

Cities' Identity through Planning and it' Architecture.

Copenhagen first smart cyclic city.



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Abstact

Cycling (Smart and Green Mode of Transport) is essential role for a sustainable city. The environmental qualities which facilitate to people determine a Cycling sense of comfort. This case study focuses on Design & planning (Cycle friendly cities, safety parameter)of urban areas in the city of Copenhagen. The objective of this study is to determine satisfaction of comfort based on their walking experience. The findings indicated that most of the respondents were highly satisfied with the level of comfort particularly in terms of cycling facilities provided.

Keywords- Cycling, Pedestrian way, environmental qualities, urban areas, Architecture, Copenhagen.



Figure 1: The Skyline of the Copenhagen.

Introduction

Today, Copenhagen is the capital and largest city in Denmark, with a growing urban population and is becoming a strong cultural and economic centre. Copenhagen is a beautiful and well-preserved city. Like other capitals it has its own unique appearance based on history and the character of the location. The city is rich in architectural, Urban Planning and landscape highlights that are rightly praised by many – also around the world. But the city surely also has areas where the architectural qualities are not striking.

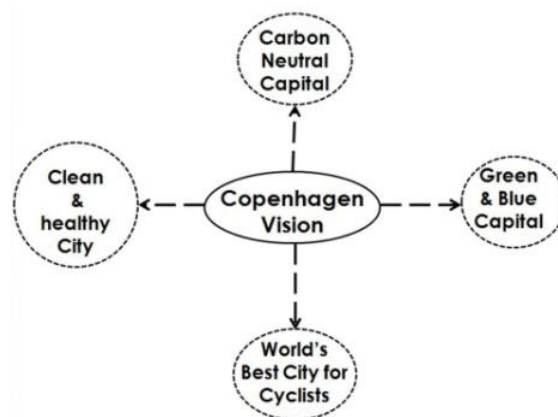
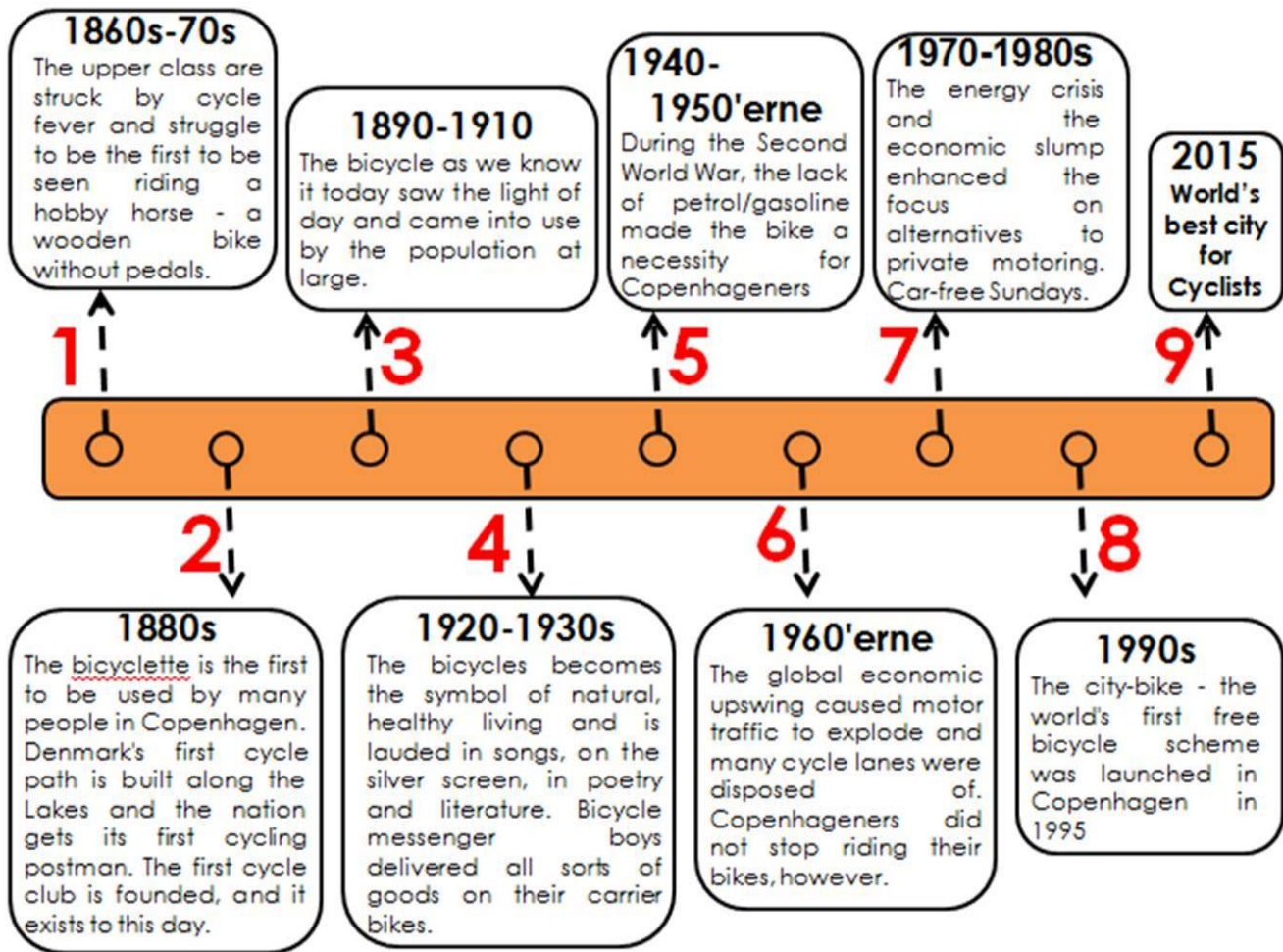


