European Commission

Scandinavian Mediterranean

Work Plan of the European Coordinator

Pat Cox

Transport

MAY 2015

This report represents the opinion of the European Coordinator and does not prejudice the official position of the European Commission.

1. Towards the *Scandinavian-Mediterranean* Corridor work plan

Transport is a policy pillar that can make a vital contribution to boosting the long-term competitiveness, sustainable growth and development of the internal market and the wider European economy. Efficiency improvements in the transport of people and goods within the internal market and between it and the wider world, enhanced deployment of intelligent transport systems and the greening of the sector and its infrastructure are key elements of the new TEN T policy. Short to medium term capital investment in transport infrastructure and systems generate a considerable direct and indirect employment effect at a time when joblessness remains stubbornly high in so many EU economies. Additionally, technological and systems innovation can be expected to foster the development of supporting business ecosystems specialising in the servicing and management of the ICT and sustainability challenges identified.

In this context it is my privilege and pleasure as European Coordinator to present to the Member States for appraisal and approval the work plan for the Scandinavian-Mediterranean Core Network Corridor (Scan-Med). This plan is founded on the provisions of Regulation (EU) No 1315/2013 of the European Parliament and of the Council of 11 December 2013 which establishes Union guidelines for the development of the trans-European transport network (the Regulation)[1].

It is transmitted in accordance with Article 47.1 of the Regulation, which enjoins each European Coordinator to 'submit to the Member States concerned a work plan analysing the development of the corridor'.

This work plan is grounded in the collaborative efforts of the Member States and Norway, the European Commission and associated agencies, assisted by external contractors and chaired by the European Coordinator. It has been elaborated over the course of four consultative Corridor Forum meetings in 2014 and has benefitted progressively from the input of numerous stakeholders.

I would like to take this opportunity to thank all those organisations and public officials who contributed such valuable time and insights to this challenging and complex exercise.

The concept of the core network corridor, as described in Article 42.1 of the Regulation, is an instrument that acts as the centre of gravity around which our work on modal integration, interoperability and coordinated development of infrastructure orbits. The Scan-Med Corridor is a crucial axis for the European economy, crossing almost the whole continent from North to South. It encompasses seven EU Member States (Finland, Sweden, Denmark, Germany, Austria, Italy and Malta) and one Member State of the European Economic Area, Norway.

[1] OJ L 348, 20.12.2013.

It is the largest of the corridors in terms of core network length - with more than 9300 km of core rail and greater than 6300 km of core road network – together with 25 core ports, 19 core airports and 44 core rail-road terminals and 18 core urban nodes. The regions along the Scan-Med Corridor constitute an important socio-economic area within the EU. In 2011 they accounted for a population share of almost 23% of the EU 28. While comprising approximately 16% of the EU territory the Scan-Med regions generated more than 27% of the EU's GDP, with an above EU-average income per capita of €30,000.

Table 1: Socio-economic indicators of Scan-Med Corridor in the year 2011

	Area (km²)	Inhabitants	GDP (million €)
EU28	4.383.136	504.990.610	12.675.264
Scan-Med Corridor regions	687.323	113.975.409	3.478.339
	15,7%	22,6%	27,4%

As regards the 73% of identified projects for which a financial cost has been provided, the total investment required until 2030 for the realisation of the objectives of the Scan-Med Corridor alone amounts to €144 billion.

The first call for proposals under the Connecting Europe Facility[2] (CEF) has a value of €12 billion, closed at the end of February 2015 and was significantly oversubscribed. In addition to CEF funding, consideration will need to be given as to how to deploy innovative financial instruments and parallel policy initiatives as these evolve in order to help achieve corridor objectives.

The European Coordinator shall use his best endeavours to facilitate measures to design the right systems of governance and identify appropriate sources of finance, both private and public, especially as regards complex cross border projects that represent a clear network and EU added value.

What follows is a detailed description of the key characteristics of the Scan-Med Corridor as derived from the corridor study undertaken by the consultants, assisted by the comments and insights of the Member States, Norway and the invited stakeholders at large. The critical analysis and the gaps identified now require Member State appraisal with a view to approving a corridor work plan whose primary objective is the realisation of the Scan-Med Corridor step by step between now and 2030, as a matter of common interest and shared responsibility.

At the end of this Work Plan the Coordinator will draw final conclusions and provide recommendations as to where particular priorities should be set to ensure that the Scan-Med corridor plays its full part in the integral Trans-European Transport Network.

[2] Regulation (EU) No 1316/2013 of the European Parliament and of the Council of 11 December 2013 establishing the Connecting Europe Facility, OJ L 348, 20.12.2013, p. 129.

2. Characteristics of the Scandinavian-Mediterranean Corridor

Alignment

The Scan-Med Corridor links the major urban centres in Germany and Italy to Scandinavia (Oslo, København, Stockholm and Helsinki) and the Mediterranean (Italian seaports, Sicily and Malta). It covers seven EU Member States and Norway and represents a crucial axis for the European economy, crossing almost the whole continent from North to South. The cartogram in Figure 1 shows the corridor's schematic alignment and its core nodes according to the TEN-T and CEF-Regulations.

"Linear" modes of transport that are assigned to the corridor are mainly rail and road. A few sections of the alignment, in particular the connections Finland – Sweden - Germany and Italy - Malta, cross the sea. The other dimension of the corridor is composed of "punctual" infrastructure: airports, seaports and rail-road terminals of the core network. For modal interconnection as well as the connection of the trans-European transport network with infrastructure for local and regional traffic, "urban nodes" are of specific importance.

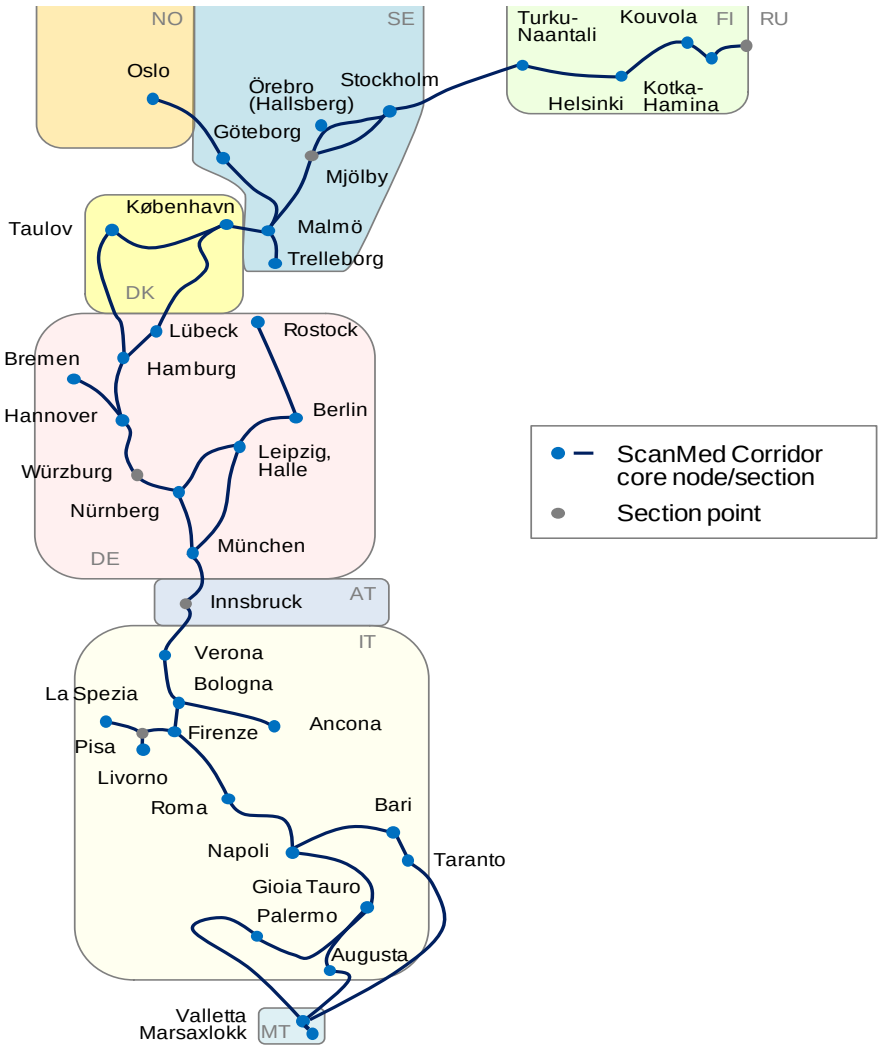


Figure 1: Alignment of the Scan-Med Corridor

Characteristics

The Scan-Med Corridor is the largest in terms of core network length of rail (> 9.300 km) and road (> 6.300 km) and number of core ports, airports and rail-road terminals (in total about 90 sites). An overview of the quantitative characteristics of the corridor is provided in table 2:

Table 2: Characteristics of Scan-Med Corridor in the year 2014

Mode/ Node	Dimension	FI	NO	SE	DK	DE	AT	IT	MT	Total
Rail	network length [km]	518	169	1.462	476	3.532	127	3.053	-	9.337
Road		376	116	1.039	440	1.869	109	2.401	22	6.372
Airports	number	2	1	3	1	7	-	4	1	19
Seaports		4	1	4	1	4	-	9	2	25
RRT		5	1	7	2	16	0	13	-	44
Rail	Share of Corridor [%]	5,5%	1,8%	15,7%	5,1%	37,8%	1,4%	32,7%	n.a.	100,0%
Road		5,9%	1,8%	16,3%	6,9%	29,3%	1,7%	37,7%	0,3%	100,0%
Airports		10,5%	5,3%	15,8%	5,3%	36,8%	n.a.	21,1%	5,3%	100,0%
Seaports		16,0%	4,0%	16,0%	4,0%	16,0%	n.a.	36,0%	8,0%	100,0%
RRT		11,4%	2,3%	15,9%	4,5%	36,4%	0,0%	29,5%	n.a.	100,0%

Transport volume

In the year 2010, the latest year for which disaggregated data could be retrieved, the international freight traffic on the corridor accounts for 129.0 million tons by sea, of which 59.9 million tons are between core ports, 50.3 million tons by road and 36.0 million tons by rail.

The seaborne freight transport between all ports of the corridor countries is distinctly higher than the continental corridor flows (rail and road). The dominant relations are located in the northern part of the corridor, mainly related to Germany and Sweden, supplemented by the flows from the remaining Scandinavian countries. These volumes accumulate to 64 % of international sea freight flows.

As regards international road freight flows, the relations Denmark – Germany, Italy – Germany and Finland – Sweden (in both ways) are dominant with a share of almost 70 %. The structure of flows illustrates a broader spatial distribution of important relations on the corridor, locating the "gravity centre" of road freight volumes in the southern part of the corridor and to a lesser extent in the far northern part.

The most important rail freight flows are in both ways: Sweden - Germany, Austria – Germany, Germany – Italy and Italy – Austria. They amount to almost 90 % of all relevant international rail freight flows. The "gravity centre" of rail freight flows is located in Germany and Austria.

Compliance analysis

Article 4 of the Regulation (EU) 1315/2013 describes the objectives of the trans-European transport network, which shall strengthen the social, economic and territorial cohesion of the European Union. The aim is to create a single European transport area, which is efficient and sustainable, to increase the benefits for its users and to support inclusive growth. The Member States agreed to the following list of specific objectives, which have to be met by the Scan-Med Corridor by 2030 the latest.

Table 3: Objectives of Scan-Med Corridor

Mode	Objective
Rail	Full electrification
	Axle load 22.5 t
	Line speed 100 km/h, minimum
	740 m freight trains
	ERMTS fully implemented
	Standard gauge 1435 mm for new lines
Road	Express road or motorway
	Intelligent transport systems (ITS) / toll collection systems comply with Directive 2004/52/EC, Commission Decision 2009/750/EC and Directive 2010/40/EU [SE]
	Parking areas every 100 km, minimum
	Infrastructure for alternative clean fuels
Airports	Terminal open to all operators
	Infrastructure for air traffic management, SESAR
	Infrastructure for alternative clean fuels
	Main airports connected to (high-speed) rail network
Maritime transport, Ports, MoS	Connection to rail, road, IWW (where possible)
	Infrastructure for alternative clean fuels
	Facilities for ship generated waste
	VTMIS, SafeSeaNet, e-Maritime services
Multimodal transport	All transport modes connected at freight terminals, passenger stations, airports, maritime ports
	Real time information on freight terminals, maritime ports, cargo airports
	Sufficient transhipment equipment on freight terminals
	Continuous passenger traffic through equipment and telematic applications in railway stations, coach stations, airports, maritime ports
Environmental targets	Specific target values more detailed than those mentioned in the Regulation (EU) 1315/2013 could be identified for specific sections of the corridor by the Member States concerned in accordance with European legislation.

On the basis of these objectives a compliance analysis was performed. The compliance analysis compares the current (infrastructure) parameters and target values set for the year 2030. The analysis uncovered the respective deficits on single TENtec sections and nodes.

The compliance analysis with respect to the distinctive **rail** objectives reveals the following, in particular:

- The standard track gauge is supplied on all corridor lines with the exception of Finland, which is exempted because of its isolated network;

- Electrification is available on almost all lines. Still a few non-electrified sections in Denmark and Germany (e.g. Lübeck – Puttgarden), require a change of locomotives and Diesel traction. Most of the non-electrified lines in Germany are about to be electrified in the framework of agreed projects, “if they are part of the requirement plan”[3];
- Interoperability constraints resulting from different electrification (15 kV 16 2/3 Hz in Sweden, Germany and Austria, 25 kV 50 Hz in Denmark and 3 kV DC in Italy on the existing lines used for freight transport, and 25 kV for HSL and new lines like the Brenner Base Tunnel);
- Different standards with regard to:
  - train length in general and below standard parameters in particular between Stockholm and Hässleholm (630 m), Hallsberg and Hässleholm[4], on a few sections in Germany (600 m), on the Brenner line until Firenze/Ancona (600 m), and on many sections in Italy south of Firenze (400/600 m);
  - axle loads below the standard parameter (< 22.5 t) on 25% of the sections in Italy;
  - loading profile for the transport of semi-trailers ("P400") which is not achieved on the current lines in Italy south of Firenze/Bologna;
- A low rate of ETCS implementation, with the exception of Austria and Denmark[5], time horizons being under discussion and resulting into a "patchwork" of ETCS implementation as well as detailed practical problems. The latter are caused by long realisation periods in which different ETCS levels and software releases were applied by infrastructure managers, rail industry and railway undertakings. This requires a more detailed observation and monitoring, if ETCS is to supply a benefit to the rail transport market. EU-coordinator Karel Vinck provides a comprehensive overview in his ERTMS-workplan.

There are significant congestion problems on the **road** network around most large cities during peak-periods and these are generally taken into account in the national and regional plans for each country. Inter-urban roads have generally less congestion problems. The motivation for measures to improve the road infrastructure is not only based on the availability of physical capacity but also to ensure e.g. the smooth flow of traffic, to increase traffic safety or to avoid sensitive populated or environmental areas. In some cases, such as the Fehmarn Belt Fixed Link, there will be significant time-saving compared with the ferry alternatives or the longer route through Jutland. Other important measures which are not related to road infrastructure directly, such as regulations, technological improvements or improved vehicle capacity unitisation are also important. To address these measures cooperation is necessary between all

[3] Feedback provided by BMVI by e-mail, 17.10.2014.
[4] Feedback provided by the Örebro region by e-mail of 17.10.2014.
[5] Denmark will be the first country to implement ETCS on the entire conventional railway network (until 2021).

interested partners involved, public as well as private. It is unlikely that the public sector will itself finance all necessary infrastructures (safe parking areas, filling stations etc.) but it can be active in the use of infrastructure and/or vehicle regulation in order to encourage or discourage transport choices by the infrastructure users. For private organisations, there needs to be a financial benefit both in the long- and short-term in order to get involved. This is a complicated process that will require concentrated action.

