

eCall for Commercial Vehicles (HGV, buses and coaches)

Gorazd Marinic, IRU
15.5.2018



This project is funded
by the European Union

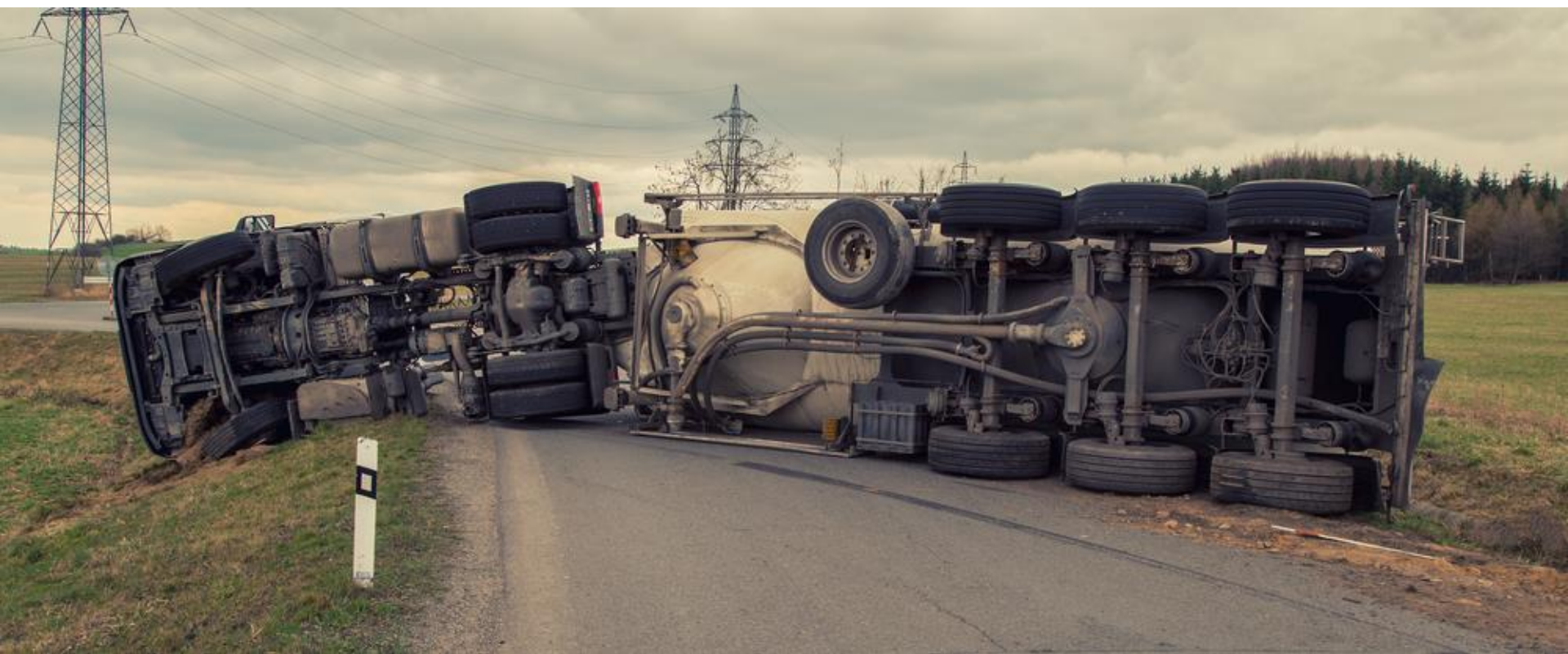


**CARS: 252
million**



HGV: 6 million

Why eCall for Commercial Vehicles?



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Harmonised eCall European Deployment











Highly disruptive!



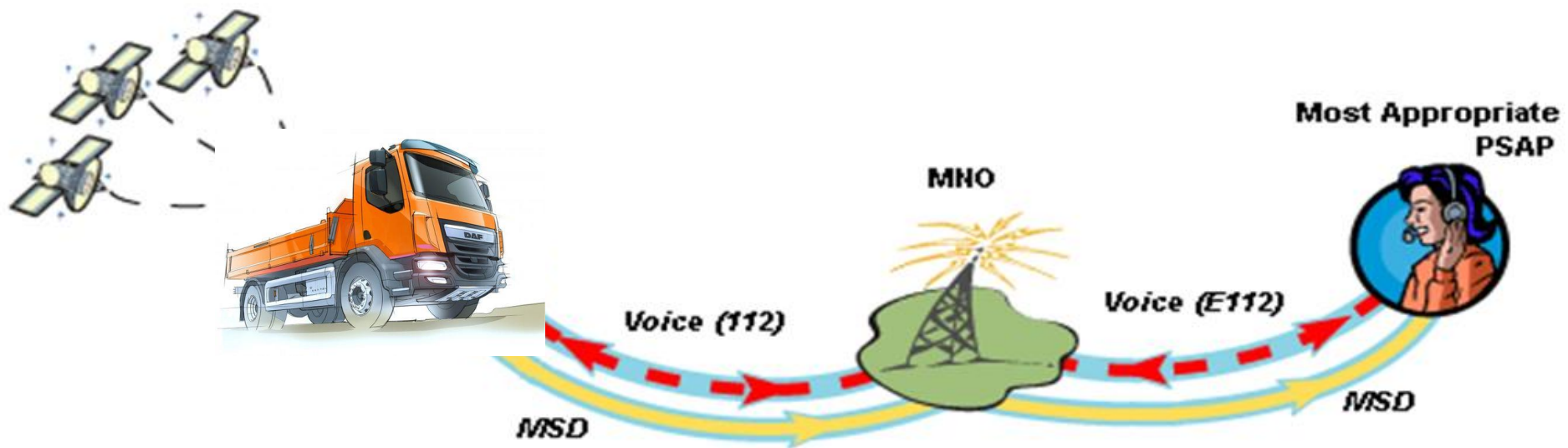


eCall for HGV

- NOT (yet) required for commercial vehicles (HGV, buses and coaches)
- CEN TS16405: standard for HGV
- Activity 2: Prototypes, Specifications for HGV, buses and coaches, legislation



eCall for HGV working principle



Handling eCall from a Commercial Vehicle



- Operator receives an emergency call
- GPS location, vehicle type, license nr.
- **CARGO INFORMATION**



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Benefits for emergency services



- Information on the cargo helps operator **make decisions on dispatching actions**
- Special tools, protective gear, deviations ...



