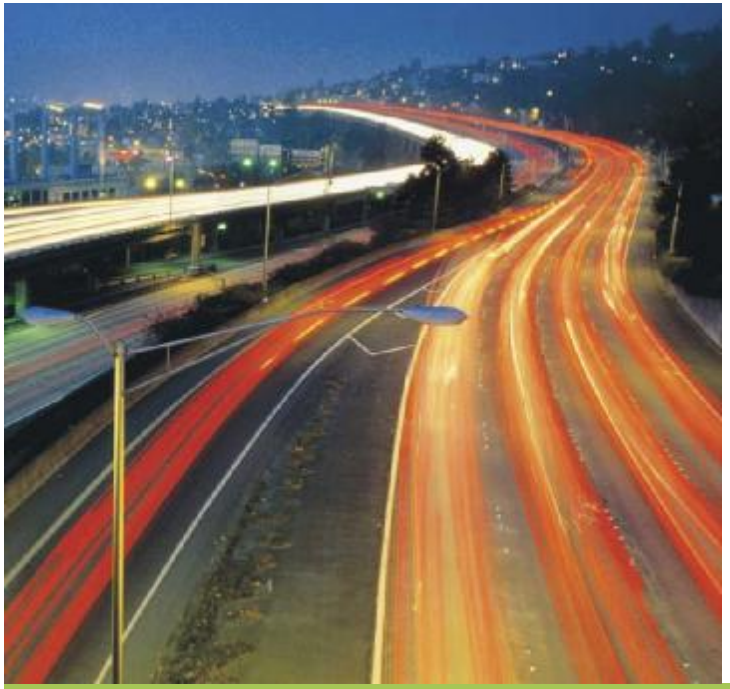

Road Safety in Euro

Stella Nikolaou

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iMF VRU WG Co-Chair

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7, 2012

I EUROPEI E RICERCA SULLA SICUREZZA STRADALE - TRASFERIBILITÀ DELLE BUONE PRATICHE NEL CONTESTO ITALIANO

sation: Stella Nikolaou, VRU WG Co-Chair, CERTH/HIT

Context

European Commission target in 2001, of halving road deaths by 2010

Good progress in some countries

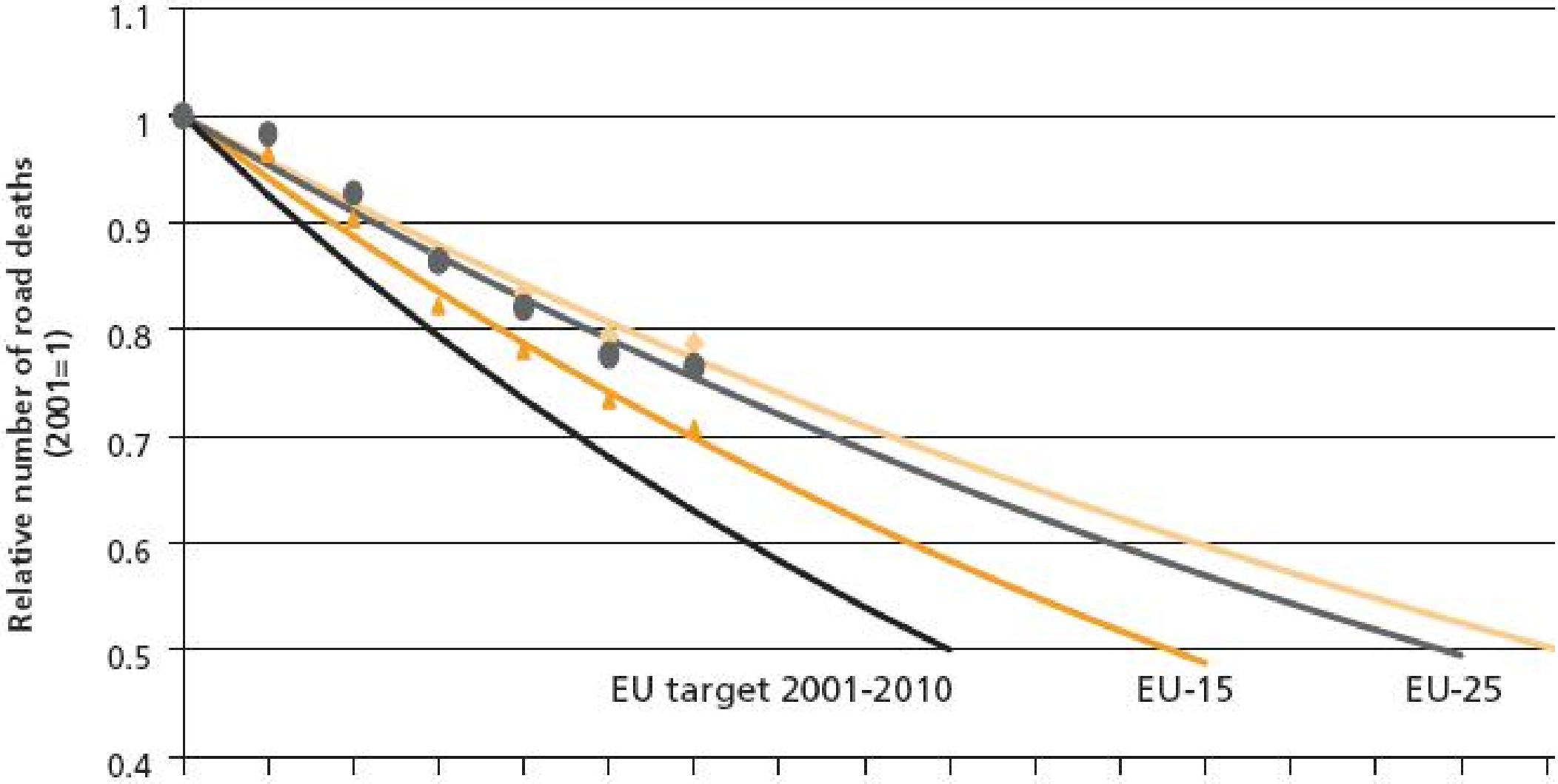
Road deaths in EU27 reduced by 36% between 2001 and 2009 (42% for EU15)

