



EC policy initiatives for an intelligent transport infrastructure

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CO-GISTICS Workshop

HOLM - House of Logistics & Mobility
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60549 Frankfurt/Main, Germany
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What is ITS?



ITS for safe, efficient and sustainable road transport and for connected mobility

2008: 24 actions identified in ITS Deployment Action Plan

Directive 2010/40/EU: Legal Framework for the coordinated deployment + delegated acts re specifications to ensure interoperability and continuity of services

2011 Transport White Paper: an Intelligent, Multimodal, Integrated, Efficient Transport System

TEN-T/CEF regulations 1315/2013 and 1316/2013: ITS which are interoperable and provide for continuity of services in the EU should be deployed on TEN-T.

ITS Action Plan



Area 1

Optimal Use of Road, Traffic & Travel Data

EU-wide real time travel information

Collection & provision of road data

Accurate public data for digital maps

Free minimum information service

Promotion of multi-modal journey planners

Area 2

Continuity of Traffic & Freight Management

Continuity of ITS services

Services for freight transport & logistics

European ITS Framework architecture

Interoperability of electronic toll systems

Area 3

Road Safety and Security

Promotion of in-vehicle safety systems

Introduction of Europe-wide eCall

Regulatory Framework on HMI

Guidelines: Impact on Vulnerable road users

Guidelines: Secure parking places for trucks

Area 4

Integration of Vehicle & Transport Infrastructure

Open in-vehicle Platform architecture

Development & evaluation of coop. systems

Specifications for V2X, I2X communication

Mandate for European standardisation

Area 5

Data Protection & Liability

Security & data protection

Addressing liability, esp. in-vehicle safety systems

Area 6

European ITS Coordination

Legal framework for EU ITS cooperation

Decision support toolkit for ITS investments

Guidelines for public funding for ITS

Collaboration platform on urban ITS

ITS Directive

Supporting Framework and Enabling Conditions

7-years mandate from the Council and the Parliament to develop and adopt specifications in four priority areas

Data sharing mechanisms

Quality framework

Data interoperability

**Interoperability and
continuity of services**

Data format

**Optimal Use of Road,
Traffic and Travel Data**

**Continuity of
Traffic and
Freight Management**

**National
Access
Point**

**Road Safety
and Security**

**Linking Vehicle and
Transport Infrastructure**

So far Delegated acts on:



- a. EU-wide multimodal travel information services (coming soon)
- b. EU-wide real-time traffic information services
- c. Road safety related minimum universal traffic information free of charge to users
- d. the Interoperable EU-wide eCall
- e. Information service for safe and secure parking places for trucks



'A' – Multi Modal Travel Info Services



Group 1 static data

Address identifiers, points of interests, access nodes, geometry of access nodes, network topology, timetables, accessibility information, road/cycle/pedestrian network etc.

Group 2 static data

Car-sharing, bike-sharing stations, refuelling points, bike parking, basic ticket information etc.

Group 3 static data

Detailed cycle network attributes and estimated travel times by day type and time-band etc.

[Group 1 dynamic data]

Disruptions, real-time status information - delays, cancellations, guaranteed connections monitoring, status of access nodes (platform information, operational lifts/escalators, closed entrances and exit locations)

Group 2 dynamic data

Car-sharing availability, bike sharing availability etc.

Group 3 dynamic data

Car parking spaces (on-street) etc.

At discretion of M.S.

'B' – Real Time Traffic information



Static road data	Dynamic road status data	Traffic data
Road network links and physical attributes (e.g. geometry, road width, number of lanes, gradients, junctions)	Road / lane / bridge closures, Accidents, Incidents	Traffic volume
Road classification	Overtaking bans on HGV	Speed
Traffic signs on traffic regulations and dangers (e.g. access conditions for tunnels / bridges, permanent access restrictions, other)	Road works, Poor pavement conditions	Location and length of queues, Travel times
Speed limits	Dynamic speed limits	Waiting time at border crossings to non-EU countries
Freight delivery regulations, Traffic circulation plans	Temporary traffic management measures	
Location of tolling stations	Direction of travel on reversible lanes	
Tolled roads, fixed RUC, payment methods	Variable RUC, payment methods	
Location of parking places / service areas	Availability of parking places, cost of parking	
Location of charging points for EV and conditions of use	Availability of charging points for EV	
Location of CNG / LNG / LPG stations	Availability of delivery areas	
Location of public transport stops and interchange points	Weather conditions affecting road surface and visibility	
Location of delivery areas		



The events or conditions covered :

- (a) temporary slippery road;
- (b) animal, people, obstacles, debris on the road;
- (c) unprotected accident area;
- (d) short-term road works;
- (e) reduced visibility;
- (f) wrong-way driver;
- (g) unmanaged blockage of a road;
- (h) exceptional weather conditions.

