

# From ITS technology to mobility solutions

## Learning by doing ...

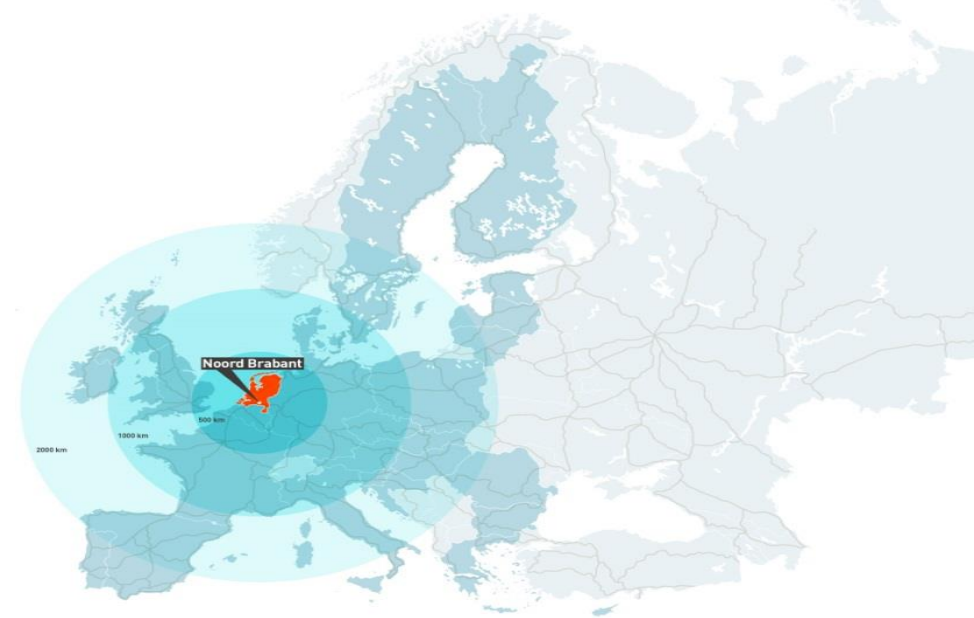
**Gert Blom**

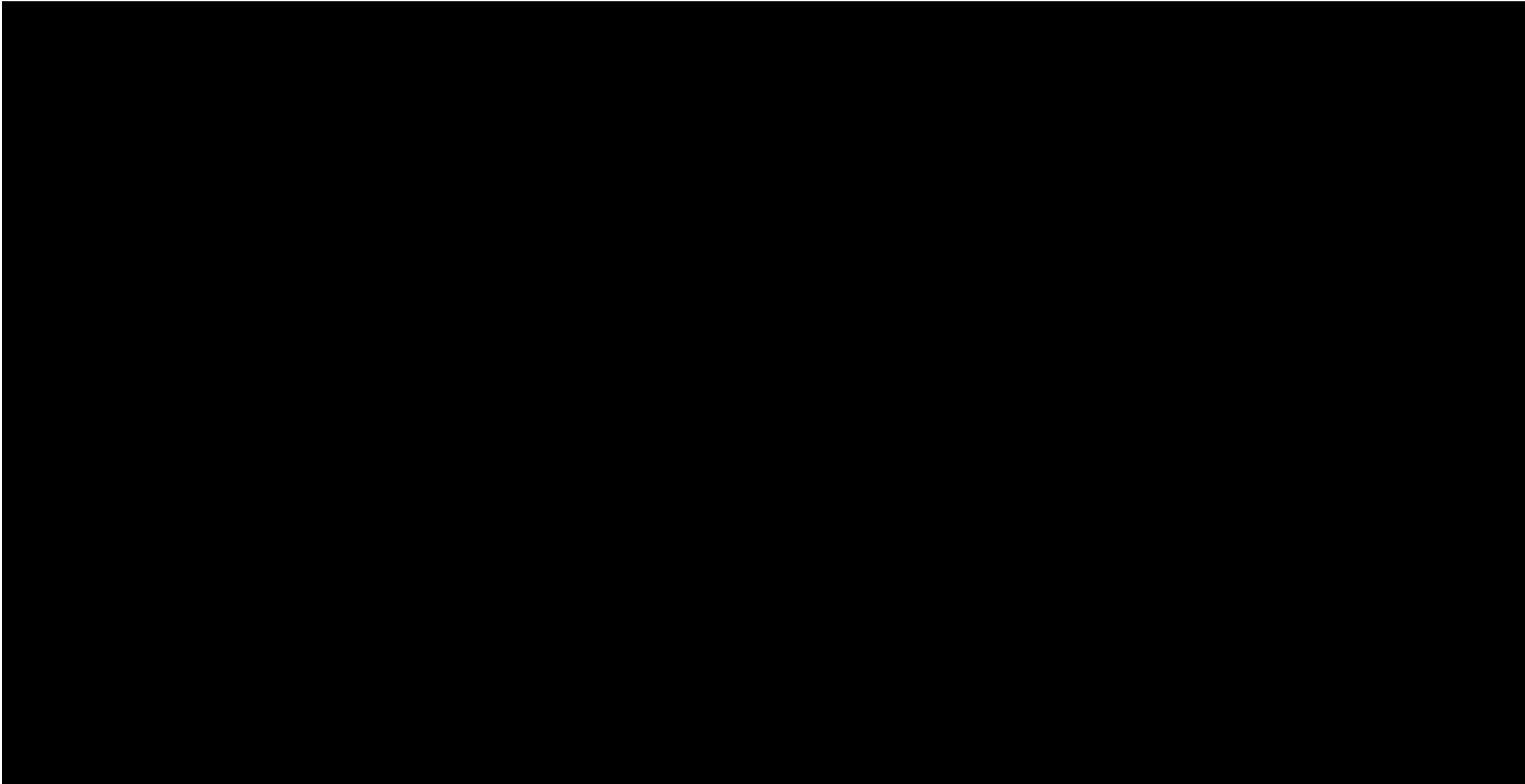
**Strategic Advisor Mobility - city of Helmond**

**ITS Innovation Manager – ITS Agency BrabantStad**



Berlin , 12<sup>th</sup> of February 2018  
Smart Mobility Executive Forum





# Mobility policy Helmond

Helmond Mobiel 2015



Integrale mobiliteitsvisie 2015



HELMOND VERBONDEN  
Mobiliteitsvisie 2016-2025

Optimizing the use  
of existing infrastructure

Urban traffic solutions  
technology driven: ITS

Active support of smart  
mobility pilots and  
showcases



# Helmond Living Lab ITS





# FREILOT Energy Efficient Intersection Service Helmond

Priority at intersections – speed & time-to-green advice



# FREILOT: Energy Efficient Intersection Service

## The example of Helmond (NL)

Source: FREILOT project



14 equipped intersections in urban zone

Period	Number of crossings	Number of stops	% of stops
Baseline	408	52	13%
Pilot	343	20	6%

Number of crossings and stops in both periods

	Baseline	Pilot	Rate of change
CO <sub>2</sub> emissions (g/km)	644	562	-13%
NO <sub>x</sub> emissions (g/km)	3.87	3.33	-14%
Fuel consumption (l/100km)	24	21	-13%
Speed (km/h)	35	36	+2.6%