Open access is basically granted in all core **airports**. Connectivity with the TEN-T road network is ensured for all airports, whilst 6 airports have no connection to rail. Helsinki, the only airport lacking a connection among the airports due to be connected to rail by 2050, will get its first rail connection in the year 2015. The way to the implementation of Single European Sky will involve airports on the Scan-Med corridor, although information on airports involved in the "SESAR road map 2014-2020" is not yet available. From the comparison of traffic figures with capacity indicators, a few airports appear to have reached an annual passenger traffic level above their respective potential capacity, expressed in terms of passengers/year. Projects aimed at improving capacity are existing and underway, and the foreseen outcome will allow the stakeholders to achieve compliance with the objective set in the Regulation. The opening of the Berlin Brandenburg airport will constitute a substantial improvement of airport capacity on the corridor and highlight the role of the Capital region of Berlin as an urban node of the corridor at the crossroads of three of the nine corridors[6].

The core requirements of the Regulation (EU) 1315/2013 on **ports** are largely fulfilled by the 25 Scan-Med Core ports regarding maritime and hinterland transport infrastructure. However, in particular for the hinterland connections a more qualitative analysis will be needed. Important to note is that the ports' environmental infrastructure is still developing. Consequently, already in 2014, a couple of MoS-Projects have been set up to mitigate this identified shortcoming. The I&C Technologies are on a high level. Vessel Traffic Service (VTS) and SafeSeaNet (SSN) are fully implemented; e-Maritime services have to be further developed with a focus on harmonization of IT and data exchange, especially through “single window” solutions. Also this task is already covered by a MoS project. The individual ports need to check in detail how they could fulfil the requirement.

All **rail-road terminals** are connected to rail and road by at least one rail track or one road lane so that this fundamental criterion is met. The other indicators, such as provision of information flows, can hardly be assessed without the involvement of the infrastructure managers and their customers. The question to be discussed with terminal operators is whether they provide for such information systems and whether they are willing to share this kind of information, in particular “in real-time”, and with whom. That should be done in the year 2015.

[6] Finding supported by the intervention of the Berlin Brandenburg capital region inthe 3rd Forum meeting.

3. Results of the transport market study

The multi-modal transport market study pursues the goal to provide a “big picture” of the present and future situation of the transport market for the Scan-Med Corridor. According to this objective, a comprehensive overview including all relevant transport modes and infrastructure was presented. The basis for this general perspective is an extensive review of numerous studies, reports and forecasts investigating market sections and nodes of the corridor stemming from the existing databases and additional data provided by infrastructure managers, Ministries and other stakeholders. This reveals a comprehensive amount of data, subsequently gathered, edited and included into a large scale view on the traffic development of the Scan-Med Corridor. With this approach it was possible to identify core network areas with highest transport volume expected in the year 2030. With respect to rail, both passenger and freight, these are: Mjölby – Malmö, Göteborg – Malmö, Malmö – København – Taulov, Bremen/Hamburg – Hannover – Würzburg, München – Innsbruck, Bologna – Firenze – Roma – Napoli. With respect to road these are: Lübeck – Hamburg/Bremen – Hannover, Würzburg – Nürnberg – München, Firenze – Roma.

The comparison of the expected traffic volumes and network loads in the year 2030 facilitates the identification of possible capacity constraints (bottlenecks).

The overview for capacity constraints and capacity utilization provides the valuable indication that, even after the construction of new infrastructure (in particular Fehmarn Belt Fixed Link, Brenner Base Tunnel and their access lines), there will remain some bottlenecks along the Scan-Med Corridor that may impede future growth of passenger and freight transport. These can be found most notably

- In Finland, for rail: Kouvola – HaminaKotka, Luumäki – Vainikkala, Helsinki, node, Helsinki – Turku; and for road: regions of Turku and Helsinki and the section Kotka–Hamina–Vaalimaa;
- In Sweden, for rail: Stockholm and Göteborg node, Hässleholm – Lund, Trelleborg – Malmö (- København);
- In Denmark, for rail: (Malmö-) København region;
- In Germany, for rail[7]: Bremen/Hamburg - Hannover, Würzburg - Nürnberg, München area; and for road: regions of Hamburg, Hannover, Berlin and München as well as the section Würzburg – Nürnberg;
- In Italy for rail, based on information provided by RFI: Verona - Ponte Gardena until the completion of the entire access lines to Brenner Base Tunnel; Firenze - Livorno/La Spezia related to the ports' traffic development; additionally there will be some constraints in the traffic of urban areas[8];
- In Malta for the connection between the port of Marsaxlokk, the airport and the capital city with its port.

In Austria, no capacity problems are reported, after the infrastructure projects will have been completed.

[7] According to BMVI by e-mail of 17.10.2014 the final identification of bottlenecks are subject to the Federal Infrastructure Plan investigations, which are about to be completed in 2015.

[8] Feedback from RFI, e-mail 28.11.2014

4. Critical issues on the Scandinavian-Mediterranean Corridor

Critical issues have been identified with respect to certain characteristics and the realisation of respective measures or projects in view of the implementation of the corridor. Results of the study review, compliance analysis and multimodal transport market study were discussed with corridor stakeholders, which confirmed the findings and identified the measures to mitigate additional critical issues. The main conclusions have been arranged by mode and section of the corridor (from north to south) in the following paragraphs. The number of projects, however, and the qualification that the list of projects is indicative does not allow presenting the projects in detail.

Rail

Finland is somewhat isolated from the rest of the Scan-Med rail infrastructure and is therefore exempted from complying with the European rail gauge standard. Concerning this parameter, the Finnish rail network is similar to the Russian, but the respective border crossing to Russia was not in the focus of this study. The comprehensive view to the future of the Finnish railway system within Europe takes the Scan-Med Corridor into account for the East-West traffic and the North Sea-Baltic Corridor for the north-south traffic. Both corridors are interrelated at the node of Helsinki. Consequently, some major rail projects are located in that urban node to improve the network capacity, such as: Ring rail to Helsinki airport (under construction), improvements near Helsinki end station (new track to Pasila, improvements at Helsinki yard, city rail loop) and separation of commuter and long distance trains to their own tracks (urban rail to Espoo) as well as the port connection. These are complemented by a measure in the freight terminal Kouvola. Further measures to mitigate additional critical issues are, in particular:

- Repairs to areas with ground frost damage and soft soils along main railway lines;
- A new shortcut railway Espoo – Lohja - Salo on the Helsinki - Turku section;
- Investigation of the Helsinki – Turku - Tampere triangle;
- Improvements to service levels along the railway section Kouvola – Kotka/Hamina: Several improvement measures for the railway yards as well as different railway and road sections (combined rail and road project);
- Implementation of ERMTS.

