Green mobility and traffic safety in Copenhagen

/ Steffen Rasmussen, Head of Projects

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Dramatic development over the last 25 years
Visions and challenges

CARBON EMISSIONS
(1,000 tonnes)

POPULATION SIZE
(exact numbers)
CPH 2025 Climate Plan / Mobility

SHARE OF TOTAL CARBON REDUCTION

- Energy Consumption: 74%
- Energy Production: 6%
- Green Mobility: 7%
- City administration initiatives: 6%
- New initiatives: 2%

ALLOCATION OF REDUCTIONS FROM GREEN MOBILITY INITIATIVES

- City of Cyclists: 18%
- New fuel types: 30%
- Public transportation: 30%
- ITS and mobility management: 22%

135,000 TONS CO₂
Urban development and traffic

- Integrate green mobility in physical planning
- Public transport and facilities for cycling in all new urban development schemes
- High density creates better condition for public transport – and cycling
- Short distances and easy access to work, school, shopping, leisure etc.
- A coherent network of public transport
Action plan for Green Mobility

A vision linked to quality of life and green growth

• More efficient and greener mobility
• Support economic growth
• CO2-neutral City by 2025
• Liveability
The main challenges of mobility

1.000 more inhabitants/month

Congestion

Parking

Climate

Local environment
Specific goals for modes of transport

**Buses:** 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
Modal split 2016

DISTRIBUTION OF TRIPS 2016 IN RELATION TO POLITICAL TARGETS

Goal: 25% car trips by 2025 (Co-create CPH).
- Goal: 34%
- Goal -9%
- 29%
- 19%
- 18%

All trips with start and/or stop in the City of Copenhagen.

Goal: Max. 1/3 of car trips (Municipal Plan).
- Goal: 43%
- Goal -10%
- 35%
- 22%

All trips with start and/or stop in the City of Copenhagen, pedestrians excepted.

Goal: 50% bicycle trips by 2025 (Co-create CPH and Copenhagen Bicycle Strategy).
- Goal: 24%
- 5%
- 41%
- 30%

Trips to work and education in the City of Copenhagen.

Copenhageners’ trips to work and education in the City of Copenhagen.

- Car
- Public transport
- Walk
- Bicycle
The world’s best cycling city
Society’s benefits from cycling

- Socio-economic gain
  Car traffic to cycling = 4,04 kr. (€0.50) per km.
- More space for urban life
- Less CO2 and noise pollution
- Less congestion
- Urban branding
- Better public health
Public transport - Metro

24 new metro stations

• 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

• Bus priority – travel times, regularity, comfort
• Public transport hubs – seamless shifts
• Sustainable fuel
Pedestrians

• Improve pedestrian network
• The pedestrian experience
Electric and hydrogen vehicles

- The administration is in the lead
- Improving e-car charging facilities (500 +)
- E-car sharing
Optimized transport systems

- City logistics - green goods delivery
- Car sharing
Traffic Safety - Vision Zero 2025

Political commitment
- New way of organizing
- New demands on procurement (safe vehicles)
- Broad cooperation
- Technology
- Education
- Design

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

- Right turn accidents
- Young men driving too fast in their car
Injury by category of road user (2016)

- Bicycle: 48%
- Pedestrian: 22%
- Car: 20%
- MC: 6%
- Moped: 3%
- Other: 1%
Accident reduction by road design

Rebuilding Roads:
- Speed humps
- Reduce speed
- Cyclepaths and lanes
- Traffic signals

• Withdrawn stop-lines for cars
• Blue cycle crossings
• Pre-green for cyclists
• LED-warnings
Accident prevention by education and campaigns

- Right turning trucks
- Pedestrians at intersections
- Bicycle helmet for school children
- Speed reduction
Future perspectives on traffic safety

- Sharing of data and knowledge
- “City safety label”
- New technology
ITS - 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
ITS - ECO-driving

- Traffic signals and Onboard Unit communication
- Driver guidance for green light
- Less noise and air pollution
Intelligent street lighting

• Illumination levels of the dynamic street lighting is reduced by 50 pct.

• Approaching cyclists are sensed by detectors and the illumination levels are brought back to 100 pct. temporarily

• The solution is possible due to a lighting system in Copenhagen which digitally can control each luminaire by a central system.
ITS World Congress – Quality of Life

- Livability
- Greener environment
- Lower congestion

**Host topic:**
Cross-border mobility solutions

**Nordic stream:**
The ITS Nordic Network and the City of Copenhagen will highlight the ITS Nordic way

- Mobility services – from transport to mobility to livability
- ITS and the environment
- Connected, cooperative and automated transport
- Next generation goods delivery
- Satellite technology applied to mobility
- Transport networks operations
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”
The ITS world congress addresses the global agenda - A changing world

Urbanization | Climate Change | Globalization | Health Issues | New Technologies | Change in Demography