



# After-Market eCall for vehicle categories M1&N1

## Project sAFE - Activity 3.1

eCall Days 2020  
Hamburg  
14<sup>th</sup> and 15<sup>th</sup> October 2020

20-10-01



Co-financed by the Connecting Europe  
Facility of the European Union

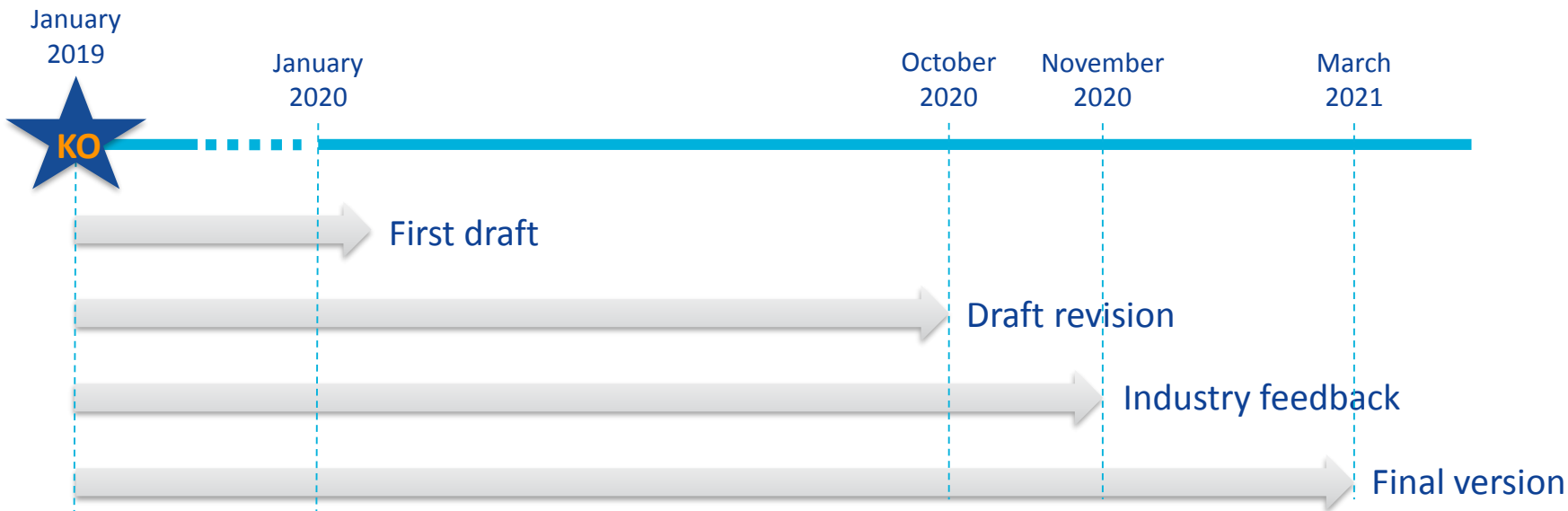




Development of  
specification by  
the industry  
**(SAFE partners)**

Submission of  
developed  
specification to  
standard bodies  
**(CEN 278 WG15)**

**Aftermarket eCall  
specification for  
M1 and N1 vehicle  
categories**



## M1



## Vehicles for carriage of passengers

standard cars with no more than eight seats in addition to the driver's

## N1



## Light vehicles for carriage of goods

four-wheeled power-driven vehicles having a maximum mass not exceeding 3.5 tonnes

