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 – 25,500
- USA – 37,500

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

There is a million reasons why we crash, and more than 90% are related to human errors

A safe system supports the driver and absorbs errors and mistakes
The key is the road transport system as a whole
Vision Zero / Safe System

A system built on human failures and human biomechanical tolerance

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. Concept of 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)

UN Global Goals / Shared responsibility

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

Traffic safety ➔ Health ➔ Sustainability
Traffic safety is one dimension in almost all processes, we have to work in an inclusive way.

ISO 39001 Process

Performance factors

- Intermediate safety factors
  - Road design
  - Use of appropriate roads
  - Personal safety equipment
  - Safe speed
  - Fitness of drivers: fatigue, alcohol, distraction
  - Journey planning
  - Vehicle safety
  - Appropriate authorisation
  - Removal of vehicles and drivers
  - Post crash response
Fatalities per 100 000 population 1950-2016 Sweden
Highest 17, Lowest 2.6

Source: WHO, Road Traffic Injuries, the Facts 2015

Children killed in traffic 1956-2016 (2013)
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Thank you!

Gordon Moore in 1965 said; "Change will never be this slow again"

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