

MIA application Stockholm Royal Seaport Hjorthagen

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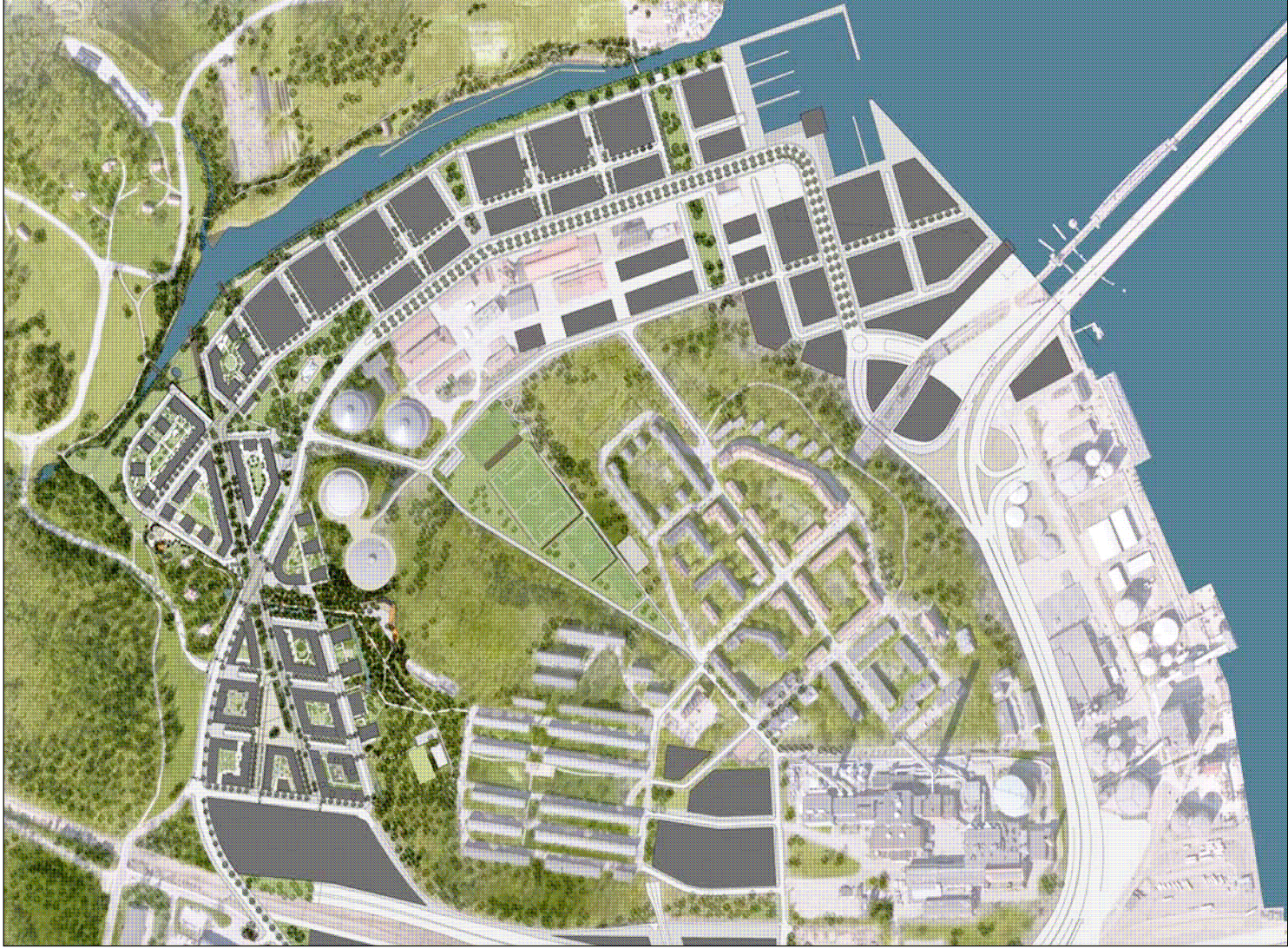
Peter Schmitt



