



European  
Commission



*CEF support to*

# **Orient - East-Med Corridor**

*May 2020*

*Innovation  
and Networks  
Executive Agency*

# **Orient East Med**

**May 2020**

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## 1. Introduction

This report describes the contribution of the CEF Transport programme to the development of the **Orient/East-Med Core Network Corridor** (OEM) in the framework of the 4<sup>th</sup> OEM Work Plan prepared by Mr Mathieu Grosch, the European Coordinator, soon to be published. It presents what has already been achieved thanks to CEF funding and what is still expected under the current programme.

The OEM Corridor **connects central Europe to the North, Baltic, Black and Mediterranean Seas**, and spans **nine Member States** (from north to south): Germany, Czech Republic, Slovakia, Austria, Hungary, Romania, Bulgaria, Greece and Cyprus. All but Germany and Austria benefit from the Cohesion fund. The Corridor aims at fostering the development of key ports as major multimodal logistic platforms and improving the multimodal connections of major economic centres in Central Europe to the coastlines, using rivers such as the Elbe. Its southern part extends, across the Mediterranean Sea, from Greece to Cyprus while its northern part ends in Germany, in the North and Baltic seas.

Several segments of the OEM Corridor overlap with other Core Network Corridors, especially with the Rhine-Danube Corridor (approximately 1,000 km) and on shorter sections, the North Sea - Baltic Corridor, the Scandinavian-Mediterranean Corridor and the Baltic - Adriatic Corridor.

Since the adoption of the first OEM Work Plan in 2014, in line with the TEN-T and CEF Regulations, the European Coordinator has taken concrete steps to define the main work priority areas and facilitate the establishment of a truly multi-modal and seamless transport Corridor by 2030. In the Work Plan, a list of 649 projects requiring at least €89 billion of investment costs have been identified to **reach a fully compliant Corridor by 2030**. Around 200 of these projects have been completed by December 2019.

The Connecting Europe Facility is an important contributor to this objective, as since 2014, **103<sup>1</sup> Actions have been selected** representing a total EU contribution of €1.76 billion for total costs of €2.72 billion. This represents around 5 % of the costs of the ongoing projects from the list. These projects received initially €2.09 billion of CEF support, but due to implementation delays the scope and budget of some of them has been reduced as described further in this report. Therefore, the actual funding foreseen is only €1.76 billion.

The existing infrastructure of the OEM **railway network**, around 5,800 km long, is not yet fully compliant with the TEN-T requirements, such as operational speed, axle load, electrification, train length and ERTMS. Most of the non-compliant sections are in the southern part of the corridor. The CEF programme addresses this priority identified in the Work Plan since most of the funding (**82% of the total portfolio**) is allocated to railway Actions. The rail actions selected are expected to upgrade 311 km of railway lines.

The **road infrastructure network** has a total length of approximately 5,400 km. The biggest part of it consists of either motorways or express roads (87%). Nevertheless, the **main non-compliant issues** along the OEM Road network are still related to the required high quality of the roads, which shall not cross rail or tram lines at level and be accessible primarily from interchanges or controlled junctions. In this respect, most of the non-compliant sections are located in Romania and Bulgaria. The CEF portfolio addresses these issues, but focuses also significantly on the deployment of **alternative fuels** (681 charging points are expected to be deployed).

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<sup>1</sup> The figures provided in the report this year are based on the latest developments of the reporting system used by INEA. The latter has allowed a more detailed allocation of Actions to many different elements of the TEN-T network thus producing a more accurate picture of the CEF funding. This explains the differences with the figures provided in past years/reports.

The OEM **inland waterway network** (IWW) is approximately 1,700 km long and is located in the northern part of the Corridor, in Germany and the Czech Republic. It concerns exclusively the rivers Elbe (Labe), Weser and Vltava as well as the canals Elbe-Seitenkanal, Elbe-Lübeck-Kanal and Mittellandkanal. The portfolio comprises the upgrade of the IWW network to reach the compliance and the deployment of River Information System (RIS).

The **OEM seaports** include 12 core ports: Hamburg, Bremerhaven, Bremen, Wilhelmshaven and Rostock in Germany; Burgas in Bulgaria; Lemesos in Cyprus; and Piraeus, Heraklion, Thessaloniki, Igoumenitsa and Patras in Greece. Most of the funding in the maritime mode goes to Motorways of the Seas and upgrade of basic infrastructure in ports.

## 2. Action portfolio: State of play<sup>2</sup>

CEF Transport has so far funded grants worth €21.1 billion across all the Core Network Corridors, with a total investment in the European economy of €45 billion. The current CEF OEM portfolio comprises **103 Actions allocating €1.76 billion of CEF Transport funding** (corresponding to 13% of total number of CEF Transport Actions and 8% of total actual CEF Transport funding).

So far 27 Actions have been completed or are close to completion (4 in rail, 1 in inland waterways, 6 in maritime, 3 in road, 2 in safe and secure infrastructure and 11 in alternative fuels for road). Out of the completed actions 13 have been closed (i.e. INEA processed the final report and payment).

### 2.1. Operational Implementation

For the OEM Corridor, the Core Network Corridor priority (under Funding Objective 1)<sup>3</sup> represents 87% of actual CEF Transport funding. Other priorities, such as Innovation (under Funding Objective 2)<sup>4</sup> and Motorways of the Seas (under Funding Objective 3)<sup>5</sup> also contribute to the development of the Corridor.

Due to its location, **most of the funding of the OEM portfolio is coming from the Cohesion envelope**. The portfolio is dominated by national Actions, which absorb around 95% of the grants allocated to this Corridor. Ninety-four per cent (94%) of the actual CEF Transport funding is allocated to Actions concerning works. Most of the funding in this Corridor is allocated to sections on the Core TEN-T network (€1.7 billion), while Nodes receive €103 million. See the Statistical Annex for more details.

The highest number of Actions (41, representing 39 % of the total number) is under the road transport mode (which also includes alternative fuel infrastructure and ITS), **while rail Actions receive most of the actual funding (82%)**.

## Figure 1: Statistics by transport mode

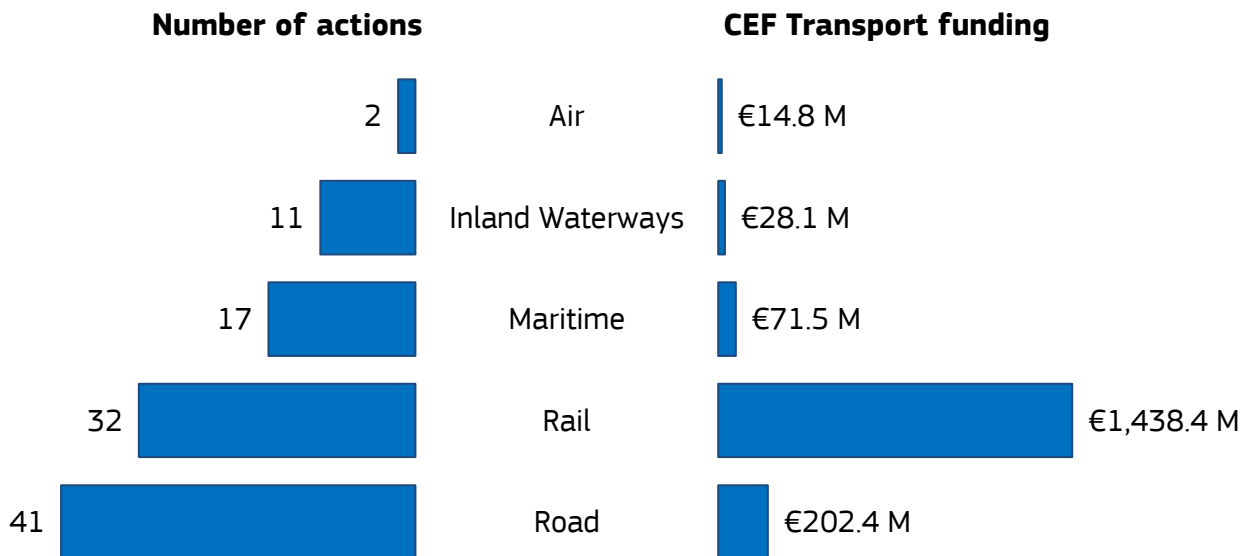
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<sup>2</sup> As of May 2020.

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

<sup>4</sup> Ensuring sustainable and efficient transport in the long run

<sup>5</sup> Optimising the integration and interconnection of transport modes and enhancing interoperability, safety and security of transport



### 2.1.1. Rail

The railway network along the OEM Corridor has an approximate length of 5,800 km. Significant sections are currently not compliant with the TEN-T requirements<sup>6</sup>, **especially in the southern part of the corridor**. While the network is electrified at 89% and despite some improvement since 2014, the main requirements still lagging behind are:

- Train length (only 50% of the rail network is compliant),
- Line speed > 100 km/h (81%)
- Axle load (84%)

The situation is particularly critical for ERTMS since only 9% of the network is ERTMS-compliant.

In order to comply entirely with all requirements by 2030, the Work Plan has identified a list of **241 rail project** representing €49.5 billion of investment cost. **The current CEF rail portfolio on the OEM is composed of 32 Actions, receiving €1.44 billion of CEF funds** for total investment costs of €1.97 billion.

Out of these 32 Actions, 24 concern works or works mixed with studies that contribute to the following results:

- **311 km of railway line** will be upgraded to meet at least one of the minimum technical requirements in terms of electrification, axle load, line speed or 740 metre train length. This would represent an improvement of **+5.36%** of the length of the OEM rail network in terms of **compliance with these main requirements, which are electrification, axle load, line, speed and adaptation to 740 metre long trains**. Since the compliance rate is around 80%, this represents approximately 25 % of the gap for a fully compliant corridor.
- **420 km will be fitted with ERTMS**, which represents an improvement of **+7.20% of the corridor ERTMS compliance**.

