



Ministry of Transport, Information  
Technology and Communications

# Retrofit eCall devices

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UNLOCKING THE REAL LIFE-SAVING POTENTIAL OF  
THE eCall initiative



# Background

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In April 2015 the final political agreement between the European Parliament and EU member states on mandatory installation of eCall was reached.

The deal requires new models of cars launched in the EU from 31 March 2018 to be fitted with the system.

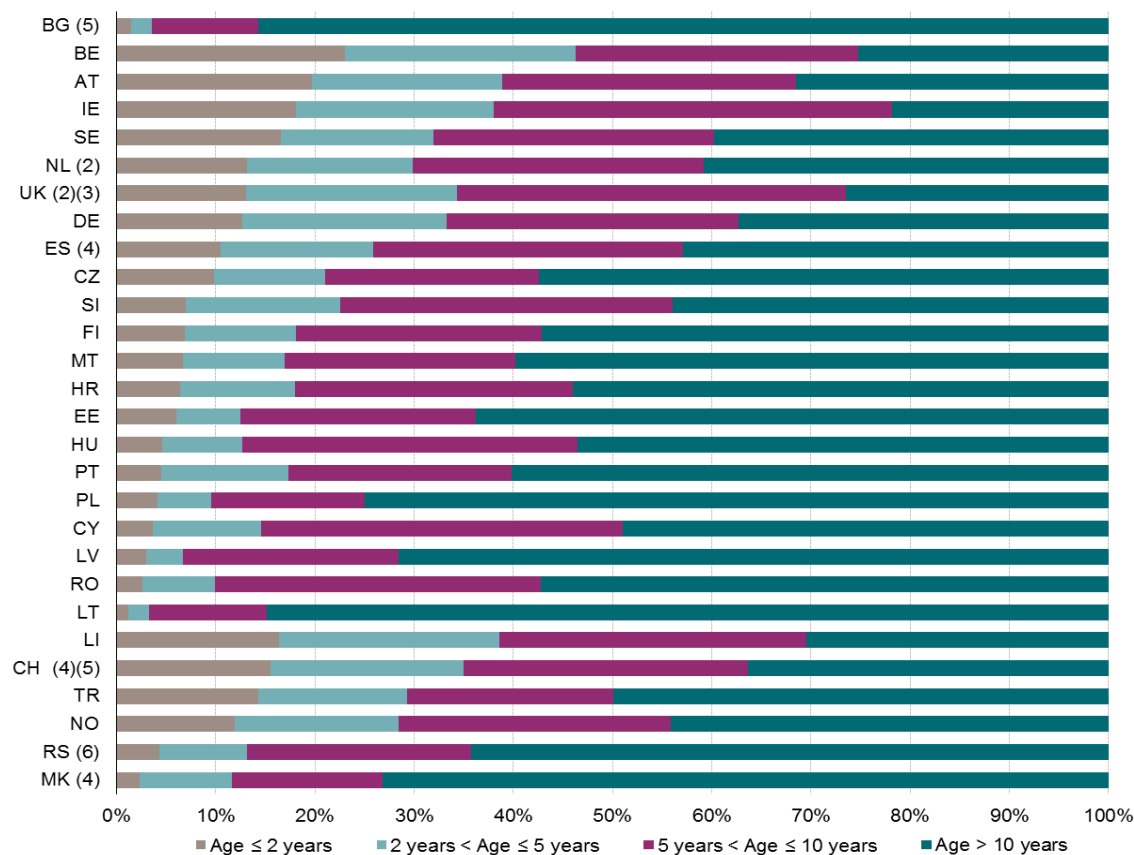
The decision comes after the voluntary deployment of eCall proved to be unsatisfactory. Only around 0.7% of vehicles are currently equipped with private eCall systems in the EU, with numbers barely rising.

