



# Automated driving

Jeroen van der Werf



STRENGTH THROUGH COOPERATION

# Automated vehicles at VDL ETS

## Topics

- VDL Enabling Transport Solutions
- Shuttle initiative
- Digital infrastructure for future mobility



# FACTS AND FIGURES 2022

**1953**  
Family business VDL Groep  
was founded in 1953



75% of our  
products are  
exported to  
**112** countries  
around the world

**100+**  
We consist of more than 100 companies

**16.585**  
Employees in 19 different countries



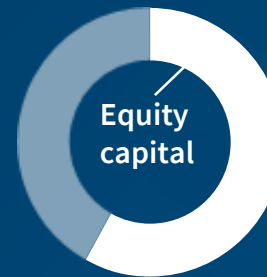
Combined revenue  
**€5,8 billion**



Consolidated turnover  
**€5,5 billion**



Net Result  
**€298 million**



**63,2%**  
of total assets



VDL Groep is in the top six on the  
Dutch reputation ranking

Source: RepTrak



# THE WORLD OF VDL GROEP



**Science, Technology  
& Health**



**Mobility**



**Energy  
& Sustainability**



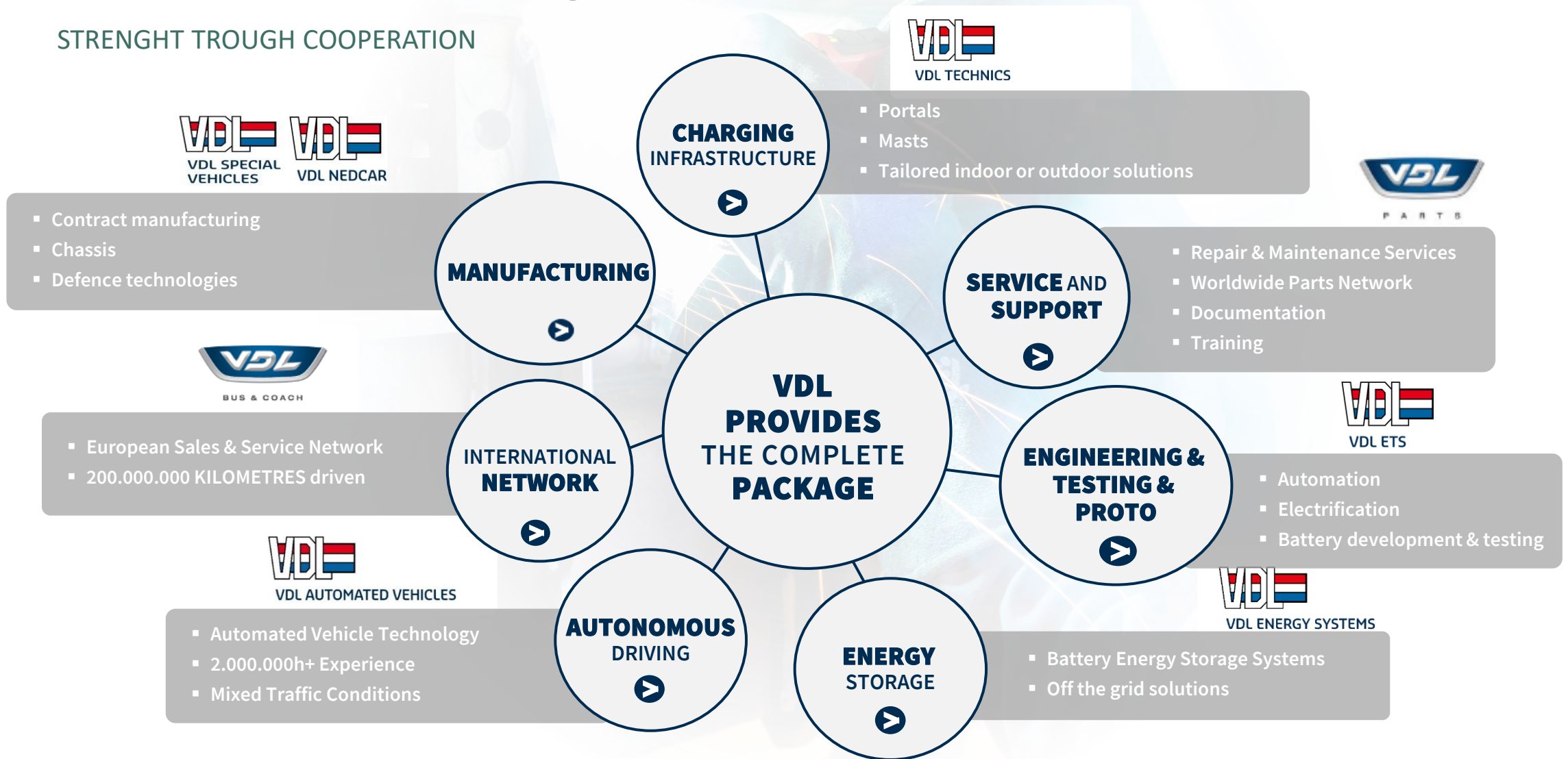
**Infratech**



**Foodtech**

# VDL Group has a strong mobility cluster

STRENGTH THROUGH COOPERATION





# SMART MOBILITY TRENDS

**Electrification**



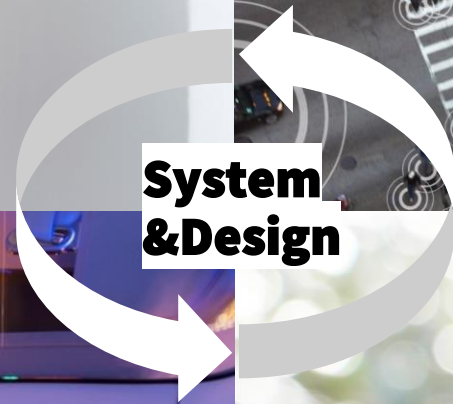
