European update
Traffic & Traveller Information
Standards Focus

European Standards

CEN/TC 278 *Road transport and traffic telematics*

- WG 1 Electronic Fee Collection
- WG 2 Freight, Logistics and Commercial Vehicle Operations
- WG 3 Public Transport *(SIRI)*
- WG 4 Traffic and Travel Information *(TMC TPEG)*
  - Most activity undertaken by TISA
- WG 5 Traffic Control Systems
- WG 7 Geographic Data Files *(GDF)*
- WG 8 Road Traffic Data *(Datex)*
- WG 9 Dedicated Short Range Communications
- WG 10 Human-Machine Interfacing
- WG 12 Automatic Vehicles and Equipment Id.
- WG 13 Architecture and Terminology
- WG 14 Recovery of stolen vehicles
- WG 15 eSafety / eCall
- WG 16 Cooperative systems

Traffic & Traveller Information Services (TTIS) in EU

Standards

DOTs (~Govt. Agencies)

- DATEX II
- SIRI (Service Interface for Real Time Information**) -** public transport data

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- UTMC (Urban Traffic Management & Control)
  - UK centric & will probably merge with Datex II under EU ITS Directive
- RTIG (Real Time Information Group)
  - UK public transport
- OTAP (Open Travel data Access Protocol) – Datex likely to replace.
- GTFS (SIRI data can interface with GTFS)

Service Providers

- TMC

  TMC delivery
  - RDS TMC
  - XML TMC
  - DAB TMC
- TPEG

  Large family of TPEG flavours and ancillary content
  - Parking
  - Fuel
  - EV Charging
  - > ongoing development

Related areas

- Maps
  - GDF >
- Communications
  - RDS
  - DAB
  - IP
  - DSRC
  - RFID
  - (CALM)
  - etc > > >
- Emergency Services
  - eCall
- Plus many more

