Innovation in zero emission: Companies should be 5 times smarter

THE LESSONS LEARNED FROM GREEN DEAL ZERO EMISSION CITY LOGISTICS IN THE NETHERLANDS

WALTHER PLOOS VAN AMSTEL – AUAS – NOVEMBER 2020

CityLogistics
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Less than 1% LCV's are electric

Netherlands Enterprise Agency

November 2020

Statistics Electric Vehicles in the Netherlands (up to and including October 2020)

This overview is composed by the Netherlands Enterprise Agency, on the authority of the Ministry of Infrastructure and Water Management. Figures may be copied stating the source (Netherlands Enterprise Agency).[1]

Number of electric vehicles registered in The Netherlands (fleet)[2]

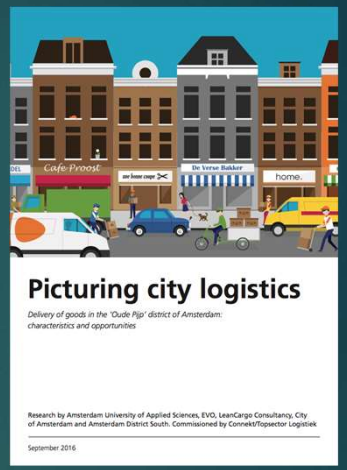
Type of vehicle / Number as of	2016	2017	2018	2019	Sept 2020	Oct 2020
Passenger Car – BEV	13,105	21,115	44,984	107,536	137,349	144,876
Passenger Car – FCEV	30	41	50	215	310	321
Passenger Car – PHEV	98,903	98,217	97,702	95,885	103,985	105,643
Subtotal	**112,038**	**119,373**	**142,736**	**203,636**	**241,644**	**250,840**
Commercial Car ≤ 3.5 tons	1,628	2,208	3,196	4,501	5,303	5,493
Commercial Car > 3.5 tons	66	81	94	173	152	153
Bus	168	296	404	789	938	971
Trike / Quadricycle	1,007	1,134	1,257	1,428	1,474	1,474
Motorbike	316	446	608	732	921	929
Light moped 45 km/h	3,775	4,376	5,302	8,009	10,921	11,276
Light moped 25 km/h	32,496	37,652	26,968	32,357	42,021	43,135
Speed Pedelec (>25km/h)[3]			16,312	19,687	22,960	23,308
Microcar 45 km/h	258	316	377	671	1,423	1,501
Total	**151,752**	**165,882**	**197,249**	**271,983**	**326,819**	**338,109**

Challenges in urban logistics

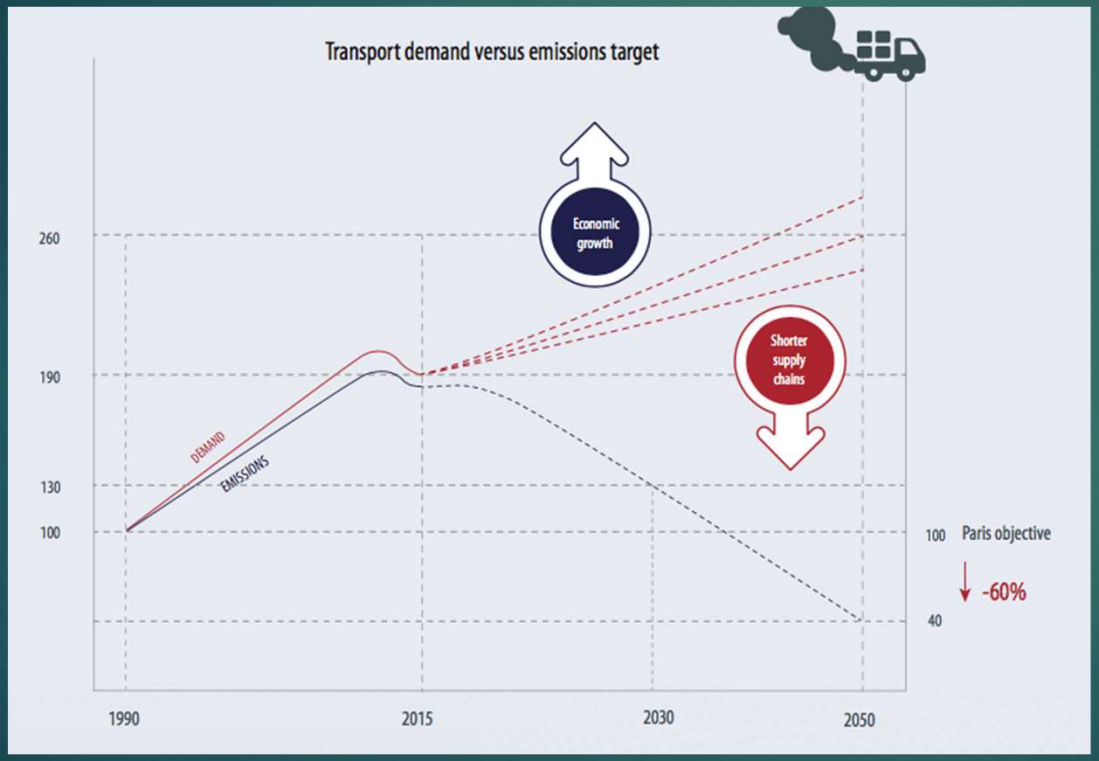
- Space
- Congestion
- Emissions (CO_2 and air pollution)
- Noise
- Safety
- Damage
- Higher cost-to-serve

