

Informal document **GRSG-114-34**  
(114th GRSG, 9-13 April 2018,  
agenda item 11.)



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# eCall for Heavy Goods Vehicles

**11 April 2018, Geneva**  
UNECE

[iru.org](http://iru.org)

# FIRST CAR ACCIDENT: 1891



**Today: accident every 4 sec**

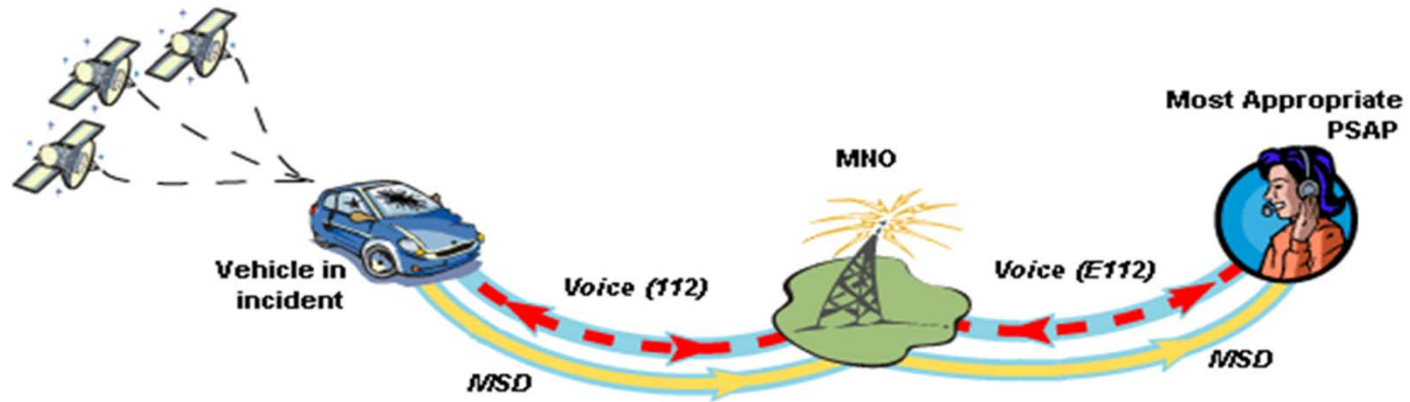


eCall device (“IVS”)





# eCall working principle





# eCall deployment (1)



- Mandatory for new vehicles 31.3.2018  
M1,N1
- Existing custom implementations (TPSP)



