

Copenhagen, Denmark

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5 Fingers Plan



Source: www.arrakeen.ch/europe/europe1.html

Aerial view of Copenhagen
source: www.arrakeen.ch/europe/europe1.html



The goals of Copenhagen's Green Structure Plan are to control urban development to ensure that people are always able to access to open space, parks and undeveloped, natural areas on a regional scale. The plan strives to weave new "green elements" into the existing mosaic of neighborhoods in the city by means of the following key principals.

- + Urbanization will develop in slender fingers
- + Green wedges of undeveloped land will remain between fingers
- + Finger development will follow public transport (esp. railways)
- + Suburbs will develop like pearls on a string
- + Inhabitants will live in close proximity to green spaces

The guiding principles of the Green Structure apply both to recreational possibilities as well as the greater environmental context of the city. In developing their strategy, planners took into account cultural-historical and ecological concerns.

"The main principle of the Fingerplan implying that the layer-upon-layer growth should stop and that most of the future city should develop in narrow town fingers along exiting and future railways".

-John Jørgensen
COPENHAGEN:
Evolution of the
Finger Structure



“Despite the condensed city centre, Copenhagen is not short on green lungs: parks...like the ever-popular Tivoli Gardens, abound in this city, which prides itself on its strict anti-pollution laws.” -Travel Guide

Copenhagen Statistics

City Population:
502,362 (2004)

City Area: 221,712 acres

Density Level:
23 people / acre

Park Acreage: 6,143

Park acreage per 1000 residents: 1.2 Acres

Governing bodies:
+ City of Copenhagen
+ Greater Copenhagen Authority

Expenditure per person:
\$72.27? (USD)

Context

Copenhagen is a true metropolis. The City of Copenhagen is inhabited by half a million people or one tenth of Denmark’s total population. 1.8 million people inhabit the peripheral ring of greater Copenhagen metropolitan area which is a third of Denmark’s population. Copenhagen is also houses the Scandinavian headquarters of international businesses, governmental offices, and other offices of national organizations. As the city matured and developed the 5 Finger Plan regional development plan and the Green Structure to guide green space planning, it underwent a number of evolutions.

1: The medieval city

Until mid 19th century the city was surrounded by ramparts and 130,000 inhabitants were living on just 3 Km2 in the fortified city.

2: The Tram City

In the beginning of the 20th century Copenhagen incorporated some of its neighbouring towns and the working and middle class areas that was developing there was subsequently served by an extended network of trams.

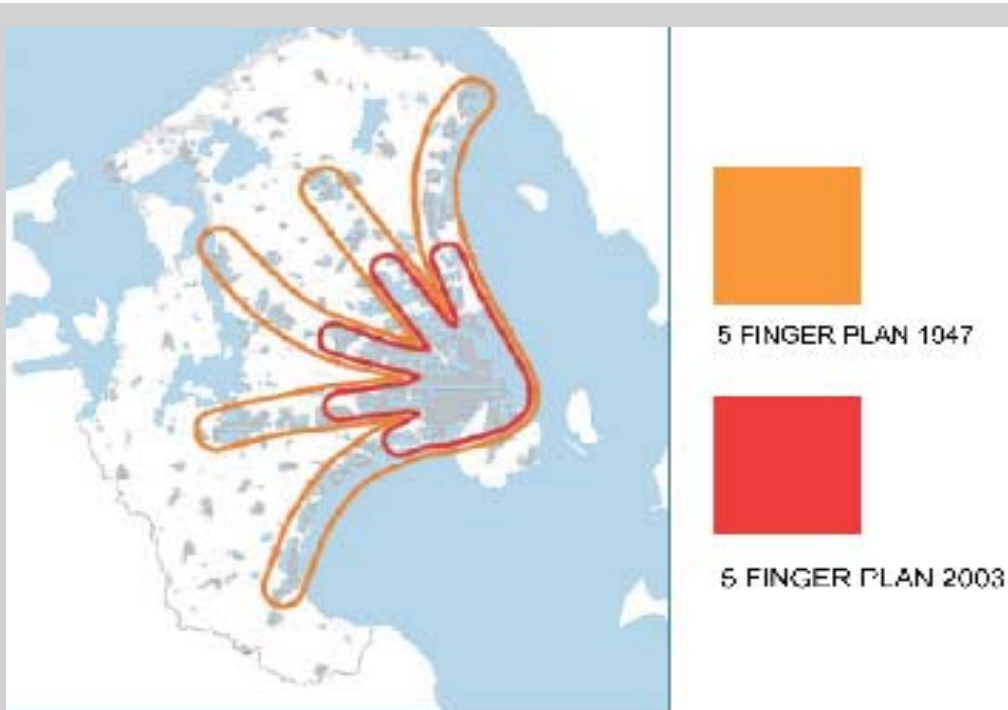
3: The pre-WW2 city served by S-trains

In the 1930s the population of the capital passed one million making further layer-by-layer growths impossible.