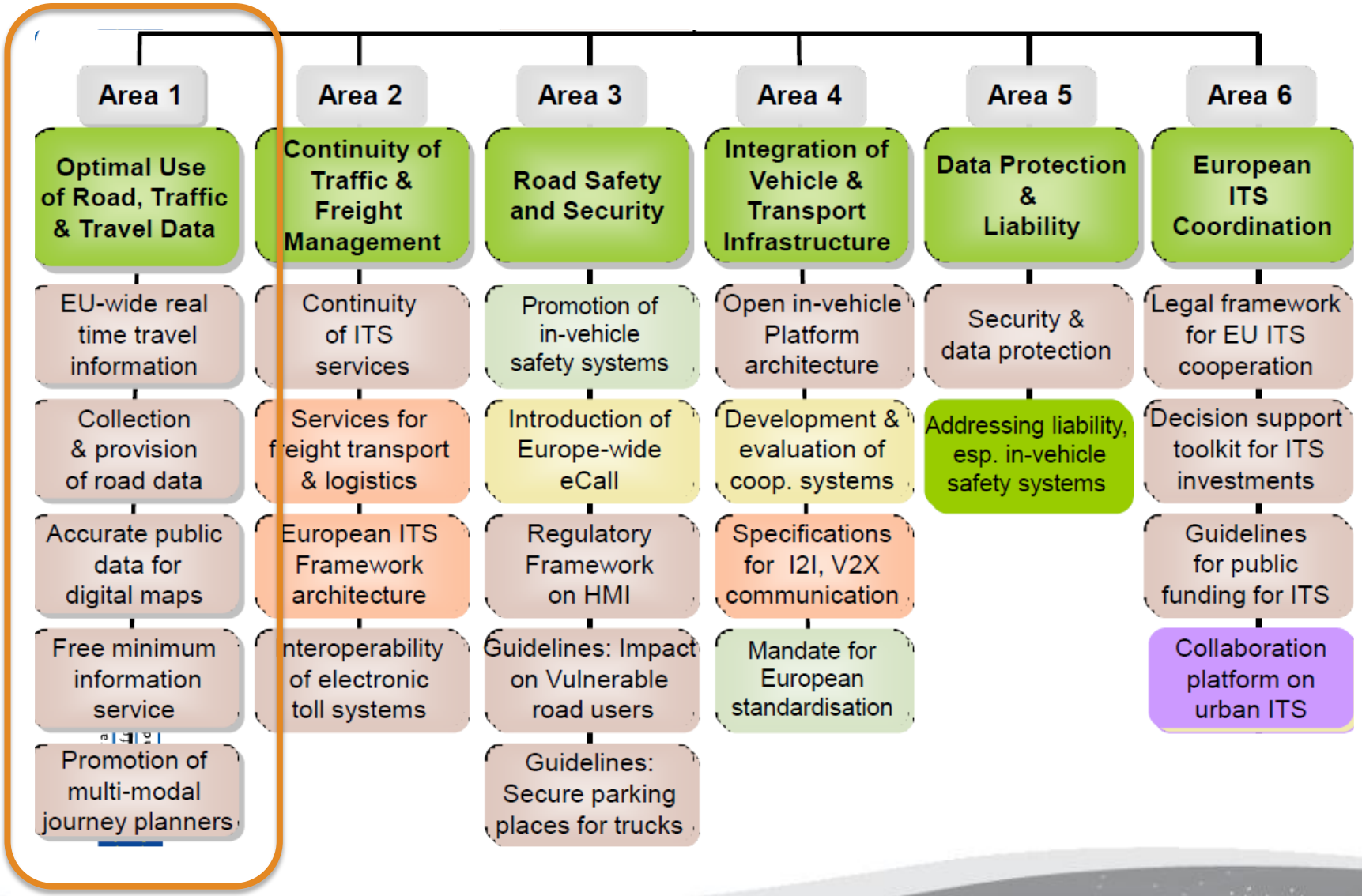
EU ITS Action Plan

EC ITS Action Plan Directive (July 2010) includes:

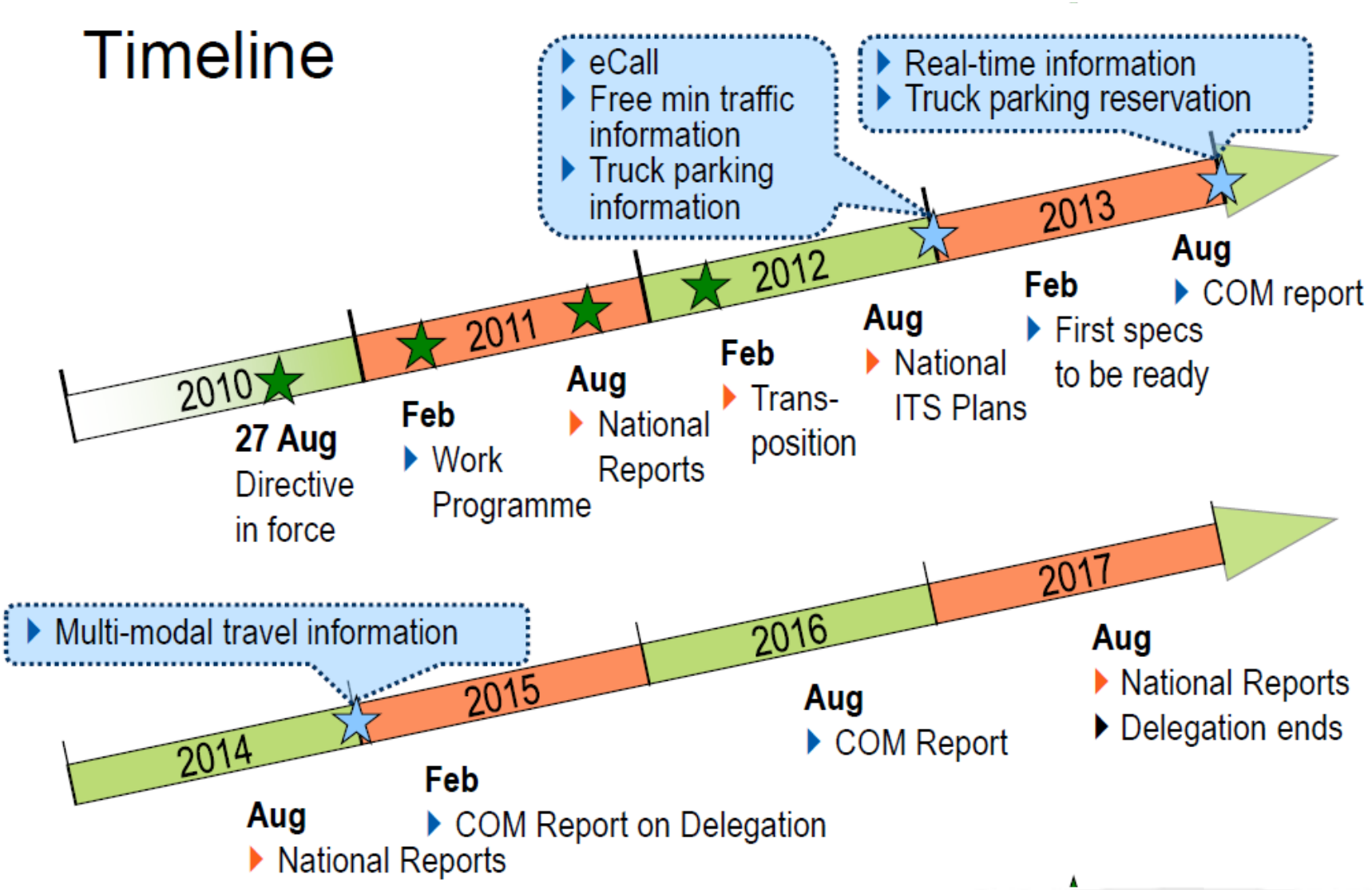
- Establishing procedures for Europe-wide traffic and travel information services;
- Developing an open in-vehicle ITS platform architecture, integrating various ITS applications;
- Proposing a legal framework for European coordination on the Europe-wide deployment of ITS (which is the scope of the proposed directive).

