Defining Vision Zero and the Safe System Approach

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Traditional approach to road safety

Information
Education
Campaigns
Regulations
Surveillance

Make the individual road-user behave correctly in traffic (follow the rules)
The need for a new approach
Many names

- “Vision Zero”
- “Towards Zero”
- “Sustainable Safety”
- “Safe System”

Similar policies that fundamentally do not accept death and serious injuries as an acceptable product of mobility
Vision Zero is a concept

Vision Zero

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Commit to the figure zero and do more of the same
“Confounders”

- Vision Zero is **not** about zero accidents

- Zero deaths and severe (disabling) injuries should be seen as the ultimate long term goal but must be specified by intermediate targets on different levels

- Vision Zero is **not** focused only on technology solutions mitigating the consequences
First and foremost Vision Zero should be seen as a vision based on an ethical foundation, creating and supporting a totally new perspective, a paradigm shift, on the road safety problem and the approach to solve it.
• People make mistakes that can lead to road crashes

• The human body has a limited physical ability to tolerate crash forces before harm occurs

The design of the road transport system should guide the road user to an as safe behaviour as possible but still mitigate the consequences of common human errors since they still will occur.
Guardrails
Median barriers
All parts of the system must be strengthened to multiply their effect, and if one part fails, road users are still protected.

Speed limits and speed management, driver assistance systems, injury mitigating properties of the vehicles etc. must be combined in an optimised way.
Safe pedestrian crossings
Vision Zero – fundamental principles (III)

- A shared responsibility exists amongst those who design, build, manage and use roads and vehicles and provide post-crash care to prevent crashes resulting in serious injury and death
1. The designers of the system are always ultimately responsible for the design, operation and use of the road transport system and thereby responsible for the level of safety within the entire system.

2. Road users are responsible for following the rules for the safe use of the road transport system decided by the system designers.

3. If road users fail to obey these rules due to lack of knowledge, acceptance or ability, or if injuries occur, the system designers are required to take necessary further steps to counteract people being killed or seriously injured.
A systems approach
## Traditional road safety policy vs. Vision Zero

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<thead>
<tr>
<th></th>
<th>Traditional road safety policy</th>
<th>Vision Zero</th>
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<tbody>
<tr>
<td>What is the problem?</td>
<td>Try to prevent all crashes</td>
<td>Prevent crashes from resulting in fatal and serious casualties</td>
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<tr>
<td>What is the appropriate goal?</td>
<td>Reduce the number of fatalities and serious injuries</td>
<td>Zero fatalities and serious injuries</td>
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<td>What are the major planning approaches?</td>
<td>Reactive to incidents Incremental approach to reduce the problem</td>
<td>Proactively target and treat risk Systematic approach to build a safe road system</td>
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<td>What causes the problem?</td>
<td>Non-compliant road users</td>
<td>People make mistakes and people are physically fragile/vulnerable in crashes. Varying quality and design of infrastructure and operating speeds provides inconsistent guidance to users about what is safe use behaviour.</td>
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<td>Who is ultimately responsible?</td>
<td>Individual road users</td>
<td>Shared responsibility by individuals with system designers</td>
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<td>How does the system work?</td>
<td>Is composed of isolated interventions</td>
<td>Different elements of a Safe System combine to produce a summary effect greater than the sum of the individual treatments- so that if one part of the system fails others parts provide protection.</td>
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