The EU research project SafetyCube (Safety CaUsation, Benefits and Efficiency) has been developing an innovative road safety Decision Support System (DSS) collecting the available evidence on a broad range of road risks and possible countermeasures. The structure underlying the DSS consists of:

1. A taxonomy identifying risk factors and measures and linking them to each other,
2. A repository of studies,
3. Synopses summarizing the effects estimated in the literature for each risk factor and measure,
4. An economic efficiency evaluation tool (E3-calculator).

The DSS is implemented in a modern web-based tool with a highly ergonomic interface, allowing users to get a quick overview or go deeper into the results of single studies according to their own needs.

**DSS content**
- Road accident risk factors
- Accident scenarios
- Road safety measures and their effectiveness
- Cost/benefit analysis of measures
- Analytic background
- Documentation

**Repository creation**
- Literature search in key databases
- Evaluation and coding of studies
- Drafting synopses with synthesis of findings
- Integration in searchable database

**Synopses**
- 139 syntheses on risk factors/measures
  - Summary (2 pages)
    - Effect of risk factor/measure and ranking
    - Risk/safety effect mechanisms
    - Risk/safety effects size, transferability of effects
  - Scientific overview (4-5 pages)
    - Comparative analysis of available studies
    - Analysis results: meta-analysis, vote-count analysis, qualitative analysis
  - Supporting document (3-10 pages)
    - Literature search strategy and study selection criteria
    - Detailed analyses

**Database of coded studies**

**Prioritisation – Colour Code**

For each risk factor and measures studied, a colour code was assigned to indicate the overall conclusion about the effect.

<table>
<thead>
<tr>
<th>Risk Factor</th>
<th>Countermeasure</th>
<th>Red</th>
<th>Light Green</th>
<th>Green</th>
<th>Light Red</th>
</tr>
</thead>
<tbody>
<tr>
<td>Increased risk</td>
<td>Results consistently show an increased risk when exposed to the risk factor</td>
<td>Results inconsistently show an increased risk when exposed to the risk factor</td>
<td>There is some evidence that the risk factor increases or decreases risk</td>
<td>Results inconsistently show that the risk factor increases or decreases risk</td>
<td>Results consistently show no change in risk when exposed to the risk factor</td>
</tr>
<tr>
<td>Decreased risk</td>
<td>Results consistently show a decreased risk when exposed to the risk factor</td>
<td>Results inconsistently show a decreased risk when exposed to the risk factor</td>
<td>There is some evidence that the risk factor increases or decreases risk</td>
<td>Results inconsistently show that the risk factor increases or decreases risk</td>
<td>Results consistently show no change in risk when exposed to the risk factor</td>
</tr>
</tbody>
</table>

**DSS search engine**
- Fully linked search
  - Search a road safety problem alone or through the measures
  - Search for measures related to specific road user groups or crash types (accident categories)
- Fully detailed search
  - Search by any parameter in each data table in the database
- Fully flexible search
  - Search a measure alone
  - Search a road safety problem alone or through the measures

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**Browse the DSS**
https://www.roadsafety-dss.eu