**Connectivity**



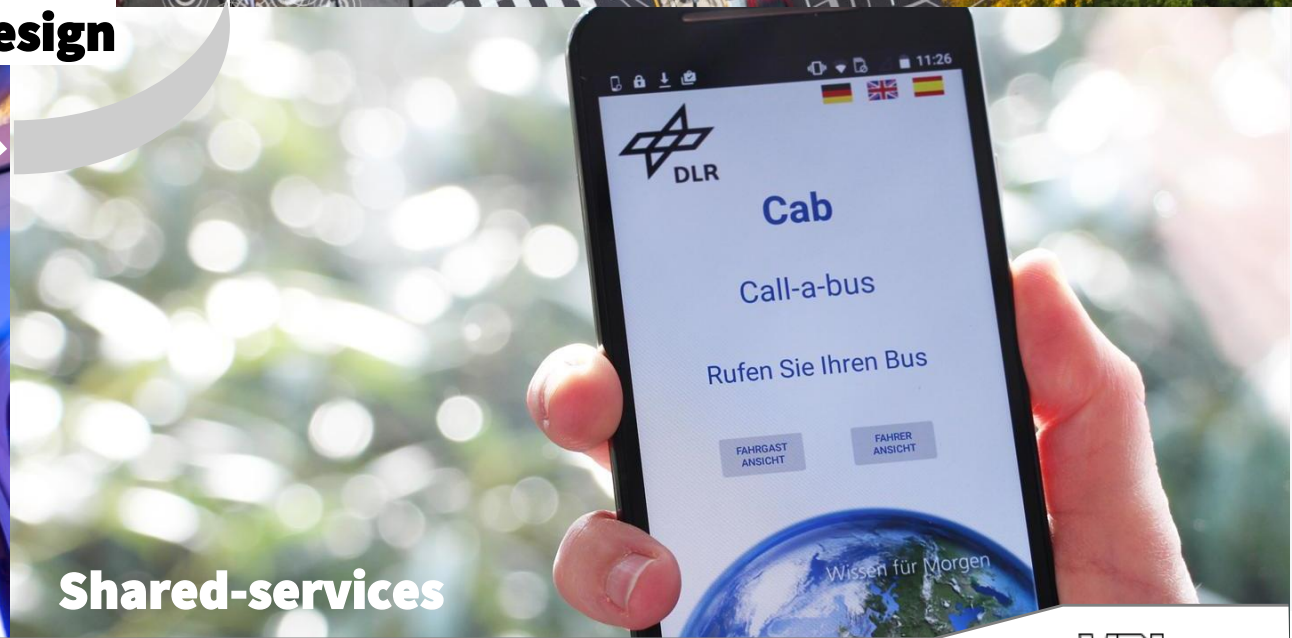
**Autonomous**



**System  
& Design**



**Shared-services**





# SHUTTLE

Initiative of  
Schaeffler and VDL







powered by  
**in** mobileye

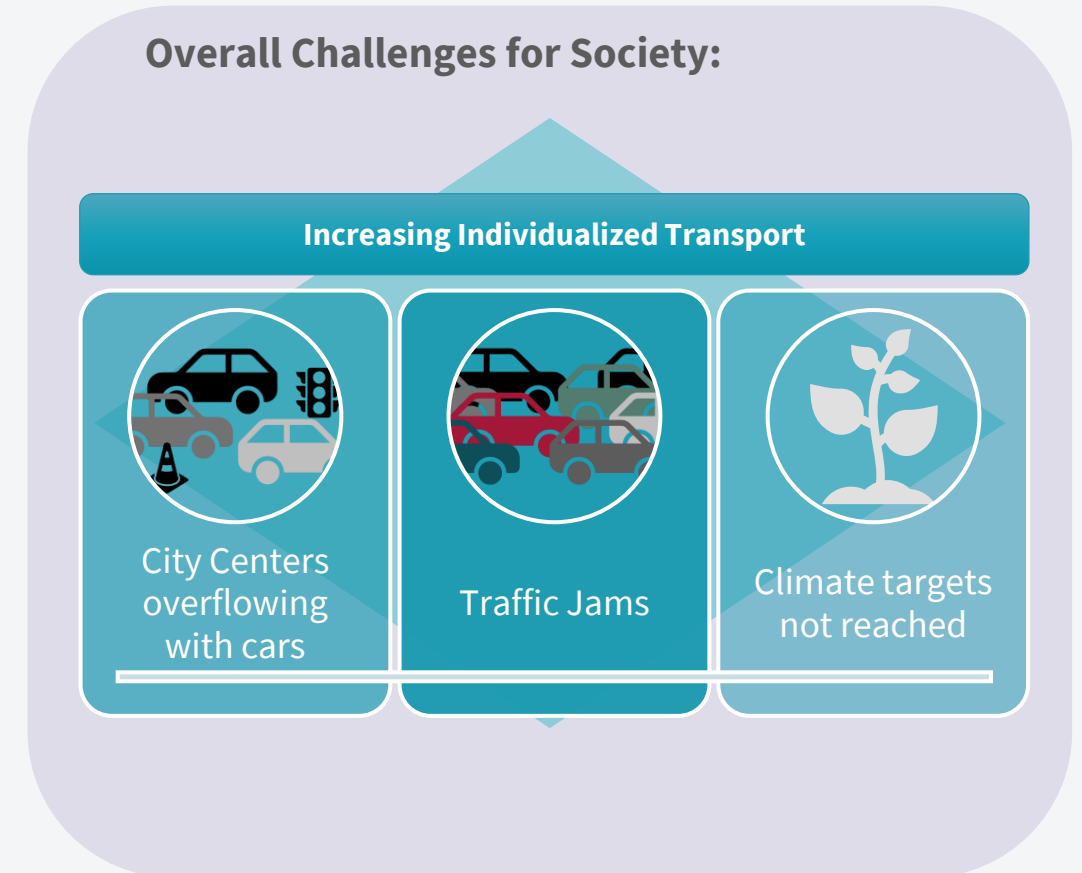
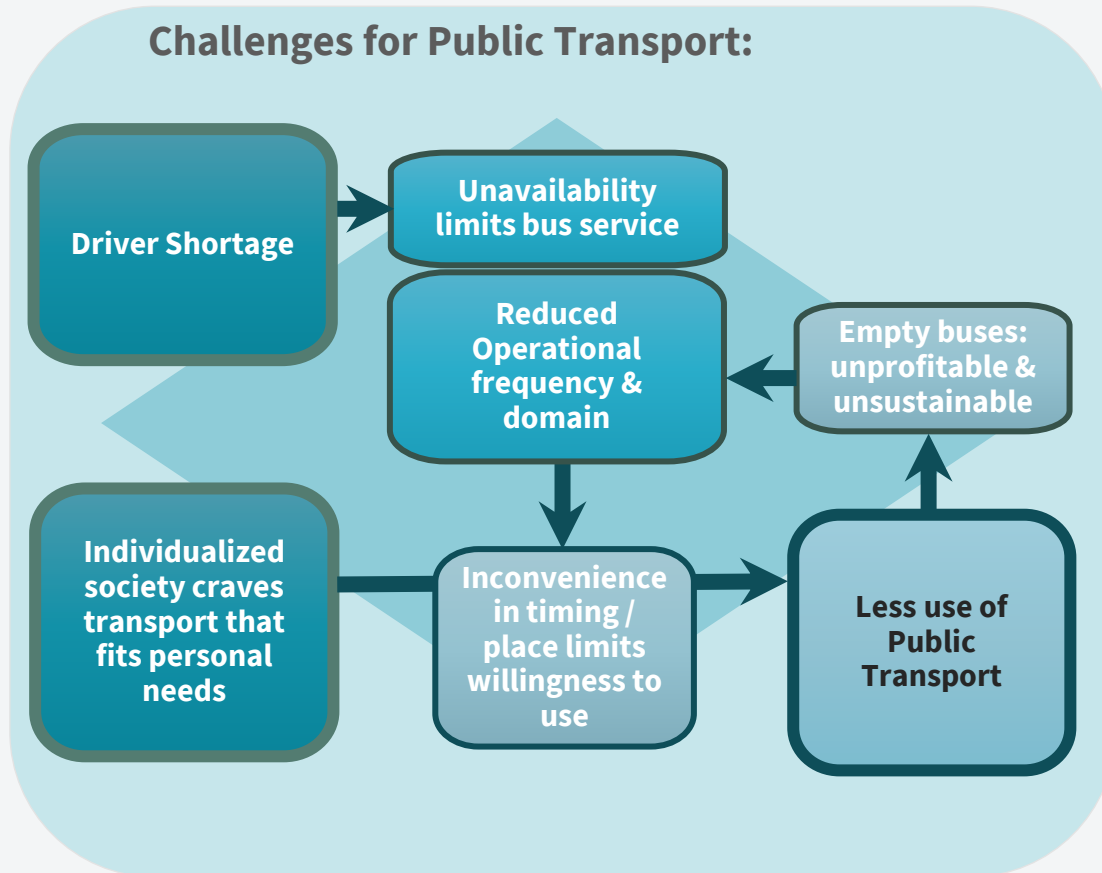
CENTRAL STATION

VBI  
SCHAEFFLER

VBI  
SCHAEFFLER



# The challenges of today's mobility:



## We believe:

Electrified shared mobility platforms can relieve traffic sustainably.  
Implementing a more flexible, frequent and personalized shared service to reduce individual driven kilometers.

