



Ministerie van Verkeer en Waterstaat

Anti-accident systems on the road

Dutch FOT on heavy vehicles

Robbert Verweij

15 juni 2009



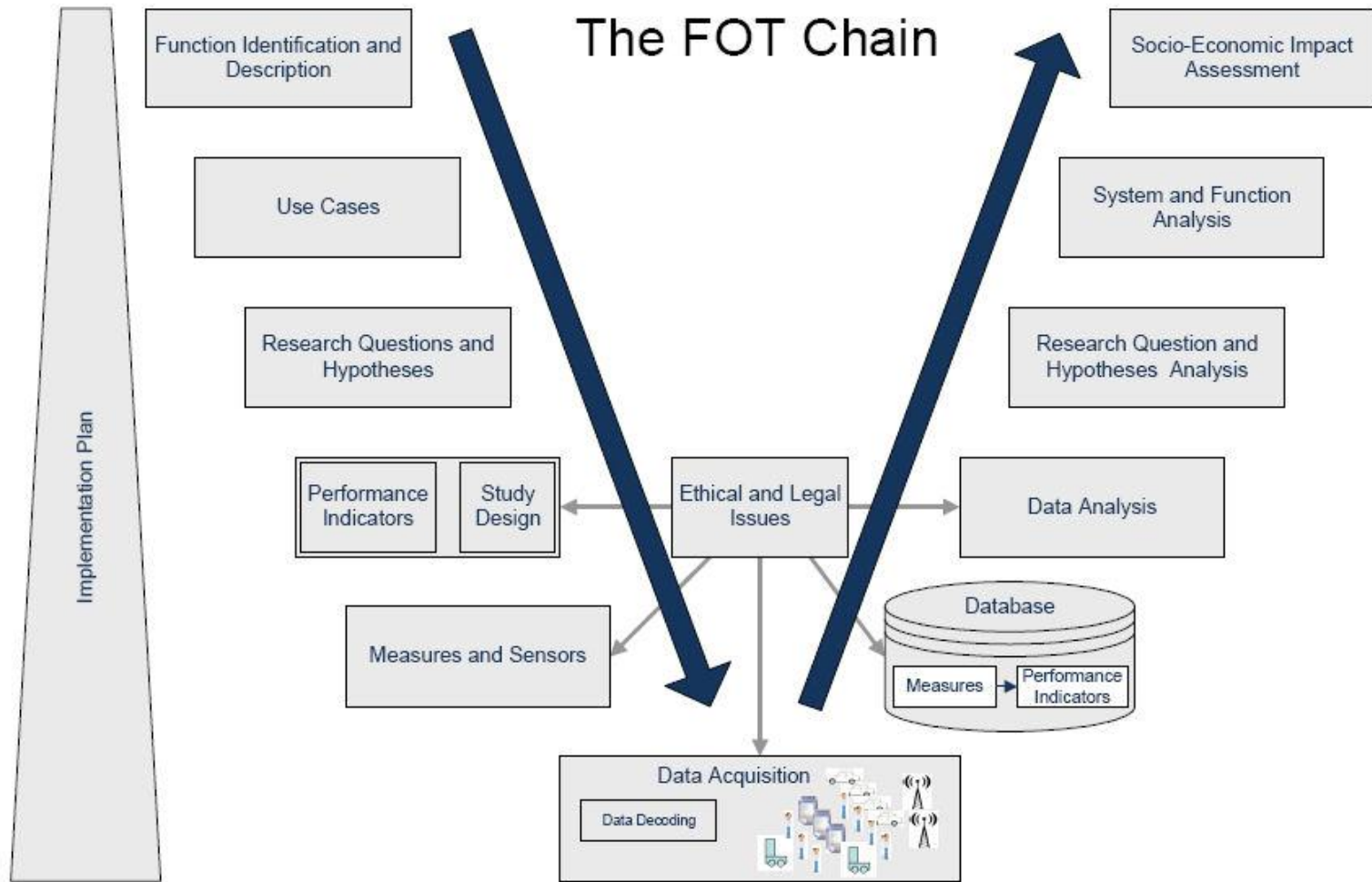
Goal FOT

1. To reduce the number of accidents involving lorries and analyse the traffic safety effects.
2. To assess the impact of large-scale implementation of accident prevention systems on traffic circulation.
3. To gain insight into the effectiveness of the various systems with regards to lorry traffic safety.