*“eCall: We have waited too long for the call that could have saved so many lives”* - Jacob Bangsgaard, Director General of the FIA Region I office



# Rationale for retrofit eCall devices

The deployment of retrofit devices is seen as a prerequisite for the introduction of the eCall at European level, especially in Eastern European countries where the average age of vehicles is much higher compared to Western European countries



*Passenger cars by age, 2013 (% of all passenger cars) Eurostat*

# Rationale for retrofit eCall devices(2)

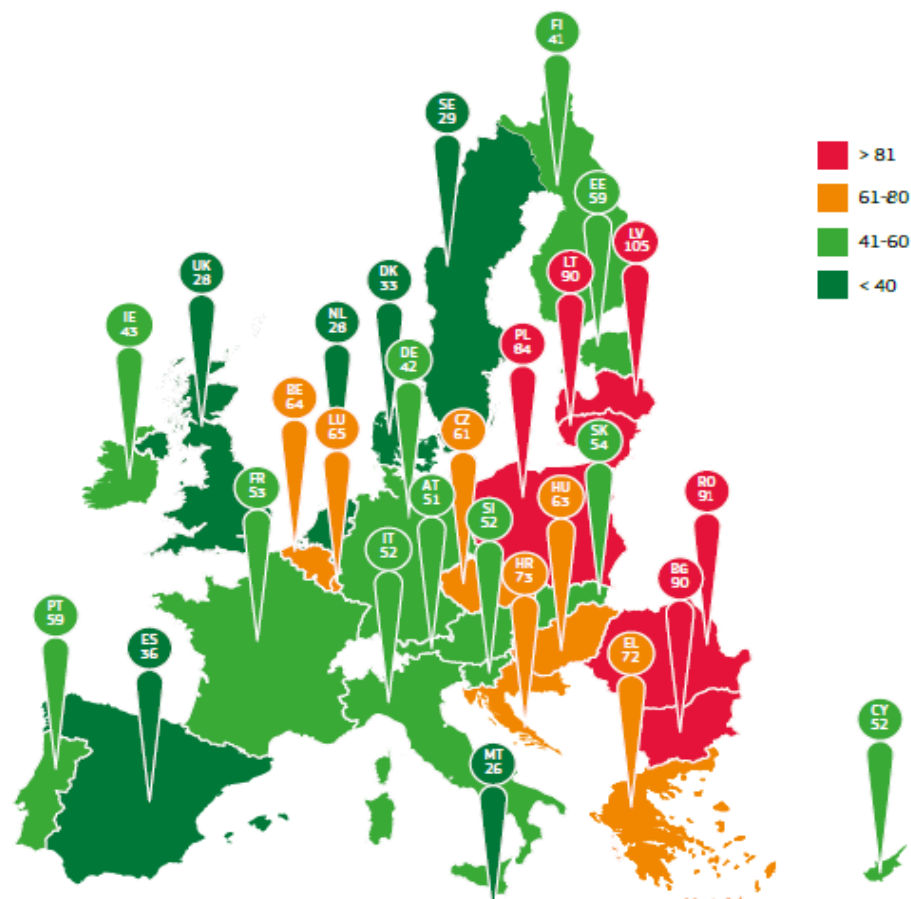
2014 was a bad year for road safety in the EU

Reaching the EU target for 2020 is at risk

Retrofit eCall devices could prove to be the needed tool for decreasing road fatality rates

The number of road deaths increased in several countries including Latvia, Slovakia, Bulgaria, Hungary, the Czech Republic

*Road fatality rates 2014 - EU road safety vademecum 2015*





# Risks from retrofit eCall devices

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## Major risks:

- PSAP overloading with false direct 112-eCalls
- PSAP Denial of service to other road users
- Very low-cost and low quality retrofit eCall devices could be a real risk for the whole TPSP model



# Risks from retrofit eCall devices

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**Major risks** (PSAP overloading with false direct 112-eCalls with possible Denial of Service to other users)

