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Copenhagen



Urban planning in Copenhagen Metropolitan Area underwent dramatic changes in the 1990s as it became apparent that the 'Finger Plan' of 1947 had outlived its usefulness.

Based on an urban structure model with a single city centre with radial road and rail corridors to residential suburbs, two urban trends had by the 1990s raised the need for a different approach:

As the city grew in size, distances were becoming too long for easy commuting, and as health care and educational facilities increasingly were moved to the western outskirts as part of plans for regional economic growth, the system developed under the Finger Plan no longer reflected the population's needs for mobility.

At first the Metropolitan Area's authorities attempted a city densification plan, whereby land use for residential purposes was encouraged, particularly in the Bridge Quarters surrounding the city centre.

However, increased congestion and associated pollution in the centre of the city made it apparent that for the population density to increase without affecting the city's livability, heavy investments were required in all modes of urban public transport.

At first more bus routes were introduced to complement the single peripheral line on the S-trains (S-tog) network, and the first metro line was opened in 2002, connecting the western city centre with the airport and new urban development on Amager Island.

Amager has traditionally been less densely populated than the rest of the metropolitan area and the metro was part of an official plan to develop land for residential and commercial uses. Ørestaden, as the island development is called, is now home to the country's media industries and to the Bella Centre that hosted the COP15 UN Climate Change Conference in 2009. The metro was heralded as the best in the world in 2008 by a panel of metro experts.

Public and private roles

In keeping with the Scandinavian tradition of strong public involvement in the economy, public transport is mainly a public administrative affair. Although Danish State Rail (DSB) and DSB S-Tog are registered as private limited companies, they are fully owned by the transport ministry and ownership and responsibility for the metro is held by The Metro Company I/S, which is a public enterprise between the Danish transport ministry and two municipal governments. Metro operations are licensed to Metro Service Ltd. on the board of which is the Milanese metro operator (a public enterprise) and AnsaldoSTS, a private company.

Likewise, the capital's bus company, Movia, is a public enterprise, owned by two regional governments and 45 municipal governments, who together constitute the area served by the company's services. Movia contracts private operators to service the routes set out by the public authorities at a pre-determined price. While feasibility studies, design and construction are commonly contracted to the private sector, the public authorities remain heavily involved, especially in operations where, in addition to receiving farebox collections, all operating companies are deficit funded by the relevant public authorities. For instance, Movia estimates that farebox collections and other revenue streams such as advertising income will cover roughly 40% of operating expenses in 2013; the remainder will be covered by regional and municipal governments and is estimated to be DKr. 2.8b (£320m or €380m).

In short, there is no single transport authority, but rather deficit funded, public enterprises supervising private contractors for each mode of transport and inter-modal coordination happens within the relevant departments of municipal, regional and national governments.

Although this is likely to complicate transport systems unnecessarily, in the instance of Copenhagen Metropolitan Area, mode integration and coordination has been rather smooth thus far. In terms of ridership, the metro, trains and buses serve 150,000, 250,000 and 584,000 passengers

a day, respectively. This is out of 1.7m inhabitants of the Capital Region.

With transport companies being deficit funded, subsidies are a significant strain on government budgets at all levels. Usually coming out of general budgets, few resources are earmarked for operations and infrastructure but rather financed through high income taxes, fuel tax, general property tax, sales tax and the so-called 'green tax' on vehicle registration which end up constituting 75% of the price a Dane pays for car use.

The State government attempted to create a cordon-type congestion charge for the Copenhagen Metropolitan Area but that was met with strong resistance from the population and was ultimately scrapped. Through property tax, the municipality ends up recouping much of increases in land value due to infrastructure investments, although the collection of this tax has been marred with serious miscalculations in recent years.

Extensions and future development plans

A second metro line, the CityRing, is currently under construction, due to open in 2018 and serving the densely populated Bridge Quarters surrounding the city centre with an extension arm to the Northern Harbour business district.

As part of a new urban master plan, the 2010 Loop City Plan, a Light Rail Rapid Transit corridor will run peripherally to the city along the brown and purple zones on map on the left, connecting several of the secondary city centres. Environmental impact assessments (EIA) is currently being conducted following the signing of a cost-sharing agreement between the State Transport and Environment Ministries, the Government of the Capital Region and ten municipal governments in June 2013.

