

**VISION
ZERO
CONFERENCE
STOCKHOLM
14-15 JUNE 2017
STRIVING
FOR EXCELLENCE IN
TRANSPORT
SAFETY**



#VisionZero2017

SUMMARY - JUNE 15

Vision Zero Conference 2017

Clarion Hotel Sign, Stockholm, Sweden, 14-15 June

trafikverket.se/en/visionzero

SUMMARY OF JUNE 14

Opening day 2

Jean Todt, United Nations Secretary-General's Special Envoy for Road Safety

Traffic volume is increasing worldwide. But traffic is not built for humans. 90% of all transport is by road in Africa.

Most leaders of the world have no idea what killer traffic is on a national or local level, and they have no idea what it costs.

Compared to other killers such as malaria, HIV and tuberculosis, traffic gets very little funding.

But there are signs of progress. More and more countries are signing up to Vision Zero, a late example being Mauritius who in 2016 adopted a strategy to halve fatalities. This included the design, construction and management of roads.

The UN is promoting the technology of seatbelt reminders, ESP and front-, and side-impact protection, and wants action.

Björn Annwall, Senior Vice President, Marketing, Sales and Customer Service, Volvo Cars

Safety have always been very important to Volvo.

Today's challenges for all car manufactures, and for Volvo specifically, are:

- Road safety
- Pollution
- Congestion

How do we tackle these challenges?

- Autonomous driving tech
- Electrification
- Digitalisation/shared mobility

How do we implement these? This has led to quite a bit of angst in the industry.

Vision Zero – road safety

We already have passive safety, now we also have active safety. We are developing connected safety.

Electrification is happening. Our commitment is to have put 1 million electrified vehicles on the roads by 2025.

Everybody is involved in autonomous driving projects. We are developing hardware with Uber, Software with Autoliv/Zenuity, and focusing on the human elements within the DriveMe-project.

Session 3: Liveable cities

Vision Zero in Tomorrow's Transport System

Maria Krafft, Director of Traffic Safety and Sustainability, Trafikverket

The focus has shifted to the unprotected road users. It is now urgent to safeguard the unprotected.

Challenges in the city include more mixed areas with traffic – deliveries, cyclist and pedestrians. We need to use a holistic view, which is integrated with other issues, like air quality, noise, energy consumption, etc.

Living labs with focus on unprotected road users to start in 2018. For example, safe, secure and liveable environments on pedestrian streets, squares and other crowded areas in the city.

What does Agenda 2030 mean for Vision Zero?

Traffic safety is the bone structure of Agenda 2030 and in building a sustainable society.

The unprotected are prioritised along with smooth and low traffic speeds, space effectivity and smarter freight delivery.

Attractiveness and security are crucial for a modern city, where traffic safety is an important function
In the end traffic safety is a success factor for automation and shared mobility

Vision Zero in City Development

Claudia Adriaola, Director, Health and Road Safety, WRI Ross Centre for Sustainable Cities

What do people want from cities? One answer is in the 2017 Mercer study.

But what is currently happening? There is an Increasing urbanisation.

Bogota in Colombia today has over 8 million citizens. Here, pedestrian dominate fatalities. In second place motorcyclists. The figures correlate with other developing countries.

Bogota is proud to be a Vision Zero-city.

Clogged traffic arteries are lethal for vulnerable users.

There has been a 227% increase in moto deaths. The air quality is gruesome.

Today's children are the first generation to have a lower life expectancy than earlier generations mainly because of lack of exercise. Cycling and walking, if safe, could help solve the problem.

Road safety is an enabler of liveable cities.

Closer together - This is the Future of Cities

Alexander Ståhle, Researcher, School of Architecture KTH and CEO, Spacescape

Digitalisation drives urbanisation. With more families moving to the city centre, walkability is driving the housing market.

In 2019 Oslo city centre will be car free. The same thing is happening in Helsinki and Stockholm.

In the Vision Plan Volvo - Gothenburg 2070 by Volvo – the city is totally free of cars.