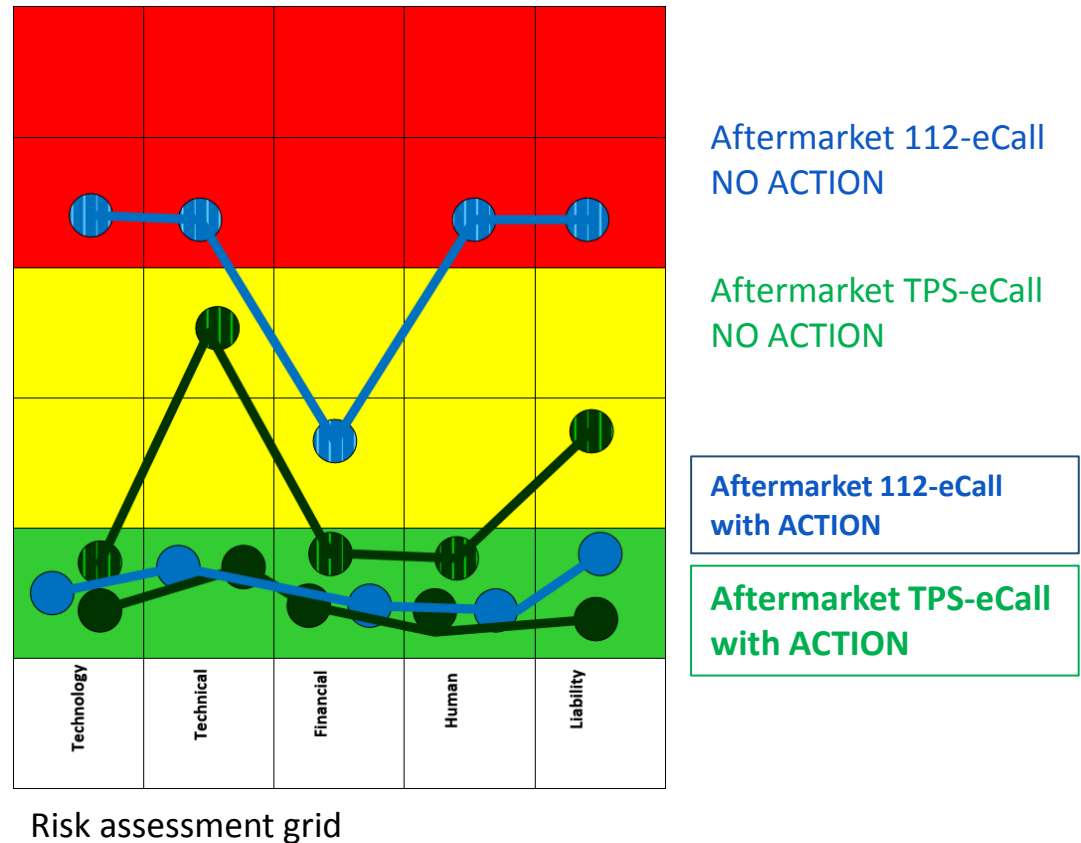
- Existing regulations enable the in-vehicle device to contact directly via the 112-eCall provisions of 305/2013
- in-vehicle system (IVS) approval in 2015/758 is “new model type approval”
- To date, aftermarket devices have no controlling regulation

PSAPs could be inundated with spurious calls from aftermarket devices, because there are no minimum or standard requirements, so the tendency will be, if in doubt, to send the eCall, in order to protect the liability of the equipment provider.



# Minimum requirements for retrofit eCall devices – need for action

**Urgent need** to develop the necessary minimum requirements and technical specifications to ensure that after-market eCall matches the exacting standards of eCall for new vehicles