Amsterdam:
some facts about city logistics

- 20% of vehicles on the road
- LCV's: 80% (daily 30.000)
- Trucks: 20% (daily 8.000)
- 5% of LCVs and trucks deliver 65% shipments
- LCV's going into Amsterdam:
  - From Amsterdam to Amsterdam: 8%
  - From greater Amsterdam region: 46%
  - From other regions: 46%
  - Distance: 95-97% rides are shorter then 150 km (also for trucks)
  - 1 or 2 stops
  - Payload 85% less then 400 kg



In freight:
35% CO2 related to city logistics



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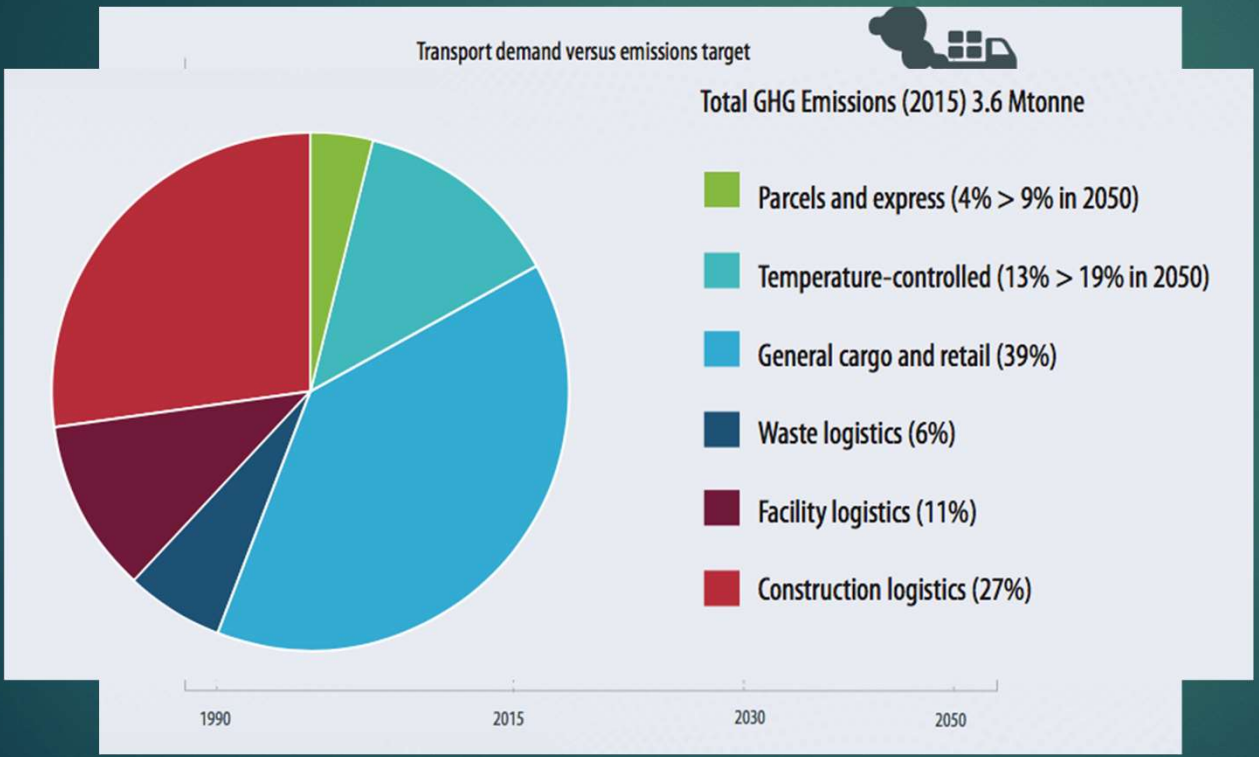