## Regulation (EU) 2017/79

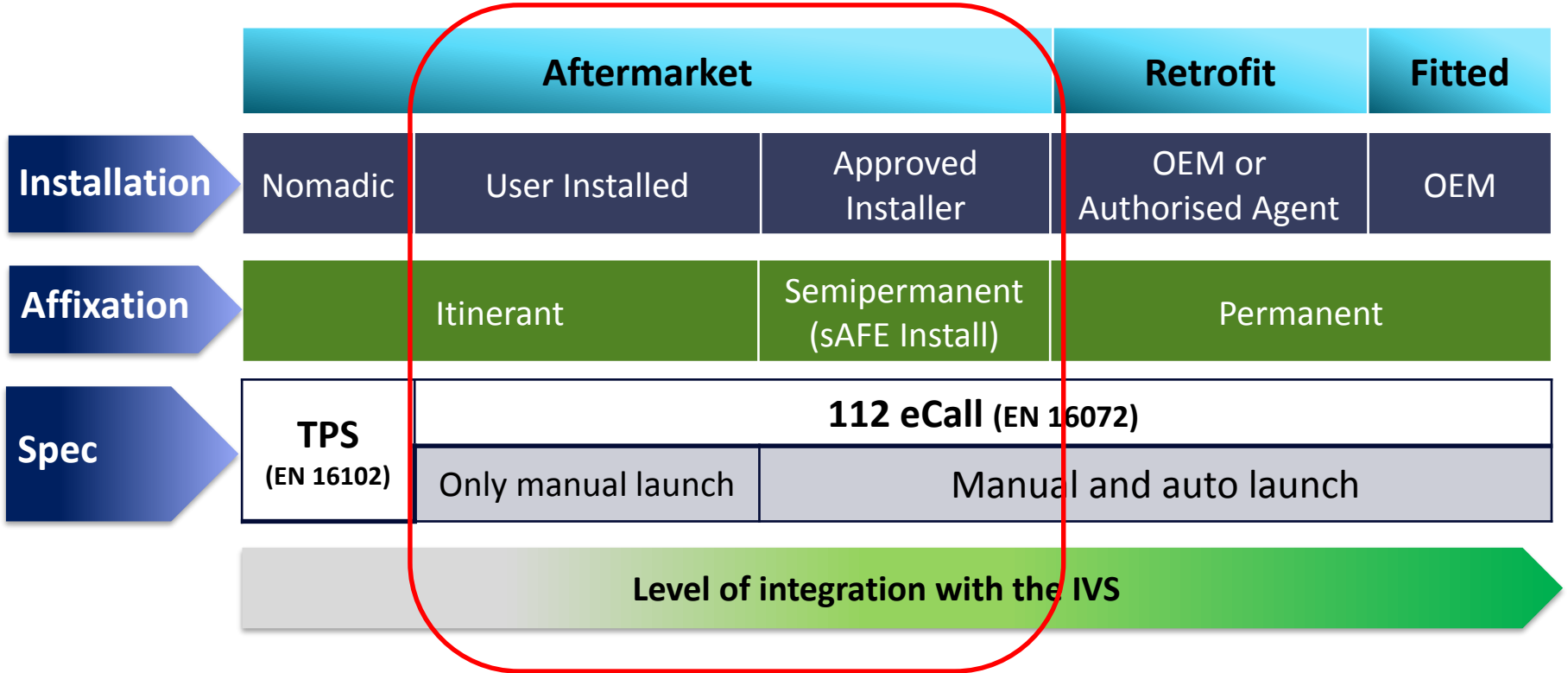
Type approval after  
April 1st 2018

Only applies to  
categories M1&N1



The rest of vehicles and categories:

- are not obligated to include any emergency call functionality
- in the best case, provide a third party service which doesn't follow the standard 112 eCall specification



## General premise

Ensure the correct functionality AND guarantee the **safety** of vehicle occupants.

**Not to increase the risk of injury!!!**

Other installation aspects covered by the specification:

affixation options

audio system

power supply





Some common aspects with regulated eCall systems...

**EN 16072**  
*Intelligent transport systems -  
ESafety - Pan-European eCall  
operating requirements*

Liability

Routing of an eCall

Priorization of an eCall

Post crash performance of in  
vehicle equipment

Location and direction

...and some particularities:

**Aftermarket eCall  
specification for M1&N1  
vehicle categories**

Minimum Set  
of Data (MSD)  
format

Modes of  
operation

HMI aspects

MSD Element	Authorised install	Self-install (*)
VIN Number	VIN Number according to ISO 3779	“AFTERMARKET”
vehiclePropulsionStorageType	One of the types set to “true”, all others set to “false”	All set to “false”
vehicleType	Vehicle definitions class M, N according to directive 2007/46/EC	Set to “passengerVehicleClassM1”
numberOfPassengers	255 : If no information about the number of occupants is available, this parameter needs to be omitted or filled with the representation of value 255	255: As no information about the number of occupants is available, this parameter needs to be filled with the representation of value 255

*(\*) There are still some limitations to be further discussed...*

Aftermarket devices inherently pose a high risk of flooding PSAPs with manual/test/misdial and false automatic eCalls



Aftermarket devices shall only generate **automatic eCalls** in case that they have been installed by an **authorised installer (sAFE-installed)**



Aftermarket **self-installed** eCall devices shall follow EN 16102 for **automatic eCalls** so they are filtered through **third party service providers**