4: The post-WW2 radial, suburban development

The Fingerplan-city.

-source *Copenhagen: Evolution of the Finger Structure*



Copenhagen’s regional framework—the 5 Fingers concept –was originally conceived in the 1940s. The 5 Finger concept continues to shape regional form as this image from the recent regional plan demonstrates. Under the guidance of a regional planning body, urban areas are confined to linear corridors that are linked by transit and extend like fingers from the central core. Green wedges protected from urban development fills in the space between the urban corridors.

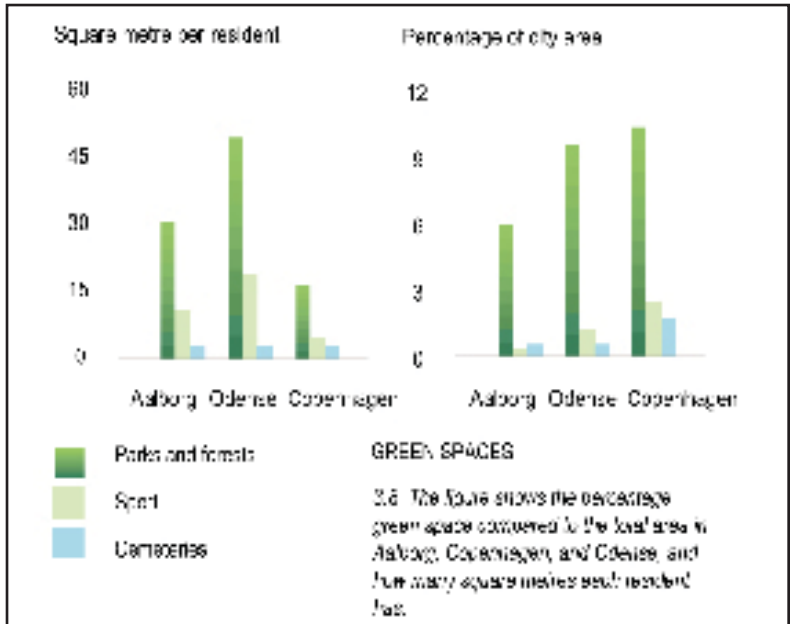
source: Greater Copenhagen Authority Transport Plan 2003

