European Commission

CEF support to

North Sea - Baltic Corridor

Innovation and Networks Executive Agency

North Sea - Baltic

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1. Introduction

The aim of this report is to describe the contribution of the Connecting Europe Facility Transport (CEF-T) to the implementation of the North Sea-Baltic Core Network Corridor (hereafter: "the Corridor") and in particular the contribution of CEF-T to the Corridor Work Plan of the European Coordinator, Ms Catherine Trautmann. This is the first INEA report aimed at presenting the contribution of the CEF funded Actions - since the 2014 calls for proposals - to the implementation of the Corridor. The report presents the actual state of play and an outlook for the Action-portfolio situated along the Corridor.

The Corridor is located in the Northern part of Europe and it is connecting eight Member States (four Cohesion and four non-Cohesion countries): Finland, Estonia, Latvia, Lithuania, Poland, Germany, the Netherlands and Belgium. The Corridor joins the Baltic Sea Region with the Low Countries and the main ports of the North Sea Region. It links East and West via around 5,000 km of railways, 4,000 km of roads and 2,000 km of inland waterways. It crosses or has common sections with the Baltic-Adriatic, Scandinavian-Mediterranean, Orient East-Med, Rhine-Alpine and North Sea–Mediterranean Core Network Corridors.

The objective of the Corridor is to link some of the most important ports in Europe not only by sea but by all available transport modes including rail, roads, inland waterways and air ensuring multi-modal links including relevant traffic and information management systems.

The main challenges of the Corridor are: (1) the existing divergences in transport infrastructure between the Eastern and Western parts of the Corridor; (2) the different traffic patterns with strong traffic in the western end of the Corridor which lessens towards the eastern part of the Corridor; (3) the development of the interconnectivity and multimodality of key urban nodes located at the junction with other Corridors; (4) the creation of new traffic flows in a North-South direction feeding in the well-established East-West transport flows.

The Corridor Work Plan identifies the priority issues to be addressed for the functioning of the Corridor and for tackling the above mentioned challenges. These priorities are:

- the timely implementation of the missing cross-border railway link - at the Corridor's north-eastern end – the Rail Baltica project;
- the interoperability of the railway network in close cooperation with the "North Sea – Baltic" Rail Freight Corridor;
- the hinterland connections – rail, road and inland waterways – of the main ports;
- implementation of innovative solutions by using the Corridor approach (ITS, alternative fuels, digitalisation, etc.);
- the efficiency of the main urban nodes, particularly the multi-corridor nodes.

Consequently a vast number of North Sea-Baltic Corridor Actions co-funded from CEF-Transport are addressing the above priorities and recommendations, thus contributing to the implementation of this transport Corridor by 2030. For example: six Grant Agreements are in place and a seventh will be signed for the implementation (or upgrade) of Rail Baltica from Warsaw to Tallinn; one CEF Action supports specifically the running of the North Sea-Baltic Rail Freight Corridor; there is a set of Actions supporting inland waterways, port and port hinterland infrastructure or improving the

efficiency and interconnectivity of urban nodes. Similarly, several innovative Actions in different transport modes (inland waterways, road, maritime) are contributing to the implementation of innovative solutions along the Corridor.

When it comes to implementation, it is ensured that: i) the Actions comply with the technical requirements defined in Regulation (EU) No 1315/2013 on Union guidelines for the development of the trans-European transport network and ii) the specific sectoral objectives stipulated in Regulation (EU) 1316/2013 establishing the Connecting Europe Facility are also considered. Consequently it is expected that by 2030 a European transport infrastructure core network of high and uniform standard will be in place.

2. Action portfolio: State of play[1]

The CEF Transport Programme has so far awarded grants worth €22.3 billion with a total investment in the European economy of €46 billion. The current portfolio of Actions in the North Sea Baltic corridor comprises 76[2] grant agreements allocating €3.1 billion of actual CEF Transport funding (corresponding to 12% of total number of CEF Transport Actions and 14% of total actual CEF Transport funding). There have been no terminations or closures of these grant agreements so far.

2.1. Operational Implementation

For the North Sea Baltic Corridor, the Core Network Corridor priority (under Funding Objective 1[3]) represents 86% of actual CEF Transport funding. Other priorities, such as ERTMS (Funding Objective 1), Innovation (under Funding Objective 2[4]) and Motorways of the Sea (under Funding Objective 3[5]) also contribute to the development of the Corridor.

Due to its location most of the funding for the North Sea Baltic Corridor portfolio is coming from the Cohesion envelope. The portfolio is dominated by national Actions, which absorb around 74% of the grants allocated to this Corridor. 70% of the actual CEF Transport funding is linked with works Actions. The highest number of Actions is under the road transport mode, while rail Actions receive most of the actual funding (79%). There are no Actions in the field of air transport. 40 bottlenecks will be addressed by Actions on this Corridor regarding mainly rail sections with cross-border impact.

[1] As of February 2018.

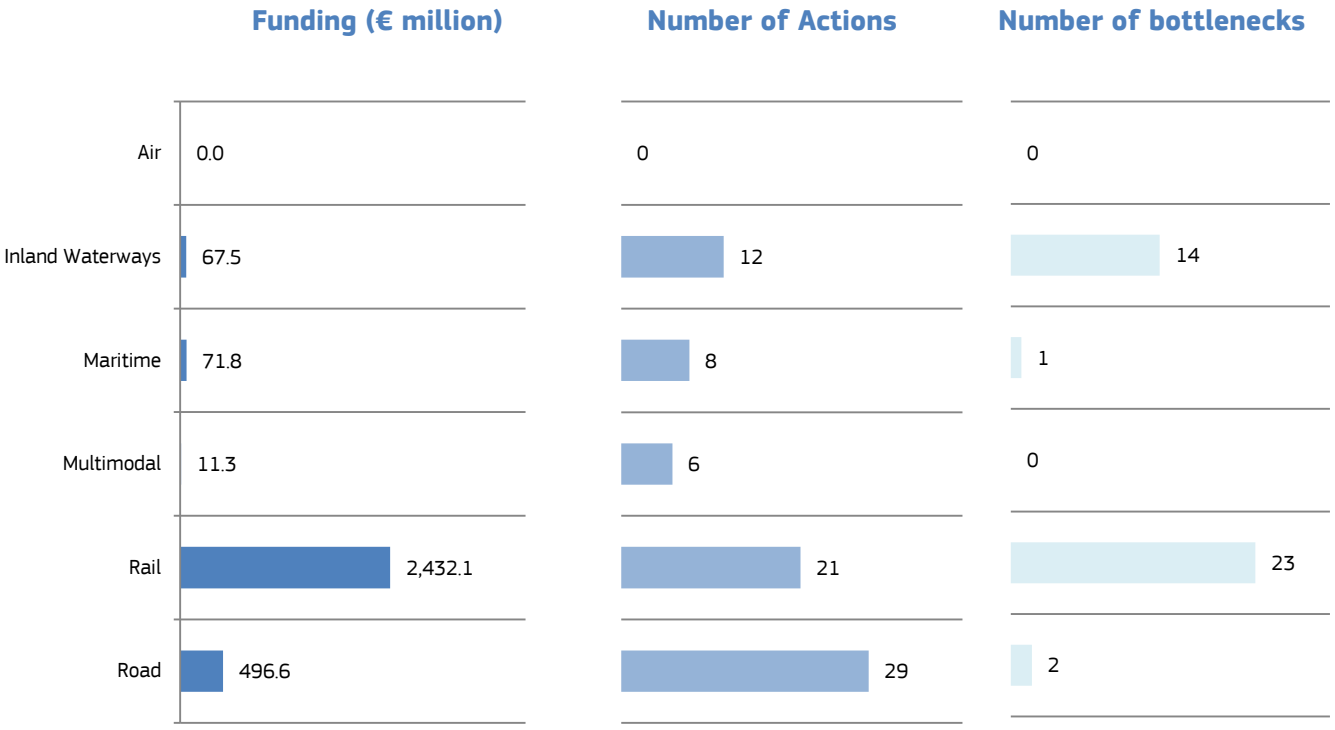
[2] Of which 67 have been signed following the 2014-2016 calls, 1 is under preparation following the 2016 Calls and 8 are under preparation following the 2017 Blending-1 Call.

