



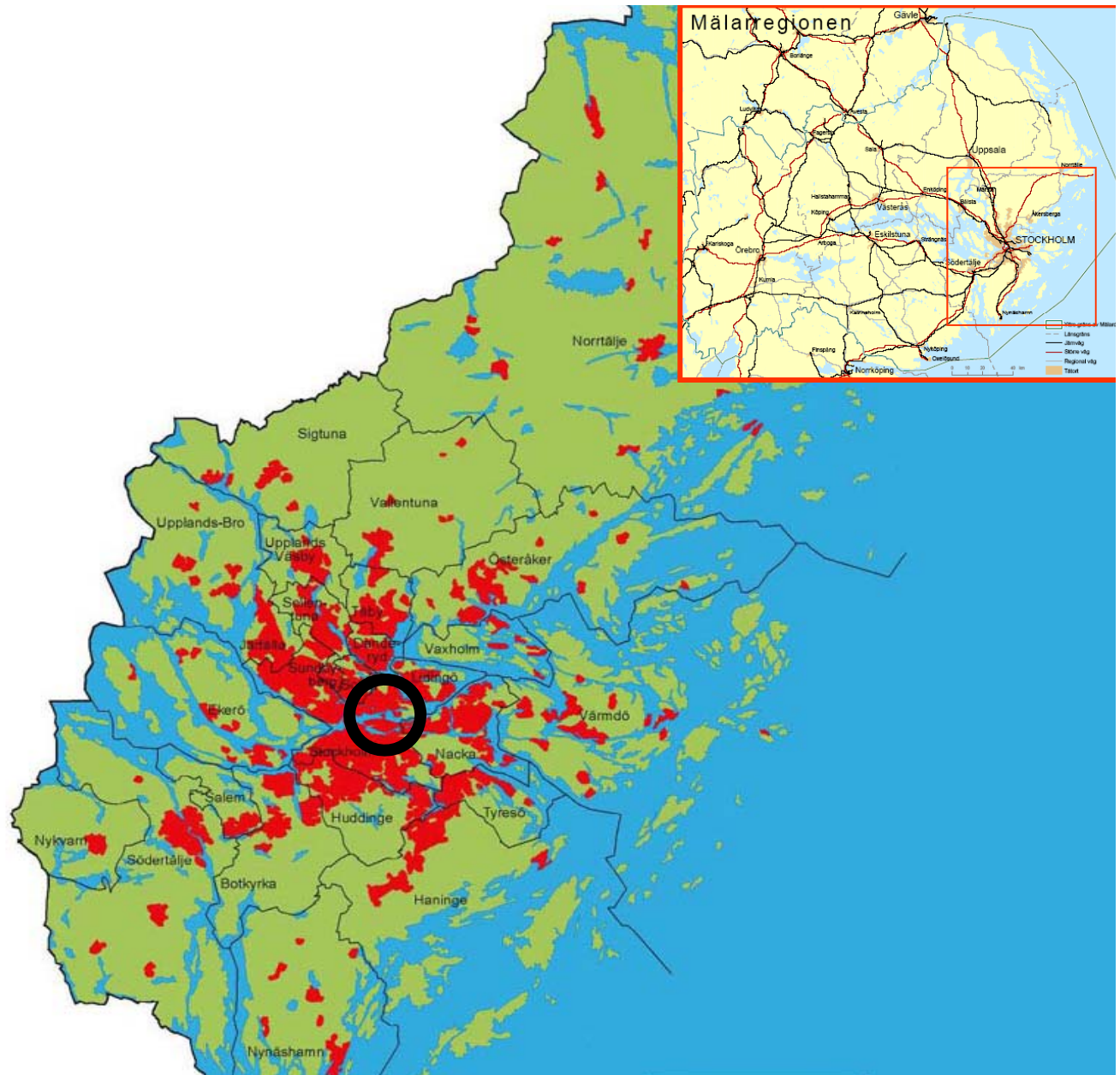
A strategy for densification - Stockholm





The Stockholm Region

- 1.95 million inhabitants
- 800 000 dwellings
- 90 000 summer-houses
- 6 500 km²
- 277 persons/km²
- 180 km from north to south
- 26 municipalities
- 14 % developed land
- 60 % farming and forestry



STOCKHOLM CITY PLANNING ADMINISTRATION



The City of Stockholm



- 806 000 inhabitants
(Stockholm Region 1.95 millions)
- 14 city districts
- 428 000 dwellings
(appr. 10 % in one-family houses)
- 1.9 persons / dwelling
- 30 km x 20 km
- 188 km²
- 4200 persons / km²
- 40% green areas



STOCKHOLM CITY PLANNING ADMINISTRATION



Stockholm in numbers



- 161, 056 are under the age of 20
497, 600 are between 20 and 64
112, 382 are over the age of 65
- 53% of all adults have post-upper secondary school education
10% have comprehensive school or the equivalent
- Average income for men SEK 332,000 (\approx E 36,000) and
women SEK 251,000 (\approx E 27,000)
- 95,000 commute out of the city every day
234,000 commute into the city from other municipalities



STOCKHOLM CITY PLANNING ADMINISTRATION

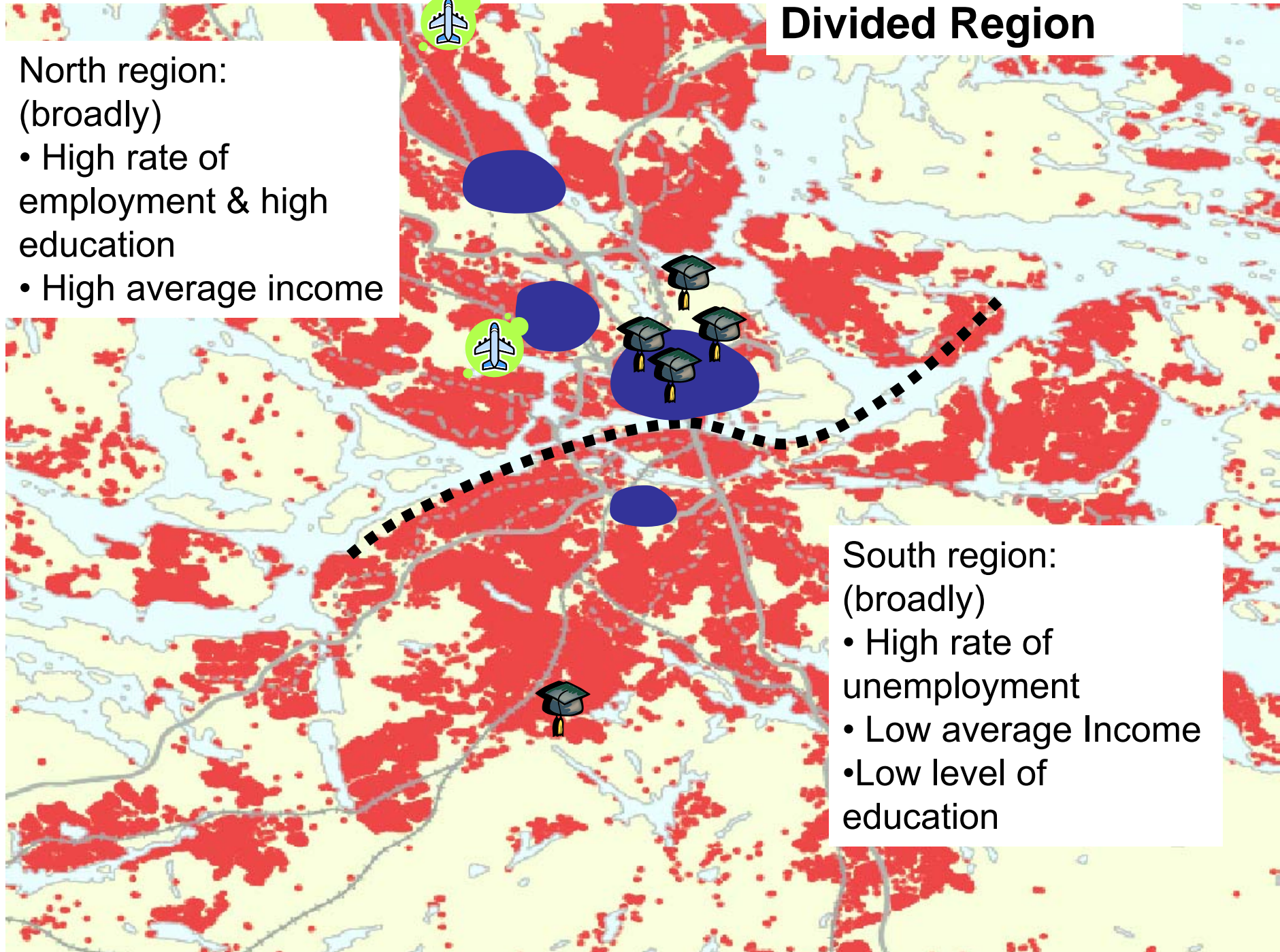
Divided Region

North region:
(broadly)

- High rate of employment & high education
- High average income

South region:
(broadly)

- High rate of unemployment
- Low average Income
- Low level of education





Stockholm Vision



2030

develop opportunities for social,
public and commercial, services;
work places and housing
polycentric metropolitan area
the City should be dynamic,
attractive, allowing and efficient
the strategy in the
Comprehensive Urban Plan is still
valid



