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1 Executive Summary

The main aim of this document is to provide suggestions through one voice for six Central European countries working in a transnational cooperation project on the update of Trans European Transport Network (TEN-T) priorities for SoNorA area. The efforts resulted in the proposal of a methodology for the selection of the elements that add up to such a network and to the proposed exemplification of a rail oriented core network which appropriately covers SoNorA network needs.

Major suggestions were developed jointly within the partnership of the SoNorA project as part of the mutual cooperation aimed at addressing and supplying contribution in response to the TEN-T revision process commenced in 2009.

The revision of the TEN-T network aims at a well connected and balanced network at European level that supports the establishment of a single European market. In this sense, it marks a great step further with respect to the previous concept of a different set of priority projects.

Agreeing with European Commission Expert Group for Core Network Methodology, the TEN-T network is called on to contribute to achieving a wide range of goals. These include mainly the sustainable mobility of persons and goods and the enhancement of both the internal market and the global competitiveness of the Community, while at the same time ensuring territorial, economic and social cohesion, social welfare, safety and security for European citizens and innovation, as well as taking into account environmental aspects such as climate change, pollution and protected areas.

Enhancing the achievement of this goal, TEN-T Policy defined the most strategic priority projects across Europe. However, despite financial efforts and resources invested, the burden is to such degree that several priority projects are still not completed.

SoNorA area is interested by 10 out of 30 priority projects that have been defined and regards rail and road networks as well as inland waterways. Among these projects, as shown in **Errore. L'origine riferimento non è stata trovata.**, are those most relevant from the funding point of view. Although significant progress has been recorded in these interested sections, it is also true that improvement still remains. In general, this approach is definitely correct but still some part of Europe (particularly Central European Areas) remain underdeveloped and underfinanced.

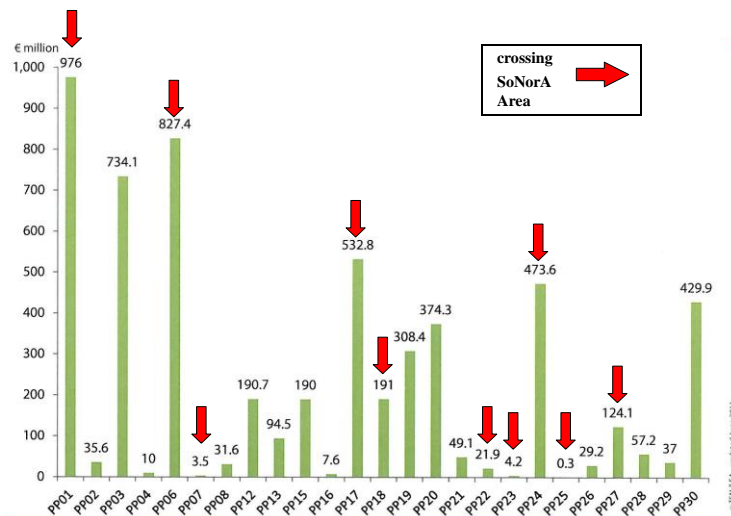


Figure 1: Total TEN-T contribution by priority project (as of 1st of June 2011)

source: *TEN-T Project in figures*, Trans-European Transport Network Executive Agency
http://tentea.ec.europa.eu/download/publications/agency_in_numbers_0611_final.pdf

SoNorA project perceives Central Europe as an area of growing importance and relevance that plays a key role in the integration process between eastern and western EU countries. This area, with a population of roughly 148 million citizens (around 28 percent of the EU population) lies between two seas that provide entry points to a latent economic potential.

The Adriatic Sea, as northernmost reach of the Mediterranean Sea provides a natural gateway for the growing traffic from the Far East into the SoNorA area. The Baltic Sea, on the other hand, has seen a growing improvement of inter-EU connections with high volumes of traffic among important transport nodes, not to mention the connections to the worldwide maritime network.

The Central Europe area is also a fine example in which the integration process is at its beginning; former borders and physical barriers are still tangible. The Iron Curtain divided Europe in two parts, not only politically but also in terms of trading routes and freight flows. In the course of time the main traffic flows shifted to the western part of Europe. Eastern Europe and the Soviet Union cut many trading relations with western and northern Europe. Due to that fact, in the past decades, until 1989 when the “German Wall” was torn down, the development of the transport network and freight flows was unequal from a European point of view. Moreover, as a consequence of the existing geography, it is evident that these stalemate issues are of major relevance particularly concerning the South-North direction. With this respect, the S-N connection between the Adriatic and the Baltic Seas will necessarily complement the E-W direction.

That was a starting point for the SoNorA consortium to prove necessity of paying attention also to this part of Europe and, thanks to parallel consultation process of European Commission on TEN-T Policy Review, the SoNorA project started to gather argumentation for partial reshaping of TEN-T network mainly focused on so called core network.

SoNorA project definitely supports objective at EU level fostering the development of a completed network based on dual layer approach: a Comprehensive Network and a Core Network, in which the “core network”, consists of both a geographical pillar and a conceptual pillar). The project also highlights the necessity of a “European added value” in a process of priority network compilation and underlines the importance of conceptual pillar principle application as a tool on how to reach European policies goals and how to guarantee proper level of flexibility respecting possible changes in the shaping of future transport network (demand, routing, etc.). The Core Network has to be built up from main nodes which play or might potentially play a key role in European geography (respecting traffic scenarios and potential change in decisive traffic flows in the future) that are then connected by corresponding links of high strategic importance that follow, as much as possible, already existing infrastructure of sufficient capacity or such infrastructure is under construction or the construction commences in approximately next 5 years.

Such constructed core network should be then coherent, sustainable, energy efficient, and multimodal, link the principal transport infrastructure axes (consisting of priority axes and the transnational axes) and has to reduce still existing bottlenecks. The most important point is the fact that this core network must be shaped as a real network (removal of “dead ends”) and from perspective of SoNorA region it also has to provide direct south-north connections between the Adriatic and Baltic seas in Central Europe (level of “SoNorA region”) stressing the importance of defining this core network, in close conjunction with the Commission and the Member States.

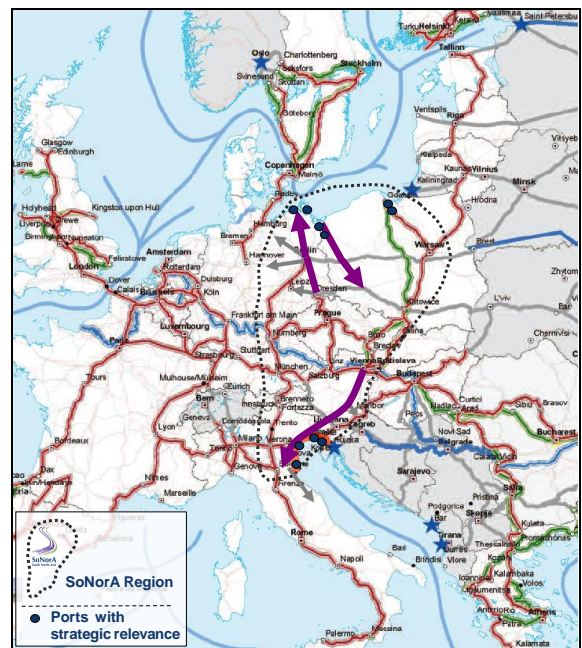
In order to be a real part of the process SoNorA project organized several events for debates on its findings with key relevant persons and also among partners. The most successful ones were those at European Parliament with attendance of the author of Green Paper (Ms Gudrun Schulze) together with the rapporteur of European Parliament on TEN-T Policy Review (Ms Eva Lichtenberger) and with participation of several MEPs or representatives from their offices. Other important events where SoNorA’s opinions were presented were during the TEN-T Days (2008/2010) as well as a specifically dedicated workshop organized by SoNorA project held in Brussels during the Open Days 2010.

Despite it was necessary to dedicate a lot of time and effort for mutual discussions and negotiation on one joint voice, not only among project partners but also with representatives of European institutions, final agreement was achieved and SoNorA project has a pleasure to introduce the results of TEN-T effort resulting in a list of TEN-T Recommendations that should be taken into account for a process of implementing TEN-T Policy. One of the relevant achievements are the maps of SoNorA core network (general scenarios with detailed insights into the touched areas) together with a set of selection criteria decisive for selection an infrastructure as a part of TEN-T network or its funding.

SoNorA project offers some modification of selection criteria from Relevance, Maturity, Impact, Quality to “MODES” principle understood as criteria usable for all modes defining selection process in five areas – Maturity, Operation, Directing, Effect and Sustainability. SoNorA project is convinced that, by real application of those criteria, clearly and strategically oriented network would be created in order to meet the basic objections as set by European legislation and primarily to meet urgent missing links and connections to the TEN-T network.



Scenario 1 of SoNorA Rail Oriented Core Network



Scenario 2 of SoNorA Rail Oriented Core Network

source: SoNorA elaboration on the basis of DGMOVE material

2 Introduction

This output gives valuable insight to the TEN-T revision process along with some suggestions for an effective implementation. The proposals deal both with methodological issues and specific topics related to the specific geographical context of the SoNorA project.

The revision of the TEN-T network aims at a well connected and balanced network at European level that supports the establishment of a single European market. In this sense, it marks a great step further with respect to the previous concept of a different priority projects. This envisaged network should be the backbone of the EU integration process. However, several questions arise as to how this ambitious goal should be pursued, what network is the most effective answer to this ambitious task and how this could be done in compliance with sustainability goals (including the different environmental and economic aspects).

These topics are of particular interest in an area as Central Europe that is of key importance within the EU integration process. This area, characterized by high development potential and in which the south north direction addressed by SoNorA project, could provide new strategic alternatives that could complement already devised and developed major corridors in areas of development that have long been latent.

The historical opportunity of linking areas separated by former political as well as natural barriers, providing land locked countries with valuable access to the sea and consequently with strategic gateways to the global markets, calls for a thorough multi disciplinary analysis. This document synthesises the main concept to be considered devising the network. Further different aspects implied within this document are the object of the various elements that make up the SoNorA project puzzle and are addressed in the various outputs that can be referred to.

2.1 Context and objectives

It is beyond doubt that the issue of TEN-T network and TEN-T Policy influences the transport network and its functions globally. TEN-T network is defined as a network of highest importance, thus, it should be permanently viewed “under the magnifying glass” to guarantee permanent fluent flows and to respect eventual change of traffic flows caused for example by a newly oriented market.

This underlines the importance of a smooth TEN-T network testifying how this matter output perfectly fits into the context of SoNorA goals identified as fostering regions to develop south-north accessibility, between the Adriatic and Baltic seas, in terms of:

- Making an integrated network of different Central European transport axis, through support for the completion of transport infrastructure;
- Activating and improving multimodal freight logistics services;
- Developing transnational action plans for future realisations;
- Supporting new regional development opportunities due to transport network improvements.

2.2 SoNorA network expected impact

The project is developed within the framework of the Central European programme, therefore the activities, a part from methodological issues (of general relevance) will be applied within its relative geographical context. This geographical context is characterized by a high relevance in the light of the European integration process (linking the East to the West of Europe) and in bridging external countries and the global markets alike to the ever more developing EU market.

3 Scope of this document

The main objectives of this core output are:

- Recommendations for process of TEN-T Policy application in various pre-conditions of particular countries
- Identification of SoNorA area TEN-T core network
- Revision of selection criteria currently used for selection of particular axis/corridor as a part of TEN-T network (applicable for core and also comprehensive network definition)

Structure of this document corresponds with the second position paper of SoNorA project that was submitted in September 2010 as a reaction on second consultation process of European Commission on TEN-T Policy Review.

3.1 Partners involved

Given the importance and sensitivity not to mention the centrality of the topic within the project, it is of no surprise that all the partnership was interested in the different stages of the process as described later.

3.2 Interlinkages within the project

3.2.1 Interlinkages with other WP3 outputs

Part of TEN-T Recommendations focuses in detail on an area of SoNorA region as it coincides with the proposal of future main important lines/axis. These findings are in coherence with current and expected traffic flows and demand as defined within O3.2.4 – Traffic Model Update and O3.2.5 – Future transport infrastructure scenarios.

TEN-T core network maps is also related to the proposals and discussions of Intermodal network, strategic nodes and sections as a part of intermodal transport chain as well as reflected in SoNorA's recommendations on national intermodal strategies (Action 3.3).

Furthermore, the development of specific links/nodes as addressed in this core output are further deepened in specific case studies within of Actions 3.5 and 3.6 and output 3.2.6 – “Case study: Analysis of Railway Axis Rostock-Berlin-Trieste).

3.2.2 Interlinkages with other WPs

As mentioned above, this output synthesizes issues of central relevance for the SoNorA project. Therefore the whole library of the SoNorA project makes up the complete picture of the issues addressed within this core output. More specifically, this output is closely related to *WP4 – Removing Obstacles to Infrastructure realisation* which focuses on facilitating network infrastructure realization through:

- qualification of necessity for transnational coordination in order to avoid mismatches on international alignment on technical parameters and scheduling of infrastructure;
- case studies on key stalemate/standstill issues (historical, consensus building, financing), and
- pre-investment studies for key links.

In particular, linkages exists with Action 4.2 – Sustaining Corridor Integrity which deals with national infrastructure plans priorities and its compatibility.

This document is also related to activities within action 4.5 – “Alternative financing options” which aim at supporting the public sector to fully understand and possibly exploit the potential of alternative financing mechanism.

Furthermore, the output is related, to the activity foreseen within the framework of *Work Package 6 – Transnational Cooperation Platform*. The activities in this work package are developed in mutual cooperation and exchange of information with all technical outputs (work packages 3 to 5). In particular, input to the document came from Output 6.2.1 - Collection of preliminary inputs for TEN-T recommendations, in which framework a meeting was also organized in Brussels in January 2009. Successively, the first draft of this document was discussed-validated (O6.2.2 - Discussion-validation of TEN-T recommendations draft output 3.3.3).

Last but not least, in the framework of *Work Package 2 - Communication, knowledge management and dissemination*, the TEN-T Recommendations Meeting was organized in Brussels in October 2010, (activities conducted within output 2.2.5).

4 Background

4.1 Basic preconditions of the TEN-T Policy - objectives and priorities

Historically, the trans-European networks concept has existed since the Maastricht Treaty was signed in 1992 and entered into force in 1993. Under the Terms of Chapter XV of the Treaty (Articles 154, 155 and 156), the European Union aims at promoting the development of a Trans-European Network as a key element for the creation of the Internal Market and the reinforcement of Economic and Social Cohesion in compliance with objectives of the Lisbon Agenda on growth and jobs to be achieved. This development includes the interconnection and interoperability of national networks as well as its accessibility. It also supports Free Movement of Persons within the territory (EU Law 341 –Directive 2004/38 and successive) of the Member States. Last but not least, it integrates environmental protection requirements with a view to promoting sustainable development.

The **objectives** of the TEN-T (based also on Decision No. 1692/1996/EC) are to:

- ensure the sustainable mobility of persons and goods within an area without internal frontiers under the best possible social and safety conditions, while helping to achieve the Community's objectives, particularly in regard to the environment and competition, and contribute to strengthening economic and social cohesion,
- offer users high-quality infrastructure on acceptable economic terms,
- include all modes of transport, taking account of their comparative advantages,
- allow the optimal use of existing capacities,
- be, insofar as possible, interoperable within modes of transport and encourage intermodality between the different modes of transport,
- be, insofar as possible, economically viable,
- cover the whole territory of the Member States of the Community so as to facilitate access in general, link island, landlocked and peripheral regions to the central regions and interlink without bottlenecks the major conurbations and regions of the Community,
- be capable of being connected to the networks of the European Free Trade Association (EFTA) States, the countries of Central and Eastern Europe and the Mediterranean countries, while at the

same time promoting interoperability and access to these networks, insofar as this proves to be in the Community's interest.

The **priorities** of the TEN-T (based also on Decision No. 1692/1996/EC) are:

- establishment and development of the connections, key links and interconnections needed to eliminate bottlenecks, fill in missing sections and complete major routes,
- establishment and development of infrastructure for access to the network, making it possible to link island, landlocked and peripheral regions with the central regions of the Community,
- optimum combination and integration of the various modes of transport,
- integration of environmental concerns into the design and development of the network,
- gradual achievement of interoperability of network components,
- optimization of the capacity and efficiency of existing infrastructure,
- establishment of and improvement in interconnection points and intermodal platforms,
- improved safety and network reliability,
- the development and establishment of systems for the management and control of network traffic and user information with a view to optimizing use of the infrastructures,
- studies contributing to improved design and better implementation of the trans-European transport network.

A way to reach the above set objectives and priorities was devised, according to the European legislation by the indication of a TEN-T (Trans European Transport Network) made up of 30 priority projects and a comprehensive network that provides further interlinkages. This network will be described in the following paragraph and its revision process is the main object of the present document.

4.2 The TEN-T Network before the 2009 revision process

In order to achieve the aforementioned objectives and priorities, concrete steps were carried out in the last years leading to the current TEN-T Network which is composed of a precisely defined set of infrastructures and projects.

This set of projects has been identified and updated after a series of decisions starting from European Council meeting on 9 and 10 December 1994 that was held in Essen.

The TEN-T guidelines were drawn with Decision No. 1692/96/EC of the European Parliament and of the Council of 23 July 1996 on Community guidelines for the development of the trans-European transport network, consisting of road and railway projects. Seaports, inland ports and intermodal terminals were included in May 2001, with European Parliament and the Council Decision No 1346/2001/EC.

In April 2004, the list of projects was further extended to the actual number of 30, in order to take into account the EU enlargement when the European Parliament and the Council adopted Decision No 884/2004/EC (added to the list by Decision No 884/2004/EC).

The following table shows the main steps in the development of the actual TEN-T network.

1996	TEN Guidelines for EU 15 (14 priority projects)
1997	Pan-European Corridors I - X
1999	TINA (“Transport Infrastructure Needs Assessment”)
2001	(minor) Guidelines revision
2004	Guidelines revision => EU27 (30 priority projects)
2004 / 2007	EU enlargement
2007	new financing regulation 2007-2013
2007	Communication on the extension of the major TEN axes to neighbouring countries

Table 1: Main steps in TEN-T network development

Currently, the guidelines, as adopted in 1996 and last amended in 2004, include two planning layers: a comprehensive network layer (outline plans for rail, road, inland waterway, combined transport, airport and port networks) and a second layer of 30 priority projects – i.e. selected projects of common interest.

4.2.1 TEN- T Network: Comprehensive and Priority Projects

In general, the TEN-T priority projects cover major rail, road and inland waterway axes that cross several Member States. Chosen in 2004 for their high relevance to transnational traffic flows, cohesion and sustainable development objectives, they were subjected to a common socio-economic evaluation. However, questions still arise, for example, as to the methodological soundness of their selection, the potential for interconnection and extension (both geographically and modally), the approach to coherent capacity and quality standards, and the means of better stimulating their completion within the planned timeframe.