# eCall deployment (2)

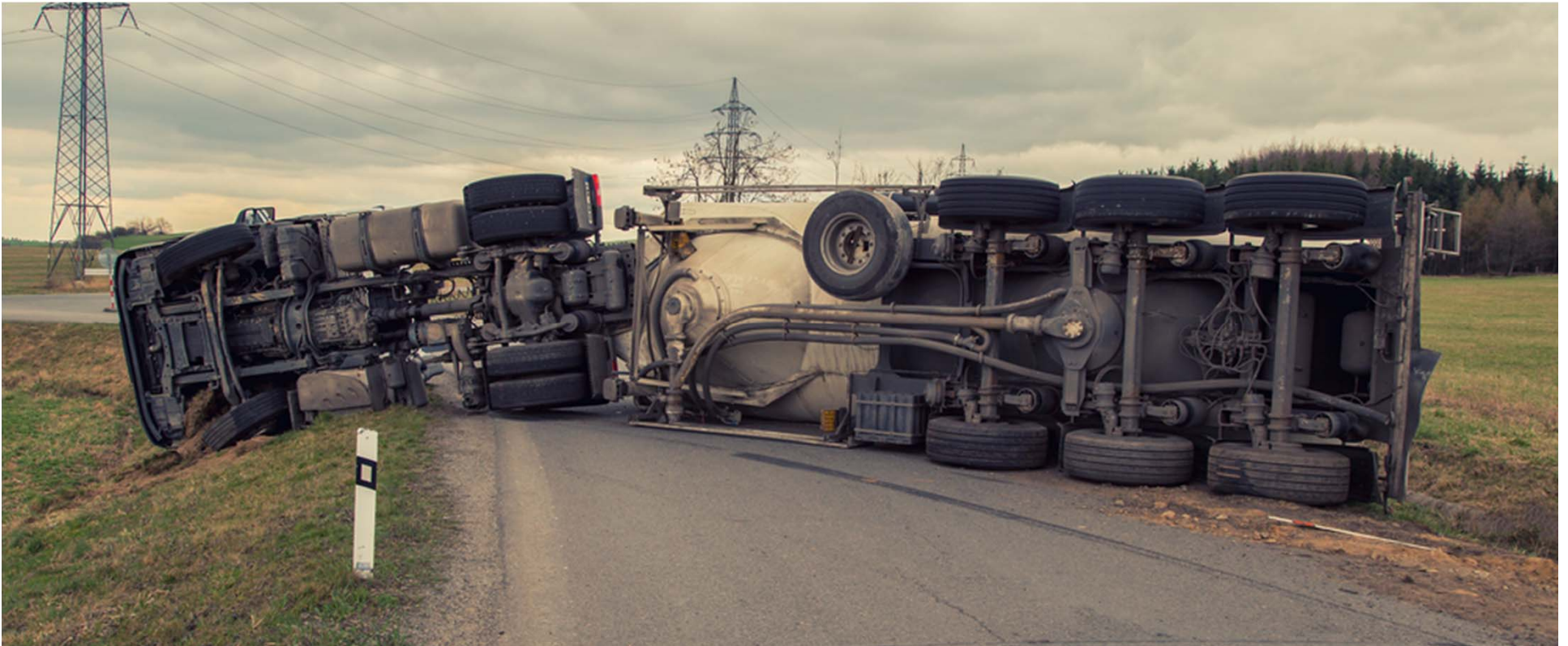


- Retrofitting NOT required
- NOT required for motorcycles and commercial vehicles (HGV, buses and coaches)
- CEN TS16405: standard for HGV

