

# On the road to smart mobility: Challenges and opportunities

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# Passive safety system

1959 Chevrolet Bel Air vs. 2009 Chevrolet Malibu IIHS crash test



# Active safety system

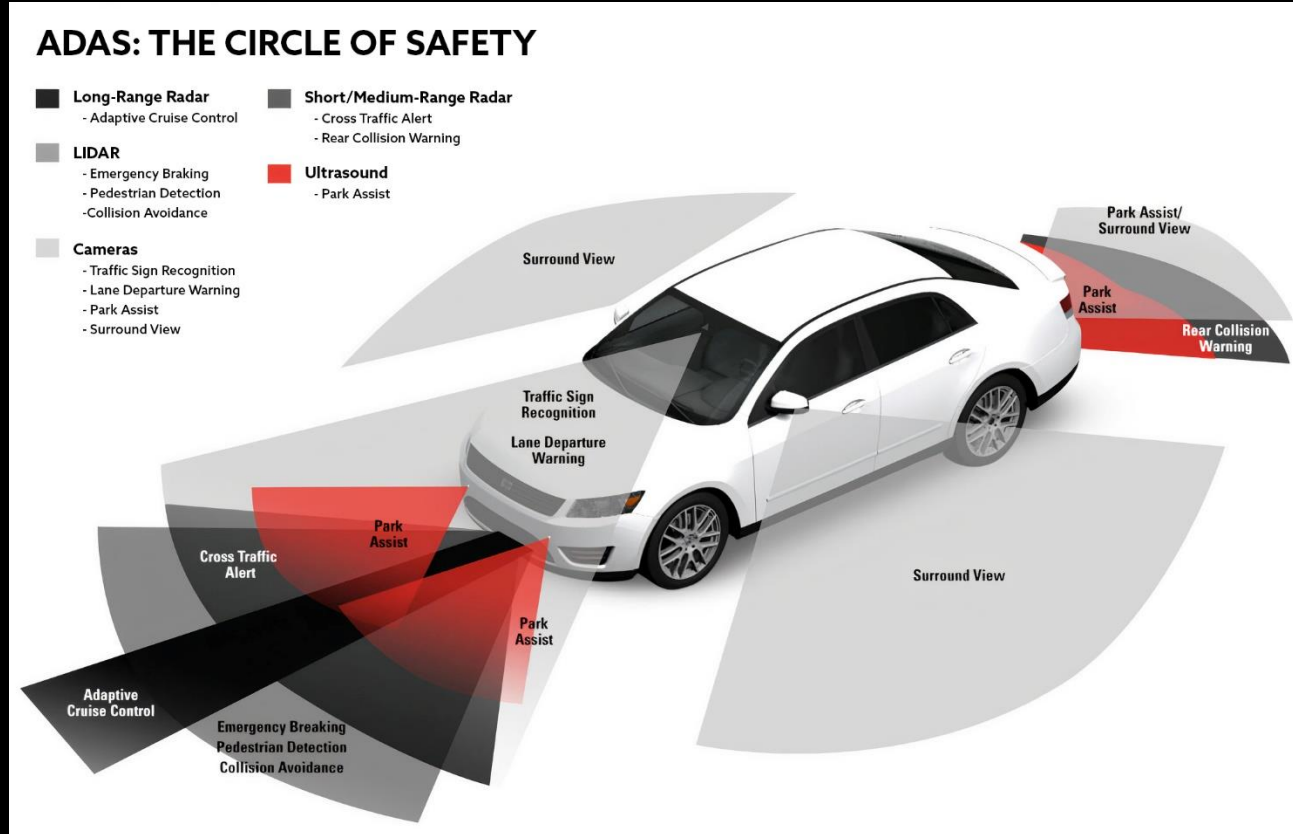
Electronic Stability Control (ESC)

SUV on a wet road [IIHS '10]