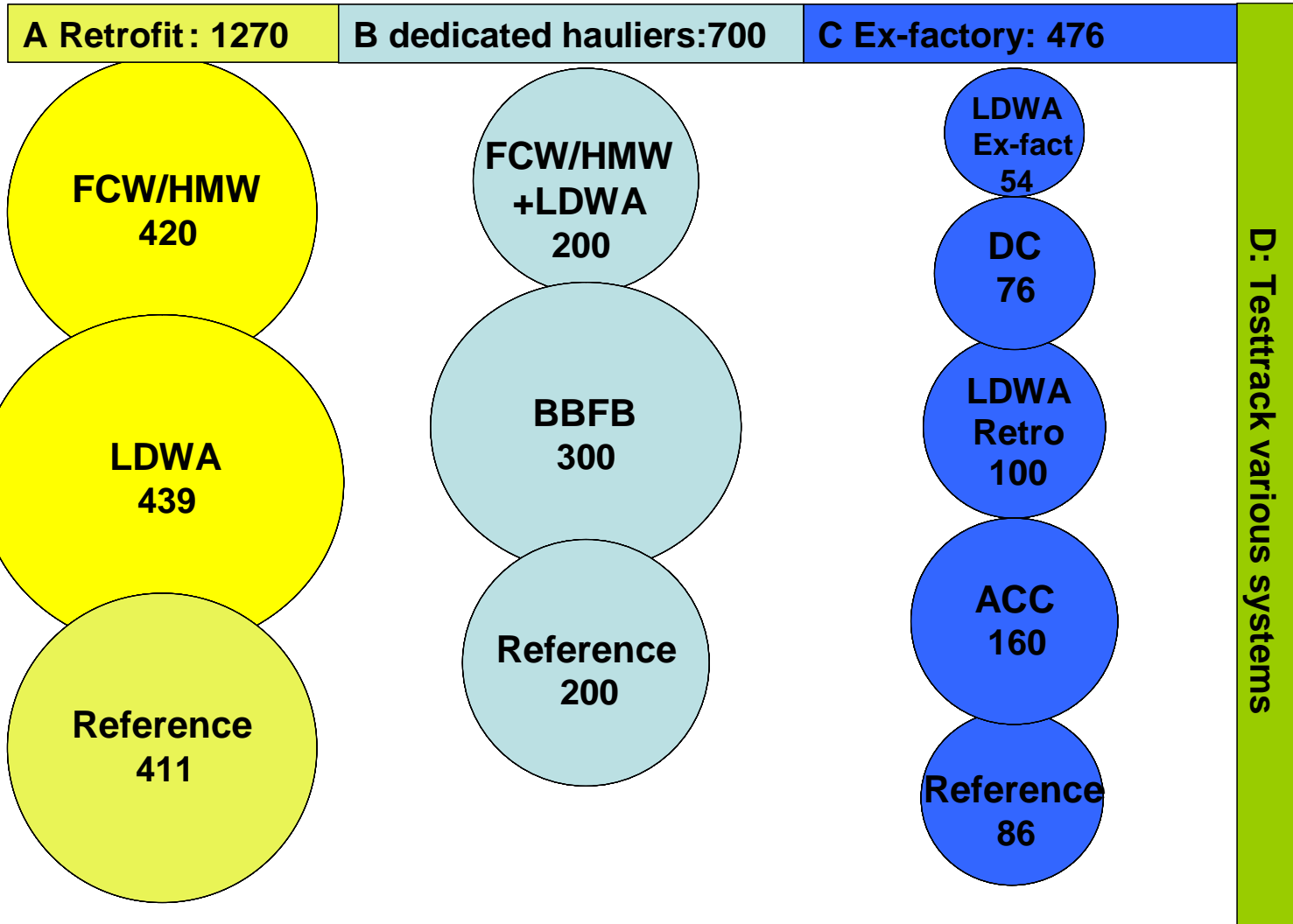


FESTA





FOT
Size





Challenges during FOT and countermeasures (1)