The information provided on the road safety-related events or conditions shall include the following items:

- (a) location of the event or the condition;
- (b) the category of event or condition and, where appropriate, short description of it;
- (c) driving behaviour advice, where appropriate.

- Specifications for the upgrading of the Public Safety Answering Point (PSAP) infrastructure required for handling of eCalls
- Every eCall PSAP is equipped to handle eCalls and receive the MSD originating from the in-vehicle equipment according to the standards
- The eCall PSAP shall have access to an appropriate Geographical Information System (GIS) allowing the eCall PSAP operator to identify the position and heading of the vehicle

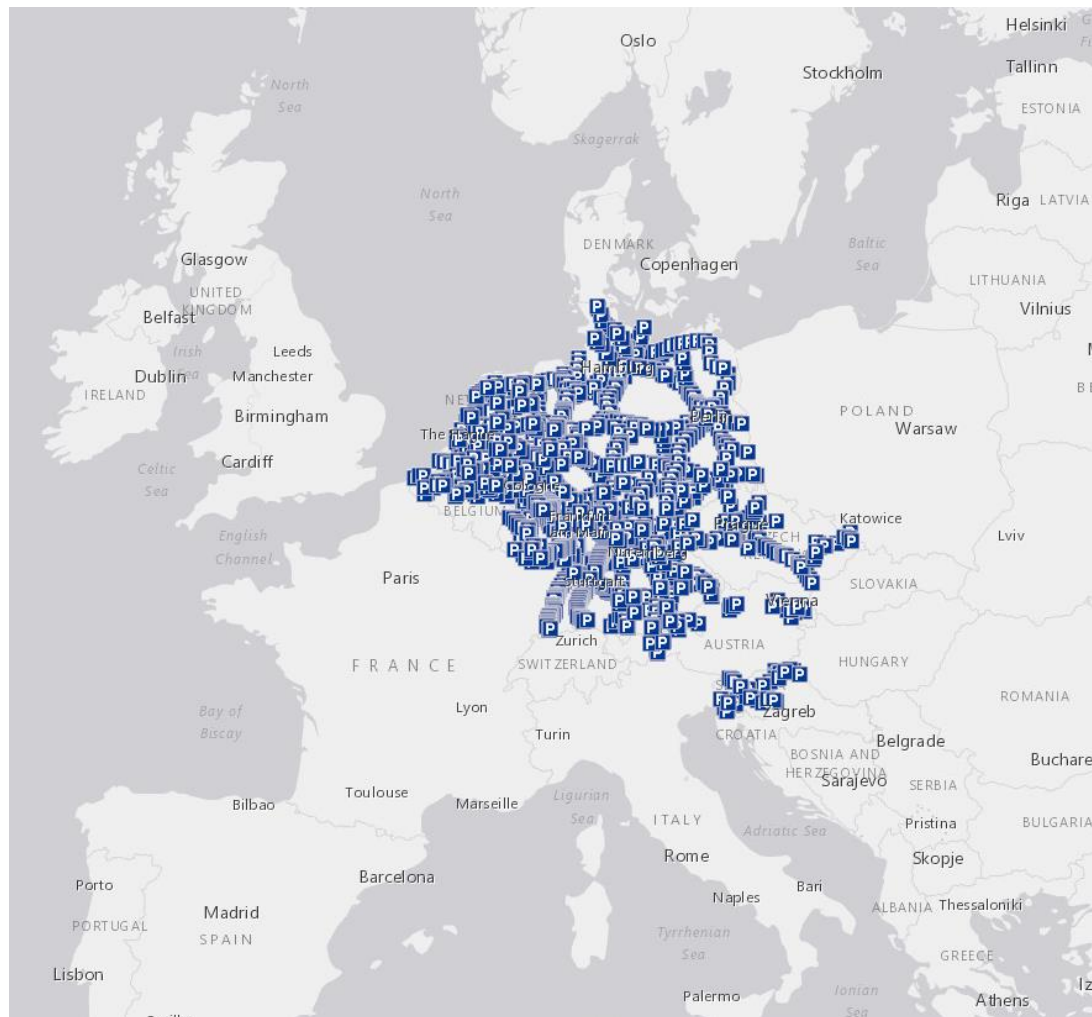


'E' - European Access Point Truck Parking

European
Commission

DATEX II data of
**Austria, Belgium
(Flanders), Czech
Republic, Germany,
Netherlands, Slovenia
and Switzerland**
already successfully
published on EU Open
Data Portal!