<sup>6</sup> Article 39 of TEN-T guidelines n°: 1315/2013

A number of these rail actions have already been successfully completed:

- Completion of the new, double-track, high speed, and electrified railway line **Tithorea-Lianonkladi-Domokos in Greece**. This Action (2014-EL-TMC-0651-W with a CEF grant of €235,7 million, the largest of the OEM Corridor so far) is addressing the last remaining missing link (106 km) to have a fully compliant railway line on this part of the Corridor. The major infrastructure works have been completed in 2018. A regular service has already been launched in 2019. Thanks to this Action, the duration of a trip Athens- Thessaloniki **has been reduced by 1 hour or 20%** (4 hours versus 5 before). Nevertheless, the Action is experiencing a 12 month delay due to a fauna overpass construction and the need to implement new regulations to connect to the energy network. It is set to be completed in June 2021.



**Railway Bridge RB26, in Domokos, completed in 2018 (as part of Action 2014-EL-TMC-0651-W). Source: ERGOSE S.A.**

- Access to the future **Kattwyk Railway Bridge on the Elbe River in Hamburg** region (2014-DE-TA-0243-W). The Action comprised the building of eastern and western landside links of the new railway bridge and the reconstruction of the leading lights. The separation of rail and road traffic will significantly enhance traffic safety and improve the flow of traffic in the Port of Hamburg. It was completed as foreseen.





**Works on Kattwyk Railway Bridge on the Elbe River (2014-DE-TA-0243-W). Source: Hamburg Port Authority**

- Modernisation of the **Čelákovice railway station** (2016-CZ-TMC-0014-W), on the Praha-Lysá nad Labem-Kolín line, in **Czech Republic**, also finalised as foreseen. It will increase capacity and safety of the line, as well as reduce travel times for passenger and freight transport.
- 2 design studies in Hungary for cross border rail connection: the first with Slovakia (Békéscsaba (excl.) – Lőkösháza : 2014-HU-TMC-0309-S) and the second with Romania (Hegyeshalom – Rajka : 2015-HU-TM-0189-S). Respectively, they cover the only single-track sections in these East and West Hungarian sections of the Orient/East Med Corridor, hence representing a significant bottleneck. The Actions' outputs will allow the construction of the second track and the upgrade of the section in line with the EU requirements.





**Works completed at Čelákovice railway station (2016-CZ-TMC-0014-W). Source: Správa železnic**

Other actions are still ongoing, sometimes with delays. The following ones are of outmost importance for the implementation of the OEM corridor:

- Upgrade of cross-border **Czech Republic – Slovak rail link between Lanžhot (CZ) and Kúty (SK)**: this project will upgrade 2 km on the CZ side (through CEF Action 2016-CZ-TMC-0038-M) and 7 km on the SK side (through CEF Action 2015-SK-TM-0207-M) to the standard requirements. The SK action is subject to **major implementation delays** related to procurement issues, namely appeals by unsuccessful bidders. The SK Action CEF grant has been extended by 24 months but for a reduced scope, that includes the reconstruction of a bridge over the Morava River. The delays in SK has an impact on the CZ Action due to the necessary coordination of the alignment/design.
- Upgrade of the **Budapest South Railway Bridge** (CEF Action 2015-HU-TM-0134-W, CEF grant of €97 million). Due to its inadequate technical parameters and deteriorated conditions, this bridge is a major bottleneck for the 3 corridors overlapping in that section (OEM, Rhine-Danube and Mediterranean). After re-launching the first unsuccessful tender, the works started in 2019 and should be completed by December 2022.
- Upgrade of **116 km of railway stretches on the section Sofia – Burgas** in Bulgaria: 4 CEF Actions (2014-BG-TMC-0133/0239-W, 2015-BG-TM-0045-W, 2016-BG-TMC-0047-W) will contribute to the Corridor compliance on this part of the network with a total grant of €373 million. More specifically, these 4 Actions will contribute to the improvement of the operating speed, which

has been identified as an issue in the Work Plan in these sections (75% of the Bulgarian rail network has currently an operating speed below 100 km/h).

Only the works of the Sofia – Elin Pelin and Kostenets – Septemvri sections (actions 2015-BG-TMC-0239-W and 2015-BG-TM-0045-W) are currently ongoing, the other 2 Actions are delayed and are at procurement phase. The 4 Actions are facing delays and will need 24 additional months to be completed in their initial or reduced scope.

This category of Actions are displayed on the Rail map further below.

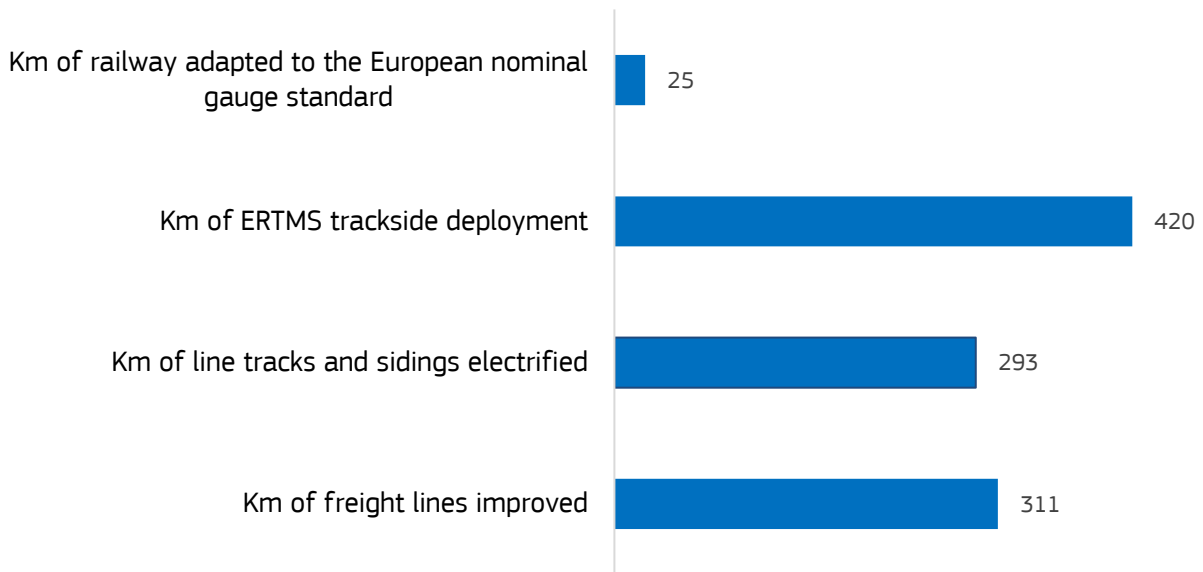
Some **studies** will enable the works for the compliance of significant/important sections of the OEM rail network and/or unlock cross-border connections:

- Feasibility studies of the upgrade of the railway line Drobeta Turnu Severin - Craiova – Calafat (Actions 2014-RO-TMC-0140-S and 2014-RO-TMC-0202-S). The length of this non-compliant section is 332 km, which represents 5.7% of the total Corridor length. Therefore, the completion of the studies will represent a major step towards the compliance of a significant part of the Corridor. These studies have been very much delayed due to procurement and implementation issues they are now supposed to be completed by 2020.
- Upgrade of the railway line Devínska Nová Ves - SK/CZ state border, Malacky-Kúty section (CEF Action 2016-SK-TMC-0220-S). This is the continuation of the aforementioned Actions addressing the cross-border connection between SK and CZ. The study will elaborate the design of the upgrade of 26 km of line. The completion of the global project supported through successive CEF Actions will ultimately ensure the compliance of a stretch of 66 km of the OEM from Lanžhot (CZ) to Devínska Nová Ves (SK). After some procurement issues the contract finally started in December 2019, the Action will need additional 8 months to be completed (August 2023 instead of December 2022).
- Studies for infrastructure upgrading on sections of Thessaloniki - Promachonas railway line (Action 2014-EL-TM-0311-S). This 142 km-long EL/BG cross-border section is currently only single track and not electrified. Both aspects will be addressed by the study. It shall be completed by September 2020.

Finally, CEF is also supporting other measures to streamline operations (as mentioned in cross-border issues in section 3.2) through a Programme Support Action to Rail Freight Corridor 7 (RFC 7). The CEF grant will contribute to the management of the RFC 7, harmonise operational and safety railways rules, train infrastructure managers staff to enhance cross-border cooperation and develop IT solutions. It is worth noting that RFC 7 is particularly active in monitoring and reducing cross-border railway waiting time. This area is a priority of the European Coordinator since investing a large amount of investment in the infrastructure can be undermined by barriers to smooth international rail freight transport operations (among others: customs, interoperability, lack of harmonisation, governance).

Thanks to CEF Transport funding in Rail actions, a number of Km of railway lines is expected to be improved, in detail:

**Figure 2: Improved railway lines (number of km)**



397 out of the total 420 km of ERTMS deployment concern first deployment, the remaining 23 km concern upgrades. <sup>7</sup>

<sup>7</sup> ERTMS first deployment means equipping a railway line section which was not equipped with the system before. ERTMS upgrade means equipping, in compliance with the legally binding Baseline of a railway line, a section already equipped with the system, and compliant with an older Baseline version.

