



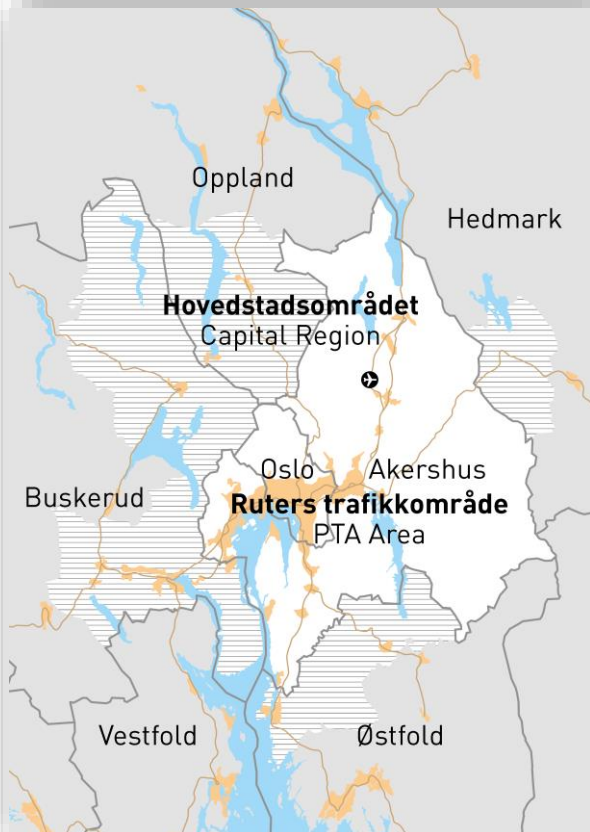
Autonomous public transport on demand

Supplier conference

Endre Angelvik, Vice president flexible transportation systems, Ruter AS

Ruter#

PT in the Norwegian Capital Region



Oslo + Akershus

Population 1,25 mill
2 counties
22 + 1 municipalities
100 km north to south

Capital Region

Population 1,5 mill
19 more municipalities
in 4 (5) counties
Commuters make it
one transport market
6 PT authorities +
State Railways (NSB)

