



Deployment of alternative fuels infrastructure along the TENT-T Network

The policy context

2016 CEF TRANSPORT CALLS
Brussels, 25 October



Alternative fuels for transport

Clean Power for Transport 2013

A **strategy** for the long term substitution of oil in all transport modes

- a coherent policy framework that guides investments + sustainability and competitiveness
- Directive 2014/94 on AF infrastructure

EC Low emission mobility strategy 2016

- Emphasize the role of the AF infrastructure

Alternative fuels for transport

Directive 2014/94 on the deployment of infrastructure for alternatively fuelled vehicles and ships, with common standards and consumer information:

DEPLOYMENT OF ALTERNATIVE FUELS INFRASTRUCTURE	DATE
Electric vehicle recharging points – Urban agglomerations	2020
CNG - Urban agglomerations	2020
CNG - TEN-T Core Network	2025
Hydrogen	2025
LNG - Heavy duty vehicles	2025
LNG - Maritime ports	2025
LNG - Inland Waterways	2030
Shore-side electricity	2025

- MS will prepare **National Policy Frameworks** and submit them by 18/11/2016
- Minimum infrastructure coverage with common standards required
- e-mobility interoperability agreement of principle in Sustainable Transport Forum sub-group

STANDARDS	CEN/CENELEC ADOPTION DEADLINE
Electric vehicle recharging points	In force
L-category recharging points	31/12/2016
CNG connectors/ receptacles	31/12/2016
LNG connectors/ receptacles	31/12/2016
CNG refuelling points	31/12/2016
LNG refuelling points HDVs	31/12/2016
Hydrogen connectors	31/12/2016
Hydrogen refuelling points	31/12/2017
Hydrogen purity	31/12/2017
Hydrogen fuelling algorithms	31/12/2017
LNG refuelling points waterborne	31/12/2017
Shore-side electricity – Maritime ports	31/12/2018
Shore-side electricity – IWW ports	31/12/2018
Electric Bus connectors	31/12/2019
Wireless charging cars & LDVs	31/12/2019
Wireless charging buses	31/12/2019
Electric vehicle battery swapping	31/12/2022



Innovation Priority

CEF Transport Info Day – 25 October 2016

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Funding Objective 2: Innovation and New Technologies

→ *Point 3.2.1. in the work programme:
Deployment of innovation and new technology
actions in all transport modes, according to the
TEN-T Guidelines, Art.33 (a to d).*

→ *Main features of the 2016 calls:*

- Originally unforeseen: budget for general call
- Identical Calls for general (EU28) and cohesion
- Call refer to WP to avoid ambiguities
- No annual call (ie only Core Network eligible!)

CEF innovation: legal framework



- **TEN-T Guidelines Regulation 1315/2013**
- **CEF Regulation 1316/2013**

Scope of the proposed actions

Transport infrastructure, facilities, vehicles (!)
and services in line with Article 33 a to d

In line with EU policy, e.g. Directive 2014/94 on
the deployment of alternative fuel infrastructure,
in view of national deployment plans by end 2016

Ready for deployment advanced technology,
while a market-oriented solution is obligatory
with compulsory deliverables at the end of the
study/pilot (business plan for the roll-out!)

Neither research, nor demo activities

TEN-T/CEF-T Topics: Innovation & New Technologies

Article 33 points a) to d): *In order for the Comprehensive Network (includes Core Network) to keep up with innovative technological developments and deployments, the aim shall be in particular to:*

- **(a)** support and promote the **decarbonisation** of transport through transition to innovative and sustainable transport technologies;
- **(b)** make possible the decarbonisation of all transport modes by stimulating **energy efficiency**, introduce alternative propulsion systems, including electricity supply systems, and provide corresponding infrastructure. Such infrastructure may include grids and other facilities necessary for the energy supply, may take account of the **infrastructure-vehicle interface** and may encompass **telematic** applications;
- **(c)** improve the **safety and sustainability** of the movement of persons and of the transport of goods;
- **(d)** improve the operation, management, accessibility, **interoperability, multimodality** and efficiency of the network, including through multimodal ticketing and coordination of travel timetables;