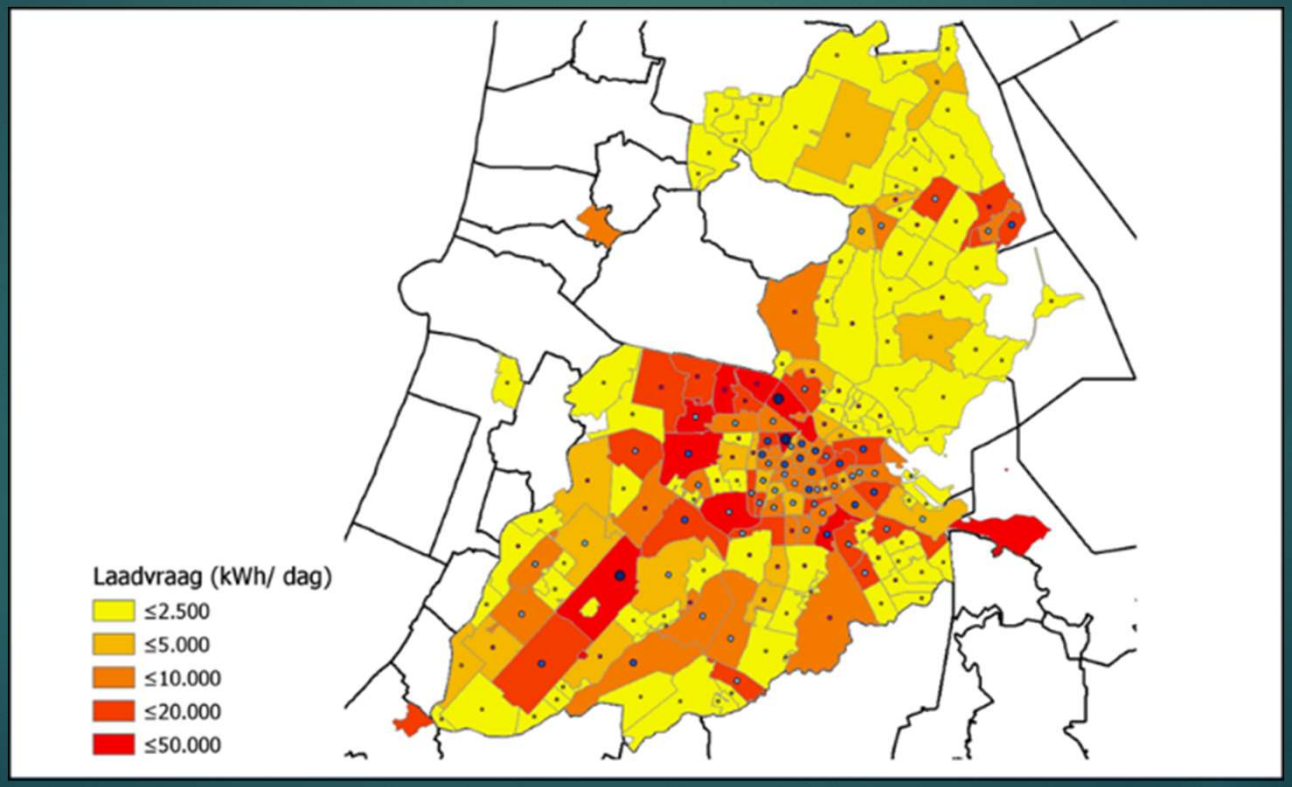
Zero emissions city logistics
Five times smarter

