

AUTOMATED DRIVING – A BOOST FOR EUROPEAN INNOVATION AND COMPETITIVENESS

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FUTURE MOBILITY AUTOMATED, CONNECTED, ELECTRIC



Automated



Electric



Multimodal



Integrated

Cloud



Connected

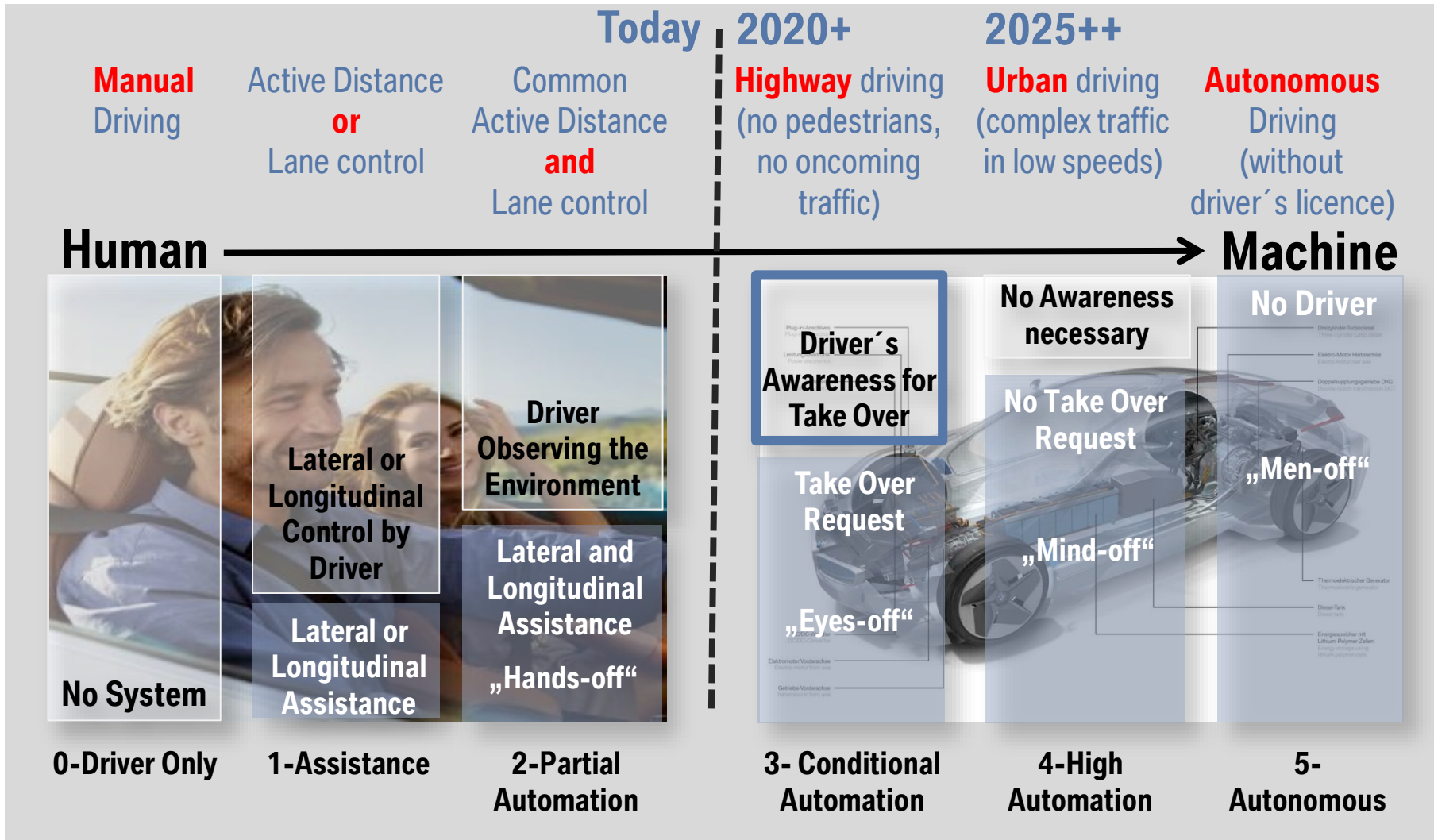
AUTOMATED DRIVING - A BOOST FOR EUROPEAN INNOVATION AND COMPETITIVENESS



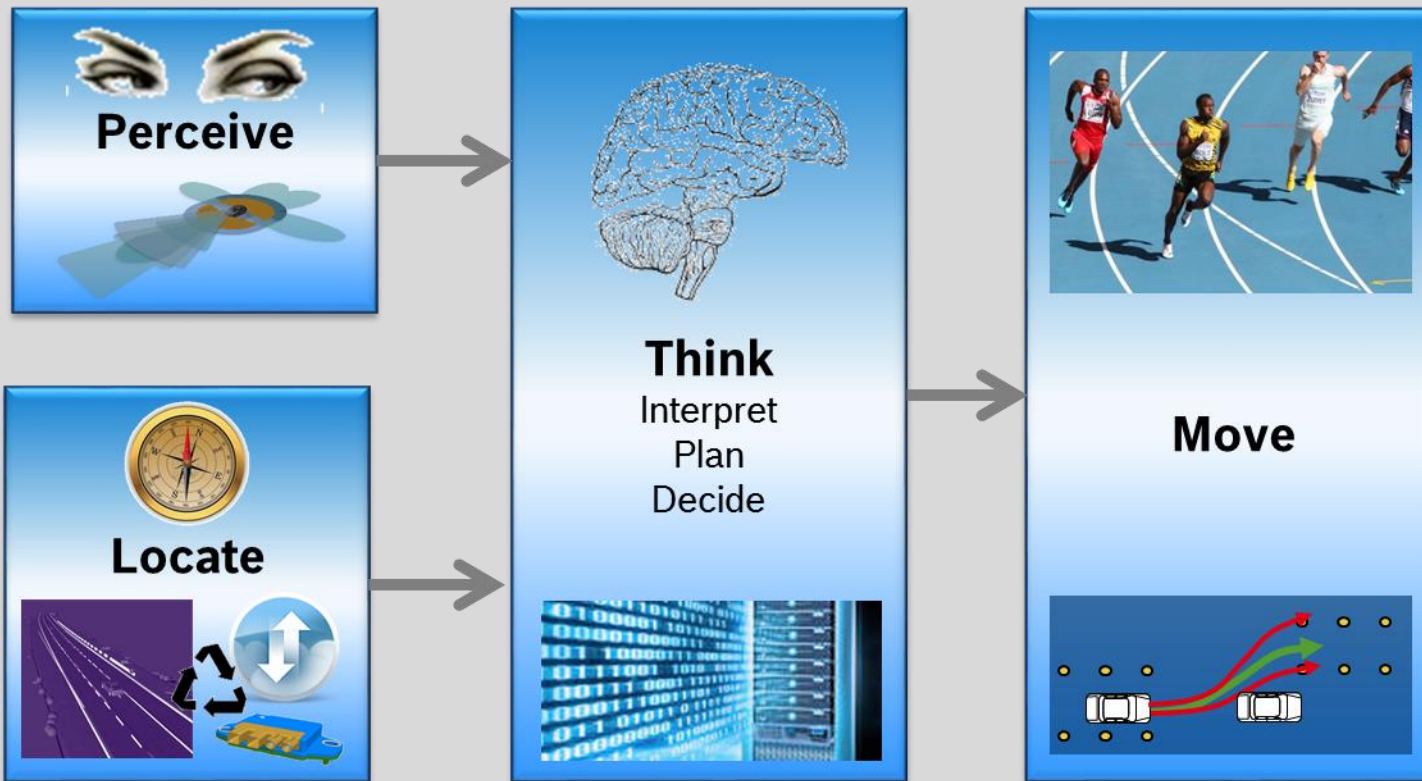
WITH AUTOMATED DRIVING ...