5 Fingers Plan

Planning Timeline

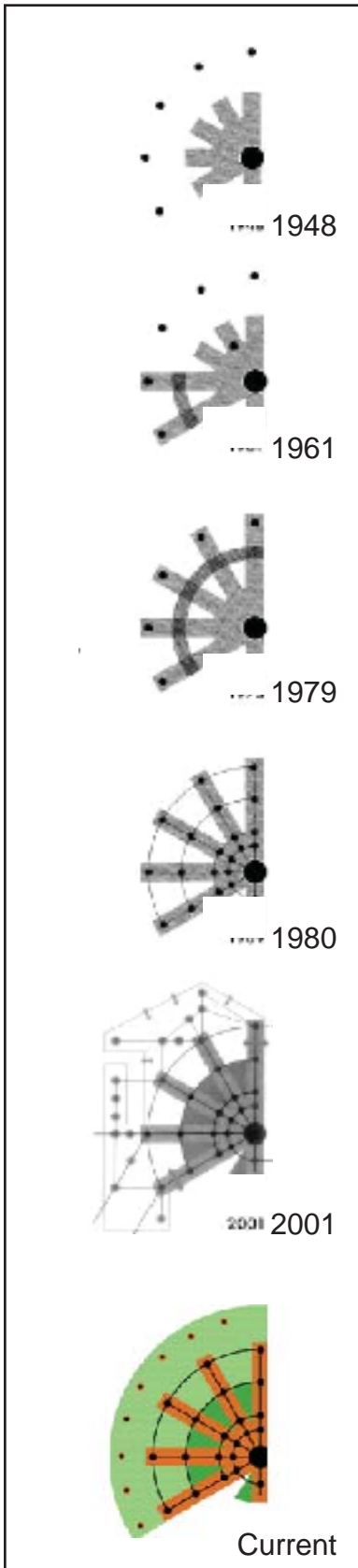
- 1939** – First Danish planning act was passed by the national government
- 1947** – The Finger Plan was developed and passed.
- 1948-56** – Was a period characterized by weak planning efforts, municipal infighting, and antagonistic relationships between Copenhagen, the central city and its suburbs.
- 1960's** – This is considered the apex of an 'urban crisis' that led to support for increased government experimentation in the field of Planning.
- 1961** – The Thumb & Forefinger—the first of the planned fingers—were planned and developed. The end result was criticized due to its inequitable separation of social classes. Public frustration with the segregation of rich and poor led to the forming of a regional planning authority
- 1966** – Regional Planning Authority Formed
- Early 1970s** – Parliamentary planning law was passed specifying how regions should plan. The law was weak in the Copenhagen region due to a fear on the part of national policy of ceding power to the region which houses 1/3 of Denmark's population.
- 1974-1989** – Greater Copenhagen Council was formed. This was a regional authority, it was criticized for having no teeth and was disbanded in 1988
- 1988-1991** – During this period, the Ministry of the environment—an entity that operated at the national level—oversaw regional planning functions. Ironically, despite the lack of a regional planning arm the Policy Decisions made at the national level such as a new transportation link to Malmö, Sweden helped secure the city's current high international status as a place of cultural economic bounty.
- Present** – The Greater Copenhagen Authority was established. This is a regional planning authority that oversees transportation planning, regional planning, transit operations, economic development, tourism and culture.

URBAN	GREEN
city center	green wedges
connective radial transit system	bicycle paths, harbor side promenades
reclaiming parking for plazas and open space	well distributed network of urban parks
dense mixed development with transit nodes	undeveloped areas / nature reserves



source: Ministry for the Environment

“The public should have easy access to infrastructural facilities such as commuter train lines and motorways, as well as they should be able to enjoy and live close to nature.”
 -Copenhagen Capacity



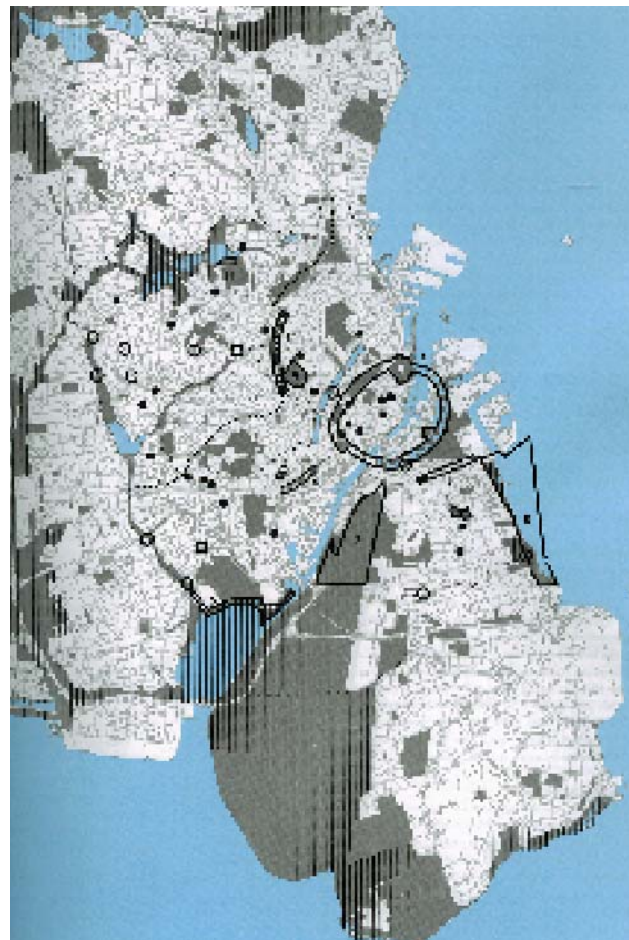
source: Evolution of Finger Structure and Greater Copenhagen Authority

Initiatives

One project that has been extremely successful in Copenhagen and could feasibly be implemented in Seattle is that the city traffic department has undertaken pedestrian and bicycle counts since the 1960's. The actual counts are done by graduate students in the local planning and design school. This has provided the city with reliable time-series data on non-motorized transportation patterns which have proven an invaluable tool for the legendary pedestrian and bicycle infrastructure the city has built since the 1970s. The program was conceived by Dr. Jan Gehl who was recently invited to advise the city of Seattle on its current planning initiatives.