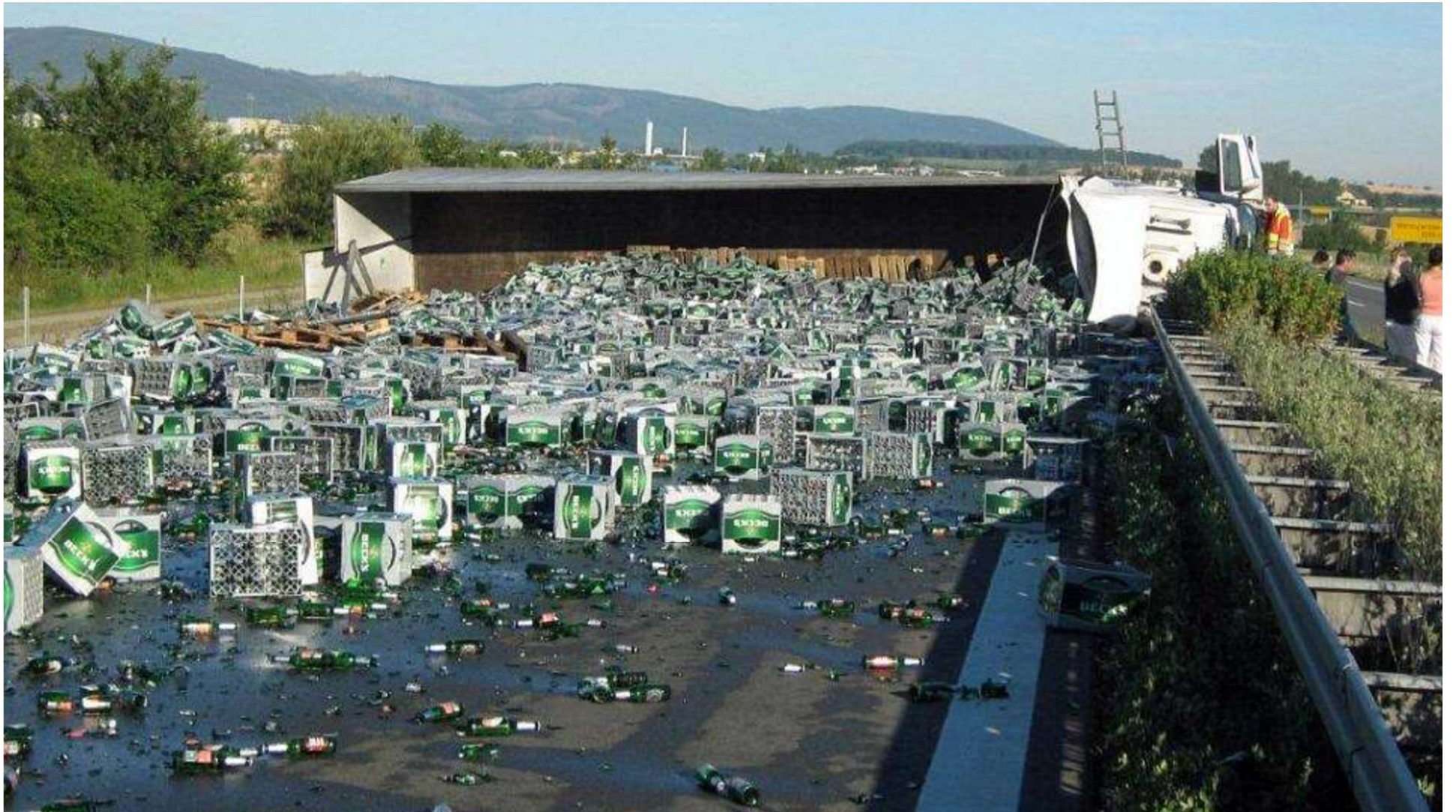




# Why eCall for Commercial Vehicles?























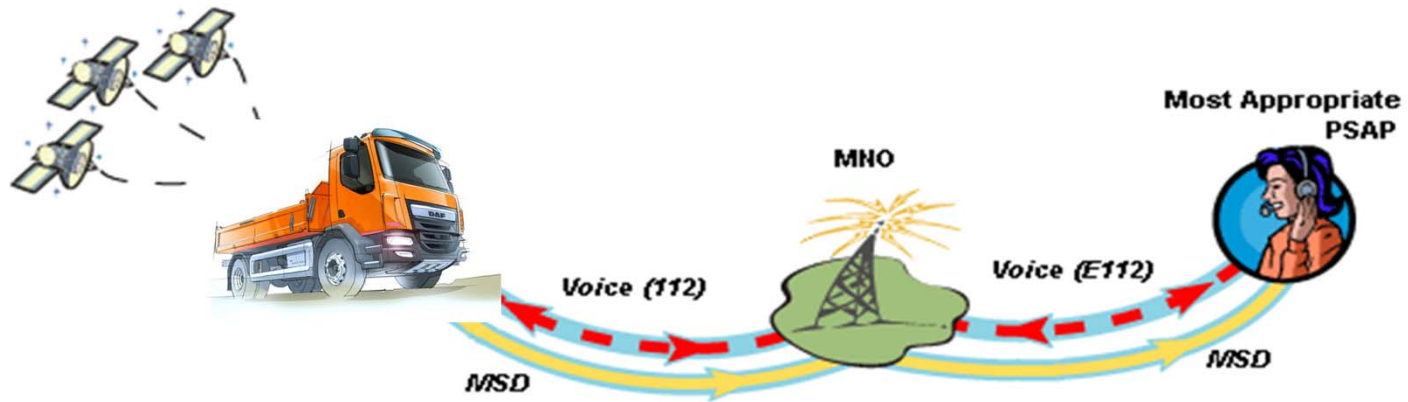
**HIGHLY DISRUPTIVE!**





**RJ**

# eCall for HGV working principle



# Handling eCall from a Commercial Vehicle



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



# 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



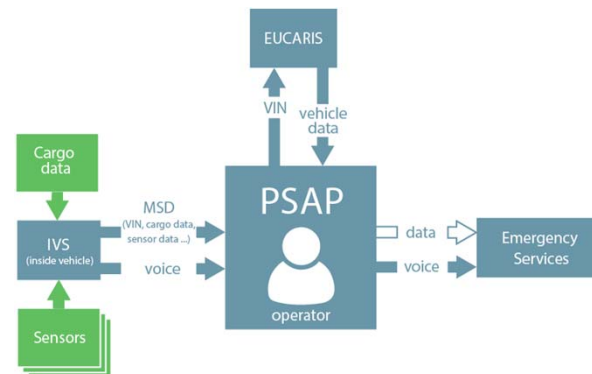
# Dangerous goods (ADR)



# Access to cargo information (1)\*



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



\* According to CEN TS16405 'Schema A'

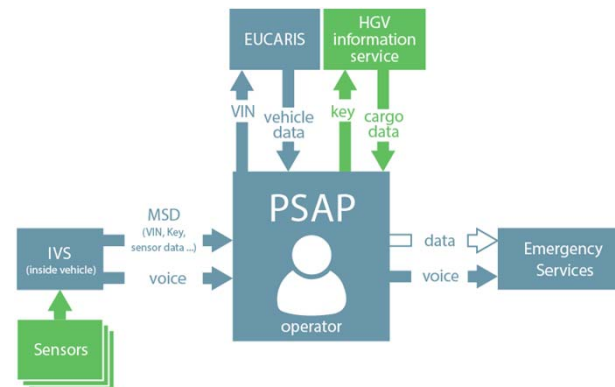
# Cargo data



# Access to cargo information (2)\*



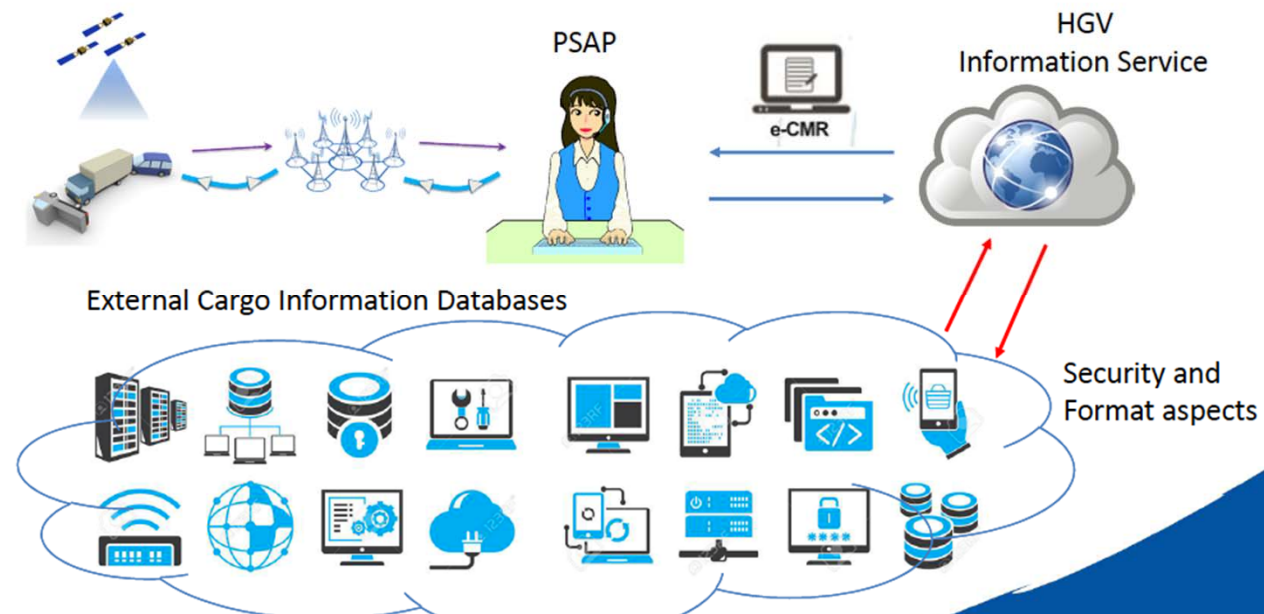
- HGV accident, PSAP receives the eCall
- Decodes MSD (VIN, Key, CargoInfoURL ...)
- Retrieves cargo data using webservices



