



Ten years of increased road safety with Bosch eCall

From an internationally successful emergency call service to the eCall of the future

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- ▶ Launched in 2012: The Bosch international emergency call service for cars turns ten.
- ▶ The service is available in over 50 countries and in more than 20 languages.
- ▶ Worldwide, 27 million vehicles from more than 15 car brands have Bosch eCall.
- ▶ Innovations for even greater road safety: smartphone-based eCall and data transmission according to modern standards.

Frankfurt am Main - Black ice on the highway. A vehicle leaves the road, flips over and slides down an embankment. There's no one around to witness the accident. "Emergency Call", known as eCall for short, was developed for situations precisely like this. In the event of an accident or emergency situation, the emergency call system for vehicles establishes a voice connection to an emergency call point to request rapid assistance either automatically or at the push of a button. Bosch Service Solutions is a leading international provider of this life-saving service. Ten years ago, on behalf of Mercedes-Benz, the service provider developed one of the first integrated emergency call services that went on to become a global success. "In June 2012, the service went live in nine countries and six languages. Today, it is already available in more than 50 countries and more than 20 languages – and there are more and more. Currently, around 27 million cars from more than 15 car brands have the Bosch emergency call service fitted," explains Stefan Gross, Head of Mobility Services at Bosch Service Solutions. In the past ten years, the company has processed over eleven million eCalls. As a pioneer in this field, it is also constantly bringing innovations to the market, most recently the smartphone-based eCall.

Launch of the eCall service in 2012

While the Bosch emergency call service still involved a combination of on-board computer and driver's cell phone in 2012, the standard integration for Mercedes-Benz cars followed in 2014. Since then, the corresponding technology has been integrated into the infotainment module – it detects an impact, sends an emergency call and transmits a package with accident-relevant data. Bosch has established an international network of service centers for the eCall service, including a comprehensive IT infrastructure. These include partner networks with connections to rescue control centers, fire departments and hospitals in the relevant countries. The service provider developed the high standards of the Bosch eCall based on years of experience in alarm and emergency call management.

Saving lives and increasing road safety

The benefits of emergency call systems in vehicles also gained acceptance at the political level: eCall became a mandatory requirement in the EU on March 31, 2018. Since then, passenger cars and light commercial vehicles newly launched on the market in the EU must have an integrated emergency call service. Consequently, two systems operate in the EU: the statutory 112 eCall system and the eCall systems run by private providers such as Bosch - both of which meet the defined EU standards. The difference is that with private eCall, the emergency call is received at the provider's own emergency call centers and immediately forwarded to the public control centers if necessary. The advantage is that faulty alarms, such as those caused by accidentally pressing the emergency call button, can be filtered out in this way. This relieves the rescue coordination centres and keeps capacities free for emergencies. With a quota of around 90 percent, Bosch has filtered out around ten million faulty eCalls in the last ten years. Another plus: Bosch emergency call center employees stay on the phone to attend to the people involved until the rescue forces arrive.

Euro NCAP confirms improved road safety

A major advantage of Bosch eCall is its multilingual nature: vehicle occupants in many countries can report an emergency in their own language. A German tourist on vacation in Spain, for example, will be addressed in German, which can be of great value psychologically and when it comes to passing on the details of the accident. In turn, the rescue control centers are informed in the local language, avoiding misunderstandings. What's more, they receive information that goes beyond the so-called minimum data set associated with EU-112 eCalls. This includes, among other things, the geographical position, the time of the accident and the direction of travel of the accident vehicle. Bosch also passes on data such as the number of occupants and the severity of the accident. Both are factors that improve the rescue chain and thus help

occupants. Euro NCAP, the independent assessment organization for vehicle safety, also evaluates in-car eCall systems when it checks the road safety of new cars in crash tests. The availability of the emergency call in as many languages as possible also has a positive impact on the evaluation, as does the transmission to the rescue control centers of accident-related data that goes beyond the minimum data set.

Combining smartphone and LTE for the eCall service of the future

Bosch is continuously developing eCall and regularly launches technical innovations on the market. For example, Bosch eCall can now be integrated into fleet vehicle apps thanks to smartphone-based collision detection. Bosch is also working on expanding faster digital transmission paths. In the USA, for example, Bosch is focusing on "Next Generation eCall" and transmits accident data from the car to emergency call centers via an internet-based data connection using LTE. "Very high speed and excellent voice quality speak for the transmission via LTE," explains Stefan Gross. "That helps us to set the rescue chain in motion particularly quickly."

Digitizing the rescue chain

The transmission of relevant information from the emergency call centers to the rescue control centers is also evolving: this is necessary because data transmission in EU-112-eCall is limited to the older 2G and 3G telephone networks, which are under constant threat of being shut down. At the same time, however, Germany still lacks a legal basis that clearly regulates how emergency calls from private providers can be transmitted digitally to the control centers. As a result, many emergency calls are still passed on by voice call. Bosch is working to expand the use of modern digital transmission paths. "We hope that the course will be set for fast digital data transmission throughout the EU as soon as possible, which will be used across the board", says Stefan Gross. Whatever happens, Bosch is well equipped to handle future emergencies quickly and effectively – with the aim of saving even more lives.

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automotive, logistics and pharmaceutical sectors as well as information and communication technology.

Additional information is available online at www.boschservicesolutions.com and www.Bosch-eCall.com

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