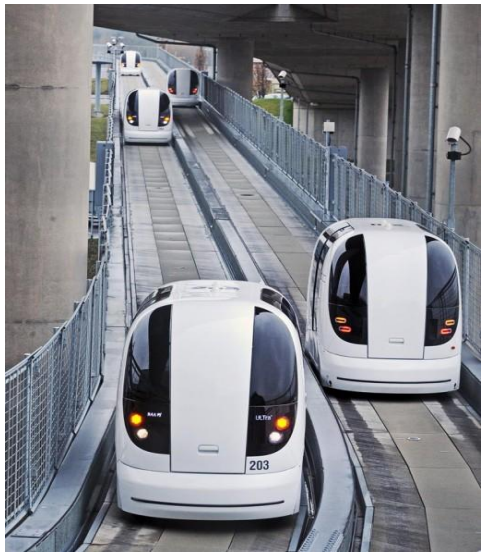
Automatische voertuigen: Kansen en uitdagingen



dr. ir. N. van Oort

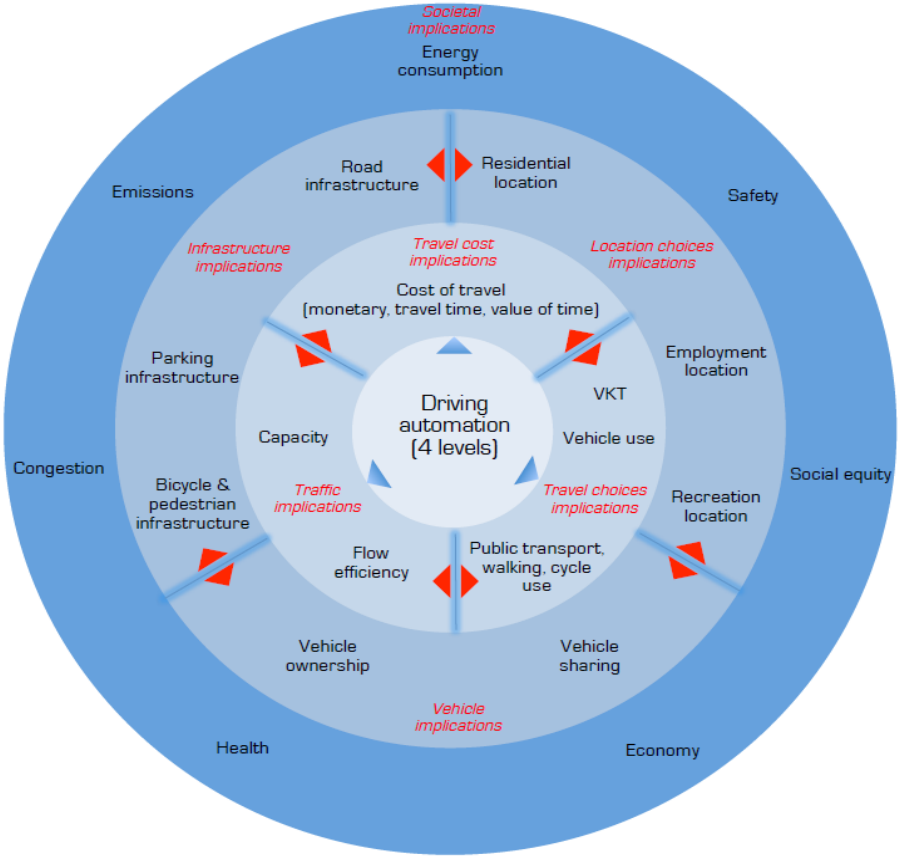
Assistant professor OV

prof. dr. ir. Bart van Arem
ir. Menno Yap
dr. Bart Wiegmans
dr. Goncalo Homem de Almeida Correia

Onderzoek

- Vraag Zuidvleugel:
- Kansen en uitdagingen voor automatische voertuigen?
  - Auto
  - Vracht
  - OV
- Essay
- Workshop 10 maart 2015

Impact en soorten AV's



NHTSA level	SAE level	SAE name
	Human driver monito	
0	0	Non-Automated
1	1	Assisted
2	2	Partial Automation
	Automated driving sy	
3	3	Conditional Automation
4	4	High Automation
	5	Full Automation

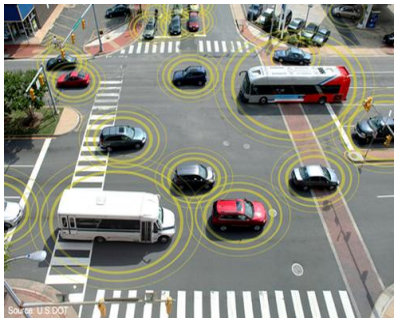
- *SAE International 2014*
- *Milakis et al. 2014*

Conclusies

- Dossier automatische voertuigen is booming (R&D ~ media)
- Believers en non-believers; Technology push?
- Techniek is 1,
  maar veiligheid, gedrag en aansprakelijkheid zijn 2
- Kansen op korte termijn voor varianten met gedeeltelijke automatisering en/of scheiding van overig verkeer
- Rotterdam The Hague airport mogelijke pilot voor Zuidvleugel

Discussie

Hoe kunnen AV's bijdragen aan (verbeteren) innovatieve verbinding naar de airport RTHA?



Niels van Oort

N.vanOort@TUDelft.nl

Research papers:

http://nielsvanoort.weblog.tudelft.nl/

NHTSA level	SAE level	SAE name	SAE narrative definition	Execution of steering and acceleration/ deceleration	Monitoring of driving environment	Backup performance of *dynamic driving task*	System capability (*driving modes*)
	***Human driver* monitors the driving environment**						
0	**0**	**Non-Automated**	the full-time performance by the *human driver* of all aspects of the *dynamic driving task*, even when enhanced by warning or intervention systems	Human driver	Human driver	Human driver	n/a
1	**1**	**Assisted**	the *driving mode*-specific execution by a driver assistance system of either steering or acceleration/deceleration using information about the driving environment and with the expectation that the *human driver* perform all remaining aspects of the *dynamic driving task*	Human driver and system	Human driver	Human driver	Some driving modes
2	**2**	**Partial Automation**	the *driving mode*-specific execution by one or more driver assistance systems of both steering and acceleration/deceleration using information about the driving environment and with the expectation that the *human driver* perform all remaining aspects of the *dynamic driving task*	**System**	Human driver	Human driver	Some driving modes
	***Automated driving system* ("system") monitors the driving environment**						
3	**3**	**Conditional Automation**	the *driving mode*-specific performance by an *automated driving system* of all aspects of the *dynamic driving task* with the expectation that the *human driver* will respond appropriately to a *request to intervene*	System	**System**	Human driver	Some driving modes
4	**4**	**High Automation**	the *driving mode*-specific performance by an *automated driving system* of all aspects of the *dynamic driving task*, even if a *human driver* does not respond appropriately to a *request to intervene*	System	System	**System**	Some driving modes
	5	**Full Automation**	the full-time performance by an *automated driving system* of all aspects of the *dynamic driving task* under all roadway and environmental conditions that can be managed by a *human driver*	System	System	System	**All driving modes**