# Introducing our solution: The People Mover

## Our Autonomous Shuttle

### Key advantages:

- No driver required
- **Shared** mobility with **individual** convenience – providing flexible & personalized transport

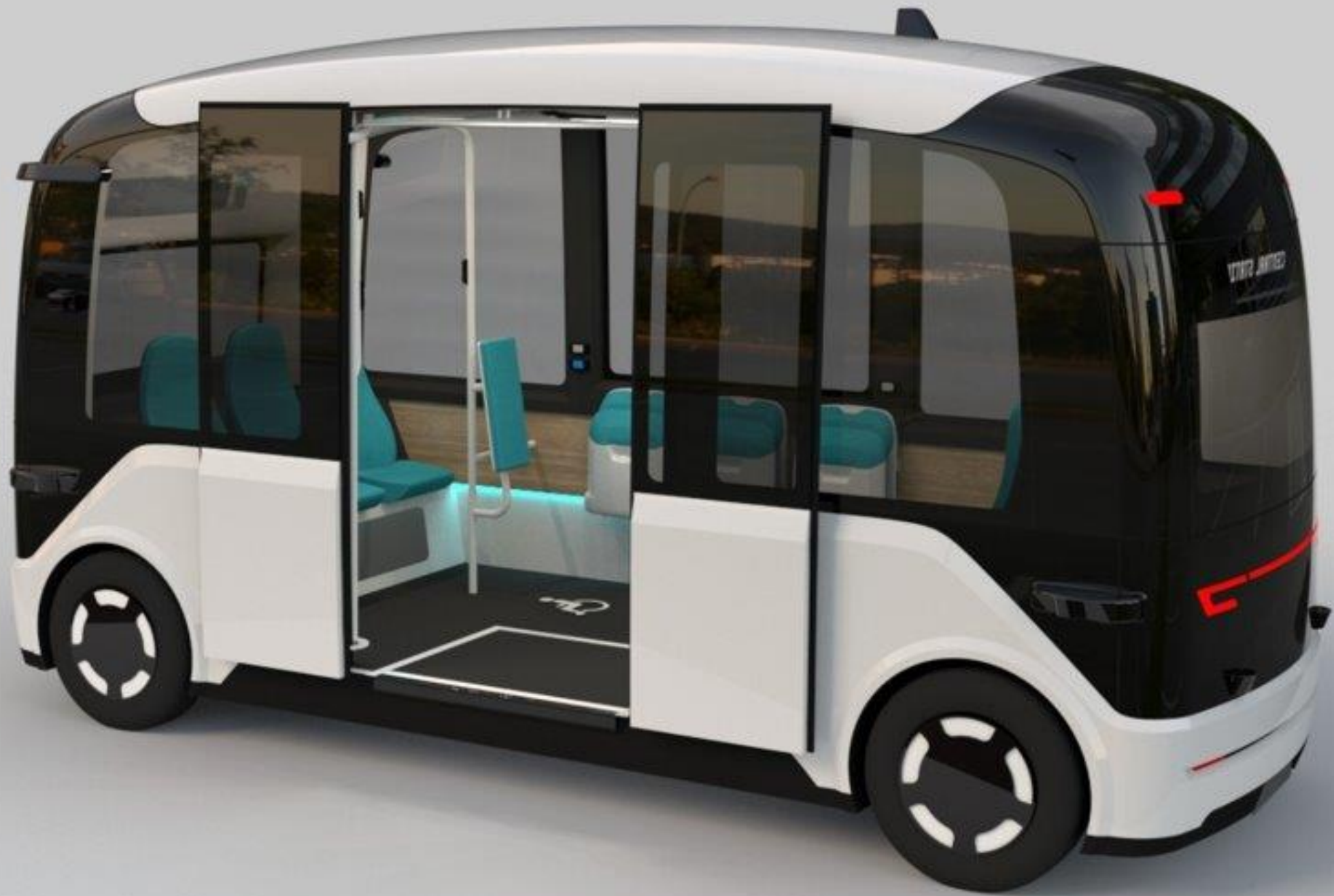
		Route-planning	
		Fixed	Flexible
Scheduling	Fixed	Usual Public Transport	Scheduled Last-Mile
	Flexible	On-Demand Routes	On-Demand Last-Mile