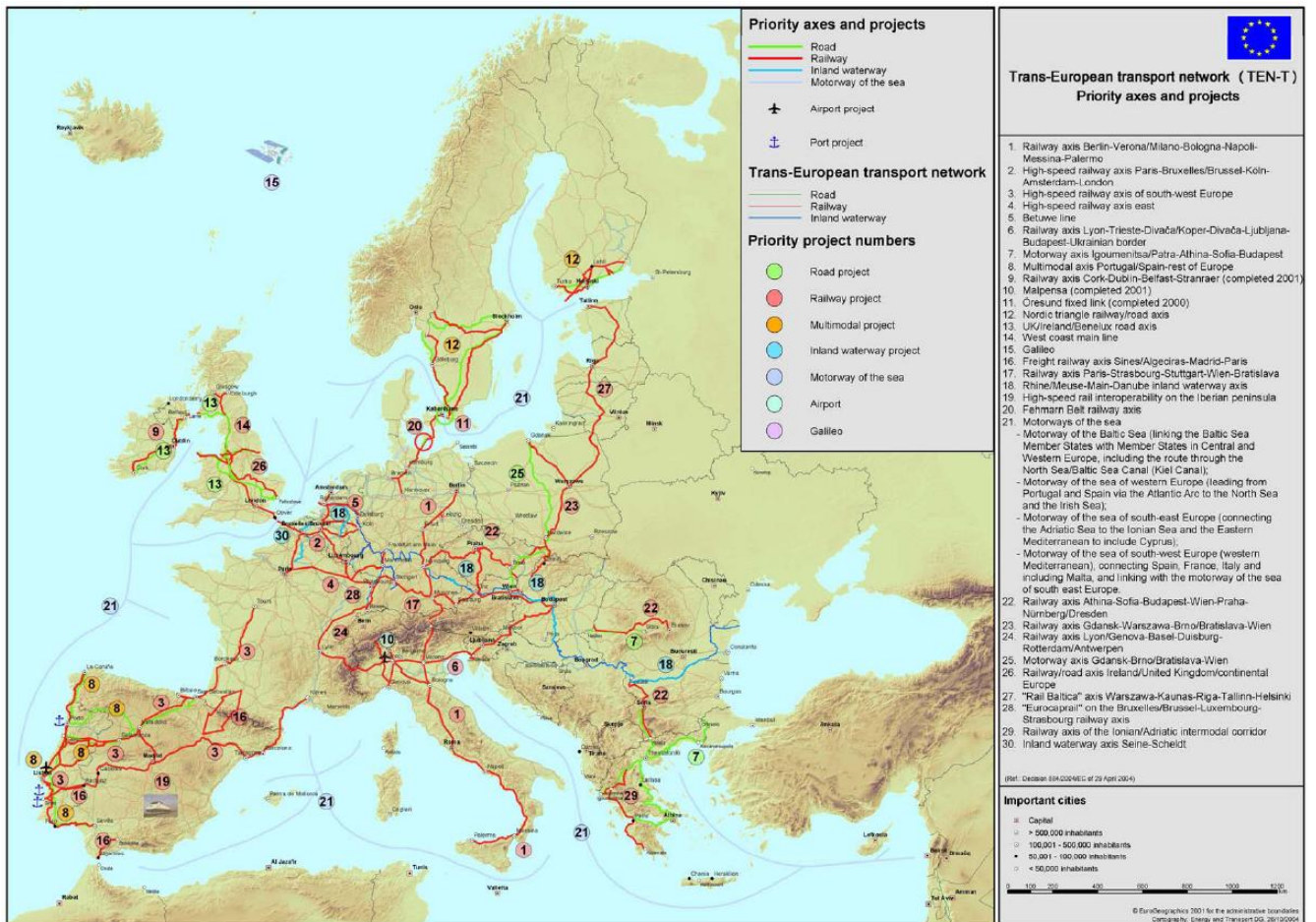


Figure 2: TEN-T Priority axes and projects

source: Trans-European Transport Network Executive Agency - http://tentec.ec.europa.eu/en/ten-t_projects/30_priority_projects/

In addition to defining projects of common interest through their location in outline plans and inclusion in the list of priority projects, the Guidelines set out "characteristics" and specify objectives and criteria

for identifying these projects. This conceptual approach was also adopted for the same reason in the field of intelligent transport systems.

As can be seen from the map of current Priority projects, this map regards not only the rail and road networks but also the inland waterways net the already achieved realization of Malpensa airport in the north of Italy and ICT Project that are out of the scope of the analysis of this SoNorA's output. The rail and road networks cover 25 of the 30 priority projects (including 3 multimodal projects). Ten out of these 30 projects regarding rail (7) and road networks (2) as well as inland waterways (1) are relevant for the SoNorA area. These are priority projects numbers 1, 6, 7, 17, 18, 22, 23, 24, 25 and 27 (see table below).

Priority Project	Network	Description
1	Rail	Railway axis Berlin-Verona/Milano-Bologna-Napoli-Messina-Palermo
6	Rail	Railway axis Lyon-Trieste-Divaca/Koper-Divaca-Ljubljana-Budapest-Ukrainian border
7	Road	Motorway axis Igoumenitsa/Patra-Athina-Sofia-Budapest
17	Rail	Railway axis Paris-Strasbourg-Stuttgart-Wien-Bratislava
18	IWW	Waterway Axis Rhine / Meuse - Main - Danube
22	Rail	Railway axis Athina-Sofia-Budapest-Wien-Praha-Nurnberg/Dresden
23	Rail	Railway axis Gdansk-Warszawa-Brno/Bratislava-Wien
24	Rail	Railway axis Lyon/Genova-Basel-Duisburg-Rotterdam/Antwerpen
25	Road	Motorway axis Gdansk-Brno/Bratislava-Vienna
27	Rail	"Rail Baltica" axis: Warsaw-Kaunas-Riga-Tallinn-Helsinki

Table 2: EU Priority Projects relevant for SoNorA area

The update of the strategic network as defined in 2004 was delivered in the early stages of the EU enlargement to Eastern Europe. It is important therefore to verify and, if needed, to integrate the vision proposed in the mid -long term perspective as part of the consolidation of EU integration.



Figure 3: TEN-T Priority axis and projects in SoNorA area

Source: Trans-European Transport Network Executive Agency - http://tentea.ec.europa.eu/en/ten-t_projects/30_priority_projects/

The comprehensive network constitutes a more fairly dense multimodal network, made up of significant parts of corresponding national networks. The comprehensive network comprises altogether: 95.700 km of road links, 106.000 km of railway links (including 32.000 km of high-speed links), 13.000 km of inland waterways, 411 airports and 404 sea ports. Most of these links and nodes already exist. However, almost 20 000 km of the road links, over 20 000 km of railway links (overwhelmingly high-speed lines) and 600 km of inland waterway links remain to be built or substantially upgraded – at an estimated cost of €500 billion according to recent estimates of Member States.



Figure 4: TEN-T comprehensive transport network outline – Roads - source: European Commission



Figure 5: TEN-T comprehensive transport network outline – Railways - source: European Commission

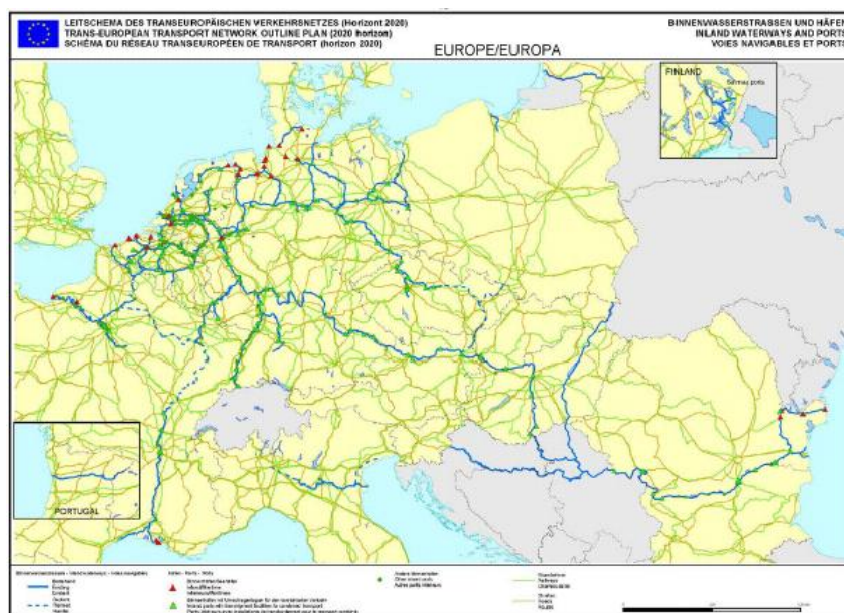


Figure 6: TEN-T comprehensive transport network outline - Inland Water Ways - source: European Commission

The maps of comprehensive network for road, rail and inland waterways are shown in the figures above. Moreover, the comprehensive network also includes air and sea port maps as well as combined transport.

4.2.2 Funding requirements, mechanism and facts

The availability of financial means is a key issue in the development of the TEN-T. Moreover the realization of the TEN-T network so far has been marked by enormous cost increases.

These are due not only for technical reasons related to the difficult geological conditions and the challenging technical solutions, but also to changes and measures needed to gain public acceptance of projects as well as the need to deal with environmental aspects.

The relevance of the matter is not simply related to the amounts itself but also to evident difficulties in prioritising investments that require multi-annual investment efforts and small returns over periods which may even exceed 50 years.

TEN-T Priority projects	1993/96 – 1999 EU 15	2000 – 2006 EU 27	2007 – 2013 EU 27
Cost (€ billion)			
TEN-T 30	32.65	93.7	154
- New Member States (EU 12)			16
- Old Member States (EU 15)			138
Community contribution (€ billion)			
Programme TEN-T	1.35	2.80	5.4
Cohesion Fund	3.83	7.0	12.3
ERDF	1.46	4.81	4.7
EIB Loans and guarantees	9.78	16.1	25
Total Community contribution (€ billion)			
Grants	6.64 (20.3%)	14.61 (15.6%)	22.4 (14.5%)
Grants and loans	16.42 (50.3%)	30.71 (32.8%)	47.4 (30.8%)
Other resources (national)	16.23 (49.7 %)	63 (67.2 %)	106.6 (69.2 %)

Figure 7: Funding of 30 Priority Projects - 2020 horizon (excluding Galileo)

source: European Commission - http://ec.europa.eu/transport/infrastructure/ten-t-funding-and-financing/doc/funding_figs.pdf

In order to cope with these needs, different institutions, actors and mechanisms as well are to be considered.

First of all, it should be underlined that the funding of TEN-T projects draws mostly from the Member States financing. In fact, with reference to the period 2007-2013, the contribution from national budgets amounts at €196bn, while the EU contribution, apart from loans and guarantees from the European Investment Bank (EIB), consists of €51bn.



* from 1996 to 2020 / in EUR 2009

Figure 8: Budget of TEN-T Network and Priority Projects

source: Revision of the TEN-T Guidelines - EC DG MOVE

http://tentea.ec.europa.eu/download/MoS/events/aarhus2011/day2/2_rev_tent_guidelines_ja4.pdf

Moreover, the EU financing is related to two different instruments: the TEN-T programme (€8bn) and the Cohesion and Structural Funds (€43bn). Both instruments should contribute to fulfilling the objectives set out in the TEN-T guideline, however, each has its own rules and characteristics.

While funding under the Cohesion and Structural Funds can reach up to 85% in eligible Member States (cohesion countries), funding in the TEN-T programme is limited to 50% for studies and in case of infrastructure realisation it is limited up to 30% for cases involving cross-border sections while lower percentages in other cases. Another aspect is that while the TEN-T programme is under direct management of the EU Commission, which selects projects to be financed, the Cohesion and Structural Funds are affected by a shared management, in which the choice is made by Member States after the Commission agrees on the overall budget of each programme.

This situation implies difficulties in setting common priorities and a strong national priority-setting and therefore, the lack of integrated funding strategy at EU level has been indicated as a critical issue for the completion of the TEN-T network, especially considering the outstanding investment needs.

For this reason, the EU has made relevant efforts to concentrate its investments on the Priority Projects and in particular on cross-border sections and bottlenecks (including access routes to both), thus leveraging effect of the TEN-T budget. An exemplification of the relevance of financing needs is provided by the proposals received for the multi-annual program 2007-2013. For Priority Projects alone, this represents a total requested Community contribution of €11.5bn (related to a total investment of more than €55bn). The EU budget available for multiannual funding for the Priority Projects was limited to €5.1bn.

This lack of resources calls for the exploitation of other financial means as those provided by the European Investment Bank (EIB) namely Private Public Partnership (PPP) mechanisms.

European Investment Bank (EIB) is the European Union's financing institution and was established under the Treaty of Rome for long-term financing of the European Union. The EIB's mission is to contribute to the integration, balanced development and economic and social cohesion of EU.

One of very important recent objectives of the EIB is to help Europe emerge from the economic crisis and substantially increase EU financing volumes while maintaining quality. EIB significantly enhanced the volume of its lending capital, having created a crisis-response package of additional EUR 50 billion. So the projected end of 2015 lending headroom exceeds €100bn.

Moreover EIB has increased its cooperation with national authorities to set up financing schemes for infrastructure projects and TEN-T network is one of the six EIB's priority strategic objectives for lending in the European Union, pre-accession (being the candidate and potential candidate).

In fact the EIB has increased its lending activity to TEN-T projects from €7.9bn in 2007 to €11.9bn in 2009, a 50% increase.

In addition to EIB loans, the EIB supports the development of TEN-T projects through several joint initiatives with the Commission, encompassing not only mere funding, but also knowledge and best practice support.

Given the constraint on public budget, other financing mechanisms are becoming more and more relevant also for the TEN-T development: Private Public Partnership (PPP). PPP is a widely used technical concept describing a wider group of projects and activities which have in common that they are shared by entities of private and public sector and that are oriented towards the satisfaction of public needs traditionally ensured in a monopolistic manner by public sector.

The benefits of PPPs consist of not only mobilising complementary financing sources or shifting financing burden from taxpayers to infrastructure users (in the case of projects financed with user-pay schemes). Partnership models can foster a more efficient development of projects lowering infrastructure costs, introducing innovative design and technology, efficient infrastructure management and improved risk management as well as providing appropriate incentives to ensure on-time and on-budget project delivery.

However, PPP schemes are complex and more difficult to set up than traditionally procured projects. Especially it is to be considered that PPP can temporarily facilitate financing of projects of public interest, but the final settlement of cost is always borne by the grantor of the project, i.e. by public sector, or is partly transferred on the end users. Given its relevance, topicality and complexity these topics have been thoroughly dealt with in Action 4.5 of SoNorA. Related outputs present an analysis of the conditions and requirements for obtaining financial coverage for project development along with some case studies as examples.

4.3 TEN-T projects implementation and current state

The implementation and development of the TEN-T network is a challenge from different view point, not only from the financial one. The ambitious infrastructure program implies challenging technical realisations and the need for ever more enhanced project coordination that also includes a wide range of activities related to consensus building as well as evaluation and mitigation of the impacts of infrastructure realisation (see SoNorA Actions 4.2 and 4.3 for a deeper analysis of the theme).

A complex part of the TEN-T project coordination is occupied by cross-border sections. An important shortcoming in cross-border project coordination is often the lack of joint cooperation and analysis on different sides regarding both technical and decisional issues (prioritization, budget contribution, planning horizons etc. as well as traffic forecasts) that lead to differing national investment planning. Thus, disconnected or even contradictory timelines, capacity planning, alignment, technical and interoperability characteristics as well as environmental assessments have been experienced in some sections.

As a consequence, Member States do not reach the same investment calculations, thus leading, at times, to significant differences in investment implementation according to the priority settings of the Member

States involved. Joint management of the accomplished infrastructure has also been insufficient, and moreover, in the decision making process Regional and local economies and other stakeholders have gained the importance that derives from the significant effects on local and regional economies, and local stakeholders.

Moreover, regions have more often been requested to contribute to the financing of infrastructure projects. In order to accompany these developments, local stakeholders should be able to find their relevant place in national decision-making processes.

In order to accelerate implementation, especially in cross-border projects and sections, European coordinators were appointed by the Commission in 2005, to cover the Priority Projects Nos. 1, 3, 6, 17, 18, 21 and 30, as well as ERTMS in order to cope with all the mentioned issues. The effectiveness of this choice has been proven in several cases, playing a major role in pushing forward realisation and in some cases also in helping with preparation and implementation of certain priority projects. The Coordinators have developed a comprehensive project approach for the Priority Projects which they follow up, indicating which conditions should logically be met for EU co-funding.

Large support was given, considering the TEN-T Programme in general, by the establishment, in October 2006, of the Trans-European Transport Network Executive Agency (TEN-T EA), in order to provide an efficient and effective support in realising the technical and financial implementation of the TEN-T Programme. Since the 1st of January 2009 TEN-T EA has been fully responsible for the management of all open TEN-T projects under the TEN-T Programme 2001-2006 (€4.875bn) and the 2007-2013 TEN-T Programme (€8.013bn), making significant improvements in both the budget execution and the payment delays.

The Progress Report on TEN-T Implementation of Priority Projects has shown the last progress achieved on the Priority Projects, nevertheless there is still a strong commitment of Member States and Community Institutions to deliver the key projects aiming at bringing above mentioned goals and benefits to the real life and perceiving of European citizens. The situation in 2010, is shown in Figure 9.