- Time pressure
 - Good for pressing decisions in uncertain fields
 - No time for incorporating experiences during the FOT
- Technical issues
 - Lack of availability of sensors
 - Size of FOT imposes unexpected challenges

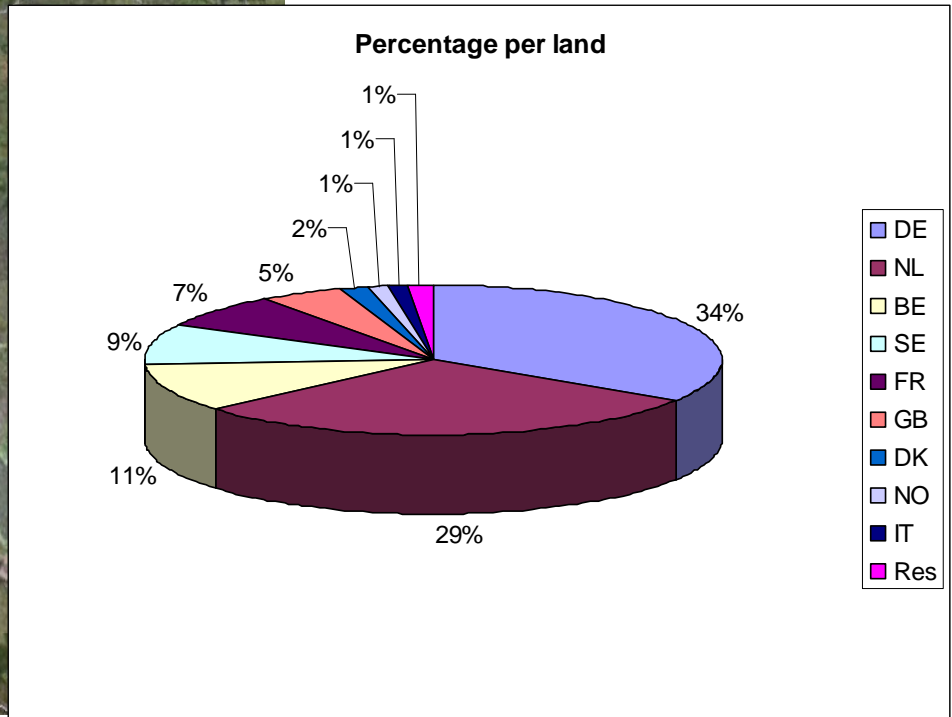
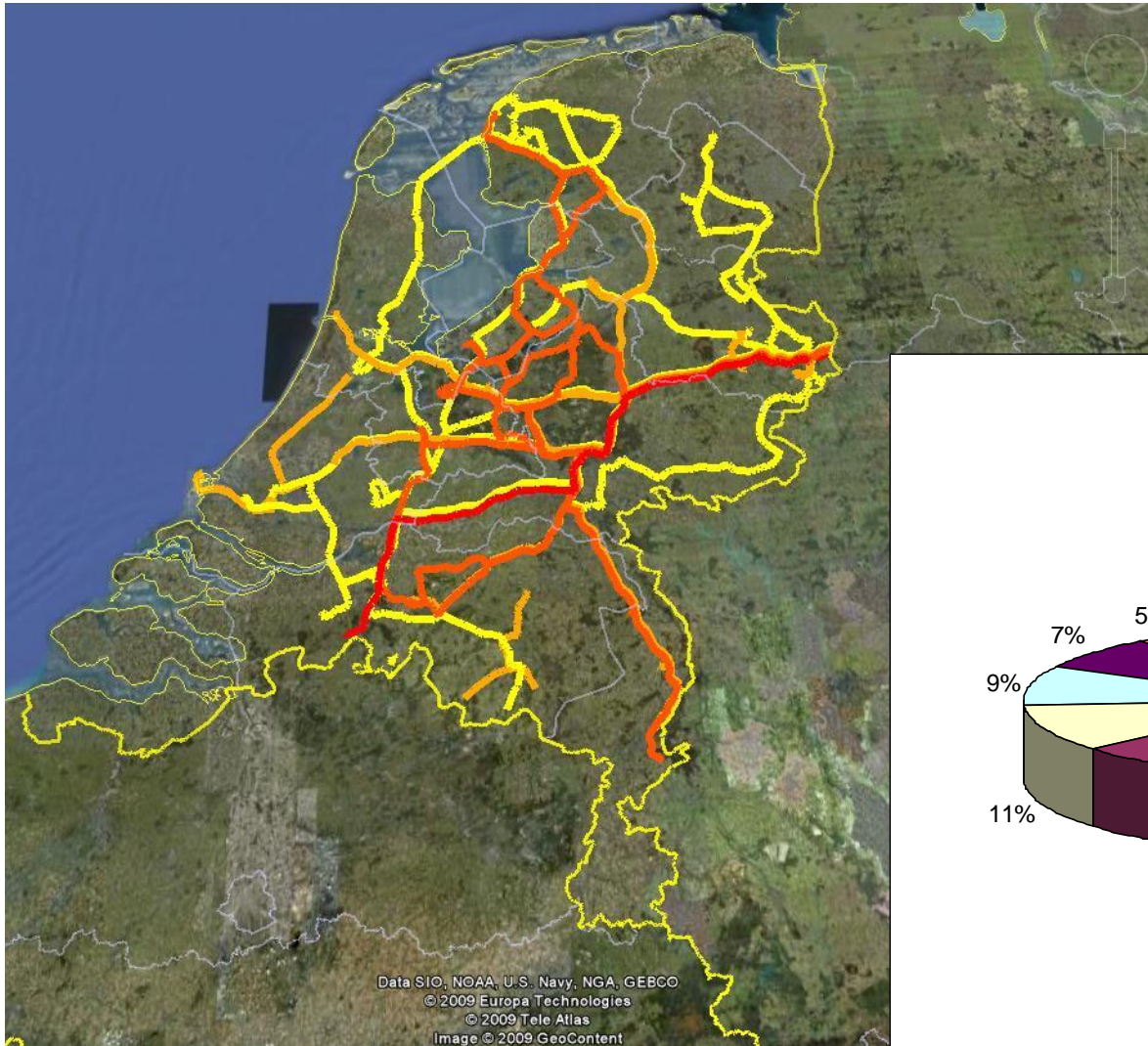