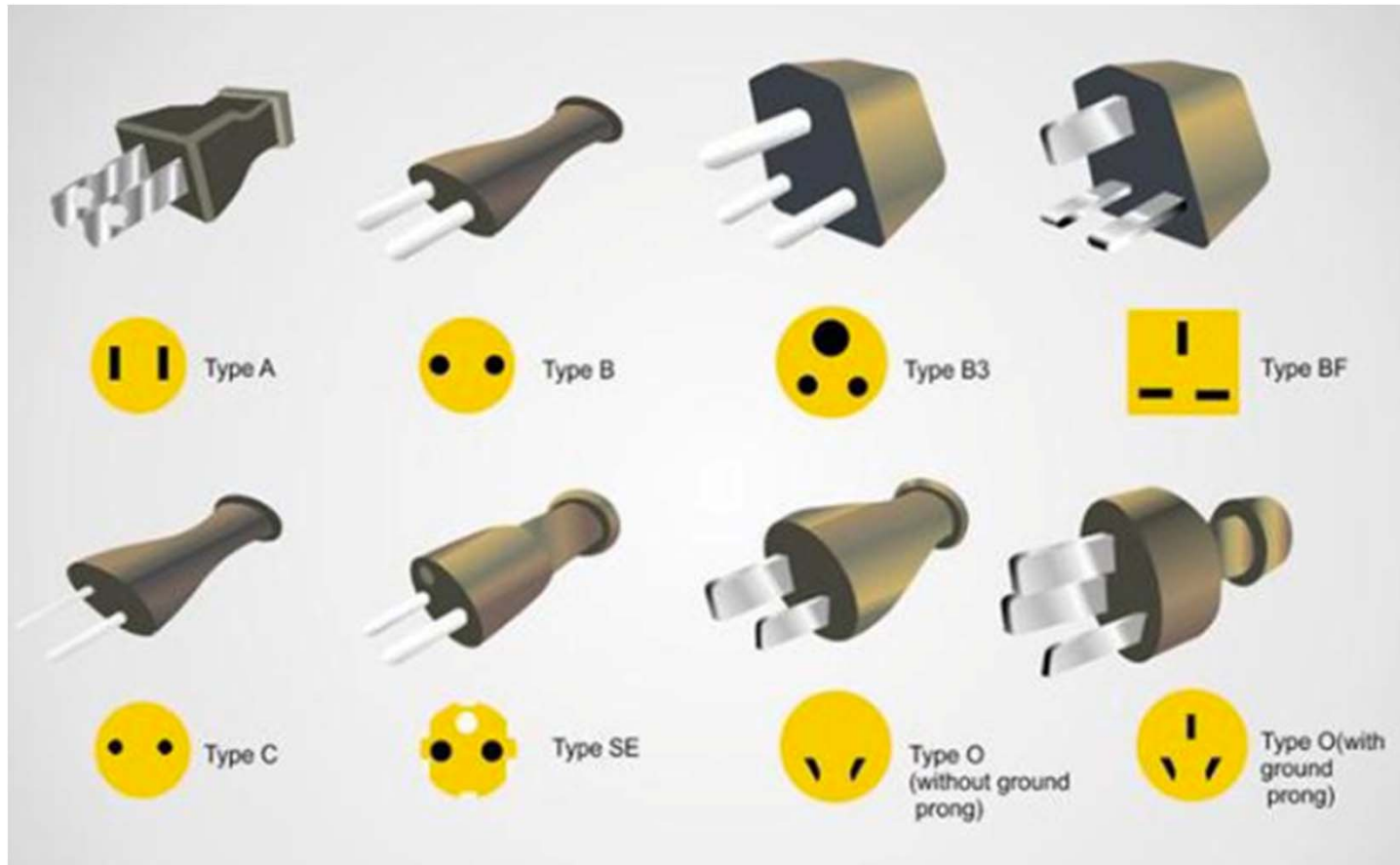
\* According to CEN TS16405 'Schema B'



# 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



The image shows a consignment note form (CMR) with the following details:

- 1. Expéditeur (Sender):** Bakt Lagervej Internationale Transporter BV, Kromhout 117, GENTERD 2090 AJ, NEDERLAND.
- 2. Destinataire (Receiver):** Bakt Lagervej Internationale Transporter BV, 2906 AJ, GENTERD NL, TEL. 0201-146-8800.
- 3. Adresse de livraison (Delivery Address):** VERHEGSTRANDEL, NEDERLAND.
- 4. Adresse de destination (Destination Address):** GENTERD, NEDERLAND.
- 5. Date de livraison (Delivery Date):** 10-11-2012.
- 6. Description des marchandises (Description of Goods):**

Quantité (Quantity)	Description (Description)	Poids (Weight)
48 Boîtes (48 Boxes)	Naturelles (Natural)	3400 kg
20 Boîtes (20 Boxes)	Naturelles (Natural)	1500 kg
400 Boîtes (400 Boxes)	Naturelles (Natural)	2200 kg
400 Boîtes (400 Boxes)	Naturelles (Natural)	400 kg
- 7. Poids (Weight):** 3400 kg, 1500 kg, 2200 kg, 400 kg.
- 8. Date de livraison (Delivery Date):** 10-11-2012.
- 9. Signature (Signature):** Bakt Lagervej Internationale Transporter BV, Kromhout 117, GENTERD 2090 AJ, NL.
- 10. Signature (Signature):** Kromhout, BV-KV-75.



# 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, Moldavia, Netherlands, Russia, Slovakia, Slovenia, Spain, Switzerland and Turkey.

# e-CMR Data format

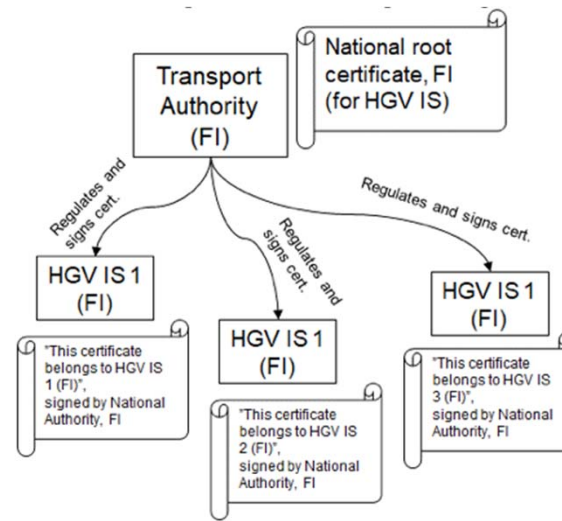
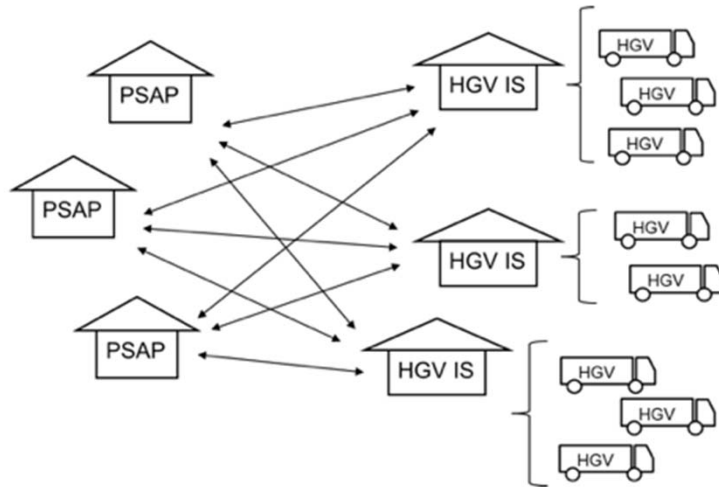


- UN/CEFACT data model for standardised electronic consignment note and appropriate message schemas
- Published 19.2.2018 [www.unece.org/cefact/brs/brs\\_index.html](http://www.unece.org/cefact/brs/brs_index.html)
- Not (yet) ADR compliant