Useful cargo information

- Consignor
- Carrier
- Phone numbers
- Type of Cargo, quantity



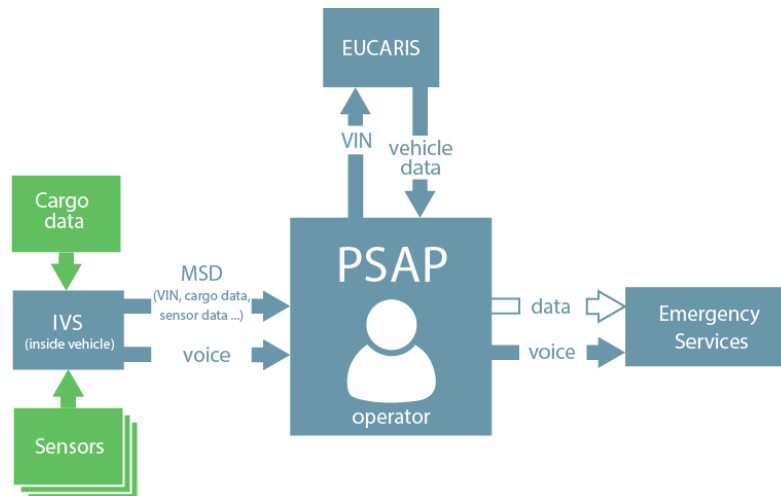
Dangerous goods (ADR)



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Access to cargo information (1)*

- HGV accident, PSAP receives the eCall
- Decodes MSD (VIN, cargo data...)



* According to CEN TS16405 'Schema A'



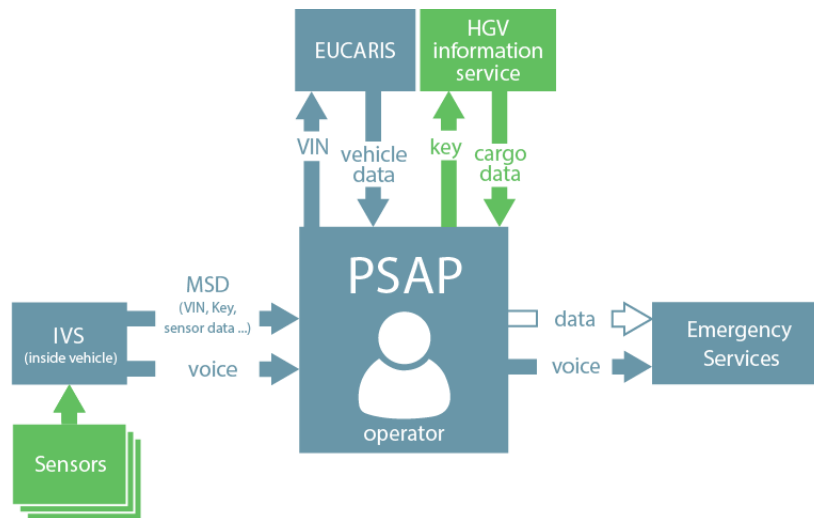
Cargo data



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Access to cargo information (2)*

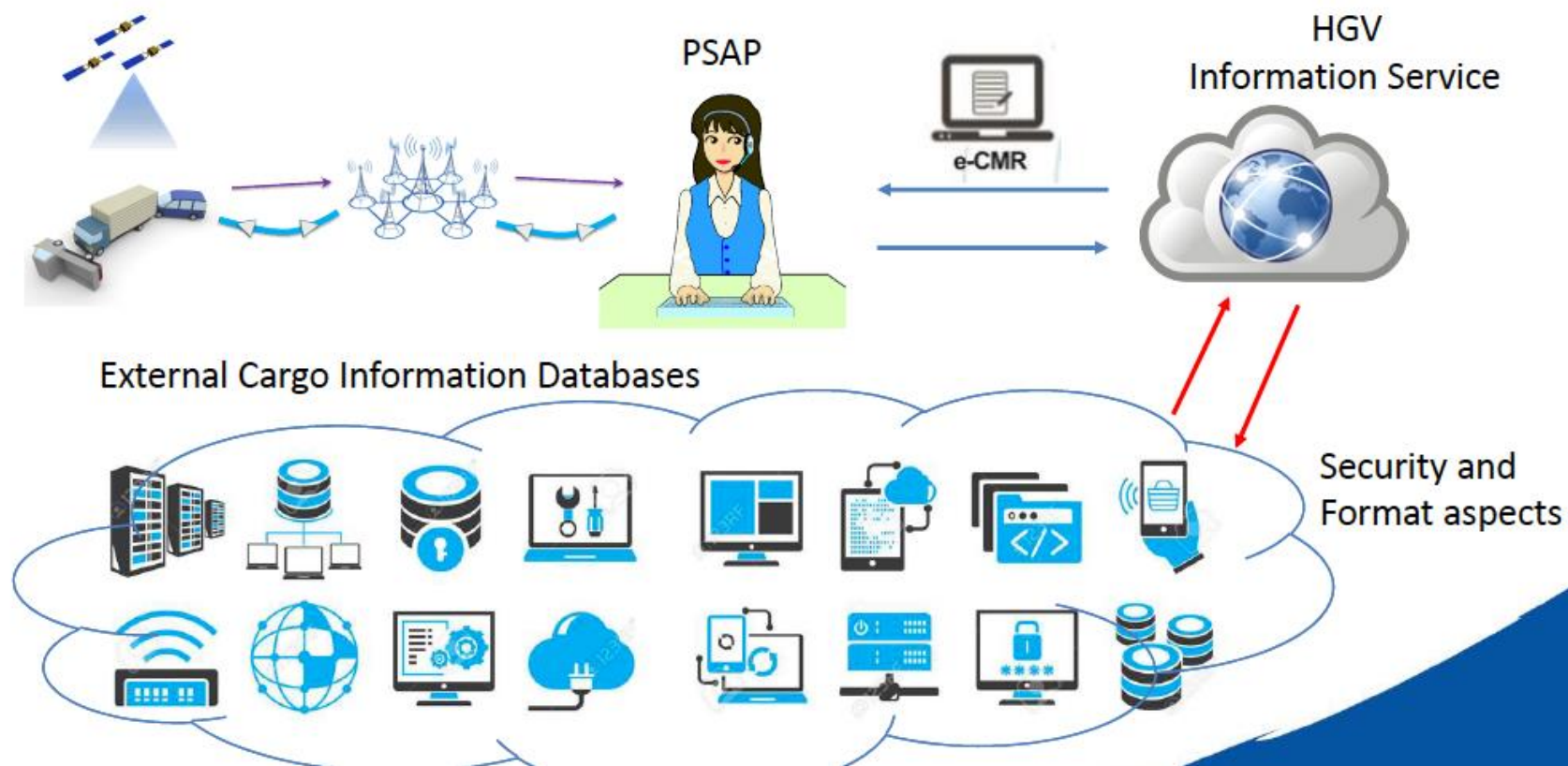
- HGV accident, PSAP receives the eCall
- Decodes MSD (VIN, Key, CargoInfoURL ...)
- Retrieves cargo data using webservices