# ORIENT/EAST-MEDITERRANEAN CORE NETWORK CORRIDOR

## CEF funded Rail Actions (excluding ERTMS)



### 2.1.2. Inland Waterways

In total, the CEF inland waterway portfolio in the OEM Corridor is composed of 11 Actions, receiving €28.1 million in CEF Transport funding:

- 6 Actions relating to traditional infrastructure contribute to the compliance of the IWW network with TEN-T requirements. A minimum draught of 2.5 metres is fulfilled only on 40% of the network. Due to the very important infrastructure needed to improve this requirement especially in Southern Germany, a reduced draught level requirement of <1.4 metres is investigated as a pragmatic solution in the upper Elbe.  
In this category of CEF Actions, it is worth noting: the upgrade of 1.5 km of the Mittelland canal (2014-DE-TM-0048-W) completed in 2018, and the upgrade of 2 existing locks on the Vltava River (2016-CZ-0110-W) expected to be completed in March 2021.  
These Actions are shown in the map included further down.
- 3 for River Information System (RIS) and especially the RIS COMEX project (subject of 2 twinned CEF Actions: 2015-EU-TM-0036-W and 2015-EU-TM-0038-W). The RIS COMEX project aims at the promotion of a more transparent and effective data exchange process and the simplification of complex administrative procedures.
- 2 for the deployment of alternative fuels in inland ports. Among those LNG Rollout in Central Europe (2017-DE-TM-0040-W) funded under the blending call was terminated because it did not reach timely the financial close.

### 2.1.3. Maritime

In total, the CEF maritime portfolio in the OEM Corridor is composed of 17 Actions, receiving €71.5 million in CEF Transport funding and is split in 4 categories:

- Motorways of the Sea (MoS) : 9 Actions out of which :
  - 4 have been successfully completed :
    - Motorway of the Sea Rostock-Gedser (2014-EU-TM-0520-M): which contributed to increase the efficiency, improve the environmental performance and enhance the competitiveness of the maritime link Rostock (DE)-Gedser (DK).
    - Upgrading and sustaining the competitive Baltic link Germany-Finland ((2014-EU-TM-0507-M). This action consisted in equipping some vessels to optimise bunker consumption and minimising the emission of greenhouse gases as well as measures in the relevant ports (Rostock-Lübeck-Travemuende, Turku and Kotka).
    - Onshore power supply and electric propulsion alternative for ships in the ports of Piraeus, Kilini and Lemesos (twinned Actions ELEMED – 2015-EU-TM-0235-S and 2015-EU-TM-0236-S)
  - 2 concern the deployment of LNG refuelling facilities in core ports: Poseidon Med II (2014-EU-TM-0673-S) for core ports in Greece, Cyprus and Italy (Veneto) and another one selected under the 2017 blending call related to the ports of Lemesos, Piraeus and Heraklion (2017-EU-TM-0149-W).
- Port infrastructure – (2 Actions) including an Action on the design studies of the upgrade of the core port of Burgas (2016-BG-TMC-0083-S) which has been successfully completed in September 2019.



- Deployment of alternative fuels and digitalisation: 4 Actions, including the pilot phase of “Green and Connected Ports” (2018-EU-TM-0117-S), which aims to provide a suitable array of digitalisation tools and technologies to support port environmental sustainability and performance of port operations in the Trans-European Network for Transport (TEN-T) Core Network. The pilot phase includes the core ports of Bremerhaven, Wilhemshaven, Piraeus, Venice and Valencia.
- A synergy Action in Cyprus, (2016-EU-SA-0009) covering optimisation studies required for the efficient establishment of an integrated storage, transmission and distribution System of natural gas (compressed and liquid) for both the energy and transport sectors in Cyprus.

#### **2.1.4. Road**

In total, the CEF road portfolio in the OEM Corridor is composed of 41 Actions, receiving €202.4 million in CEF Transport funding.

This portfolio can be divided in 4 main categories: "traditional" road infrastructure (5 Actions receiving €121.9 million of CEF contribution), safe and secure infrastructures (5 Actions, €24.1 million), intelligent transport system (ITS) for roads (6 Actions, €8.2 million) and alternative fuels infrastructure (25 Actions, €48.2 million).

##### "Traditional" road infrastructure

This category aims at upgrading the OEM road network to the TEN-T requirements<sup>8</sup>. This means upgrading each section to a **motorway or express road** not crossing rail or tram lines at level and be accessible primarily from interchanges or controlled junctions.

The biggest part of the OEM road network (88% according to the Work Plan) is compliant with this requirement. Nevertheless, several non-compliant road sections remain; they are mostly located in Romania (256 km in total) and Bulgaria (297 km).

Under this category, 3 CEF works or mixed Actions will directly result in the **upgrade of 48.9 km of road to motorways**:

- Cross-border connection AT/CZ on the section Vienna – Brno (2014-AT-TA-0064-M): 25 km extension of the A5 North Motorway between Schrick and Poysbrunn. This action was successfully completed by December 2018.
- Cross-border connection HU/SK Mosonmagyaróvár – Rajka (2015-HU-TM-0087-M): 14.5 km of upgrade of M15 expressway to a 2-lane double-carriageway motorway. The works started in 2017 and should be completed by the end of 2020.
- Lefkosia South Orbital Bypass (2016-CY-TMC-0258-W): construction of 7.4 km of the future Cypriot capital road bypass. The signature of the contract took place in February 2020, the works are expected to be completed by December 2023.

This category of Actions is represented in the combined map Road-IWW-Maritime further down.

##### Safe and secure infrastructure

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<sup>8</sup> Article 17 of TEN-T guidelines n°: 1315/2013

This category of Actions is addressing the specific requirement with regard to the provision of sufficient **parking areas** (at least every 100 km) with an appropriate level of safety. According to the Work Plan, there is an adequate density of parking facilities in Germany, Czech Republic, Slovakia, Austria and Hungary. However, in Romania, Bulgaria and Greece, there are still long road sections without any such facility. The CEF programme is already contributing to this requirement through 4 Actions.

Out of which 2 were completed:

- The first one in Romania: 2015-RO-TM-0137-M, this Action delivered in February 2018 the upgrade of 4 certified safe and secure parkings in Romania, the development of an ITS software programme and a mobile application to inform the truck drivers of available slots in secure parkings.
- The second in Czech Republic (2016-CZ-TMC-0191-M) concerning the Humpolec rest area on D1 motorway completed in February 2020.

## ITS

On the OEM Corridor, the existing systems do not provide adequate real-time traffic and weather information (RDS-TMC) that would facilitate seamless corridor road traffic.

The major share of the ITS portfolio on the Corridor is contributing to the **CROCODILE** project (5 out of 6 ITS Actions in the Corridor). Within this project, traffic information service providers of seven OEM countries (Austria, Cyprus, Czech Republic, Germany, Greece, Hungary, and Romania plus Bulgaria and Slovakia) have set up a data exchange infrastructure to provide harmonized cross-border real-time traffic information services along the whole Corridor. A specific focus within the CROCODILE project lies on safety-related and truck parking information services.

## Alternative fuels supply

According to the Work Plan, at least one type of alternative fuel should be available on 95% of total OEM road network length.

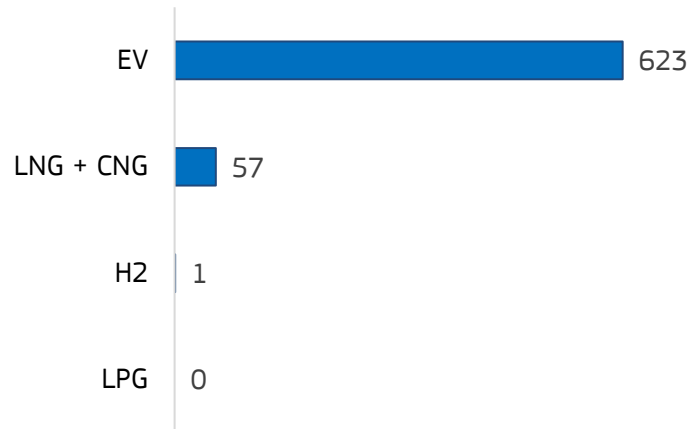
The CEF programme is substantially contributing to the improvement of this indicator with 25 Actions that are expected to deploy a total number of approximately **681 alternative fuel stations and charging points**, out of which:

- **623 electric**, which represents the largest share of this category on the Corridor. 11 Actions cover studies with pilot deployment of multi-standard high power stations (more than 22kW, usually 50kW) and/or high power chargers (150kW-350kW) for electric vehicles. Most countries on the Corridor, particularly the Czech Republic (involved in 5 Actions) and Slovakia (involved in 4 Actions and still identified in the Work Plan as a country with a low number of stations), are taking an active approach in addressing the Alternative Fuels Directive by investing in electro-mobility.
- **57 Liquefied and or Compressed Natural Gas**: Compared to electric mobility, the LCNG market is not yet so developed and there are fewer investments on the Corridor focused on this type of fuel. To note the relative high share of Compressed Natural Gas (CNG) stations in Hungary (20 stations, 2015-HU-0315-M) and Greece (13 stations, 2016-EL-TM-0227-S).
- **1 Hydrogen (H2)**: The market for hydrogen as an alternative fuel for road transport is at an even earlier stage of development and only one hydrogen refuelling station on the Corridor will be deployed with the action Connecting Hydrogen Refuelling Stations (COHRS: 2014-EU-TM-0318-S).

