



AUTONOMOUS DRIVING

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GLOBAL TRAFFIC CHALLENGES



SAFETY

1.2 million people killed every year

ENVIRONMENT

Local pollution and global CO₂ emissions

SOCIETY

Congestion and lost time when commuting

THE MASTER PLAN

Active
and Passive
Safety

VOLVO VISION 2020

Autonomous
Drive

Reduced
number of
accidents

Less fuel
Lower
emissions

Higher
transport
efficiency

Connectivity
when driving



AUTONOMOUS DRIVE

- A KEY ENABLER FOR SAFE TRANSPORTATION

Over 90% of all accidents are due to human errors

Minimizing and long term eliminating human errors by extensive use of driver support systems is an important tool to move towards the ultimate safety goal of zero collisions.

Human Errors
(57~93%)

Traffic Environment
(34%)

Vehicle
Faults (13%)

ACTIVE SAFETY PAVES THE WAY



- Park Assist Pilot
- Collision Warning with Full Auto Brake
- Pedestrian & Cyclist Detection
- City Safety
- Lane Keeping Aid
- Adaptive Cruise Control



AUTONOMOUS DRIVE ADDS NEW OPPORTUNITIES

- Safety
- Fuel economy
- Traffic efficiency
- Mobility
- Comfort
- Convenience
- Constant connectivity
- Infrastructure investments
- City planning



MAIN CHALLENGE

SECURE **RELIABLE**
UNDERSTANDING OF THE
ENVIRONMENT AROUND A
SELF-DRIVING CAR



AUTOMATED DRIVE – CHALLENGES



- Legality
- Liability
- Technology
- Business models
- Infrastructure



LEGAL OVERVIEW

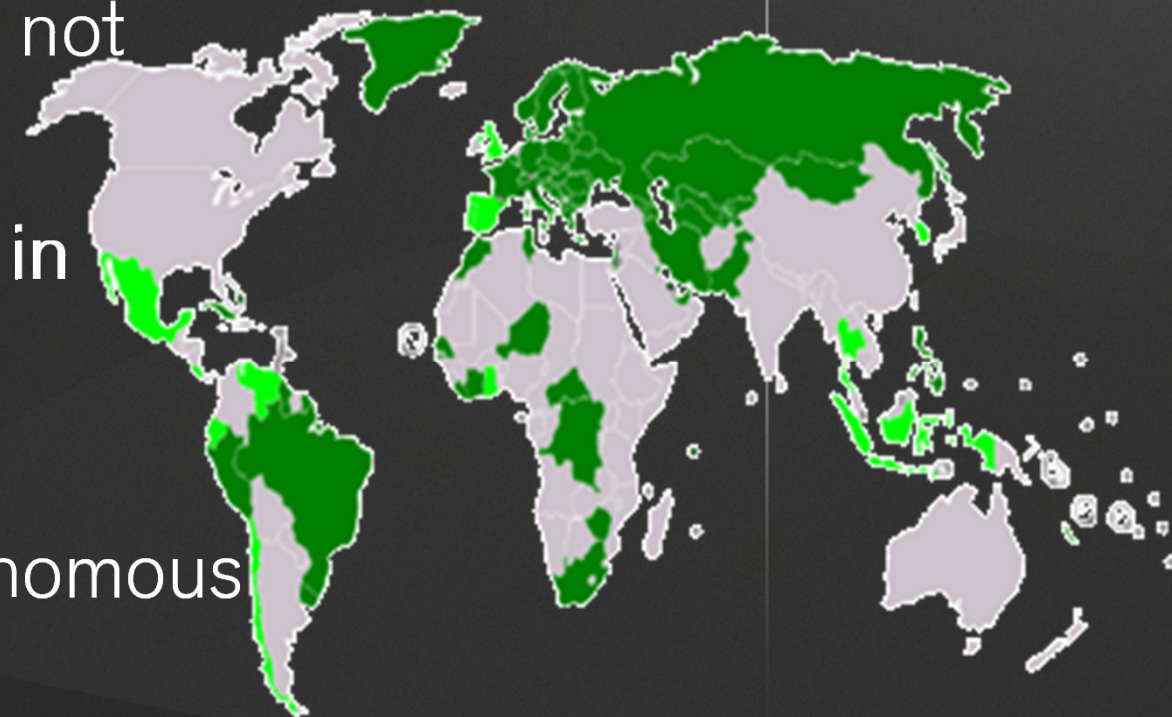


The Vienna Convention (Last amended 1968)

Article 8, 'Drivers' state: *'Every driver shall at all times be able to control his vehicle or to guide his animals.'*

- One interpretation is that the Driver must be capable of being in control, thus the Vienna Convention does not restrict autonomous vehicles
- Another interpretation is that the Driver has to be in control, thus the Vienna Convention restricts autonomous vehicles
- National laws and regulations can still restrict autonomous vehicles in some countries

Green countries have ratified the Vienna Convention



**ALREADY A NATURAL PART
OF MODERN SOCIETY**



CONCLUSIONS

Autonomous drive will:

- Save life and reduce injuries
- Increase Transport efficiency due to less accidents
- Reduce fuel consumption and emissions due to transport efficiency
- Legal obstacles need to be removed to pave the way for Autonomous Driving
- Supporting research needed for Autonomous Driving