Emissions, consumption and speed variations

## From C-ITS- technology to mobility solutions the deployment challenge

 Technology

 Policy

 **Business-models: economies of scale**

 General Acceptance

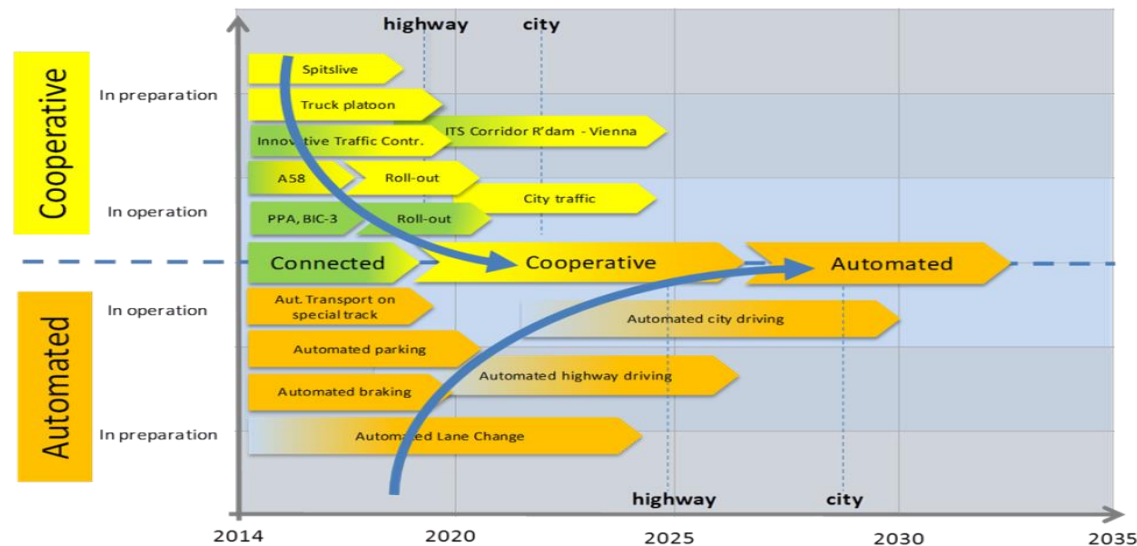
 Proof of Evidence

 Cyber Security

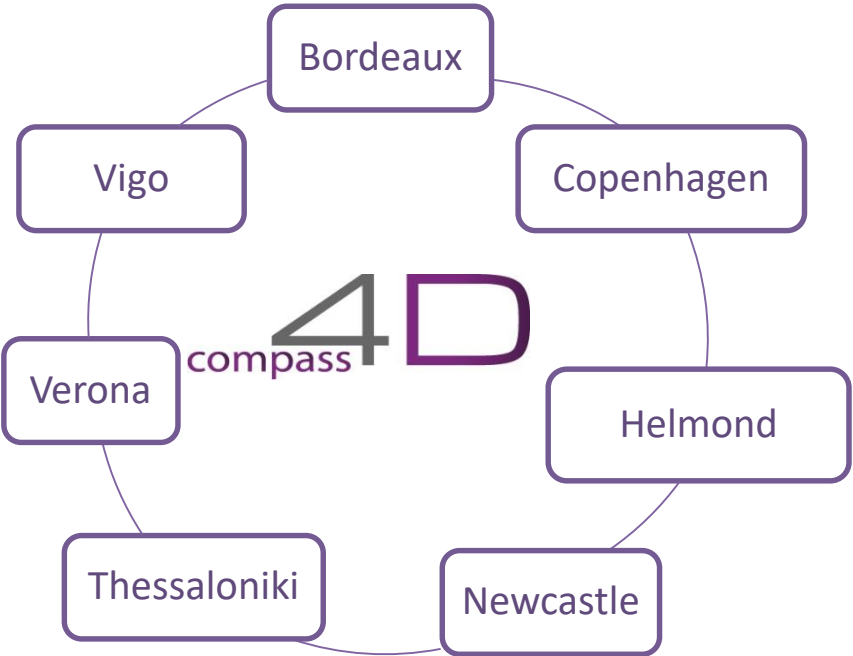


## Next ITS steps for Helmond ...

- Contribute to large scale deployment of C-ITS
  - EU- Projects **Compass4D**, **C-Mobile**, **C-TheDifference**, **CAPITAL**
- Prepare for introduction and transition towards automated vehicles
  - EU- Projects **MAVEN**, **AUTOPILOT**, **CoEXist**, **FABULOS**