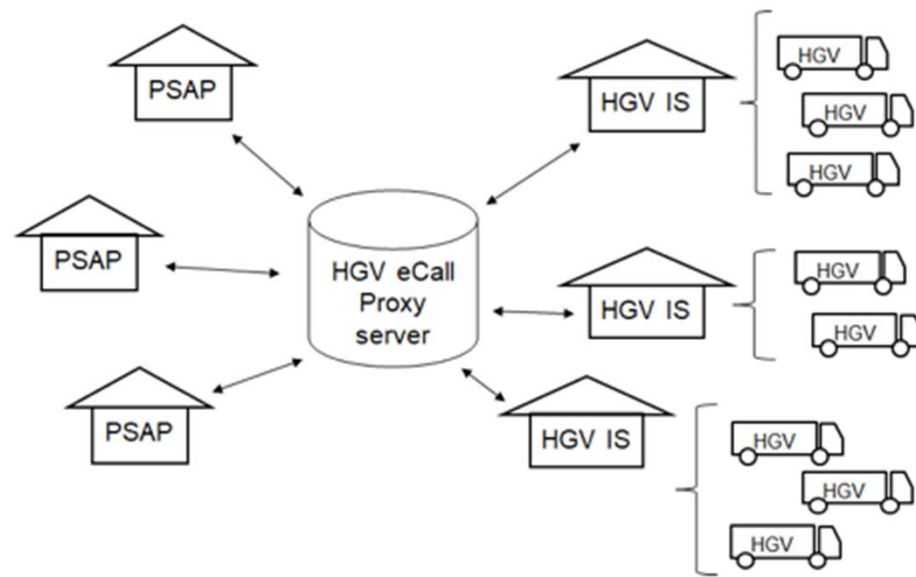




# eCall for HGV Architecture (1): PKI



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





eCall for buses and coaches

# Differences



+





# eCall for Buses and Coaches



- **Number of Passengers**





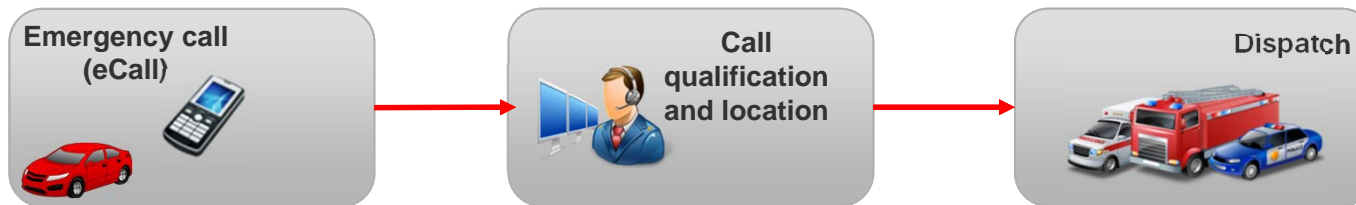
# Cross-border eCall

# Cross-border eCall



- EU trucks entering Russia
- Russian trucks 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

# Interoperability among PSAPs



- Emergency call to 112
- Call taker qualifies the call and locates the caller
- Dispatcher sends the most appropriate type of resources