But numbers killed in 2009 still higher than the target set by the EU for 2010

New target to further reduce by 50% by 2020 and to zero by 2050

Still a lot to be done

The European Union's yearly reduction in road deaths is no more than 4.2% on average. To reach our goal we should have an annual reduction of 7.4%.



Actors and issues in transport safety resear

Main actors:

- Driver/Rider (user)
- Road, or infrastructure
- Vehicles

Main factors:

- Technology
- Society
- Policy

targets

Emphasis on injury prevention, not just reduction in fatalities

Vulnerable road users

- Pedestrians, especially children
- Cyclists
- Urban areas
- Motorcycle (PTW) riders
- The elderly and mobility impaired

Training and education

Transferability & Sustainability

Recognising and transferring best practice between EU countries

Safety an important component of other actions – eg sustainability and the environment

requirements (1)

Over past decade, technological development addressed mainly passive safety systems

Considerable progress in vehicle structures and materials used, and in occupant protection

Influence of roadside furniture on crash seriousness

- Road side location of furniture
- Effect of impact on vehicle structure

Requirements for crash tests re-evaluated and extended

requirements (2)

Research should continue on:

Vehicle compatibility

Conspicuity and new materials

- with special emphasis on vulnerable road users

Research on infrastructure

ocus on ‘self explanatory’ and ‘forgiving’ road
nvironments

requirements (3)

nprovements in harmonisation of road safety related da

urther research requires the creation and maintenance
eliable pan-European databases

etter, more accurate geographical and sectoral data

evelopment of accident prediction models for different
ypes of member states

oad safety impact assessments

lackspot management

etwork safety assessment

enchmarking

requirements (4)

Systems often have multiple uses, and overall impact on safety often unclear

Data availability and ITS analysis are key

Synergetic effects of ITS in safety, mobility and the environment under-researched

Systems often have multiple uses, and overall impact on safety often unclear

requirements (5)

Driver behaviour and training

New technologies to enhance awareness, aids for the driver

nclude all stakeholder groups (those involved in the echnological development as well as operators, users, etc)

.ong-term impacts

Enforcement technologies

Effectiveness of public awareness campaigns

Driving impairment prevention (fatigue, alcohol, drugs, llness)

nfluence of, and on, mobility measures (eg route

Key Stakeholders

Forum of European Road Safety Institutes (FERSI).