3 Removing bottlenecks and bridging missing links, enhancing rail interoperability, and, in particular, improving cross-border sections

4 Ensuring sustainable and efficient transport in the long run

5 Optimising the integration and interconnection of transport modes and enhancing interoperability, safety and security of transport

Figure 1: Statistics by transport mode



2.1.1. Inland Waterways

The inland waterway portfolio in the North Sea Baltic Corridor is composed of 12 Actions, receiving €67.5 million in CEF Transport funding. The Actions are located in the Netherlands, Germany and Belgium. The location of the supported inland waterway works Actions are represented on the map below:


NORTH SEA – BALTIC
CORE NETWORK CORRIDOR
CEF funded Inland Waterway Actions
(excluding RIS)
Finland
Norway
Helsinki
Tallinn - old city harbour
Sweden
Estonia
Russia
Latvia
Denmark
Klaipeda
Lithuania
Belarus
Bremerhaven
Netherlands
Rotterdam
Poland
Germany
Koeln
Belgium
Czech Republic
Ukraine
Slovakia
France
Austria
Hungary
Romania
Slovenia
Croatia
Serbia
Bosnia and Herzegovina
CEF Actions in Core Ports
CEF Actions on Inland Waterways
North Sea-Baltic Corridor (inland waterway)
Cartography: INEA, March 2018
© EC, DG MOVE, TENtec for TEN-T network
© EuroGeographics for the administrative boundaries
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250
500
km

The Amsterdam Sea Lock's preparatory works and the project management are supported with a €11 million CEF Transport grant. The Action shows good progress as the preparatory works (including the necessary demolitions and relocations of civil engineering structures) are already completed and the construction works (not part of the Action) are ongoing. It is expected that the Action will be completed in full and in time.

Innovation is present in inland waterways through a study Action in the Netherlands aiming to facilitate large scale implementation of LNG in inland navigation, thus forcing a breakthrough in the LNG market through innovative financing solutions and standardisation. Furthermore, through an Action selected in the 2017 Blending Call, CEF supports innovative 'zero emission' inland waterway ships in the Netherlands.

Germany, the Netherlands and Belgium are all participating in a very large and ambitious project (supported through two 'twinned' Actions, in which Member States eligible and non-eligible for Cohesion Funds are collaborating): the River Information Services Corridor Management (COMEX), which started in February 2016 and joins the forces of 13 countries to improve cross-border cooperation with a view to achieving a service for navigation corridors with common data quality, equal service level and unique access. The Actions are progressing well and held its high-level official kick-off event in Berlin on 17 January 2017.

This project is especially important because it supports RIS in achieving its full potential towards increasing the efficiency of inland waterway transport (IWT). In particular, the exchange of data across borders is rather limited and the quality of data and service levels vary from one country or sometimes region to another. Thus, public and private users of RIS are not reaping the full benefit of RIS yet. The main activity of the twinned Actions (€16.5 million, around 62% of the budget) consists in the implementation of Corridor river information priority services and systems in agreed RIS COMEX project corridors. Identified services will be implemented on specific corridors or in some cases for the whole length of EU waterways.

Furthermore on the Corridor there are six German inland waterways Actions with a cumulated CEF grant of €28.6 million having as objectives the:

1) Development of the Western German canals according to the criteria of the European waterways class Vb. and, consequently the improvement of the connection between the ARA seaports (Amsterdam, Rotterdam, Antwerp) and Berlin/Poland; in particular by replacing bridges and culverts along several western German canals (Dortmund-Ems-Kanal (DEK), Wesel-Datteln-Kanal (WDK) and Rhein-Herne-Kanal (RHK)). The bridges will be provided with an increased clearance height to enable double-stacked container transport.
2) Improvement of the Hannover-Magdeburg-Berlin waterway connection according to the criteria of the European waterways class Vb. This will be done in particular by: i) upgrading the lock in Zerben hence removing the last relevant bottleneck along the Elbe-Havel Canal; ii) upgrading a specific section of the Sacrow-Paretzer Canal (a major bottleneck of the lower Havel waterway); and iii) by widening and increasing the depth of the Mittelland Canal bed.
3) Contributing to the strengthening of Inland Water Way transportation, by making the Port of Cologne more modern and efficient, in particular by reinforcing parts of the waterfront walls of the port.

Regarding their progress, the replacement of the Schillerstraßen-Brücke is completed, the Hervester Brücke no. 423 was opened for traffic in May 2015; the Gartroper Straßen-Brücke no. 308 is completed and the waterfront walls of the Port of Cologne were improved.

The Actions belonging to this transport mode are expected to address 14 bottlenecks and equip the ports of Antwerp, Brussels and Köln, as well as Berlin, Braunschweig, Dortmund and Magdeburg with supply points for alternative fuels.

2.1.2. Maritime

In total the maritime portfolio in the North Sea Baltic Corridor is composed of 8 Actions, receiving €71.8 million in CEF Transport funding. Of these, 7 are Motorways of the Sea (MoS) Actions targeting the 'greening' of the maritime transport by promoting the use of alternative fuels (LNG) or upgrading/introducing of more environmental friendly vessels, helping therefore the carriers to comply with the EU sulphur regulations for maritime transport.

At the northern end of the Corridor an emblematic Action receiving an almost €30 million CEF grant is developing and upgrading the MoS link between the ports of Helsinki (located at the crossroads of the North Sea – Baltic and the Scandinavian-Mediterranean Corridors) and Tallinn, addressing port bottlenecks, optimising port operations and further increasing passenger capacity. Within the Action - besides the ongoing port facility developments - an environmental friendly and efficient, new generation RoPax ferry fuelled by LNG ("Megastar") has been already put in operation.

The port of Klaipeda in Lithuania is very engaged in CEF Actions as it is involved in three MoS Actions. The already completed one has supported the deployment of an effective ship emission abatement technology (hybrid wet-scrubbers) on the mid-size RoPax vessels "Optima Seaways" and "Athena Seaways" operating on the Klaipeda – Karlshamn (Sweden) link. Efficiency, capacity, quality and safety improvements in both ports were implemented: a new terminal management system in Klaipeda and new gate facilities and extension of the parking area in Karlshamn. The second Action – to be inaugurated in 2018 in Klaipeda - is about building an onshore LNG reloading station enabling the direct bunkering to vessels. Finally in the Action "Blue Baltics – LNG infrastructure facility deployment in the Baltic Sea Region" in cooperation with Sweden, Estonia and Germany a Maritime LNG Mobile Multifunctional Refilling Station-MMRS will be developed in Klaipeda, which together with the upgraded LNG reloading station shall turn Klaipeda into a main LNG Hub within the Baltic Region.

In a similar approach to greening of maritime transport, shipping companies from Germany and Finland are cooperating to introduce in the market a new product to tackle exhaust gas abatement and waste water cleaning technology. Furthermore Finland, Germany and the Netherlands are joining efforts to environmentally upgrade two MoS container transport links between the TEN-T core ports of Helsinki, Rotterdam and Teesport (UK) to address the bottleneck of insufficient container handling capacity in the ports and to improve the energy efficiency of the whole logistics chain.

Finally, as a result of the 2017 blending Call, the maritime access to the port of Vuosaari in Helsinki will benefit from a CEF support of €6.7 million.

2.1.3. Multimodal

In total the multimodal portfolio in the North Sea Baltic Corridor is composed of 6 Actions, receiving €11.3 million in CEF Transport funding. It is interesting to note that each of the four Actions signed following the 2014-2016 calls have different scopes and objectives related to multimodality:

- a German Action – about to be completed - aims to shift traffic from road to rail by promoting the innovative 'just-in-time' (JIT) intermodal logistics concept and improving the loading-unloading process through investing in some 300 innovative, 40-foot containers and 184 wagons that are compliant with the Eurotunnel safety specifications;
- in Bremerhaven there is an infrastructure Action that is expected to improve the connection of the port to the railway network by doubling the capacity of the shunting yard at "Imsumer Deich";
- a study in the urban node of Helsinki aims to develop optimum and seamless multimodal transport connection between the long distance, urban and airport traffic at the Helsinki Airport Travel Centre. Once completed, the Travel Centre will serve both the North Sea-Baltic and Scandinavian-Mediterranean Corridors.
- the fourth Action is to support the deployment of alternative fuels infrastructure primarily on the cross-border sections of Belgium and the Netherlands through a co-funding framework/grant scheme for innovation and new technologies in road and inland waterways transport.

The two multimodal Actions selected in the 2017 blending Call will further enforce the above efforts by contributing to the works of the Helsinki Travel Centre mentioned above and to the roll-out of the LNG in Central European part of the Corridor.