Market-sided Innovation (1)

*Focus: Only new technologies **ready for deployment**,*

- **Completion date at the latest 31/12/2020.**

Studies with integrated deployment "Pilot activities": "market-sided innovation", but still of "experimental nature"

- **Principal objective** to bridge the gap between demo and market-rollout (= works!)
- **Real-life trials** (not just a demo) – *business-client relation, billing, roaming, etc., selling a package to the end-user (a citizen, a business person; targeting of niches allowed, however interoperability!)*
- (1) Innovation on new technologies (testing/optimisation on sufficiently large scale!) – *E.g. bring down unit costs!*
- (2) Innovation of processes: Testing/optimisation of business-client relations, i.e. integration of a clearly elaborated consumer-oriented business model

Market-sided Innovation (2)

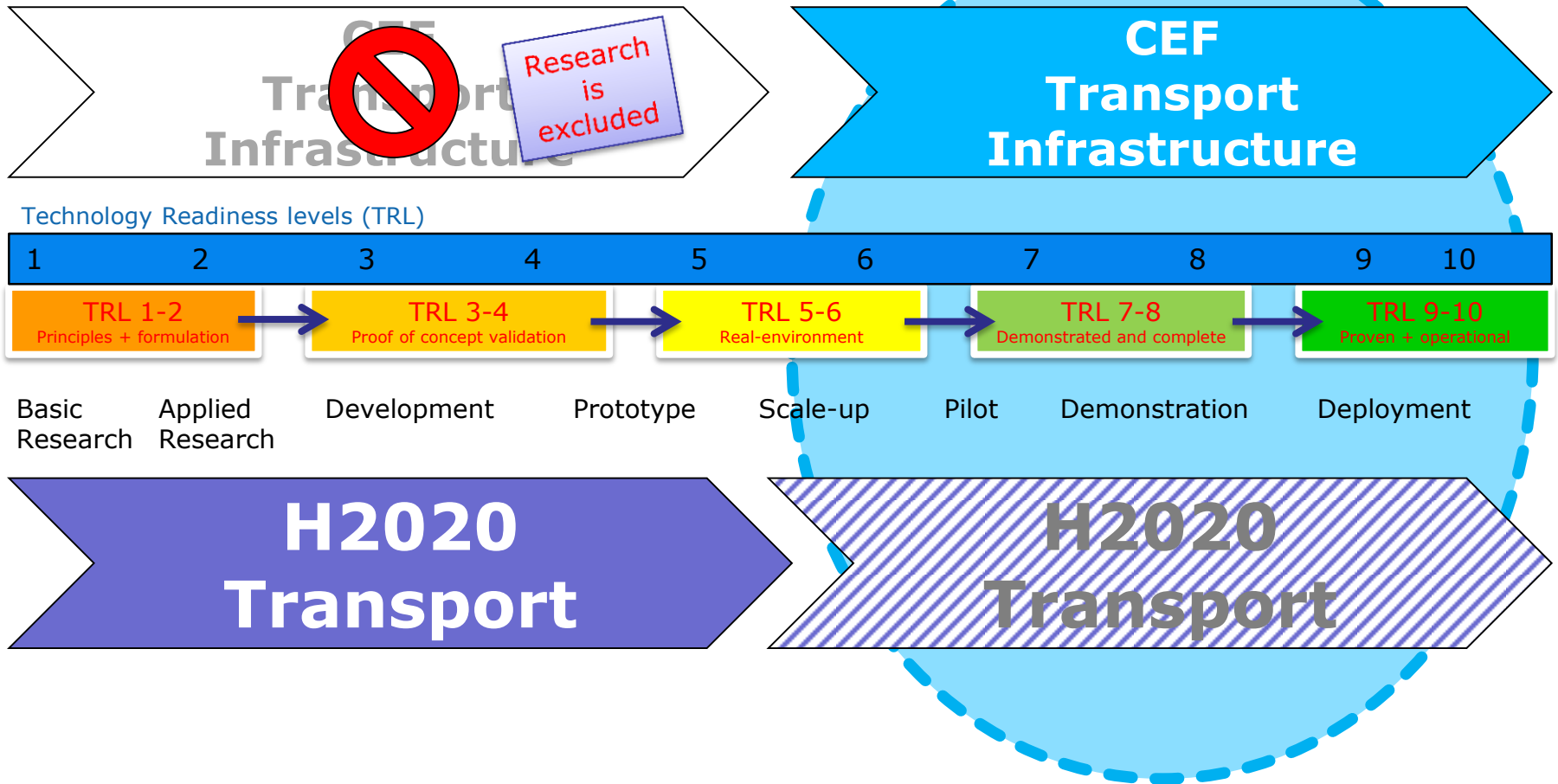
*Studies with integrated deployment "Pilot activities":
"experimental nature" (continued)*