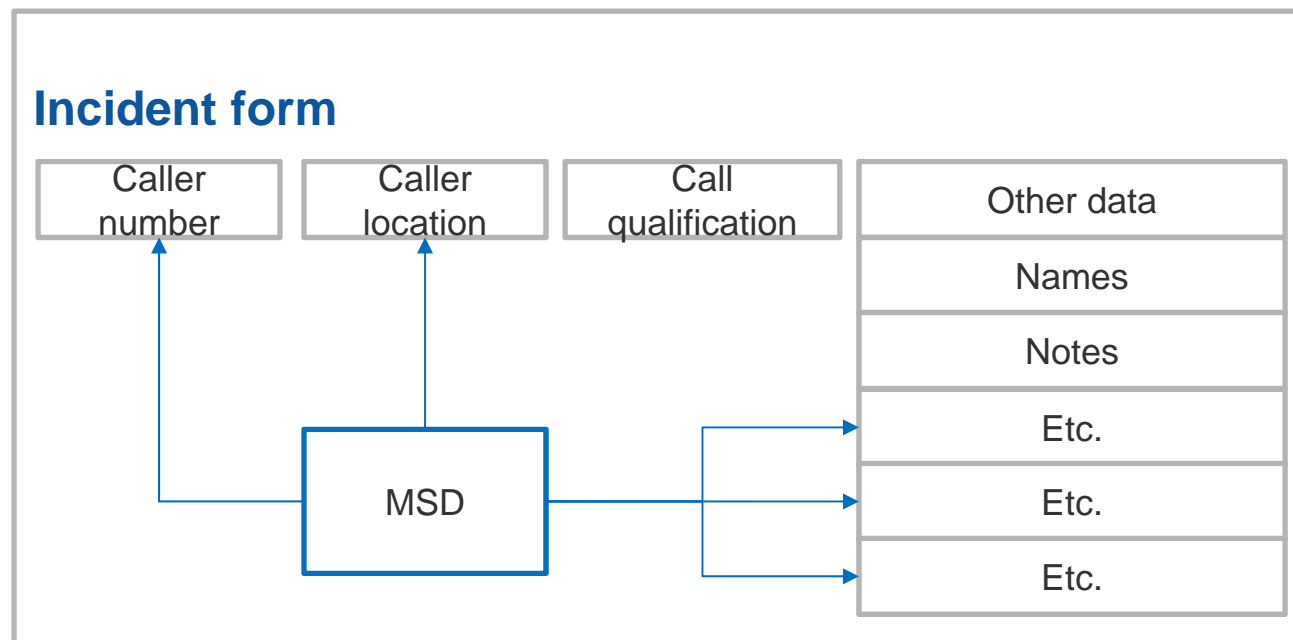


# The concept of “Incident form”

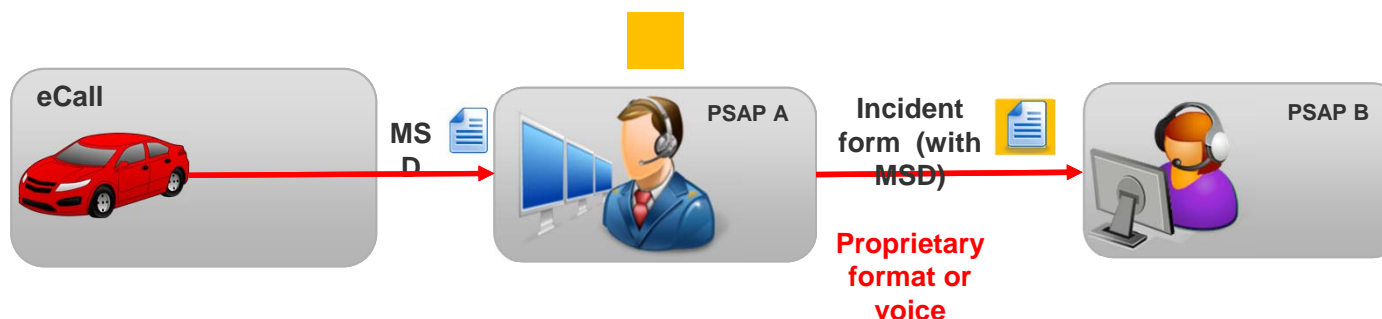
**Incident form**

Caller number	Caller location	Call qualification	Other data
			Names
			Notes
			Etc.
			Etc.
			Etc.

# The concept of “Incident form”

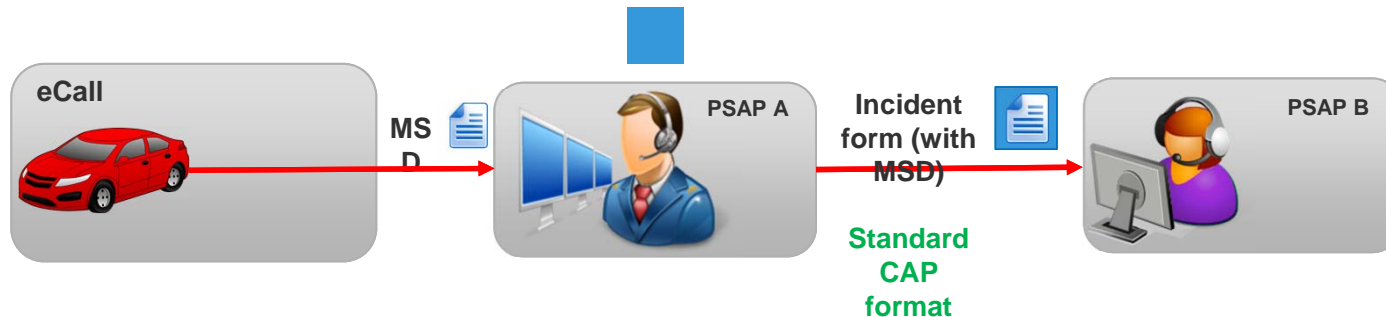


# MSD-to-PSAP-to-PSAP: today



- The **MSD** is received by **PSAP A**
- Incident form is transmitted to **PSAP B**
- “Incident form” (if existing) is built using a proprietary format
  - **this prevents interoperability** in multi-PSAP cooperation environments
  - each receiving PSAP should know and interpret **many different formats**

