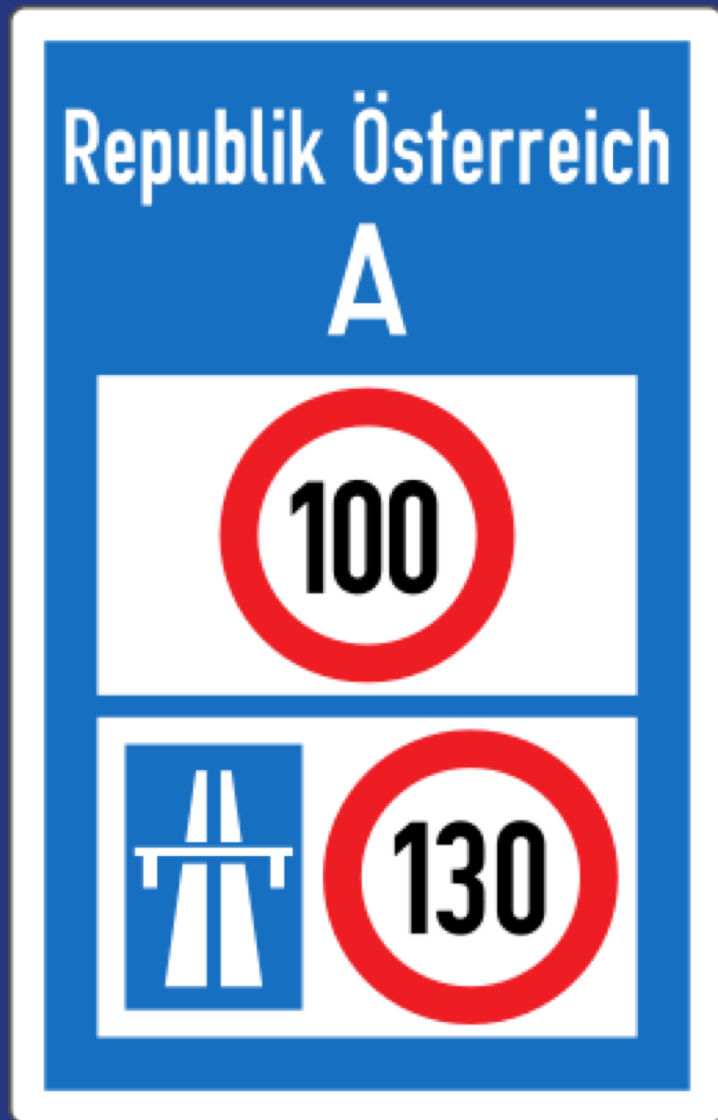


DATEX II

DATEX II update

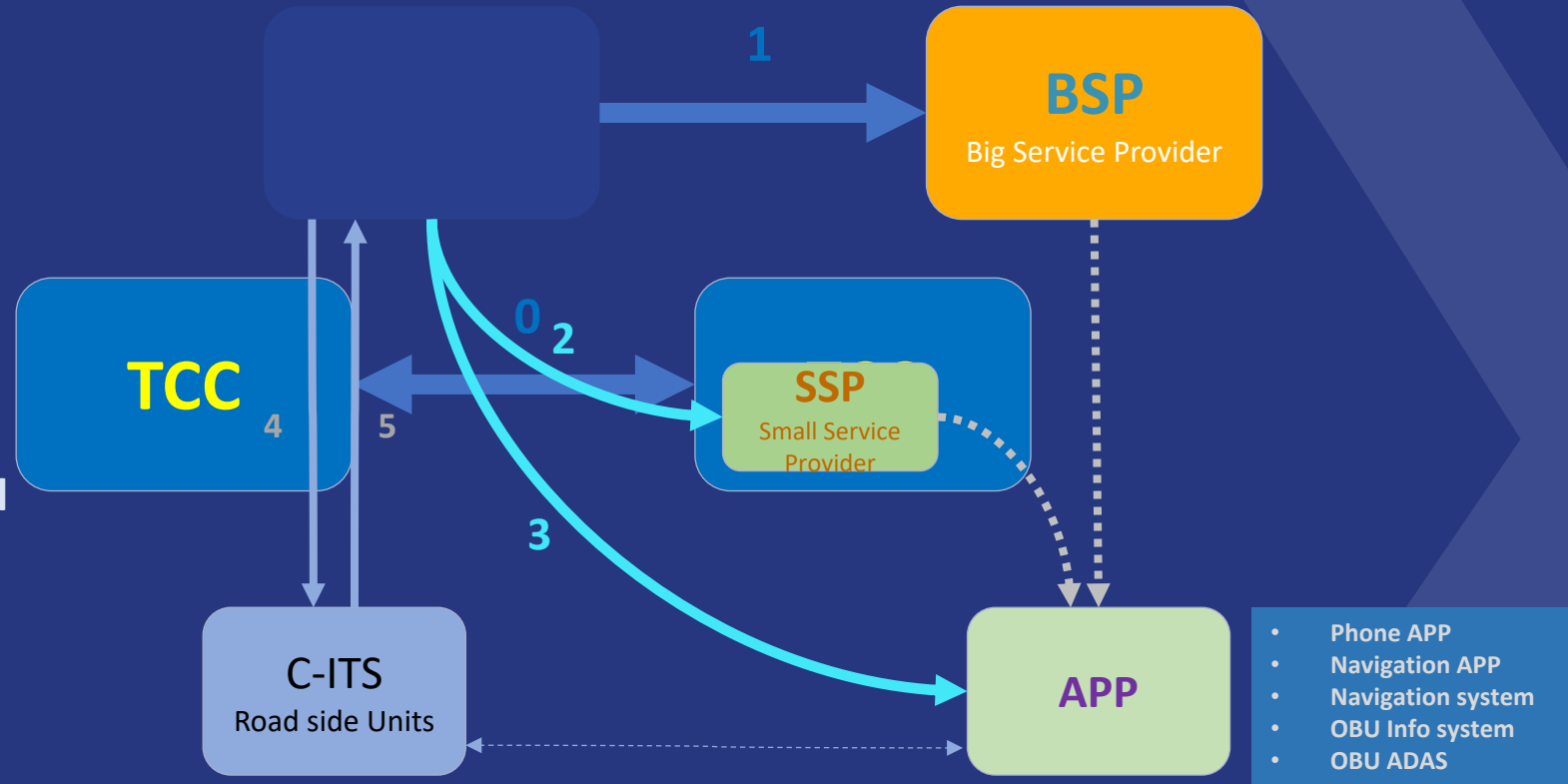
CEDR 6th March 2019



DATEX II

DATEX II Positioning

0. Original interface
1. DATEX XML full model
2. DATEX Light
3. DATEX Light
4. Message protocol
5. Message protocol



DATEX II

The content part of DATEX II

- Traffic situations (event driven)
 - Accidents, incidents, traffic disturbances
 - Details like vehicles involved
 - Traffic management measures
 - Roadworks and big events
 - Congestion information
 - Bad weather conditions
- Traffic status (status updates per time)
 - Traffic flow, Traveltimes
 - Weather data (rain, snow, wind, dust etc.)
 - Detector data per second or per vehicle
- Traffic related
 - VMS settings
 - Parking information
- Work in progress
 - Revision of Parking
 - Refueling and recharging infrastructure and actual status
 - Traffic Management measures (METR and UVAR under way)
 - Urban specific information
 - traffic light greenphase
 - Traffic management in urban context

DATEX II

What is DATEX II v.3.0 ?