Currently in the
uploading process with
other countries

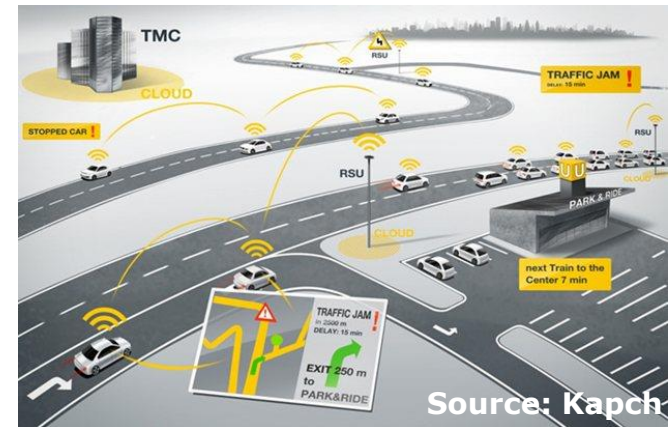


http://ec.europa.eu/transport/themes/its/safe_and_secure_parking_en.htm

What is C-ITS?

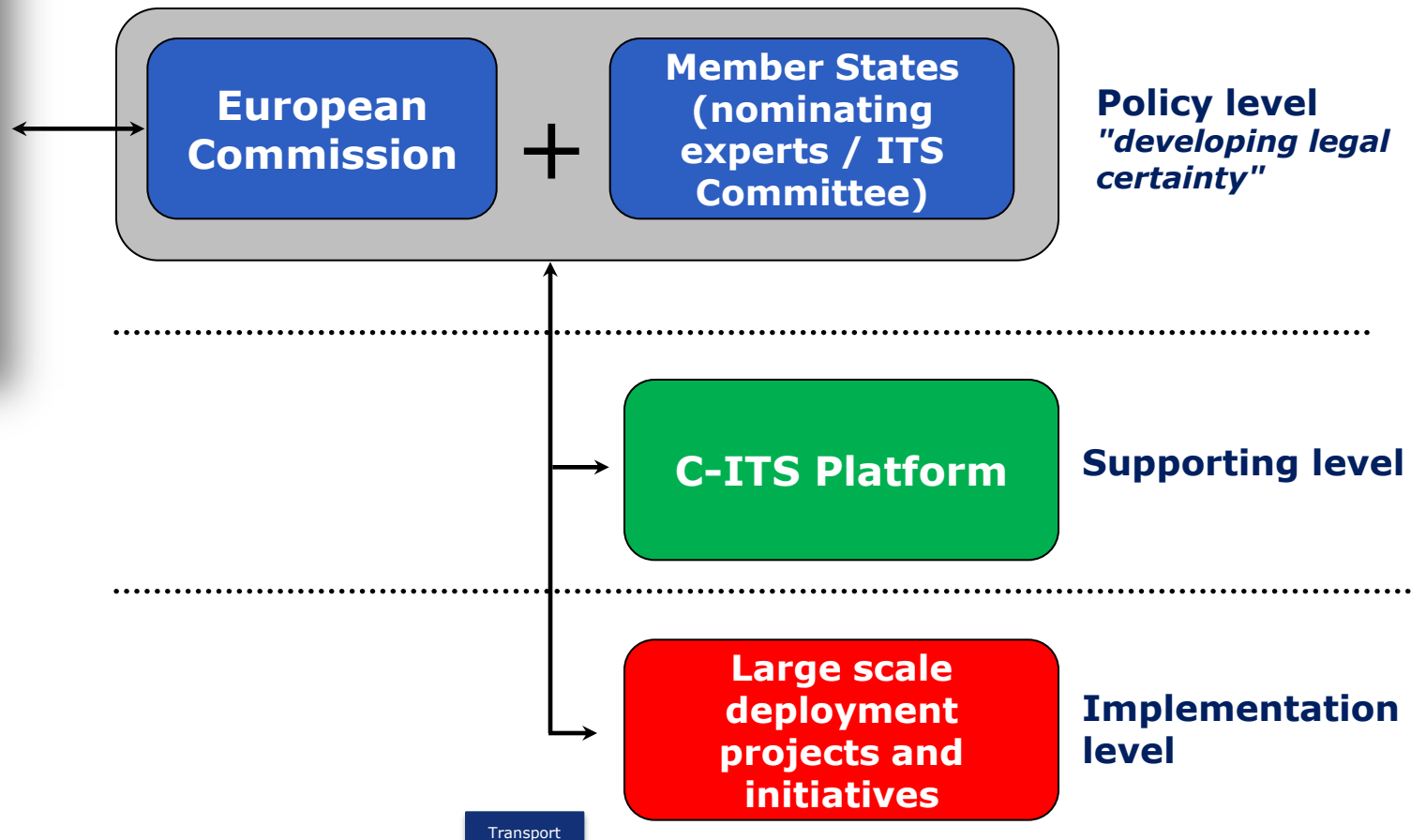
Cooperative Intelligent Transport Systems (C-ITS) make use of information and communications technologies that enable connectivity

