

# Speed assistance in modern cars and trucks



**TRAFIKVERKET**  
SWEDISH TRANSPORT ADMINISTRATION

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Administration and  
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# The Vision Zero as decided by the Swedish parliament in 1997

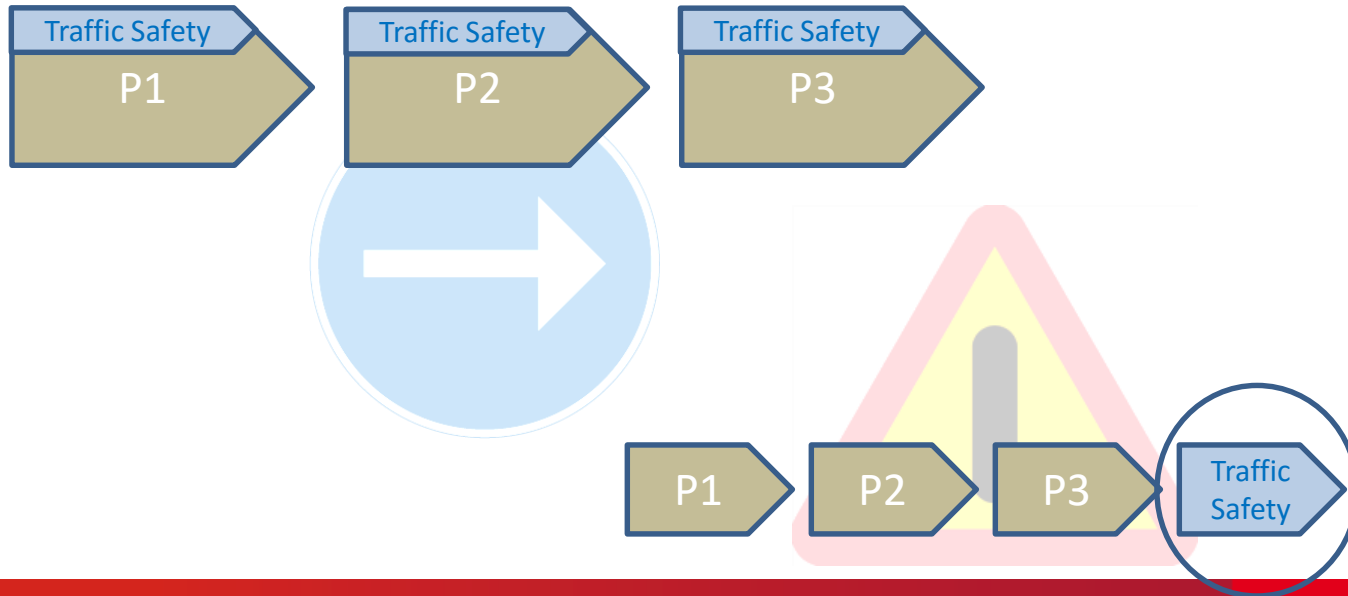
- Long term target is that no one should be killed or receive long term disability in traffic
- Focus on injury outcome instead of crashes
- Holistic approach in which system designers play an important role
- Based on the system's tolerance to human failures
- Mobility a function of safety

## 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.”*



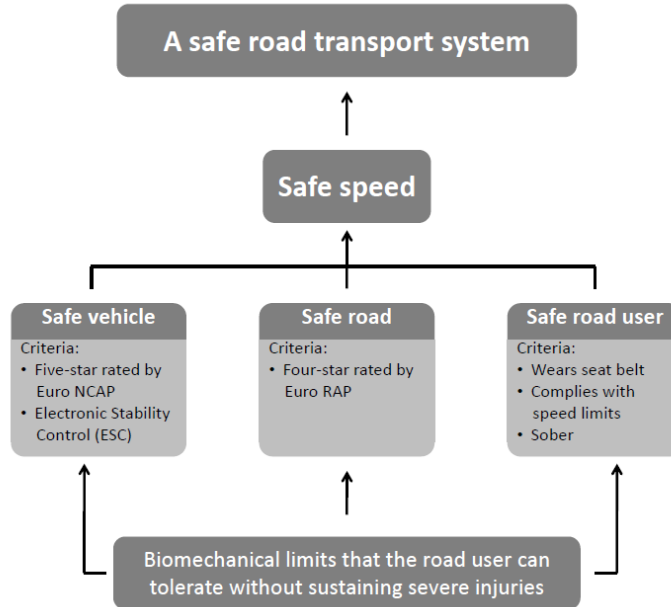
Traffic safety is one dimension in almost all processes, we have to work in an inclusive way