Challenges during FOT and countermeasures (2)

- Data issues
 - Data acquisition, data processing and data analysing on Terabytes is not easy!
 - Hauliers suffer from external factors (damage, financial crisis, international transport (€€€))
 - Unclear where data processing ends and analysing starts







Challenges during FOT and countermeasures (3)

- Legal issues
 - State aid not a problem!
 - In state of the art technology it is difficult to define what to expect from third parties

- General issues

FOT attracts attention of:

- (1) Hauliers
- (2) Scientists
- (3) Policy makers





How is it related to full-scale development?

- Buying systems reduces costs in near future
- All transport-organisations are involved and will communicate results
- Coupling with EC/UNECE for LDWA/ESC systems
- Drivers are enthusiastic (peer review works!)





And ... as we are all human too ...

some quick results 😊



Results (1)

TRIP_SUMMARY:

- Datum, tijd aan begin&eind
- snelheid (gemid.+max)

TRIP_DETAIL (elke 2 kilometer)

- Datum, tijd, GPS, mapmatching
- Snelheid (gemid.&actueel)
- Actuele volgtijd

AOS_SUMMARY (event):

- Datum, tijd, kenteken, GPS, mapmatching
- Event-type
- Actuele snelheid
- Rem, richtingaanwijzer, HW, lane departure

AOS_DETAIL:

- Elk event 10s
- Datum, tijd, kenteken, GPS
- Dwars en langsversnelling
- Mobileye “Auxiliary AOS data”

CRASH_SUMMARY (|a|>4g):

- Datum, tijd, kenteken, GPS
- Max. acceleratie, botssnelheid

CRASH_SUMMARY:

- Elke crash gedetailleerd (1s)
- GPS
- Acceleratie

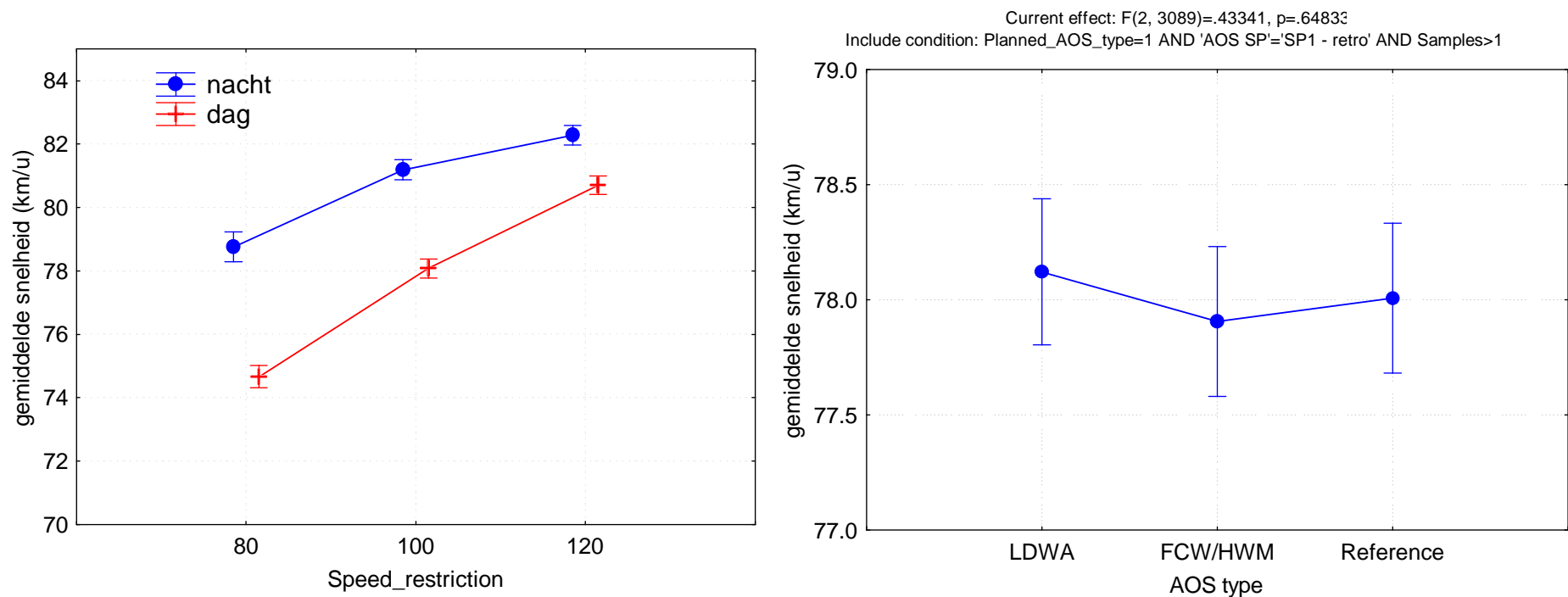


Results (2)





Results (3)