* According to CEN TS16405 'Schema B'



Cargo Databases in different countries



Interoperability



Type A



Type B



Type B3



Type BF



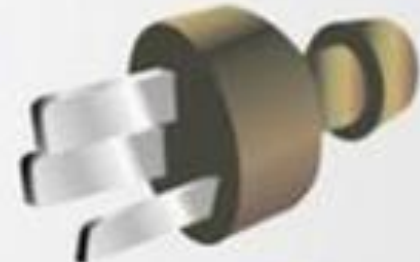
Type C



Type SE



Type O
(without ground
prong)



Type O (with
ground
prong)

Connectivity Everywhere



Consignment note: (e)CMR

1 Transporteur / Expéditeur: **Barth Lagerweij Internationale Transporten BV**
Eilanden 117
5187KZ, 2006 AJ, NEDERLAND

2 Destinataire / Récepteur: **Barth Lagerweij Internationale Transporten BV**
Eilanden 117
5187KZ, 2006 AJ, NEDERLAND

3 Adresse du destinataire: **VERMOEGENSGRADEEL, NEDERLAND**

4 Adresse du destinataire: **GINTERSZO, NEDERLAND**

5 Nature et contenu de la marchandise:

Quantité	Description	Poids
44	soort Natuursteen Hisselsten	3400 kg
20	soort Natuursteen Afglisselsten	1500 kg
400	soort klein materiaal	2200 kg
		400 kg

6 Date de la livraison: **10-11-2012**

7 Remarque: **Barth Lagerweij Internationale Transporten BV**
Eilanden 117
5187KZ, 2006 AJ, NEDERLAND



e-CMR in use

- 17 countries* acceded
- Russia: 2nd February 2018
- Several commercial services



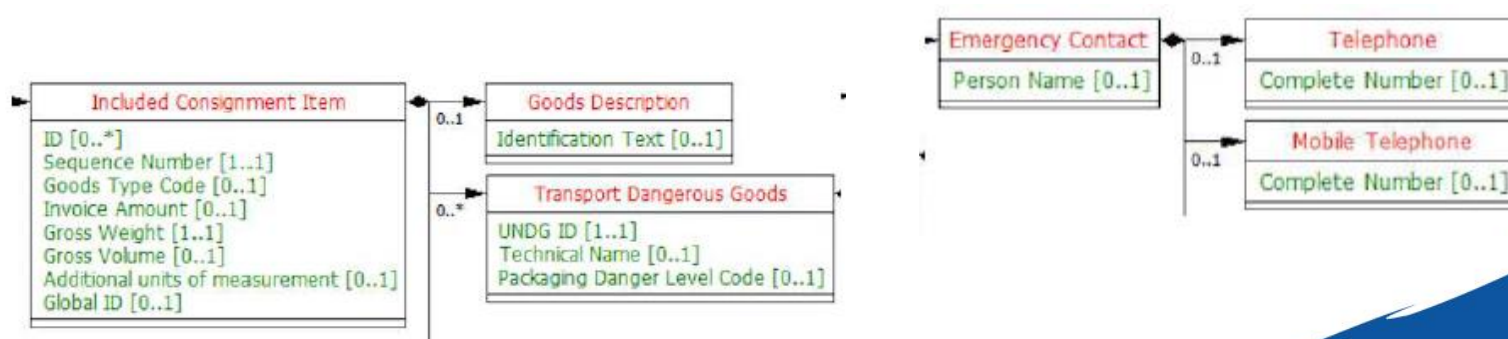
To date 17 countries have acceded the e-CMR protocol; Bulgaria, Czech Republic, Denmark, Estonia, France, Iran, Latvia, Lithuania, Luxembourg, Moldova, Netherlands, Russia, Slovakia, Slovenia, Spain, Switzerland and Turkey.