2.1.4. Rail

In total the rail portfolio in the North Sea Baltic Corridor is composed of 21 Actions receiving €2.4 billion in CEF Transport funding. Actions in the North Sea - Baltic Corridor expect to build, upgrade and improve several thousand km of railway lines. In particular - and in line with the Corridor Work Plan - the rail Actions are focusing on the Cohesion countries. This is also evident from the map below highlighting the location of the rail works.


NORTH SEA – BALTIC
CORE NETWORK CORRIDOR
CEF funded Rail, Multimodal and Maritime Actions
(excluding ERTMS)
Finland
Norway
Helsinki
Tallinn - old city harbour
Sweden
Estonia
Russia
Latvia
Riga
Denmark
Klaipeda
Lithuania
Vilnius
Belarus
Bremerhaven
Hamburg
Bremen
Amsterdam
Netherlands
Rotterdam
Hannover
Berlin
Poznań
Łódź
Warszawa
Poland
Bielefeld
Germany
Antwerpen
Bruxelles/Brussel
Köln
Belgium
Czech Republic
Ukraine
Slovakia
Austria
Hungary
Romania
Slovenia
Croatia
Italy
Serbia
Bosnia and Herzegovina
Urban Nodes
CEF Actions in Core Ports
CEF Actions on Railways
North Sea-Baltic Corridor (rail)
Cartography: INEA, January 2018
© EC, DG MOVE, TENtec for TEN-T network
© EuroGeographics for the administrative boundaries
0
250
500
km

The bulk of the railway works Actions (10) are located in Poland, Lithuania, Latvia and Estonia. Seven of these Actions are dealing with the upgrade or construction of Rail Baltica, one of the priorities identified by the Coordinator in the Corridor Work Plan.

In Poland the related upgrade works are advancing in line with the Polish National Railway Development Plan: the remaining works on the Warsaw - Czyzew section have started, while the Czyzew - Bialystok and Bialystok - Elk sections are in the design preparation phase.

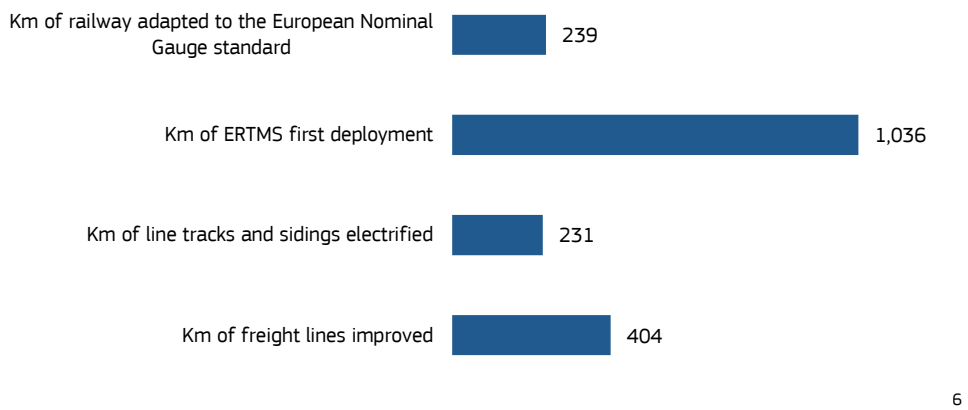
The Rail Baltica cross-border project in the three Baltic States is progressing as well. The global project, which is aiming to build a 870 km-long, new, fast, EU gauge, double track railway in the Baltic States from Tallinn to the LT/PL border, is expected to be completed by 2026. Due to its cross-border aspect the global project is very complex and engages a high number of stakeholders coordinated by the Joint Venture RB Rail AS. It reached its design phase while further horizontal studies (e.g. about its implementation and post-construction management) and land acquisition are ongoing in parallel. Construction works of the double track line are expected to start after the permitting phase is completed in 2018-2019 depending on the progress in each country and section.

There are 5 Actions fully dedicated to the deployment of the European Rail Traffic Management System (ERTMS) in Belgium, the Netherlands, Germany and Poland. From the perspective of the Corridor the most relevant ERTMS Action with a CEF grant of €251,962,167 is the Polish Action covering the deployment of ERTMS/ETCS, Level 2, Baseline 2 on four railway sections of the TEN-T Core Network amounting to 989.5 km double track equivalent, including parts of the Baltic - Adriatic and North Sea - Baltic Corridors (on a total length of 658 km) in Poland. In addition, further railways Actions in Poland include ERTMS track-side deployment activities, notably along the Rail Baltica.

The North Sea-Baltic Rail Freight Corridor (RFC) is supported by one Action supporting the functioning and the extension of the RFC to Latvia and Estonia. Within the Action a dedicated European Economic Interest Grouping (EEIG) has been set up to manage and run the RFC.

The expected results of the North Sea-Baltic railway Actions are the following:

Figure 2: Improved railway lines (number of km)



Furthermore, Actions belonging to this transport mode are expected to address 23 bottlenecks.

[6] ERTMS first deployment means equipping a railway line section which was not equipped with the system before.

2.1.5. Road

In total the road portfolio in the North Sea - Baltic Corridor is composed of 29 Actions receiving €496.6 million in CEF Transport funding.

There are only two road construction Actions in the road portfolio as presented in the map below.. However these two CEF grants amount to some 86% of the total CEF grant attributed to the North Sea-Baltic Corridor road Actions: €429.9 million. The two Actions are located in Cohesion countries (Poland and Lithuania) and concern the upgrade/construction of the strategic "Via Baltica" connecting between Warsaw and Tallinn. Once completed, the two Actions are expected to address 2 bottlenecks in Poland and Lithuania respectively. The two CEF Actions are ongoing and show good progress so far, therefore they are expected to be completed in line with the time plan of the Grant Agreements.

To be noted that in parallel to the Polish Action of the construction of S61 expressway Szczuczyn - Budzisko (Lithuanian border) also the Ostrow Mazowiecka – Szczuczyn section of the S61/Via Baltica will be upgraded with the support of the Cohesion Funds.

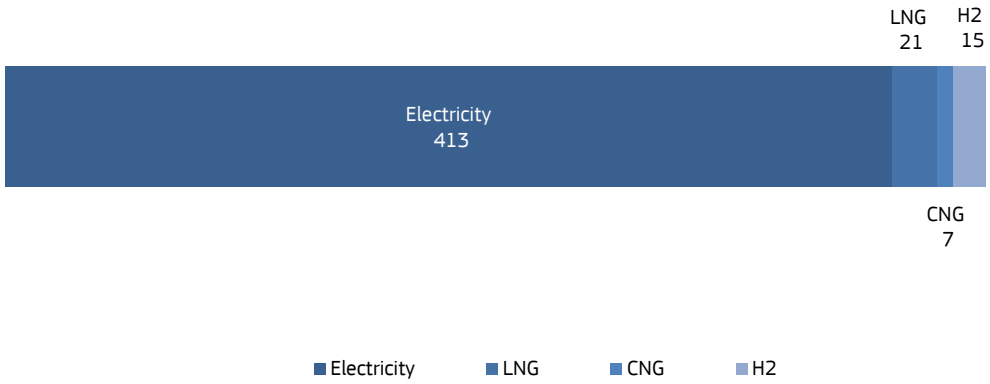

NORTH SEA – BALTIC
CORE NETWORK CORRIDOR
CEF funded Road Actions
(excluding ITS and Innovation)
Finland
Helsinki
- Vantaa
Norway
Tallinn
Sweden
Estonia
Russia
Latvia
Riga
Denmark
Lithuania
Vilnius
Belarus
Hamburg
Bremen
Amsterdam
Berlin
Poznań
Warszawa
Hannover
Netherlands
Bielefeld
Poland
Rotterdam
Łódź
Germany
Antwerpen
Köln
Bruxelles/Brussel
Belgium
Czech
Republic
Ukraine
Slovakia
Urban Nodes
CEF Actions in Core Airports
CEF Actions on Roads
North Sea-Baltic Corridor (road)
Austria
Hungary
Romania
Slovenia
Croatia
Serbia
Bosnia and Herzegovina
Cartography: INEA, January 2018
© EC, DG MOVE, TENtec for TEN-T network
© EuroGeographics for the administrative boundaries
0
250
500
km

The majority of the road Actions (19 out of 29) are in fact innovation Actions targeting the deployment of alternative fuels infrastructure on the North Sea - Baltic Corridor in the framework of the EU Directive 2014/94/EU. Seven of those Actions aim at the deployment of LNG/CNG road infrastructure. It is to be noted that these LNG/CNG Actions will be mainly implemented in Belgium, the Netherlands and Germany while all three Baltic States (i.e. EE, LT and LV) do not include LNG for road in their priorities, as described in National Policy Frameworks (NPF) for alternative fuel infrastructure. Though their focus is on electro-mobility, they do not participate either in any of the 7 such Actions that concern the North-Sea – Baltic Corridor. On electro-mobility there is a big participation of Belgium and Poland which is fully in line with their NPF.

