



Connected Autonomous Cars



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Global Trends

- Urbanisation
- Growing mega cities
- Air quality major health problem
- Traffic accident global health issue
- Time for commuting
- Desire for time efficiency
- Desire for constant connectivity





AD Opportunities

- **Safety**
- **Fuel economy**
- **Traffic flow**
- **Improved mobility**
- **New mobility solutions**
- **Infrastructure**
- **Comfort**
- **Urban planning**

Why AD? – Customer Perspective

- What is it that modern people are lacking?
 - Time
 - Constant connectivity

What if we can create a car that offers time, connectivity and a safe ride?




Autonomous Driving Functionality



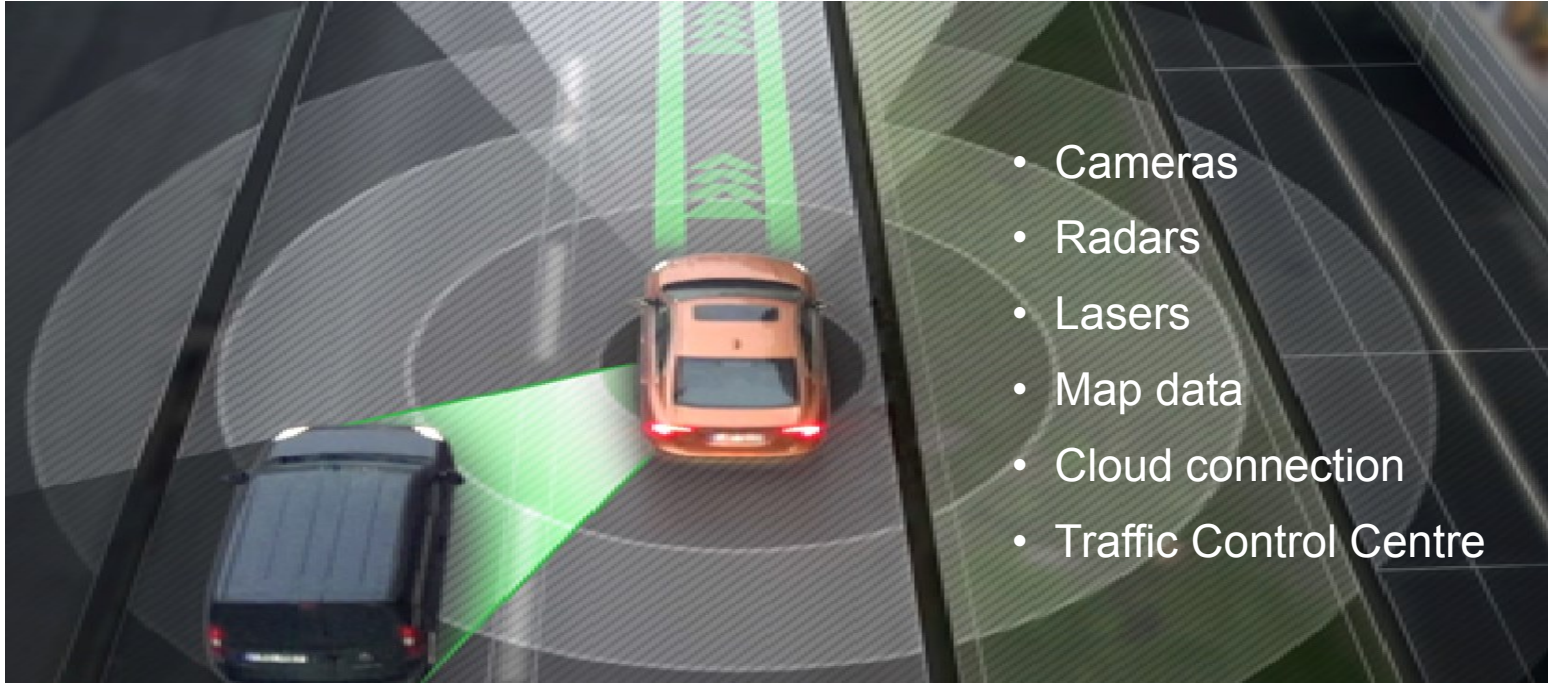
Driver out of the loop



A self-driving vehicle must be able to handle *all* situations (and *prove* that it can!)

