

# Changing public transport network in a new area

Autonomous vehicles fully integrated in an existing public transport network in Barkarby, Stockholm

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Barkarby located 15km northwest of Stockholm centre, in Järfälla municipality

Barkarbystaden a new area under construction 2017-2032 growing with ~1 000 new apartments/year

About 40 000 residents and 10 000 workplaces within 2 km<sup>2</sup>





## Why all these efforts in Barkarbystaden?

- Changing the tradition of Public transport coming after people have lived in a new area a while
  - With the consequence we have to try to make them go by public transport after they already have got used to other ways
- Interested municipality and interested operator in the area
- Raising the usage of public transport increases the value of the investment in metro opening 2025



# Nobina in Järfälla

Agreement E28

- Contractual time 2016 – 2026, about 100 vehicles in traffic
- Compensation: 30% from incentive (VBP) and 70% from kilometre production
- Nobina has the responsibility for planning the bus traffic
- Suggested development of planned traffic is driven by Nobina
  - Including discussions with the concerned municipalities and making analyses of consequences
- The agreement gives freedom in choosing vehicles as long as they:
  - Meet demands for safety and availability
  - Follow some standards
  - The traffic is managed below pre-set maximum levels for congestion
- The agreement includes a part where development of new solutions is demanded from SL



# Cooperation between 3 parties

The PTA (SL), the municipal authority in the area (Järfälla kommun) and the contracted operator in the area (Nobina)

## This is essential to be able to make change!

A letter of intent was signed by all three parts:

- Sets what to aim for and goals for the result of the cooperation
- Sets 9 areas for development, with intentions
- Regulates that each part takes its own costs