It is noticeable that almost all countries of the Corridor participate in Actions (4 in total for the Corridor) addressing the deployment of infrastructure for hydrogen (H_2). For example the H2Nodes Action involving Estonia, Latvia and the Netherlands, which besides the infrastructure in Pärnu, Riga and Arnhem will result in a roadmap. This will provide Member States, other cities and regions with lessons learned on how to establish hydrogen nodes along the Core Network Corridors with integrated planning of regionally produced sustainable hydrogen, roll-out of the refuelling infrastructure and mobilising local and regional demand for zero emission FCEV.

The Actions on the North Sea - Baltic Corridor expect to install 456 supply points for alternative fuel for road transport, 413 Electricity, 21 LNG and 7 CNG, and 15 H_2.

Figure 3: Number of supply points for alternative fuel for road transport



Four CEF Actions in the field of Intelligent Transport Services (ITS) on roads account for a total corridor funding share of more than €10 million and focus on the implementation of the priorities of EU Directive 2010/40/EU and its delegated regulations.

The ITS services are harmonised, interoperable and deployed at Corridor level, so that the European driver can travel seamlessly across several Member States. Examples of ITS services are: the provision of real-time traffic information, the availability of Intelligent Truck Parkings, the real-time delivery of safety related alerts on road works, road accidents, adverse weather, etc.

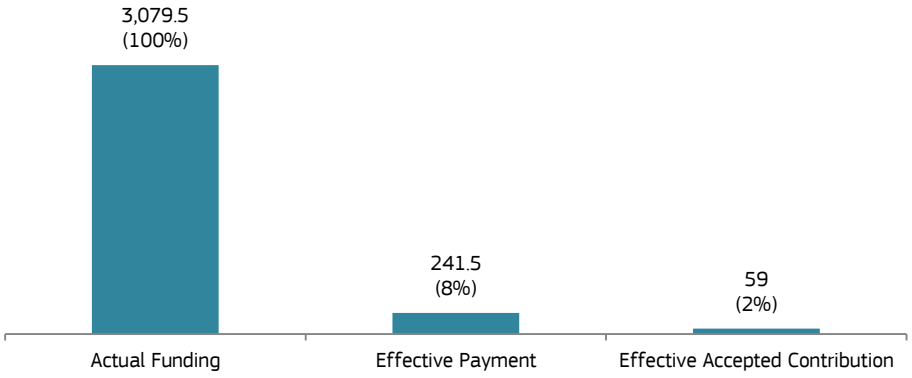
CEF funding in this field acts as catalyst for the development of the Corridor and to significantly improve the efficiency of the existing road network.

Finally, the road portfolio includes as well 3 'safe and secure infrastructure' Actions in The Netherlands and Belgium, including an Action in The Netherlands supporting the construction of three certified parking areas with around 360 secure parking spaces for trucks. This Action – completed by now - is part of the Dutch strategy to increase parking capacity and safety for road hauliers.

2.2. Financial implementation

The state-of-play of the financial implementation of the NSB CEF project portfolio is shown in the figure below. The effective payment[7] (including pre-financing) corresponds to €241.5 million and therefore 8% of the actual CEF Transport funding. As a consequence of the interim cost claims introduced by the beneficiaries, costs corresponding to CEF-T funding of €59 million have been accepted so far (2% of the actual CEF Transport funding allocated to projects on the North Sea-Baltic Corridor).

Figure 4: Financial implementation ratios (€ million)



Effective payments and effective accepted contribution as shown in the figure above may appear as relatively low. This is due to a series of reasons:

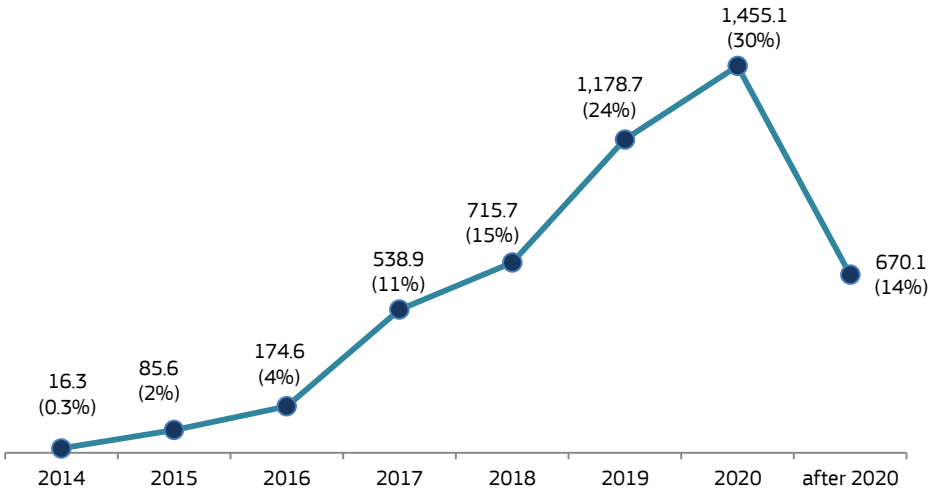
- Actions are due to submit interim payment claims every two years. As a consequence, the "accepted contribution" by the end of 2017 corresponds to cost claims sent in 2017 for some Actions and in 2016 for other Actions. Moreover, the cost claims received in 2017 include costs incurred until 31/12/2016 and those received in 2016 include costs incurred until 31/12/2015.
- The bulk of the funding goes to works (or major studies). These Actions usually start with a study and/or a tendering phase during which the costs incurred are relatively low. For this reason, the bulk of the costs are incurred in the last implementing years of these Actions (see also figure 5 below).

Moreover, it has to be noted that effective payments are higher than effective accepted contribution due to the fact that advance payment (pre-financing) are made.

Figure 5 gives an overview of the estimated financial progress, in terms of total estimated costs, of the overall NSB portfolio of CEF Transport projects.

[7] (closed payments – recoveries)

Figure 5: Estimated budget implementation (€ million)

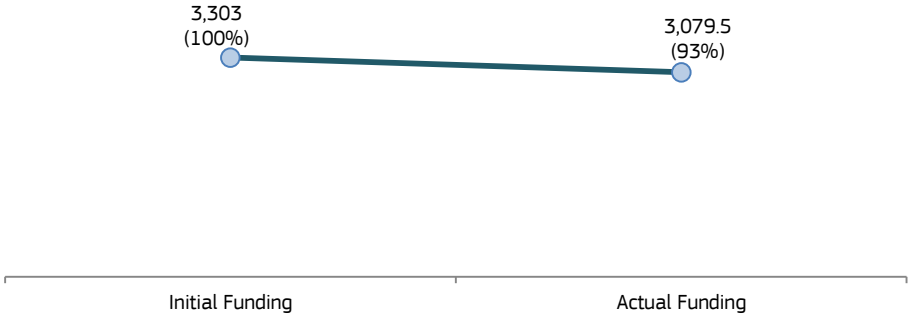


3. Evolution of the Action portfolio

3.1. Funding variations after the Grant Agreement signature

The actual CEF Transport funding allocated to Actions can differ from the initially allocated funding depending on (1) Action closures and terminations and (2) certain types of amendments. Up until now, amendments have triggered a funding reduction for 8 Actions (€223.6 million – 7%), while there have been no Action closures or terminations.

Figure 6 : CEF Transport funding variations (€ million)



3.2. Challenges affecting the implementation of Actions

The most vulnerable and exposed to technical challenges are the Actions being in their early phase in the project lifetime. For the North Sea – Baltic corridor this is the case for most of the Actions in the Cohesion countries having in general a large budget to spend within an ambitious timeframe. Such Actions encounter several challenges as from the study phase, such as:

- Procurement issues. The transposition into national legislation and application of the new EU public procurement rules might lead to slower public procurements in these Member States. Also, not adequate terms of reference are inherently leading to appeals. In certain cases the public procurements had to be repeated due to no sufficient interest from bidders to place

offers. Finally, lengthy appeal processes by bidders have a direct impact on the Action's time line.

