

# Sustainable Urban Mobility and Urban Planning

Lecture 4:

Sustainable mobility and urban planning in  
Copenhagen, Freiburg and Rotterdam

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# Copenhagen (1)

	Transport	Land-use	Environment
Policy documents	Greater Copenhagen Transport Plan, 5 year time horizon, revised every 4 years	Greater Copenhagen Plan (2003), 12-year time horizon, revised every 4 years	---
Responsibility for drafting policy	Greater Copenhagen Authority (Hovedstadens, Udviklingsrad)	Greater Copenhagen Authority (Hovedstadens, Udviklingsrad)	---

Main policy documents for transport, land use and the environment in the greater Copenhagen region.

Source: Stead, D. (2004)

# Copenhagen (2)

On the basis of two cases, namely:

- Widening of a motorway between Copenhagen and Helsingor;
- Cuts in the fee rate for energy efficient cars;

The following institutional potentials has been identified (Hedegaard Sorensen, 2004: 35-50):

- Road Directorate changed its goal from road building towards to achieving efficient flow conditions;
- Ministry of Transport has increasing awareness for clean technology;
- Ministry of Transport has taken initiatives to overcome sub-sectorising (by de-sectorising);
  
- In 2012 Copenhagen opened the first section of a bike highway!
  - Connecting Copenhagen with its surrounding villages;
  - 26 bike trajectories
  - 300 km in total

# Copenhagen (3)

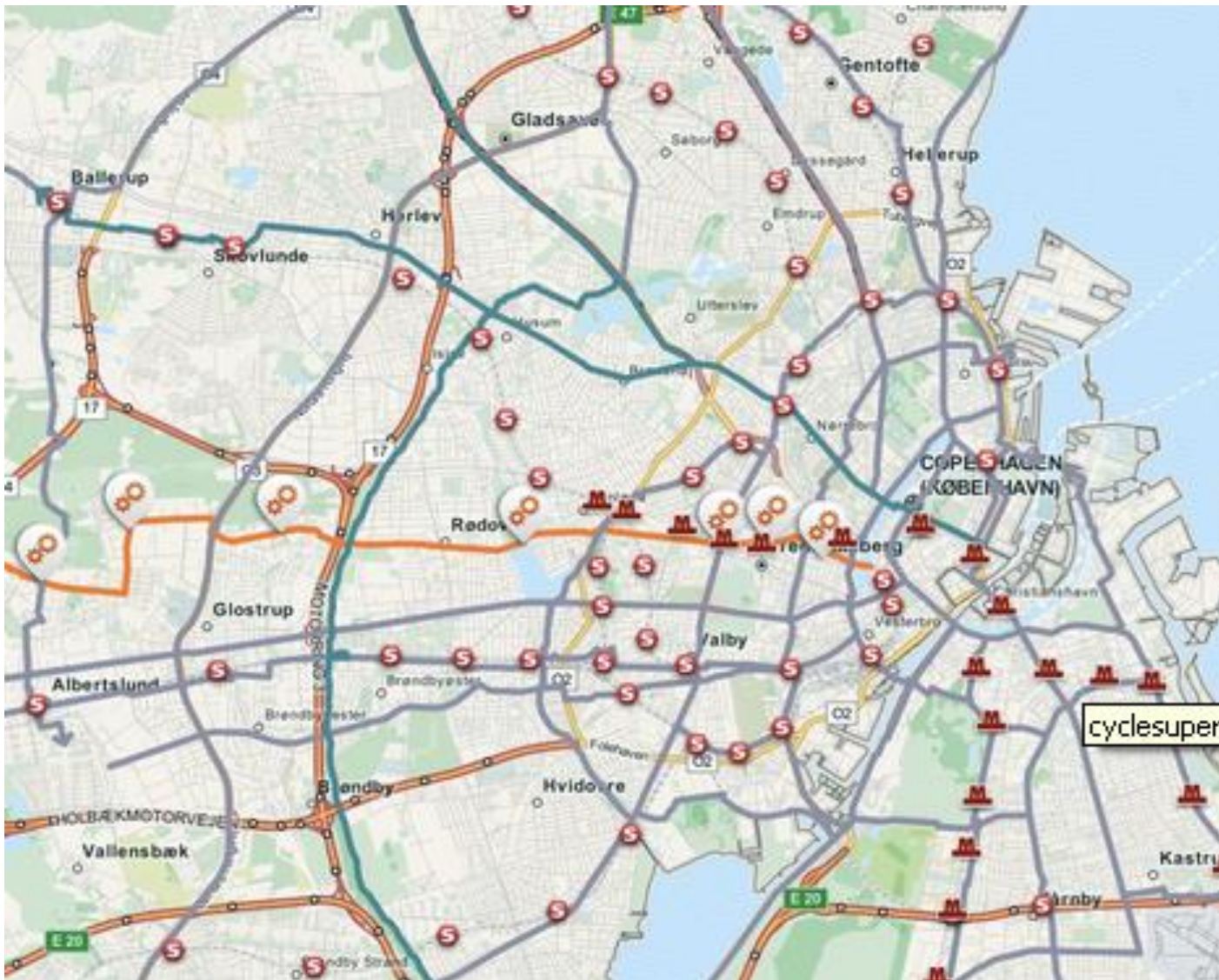
Five *institutional barriers* to integrating environmental concerns with transport has been identified by Hedegaard Sorensen (2004):