+ 150.000-180.000 inhabitants year 2030



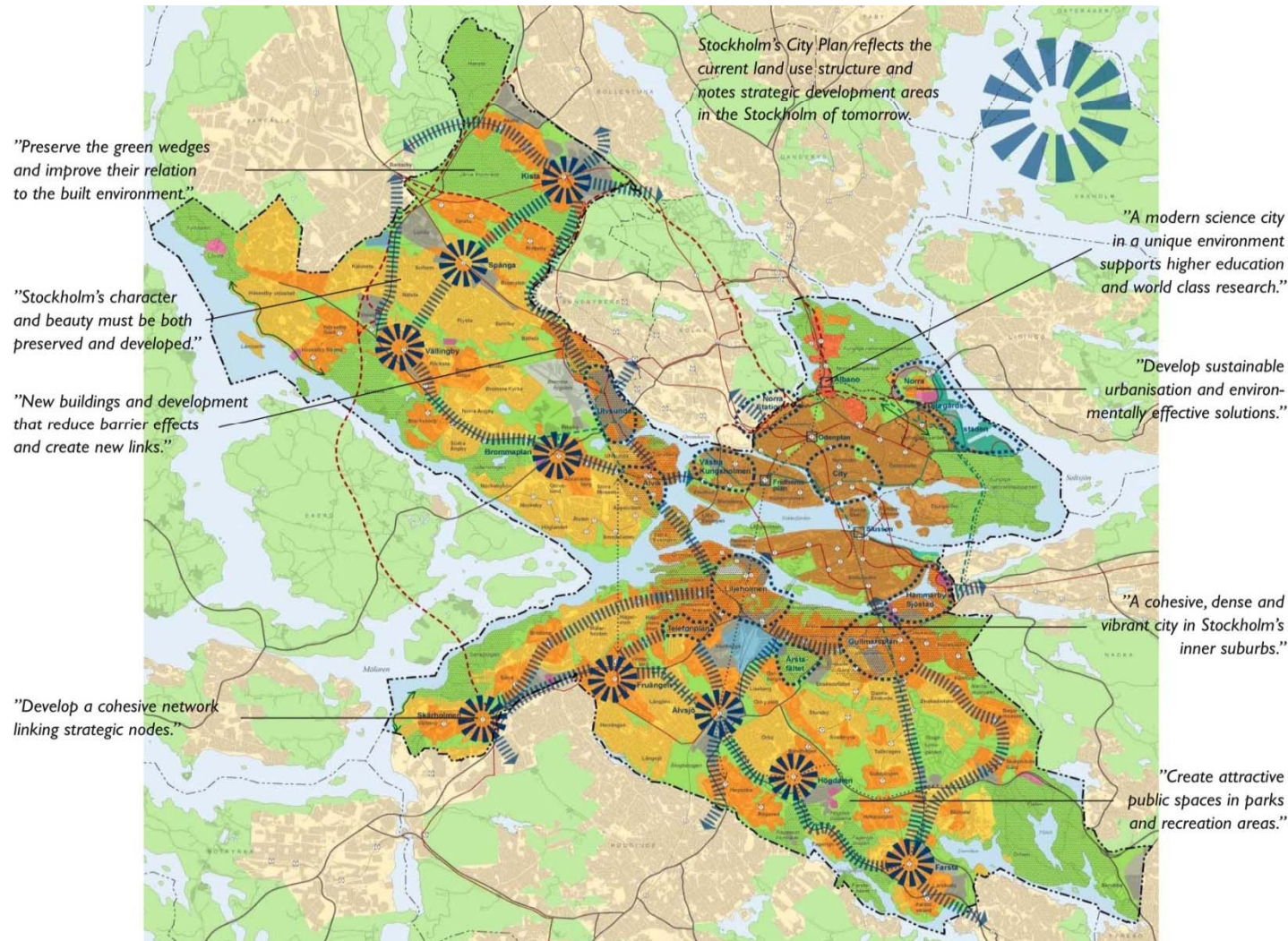
STOCKHOLM CITY PLANNING ADMINISTRATION



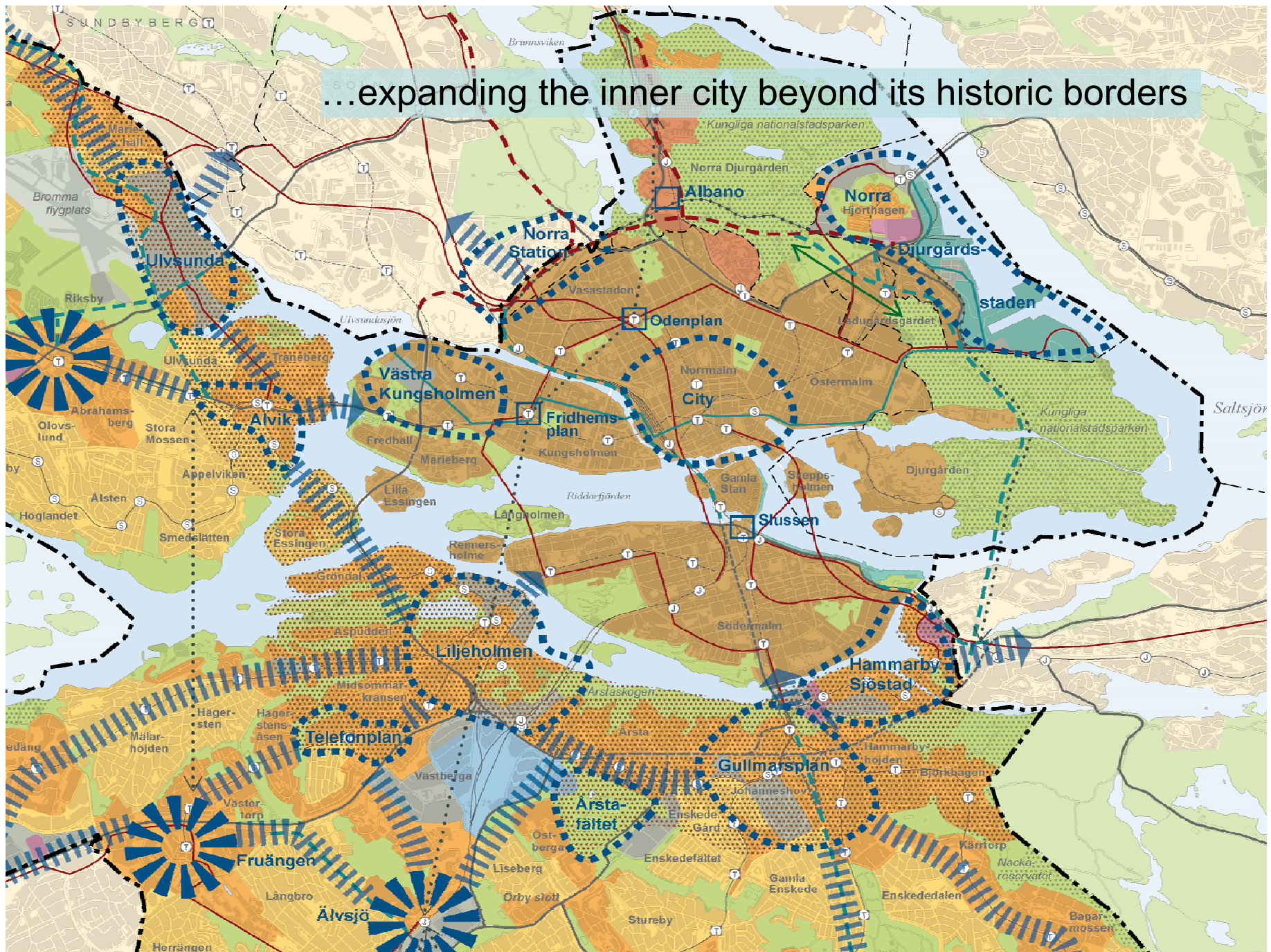
STOCKHOLM CITY PLAN

1. Urban development strategies
2. Dialogue and cooperation
3. Continued planning and implementation





...expanding the inner city beyond its historic borders



- (1) Strengthen central Stockholm
- (2) Focus on Strategic Nodes
- (3) Connect city areas
- (4) Create a vibrant urban environment

...towards a dense
and more connected
Stockholm!



STOCKHOLM CITY PLANNING ADMINISTRATION



Foto: Richard Ryan

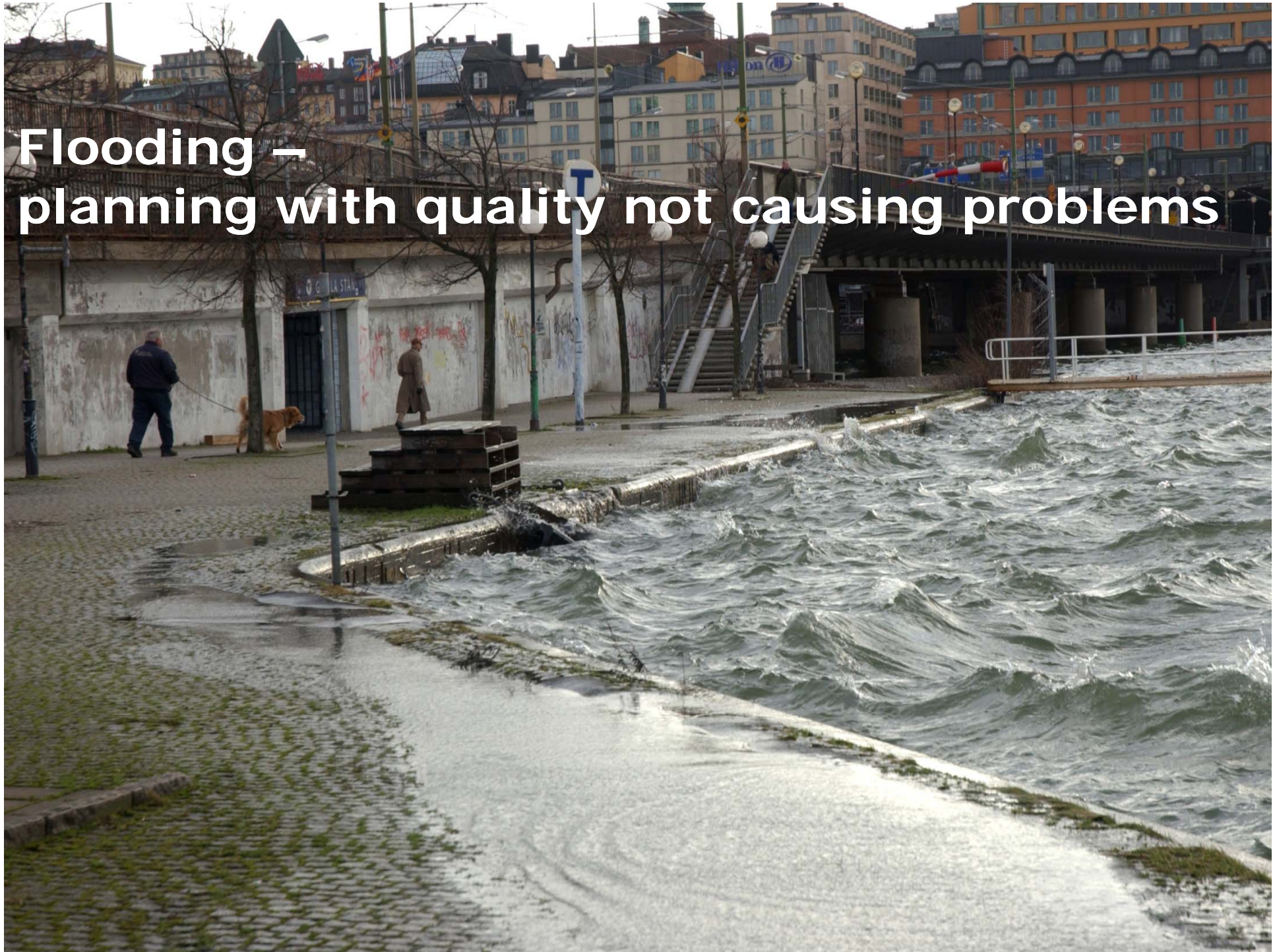


IPCC and the climate change in Stockholm

- +4-5 degrees Celsius warmer
- More rain/snow in the winter
- Mild winters and really cold days over -10 degrees Celsius disappears
- Earlier springflooding
- Dry summers
- Extreme weather (storms, draught...)
- 1-2 months longer growth-period