- Design issues, such as: i) the geological analysis is not sufficiently thorough leading to unexpected difficulties with the earth works at a later stage; ii) not sufficiently accurate cost estimations for the subsequent works phase causes unnecessary repeated procurements for works; iii) delays occurred in the design phase have a direct impact on start of the subsequent procurements and works jeopardising the timely completion of the Actions.
- Environmental issues. For instance, environmental mitigation measures requested by the environmental authorities might add to the Action's complexity and to additional – unforeseen- implementation time.
- Unexpected archaeological findings can cause delays or even keep on hold the execution of works.
- Land acquisition and permitting issues. Often the land acquisition process usually takes more time than originally planned. Similarly, due to administrative difficulties the time necessary for permitting is often underestimated by the beneficiaries, hence land acquisition and permitting might cause delays in the timely start of works.

All the above challenges are valid and are impacting the implementation of the flagship project Rail Baltica, the global project aiming to eliminate the most relevant rail bottleneck and missing link of the North Sea - Baltic Corridor.

For the new construction of Rail Baltica in Estonia, Latvia and Lithuania additional complexity has to be considered: as the global project has an unprecedented scale, to be implemented in three countries. The project partners have to set up and to apply common technical standards, to tackle cross-border, interoperability, maintenance and joint infrastructure management issues, etc. The complexity is present in the CEF Transport Programme as well: so far there are two cross-border Grant Agreements ongoing and one to be signed involving the three Member States and the Joint Venture RB Rail AS. There also is an Action carried out by Lithuanian Railways, which is linked to these. The upgrade of Rail Baltica in Poland also has to be fully interoperable with the new construction in the Baltic States. Furthermore, the said Actions cover only partly the activities of the global project and only for the timeframe of 2015-2023. Such a set-up makes the technical and financial follow-up of the global project difficult, both from the point of view of the project Coordinator and INEA.

Therefore, the successful implementation of Rail Baltica requires very close cross-border cooperation between the involved Member States. Although the strategic importance is recognised by all stakeholders, the joint implementation could be a smoother process and it reflects significant differences among the partners, who are not yet always able to speak with a single voice.

The said differences are well demonstrated by the difficulties encountered in reaching agreement on the content of the third cross-border CEF Grant Agreement, for which the signature is still pending. Consequently, there is more to do by all stakeholders to build and deepen further the cross-border cooperation and the trust among the partners.

By now there is a quite robust special purpose vehicle "RB Rail AS" in place, whose main business is the design, construction and marketing of the global project in the Baltic States. Within the last couple of years the Joint Venture has gained valuable coordination experience and its staff has been reinforced with a number of experts from all the three Member States and beyond. Currently

efforts are ongoing to improve and simplify the project implementation set-up and functioning and to put in place the most efficient governance structure, which is able to deliver the global project on time and within the estimated budget. It is expected that by mid-2018 a highly integrated project delivery organisation will be in place and functional as important infrastructure works along the alignment are foreseen to start in 2019-2020.

On the Corridor there are also certain challenges, which are specific to a transport mode:

For innovation Actions the main challenge in most Actions addressing alternative fuels is to secure locations of charging points/refuelling stations as much as possible closer to the alignment to the Corridor. Especially for LNG in a fast developing market the competition between different operators on securing locations may impact the duration of the implementation of the Actions.

For ITS one of the main challenges for public authorities and road operators in this area is to ensure the efficient and cross-border communication among the various traffic management centres. In this regard, the implementation of national access points and the use of the DATEX II communication standard have started and are funded by past and ongoing CEF Actions.

4. Conclusion and Outlook

To implement by 2030 the North Sea – Baltic Corridor, the Corridor Work Plan identified some 530 infrastructure projects proposed by the Member States, with an investment need of around 96 billion euros.

The Connecting Europe Facility is one of the EU instruments established to financially support the Member States in implementing these Corridors. Indeed, for the North Sea Baltic Corridor alone currently there are already 76 Grant Agreements in place allocating €3.1 billion of actual CEF Transport Funding.

Furthermore, the first blending Call (i.e. blending CEF grants with private investments and innovative financial instruments) resulted in awarding an additional 8 Actions to this Corridor (including 4 under the Innovation priority, and two each under the Core Network and the Node of the Core network priority) with a recommended CEF funding of €35.1 million generating a total investment of €205.6.

It is evident that the CEF Transport funding cannot cover the total investment needs of the Corridor, for that a much more ambitious CEF budget would be needed. Nevertheless, the already allocated €3.1 billion of CEF grants accompanied by the national resources will lead to a €4.8 billion investment in infrastructure Actions along this Corridor. Moreover, this investment is specifically targeting the priorities and recommendations of the European Coordinator Ms Trautmann in the Corridor Work Plan that are crucial for the Corridor to become functional.

Indeed, as a response to the first priority of the Work Plan, *the timely implementation of the missing cross-border railway link – the Rail Baltica*, the global project is supported by CEF through a number of Grant Agreements in the Cohesion countries of Estonia, Latvia, Lithuania and Poland with €1,589,581,154. Without the implementation of the flagship project Rail Baltica ensuring an EU gauge, north-south connection of the Baltic States and Finland to central Europe, the North Sea-Baltic railway Corridor would be very limited as regards passengers' and goods' flows and would not solve the existing technical bottleneck, the infrastructure discrepancy and the lack of a performant railway link between north-eastern and western Europe.

Under the priority of *the interoperability of the railway network in close cooperation with the "North Sea – Baltic" Rail Freight Corridor*, CEF Transport provides financial support in eight Actions for the deployment of the European Rail Traffic Management System (ERTMS) both to the western and eastern parts of the Corridor and supports as well the functioning and further development of the North Sea-Baltic Rail Freight Corridor, along with the high share of funding allocated to rail Actions in general along the North Sea-Baltic Corridor (79%).

The hinterland connection by rail, road and inland waterways of the main ports and the port developments of the Corridor are supported by CEF Transport grants in Helsinki, Tallinn, Klaipeda, Bremerhaven, Köln and Amsterdam. Inland waterway and river information services (RIS) Actions are improving the inland waterways connections in the Netherlands, Belgium and Germany.

Promoting innovation is a key objective of the Corridor Work Plan, therefore a significant number of innovation Actions (23 out of the total 76) along the Corridor are there to provide the basis for the large scale deployment of new technologies and innovation, which can help to enhance the overall efficiency of the European transport sector and help to reduce its carbon footprint.

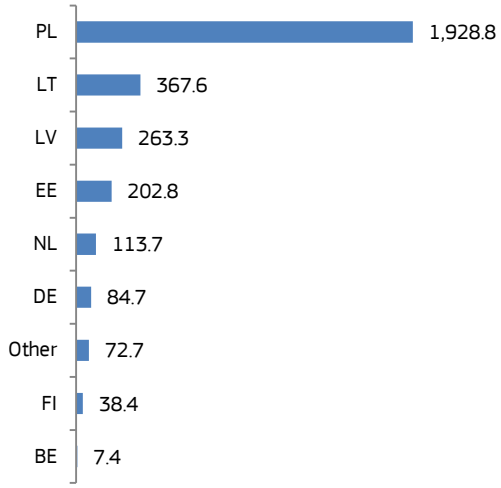
As for *the efficiency of the main urban nodes, particularly the multi-corridor nodes*, more than 9 million EUR grant was awarded to study solutions and implement a multimodal and digital travel centre in the urban node of Helsinki, linking the North Sea-Baltic with the Scandinavian-Mediterranean Corridor. At the other end of the Corridor, a more efficient and greener public transport of the urban node of Rotterdam –situated at the crossroads of the North Sea-Baltic, Rhine-Alpine and North Sea-Mediterranean Corridors- is also supported with a grant of 3.2 million EUR.

Most of the Actions of the Corridor are ongoing or to be started soon. Their level of technical and financial progress varies according to their complexity, maturity, etc. The challenges mentioned in the report are substantial and both the beneficiaries and INEA are making considerable efforts to overcome them. The goal is to complete these Actions in line with the technical and financial plans of the Grant Agreements, absorbing therefore in full and on time the awarded CEF grants.