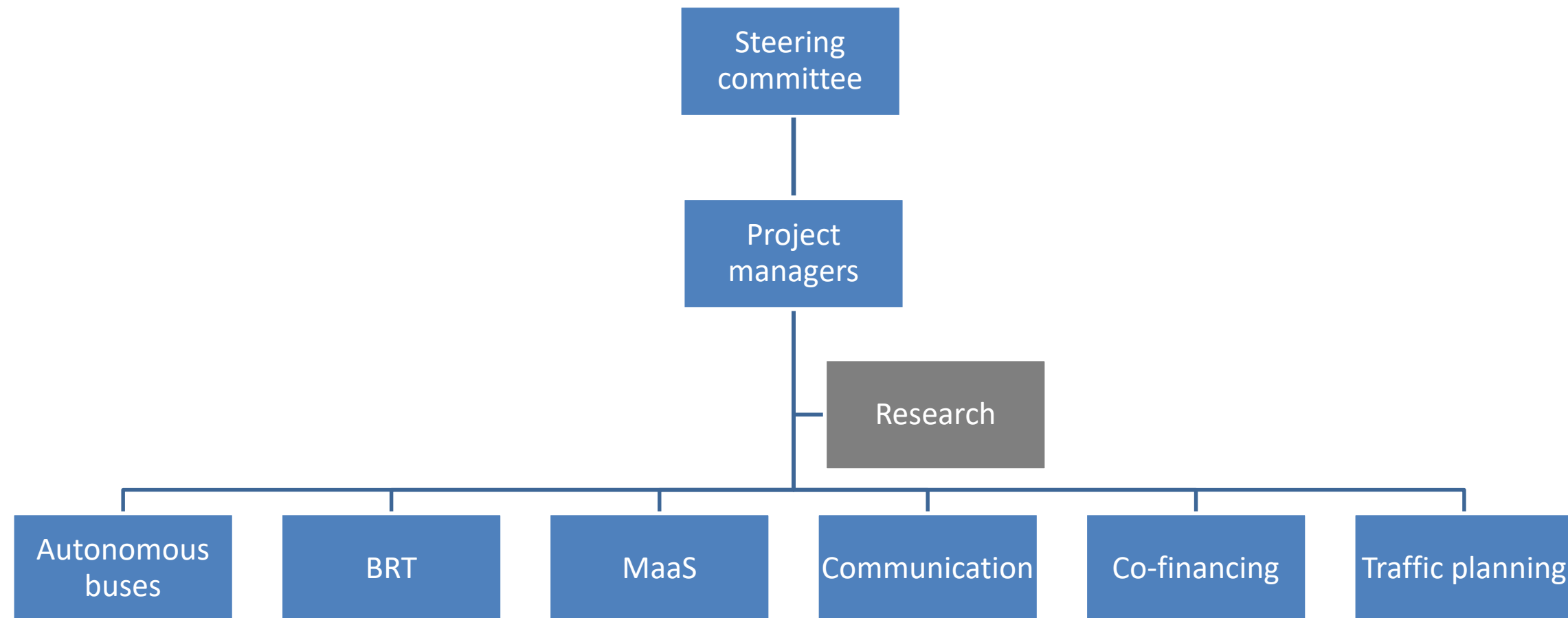


Självkörande bussar och elektrisk BRT i Storstockholm (uppdaterad)



JÄRFÄLLA KOMMUN

# Organization of project



6 different areas within the project

Each box with 1 person from each organization as responsible

Research resources from VTI and KTH/ITRL



# Autonomous shuttlebus in regular traffic

- A way of getting people used to future bus stops
- With host on board, regular SL ticket price
- Fixed stops and timetable (every 15 minutes)
- Great chance to see people's acceptance of autonomous vehicles
- Can go on streets "big" buses won't reach yet
- Possible to offer public transport to areas with less people





# Autonomous 12 metre bus



Starting in 2020

## Nobina och Scania i banbrytande samarbete om självkörande fullängdsbussar i Sverige

ON, FEB 20, 2019 10:00 CET



Nyheter

Bilder & Videor

Kontaktpersoner

Dokument

Evenemang

## Först i Europa: Självkörande fullängdsbussar ska trafikera Barkarby

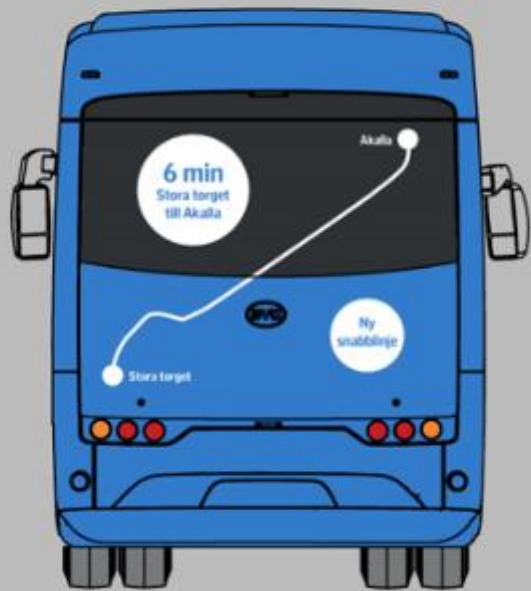
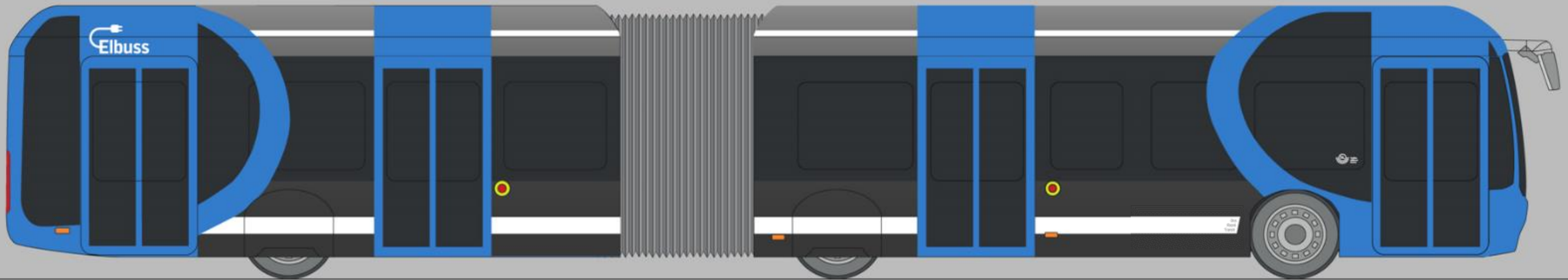
Pressmeddelande