- Toolbox

ready to support:

- Provision of detailed traffic and travel information AND traffic management measure information
- Joint TM operational support
- Open data technologies and information concepts
- Functional packages instead of 1
- Exchange completely separated (now also JSON and ASN.1 on its way)
- Profiles per use-case

DATEX II



Data Model
Payload

CEN TS 16157-1 – DATEX II
Conversion to EN in 2018

Standard Multipart

1. **Methodology**
2. **Location referencing**
3. **Situation Publication**
4. VMS
5. Measured /Elaborated Data
6. Parking Information



Exchange
Platform Independent
Model
Business Scenarios

CEN/ISO 19468 – Exchange PIM
CEN/ISO Preliminary workitem

Business Scenario

- Data Delivery
 - PIM/FEP Publish Subscribe
- **Collaborative ITS Services**
 - *To be integrated*



Exchange among Centres
and Systems
Platform Specific

CEN/ISO 14827-x

Standard Multipart

1. Message definition requirements
2. ASN.1
3. **in progress XML Messages (JP)**
4. **in progress from UE .. XML Data Delivery Exchange based on WS Notification Web Services (OASIS 2006)**

Methodology

part 1

Traffic
Situations
part 3

Traffic
Data
part 4

VMS
infra
&
actual
part 5

Parking
infra
&
actual
part 6

Energy
infa
&
actual
ongoing

Common elements part 7
Location Referencing part 2

Reusing existing ITS standardised methods

RDS-TMC

TPEG-LOC

Linear
referencing


Open-LR

Coordinates for
points, lines and
polygons

TEX II

Academy | DATEX II

https://www.datex2.eu/support/academy

DATEX II  Home DATEX II NEWS IMPLEMENTATIONS SUPPORT EVENTS CONTACT/LINKS in

Academy


SUPPORT > Academy

Looking for information tailored to your level?

At the DATEX II Academy, you will find all the information available about DATEX II (guides, specifications, etc.).

For the convenience of the different kind of users, the information is categorized and structured in three support levels as shown below.

Please click [here](#) to be taken to the DATEX II Academy.