- Current President: Dr H. Schulze, BAST (Germany)

HUMANIST Virtual Center of Excellence on Human-Centred Design

- Current President: Dr. E. Bekiaris, CERTH/HIT (Greece)

ETRA – European Transport Research Alliance established on September 2012 aiming at supporting the transport research in Europe (FERSI & HUMANIST are members)

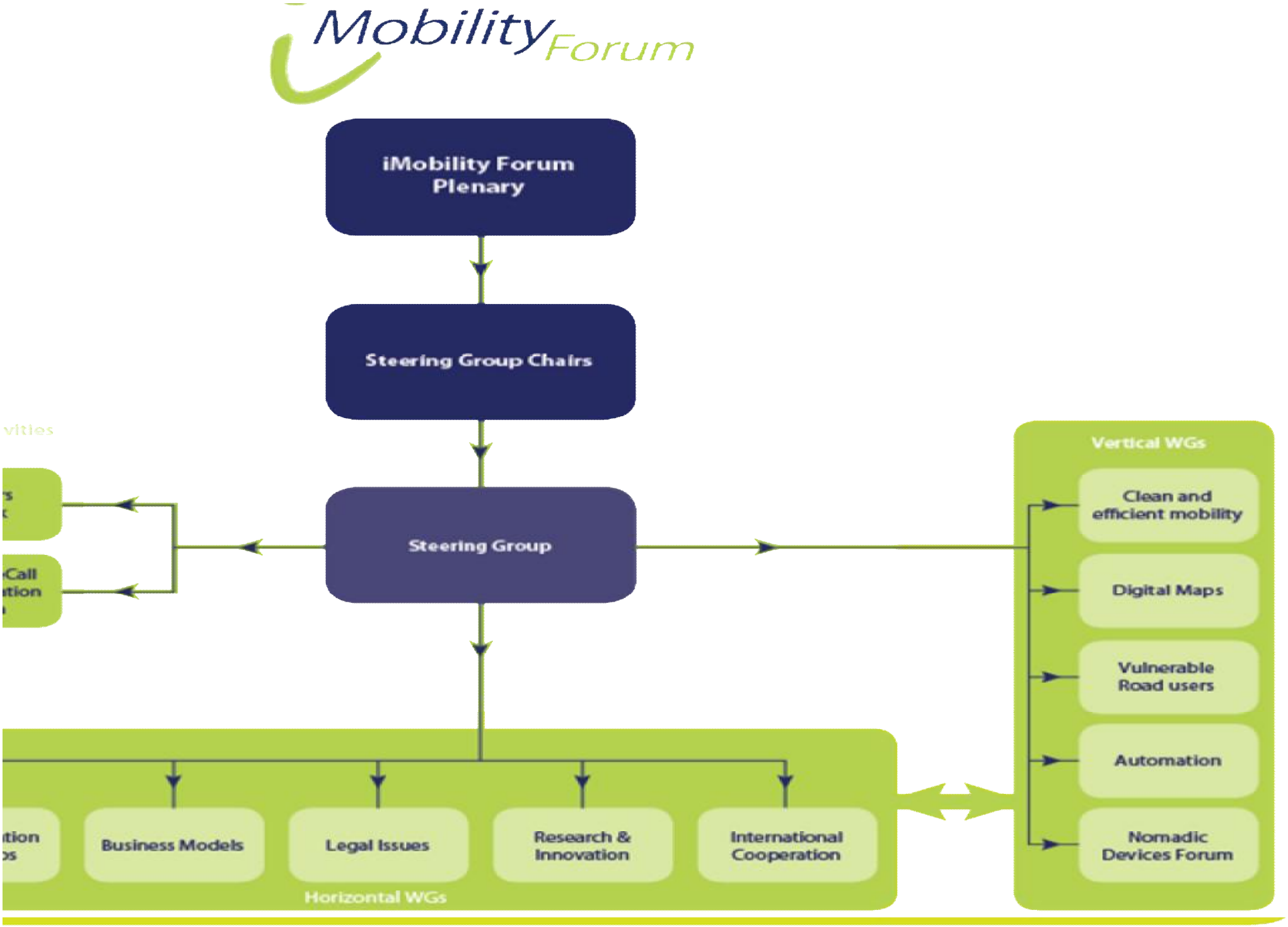
- Current President: Prof. G. Giannopoulos, CERTH/HIT Director (Greece)

[Vulnerable Road Use
Working Group

iMobility Forum succeeds the eSafety Forum. Its field of wo
udes ICT systems for resource-efficient and clean mobility ir
ition to the latter's focus on ICT-based safety technologies.

iMobility Forum provides a platform for all ITS stakeholders
ope to discuss, define, coordinate and support activities to
her innovation, research, development, deployment and use
based transport systems and services.