Feb 20, 2019 12:00 CET

Följ Moderaterna i Region Stockholm

Sök





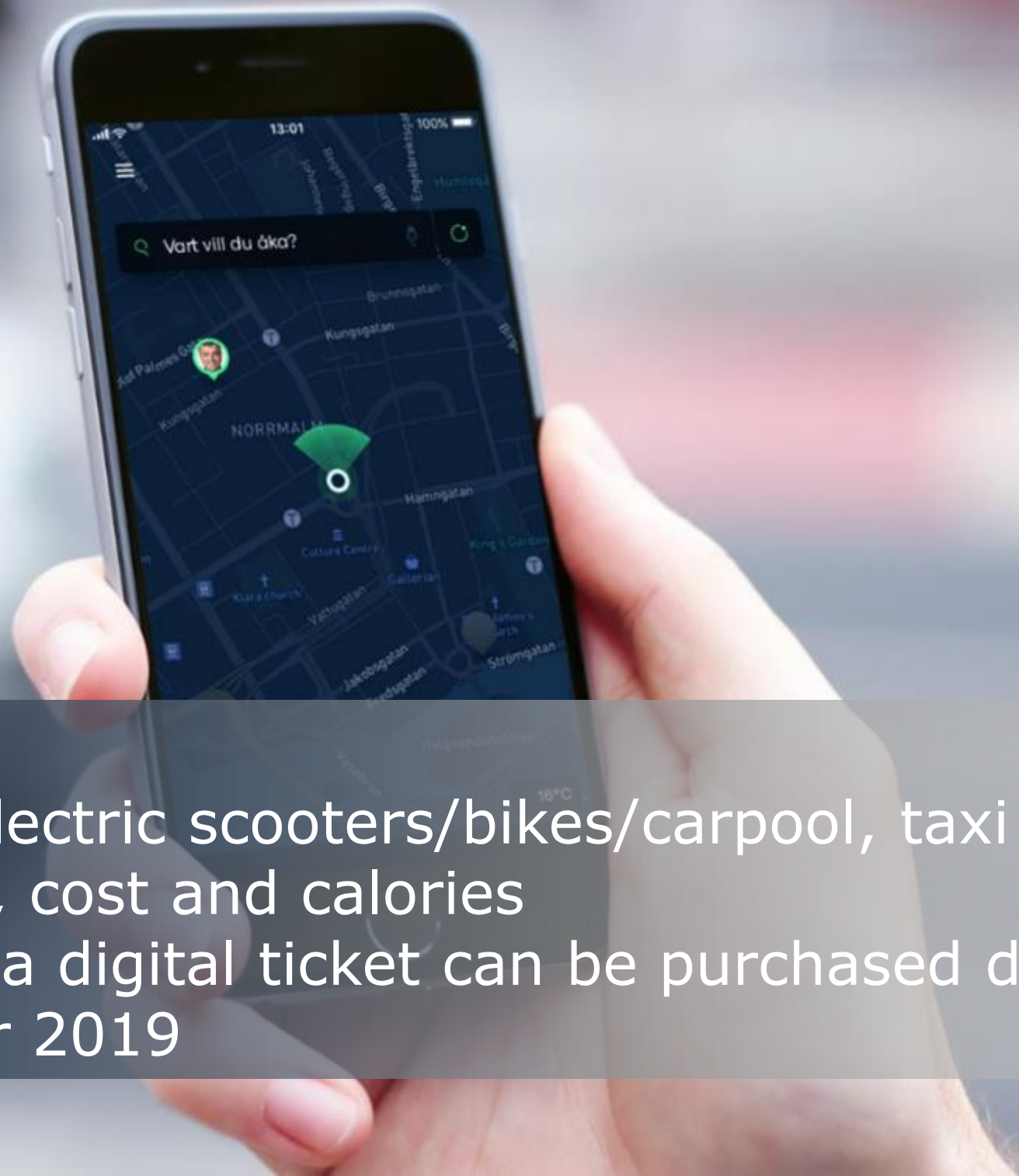
## BRT bus

Starting with the same route as metro will go  
Connecting to existing metro

Electric  
High regularity  
Prepared infrastructure to extend the route when metro opens