# Compass4D -overview



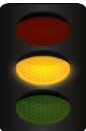
Compass4D pilot sites

> 600 vehicles, > 1200 drivers

Vehicles / pilot site	Bordeaux	Copenhagen	Helmond	Newcastle	Thessaloniki	Verona	Vigo	Total
Trucks	40		7	5 vans				52
Cars	34		25 electric	5 electric	7	10	10	91
Buses		100	5			10	20	135
Emergency vehicles	6		5				2	13
Taxis					35		8	43
Total vehicles	80	100	42	10	42	20	40	334

Services:

Energy Efficient Intersection



Road Hazard Warning

Red Light Violation Warning



# **The Difference** Beyond Traffic Jam C-ITS urban pilots

- Project assigned by EC DG MOVE
- October 2016 – September 2018
- Building on recent experience with urban C-ITS pilots
- European C-ITS front runners
- Dissemination and communication across Europe

## Cities



## Technology & Service providers



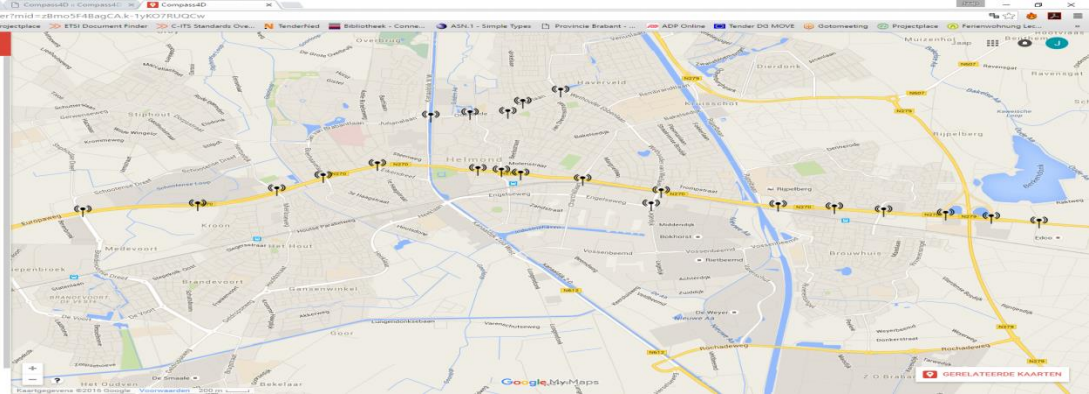
## Research & Consultancy





# C- The Difference Helmond Pilotsite

Helmond Pilot Site	
Road Infrastructure	
Number of ITS G5 RSUs	24 intersections
Number of 3G equipped traffic lights	0
Vehicle Fleet	
Passenger cars	0
Commercial vehicles	103 equipped with ITS G5 OBU (trucks, emergency vehicles)