nator: ERTICO ITS Europe
nation and Supportive Action
tribution: 1 949 767 Euro


iMobility Forum
iMobility Forum Plenary
Steering Group Chairs
Steering Group
Vertical WGs
Clean and efficient mobility
Digital Maps
Vulnerable Road users
Automation
Nomadic Devices Forum
Business Models
Legal Issues
Research & Innovation
International Cooperation
Horizontal WGs

Who We Target Groups

edestrians

- with emphasis on:
  - Children
  - Elderly/ Mobility Impaired

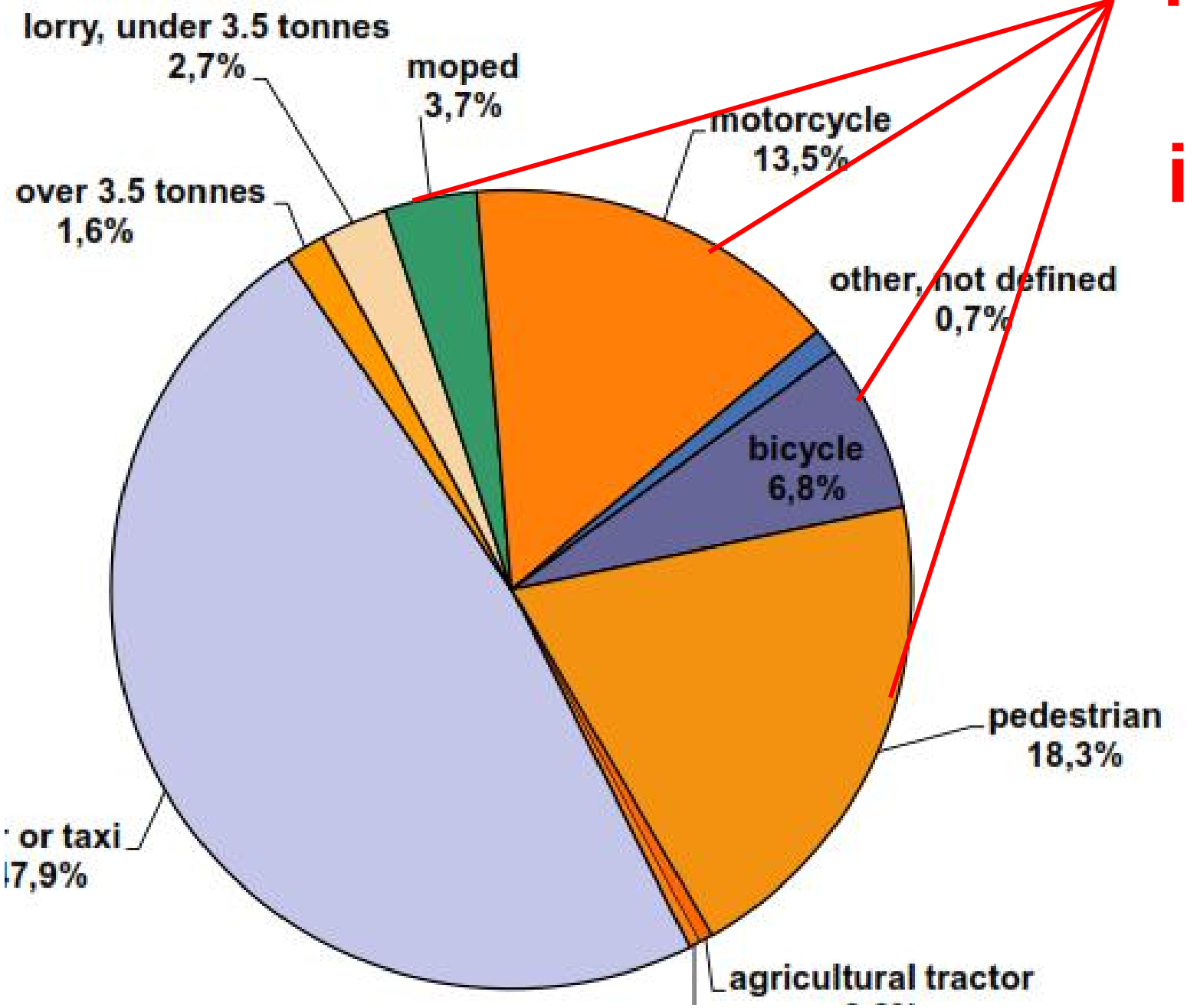
yclists

  - BUT ALSO… potential menace to pedestrians

TW riders

  - BUT ALSO… potential menace to pedestrians and cyclist

in 2009 (EU-24)