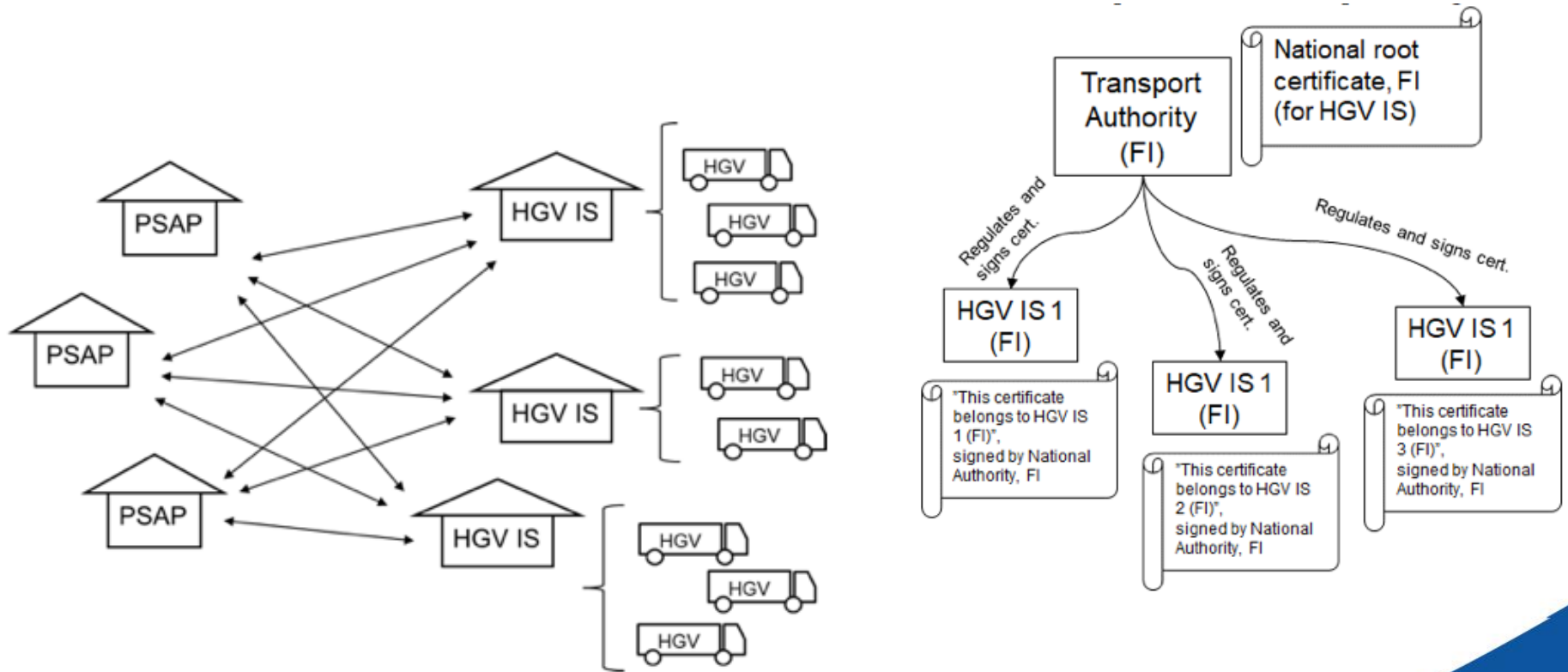
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e-CMR Data format

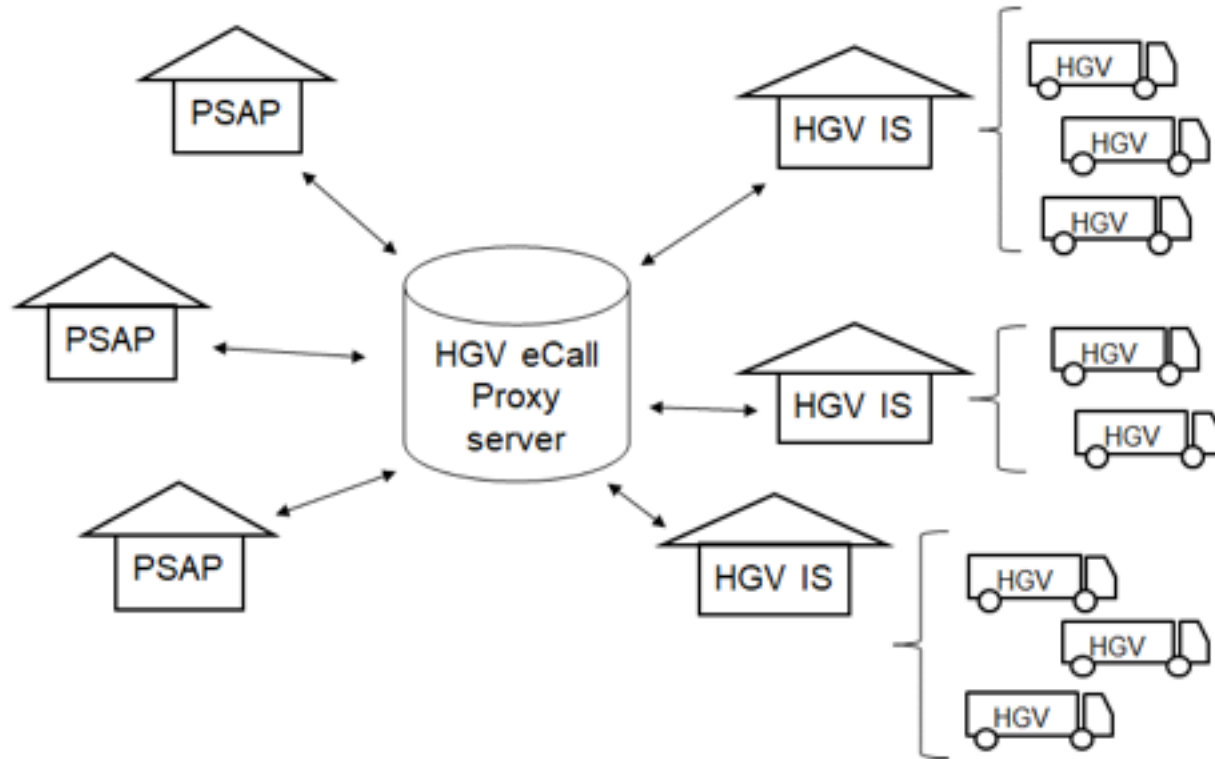
- UN/CEFACT data model for standardised electronic consignment note and appropriate message schemas
- Published 19.2.2018 www.unece.org/cefact/brs/brs_index.html
- Not (yet) ADR compliant