Thanks to CEF Transport funding in Road actions:

- 394 parking spots are expected to be built or improved in 2 parking areas in the Czech Republic
- 681 supply points for alternative fuel for road transport are expected to be installed, in detail:

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



## ORIENT/EAST-MEDITERRANEAN CORE NETWORK CORRIDOR

**CEF funded Road, Inland Waterway and Maritime Actions**  
(excluding ITS, RIS and Innovation)

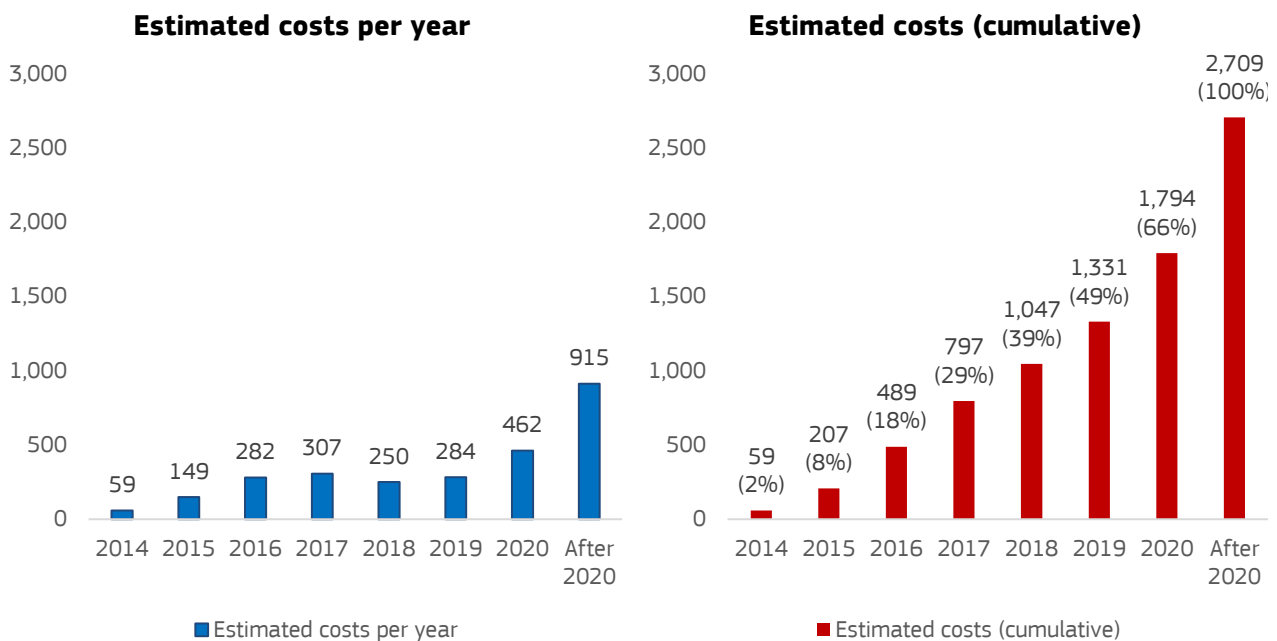


## 2.2. Financial Progress

CEF Transport funding for actions in the Orient East Med Corridor was initially<sup>9</sup> €2.1 billion, corresponding to €3.2 billion in eligible costs. Following amendments and closures, the actual funding going to this Corridor is €1.8 billion, corresponding to €2.7 billion in eligible costs. It is important to note that the major part of the reductions is re-injected in the 2019 CEF Transport call.

When taking into account the latest information available<sup>10</sup>, the costs necessary to implement CEF Transport actions are estimated at €2.7 billion. The below figures give an overview of the respective financial progress (in terms of estimated costs) of the overall Corridor portfolio. By the end of 2019 the financial progress reached was 49%.

**Figure 4: Estimated budget implementation (€ million)**



Whilst the above financial progress charts are based on cost estimates provided by the beneficiaries (updated annually in action status reports), the budgetary absorption of the allocated funding can also be analysed by assessing the payments made and interim/final costs claims processed. In fact, out of the €1.8 billion of CEF Transport funding:

- 41% or €725.8 million has already been paid (including pre-financing)
- 28% or €486.3 million of contribution has already been accepted (following the introduction of interim/final cost claims by beneficiaries).

## 3. Challenges affecting the implementation of Actions

Almost all CEF Actions on the OEM are ongoing. Only a few Actions have already been technically completed or are close to completion. Overall, the Actions are making good progress but have encountered a number of challenges. Delay in implementation is the most recurrent of these challenges. In terms of amendments, as

<sup>9</sup> i.e. grant agreement signature stage

<sup>10</sup> i.e. action status reports and received but not yet approved final payment claims.



of May 2020, around 46 Grant Agreements of the OEM CEF Transport portfolio (45%) **have been extended** as follows:

- By 1 to 12 months: 22 Actions
- By 13 to 24 months: 20 Actions
- By more than 24 months: 4 Actions

Other actions facing delays may still need to be extended.

Delays in implementation are mainly due to:

- Procurement

Procurement delays are mainly caused by complex preparation of tender documentation, for example due to changes in the national procurement law. Moreover, lengthy tender procedures, mainly resulting from appeals from bidders are conducive to important delays.

The 2014 EU public procurement Directive transposition in national legislation required national administrations to adopt new internal practices and, in some cases, to resort to new additional legal services and expertise.

Besides, in some Member States an additional ex-ante control by national authorities has been introduced at the end of the procurement procedure, prior to contract signature. Consequently, the start of the works phase of many projects has been affected. Small Actions in the fields of innovation and inland waterways suffered from limited delays thanks to the contingency plans that they included. On the contrary, a number of railway Actions bear major delays between 6 months and nearly 2 years. In most of those cases, the successful completion of works will take place only after December 2020.

In some countries, procurement delays were also caused by a substantial level of appeals during tendering processes by unsuccessful bidders. This issue was partly addressed by increasing the fee required to lodge an official complaint (reimbursed in case the appeal is successful).

- Environmental, permitting procedures and land acquisition

Another important issue relates to complex and lengthy environmental and permitting procedures for works Actions. This concerns mainly the issuing of the necessary environmental impact assessment (EIA) decisions and building permits, without which construction works cannot start.

Some Actions have suffered from the divergence between national and European environmental norms, which led to the inclusion of a strong environmental conditionality in the grant agreements, which needs to be fulfilled during the implementation.

Concerning land acquisition, resistance from current landowners or even difficulties to identify them, sometimes led to delays.

- Administrative and project management capacities

The two aforementioned challenges concerning procurement and permitting may be compounded in some cases when Beneficiaries do not allocate adequate staff during the preparatory phases of the projects.

- Cross-border coordination

In the first four CEF calls a particular critical rail cross-border connection has been addressed by CEF Actions (see section 2.1.4). It is the rail link between Lanžhot (CZ) and Kúty (SK), subject of 2 distinct CEF Actions, one on each side of the border.

The Actions are interdependent since the design of one relies on the final alignment of the other. Therefore, the delay observed in in one Action causes delay to the other one.

A memorandum of understanding between the CZ and SK Transport Ministries has been signed early 2016. However, the beneficiaries have expressed the need for an improved coordination at technical level between both sides. As mentioned previously in this report, the SK action is very much delayed and the CEF support has been reduced.

On the other hand, it is worth mentioning that the investment in the infrastructure should be combined with additional measures to facilitate smooth cross-border flows from the operational point of view. The recent analysis of the OEM Rail Freight Corridor has identified a number of operational and administrative bottlenecks, which hamper transport flows along the corridor e.g. long delays at the borders due to different operational rules and procedures. CEF is also addressing this issue with support to Rail freight Corridors initiatives, mainly through the development of IT solutions

- Market development and access to finance for innovation actions

The Actions concerning the deployment of alternative fuel stations are most of the time managed by private promoters. These stakeholders may face constraints to cover their share of co-funding (either by their own resources or by accessing to finance) or in terms of commercial aspects. Some Actions have reported issues in that respect.

- Other issues (technical complexity, budget changes)

Some of the main works interventions face costs overruns, resulting from bids that were higher than the initial tender price estimates. As a result, new financial commitments by the concerned Governments or the revision of existing designs are required. These changes delay further the start of the projects. Technical complexity of some Actions, for example related to the construction of bridges or tunnels, also cause some delays and require careful planning. Overall, the planning of CEF rail Actions often suffers from unrealistic timetables or lack of comprehensive risk management strategies during project preparation.

#### 4. Conclusion and Outlook

As outlined in this report, CEF-funded Actions have positively affected the development of the OEM Corridor in line with the objectives and priority areas defined by the European Coordinator, Mr Mathieu Grosch, in the latest Work Plan. These Actions have already contributed to the removal of some of the main bottlenecks along the Corridor.

The largest part of the CEF OEM portfolio concerns **rail** Actions (82% in terms of EU funding). The 32 Actions selected so far represent 5.36 % of the needs estimated by the Work Plan for a fully compliant Corridor and will contribute to the **compliance of approximately 5% of the corridor length** (which constitutes 25 % of the gap given the fact that the compliance is already around 80%).

As regards **cross-border** cooperation some bilateral initiatives exist (for instance CZ/SK) but some stakeholders expressed the need for an improved coordination. The European Coordinator supported by DG MOVE and INEA could add value in that respect as facilitator of an enhanced coordination.

Concerning **road transport**, the second largest category in the CEF OEM portfolio, CEF funding is focusing on traditional infrastructure. The CEF programme will also substantially contribute to the decarbonisation of road transport on the OEM with the deployment of large number (more than 680) of alternative-fuel stations.