- between vehicles (vehicle-to-vehicle or V2V) and
- between vehicles and infrastructure (vehicle-to-infrastructure or V2I).
- They will enable "connected mobility" and further enhance the provision of core ITS services (e.g. traffic information, traffic management)
- while leveraging their quality and cost-efficiency.
- ...provided that the necessary framework conditions and (new) technologies are appropriately put in place and merged with existing systems and practices
 - Development of a shared vision, strategy and roadmap for the deployment
 - C-ITS platform
 - C-ITS Master Plan



Preparation of a C-ITS delegated Act under the ITS Directive 2010/40/EU

Applying a learning by doing approach



Brussels, 30.11.2016
COM(2016) 766 final

COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN
PARLIAMENT, THE COUNCIL, THE EUROPEAN ECONOMIC AND SOCIAL
COMMITTEE AND THE COMMITTEES OF THE REGIONS

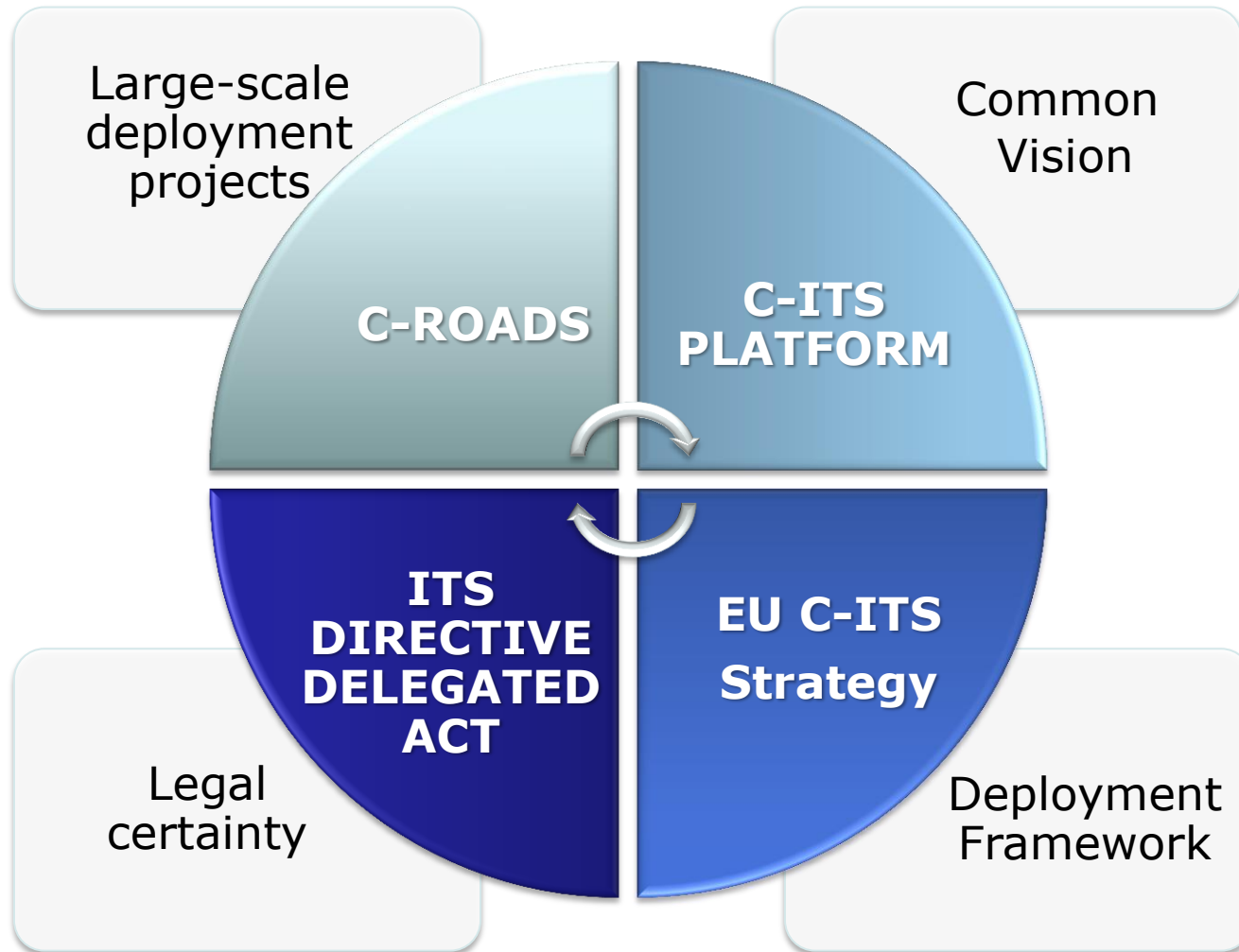
A European strategy on Cooperative Intelligent Transport Systems: a milestone towards
cooperative, connected and automated mobility

