



# Knowledge and Perception of Advanced Driver Assistance Systems

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Maria Fleischer | Austrian Road Safety Board (KFV)



# Advanced Driver Assistance Systems



# ADAS - Human Behaviour and Attitude

Active safety systems and advanced driver assistance systems (ADAS) in cars evolved rapidly

Shifted from safety and supportive assistance - take over full vehicle control

➤ Have a **high potential to reduce accidents**

Sophisticated driver assistance systems can significantly contribute to accident avoidance, accident severity and overall reduce the risk of accidents

# ADAS - Human Behaviour and Attitude

Multitude of ADAS - more complex for the driver

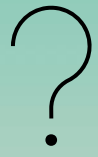
**Solid basic knowledge & a high level of acceptance of all ADAS** - to take full advantage of the support provided by these systems to increase road safety

Otherwise, a **new burden could arise** due to a possible incorrect use or ignorance of the systems



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# ADAS - Human Behaviour and Attitude



- **Is there a need to improve the knowledge on driver assistance systems to increase road safety?**
- Do the drivers know all the systems?
- Do they know their functionalities?
- Is the acceptance for ADAS given?
- Is the willingness to use all the systems given?
- Do ADAS influence the car purchase?

**Survey in 2019, 2020 and 2021/2022**



# Survey

## Survey details:

- Market research institute
- Method: online survey (CAWI)
- Questionnaire:  
Up to 45 questions (open and closed)  
~ 20 min.
- Survey period:  
August 2021 and January 2022

## Sample:

- n=2761 Driving licence holder  
(conducted on Austria- representative & province-representative basis)
- Mainly frequent driver
- 52 % men and 48 % women
- Age distribution is almost even across the age groups
  - 17-29 years 15%
  - 30-39 years 21%
  - 40-49 years 18%
  - 50-59 years 20%
  - 60-69 years 17%
  - 70 years or older 9%

# Survey



## Main topics:

- ADAS and purchase decision
- Popularity and utilisation
- Information on ADAS
- Driver education and training

# Specified Systems in the Survey

- Cruise Control
- Parking Assistant
- Tyre Pressure Monitoring System
- Speed Limiter
- Collision Warning
- Lane Keeping Assistant
- Fully-automated Parking Assistant
- Autonomous Emergency Braking System
- Lane Departure Warning System
- Drive Drowsiness Detection
- Blind Spot Monitor
- Adaptive Cruise Control (ACC)
- Intelligent Speed Adaption
- Traffic Sign Recognition
- Traffic Jam Assistant
- Motorway Assistant
- Night Vision Assistant





# Results - Purchase Decision

## ADAS and Purchase Decision

**Past** car purchase: **39%** reported ADAS played a role

**Future** car purchase: **59%** reported that ADAS would play a role

Most important systems:

Parking Assistant, Cruise Control, Lane Keeping Assistant, ACC

**66%** reported, that their car is equipped with ADAS

# Results – Awareness and Utilisation

**All specified systems are known by more of 54%**

Some systems are used by only 12 to 20%

(Fully-automated Parking Assistant, Night Vision Assistant, Motorway Assistant, Traffic Jam Assistant)

The most ADAS are used by over 20% and up to 68%

# Results – Awareness and Utilisation



## Top 5 used ADAS:

- Cruise Control (68%)
- Tyre Pressure Monitoring System (61%)
- Park Assistant (41%)
- Speed Limiter (37%)
- Collision Warning (37%)



**Most ADAS are known and used more often than in previous years!**

Only 17% do not use any of the systems!

# Results – Awareness and Utilisation



Systems that are **deliberately deactivated** (users of ADAS)

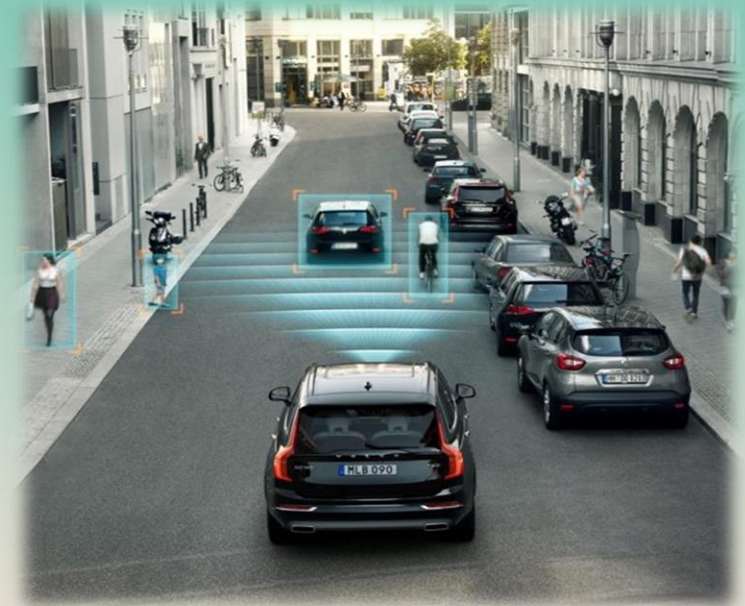
## Top 5:

- Speed Limiter (32%)
- Adaptive Cruise Control (ACC) (30%)
- Cruise Control (27%)
- Motorway Assistant (27%)
- Fully-automated Parking Assistant (26%)



# Results – Awareness and Utilisation

The greatest impact on the reduction of accidents involving personal injury or property damage –  
**Autonomous Emergency Braking System**



The greatest impact on the reduction of accidents involving vulnerable road users (VRUs)-  
**Autonomous Emergency Braking System & Blind Spot Assistant**