- Compact, suitable for frequent service
- Developed for Public Transport













Flexible



Communicative



Reliable

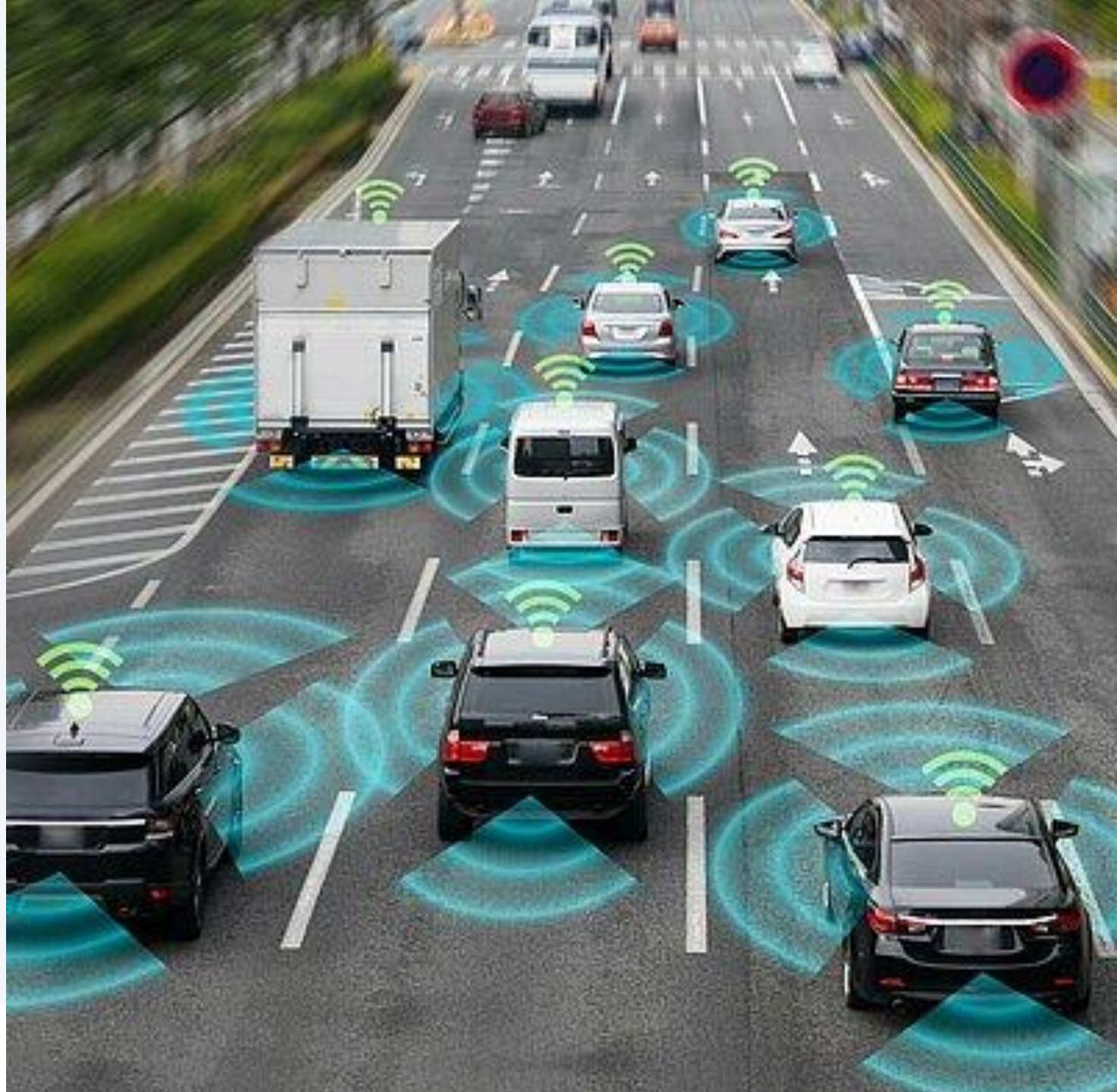


Comforting

## DITM

DIGITALE INFRASTRUCTUUR VOOR  
TOEKOMSTBESTENDIGE MOBILITEIT

Beyond Roads: how the  
DITM project is  
contributing towards a  
digital infrastructure for  
future-proof mobility!





Goal: Enable higher levels of autonomous driving

Lead partner

**BRAINPORT DEVELOPMENT**  
economische ontwikkelingsmaatschappij

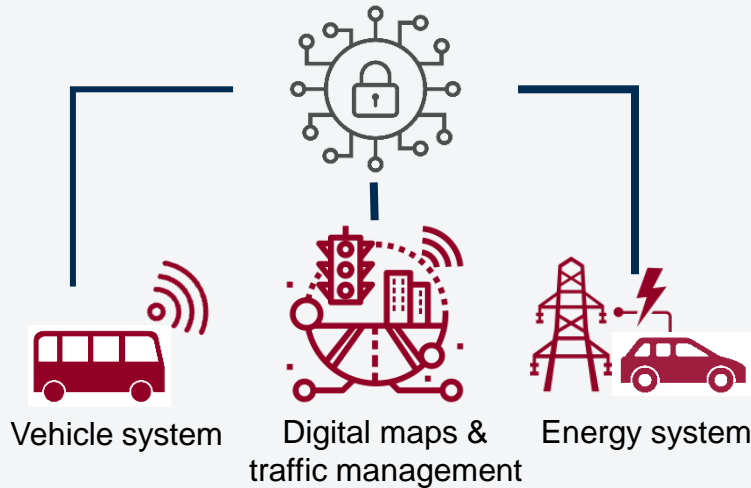


**20**  
Partners

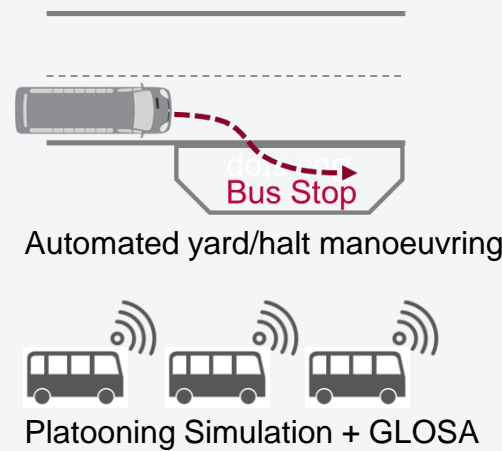
**16**  
Companies



# Digitale Infrastructuur voor Toekomstbestendige Mobiliteit



Use Cases



€ 60 million



1 Oct 2022  
1 Oct 2026



Website [link](#)