**Flooding –
planning with quality not causing problems**





Dec. 2000 Mälaren +59 cm

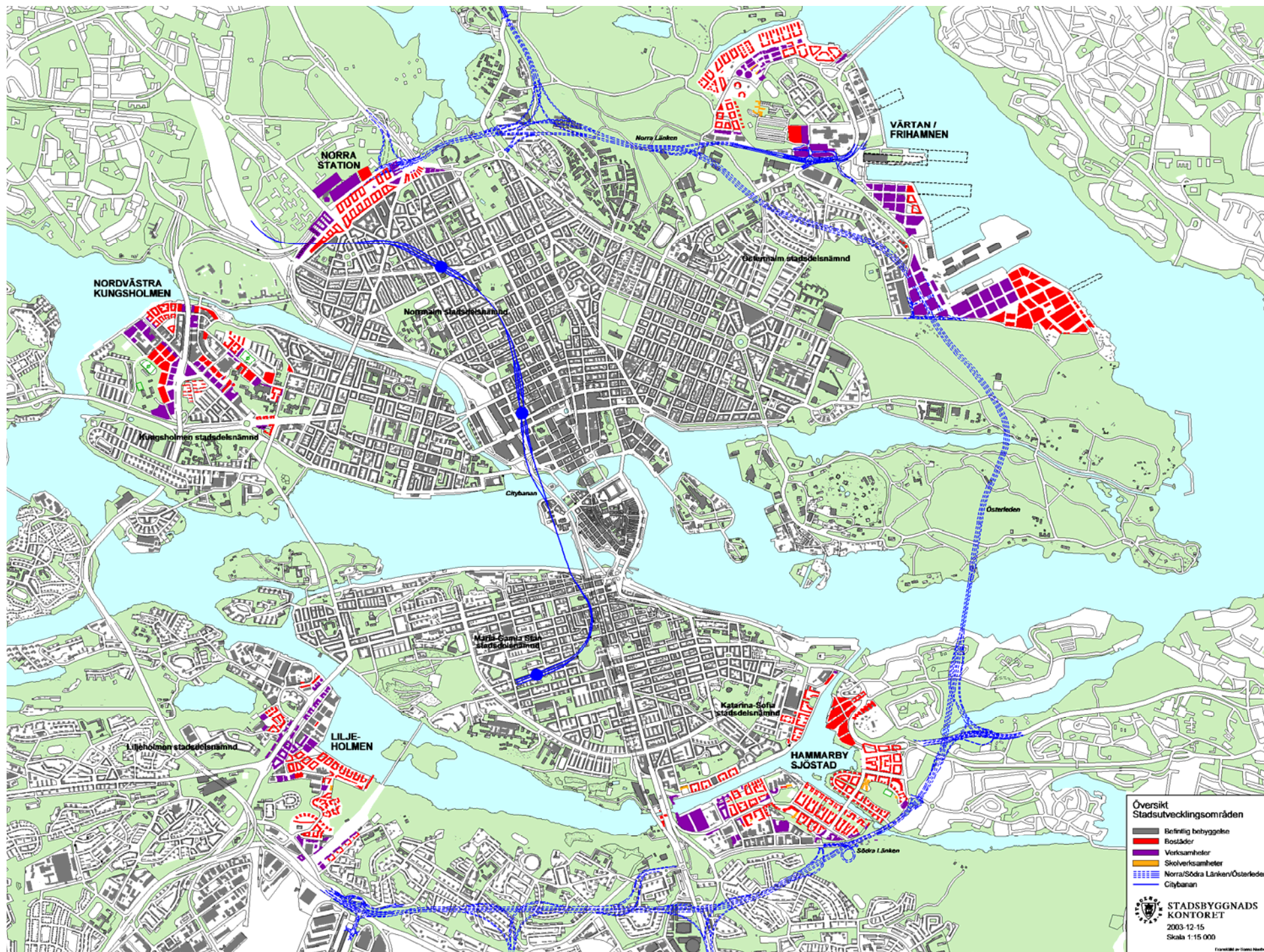








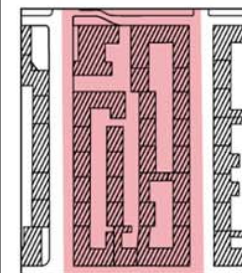
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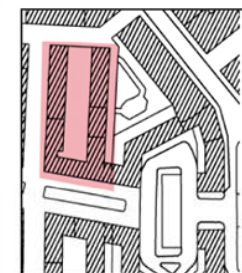




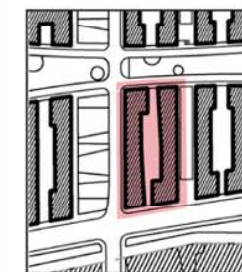




Kvartersstruktur 1890-tal
Vasastaden.

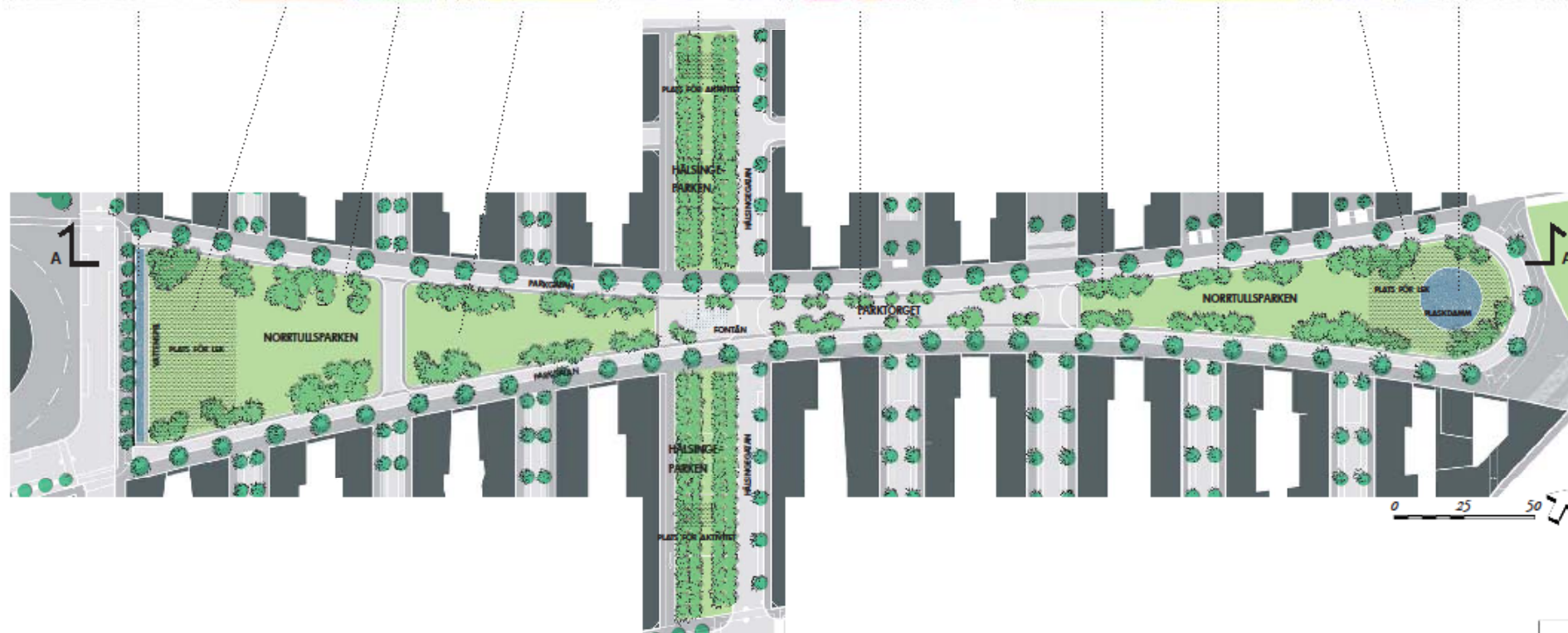


Kvartersstruktur 1920-tal
Röda Bergen.



Kvartersstruktur 2010
Norra Stationsområdet.

