











The road transport system is an open and complex system

- Infrastructure
- Vehicles
- Road users
- Transports of goods and passengers
- Road users on duty
- Companies and organisations
- Rules and regulations
- Enforcement
- Etc.



The road transport system is an open and complex system that is killing many people











- 1.25 Million Globally
- EU 26 000
- USA 35 000



Source: Index Mundi

The Vision Zero - Swedish Parliament 1997

- Long term target is that no one should be killed or receive long term disability
- Injury outcome instead of crashes
- Holistic approach in which system designers play an important role
- Tolerance to human failures
- Mobility a function of safety



The Vision Zero European Commission 2011

"By 2050, move close to zero fatalities in road transport. In line with this goal, the EU aims at halving road casualties by 2020. Make sure that the EU is a world leader in safety and security of transport in all modes of transport."

UN Global Goals





By 2020, halve the number of global deaths and injuries from road traffic accidents



Strengthen the capacity of all countries, in particular developing countries, for early warning, risk reduction and management of national and global health risks



By 2030, provide access to safe, affordable, accessible and sustainable transport systems for all, improving road safety, notably by expanding public transport, with special attention to the needs of those in vulnerable situations, women, children, persons with disabilities and older persons



Encourage companies, especially large and transnational companies, to adopt sustainable practices and to integrate sustainability information into their reporting cycle



Promote public procurement practices that are sustainable, in accordance with national policies and priorities



Traditional system

- Educate
- Inform
- Motivate
- Rules and regulations
- Enforcement
- Etc.
- Efficiency before safety



Vision Zero

- Educate
- Inform
- Motivate
- Rules and regulations
- Enforcement
- Etc.

- Adapt the system to the failing human
- Safety before efficiency





Vision Zero ≠ Zero Fatalities (At least not only) Vision Zero = 5 dimensions (or more?)

- 1. Ethical platform
- 2. Vision for many stakeholders
- 3. Driving force for change
- 4. Shared responsibility
- 5. Safety philosophy

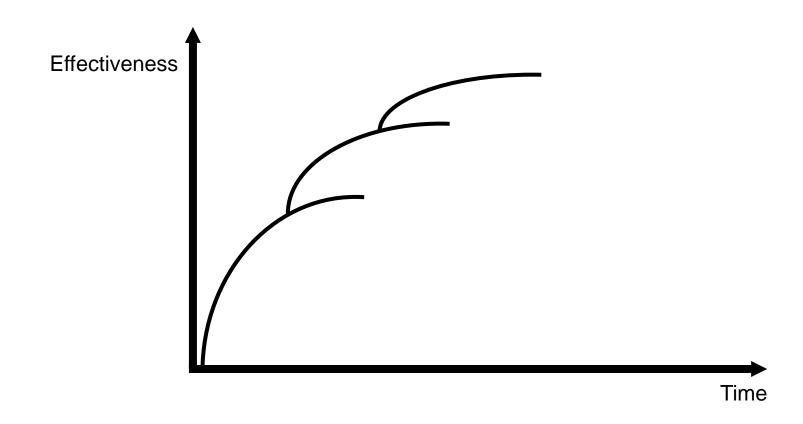


Vision Zero Safety Philosophy

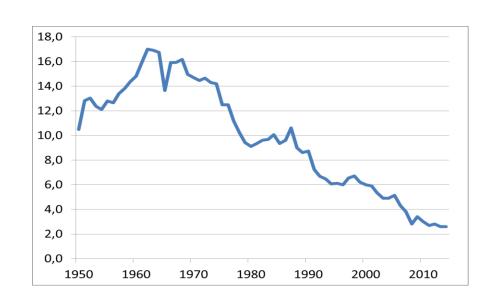
- 1. Severe injuries not crashes
- 2. People make errors, mistakes and misjudgements
- 3. Humans have a biomechanical tolerance
- 4. Energy control is key
- 5. Eliminations is the target (backcasting)



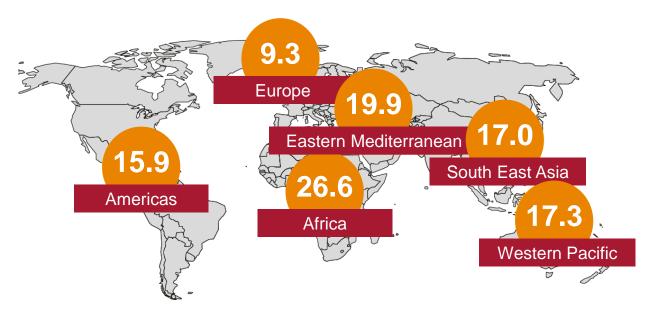
Need for change (new strategies build on old ones?)



Fatalities in Sweden over time



Fatalities per 100 000 population 1950-2016 Sweden - Highest 17, Lowest 2.6



Road traffic fatalities per 100 000 population



International perspective

(Source: International Transport Forum)

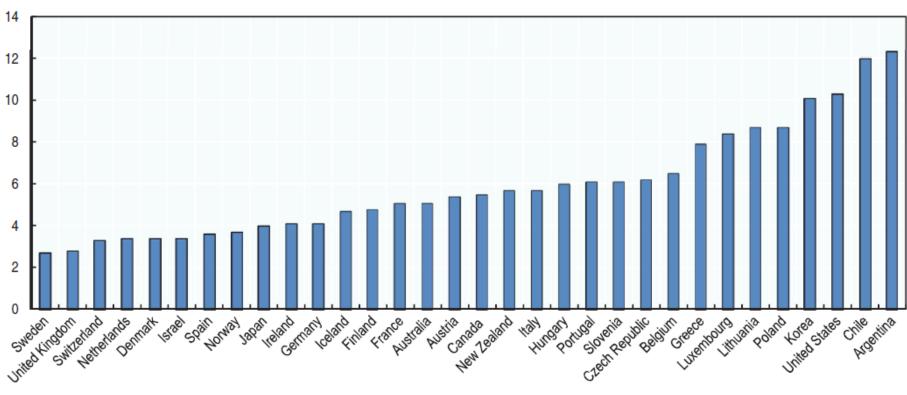


Figure 1.2. Road fatalities per 100 000 inhabitants in 2013

Note: Provisional data for Australia, Canada, Ireland, Lithuania and the United States.

Children killed in traffic 1956-2016