The project

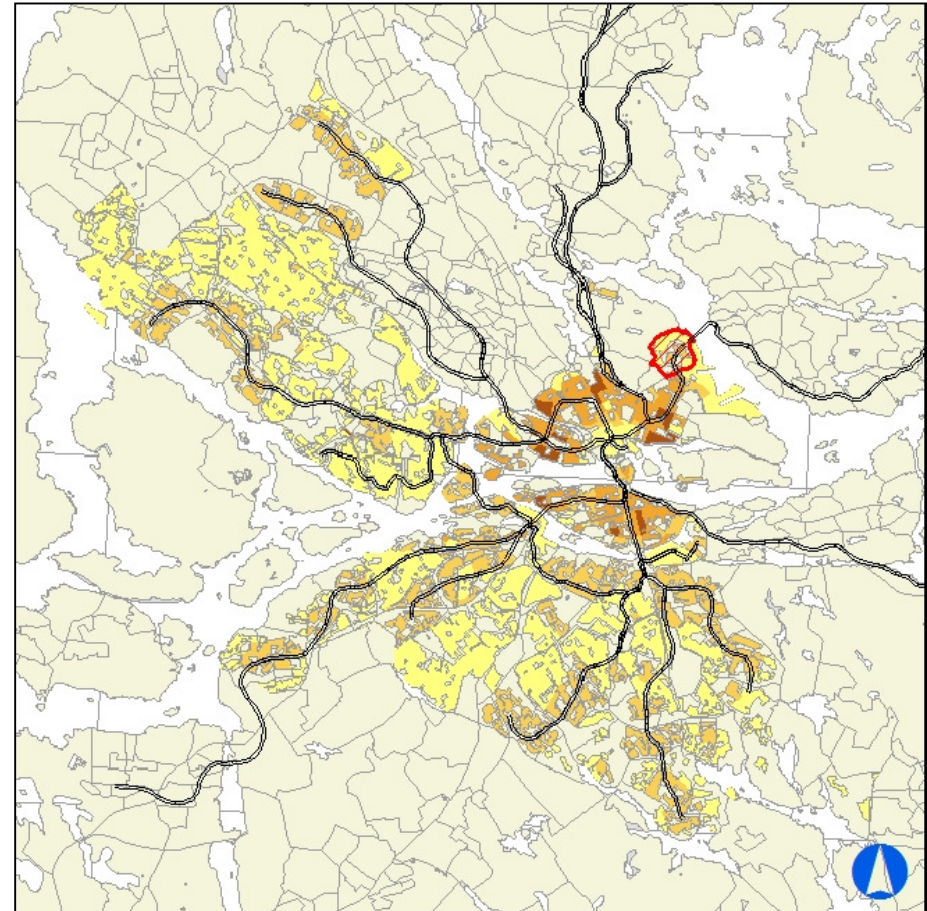
- Hjorthagen is the first phase of three
- 2010-2025
- Reuse of brownfields in central Stockholm
- 1.5 tons CO2 per capita
- Mixed use district
 - 13 700 residents
 - 5 000 apartments