NORRTULLSPARKEN OCH HÄLSINGEPARKEN - ILLUSTRATIONSPLAN





STOCKHOLM CITY PLANNING ADMINISTRATION

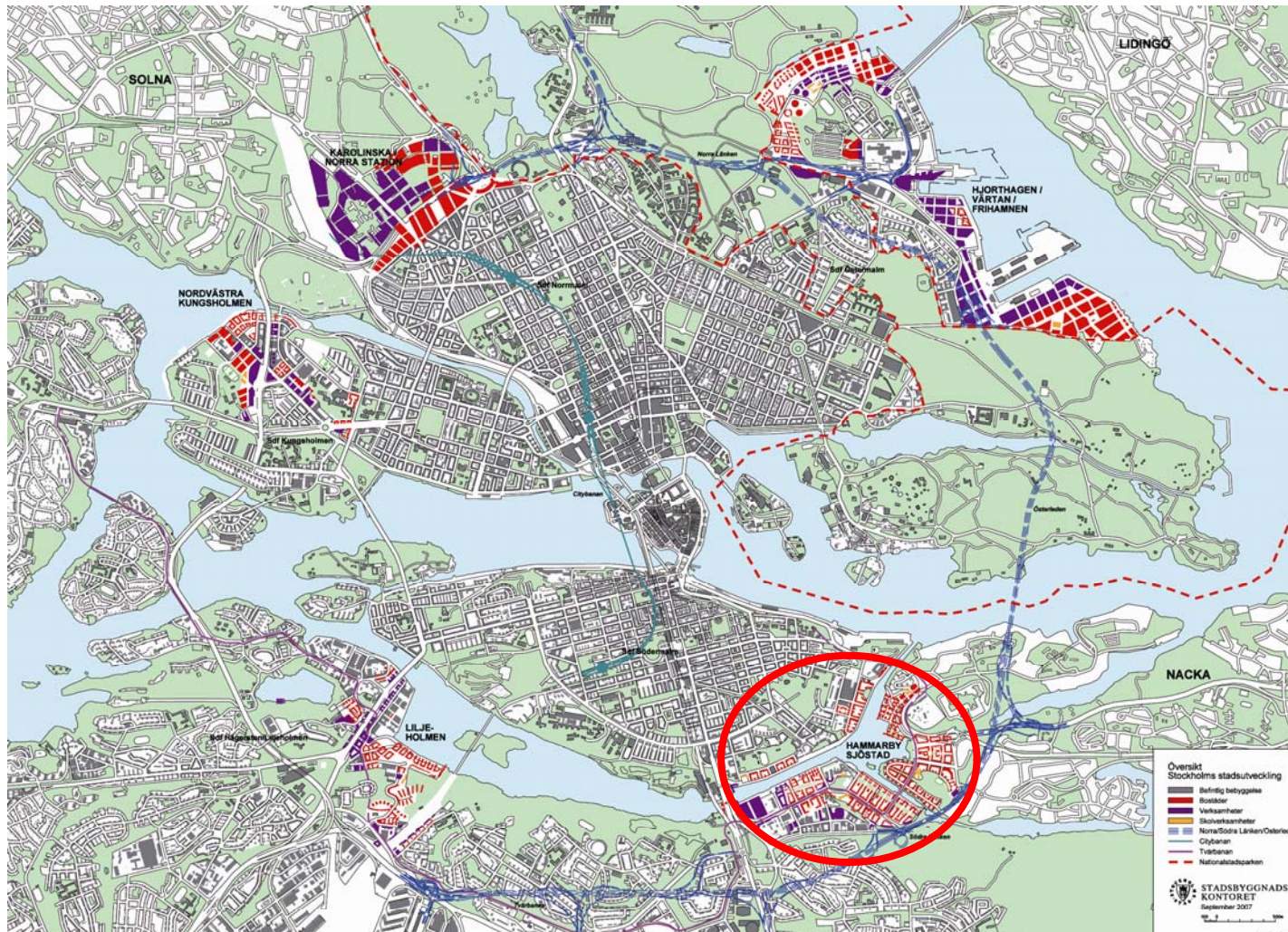












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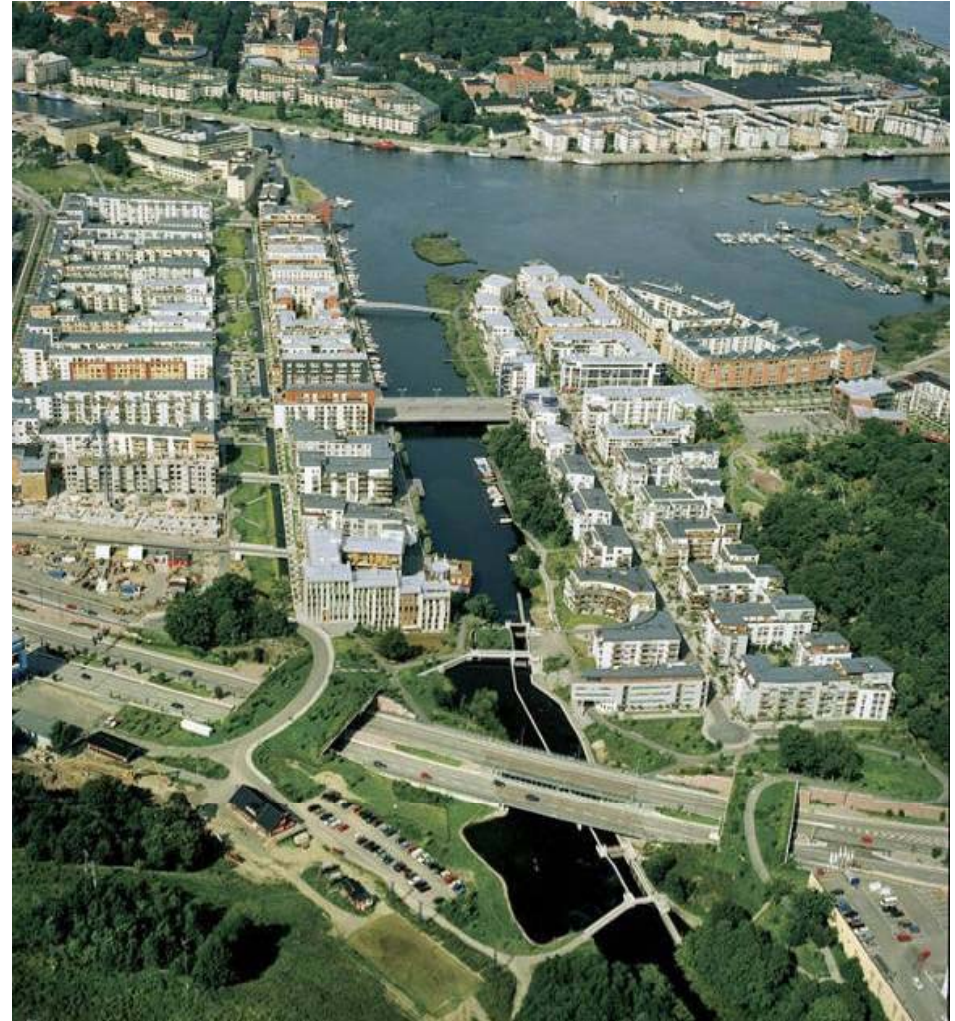


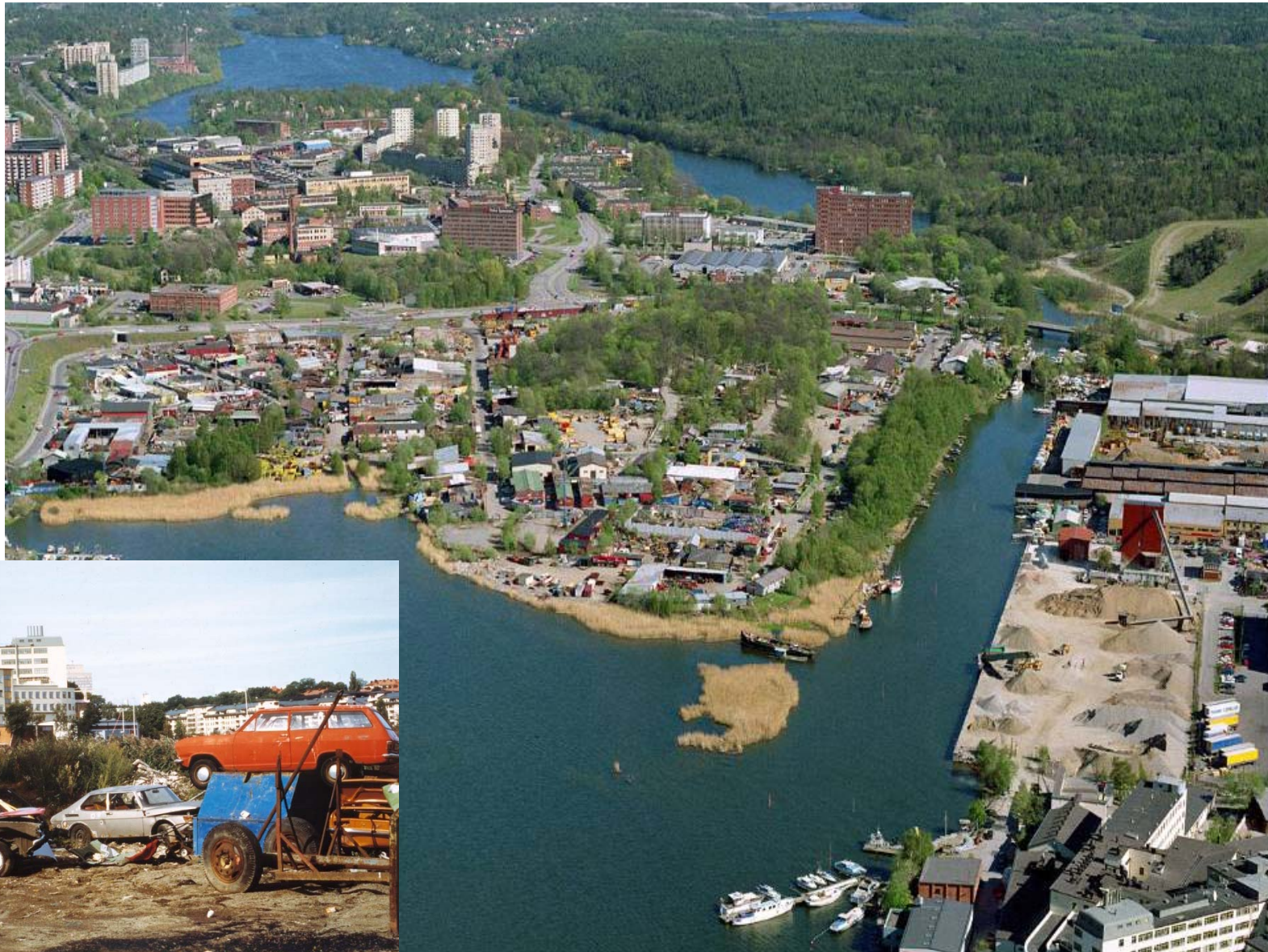
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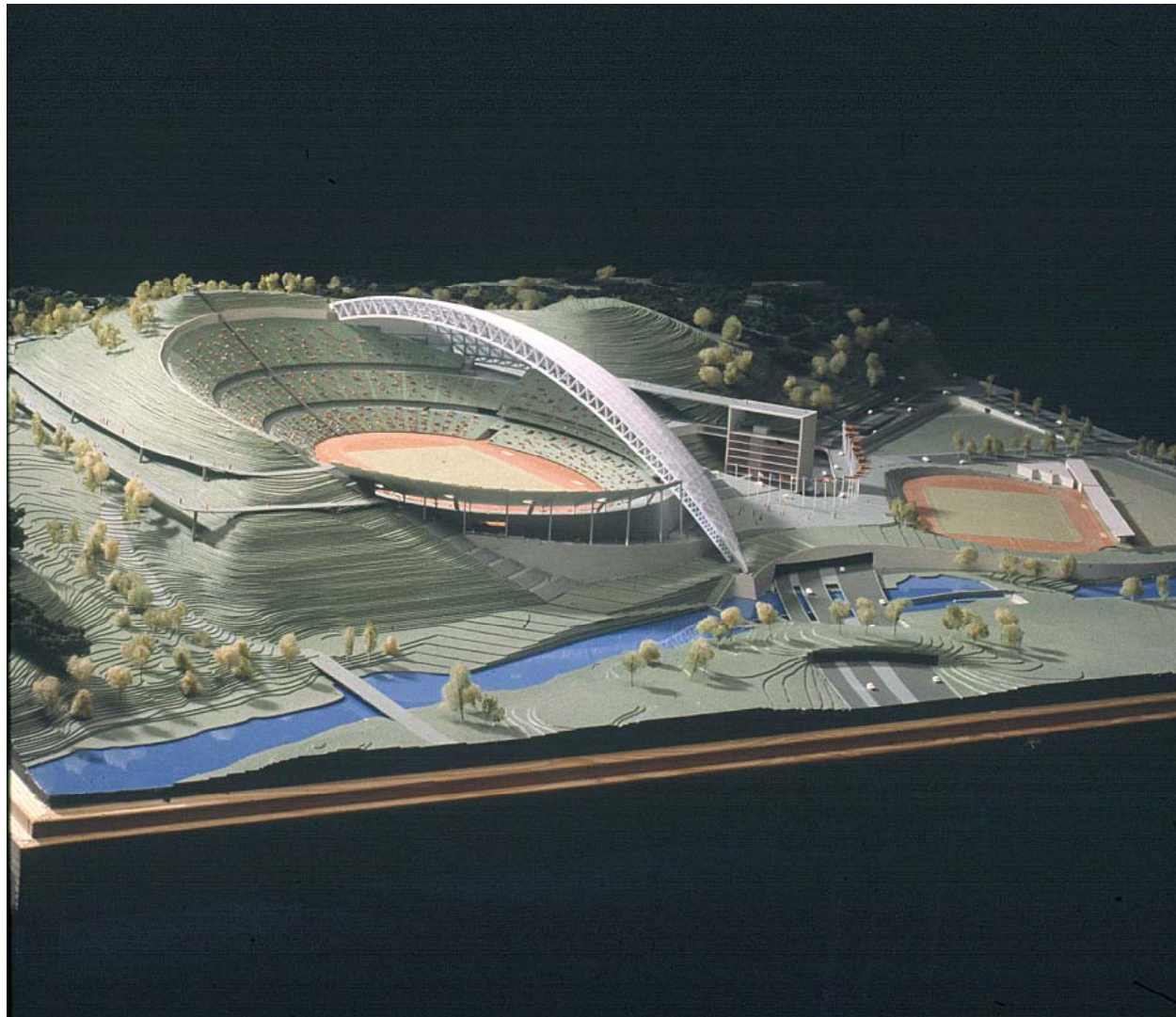


