



***SWOV- FERSI - ETSC Conference 'Prevent crashes, reduce injuries, save lives',
House of Europe, The Hague, 25th May 2016***

Road Safety Research: from FP7 to H2020



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Transport Directorate***

Today's roadmap

- 1. The policy context*
- 2. Road safety challenges*
- 3. Road safety research areas*
- 4. Horizon 2020*

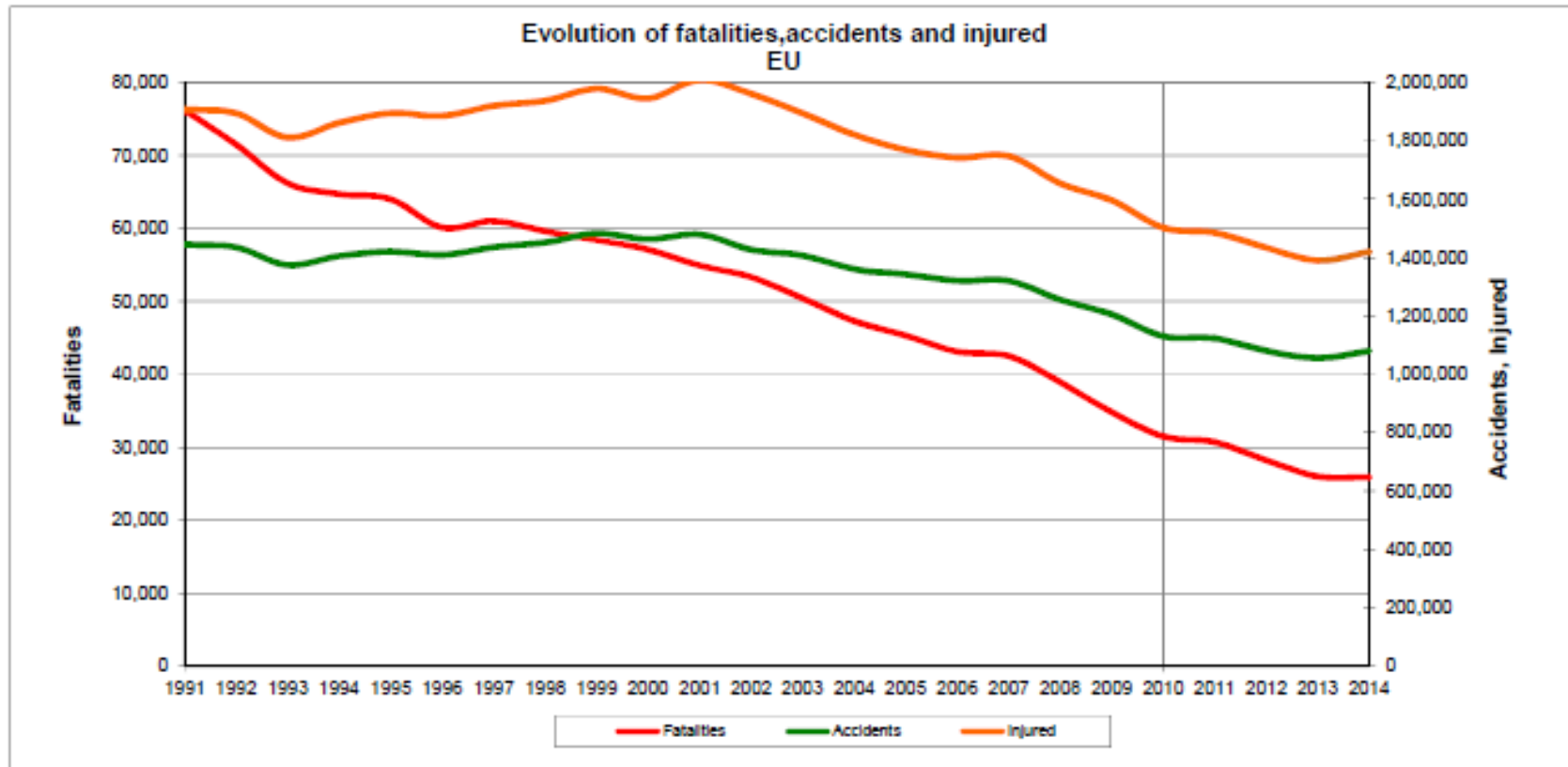
Transport White Paper 2011

Roadmap to a Single European Transport Area: Towards a competitive and resource efficient transport system