42,3% of total fatalities involve VRU

Source:
EC CARE database
December, 2011

Purpose of the VRU WG

he WG supports ITS stakeholders with the evelopment of

- Individual goals and targets for the improvement of the safety of VRU along with recommendations and guidelines to achieve these goals

he focus is on both passive and active ystems as well as the potential improvements rom the combination of both

European road safety policy orientations 2011-20 aims t
vide a general framework and challenging objectives to
le national and local strategies, in accordance with the
ciple of subsidiarity. Within the general framework, the
mission highlights among two others the need to impro
safety of vulnerable road users.

Action Plan, D4 – Final Report, "Action 3.4–Safety and comfo
ıe Vulnerable Road User"
p://ec.europa.eu/transport/its/studies/doc/2011_05-safety-an
fort-vulnerable-road-user.pdf)

opean Commission, "Road safety: Policy orientations on road
ty 2011-2020"
p://europa.eu/legislation_summaries/transport/road_transpor
6_en.htm)

Phase 1: Working Documents

RI.1: In-depth State-of-the Art on market and near-market products, research prototypes, research projects, best practices and supporting legal framework focusing on VRU protection. Issue Date: February 2013

RI.2: Mapping of available ITS technologies (infrastructure-based, vehicle-based, VRU-based) to specific safety scenarios. Identification of research gaps lack of data and indicative cost-benefit analysis of potential supportive applications. Issue Date: First Release: April 2013 – Final Release: July 2013

estrians

CLIDE Project (FP5): enhanced HMI for on-vehicle vision hancement systems

ATCH-OVER Project (FP6): in-vehicle safety systems for VRU otection, www.watchover-eu.org

CESS2ALL Project (FP7): mobility schemes for public transport ers with emphasis to elderly and mobility impaired, www.access -all.eu

FEWAY2SCHOOL Project (FP7): children protection from home to hool, http://safeway2school-eu.org

ferBrain Project (FP7): best practices for pedestrians and cyclist fety, www.saferbrain.eu

PECSS (FP7): Assessment methodologies for forward looking tegrated Pedestrian and further extension to Cyclists Safety

ists

aferBrain Project (FP7): best practices for pedestrians and cycli
afety, www.saferbrain.eu

AFECYCLE Project (FP7): ICT applications for cyclists' safety,
ww.safecycle.eu

IDERSCAN (FP7), European scanning tour for motorcycle safety,
ww.fema-online.eu/riderscan

SPECSS (FP7): Assessment methodologies for forward looking
ntegrated Pedestrian and further extension to Cyclists Safety
ystem, www.aspecss-project.eu

/ Riders

AFERIDER Project (FP7): On-bike safety and information systems
ARAS & OBIS) for riders' safety and comfort, www.saferider-eu.c

-BE-SAFE Project (FP7): naturalistic and behavioural studies to
nhance PTW riders' safety, www.2besafe.eu

IDERSCAN (FP7), European scanning tour for motorcycle safety,
www.fema-online.eu/riderscan

cident Statistics

DaCoTa Project (FP7): Accident analysis for European Road Safe
Observatory, www.dacota-project.eu

operative

SAFESPOT project (FP6), Cooperative vehicles and road infrastructure for road safety, www.safespot-eu.org

plementation

PROS Project (FP7), Project for Road Safety Research in Europe

HeERO eCall Platform, Harmonised eCall European Platform, www.heero-pilot.eu (mandatory for all cars in Europe in 2015)

Conclusions & Remarks

ust learning the lessons from around Europe may not be nough to get greater reductions at an aggregate level

here are many factors all pushing in the wrong direction:

- eing drivers
- versification of road users
- stractions in vehicles
- ronic fatigue
- suse of drugs and medicines
- compatible vehicle sizes and structures
- essure to reduce costs of road safety education
- aining and safe use of ITS

here is still much work to be done

Conclusions & Remarks – Focus on VRU's

eed for design user-centred ITS and measures for VRU's.

ceptability & Cost of implementation. Feasibility?

uman-Machine Interaction. Need for effective and safe warn
signed for VRU's needs and use cases.

sential incident data for improving safety currently unavaila
eed for large FOT's on VRU's data collection,

mited research performed so far on VRU's behaviour and the
plication with other road participants.

ow to proceed? Keep VRU's on the loop. User-centered appro
they key!

[Thank you for your attention!