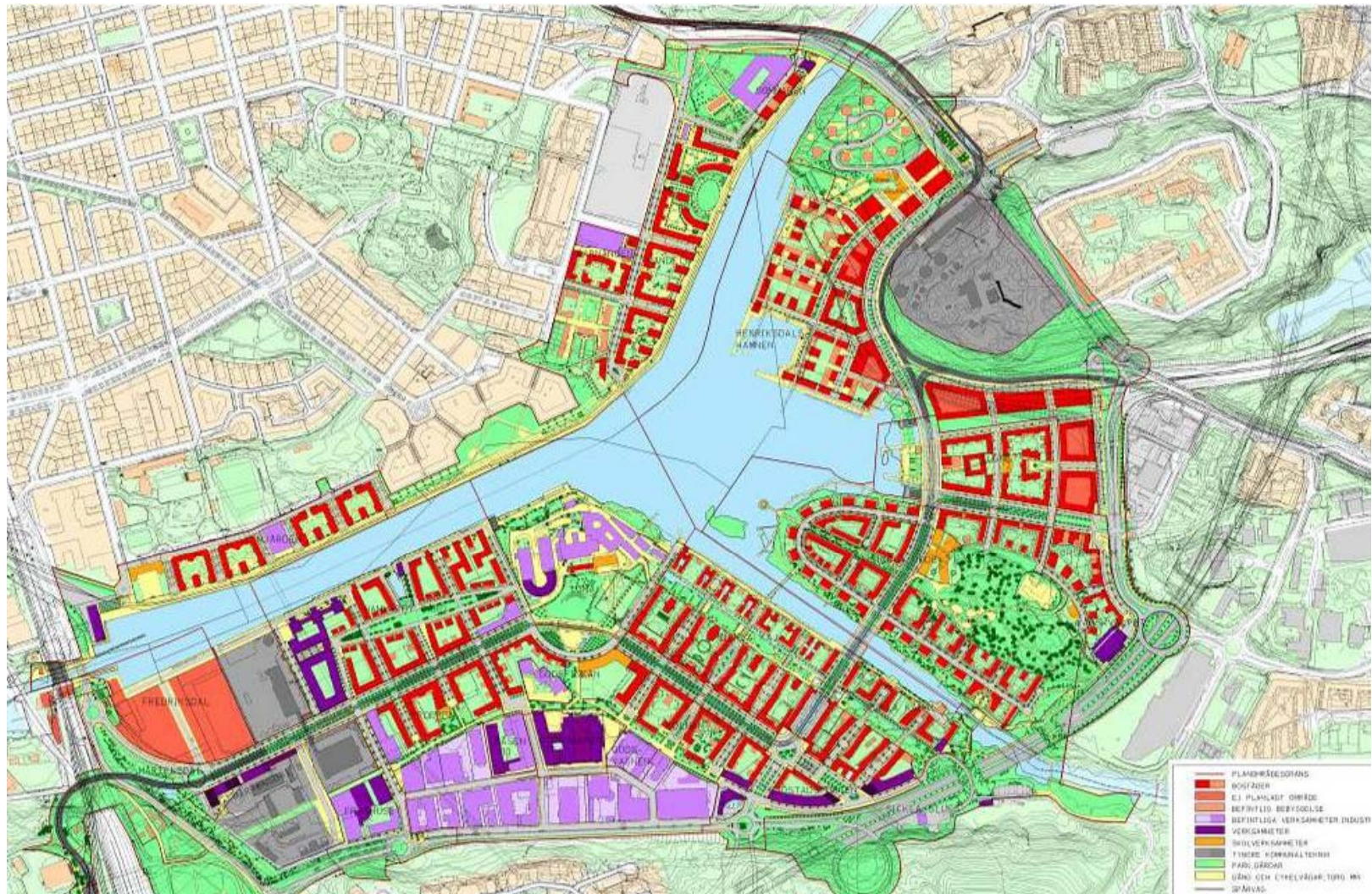
Hammarby Sjöstad

- largest urban development project in Stockholm
- 160 hectares
- 10.000-11.000 new apartments and 200.000 m² new office space, retail, services etc.
- infrastructure projects
- construction period 1995-2017
- 20 billions SEK (US \$ 2,8 billions)
the city invests 20 %
- today, about 2/3s completed



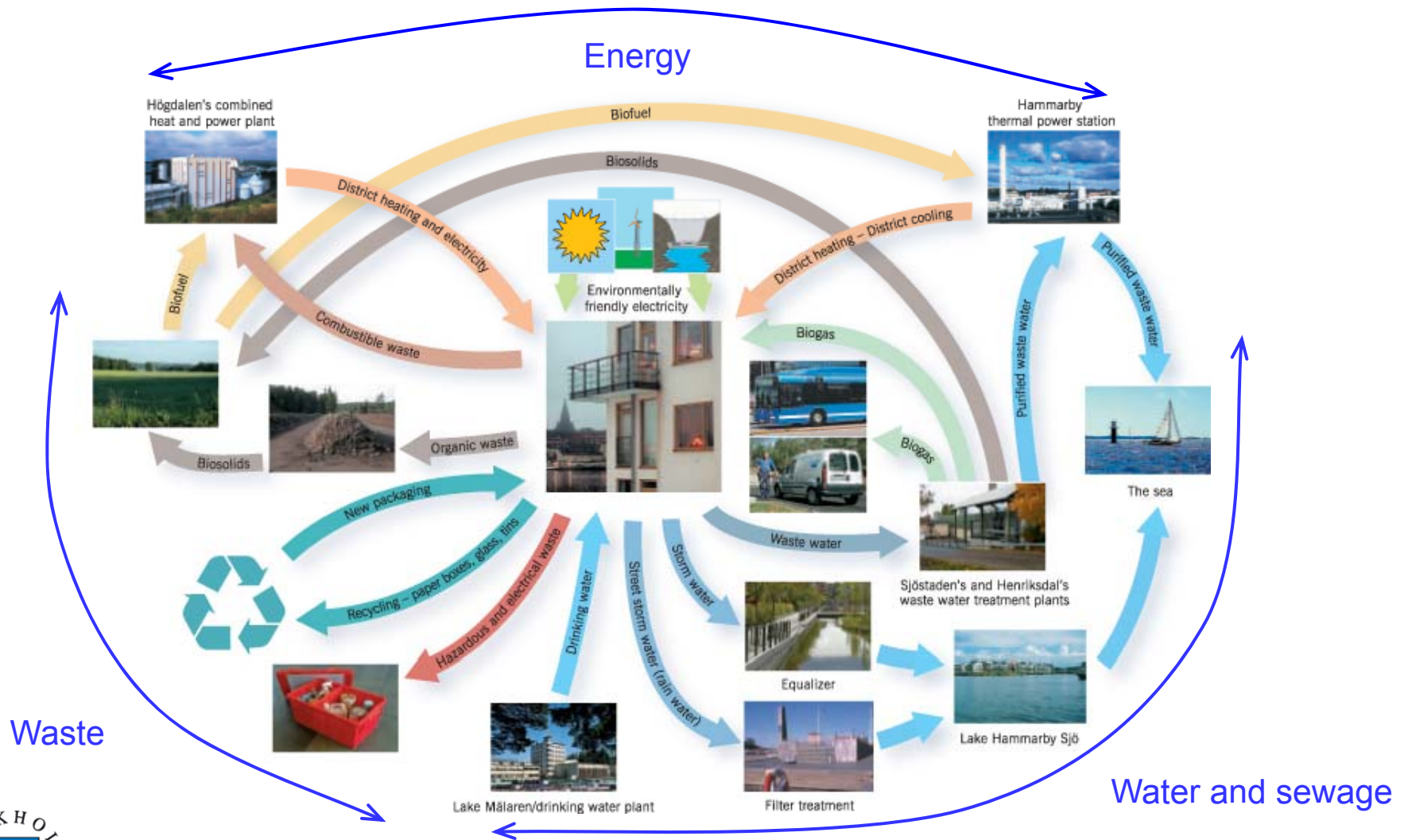








The Hammarby Model



STOCKHOLM CITY PLANNING ADMINISTRATION



Energy

- Combustible waste is converted into district heating and electricity.
- The heat from the treated waste water is converted into district heating and cooling.
- Solar energy is converted into electrical energy or used to heat water.