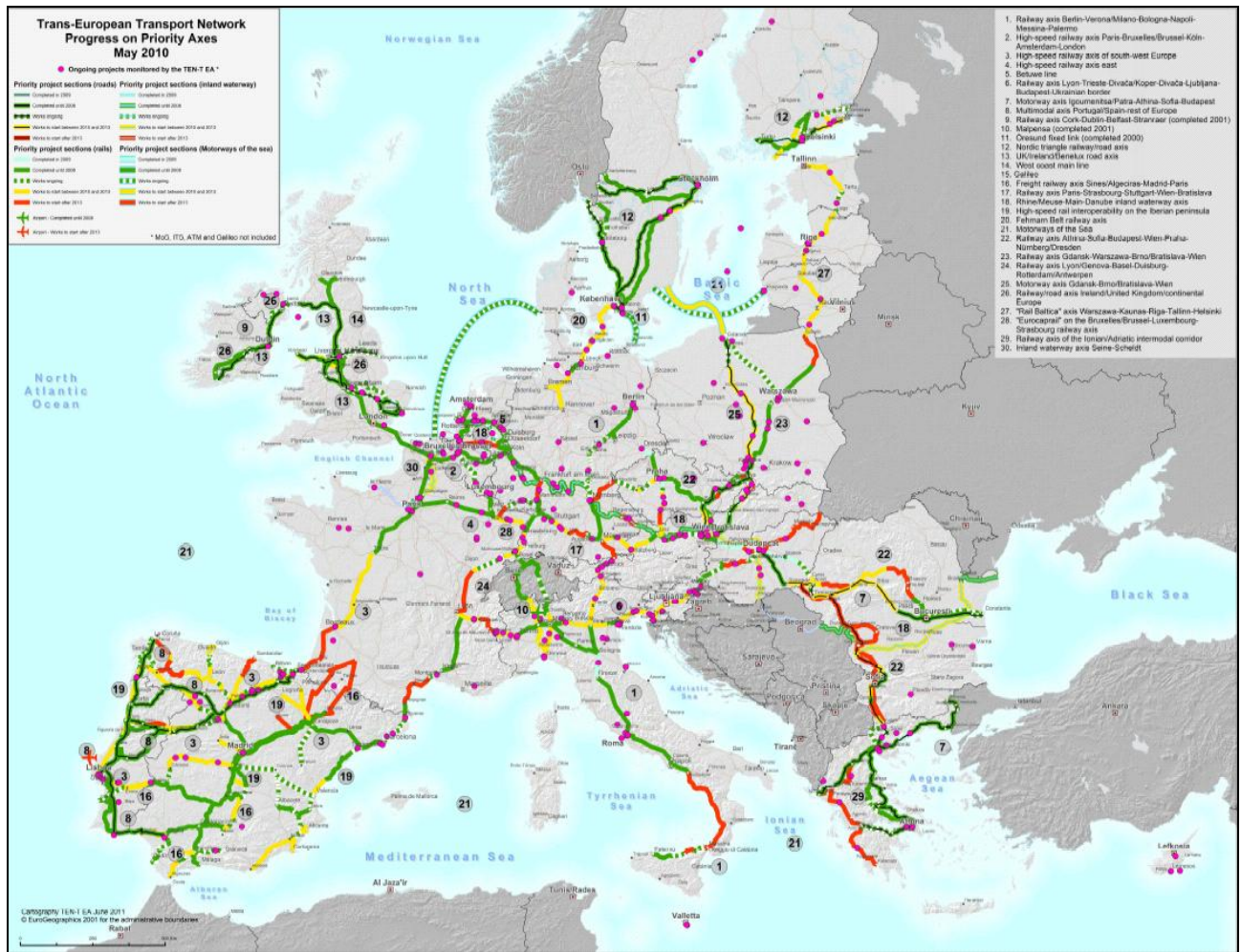


Figure 9: TEN-T Transport Network - Progress May 2010

source: *Implementation of the Priority Projects – Progress Report 2010, Trans-European Transport Network Executive Agency*

http://tentea.ec.europa.eu/download/publications/progress_report_superfinal_web.pdf

The Commission is concentrating its funding on a limited number of projects in which the European added value is based on the leverage effect of the funding provided and on the acceleration of a project. In general, this approach is definitely correct but still some part of Europe (mainly Central European Area remains underdeveloped and underfinanced).

The completion of the Priority Projects offers new business opportunities. To fully benefit from these positive developments, it is important to improve the technical compatibility of the national network. At the European level, the Commission will step up its efforts to encourage Member States to coordinate their infrastructure policies in order to guarantee the same level of priority especially regarding cross-border projects of transnational relevance, This is the most crucial reason why also SoNorA project

strongly supports the effort to stimulate European Institutions and Member States to rely on the work of the European Coordinators, who, because of their dedicated work, have played a major role in advancing the Priority Projects.

Project coordination on cross border sections is often the most critical aspect of TEN-T development and demands active cooperation among a wide range of stakeholders. Such cooperation between Member States is usually guaranteed through bilateral treaties for shared infrastructure (e.g. Brenner base tunnel). Another possible option, mainly used in the cases of cross-border sections (e.g. Munich-Salzburg, Vienna-Bratislava and between the Baltic States and Poland) is provided by Memoranda of Understanding or Letters of Intent.

Generally speaking, adopting a legally binding bilateral treaty is a lengthy process. However, they are useful in improving the situation on some major cross border bottlenecks. Memoranda of Understanding and Letters of Intent are instead mostly easier and quicker to conclude, however they are also less useful and effective in providing longer term stability.

In general, the experience of international cooperation processes on cross-border project coordination has revealed that Member States often lacked joint traffic forecasts, which leads to different investment plans. There is also a lack of investment planning coordination, thus leading to disconnected or even contradictory timelines, capacity planning, alignment, technical and interoperability characteristics, and environmental assessments, therefore, joint management of both infrastructure development and operations (once built) is often insufficient.

Moreover, regional and local authorities, as well as stakeholders have gained in importance in the decision making processes related European infrastructure projects which have significant effects on local and regional economies, and local stakeholders. In fact, new infrastructure provides local economies with relevant opportunities. Moreover, regions have more often been requested to contribute to the financing of infrastructure realisation. Therefore, local stakeholders should be able to find their relevant place in national decision-making processes.

These are the main reasons of how complicated the framework in which the decision and infrastructure realisation process is to be carried out. Therefore, the coordination of the process is an issue of utmost relevance and calls for the identification of coordination figures and procedures.

4.4 The ongoing TEN-T Network revision process

Planning this Community network has essentially meant adding together significant parts of national networks for the different modes and connecting them at national borders. While certainly appropriate in the early days of TEN-T policy, the adequacy of this approach became progressively weaker with each enlargement. TEN-T network planning has not been driven by genuine European objectives that would ensure that the whole is greater than the sum of its parts. Overriding Member States' sovereign responsibility in the field of infrastructure planning and the implementation on their territories, the question of how national planning can be combined with a European level of planning that takes account of objectives outside each individual Member State's perspective becomes more and more relevant as the EU expands and the network become increasingly complex.

Therefore new circumstances, related to both the European Union growth and the goal of environmental sustainability call for a substantial policy review.

In particular, The TEN-T policy which should result from this stronger European level planning, is expected to “move from disconnected Priority Projects to a genuine network approach”.

Moreover, The TEN-T policy review is placed in the broader context of the “Europe 2020” Strategy under which the Commission “[...] present proposals to modernise and decarbonise the transport sector thereby contributing to increased competitiveness.”

The Green Paper "Towards a better integrated trans-European transport network at the service of the common transport policy" published in February 2009 opened the TEN-T policy review.

The green paper questions whether the current planning approach should be maintained or whether another approach should be implemented. It therefore proposes three options:

1. status quo
2. a single layered approach based on priority projects and extension to ‘priority networks’
3. a dual layered structured based on comprehensive network and a core network

The second option was meant to extend priority projects to ‘priority networks’ involving the definition of ‘geographical corridors’ comprising priority project plus important nodes (main source of congestion & other inefficiencies, i.e. urban interfaces), ports & airports. Main advantage is that this would promote the multi-modal dimension (which is lacking in current Ten-T).

The term “Core network” was used for a network adding to the priority network (explained above) a ‘conceptual pillar’ based on the identification of projects, corridors and network parts over time based on short, medium and long-term service needs, i.e. conceptual features (objectives, criteria, etc) are defined at the outset rather than the projects (and naturally these can evolve over time).

Stakeholders and European Institutions and consultative bodies broadly welcomed (European Commission received around 300 contribution) the review and the approach proposed (Option 3 - dual layer planning approach with a “core network” as the top layer).

In order to support the analysis of specific issues identified or reconfirmed in the Green Paper process, six expert groups have been set up consisting of highly experienced representatives from various fields for the future TEN-T planning and implementation approaches. The expert groups have been working between November 2009 and April 2010 paving the way to a second public consultation aimed at refining the available policy options that have been emerging from the contributions made in 2009 within the first consultation,

Then the document "Consultation on the Future Trans-European Transport Networks", adopted in May 2010, still covered the three planning options of the Green Paper, but, based on the strong support for option 3, focuses on the latter. It includes a description of the methodology to elaborate the core network and is also accompanied by an ex-post analysis of the past TEN-T policy, within a separate Staff Working Document. The document invited stakeholders as well as European institutions and consultative bodies to express their views in a consultation process, which ended on 15 September 2010. The TEN-T days in Zaragoza on 8 and 9 June 2010 were a key event of this consultation.

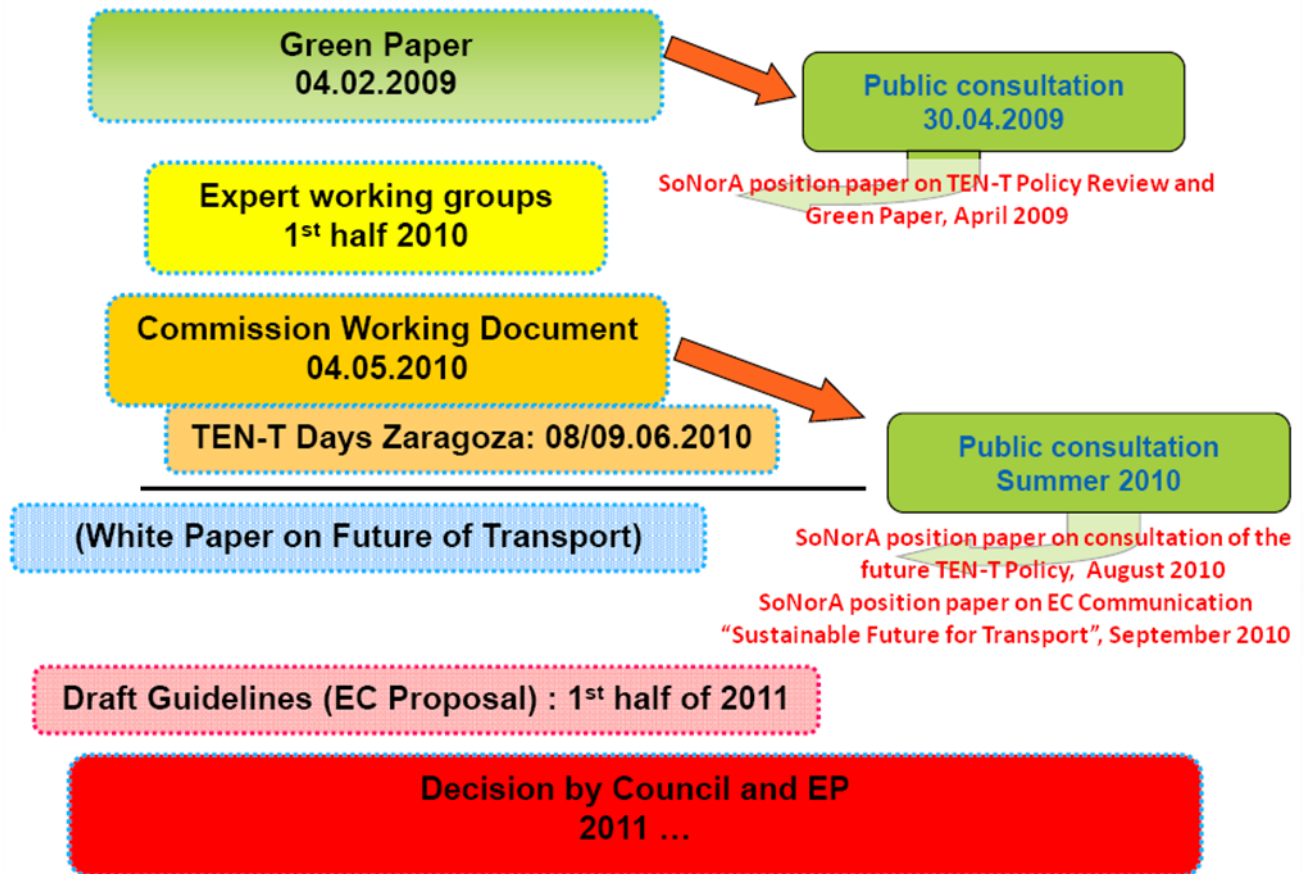


Figure 10: Steps in TEN-T revision process

source: SoNorA elaboration on the basis of "Revision of the TEN-T Guidelines" - EC DG MOVE

http://tentea.ec.europa.eu/download/MoS/events/aarhus2011/day2/2_rev_tent_guidelines_ja4.pdf

Based on these intermediate steps, and following the responses from the consultation, the major legislative proposal resulting from the Green Paper process will be a Commission proposal for the overhaul of the existing TEN-T Guidelines. The new/revised Guidelines could be ready for adoption by the Commission in 2011, and, as indicated by the Polish Presidency Programme, decision is expected by December 2011 ("The considerable progress in the revision process from 2010-2012 concerning the EU trans-European transport networks (TEN-T) is one of the transport priorities of the Polish Presidency. The Presidency will attempt to agree a general approach to this issue at the meeting of the Transport, Telecommunications and Energy Council (TTE) in December 2011. The achieving of this aim is, however, dependent on the date of the publication of the legislative document for this matter by the European Commission." – <http://pl2011.eu/en/content/future-trans-european-transport-networks>).

4.5 Main identified issues

There are several studies and reports describing and monitoring the progress of TEN-T Policy from European perspective but SoNorA projects intend to provide more “pro-regional” level since several project partners have their direct experiences from their countries.

SoNorA partners appreciate the progress that has been already achieved by Priority Projects, nevertheless, it is extremely important to support their fast finalization continuously since their completion will not only improve the economic efficiency of the European transport system, but will also benefit European citizens directly.

However, based on several debates between the SoNorA project partners focus an attention on mostly often appeared comments on current status of TEN-T Policy from the perspective of authorities and users:

- TEN-T policy helps the achievement of Lisbon agenda objectives;
- Once constructed it stimulates the demand and fastens the process of transport;
- There is still a long way to implement initial plans fully;
- Innovative systems were deployed and TEN-T policy also stimulates ITS systems;
- Role of freight logistics has to be considered more to play a crucial role for the Community;
- Different needs of passenger and freight traffic implies urgency of dedicated freight networks issue resolving;
- Inland waterborne has relatively free capacity but the number of bottlenecks still exists;
- Ports should be more involved in logistics chain and needed to increase inland connection;
- Introduction of Motorways of the Sea is needed;
- Intelligent transport systems started to be implemented and that means another significant stimulus for freight transport and distribution of goods;

- Cross-border projects to be more monitored in order to fulfil their original thought – smooth connection across Europe – today still national priorities (not in the European context) are preferred.

5 Methodology and elaborations

The approach set to reach the goals of this outputs was clearly meant to analyse implementation of TEN-T Policy in particular countries, to debate the results of EU TEN-T Policy implementation in context of national conditions but above all it was strongly necessary to permanently discuss interim findings with external subject – representatives of Commission as well as important EU institutions.

The process of setting up TEN-T Recommendations, from the point of SoNorA project, ran in two phases – internal negotiations and external presentations and consultations.

5.1 Internal negotiations

These negotiations permitted SoNorA partnership to reach the following goals:

- Experiences with TEN-T Policy implementation within SoNorA countries were involved,
- Identification of main problems,
- Set of recommendations for general application of TEN-T Policy,
- Set of selection criteria,
- Identification of SoNorA core network.

This process occurred through technical meetings during Consortium meetings, via emails and, due to importance of this issue, by means of several specially dedicated meetings among partners in order to reach consensus on this topic across the whole consortium.

5.2 External presentations and consultations

The process of TEN-T Recommendations was concurrent to the EU Commission's consultation process of TEN-T Policy Review. This implied that significant input for project partners were available from different events, presentations and consultations with EU Commission or EU institutions as this was helpful to understand TEN-T Policy in broader context.

5.3 SoNorA milestones on TEN-T Recommendations development

The following chapters report the developments made both among the partnership and in relation to external meetings. Several parts are the direct results of the meeting minutes or conclusions and have included as such.

5.3.1 January 2009: meeting at premises of Community of European Railways (CER)

The session concerning status quo of Green Paper on TEN-T policy update was aimed on a basic explanation of what is expected. This discussion was primarily based on the conclusions of Workshop 7 and 10 during TEN-T Days 2008 where three main directions of future EU policy in this area were drafted. These possible options for further development are as follows:

- Dual layer: comprehensive network and priority projects (current structure);
- Single layer: priority projects – possibly in extended form complemented by priority infrastructure needs;
- Dual layer: comprehensive network in current form and “Priority Network“ consisting of *geographical pillar* (links up and extend current multinational priority axis, nodes and intermodal connecting points) and *conceptual pillar* (basis for identification of projects, corridors or network parts over time) – defined by objectives, criteria.

Following this approach, each representative of project partner or institution that was actively involved delivered their contribution to the currently existing TEN-T network that briefly explains his point of view also in intention of policy approach that is now mainly being discussed within TEN-T policy revision.

Generally, it can be said that project partners agreed with the idea of core network that will serve as a base for other development as for instance the priority network. SoNorA thus supports dual layers principle but followed by bottom-up approach. Nevertheless, also some specific and crucial points have to be solved when taking into consideration practical aspects of particular projects. Questions arisen such as: How to proceed within the planning process? How to select the main axis? What projects should be recommended for financing – what are the selection criteria? Etc.

The main thoughts of participants are summarized as follows:

- Emphasise accessibility, integration and cohesion,
- To provide interconnection between cross-border projects,
- To connect ports with TEN-T network,
- To support projects of environmentally less damaging modes,
- To consider also the service point of view,
- Is it really effective and feasible to build dedicated networks?
- Unclear methodology backing – selection criteria,
- Top down or bottom-up approach in planning process,
- Is combination of EU Funds possible?
- Internalisation of external costs still not finished,
- How to measure European added value?

The following are the outline responses from the participants and speakers present:

Mr. Jacques Dirand presented the point of view of Community of European Railways (CER). On behalf of this institution he pointed out several main points that should be taken in account within the process of TEN-T policy update:

- TEN-T policy must ensure real intermodal and environmental network,
- Precise planning process – it is policy for 2014-2020,
- Clear qualitative and selection criteria – project must fulfil them,
- CER recommends to support “bottom-up” approach.

Mrs. Shelley Mason (DG TREN) described the current status of Green Paper preparation pointing out the end of January 2009 as the official start of consultations on Green Paper. Time for discussion will last for three months to obtain eventual comments from various stakeholders.

She also reminded that this document is about overall concept not about concrete projects and is now in process. Mrs. Mason also appreciated this document because it is in fact the first real mid-term review and not only amendment to current decision in force.

Mrs. Mason recommended SoNorA partners to make “SWOT” analysis of Green Paper and particular options of future policy and to avoid arguments “lack of money” and positively appraised SoNorA consortium of partners – big networking group composed of main stakeholders across transport modes and advised to have a reasonable compromise.

Mr. Paulus Guitink (CER) stressed the importance of corridor principle in general and focused his contribution on “practical” questions related to TEN-T networks and their construction. Summarizing his point of view, the following are several interesting points that should not be forgotten:

- Cross border issues are most important in the process of planning – agreement on the same time plan in cross-border projects,
- Try to attract private sector,
- Business case for each proposal,
- Promote ports as a part of logistics chain.

5.3.2 March 2009: SoNorA Position Paper meeting and debate at European Parliament

The aim of this position paper was to contribute to the debate on the fundamental review of the TEN-T policy, as discussed in the *TEN-T: A Policy Review Green Paper*. In relation to this opportunity, SoNorA project organized an open debate with the presence of some MEP personally and persons from their Offices as well as representatives of various permanent representation and EU institutions.

