ANNEX 4
PRIORITY "DEPLOYMENT OF NEW TECHNOLOGIES AND INNOVATION IN ALL TRANSPORT MODES, WITH A FOCUS ON DECARBONISATION, SAFETY AND INNOVATIVE TECHNOLOGIES FOR THE PROMOTION OF SUSTAINABILITY, OPERATION, MANAGEMENT, ACCESSIBILITY, MULTIMODALITY AND EFFICIENCY OF THE NETWORK"

The overall objectives of this priority are set out in chapter 3.2.1 of the Multi-annual Work Programme.

This priority is divided into two fields: i) new technologies and innovation in all transport modes and ii) sustainability and efficiency in the network.

i) New technologies and innovation in all transport modes

Under this field, and in accordance with Article 4 (2) (b) of the CEF Regulation, the general objective is to support the deployment of a sustainable and efficient transport system and to promote the decarbonisation of all transport modes along the core network corridors. This can be achieved through the implementation of new technologies and innovative technological and organisational systems, based on a market-oriented approach.

Actions to be selected under this priority will concern works or studies that may include pilot activities. Priority will be given to actions that include applicants from and are submitted by more than one Member State.

TEN-T infrastructure, as described in Article 33 of the TEN-T Guidelines, and in line with the policy framework set by the Communication from the Commission "Clean Power for Transport: a European alternative fuels strategy"¹, may be supported.

Priority will be given to actions located on the core network, with particular emphasis along the core network corridors², according to Annex I and Annex II/part 2 of the TEN-T Guidelines, that are listed in Annex I/ part 1 of the CEF Regulation. Actions that are not located on the core network shall be submitted to Priority "Deployment of new technologies and innovation, other than those covered by the Multi-annual Work Programme"³ of the 2014 annual transport call for proposals.

Activities in urban nodes may be supported by this priority if necessary and as part of a broader action on the core network. Should this lead to deployment at a local, regional or national level, the potential for replication, scale-up or roll-out at EU level must be demonstrated.

However, proposed Actions relating to solutions addressing only the "last mile" within urban areas shall be submitted either to Priority "Actions implementing transport infrastructure in core network nodes, including urban nodes"⁴ of the 2014 annual transport call for proposals,

¹ COM(2013)17 of 24 January 2013
² Corresponding to the section 3.2.1(i) of the Multi-annual Work Programme
³ Corresponding to the section 3.2.1 of the Annual Work Programme
⁴ Corresponding to the section 3.3.3 of the Annual Work Programme
or to Priority "Actions implementing transport infrastructure in core network nodes including urban nodes" of the 2014 multi-annual transport call for proposals, Funding Objective 3.

In the context of this priority, **innovation** means advanced technology, ready for deployment but while a market orientated solution is still being sought. The development and demonstration phases of a technological solution are considered as research activities which are not covered by this priority.

Innovation of operational processes may be funded under this call including if they are related to fleet management, load and fuel management, multimodality and interoperability.

EU support is also available for the improvement and deployment of telematics applications, coming to support decarbonisation of transport, with a view to enable roaming functionality, interoperability, multimodality and compatible ticketing systems.

Actions must demonstrate the existence of a business case for short and medium term viability of the technology (3 - 10 years). This must include a clearly elaborated consumer-oriented business-model. This requires the setting up of an estimated (study) or existing (pilot phase, i.e. study with integrated pilot activities) demand which means that forerunner users (individual consumers or fleets managers), should be involved to assess the viability of the action and enhance the robustness of the results.

Studies may include pilot activities providing that the provisions for this type of action laid down in chapter 2 of this call for proposals are taken into consideration.

Studies that include pilot activities should incorporate a real-life trial (rather than just a demonstration). At the end of the trial, as part of the study, an analysis should be made and disseminated, showing how to scale the trial for mass application, i.e. how on the basis of the resulting optimised business-client relationship, to roll the technology out onto at least a significant part of a corridor. Pilot activities should address the roll-out of the innovative solution onto a significant part a core network corridor.