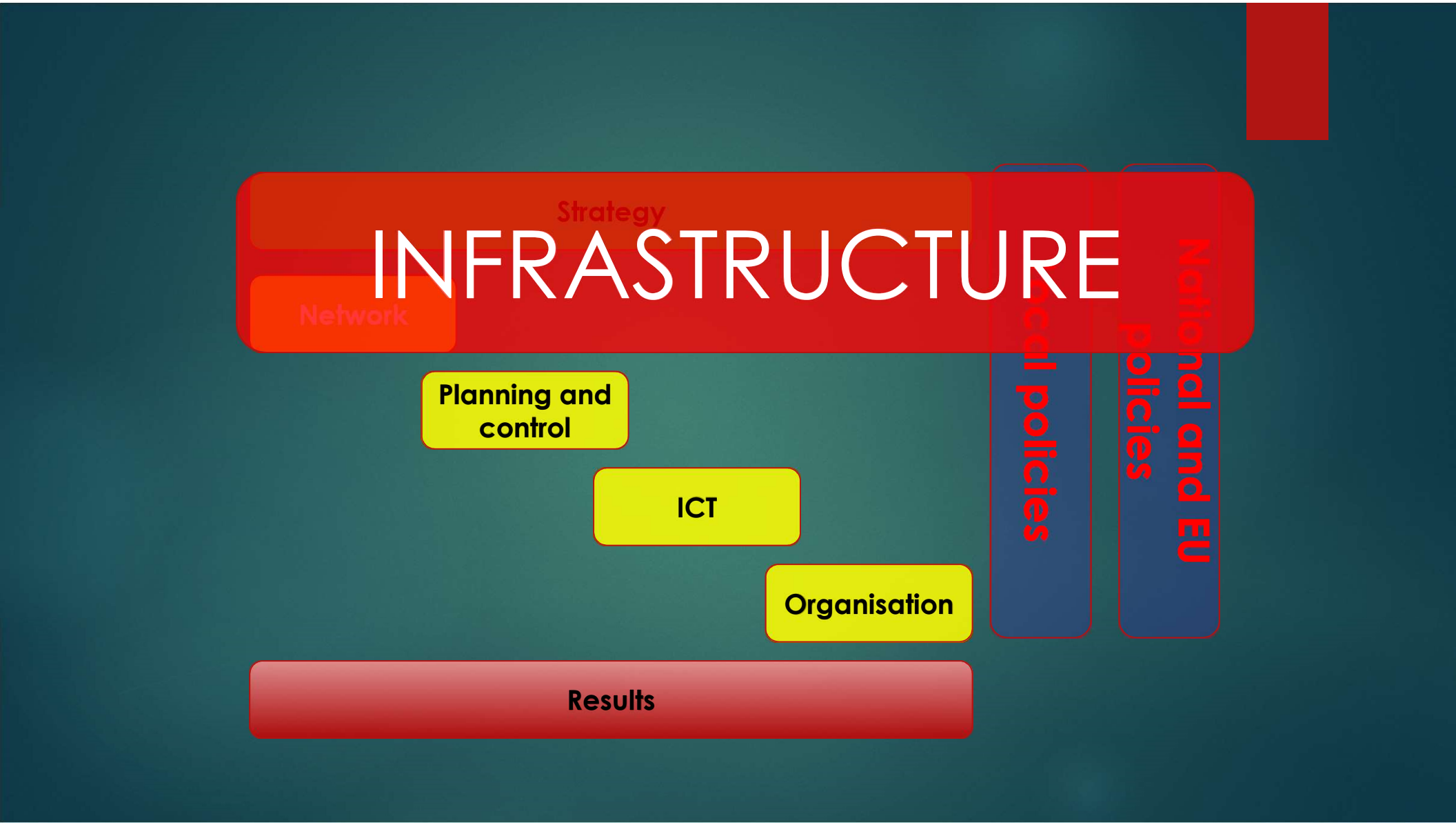
- Plan:
  30 to 40 cities introducing inner city zero emission zones in 2025.
  Impacting 40.000 trucks and 400.000 (plus) LCV's

- Smart vehicle (or no vehicle):
  industry segment solution
- Smart driver
- Smart dynamic transport planning
- Smart charging (vehicle2building)
- Smart purchasing of energy services