Ruter#

334

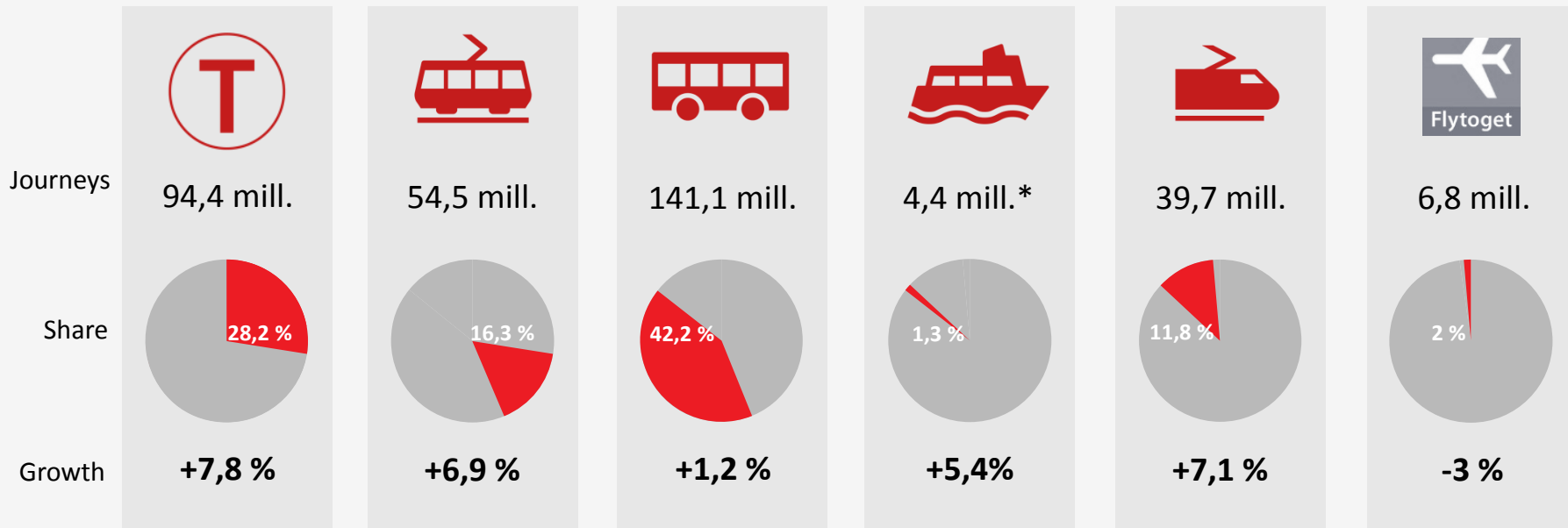
million passengers

boarding on metro, bus, tram, train and ferry in 2015



Ruter#

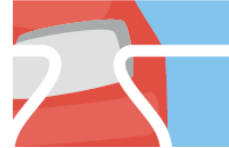
4,7 % growth in public transport during 2015





Shared Mobility

Innovation for Liveable Cities



Corporate Partnership Board
Report



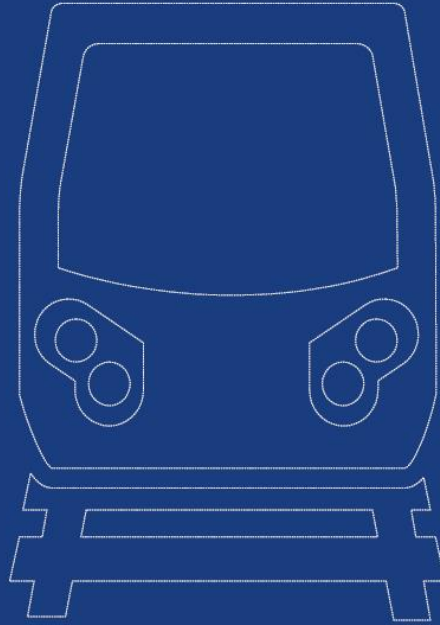
Shared "taxis"

simultaneous ride-sharing

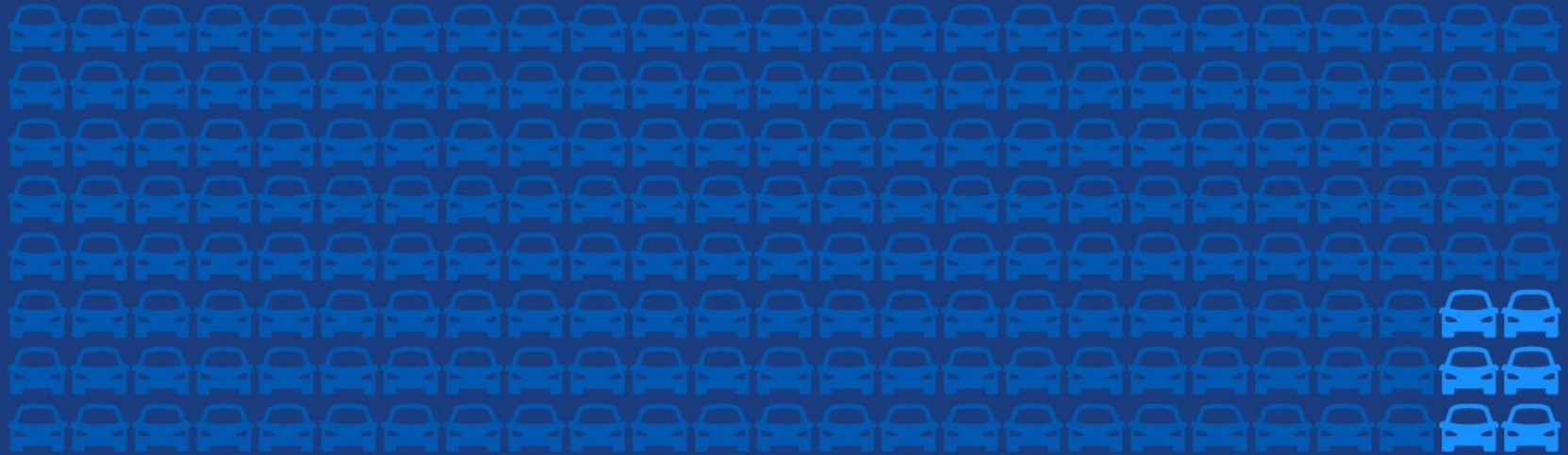


TaxiBus

optimised on-demand bus



high-capacity public transport



Scenario: 24 hours



number of cars
required to provide the
same trips as before:

3%

vehicle occupancy



Private cars

1.2



Shared taxis

2.0-2.6



+20%

kerb-to-kerb street space

Hentet fra Phillippe Crist (OECD – ITF) sin presentasjon på Drive Sweden Forum 28. april 2016



-80%
off-street parking

-23% to -37%

24 hr.

Peak hr.

vehicle kilometres

30mn access to jobs

Lisbon



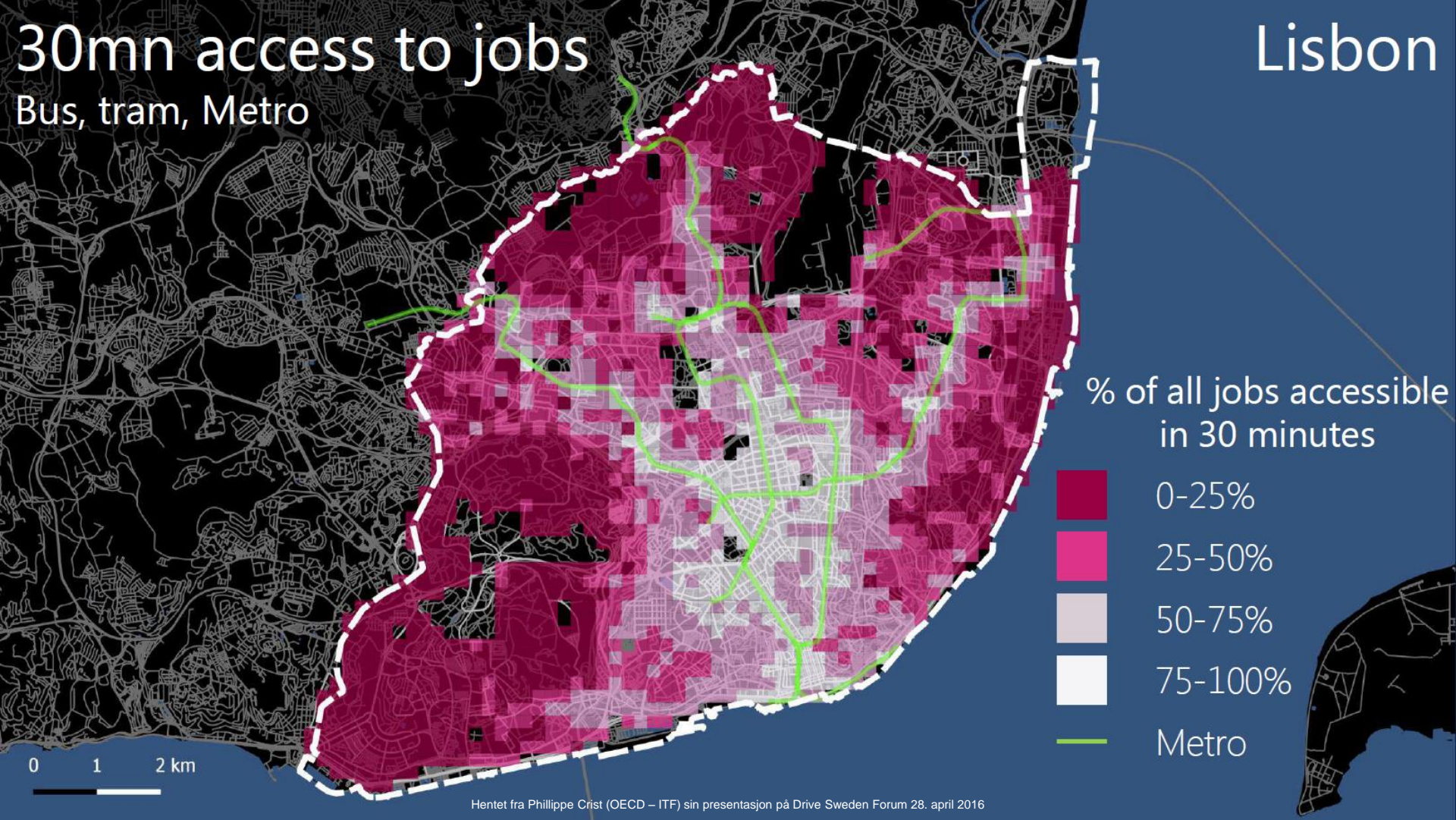
0 1 2 km

— Metro

30mn access to jobs

Bus, tram, Metro

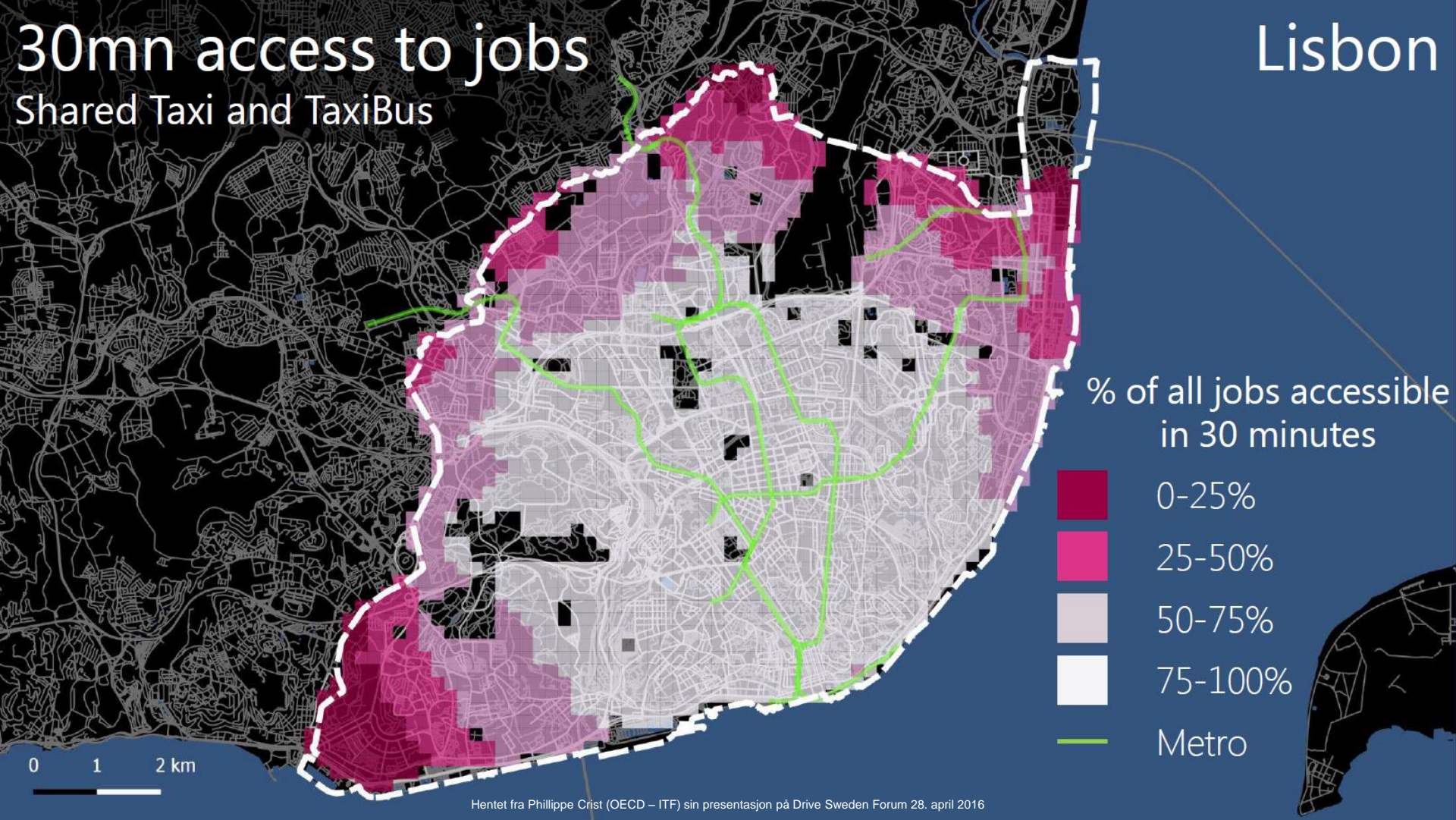
Lisbon



30mn access to jobs

Shared Taxi and TaxiBus