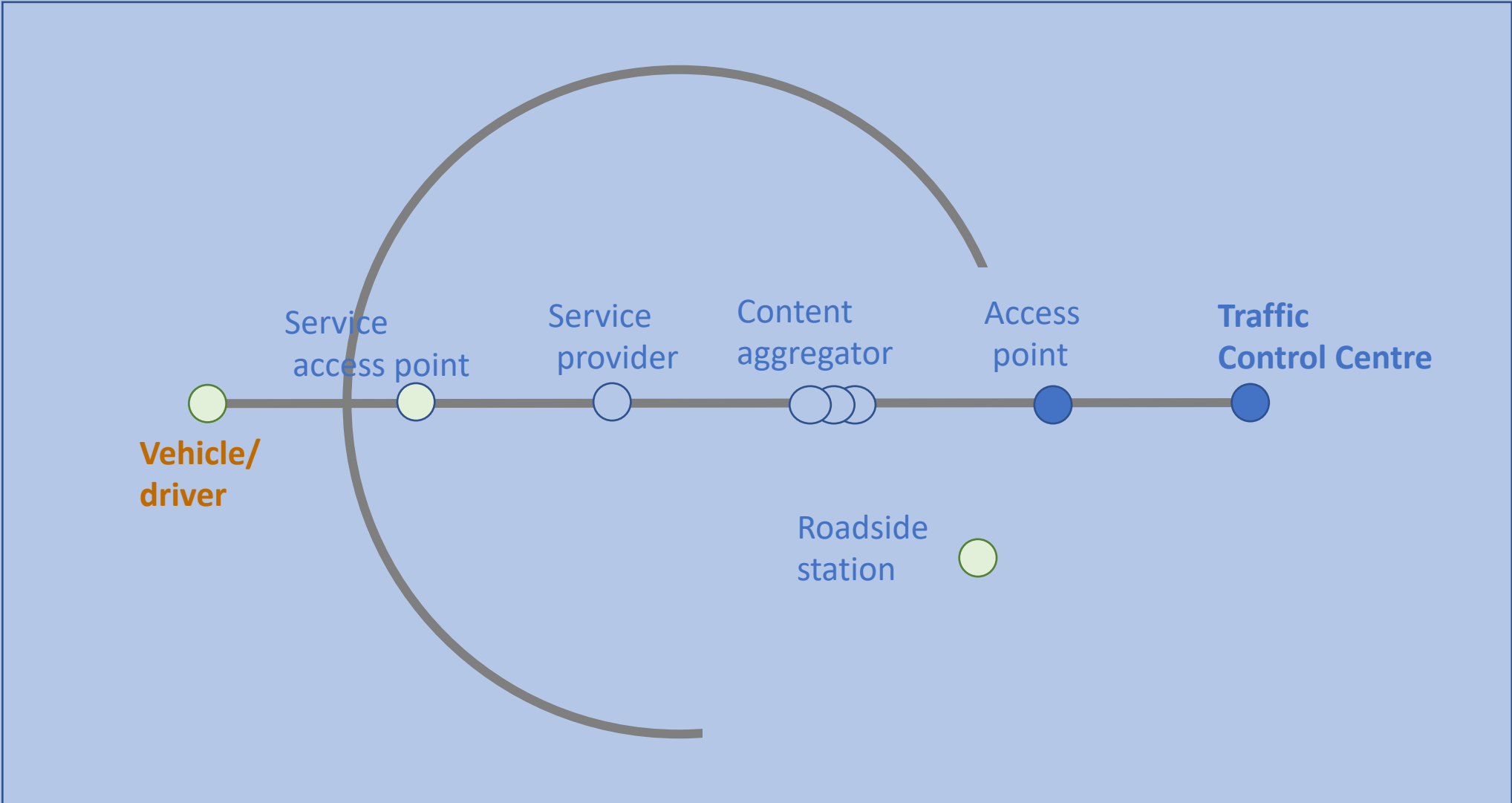


LEVEL 3
Expert user is able to assemble own profiles

LEVEL 2
Meant for more experienced