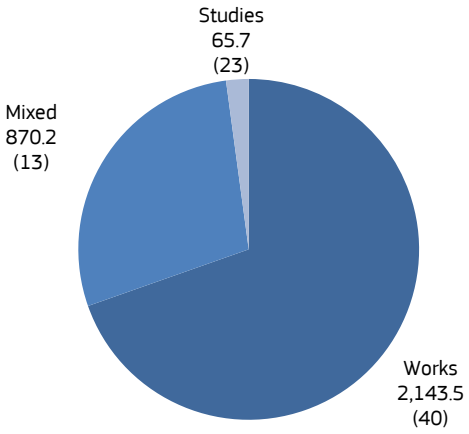
From the estimated budget implementation figure it is evident that the bulk of the work and financial consumption is expected in the 2018-2020 period and the beneficiaries will have to do their best to comply with the agreed implementation deadlines. Although several Actions reported delays, they are all gaining maturity by each year and there is confidence that the vast majority of Actions will continue with their good progress and - once completed - will effectively contribute to the implementation of the North Sea-Baltic Corridor.

5. Statistical Annex

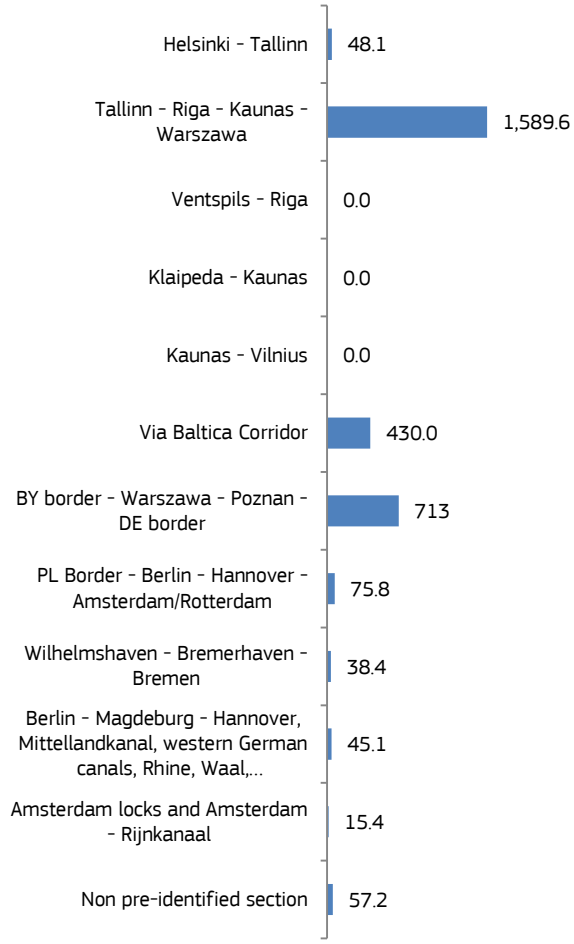
Corridor funding (€ million) per country



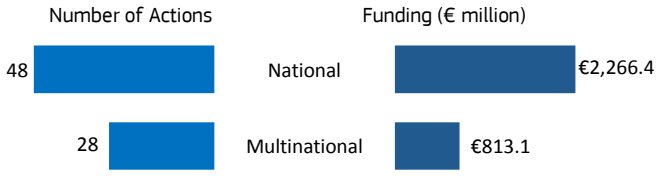
Corridor funding (€ million) per type



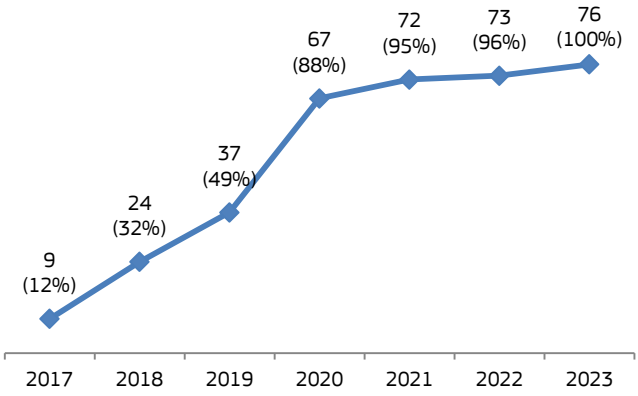
Corridor funding (€ million) per section



Number of Actions and corridor funding (€ million) by national/multinational



Cumulative number of finalised Actions



Disclaimer: The allocation of Actions and funding to the corridor is based on the assessment done by INEA. In the chart per beneficiary country, the funding of multinational Actions which are allocated to more than one corridor is included in the "Other" category.

6. List of Actions on the North Sea Baltic Corridor

Transport Mode	Project Code	Title	Funding Objective	Priority	Type	Actual Corridor Share	Actual Start Date	Actual End Date	Actual Funding	Actual Costs
Inland Waterways	**2014-DE-TA-0113-M**	Safeguarding and adaptation of waterway access to the Rhine-Alpine and North Sea-Baltic corridors from the port of Cologne	**FO 1**	Projects on Core and Comprehensive	**Mixed**	100%	**01/01/2014**	31/12/2017	1,976,200	9,476,000
Inland Waterways	**2014-DE-TM-0048-W**	Extension of the Mittelland canal from km 302.377 to 303.800 - Removal of the last bottleneck	**FO 1**	Core Network Corridors	**Works**	100%	**01/07/2015**	31/05/2018	6,780,000	33,900,000
Inland Waterways	**2014-DE-TM-0076-W**	Bridges and culverts in the city section of Münster, Dortmund-Ems Canal	**FO 1**	Core Network Corridors	**Works**	100%	**01/03/2014**	31/12/2019	4,304,420	21,522,100
Inland Waterways	**2014-DE-TM-0077-W**	Removal of bottlenecks at bridges in the Western German canal system, Gartroper-Straßen-Brücke and Hervester Brücke	**FO 1**	Core Network Corridors	**Works**	100%	**01/05/2014**	31/10/2017	1,643,146	8,215,730
Inland Waterways	**2014-DE-TM-0278-W**	Construction of the second lock Zerben, Part 2	**FO 1**	Core Network Corridors	**Works**	100%	**01/04/2014**	31/03/2018	5,132,000	25,660,000
Inland Waterways	**2014-DE-TM-0374-W**	Upgrade of the Sacrow-Paretzer Canal in the km 21.00 - km 32.61 section emptying into the Havel Canal at km 33.80 - km 34.90	**FO 1**	Core Network Corridors	**Works**	100%	**15/05/2014**	30/06/2018	8,800,000	44,000,000
Inland Waterways	**2014-NL-TM-0241-W**	Preparatory activities and project management for the new large Amsterdam lock	**FO 1**	Core Network Corridors	**Works**	100%	**01/01/2014**	31/12/2019	11,095,628	27,739,070
Inland Waterways	**2014-NL-TM-0394-S**	Breakthrough LNG deployment in Inland Waterway Transport	**FO 2**	Innovation	**Studies**	33%	**01/01/2016**	31/12/2018	3,608,588	7,217,176
Inland Waterways	**2015-BE-TM-0024-W**	Upgrading Flemish RIS Infrastructure	**FO 3**	RIS	**Works**	100%	**16/02/2016**	31/12/2019	1,175,000	2,350,000
Inland Waterways	**2015-EU-TM-0038-W**	River Information Services Corridor Management Execution (General Call)	**FO 3**	RIS	**Works**	100%	**15/02/2016**	31/12/2020	9,886,679	19,773,358

