MOBILITY AND CITY TWO SIDES OF THE SAME CON

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60 years rise and stabilization of the car





PBL Netherlands Environmental Assessment Agency 2014



Two centuries of mobility growth: ever faster



Fifty years mobility: constant travel time; faster = further



Average car speed constant for 20 years



Car mobility stabilized in Western-Europe



Various National Statistics

Only aviation grows



Netherlands Inistitute for Tansport Policy Anlysis, multiple years

Mobility in 2050



Transport modes guide urbanization













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Urban mobility is different

	Amsterdam	Most Urban	Most Rural
Average trip distance		10 km	12 km
Average commuting distance		17 km	20 km
Average to hospital, station, theatre		2 – 3 km	9 km
Average travel speed		24 km/hr -30	% 33 km/hr
Average car speed		39 km/hr	45 km/hr
Average travel time		1.1 hr/day	1.0 hr/day
Trip share car	20%	36%	55%
Trip share public transport	16%	10% +40	0% 2%
Trip share walking and cycling	59%	53%	40%
Travel distance		26 km/day	32 km/day
Car travel		16 km/day -40	%26 km/day
			Institution Noth

Statistics Netherlands 2015

Most trips are short



Shortage of space determines urban mobility



Institute for Sensible Transport 2018

Urban car speed

	24/24	Free flow	Peak	Peak/ free
Amsterdam	31 km/h	33 km/h	28 km/h	- 17 %
Rotterdam	31 km/h	34 km/h	29 km/h	- 13 %
Den Haag	27 km/h	30 km/h	24 km/h	- 18 %
Utrecht	33 km/h	36 km/h	30 km/h	- 17 %

Time loss in urban areas







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Accessibility and urbanization



Accessibility and congestion



Geurs 2016

Urban density increases accessibility

[[×10]^{^5} (disutility) Rotterdam



Main policy choice



The future?





Smart mobility Development Impact

Car sharing Greenwheels, Taxi, Uber,	Travel on demand will increase somewhat (e.g. MaaS)	Less parking space Limited impact on mobility More urban congestion
Ride sharing Carpooling,	Unlikely to take of Occupancy of cars is declining	No impact on mobility
Electric car	Fast development Fiscal subsidies	No air pollution and climate change No impact on mobility
Self-driving car Level 1 – 4 With driver	Fast development	Improved road safety Increases highway capacity No impact on mobility
Self-driving car Level 5 Full Automated	Technical development fast Time of deployment unclear	Less parking space End to small-scale PT More urban congestion



United nations conference on climate change

COP21/CMP11

2015, November 30 to December 11 - PARIS

Effective policies



Clean vehicles and fuels

- European standards
- National fiscal stimulus
- High energy price
- Parking policy
- Environmental zoning



Urbanization

- Increase urban density
- Improve mobility within urban areas



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Sustainable aviation



Does'nt work

lessons from 30 year car policy

- Modal shift
- Spatial planning
- Changing mobilty behavior
- Pricing policy
- Voluntary agreements with industry
- Biofuels

Works

- Energy efficiency (engines, hybridelectric, aircraft, operations)
- Synthetic kerosine from wind and solar power
- Accept costs



	OLD NARRATIVE	NEW NARRATIVE
Accessibility	Speed, no congestion	Short distances and speed
Faster transport	Yields time savings	Yields longer travel distances
Economy	Industrial economy	Knowledge and creative economy
Spatial development	Suburbanization	Urbanization
Economy and mobility	Relieve congestion, increase speed	Invest in better inner-city transport
Car traffic	Growth	Towards zero growth
Aviation	Separate mode of transport	Part of overall mobility system
Infrastructure	Between and around large cities ('Intercity')	Within large cities ('Intracity')
Societal value of public transport	Environmental and social	Economic and social
Main administrative responsibility for infrastructure and mobility	National government	Metropolitan government
Reduction of CO2 emissions	Incentives for alternative transport modes and technologies	Obligations and incentives for clean technologies



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Thank you for your attention! Questions and discussion? www.ariebleijenberg.nl