- **Improved safety** (90% of accidents are caused by human errors)
- **Reduced congestion** (less traffic jams, urban accessibility)
- **Higher fuel efficiency** (constant, intelligent traffic flow)
- **Mobility for all** (ensure mobility to the aging population)
- **Gain in productivity** (travel time can be used otherwise)
- **Comfort** (relax while driving)

THE RESPONSIBILITY MOVES FROM THE DRIVER TO THE SYSTEM:

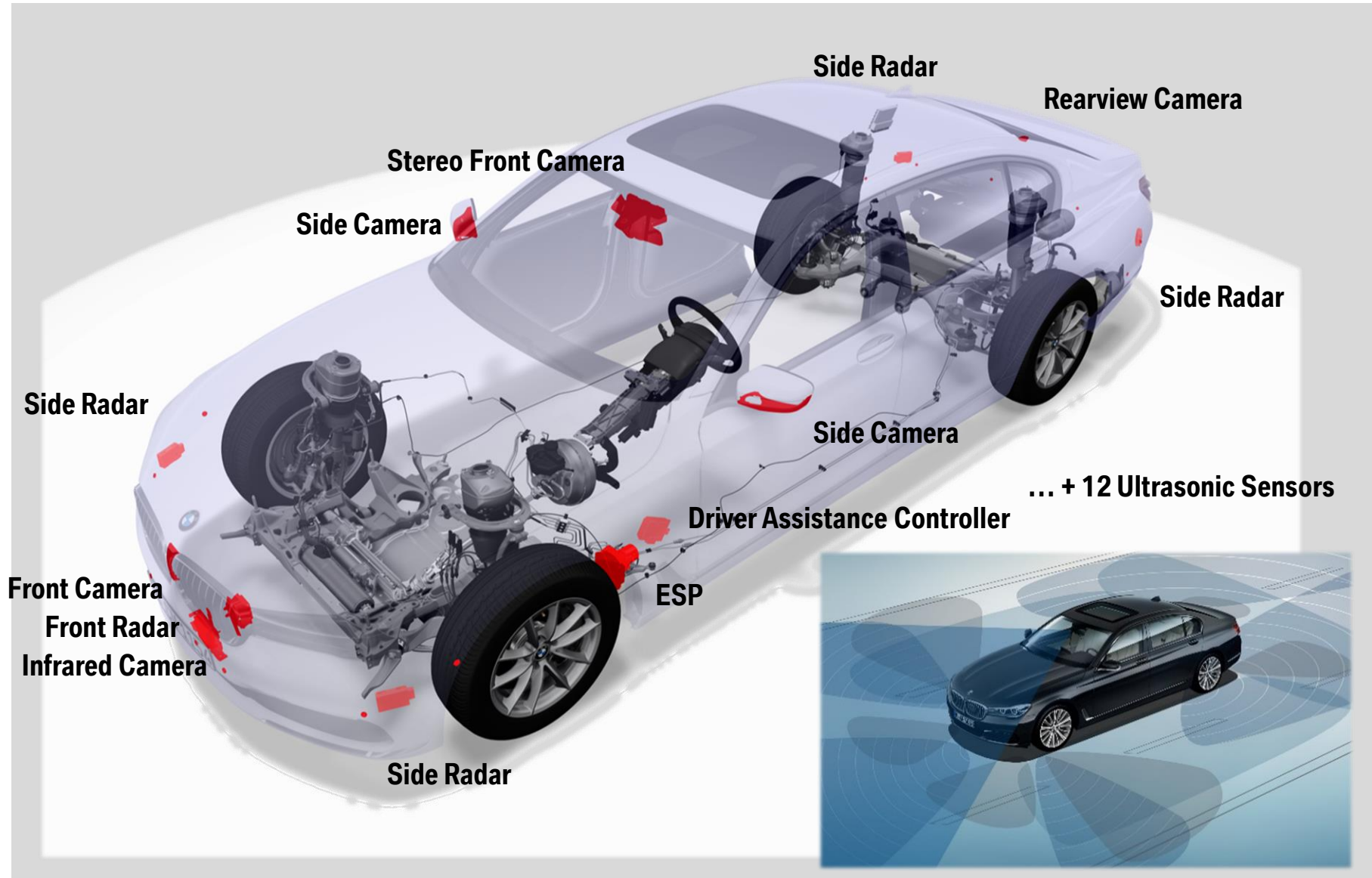


AUTOMATED DRIVING MIRROR HUMAN ABILITY TO REASON & DECIDE IN VEHICLE

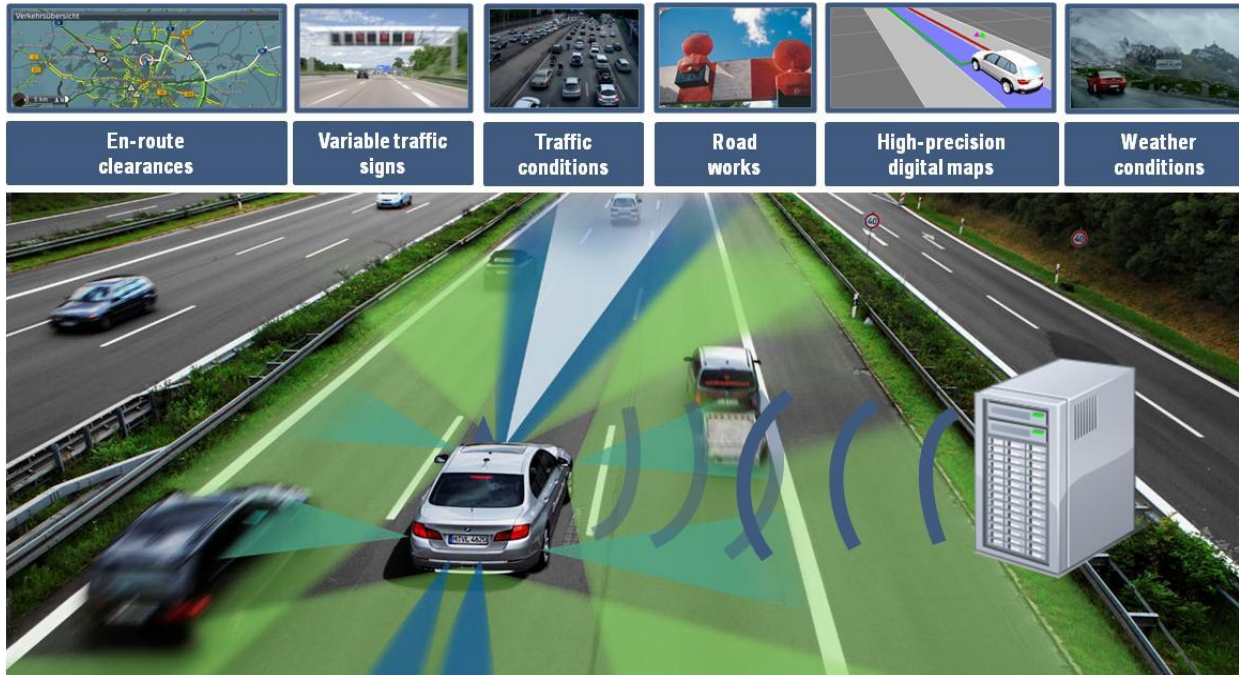


- ▶ Automated driving technology is based on artificial intelligence (AI) principles.
- ▶ The vehicle becomes a “brain” which can interpret, decide and execute in concert.