Issues

One issue that should resonate with Seattle is how the greater Copenhagen area has struggled with the role that regional government should play in the planning process. The region has experimented with various forms of regional government since 1966. Since 1/3 of the country's population is centered around Copenhagen, the federal government has been reluctant to cede power to a strong regional body. For example, in 1989 the Greater Copenhagen Council was abolished only to be reinstated in the mid-90s as the Greater Copenhagen Authority. The newer body is responsible for transportation planning, regional planning, transit operations, economic development, tourism and culture, but does not do environmental planning. Critics complain that not unlike our local Puget Sound Regional Council, the organization lacks the 'teeth' it needs to effectively carry out its mandate.



source: City of Copenhagen Municipal Plan

-  Target Areas
-  Green Cycling Route
-  Prioritized Open Space Connection
-  Green Junction
-  Regional Areas for open air recreation
-  Existing & Planned Green Areas

Lessons Learned

Creative Urban Planning Fosters City Pride and Boosts the Economy

An important lesson the Copenhagen experience can teach Seattle is that innovative and bold planning initiatives can have lasting impacts on civic pride. Also, innovative planning in the 1970s has had a snowball effect that positively influenced public and political willingness to experiment and fostered a culture of creativity that has ensured Copenhagen international status as a world class city. The city's positive reputation continues to act as an engine for economic growth and prosperity.

Incremental Removal of Cars from the City Center

Copenhagen's policy of incrementally replacing spaces for cars with spaces for people to walk, bike and recreate has been instrumental in fostering an inviting and vibrant pedestrian landscape in the center city while effectively moving people and goods throughout the region

Political Support For Planning Across Political Scales

The greater Copenhagen area has seen general support at various political scales for its regional planning framework for over half a century. Such support spans the national and regional level as well as across the numerous municipalities that constitute the fingers themselves. It has enabled residents to enjoy a high quality of life characterized by access to the natural environment, a balanced transportation system and a healthy economy.

Principles of the 5 Finger Plan

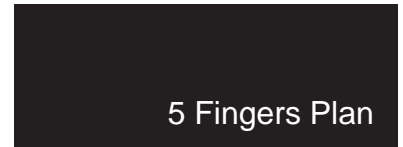
The public should have easy access to infrastructural facilities such as green spaces, bike paths, commuter trains and motorways.

People should have the possibility to enjoy forests and lakes, agricultural landscapes, rivers, streams and fjords and still benefit from the close proximity to the city centre.

The form of the Five Finger Plan makes traffic and transportation of people and goods a much easier task.

The Five Finger Plan has steered growth for almost 60 years

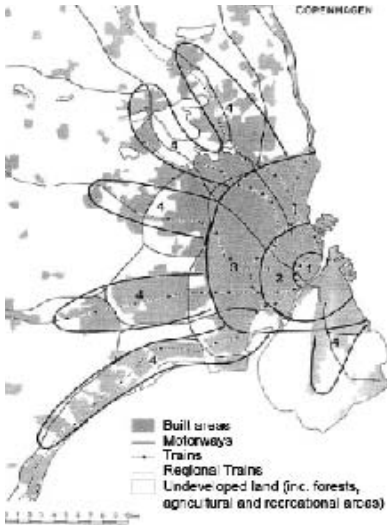
- + The Plan is still the basis of all regional planning - almost 60 years old. expecting
- + growth of inhabitants >10.000 people/year in next 20 years.
- + add 75,000 homes
- + extend or thicken "fingers" – w/ same degree of infrastructural facilities



source: <http://primates.ximian.com/~federico/news-2002-10.html>



source: Greater Copenhagen Authority



source: Evolution of the Finger Structure

Resources

Case Study on Copenhages 5 Finger Plan.
<http://www.inro.tno.nl/transland/Copenhagen.html>

COPENHAGEN

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