

# **Comparison of Cat.C HMI solution and vehicle without Cat.C**

**Industry input to ACSF 11th meeting  
March 2017, Berlin**

# Manual lane change without ACSF C

# B1+C Lane Change - HMI solution

## 1. Necessity of a lane change

Visually by the driver



Visually by the driver



## 2. Detection of free space in the adjacent lane

The driver monitors the environment



The driver monitors the environment



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### 3. Initiation of the lane change procedure

Activation of the direction indicator by the driver



Number of flashes depends on driver



Activation of the direction indicator and „arming“ of Cat.C lane change by the driver (by the stalk or another means)

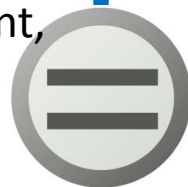


**Minimum 3 flashes in all cases.  
Use of direction indicator guaranteed.**



### 4. Monitoring of the traffic

The driver monitors the whole environment (front, side and rear).



The driver monitors the whole environment (front, side and rear).



**ACSF supports the driver until start of manoeuvre → favors good monitoring by the driver.**

**1<sup>st</sup> action**

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## 5. Lane change manoeuvre

The driver steers to the chosen lane and monitor the traffic



The driver initiates the manoeuvre, the system assist the driver to steer into the chosen lane, while the driver can pay more attention on the traffic situation

2<sup>nd</sup> action

Reduction of the workload + Smooth / standardized manoeuvre



## 6. Finalize the lane change

Back to driving in the lane (w or w/o B1).

Back to B1



# Conclusions

- ❑ B1+C HMI solution (2 deliberate actions):
  - brings safety advantages during lane change vs no ACSF and vs B1 only
  - brings no drawback vs no ACSF and vs B1 only
- ❑ Sensors are not required for a safe HMI solution