Green mobility and traffic safety in Copenhagen
GREATER COPENHAGEN

- 4 million inhabitants
- Strong infrastructure
- Copenhagen Airport – Important North European hub
- Harbours, bridges and an integrated railway system facilitate easy supply of goods and services
A changing world

- Urbanization
- Climate Change
- Globalization
- Health Issues
- New Technologies
- Change in Demography
UN - sustainable development goals

“..work in the spirit of partnership and pragmatism to make the right choices now to improve life, in a sustainable way, for future generations”

“..clear guidelines and targets for all countries”
Dramatic development over the last 25 years
Visions and challenges
Quality of life

Traffic flow for all modalities
Traffic safety
Real time traffic information to all road users
Prioritizing green and sustainable mobility
Signal optimizing in a CO2 perspective
Mobility as a service
Long term transport political goal

At least 1/3 Biking

At least 1/3 public transport

No more than 1/3 car
Specific goals for modes of transport

**Busses:** Shorter travel time and better regularity

**Cyclists:** Shorter travel time and fewer stops

**Pedestrians:** Priority in the city centre, shopping streets and at public transportation

**Cars:** Maintain travel times, better regularity and fewer stops
The World’s best cycling city

COPENHAGENERS’ REASONS FOR CYCLING

- Fastest: 53%
- Easiest: 50%
- For the exercise: 40%
- Financial: 27%
- Convenient: 23%
- Eco-friendly: 7%
Society’s benefits from cycling

Car traffic to cycling = €0.50 per km.
Public transport - Metro

Cityringen
A completely new 15.5 km metro line under downtown Copenhagen with 17 underground stations opens July 2019.

Two extensions
The Nordhavn and Sydhavn extensions with two and five new stations will be linked to Cityringen in 2020 and 2024.
Public transport - Buses

Travel times, regularity, comfort

Bus plan 2019 – seamless shifts

By 2025 all buses has to be changed to zero emission buses
ITS - ECO-driving

Traffic signals and Onboard Unit communication

Driver guidance for green light

Less noise and air pollution
Traffic Safety - Vision Zero 2025

Political commitment
New way of organizing - broad cooperation
Road design
Education and campaigns
New demands on procurement (safe vehicles)
Technology

Killed in traffic accidents:
1985: 48
1991: 24
2016: 13
2017: 5
2018: 5
Typical accidents

Right turn accidents
Reckless driving - Young men
Injury by category of road user (2016)

- Bicycle: 48%
- Pedestrian: 22%
- Car: 20%
- Moped: 6%
- Other: 1%
- Moped: 3%
Intelligent street lighting

Levels of street lighting is reduced by 50 pct.

When cyclists are sensed by detectors and the levels are brought back to 100 pct. temporarily

The lighting system in Copenhagen controls each luminaire by a central system.
ITS - Digitalization improves green mobility

Data on bicycle data

Real time data for travel times for bikes

Data on number of stops

Data on traffic safety and air pollution
Machine learning

Systems adaptive to real time situations in traffic

Monitor and repair errors in traffic management systems
Challenges

More data needed for mobility services – enhanced demands for personal security (GDPR)

Open protocols

Autonomous vehicles in real traffic situations

Clarify political priorities in the traffic management systems

Involve and engage users