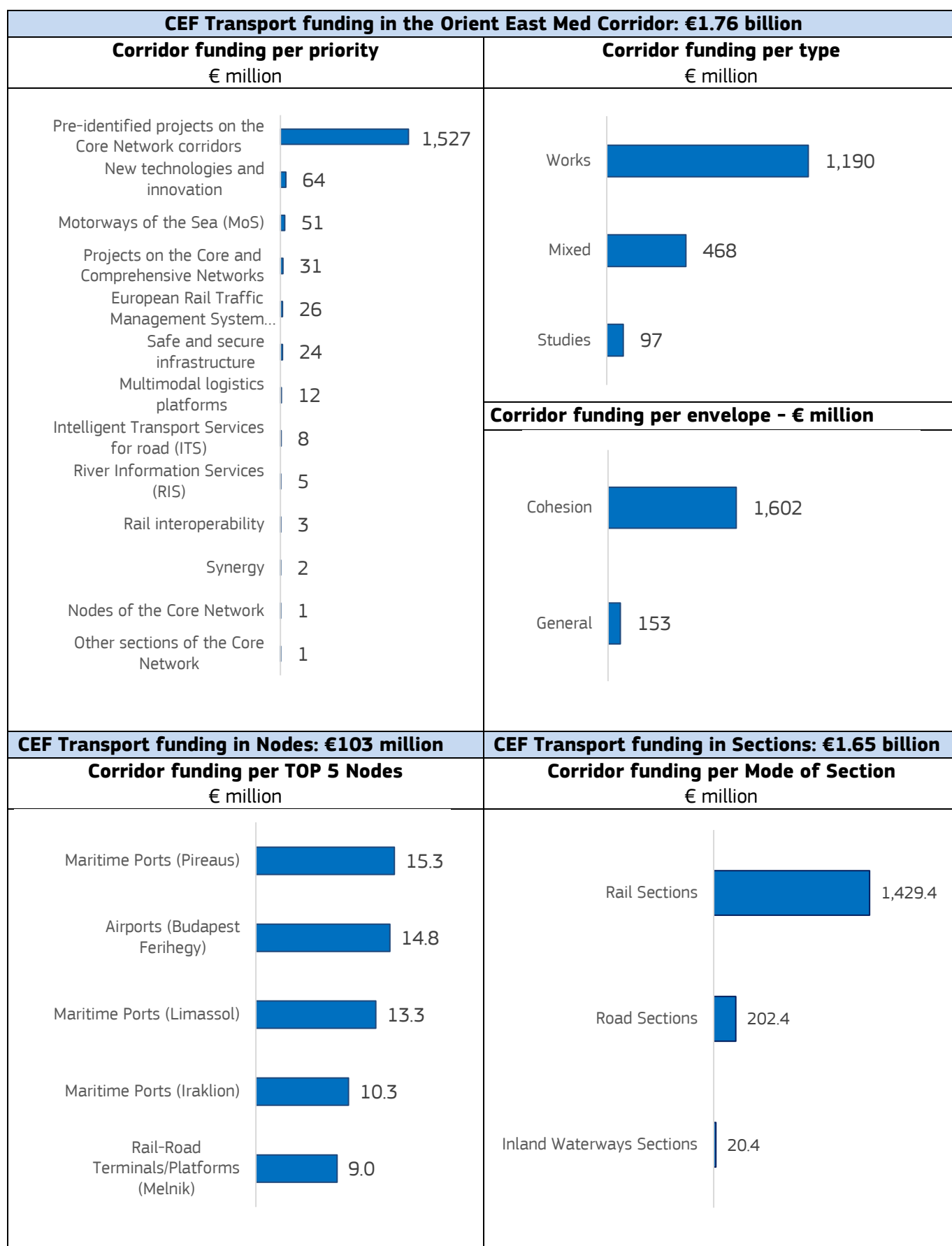
The **IWW** OEM portfolio is proportionate to the size of the network. The issue of the River Elbe (widely free flowing river which prevents a permanent good navigation status), identified as critical in the Work Plan, has not yet been addressed nor submitted for potential support under the CEF programme.

Due to the insularity of Cyprus and the importance of the maritime industry in Greece, the **MoS** dimension is particularly relevant for the development of the Corridor and is properly addressed by the CEF programme since it receives most of the **maritime** portfolio funding.

As demonstrated in the previous section the main two issues affecting the implementation of CEF Actions on the OEM Corridor relate to procurement and permitting procedures. In this context, the initiatives of the Commission concerning public procurement i.e. Commission's ex ante assessment mechanisms for large infrastructure projects, and the permitting initiative for streamlining measures for swifter implementation of TEN-T projects, may facilitate project implementation in the future.

Thus, despite the existing difficulties as described in section 3.3, meaningful progress has been achieved in the past 6 years of CEF implementation and some significant milestones have been reached. Until the end of the program, the highest budget implementation so far is planned, and the corresponding leap forward in operational progress is expected. INEA will continue making implementation happen through regular monitoring of the progress of the Actions and close cooperation with the OEM Corridor Coordinator and countries. However, at the time of this report, it was not possible to quantify or assess the consequences of the health crisis caused by COVID-19.

## 5. Statistical Annex



## 6. List of actions on the Orient East Med Corridor

| Transport Mode   | Action code        | Title  | Status  | Priority  | Type    | Actual start date | Actual end date | Actual Corridor Share | Actual funding    | Actual costs      |
|------------------|--------------------|--|---------|---|---------|-------------------|-----------------|-----------------------|-------------------|-------------------|
| Air              | 2014-CY-TM-0727-W  | Larnaka Airport Multimodal Logistic (freight) Platform   | Closed  | Multimodal logistics platforms                        | Works   | 01/10/2015        | 31/12/2017      | 100%                  | -                 | -                 |
| Air              | 2014-HU-TMC-0508-W | Connection of the railway line Budapest-Arad to the multi-modal hub at Budapest Airport          | Ongoing | Pre-identified projects on the Core Network corridors | Works   | 01/01/2014        | 30/09/2021      | 100%                  | 14,841,000        | 17,460,000        |
| <b>Air Total</b> |                    |  |         |   |         |                   |                 |                       | <b>14,841,000</b> | <b>17,460,000</b> |
| Inland Waterways | 2014-DE-TM-0048-W  | Extension of the Mittelland canal from km 302.377 to 303.800 - Removal of the last bottleneck    | Closed  | Pre-identified projects on the Core Network corridors | Works   | 01/07/2015        | 31/05/2018      | 100%                  | 5,050,421         | 25,252,107        |
| Inland Waterways | 2015-EU-TM-0036-W  | River Information Services Corridor Management Execution (Cohesion Call)                         | Ongoing | River Information Services (RIS)                      | Works   | 15/02/2016        | 31/12/2020      | 50%                   | 2,859,331         | 3,363,919         |
| Inland Waterways | 2015-EU-TM-0038-W  | River Information Services Corridor Management Execution (General Call)                          | Ongoing | River Information Services (RIS)                      | Works   | 15/02/2016        | 31/12/2020      | 17%                   | 1,680,735         | 3,361,471         |
| Inland Waterways | 2015-HU-TM-0152-S  | Master Plan and feasibility study for the development of the TEN-T ports, including Komárom Port | Ongoing | Pre-identified projects on the Core Network corridors | Studies | 01/08/2016        | 31/03/2020      | 100%                  | 889,683           | 1,046,686         |



| Transport Mode         | Action code        | Title   | Status     | Priority  | Type    | Actual start date | Actual end date | Actual Corridor Share | Actual funding | Actual costs |
|------------------------|--------------------|---|------------|---|---------|-------------------|-----------------|-----------------------|----------------|--------------|
| Inland Waterways       | 2015-HU-TM-0349-M  | PAN-LNG-4-DANUBE  | Ongoing    | New technologies and innovation                       | Mixed   | 01/06/2016        | 31/12/2021      | 85%                   | 5,127,691      | 6,032,578    |
| Inland Waterways       | 2015-HU-TM-0365-S  | Preparatory activities to upgrade the railway link between the inland Freeport of Budapest and the core network corridors | Ongoing    | Pre-identified projects on the Core Network corridors | Studies | 16/02/2016        | 31/12/2020      | 100%                  | 840,858        | 989,245      |
| Inland Waterways       | 2015-SK-TM-0116-S  | Master plan and feasibility study for the public port of Komárno  | Ongoing    | Pre-identified projects on the Core Network corridors | Studies | 01/09/2016        | 31/12/2020      | 100%                  | 572,135        | 673,100      |
| Inland Waterways       | 2016-CZ-TMC-0110-W | Improvement of the navigation status on Vltava waterway   | Ongoing    | Pre-identified projects on the Core Network corridors | Works   | 15/03/2017        | 30/06/2021      | 100%                  | 10,686,547     | 12,572,408   |
| Inland Waterways       | 2016-HU-TMC-0164-S | Integrated Port Information System in Hungary   | Ongoing    | Pre-identified projects on the Core Network corridors | Studies | 01/09/2017        | 31/12/2020      | 34%                   | 288,278        | 339,150      |
| Inland Waterways       | 2017-DE-TM-0040-W  | LNG Rollout in Central Europe - for a greener transportation sector   | Terminated | New technologies and innovation                       | Works   | 01/01/2018        | 30/06/2021      | 50%                   | -              | -            |
| Inland Waterways       | 2018-EU-TM-0020-S  | Masterplan Digitalisation of Inland Waterways   | Ongoing    | River Information Services (RIS)                      | Studies | 01/07/2019        | 02/12/2022      | 5%                    | 73,000         | 146,000      |
| Inland Waterways Total |                    |   |            |   |         |                   |                 |                       | 28,068,679     | 53,776,663   |

| Transport Mode | Action code       | Title   | Status  | Priority                        | Type    | Actual start date | Actual end date | Actual Corridor Share | Actual funding | Actual costs |
|----------------|-------------------|---|---------|---------------------------------|---------|-------------------|-----------------|-----------------------|----------------|--------------|
| Maritime       | 2014-EU-TM-0503-S | Planning, construction, demonstration and market roll-out of small-scale liquefaction and supply facility for Liquefied Biogas (LBG) as alternative fuel for the transport sector | Ongoing | New technologies and innovation | Studies | 01/06/2014        | 30/06/2019      | 100%                  | 6,836,750      | 13,673,500   |
| Maritime       | 2014-EU-TM-0507-M | Upgrading and sustaining the competitive Baltic MoS link Germany-Finland (RoRo multiple ports loop)   | Closed  | Motorways of the Sea (MoS)      | Mixed   | 01/01/2014        | 31/12/2016      | 51%                   | 2,519,321      | 8,397,738    |
| Maritime       | 2014-EU-TM-0520-M | Motorway of the Sea Rostock-Gedser - Part 2   | Closed  | Motorways of the Sea (MoS)      | Mixed   | 01/01/2014        | 31/12/2017      | 42%                   | 2,595,119      | 8,650,397    |
| Maritime       | 2014-EU-TM-0673-S | Poseidon Med II   | Ongoing | Motorways of the Sea (MoS)      | Studies | 01/06/2015        | 31/12/2020      | 70%                   | 18,647,792     | 37,295,584   |
| Maritime       | 2015-DE-TM-0050-W | Quality and capacity upgrade of the railway system in the seaport of Bremerhaven (Imsumer Deich Plus)   | Ongoing | Multimodal logistics platforms  | Works   | 16/02/2016        | 31/12/2019      | 100%                  | 3,307,620      | 16,538,100   |