Under this Directive the Commission has to adopt within the next seven years specifications (i.e. functional, technical, organisational or services provisions) to address the compatibility, interoperability and continuity of ITS solutions across Europe.

EU ITS Action Plan



EU ITS Timeline



EU ITS Priorities

ITS Directive/ Annex 1: Priority Areas and Actions

- Priority Areas:
  - I. Optimal use of road, traffic and travel data
  - II. Continuity of traffic & freight management ITS services
  - III. ITS road safety and security applications
  - IV. Linking the vehicle with the transport infrastructure

- **Key words:**
  - Access & availability of data
  - (Electronic) ***Data Exchange***
  - Standardised interfaces

DATEX II – a key standard

The importance of DATEX II: a *key enabler* !

- Key outcome of effective cooperation (within EasyWay)
- Road Authorities in the driving seat
- Increasing interaction with private actors

- Standardisation achieved (first package > CEN TS)
- Further work ongoing / 'parts 4 & 5' plus new extensions
- Cooperation with TISA
  - to bring the data/ services into the vehicle
- Growing Community & operational use

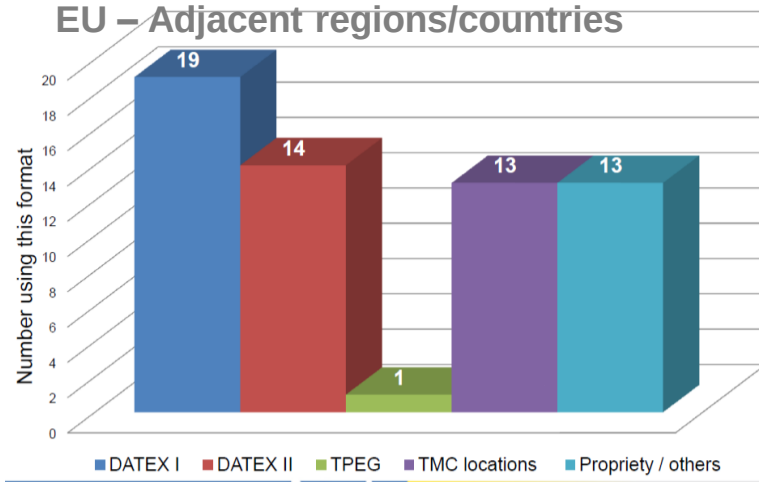
> **Cooperation … going beyond the bits & bites !**