Vision Zero in Toronto

Christine Keighren, Business Sweden

Toronto has 3 million inhabitants, Greater Toronto, 6 million. The fatality rate in Toronto's downtown is evenly split between cars, public transport, cycling and walking. In the suburbs car fatalities dominate.

In July 2016, Vision Zero was adapted in an initial five-year plan mainly focusing on black-spots. Every important stakeholder is in on the agenda.

Emphasis has so far focused on vulnerable road-users including:

- Pedestrians
- School children
- Older adults
- Cyclists
- Motorcyclists

There has also been focus on reducing aggressive driving and distraction with the installation of red light cameras.

Rapidly Developing Cities - The Role of Safety

Winnie Mitullah, Director of the Institute for Development Studies, University of Nairobi, Kenya

Every city is unique. This is especially true in the developing world.

In Kenya, we are experiencing rapid urbanisation. In Nairobi, we have carried out pilot projects with success, but we need to see a larger framework.

Cities in the developed world tend to be compact. Cities in the developing world tend to be sprawling so the issues and challenges are likely to be different.

Amongst unprotected users, 70% of fatalities happen while crossing the road.

Budgets for traffic measures are minimal.

Session 4: New Technology and Innovation

Vision Zero – The Role of Innovation

Claes Tingvall, Senior Advisor, ÅF and Monash University

We have great challenges.

We need to replace fossil fuel. We must eradicate death and serious injury in traffic.

To do this we depend on innovation.

The goal of eradication drives innovation.

1. If the current methods do not lead to eradication, full compliance and zero defects, we need new methods
2. If the current methods to eradicate produce unwanted side effects or do not lead to overall sustainability (Sum Zero), we need new methods
3. If the current methods to eradicate are too costly, take too much time or are not accepted by the public, we need new methods.
4. If you cannot express the need for innovation in an effective way, you need to go home and rethink
5. Develop criteria, test methods, critical limits and test demos early to drive innovation
- 6a. Read your Haddon (it is always about control of energy!)
- 6b. Never give up, sometimes it can take 50 years to be understood!

Challenges drive innovation, but we need to know and understand what the challenges are.

Safe Infrastructure

Guro Ranæs, Norwegian Public Roads Administration

A vision based on zero fatalities and zero serious injuries in road traffic.

The vision has three pillars: Ethics, facts & science and shared responsibility.

Fatalities are falling in Norway; do we have the best figures in Europe!?!?

But we are seeing a plateau in success metrics.

We use mid-barriers where there is room, rumble lines as mid-barriers when the roads are narrower.

Why have we succeeded?

We are committed and systematic, we work long term and are targeted. All our efforts are science and knowledge based. We are involving of a broad spectre of organisations and use of a broad spectre of measures.

Managing Impaired Driving

Ola Boström, Vice President, Autoliv Research

What's impaired driving:

- Drug abuse
- Drowsiness
- Distraction
- Trust

'Over trust' i.e. texting, while 'under trust', i.e. switch off

The industry roadmap towards automated driving:

2000 – feet off

2015 – hands off

2018 – eyes off

2020 – mind off

We need a human centric approach. Human and machine need to work together as a joint cognitive system sharing control and trusting each other.

AI is advancing and is becoming more commonplace in human interface usage.

A Smart Transport System

Catharina Elmsäter-Svärd, Chairman, Drive Sweden

As a former politician, I say; Vision Zero is better than zero vision.

Late in 2015, global sustainable goals. Challenges and possibilities.

OK, it is known that cars are safer but what about congestion?
People need mobility. So how will the future of transportation look?
Automated cars? They are already here; in fact the future starts now.

Rethinking Regulation in Light of Disruptive Technologies

Azra Habibovic, Senior Researcher, RISE Viktoria

What is a disruptive technology? “A new technology that unexpectedly displaces an established technology” (Clayton M. Christensen)

Vehicles are becoming sophisticated.

Rethinking regulation in the light of disruptive tech? Unpredictability makes regulation challenging.

Regulation needs to be general enough to enhance innovation, but specific enough to ensure safety and give clarity to manufacturers.