| Transport Mode | Action code        | Title  | Status  | Priority  | Type    | Actual start date | Actual end date | Actual Corridor Share | Actual funding | Actual costs |
|----------------|--------------------|--|---------|---|---------|-------------------|-----------------|-----------------------|----------------|--------------|
| Maritime       | 2015-EU-TM-0235-S  | ELEMED – ELectrification of the Eastern MEDiterranean area (use of Cold Ironing and electricity as a propulsion alternative) | Closed  | Motorways of the Sea (MoS)                            | Studies | 01/04/2016        | 31/03/2018      | 80%                   | 654,919        | 952,791      |
| Maritime       | 2015-EU-TM-0236-S  | ELEMED – ELectrification of the Eastern MEDiterranean area (use of Cold Ironing and electricity as a propulsion alternative) | Closed  | Motorways of the Sea (MoS)                            | Studies | 01/04/2016        | 31/03/2018      | 20%                   | 15,154         | 30,309       |
| Maritime       | 2015-EU-TM-0310-M  | Adriatic MoS Upgrated Services - Adri-Up   | Ongoing | Motorways of the Sea (MoS)                            | Mixed   | 01/03/2016        | 20/12/2020      | 48%                   | 3,422,640      | 10,908,000   |
| Maritime       | 2016-BG-TMC-0083-S | From East 2 West. Access to the OEM Corridor through the Core port of Burgas   | Ongoing | Pre-identified projects on the Core Network corridors | Studies | 01/07/2017        | 30/09/2019      | 100%                  | 2,269,500      | 2,670,000    |
| Maritime       | 2016-CY-TMC-0330-M | Design study of the improvement of Lemesos Port-Vasiliko Terminal  | Ongoing | Pre-identified projects on the Core Network corridors | Studies | 01/06/2017        | 29/03/2019      | 100%                  | 441,920        | 625,240      |
| Maritime       | 2016-EU-SA-0009    | CYnergy  | Ongoing | (blank)   | Studies | 01/04/2017        | 31/03/2020      | 50%                   | 2,241,000      | 3,735,000    |
| Maritime       | 2016-EU-TM-0341-W  | Development of port capacity for integrated Baltic MoS link(s) on Rostock – Hanko  | Ongoing | Motorways of the Sea (MoS)                            | Works   | 07/02/2017        | 30/06/2020      | 72%                   | 3,174,386      | 14,090,329   |

| Transport Mode        | Action code        | Title  | Status  | Priority  | Type    | Actual start date | Actual end date | Actual Corridor Share | Actual funding    | Actual costs       |
|-----------------------|--------------------|--|---------|---|---------|-------------------|-----------------|-----------------------|-------------------|--------------------|
| Maritime              | 2016-EU-TM-0342-M  | MoS Venice–Patras. Developing and upgrading of the East-Mediterranean Mos link Italy-Greece        | Ongoing | Motorways of the Sea (MoS)                            | Mixed   | 01/07/2017        | 31/03/2021      | 10%                   | 283,130           | 1,004,667          |
| Maritime              | 2017-EL-TM-0048-W  | SuperGreen (SG)  | Ongoing | New technologies and innovation                       | Works   | 01/01/2019        | 30/04/2021      | 100%                  | 3,938,981         | 19,694,903         |
| Maritime              | 2017-EU-TM-0149-W  | BlueHUBS: LNG and CNG Supply Chains Upgrading Core TEN-T Ports in Eastern Mediterranean            | Ongoing | Motorways of the Sea (MoS)                            | Works   | 01/02/2019        | 31/12/2022      | 100%                  | 19,789,020        | 65,963,400         |
| Maritime              | 2018-EU-TM-0117-S  | Green and Connected Ports (GREEN C PORTS)  | Ongoing | New technologies and innovation                       | Studies | 01/04/2019        | 31/03/2023      | 26%                   | 930,242           | 1,860,484          |
| Maritime              | 2018-EU-TM-0135-S  | Application of Industry 4.0 Technologies towards Digital Port Container Terminals – iTerminals 4.0 | Ongoing | New technologies and innovation                       | Studies | 01/03/2019        | 31/12/2021      | 12%                   | 444,030           | 888,060            |
| <b>Maritime Total</b> |                    |  |         |   |         |                   |                 |                       | <b>71,511,525</b> | <b>206,978,502</b> |
| Rail                  | 2014-BG-TMC-0133-W | Development of Sofia Railway Junction: Sofia - Voluyak Railway Section                             | Ongoing | Pre-identified projects on the Core Network corridors | Works   | 01/01/2016        | 31/12/2020      | 100%                  | 76,074,064        | 104,211,047        |
| Rail                  | 2014-BG-TMC-0239-W | Modernization of the railway section Sofia - Elin Pelin  | Ongoing | Pre-identified projects on the Core Network corridors | Works   | 01/07/2015        | 31/12/2020      | 100%                  | 57,786,910        | 67,984,600         |

| Transport Mode | Action code        | Title  | Status  | Priority  | Type    | Actual start date | Actual end date | Actual Corridor Share | Actual funding | Actual costs |
|----------------|--------------------|--|---------|---|---------|-------------------|-----------------|-----------------------|----------------|--------------|
| Rail           | 2014-CZ-TMC-0308-M | ETCS Petrovice u Karviné – Ostrava – Přerov – Břeclav  | Ongoing | European Rail Traffic Management System (ERTMS)       | Mixed   | 13/09/2016        | 30/06/2020      | 100%                  | 20,519,708     | 24,140,833   |
| Rail           | 2014-CZ-TMC-0321-W | Optimization of the line Praha Hostivar – Praha hl.n., 2nd part – Praha Hostivar – Praha hl.n.   | Ongoing | Pre-identified projects on the Core Network corridors | Works   | 05/02/2018        | 01/04/2022      | 100%                  | 110,309,931    | 134,295,022  |
| Rail           | 2014-DE-TA-0243-W  | New Kattwyk Railway Bridge – Building of landside Links and Re-construction of the Leading Lights  | Closed  | Projects on the Core and Comprehensive Networks       | Works   | 27/01/2014        | 31/12/2016      | 100%                  | 8,460,961      | 28,203,204   |
| Rail           | 2014-EL-TM-0311-S  | Studies for the infrastructure upgrading on sections of Thessaloniki - Promachonas Railway Line (Part of OEM Corridor), necessary for the installation of the electrification system | Ongoing | Pre-identified projects on the Core Network corridors | Studies | 15/12/2015        | 30/09/2020      | 100%                  | 500,000        | 1,000,000    |

| Transport Mode | Action code        | Title   | Status  | Priority  | Type    | Actual start date | Actual end date | Actual Corridor Share | Actual funding | Actual costs |
|----------------|--------------------|---|---------|---|---------|-------------------|-----------------|-----------------------|----------------|--------------|
| Rail           | 2014-EL-TMC-0268-W | Construction of railway infrastructure in section Rododafni (Km 91,5) - Psathopirgos (Km 113) of the new railway line Athens - Patras, part of Orient/East-Med corridor | Ongoing | Pre-identified projects on the Core Network corridors | Works   | 01/01/2014        | 30/06/2020      | 100%                  | 141,748,188    | 198,610,324  |
| Rail           | 2014-EL-TMC-0651-W | Completion of the new, double, high speed, electrified railway line Tithorea-Lianonkladi-Domokos, 106km long  | Ongoing | Pre-identified projects on the Core Network corridors | Works   | 01/01/2014        | 30/06/2020      | 100%                  | 235,788,961    | 349,420,512  |
| Rail           | 2014-HU-TMC-0309-S | Design and Study for the Modernisation of the Békéscsaba (excl.) – Lőkösháza (country border) railway line section  | Ongoing | Pre-identified projects on the Core Network corridors | Studies | 24/09/2015        | 30/06/2019      | 100%                  | 3,774,000      | 4,440,000    |
| Rail           | 2014-RO-TMC-0140-S | P.2 - The Feasibility study for the rehabilitation of the Craiova - Drobeta Turnu Severin – Caransebes railway line, part of the Orient/East-Mediterranean Corridor.    | Ongoing | Pre-identified projects on the Core Network corridors | Studies | 01/11/2015        | 29/10/2020      | 100%                  | 4,982,773      | 5,862,086    |