# The key is the road transport system as a whole



# Vision Zero model for safe traffic



The vehicle:

- High NCAP score
- ESC

The user:

- Wears seat belt
- *Complies with speed limits*
- Sober

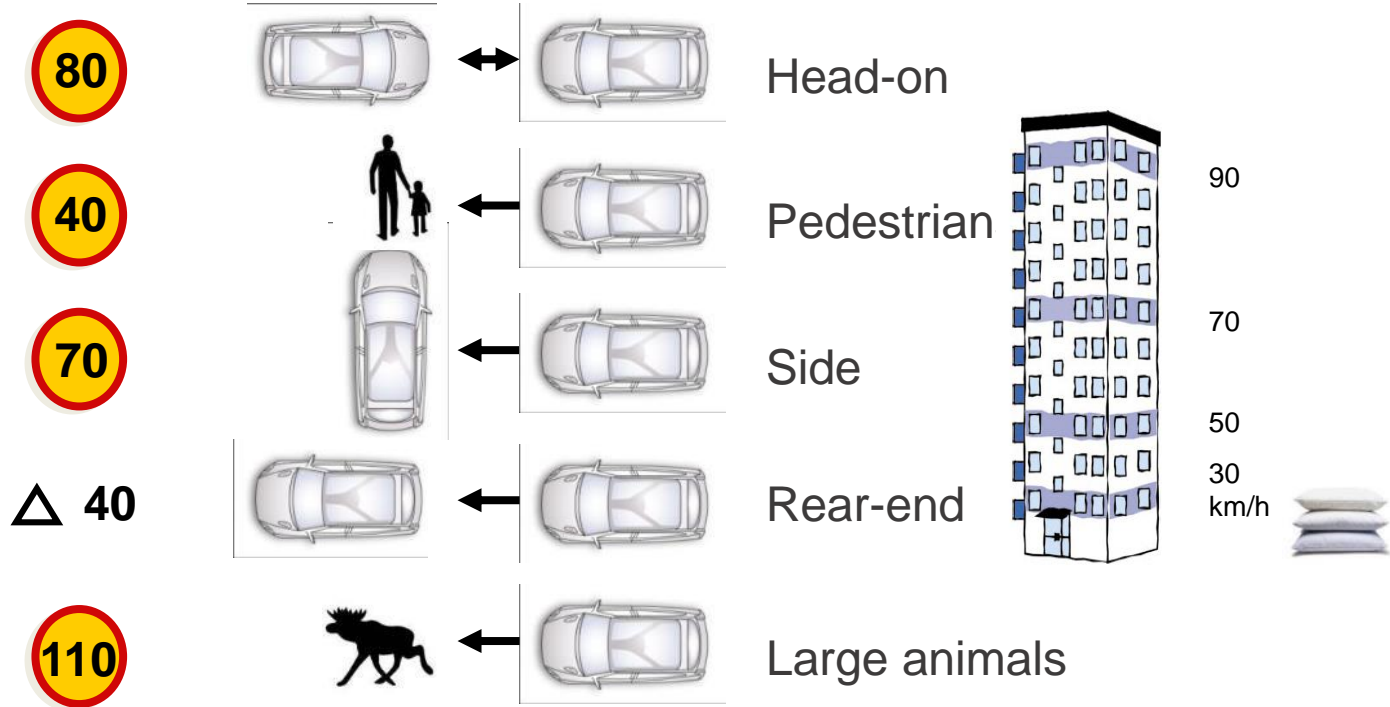
The road:

- Four star rated in RAP

# Key behaviours

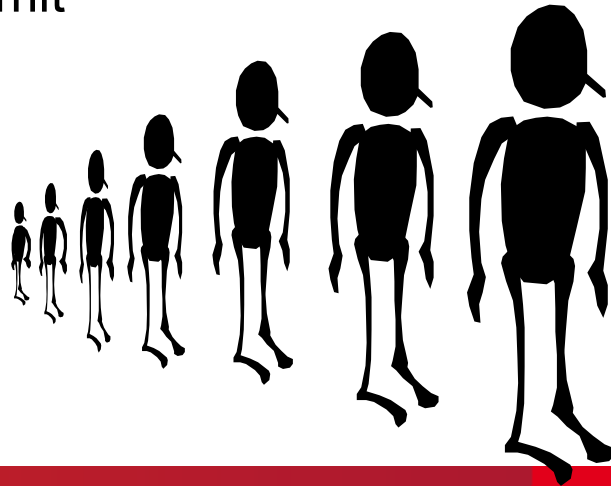
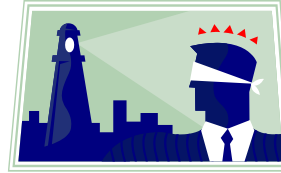


# Road / Vehicle / Speed limit (Potential future )



# Why do we speed?

- We copy
- It seems right and efficient
- We don't know the speed limit





# Speeds and technology, how can we support drivers?

- Humans are fairly blind to speeds
- Enforcement helps
- Technology supports



# Sweden 1999-2002

## LARGE-SCALE SPEED-ALERT TRIAL



- **5 000 vehicles**
- **Three years**
- **Four test areas**
- **8 million euro**

**High quality speed map**

# Sustainable travel and transports (Under Swedish Road Administration)

- Aims to develop a program and action plans
  - companies
  - municipal councils
  - public transports authorities
  - organizations
- Change attitudes and travel habits
- Speed
- Alcohol & drugs
- Seat Belts
- Safe vehicles
- Carbon dioxide emissions
- Hazardous emissions



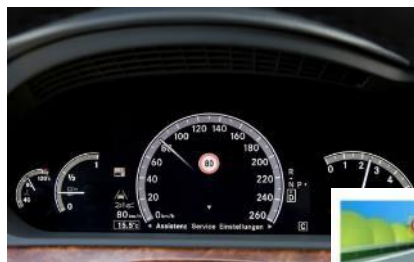
Swedish Transport Administration has a slightly different instruction

# Speed limit as part of navigation systems





Opel Insignia



Mercedes S-Klass



Note: Information shown in main instrument as

Saab 9-5



BMW 5-Serie



Ford Focus



VW Phaeton / Passat



Audi A6

As of 2010

# How can a mass market introduction happen?

Engage vehicle manufacturers

Engage system developers

Engage map suppliers

Euro NCAP as a toolbox






















2009 Speed Limiters

2013 SAS Speed assistance systems



- Encouraging all-round safety – now including ADAS and avoidance technology



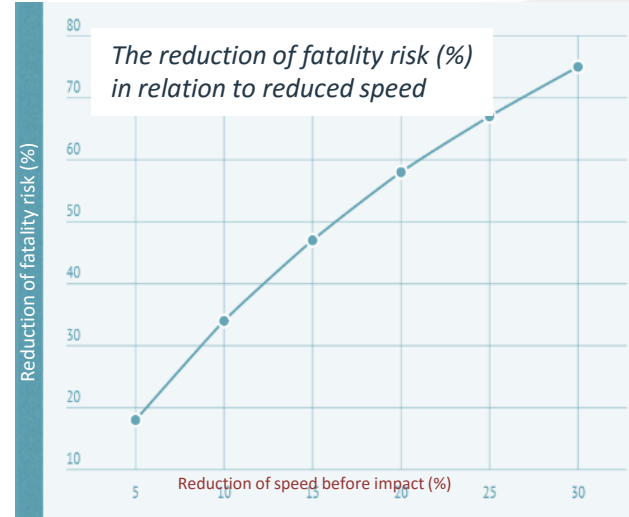
	 Offset-Deformable Barrier	 Full Width Rigid Barrier	 Side Mobile Barrier	 Side Pole	 Whiplash	 AEB City
	 CRS Performance	 CRS Installation Check	 Vehicle Provisions			
	 Head Impact	 Upper Leg Impact	 Lower Leg Impact			
	 Speed Assistance	 Lane Support	 AEB Interurban	 Seatbelt Reminders		