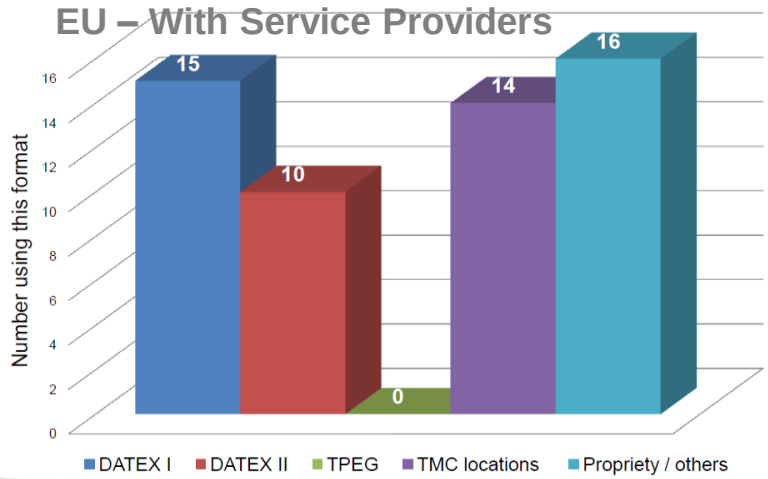
DATEX II = *a key driver for rolling out harmonised ITS*

http://www.datex2.eu/user-forum/2012/duf_2012_p3_its_deployment.pdf

EU Datex standards use (2010)

Data formats used to exchange data & information





- DATEX was originally designed and developed as a traffic and travel data exchange mechanism to standardise the interface between traffic control and information centres.
- DATEX II it has become the reference for all applications requiring access to dynamic traffic and travel related information in Europe.

Datex II

CEN TS 16157 Planning	2010				2011				2012				2013				2014				2015			
	q1	q2	q3	q4	q1	q2	q3	q4	q1	q2	q3	q4	q1	q2	q3	q4	q1	q2	q3	q4	q1	q2	q3	q4
Part 1: Context and Framework																								
Part 2: Location referencing																								
Part 3: Situation																								
Part 4: Variable Message Sign																								
Part 5: Measured & Elaborated data																								
Part 6: Parking Information																								
Part 7: Traffic View																								

= Ratification and preparation of definitive texts by CMC (3m)
= Preparation of TCA-draft by CMC and Voting (6,5m)
= TC-review, processing comments by WG (6m)
= Drafting stage (6m)
= Preliminary stage, optional (12m)

Intelematics

TPEG in Europe

Audi

SP~Inrix - using TPEG over IP

BMW

SP~Inrix - using TPEG over IP

Toyota

SP~Inrix - using TPEG over DAB

TPEG

RTM (Road Traffic Message)
Ideal for radio scrolling text. No mandatory data fields. Loc by TPEG LOC

TAP (TPEG Automotive Profile)
TAP is a defined set of TPEG services necessary for auto grade Nav.
TAP = TEC + hazards, weather, flow, prediction, parking & assist

TEC (Traffic Event Compact) (Incidents, Events – not flow)
Designed to support NAVIGATION. Uses Dynamic Loc Ref (DLR) previously AGORA-C

Loc (Location referencing)

TFP (Traffic Flow & Prediction)

CTT (Congestion and Travel-Time)

FPI (Fuel Price Information)

