

eCall

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Introduction

eCall is a service designed to provide quick emergency response in case of a road accident, anywhere in the EU. Its aim is to advance Europeans' protection and safety, and reduce fatalities caused by road accidents, as well as related injuries and property loss.

The latest developments show that all **new types** (new models) of cars in the European market will be mandatorily equipped with eCall technology from 31 March 2018 onwards. Based on the European Commission's Impact Assessment, 100% penetration should be achieved by 2035.

BUT WHAT DOES THIS MEAN FOR CITIZENS AND EMERGENCY SERVICES?

The purpose of this document is to provide its reader with a brief presentation of eCall. Although there is a large amount of information available, this document aims at being an inclusive, but by no means exhaustive, summary of the service's key-points. By avoiding technical and legislative terminology, the goal is for everyone to have a good understanding of the topic after reading this factsheet.



What is eCall?

eCall is an emergency call that can be generated either manually by vehicle passengers or automatically via activation of in-vehicle sensors when a serious road accident occurs.

When activated, the in-vehicle eCall system establishes a 112-voice connection directly with the relevant Public Safety Answering Point (PSAP).

Even if no passenger is able to speak, for instance due to injuries, a 'Minimum Set of Data' (MSD) is sent to the PSAP, which includes the exact location of the crash site, the triggering mode (automatic or manual), the vehicle identification number, a timestamp, as well as current and previous positions. This way, information that is valuable for emergency responders is reaching them as soon as possible.

The option to generate an eCall manually, where a passenger can do so, for instance, by pushing a button inside the car, allows for witnesses of accidents to report it and to automatically give the precise location emergency responders need to go to.



What are the expected benefits of eCall?

The ability of eCall to deploy emergency assistance will save lives and reduce the social burden of road accidents. The service will improve the notification of such accidents, speed up the emergency service response and address the resulting issues of fatalities, injuries and traffic flows.

Some estimates suggest that emergency response time will go down to 50% in rural areas and 60% in urban areas¹.

Thanks to this, the introduction of eCall is expected to save 2,500 lives throughout Europe each year², and to mitigate the severity of tens of thousands of injuries.

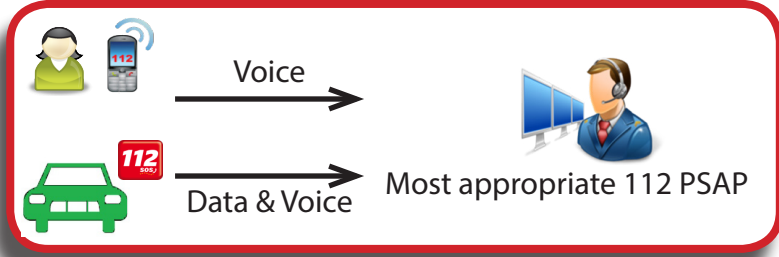
Indicatively, road accidents cost the EU approximately €160 billion per year, but, according to some estimations, if all cars were equipped with the eCall system, up to €20 billion could be saved on an annual basis³.

eCall Models

How is eCall going to be transmitted?

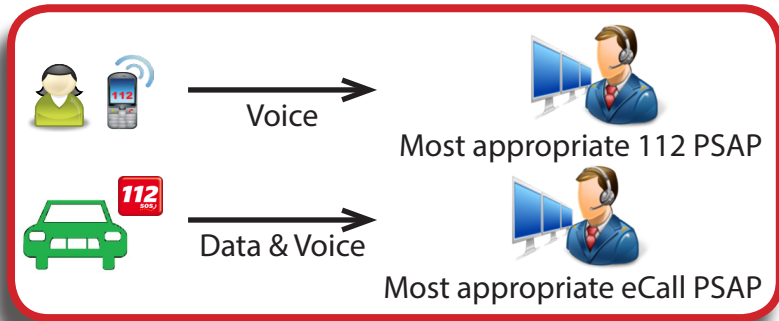
There are three main models that portray the possible functioning of eCall. These models are not exhaustive but merely indicate some major characteristics.

Model 1



eCalls routed as 112 calls: The most appropriate Public Safety Answering Point (PSAP) receives 112 calls and eCalls.

Model 2



eCalls routed to a PSAP dedicated only to eCalls: 112 calls continue to be routed to the 112 PSAP.

An eCall is identified in the network thanks to the **"eCall flag"**, which indicates that the call is not a usual emergency call but rather an "eCall". That way, it can be routed accordingly by mobile network operators. Please note that the eCall flag is a recommendation made by the European Commission. So far, Mobile

Network Operators are not obliged to implement it and very few have done so, despite the fact that it is of crucial importance in order to distinguish between 112 calls and 112 eCalls.

A Member State can choose to outsource the reception of an eCall to a third party instead of a public authority. In this case, eCall is not going to be handled by a public authority, but instead, a private company will manage the state's eCall service based on 112.

Model 3

Manually triggered eCalls and automatically triggered eCalls are routed to different PSAPs: It is possible that it can be the same PSAP as for 112 calls. A PSAP that receives the manually triggered eCall can also be the same PSAP receiving traditional 112 calls.





European legislation leaves room for the existence of Third Party Service eCall (TPS eCall), apart from the Pan European eCall based on 112.

But what does this mean?

Private companies can offer services similar to the public eCall on their own. That way, the respective customer will be able to opt either for the service offered by the state (either managed by a public authority or a private company) or for a private service. The consumer has the right to opt for the state-provided eCall even if initially they chose the privately offered service.