- At the end, the Ministry of Transport defends mobility concerns;
- Organization of Ministry of Transport into different transport modes;
- Ministry of Finance dominates the other ministries, hindering a successful integration between environmental concerns and transport;
- Ministry of taxation limits changes in tax rates;
- Conflicting atmosphere between Ministry of Transport and Ministry of Environment.



fietbelt.worldpress.com (2014)

# Copenhagen (4)



*Highways for the bike in Copenhagen. Zeronaut.be (2012)*

# Freiburg (1)

A couple of *institutional chances* exist in Freiburg, hindering the development of sustainable mobility (Schleicher-Tappeser et al, 2004):

- High population density has led to a high importance of transport, environment and land use policies, with a strong tradition of cooperation;
- Strong democratic legitimization and efficiently managed budgets;

These institutional chances could support the development of a sustainable mobility policy and urban planning.

# Freiburg (2)

A couple of *institutional barriers* exist in Freiburg, hindering the development of sustainable mobility and –urban planning (Schleicher-Tappeser et al, 2004):

1. Strong fragmentation in policy-making, decision making and implementation;
2. *Länder* have relatively much power in legislation on waste, air quality and nuclear safety. They are valid unless federal regulations exist;
3. Lack of overall vision for transport policy has led to policy dominated by some strong interest groups;
4. Preference for ‘command and control’ has difficulties in dealing with the dynamic complexity of 21<sup>st</sup> century;
5. 5 challenges ahead, namely reformulation of problems, developing understandable structures, mobilization of participation, exchange experience in Europe, new models of cooperation.



# Freiburg (3)



View on Freiburg, Germany  
Source: iwgo.org (2011)

# Smart port Rotterdam

Rotterdam Smart Port: cooperation between the Harbor Corporation, Erasmus University and other parties (Erasmus Smart Port, 2011: 24-26).

Research theme 'Governance of sustainable mobility'

- ✓ How to realize sustainable mobility in the port of Rotterdam?
- ✓ Avoidance of peak traffic;

Research theme 'Operational excellence'

- ✓ Rotation of sea ships;
- ✓ Optimization of freight in lorries and containers.

Further research on:

- ✓ Optimization of port logistics
- ✓ Cleaner transport modality: train, pipelines, shipping, deep sea, inland shipping
- ✓ Digitalization of harbor facilities

# Rotterdam transumo A15 (1)



Direction of the clock:

- Above: harbor of Rotterdam & A15
- Right above: Containers in the harbor
- Right: A15 highway

Source: Consortium Transumo A15 (2009)

# Rotterdam transumo A15 (2)

According to the Consortium Transumo A15 (2009):

- A15 highway corridor connects the port of Rotterdam (incl. 2<sup>e</sup> Maasvlakte) with the European hinterland;
- Harbor container growth from 11 milj TEU (2008) until an expected 33 milj TEU in 2033
- As a result; the expected growth in traffic at the A15 leads to a decrease in air quality, noise and safety;
- Public and private stakeholders involved;
- 3D measures consisting of:
  - Development of the Oranjetunnel, A15-A4 connection;
  - Innovative person traffic;
  - Innovative modal-shift;
  - Separate highway lane for lorries;
  - Night distribution;
  - Optimization harbor facilities and infrastructures;
  - Working at home;
  - New organizational arrangements.

# Rotterdam transumo A15 (3)



View on Maasvlakte 2, Rotterdam. This area is connected to the A15 highway.  
Source: [www.maasvlakte2.com](http://www.maasvlakte2.com)

# Conclusion

- Policy integration has occurred to a certain extent in the three cases;
- Policy integration may lead into successful sustainable mobility projects and –urban planning;
  - Copenhagen has been successful in de-sectorization, the development of efficient traffic flows and a growing awareness for clean technology;
  - Freiburg has been successful in the high policy priority of land use planning, transport and the environment. Freiburg has also been successful in efficient managed budgets and policy integration. Though, its command and control approach is a hindrance.
  - Rotterdam has been successful with different sustainability initiatives like the cooperation between the EUR and mobility partners in the region and Transumo A15.

# Sources

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