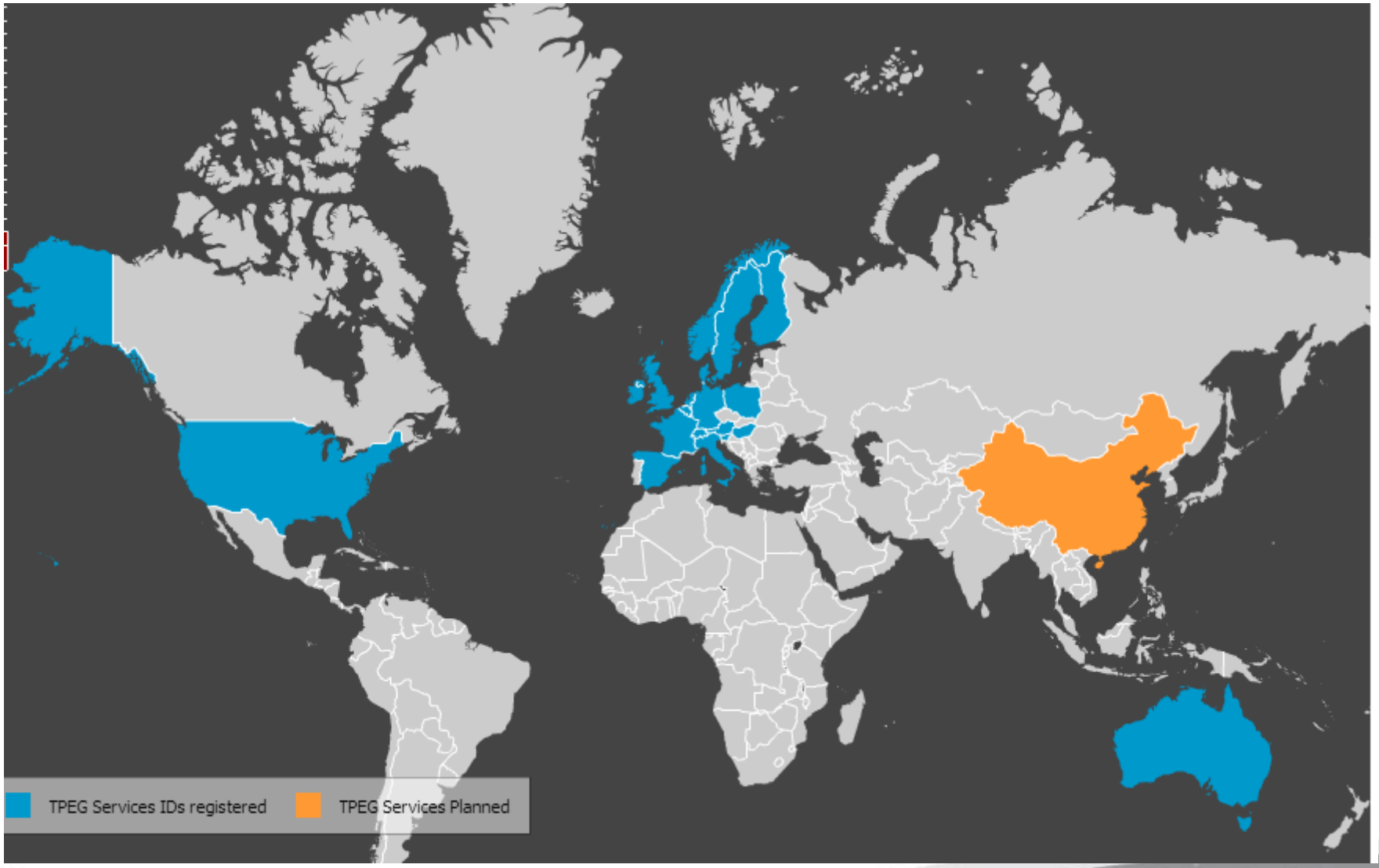
PKI (Parking Information)

PTI (Public Transport Information)

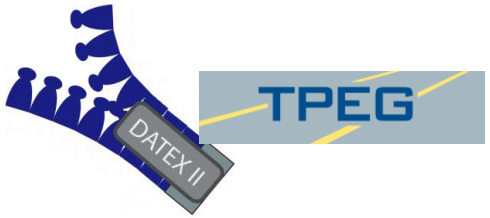
WEA (Weather information for travellers)

Under Development
UCP EV Charging
TSI (Traffic Signal Information- Green Wave)

TPEG globally



EasyWay



- EasyWay ESG5 (Expert Study Group 5) and TISA are collaborating on a common demonstrator showing a full end-to-end information delivery chain, starting from an original content provider (e.g. a TIC or TMC - Traffic Management Centre) generating DATEX II messages down to the final display to the motorists in end-user devices.