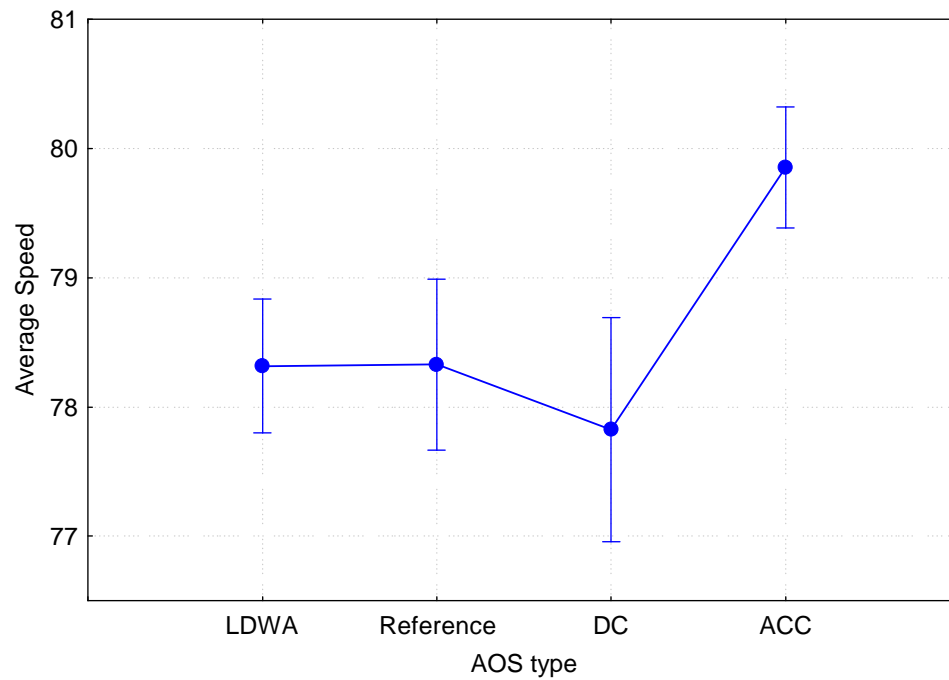
Effect on speed limit and day/night...

not on AOS system

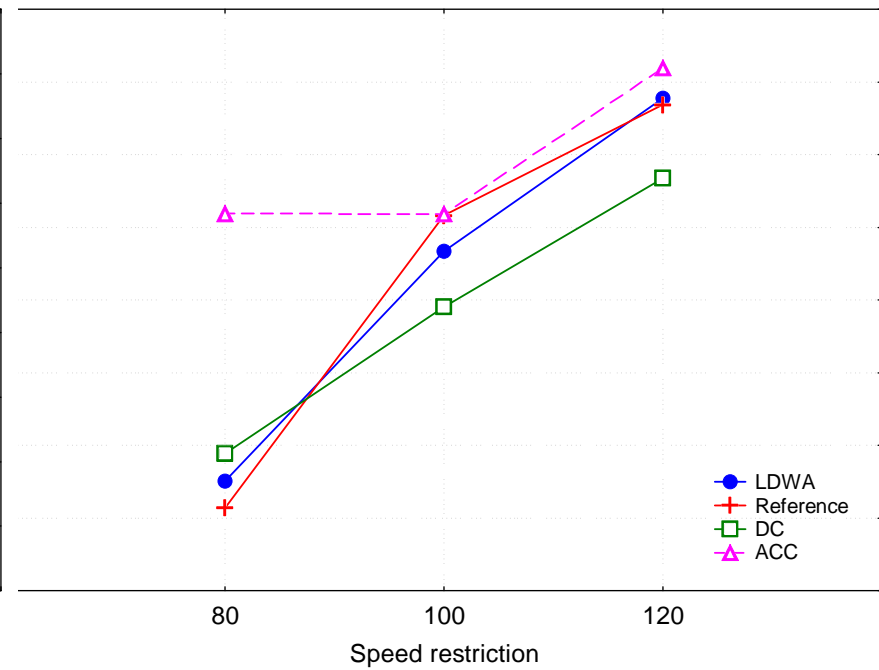


Results (4)