Mr. Petr Duchoň (MEP), as the rapporteur of the European parliament for the Rail Freight Network regulation, introduced his report. The regulation on Rail Freight Network has the clear connection with the TEN-T policy review. As he pointed out, the biggest problem in the successful TEN-T implementation is the lack of appropriate funding. The overall budget for TEN-T projects is not

adequate to the number and scale of important transport projects. The slow speed of the infrastructure development is not caused by the lack of will of the Member states. The average state debt is currently flowing around the maximal allowed limit which means that Member states do not have wide range of possibilities to speed up the project realization.

Ms. Eva Lichtenberger (MEP) as a European Parliament Rapporteur and author of Report on Green Paper by European Parliament presented “EP point of view” highlighting the main objectives related to TEN-T policy in general and describing the point of view of European Parliament. On behalf of European Parliament, she pointed out several main points that should be taken in account within the process of TEN-T policy review:

- Question of core network – this network can not be considered only geographically (although understood in this way) but there must be set of clear criteria how to set this network,
- Transnational understanding of TEN-Ts, it means “network concept” (as it is involved in the SoNorA project),
- To avoid parallel constructions of rail and road – to find a way how to clearly set who wins,
- To follow the principle of shifting the transport from road to rail (more urgent now – climate changes),
- Missing regional accessibility,
- Attention to be paid also for ports and inland waterways,
- Problems with delays of goods delivery – not about the transport speed (quality of infrastructure) but about logistic issues,
- Closer transnational cooperation during the planning processes is essential.

Ms. Gudrun Schulze (DG MOVE) described the whole process of TEN-T Policy review and the reasons that were as a background of the need for this revision. Summarizing her point of view the most decisive points in this process are:

- Lack of policy progress, projects not completed or slow progress,

- Planning vs. instruments for realization,
- Combination of financial and non-financial instruments,
- Cohesion issue, climate change issue,
- Question of intermodal terminals, rail freight green corridors,
- Support for EU coordination,
- Rail transport in the centre of TEN-T funding,
- Major challenges;
 - Fit TEN-T to global change,
 - Neighbourhood policy,
 - Special attention to the airports,
 - EU Transport policy implementation implies new TEN-T policy.

Mr. Bogusław Liberadzki (MEP) then presented the circumstances for practical implementation of TEN-T policy. To achieve a really successful process of TEN-T policy realization there are some crucial points that must not be forgotten:

- The most important problem with the TEN-T funding is the often budget reduction during the programming period,
- Big difference of rail infrastructure access charge in particular Member States which paralyses the rail transport especially in new member states,
- Market driven approach for the project evaluation is very important,
- Importance of south-north connection and network approach of TEN-T policy,
- Also supports the idea of shift of transport from road to rail,
- Question of motorways of the sea.

After the presentations all participants had an opportunity to present their opinions on necessary steps to be taken for successful implementation of TEN-T policy.

The following are the main thoughts mentioned and discussed during this debate:

Mr. Helmut Adelsberger (Ministry of Transport of Austria)

- Supported an issue of spatial integration – priority to rail transport
- Infrastructure planning = process of integration

Mr. Libor Lochman (Deputy of Executive Director of CER)

- Welcomed the support of environmentally friendly nodes
- More coordination for TEN-T Networks

Mr. Horst Sauer (Joint State Planning of Berlin and Brandenburg, Germany)

- Close cooperation between Member States and EU needed,
- Coordination of EU funds that could help to increase the co-financing ration,
- Global market connections must be taken into account,
- Inclusion of Territorial agenda of the EU, ESPON and INTERREG results.

Complete position paper is available as Annex 1.

5.3.3 June 2010: Shape of core net discussed with the representatives of European institutions during TEN-T Days 2010

As another step in TEN-T recommendations process SoNorA project took part at TEN-T Days 2010 conference which was organized in Zaragoza. As written in official TEN-T Days Report the TEN-T days 2010 gave birth to what will remain as being the "Spirit of Zaragoza", and which could be defined as a consensus on:

- the need to develop a European infrastructure policy serving transport policy needs, as a basis for an emerging integrated European transport system;
- the need to move from a patchy assembly of partly completed national TEN-T sections to a truly interconnected, interoperable, sustainable, user-friendly and safe TEN-T core network, decisively enhancing the European added value of a European infrastructure policy;
- hence, the need to focus on cross-border sections both through targeted financing and through integrated multinational governance mechanisms;
- the need to reconcile competitiveness and territorial cohesion both between older and newer Member states and between the geographic core of the Union and its peripheral areas; it shall also include as from now efficient connections to third countries, in first rank to the Eastern and to the Mediterranean partners.

During this conference representatives of SoNorA project had an opportunity to discuss above mentioned crucial conclusions with TEN-T Policy experts at European level trying to interlink these main focuses of TEN-T Policy for the future with findings and recommendations made by SoNorA project.

5.3.4 September 2010: SoNorA position paper on EC Communication “Future of Transport”

SoNorA project also contributed to the open discussion on EC Communication “Future of Transport” stressing mainly the facts of permanent improvements in the quality of transport and the importance of land-use planning issues. Planning must take into account future visions and trends including

globalisation and migration so as to guarantee a rational and well-balanced transport network and of course the fact of importance of the future development of the TEN-T network for European prosperity.

Complete position paper is available as Annex 3.

5.3.5 August 2010: SoNorA position paper on consultation “future TEN-T Policy”

The aim of second position paper on TEN-T was to provide follow-up on first consultation process with regards to consolidated findings of SoNorA consortium on the review of the TEN-T policy, as discussed in the European Commission “Consultation on the future Trans-European Transport Network Policy”.

In relation to TEN-T Network Update, the SoNorA project:

- Supports the dual layer approach (Comprehensive Network and Core Network, in which the “core network” consists of both a geographical pillar and a conceptual pillar) and the necessity of highlighting the “European added value”,
- Supports Commission’s core net methodology as currently existing,
- Supports a core network principle which should be coherent, sustainable, energy efficient, and multimodal, must link the principal transport infrastructure axes (consisting of priority axes and the transnational axes), reduce still existing bottlenecks and be shaped as a real network,
- Introduces criteria for shaping the network as so called “MODES principle” since the most important principle is to promote multimodal core network:
 - Maturity (preparedness of action);
 - Operation (decisive interconnections guaranteed);
 - Direction (concrete routing of particular axis/corridor);
 - Effect (impact on traffic);
 - Sustainability (sustainable development)
- Urgently stresses the problem of cross-border projects, which are not fully coordinated transnationally,
- Expresses support for the corridor coordinators and keeping up their function for the core network.

This position paper was also introduced within an article of Regional Review Magazine and is available in a full version in Annex 2.

5.3.6 October 2010: Meeting and Debate “TEN-T Policy in Central Europe” organized in Brussels during Open Days 2010

The SoNorA project officially presented its *TEN-T Recommendations* during a transnational meeting organized in Brussels, in parallel with the Open Days 2010. The meeting was organised by Veneto Region and the event was opened by a presentation from Veneto Region diplomatic advisor, **Mr. Stefano Beltrame**.

Mr. Gabriel Hochaime, technical advisor to the Lead Partner Veneto Region went through the SoNorA proposal of TEN-T selection criteria (MODES) which was followed by **Mr. Riccardo Maratini**, in quality of SoNorA project manager, who gave a complete application of the proposed methodology.

Mr. Roberto Ferrazza, from the Italian Ministry of Transport Infrastructure, gave further remarks and indications on the relevant trends and opportunities of the TEN-T network development.

Mr. Helmut Adelsberger, DG MOVE, gave an effective picture of the TEN-T revision process along with indications from the EU institutions. He stressed in several occasions the importance of the network approach in the EU perspective.

Further, experiences and connection with other initiatives (such as the Scandinavian Adriatic Development Region, Scandria, the BAC Initiative, the Baltic Adriatic Axis: Connecting Europe, the Central European Transport Corridor – CETC –ROUTE65) were described.

6 TEN-T general recommendations

6.1 Principles for designing core network

Considering a long process of mutual discussions on TEN-T Policy progress at European and national level and understanding criticality and urgency of its successful implementation into the national conditions SoNorA project comes with concrete recommendations for approach of setting up priority network for the future with proper reflection of SoNorA region.

Methodology used in the project is very close to the Core Network Planning Methodology as dealt in Expert Group 1. Base step is to draw a picture of “Core of a Core Net” connecting Capital Cities, Capital Regions, relevant Functional Urban Areas and Port Areas by extension of Priority and Transnational Axis, following existing infrastructures or infrastructures under construction. The second step presumes higher density of network, integration of Medium Nodes by additional South North Axis, regarding economic potentials of medium nodes and smaller Metropolitan European Growth Areas.

With this respect SoNorA project:

- a) Supports the dual layer approach (Comprehensive Network and Core Network “”, in which the “core network”, consists of both a geographical pillar and a conceptual pillar) and the necessity of highlighting the “European added value” in a process of priority network compilation and underlines the importance of conceptual pillar principle application as a tool how to reach European policies goals and how to guarantee proper level of flexibility respecting possible changes in the shaping of future transport network (demand, routing etc.).
- b) Supports Commission’s core net methodology as currently existing in a way of highlighting the importance of Capital Regions, Major Nodes / Functional Urban Areas > approximately 1 million inhabitants and Ports / Port Areas for a spatially balanced core network on the European level following ESDP and TAEU; The Core Network has to be built up from main nodes which play or might potentially play some key role in European geography (respecting traffic scenarios and potential change in decisive traffic flows in the future) that are then connected by corresponding links of high strategic importance that follow, as much as possible, already existing infrastructure of sufficient capacity or such infrastructure is under construction or the construction commences in approximately next 5 years.

c) Supports a core network principle which should:

- Be coherent, sustainable, energy efficient, and multimodal;
- Link the principal transport infrastructure axes (consisting of priority axes and the transnational axes);
- Reduce still existing bottlenecks;
- Be shaped as a real network (removal of “dead ends”);
- Provide direct south-north connections between the Adriatic and Baltic seas in Central Europe (level of “SoNorA region”) - stresses the importance of defining this core network, in close conjunction with the Commission and the Member States.

d) Supports a core network that must:

- Address the remaining key bottlenecks of transnational relevance, which create direct damages to the European economy;
- Ensure connections to global markets by development of European transport axis, as well as connections between capital regions and other metropolitan areas which will stimulate economic development of EU;
- Guarantee quality intermodal connections between ports and hinterland areas (in a balanced way between Adriatic and Baltic sea), raising global competitiveness of EU;
- Support the integrated planning of transport and logistics services;
- Provide opportunities for increasing the efficiency of existing infrastructure.

6.2 Criteria for designing core network

e) Agrees in general with adequacy of proposed criteria for designing of core network underlining the importance of assessing “European Added Value” the importance of assessing „European Added Value“ in the selection of TEN-T core network components, such as the project’s;

- European/cross-border effects;
- Sustainability (promoting multi-modality);

- Economic growth and competitiveness according to the Lisbon Strategy (raising employment effects);
 - Cohesion (stimulating economic development and integrating countries in the European Union, social and territorial cohesion);
 - Accessibility (in general and with specific reference to regional accessibility), as a necessary precondition for European integration and political stability;
 - Spatially balanced network regarding - implementation of Territorial Agenda of the EU and ESPON (European Spatial Planning Observation Network) as well as INTERREG results.
- f) Supports Multi Criteria Analysis as the best assessment method to determine concrete links and projects and proposes to use of the MODES criteria for the evaluation and selection of links and projects in the framework of the MCA;
- g) Underlines that criteria that should be applied to support the importance of particular corridor/axis/nodes to be included in priority TEN-T network (applicable for core and even comprehensive network) must be fully in accordance with the principles of sustainable development of transport. That indirectly means to be in agreement with the main recommendations and expected development as set by White Paper and as now discussed within the process of consultation of future of transport;
- h) Introduces criteria for shaping the network as so called “**MODES**” **principle** since the most important principle is to promote multimodal core network:
- **Maturity** (preparedness of action);
 - **Operation** (decisive interconnections guaranteed);
 - **Direction** (concrete routing of particular axis/corridor);
 - **Effect** (impact on traffic);
 - **Sustainability** (sustainable development).

6.3 Definition of selection criteria – “MODES”

Selection criteria which should be applied to support the importance of particular corridor/axis/nodes to be included in priority TEN-T network (regardless if we are speaking about core network or comprehensive network) must be fully in accordance with the principles of sustainable development of transport. That indirectly means to be in agreement with the main recommendations and expected development as set by White Paper and as now discussed within the process of consultation of future of transport. Since these criteria should cover political, social, environmental and economic dimension it is necessary to come with such criteria creating the network with these aspects (general /strategic level):

- Multimodality,
- Interoperability,
- Sustainability,
- Accessibility,
- Spatially balanced network.

In deeper analysis, SoNorA project focused its effort on definition of concrete set of criteria respecting above mentioned principles. Finally, SoNorA project offers criteria (see below) for shaping the network as so called “MODES principle”.

MODES describes primarily a thought that all of below presented criteria can be applied for all modes (it is not necessary to distinguish criteria for road, rail, water, air etc.). Within this logic MODES means also five main groups of criteria:

- M...Maturity (preparedness of action)
- O...Operation (decisive interconnections guaranteed)
- D...Direction (concrete directing of particular axis/corridor)
- E...Effect (impact on transport)
- S...Sustainability (sustainable development)

The following is a thorough description for each criteria.

6.3.1 Maturity

Each action requesting to be a part of the core network (or financing at the end) must be justified by a sufficient level of preparedness – construction works are to be legally commenced in a short time, this part axis fits to the global TEN-T network and fulfils the general aspects of the network (see above).

There are some concrete elements to be assessed, and these are described as follows:

Minimum requirements:

- Axis is part or extension of currently existing priority or transnational axis

Additional requirements:

- Memorandum of Understanding has been already signed / at least is being prepared,
- Section is a part of the respective national priority,
- Project is of transnational relevance - in transport projects cross border effect must be given the highest priority due to smooth completion of different infrastructure projects. It is not acceptable that two neighbouring countries building the same corridor have different approach and prioritisation of completion of infrastructure. It is urgent to provide well managed cooperation between countries in order to prioritise the same corridor / axis to be developed,
- Level of coordination of work must be considered,
- Infrastructure is already existing or works will commence approximately in the next 5 years (permissions given, technically prepared).

6.3.2 Operation

Operation in this context means the level how the shaped network contributes to the inter-connections of the main hubs, nodes and terminals as the most important gateways of traffic flows meaning smoothening the connections among the significant points playing crucial role in O/D matrix.

Concrete elements to be assessed are following:

- Clear connection of EU main nodes with priority Capital Regions and Major Functional Urban Areas,
- Connection to major and multimodal freight terminals proven,
- Connection to major port areas including Motorways of the Sea (MoS) supported,
- Connection of major airports simplified,
- Connection to global market and neighbour countries,
- Accessibility of peripheral regions,
- Reduction of loop ways and integration into long distance connections.

Proposed indicators for accessibility

- Accessibility improvement to road, rail, ports, maritime, waterway,
- Change of traffic flows after project realisation,
- Travel time reduction,
- Removal bottlenecks and catchment areas,
- Connection to global markets (main connection point: ports, airports, border crossing).

Proposed indicators for cross-border effects

- Quantification of gravity flows cross-border,
- Increase of volumes cross-border (in %),
- Change in traffic flows directing cross border,
- Scheme of coordination (level of official agreement),

6.3.3 Direction

Although directing of each concrete corridor is always a question of several discussions this group of criteria should be understood as a tool for facilitation of transport. This is rather about “network principle”. Since a special focus is dedicated to multimodality, sufficient traffic flows at present day scenario and in future must be considered as well as the issue of eventual parallel routing. One of the most important impacts must undoubtedly be definite removal of existing bottlenecks. The concrete elements to be assessed are following:

- Strong traffic flows must be proven (in a case of cross border project joint traffic forecast is existing),
- Currently existing or expected bottlenecks removal,
- Issue of capacity and its saturation (present day and future scenario),
- Alternative parallel routing (justification of concrete routing),
- Dedicated freight corridors / green corridors created?
- High technical standards (motorway standard, double track rail, min. speed 160 km/h, electrified) required; in case of cross border projects compatibility of technical characteristics has to be assessed.

6.3.4 Effects

The basic characteristic of each infrastructure is to enable the movement of goods and transport. This principle is even emphasized when describing TEN-T network, especially speaking about core network. Each part of the corridor (which finally supplies a whole axis) must be proven by measureable effects, for the purpose here now called “socio-economic principle”. In general all these effect should support practical implementation of Lisbon Strategy.

Concrete elements to be assessed are following:

- Increase of passenger / freight transport (change in %),
- Spatially balanced network,

- Socio-economic effects, economic growth, cohesion,
- Development of multimodality,
- Implementation of TSIs, ERTMS, ICT etc (prioritised elements of European policies),
- Contribution to Lisbon Strategy realisation (for the needs of transport infrastructure impact especially focused on economic growth of the regions touched by construction of particular infrastructure).

Multi-Criteria Analysis to be applied on the whole corridor, not only on particular section – Impact Assessment mandatory.

Proposed indicators for spatially balanced network

- Change in GDP when implementing TEN-T policy and concrete project,
- Growth of population, ageing – needs for transport,
- Urban vs peripheral areas utilization,
- Tourism, industrial zones, level of service.

Proposed indicators for socio-economic effects, cohesion

- Map of global and EU primary economic hubs,
- Stimulus for economic development,
- Structural funds spending.

Proposed indicators for multimodality

- Interoperability issues (implementation),
- Map of major hubs for freight rail,
- Level of service,
- Key interchange nodes (freight / passenger).

Proposed indicators for contribution to Lisbon Strategy goals (esp. economic growth)

- Regional economic growth disparities existing,
- Economic growth changes – absolute, in %,
- Level of employment.

6.3.5 Sustainability

European Union Council of Ministers of Transport defines a sustainable transportation system as one that:

- allows the basic access and development needs of individuals, companies and society to be met safely and in a manner consistent with human and ecosystem health, and promotes equity within and between successive generations,
- is affordable, operates fairly and efficiently, offers a choice of transport mode, and supports a competitive economy, as well as balanced regional development,
- limits emissions and waste within the planet's ability to absorb them, uses renewable resources at or below their rates of generation, and uses non-renewable resources at or below the rates of development of renewable substitutes, while minimizing the impact on the use of land and the generation of noise.

To guarantee fulfilment of the above mentioned statements, concrete elements to be assessed are the following:

- Financial sources (level of guarantee); in a case of cross border projects investment planning coordination described,
- Rentability / Profitability (ROI, ROE as a justification),
- Plan of sustainable development in the next 30 years,
- Risk of non-investment (description of potential after-effects),
- Regional environmental impact (noise reduction, CO2 reduction...),

- Achieved modal shift to environmentally friendly modes.

Proposed indicators for sustainability

- Solutions for existing environmental problems,
- Potential risk associated to investment (obstacles, additional costs),
- Risk of non investment (socio-economic value of this risk),
- Estimated modal shift to more sustainable modes.