- This is made possible through a DATEX II-to-TPEG conversion that will hand-over TPEG messages to TPEG services.

eCall

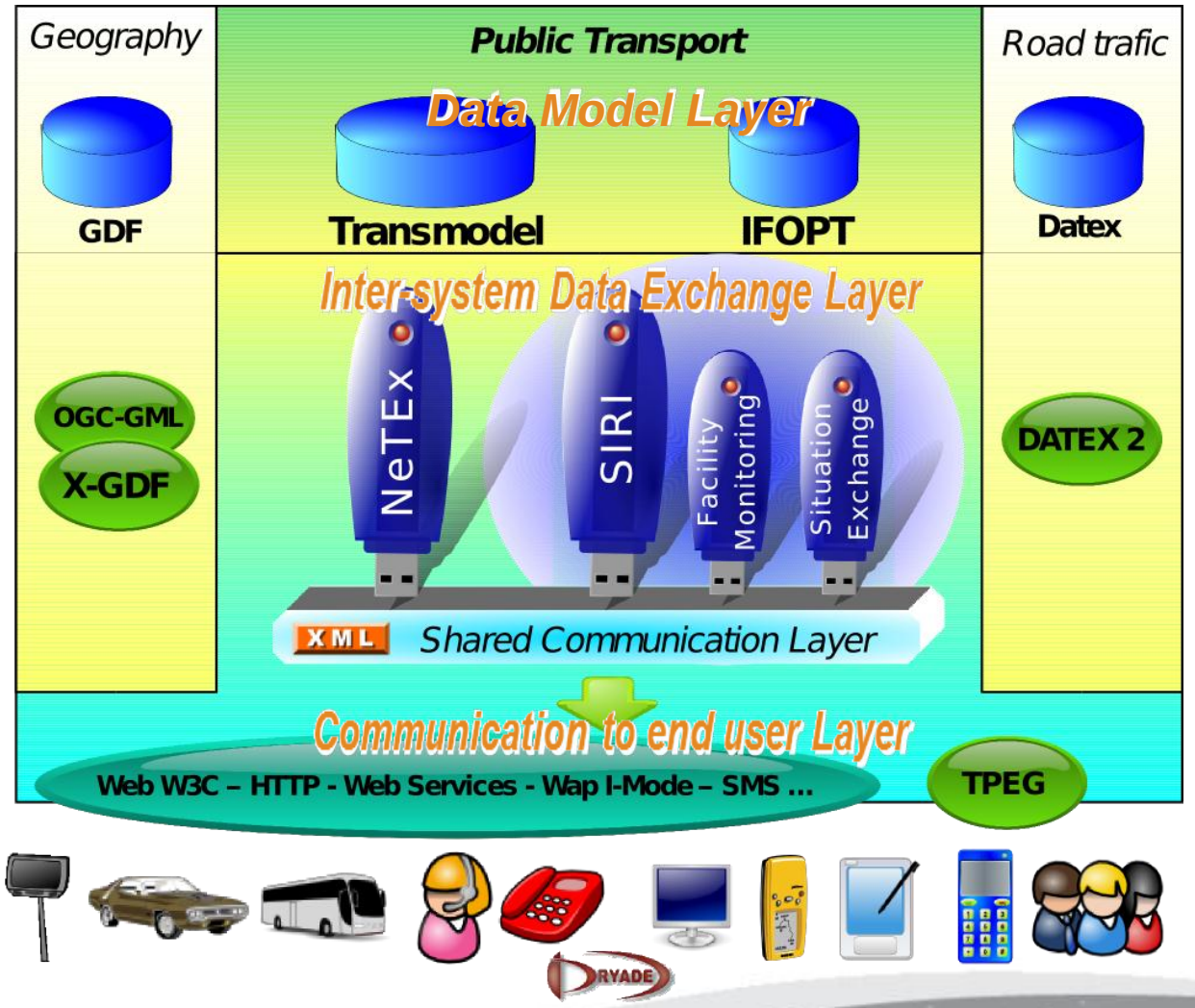
- Currently voluntary
- Strong push for making mandatory
  - Mandatory position endorsed by EU Internal Market and Transport Committees
- Mandatory inclusion would drive installed base of connected vehicles
  - Opportunities for applications that could utilise connectivity at marginal cost.

EU PT data standards - overview

Data Model

Inter-System Data Exchange

End-user communication



Source - Kasia Bourée , French Ministry of Transport

Picture provided by Dryade

EU standards MultiModal