users using prepackages

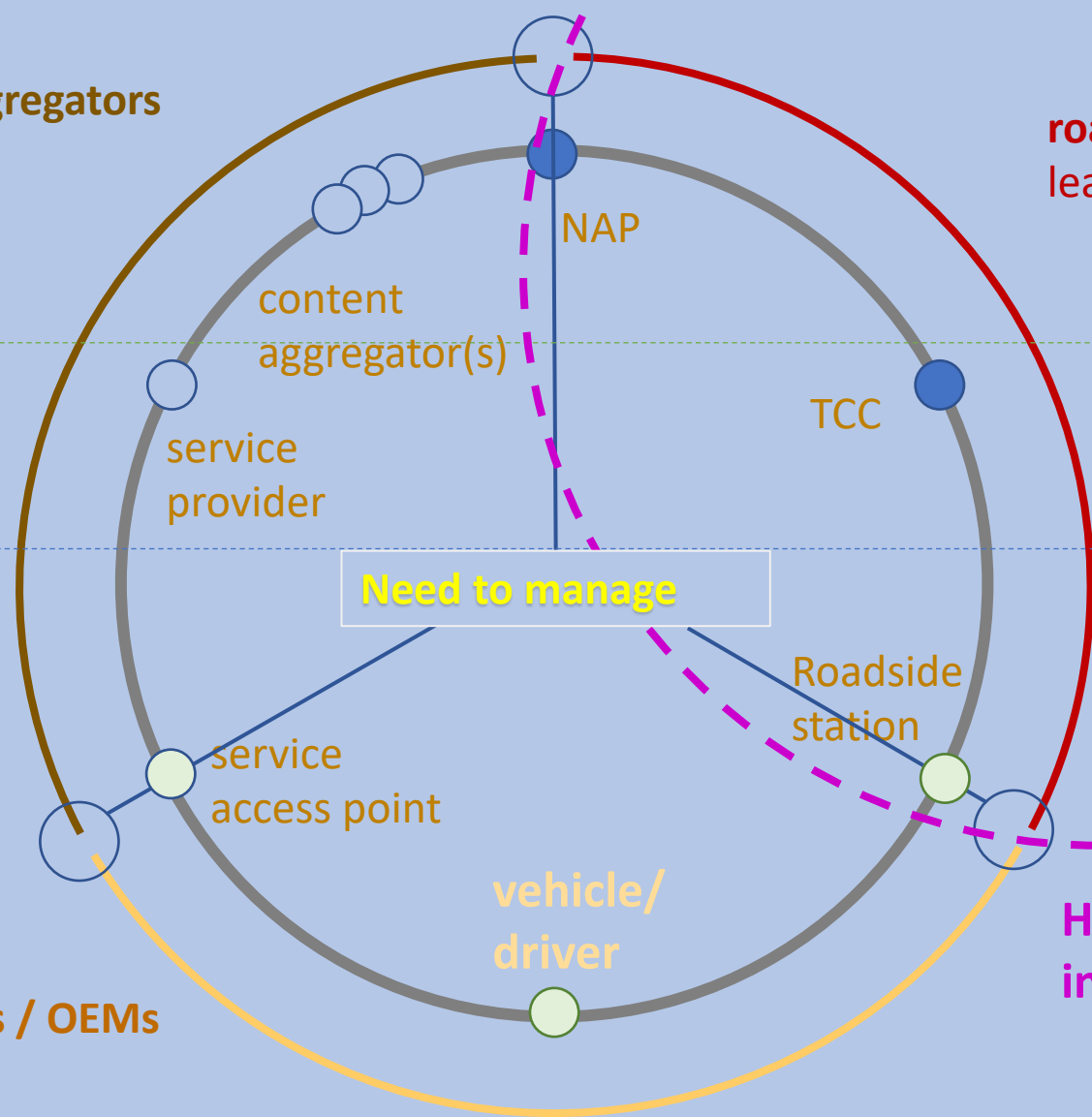
LEVEL 1
Tailored for basic users using standard case driven profiles