The technical parameters are basically fulfilled by the **Swedish** rail network, with the exception of the required freight train length of 740 m and the implementation of parts of ERTMS Corridor B: Stockholm – Malmö, Hallsberg – Katrineholm, Hallsberg – Mjölby. The main concerns result from current and even more ambitious future passenger and freight volumes to be transported by rail. In order to link major urban areas across Norway, Sweden, and Danmark with reasonable travel times, the network lines need to be upgraded or newly built, both in the designated urban nodes

of Stockholm, Göteborg and Malmö, as well as the relevant sections in between these nodes, in particular:

- Stockholm C – Stockhom Södra;
- Citybanan: tunnel under central Stockholm with two new stations;
- Ostlänken: new 2-track line for HS Trains on section Linköping – Järna;
- Hallsberg - Åsbro - Dunsjö - Degerön (-Mjölby): upgrade to 2-track and grade separation on respective sections;
- Malmö – Jönköping: HS Link study;
- Norwegian/Swedish border – Göteborg, Kornsjö – Öxnered: study;
- Western Sweden/Göteborg: different improvement measures including a city tunnel “West link project”;
- Göteborg: Central station (new signal box), Olskroken (grade separation);
- Western and Southern Sweden: Varberg – Hamra (new 2-track), Hallandsås project (2-track tunnel), Western Main Line Ängelholm – Maria station, Åstorp – Teckomotorp - Arlöv (expansion and new stations);
- Southern Main Line Arlöv – Lund (two sections with improvement works);
- Skåne/Småland regional railway stations renewal (“Pågatåg” network);
- Skåne region: capacity enhancement measures;
- Fosieby – Trelleborg: capacity enhancement measures including construction of a 2-track line.

The technical parameters (axle load, operating speed for freight trains) are basically fulfilled by the **Danish** rail network, with the exception of some areas which do not fulfill the required full electrification, implementation of ERTMS and at least 740 m freight train length on all sections today. Tthis will be changed in the next years with coming projects. Interoperability on border crossing sections Malmö/København and Padborg/Hamburg is currently achieved by multi-system locomotives of the railway undertakings and respective transition rules. Like in Sweden the current and even more ambitious future passenger and freight volumes by rail cause concern. Consequently, network lines need to be upgraded or newly built, both in the urban node København and the relevant sections connecting it with Sweden and Germany. Additional capacity, reduction of travel time and more efficient rail operations can be achieved through in particular:

- Full attention on the completion of the Fehmarn Belt Fixed Link for road and rail by 2021;
- ERTMS Level 2, Baseline 3 on the entire conventional railway network in Denmark by the end of 2021;
- Increase the capacity of København central station through development of Ny Ellebjerg station;
- Ringsted - Fehmarn: Upgrade and renew the 115 km long railway line to a new, future-proof line (electrification, double track, and 200 km/h speed)
- New Storstrøm Bridge (primarily rail, but includes also road and bicycle lanes);
- New HS rail line between København and Ringsted via Køge (up to 250 km/h for passenger trains);

- Speed increase Ringsted-Odense;
- New railway line on Western Funen Kauslunde – Odense of about 35 km;
- Construction of a 2-track line between Vamdrup and Vojens;
- Capacity increase on the Øresund railway line to eliminate potential future bottleneck.

Despite the high technical standard of the **German** rail network, some required parameters are not met along entire sections of the Scan-Med, e.g. electrification, operating speed and ERTMS implementation. Interoperability on border crossing sections Padborg/Hamburg is currently achieved by multi-system locomotives and respective transition rules. More ambitious passenger and freight volumes by rail require upgraded or newly built lines, both in the urban nodes and the relevant access lines connecting with Denmark and Austria. Denmark is reached on two ways: via Jutland and the Fehmarn Belt, involving the Fixed Link as a combined rail and road tunnel. Austria is reached at the Kufstein border station.

The following measures can mitigate critical issues on the German rail network:

- Completion of the Fehmarn Belt Fixed Link by the end of 2021. The southern access will be completed according the regional planning decision in Schleswig-Holstein from 06.05.2014. Furthermore a reasonable and economically viable solution for upgrade/replacement of Fehmarnsundbridge must be found;
- ERTMS deployment of the main freight corridors with clear timelines, in particular the entry points Kolding-Hamburg and München – Kufstein (by 2020);
- Increase the capacity of Hamburg central station by multi-rails extension between Hasselbrook and Bargteheide and remove bottleneck on the section Lübeck - Hamburg;
- Realisation of high priority improvements of the railway network (as foreseen in the “Bundesverkehrswegeplan 2003” on the lines (Bremerhaven-) Bremen/Hamburg – Hannover as well as Ingolstadt – München, node München and München – Kufstein. However, even with the priority measures bottlenecks will remain according to the transport volume forecast for 2025 on the ScanMed Corridor;
- Expansion of rail routes from the port of Rostock to an axle load of 25 tons;
- New lines/Upgrades on VDE (Verkehrsprojekte Deutsche Einheit) 8.2 Erfurt - Halle/Leipzig, VDE 8.1 Nürnberg – Erfurt, and ABS/NBS Nürnberg - Ingolstadt – München (Ingolstadt - München to be finished in 2015);
- Identification of basic parameters for a possible extention/upgrade for the Brenner tunnel access according to a bilateral agreement betweeen Austria and Germany;
- Flexible coordination and definition of market attractive train paths on mixed lines in particular around the nodes of Hamburg, Bremen, Hannover, Nürnberg and München, considering the specific needs of passenger transport;
- Improve technical parameters, by electrification of about 180km of track between Hof and Regensburg Hbf;

- Regional projects in the Capital Region Berlin-Brandenburg, identified by the region such as the improvement of the rail connections to the terminals / freight villages and intermodal freight capacities;
- Study on the creation of an additional railway link from the northern catchment area of Hamburg Airport (Rail and Airport project).

The following issues are to be coordinated between **Germany and Austria (border** crossing project):

- Timely completion of studies and works on the remaining parts of the northern access lines to the Brenner Base Tunnel in the area of Kundl/Radfeld – Kufstein – Rosenheim – München, where a joint project has been agreed upon between Germany and Austria and is currently carried out by DB Netz and ÖBB respectively;
- Second step capacity improvement for border crossing rail traffic between DE/AT border and Schaftenau (Unterinntalbahn); The existing double track line will be expanded by construction of a new double track line on the length of about 8 km to reduce the travel time and to expand the capacity (expected finalisation after 2030).

On the **Austrian** section of the Scan-Med corridor, the technical parameters are basically achieved, with the exception of operating speed, which is below the standard on the present Brenner mountain line. Due to the slope, the train length (in connection with the weight) is also limited. However, Austria has made considerable progress with building the new Unterinntal railway line for High speed passenger and freight trains. Interoperability on two border crossings (Kufstein, Brenner/Brennero) is currently achieved by multi-system locomotives of the railway undertakings and respective transition rules, which had to be modified in conjunction with the implementation of ETCS level 2 between Kufstein and Brenner. As in other countries on the Scan-Med corridor high ambition levels as regards rail freight and passengers traffic are expected to put pressure on the infrastructure network in the future. In order to meet these ambitions the network lines need to be been upgraded or newly built or completed as follows:

- Full attention on the completion of the Brenner Base Tunnel mitigating the inherent risk elements such as financing, environmental assessment, involvement of civil society;
- Short term infrastructural, operational and regulatory measures on the section München - Verona, in particular Brenner/Brennero station, to improve interoperability the quality of the service and the efficiency until the base tunnel is in operation;
- Second step expansion of the section Schaftenau – Kundl/Radfeld as part of the Unterinntalbahn (expected finalisation after 2030);
- Reconstruction of the railway stations Brixlegg and Schwaz;

- Further measures as part of the "investment programme 2013-2018": rehabilitation point switches, safeguarding of level crossings, noise protection, rehabilitation railway stations, Park & Ride sites.