- Reduce greenhouse gas emissions by at least 60%
- Halve the use of conventional cars in urban transport by 2030
- Increase the efficiency & capacity of the transport system
- **Move close to zero fatalities in road transport by 2050**



The extent of the problem



Source : CARE (EU road accidents database)

from http://ec.europa.eu/transport/road_safety/pdf/observatory/historical_evolution.pdf

Road Safety in Europe – ambitious new policy targets

- In addition to the Transport White Paper:
 - **EU Road Safety Action Plan 2011-2020 :**
aiming for a 50% reduction in fatalities between 2010 and 2020



Road Safety in Europe – key challenges *

- High risks for Vulnerable Road Users (2-wheelers, Pedestrians)
- Increasingly unsafe behaviour (drugs, medicines, distraction, use of mobile phones while driving, etc.)
- Growing number of serious injuries
- Missing investment in road infrastructure maintenance and construction
- New generation of alternatively powered, sub-compacts cars (EV)
- Incompatibility of vehicles and structures
- Ageing population

* source Commission staff working paper accompanying the Transport White paper

How do we achieve these ambitious targets?

EU road safety action plan sets out a number of initiatives focussing on improvements to **vehicles, infrastructure** and road **user behaviour**:

- Improved safety measures for trucks and cars
- Building safer roads
- Developing intelligent vehicles
- Strengthening licensing and training
- Better enforcement
- Targeting injuries
- A new focus on motorcyclists



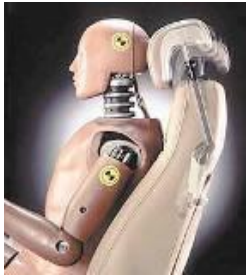
To be effective **this relies on an increase in complementary research and innovation**

Road Safety – FP7 Research areas



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**Ergonomics of
vehicles and seats**

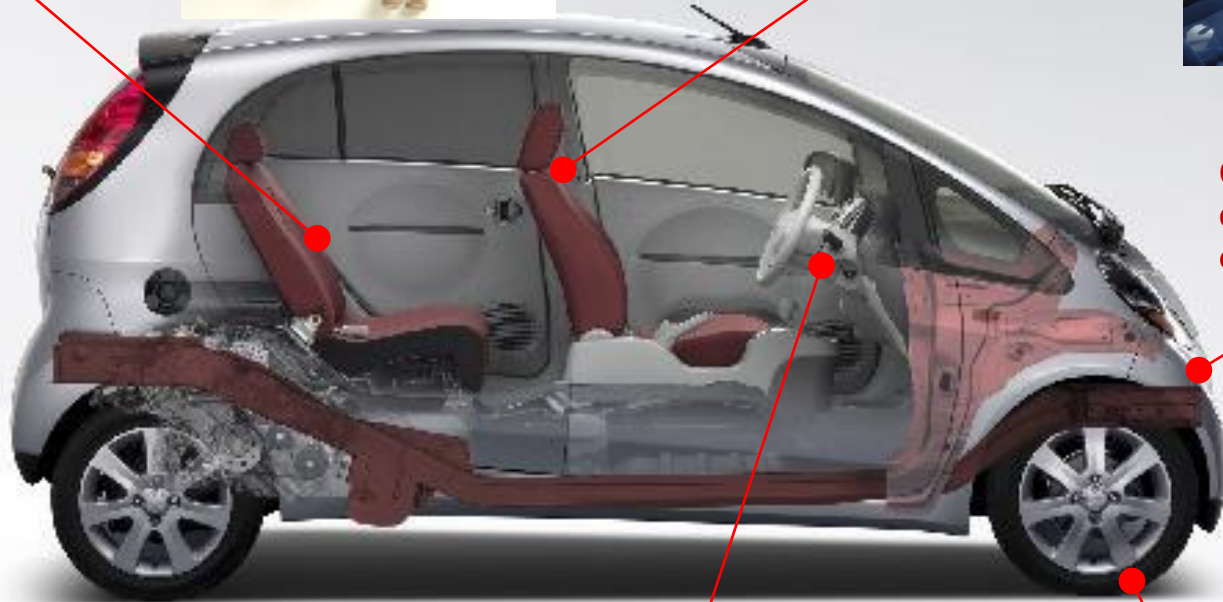


**Crash dummies,
biomechanics, virtual testing**

**Real-life observations of
driver behaviour**



**Compatibility and
crashworthiness
of vehicles**



**Safe road
infrastructure**



**Interaction between
innovative technologies
and drivers**

**Tyre/road interaction,
Skid resistance**



Societal Challenge 4 'Smart, green and integrated Transport':