HIGH-TECH EQUIPMENT FOR AUTOMATED DRIVING – A CHANCE FOR EUROPE´S INDUSTRY



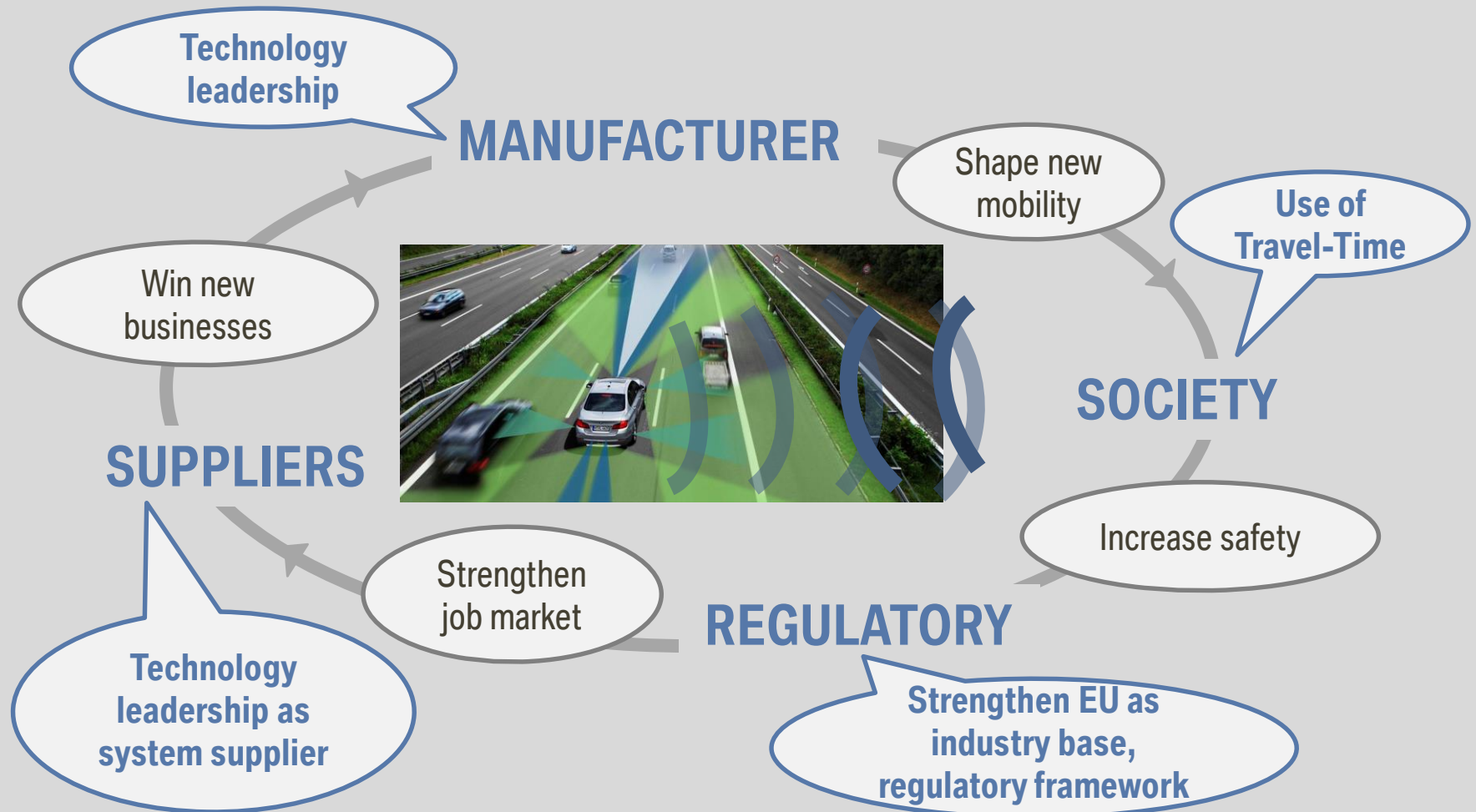
THE HIGHER THE AUTOMATION, THE HIGHER THE REQUEST FOR ENVIRONMENT INFORMATION (SENSORS, CONNECTIVITY)



Challenges for connectivity:

- Accessibility (Motorways / Cities bandwidths and priorities)
- Handling „Big Data“ in „real time“
- Security (avoid attacks from hackers by end-to-end solution of OEMs)
- Safety (e.g. priority for local danger warnings)

THE SOCIETAL CHALLENGES CALL THE INDUSTRY AS WELL AS THE PUBLIC AUTHORITIES TO WORK TOGETHER



CONNECTED AND AUTOMATED DRIVING GLOBAL COMPETITION IS CHALLENGING EUROPE




- **New players** with enormous financial resources are entering to Europe's back bone industry
 - R&D volume European Automotive Industry ca. 40 billion EUR total p.a.
 - Silicon Valley "big five" (Apple, Google, ...) have cash reserves of 400 billion EUR.
 - US government will invest \$4 billion in piloting automated vehicles. From 2015 to 2016 the federal public funding for Connected Automated Driving will increase by about 90%.

→ Need for **large-scale support** for research and investments in Europe

TO TACKLE THE CHALLENGE...



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- The background of the slide is a nighttime cityscape with a complex highway interchange. Light trails from vehicles are visible on the roads, and the city buildings are illuminated. The text is overlaid on this image.
- ... the technologies must be mastered and made affordable.**
 - ... the society has to be informed and prepared (regulatory framework).**
 - ... a joint collaboration of all key players is necessary.**
 - ... extraordinary activities for research, development and roll-out are essential.**
- Connected and automated driving offers a great chance for deployment**