Transport Mode	Project Code	Title	Funding Objective	Priority	Type	Actual Corridor Share	Actual Start Date	Actual End Date	Actual Funding	Actual Costs
Inland Waterways	**2017-EU-TM-0024-W**	Optimizing Inland Waterway- and Multimodal Transport in the Euregio, along the North Sea Baltic Corridor.	**FO 1**	Core Network Corridors	**Works**	100%	**14/07/2017**	31/05/2022	10,873,127	58,632,015
Inland Waterways	**2017-NL-TM-0056-W**	Port-Liner, "zero emission" ships for inland waterways	**FO 2**	Innovation	**Works**	33%	**15/07/2017**	31/07/2019	2,268,394	11,514,691
Inland Waterways Total									**67,543,182**	**270,000,140**
Maritime	**2014-EU-TM-0087-M**	TWIN-PORT 2	**FO 3**	MoS	**Mixed**	100%	**01/01/2014**	31/12/2018	29,300,000	97,600,000
Maritime	**2014-EU-TM-0095-W**	ReaLNG: Turning LNG as marine fuel into reality in the North Sea-Baltic region	**FO 3**	MoS	**Works**	39%	**01/01/2014**	30/09/2017	5,102,282	15,625,684
Maritime	**2014-EU-TM-0120-W**	HEKLA – Helsingborg & Klaipeda LNG Infrastructure Facility Deployment	**FO 3**	MoS	**Works**	99%	**01/01/2015**	30/06/2018	4,657,220	15,254,440
Maritime	**2014-EU-TM-0379-M**	Back from Black -Study and deployment of the affordable scrubber retro fitting technology for SME shipowners	**FO 3**	MoS	**Mixed**	30%	**01/01/2014**	30/06/2017	1,674,602	4,456,448
Maritime	**2014-EU-TM-0437-M**	Upgrading and sustaining competitive sea-based transport service on Baltic MoS Klaipeda-Karlshamn	**FO 3**	MoS	**Mixed**	84%	**01/01/2014**	31/12/2017	2,482,704	8,183,280
Maritime	**2015-EU-TM-0098-M**	DOOR2LNG -Upgrade of the maritime link integrated in the multimodal container transport routes	**FO 3**	MoS	**Mixed**	49%	**16/02/2016**	30/06/2019	8,309,420	27,469,400
Maritime	**2015-EU-TM-0179-W**	Blue Baltics – LNG infrastructure facility deployment in the Baltic Sea Region	**FO 3**	MoS	**Works**	90%	**01/03/2016**	30/06/2019	13,541,850	42,844,500
Maritime	**2017-FI-TM-0027-W**	Vuosaari Fairway - Improvement of the maritime access of the Port of Helsinki, Vuosaari Harbour	**FO 1**	Core Network Corridors	**Works**	100%	**01/01/2018**	31/12/2021	6,720,000	33,600,000
Maritime Total									**71,788,078**	**245,033,751**

Transport Mode	Project Code	Title	Funding Objective	Priority	Type	Actual Corridor Share	Actual Start Date	Actual End Date	Actual Funding	Actual Costs
Multimodal	**2014-DE-TA-0296-W**	40-CONTECH - Investing in a just in time intermodal logistics concept with an innovative 40ft open top curtain side container to develop sustainable, interoperable and safe rail services through the Eurotunnel along the TEN-T core network corridors	**FO 2**	Freight Transport Services	**Works**	7%	**01/07/2014**	31/12/2017	100,687	503,433
Multimodal	**2015-DE-TM-0050-W**	Quality and capacity upgrade of the railway system in the seaport of Bremerhaven (Imsumer Deich Plus)	**FO 3**	Multimodal	**Works**	100%	**16/02/2016**	31/12/2018	3,307,620	16,538,100
Multimodal	**2015-FI-TM-0127-S**	The Helsinki Multimodal Urban Node	**FO 3**	Nodes of the Core Network	**Studies**	100%	**01/06/2016**	31/12/2020	2,250,000	4,500,000
Multimodal	**2016-EU-TM-0277-S**	BENEFIC	**FO 2**	Innovation	**Studies**	34%	**01/07/2017**	31/12/2020	2,577,200	12,631,000
Multimodal	**2017-DE-TM-0040-W**	LNG Rollout in Central Europe - for a greener transportation sector	**FO 2**	Innovation	**Works**	50%	**01/01/2018**	30/06/2021	1,636,470	8,182,350
Multimodal	**2017-FI-TM-0031-W**	The Multimodal Travel Centre of Helsinki Airport	**FO 3**	Nodes of the Core Network	**Works**	20%	**02/01/2019**	31/12/2020	1,476,000	7,380,000
Multimodal Total									**11,347,977**	**49,734,883**
Rail	**2014-BE-TM-0660-W**	Deployment of ETCS Level 1 on the rail section Ans - Angleur	**FO 1**	ERTMS	**Works**	100%	**01/07/2015**	01/05/2018	2,367,500	4,735,000
Rail	**2014-DE-TM-0368-M**	Upgraded Line Oldenburg – Wilhelmshaven with electrification, track and subsurface strengthening and construction of new subsections	**FO 1**	Core Network Corridors	**Mixed**	100%	**01/01/2014**	31/12/2019	35,132,095	100,095,088
Rail	**2014-EU-TM-0217-S**	Establishment of Rail Freight Corridor „North Sea – Baltic“ and its further development aiming at improving conditions for international rail freight transport	**FO 1**	Rail interoperability	**Studies**	100%	**01/01/2015**	31/12/2020	4,131,250	8,262,500

Transport Mode	Project Code	Title	Funding Objective	Priority	Type	Actual Corridor Share	Actual Start Date	Actual End Date	Actual Funding	Actual Costs
Rail	**2014-EU-TMC-0560-M**	Development of a 1435 mm standard gauge railway line in the Rail Baltic/Rail Baltica (RB) corridor through Estonia, Latvia and Lithuania	**FO 1**	Core Network Corridors	**Mixed**	100%	**01/03/2015**	31/12/2020	442,230,615	540,427,656
Rail	**2014-FI-TM-0142-M**	The Planning of the Core Network Railway Corridors in Helsinki	**FO 1**	Core Network Corridors	**Studies**	50%	**01/01/2015**	31/12/2018	8,152,500	16,305,000
Rail	**2014-LT-TMC-0109-M**	Bridging the missing links of the Rail Baltic/Rail Baltica EU gauge railway on line Polish and Lithuanian state border - Kaunas and preparation for the development of the EU gauge railway line Kaunas - Lithuanian and Latvian state border	**FO 1**	Core Network Corridors	**Mixed**	100%	**24/07/2015**	31/12/2020	105,898,408	124,586,362
Rail	**2014-NL-TA-0680-S**	3EUStates2cross (Study, Rail, Limburg S-E Netherlands)	**FO 1**	Projects on Core and Comprehensive	**Studies**	15%	**16/11/2015**	15/11/2018	713,625	1,427,250
Rail	**2014-NL-TM-0233-W**	Removing the bottleneck on the rail freight corridor between mainport Rotterdam and the European hinterland by realising the Theemsweg railway section.	**FO 1**	Core Network Corridors	**Works**	100%	**01/10/2015**	31/12/2019	59,892,117	199,640,390
Rail	**2014-PL-TMC-0182-W**	Works on the E75 railway line Sadowne – Czyżew section, along with the remaining works on the Warszawa Rembertów - Sadowne section	**FO 1**	Core Network Corridors	**Works**	100%	**15/11/2016**	31/12/2020	179,200,409	235,171,141
Rail	**2014-PL-TMC-0185-W**	Works on the E 20 railway line, Warsaw – Poznań section – remaining works, Sochaczew – Swarzędz section	**FO 1**	Core Network Corridors	**Works**	100%	**31/10/2015**	31/12/2020	347,816,102	462,706,002

Transport Mode	Project Code	Title	Funding Objective	Priority	Type	Actual Corridor Share	Actual Start Date	Actual End Date	Actual Funding	Actual Costs
Rail	**2015-DE-TM-0363-W**	Design and equipment of ERTMS for six border crossing corridor sections as well as two gap closings on German TEN core network corridors	**FO 1**	ERTMS	**Works**	29%	**16/02/2016**	31/12/2020	7,225,192	15,005,549
Rail	**2015-EU-TM-0347-M**	Development of a 1435 mm standard gauge railway line in the Rail Baltic/Rail Baltica (RB) corridor through Estonia, Latvia and Lithuania (Part II)	**FO 1**	Core Network Corridors	**Mixed**	100%	**16/02/2016**	31/12/2020	130,193,541	153,168,872
Rail	**2015-NL-TM-0264-W**	Deployment of ERTMS level-2 (only) trackside at the railway line Kijfhoek- Roosendaal-Belgian border	**FO 1**	ERTMS	**Works**	100%	**01/08/2017**	31/12/2020	11,275,000	24,417,500
Rail	**2015-PL-TM-0002-W**	Works on the E75 railway line, Czyżew - Białystok section	**FO 1**	Core Network Corridors	**Works**	100%	**13/09/2016**	31/12/2020	283,249,774	371,718,863
Rail	**2015-PL-TM-0007-W**	Works on the E 20 railway line, Siedlce - Terespol section, stage III - LCS Terespol	**FO 1**	Core Network Corridors	**Works**	100%	**31/01/2017**	31/12/2020	109,522,333	131,007,575
Rail	**2015-PL-TM-0037-S**	Modernization of railway infrastructure at the Małaszewicze Transloading Zone forming part of the Rail Freight Corridor no. 8, at the border between the EU and Belarus – studies	**FO 1**	Core Network Corridors	**Studies**	100%	**01/08/2016**	31/03/2019	3,241,104	3,813,064
Rail	**2016-BE-TM-0298-W**	ETCS L2 track-side deployment on 2 cross border sections of the Core network Corridors	**FO 1**	ERTMS	**Works**	23%	**06/03/2017**	30/06/2020	541,650	1,083,300
Rail	**2016-EU-TA-0108-W**	2EUStates2cross	**FO 1**	Projects on Core and Comprehensive	**Works**	2%	**07/02/2017**	31/12/2020	573,600	1,434,000
Rail	**2016-EU-TMC-0116-M**	Rail Baltica - 1435 mm standard gauge railway line development in Estonia, Latvia and Lithuania (Part III)	**FO 1**	Core Network Corridors	**Mixed**	100%	**06/02/2017**	31/12/2023	110,471,837	129,966,867

