



EUROPEAN AUTOMOBILE  
MANUFACTURERS ASSOCIATION

ACEA

## **Impact Assessment Deployment of in-vehicle emergency call – eCall – in Europe**

### **Comments from the European Automobile Manufacturers Association (ACEA) on behalf of its members 11 October 2010**

The European Automobile Manufacturers Association (ACEA), founded in 1991, represents the interests of the sixteen European car, truck and bus manufacturers at EU level.

Its membership consists of the major international automobile companies, working together in an active association to ensure effective communication and negotiation with legislative, commercial, technical, consumer, environmental and other interests. The members of ACEA are competitors in the automobile market place and support free and fair competition as a trade policy and a legal concept.

ACEA is an Economic Interest Grouping. Its headquarters are based in Brussels and made up of the Secretary General and the Secretariat. In 1995 and 2004, ACEA opened additional offices in Tokyo and Beijing.

#### **General comments:**

ACEA has been asked by the European Commission to provide **cost data for in-vehicle eCall systems**. We, therefore, concentrate on this task and basically abstain from general remarks concerning eCall in general and related study results.

#### **Scope:**

With reference to the industry position paper signed by ACEA, JAMA and KAMA (see attachment) and the discussions the industry had with the European Commission eCall is currently only under consideration for passenger cars up to 3.5 t. **Any other statements are misleading and cannot be supported by the industry.**

The reasons for excluding trucks & buses have been explained in detail at other occasions and are related to the size and complexity of the vehicle, the low penetration rates of airbags, the doubtful effectiveness of other potential crash sensor systems, the need for tedious extensive research, etc.

Professional Fleet Management Systems follow the location of a truck constantly so that a manual eCall is covered by normal or (smart) mobile phone systems (almost 100% penetration) without the need for an additional integrated system.

#### **Other limitations and definitions:**

Due to the nature and structure of the business it is further not possible to give exact figures valid for all car types and brands. The equipment cost for eCall for a car of one manufacturer is not automatically the same as for a car of another manufacturer, on the contrary.

Due to also the confidentiality of the numbers we have decided to give quotes for three different types of eCall systems as approved by the Commission in form of a cost range:

- Dedicated embedded eCall systems
- Mobile eCall systems (intelligent interface in the vehicle)
- TPS Third party eCall service support

It has to be highlighted that the range is based on manufacturer costs. Basic data from different sources on the costs of technological options are compared on the basis of manufacturer costs. Manufacturer costs include all direct costs to produce a vehicle (purchase costs of materials and components, tooling costs, labour costs, etc.) as well as a proportional share of company overheads (R&D, management, marketing, etc.).

#### Embedded systems:

eCall systems that are fully embedded/integrated in the car as specified by CEN. Dedicated SIM card for eCall, automatic and manual eCall, no other (value-added) services provided..

#### Mobile eCall system:

The increase in smartphones as well as connected mobile navigation systems (PNDs) is taken into account when providing an intelligent and safe interface (different integration levels) for devices, owned and provided by the customer, in the vehicle and connection to the vehicle bus and airbag deployment trigger.

#### TPS eCall:

Certain OEMs offer private eCall systems today. The concept include the transfer of the data to a service provider who has the first contact to the customer and clarifies what happened for filtering and information reasons and collects if possible additional information for the PSAPs. The service provider calls the relevant PSAP immediately to send the necessary information and data of the accident.

#### **Assumptions:**

ACEA members contributed extensive and detailed consolidate data which were subsequently sanitised by a clean team. Estimates were based on the following assumptions:

- (a) Introduction for all new type-approved passenger cars after a certain date (mandatory introduction) with a volume over the first 6 years: **49 million cars**
- (b) For each of the three eCall variants volume-based cost calculations were carried out
- (c) In each case, estimations were conducted for a small, medium and high-volume manufacturer
- (d) This calculation was carried for each system in order to ensure the best-possible comparability
- (e) Accordingly, a small manufacturer was defined as: 2 million units over the course of six years
- (f) A medium manufacturer was defined as: 5 million units over the course of six years
- (g) A high-volume manufacturer was defined as: 16.5 million units over the course of six years
- (h) No license costs for eCall components and software
- (i) GSM based eCall, cost for **dual mode systems with 2G and 3G functionality** to cover future mobile communication technologies were **not included** -> system costs could become significantly higher
- (j) No cross-subsidization

## **Cost calculation:**

In the ACEA cost calculation the following cost drivers have been considered:

- Internal costs related to product planning, cost calculation, decision, etc. (one-time costs)
- R&D costs (any cost related to creating the requested product or upgrade internal & external) (one-time cost)
- Purchase process costs (negotiations, tenders, supplier development and ongoing support, etc.)
- eCall System/component unit costs
- Unit-cost of unifunctional SIM card as offered by Telecoms based on estimated volumes
- Vehicle/system integration costs (connection, cabling, tooling for e.g. a bracket, etc)
- Line Fitment (Line preparation, manual installation)
- Internal training (manufacturing)
- Quality & functionality testing
- Cost of regulation (Type-approval, Certification, etc.)
- Warehousing
- Marketing & Sales Costs (including instruction manual)
- Dealer/sales person training incl. training material
- Recycling costs including dismantling

## **Results:**

Range of possible system cost, including overheads and VAT  
Price ranges highly depend on 5 key cost drivers:

- R&D costs,
- Component costs,
- Cost of SIM card,
- System integration costs
- Organisational structure of OEM

(a) Dedicated embedded eCall systems

**€ 400 - 450 per unit**

(b) Mobile eCall systems (intelligent interface in the vehicle)

**€ 150 - 200 per unit**

(c) TPS Third Party eCall service support

**€ 450 - 550 per unit**

## **Mandatory vs. voluntary approach**

The industry has not taken position for either a mandatory or voluntary approach, as many questions were not yet resolved.