The TPS service that operates privately, is allowed under the three following prerequisites:

- i. It complies with EN 16102:2011 - TPS eCall standard;
- ii. Only one system can work at a time and in the case the private TPS does not function, 112 based eCall will work instead;
- iii. The vehicle owner may at any time choose to use the 112 based eCall instead of the TPS service.

Recent developments indicate that the vast majority of cars equipped with eCall will have both types of devices, or even a single device able to trigger either 112 based eCall or TPS eCalls. The TPS eCall will most probably be activated by default . The owner of the vehicle can then opt out if they wish, and get only 112-based eCall.

In 2014, the German Automobile Club ADAC estimated that 95% of new cars will be equipped with both 112 based eCall and telematics services such as TPS eCall.

It should be noted that TPS eCall centres will need to have a database with the “long” numbers (e164 numbers) of the 112 PSAPs in order to transmit the call, or, in other words, the should not only dial ‘112’.

An agreement between emergency services organisations and TPS eCall providers is needed in order to clearly establish the procedure on how eCalls are handled by TPS providers and how they are sent to emergency services.

EENA will shortly release the “TPSP eCalls and Emergency Services Authorities Agreement template” operations document, which will provide a template of the agreement to be signed by the authority in charge of emergency services and the TPSP.

So, eCall can be...

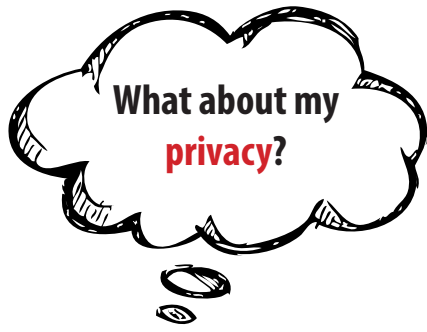


112 pan-European eCall provided by a public authority

112 pan-European eCall provided by a TPS on behalf of the public authority

eCall services provided by a TPS as a service by a private company





What about my
privacy?

Although the added value of a service such as eCall cannot be easily questioned, concerns about citizens' privacy should be well addressed.

Does eCall send my information to others without me knowing?

In order to sufficiently answer this question, we must separate between the public eCall service (whether offered by a public authority or by a private company under a public mandate) and the TPS eCall service offered by private companies.



Public eCall service

The public Pan European 112 eCall in-vehicle system remains dormant or, in other words, it is not connected to mobile phone networks, unless a serious accident takes place. As a result, there is no tracking or transmission of data during the normal operation of the system.

Only in case of a serious accident, or of manual activation, the information contained in the Minimum Set of Data (MSD) is transmitted to the PSAP. The data included in the MSD are those strictly needed by the emergency services to handle the emergency situation. For instance, this information may include the triggering mode (was it automatic or manual?), the vehicle identification number, a timestamp, current and previous positions.

This information is stored by the PSAP, always in compliance with the relevant legislation on personal data & consumer protection.



TPS eCall service

If a car is equipped with TPS devices, it usually offers additional services. These services are called "telematics services" and include GPS navigation, integrated hands-free cell phones, road assistance, and so on.

In this case, the eCall device is not dormant. When it comes to TPS, eCall is not the only service provided and, thus, it cannot be guaranteed that the device is dormant since it might need to transmit data depending on the other services provided.





Legislation overview & next steps

26 November 2012

Delegated EU Regulation 305/2013 Specifications for PSAPs

The European Commission makes a Delegated Regulation with regard to the harmonised provision for an interoperable EU-wide eCall.

Decision on the deployment of the interoperable EU-wide eCall service

The European Parliament and the European Council adopt the decision on the deployment of the interoperable EU-wide eCall service.

3 June 2014

28 April 2015

European Parliament adopts Regulation on type approval requirements

The European Parliament, during the plenary session in Strasbourg, adopts the regulation on eCall type approval requirements.

State of implementation

Member States shall report to the European Commission on the state of implementation of eCall, at least on their plans to implement eCall.

By 24 December 2015

By 1 October 2017

Infrastructure deployment

The Member States shall deploy on their territory the eCall PSAP infrastructure required for the proper receipt and handling of all eCalls.

By 31 March 2018

eCall to all new models of passenger cars

All new models of passenger cars, as well as light commercial vehicles will have to be equipped with the eCall system. Moreover, all car manufacturers and TPS call centres need to have applied the conditions mentioned in page 4 of this document.



References

1. European Commission website, available here: <http://ec.europa.eu/digital-agenda/en/ecall-time-saved-lives-saved>
2. European Commission MEMO, available here: http://europa.eu/rapid/press-release_MEMO-13-547_en.htm
3. HeERO Project (eCall deployment Project, 2011-2014), available here: <http://www.heero-pilot.eu/view/sv-en/media/news/20130415.html>

Would you like to know more?

Read EENA's "eCall" Operations document [HERE](#).

Read the recommendations from the HeERO project [HERE](#).

Visit the website of the European Commission [HERE](#).

Read the Impact Assessment carried out by the European Commission, as well as its summary, [HERE](#).

Read the "Final report: eCall Technical considerations regarding type approval testing of eCall in vehicle systems" [HERE](#).

Read the eCall standards by CEN [HERE](#).

Read the eCall standards by ETSI [HERE](#).