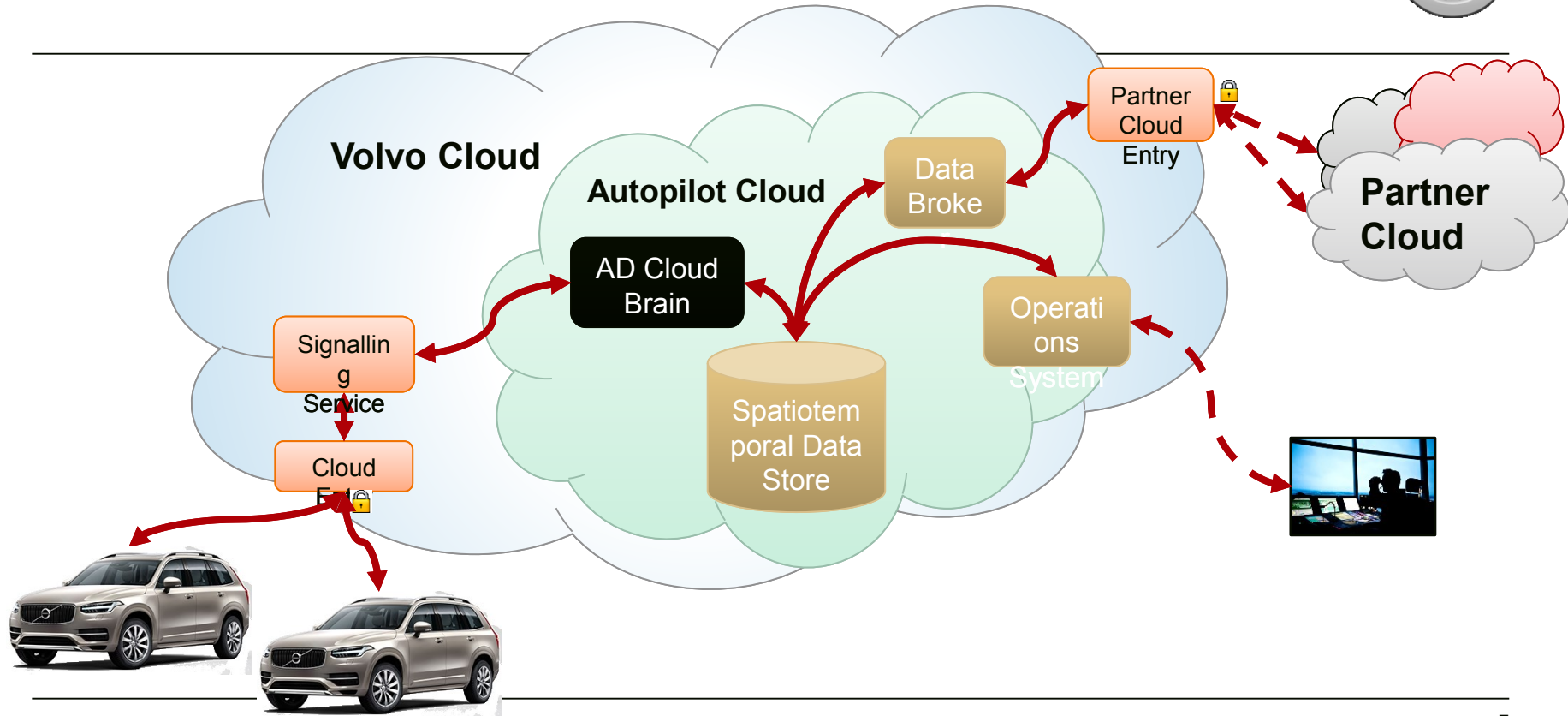
No fall back responsibility for the driver  **SAE Levels 4 and 5**
Highly/ Fully autonomous vehicles

Volvo Autonomous Technology



- Cameras
 - Radars
 - Lasers
 - Map data
 - Cloud connection
 - Traffic Control Centre
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AD/ Cloud Connectivity



Connectivity

Connected safety applications



- Road friction detection
 - Car measures road friction and sends to other cars through the cloud
- Traffic flow information
- Animals/ Pedestrians/ Bicyclists

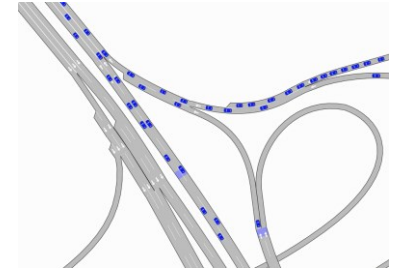


Connected Autonomous Driving



- Optimized traffic flow:
 - Optimized weaving
 - Speed and distance between vehicles.

➔ *Reduced need for infrastructure investments.*
- New mobility models:
 - Cars on demand
 - 'Peer to Peer' sharing
 - Ride sharing
- Autonomous parking:
 - Cars range themselves away from city centres
- Merge between individual mobility and public transportation



Connected Autonomous Cars

Conclusions



- Highly and Fully Autonomous vehicles (levels 4 and 5) will bring many opportunities to the society and to its citizens and will enhance sustainable mobility:
- AD levels 4 and 5 will safely enable the driver to do other things while the car is in control.
- Connectivity essential for the safe performance of highly and fully autonomous vehicles.
- Connectivity may be used for sharing important safety data and optimizing traffic
- Cloud connectivity for tactical and strategic decisionmaking.
- Only minor infrastructure changes are needed for this development.



***• Save people's
time and
uncomplicating
their lives!***



Thank you!