Figure 2: Vision of Copenhagen City.

The history of cycling in Copenhagen



Great Cities don't just happen: they are made!

World's Best City for Cyclists

Cycle tracks and Reinforced cycle lanes.

Traditionally, cycle tracks along the roads are the chief element of the Copenhagen bicycle traffic infrastructure. At the end of 2001 there were 307 km of cycle tracks and 9 km of cycle lanes.

The priorities set forth in the plan are based on the following principles:

1. Reinforced cycle lanes shall be established as a quick and cheap first stage whenever Possible.
2. Cycle tracks shall be built as quickly as possible in the most difficult sections.
3. Short sections which can form a link-up to the network shall be given high priority.

- Sections with heavy bicycle traffic shall be given higher priority than sections with little bicycle traffic, under equal conditions.

61%

Satisfaction with

The conditions of cycle tracks

32%

Satisfaction with
The condition of the roads

50%

Width of cycle Tracks

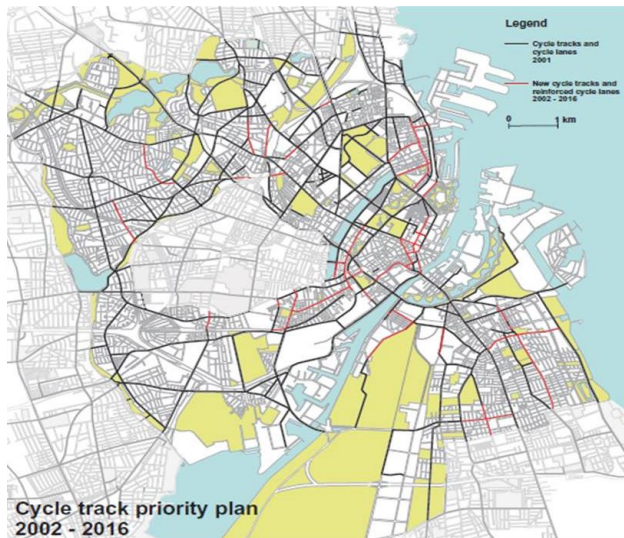


Figure 3: Cycle track priority Plan of Copenhagen (2002-2016) Figure 4: Street Design exclusive bus, Bicycle and Pedestrian use.

Green Cycle routes.