# Results – Awareness and Utilisation

19% were involved in a near-accident/accident with VRUs

53% stated, that an ADAS would have been helpful in preventing a (near) accident

## The greatest accident-avoiding effect:

- Automatic Emergency Brake Assist
- Blind Spot Assist
- Night View Assist



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# Results - Information

78% have already informed themselves about ADAS

38% Car Dealership 

28% World Wide Web 

25% User Manual 

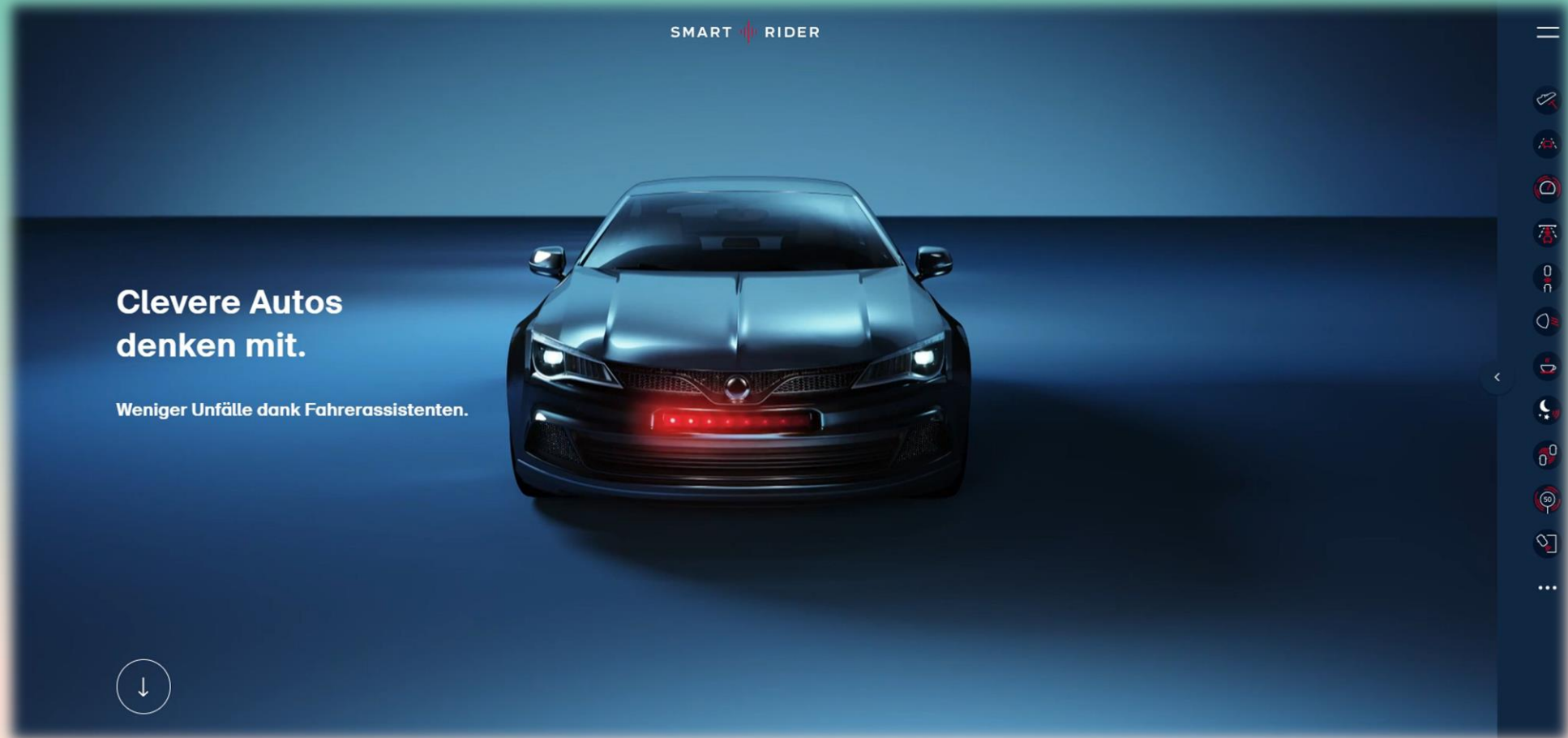
Divergence between men and women

# Results - Information

**Need for information** on the following topics:

- Insurance issues (50%)
- **Dangers in case of incorrect handling (47%)**
- **Technical limits (44%)**
- Legal questions (43%)
- **General application of the various systems (39%)**

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The advertisement features a dark blue background with a central image of a car's front view. The car's headlights and a red light bar on the bumper are illuminated. To the left of the car, the text 'Clevere Autos denken mit.' is written in a bold, white font, with 'Weniger Unfälle dank Fahrerassistenten.' in a smaller font below it. At the top center, the 'SMART RIDER' logo is displayed. On the right side, a vertical navigation bar contains various icons for navigation, search, and other functions. A small white arrow icon is located in the bottom left corner of the advertisement area.

# Results – Driver Education and Training



**79%** think, that ADAS should be subject of the general driver education (practical & theoretical part).

**More than 50%** of all respondents (56%) would attend a **half-day training course** on Advanced Driver Assistance Systems.



# Summary & Future Topics



ADAS become more and more important for all drivers

- Follow-up surveys every 2 years
- International comparisons and exchanges
- Information dissemination and awareness raising for all ADAS - especially mandatory systems
- Systems, such as AEBS, should not be able to be deactivated
- Integrate driver assistance systems into driver training (theoretical and practical)
- Further research



# Thank you for your attention!

Maria Fleischer

Austrian Road Safety Board (KFV)

E-Mail: [Maria.fleischer@kfv.at](mailto:Maria.fleischer@kfv.at)