On the **Italian** sections of the Scan-Med corridor several technical parameters, with the exception of 1435 mm gauge and electrification, are not achieved: train length below 740 m on the Brenner line until Firenze/Ancona (600 m) and on many sections in Italy south of Firenze (400/600 m); axle loads below the standard parameter (< 22.5 t) on 18% of the sections in Italy; loading profile for the transport of semi-trailers ("P400")[9] on the current lines in Italy south of Bologna. Interoperability on the Brenner border crossing (Brenner/Brennero) is currently achieved by multi-system locomotives of the railway undertakings and respective transition rules, which will have to be modified in conjunction with the implementation of ETCS level 2 between Kufstein and Brenner and in Italy. The network lines have to be upgraded, newly built or completed as follows[10]:

- Timely completion of the studies and works on the remaining parts of the southern access lines to the Brenner Base Tunnel (section Fortezza – Verona and nodes of Bolzano and Verona);
- Upgrading, including doubling of tracks, completion of sections and increasing speed: Salerno – Bari HSL, Messina - Catania – Palermo, Salerno - Reggio Calabria, Bologna - Ancona / Bari – Taranto, Bologna - Firenze - Pisa - Livorno/La Spezia, Firenze - Roma - Napoli - (Gioia Tauro) and Napoli – Paola;
- ERTMS equipment: Napoli – Bari HSL, Messina - Catania – Palermo, Firenze – Roma, Roma – Napoli, Bicocca – Augusta;
- Technical and infrastructural upgrade of the following nodes: Bari, Palermo, Firenze, Falconara/Ancona, Napoli, Foggia, Salerno, Verona high-speed node, Catania, Roma.

On various sections, which are to be identified by RFI in detail, the present non compliance with technical standards shall be mitigated:

- Compliance to TSI in stations: improve accessibility, service quality and compliance to TSI;
- Elimination of level crossings: improving safety:
- Improving maximum axle weight to 22,5 tonne/axle;
- Deployment of ERTMS trackside equipment;
- Improving maximum speed on HS "antenna" lines: improving the maximum speed allowed on lines feeding the HS network on ScanMed Corridor;
- Increasing line speed: compliance with standard of 100 km/h operating speed for freight.

[9] The loading profil "P400" is not part of the objectives included in Regulation (EU) 1315/2013. It is however of significant importance for capturing additional freight from road and to supply competitive advantages for rail freight transportation.

[10] The technical nature of the measures is described in detail in the Final Report which is annexed to this Work Plan.

In order to connect the Rail Road Terminals to international rail freight transport via Brenner/Brennero it is essential that their access and the aligned rail infrastructure provides for the loading profile P 400. The upgrading to that standard in Italy should therefore start from the North (Bologna/Firenze) to the South so that respective sections will become effective to the market stepwise.

Road

Despite already existing good practice on cross-border road projects, namely the completion and operational start of the Øresund bridge as a combined two track rail and four lane road bridge and tunnel across the Øresund Strait between Sweden and Denmark, some critical issues regarding road transport have to be noted. The Work Plan lists critical issues of a general nature. A indicative detailed list of concrete measures per country is available for information in the Final Report.

To mitigate the critical issues on the corridors' road network a high quality of roads is indispensable for example for maintaining speed and safety standards. To avoid congestion in and around large cities or in geographically limited areas, bottlenecks and missing links need to be solved. Availability of alternative fuels and filling stations is needed along the entire corridor. As the future is likely to include several alternatives at the same time it is important to include all forms of alternative fuels for the whole corridor. The general location of stations for alternative fuels should be cordially agreed upon. Information systems and ITS solutions to inform and steer the traffic to/from desired routes must be implemented to avoid delays or accidents further down the network, to re-route in case of big events or simply to control the traffic flows via traffic metering. The regulation also requires safe parking facilities along the route. General developments of vehicle technology, emission regulations, weights and dimensions regulation etc. could have a significant effect on the Scan-Med Corridor as well. "Greening" is also an important element of the corridor. Projects such as SWIFTLY Green shall provide concrete advice on issues such as reducing noise and air emissions as well as increased environmental efficiency by mode. Finally, there is no common view between countries or regions on the issue of allowing “longer and heavier trucks” thus exempting parts of the road freight transport from the maximum permitted parameters defined in Directive 96/53/EEC. Larger and heavier trucks are currently allowed in Sweden and Finland. Denmark is testing the same vehicle dimensions on a limited part of the Danish road system. The benefits of this solution are a better use of available capacity as well as lower emissions per transported ton and lower costs. In other parts of the corridor, there is scepticism to allow these type of trucks. Germany has created field-test on selected roads for distinguished applicants which is ongoing, whereas Austria and Italy have already expressed that they will not accept such vehicles.

Airports

In general, airports of the core nodes aligned with the corridor suffer from saturated road access at peak times, capacity enlargement plans which are – for multiple airports – disputed on a local level, sufficient access by rail (Helsinki) or timely completion (Berlin-Brandenburg), as wanted in the TEN-T corridor objectives. Airport managers, industry representatives and residents impacted by the noise and other harmful emission of the airport and the resulting air and land traffic are discussing whether and how the capacity can be increased in a sustainable way.

For the Scan-Med airports of Helsinki, Stockholm, København, Berlin, Hamburg, München and Roma, the possibility and necessity for a connection to the high-speed railway network has to be analysed in a separate study by these airports and regional stakeholders.

It should be discussed with the airport managers and public authorities whether airports as single installations would require a local, regional or national coordination (e.g. the German "Flughafenkonzept" and the Italian "Piano Nazionale degli Aeroporti"), rather than or in addition to a European Corridor coordination. As regards corridor coordination it should however be noted that their "land" catchment areas are crossing borders (e.g. København/Malmö). Moreover, issuing an "National Airport Plan" could lead to incoherence with the current definition of the core network. For example, the latest version of Italian "Piano Nazionale degli Aeroporti"[11], which provides for a cluster of 10 "strategic" airports (one per "traffic basin"), and 26 other “airports of national interest”, identifies 3 "strategic" airports that are geographically located on Scan-Med corridor but are not part of the core network, namely Firenze/Pisa, Bari and Catania.

Within the area of airports detailed measures and resulting projects have been identified, jointly with the stakeholders concerned. A detailed overview is available for information in the Final Report which is annexed to this Work Plan.

Seaports

Most of the Scan-Med core ports are equipped with access to rail, road and inland waterway network, unless the geographical and climate structure does not provide any inland waterways for freight transport, such as Italian and Maltese Ports.

In general, the Scan-Med core ports are connected with railway access to the hinterland (except, understandably, Maltese ports of Marsaxlokk and Valletta, as Malta does not have any railways). However, the number of railway tracks connecting the core ports with the hinterland does not represent the real infrastructure capacity. Even

[11] Released by Italian Government on 30.09.2014.

bigger ports such as the Port of Hamburg with an extensive number of tracks leading out of the port need additional attention and efforts to extend the capacity of the rail hinterland network towards the south of the Scan-Med Corridor until 2030, making sure that the ports can fulfil their role in the TEN-T core network to the utmost extent.

A critical issue is to maintain good ice-breaking capacity throughout the year to ensure access to the ports in the Northern Baltic Sea (e.g. HaminaKotka, Helsinki, Turku/Naantali, and Stockholm).

Regulation (EU) 1315/2013 and other EU legislation on sustainability, energy efficiency and CO2 reduction require publicly accessible alternative clean fuels for maritime (and IWW) transport to be provided by all the maritime core ports by 2030. There seems to be “sufficient” time to achieving this objective but nevertheless the starting needs to be observed.

Many ports within the Emission Control Area (ECA) of North and Baltic Sea already have established or are planning LNG bunkering facilities. In particular, the Ports of Stockholm, Oslo and Trelleborg already provide LNG for ships and ferries. Many ports have already set up port regulations for LNG bunkering and can provide ship-to-ship bunkering as in the ports of Stockholm and Gothenburg. The ports of HaminaKotka, Turku, Helsinki, Göteborg, Trelleborg and the four German ports are planning or are already installing LNG facilities. Ports in the southern part of the corridor have also started LNG planning activities, in particular the ports of La Spezia and Livorno.

