Zero Road Deaths and Serious Injuries: Leading a Paradigm Shift to a Safe System.

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Overview

1. What is a Safe System?
2. Why a Safe System?
3. Why Act Now?
4. The Ingredients for a Safe System Journey
5. Recommendations
What is a Safe System?

SAFE SYSTEM

- Road and roadside: 70
- Post-crash response and medical care: 50
- Educated, mostly compliant, make errors, physically vulnerable: 30

Shared responsibility

- Users
- Builders
- Designers
- Operators
- Legislators
- Influencers
- Advocates
- Corporations
- Enforcers
- Monster
- Data
- Research
- Reports
The four principles of a Safe System

1. People make mistakes that can lead to road crashes;

2. The human body has a limited physical ability to tolerate crash forces before harm occurs;
Four Principles of a Safe System (cont’d)

3. 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 or death; and

4. All parts of the system must be strengthened to multiply their effects; and if one part fails, road users are still protected.
The Safe System – 2nd Guiding Principle

The human body by nature has a limited physical ability to tolerate crash forces before harm occurs.

vehicle vs vulnerable user-
30km/h

Side-on, 90 degree V2V- 50km/h

Head on collision V2V - 70km/h

No possible side/frontal collision- 100kmh+
The Paradigm Shift to a Safe System
From crash reduction to injury prevention
### Traditional road safety approach vs. Safe System

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<th>From</th>
<th>To</th>
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<tbody>
<tr>
<td>Victim blaming</td>
<td>Recognising human error and minimising its consequences; shared responsibility</td>
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<tr>
<td>Emphasis on road user education and compliance</td>
<td>Effort to create forgiving road environment</td>
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<tr>
<td>Crash reduction</td>
<td>A focus on consequences, especially severe injury minimisation</td>
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<td>Design standard compliance</td>
<td>Safe System solutions</td>
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<td>Reactive black spot treatments</td>
<td>Proactive network/route improvement programmes</td>
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<td>3 – E’s approach (engineering/education/enforcement)</td>
<td>Four pillars jointly optimised (roads/use/vehicles/speeds)</td>
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<td>Mobility-safety balance</td>
<td>Maximising safe mobility</td>
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Inherent, hidden risks (Swedish Transport Agency)
Paradigm Shift to Safe System

From user blame to safe system principles

How do road users *use* infrastructure?

Can we design our roads to achieve survivable impact speeds?

How do we mitigate crash frequency *and* severity? (e.g. roundabouts 4 vs 24 major conflict points)
Why a Safe System?

• Focus overcomes behavioural bias

• Universally applicable

• Provides clear guidance for design
Why a Safe System (Cont’d)

• Holistic integration with public policy

• Inclusive for all road users

• New insights into problems & solutions, flexible framework
Why Act Now?

- Unsustainable burden - 1.25m deaths and up to 50m injuries world-wide
- Rapid motorization in LMIC’s
- UN SDG’s- 50% by 2020
- Opportunity for new thinking, holistic
- Sustainable legacy for future generations
UN Decade of Action Goal and Sustainable Development Target (millions people killed)
The Ingredients for a Safe System Journey

• Strong and Sustained Leadership to:
  – Overcome persistent community awareness and demand deficits in the problem, the real dangers and the solutions through communicating evidence
  – Press the political system to embrace a safe system with the four principles as foundations to guide the journey
Leadership to:

– Foster leaders at all levels of society, including bottom up

– Ensure coordination for shared responsibility

– Develop a strategy with vision and safe system principles

– Manage for results- set objectives- monitor
Recommendations

1. Think safe roads, not safer roads
2. Provide strong, sustained leadership for the paradigm shift
3. Foster urgency to drive change
4. Underpin aspirational goals with concrete, operational targets
Recommendations Cont’d

5. Establish shared responsibility
6. Apply a results focussed approach
7. Leverage all parts of a Safe System for greater overall effect and so that if one part fails, the others will still prevent serious harm
Recommendations cont’d

8. use a safe system to make city traffic safe for pedestrians, cyclists and motorcyclists.

9. Build safe system capacity in rapidly motorising low/middle income countries

10. Grow data collection, analysis and research on traffic in a safe system.
Acknowledgements

• 29 Members of ITF/OECD Working Group

• Members of the Editorial Committee:
  – Saul Billingsley (FIA Foundation), Colin Brodie (NZ), Iain Cameron (Australia), Shalom Hakkert (Israel), Peter Larsson (Sweden), David Ward (Global NCAP), Wendy Weijermars (Netherlands) and the ITF Secretariat

• Peer Reviewers:
  – Eric Howard (Australia), Fred Wegman (Netherlands)
Merci, Thank you

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