eCall for HGV Architecture (1): PKI



eCall for HGV Architecture (2): e-CMR Proxy



HGV: Triggering eCall ?



eCall for buses and coaches



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Differences

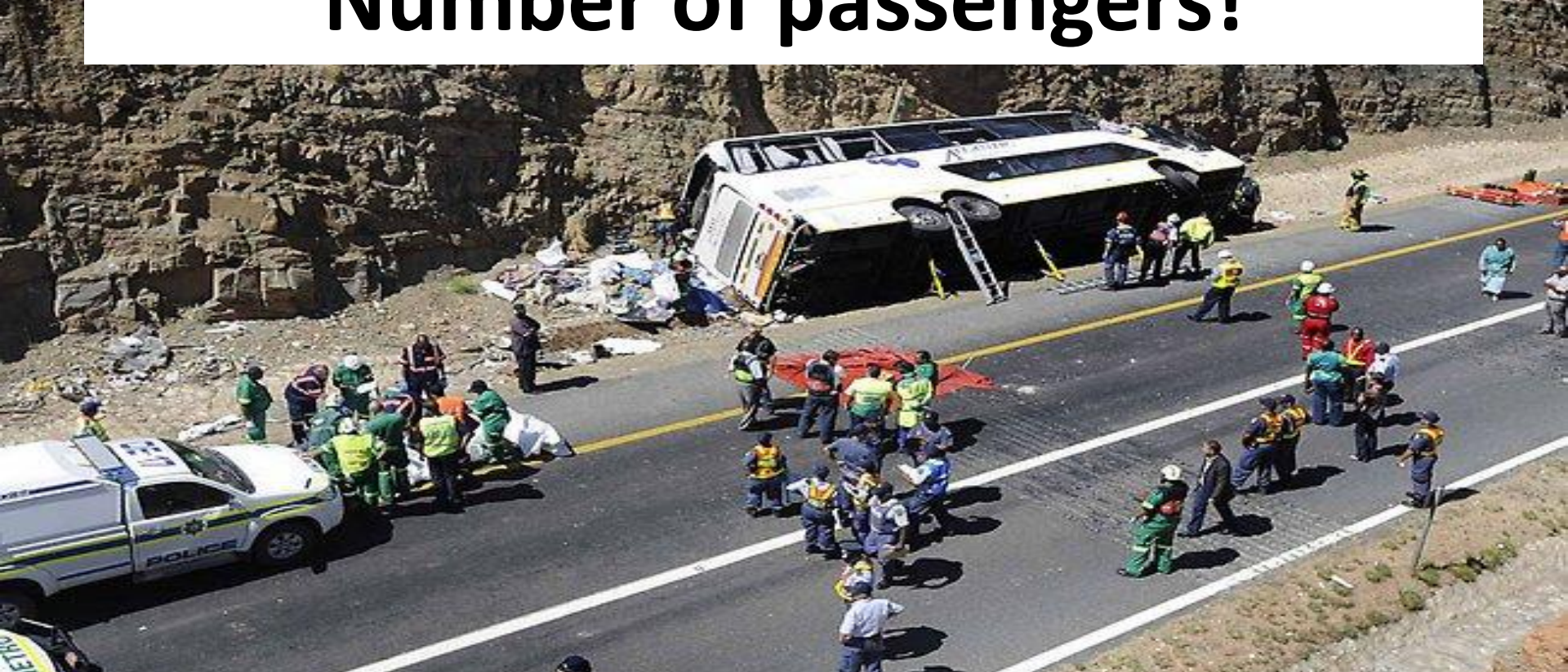


+





Number of passengers!



CEN standard

7.3 Optional additional data concept CB1 held in the IVS

Static data					
Data Element	Source of data	Content of data fields	Data Type	Optional / Mandatory	Benefit to PSAP
<u>SeatedPlaces</u>	IVS	Number of seated places	Integer (0...255)	O	Characterises the affected vehicle
<u>StandingPlaces</u>	IVS	Number of standing place. In case the number is 0 it indicates that the vehicle is a coach.	Integer (0...255)	O	Characterises the affected vehicle
Drive	IVS	Left / Right True: left drive False: Right drive	BOOLEAN	O	Characterises the affected vehicle



Triggering eCall ?