Current effect: $F(3, 802)=9.8884, p=.00000$



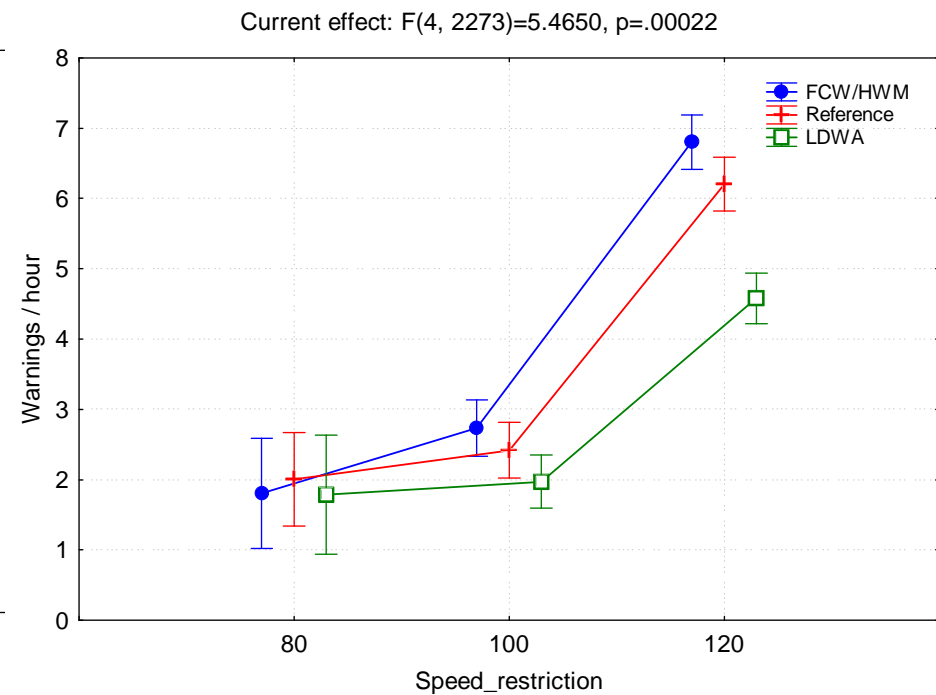
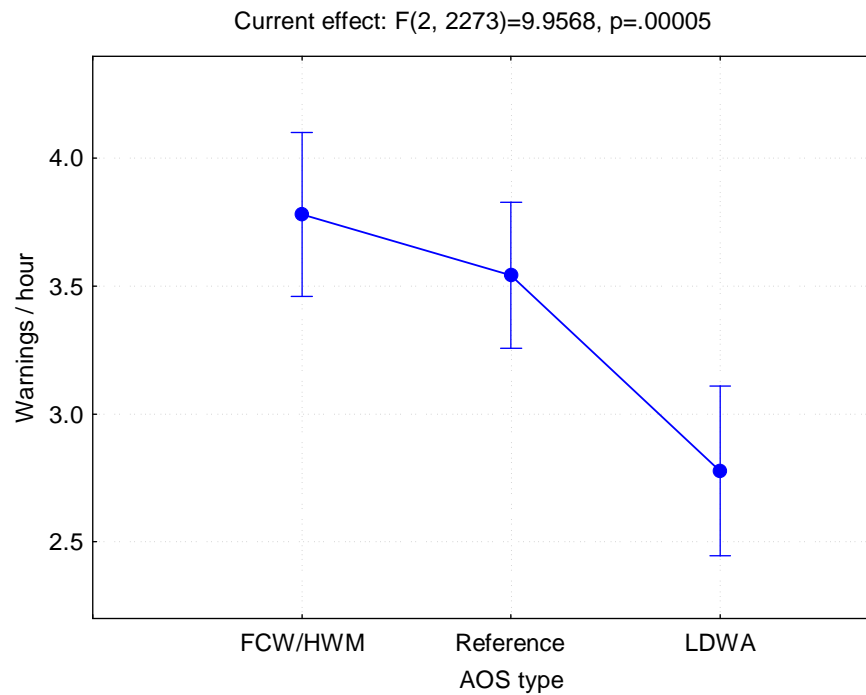
Current effect: $F(6, 802)=4.0934, p=.00047$



