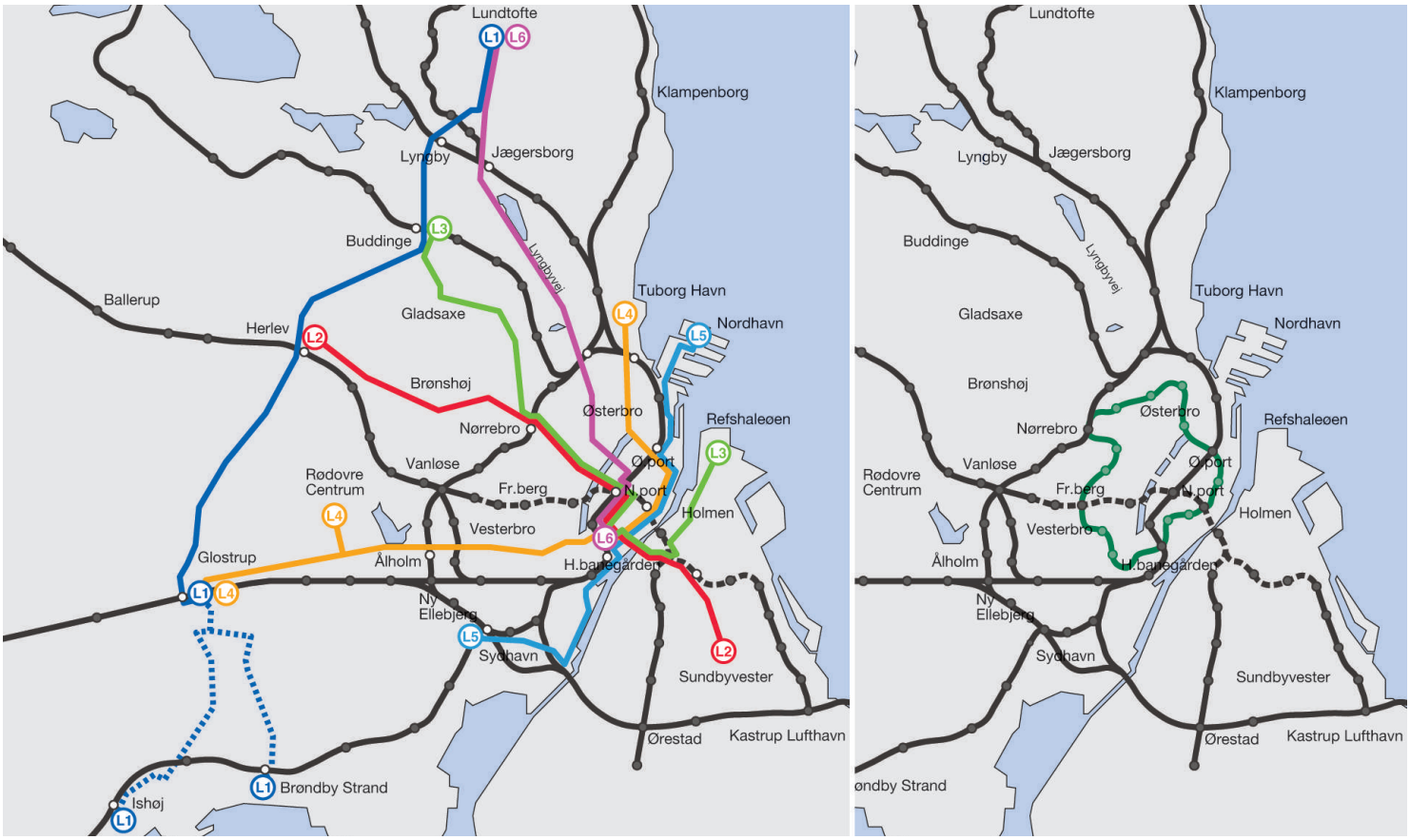
Proposal for Light Rail in Copenhagen



97 km Light Rail Network, € 2,2 bill.:

€ 22 mill. pr. km.