Green cycle routes are to be developed on the basis of "Proposals for Green Cycle Routes". A plan to develop the Nørrebro cycle route by stages has received political approval and it is proposed that a similar stage-by-stage plan for the Amager route be drawn up. In addition, work is being done to initiate other green cycle routes, and also to upgrade existing cycle routes such as the Vigerslev route.

The green cycle routes are coordinated with the main cycle path network within the Greater Copenhagen Area.

40Kms

Of Green Cycle Routes

70Kms

more Green cycle routes Planned

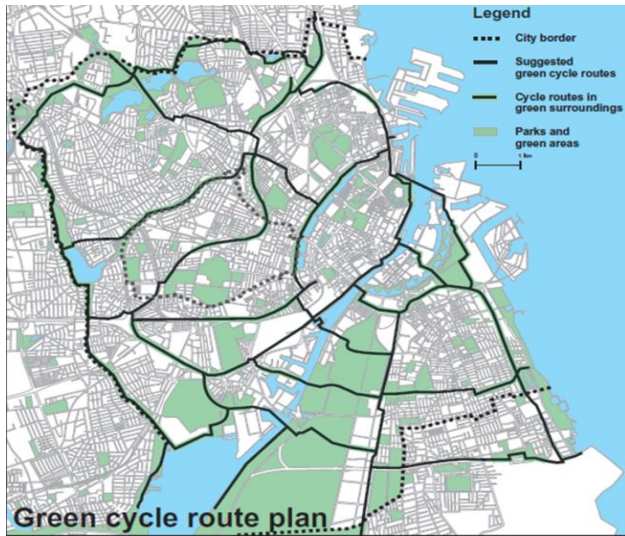


Figure 5: Green cycle route plan of Copenhagen. Figure 6: Green cycle route in Copenhagen.

Improved cycling conditions in the city.

In the City Centre (the area within the Lakes) cycling conditions are not satisfactory. A long term plan to improve cycling conditions in the City Centre is based on the report Traffic Calming in the City Centre – after a Harbour Tunnel is Built. Although the harbor tunnel has not been approved, a significant number of the improvements proposed for cyclists may be carried out.

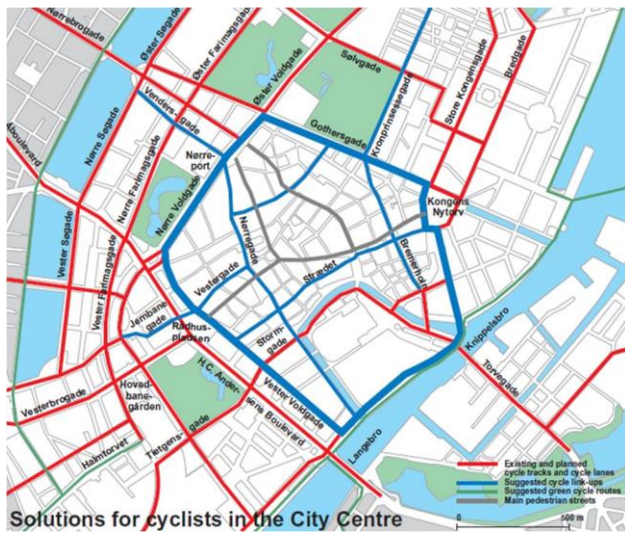


Figure 7: Solution for cyclists in the City Center.



Figure 8: Improved lane of Copenhagen.

Combing cycling and Public transport.

A number of transport needs cannot be covered by cycling or public transport alone since neither can offer a sufficiently flexible transport solution on its own. Proposals are set forth in the City Plan 2001 which would make it easier to combine cycling with public transport, thus providing a realistic alternative to private cars.

60%

Satisfaction with
Bicycle and Public Transport.



Figure 9: Alternative Transportation System at Copenhagen. Figure 10: Design Improvement at Terminals.

Bicycle Parking

An action plan for bicycle parking will be drawn up. The plan will include bicycle parking in all contexts, including at homes and workplaces, shops, shopping centers and malls and city streets. Bicycle parking at stations and terminals is treated under the headline "Combining cycling and public transport".