Cross-border eCall



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Border EU-Russia: 4000 km



- EU member states
- EU candidate countries
- EU potential candidates



EU eCall vs. GLONASS

19.5.2015

EN

Official Journal of the European Union

L 123/77

REGULATION (EU) 2015/758 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 29 April 2015

concerning type-approval requirements for the deployment of the eCall in-vehicle system based on the 112 service and amending Directive 2007/46/EC

THE EUROPEAN PARLIAMENT AND THE COUNCIL OF THE EUROPEAN UNION,

Having regard to the Treaty on the Functioning of the European Union, and in particular Article 114 thereof,

Having regard to the proposal from the European Commission,

After transmission of the draft legislative act to the national parliaments,

Having regard to the opinion of the European Economic and Social Committee (1),

Acting in accordance with the ordinary legislative procedure (2),

Whereas:

- (1) A comprehensive Union type-approval system for motor vehicles has been established by Directive 2007/46/EC of the European Parliament and of the Council (3).
- (2) The technical requirements for the type-approval of motor vehicles with regard to numerous safety and environmental elements have been harmonised at Union level in order to ensure a high level of road safety throughout the Union.
- (3) The deployment of an eCall service available in all vehicles and in all Member States has been one of the principal Union objectives in the area of road safety since 2003. In order to achieve that objective, a series of initiatives have been launched, as part of a voluntary deployment approach, but have not achieved sufficient progress to date.
- (4) In order to further improve road safety, the Commission Communication of 21 August 2009 entitled 'eCall: Time for Deployment' proposed new measures to deploy an in-vehicle emergency call service in the Union. One of the suggested measures was to make mandatory the fitting of 112-based eCall in-vehicle systems in all new types of vehicles starting with vehicles of categories M₁ and N₁ as defined in Annex II to Directive 2007/46/EC.
- (5) On 3 July 2012, the European Parliament adopted a resolution on eCall: a new 112 service for citizens, which urged the Commission to submit a proposal within the framework of Directive 2007/46/EC in order to ensure the mandatory deployment of a public, 112-based eCall system by 2015.
- (6) It is still necessary to improve the operation of the 112 service throughout the Union, so that it provides assistance swiftly and effectively in emergencies.
- (7) The Union eCall system is expected to reduce the number of fatalities in the Union as well as the severity of injuries caused by road accidents, thanks to the early alerting of the emergency services. The mandatory introduction of the 112-based eCall in-vehicle system, together with the necessary and coordinated infrastructure upgrade in public mobile wireless communications networks for conveying eCalls and Public Safety Answering Points (PSAPs) for receiving and handling eCalls, would make the service available to all citizens and thus contribute to the reduction of fatalities and severe injuries, of costs relating to healthcare, of congestion caused by accidents and of other costs.

МЕЖГОСУДАРСТВЕННЫЙ СОВЕТ ПО СТАНДАРТИЗАЦИИ, МЕТРОЛОГИИ И СЕРТИФИКАЦИИ
(МГС)
INTERSTATE COUNCIL FOR STANDARDIZATION, METROLOGY AND CERTIFICATION
(ISC)

МЕЖГОСУДАРСТВЕННЫЙ
СТАНДАРТ

ГОСТ
33474—
2015

Глобальная навигационная спутниковая система АППАРАТУРА СПУТНИКОВОЙ НАВИГАЦИИ ДЛЯ ОСНАЩЕНИЯ КОЛЕСНЫХ ТРАНСПОРТНЫХ СРЕДСТВ

Методы испытаний на соответствие требованиям
по электробезопасности, климатическим
и механическим воздействиям

Издание официальное

 Москва
Стандартинформ
2017



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Harmonised eCall European Deployment

Cross-border eCall

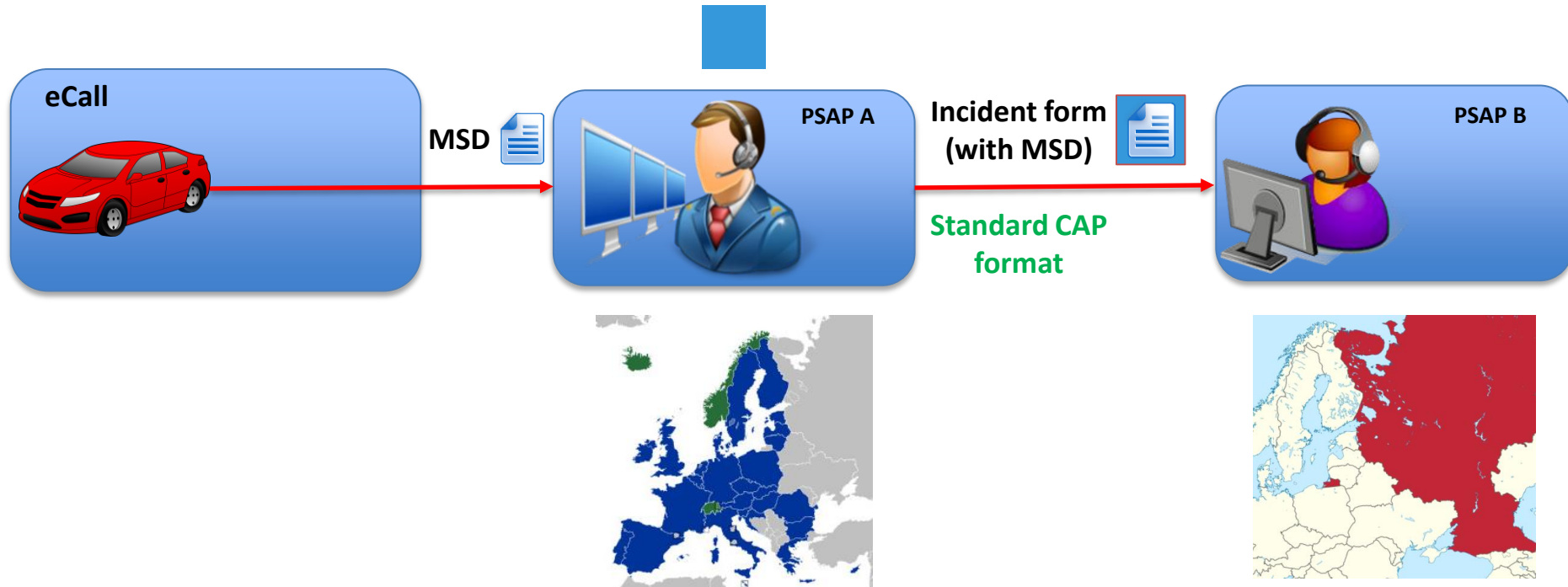
- EU vehicles entering Russia
- Russian vehicles entering EU
- Near-border scenario: mobile signal picked up by foreign network, emergency call answered by operator across the border
- Need to exchange accident info between EU/Russia emergency services