*“On the way towards full autonomous vehicles, we develop the underlying technologies for advanced driver assistance systems (ADAS) which provide the safe and increasingly autonomous experiences that will reshape our relationship to transport.- Brian de Bart, NXP*



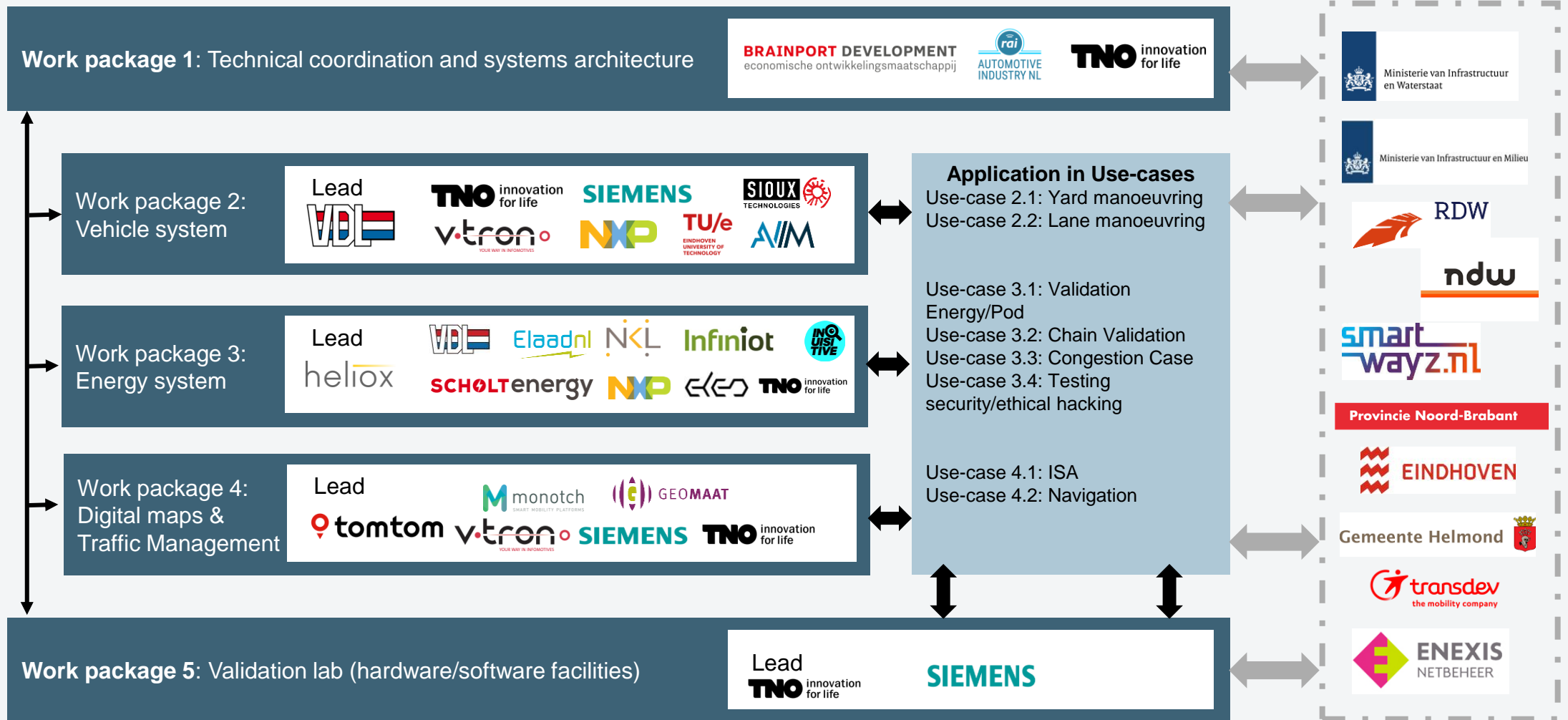
Supported by:

**BRAINPORT DEVELOPMENT**  
economische ontwikkelingsmaatschappij



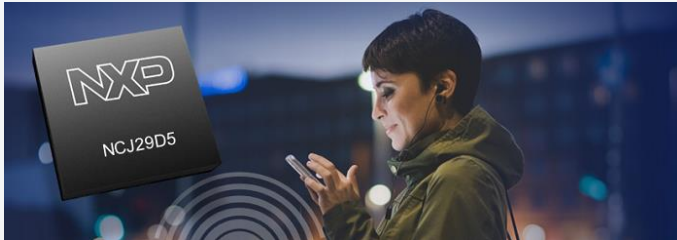
*The DITM project is made possible by the Ministry of Infrastructure and Water Management (I&W). DITM is funded by the European Union-NextGenerationEU and DITM partners.*