- Aiming for viability (replace by cost-efficiency if viability makes no sense, e.g. for noise reduction) – *add socio-economic cost-benefit-analysis for works!*
- Study at the end of trial: lessons learnt & analysis on how to scale-up to mass application – *and integrate dissemination activity!*
- *Advice: Short duration, aim for 2-3 years max, first results after 1 year*

Works: "experiments are over, people know what they are doing"

- Roll-out on (significant part of) corridor... *into the market! BUT still no profit!*
- *===> New financial instruments of EFSI (Juncker Plan),*
- *& blending = grant&loan (special large call, probably by end of 2016)*

Innovation: CEF Vs H2020



Call MAP 2016: Budget

MAP Call type	Budget
Cohesion	€59.5 million
General	€80 million

Innovation only under MAP cohesion & MAP General only

Co-funding rates

No paper studies eligible

Type of activity	Support rate
Studies with Pilot deployment	50%
Works	20%
Cohesion Countries (Studies & Works!)	85%

"New technologies and innovative solutions should be deployed on the core network with particular emphasis along the core network corridors".

Type of actions 1/3

- A) **Studies** with regional or local pilot deployment in at least one Member State
- B) **Studies** with pilot deployment on a scale of a core network trajectory/corridor of at least 500 km serving at least two Member States or achieving coverage of minimal density of at least 2 complete Member States.
- C) **Works** and applicable to roll-outs on the core network in at least 2 Member States.

Essential components:

- **Business case**
- **Pilot with users**
- **Dissemination**

Type of actions 2/3

Studies with Pilot:

- Demonstrate when required consistency with National Strategies
- Clear justification for the pilot vs deployment phase
- Real added value at EU level compare to existing studies

Works:

- consider financial instruments available under the CEF and EFSI

Type of actions 3/3

Grant schemes

- *Public operators, or consortia led by public operators*
- *Methodology for the implementation of the grant scheme*
- *Criteria of selection*

Joint procurement

- *Public operators, or consortia led by public operators*
- *Economies of scale*

Points for your attention:

Mobile equipment (i.e. concerning vehicles):

- financial difference between a usual, conventional solution and the use of a new technology in a vehicle (ship, car, truck, plane, train...)
- priced separately in the grant application
- up to 10% for road equipment, 30% for ships and rail mobile equipment
- secondary to the infrastructure
- 5 years in the EU
- Scrubbers are not eligible

(Only for studies with integrated pilot deployment)

Mobile infrastructure (i.e. concerning moving parts of infrastructure)

- E.g. innovative cranes, innovative reach-stackers, innovative fuel supply vehicles, etc...

Interface between infrastructure and vehicles

- E.g. the telematics link, the charging cable, adaptors, etc

Innovation: which priority?