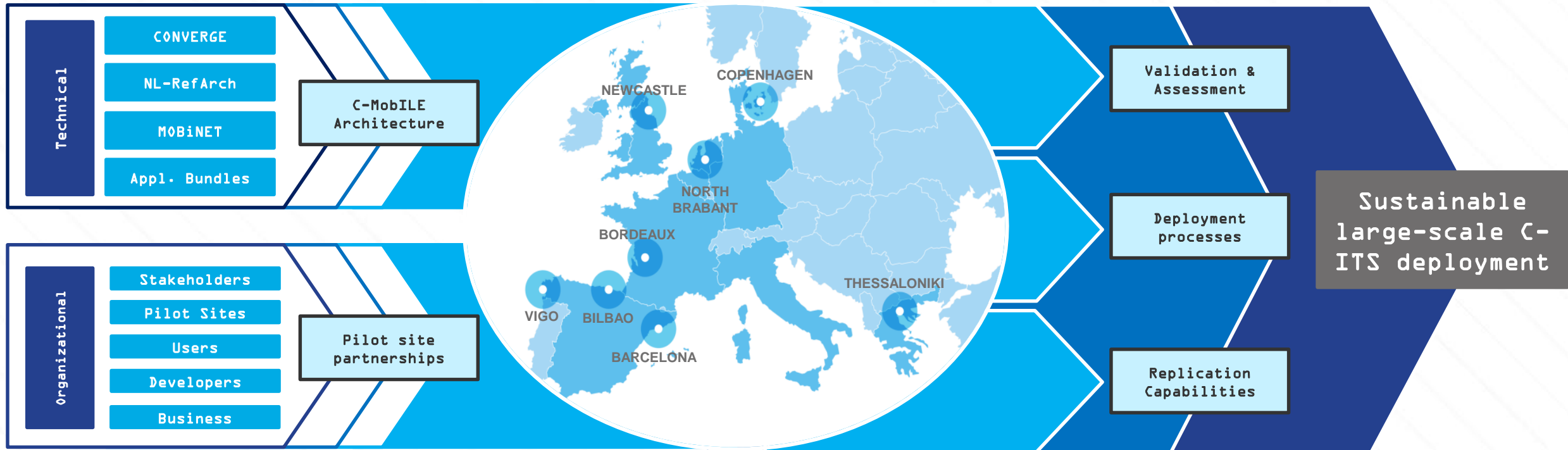


# **The Difference**

## Proposed C-ITS Services to be piloted

Pilot Site C-ITS services	List of proposed C-ITS services to be piloted and evaluated in C–The Difference pilot project	
	Bordeaux	Helmond
Emergency vehicle approaching	X	X
Road works warning	X	X
Weather conditions	X	
In-vehicle speed limits	X	
Probe vehicle data	X	
Signal violation / Intersection Safety		X
Traffic signal priority for designated vehicles		X
Green Light Optimal Speed Advisory (GLOSA)	X	X

