The future of City Transportation is Electric

Dr. Anders Berger Volvo Group
Night-time assignments improve safety and productivity

Accessible
Attractive and efficient
Clean
Silent

Indoor Noise
How far does 5 liter of diesel take you?

- CNG bus: 77 km
- Diesel bus: 100 km = 10 km
- Fuel Cell: 126 km
- Opportunity Charged Electric Bus: 390 km

Well to wheel comparison:
- 5 l diesel
- 5 Nm3 CNG
- 50 kWh of electricity

Making the city quieter

Indoor Noise

Constant Speed: -15 dBA

1000 million SEK/year
1200 Disability adjusted life years

Source: Sustainable city – open to the world, Trafikkontoret, Göteborgs Stad
Off Peak Deliveries

Pilot Tests
(New York, London, Stockholm)

- Average speed go up
- Shipment times go down
- Increased delivery precision
- Inventory cost goes down
- Less peak hour congestion
- Local air quality improves
- Fuel consumption reduced
- Reduced risk of accidents
- Night-time Noise?
- Customer convenience?
Electric City Distribution Challenges

- Vehicle Size
- Driving Range
- Charging Strategy
- Driver behaviour
- Logistic development
- Regulatory development
- City-scaping
- Public opinion
Estimating energy and power requirement for charging of EVs in Gothenburg

- The purpose is to estimate whether the capacity of the DSO grid in Gothenburg will manage "total" EV-load
- Traffic work in the municipality of Gothenburg and commuting to and from neighboring municipalities
- Scenarios for development to the year 2030
- Presented as a scenario for full electrification and "new traffic hierarchy"
Estimated energy and power impact for charging of EVs in Gothenburg
Volvo FH & FM LNG
Saving fuel
VERA
We need to travel into the future together!