

Final Event

***Supplier view***  
***Preserving Technological Progress***  
***in Automotive Safety***

First Hotel Grand, Borås, Sweden  
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# Preserving Technological Progress

## Market Introduction of Selected Safety Milestones by EU-Suppliers

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- ▶ 1898: Car Air tire
- ▶ 1926: Hydraulic brake system
- ▶ 1950: Vacuum brake booster
- ▶ 1953: Hydraulic disc brake
- ▶ 1959: Three-point seat belt
- ▶ 1978: Anti-Lock Brake System (ABS), 1984: Standard fitment to Ford Scorpio
- ▶ 1980: Airbag system
- ▶ 1987: Traction Control System (TCS)
- ▶ 1995: Electronic Stability Control (ESC)
- ▶ 1999: Adaptive Cruise Control ACC (Radar sensor)
- ▶ 2008: Emergency Brake Assist – City (CV sensor)

# Global Trends in a Changing World

 <p>① Strive for Higher Standard/ Quality of Living</p>	 <p>⑥ Urbanization</p>
 <p>② Globalization</p>	 <p>⑦ New Mobility Pattern</p>
 <p>③ Information/ Communication Society</p>	 <p>⑧ Safety &amp; Security</p>
 <p>④ Resource Shortage</p>	 <p>⑨ Demographic Change</p>
 <p>⑤ Climate Change</p>	 <p>⑩ Affordability (at new markets)</p>