Simultaneously, operators of ferry lines are currently challenged by IMO conventions requiring lower emission vessels (scrubbers, LNG and methanol and are dealing with the implementation deadlines given for the respective area (Baltic, North Sea, Mediterranean) - an issue which is not directly linked to the corridor approach since it targets at sea areas.

A first glance on the Scan-Med ports indicates a wide range of frequencies of regular freight and passenger connections between Finland and Sweden (Turku/ Naantali and Stockholm), Denmark and Norway (København – Oslo), Southern Sweden/Germany (Malmö/Trelleborg/Göteborg to Lübeck-Travemünde / Rostock) as well as between Italian and Maltese ports (Taranto to Valletta and Palermo to Valletta).

While the numbers of ferry connections (short sea routes) are set by the market’s demand and supply structure, the surrounding conditions on port infrastructure and hinterland access, administration, regulations and information systems play an additional role. The status of the current analysis, however, does not yet allow for specific comments on “critical issues” on the MoS conditions of the Scan-Med Corridor.

Reform of the Italian Port system is ongoing. Article 29 of Decree no. 133 of September 12th, 2014 ("Decreto Sblocaa Italia") issued by the Italian government describes that the number of port authorities will be reduced in the framework of a "Strategic Plan for Ports and Logistics". The foreseen reform aims at increasing traffic

for Italian key ports, in particular for those that will be selected as “hubs” for international transport on the land side of the Corridor, and for deep sea traffic to/from Far East. The reform may also have a significant impact on the port accessibility and selection of projects of European added value; according to the Decree, port authorities have to inform the government on relevant ongoing or programmed projects. The Ministry of Infrastructure will then select projects to be included in the "Strategic Plan".

Within the area of seaports, critical issues, measures and resulting projects have been identified, jointly with the stakeholders concerned and included in the List of Project.

Rail-Road Terminals

With respect to rail-road terminals, critical issues are generally rail and road access as well as handling and intermediate storage capacity. However, recently completed enlargement programmes, which were initiated along the corridor by the Brenner Action Plan of 2003 and updated in the “Action Plan Brenner 2009” have resulted in sufficient capacity for the current traffic demand. Good practices applied were double sided electrified rail access, e.g. in Hamburg-Billwerder and München-Riem and the replacement of old equipment by modern Rail Mounted Gantry Cranes, e.g. in Stockholm-Arsta or Rostock to name but a few from recent completion.

In Germany the Development concept 2025 for the intermodal transport in Germany[12] highlighted the future capacity needs per location area (not single terminals) and suggested a continuation of the successful financial support of the infrastructure construction. According to the Development Concept 2025, the growth of the intermodal market volume requires an increase of handling capacity in several terminal areas while leaving the decision on the exact terminal and improvement measure to the private sector.

Although some terminal projects could already be identified, critical issues in relation with all 44 terminals could not be identified in the scope of the present corridor study. These critical issues, as well as quality deficits of the railways which are impacting the performance of the terminals should be identified at a later stage, when the respective stakeholders are involved in the process notably 2015.

[12] Entwicklungskonzept KV 2025 in Deutschland als Entscheidungshilfe für die Bewilligungsbehörden, Aktenzeichen Z14/SEV/288.3/1154/UI32;UI32/3141.4/1, Abschlussbericht, Hannover, Frankfurt am Main, November 2012.

Multimodal Dimension

Multimodality has many dimensions. Article 3 (n) of Regulation (EU) 1315/2013 defines, “multimodal transport” as: the carriage of passengers or freight, or both, using two or more modes of transport. In this phase of the corridor analysis the main focus has been on the port-rail dimension. Several measures have been identified, for example in Hamburg the construction of a new Railroad Bridge Kattwyk and track doubling Nordkurve Kornweide and in Göteborg the Port line (upgrade to double track) Also in the Italian ports (Taranto, Napoli, Gioia Tauro, Bari, Palermo, Augusta and Livorno) and in Lübeck railway links need to be upgraded or constructed.

In spite of the focus on the port-rail dimension, other dimensions have also been taken into account:

- Road, Rail and Sea: renewal of road, sea and rail traffic control systems in Finland (nationwide);
- Multimodal passenger traffic: long distance commuting in Helsinki;
- Seaport and MoS: Improvements of the maritime access as well as infrastructure and services for alternative fuels, development of intermodality and e-Freight, studies and potential services for further cross-border port interconnections;
- Rail and Airport: airport connections, upgrading of rail link and stations (Göteborg-Landvetter, Hamburg, Catania Fontanarossa, Roma Fiumicino);
- Rail and Road: Fehmarn Belt Fixed Link, renovation and redesign of road and rail connections of the container terminal Burchardkai (Hamburg);
- Rail and Rail Road Terminals: rail connection in Stockholm Nord (Rosersberg) and new public siding in Bari Lamasinata Freight village, improving of capacity of Verona Quadrante Europa.

List of Projects

The long list of projects concluded from the analysis of documents, reports, studies, national development plans, the compliance analysis and the identification of critical issues has been checked and completed by the Member States and stakeholders after the 4th Corridor Forum meeting. Information received in due time (by 28.11.2014) and with respect to the required data fields, have been included by the Contractor Consortium into the list. Contractor consortium checked it against the characterisation criteria which made the projects to become “critical issues” and whether it is among the pre-identified sections and projects as listed in Annex I of the CEF Regulation and updated the list accordingly.

This comprehensive indicative list will form the basis for the implementation of the corridor.

As presented in the table below, the current project list includes 374 projects and measures related to the Scan-Med corridor.[13]

Table 4: Number of projects by mode and country ("Diverse" = multi-country projects)

Country	Rail	Rail + other	Road	Road + other	Sea-port	Sea-port + MoS	MoS	Air-port	RRT	Other	Total
FI	15	1	5	1	2	1		2	3	2	32
FI/SE						1					1
SE	22	3	15		4	2	1	2	1		50
SE/DK		1									1
DK	10		5	1	2	1		2	1		22
DK/DE		1									1
DE	29	9	31		10	1	1	26	6	1	114
DE/AT			1								1
AT	6		6						1		13
AT/IT	2										2
IT	62	13	13	3	21	4	1	1	1		119
IT/MT						1					1
MT			3		10			6			19
NO	1		1					1	1		4
Diverse							14				14
Total	147	28	80	5	49	11	17	40	14	3	394

[13] Some of the projects are related to sections or nodes shared with other core network corridors, such as Helsinki, Hamburg/Bremen – Hannover, Rostock – Berlin, Halle/Leipzig, Würzburg – Nürnberg, München, Verona, Bologna.

5. Recommendations and outlook by the European Coordinator

As can be seen 394 projects and measures related to the Scan-Med corridor have been included in the analysis. This is a gauge of the substantial progress that has been made during 2014 in identifying corridor alignment, compliance with Regulation requirements, identification of cross border bottlenecks, missing links, intermodal node connections with the corridor and the deployment of traffic management systems. All this has been complemented by a market analysis developed on a study based approach.

The work done to date represents an important milestone in terms of defining the nature and the scale of the challenge that separately and collectively we are summoned to address in order to realise the objectives that have been set as a matter of common interest and shared responsibility.

It marks the end of the beginning as the governance system pivots from the definition and design phase, through the approval to the implementation phase.

Corridor Forum – An innovative Governance Tool

The Corridor Forum has been a valuable learning by doing exercise. It is consultative in form and has privileged the quality and constancy of dialogue and engagement with Member States, while progressively opening up to increasingly wider stakeholder participation. The Coordinator would propose to continue this practice.

There will be two Corridor Forum meetings in 2015, three in 2016 to prepare the first revision of the work plan, two again in 2017 and three in 2018 to prepare the second revision of the work plan.