Consequences for charging

Depots require major charging infrastructure investments

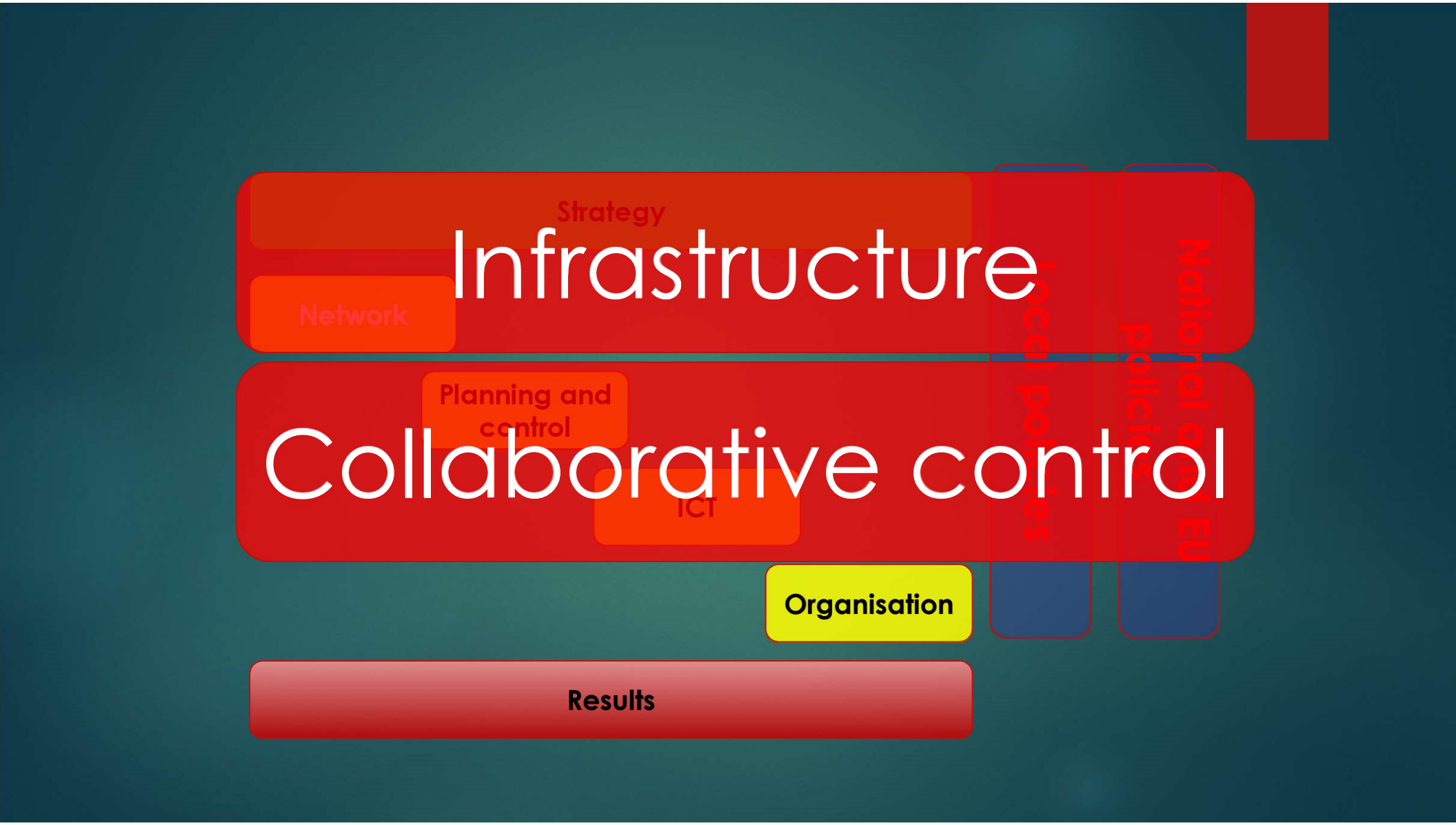



Strategy
INFRASTRUCTURE
Network
Planning and control
ICT
Organisation
Results
Local policies
National and EU policies

Slow versus personalised

‘Slow mobility’	‘Personalised mobility’
Bundling	Value of time
Ecocombi/Synchro	Clean
Platoons	Safe
Push	Pull
Open data	Open data
Big players	Local heroes