This field will support actions aimed at initiating or enhancing the deployment of new technologies and innovation on the necessary TEN-T infrastructure based on the use of alternative fuels. It will also support the use of alternative fuels, reducing the external cost of transport activities through emission reduction, energy efficiency, and safety improvement measures in particular.

More specifically, and according to Article 33 (a) to (d) of the TEN-T Guidelines, under this field, the following actions may be supported:

- Actions supporting the decarbonisation of transport by the roll-out of alternative fuels distribution infrastructure. This encompasses the use of electricity, hydrogen, biofuels, synthetic fuels, compressed or liquefied natural (bio)gas (CNG and LNG) as well as liquefied petroleum gas (LPG), or other innovative systems. Infrastructure may also include emission reduction and energy storage equipment as well as the necessary equipment for energy supply systems. Such infrastructure may include grids and other facilities necessary for the energy supply.

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5 Corresponding to the section 3.3.5 of the Multi-annual Work Programme

6 Corresponding to the section 3.2.1(i) of the Multi-annual Work Programme
• Actions for the improvement and deployment of interoperable infrastructure/vehicle interfaces that will support the use of alternative fuels, including telematics applications or energy demand management systems when required. Such applications should demonstrate their potential or actual contribution to interoperability, multimodality and overall efficiency of the network.

In order to demonstrate the viability of the system proposed by the studies, pilot activities may be funded under this field. Further to the dispositions for such type of action laid down in chapter 2 of this call for proposals:

• Pilot activities may include the roll-out of mobile equipment supporting the distribution of alternative fuel. Mobile equipment, new or retrofitted, serving for freight or passenger transport may be included in a pilot for maritime and inland waterway transport only, and as long as it is strictly necessary for the study and in order to demonstrate the operational and commercial viability of the innovative activities proposed;

• To facilitate the deployment of a European network of alternative fuels, pilot activities within studies may be implemented in the form of a grant scheme by which public operators will support through joint grant schemes or joint procurement, the installation of refuelling/charging stations accessible to the public by public or private economic operators. Such activities can be divided in several phases to address the needs progressively over a time period and/or by location. This should aim at stimulating the deployment of interoperable infrastructures within the network. Such a progressive approach should enable the project owners to size the financial support to market price developments in real time. For such projects, the planned number of refuelling/charging stations accessible to the public, of users and of emission savings in particular will have to be forecasted.

**ii) Sustainability and efficiency in the network**

**DEVELOPMENT OF CORRIDORS**

The general objective of this field is to advance the development of the core network corridors in such a way as to strengthen their sustainability, efficiency and performance. Its key aim is, therefore, to define, test and as appropriate implement corridor-wide approaches suited to lead these corridors towards their role as "forerunners of a sustainable transport system". Action under this priority is largely guided by a "transport systems' approach", building on the interaction between infrastructure development and optimisation on the one hand and transport policy implementation / service operations on the other hand. It aims at identifying and organising infrastructure-related action along the corridors – in the meaning of Chapter II of the TEN-T Guidelines – from the perspective of relevant EU transport policy objectives and user needs. It also aims at further optimising infrastructure planning and development along core network corridors with in order to enhancing multi-modality, capacity utilisation, infrastructure quality / resilience, short-, medium- and long-term capacity planning, integration with other areas such as spatial planning, accessibility, monitoring, day-to-day management etc. Results of the action shall be suited for take up in the continuous
development of the core network corridors, i.e. to feed into corridor work plans and their implementation.

Actions to be selected under this priority will concern works or studies that may include pilot activities. They shall be in line with article 33 and support the implementation of Chapter IV of the TEN-T Guidelines.