6.4 Supplementary infrastructure measures shaping a core network

i) Underlines that several elements of EU transport policy should get a prominent role in defining the “core network”, including:

- Sustainable energy efficient transport solutions for all modes (passenger transport, logistics, rail and road, motorways of the sea, inland waterways and major airports);
- ERTMS, interoperability issues, etc.;
- Intelligent transport systems for facilitating smoother and safer traffic management;
- Global fight against climate changes.

j) Urgently stresses the problem of cross-border projects, which are not fully coordinated transnationally (i.e. national infrastructure plans do not reflect international agreements on infrastructure investment programmes and it is still rather an assembly of national sections than European seamless network). Therefore, strong cooperation mechanisms should be developed to support TEN-T policy, which encourage Member States to focus on cross-border projects and thus minimise the risk of un-harmonised implementation of cross/border projects (so as to avoid infrastructure sections which end at the border since the relevant neighbouring country did not complete the section according to original plans)¹.

¹ Deeper analysis of cross-border projects and impact on unharmonized national plans offers SoNorA output 4.2.2 “ **Cost benefit analysis and impacts of disalignment,,**

- k) Urgently stresses the problem of cross-border projects, which are not fully coordinated transnationally (i.e. national infrastructure plans do not reflect international agreements on infrastructure investment programmes and it is still rather an assembly of national sections than European seamless network). Therefore, strong cooperation mechanisms should be developed to support TEN-T policy, which encourage Member States to focus on cross-border projects and thus minimise the risk of un-harmonised implementation of cross/border projects (so as to avoid infrastructure sections which end at the border since the relevant neighbouring country did not complete the section according to original plans)².
- l) Expresses support for the corridor coordinators and keeping up their function for the core network (PP and PAN coordinators), geographical and thematic extension of their duties regarding the extension of corridors and the integration of policy elements³.

6.5 Specific TEN-T Planning contribution “Europe 2020” strategic objectives

- m) Supports the integration of network planning and transport policy by the conceptual pillar which will lead to better coordination and increase of efficiency of EU policy as an important element for implementation of EU Strategy 2020.
- n) Highlights the fact that permanent improvement of quality of transport system is needed; it means to not only provide a quality infrastructure but to provide the global background for functioning of the transport services in general (i.g. improvement of logistics services, involvement of ports into the global economy chain, implementation of innovative technologies such as intelligent transport systems, ERTMS etc.).
- o) Draws attention on the issue of future migration based on the effect of future ageing of society; this might result into the changes or increase of movement of goods and people.
- p) Stresses the importance of EU integration with neighbouring regions because of other liberalisation of markets and globalisation of world market in general.

² Deeper analysis of cross-border projects and impact on unharmonized national plans offers SoNorA output 4.2.2 “ **Cost benefit analysis and impacts of disalignment,,**

³ More information to be found in output 4.2.3 “Evaluation of Impact and Effectiveness of transnational coordination”

- q) Recognises several elements with a crucial impact on smooth functioning of the transport system; these elements must be precisely touched by any of the European existing or newly commenced policy:
- Interoperability of the network – to be guaranteed by the application of standards (TSI implementation);
 - Proper interconnections of nodes - sustainable energy efficient transport solutions for all modes (passenger transport, logistics, rail and road, motorways of the sea, inland waterways and major airports);
 - Avoiding congestions and removal of key bottlenecks of transnational relevance, which create direct damages to the European economy;
 - Maritime sector to be more involved in the transport map - guarantee quality intermodal connections between ports and hinterland areas (in a balanced way between Adriatic and Baltic sea), raising global competitiveness of EU.

6.6 SoNorA region importance

- r) Urges the Commission to update the current TEN-T policy to adequately address the SoNorA area, in particular with regards to the changes due to EU enlargement.
- s) Underlines the importance of ensuring South North connections in Central Europe, in particular between the Adriatic and Baltic Seas, given the:
- Historical underdevelopment of current transport sections;
 - Expected increase in transport volumes throughout Europe (in long term view);
 - Overload of existing south-north corridors;
 - Necessity to ensure balanced spatial development and economic growth;
 - Utility of connecting Baltic Sea Strategy with Mediterranean Union;
 - Necessity to establish several viable and safe Baltic sea transport crossing options; and

- Increasing the importance of human and economic integration of Scandinavian countries with Central Europe, via “Motorways of the sea”
- Necessity of considering North Adriatic as a gateway to the Far East.

The methodology and criteria described, especially with reference to SoNorA region importance will be developed in the following chapters providing a concrete exemplification.

7 TEN-T network proposals for SoNorA Area

7.1 Importance and impact of TEN-T Policy for SoNorA countries

The SoNorA project geographically considers the very sensitive and heterogeneous area of the Central Europe forming the bridge between old and new Member States together with Accession countries and the neighbouring countries. This area is one of the world's most dynamic growth regions in a global context.

Efficient and sustainable transport solutions are both a prerequisite and a tool to promote this development. For this reason, the improvements will not only result in more efficient transport services to the industry, but will also increase accessibility within the Baltic Sea and the Adriatic Sea areas and contribute in bridging the social and economic gaps existent thus providing an interlinkage of TEN-T Policy to social and cohesion policy.

The TEN-T Recommendations have, therefore, a decisive impact on smooth functioning of global market with the intension of providing quality infrastructure as a basic precondition for transport and logistic services. The synergic integration of different modes of transport should guarantee the realisation of a functionally interconnected network that is consistent with the objectives of EU transport or other relevant policies, such as decarbonisation. Therefore, while current TEN-T priority is related to a single mode transport and considering each in separate manners, the proposed TEN-T network should be multimodal (as already mentioned in the previous paragraphs). This approach towards multimodality is the basis of relevant development of an effective green transport. The concept, goes beyond the scope of the present analysis, and is being developed in many studies, aiming at the establishment of green corridor denoting long-distance freight transport corridors where advanced technology and co-modality are used to achieve energy efficiency and reduce environmental impact.

Given the context and main direction of the analysis carried out in the following paragraphs will be dealing with the development of a rail oriented co-modal Core network within SoNorA area. Nevertheless, it's important to underline the relevance of the connections bridging to the external worldwide transport system. In fact, one of SoNorA aims is to support the regional development and accessibility of the regions. From this point of view, it is crucial to understand the importance of Central European regions in the context of extra/intra European and SoNorA global business. This context could be described by various business and transport relationships and its strength. The most significant

relationships form then the key interconnections and describe the role of the regions more closely and together with review of infrastructure conditions enable better understanding of which axes are more or less significant for further regional development.

In this respect, the role of maritime routes is worth mentioning. An effective implementation of Motorway of the Sea of technical concepts is ongoing or planned in both the seas, aiming at improving the quality of maritime operations while also improving their integration in the global transport chain. The programme, brought forward in the framework of PP21, fosters the development of several small actions for improvement of port infrastructure, information systems and the efficiency of maritime operations not to mention the improvement of connections between ports. One important remark concerns the usage of the term "motorways of the sea" within the TEN-T context. Currently it is used to refer to successful project applications for EU co-funding from the funds of that same name. Therefore, a great number of important and busy sea liner and/or ferry connections are not mentioned as part of the TEN-T network as opposed to the connections being a part of "MoS" co-funding applications. Moreover, a number of the EU strategies that are being currently developed refer to the development of the "motorways of the sea" network.

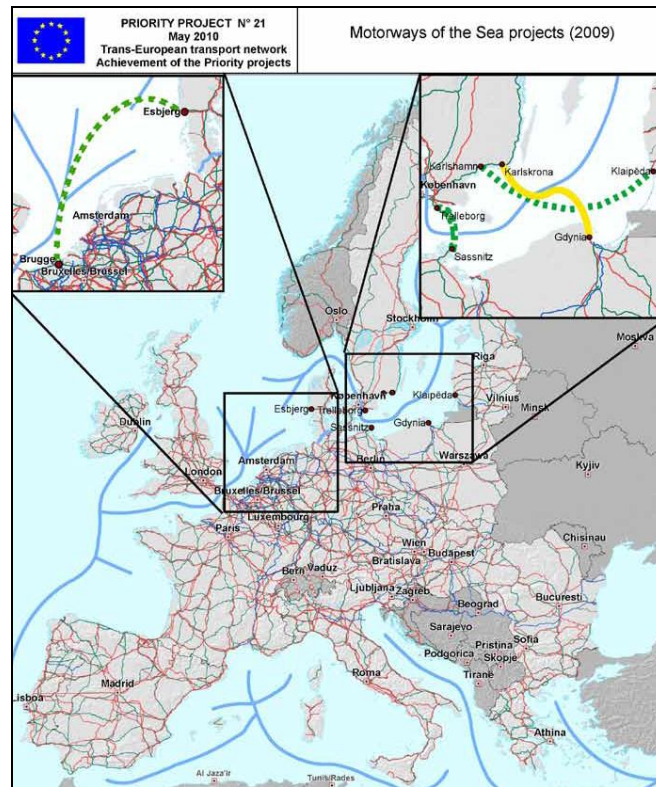


Figure 11: Motorways of the Sea Projects (2009)

source: Implementation of the Priority Projects – Progress Report 2010, Trans-European Transport Network Executive Agency

http://tentea.ec.europa.eu/download/publications/progress_report_superfinal_web.pdf

As a consequence, the MoS programme also promotes the cooperation between ports and sea regions, such as in the Baltic area in which a common understanding on issues as ice operations, environmental protection and traffic safety is steadily developing.

The identification of port clusters aims at paving the way to the formation of multi-port gateways in line with the approach fostered by EU. In fact, the presence of a huge amount of ports whilst guaranteeing closeness to the natural hinterland, is also responsible for large economic inefficiencies and for duplications of investment. A good solution could be assured by a strong organizational coordination and cooperation among neighbouring ports. Thus specialising ports in certain types of trade (but not exclusively) on one hand and establishing common procedure on the other, leads to maximise the results of investment.

Concerning ports association, the Northern Adriatic Ports Association (NAPA) provides an already established example and further associations of ports should be encouraged in the Baltic Sea. NAPA

brings together the ports of Ravenna, Venezia, Trieste, Koper and Rijeka. The cooperation established allows to enhance common strengths and fight present weaknesses, thereby increasing the attractiveness with reference to potential for international trade within the Mediterranean basin but also, with Far-Eastern markets. This cooperation does not simply imply boosting economies of scale but also the realisation of common actions and the usage of shared tools (e.g. common information network).

Another important aspect is the need to establish efficient hinterland relationships by means of efficient connections with the most important hinterland and foreland destinations. An effective implementation is obtainable by means of "dry-ports" providing efficient inland intermodal terminal directly connected and acting in close cooperative connection with maritime ports

Ideally the main connections between ports and their intermodal platforms should be railways or inland waterways. However, in certain cases, no better solution exists than connections by road infrastructures (e.g. motorways in Poland) both in the present as well as near future.

As a conclusion, a great deal is currently and correctly paid to the issue of bringing the ports effectively into the network in which SoNorA proposal falls perfectly in line.

Since the project touches a part of Central European programme and TEN-T discussions were primarily focused on these underdeveloped area (based on historical development of priority projects due to EU Accession process) for which well set policy of TEN-T has a significant impact for future connection to the global market, it was decided to draw a concrete proposal of core network within SoNorA region respecting Core Network planning Methodology and "MODES" Selection Criteria. Core Network shaping, as done by partners, can be therefore considered as an added value of all currently known conclusions, not only at the project level but also at European level since, till this moment, discussions dealt mainly with methodology on how to set core network in Europe.

7.2 Setting up Rail Oriented co-modal Core network within SoNorA area

In the following pages, a concrete proposal maps of core network applied within and to the SoNorA area, and they are the best/most suitable exemplification of this methodology. The results depict the proposal of the project partnership (as agreed upon during the Prague meeting – June 2010) respecting

Core Network planning Methodology and “MODES” Selection Criteria, as stated in previous paragraphs, with the aim of setting up a Rail Oriented co-modal Core network within SoNorA area.

The focus was set on the Core Network connections mainly because a thorough definition of the comprehensive network goes beyond the scope of this output. Nevertheless, the SoNorA project fully promotes the development of this layer that complements the core network and therefore strengthens its efficiency and validity according to MODES criteria. Core Network shaping, as done by partners, can be therefore considered as an added value of all currently known conclusions, not only at the project level but also at European level since, till this moment, discussions dealt mainly with methodology on how to set core network in Europe.

7.3 Explanatory notes on scenarios

Two scenarios are proposed aiming at providing flexible indications according to budget availabilities and different time horizons. The scenarios for the development of the Core Network, according to the methodology described in the previous pages, confirm the relevance of current Priority Projects within the SoNorA area along with the Pan European corridors already identified and suggest additional extensions. Focus was placed on the Core Network connections mainly because a thorough definition of the comprehensive network goes beyond the scope of this output. Nevertheless, the SoNorA project fully promotes the development of this layer that complements the core network and therefore strengthens its efficiency and validity according to MODES criteria. Moreover, as said, it is to underline that the scenario maps proposed depict the connection from and to main nodes or group of nodes.

Current State:

The developed maps originated from the official DG MOVE presentations in which Priority Projects are reported in red or green or blue (according to the transport mode) and this map has been adopted as a general background.

The Pan European Transport Corridors, along with relevant connection that reach outside the SoNorA area, has been indicated in grey. On the other side, proposed links meaning to close the network connecting relevant nodes are reported in violet.

Relevant nodes are identified applying the methodology described within the document with reference to both single relevant cities and cluster of city or, generally speaking, Functional Urban Areas (FUAs, widespread urbanised areas). The connection are represented simply as links between FUAs, thus not considering the specific routing and, in principle, parallel routing between identified.

Particular attention was devoted to the connection of ports and a specific deal is paid to the identification of ports and their grouping. In fact, the following are considered within the maps:

Port Associations:

- NAPA: North Adriatic Port Association (Ravenna, Venice, Trieste, Koper, Rijeka)

Port Areas:

- NAP: North Adriatic Port Area (Ravenna, Venice, Trieste, Koper, Rijeka) – orange in the maps
- SBP: South West Baltic Port Area (Rostock, Sassnitz, Swinoujscie, Szczecin)
- SEBP: South East Baltic Port Area (Gdynia, Gdansk, Kaliningrad)

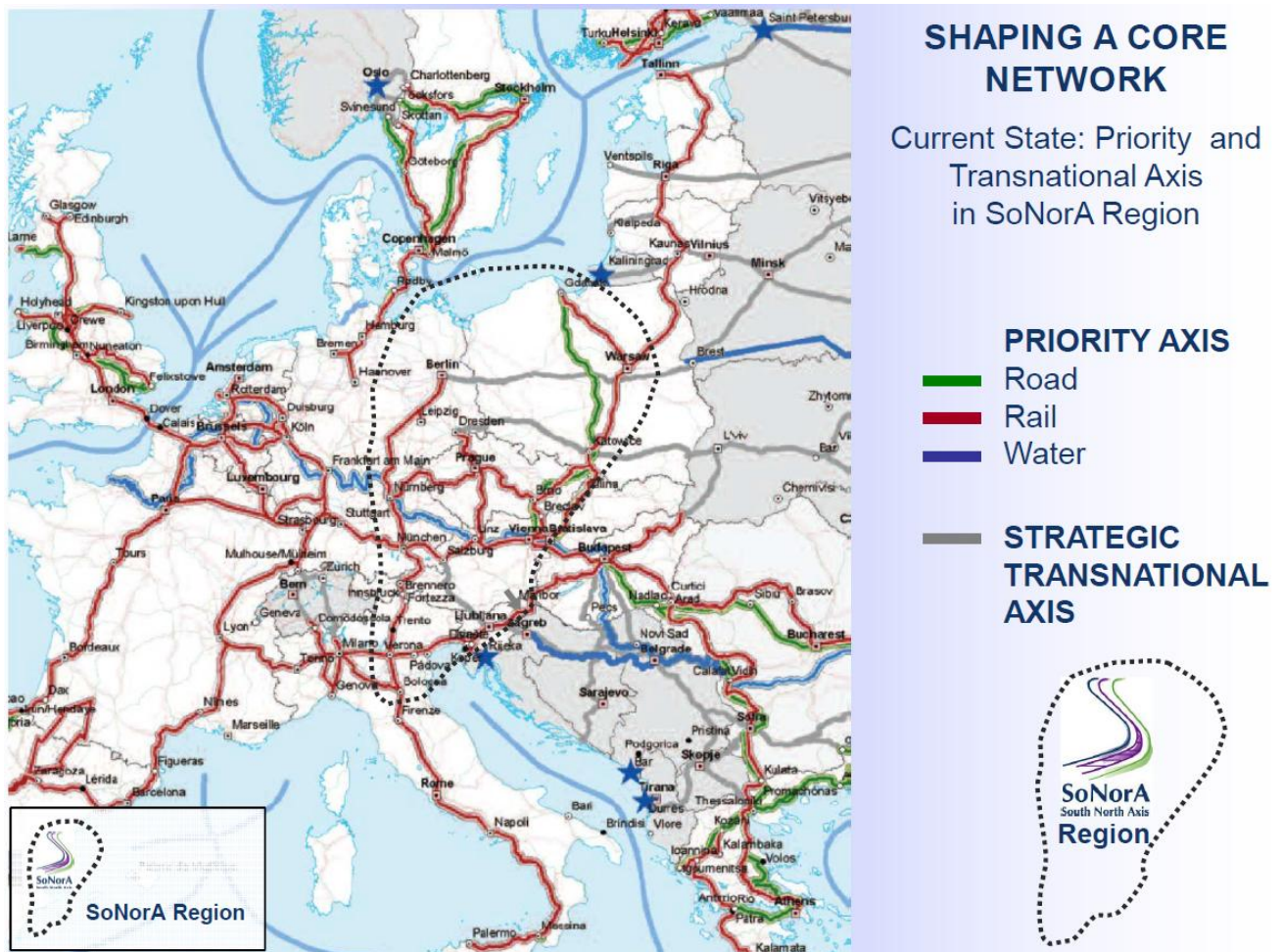


Figure 12: Current Priority Projects and Transnational Axis in SoNorA region

source: SoNorA elaboration on the basis of DGMOVE material

Motorways of the Sea, in the Baltic and Adriatic sea, are deemed as relevant by the SoNorA partnership even though it is not part of the SoNorA area therefore already identified Motorway of the Sea (MoS) connection to the port are not represented in the maps, taking also into account the criterion of not dealing with specific routing. The present MoS are shown in a schematic way as presented by DGMOVE. Nevertheless, the SoNorA partnership confirms the relevance of the already identified MoS (Gdynia – Karlskrona, Sassnitz – Trelleborg, Rostock – Gedser and others according to the EU PP21 and welcomes the development of new connections.

SCENARIO 1: Currently existing priority projects that will create the base for future core network, it is a rail oriented co-modal Core Network in SoNorA Region. It is namely a “Core of a Core Net” close to the current Core Net Methodology: it aims at connecting Capital Cities, Capital Regions, relevant Functional Urban Areas and Port Areas by extension of Priority and Transnational Axis following existing infrastructures or infrastructures under construction. The Scenario 1 therefore add to already established Priority Projects and Transnational Axis:

- Extension of PP23 in both directions (i.e. Southwards from Wien / Bratislava to Graz – Klagenfurt - Villach – Udine – Trieste/Venice – Bologna / Ravenna and Northwards from Gdansk to Gdynia) ⁴,
- the extension of PP1 (Berlin-Rostock),
- and the extension of PP22 (Dresden-Berlin).

