



Automated mobility

—
De Lijn





 WAYMO

 transdev
the mobility company

Autonomy
Central

AC



Tech-leaders



ZOOX



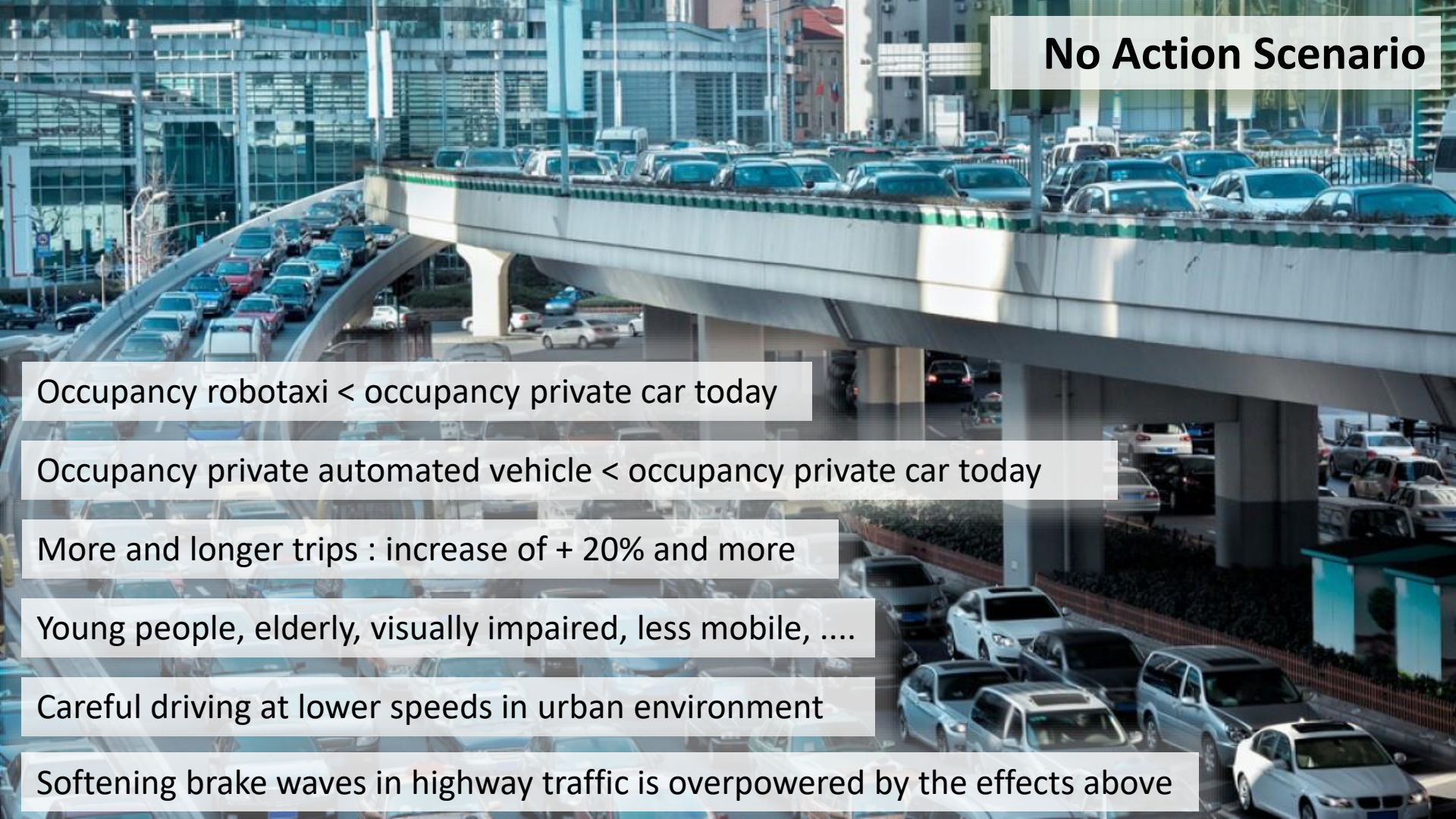
Urban – No steward – Large scale

Small scale



nuro





No Action Scenario

Occupancy robotaxi < occupancy private car today

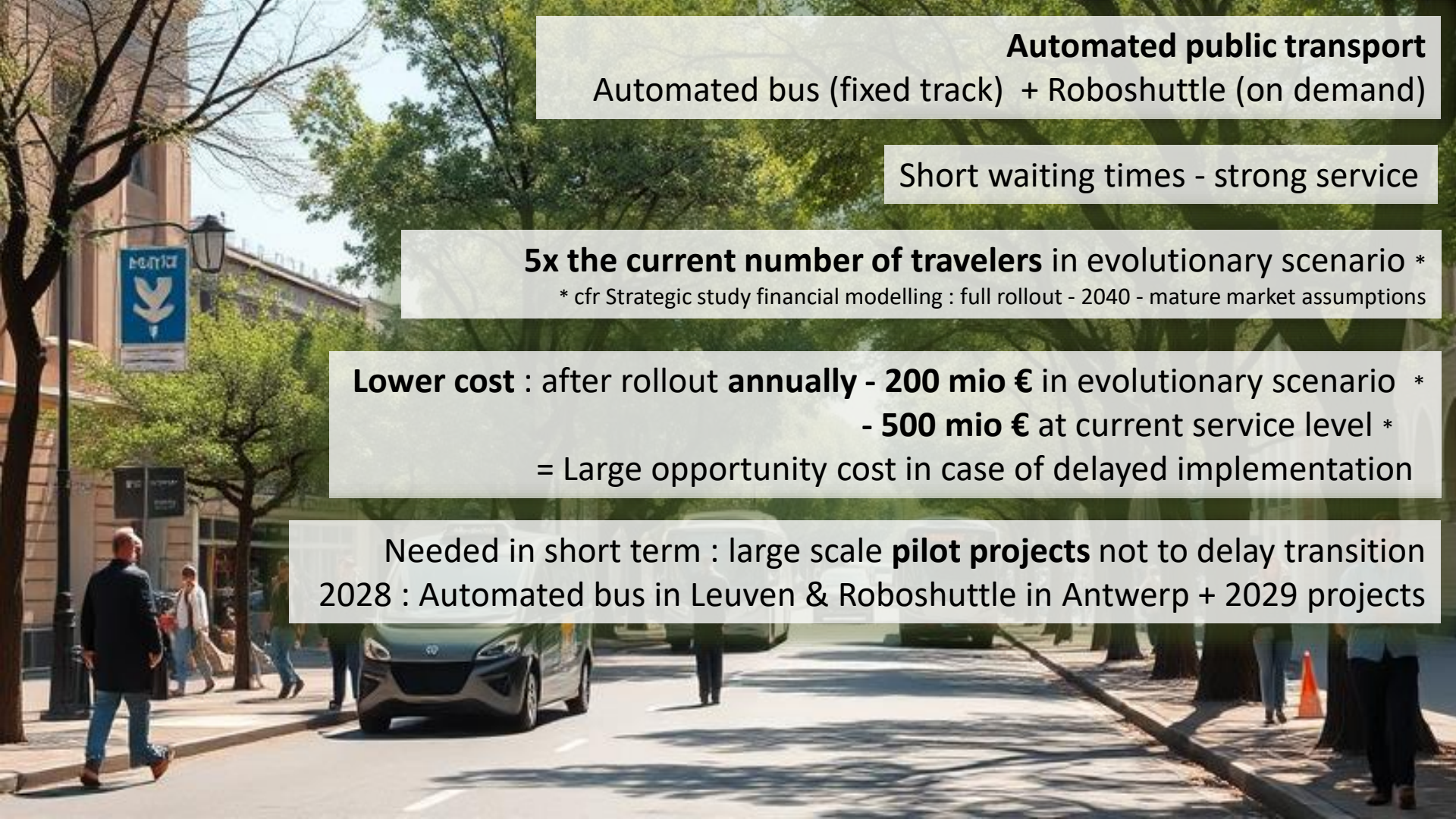
Occupancy private automated vehicle < occupancy private car today

More and longer trips : increase of + 20% and more

Young people, elderly, visually impaired, less mobile, ...

Careful driving at lower speeds in urban environment

Softening brake waves in highway traffic is overpowered by the effects above

A background image of a city street. On the left, there's a blue sign with a white bird-like logo and the word 'BOUTIK' above it. A small green car is driving on the road. Pedestrians are walking on the sidewalks. The scene is set in a city with trees and buildings.

Automated public transport

Automated bus (fixed track) + Roboshuttle (on demand)

Short waiting times - strong service

5x the current number of travelers in evolutionary scenario *

* cfr Strategic study financial modelling : full rollout - 2040 - mature market assumptions

Lower cost : after rollout **annually - 200 mio €** in evolutionary scenario *
- **500 mio €** at current service level *

= Large opportunity cost in case of delayed implementation

Needed in short term : large scale **pilot projects** not to delay transition
2028 : Automated bus in Leuven & Roboshuttle in Antwerp + 2029 projects