The Corridor Forum can serve as a tool to encourage and integrate other transport policy initiatives such as smart and sustainable urban transport, green corridors, innovation and traffic management systems, thus permitting it to play a leading role in encouraging peer group demonstration effect between early adopters and the rest and position the Forum as a frontrunner in the evolution of transport policy.

Given the corridor logic of this exercise, EU-Member State dialogue has been multilateral and not just bilateral.

Current and eventual corridor stakeholders represent a wide variety of sub national and transnational actors including many from the non-state civil society community, both profit and non-profit. Their interests are diverse but the complexity of our goals requires us to forge and to mobilise a unity of purpose around common themes.

While there is provision for the establishment of working groups, sectorial or thematic, as has been done, it might be helpful to think of many of these more as ‘Ideas

Laboratories' fostering peer-to-peer interaction, communication and also knowledge and best practice sharing.

It is certainly the case that to date our work focus, in line with the Regulation, has been on traditional infrastructure analysis. However, the innovation, multimodality and sustainability dimensions need further elaboration and must be incorporated and animated through appropriate drivers.

So far the anatomy of the analytical work done has been skeletal in form. We know the bones of the matter, though even here more work is needed to understand the joints, namely the key nodes whether urban, ports, airports or multimodal terminals.

Nodes are the most complex points of intersection and when intelligent traffic systems, big data management and technological innovation are added to the mix it is like adding a central nervous system to the skeleton which we now have, or when urban or port related congestion and pollution are taken into account, for example, this is a bit like adding the circulatory and respiratory systems to our existing skeletal anatomical analysis. While recognising that Rome was not built in a day these issues must begin to move up our priority list.

Ideas Laboratories

So far, the role of urban nodes, smart operations and innovation has been recognised but not yet articulated or connected to the organisation of the Corridor Forum. Imagine an 'Ideas Lab' on mobility and innovation in a corridor setting.

This could, for example, encourage the emergence of innovative ecosystems, including business ecosystems; support tomorrow's winning technologies; facilitate the introduction of new economic instruments; introduce into the debate tailored and targeted public policies; and foster massive deployment including big data capture and use.

Best practice could be promoted and shared on the setting of ambitious CO2 emissions, local air emissions and noise reduction targets; the creation of ultra-low emission zones; the reinvention of last mile urban logistics; and the development of door-to-door transport solutions and services for people.

In short, the Corridor Forum could become not just another date in the calendar but rather a very practical ideas workshop from which real solutions and potential innovation, both technological and procedural, with a clear added value for the Scan-Med corridor could be explored. This would also assist in deciding on cofunding ICT, innovation and sustainability policy initiatives.

Regions, cities, ports, airports and rail-road terminals complemented by relevant user and civil society groups could contribute to and benefit from a shared commitment to such ideas animation and implementation.

As with so much else that the EU needs to do, this exercise is essentially about raising our sights and raising our game. To borrow a term from diplomacy, especially in the field of global trade negotiations, the Corridor Forum could transform into a 'polylateral' governance tool, where the bottom up meets the top down while also encouraging peer-to-peer and, as regards actors, state to non-state interaction.

Key considerations

Ports are the single market's gateways to and from the wider world. Their efficiency is a vital component in the competitiveness of the EU's logistical chain. The Coordinator wishes to encourage Member States to pay particular attention to multi-modal port hinterland connections that have been identified among the critical gaps, especially the last mile and rail connections. Together with the Coordinator for the Motorways of Sea I will use my best endeavours to intensify dialogue on this multi-modal dimension with the relevant stakeholders in the coming period.

Interoperability is an important concept whose reach extends across the entire range of activities of the corridor, in particular for rail operations. It is essential that this becomes operational over the planning horizon to 2030 by moving from the current patchwork to a genuine network. Rail interoperability need to be addressed in close cooperation with the Scan-Med Rail Freight Corridor. As regards the roll out and deployment of ERTMS I will also work closely with the ERTMS Coordinator to ensure that the Scan-Med corridor plays its full part in this systems transformation. Other aspects of rail interoperability, such as operational and authorisation rules which can produce unnecessary and avoidable delays, represent low hanging fruit that, once resolved, could deliver high yield low cost solutions.

Detailed ways how to accelerate ERTMS equipment along the core network corridors will be described in a separate Work Plan by the European ERTMS Coordinator. In his report, the ERTMS Coordinator will present a so called Breakthrough programme, which has been established in close cooperation with the railway sector and consist of a limited number of objectives to be reached by 2016, including a review of the current European Deployment Plan and the identification of a strategy for ERTMS equipment by 2030, as laid down in Regulation (EU) 1315/2013.

Two of the largest infrastructure priority projects in the EU are situated on the Scandinavian-Mediterranean corridor: the Fehmarn Belt Fixed Link between Denmark and Germany and the Brenner Base Tunnel between Austria and Italy.

Both projects in tackling major cross-border bottlenecks and having clear EU added value fulfil key criteria of the new TEN-T policy guidelines. Together with cross-border

projects on the other corridors these will contribute to the EU's long-term mobility and sustainability objectives.

The Fehmarn Belt Fixed Link will establish a direct link between Denmark and Germany via an 18 km long rail/road tunnel. The project, which will be completed in 2021, will create more rail and road capacity between the two countries. Furthermore, in combination with upgrading projects on the Danish and German railway hinterland connections, the project will reduce travel times from 4.5 to around 2.5 hours for rail passengers between Copenhagen and Hamburg. Travel times for freight trains will also be significantly reduced.

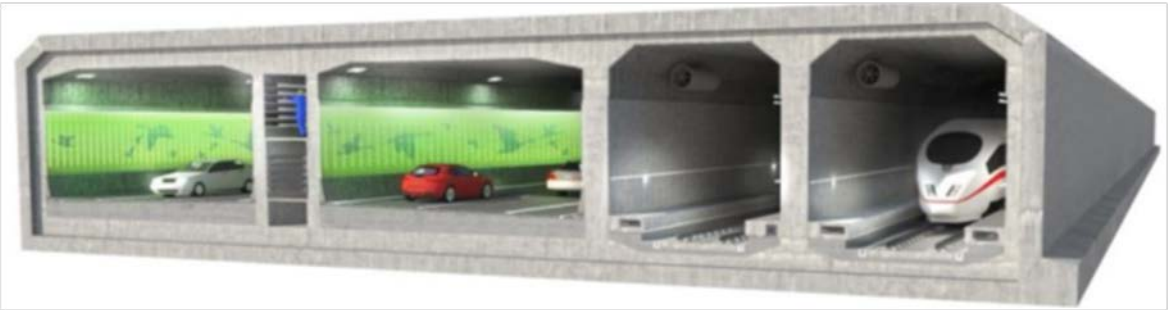
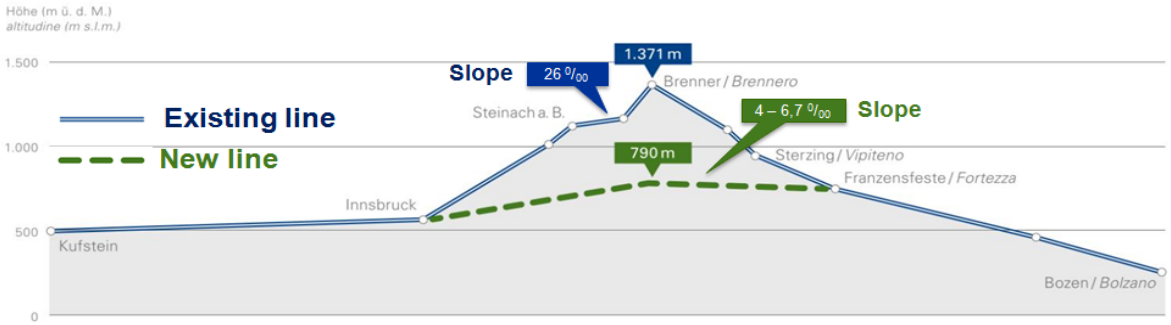


Figure 2: Cross section of Fehmarn Belt Fixed Link tunnel (Source: Femern AS 2014)

The Brenner Base Tunnel is the main element of the new Brenner railway from Munich to Verona. This rail tunnel runs from Innsbruck in Austria to Fortezza in Italy over a length of 55 km. If one adds the Innsbruck railway bypass the entire tunnel system is 64 km long. Therefore, when it becomes operational in 2026, the Brenner Base Tunnel can be considered the world's longest underground railway connection. The new tunnel will increase the capacity up to 400 trains per day, reduce travel time between Munich and Verona from 5.5 to 3 hours and will improve the efficiency of rail freight operation by allowing longer and heavier trains due to a significant reduction of the climbing slope.