To balance innovation and safety, authorities need to:

- Adopt a system perspective
- Be more proactive, less detailed – ask questions, not give answers
- Embrace an iterative, learn-by-doing regulation strategy

Disruptive tech will change our lives, i.e. automated vehicles

Now a hardware enabled future will be software defined, ever-changing and ever-learning. Many stakeholders make the future harder to read, and difficult to predict. Traffic is, and will remain, complex.

Session 5: Role of Humans and Organisations from a Vision Zero Perspective

Introduction

Peter Larsson, Senior Advisor, Transportstyrelsen

Purpose of accident analysis: A fact-finding activity to learn from accidents in order to develop effective countermeasures to prevent accidents, or mitigate their consequences.

The importance of accident models

Vision Zero is based on a systems approach

- Humans cannot be “error free”
- Human error and injuries are treated as system failures
- Accident analysis focuses on both accident and injury causation from a systems perspective
- Countermeasures are related to all components and their interaction, but also to organisations influencing the design and use of the system

A simple example:

- Why did the truck drive off the road?
 - Because the driver fell asleep (most accident analyses based on the person-approach end here and the interventions are directed towards driver behaviour).
- Why did the driver fall asleep?
 - Because he had volunteered to take an extra shift outside the permitted driving hours even though he was very tired (he needed the money).
- Why was the driver able to take the extra shift?
 - Because the employer did not have a management system or something similar to prevent the driver from driving outside the permitted driving hours.
- Why didn't the employer have a safety management system?
 - Because legislation does not cover this and consequently there is no authority supervision.
- Why was a rigid lamp post placed in close proximity to the road?
 - Because the regulations governing the design of the road permitted such a design.
- Why did the regulations permit such a design?
 - Because the road authorities do not have a systematic way of investigating crashes, as a part of a safety management system.

- Why do the road authorities not have a safety management system?
 - Because politicians are unwilling to pass laws which may increase costs.

One example where responsibility is moved to systems managers is from IKEA. The retail giant introduced zero alcohol rules amongst its drivers. The responsibility for this is shared between drivers and management. IKEA uses ISO 39001.

ISO 39001 – a Tool for Organisations

Shaw Voon Wong, Director-General Malaysian Institute of Road Safety Research (MIROS) Ministry of Transport Malaysia

ISO 39001 – 40 member countries, 14 international liaison organisations, for instance the World Bank. Vision Zero as an efficient toll for road safety.

Vision Zero in Public Organisations

Naomi Baster, Principal Strategy Planner Road Safety, Transport for London

The British Government and the Mayor of London have both adopted Vision Zero.

Public health is a crucial factor for the Mayor and the Boroughs of London to introduce Vision Zero. Therefore, we now consider it our responsibility for road safety within the context of our responsibility for health.

This means that London's Vision Zero programme will be aligned with our Healthy Streets approach. This also means that Vision Zero for London will focus on road danger reduction, as well as casualty reduction.

Humans in Complex Systems

Sixten Nolén, Senior Advisor, Human Factors, Transportstyrelsen

It's human to make errors and mistakes ± even in road traffic. In fact human errors and mistakes will happen sooner or later. Design of the transport system must take that into account. Design cannot stop errors and mistakes from happening, but it can reduce the risk (probability and consequence). We must design systems keeping in mind that 80% of accidents are caused by human errors. But why should these errors have to lead to fatalities?

As humans we have limitations; they can be cognitive, for example, we might interpret environment unreliably. We tend to perceive benefits rather than the opposite; we have a tough time assessing consequences; we tend to make workarounds instead of facing up to truths; and finally, we tend to overestimate our own abilities.

In a complex system, it is difficult to predict all risks. A safe system also needs to handle unpredictable risks. Technology and organisation are important barriers. Human adaptability may also play a vital role in a resilient system.

It is important to have a MTO (Man, Technology, Organisation)-perspective which preconditions humans to behave safely. Technology and organisation need to support human performance.

Humans also have strengths that are useful in a resilient system.

In the presence of:



Organised by:

