



## ØRESTAD, COPENHAGEN IN DENMARK

# Funding a Metro through land development

## Background/context

Ørestad is an area approximately 5 km south of the city centre of Copenhagen (København) on the island of Amager. Despite being relatively close to downtown Copenhagen and Copenhagen Airport (Kastrup), it was relatively undeveloped until the 1990s. A major reason was that much of the land had been reserved and used for military training purposes.

## Description of the case

To develop this land, the Ørestad consortium (Ørestadsselskabet I/S) was set up 1992 with two main tasks:

- develop and sell the land for housing, offices, schools, etc.; and
- finance the building and operation of the Metro through the sale of land.

The consortium was owned by the City of Copenhagen (55%) and the Danish State (45%). This 55/45 division resembled the previous division of land ownership between the city and state. The consortium was then not a public-private partnership (PPP) in the original sense. In 2007 the Ørestad consortium was replaced by the Metro consortium with a similar division of ownership.

The first stage of Metro began operating in 2007.

## Legislation and policy issues

Special legislation was passed by the Danish Parliament in 1992 and again in 2007, when the original consortium was replaced. Legislation and policy is therefore on a national as well as on a local level. This was the first major transport PPP scheme in Denmark.

## Cost and financing

The Metro's construction was financed through the sale of land. The consortium was free to borrow on the markets, and the loans were fully guaranteed by the City of Copenhagen and the Danish State.

According to a memo supporting the 1992 law, the proposed construction costs for the whole Metro (Map 2) from western Copenhagen (Vanløse) through the city centre with branches to Ørestad (Vestamager) and Kastrup Airport (Lufthavnen) were estimated at EUR 485 million Euro (1990 prices).

However, according to a report from the Danish National Audit Office (Stats revisoratet), the costs were estimated at EUR 1,065 million (2004 prices) when most of the construction contracts had been signed in 1996. The actual construction costs were later presented as EUR 1,600 million (2004 prices).

The actual metro operations are subject to a net cost contract, with the consortium's compensation on a per-passenger basis. See Problems.

The separate construction company COMET has a claim on the Ørestad consortium in the range of DKK 2,000 million (EUR 265 million). This claim has not been settled and is a serious risk.

## Results

Land has been sold more easily and at much higher prices than foreseen (at least until autumn 2008).

Borrowing has been possible at lower interest rates than foreseen. After teething problems, the Metro works very well with better than 98% punctuality.

The metro carried 46 million passengers in 2008. Passenger forecasts have been revised several times, but are, in any case, much lower than the original forecasts when the metro was decided.

There are several bus routes parallel or almost parallel to the metro. These may be slower but as the bus network is denser than the Metro's, the total journey times may be equal. Copenhagen city centre is very densely built with scarce and expensive parking. This is a disadvantage for car travel and perhaps an advantage for public transport.

## Problems

The light rail system originally foreseen was replaced by an automated Metro. It was believed that a Metro would be cheaper to operate and attract more passengers. Construction of the Metro was much more complicated than expected with very serious cost overruns. Passenger numbers have been lower than forecast.

The consortium has no authority to set fares; these are set by MOVIA, the transport authority for Eastern Denmark. Revenue distribution has been controversial; disputes have several times been settled by the Ministry of Transport.

## Transferability and success factors

If similar areas of unused land or land which can be developed for new profitable purposes are available and can be combined with improved public transport, the Ørestad metro may be a good example.

It must be mentioned that the consortium's activities, and the Metro construction in particular, have been extremely controversial and subject to an intense debate both in the press and among professionals. Criticism focuses on how the light railway was turned into an automated Metro and how this was motivated by expected higher revenues. The choice of untried technology, the subsequent delays and cost escalation and the many revisions of passenger forecast have also been criticised. Finally the low interest rates have been seen as a real stroke of luck necessary for the consortium's survival.

## Copenhagen Metro system



## Lessons learnt

Possible followers must take care to:

- not overestimate the revenues from real estate development;
- not change the technical solutions or specifications mid-way through the project;
- not underestimate infrastructure costs; and
- ensure that there is an agreed revenue-sharing system.

## Conclusions

Learn from Ørestad and adapt with care, especially when new technology is concerned.

## References and contacts

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