STOCKHOLM CITY PLANNING ADMINISTRATION



Water & Sewage

- A pilot sewage treatment plant facility has been built to evaluate new sewage treatment techniques.
- Biogas is extracted from the digestion of sewage sludge.
- Rainwater from streets is treated locally/settled and then drained into Hammarby Sjö - not to the wastewater treatment plant.

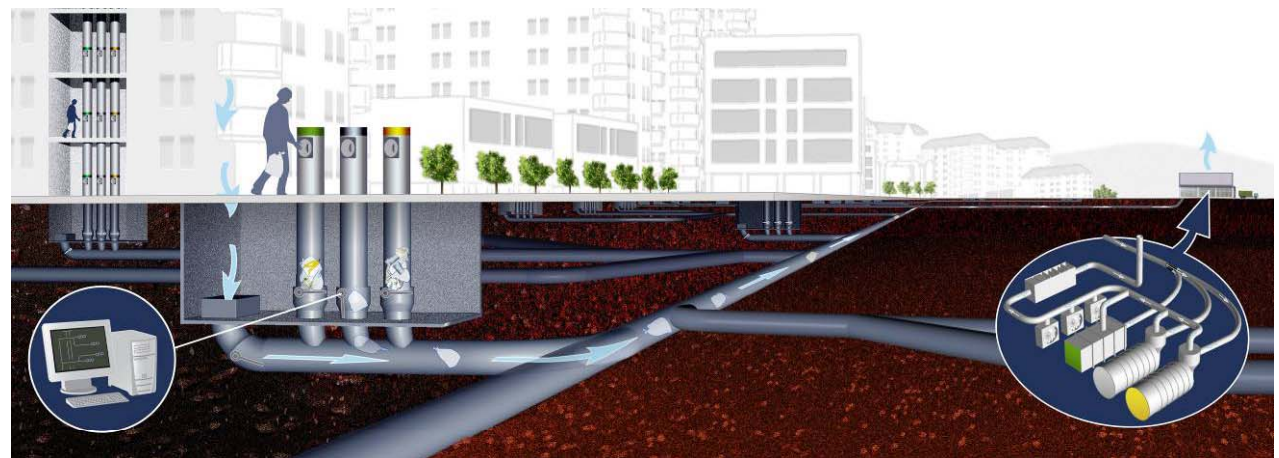


STOCKHOLM CITY PLANNING ADMINISTRATION



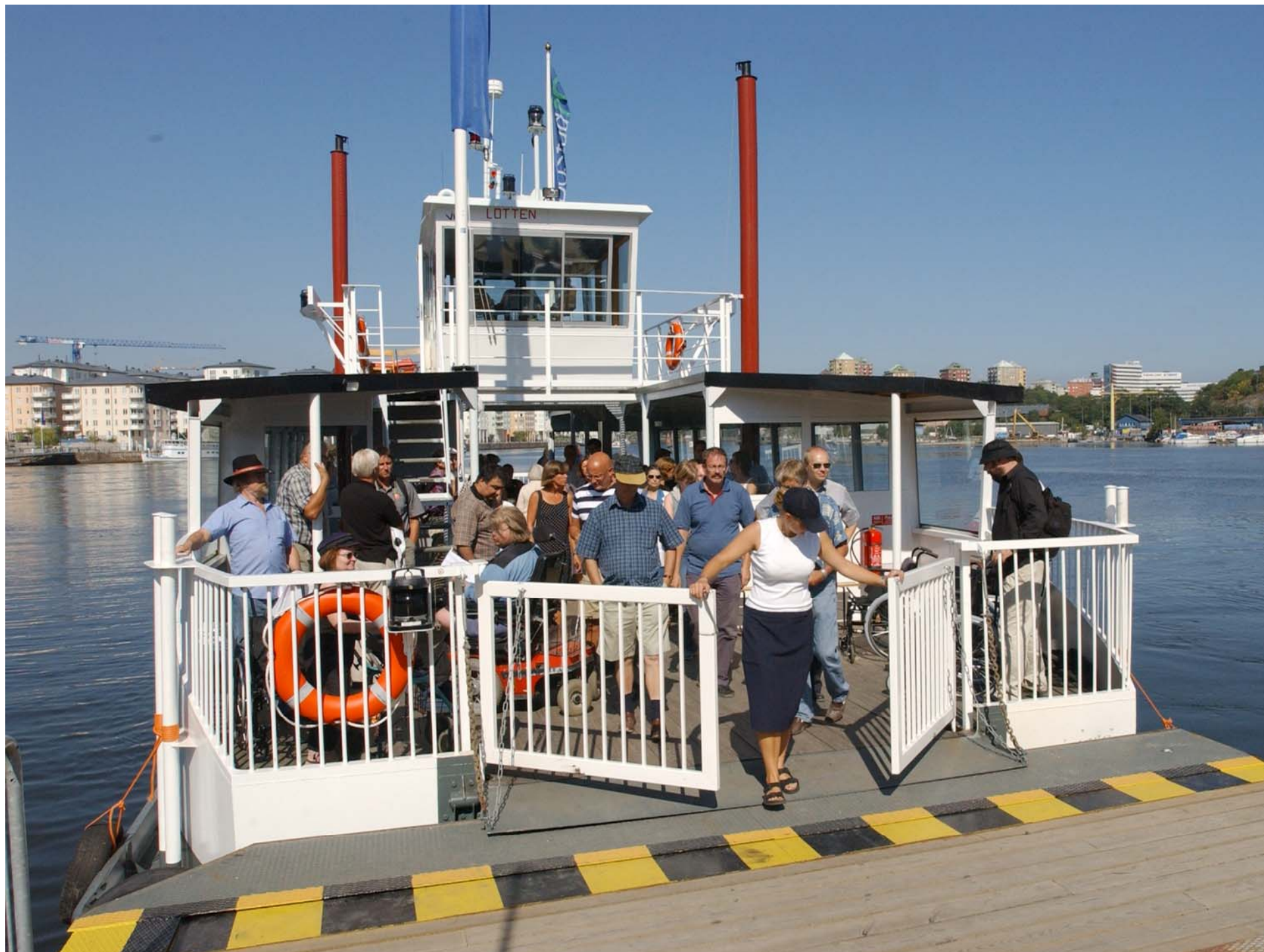
Waste

- An underground automated waste disposal system reduces the transports in the area and makes it easy to sort the waste.
- As does a block based system of recycling rooms and area-based environmental stations.
- All recyclable material is recycled: newspapers, glass, cardboard, metals, etc.



STOCKHOLM CITY PLANNING ADMINISTRATION







Design of courtyards

Design of public space, parks and streets







Conclusions

- integrated planning
- municipal involvement
- clear vision and strategy
- organisation/ co-operation



STOCKHOLM CITY PLANNING ADMINISTRATION



Next step?

- Evaluation of the environmental programme of Hammarby Sjöstad
- Implementation in Stockholm's next large urban development
- New and improved environmental programme
- Improvement of the Environmental Load Profile
- Focusing on energy efficiency and reduction of greenhouse gas emissions