DATEX II



content/service aggregators
leading: TPEG

road operators
leading: DATEX II



centre-to-centre



roadside-to-vehicle
roadside-to-device

Need to manage

**Harmonised/aligned
interoperable profiles**

service providers / OEMs
TPEG / C-ITS

Animation

- <https://www.youtube.com/watch?v=wC9gqXGmZE8>

DATEX II

Mapping of SRTI events

- **Joint Working group of**
 - TISA
 - DATEX II
 - AMSTERDAM Group
 - C-ROADS ?
 - CAR2CAR ?
- **Hosted by TISA**
- **Chaired by DATEX II**
- **Continuous proces for maintaining based on operations and extending both in content scope as in technologies**

DATEX II

- Version 3 of
- Hybrid profiles
-

Executive Office	  	ITSTF17001 v1.0
Terms and definitions		2017-02-14
		Page 1 of 21
Safety related message sets – Selection of DATEX II Codes, DENM Event Types, TPEG2-TEC Causes and TMC Events for EC high level Categories		

DATEX II

Road safety-related events in 886

- (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.

DATEX II

Sneak peak

Event\Country	used in #											
	MS	NL	NO	IT	ES	SE	DK	GR	PT	LU	FR	GE
Category A: Temporary slippery road												
Event												
flooding	7		X	X	X	X		X	X	X		
danger of aquaplaning	2	X					X					
surface water hazard	5	X	X			X	X	X				
slippery road	6	X	X			X	X	X	X			
mud on road	4	X	X				X		X			
loose chippings	2					X	X					
oil on road	7	X	X		X	X	X	X	X			
petrol on road	4	X			X			X	X			
ice	8	X	X		X	X	X	X	X	X		
black ice	3	X	X					X				
snow drifts	4	X				X	X		X			
icy patches	2	X					X					
freezing of wet road	2	A						A				
flash flooding	2			A					A			
wet and icy roads	2	A						A				
freezing rain	2		A	A								
heavy frost	3				A				A	A		
frost	1							A				
wet road	1							A				