**COM(2016)
766 final**

EN

EN

Cooperative ITS





- A Day-1 list of commonly agreed C-ITS services for deployment across the EU
- A common vision to tackle cyber security detailed in an agreed Trust Model
- An assessment of C-ITS benefits across Europe, based on a hybrid communication approach with kick start for road safety related services based on ITS-G5 communication and allowing integration of cellular where and when available and appropriate
- Guiding principles for access to in-vehicle data
- A detailed analysis on privacy and data protection, basis to work on privacy by design, and implementation of new requirements according to new General Data protection Regulation

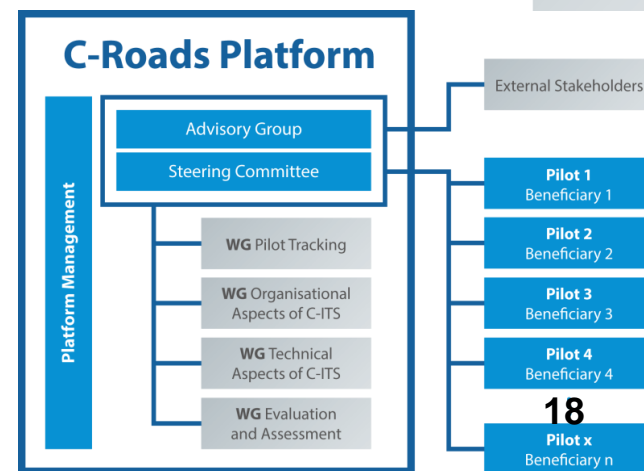
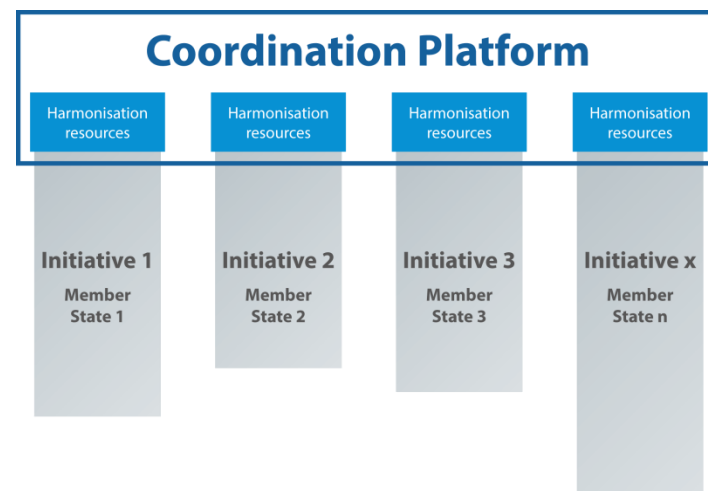


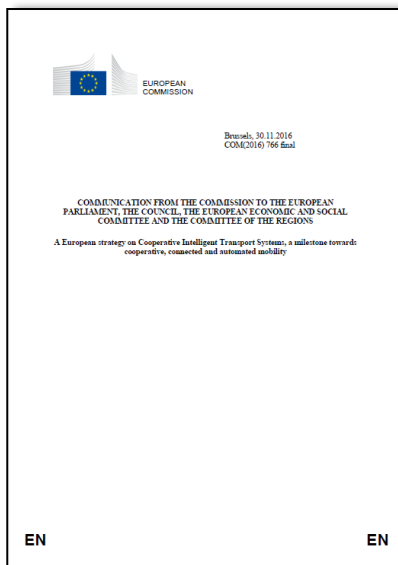
C-ITS Deployment Platform Status

- Phase 2 launched in April 2016
 - New Working Groups addressing **C-ITS and automation**:
 - Physical and Digital Road Infrastructure
 - Enhanced Traffic Management
 - C-ITS, Automation and Road Safety
 - C-ITS, Public Transport and automation in urban areas
 - Phase 2 report to be published in September 2017.
- 2016 CEF Call (Studies including piloting activities on C-ITS & Automation)