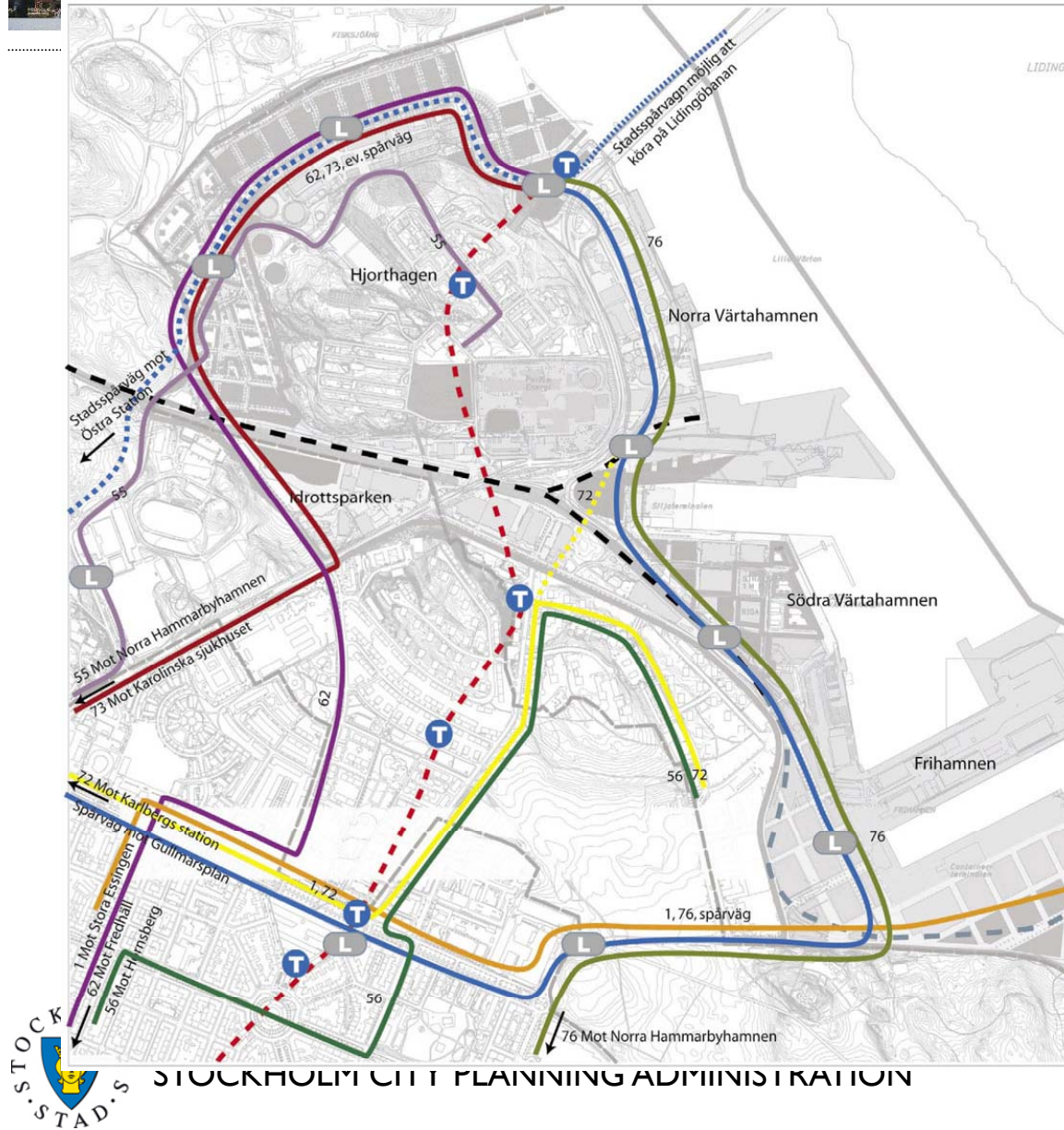




STOCKHOLM CITY PLANNING ADMINISTRATION



Stockholm





Public consultation



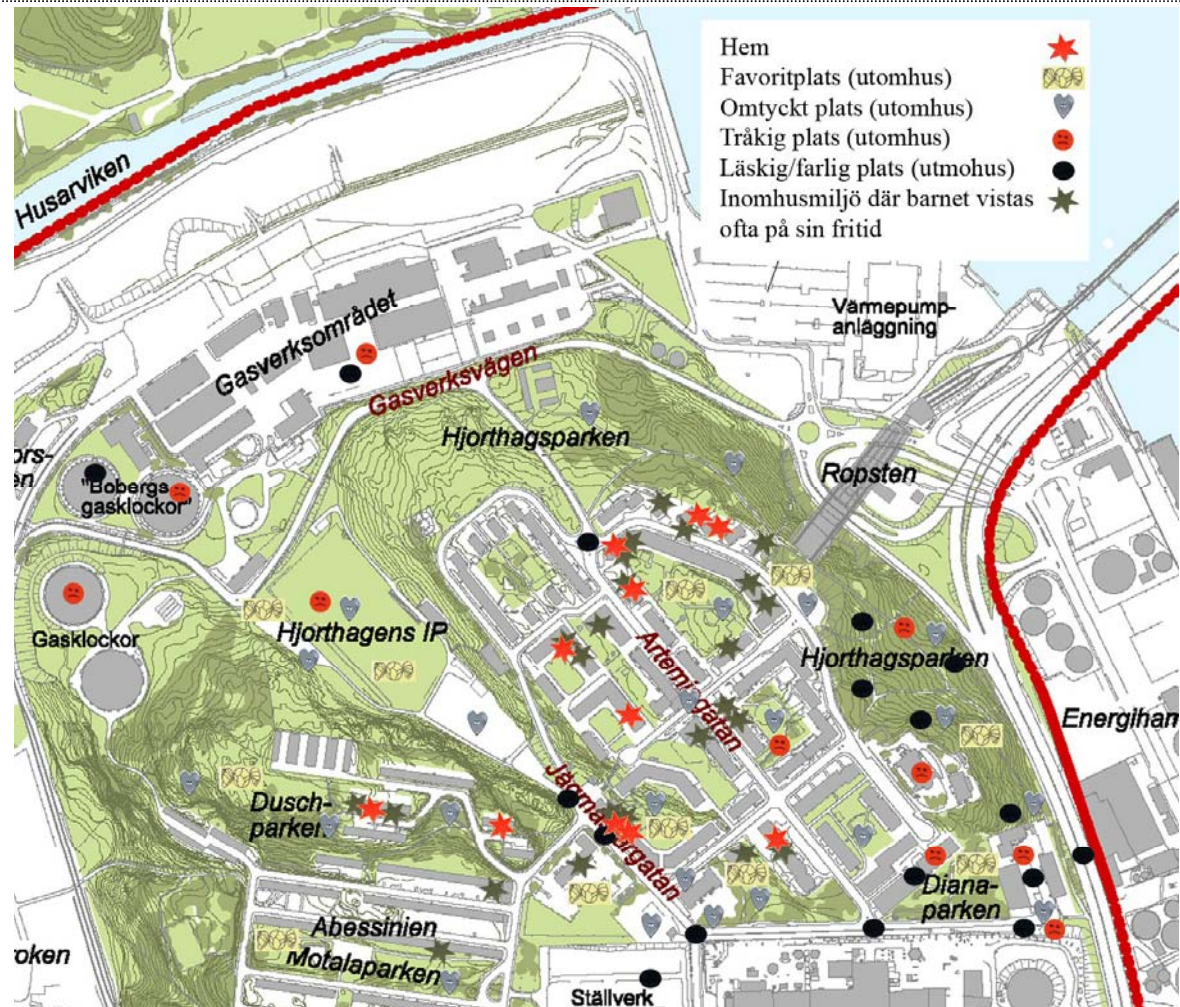
- Meetings
- Focus groups
- Interviews
- Questionnaires
- Walking tours