This light rail network in street level, will service many parts of Copenhagen, today only reached by busses.

Car drivers will get a new alternative, getting quickly in and out of town with no parking problems, which limits car traffic and pollution on a voluntary basis. The expected reduction in car traffic of min. 20% makes it possible to reduce street and parking areas with max. 10%, freeing space for the lightrail tracks. ‚Park and Ride' facilities can be placed at the perimeter of the light rail network.

Financing

Every line can be financed fully or partly with private funds. In this way the expansion can be made in steps, independent of public funding. This requires a very precise description of the public demands of the light rail network.

Travel speed

Travel time with the light rail will be 30-35% shorter compared to the current bus system. A journey from door to door will only take 2% longer, using lightrail instead of Metro.

(Source: ‚Københavns Amt' and ‚Københavns Kommune' Planredegørelse 2005)

Trambaix, Barcelona, Catalonia

15 km Metro City Ring, € 2 - 3,5 bill.

€ 135 – 235 mill. pr. km.

The Metro City Ring will not create new means of getting quickly in or out of town, without changing from the existing already over crowded train system. ‚Park and Ride' facilities are not planned. The Metro City Ring will accordingly not get it's necessary passengers before new radial connections in and out of town are created.

The planned Metro City Ring will only serve the inner parts of Copenhagen. The bus lines in and out of town will be reduced the same way it was done, establishing the current Metro System, also in areas that the Metro will not reach.
The reduction in public transportation in Greater Copenhagen generally, will result in an increase in car traffic, thus also increaseing pollution in the city.

Financing

There is a great deal of uncertaincy about this price, mainly because all sections are in tunnels. Traffic researchers have calculated that there is a 50% possibility that the € 2 bill. will be 40% more expensive. The start up price for tunnel drilling equipment is very high, regardless of the lenght drilled. Therefore it is not possible to finance in steps or stop the project, regardless of the size of possible budget deficits.

Until now the investments in the metro system has been about € 2,4 bill., only moving bus passengers underground. The big problems with congested roads has not been solved.
Single investments as the metro city ring, will neither solve the problem, nor turn the trend. An overall solution, including health, environment, space, time and economy together with systems easily implemented in phases, must be done as soon as possible. Here lightrail is a well tested and proven solution.

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Light Rail Network in Greater Copenhagen

Line	Sections	New sections	Price
L1	Lundtofte-Lyngby-Buddinge-Herlev-Glostrup (-Brøndby Strand / Ishøj)	20 km	€ 460 mill.
L2	Herlev-Husum-Nørrebro-Amagerbro-Sundbyvester Pl.	18 km	€ 400 mill.
L3	Buddinge-Nørrebro-Christianshavn-Operaen-Refshaleøen	8 km	€ 180 mill.
L4	Tuborg Havn-Østerbro-City-Rødovre-Glostrup	27 km	€ 600 mill.
L5	Sydhavn-City-Nordhavn	7 km	€ 160 mill.
L6	City-Rigshospitalet-Lyngbyvej-Lundtofte (DTU)	17 km	€ 400 mill.
All lines in street level		**97 km**	**€ 2.200 mill.**

Metro City Ring in Central Copenhagen

Line	Section	Lenght	Price
O	City-Østerbro-Nørrebro-Frederiksberg-City (loop line)	**15 km**	**€ 2 - 3,5 bill.**

What you get for the money:

	Light Rail Network	Metro City Ring
Number of lines:	6	1
Method of finance:	Possibility of step by step private funding	Private funding is not very likely
Type of vehicles:	Low floor lightrail vehicles	As the current Metro
Passagerkapacity:	250 – 300	300
Distance between the stations:	500 m.	1.000 m
Number of stops:	ca. 180	16
Travel speed from door to door:	30% faster than the bus system	2% faster than the light rail system
Utilisation of the road capacity:	6 times better	No changes
Impact on car traffic:	20-25% less cars	1% less cars
Impact on bicycles:	No restrictions	No restrictions
Environmental changes:	Fewer cars and busses	Fewer busses

Wiener Straßenbahn, Vienna, Austria