

Impaired Driving – Focus for the Future

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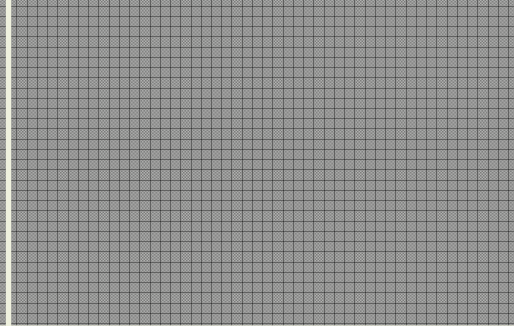
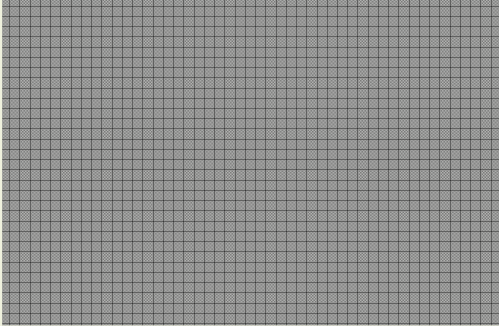


People

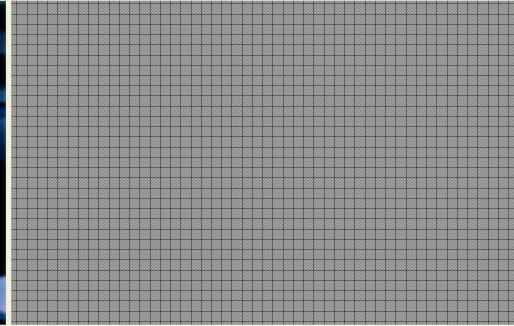
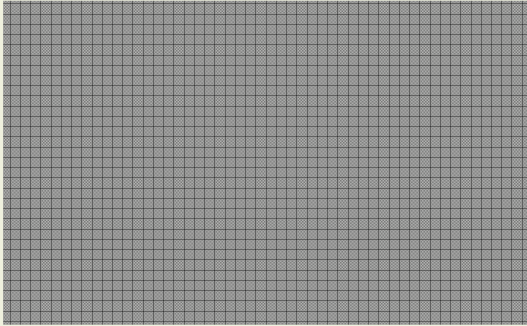
Vehicle

Traffic Environment

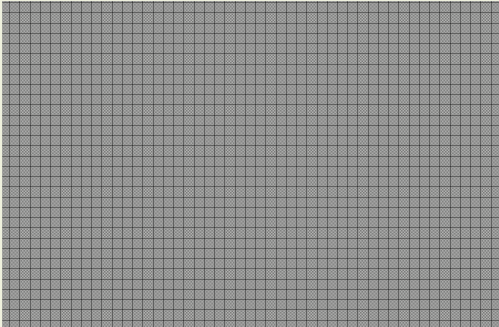
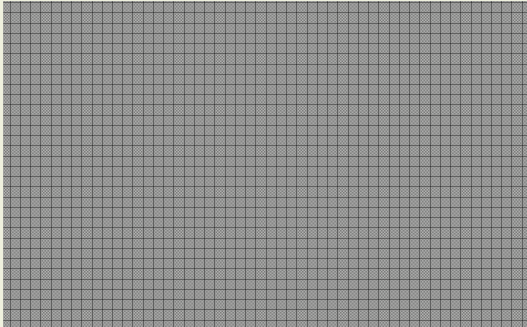
Before