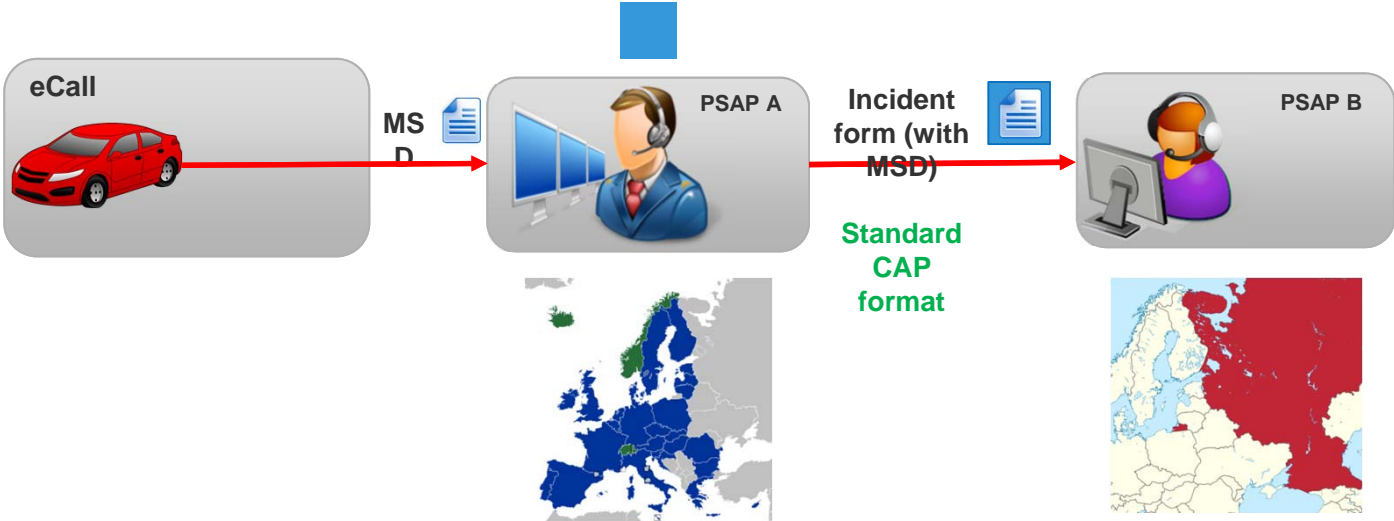
# MSD-to-PSAP-to-PSAP: tomorrow



- The **MSD** is received by **PSAP A**
- Incident form is transmitted to **PSAP B**
- Different, proprietary Incident forms are replaced by a common, standard format: **CAP**
  - **interoperability is much easier**, as only **MSD** and **CAP** knowledge is required
  - “**future-proof**” solution, thanks to the **extensibility** and **flexibility** of the **CAP** structure



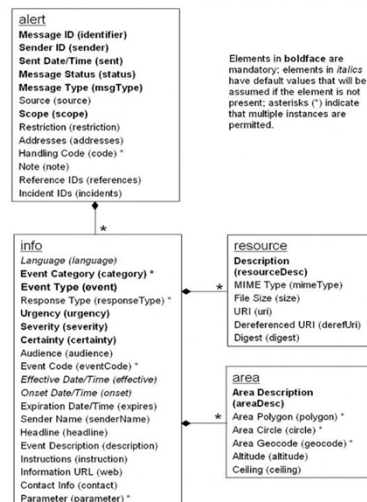
# MSD-to-PSAP-to-PSAP: cross-border



# 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>

## Current status

- eCall/GLONASS interoperability testing starting in April (with VTT Finland)
- 26<sup>th</sup> Feb (Moscow) Presented the eCall for HGV concept to ERA-GLONASS
- Discussed the options to exchange information in case of accident

# Next steps



- Discuss the options to exchange information in a wider context
- Define the needs and requirements
- Design an architecture
- Develop a reference model – pilot/test
- Standards and regulation





eCall for HGV:  
Demonstration of prototypes

# ITS Strasbourg



- 19 - 22 June 2017



# Demo tour: Torino, Italy



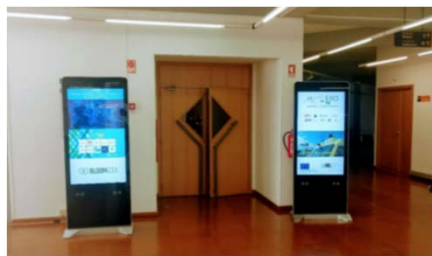
- SmartMobilityWorld 10-11 October 2017



# Demo tour: Lisbon, Portugal



- 10 October 2017

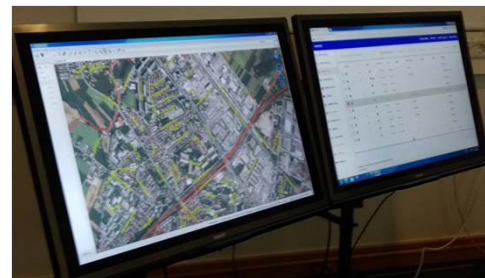
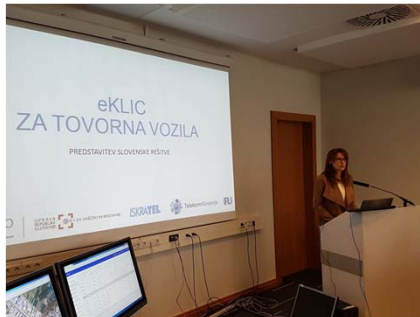




# Demo tour: Ljubljana, Slovenia



- 16 October 2017



# Demo tour: Athens, Greece



- 24 October 2017



# Demo tour: Ostrava, Czech republic



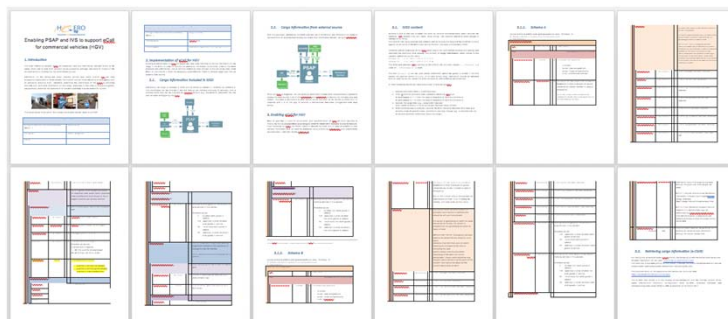
- 30-31 October 2017



# eCall Testfest



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





# BUSWORLD

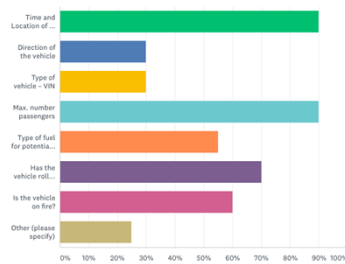


- Survey on eCall for buses and coaches



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

# I\_HeERO project partners




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