**Innovation
as
primary
feature**

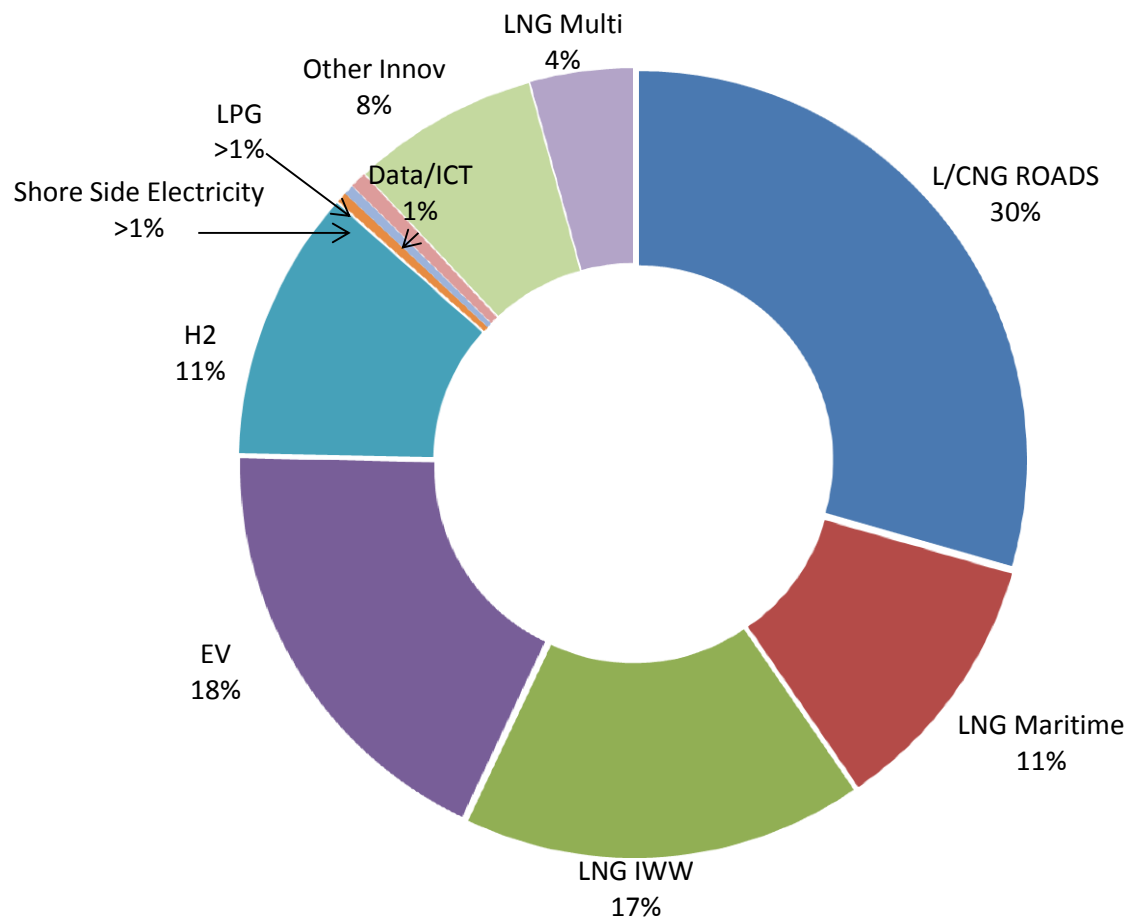
INNOVATION PRIORITY
In MAP General & MAP Cohesion Calls