29%

Satisfaction with
Bicycle Parking in General

71%

Satisfaction with
Parking at Workplace

23%

Satisfaction with
Parking at Stations



Figure 11: Improvements in bicycle parking facilities at station, Terminals & Public Space.

Improved single Intersection.

A systematic effort will be made to improve cyclist safety, sense of security and ease of passage at signal intersections by means of withdrawn stop lines for cars, white and blue marked crossings and pre-green traffic signals for cyclists, etc. The impact of the proposed alterations may be increased by campaigns.



Figure 12: Coolers transition zone for left turning vehicles.



Figure 13: Bike lane at Intersection advanced stop line for cyclists



Figure 14: Bicycle lane at roundabouts and Traffic circle.

Better cycle tracks maintenance.

The strategy to improve cycle track surfaces makes no distinction between cycle track maintenance and intersection maintenance. An extra appropriation was granted in 2000-2002 to upgrade the cycle track maintenance standard to a reasonable level. This will be done by improving a number of small sections all over the city. Cyclists have a say in the sections they think ought to be improved.

61%

Satisfaction with
the condition of cycle tracks

32%

Satisfaction with
the condition of the roads

Better cycle track cleaning.

An action plan to improve cycle track cleaning will be drawn up. For example, roughly 50 km of cycle tracks along shopping streets and past places of entertainment also ought to be swept on weekends. Snow clearance will be stepped up so that virtually all cycle tracks will be cleared before the onset of the morning rush hour.



Figure 15: Cleanliness and separate lane for bike at major roads.

Campaigns and Information.

Cycling promotion campaigns will continue to be an integral part of the City's strategies with regard to cycling. The "We bike to work" campaign will be upheld as an annual event. New cycling promotion campaigns will be developed continually. Information about what the City is doing to promote cycling is provided in the Bicycle Account and the map cycling in Copenhagen etc.

SENSE OF SECURITY

One of the requirements for choosing the bicycle is that the individual citizen has the impression that cycling is safe. One of our goals is that in 2015, 76% of cyclists in Copenhagen feel safe in the traffic and in 2025, that number will be 90%. In 2010, the number was 67%. A city that feels safe to cycle in means more people will ride – not least newcomers to the city, children, the elderly and others who find cycling during rush hour to be an overwhelming experience today.

Many transport habits are established at an early age and children who are used to cycling are more inclined to keep cycling and will be better at navigating through the traffic when they are older.

76%

Satisfaction with
Cycling degrees of Safety

19%

Satisfaction with
Somewhat Safe

5%

Satisfaction with
unsafe

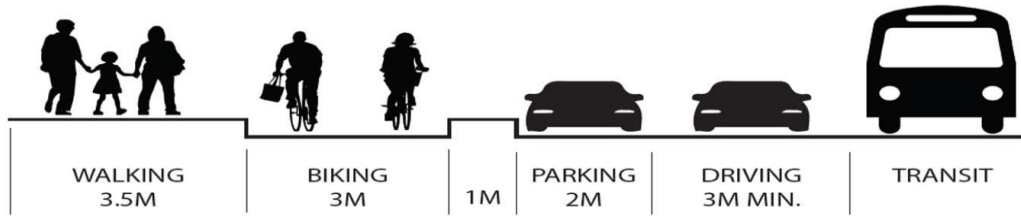


Figure 16: Basic Street section of Copenhagen.



Figure 17: Bike Friendly Public Square at Copenhagen's.

Copenhagen is making its transportation system more intelligent and modernizing its traffic signals to be controlled in real time in order to further promote cycling and public transport.

Conclusion

Therefore,

36%

People to work or Education in the City of Copenhagen commute **by Bicycle.**

28%

People to work or Education in the City of Copenhagen commute **by Public transport.**

29%

People to work or Education in the City of Copenhagen commute **by Car.**

7%

People to work or Education in the City of Copenhagen commute **by Walk.**

80%

Cyclist in Copenhagen to feel Safe & Secure **in Traffic.**

20%

CO2 Emission Reduce Between 2005 to 2015. First Carbon Neutral Capital in the World by 2025.

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