This priority encourages a broad range of "corridor packages", i.e. the definition, testing and – as appropriate – implementation of projects along core network corridors (or substantial parts thereof) which aim at advancing sustainable mobility solutions for passengers and / or freight and at advancing the approach to infrastructure planning and implementation at a multi-modal corridor level. They may, inter alia, cover the following types of actions:

- The inter-linkage of modal EU transport policy action and infrastructure requirements (existing actions in fields such as NAIADES, rail freight corridors, Green Corridors, etc.) may be integrated;

- The inter-linkage of traffic management and infrastructure development; promotion of innovative ICT-based solutions enhancing capacity use and performance or lower resource and energy consumption;

- The promotion of seamless multi-modal transport chains for passengers, through the development and deployment of traffic and travel information and planning systems including integrated ticketing. Such systems should demonstrate their potential or actual contribution to interoperability, multimodality and/or co-modality, and overall efficiency of the networks. This may be achieved through coordinated timetables, multimodal ticketing, secured data collection and roaming services;

- Advancing organisational set-ups for efficient transport systems approaches within and across modes;

- Developing/testing practical key performance indicators which may support a systems approach, aiming at sustainable and efficient core network corridors;

- Advancing roll out of innovative design and manufacturing concepts in order to enable cost-effective and flexible (modular) approaches with the aim of reducing infrastructure down-time during construction and/or maintenance; promoting materials which enhance the infrastructure life-time and reduce the "total cost of ownership" through lower maintenance needs;

- Promoting complementarity and synergies with up-to-date development in related areas (e.g. territorial development, environmental / climate protection, industrial policy, energy, ICT) and integrating, as appropriate, relevant actions.

Proposed Actions related to a better integration between transport modes, aiming to enable optimal choices for operators and customers, improving efficiency of processes, enhancing asset utilisation and infrastructure capacity and establishing trusted cooperation between
transport stakeholders or addressing inefficiencies within individual modes, shall be submitted to Priority "Freight Transport Services" of the 2014 annual transport call for proposals.7

E-FREIGHT

Within the frame of the corridor developments, the development and deployment of the e-Freight policy8 via multi-modal telematics applications shall be supported with a particular emphasis.

The e-Freight policy aims at better connecting logistics professionals in order to simplify access and use of information in freight transport. The objective is to make logistics more efficient, less costly, and to build new market opportunities.

Some initiatives already provide a basis for easier information exchange, such as SafeSeaNet, Directive 2010/65/EU and Blue Belt for the maritime sector; RIS for inland waterways; TAF-TSI for rail; ITS for road; SESAR for air; e-Customs.

The e-Freight policy aims at providing further coordination between these modal initiatives in order to overcome the current fragmentation of information flows.

This priority may cover the following types of Actions:

- Information systems to enable / enhance Europe-wide and multimodal freight transport and logistics planning and management, including integration with traffic management systems and relevant applications (e.g multimodal journey planners for freight, tracking and tracing tools, intelligent cargo applications, tools for the implementation of single transport documents, amongst others in the frame of public procurement). In this context, actions aiming at the facilitation of freight transport with neighbouring countries hence fostering international trade can be supported.

- IT infrastructures supporting information exchange and users authorisations / authentication.

Projects shall aim at supporting the implementation of the e-Freight policy. In order to ensure coherent and harmonised e-Freight developments all over Europe, project coordinators shall participate in "e-Freight working groups" organised by the European Commission. In addition, since the Commission is considering working on the development / adoption of data models and technical requirements for information exchange on freight transport, all projects shall follow the status of these discussions, and take measures to align with such standards as much as possible.

Actions to be selected under this priority will concern works or studies that may include pilot activities.

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7 Corresponding to the section 3.2.2 of the annual Work Programme
Proposed Actions specific to one transport mode shall be submitted to the Priority "RIS", "ITS for road" or "Motorways of the Sea" of this call for proposals, Funding Objective 3, or to the Priority "Rail Interoperability" of this call for proposals, Funding Objective 1.