**Innovation
as
Secondary
feature**

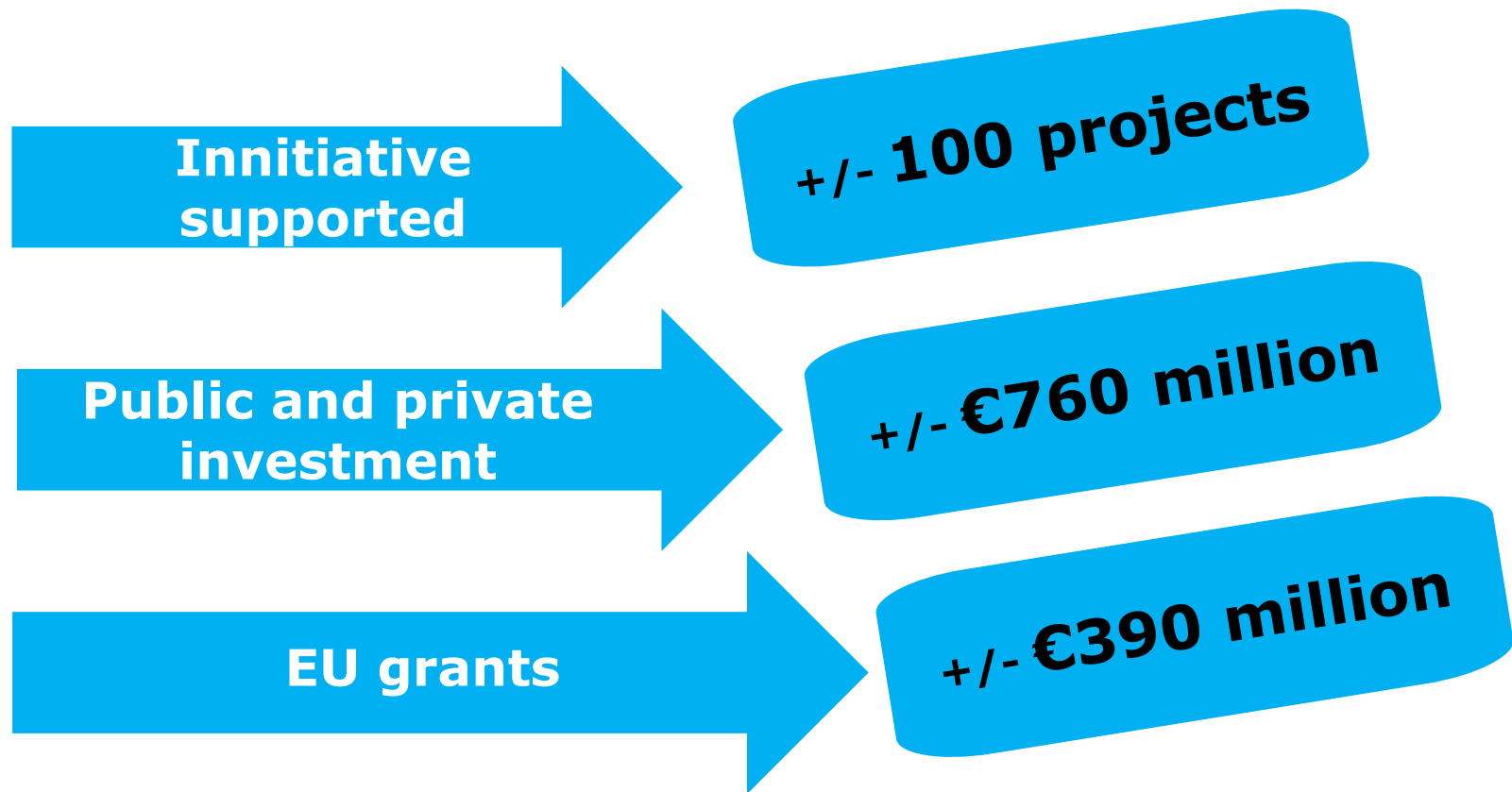
OTHER PRIORITIES

- **Urban Nodes**
alternative fuel / mobility / last mile in urban area only
- **MoS**
Innovation but main focus on logistic service
- **Telematic applications**
RIS, ITS, ERTMS

Projects financed under innovation priority in TEN-T and CEF



Innovation since 2010:





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Look for INEA!

Thank you!