- eCall/GLONASS interoperability testing (as proposed by VTT Finland)
- Presented eCall for HGV concept to GLONASS

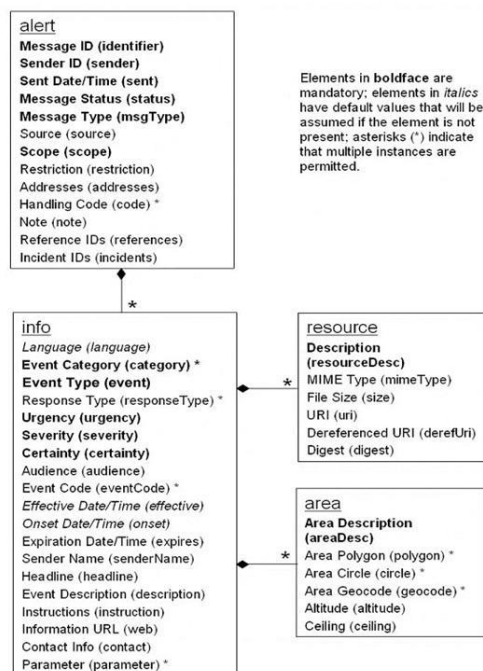


MSD-to-PSAP-to-PSAP: cross-border



CAP – Common Alerting Protocol

- Format for exchanging all-hazard emergency alerts and public warnings over all kinds of networks



<https://docs.oasis-open.org/emergency/cap/v1.2/CAP-v1.2-os.html>



Next steps

- Agree how to exchange information in case of accident
- Develop architecture
- Pilot a solution (with e-CMR)



Events



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ITS Strasbourg

- 19 - 22 June 2017



Demo tour: Torino, Italy

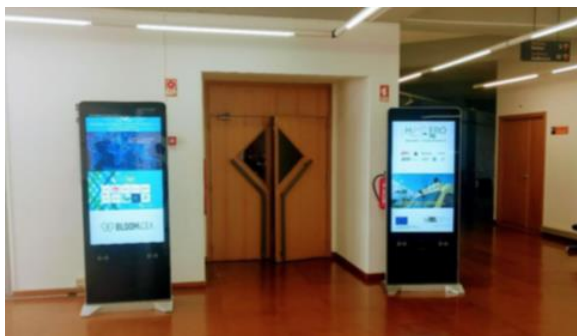
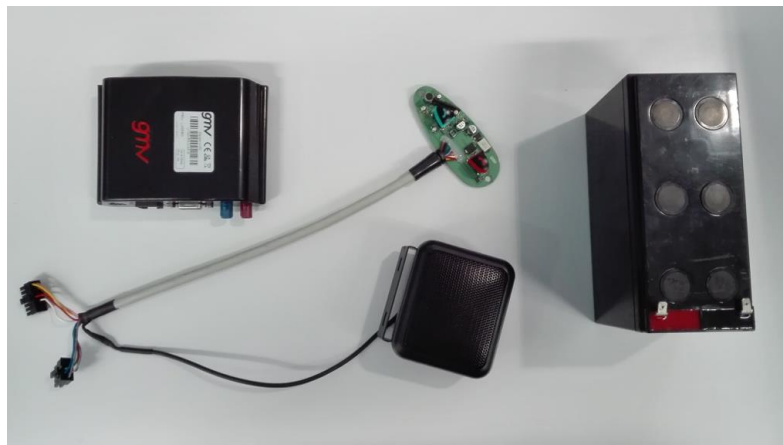
- SmartMobilityWorld 10-11 October 2017



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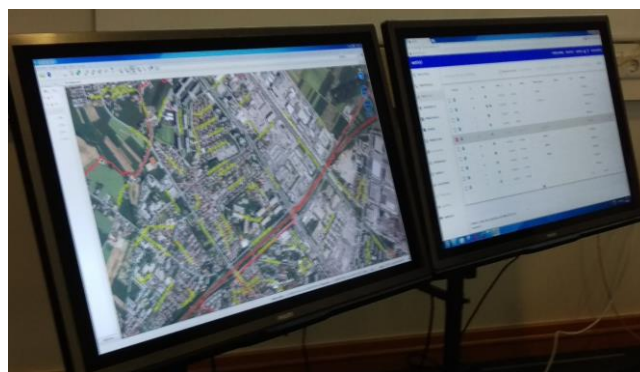
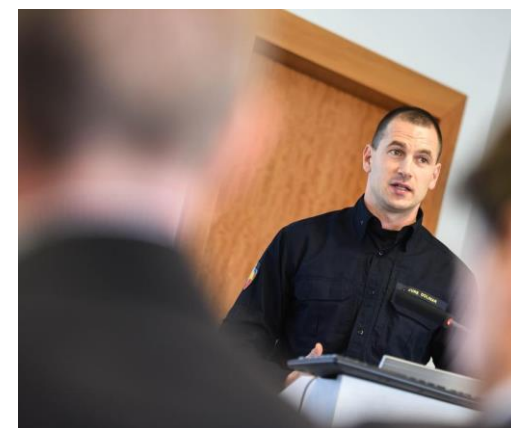
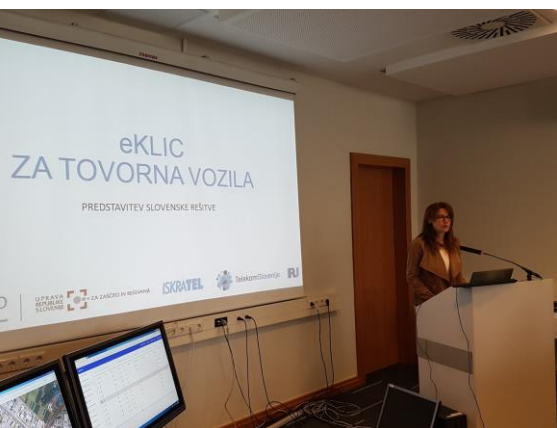
Demo tour: Lisbon, Portugal