# Mobility as a Service

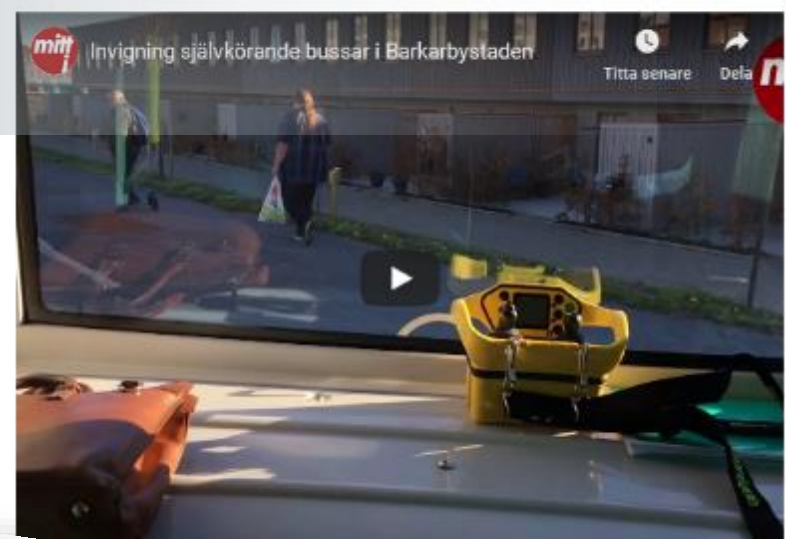


- A “pay as you go” service
- Including public transport, electric scooters/bikes/carpool, taxi and walking
- Travel planner showing time, cost and calories
- If public transport is chosen a digital ticket can be purchased directly
- Official launch 28 September 2019



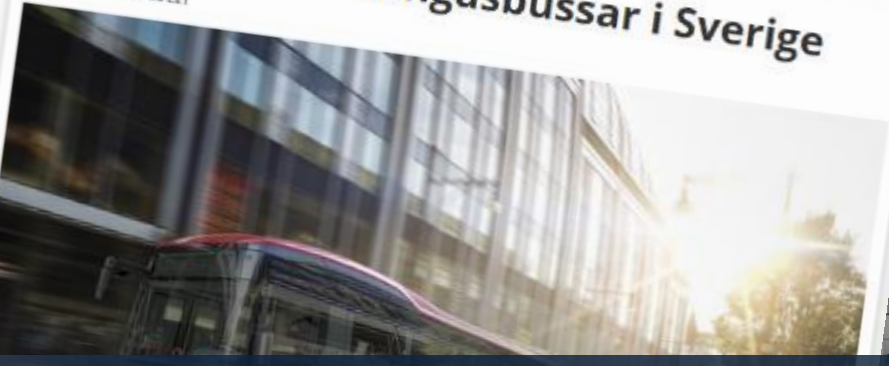
# Communication

Tidtabellen på plats - nu kan du åka utan chaufför



Nobina och Scania i banbrytande samarbete om självkörande fullängdsbussar i Sverige

DN, FEB 20, 2019 10:00 CET



...e bussar och elektrisk BRT i ...m (uppdaterad)

Aims to show positive things about public transport  
Communication to people being in the area  
Communication to companies located here  
Media visibility  
Visibility for and by politicians

Världen första självkörande linje

KLIPP - 1 GÅR KL 22:44  
LÄNGD 1:38

I Barkarby, norr om Stockholm, börjar buss 549 rulla imorgon.





# Co-financing



Working with applications for governmental co-financing

There are possibilities within:

- building infrastructure for environmental friendly purposes
- electrical buses
- development of MaaS



# Traffic planning



Working with improvement of existing network and effects in combination with new development



# Evaluation of the project



- Increase of public transport trips faster than increase of population
- Increase of car transportation lower than increase of population
- Higher share for public transport out of motorized transports
- Number of cars per 1000 persons lower than comparable areas
- High satisfaction with traffic situation in the area from people living there





Thank you for listening!

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