| Transport Mode | Action code        | Title   | Status  | Priority  | Type    | Actual start date | Actual end date | Actual Corridor Share | Actual funding | Actual costs |
|----------------|--------------------|---|---------|---|---------|-------------------|-----------------|-----------------------|----------------|--------------|
| Rail           | 2014-RO-TMC-0202-S | P.3 - The revision of the Feasibility Study for the Rehabilitation of Craiova-Calafat railway line, component of Orient/East-Mediterranean Corridor | Ongoing | Pre-identified projects on the Core Network corridors | Studies | 01/11/2015        | 30/05/2020      | 100%                  | 779,271        | 916,789      |
| Rail           | 2015-BG-TM-0045-W  | Modernization of the railway section Kostenets – Septemvri  | Ongoing | Pre-identified projects on the Core Network corridors | Works   | 01/10/2016        | 31/12/2022      | 100%                  | 130,488,600    | 153,516,000  |
| Rail           | 2015-CZ-TM-0099-M  | Modernisation of selected sections of the railway line Pardubice -Česká Třebová   | Ongoing | Pre-identified projects on the Core Network corridors | Studies | 18/03/2016        | 31/12/2022      | 100%                  | 10,286,001     | 12,101,178   |
| Rail           | 2015-CZ-TM-0214-W  | Reconstruction of the Negrelli Viaduct  | Ongoing | Pre-identified projects on the Core Network corridors | Works   | 30/03/2017        | 30/09/2021      | 100%                  | 36,646,713     | 47,432,971   |
| Rail           | 2015-CZ-TM-0238-M  | ETCS Cesky Brod - Praha Junction (including)  | Ongoing | European Rail Traffic Management System (ERTMS)       | Mixed   | 30/11/2016        | 31/12/2020      | 100%                  | 5,295,500      | 6,230,000    |
| Rail           | 2015-CZ-TM-0406-W  | INTERMODAL TERMINAL MELNIK, Phase 2. and 3.   | Ongoing | Multimodal logistics platforms                        | Works   | 01/03/2016        | 31/12/2020      | 100%                  | 8,997,188      | 10,584,927   |



| Transport Mode | Action code        | Title   | Status  | Priority  | Type    | Actual start date | Actual end date | Actual Corridor Share | Actual funding | Actual costs |
|----------------|--------------------|---|---------|---|---------|-------------------|-----------------|-----------------------|----------------|--------------|
| Rail           | 2015-EL-TM-0253-W  | Construction of railway infrastructure in section Psathopirgos-Patras(Bozaitika), of axis Athens-Patras, part of OEM Corridor | Ongoing | Pre-identified projects on the Core Network corridors | Works   | 16/02/2016        | 31/12/2020      | 100%                  | 78,537,184     | 112,003,971  |
| Rail           | 2015-HU-TM-0053-W  | Stage 2 of deployment of the GSM-R system on the TEN-T Railway Core Network in Hungary  | Ongoing | Pre-identified projects on the Core Network corridors | Works   | 01/09/2016        | 31/12/2021      | 14%                   | 6,928,854      | 8,151,593    |
| Rail           | 2015-HU-TM-0134-W  | Upgrade of the Budapest South Railway Bridge  | Ongoing | Pre-identified projects on the Core Network corridors | Works   | 01/01/2017        | 31/12/2022      | 100%                  | 97,105,657     | 114,241,949  |
| Rail           | 2015-HU-TM-0189-S  | Preparatory activities for the upgrade of the Hegyeshalom - Rajka (HU-SK border) railway line section                         | Ongoing | Pre-identified projects on the Core Network corridors | Studies | 16/02/2016        | 31/10/2019      | 100%                  | 1,898,715      | 2,233,782    |
| Rail           | 2015-SK-TM-0207-M  | Modernisation of two sections of the CZ/SK state border - Devinska Nová Ves railway line                                      | Ongoing | Pre-identified projects on the Core Network corridors | Mixed   | 17/02/2016        | 31/12/2022      | 100%                  | 37,569,270     | 51,184,291   |
| Rail           | 2016-BG-TMC-0047-M | Development of Plovdiv Railway Node   | Ongoing | Pre-identified projects on the Core Network corridors | Mixed   | 15/02/2017        | 15/12/2020      | 100%                  | 87,955,649     | 103,477,234  |

| Transport Mode | Action code        | Title  | Status  | Priority  | Type    | Actual start date | Actual end date | Actual Corridor Share | Actual funding | Actual costs |
|----------------|--------------------|--|---------|---|---------|-------------------|-----------------|-----------------------|----------------|--------------|
| Rail           | 2016-CZ-TMC-0014-W | Modernisation of the Čelákovice railway station  | Ongoing | Pre-identified projects on the Core Network corridors | Works   | 31/01/2017        | 31/10/2019      | 100%                  | 17,373,556     | 20,914,356   |
| Rail           | 2016-CZ-TMC-0038-M | Upgrade of the Lanžhot-SK border railway line  | Ongoing | Pre-identified projects on the Core Network corridors | Mixed   | 15/12/2017        | 31/10/2021      | 100%                  | 16,100,370     | 20,909,571   |
| Rail           | 2016-CZ-TMC-0102-M | Upgrade of the Mstětice - Praha-Vysočany railway line  | Ongoing | Pre-identified projects on the Core Network corridors | Mixed   | 19/09/2017        | 31/03/2023      | 100%                  | 131,496,521    | 158,296,041  |
| Rail           | 2016-CZ-TMC-0106-M | Upgrade of the Lysá nad Labem - Čelákovice railway line  | Ongoing | Pre-identified projects on the Core Network corridors | Mixed   | 26/06/2017        | 30/06/2022      | 100%                  | 42,491,999     | 51,152,039   |
| Rail           | 2016-EL-TMC-0232-M | TAF/TAP-TSI implementation in Greece: Design and development of scalable TAF/TAP – TSI systems | Ongoing | Rail interoperability                                 | Mixed   | 01/10/2017        | 31/12/2020      | 100%                  | 2,997,202      | 3,526,120    |
| Rail           | 2016-EL-TMC-0288-W | Upgrade of the Athens (RS)–Tris Gefires railway section  | Ongoing | Pre-identified projects on the Core Network corridors | Works   | 16/05/2017        | 31/12/2022      | 100%                  | 40,363,249     | 56,278,931   |
| Rail           | 2016-HU-TMC-0319-S | Budapest Railway Node Strategic Development Study  | Ongoing | Pre-identified projects on the Core Network corridors | Studies | 01/01/2018        | 30/04/2021      | 100%                  | 1,266,500      | 1,490,000    |

| Transport Mode | Action code        | Title  | Status     | Priority  | Type    | Actual start date | Actual end date | Actual Corridor Share | Actual funding | Actual costs  |
|----------------|--------------------|--|------------|---|---------|-------------------|-----------------|-----------------------|----------------|---------------|
| Rail           | 2016-SK-TMC-0220-S | Upgrade of the railway line Devínska Nová Ves - SK/CZ state border, Malacky-Kúty section   | Ongoing    | Pre-identified projects on the Core Network corridors | Studies | 07/02/2017        | 31/08/2023      | 100%                  | 4,737,050      | 5,573,000     |
| Rail           | 2017-BG-TM-0029-W  | Multimodal Logistics Platform Sofia-West   | Terminated | Multimodal logistics platforms                        | Works   | 01/09/2017        | 05/03/2020      | 100%                  | -              | -             |
| Rail           | 2017-CZ-TM-0020-W  | Removing selected bottlenecks on pre-identified sections of the Core Network Corridors   | Ongoing    | Pre-identified projects on the Core Network corridors | Works   | 16/04/2019        | 31/12/2022      | 50%                   | 19,142,152     | 95,710,761    |
| Rail Total     |                    |  |            |   |         |                   |                 |                       | 1,438,402,698  | 1,954,093,133 |
| Road           | 2014-AT-TA-0063-S  | Reinforcing the Baltic-Adriatic Corridor between Vienna and Brno by extending the Austrian A5 North motorway as a cross-border project with the Czech R52 (Planning of the A5 North motorway, section between Poysbrunn and the national border) | Closed     | Projects on the Core and Comprehensive Networks       | Studies | 01/01/2015        | 31/12/2018      | 100%                  | 1,184,041      | 2,368,082     |

| Transport Mode | Action code        | Title   | Status  | Priority  | Type    | Actual start date | Actual end date | Actual Corridor Share | Actual funding | Actual costs |
|----------------|--------------------|---|---------|---|---------|-------------------|-----------------|-----------------------|----------------|--------------|
| Road           | 2014-AT-TA-0064-M  | Reinforcing the Baltic-Adriatic Corridor between Vienna and Brno by extending the Austrian A5 North motorway as a cross-border project with the Czech R52 (Planning and construction of the A5 North motorway, Schrick-Poysbrunn section) | Closed  | Projects on the Core and Comprehensive Networks                   | Mixed   | 01/01/2015        | 31/12/2018      | 100%                  | 21,077,519     | 200,060,723  |
| Road           | 2014-EU-TM-0196-S  | FAST-E (DE/BE)  | Ongoing | New technologies and innovation                                   | Studies | 01/09/2014        | 30/09/2018      | 15%                   | 1,313,978      | 2,627,955    |
| Road           | 2014-EU-TM-0318-S  | Connecting Hydrogen Refuelling Stations (COHRS)   | Ongoing | New technologies and innovation                                   | Studies | 01/09/2015        | 31/12/2020      | 5%                    | 648,889        | 1,297,779    |
| Road           | 2014-EU-TM-0563-W  | CROCODILE 2   | Ongoing | Intelligent Transport Services for road (ITS)                     | Works   | 01/01/2015        | 31/12/2019      | 20%                   | 1,651,400      | 8,257,000    |
| Road           | 2014-EU-TMC-0568-S | FAST-E (SK/CZ)  | Closed  | New technologies and innovation                                   | Studies | 01/09/2014        | 30/09/2018      | 25%                   | 513,064        | 603,604      |
| Road           | 2014-HU-TMC-0629-M | PAN-LNG Project   | Ongoing | New technologies and innovation                                   | Mixed   | 02/06/2015        | 30/06/2018      | 20%                   | 2,887,159      | 3,396,658    |
| Road           | 2015-CZ-TM-0333-M  | Studies for construction of Motorway D52, Bavory – state border CZ/AT section   | Ongoing | Pre-identified projects on the other sections of the Core Network | Studies | 01/02/2017        | 30/11/2021      | 100%                  | 838,708        | 986,715      |