C-Roads

- Harmonised deployment of C-ITS in line with needs and priorities of Member States
- Definition of specifications (security, communication, etc.)
- Test suited and cross-border pilots
- Cooperation with EC and C-ITS platform
- www.c-roads.eu
- 8 Members + Associated Members + more Members to join soon





A European strategy on cooperative ITS, a first milestone towards cooperative, connected and automated mobility

COM(2016) 766 final

30.11.2016

http://ec.europa.eu/transport/sites/transport/files/com20160766_en.pdf



ITS and C-ITS hands on!

Ongoing ITS Projects



CEF

ITS

Arc Atlantique 2

Ursa Major 2

Next ITS 2

MedTIS 2

Crocodile 2

Crocodile 2 Hungary

Crocodile 2 Croatia

ITS deployment PL

ITS deployment SI

ITPs in DE and AT

ITPs in RO

ITPs in Flanders

ITPs in ES

EU ITS Platform

I_HeERO

eCall.at

C-Roads Platform

C-Roads AT

C-Roads FR

C-Roads CZ

C-Roads SI

C-Roads BE

C-Roads DE

InterCor

SCOOP@F

NordicWay

Timely

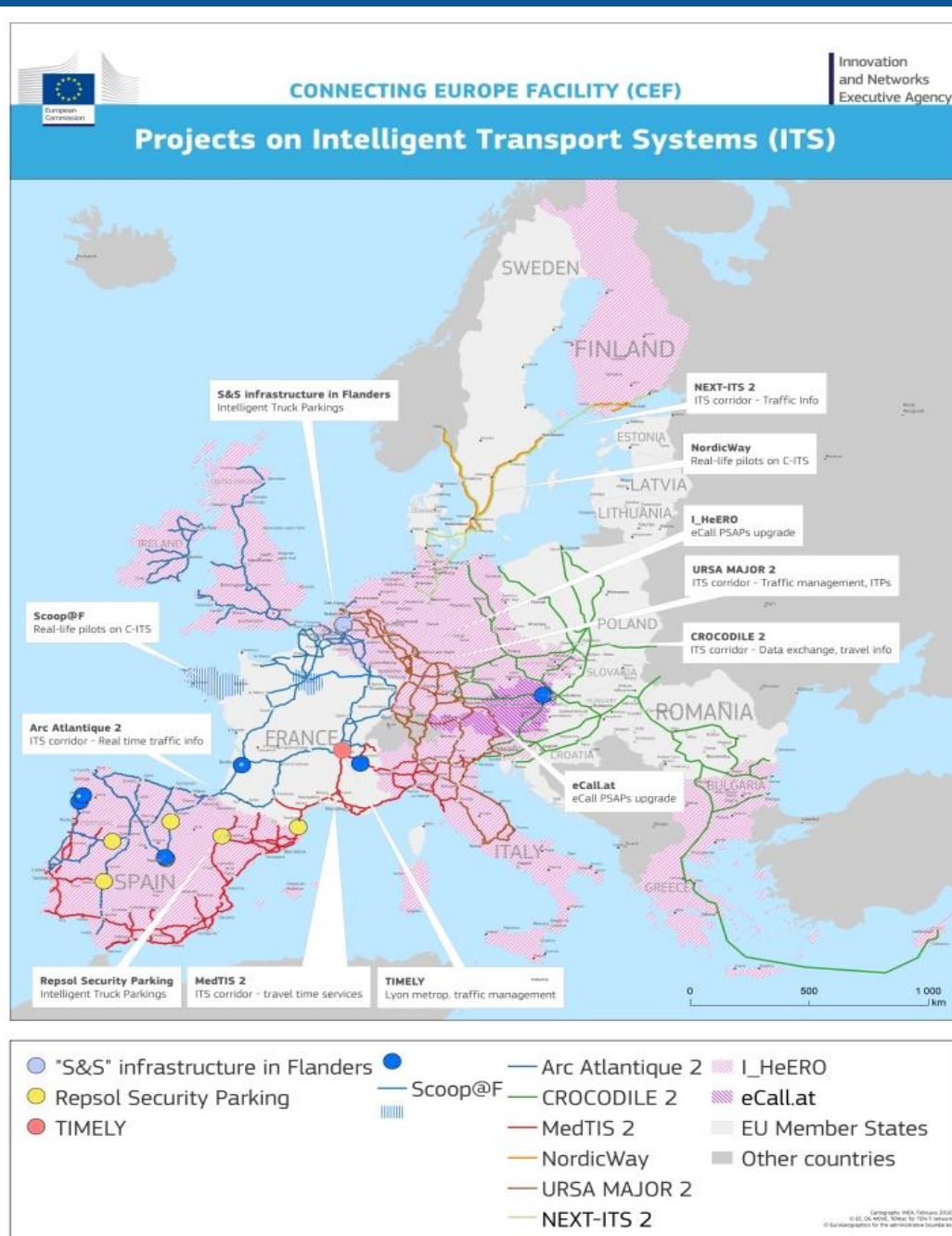
AUTO C-ITS

SOLRED

CITRUS

Total CEF funding for ITS: 318,449,472 EUR
Including 71,293,517 for C-ITS

Total investments for ITS: 731,570,742 EUR
Including 129,338,280 for C-ITS



EU funded projects



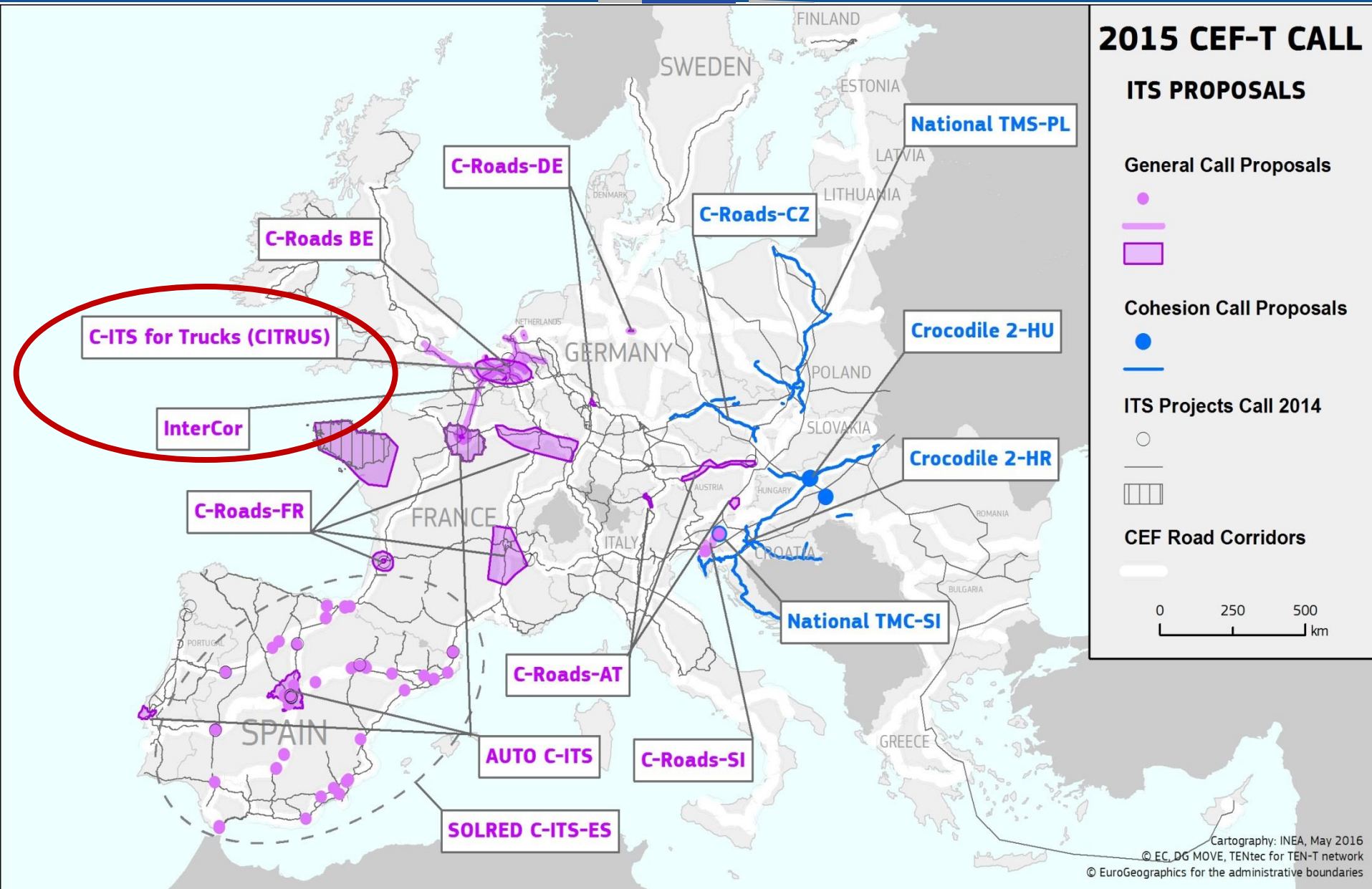
"ITS corridors"

Arc Atlantique, MedTIS , CROCODILE , NEXT-ITS , ...