# Individual Mobility Measures against the Trend

① Strive for Higher Standard / Quality of Living

② Globalization

③ Information / Communication Society

④ Resource Shortage

⑤ Climate Change

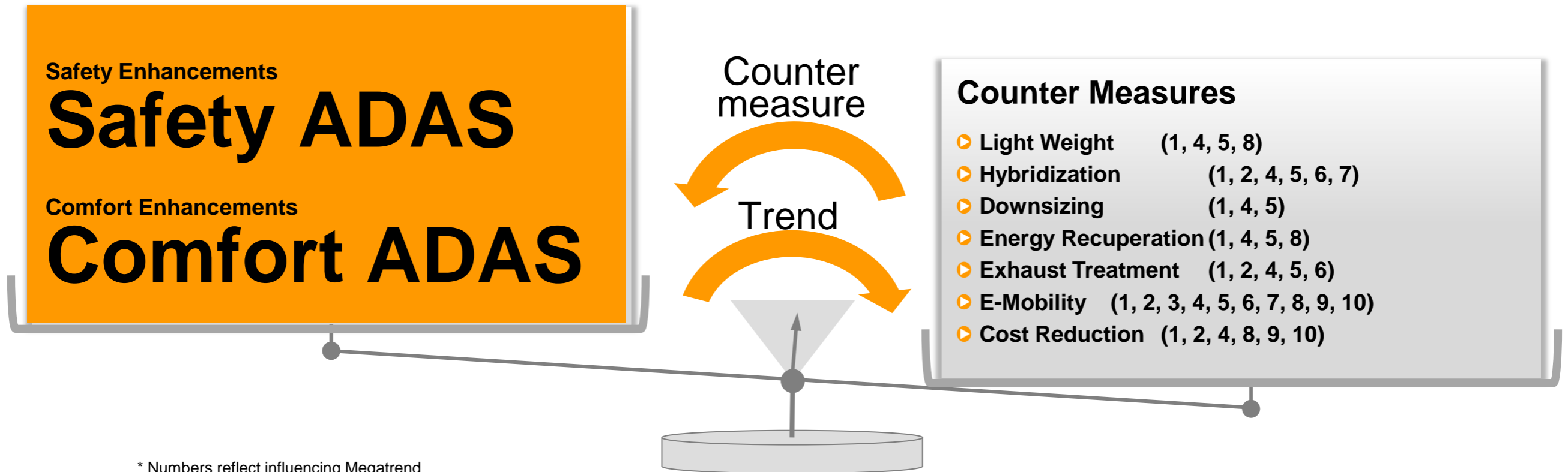
⑥ Urbanization

⑦ New Mobility Pattern

⑧ Safety & Security

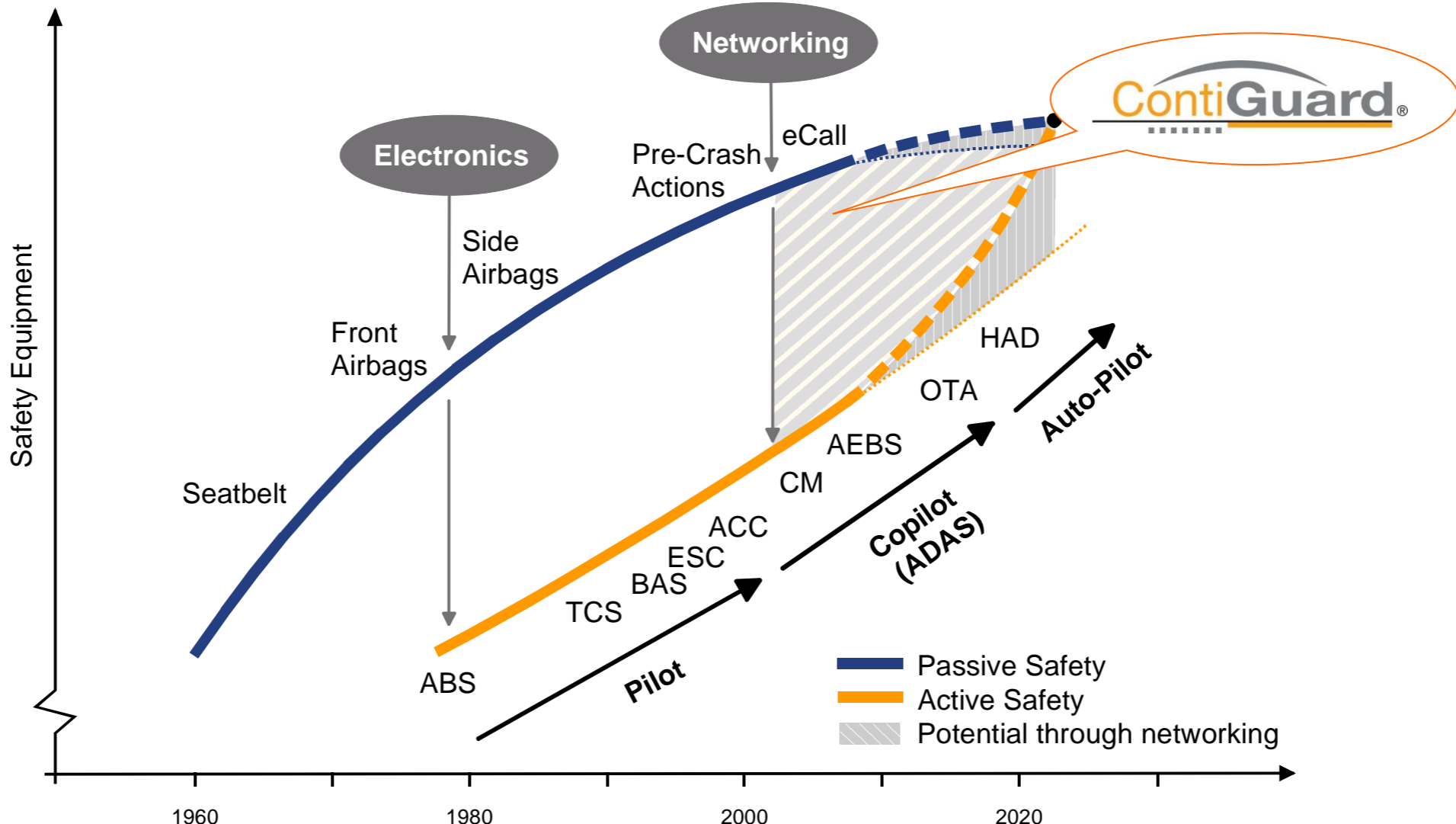
⑨ Demographic Change

⑩ Affordability (at new markets)