Under the founding agreement, the state will carry 40% of construction costs and hence ownership but the Capital Region and municipal governments will buy the state's share once the line is fully operational. Scheduled to commence operations in 2020, the light rail corridor will create a third city ring in addition to the metro and S-train rings and will be administered by the Metro Company I/S.

As part of the Loop City Plan, ten regional challenges such as waste and water management, health care, education and

quality public transport

is a partnership between the International Transport Workers Federation (ITF) and Public World, with the support of Friedrich Ebert Stiftung.

Its purpose is to build the capacity of urban transport unions to campaign for quality services and build alliances with passengers and other civil society organisations to promote sustainable transport systems.

That means services that enable everyone to travel safely, comfortably and quickly, and employ enough securely employed, properly trained and fairly rewarded transport workers.

energy have been identified and assigned to ten centres along the corridor, intending to boost regional economic development.

Environment

Denmark has strong environmental protection legislation and appeals to extend and use the public transport system are commonly made on environmental grounds. With the opening of the metro in 2002, a modal shift from both private vehicle use and other forms of transport did occur, but so far ridership has not achieved the anticipated growth figures, although that is partly due to large construction work being carried out at the city's busiest station, Nørreport, which normally sees close to one million passes in a day. The central part of the metropolitan area is an Environment Zone, where all diesel-driven vehicles weighing more than 3 tonnes (which covers all buses) are required to comply with additional environmental requirements to those imposed nationally. Movia estimates that CO2 emissions from their buses are roughly half per person-km that of private vehicles but is nonetheless working towards 20-60% reduction targets for 2020 for various particles and GHGs.

Social justice issues

Having a strong welfare tradition, social justice issues are salient in the financing, planning and organisation of public transport in Denmark. Students, children and the elderly receive discounts on their transport fares any passenger may take a child under 12 along free of charge - passengers paying full fare may bring two. Additionally fares are heavily subsidised by state, regional and municipal governments alike.

In terms of access, the proposed light rail rapid transit will service some of the

poorest municipalities in the country located in the southern suburbs, connecting inhabitants directly with health care hubs, educational institutions and shopping facilities which have increasingly moved out of the city centre.

Infrastructure investments affect the land property market and Copenhagen Metropolitan Area is no exception. The densification plans of the 1990s saw property and rental prices shoot up in the city centre, pushing many people out to the suburbs. Students, the elderly and the unemployed are all among the affected demographics and can no longer afford housing in the city centre. That said, Denmark has an extensive social welfare system in place and if the Loop City Plan is implemented according to plan, it will be less attractive to live in the centre of Copenhagen anyway.

Overall system quality

Urban planning in Copenhagen has a long history of integrating land development and public transport. From the Finger Plan in 1947 over the metro and associated Ørestads plan at the turn of the millennium to the current plans of a light rail rapid transit encircling the city in the Loop City Plan of 2010, transportation has been a key component of urban planning. The metro in particular enjoys 98+% passenger satisfaction rates, and with more peripheral connections planned, overall access in the Capital Region is likely to improve in addition to mobility.

Further Reading

www.moviatrafik.dk - Bus information (Danish)

www.dsb.dk/om-dsb/in-english/ - Danish State Rail

<http://www.trm.dk/en/> - Danish Ministry of Transport

<http://www.archdaily.com/76482/loop-city-big/> Short video on the Loop City Plan

www.copenhageneze.com - Tips and tricks for city planners to promote a cycling culture

Copenhagen is renowned for cycling; as much as one-third of all trips for work and educational purposes are done by bicycle, leading other cities to implement 'Copenhagenisation' programmes to get their inhabitants to cycle more. Paradoxically, in Copenhagen, this has led to a lower uptake of public transport modes since the environmentally conscious Copenhagener will use a bicycle over the bus or train.

Generally a safe city for pedestrians and cyclists, cyclist road safety is a salient issue in the public debate, although campaigns often focus on the cyclists' own responsibility for wearing helmets and giving proper sig-

nals to motorised vehicles. Culturally, cycling is very commonplace and it is common to see MPs, the prime minister and private sector executives plying the extensive cycle route network of the capital.

The ministry of transport is working to integrate cycling and public transport with the trial of a shared bike scheme in the two central municipalities in Copenhagen.

Visit www.qualitypublictransport.org for all our briefings.

Quality Public Transport is a project managed by www.publicworld.org

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