Lisbon



0 1 2 km



Lysaker stasjon

Utgang nord
Exit North

Utgang sør
Exit South

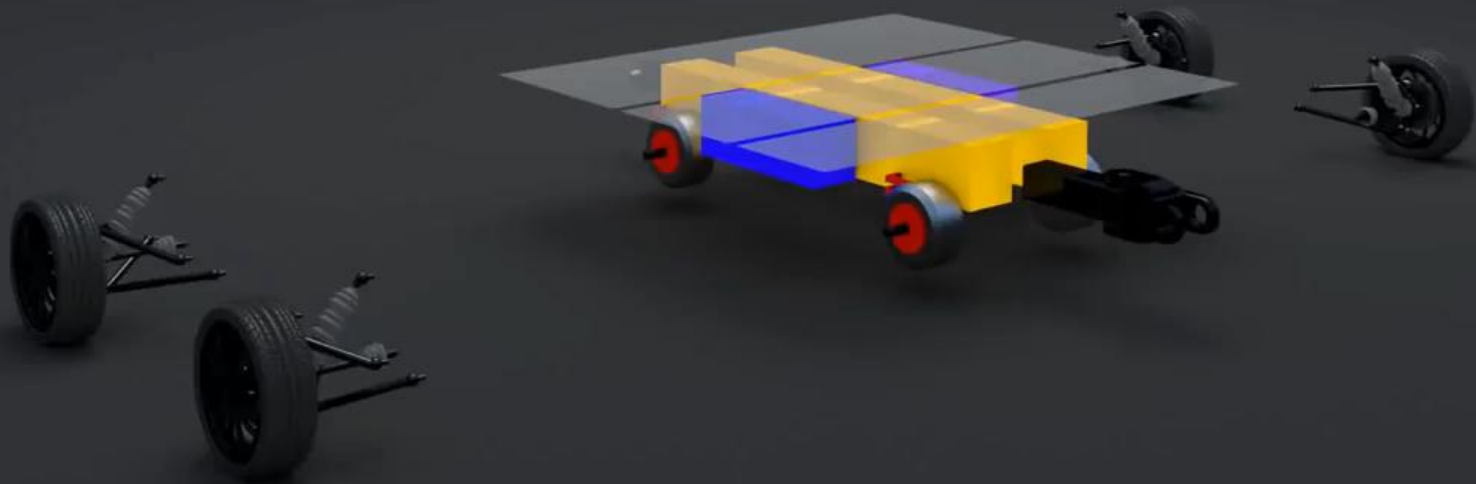
Utgang øst
Exit East

Utgang vest
Exit West

Utgang nord
Exit North

Utgang sør
Exit South





We need to learn



and we need to do it together with our customers



A real service as part of our network



Possible service scenarios

- Last mile service, densely populated area
- Last mile service, sparsely populated area
- Local services in a city district
- City centre
- Winter operations
- Others?

Innovation through public procurement

Our innovation tools:

- Be a demanding customer
- Solid market knowledge
- Frontrunner position - willingness to take risk
- Test new technology
- Promote learning among the suppliers

- Ruter purchases public transport services for approx. MEUR 500 per year
- Around 50% of all public transport in Norway
- High environmental targets
- Success is dependent on innovation in public procurement processes and in solutions