\* Numbers reflect influencing Megatrend

# The Road to Automated Driving

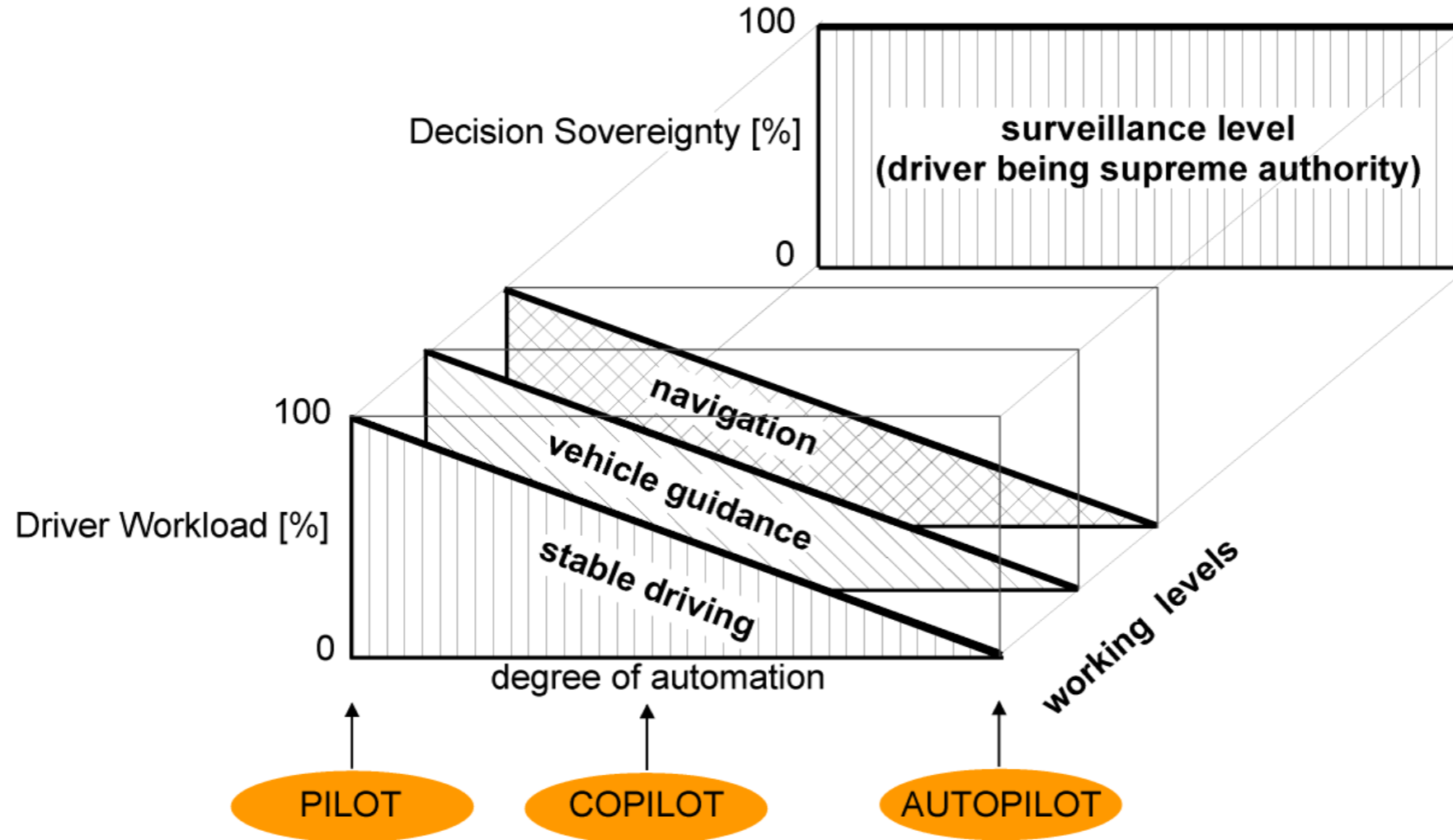


ABS: Anti-lock Brake System; TCS: Traction Control System; BAS: Brake Assist System; ESC: Electronic Stability Control; ACC: Adaptive Cruise Control; CM: Collision Mitigation; AEBS: Advanced Emergency Braking System; OTA: Overtaking Assist; HAD: Highly Automated Driving