SCENARIO 2: Based on Scenario 1, consider a higher density of network and the integration of Medium Nodes by additional South North Axis, regarding economic potentials of medium nodes and smaller Metropolitan European Growth Areas. In particular, along with the extension proposed within the Scenario 1, the Scenario 2 includes also the development of a Freight Corridor between Świnoujście and Wrocław.

7.3.1 Terms of use of the maps

Given the importance and sensibility of the topic the SoNorA project partnership agreed that the maps were subject to the following terms of use as highlighted in the notice below:

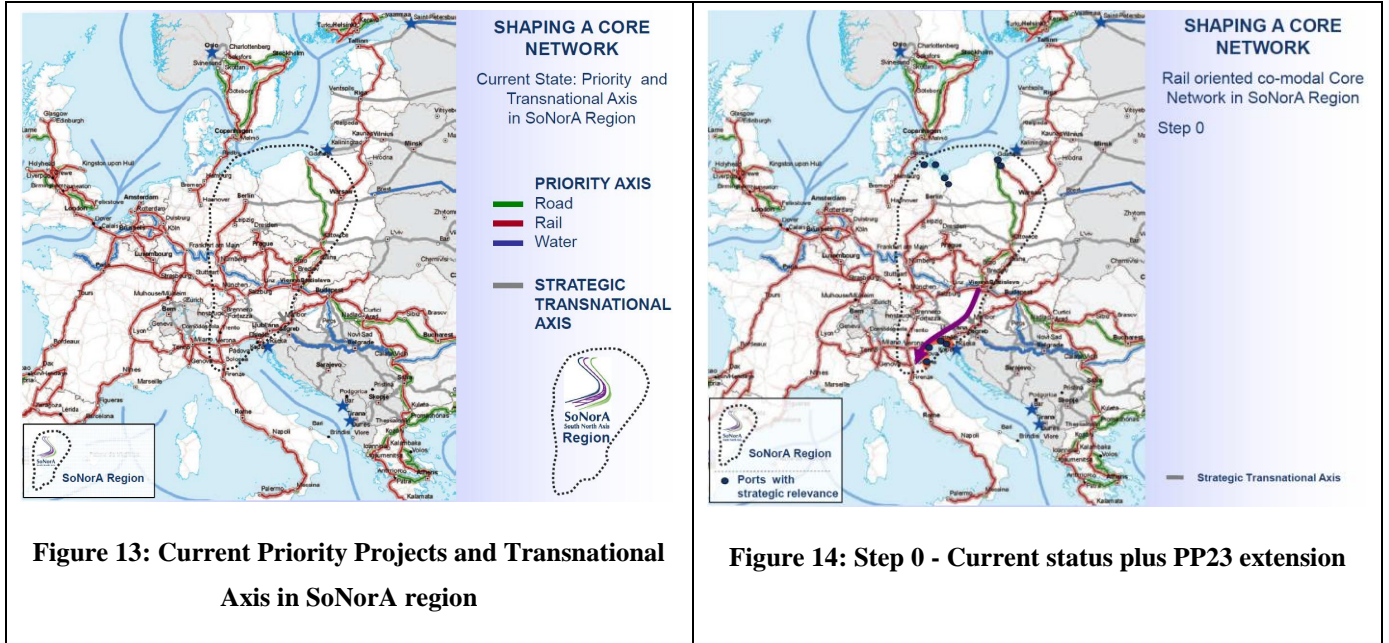
“IMPORTANT NOTICE: Given the importance of the matter and the sensibility of the issue, the maps attached are subject to special terms of use in order to guarantee the correct and impartial use of the maps.

As such, ALL PARTNERS ABIDE WITHOUT ANY EXCEPTIONS to the condition that BOTH SCENARIO MAPS HAVE TO BE USED TOGETHER. Any specific country focus will have to be done after the full presentation with both maps is given”

⁴ Letter of intent on the Development of the Baltic - Adriatic Transport; Corridor including the extension of the existing Pan - European Transport Corridor VI, signed in Luxemburg on 12/10/2006 by AT, CZ, IT, PL, SK. “The Baltic Adriatic Corridor declaration: Alliance of 14 Regions to support the consequent and immediate realization of the Baltic-Adriatic Railway Corridor for the consequent and immediate realization of the Baltic Adriatic railway corridor” signed on 6/10/2009 in Brussels.

7.4 Scenario 1 of SoNorA Rail Oriented Core Network

7.4.1 The development process: intermediate steps



source: SoNorA elaboration on the basis of DGMOVE material

Scenario 1 identifies “Core of a Core Net” connecting Capital Cities, Capital Regions, relevant Functional Urban Areas and Port Areas by extension of Priority and Transnational Axis, following existing infrastructures or infrastructures under construction.



Figure 15: Scenario 1 of SoNorA Rail Oriented Core Network

source: SoNorA elaboration on the basis of DGMOVE material

7.4.2 Extension of PP01 (Berlin – Rostock) – justification based on MODES criteria



Figure 16: Extension of PP01 and PP22

source: SoNorA elaboration on the basis of Trans-European Transport Network Executive Agency material

http://tentea.ec.europa.eu/en/ten-t_projects/30_priority_projects/

- Technical standards:
 - length ca. 230 km, double track, electrified, axle load 25 tons, ERTMS, speed 160-200 km/h
- Maturity of action:
 - existing railway axis, upgrading under construction, finished 2015
 - multimodal axis because it is complemented by existing A 19 Motorway, 2 lanes
- Political commitment - agreed upon on all levels regionally, nationally and internationally:
 - COINCO Charta March 2007 signed by 19 Partners,

- Berlin Declaration November 2007 signed by all 6 East German States,
- North-South-Initiative, Declaration Mecklenburg-Vorpommern and Seeland 12.04.2010,
- Declaration Mecklenburg-Vorpommern and Skane from 13.04.2010,
- Green Corridor Agreement between Swedish Government and Scandria Project November 2009, project is part of the EU Strategy for the Baltic Sea Region,
- the VASAB Long Term Perspective and the Federal Transport Infrastructure Plan – FTIP.

7.4.3 Extension of PP22 (Dresden - Berlin) – justification based on MODES criteria

- Technical standards:
 - length ca. 200 km, double track, electrified, 160-200 km/h
- Maturity of action:
 - existing railway axis, upgrading under construction, finished 2015
 - multimodal axis because it is complemented by existing A 13 Motorway, 2 lanes
- Political commitment - agreed upon on all levels regionally, nationally:
 - Berlin Declaration November 2007 signed by all 6 East German States
 - North-South-Initiative, Federal Transport Infrastructure Plan – FTIP
- Considerations from SoNorA transport modelling (Output 3.2.4 and O3.2.5):

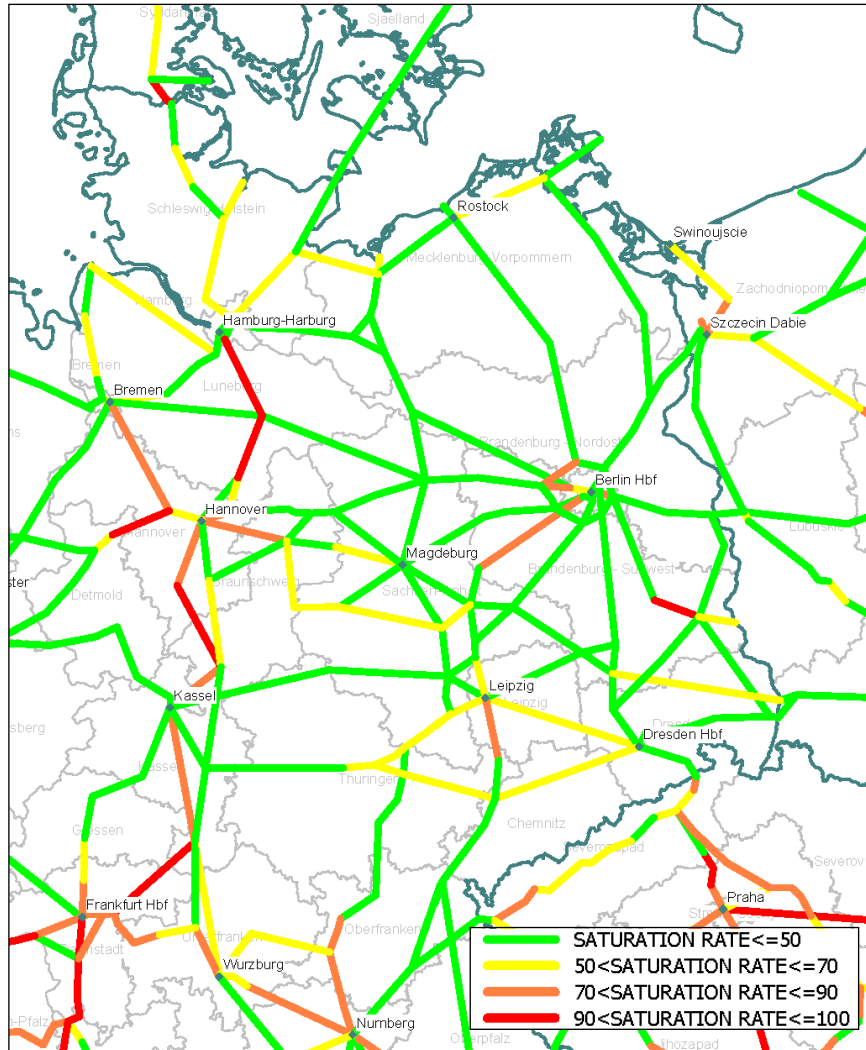


Figure 17: Detail view of SoNorA model traffic assignment (current state 2009)

With reference to the proposed extension, an analysis of the SoNorA transport model (see figure above) leads to conclude that:

- Significant congestion level in the western part of Germany near Hamburg in the south north direction.
- Unexploited capacity for alternative routing in the Eastern part of Germany via Berlin

7.4.4 Extension of PP23 - justification based on MODES criteria

This extension is referred to as “PP23 extension” in the text (in which a special attention is paid to rail mode). Nevertheless, being the aim the development of a multimodal network is worth mentioning also PP25 which functionally complements the PP23 in the realization of the Baltic Adriatic Corridor which Maturity is based on:

- Formal agreements already existing (Memorandum of Understanding on Gdansk – Gdynia, and Wien/Bratislava – Graz – Klagenfurt - Villach – Udine – Trieste/Venezia - Bologna/Ravenna);
- Strategic transnational axis as a part of core network;
- Port areas as the main gateways (entrance/exit points) for freight – strategic influence for traffic flows of SoNorA region as well as its connection with global market;
- Port areas indicate the need of south-north connection development.

7.4.5 Extension of PP23 – justifications based on MODES criteria (northern extension - Poland)



Figure 18: Extension of PP23 - northern extension

source: SoNorA elaboration on the basis of Trans-European Transport Network Executive Agency material

http://tentea.ec.europa.eu/en/ten-t_projects/30_priority_projects/

- Technical standards:
 - E-65 is under modernisation from Warsaw to Gdynia – Chylonia station (nearby port of Gdynia area) - within the scope of Operational Programme Infrastructure and Environment 2007-2013. The completion of works is expected until 2015.
- Maturity of action:
 - This Freight Corridor is to be established 5 years after entry into force of this Regulation
- Political commitment - agreed upon on Regional, National and International level:
 - Gdynia - Katowice-Ostrava/Zilina-Bratislava/ Vienna- /Klagenfurt - Udine- Venice/ Trieste/ / - Bologna/Ravenna/ /Graz-Maribor-Ljubljana-Koper/Trieste established by EU Resolution as one of Freight Corridors
 - Regional

- The Letter of Intent of the selfgovernments of voivodeships: Pomorskie, Kujawsko-Pomorskie, Mazowieckie, Warmińsko-Mazurskie, Śląskie, Łódzkie, Wielkopolskie concerning strenghtening interregional cooperation for creating development conditions for the Baltic-Adriatic Transport Corridor in Poland (Gdynia 2010)
 - Common initiative of Baltic Link Association and ARCA for upgrading of the transport corridor Baltic Link to E-road (Gdynia 2010).
 - Joint political statement of Euroregion Baltic Council regarding the ongoing revision of the TEN transport corridors in Europe. (ERB Council – 2010)
 - National
 - National Development Strategy of Poland 2007-2015
 - Operational Programme “Infrastructure and Environment 2007-2013”. (Warsaw 2006)
 - International
 - European Agreement on main international railway lines (AGC): E 65 railway (Gdynia - Gdańsk - Warszawa - Katowice - Zebrzydowice - Petrovice u Karvine - Ostrava - Breclav - Bernhardstahl - Wien - Semmering - Bruck a.d. Mur - Klagenfurt - Villach - Rosenbach - Jesenice - Ljubljana - Pivka – Rijeka.
 - Regulation of European Parliament and the Council on 22 September 2010 concerning a European rail network for competitive freight (EC 913/2010. (Freight Corridor 5 (Balt-Adria) Gdynia – Katowice – Ostrava/Žylyna - Bratislava/Vienna/ Klagenfurt - Udine-Venice / Trieste/Bologna/Ravenna – to be established until 10 Nov. 2015.)
 - European Commission’s Communication concerning the European Union Strategy for the Baltic Sea Region (Action Plan COM 2009 248).
- (Confirmation the railway Gdańsk – Warsaw-Brno/Bratislava-Wien – as a “flagship project”)

- UNECE Trans-European network for Motorways and Railways – TER project Master Plan – July 2006.

(The Master Plan accepts the list of trans-European railways – including:

- E 65 Gdynia – Gdańsk – Tczew – Malbork – Warsaw – Idzikowice – Psary – Katowice – Pszczyna – Wisła Most – Zebrzydowice – Petrovice u. Karvine – Bohumin – Hranice na Morave – Prerov – Breclav – Bernhardstahl – Hohenau – Retz – Florisdorf – Vienna – Bruck a.d.M. – St. Michael – Villach – Rosenbach – Jesenice – Ljubljana – Pivka – Il. Bistrica – Sapjane – Rijeka.
- T 065 Tczew – Barłogi – Zduńska Wola – Gliwice – Pszczyna)
- Rail Net Europe Corridor 07 (Gdynia – Katowice – Vienna – Trieste/Koper).
- Memorandum of Understanding of the 14th of October 1999 for Corridor VI – (Gdańsk – Warszawa – Katowice – Zilina with branches to Poznań and Breclav/Brno.
- Letter of intent of the 12 October 2006 on the Development of the Baltic-Adriatic Transport Corridor including the extension of the existing Pan-European Transport Corridor VI Gdansk – Warszawa – Katowice – Zilina with branches to Poznań and Breclav/Brno, to Bratislava / Wien – Graz – Klagenfurt – Udine – Trieste/Venezia – Bologna.

Very much related link of strategic importance is also railway line CE-65 (indicated in Figure 18 in black colour). This line is dedicated mostly to freight transport (since PP23 – railway line is more dedicated to passenger transport) and it is the shortest and most economical/optimal connection for freight transportation between the ports of Gdynia/Gdańsk and the Southern border of Poland. In fact, this was included in the Regulation of European Parliament and the Council on 22 September 2010 concerning a European rail network for competitive freight (EC 913/2010).

- Considerations from SoNorA transport modelling (Output 3.2.4 and O3.2.5):

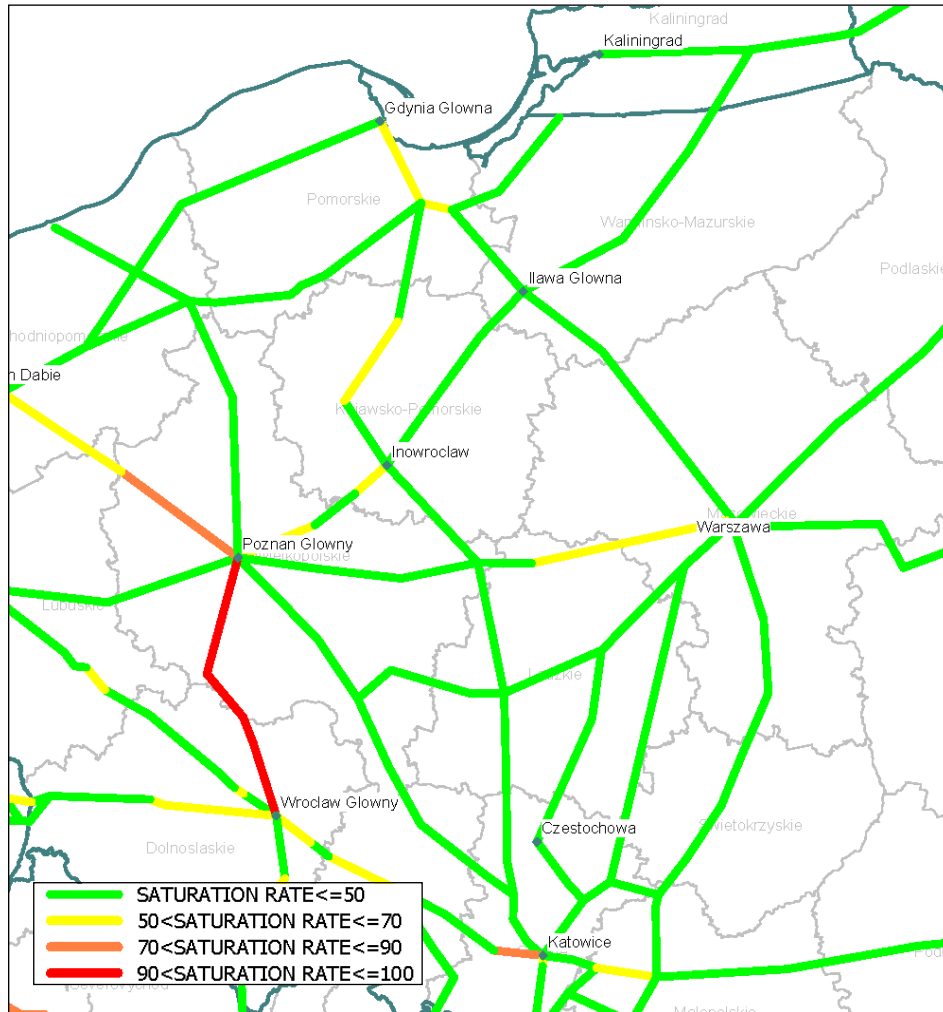


Figure 19: Detail view of SoNorA model traffic assignment (current state 2009)

With reference to the proposed extension, the analysis of the SoNorA transport model (see figure above) leads to conclude that:

- Levels of flow relatively high in the area of Gdansk and Gdynia
- Possibility of alternative routing and or infrastructure development