# WP Overview





# Automated vehicle functions



UWB positioning



Tele operation



Automated driving bus



Radar positioning



Digital Infra



Digital twin



# Research with VDL CITY BUS

Automated Yard Maneuvering

Teleoperation

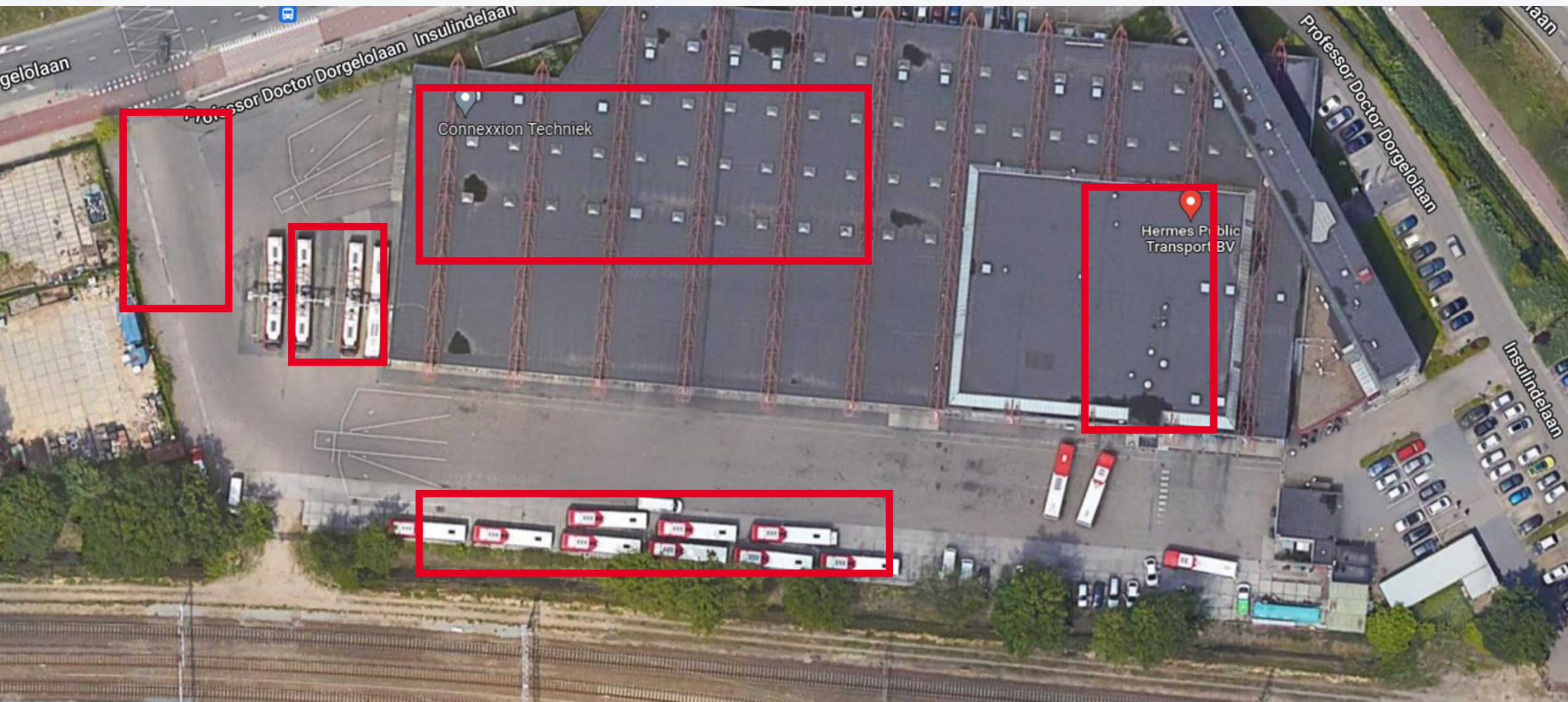
Automated Halt Maneuvering

Connected platoon on intersection