| Transport Mode | Action code       | Title   | Status  | Priority  | Type    | Actual start date | Actual end date | Actual Corridor Share | Actual funding | Actual costs |
|----------------|-------------------|---|---------|---|---------|-------------------|-----------------|-----------------------|----------------|--------------|
| Road           | 2015-CZ-TM-0357-S | EV Fast Charging Backbone Network Central Europe  | Ongoing | New technologies and innovation                       | Studies | 18/02/2016        | 30/09/2019      | 25%                   | 491,938        | 578,750      |
| Road           | 2015-CZ-TM-0430-M | Extension of the rest area Střechov on motorway D1  | Ongoing | Safe and secure infrastructure                        | Mixed   | 01/10/2016        | 30/11/2020      | 100%                  | 9,198,700      | 10,822,000   |
| Road           | 2015-EU-TM-0204-S | EAST-E  | Ongoing | New technologies and innovation                       | Studies | 01/03/2016        | 30/06/2020      | 20%                   | 1,011,160      | 1,189,600    |
| Road           | 2015-EU-TM-0422-S | LNG motion: Fuelling trucks with LNG/CNG along the core network   | Ongoing | New technologies and innovation                       | Studies | 16/02/2016        | 30/06/2021      | 5%                    | 620,571        | 1,241,141    |
| Road           | 2015-HU-TM-0087-M | Upgrading the M15 expressway to a 2-lane, dual carriageway, motorway between the M1 Motorway and Rajka (HU-SK border) | Ongoing | Pre-identified projects on the Core Network corridors | Mixed   | 16/02/2016        | 31/12/2020      | 100%                  | 54,962,645     | 64,661,935   |
| Road           | 2015-HU-TM-0315-M | CNG Clean Fuel Box Project  | Ongoing | New technologies and innovation                       | Mixed   | 01/10/2016        | 31/12/2018      | 52%                   | 5,133,874      | 6,039,852    |
| Road           | 2015-HU-TM-0358-W | CROCODILE_2.0_HU  | Ongoing | Intelligent Transport Services for road (ITS)         | Works   | 16/02/2016        | 31/12/2019      | 50%                   | 2,522,577      | 2,967,738    |
| Road           | 2015-RO-TM-0137-M | Setup and ITS connectivity of safe and secure truck parking areas in Romania along the TEN-T Core Network Corridors   | Closed  | Safe and secure infrastructure                        | Mixed   | 17/02/2016        | 28/02/2018      | 100%                  | 4,146,158      | 4,877,833    |

| Transport Mode | Action code        | Title   | Status  | Priority  | Type    | Actual start date | Actual end date | Actual Corridor Share | Actual funding | Actual costs |
|----------------|--------------------|---|---------|---|---------|-------------------|-----------------|-----------------------|----------------|--------------|
| Road           | 2015-RO-TM-0373-M  | CNG ROMANIA: Initial Market Deployment of a Refuelling Station Network along the Core Network Corridors           | Ongoing | New technologies and innovation                       | Mixed   | 01/03/2016        | 31/12/2021      | 17%                   | 753,168        | 886,080      |
| Road           | 2015-RO-TM-0435-W  | Early Warning Intelligent System for Road Transportation Risks  | Closed  | New technologies and innovation                       | Works   | 01/10/2016        | 30/09/2018      | 50%                   | 36,114         | 42,487       |
| Road           | 2015-SK-TM-0320-S  | NCE-FastEvNet   | Closed  | New technologies and innovation                       | Studies | 01/03/2016        | 30/03/2019      | 3%                    | 97,767         | 115,020      |
| Road           | 2016-CY-TMC-0258-W | Construction of the Lefkosia South Orbital Motorway (Phase A)   | Ongoing | Pre-identified projects on the Core Network corridors | Works   | 09/10/2017        | 31/12/2022      | 100%                  | 43,837,143     | 51,573,109   |
| Road           | 2016-CZ-TMC-0191-M | Extension of the Humpolec rest area on D1 motorway  | Ongoing | Safe and secure infrastructure                        | Mixed   | 07/02/2017        | 28/02/2020      | 100%                  | 1,398,016      | 1,644,725    |
| Road           | 2016-CZ-TMC-0296-S | CEZ EV TEN-T Fast Charging Network  | Ongoing | New technologies and innovation                       | Studies | 08/02/2017        | 30/06/2020      | 50%                   | 1,248,225      | 1,468,500    |
| Road           | 2016-DE-TM-0332-S  | LNG4Trucks  | Ongoing | New technologies and innovation                       | Studies | 07/02/2017        | 31/12/2020      | 7%                    | 670,960        | 1,341,920    |
| Road           | 2016-EL-TM-0227-S  | STUDY ON A PILOT CNG FILLING STATION NETWORK ACROSS THE GREEK PART OF THE ORIENT EAST MEDITERRANEAN ROAD CORRIDOR | Ongoing | New technologies and innovation                       | Studies | 01/09/2017        | 28/02/2021      | 100%                  | 4,544,150      | 9,088,300    |

| Transport Mode | Action code        | Title  | Status  | Priority                                      | Type    | Actual start date | Actual end date | Actual Corridor Share | Actual funding | Actual costs |
|----------------|--------------------|--|---------|---|---------|-------------------|-----------------|-----------------------|----------------|--------------|
| Road           | 2016-EU-TM-0023-M  | North European cross-border ITS phase 3 – NEXT-ITS 3   | Ongoing | Intelligent Transport Services for road (ITS) | Mixed   | 01/01/2018        | 31/12/2020      | 7%                    | 681,408        | 3,304,672    |
| Road           | 2016-EU-TM-0121-W  | High speed electric mobility across Europe   | Ongoing | New technologies and innovation               | Works   | 01/07/2017        | 31/12/2020      | 4%                    | 406,720        | 2,033,600    |
| Road           | 2016-EU-TM-0163-W  | CROCODILE 3  | Ongoing | Intelligent Transport Services for road (ITS) | Works   | 01/01/2018        | 31/12/2020      | 33%                   | 907,830        | 4,539,150    |
| Road           | 2016-EU-TMC-0344-W | Comprehensive fast-charging corridor network in South East Europe  | Ongoing | New technologies and innovation               | Works   | 01/05/2017        | 31/12/2020      | 12%                   | 411,403        | 514,254      |
| Road           | 2016-EU-TMC-0350-S | NEXT-E   | Ongoing | New technologies and innovation               | Studies | 01/03/2017        | 31/12/2020      | 17%                   | 3,203,565      | 3,768,900    |
| Road           | 2016-EU-TMC-0351-S | URBAN-E: e-Mobility, Infrastructure and Innovative Intermodal Services in Ljubljana, Bratislava and Zagreb | Ongoing | Nodes of the Core Network                     | Studies | 01/03/2017        | 31/12/2020      | 28%                   | 1,064,588      | 1,252,457    |
| Road           | 2016-HR-TMC-0162-W | CROCODILE 3 Croatia  | Ongoing | Intelligent Transport Services for road (ITS) | Works   | 01/01/2018        | 31/12/2020      | 15%                   | 624,240        | 734,400      |
| Road           | 2016-HU-TMC-0300-W | CROCODILE 3 HU   | Ongoing | Intelligent Transport Services for road (ITS) | Works   | 01/01/2018        | 31/12/2020      | 100%                  | 1,780,922      | 2,095,202    |



| Transport Mode | Action code        | Title   | Status  | Priority                        | Type    | Actual start date | Actual end date | Actual Corridor Share | Actual funding | Actual costs |
|----------------|--------------------|---|---------|---------------------------------|---------|-------------------|-----------------|-----------------------|----------------|--------------|
| Road           | 2016-SK-TMC-0235-S | fuelCNG   | Ongoing | New technologies and innovation | Studies | 03/07/2017        | 31/12/2020      | 33%                   | 5,178,785      | 6,092,688    |
| Road           | 2016-SK-TMC-0320-S | LBG: Fuelling Renewable Transport in the Visegrad countries     | Ongoing | New technologies and innovation | Studies | 07/02/2017        | 31/12/2020      | 40%                   | 11,030,655     | 12,977,241   |
| Road           | 2017-DE-TM-0064-W  | EUROP-E: European Ultra-Charge Roll Out Project - Electric      | Ongoing | New technologies and innovation | Works   | 15/07/2017        | 31/12/2021      | 5%                    | 1,955,269      | 9,776,345    |
| Road           | 2017-EU-TM-0065-W  | Central European Ultra Charging                                 | Ongoing | New technologies and innovation | Works   | 01/01/2018        | 31/05/2021      | 13%                   | 1,605,189      | 8,025,944    |
| Road           | 2017-EU-TM-0068-W  | MEGA-E: Metropolitan Greater Areas - Electric                   | Ongoing | New technologies and innovation | Works   | 01/08/2017        | 31/12/2021      | 4%                    | 1,172,013      | 5,860,066    |
| Road           | 2017-EU-TM-0080-W  | BioLNG EuroNet  | Ongoing | New technologies and innovation | Works   | 12/04/2018        | 31/12/2023      | 6%                    | 1,524,576      | 7,622,880    |
| Road           | 2017-IT-TM-0110-W  | AMBRA-E lectify Europe  | Ongoing | New technologies and innovation | Works   | 01/09/2018        | 31/12/2022      | 5%                    | 707,547        | 3,537,734    |
| Road           | 2018-BG-TM-0095-M  | Road safety assessment, prioritization and improvements         | Ongoing | Safe and secure infrastructure  | Mixed   | 03/03/2019        | 30/12/2021      | 100%                  | 9,150,001      | 41,718,980   |
| Road           | 2018-EU-TM-0019-S  | Saving lives assessing and improving TEN-t road networks safety | Ongoing | Safe and secure infrastructure  | Studies | 01/04/2019        | 31/03/2021      | 25%                   | 233,821        | 467,643      |
| Road Total     |                    |   |         |                                 |         |                   |                 |                       | 202,426,454    | 492,459,661  |

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