- 10 October 2017



Demo tour: Ljubljana, Slovenia

- 16 October 2017



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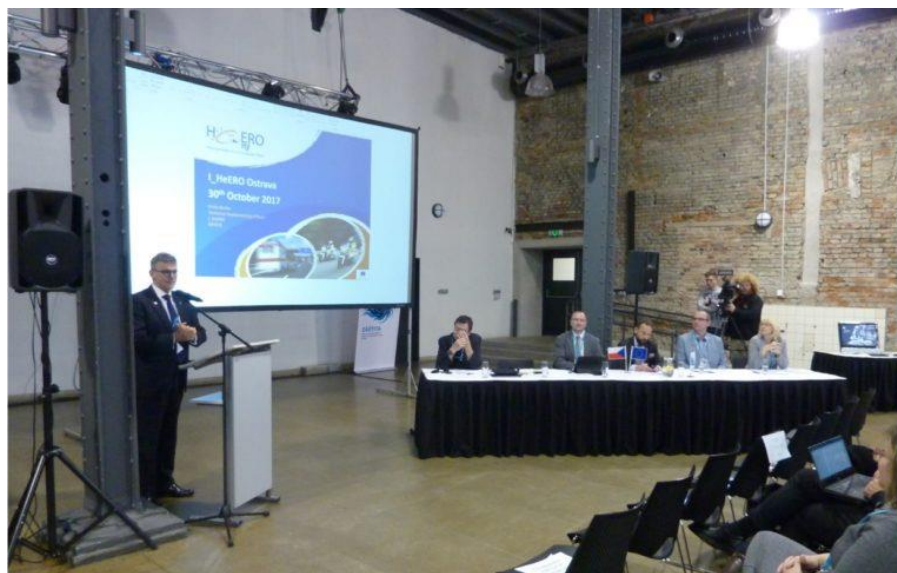
Demo tour: Athens, Greece

- 24 October 2017



Demo tour: Ostrava, Czech republic

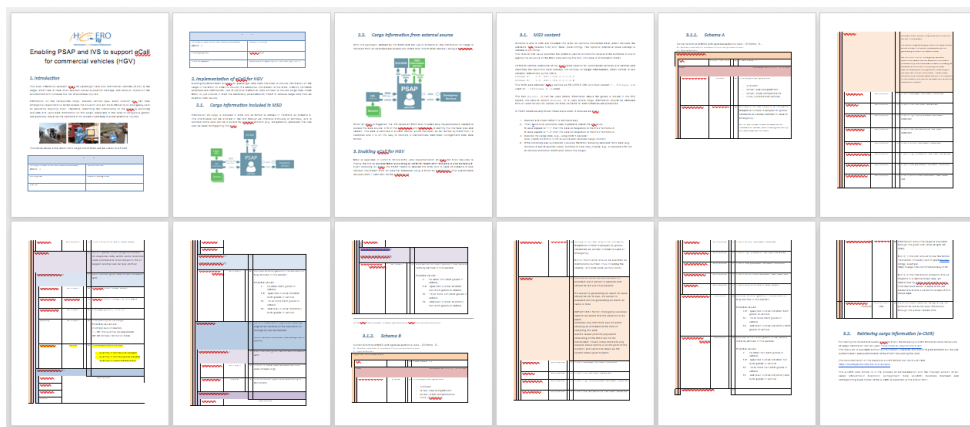
- 30-31 October 2017



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eCall Testfest

- 9-13 October in Kranj, Slovenia
- > 80 registered participants
- Implementation of eCall for HGV
- Instructions for IVS and PSAP developers



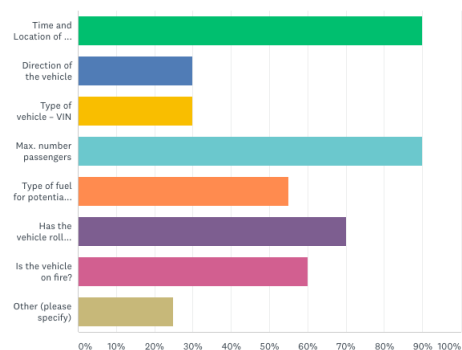
BUSWORLD

- Survey on eCall for buses and coaches



What type of information would be useful to the emergency services in relation to the vehicle and accident to best understand

Answered: 20 Skipped: 0



busworld.
EUROPE KORTRIJK
20-25 OCT 2017



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HERO
112
SOS
Harmonised eCall European Deployment

I_HeERO Activity 2 partners

 Autoritatea de Servicii Spitalicești de Urgență A20		 AGENCY NATIONAL RESEARCH SCIENTIFIC		 BETA 80 GROUP		 Invented For Life	 Innovative engineering	 CEIC	 CETEM
 COSMOTE		 Center for Transport and Traffic Analysis	 CENTRUL DE URGENȚĂ			 DEKRA	 ENTICO	 e-trikala	 FIDESA
 GS Telematix	 gmV		 GPS	 iep	 IES Solutions	 IMT	 IMT	 RU PROJECTS	 ERATEL
 KTM							 MAGNET MARELLI		 Niedersachsen
 NOS	 PIAGGIO GROUP	 POLITECNICO MILANO 1863	 PT	 PTL		 WOLFSBURG	 telematix	 TELECOM	 Teamnet
 Telekom	 UNIMORE	 eledia		 VITKOVICE	 VITKOVICE	 vodafone	 YAMAHA		

Thank you!



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