EC policy initiatives for an intelligent transport infrastructure

Pedro Barradas, Move B4

CO-GISTICS Workshop
HOLM - House of Logistics & Mobility
Bessie-Coleman-Straße 7, Gateway Gardens,
60549 Frankfurt/Main, Germany
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What is ITS?
Policy framework

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
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 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
Data interoperability
Data format
Quality framework
Interoperability and continuity of services
National Access Point

- Optimal Use of Road, Traffic and Travel Data
- Continuity of Traffic and Freight Management
- Linking Vehicle and Transport Infrastructure
- Road Safety and Security

Optimal Use of Road, Traffic and Travel Data
Continuity of Traffic and Freight Management
Linking Vehicle and Transport Infrastructure
Road Safety and Security
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

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

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

Applying a learning by doing approach

European Commission

Member States (nominating experts / ITS Committee)

C-ITS Platform

Large scale deployment projects and initiatives

Policy level "developing legal certainty"

Supporting level

Implementation level
Cooperative ITS

Large-scale deployment projects

Common Vision

C-ROADS

C-ITS PLATFORM

ITS DIRECTIVE

DELEGATED ACT

EU C-ITS Strategy

Legal certainty

Deployment Framework
• 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

ITS and C-ITS hands on!
Ongoing ITS Projects

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

CEF

C-ITS
- C-Roads AT
- C-Roads FR
- C-Roads CZ
- C-Roads SI
- C-Roads BE
- C-Roads DE
- InterCor

EU ITS Platform

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
Projects on Intelligent Transport Systems (ITS)

- "S&S" infrastructure in Flanders
- Repsol Security Parking
- TIMELY
- Scoop@F
- Arc Atlantic 2
- I_HeERO
- CROCODILE 2
- eCall.at
- MedTIS 2
- NordicWay
- URSA MAJOR 2
- EU Member States
- Other countries
- NEXT-ITS 2
"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.
CEF Transport 2015

ITS proposals suggested for funding

2015 CEF-T CALL

ITS PROPOSALS

- General Call Proposals
- Cohesion Call Proposals
- ITS Projects Call 2014
- CEF Road Corridors

- C-ITS for Trucks (CITRUS)
- InterCor
- C-Roads BE
- C-Roads DE
- C-Roads CZ
- C-Roads FR
- C-Roads AT
- C-Roads SI
- AUTO C-ITS
- SOLRED C-ITS ES
- National TMS PL
- Crocodile 2 HU
- Crocodile 2 HR
- National TMC SI

Cartography: INEA, May 2016
© EC, DG MOVE, TENtec for TEN-T network
© EuroGeographics for the administrative boundaries
"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.
EU funded projects

"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

- **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

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

Co-funded by the Competitiveness and Innovation Framework Programme of the European Union
EC TEN-T Coordinators  

**Recommendations**

- 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!

pedro.barradas@ec.europa.eu

European Commission
DG Mobility and Transport
Unit B.4 - Sustainable & Intelligent Transport