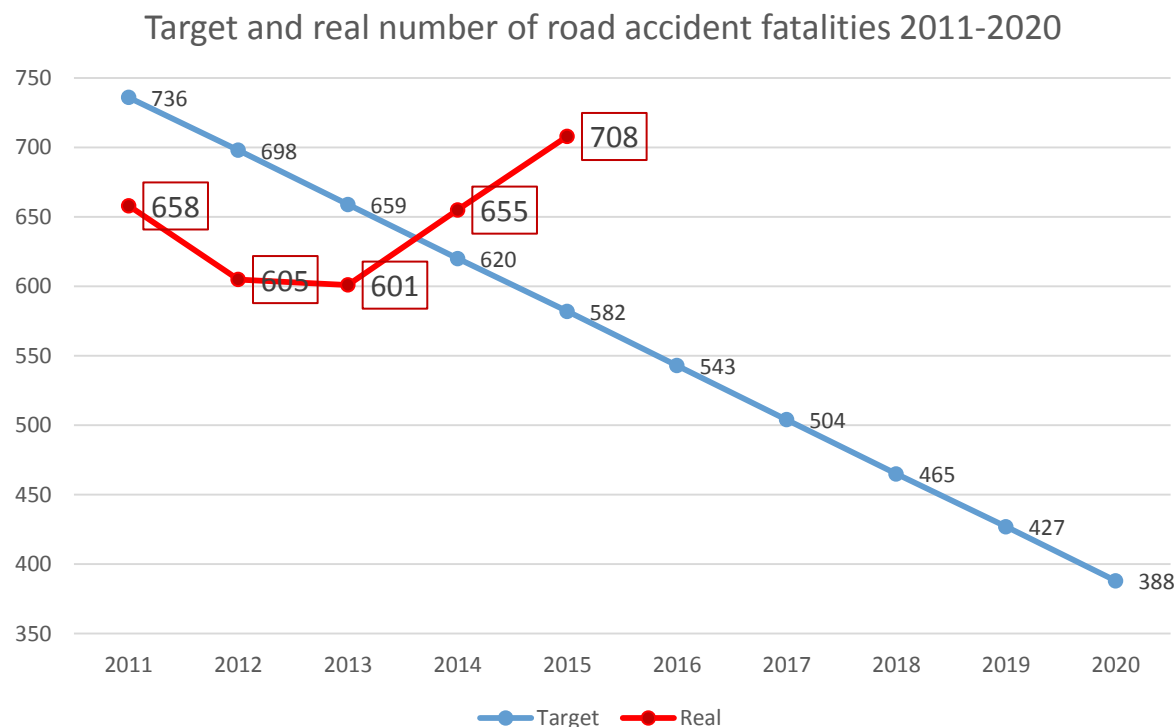




# Why Bulgaria – road fatalities trend

Road fatality rate among the highest in EU and rising

Targets as set in the “*National Strategy for Improving Road Safety in Bulgaria for the Period 2011–2020*” seem unreachable