**Safety related message sets –
Selection of DATEX II Codes, DENM Event Types, TPEG2-TEC
Causes and TMC Events for EC high level Categories**

DATEX II (CEN/TS 16157)			TMC Events (EN ISO 14819-2)			TPEG-TEC (ISO/TS 21219-15)				DENM (ETSI EN 302 637-3)		
DATEX Class	TYPE	Supplementary Position Description	Line	Text (CEN-English)	Code	Cause Code	Sub Cause Code	Warning Level	Text SubCauseCode trumps Cause Code	Cause Code	Sub Cause Code	Text SubCauseCode trumps CauseCode
EnvironmentalObstruction	flooding		880	flooding. Danger	908	5	1	3	flooding	9	0	hazardous location - surface condition
WeatherRelatedRoadConditions	surfaceWater		980	danger of aquaplaning	1002	7		3	aquaplaning	6	0	adverse weather condition -adhesion
WeatherRelatedRoadConditions	surfaceWater		977	surface water hazard	1041	7		3	aquaplaning	6	0	adverse weather condition -adhesion
WeatherRelatedRoadConditions	slipperyRoad		979	slippery road (above Q hundred metres)	1003	6		3	slippery road	6	0	adverse weather condition -adhesion
NonWeatherRelatedRoad Conditions	mudOnRoad		981	mud on road. Danger	1055	6	3	3	mud on road	6	3	mud on road
NonWeatherRelatedRoad Conditions	looseChippings		985	loose chippings. Danger	1056	6	8	3	loose chippings	6	8	loose chippings
NonWeatherRelatedRoad Conditions	oilOnRoad		987	oil on road. Danger	1057	6	7	3	oil on road	6	7	oil on road
NonWeatherRelatedRoad Conditions	petrolOnRoad		989	petrol on road. Danger	1058	6	2	3	fuel on road	6	2	fuel on road
WeatherRelatedRoadConditions	ice		992	ice (above Q hundred metres)	1006	6	5	3	ice on road	6	5	ice on road
WeatherRelatedRoadConditions	blackIce		996	black ice (above Q hundred metres)	1008	6	6	3	black ice on road	6	6	black ice on road
WeatherRelatedRoadConditions	snowDrifts		1006	snow drifts (above Q hundred metres)	1016	9	5	3	snow drifts	9	5	snow drifts
WeatherRelatedRoadConditions	icyPatches		996	icy patches (above Q hundred metres)	1047	6	5	3	ice on road	6	5	ice on road



ATEX II

Standardisation developments i.r.t. (C-) ITS

- Location Referencing alignment and increased detailing
- Emissions Management
- Models and Definitions For New Modes
- Mixed vendor environments
- TM Data Models; TM interfaces and information

- Management of Electronic Traffic regulations (METR)