During



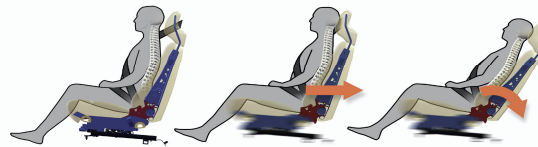
After



Volvo Historical Safety Developments



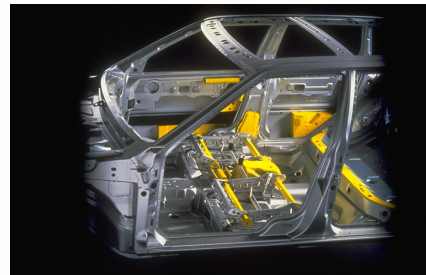
3-point lap-shoulder
belt 1959



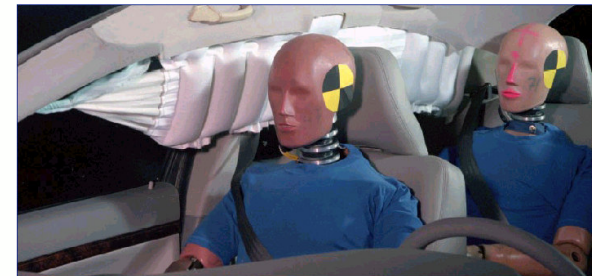
Whips- Whiplash
Protection System 1998



SIPS bag- Side Impact
Protection System Air bag 1994

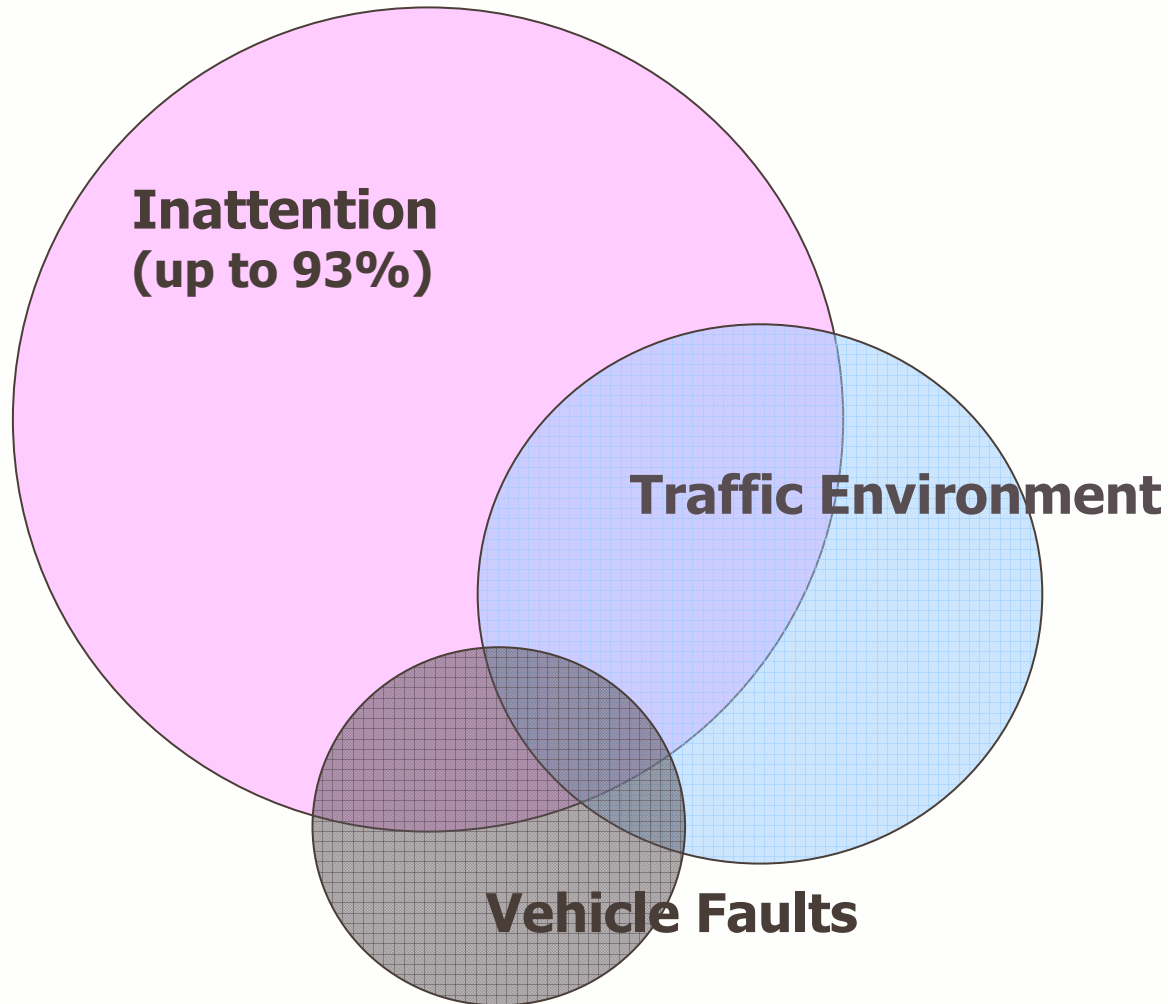


SIPS- Side Impact
Protection System 1991



Inflatable Curtain-1998

What Causes Accidents?



Source: Virginia Transportation Institute



Further Safety Advancements – Manufacturer Challenges

- Life-saving protection is complemented by prevention of accidents
- Behavioural aspects are becoming an increasingly important factor
- Examples of areas for concept development: Systems that address...
 - Driver distraction
 - Driver drowsiness
 - DWI (alcohol and drugs)
 - Driver capabilities

'the 4 D's'



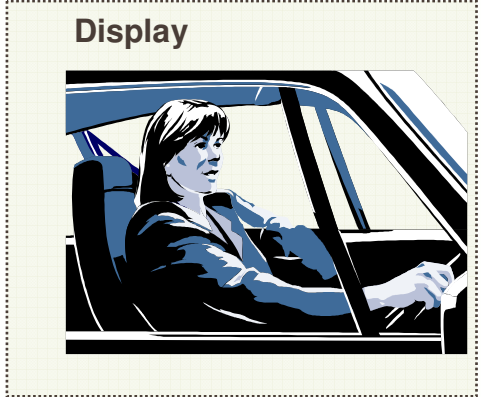
System for Addressing Driver Distraction

IDIS – Intelligent Driver Information System

Prioritization of information

Parameters for:
The driver's rate of activity
Secondary information

Evaluation of driver-loading



System related information
Warnings
Traditional driver inform
Navigation
Telephone calls



System for Addressing Driver Drowsiness

Driver Alert

- Driver is alerted if he or she is about to steer off the road.
- System monitors the driving pattern in relation to road markings.
- Audio signal + message in driver information module.



System for Addressing DWI – Alcolocks

- Different driver categories influencing solutions
 - Drinks & Drives
 - More than alcolocks is needed to restrict from driving
 - “Takes a chance”, Occasionally driving after drinking
 - Alcolocks with a certain level of discomfort can be acceptable
 - “Takes no risk” - Don’t drink & drive
 - Solutions need to be transparent, hassle-free and very comfortable without effort from driver.



evolution

System for Addressing Driver Capabilities

Speed Limiter Key

- Possibility to set parameters linked to driver capabilities:
 - limiting maximum speed,
 - maximum power,
 - maximum time for acceleration,
 - restrictions on night time driving, etc.



Summary – Preventative safety - addressing driver capabilities

- System development is possible
- Success depends on application and use
- Application and use depends on customer acceptance and demand
- Government/ manufacturer co-operation...
 - Customer acceptance – if nonexistent - help from governments to get to market
 - Society readiness
 - Incentives/ Taxes
- Example of government / manufacturer co-operation: alcolocks in Sweden
 - Fleet owner acceptance to secure quality of product
- Key is to turn "public good" into "private good"!





Thank You!

