

SafetyCube

Road User related Risks & Measures in the European Road Safety DSS



The SafetyCube project

Funded by the European Commission under the **Horizon 2020** framework programme



Coordinator: Pete Thomas,
Loughborough University

Start: May 2015

Finish: April 2018

17 partners from 12 EU countries



Common objective



Creating an evidence based Decision Support System
Safety effects of risk factors and countermeasures related to

- Road users
- Road infrastructure
- Vehicles
- Serious injuries



SafetyCube DSS Users

- **Public Authorities**

local, regional, national, European and international

- **Industry**

Infrastructure, Vehicle, Insurance, Technology

- **Research Institutes, Experts**

- **Non Governmental Organizations**

- **Mass Media**



Common methodology



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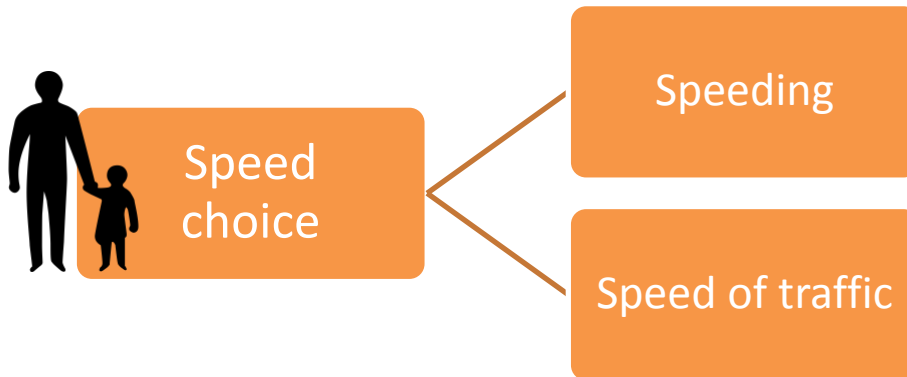
1. Creating **taxonomies** of risks and measures
2. Exhaustive **literature review** and rigorous study selection
3. **Coding of individual study information**
4. Studies analyzed for carrying out meta-analyses to estimate the effects of risk factors and measures
5. **Synopses > summarizing study results**
(meta-analysis, vote-count, review)
6. **Quality assurance** process



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Systems approach

- Links between infrastructure, road users and vehicles
- Cooperation on common topics e.g. 'alcohol interlock'



Demerit point system

Increase sanctions

Speed awareness course

Speed campaign

Zero tolerance, reduction of tolerance

Mobile speed enforcement

Change speed limits

Speed cameras

Section control

Variable traffic signs

Dynamic speed warning 😊😐😞

Speed humps

Adaptiv cruise control

Intelligent Speed Adaptation

Type of content for various topics



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- Information of individual studies
- Synopses of risks and measures
- Colour code >
- Cost-benefit analyses

Risk factors

Red	Results consistently show an increased risk when exposed to the risk factor concerned.
Yellow	There is some indication that exposure to the risk factor increases risk, but results are not consistent.
Grey	No conclusion possible because of few studies with inconsistent results, or few studies with weak indicators, or an equal amount of studies with no (or opposite) effect.
Green	Results consistently show that exposure to the presumed risk factor does not increase risk.

Measures

Green	Results consistently show that the countermeasure reduces road safety risk.
Light green	There is some indication that the counter measure reduces road safety risk, but results are not consistent.
Grey	No conclusion possible because of few studies with inconsistent results, or few studies with weak indicators, or an equal amount of studies with no (or opposite) effect.
Red	Results consistently show that this measure does NOT reduce road safety risk and may even increase it.

Challenges

- Is a protective device a risk or measure?
- Not all human related risk factors are directly observable
e.g. emotions
- Actual contribution to accidents occurrence?
- Confounding risk factors



Results

Road user related content



- 450+ considered individual studies
- ~50 synopses on human related risk factors and measures



Delivering a long-awaited tool



- 1st integrated road safety support system **developed in Europe**
- Scientific evidence on
 - risks, not only measures
 - risks and measures related to road users and vehicles, not only on infrastructure
 - a very large number of estimates of risks and measures effects
 - links between risks factors and measures
- SafetyCube DSS aims to be **a reference system** for road safety in Europe, constantly improved and enhanced



SafetyCube DSS



European Road Safety Decision Support System

[Search](#)[Knowledge](#)[Calculator](#)[Methodology](#)[Support](#)

The SafetyCube DSS is the European Road Safety Decision Support System, which has been produced within the European research project SafetyCube, funded within the Horizons 2020 Programme of the European Commission, aiming to support evidence-based policy making. The SafetyCube Decision Support System provides detailed interactive information on a large list of road accident risk factors and related road safety countermeasures. A Quick Guide on using the SafetyCube DSS, with instructions on how to browse the system, make a search and further refine the results, is available for download [here](#).



Keyword
Search



Risk
Factors



Measures



Road User
Groups



Accident
Categories



BETTER DECISION MAKING FOR ROAD SAFETY

European Conference
March 22 & 23 2018 - Vienna

Thank you!
Join us in Vienna!

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