DATEX II

Methodology

part 1

Traffic Situations
part 3

Traffic Data
part 4

VMS
part 5

Parking
infra & actual
part 6

Energy
infa & actual
ongoing

METR

UVAR

LOGISTICS

Common elements

part 7

Location Referencing part 2

Reusing existing ITS standardised methods

RDS-TMC

TPEG-LOC

Linear
referencing

Open-LR

Coordinates for
points, lines and
polygons

High precision GNSS

Challenge of governance and acceptance

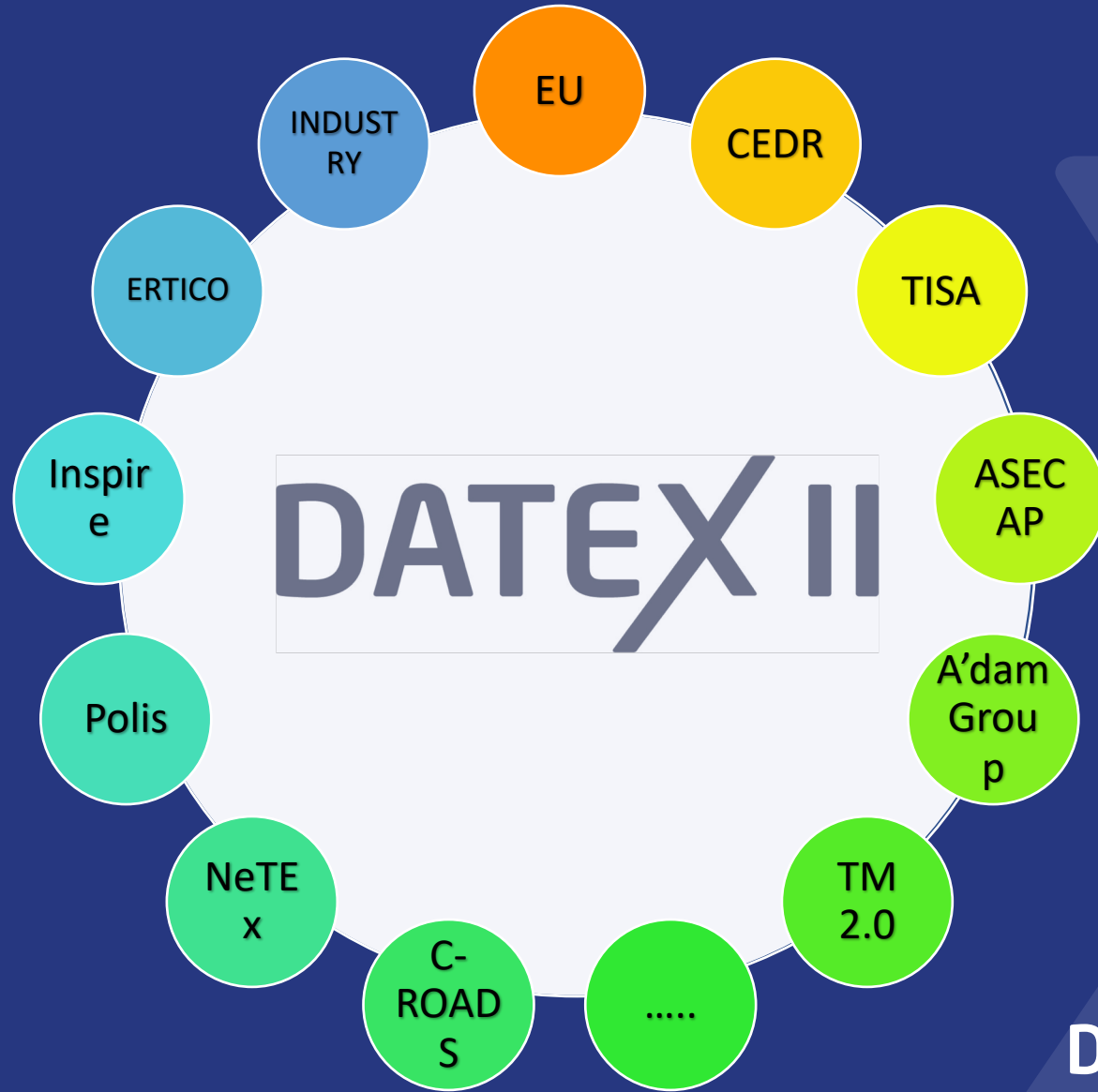
- End of 2020 this program ends
- New governance model is required respecting the interests from operators and road authorities from:
 - Motorways
 - Urban
 - Parking (on and off street)
 - Environment
 - OEM's
 - End user Service providers
 - Logistics/freight
 - Other modalities

DATEX II

DATEX II

STakeholder Advisory Board

STAB



DATEX II

Conclusion of the STAB 2018

- Acknowledged and understand the different perspectives
- It is obvious to all that we have common values
- Deeper into details the differences become more apparent
- Acknowledged the common value

Supporting and servicing the road user in order to provide a safe, efficient and sustainable trip.

- We are now at the “Why”; “What” and the “How” will be discussed

DATEX II



DO THE RIGHT MIX