Achieving a European transport system that is:

- resilient
- resource-efficient
- climate and environmentally friendly
- safe
- seamless
- competitive

...and that benefits citizens, economy and society

Safety in H2020 - the story so far (Call 2014/2015)

- **MG.3.4 - 2014:** Traffic safety analysis and integrated approach towards the safety of Vulnerable Road Users
→ 5 projects: SafetyCube, PROSPECT, InDeV, XCYCLE, SENIORS
- **MG. 8.2 - 2014:** Next generation transport infrastructure: resource efficient, smarter and safer
→ 1 project: USE-IT
- **MG. 3.6 - 2015:** Safe and connected automation in road transport
→ 4 projects: ADASANDME, VI-DAS, MAVEN, AutoMate

Safety in H2020 – Call 2016/2017

- A dedicated group of topics on Transport Safety for the first time:
 - aviation safety, maritime safety
 - **protection of road users,**
 - **infrastructure safety,**
 - **transport safety from a behavioural standpoint,**
 - **EU-Africa Road safety initiative.**
- Automated Road Transport call





*2016-2017: **6 topics***
***EUR 66 Mio** EU budget*

Context

- Safety improved across all modes over last 10 years
- EU targets for transport safety: halving road casualties by 2020, towards zero fatalities by 2050
- Aim: reducing accident rates, fatalities and injuries in each mode
- Increasing knowledge and awareness, developing technologies, products, services, solutions

Safety: topics and budget

Total EU contribution **EUR 66 Mio**



Topic	Title	Action type	Stages	Budget (EUR Mio)	
				2016	2017
MG-3.1	Addressing aviation safety challenges	RIA	2	15	
MG-3.2	Protection of all road users in crashes	RIA	2		14
MG-3.3	Safer waterborne transport and maritime operations	RIA	2	22	
MG-3.5	Behavioural aspects for safer transport	RIA	2		
MG-3.4	Transport infrastructure innovation to increase the transport system safety at modal and intermodal level	RIA	2	12	
MG-3.6	Euro-African initiative on road safety and traffic management	CSA	1	3	

Stage II:
29 Sept
'16

RIA = Research and Innovation Action; CSA = Coordination and Support Action

Protection of all road users in crashes



Topic MG-3.2-2017 (RIA)

Challenge

- Improving crash safety in case of accidents
- Developing fully integrated safety systems
- Transport user protection: keeping Europe's leadership

Scope

- Vehicle based systems
- Personal protection equipments
- Crash simulation tools, human body models

20 Sep'16: Call opens
26 Jan '17: Stage I
19 Oct '17: Stage II

Expected impact

- Contribute to reducing fatalities and injuries

Estimated EC contrib. per proposal: EUR 4-9 Mio

SMEs participation & Int. Cooperation encouraged

Twinning with projects funded by US DOT foreseen

Automated Road Transport



Detect vehicle location and environment



Vehicle-driver interface



User and social acceptance



Connectivity for advanced level of automation



Safe AD systems in complex traffic situations



Automation Pilots



Road infrastructure

R&I priorities



Call on "Automated Road Transport"



- ❑ Key priority in the H2020 Transport Research programme

- ❑ Indicative budget: € 114 Mio
- ❑ Published: 14 October 2015

- ❑ Focus:
 - Support short term introduction of automated driving systems for passenger cars, trucks and urban transport

 - "Large-scale Field Operational Tests" to test technologies in complex traffic and driving conditions



Call "Automated Road Transport" topics and budget



Topic	Title	Action type	Stages	Budget (EUR Mio)	
				2016	2017
ART-02	Automation pilots for passenger cars	IA	2		
ART-04	Safety and end-user acceptance aspects of road automation in the transition period	RIA	2	48	
ART-05	Road infrastructure to support the transition to automation and the coexistence of conventional and automated vehicles on the same network	RIA	2	13	
ART-06	Coordination of activities in support of road automation	CSA	1	3	26 Jan '16
ART-01	ICT infrastructure to enable the transition towards road transport automation	IA	2		
ART-03	Multi-Brand platooning in real traffic conditions	IA	2		50
ART-07	Full-scale demonstration of urban road transport automation	IA	2		

20 Jan '16: Stage I
29 Sep'16: Stage II

¹⁷
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Call "Automated Road Transport" topics and budget



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THANK YOU FOR YOUR ATTENTION!



Visit our website:
http://ec.europa.eu/research/transport/index_en.htm