# ACCELERATING C-ITS MOBILITY INNOVATION AND DEPLOYMENT IN EUROPE /





# GOALS /



## **IMPROVING ROAD TRANSPORT**

Improving road transport, make it safer, more efficient and more sustainable



## **TECHNOLOGIES**

Demonstrating fully integrated C-ITS technologies in real-world conditions



## **SAFE & SECURITY**

Assessing and evaluating impacts on user acceptance, safety and security



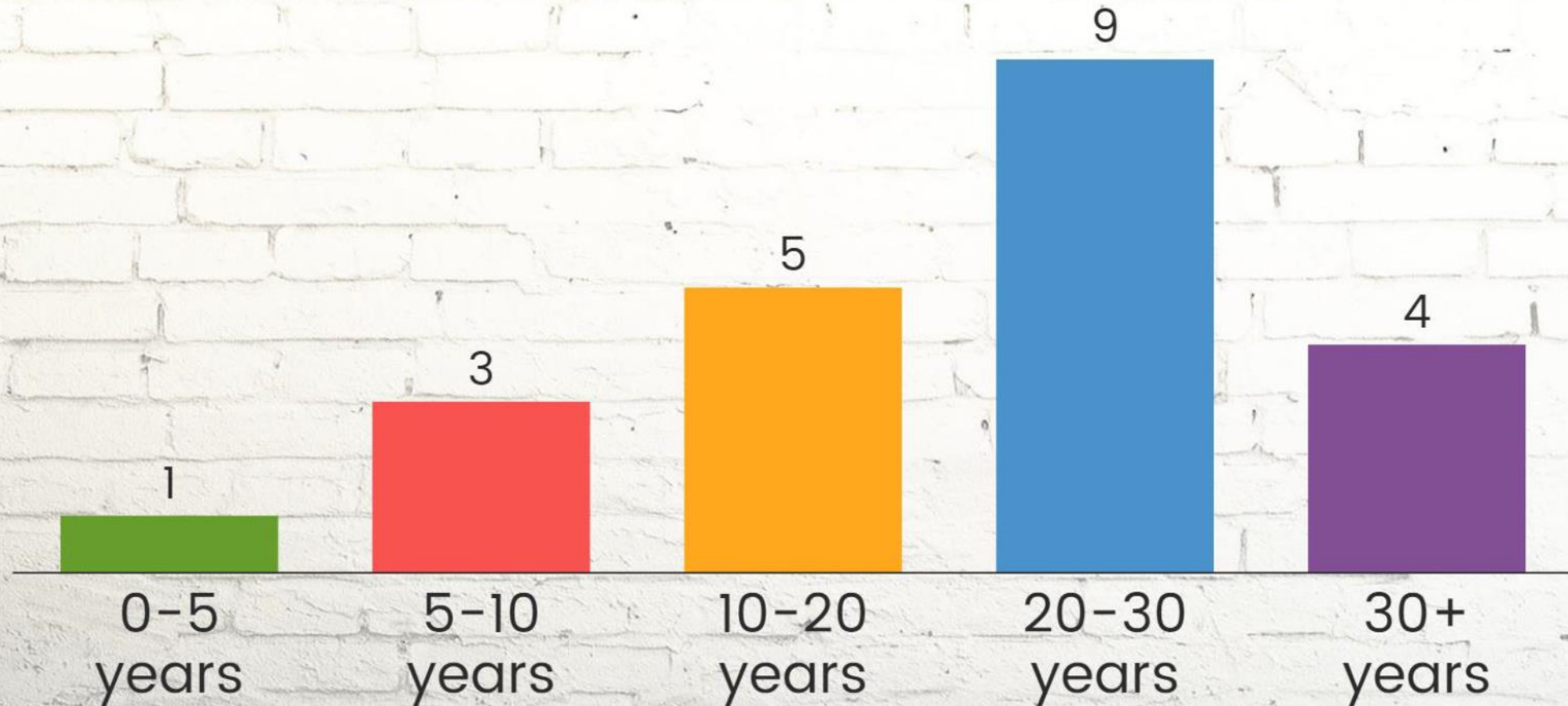
## **ECONOMICS**

Demonstrating the added-value and economic viability of C-ITS services for users

Go to [www.menti.com](https://www.menti.com) and use the code **38 53 46**

 Mentimeter

**When do you think 10% of the vehicle fleet in your city will be automated vehicles?**



**Previous session**

[Go back to current](#)

 **22**

# CoEXist : the mission

Aim of the project: to assist cities to prepare for the transition phase :

Shared network of conventional vehicles & increasing number of automated vehicles

- AV-ready framework (policy): transition roadmap
- Traffic simulation tools

## Project Partners



University of Stuttgart  
Germany



## More Information

RUPPRECHT CONSULT - Forschung & Beratung GmbH

[www.rupprecht-consult.eu/coexist](http://www.rupprecht-consult.eu/coexist)  
Tel +49 221 60 60 55 0

Bernard Gyergyay,  
[b.gyergyay@rupprecht-consult.eu](mailto:b.gyergyay@rupprecht-consult.eu)

Siegfried Rupprecht,  
[s.rupprecht@rupprecht-consult.eu](mailto:s.rupprecht@rupprecht-consult.eu)



Funded by the Horizon 2020  
programme of the European  
Union

# CoEXist



"AV-ready" transport models and  
road infrastructure for the  
coexistence of automated and  
conventional vehicles