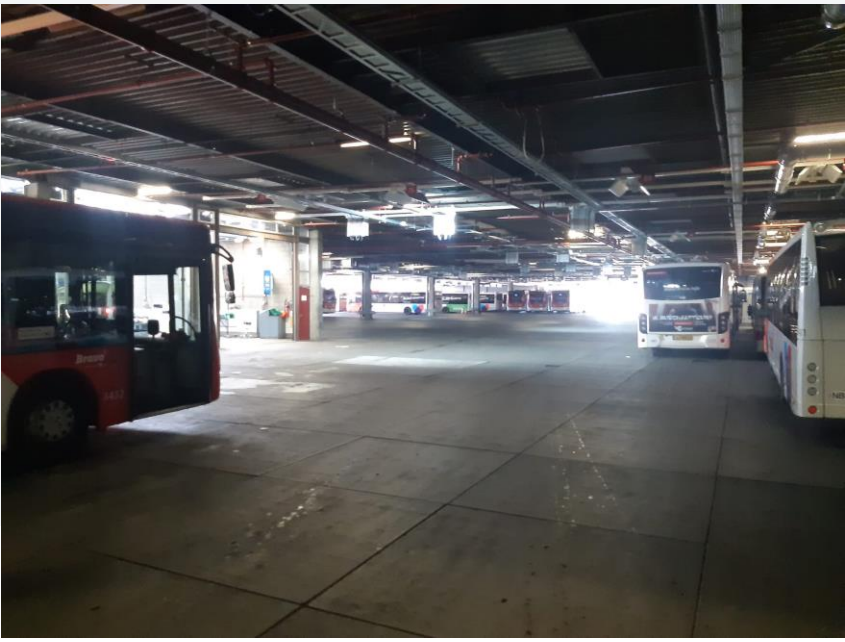
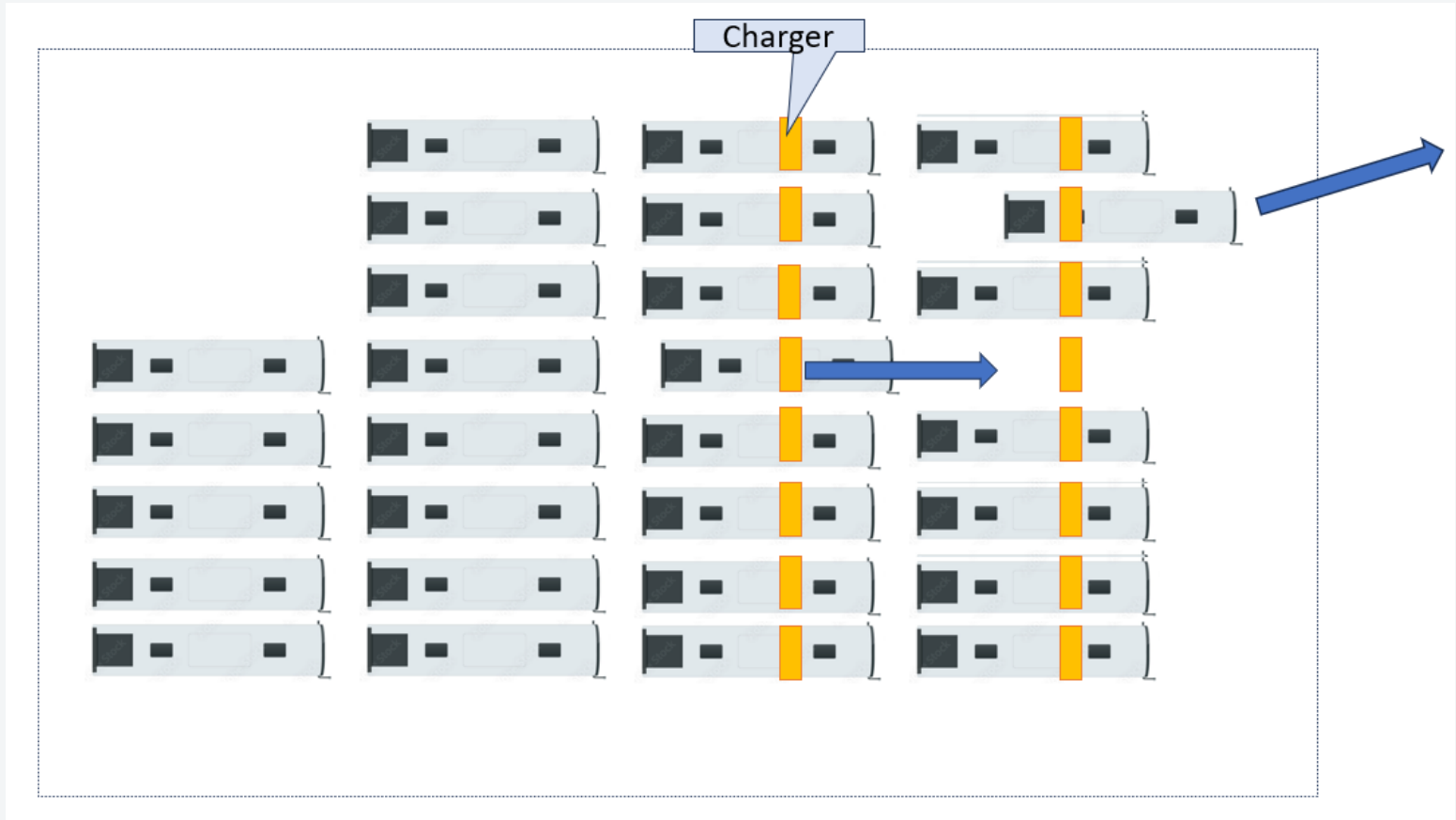




# Automated Yard Maneuvering



# Parking with charger





# Automated vehicles at VDL ETS

## Summary

- Part of mobility cluster
- Engineering automated shuttle
- Engineering innovation
- Building prototype automated Citea





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