Freight trains	Length	Locomotives	Length of the trains	Max transportable mass	Travel time
Existing line	75km	2 - 3	450 m	1200 t	1h 45'
New line	**55km**	**1**	**750 m**	**1600 t**	**35'**

Figure 3: Longitudial section and basic train parameters of Brenner (Source: BBT SE 2014)

It has to be noted that for making these cross-border projects a success it is essential also to develop the access routes in Denmark, Germany, Austria and Italy. Specifically, the access lines in Germany to the Brenner Base Tunnel and the Fehmarn Belt Fixed Link and in Italy to the Brenner Base Tunnel need to be progressed. The development of these lines therefore will be high on my priority list.

In view of the great importance of the cross-border projects for the Scan-Med corridor I will propose to Member States, without replicating existing structures, to strengthen cross-border dialogues by organising dedicated working groups focusing on a coordinated project implementation, including crucial elements such as financing, environmental assessment and involvement of civil society.

Accompanying measures

Projects like the Brenner Base Tunnel and the Fehmarn Belt Fixed Link are part of what may be described as the hardware of the Union's mobility network. But to ensure resource efficiency and sustainability one also needs to develop in parallel what one might call the network's accompanying policy software.

Take the Brenner Corridor between Munich and Verona as a concrete example. Each year, approximately 2 million trucks drive through the Brenner Pass. The impact on the sensitive alpine environment along this corridor is huge. EU minimum air and noise quality standards are significantly exceeded. The Brenner Base Tunnel, which becomes operational in 2026, aims to shift a large part of the freight which is now transported by road to rail, and should consequently improve the quality of life of the local population. However, this goal will not be achieved without a coherent set of flanking policy measures.

These measures relate to areas such as environmental and noise protection, cross-financing mechanisms - for example through tolls - from road to rail, the internalisation of external costs, policy initiatives regarding open access to network infrastructure, or even fuel pricing. Here it is important to stress the necessity of seeking to explore and develop inter-regional and cross-border dialogue and cooperation leading to corridor coherence in the evolution of flanking policy measures. At present there are, for example, large differences in toll pricing between the Austrian-Italian alpine crossings and the much more expensive Swiss crossings. Even between the three countries along the Brenner Corridor –Germany, Austria and Italy– there are large price differentials. Excise taxation can lead to large differences in fuel prices for heavy goods vehicles. As a result, trucks take long bypass routes to save hundreds of euros by refuelling at the Brenner Pass. Clearly, these price differentials can distort corridor and modal choice leading to corridor shopping on environmentally sensitive alpine routes.

Such accompanying or flanking measures, referred to here as policy software, are indispensable to optimising the worth, effect and socio-economic rate of return on the

expensive capital investments in infrastructure being undertaken or contemplated under the new TEN-T guidelines.

It takes a long time to construct major infrastructure projects. For instance, the 62 km long Brenner Base Tunnel and its access routes to the North and South are not scheduled to be completed until 2026. It is a complex engineering, geological, hydrological and financial challenge. No less complex, perhaps even more so, is the question of making meaningful progress on a set of coherent and appropriate accompanying policy software measures. This is not possible without the active cooperation of the relevant national and regional governmental authorities. Each is a repository of its own historical, constitutional and institutional legacy and traditions. Each enjoys and asserts its own policy autonomy or sovereignty. Each has its own policy inheritance, preferences and interests.

The corridor logic now being embarked on requires vision and leadership that is willing to challenge such inherited diversity. It should aim to find sufficient common cause to make the best use of the investments now planned across regional and national boundaries. The coordinator is willing to encourage and assist such an endeavour, to help start and to accompany the policy journey towards defining and delivering the appropriate policy software. This cannot be done from the outside. It will not happen because ‘Brussels’ wants it. It can only happen and succeed if the relevant national and regional political and administrative authorities want it to happen and commit themselves to take the necessary steps. This will be a bottom up process or it will not be. The Core Network Corridor concept, the Corridor Forum and the Coordinator can facilitate but not dictate such an engagement.

It might be helpful to begin by exploring some of the principles and questions surrounding the policy software agenda before rushing to suggest solutions. Member States, ministers and ministries appreciate the difficulty of making policy change and bringing public opinion along with it. Change takes time. When it is multidimensional - cross border, interregional and multi modal - it risks taking longer to establish the kind of coherent software consensus that will help optimise the social, environmental and economic value of the hardware investments being made. That is why, from the very outset, from now, this journey towards the evolution of acceptable accompanying policy software should go hand in hand with the unprecedented investment in infrastructure now planned.

Communications Policy

Last but not least, the importance of communication strategy cannot be overemphasised. Every year for the past several years, for example, together with regional political leaders and the project’s senior management the Coordinator has met the mayors along the Brenner Corridor. Such local meetings create stakeholder awareness and ownership and carry issues and questions about the project to and

from the community. “Stuttgart 21” and the controversy it generated in Germany is an object lesson in handling long-term infrastructure investments. Even when the political paternity or maternity of a project is positive at the start, when it finally passes from conception to construction, with the passage of time, this initial positivity risks to decline. Sometimes, politically or even literally, the original protagonists may have passed on and absent a vibrant communications strategy vital elements of such projects can be placed at additional risk. No less than good design and sound engineering as regards infrastructural hardware, or the articulation of sensible and coherent accompanying policy software measures, a clear and transparent communications strategy is an indispensable arm in the conduct of the kind of programme being embarked on from today.

Conclusion

There is now real momentum. We have a policy - the TEN-T Guidelines. We have a budget - the Connecting Europe Facility and possibly additional parallel innovative financial options. We have implementation instruments - the corridors, Coordinators and work plans. And crucially - we have political consensus for each of these things founded in an EU Regulation. Now we need to move from design to delivery. This will happen through this work plan that the Member States are being asked to approve in the coming months. We have identified critical gaps that unaddressed could prevent the brighter future for mobility and connectivity which beckons. We share this unique opportunity together to build something lasting and substantial, for the common good and for the betterment of the lives and chances of our citizens, on a scale and with a vision unmatched in the European Union’s past. We have the vision, the targets and the motivation. It is time to choose and then to get on with the work.

Contacts

Pat Cox, European Coordinator

Leo Huberts, Advisor
(leo.huberts@ec.europa.eu)

Menno van der Kamp, Advisor
(menno.van-der-kamp@ec.europa.eu)

Corridor website:
http://ec.europa.eu/transport/themes/infrastructure/ten-t-guidelines/corridors/scan-med_en.htm

Background information with useful links

- Corridor Study
- List of projects
- TENtec maps

Downloads: http://ec.europa.eu/transport/themes/infrastructure/ten-t-guidelines/corridors/corridor-studies_en.htm)

Contact details:
European Commission – Directorate General for Mobility and Transport
Directorate B – European Mobility Network
Unit B1 – Trans European Network
http://ec.europa.eu/transport/index_en.htm
email: move-info@ec.europa.eu

Offices:
Rue Demot 28
1049 Brussels Belgium

MAY 2015

Design & Layout by TENtec