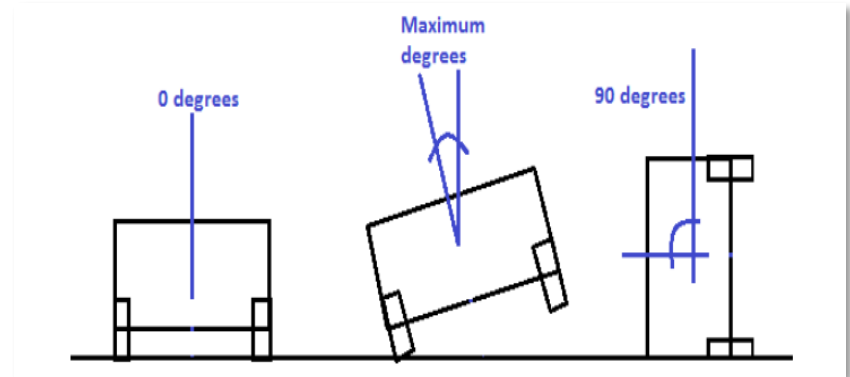
## Recommendations for rollover detection

(OEM & 'SAFE-installed' devices)

Include **rollover sensors** whose function has been validated in appropriate scenarios

The manufacturer is informed about the rollover **patterns of each particular vehicle**

The sensors detect a change in vehicle's orientation of more than **90 degrees** and **vehicle velocity stopped after the overturn is detected**



	EN 16072	TS 17184 or EN 16062
Manual termination of an in progress eCall	●	
Requirements to physical layer		●
Establish voice channel	●	●
Acknowledgment of eCall	●	●
Continuing availability	●	●
PSAP response	●	
eCall Termination	●	●

*EN 16072: Operating requirements*

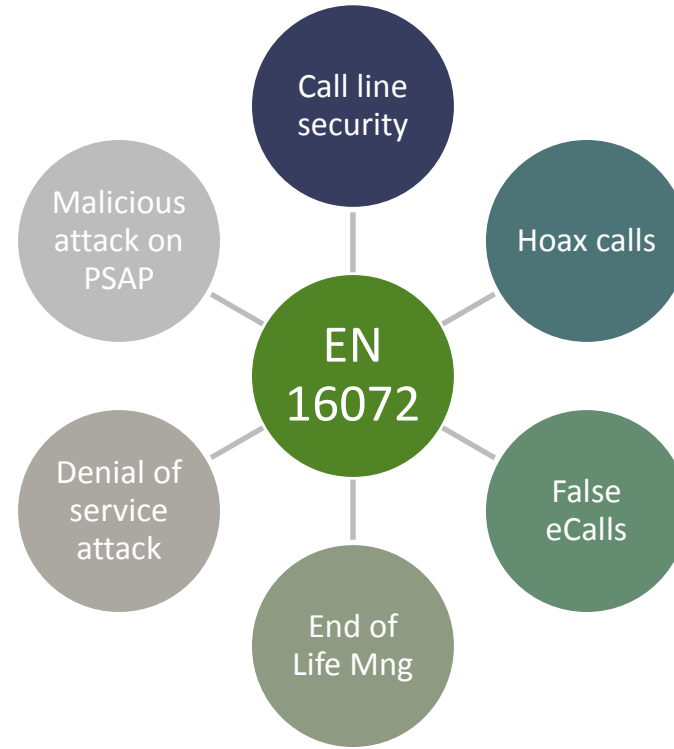
*EN 16062: HLAP for GSM/UMTS circuit switched networks*

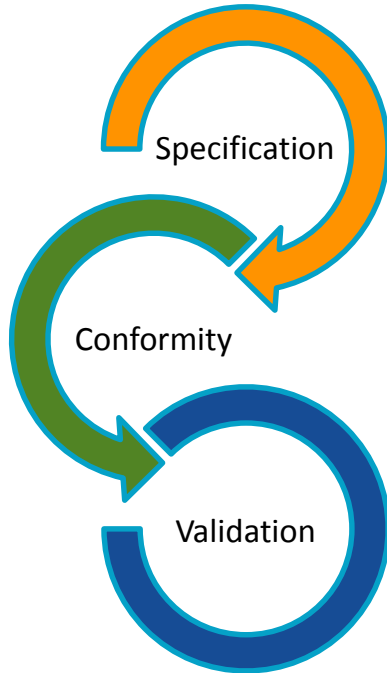
*TS 17184: HLAP for IMS packet switched networks*

**Same level of protection  
as any regulated eCall**



**The same mechanisms  
shall be implemented for  
aftermarket devices**





## **CONFORMITY SPECIFICATION** (*Activity 4*)

Definition of the procedure by which an entity will be authorised to assess the readiness of aftermarket 112 eCall devices **according to the specification**

## **VALIDATION OF MEMBER STATES** (*Activities 5&6*)

Evaluation of aftermarket eCall devices and its correct operation with PSAP **according to the specification**



**There is a need for an aftermarket solution that can benefit all the vehicles in Europe**

Different kind of aftermarket devices according the installer and the level of integration in the vehicle

High risk of generating false eCalls causing problems to PSAPs

Commonalities with existent regulation, but issues and limitations with automatic triggering



# Questions?

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