7.4.6 Extension of PP23 – justification based on MODES criteria (southern extension)

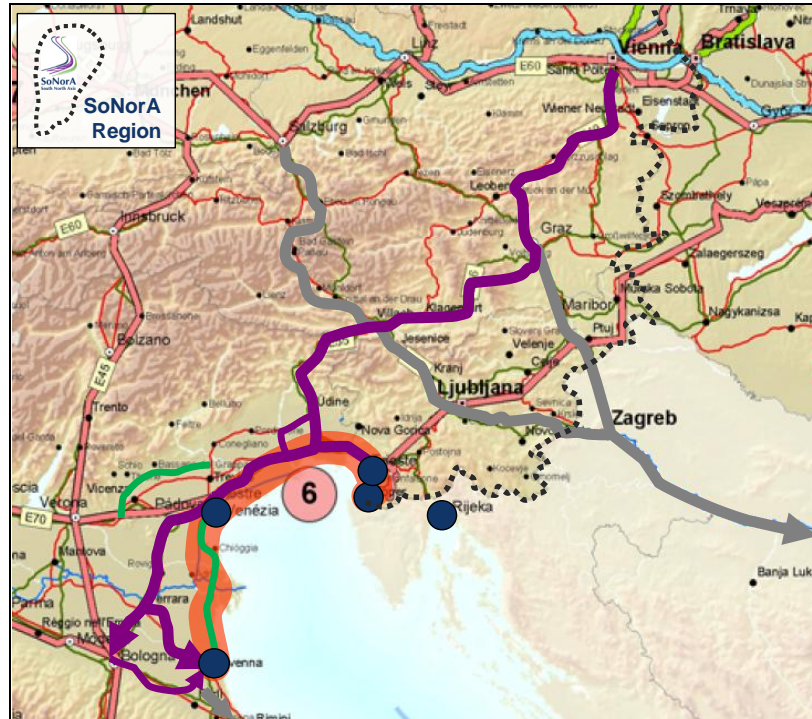


Figure 20: Extension of PP23 - southern extension

source: SoNorA elaboration on the basis of Trans-European Transport Network Executive Agency material

http://tentea.ec.europa.eu/en/ten-t_projects/30_priority_projects/

- Technical standards:
 - Semmering base tunnel: length ca. 26 km, flat-line (0,85%), for heavy freight trains (with just a single locomotive), reduction of travel time (Vienna – Graz) of almost half an hour, targeted completion 2022
 - Koralm railway: length ca. 130 km, two track, electrified, reduction of travel time (Graz – Klagenfurt) two hours, 158-256 trains per day, targeted completion 2020
 - Tarvisio – Udine: length ca. 94 km, double track, electrified, axle load 22.5 tons (in part with speed restriction), SCMT, maximum grade 15 %, speed 140-180 km/h
 - Venezia Mestre - Padova: length ca. 28 km, double track, electrified, axle load 22.5 tons, SCMT, speed 220 km/h
 - Padova-Bologna: length ca. 123 km, double track, electrified, axle load 22,5 tons (in part with speed restrictions), SCMT, speed 135-180 km/h

- Ferrara-Ravenna: length ca. 72,6 km, single track, electrified, axle load 22,5 tons (with speed restrictions), SCMT, speed 100-120 km/h
- Bologna-Ravenna: length ca. 83 km, double track, electrified, axle load 22,5 tons (in part with speed restrictions), SCMT, speed 120-180 km/h
- Maturity of action:
 - Semmering base tunnel: start of construction 2012/13, completion 2022
 - Koralm railway: start of construction 2008, completion 2020
 - Padova-Bologna: fully operational
 - Ferrara-Ravenna: fully operational, preliminary studies on solving interference of port rail link with road urban traffic (in prospect of rail traffic growth) further details on italian part will be supplied also
 - Bologna-Ravenna: fully operational, preliminary studies on Faenza avoiding line, linking Lugo and Rimini lines
- Political commitment - agreed upon on Regional, National and International level:
 - Austrian Masterplan 2009 – 2014 (Federal Ministry for Transport, Innovation and Technology)
 - Letter of intent on the Development of the Baltic - Adriatic Transport; Corridor including the extension of the existing Pan - European Transport Corridor VI, signed in Luxemburg on 12/10/2006 by AT, CZ, IT, PL, SK
 - “The Baltic Adriatic Corridor declaration: Alliance of 14 Regions to support the consequent and immediate realization of the Baltic-Adriatic Railway Corridor for the consequent and immediate realization of the Baltic Adriatic railway corridor” signed on 6/10/2009 in Brussels
 - Currently at second reading for adopting the regulation at the European Parliament and at the Council (11069/5/2009 – C7-0043/2010 – 2008/0247(COD)), Committee on Transport and Tourism

Other relevant connections to be considered, in this context, are the linkages with the Balkans and capital cities such as Ljubljana and Zagreb. In this respect, it is important to highlight the relevance of already defined PAN Corridor X.

- Considerations from SoNorA transport modelling (Output 3.2.4 and O3.2.5):

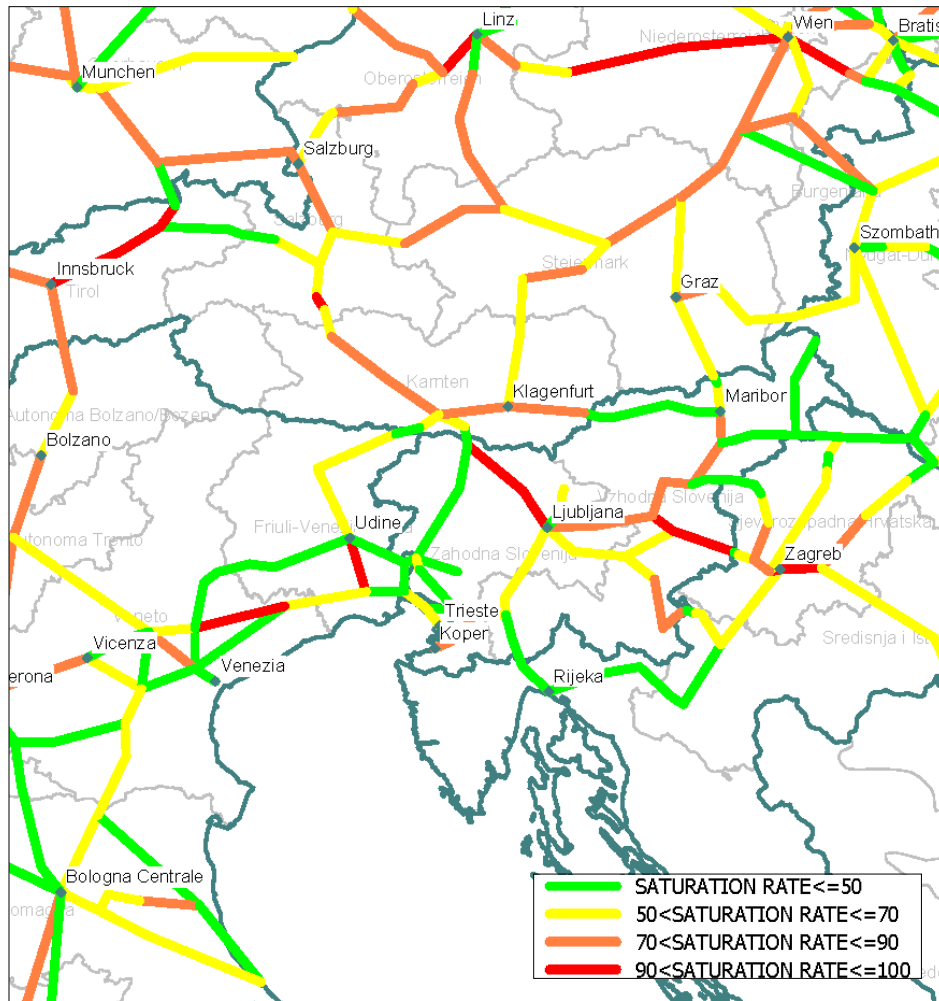


Figure 21: Detail view of SoNorA model traffic assignment (current state 2009)

With reference to this context, the analysis of the SoNorA transport model (see figure above) leads to conclude that:

- spare capacity in Italy (Pontebbana) that will be exploited once the Koralm tunnel will be ready
- relevant flows in Austria from Vienna southwards towards Styria and Carinthia
- relevant flows also in Slovenia from and to Austria and towards Zagreb

7.5 Scenario 2 of SoNorA Rail Oriented Core Network

7.5.1 The development process

Based on Scenario 1 (7.4.1), considers a higher density of network and the integration of Medium Nodes by additional South-North Axis, regarding economic potentials of medium nodes and smaller Metropolitan European Growth Areas. In particular, along with the extension proposed within the Scenario 1, the Scenario 2 includes also the development of a Freight Corridor between Świnoujście and Wrocław.



Figure 22: Scenario 2 of SoNorA Rail Oriented Core Network

Sources: SoNorA elaboration on the basis of DGMOVE material

Higher density of network, integration of Medium Nodes by additional South North Axis, regarding economic potentials of medium nodes and smaller Metropolitan European Growth Areas.

7.5.2 New freight link – justification based on MODES criteria

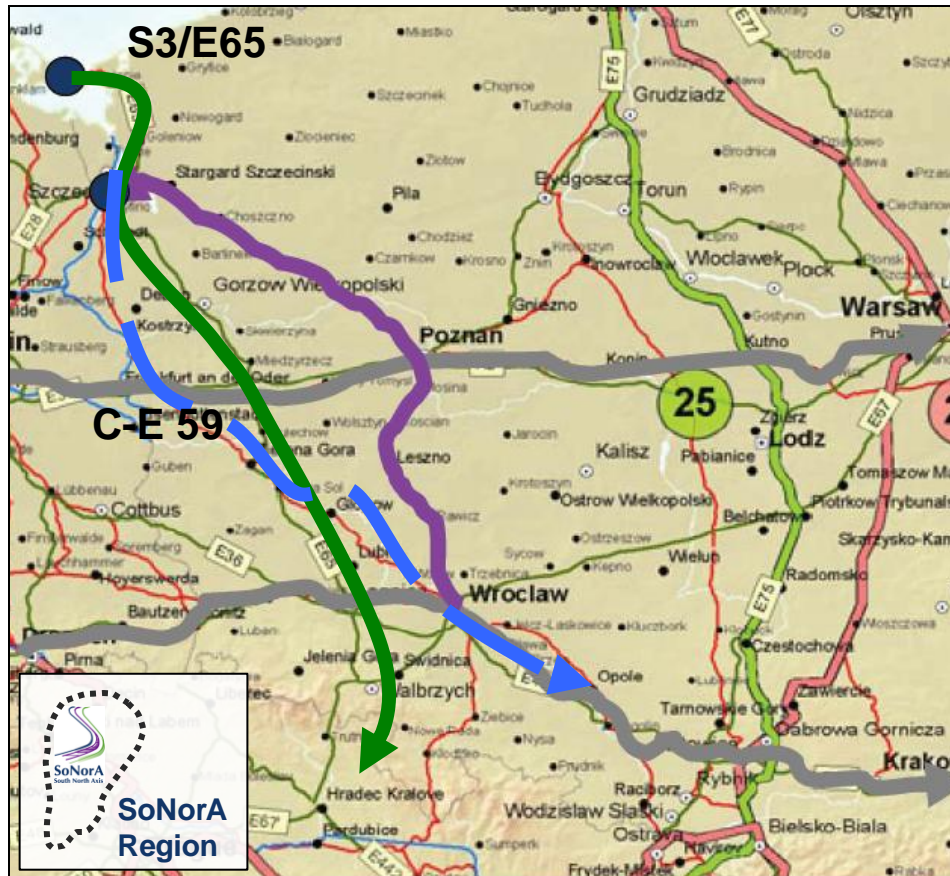


Figure 23: New freight link in South-North direction

source: SoNorA elaboration on the basis of Trans-European Transport Network Executive Agency material

http://tentea.ec.europa.eu/en/ten-t_projects/30_priority_projects/

- Technical standards:
 - length ca. 625 km, double track, electrified, speed 100-160 km/h
- Maturity of action:
 - modernized in order to meet requirements of AGC and AGTC international agreements, improve travelling time, increase pressure to maximum axle load of 221 kN; increase throughput, develop of ERTMS/ETCS system, finished 2015
 - constitutes a rail component of the Central European Transport Corridor (multimodal axis)

- providing the shortest possible and the most convenient railway connection with the seaports located in the mouth of the Oder
 - with respect to international realities provides a connection serving transit between the Baltic Sea Basin countries with inland countries of the Central Europe, further the Southern Europe
- Political commitment - agreed upon on all levels regionally, nationally and internationally:
 - Declaration on Strengthening Cooperation on the development of the Central European Transport Corridor area signed in September 2009 by representatives of 8 Polish cities
 - Szczecin Declaration on the Central European Transport Corridor CETC-ROUTE65 - Supporting the European regional development signed on 28th June 2010 in Szczecin during Ministers' Conference by the governments of Sweden, Poland, Hungary, Slovakia, Czech Republic and Croatia
 - Joint proposal on the revision of the EU guidelines for the development of the Trans-European Transport Network - 23 March 2010 during the meeting of Visegrad Group State Secretaries of Transport in Budapest
 - Declaration regarding joint activities with the view to increase the level of cooperation within the Central European Transport Corridor signed on 4th December 2008 in Bratislava by representatives of 11 regions from Sweden, Poland, Hungary, Slovakia, Czech Republic and Croatia
 - on 29th May 2007 in Bratislava by representatives of 12 regions from Sweden, Poland, Hungary, Slovakia, Czech Republic and Croatia.
 - The Transregional Agreement on Establishing Central European Transport Corridor signed on 6th April 2004 in Szczecin
 - National Development Strategy 2007-2013 "Improvement of Technical and Social Infrastructure".

- National Strategic Reference Framework 2007-2013 “Construction and modernisation of technical and social infrastructure of the basic importance for the growth of Poland’s competitiveness”.
- Master Plan for the rail transport in Poland until 2030 adopted on 19th December 2008
- Polish proposal of the core network element
- Considerations from SoNorA transport modelling (Output 3.2.4 and O3.2.5):

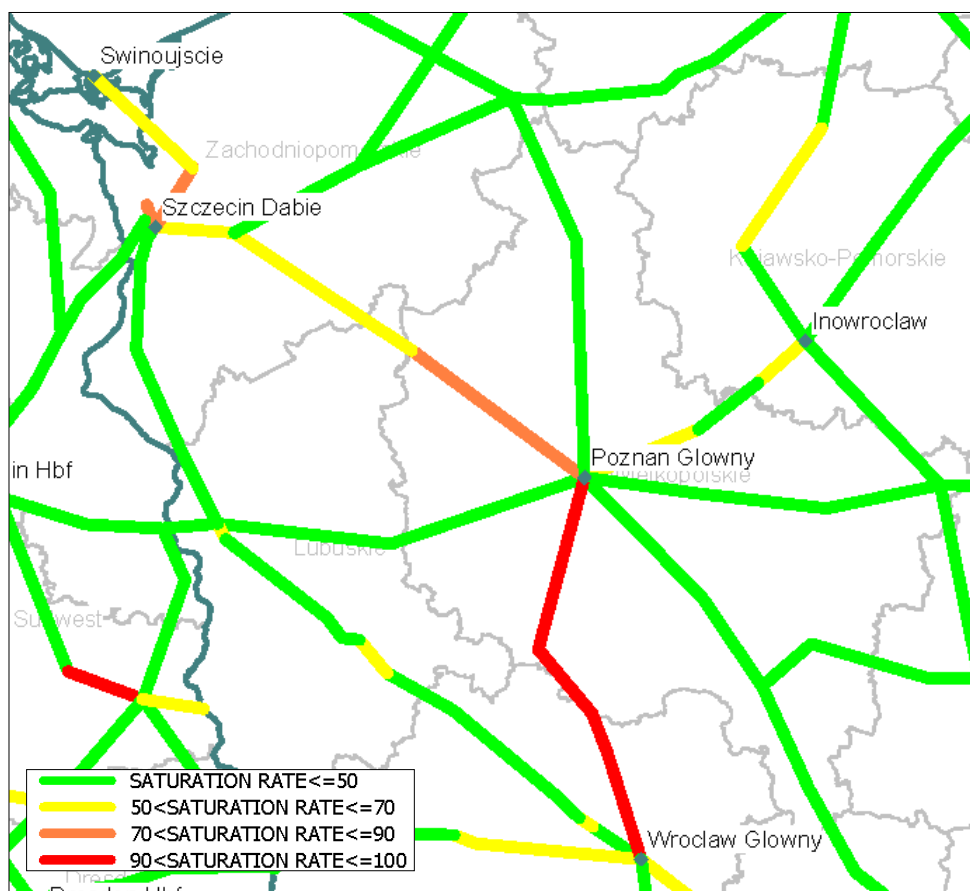


Figure 24: Detail view of SoNorA model traffic assignment (current state 2009)

With reference to the proposed extension, the analysis of the SoNorA transport model (see figure above) leads to conclude that:

- Levels of flow relatively high in the area Szczecin and Świnoujście
- Possibility of alternative routing and or infrastructure development.

8 Conclusions

The relevance of this output is strongly intertwined with the centrality of “TEN-T development” with respect to the SoNorA project goals. In fact, the needed improvement for making the SoNorA network real can only be achieved not only in a transnational context but also in a strategical EU perspective. Therefore, this output is not an end in itself but is meant to bring into the current EU debate the main issue tackled within the extensive number of outputs in the SoNorA project.

In fact this output was developed while the TEN-T revision by the EU commission was ongoing. On this behalf, it is worth mentioning that both the EU TEN-T revision process and SoNorA activities are both characterized by the adoption of a network approach. This approach has been addressed in the development of the methodology for building the TEN-T network proposed in this output this approach has been applied to Central Europe contest providing exemplification for an effective implementation.

Apart from the support to the single corridors which constitute the SoNorA network, what is important to be stressed is the relevance of the whole South-North direction in this key area of EU integration and future development. Strong indication that arise from this and other activities in the SoNorA project is the need of the development of a well connected functional network reaching out to from land locked countries to the port areas that provide outreach to global market both via the Adriatic and the Baltic seas. This opportunity complements already well known and established directions from South-North and western Europe and in East-West direction as well.