Amsterdam: use of waterways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Strategy
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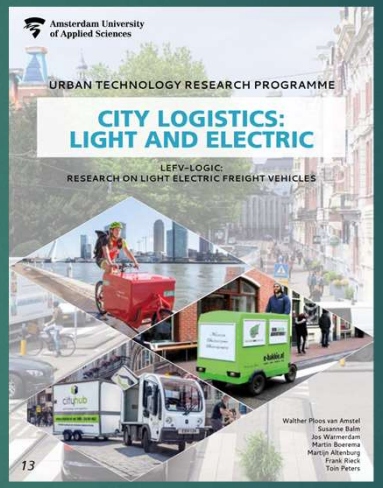
Social innovation
Results
Local policies
National and EU policies

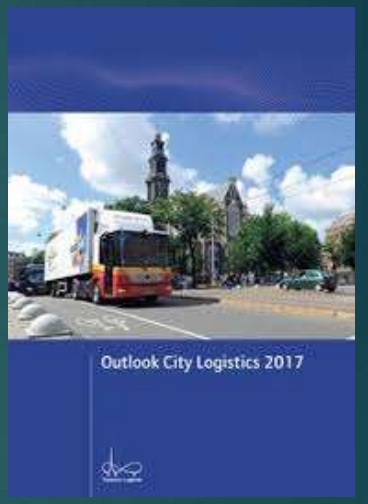
Social innovation: creating value of time together

- Strategic collaboration: shippers, transporters, truck and trailer builders and government
- Planner 2.0: align planning operational and tactical
- The driver of the future
- Experiment: train as you fight…

AUAS – urban technology Research

- Annual outlook city logistics
- Light electric freight vehicles
- ‘Gas op elektrisch’ – service logistics
- Construction logistics
- Waste logistics
- Food and HoReCa logistics
- Public procurement
- ITS in city logistics/intelligent access
- National charging infrastructure
- Smart charging infrastructure
- Urban design for city logistics





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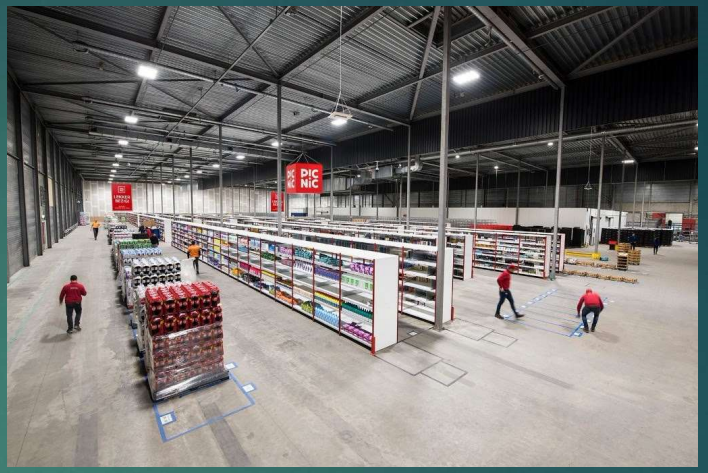
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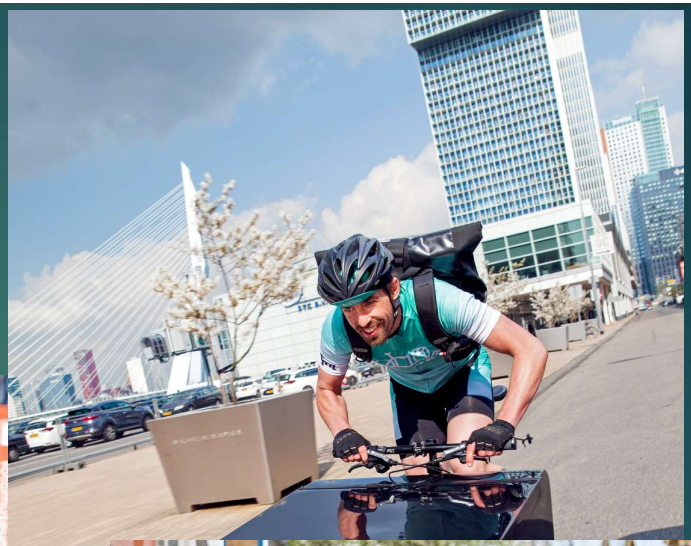


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