



# How does eCall help the Rescue Operations?

## eCall impact study

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- eCall in Finland
- Impact study of eCall
  - first study and conclusions
- Next steps



# Finland – a pioneer of the eCall



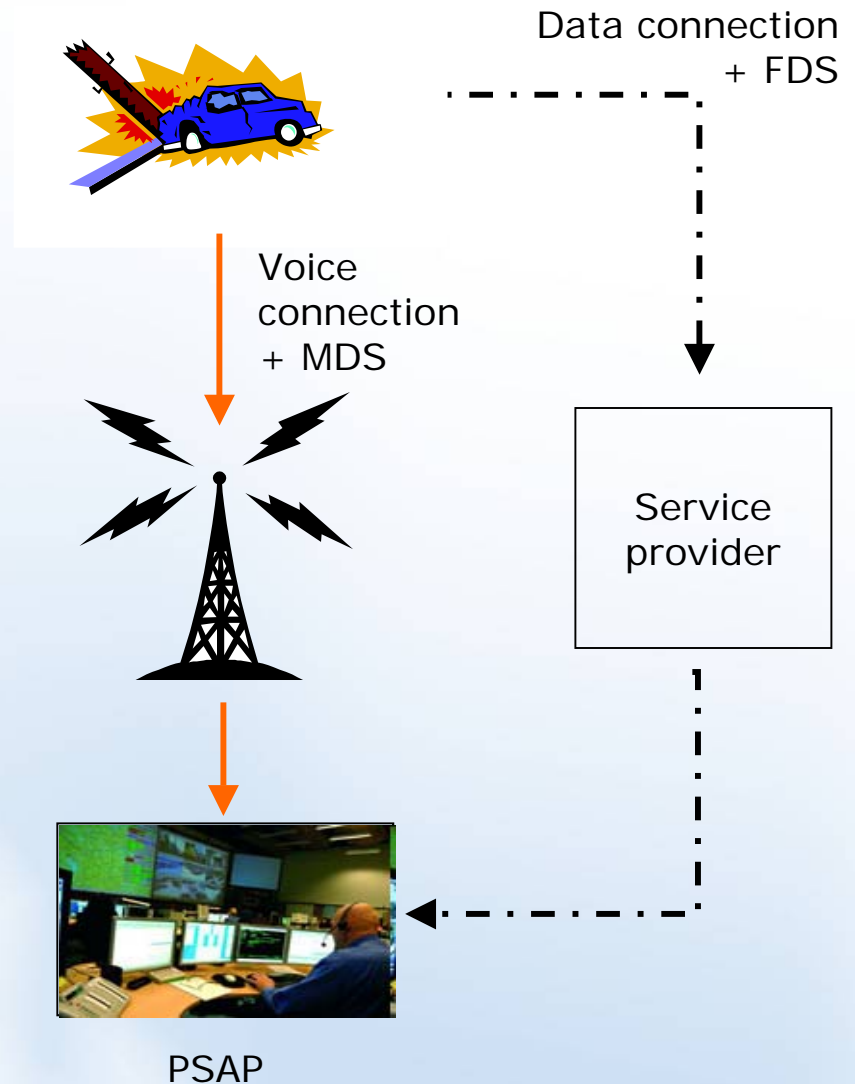


## eCall - what and why

- **eCall is an automatic in-vehicle emergency call service developed in the European Union**
- **The benefits of the eCall system are mainly based on the faster relaying of important accident information**
  - **Precise location, time and type of the accident**
- **The system itself will not reduce the number of accidents.**
- **The main objective is to improve response times in the case of a traffic accident and save lives by faster help**



- Accident
  - **Sensor data: Strong deceleration, rapid rise in temperature, roll-over,...**
- **Vehicle position**
  - Vehicle position and direction information at time of accident using satellite positioning (GPS)
- **Minimum set of data (MDS)**
  - Place, time and type of accident,...
  - Transmitted during call
  - Uses GSM built-in procedures
- **Full set of data (FDS)**
  - More extensive information about the vehicle, may be complemented with additional information from data base
  - Short message, GPRS or similar information transmission
  - Technology-neutral transmission to emergency exchange





# eCall Impact analysis 1/4

## Aims of a recent study

- To estimate the effects of real-time information about the vehicle location and accident type on the consequences of the accident.
  - the number of the fatalities that could be avoided in Finland by the eCall system.
  - the effects of the eCall on emergency response times.



# eCall Impact analysis / Road Accident Investigation Teams

- In Finland all fatal accidents are investigated by Road Accident Investigation Teams.
- Teams consist of a police officer, a road specialist, a vehicle specialist, a physician, a psychologist and other experts.
- The teams investigate what happened, why the accident happened, which factors affected the risk of the accident and what were the reasons for the consequences of the accident.



## eCall Impact analysis 2/4

Source: Case reports of the Road Accident Investigation Teams years 2001-2003

- Total of 797 accidents involving a fatally injured occupant (n=929)
- Data included accidents of all vehicle types, divided to
  - accidents, where there was at least one vehicle in which eCall system could be installed, and
  - accidents, where there were no vehicles in which the current eCall system could be installed (e.g. single motorcycle and snowmobile accidents).