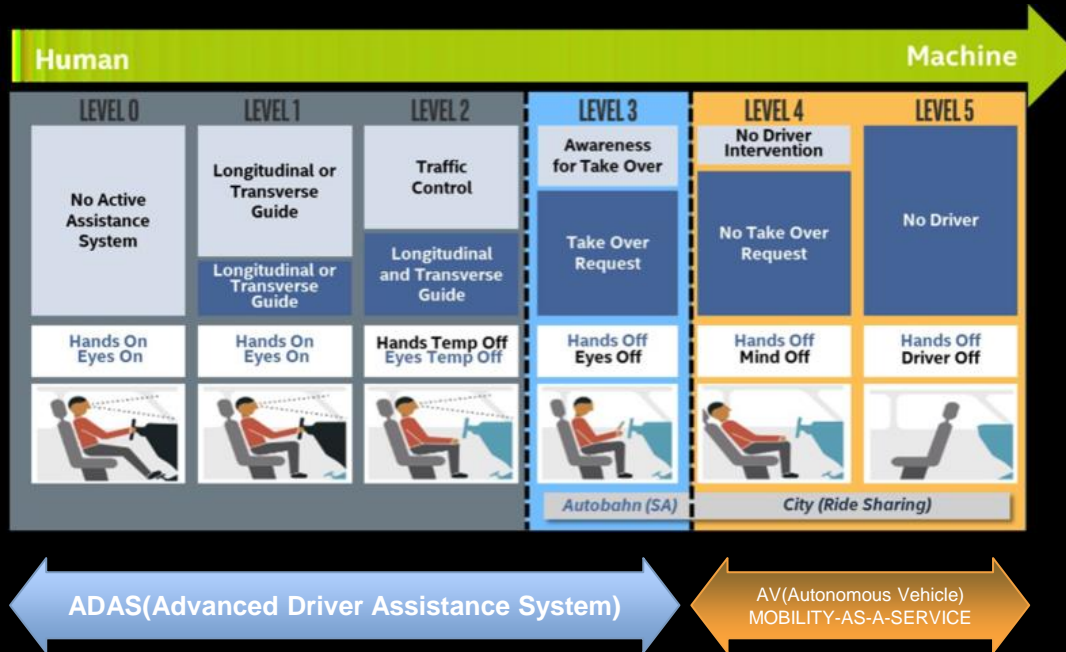


ESC reduces single-vehicle crashes of cars by 32%. [Sivinski '11]

# Advanced Driver Assistance Systems (ADAS)



# Levels of Driving automation



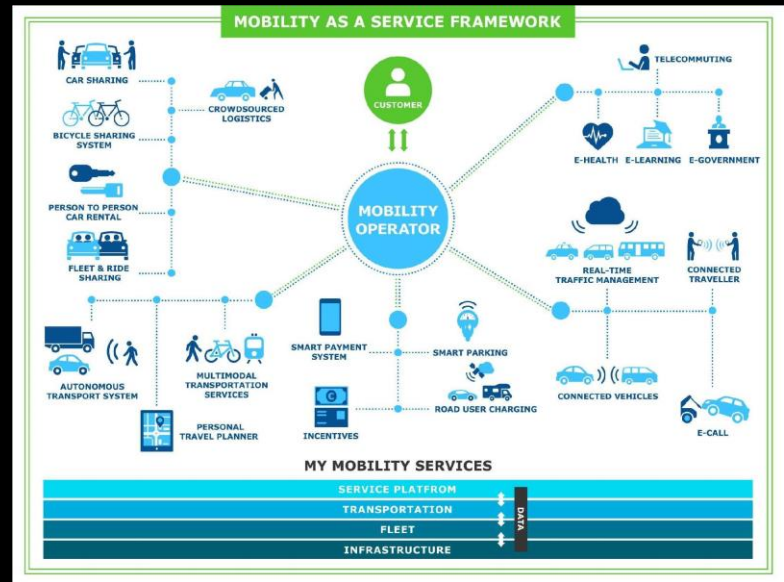
# Huddles of Autonomous driving



# “Smart” Mobility

- **New technologies**
  - Autonomous driving vehicles
  - Electric Vertical Take-Off and Landing(eVTOL) for Urban Air Mobility(UAM)
  - Eco-friendly alternative energy (electric, fuel cell)
  
- **Sustainable, Safe, Efficient, Affordable, Equitable, etc.**
  
- **Mobility-as-a-Service(MaaS)**

Image Source: <http://telematicswire.net/wp-content/uploads/2016/02/mobility-as-a-service.jpg>

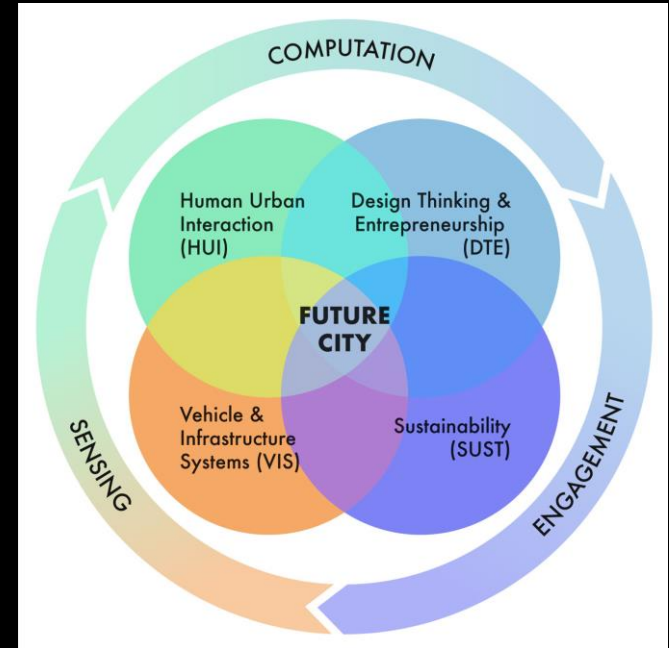


# Stanford Center at the Incheon Global Campus

Stanford University's flagship research center in South Korea

University-wide interdisciplinary research for smart city implementation by exploring the following four areas:

- Vehicle & Infrastructure Systems
- Human Urban Interaction
- Design Thinking and Entrepreneurship
- Sustainability







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