Target De Lijn : Modal shift

with advantages in congestion – inclusion - environment - spatial impact



Impact automated transport	Private automated car	Robo-taxi	Robo-shuttle	Automated bus	Passeng. bus + shuttle vs bus today	Yearly budgetary impact authorities vs today *
	Vehicule in individual ownership	Selfdriving taxi	Robotaxi with different customers	Large vehicle on fixed track		
Occupancy rate versus private cars	Lower for example by rides to hail a family member	Lower by rides to pick up the next customer	Higher 1,5-2 people with similar destinations	Very high		
Current mobility non-automated	76 %	-	-	3,8 %		
Evolutionary social market development	46 %	20 %	12 %	2,5 %	5x	- 200 million € lower cost
Revolutionary social market development	18 %	39 %	22 %	1 %	9x	+ 1 billion € higher cost

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AMAM - Advanced Masterclass Automated Mobility 2025 (+26-28)

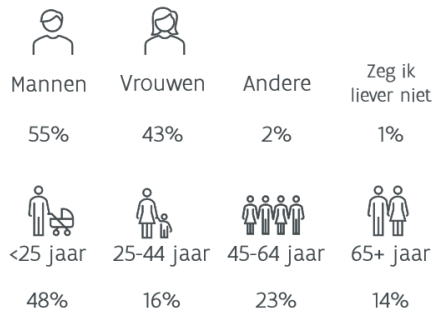
Leuven - Heverlee



Bevraging klantentevredenheid

Tussentijdse resultaten : steekproeven in maart/juni/augustus (totaal #750)

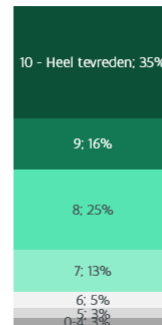
Persoonlijke kenmerken



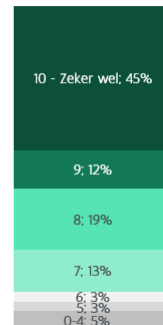
Gemiddelde beoordeling:

8,4
/ 10

Rittevredenheid



Aanbeveling



- **Veiligheid, comfort, rijgedrag en gebruiksgemak**
scoren heel hoog : meer dan 75% geeft 7 of hoger op 10
- **Toekomst : 95%** geeft aan zelfrijdende bussen te willen gebruiken in dagelijkse leven



Automated transport – Roadmap De Lijn – To be confirmed

TBC : Framework contract 2026 all pilot projects = 100 vehicles
+ Central Procurement Body for EU operators/auth. = 460 vehicles

2025-28 Pilot

25-28 Leuven
EIT-Interreg
fixed track

2028 Project Leuven Automated

Fixed track bus
• 26 tender
• 27 testing
• 28 operations

2028 Project Antwerp harbor

On demand shuttle
• 27 Testing
• 28 Operations

2029 Projects

- Fixed track
- On demand
- Corridor = fixed
+ on demand in
new network

2030-2040 Transformation De Lijn Automated transport

Transition to
automated bus and roboshuttle

Framework Agreement Pilot Projects

Automated Transport Leuven & Antwerp

- Central purchasing body with broad follow-up :
Signed LOI of – a lot of interest - win – win cooperation

LETEC.


