



AUTONOMOUS DRIVING and the Impact on Traffic Safety

PRI International Conference

13-14 October 2016 Lisbon – Portugal

Netherlands testing ground for self-driving vehicles: The Initiatives

Joop Goos



Trending Topics and Challenges

Topics

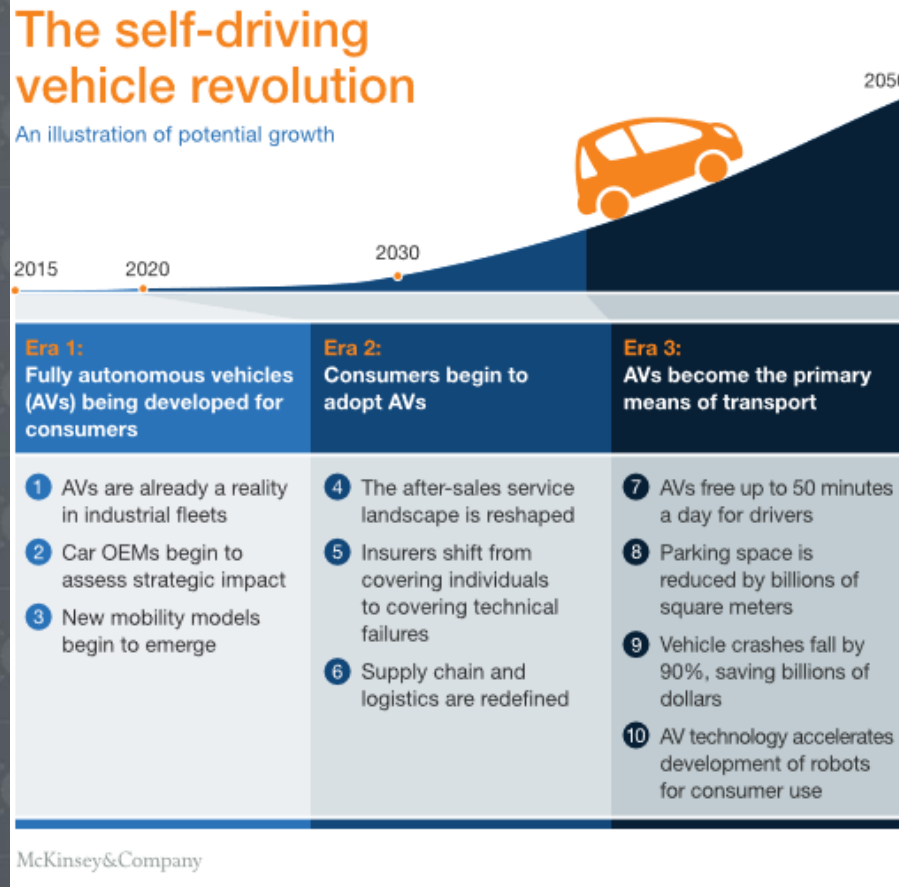
- Cycling Transportation
- Autonomous Driving



Challenges

- Impact of both individually and to each other
- Relevance to Developing Countries
(90% of road deaths occur in these countries)

McKinsey&Company



The Dutch Ambition

- **Relationship driver-vehicle: Greater change in the next 20 years than in the past 30 years**
- **Netherlands in leading position in this area of innovation**

Expected effects:

1. **Better traffic flow (balance between distance and speed)**
2. **Improving safety (90% crashes due to human error)**
3. **Increasing liveability (eco driving, less emission)**
4. **Economical revenues (saving fuel)**

The Dutch Approach

- **Strong involvement of government**
- **Coop with research institutes and automotive industry**
- **Learning by doing ; step by step**
- **Testing ground for small and large scale trials**
- **Legislation (flexibility to accommodate innovations)**
- **Assessment of applications for experiments**
- **International cooperation (EU, UNECE)**

Declaration of Amsterdam

Joint Agenda

1. Coherent (inter)national, European rules
2. Use of data
3. Ensure privacy and data protection
4. Vehicle-to-Vehicle / Infrastructure communication
5. Security
6. Public Awareness and acceptance
7. Common definitions
8. International cooperation

Actions by: EU Member States, European Commission,
Industry



Declaration of
Amsterdam

Cooperation in the
field of connected
and automated
driving

14-15 April 2016

EU
2016

Cooperation and Initiatives

- Dutch Automated Vehicle Initiative DAVI
- Taskforce Dutch Roads
- Action program Connecting Mobility
- Integrated Test site on Cooperative Mobility
- Cooperative ITS Platform of European Commission
- Horizon 2020 Program
- World Econ Forum: Roadmap Self-driving Vehicles
- UNECE: Vienna Treaty

Dutch Trials - Assessment

Assessment

- Description of the trial
- Risk analysis
- “stress test” on closed test site
- After positive results permission to test on public roads
- Evaluation study (procedures and results)

Learning

- (International) exchange of results
- Sharing experiences





Dutch Trials - Initiatives

- **Platooning trucks**
(Port of Rotterdam Authority/TNO/TLN/Scania/DAF 2015)
- **Self-driving electric Shuttle bus WePOD Foodvalley**
(Province of Gelderland/Wageningen University 2015)
- **DAVI demonstration with automated cars on A10**
(Core group: TU Delft/TNO/RDW/Connekt 2013)
- **Automated cars as connecting transport of train travellers**
(Delft Technical University 2015)
- **Semi-autom cars: ACC and Lane Keeping System on A2**
(RoyalHaskoningDHV e.a. 2015/6)



Declaration of Amsterdam on YouTube



<https://youtu.be/heHzo6Cnghs>



Thank you
JOOP GOOS

joop@goosconsultancy.com