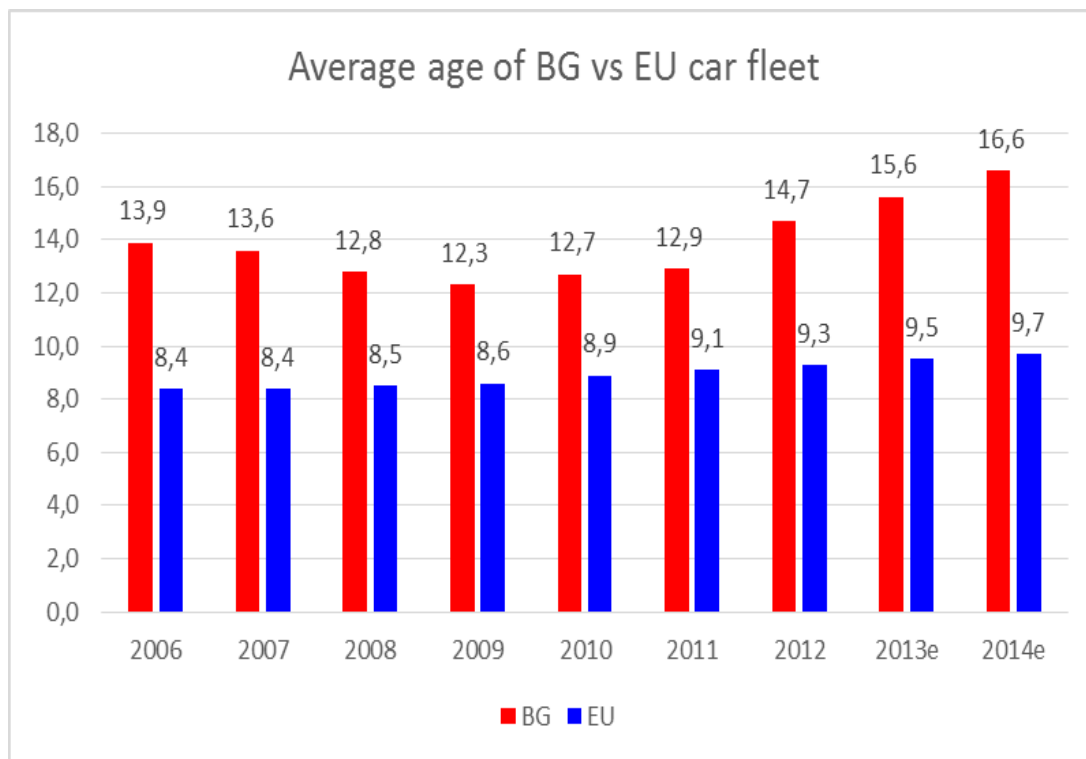




## Why Bulgaria – the oldest car park in EU

70% of road accidents in the country involve vehicles older than 10 years, with 2/3 of the total number of vehicles being more than 15 years old

Registered new vehicles represent than 1% of the total passenger cars in the country in 2013





# Why Bulgaria

With the lowest refresh rate of the car park in EU (**0.28%**), the mandatory installation of eCall devices in new cars after 2018 will have negligible effect in the country

Motor vehicle registrations in the EU				BY
COUNTRY / 2014	New Registrations light vehicles	Population	Refresh rate	Years to Replenish total car park
Luxemburg	49,793	562,958	8.84%	11
Belgium	482,939	11,258,434	4.29%	23
United Kingdom	2,476,435	64,767,115	3.82%	26
Germany	3,036,773	81,174,000	3.74%	27
Austria	303,318	8,584,926	3.53%	28
Denmark	189,051	5,659,715	3.34%	30
Sweden	303,948	9,747,355	3.12%	32
France	1,795,885	66,352,469	2.71%	37
Slovenia	53,296	2,062,874	2.58%	39
Netherlands	387,835	16,900,726	2.29%	44
Italy	1,359,616	60,795,612	2.24%	45
Ireland	96,344	4,625,885	2.08%	48
Finland	106,236	5,471,753	1.94%	52
Spain	855,308	46,439,864	1.84%	54
Czech Republic	192,314	10,538,275	1.82%	55
Estonia	20,861	1,313,271	1.59%	63
Portugal	142,827	10,374,822	1.38%	73
Slovakia	72,249	5,421,349	1.33%	75
Cyprus	8,283	847,008	0.98%	102
Poland	327,219	38,005,614	0.86%	116
Croatia	33,997	4,225,316	0.80%	124
Hungary	67,476	9,849,000	0.69%	146
Greece	71,218	10,812,467	0.66%	152
Latvia	12,452	1,986,096	0.63%	160
Lithuania	14,503	2,921,262	0.50%	201
Romania	70,172	19,861,408	0.35%	283
Bulgaria	20,359	7,202,198	0.28%	354



## Why Bulgaria – political will and readiness

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The Bulgarian state has the **political will and proven track record** for eCall implementations through its involvement in the **HeERO** series of projects.

The country is perfectly positioned to initiate a pilot project for retrofit eCall devices in used cars on a regional level, which could demonstrate the real-life performance of the eCall service and its life-saving potential thanks to the achieved **technical readiness**:

- The Ministry of Interior updated the PSAP infrastructure enabling it to process eCalls
- Bulgarian mobile network operators have implemented the “eCall flag”
- Developed and tested affordable aftermarket eCall device prototypes



The Bulgarian state has the political will and **proven track record of promoting eCall implementation in used vehicles since 2012**



Past Vice President of the EC, Ms. Neelie Kroes presses the emergency button of the prototype for a Bulgarian low-cost eCall IVS specifically designed for retrofit installation in used vehicles at the High-level Regional Conference on 2012 Digital Agenda for Europe (DAE) in Sofia, September 20, 2012



# Sources

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[European Commission MEMO-13-547](#)

<http://www.buckingham.ac.uk/wp-content/uploads/2014/11/pnc-2014-usedcar.pdf>

[70% of road accidents in Bulgaria with old vehicles involved](#)

[Eurostat](#)

[European Traffic Safety Council](#)

[FIA](#)

[HeERO](#)

[ACEA](#)

[State-Public Consultative Commission on the Problems of Road Safety](#)

[European Commission](#)