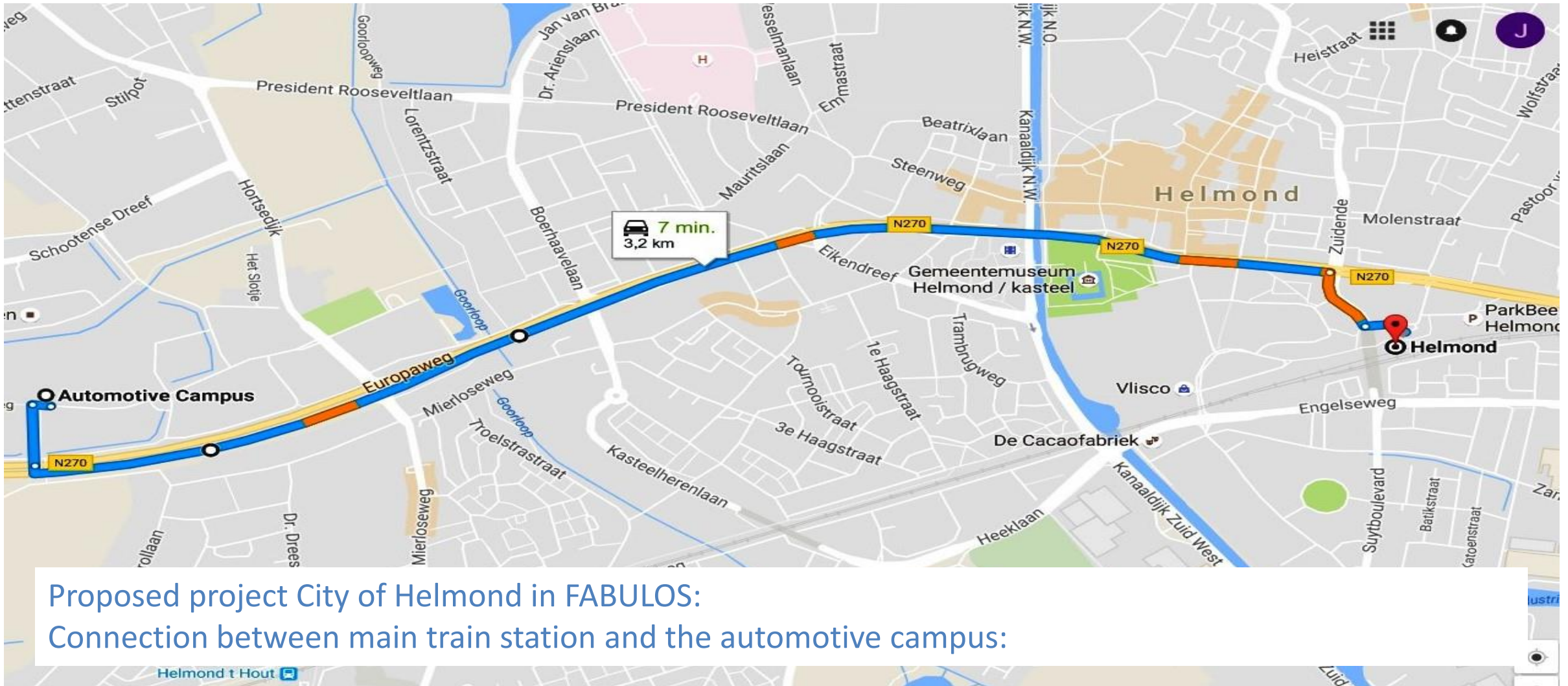
# FABULOS Project

## Future Autonomous Bus Urban Level Operation Systems





# MAKING AUTOMATION WORK FOR (small) CITIES



Proposed project City of Helmond in FABULOS:  
Connection between main train station and the automotive campus:

## PHASES OF PRE-COMMERCIAL PROCUREMENT in FABULOS

- 1) **Open Market Consultation (2018)**
- 2) **Concept Design (2019)**  
Minimum of 12 suppliers to be selected to develop a feasibility study of the proposed solutions and technologies.
- 3) **Prototype Development (2019)**  
Minimum of 6 suppliers to develop the most promising concepts into working prototypes which will be tested in lab-type environments.
- 4) **Testing (2020)**  
Minimum of 4 suppliers to be selected to execute large-scale level-4 pilots within the procuring cities.



## How to play domino our view on deployment of ITS ...

- Learning by doing (it is now officially allowed) ...
- What if the pilot is successful ? ...
- Autonomous vehicles: NO ! Connected Automated Driving : YES !
- Commitment of local stakeholders is key for success
- Policy base and political support is important
- ITS should give answers to real local problems
- Not “one size fits all “
- Think global, but act local
- Seeing is believing

**Disclaimer: ITS just a tool ...**



**For more information  
please contact**

[www.drivenbyhelmond.nl](http://www.drivenbyhelmond.nl)

[g.blom@helmond.nl](mailto:g.blom@helmond.nl)

Mobile: + 31 6 53 21 48 51