9 Bibliography

SoNorA documents:

- Output 3.2.4 – Traffic Model Update
- Output 3.2.5 – Future transport infrastructure scenarios
- Output 6.2.1 - Collection of preliminary inputs for TEN-T recommendations
- Output 6.2.2 – Discussion-validation of TEN-T recommendations draft output 3.3.3

EC documents / decisions

- Decision No 1692/1996/EC
- Decision No 1346/2001/EC
- Decision No 884/2004/EC
- Green Paper: TEN-T policy review. Towards a better integrated trans-European transport network at the service of the common transport policy, /* COM/2009/0044 final */
- Progress Report 2010 Implementation of the Priority Projects, Trans-European Transport Network Executive Agency, June 2010
- EU Strategy 2020, A European strategy for smart, sustainable and inclusive growth, EC
- Lisbon Agenda
- http://tentea.ec.europa.eu/en/ten-t_projects/ten-t_projects_by_country/multi_country/2010-eu-21107-p.htm
- http://tentea.ec.europa.eu/en/ten-t_projects/ten-t_projects_by_country/multi_country/2009-eu-21010-p.htm

ANNEXES

Annex 1 - SoNorA position paper on TEN-T Policy Review and Green Paper, April 2009

The SoNorA project seeks to contribute to the debate on the fundamental review of the TEN-T policy, as discussed in the *TEN-T: A Policy Review Green Paper*. On behalf of all project partners, the SoNorA project:

Green Paper Principle

1. Welcomes the initiative of Green Paper on TEN-T update policy
2. Agrees with the Commission that, until now, most of the 30 TEN-T priority projects have not yet been realised according to the planned time schedule and, therefore, the identification and funding of such projects need to be revised.
3. Supports the Green Paper principle of the “Dual Layer: Comprehensive Network⁵ and Core Network⁶”, in which the “core network” consists of both a geographical pillar and a conceptual pillar. The core network should:
 - a. Be coherent, sustainable, energy efficient, and multimodal;
 - b. Link the principal transport infrastructure axes (consisting of priority axes and the transnational axes)⁷ to a spatially balanced network;
 - c. Provide direct south-north connections between the Adriatic and Baltic seas in Central Europe;
 - d. Stresses the importance of defining this core network, in close conjunction with the Commission and the Member States.

⁵ Comprehensive network is understood as a dense system which covers all member states and modes (example as the current TEN-T network). See http://ec.europa.eu/transport/infrastructure/consultations/2009_04_30_ten_t_green_paper_en.htm for additional information

⁶ Core network is understood as a selection of primary priority axes and projects of transnational importance, which form a high-level network (example, an integrated version of the current priority projects supporting a unified vision). This network is expected to consist of both a geographical pillar (pre-defined reference network) and a conceptual pillar (a selection process for future incorporation of projects into the network according to pre-defined objectives and criteria). See http://ec.europa.eu/transport/infrastructure/consultations/2009_04_30_ten_t_green_paper_en.htm for additional information

⁷ Please see http://ec.europa.eu/transport/infrastructure/maps/doc/ten-t_pp_axes_projects_2005.pdf and COM (2007) 32 Final Communication from the Commission to the Council and European Parliament: *Extension of the major trans-European transport axes to the neighbouring countries - Guidelines for transport in Europe and Neighbouring Regions* for additional information on the component elements.

Existing Gaps to be Filled

4. Urges the Commission to update the current TEN-T policy to adequately address the Central European area, in particular with regards to the changes due to EU enlargement.
5. Underlines the importance of ensuring South North connections in Central Europe, in particular between the Adriatic and Baltic Seas, given the:
 - a. Underdevelopment of current transport sections;
 - b. Expected increase in transport volumes throughout Europe;
 - c. Overload of existing south-north corridors;
 - d. Necessity to ensure balanced spatial development and economic growth;
 - e. Utility of connecting Baltic Sea Strategy with Mediterranean Union;
 - f. Necessity to establish several viable and safe Baltic sea transport crossing options; and
 - g. Increasing the importance of human and economic integration of Scandinavian countries with Central Europe, via “motorways of the sea”.

TEN-T Network Concept

6. Underlines the importance of evaluating the current TEN-T priority projects so that only those projects, which have tangible commitment and are realisable in the medium term, are supported within the core network. Eventual immediate planned extensions, with the same characteristics, should also be considered for support.
7. Urges the definition of a “conceptual pillar”, which can effectively stimulate longer-term strategic transport investments of a transnational nature.
8. Emphasises the importance of selecting elements for the TEN-T core network, which ensure a credible and realisable medium term network. The TEN-T core network must:
 - a. Address the remaining key bottlenecks of transnational relevance, which create direct damages to the European economy;
 - b. Ensure connections to global markets by development of European transport axis, as well as connections between capital regions and other metropolitan areas;
 - c. Guarantee quality intermodal connections between ports and hinterland areas (in a balanced way between Adriatic and Baltic sea), raising global competitiveness of EU;
 - d. Support the integrated planning of transport and logistics services;

- e. Provide opportunities for increasing the efficiency of existing infrastructure.
9. Underlines that several elements of EU transport policy should get a prominent role in defining the “core network”, including:
 - a. Sustainable energy efficient transport solutions for all modes (passenger transport, logistics, rail and road, motorways of the sea, inland waterways and major airports);
 - b. ERTMS, interoperability issues, etc.;
 - c. Intelligent transport systems for facilitating smoother and safer traffic management;
 - d. Global fight against climate changes.

Institutional Framework

10. Recognises the crucial role of Member States in the decisions on the TEN-T network components, given their involvement in selection of, planning for and financing of transport infrastructure (including European cross-border coordination and cooperation).
11. Focuses on the importance of addressing the increased role of regions in the deployment of infrastructure of national and transnational relevance, and the consequent need to include regions in a bottom-up process of selection of TEN-T network components.
12. Stresses the problem of cross-border projects, which are not fully coordinated transnationally (i.e. national infrastructure plans do not reflect international agreements on infrastructure investment programmes). Therefore, strong cooperation mechanisms should be developed to support TEN-T policy, which encourage Member States to focus on cross-border projects and thus minimise the risk of un-harmonised implementation of cross/border projects (so as to avoid infrastructure sections which end at the border since the relevant neighbouring country did not complete the section according to original plans).
13. Supports a strengthened role of EU coordinators for the development of key transnational infrastructure project deployment.

Selection criteria

14. Highlights the issue of Cost Benefit Analysis, as one of several important selection criteria for TEN-T core network. This tool is an important means to evaluate projects, but often in its traditional application, does not assess important and critical considerations on the value to Europe of specific developments.

15. Emphasises the importance of assessing „European Added Value“ in the selection of TEN-T core network components, such as the project’s:
 - a. European/cross-border effects;
 - b. Sustainability (promoting multi-modality);
 - c. Economic growth and competitiveness according to the Lisbon Strategy (raising employment effects);
 - d. Cohesion (stimulating economic development and integrating countries in the European Union, social and territorial cohesion);
 - e. Accessibility (in general and with specific reference to regional accessibility), as a necessary precondition for European integration and political stability;
 - f. Spatially balanced network regarding - implementation of Territorial Agenda of the EU and ESPON (European Spatial Planning Observation Network) as well as INTERREG results.
16. Highlights the need of inclusion of external costs and benefits, as a selection criterion for the TEN-T core network (including air pollution, noise pollution, land, regional development, etc.).
17. Highlights the issue of Environmental Risk Analyses as an important criteria for the selection of the core network, including: the preference of specific transport modes, the location of the transport section which has the lowest environmental effect, qualitative assessments of spatial environmental risks and conflict areas.

Finance

18. Requests the Commission to facilitate the availability and use of new, enlarged financial schemes (including further opportunities and incentives to combine EU funding programmes) for the necessary funding of the realization of TEN-T components in their countries.
19. Urges more coherence from the European Council between requests for TEN-T projects and decisions on TEN-T budgets.
20. Supports the revision of the annual programme of grants for the Trans-European Transport Network (TEN-T) so that additional consideration is given to those projects which complement the priority projects.

Annex 2 - SoNorA position paper on consultation of the future TEN-T Policy, August 2010

The SoNorA project seeks to contribute the second consultation process on the fundamental review of the TEN-T policy, as discussed in the document of European Commission “Consultation on the future Trans-European Transport Network Policy” released on 14th May 2010.

On behalf of all project partners and with regards mainly to TEN-T Core Network Methodology, the SoNorA project:

Principles for designing core network

1. Supports the dual layer approach (Comprehensive Network and Core Network “, in which the “core network”, consists of both a geographical pillar and a conceptual pillar) and the necessity of highlighting the “European added value” in a process of priority network compilation and underlines the importance of conceptual pillar principle application as a tool how to reach European policies goals and how to guarantee proper level of flexibility respecting possible changes in the shaping of future transport network (demand, routing etc.).
2. Supports Commission’s core net methodology as currently existing in a way of highlighting the importance of Capital Regions, Major Nodes / Functional Urban Areas > approx. 1 Mio. and Ports / Port Areas for a spatially balanced core network on the European level following ESDP and TAEU; The Core Network has to be built up from main nodes which play or might potentially play some key role in European geography (respecting traffic scenarios and potential change in decisive traffic flows in the future) that are then connected by corresponding links of high strategic importance that follow, as much as possible, already existing infrastructure of sufficient capacity or such infrastructure is under construction or the construction commences in approximately next 5 years.
3. Supports a core network principle which should:
 - a. Be coherent, sustainable, energy efficient, and multimodal;

- b. Link the principal transport infrastructure axes (consisting of priority axes and the transnational axes);
 - c. Reduce still existing bottlenecks;
 - d. Be shaped as a real network (removal of “dead ends”);
 - e. Provide direct south-north connections between the Adriatic and Baltic seas in Central Europe (level of “SoNorA region”) - stresses the importance of defining this core network, in close conjunction with the Commission and the Member States.
4. Supports a core network that must:
- a. Address the remaining key bottlenecks of transnational relevance, which create direct damages to the European economy;
 - b. Ensure connections to global markets by development of European transport axis, as well as connections between capital regions and other metropolitan areas which will stimulate economic development of EU;
 - c. Guarantee quality intermodal connections between ports and hinterland areas (in a balanced way between Adriatic and Baltic sea), raising global competitiveness of EU;
 - f. Support the integrated planning of transport and logistics services;
 - g. Provide opportunities for increasing the efficiency of existing infrastructure.

Criteria for designing core network

- 5. Agrees in general with adequacy of proposed criteria for designing of core network underlining the importance of assessing “European Added Value”;
- 6. Supports Multi Criteria Analysis as the best assessment method to determine concrete links and projects and proposes to use of the MODES criteria for the evaluation and selection of links and projects in the framework of the MCA;
- 7. Underlines that criteria that should be applied to support the importance of particular corridor/axis/nodes to be included in priority TEN-T network (applicable for core and even comprehensive network) must be fully in accordance with the principles of sustainable development of transport. That indirectly means to be in agreement with the main recommendations and expected development as set by White Paper and as now discussed within the process of consultation of future of transport;

8. Introduces criteria for shaping the network as so called “MODES principle” since the most important principle is to promote multimodal core network:
 - a. **Maturity** (preparedness of action);
 - b. **Operation** (decisive interconnections guaranteed);
 - c. **Direction** (concrete routing of particular axis/corridor);
 - d. **Effect** (impact on traffic);
 - e. **Sustainability** (sustainable development);

Supplementary infrastructure measures shaping a core network

9. Underlines that several elements of EU transport policy should get a prominent role in defining the “core network”, including:
 - a. Sustainable energy efficient transport solutions for all modes (passenger transport, logistics, rail and road, motorways of the sea, inland waterways and major airports);
 - b. ERTMS, interoperability issues, etc.;
 - c. Intelligent transport systems for facilitating smoother and safer traffic management;
 - d. Global fight against climate changes.
10. Urgently stresses the problem of cross-border projects, which are not fully coordinated transnationally (i.e. national infrastructure plans do not reflect international agreements on infrastructure investment programmes). Therefore, strong cooperation mechanisms should be developed to support TEN-T policy, which encourage Member States to focus on cross-border projects and thus minimise the risk of un-harmonised implementation of cross/border projects (so as to avoid infrastructure sections which end at the border since the relevant neighbouring country did not complete the section according to original plans).
11. Expresses support for the corridor coordinators and keeping up their function for the core network (PP and PAN coordinators), geographical and thematic extension of their duties regarding the extension of corridors and the integration of policy elements.

Specific TEN-T Planning contribution “Europe 2020” strategic objectives

12. Supports the integration of network planning and transport policy by the conceptual pillar which will lead to better coordination and increase of efficiency of EU policy as an important element for implementation of EU Strategy 2020.
13. Highlights the fact that permanent improvement of quality of transport system is needed; it means to not only provide a quality infrastructure but to provide the global background for functioning of the transport services in general (e.g. improvement of logistics services, involvement of ports into the global economy chain, implementation of innovative technologies such as intelligent transport systems, ERTMS etc.).
14. Draws attention on the issue of future migration based on the effect of future ageing of society; this might result into the changes or increase of movement of goods and people.
15. Stresses the importance of EU integration with neighbouring regions because of other liberalisation of markets and globalisation of world market in general.
16. Recognises several elements with a crucial impact on smooth functioning of the transport system; these elements must be precisely touched by any of the European existing or newly commenced policy:
 - a. Interoperability of the network – to be guaranteed by the application of standards (TSI implementation);
 - b. Proper interconnections of nodes - sustainable energy efficient transport solutions for all modes (passenger transport, logistics, rail and road, motorways of the sea, inland waterways and major airports);
 - c. Avoiding congestions and removal of key bottlenecks of transnational relevance, which create direct damages to the European economy;
 - d. Maritime sector to be more involved in the transport map - guarantee quality intermodal connections between ports and hinterland areas (in a balanced way between Adriatic and Baltic sea), raising global competitiveness of EU.

SoNorA region importance

17. Urges the Commission to update the current TEN-T policy to adequately address the SoNorA area, in particular with regards to the changes due to EU enlargement.
18. Underlines the importance of ensuring South North connections in Central Europe, in particular between the Adriatic and Baltic Seas, given the:

- a. Historical underdevelopment of current transport sections;
- b. Expected increase in transport volumes throughout Europe (in long term view);
- c. Overload of existing south-north corridors;
- d. Necessity to ensure balanced spatial development and economic growth;
- e. Utility of connecting Baltic Sea Strategy with Mediterranean Union;
- f. Necessity to establish several viable and safe Baltic sea transport crossing options; and
- g. Increasing the importance of human and economic integration of Scandinavian countries with Central Europe, via “Motorways of the sea”
- h. Necessity of considering North Adriatic as a gateway to the Far East

Annex 1: Maps / scenarios as an example for implementing the methodology on south north connection in the SoNorA Area (A = implementation of methodology as currently proposed; B = higher network density considering the potentials and probable future economic development) – see chapter 7.3.

Annex 2: MODES criteria - see paragraph 6.3

Annex 3 - SoNorA position paper on EC Communication “Sustainable Future for Transport”, September 2010

Since the SoNorA project gathers 25 stakeholders from 6 countries all over the Central Europe its consortium has a broad overview and experiences with transport policy and its implementation at national level. This is why the SoNorA project seeks to contribute to the debate on the Commission’s Communication “A sustainable future for transport: Towards an integrated, technology-led and user“.

On behalf of all project partners, the SoNorA project:

Trends and Objectives of Transport Policy

1. Agrees that the transport is an essential element of the European economic, social and spatial cohesion as well as of the mobility of EU citizens with a crucial impact on all involved parties of global product chain; European policy is strongly needed which clearly sets tangible goals as a framework for its further development.
2. Appreciates the progress that has been made at the level of TEN-T Policy (as a basic presumption for infrastructure development) nevertheless its modification is highly necessary – (see SoNorA Position Paper on Green Paper “TEN-T Policy Review for more information).
3. Understands that the transport sector currently depends mainly on fossil fuels and other non-renewable resources; effective tools to reduce these impacts on the environment are definitely if we are to create a sustainable transport system.
4. Draws attention to the issues of future migration and of the future ageing of society, which could result into significant changes to the movement of goods and people.
5. Stresses the importance of EU territorial cooperation and integration with neighbouring regions because of liberalisation of markets and the globalisation of world market in general.
6. Supports the initiatives of Pan-European Transport Corridors along with the initiative of International Rail Corridors for Competitive Freight.

Future objectives

7. Highlights the fact that permanent improvements in the quality of transport system are needed; which will require both quality infrastructure as well as a fertile context for the smooth functioning of transport services globally (i.g. improvement of logistics services,

increase of involvement of maritime and inland waterway sector in the global economy chain, implementation of innovative technologies such as intelligent transport systems, ERTMS etc.).

8. Underlines the importance of the perception of infrastructure as a set of several components (network, vehicles, equipment) creating the system, hence requiring effective and optimal combined functioning of all these elements.
9. Stresses the fact that one of the mechanisms on how to create a well balanced transport system with regards to the environment is based upon creating a level playing field between modes, where equivalently calculated prices reflect all the relevant costs for a mode; if these prices are equivalently calculated more environmentally objective choices can be expected by the customer.
10. Recognises the importance of ensuring that network effects are assessed and valorised, so as to develop a truly EU network.
11. Emphasises the importance of land-use planning issues; authorities responsible for transport planning must take into account future visions and trends (including globalisation and migration), so as to guarantee a rational and well-balanced transport network (including connection to the sea).
12. Underlines the importance of seamless accessibility to transport for all (respecting the estimated travel needs of the population).

Policy instruments

13. Recognises several elements with a crucial impact on the smooth functioning of the transport system in general; these elements must be specifically addressed in future EU transport policy:
14. Interoperability of the network – to be guaranteed by the application of standards (TSI implementation).
 - a. Interconnections of nodes for sustainable energy efficient transport solutions for all modes (rail, maritime, inland waterways, road, and airports) for passenger and freight transport (including logistics).
 - b. Avoiding congestion and removing key bottlenecks of transnational relevance, which create direct damages to the European economy.

- c. Maritime sector to be more involved in the overall EU transport balance – so as to guarantee quality intermodal connections between ports and hinterland areas, raising global competitiveness of EU. This hinterland connectivity, while generally important, is even more critical in Central Europe, connecting in a balanced way the Adriatic and Baltic seas.
 - d. The relevance of the Co-Modality promotion centres, as defined by the report of Mr. Luis Valente De Oliveira, to support the marketing of the co-modal logistics chain.
15. Underlines the importance of the future development of the TEN-T network for European prosperity; the important revision of TEN-T policy currently being conducted should ensure the following aspects in order to best facilitate the network development in the future:
 - a. Selection criteria for the TEN-T network should be revised so as to attribute greater importance to cohesion and accessibility benefits, cross border effects, sustainability, multi-modality, assessment of external costs and benefits and environmental risk analyses of investments,
 - b. The institutional framework which selects and implements the TEN-T network components should be strengthened so as to ensure:
 - the relevance of the role of the EU Commission in achieving the objectives set by the EC Treaty in Article 154,
 - crucial role of Member States in the decisions on the TEN-T network components,
 - increased role of regions in the deployment of infrastructure of national and transnational relevance,
 - c. Development of strong cooperation mechanisms which encourage Member States to prioritise cross-border projects in order to minimise the risk of un-harmonised implementation of cross/border projects (such as when national infrastructure plans do not reflect international agreements on infrastructure investment programmes). The improvement of South-North connections as a consequence of EU extensions in last decade.
 - d. Supports the development of the South East Europe Core Regional Network as a precursor of the TEN-T and the European Neighbourhood Policy Action Plans, in

particular to ensure that the TEN-T network also responds to the market and passenger flows outside the EU.

- e. With regards to financing issue, requests that the Commission develops and facilitates the use of new, enlarged financial schemes (including further opportunities and incentives to combine EU funding programmes) so as to provide greater funding possibilities for the realization of investments, which are expected to subsequently stimulate the employment of additional private funds in the transport sector.