BRUSSELS MOBILITY
BRUSSELS REGIONAL PUBLIC SERVICE



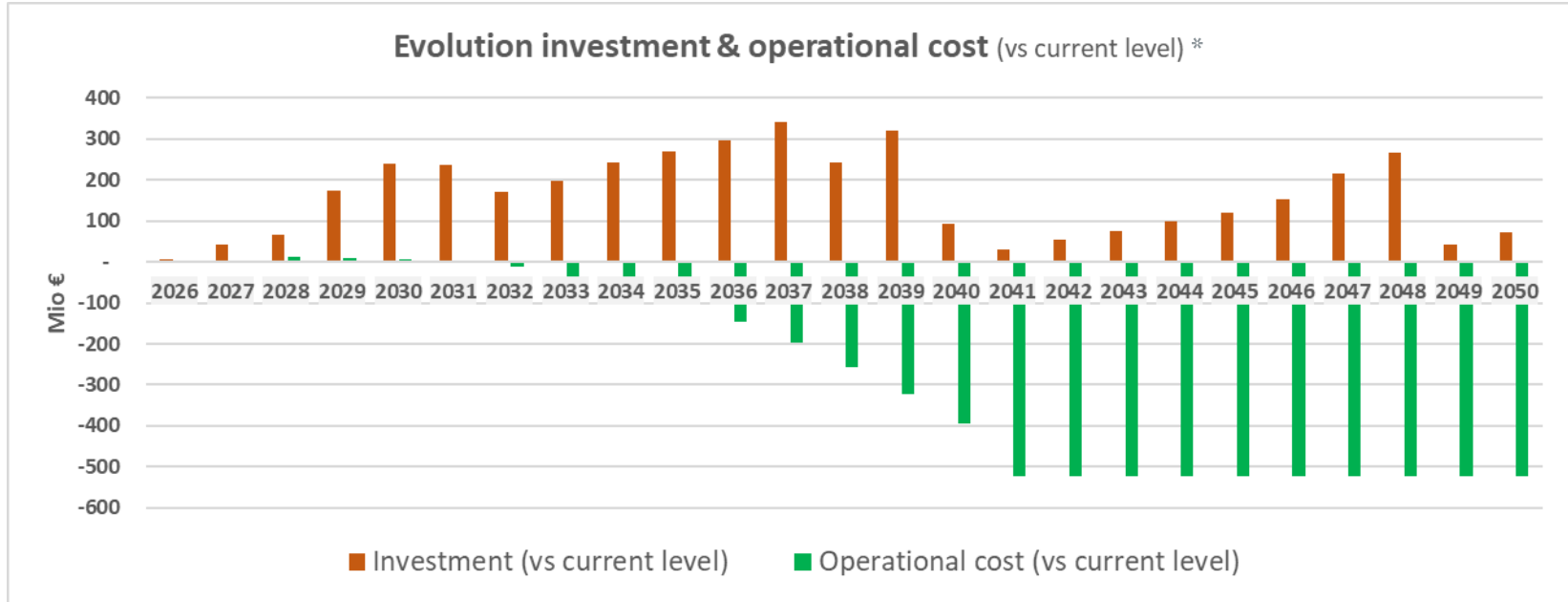
**Provincie
Noord-Brabant**

Helmond



- Scope framework agreement : Vehicles + supervision + support Projects
De Lijn: up to 100 vehicles
Participants central purchasing body: up to 460 Vehicles
- Support for deployment via
 - EU LIFE programme
 - Different proposals in preparation or submitted

Financing the De Lijn transformation



How to finance : Research track launched to evaluate financial strategies

- Loans (EIB/private/...) ↔ Authorities deep in debt already
- Leasing – financing by third parties
- More outsourcing ↔ Financing by private operators at higher cost?
- SPV? Investors? Venture capital?

* cfr Strategic study financial modelling : full rollout - 2040 - mature market assumptions

Sensitivity analysis on transition to automated driving

on year of launch and transformation length

Cost total transition bus + shuttle (additional cost vs optimum - mio €)	Year of launch bus + shuttle transition (year with vehicles operational)									
	71	2027	2028	2029	2030	2031	2032	2033	2034	2035
8		297	82	103	22	14	159	424	768	1.158
9		309	229	59	-	94	315	636	1.024	1.449
Transition length (number of years)	10	402	167	29	71	241	518	881	1.301	1.752
	11	328	138	96	215	443	764	1.158	1.603	2.073
	12	276	177	216	395	669	1.023	1.443	1.907	2.177
	13	291	275	378	606	916	1.298	1.737	2.016	2.327
	14	361	412	568	835	1.175	1.579	1.848	2.165	2.509
	15	473	580	780	1.079	1.444	1.691	1.995	2.342	2.714

cfr Strategic study financial modelling : full rollout - 2040 - mature market assumptions



Beweeg mee

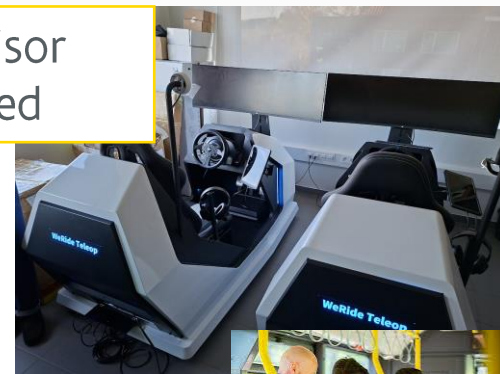


Staff impact

- Driver shortage
- 10-15 % of drivers leave De Lijn each year
high average age – variable working regimes
- 5 year pilot projects + 10 year transformation (or longer?)
- Many new functions : supervisors – in-field support teams
- Good transformation management necessary

Conclusion : De Lijn will keep on hiring

Supervisor
needed



Support
needed



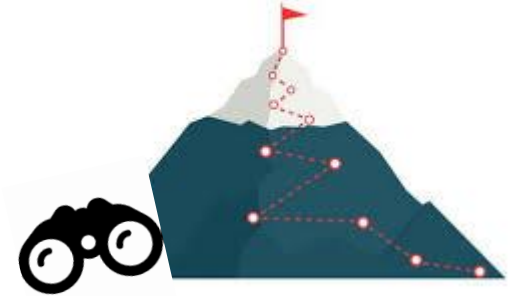
Beweeg mee naar minder CO₂



Roboshuttle depots



No more greenfield projects?



Vision development needed



Street parking?
Office/supermarket
parking?



Service hubs voor
Charging-cleaning?



Private market developing :
next gen service stations?

In mobility the most profound disruption since the introduction of the passenger car is prepared now ...