Transport Mode	Project Code	Title	Funding Objective	Priority	Type	Actual Corridor Share	Actual Start Date	Actual End Date	Actual Funding	Actual Costs
Rail	**2016-PL-TMC-0135-W**	Works on the E75 railway line, Białystok – Suwałki – Trakiszki (state border) section, Stage I Białystok - Ełk section	**FO 1**	Core Network Corridors	**Works**	100%	**01/06/2017**	29/12/2023	338,336,570	398,043,024
Rail	**2016-PL-TMC-0136-W**	Deployment of ERTMS/ETCS on the TEN-T core network lines	**FO 1**	ERTMS	**Works**	86%	**19/05/2017**	31/12/2023	251,962,167	296,426,079
Rail Total									**2,432,127,389**	**3,219,441,082**
Road	**2014-BE-TM-0170-S**	Pilot deployment of a smart (bio-)LNG/CNG network in Flanders, investigating an innovative 'mobile CNG pipeline' concept	**FO 2**	Innovation	**Studies**	50%	**01/01/2015**	30/06/2019	733,250	1,466,500
Road	**2014-BE-TM-0694-S**	Safe and secure infrastructure in Flanders	**FO 2**	Safe and secure infrastructure	**Studies**	100%	**01/01/2014**	31/12/2019	1,310,099	2,620,198
Road	**2014-EU-TM-0196-S**	FAST-E (DE/BE)	**FO 2**	Innovation	**Studies**	4%	**01/09/2014**	30/09/2018	350,394	700,788
Road	**2014-EU-TM-0318-S**	Connecting Hydrogen Refuelling Stations (COHRS)	**FO 2**	Innovation	**Studies**	25%	**01/09/2015**	30/06/2019	3,244,447	6,488,894
Road	**2014-EU-TM-0563-W**	CROCODILE 2	**FO 3**	ITS	**Works**	20%	**01/01/2015**	31/12/2018	1,651,400	8,257,000
Road	**2014-EU-TM-0579-M**	UNIT-E	**FO 2**	Innovation	**Mixed**	19%	**01/07/2015**	31/12/2017	338,808	677,616
Road	**2014-EU-TM-0643-S**	H2Nodes – evolution of a European hydrogen refuelling station network by mobilising the local demand and value chains	**FO 2**	Innovation	**Studies**	100%	**01/03/2014**	31/12/2018	14,503,000	29,006,000
Road	**2014-FI-TA-0119-S**	Development of LNG/L-CNG network in Finland	**FO 2**	Innovation	**Studies**	21%	**27/01/2015**	29/12/2017	556,197	1,112,394
Road	**2014-LT-TMC-0258-W**	Development of Transeuropean Road Network Road E67 (Via Baltica) section from Lithuanian-Latvian border to Panevezys city	**FO 1**	Core Network Corridors	**Works**	100%	**30/06/2016**	30/06/2020	23,437,909	38,817,338
Road	**2014-NL-TM-0153-W**	Safe & Secure Truck Parkings on core network in the Netherlands	**FO 2**	Safe and secure infrastructure	**Works**	32%	**01/01/2015**	31/12/2017	413,792	2,068,960
Road	**2014-PL-TMC-0214-W**	Construction of S61 expressway Szczuczyn - Budzisko (state border)	**FO 1**	Core Network Corridors	**Works**	100%	**01/01/2015**	31/12/2020	406,496,417	795,492,009

Transport Mode	Project Code	Title	Funding Objective	Priority	Type	Actual Corridor Share	Actual Start Date	Actual End Date	Actual Funding	Actual Costs
Road	**2014-PL-TMC-0220-S**	Study optimizing the functioning and deployment of alternative fuel stations of the TENT-T core network	**FO 2**	Innovation	**Studies**	100%	**01/04/2015**	30/06/2018	1,518,950	1,787,000
Road	**2015-BE-TM-0244-W**	Elimination of level crossings on the Core Network Corridors in Belgium in order to increase safety and remove bottlenecks for both rail and road	**FO 2**	Safe and secure infrastructure	**Works**	4%	**01/03/2016**	31/12/2020	286,000	1,430,000
Road	**2015-EU-TM-0316-S**	Models for Economic Hydrogen Refuelling Infrastructure	**FO 2**	Innovation	**Studies**	33%	**01/07/2016**	31/12/2020	1,818,135	3,636,270
Road	**2015-EU-TM-0367-S**	ULTRA-E	**FO 2**	Innovation	**Studies**	12%	**01/03/2016**	31/12/2018	785,118	1,570,236
Road	**2015-EU-TM-0422-S**	LNG motion: Fuelling trucks with LNG/CNG along the core network	**FO 2**	Innovation	**Studies**	15%	**16/02/2016**	31/12/2020	4,164,765	8,329,530
Road	**2015-PL-TM-0093-W**	National Road Traffic Management System on the TEN-T network - Phase I	**FO 3**	ITS	**Works**	6%	**01/11/2016**	31/12/2020	7,392,695	8,697,288
Road	**2015-SK-TM-0320-S**	NCE-FastEvNet	**FO 2**	Innovation	**Studies**	28%	**01/03/2016**	30/03/2019	912,492	1,073,520
Road	**2016-DE-TM-0332-S**	LNG4Trucks	**FO 2**	Innovation	**Studies**	36%	**07/02/2017**	31/12/2020	3,450,651	6,901,303
Road	**2016-EU-TM-0023-M**	North European cross-border ITS phase 3 – NEXT-ITS 3	**FO 3**	ITS	**Mixed**	6%	**01/01/2018**	31/12/2020	584,064	2,832,576
Road	**2016-EU-TM-0044-M**	URSA MAJOR neo	**FO 3**	ITS	**Mixed**	5%	**07/02/2017**	31/12/2020	1,606,469	7,473,086
Road	**2016-EU-TM-0121-W**	High speed electric mobility across Europe	**FO 2**	Innovation	**Works**	12%	**01/07/2017**	31/12/2020	1,220,160	6,100,800
Road	**2016-EU-TM-0175-S**	H2Benelux	**FO 2**	Innovation	**Studies**	25%	**07/02/2017**	31/12/2020	1,804,719	4,371,137
Road	**2016-NL-TM-0339-S**	BIOLNG4EU	**FO 2**	Innovation	**Studies**	50%	**07/02/2017**	31/12/2020	4,100,000	8,200,000
Road	**2016-PL-TM-0281-S**	LEM project – pilot implementation of electromobility along the TEN-T base network	**FO 2**	Innovation	**Studies**	20%	**20/11/2017**	22/12/2020	80,095	160,191
Road	**2016-SK-TMC-0317-S**	NCE-AdvancedEvNet	**FO 2**	Innovation	**Studies**	28%	**01/03/2017**	30/06/2020	1,726,339	2,030,987
Road	**2017-DE-TM-0064-W**	EUROP-E: European Ultra-Charge Roll Out Project - Electric	**FO 2**	Innovation	**Works**	10%	**15/07/2017**	31/12/2021	3,910,538	19,552,689

Transport Mode	Project Code	Title	Funding Objective	Priority	Type	Actual Corridor Share	Actual Start Date	Actual End Date	Actual Funding	Actual Costs
Road	**2017-EU-TM-0068-W**	MEGA-E: Metropolitan Greater Areas - Electric	**FO 2**	Innovation	**Works**	17%	**01/08/2017**	31/12/2021	4,981,056	24,905,281
Road	**2017-NL-TM-0060-W**	REMETBUS2 Rotterdam	**FO 3**	Nodes of the Core Network	**Works**	100%	**01/01/2018**	31/12/2021	3,266,579	41,825,600
Road Total									**496,644,538**	**1,037,585,190**