Higher average speed with ACC... but only on 80kmh road



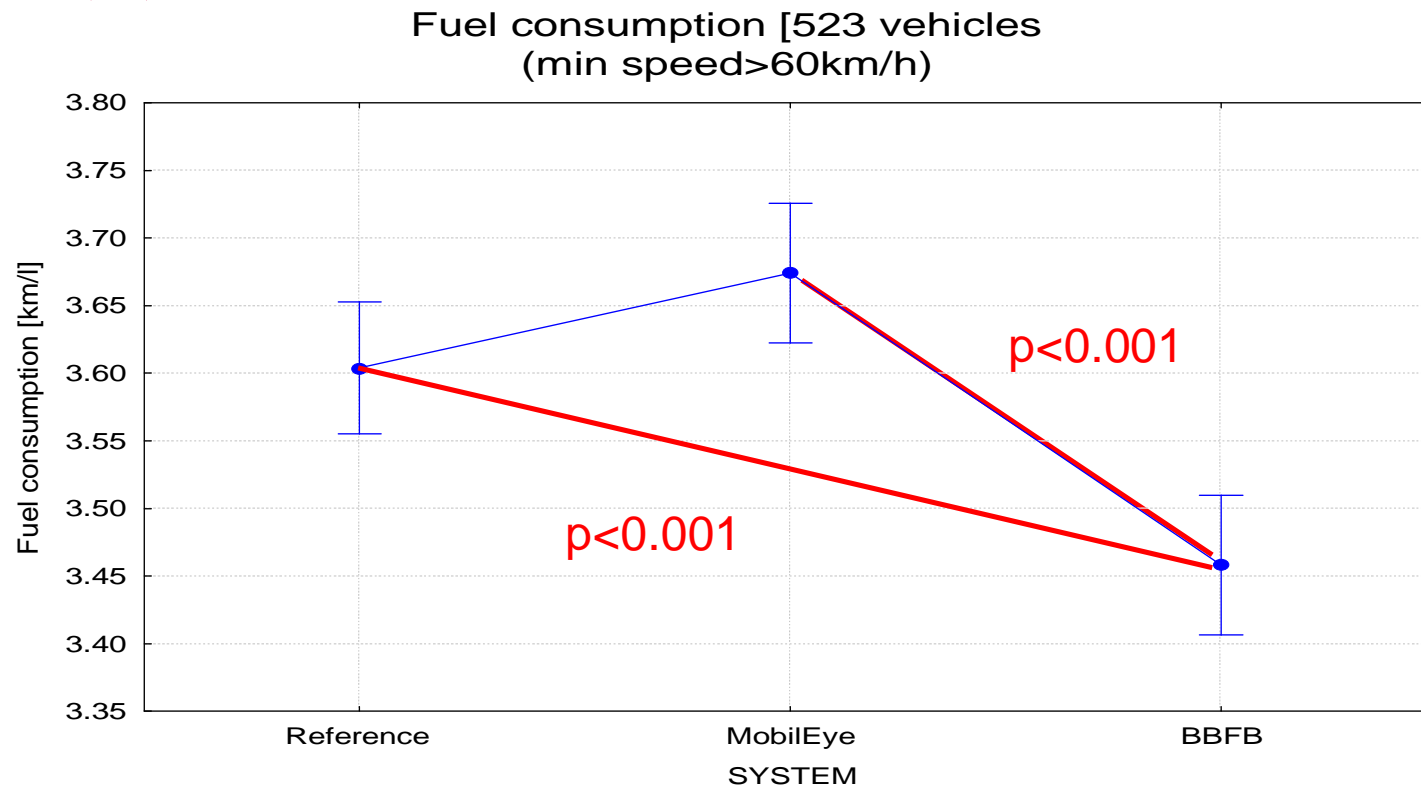
Results (5)



LDWA seems to lead to less linecrossings ...



Results (6)



... black box leads to less fuel consumption ...



FOT roundup

Presentation of final results September 9th.

Reports, brochures, DVD available (in english too).

Presentations during ITS-Stockholm

Please contact:

Robbert Verweij

Department of Transport

Robbert.Verweij@minvenw.nl