## Speeding is the “big killer” on hazardous roadway.

### Strong relationship between speed and injury severity

- For car occupants in a crash with an impact speed of 80 km/h, the likelihood of death is 20 times what it would have been at an impact speed of 30 km/h
- Particularly critical for vulnerable road users such as pedestrians and cyclists



## ■ Speed Limit Information Function

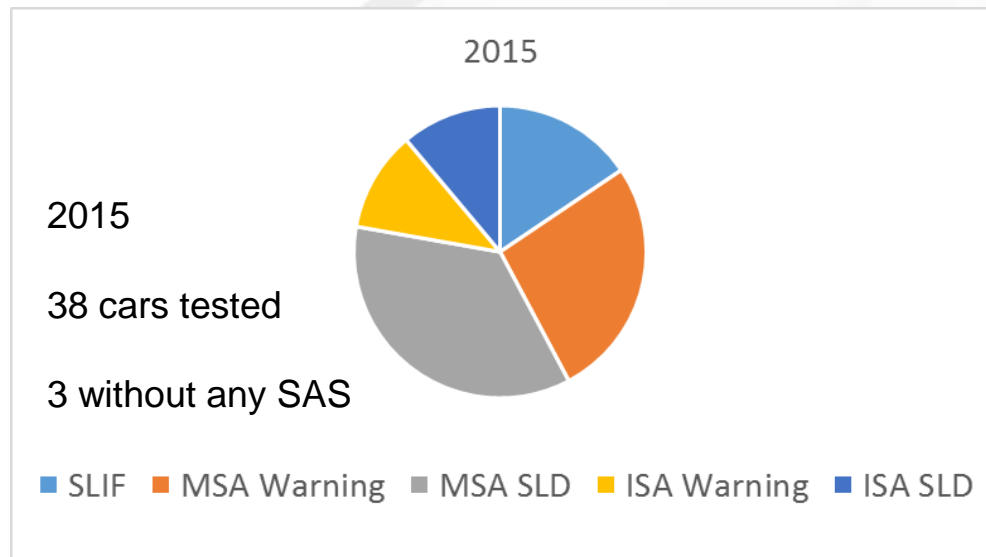
- Proving reliable information about speed limit

## ■ Manual Speed Assist

- Driver sets threshold for warning or limitation
  - Warning function
  - Speed limitation function

## ■ Intelligent Speed Assist

- Driver or system enters known speed limit indicated by car



- Introduction of conditional speed limits, i.e. rain, time, etc.



- Show conditional speed limit
- Display correct speed limit taking conditions into account
- More accurate speedometer

	SLIF	MSA	ISA
Communicating speed limit (Section 4.4)	1.00		1.00
Camera based			
- without subsign recognition	0.25		0.25
- with subsign recognition	0.50		0.50
Digital Map based			
- without subsign recognition	0.25		0.25
- with subsign recognition	0.50		0.50
Camera and Digital Map combined			
- without subsign recognition	0.75		0.75
- with subsign recognition	1.00		1.00
Warning Function (Section 4.5 and 4.6)		0.50	1.00
Speed Limitation Function (Section 4.7)			
- Vstab within -10/+0 km/h of Vadj		0.75	0.75
- Vstab within -5/+0 km/h of Vadj		1.00	1.00

# New possibilities also in commercial traffic



**THE GLOBAL GOALS**  
For Sustainable Development



Thank you!



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