## Impacts of eCall 3 / 4 – Fatalities to be prevented

Influence on traffic accidents' consequences	Fatalities with eCall possibility		Fatalities without eCall possibility		Total	
	n	%	n	%	n	%
eCall could probably have prevented death of the victim	39	4.4	4	10.0	43	4.6
eCall would probably not have prevented death of the victim	831	93.5	32	80.0	863	92.9
Unclear cases (not enough data)	19	2.1	4	10.0	23	2.5
<b>Total</b>	<b>889</b>	<b>100</b>	<b>40</b>	<b>100</b>	<b>929</b>	<b>100</b>

**In addition to the 4.6%,  
a similar amount of the fatalities may have been prevented**



# Impact analysis 4/4

## Conclusions

- eCall could prevent 5 - 10% of the fatalities in Finland
- eCall has greater impact than many other traffic safety measures.
- Biggest effect expected on minor rural roads, at night time, in off-peak traffic



## Finnish principles to reach the rapid implementation of pan-European eCall

- 1. Vehicle to PSAP communications are implemented utilising existing communications technologies, networks and standards**
  - In future, the technology will be developed further following the standardisation work**
- 2. Service centre to PSAP messaging is secure and, at the same time, enables free EU-wide competition of service centre business**
- 3. EU-wide interoperability of terminals is ensured by creating a centralised EU-level terminal certification**
- 4. EU member states agree on a rapid EU-wide and interoperable implementation of eCall at PSAPs**
- 5. eCall terminal will be made mandatory in all vehicles in a rapid schedule**



## eCall next steps in Finland

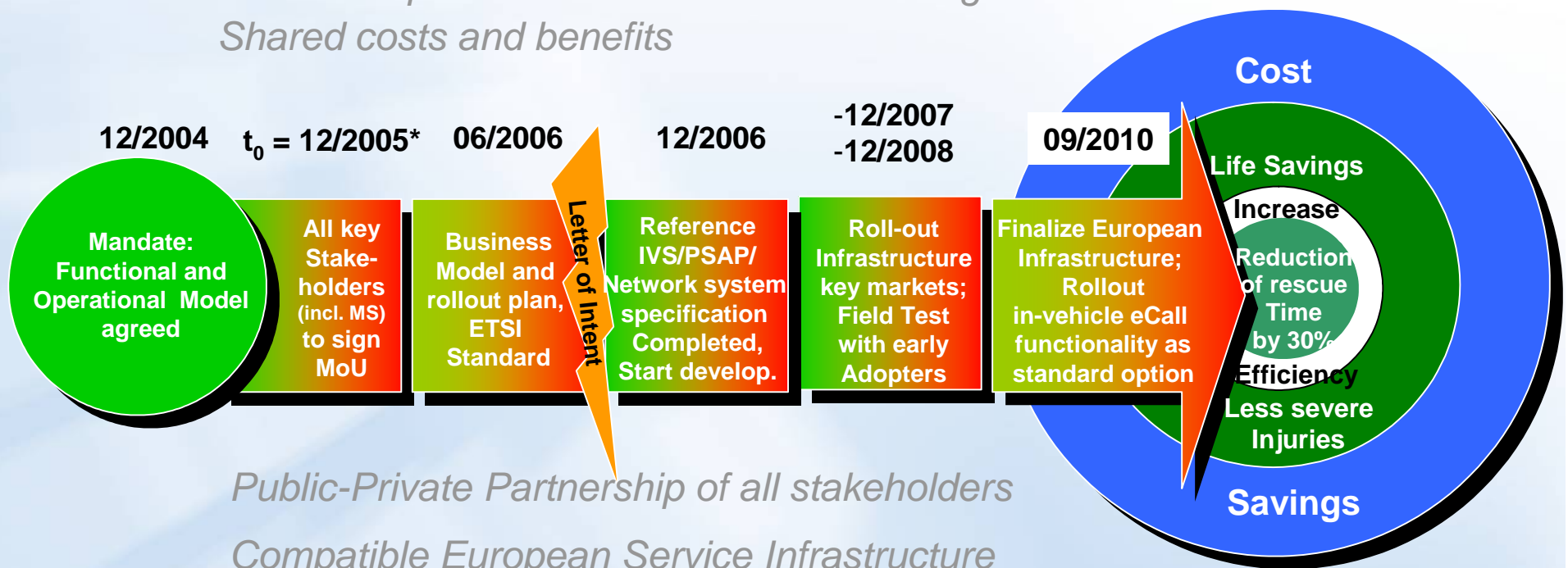
- **Communications test bed to be part of a pan-European certification procedure in co-operation with the European commission; also physical features**
- **Language support**
- **Cross-border data exchange**
- **Implementation of eCall in the Emergency Centers (PSAP)**
- **public awareness and “marketing” to insurance companies and other stakeholders**
- **consideration of fiscal incentives**
- **further impact analysis**



MINISTRY OF TRANSPORT  
AND COMMUNICATIONS FINLAND

# eSafety Forum Implementation Road Map Working Group 18 October 2005

*Low cost in-vehicle eCall functionality as standard option*  
*Common specifications and reference design*  
*Shared costs and benefits*



*Public-Private Partnership of all stakeholders*

*Compatible European Service Infrastructure*

*Full coverage of key Member States*

*Financial incentives for ramp-up*



## The Finnish eCall website

eCall - www.ecall.fi - Mozilla Firefox

Tiedosto Muokkaa Näytä Siirry Kirjanmerkit Työkalut Ohje

http://www.ecall.fi/indexe.html

Firefoxin aloitus sivu Uutisotsikot

**eCall**

[Suomeksi](#)

Home page

**The Finnish eCall website is now open**

The Finnish eCall website is now open. The web site will contain a list of the eCall operators and information about the progress of eCall.

- ▶ [The eCall test bench is available](#)
- ▶ [Finnish eCall discussion paper](#)
- ▶ [eCall Implementation in Finland](#)

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