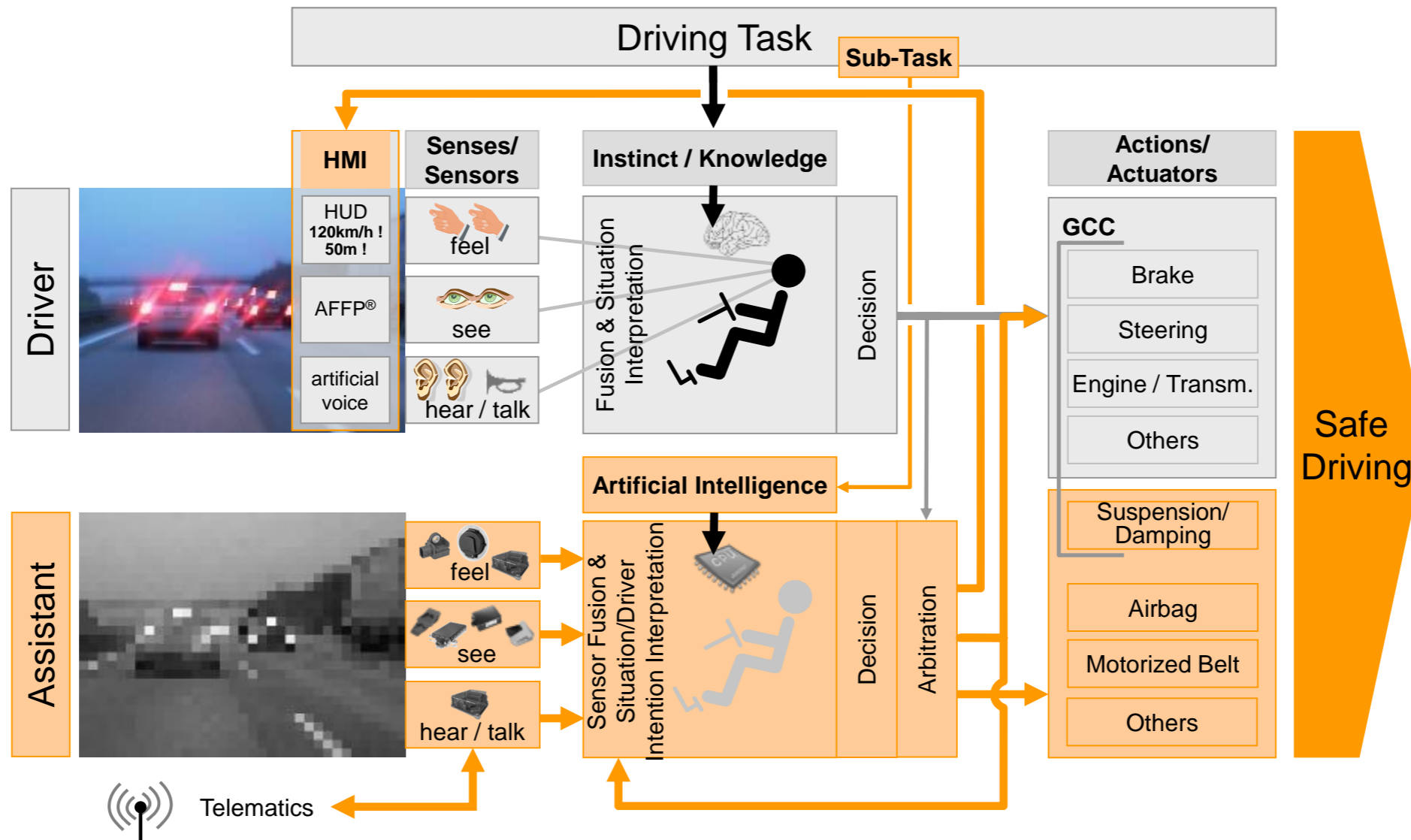
# Driver Assistance

## Human Workload vs. Decision Authority

Driver Assistance = Support and Help with regard to Driver Decisions and Driver Workload



# From Driver Assistance to Automated Driving



# Requirements to Preserve Technological Progress in Automotive Safety

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- ▶ Open standards
- ▶ Synchronized innovation and development processes
- ▶ Harmonized development tools
- ▶ Early trustful networking
- ▶ Harmonized education excellence