STOCKHOLM CITY PLANNING ADMINISTRATION



Child Impact Analysis



STOCKHOLM CITY PLANNING ADMINISTRATION



Noise Pollution Map



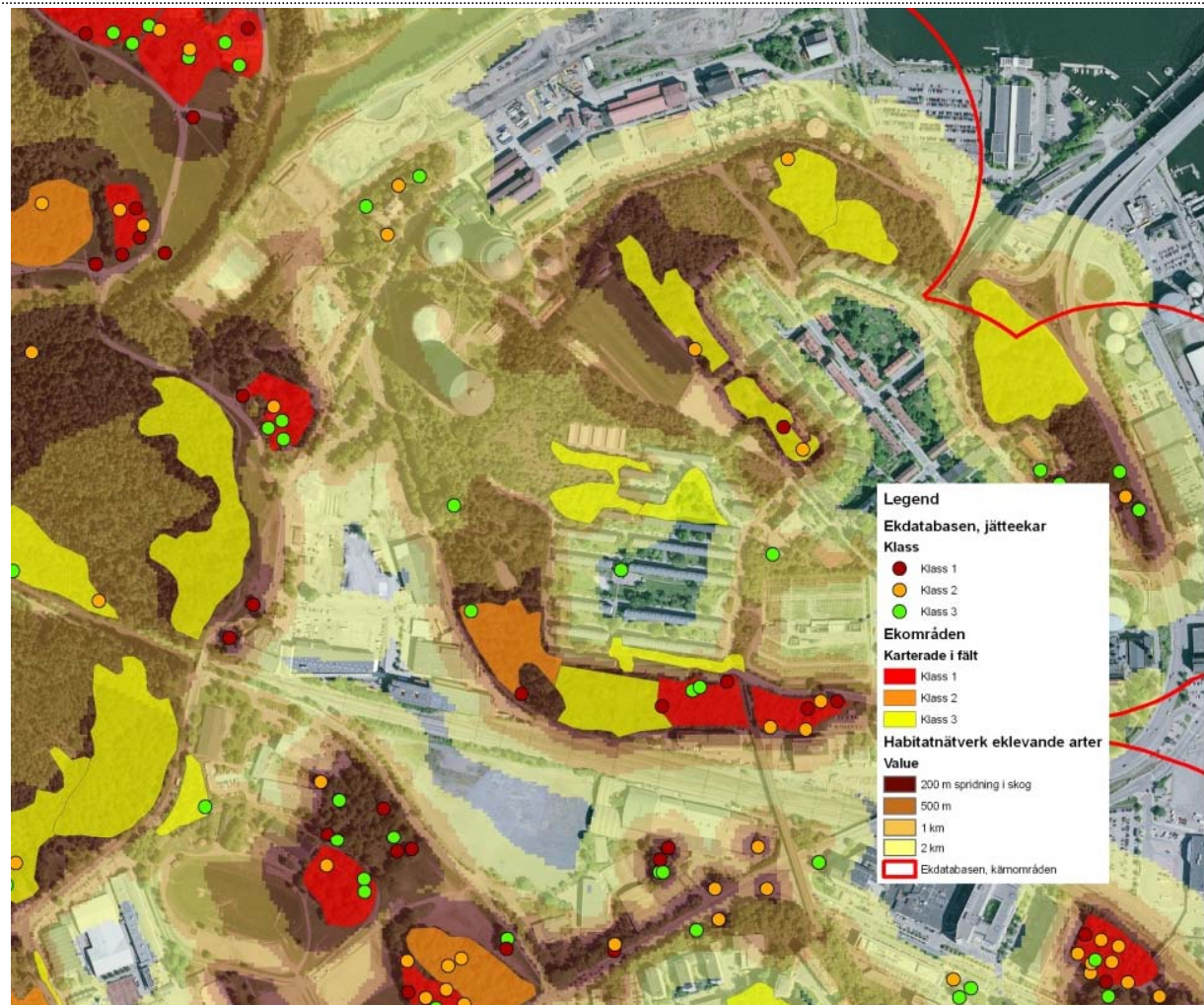
STOCKHOLM CITY PLANNING ADMINISTRATION

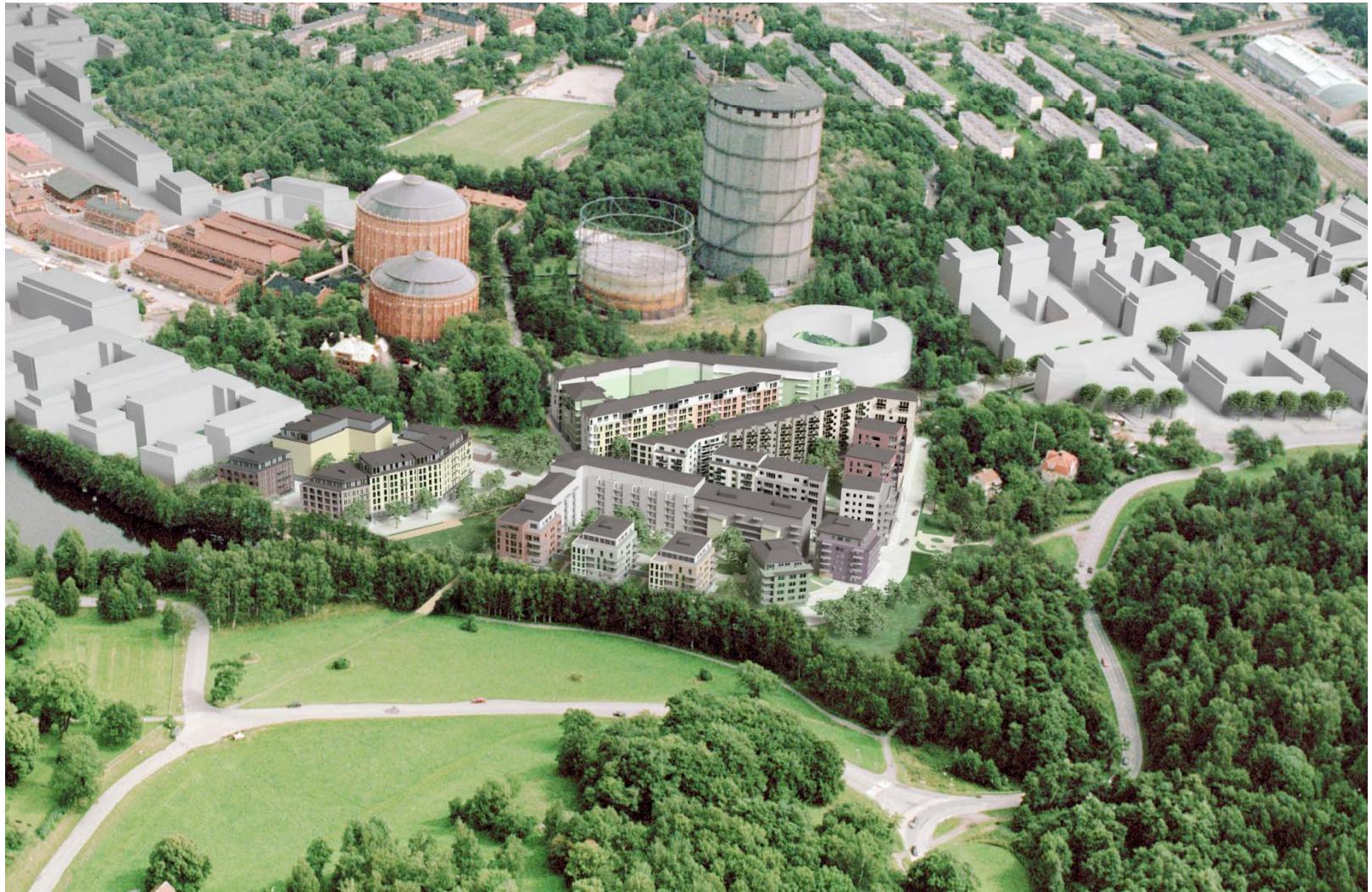


Habitat Network



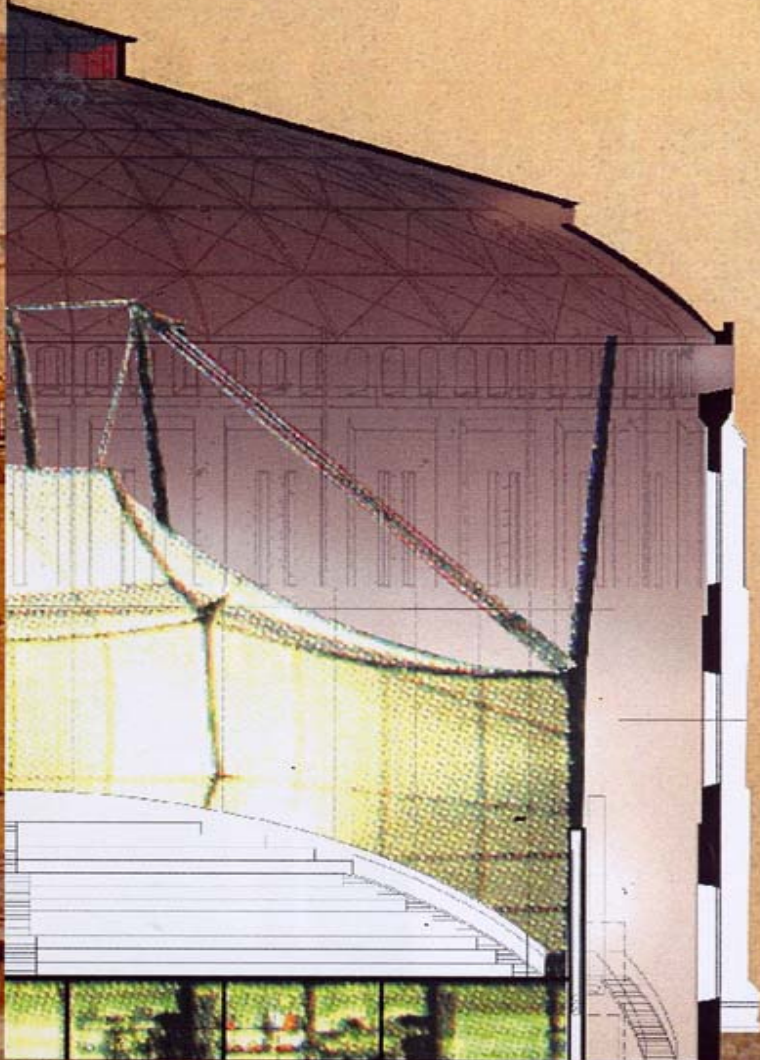
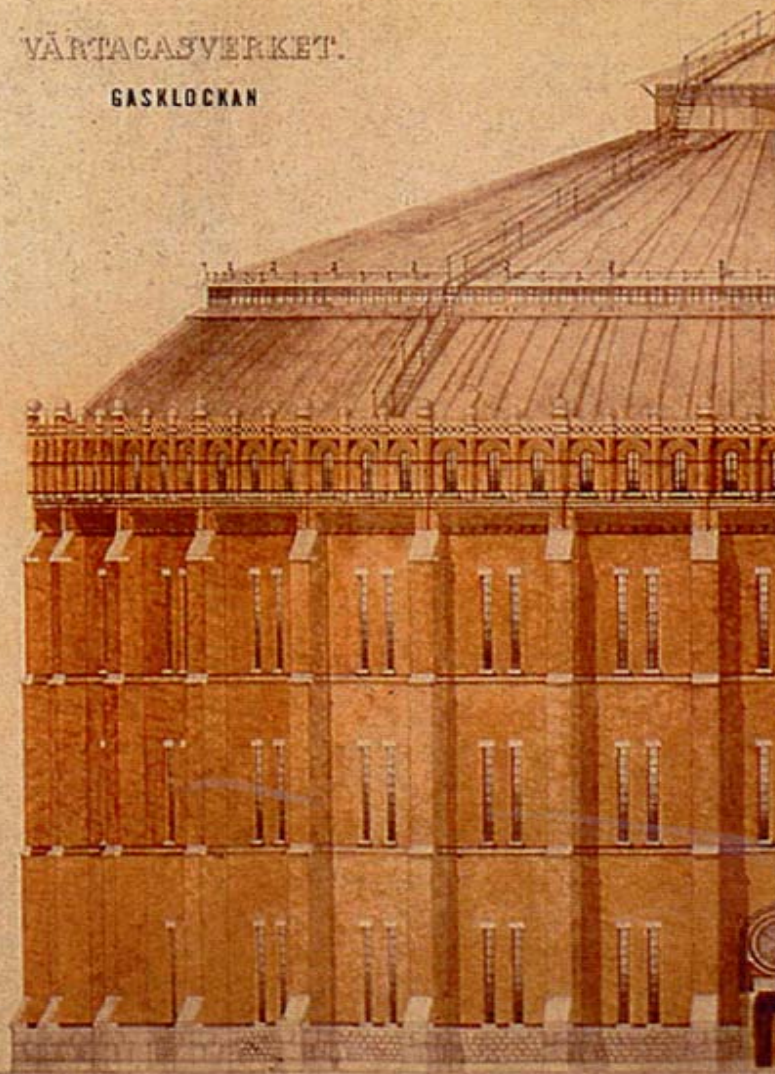
Critically endangered Longhorn Beetle, *Plagionotus detritus*





VÄRTAGÅSVERKET.

GÅSKLOCKAN











Conclusions

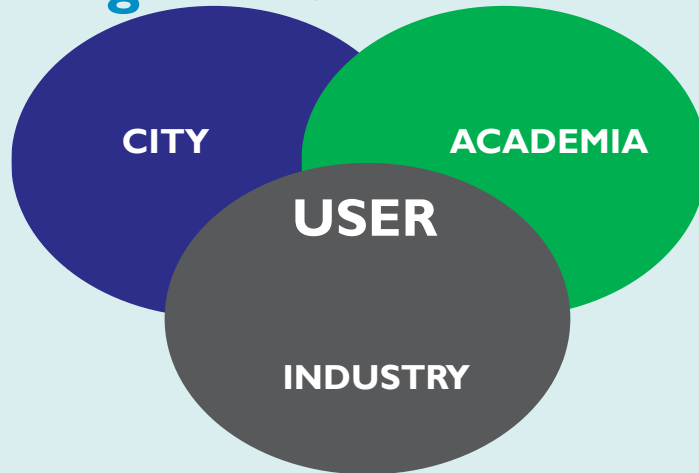
Density

- Green areas/new houses
- Shortage of land
- Climate changes
- Social segregation
- Energy supply
- Means of transport
- Complex planning

Think

- Multifunctionality
- Reuse land, harbour-areas, brownfield
- New technology
- Form of tenure
- Flexibility in energy sources
- Public transport/cars
- New planning tools

Together!



"No one can do everything, but everyone can do something"



STOCKHOLM CITY PLANNING ADMINISTRATION