URSA MAJOR

aims at improving international freight traffic on the TEN-T road network in a corridor linking North-Sea-Ports, the Ruhr and Rhine area, metropolitan areas in southern Germany and in northern Italy.

URSA MAJOR covers most of the core network corridor RHINE-ALPINE and parts of the core network corridors Scandinavian-Mediterranean and RHINE-DANUBE.



"CITS corridors"

1. CITRUS

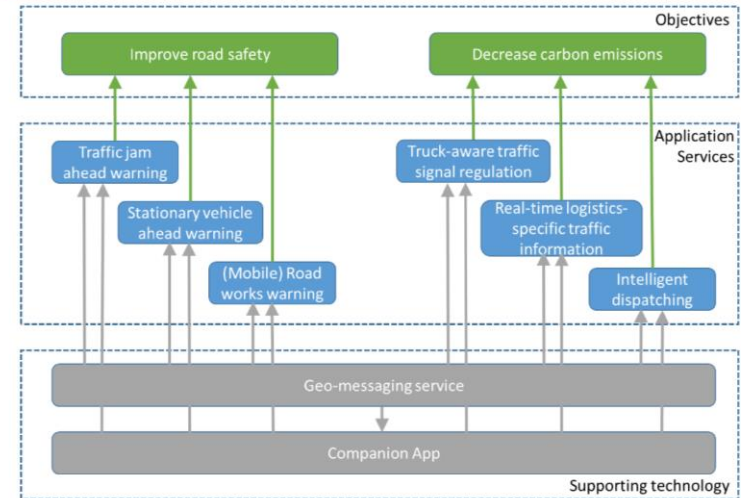
- In-vehicle 'companion application' for trucks
- Focus on road Safety & transport-related Emissions
- 3G / 4G existing communication networks
- Geo-fenced broadcasting

The Action takes place in Belgium.

It envisages the development of the app as well as a pilot deployment and testing involving around 300 truck drivers.

The app will provide some services relating to "Day 1 services", like giving safety-related warnings or advice as regards speed, routing and other information.

CITRUS:



Approx. 300 trucks (Colruyt) – tablets/ smartphone

"CITS corridors"

INTERCOR (Interconnection of Corridors)

- Common set of C-ITS specifications
- Cross-border testing & concerted deployment
- Partners: NL, Fr, UK, Flanders + ERTICO
- (ETSI) ITS-G5 Service consistency (÷ service continuity)
- Hybrid communication (÷ architecture)
- Agreed security mechanism – Public Key Infrastructure
- Freight-related services - Road works warning, Green Light Optimized Speed Advisory, In vehicle signage and Probe vehicle data.
- Cross-border testing
- Functional & technical interoperability – Guidelines



EU funded projects



C-ITS and 5 CO-GISTICS services will be deployed in 7 logistic hubs and on at least 325 trucks and vans.

- *CO-GISTICS' partners will work together for three years on the installation and running of cooperative services on at least 315 vehicles (trucks and vans).*
 - Intelligent Truck Parking and Delivery Areas Management
 - Cargo Transport Optimisation
 - CO2 Footprint Monitoring and Estimation
 - Priority and Speed Advice
 - Eco-Drive Support

**Co-funded by
the Competitiveness and Innovation
Framework Programme
of the European Union**



- The "**ITS corridors**" should be expanded to cover all core network corridors.
- **Coordination** is key for sharing experiences, lessons learnt and best practices between Member States and their stakeholders with different level of advancement in the pre-deployment of C-ITS. [...] **the recommendations of the C-ITS platform to be implemented** +there should be **a feedback loop**.
- Core network corridor stakeholders should support the deployment of **national access points** to road and multimodal travel data on core network corridors and the linkage of multimodal information services/journey planners along core network corridors **to enable a data-sharing backbone**.
- Coordinator should ensure cohesion of (C-)ITS deployment along their corridors [...]



Thank you for your attention!

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European Commission

DG Mobility and Transport

Unit B.4 - Sustainable & Intelligent Transport