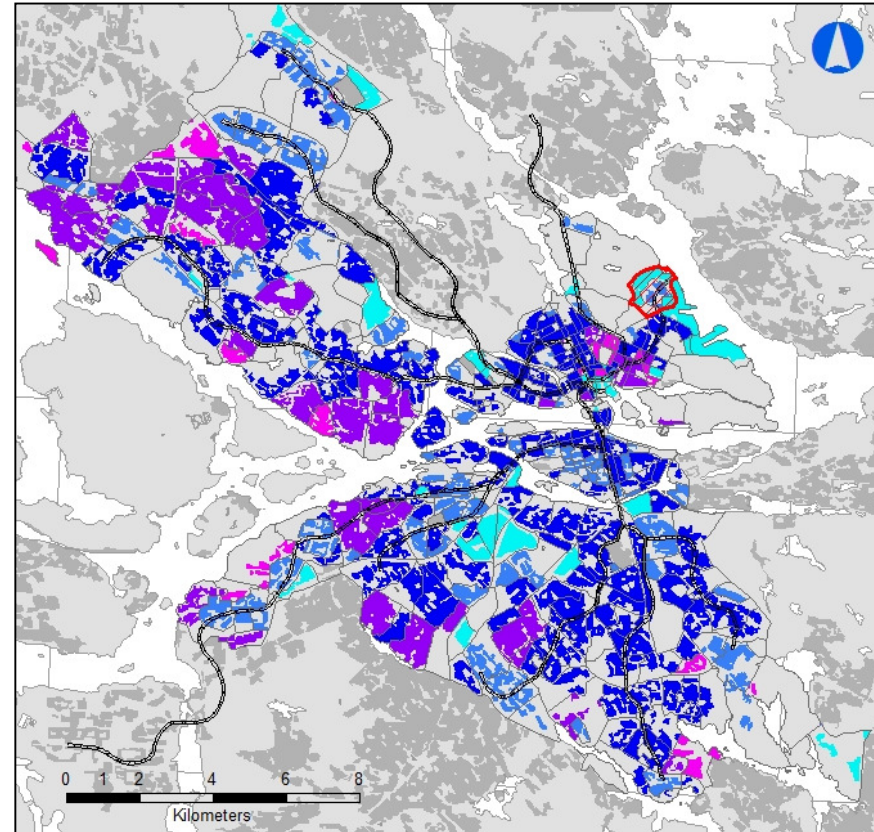
The context: City of Stockholm

- More than 810 000 inhabitants
- Transit oriented urban structure
- Fragmentation due to vast protected green and cultural valued areas
- High demand of buildings in central areas
- Focus on transforming former industrial areas into residential and service areas



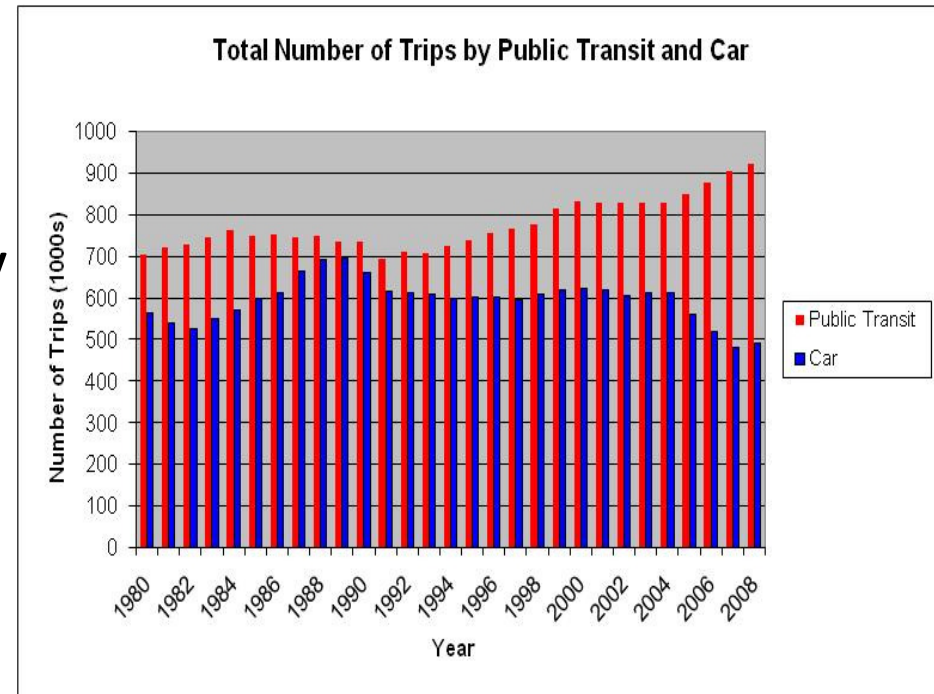
The context: City of Stockholm

- Decreasing energy consumption in the residential sector
- Energy system based on district heating (37%)
- Emphasis on increasing the share of renewable
 - Biomass and municipal waste
- Challenge resides in achieving further energy efficiency and incorporating new renewable sources



The context: City of Stockholm

- Increasing congestion
 - Roads
 - Public transit
- Decreasing private car transport towards the city centre during peak hours
 - Congestion charges
- Goals on increasing accessibility
 - Public transport
 - Cycling
 - Walking



The project: Measures

- High energy efficiency in buildings
 - Insulation
 - Passive solar technology
 - Geothermal technology
 - District heating
 - Reuse of residual heat
 - Wind and photovoltaic
 - Biogas production from sewage
- Water saving
 - Water efficient devices
 - Reuse rainfall waters for irrigation

The project: Measures

- Transport
 - Increased accessibility
 - Walking
 - Cycling
 - Public transit
 - Limited parking
 - 0.5 parking places per household
 - High parking fees
 - Car pooling
 - Personal transport plans for residents and workers
 - Transport calming measures

The impacts

Indicator	Stockhom Royal Seaport	City of Stockholm
Residential energy consumption (m2)	55 Kwh/m2	196 Kwh/m2
Residential energy consumption (Capita)	2 668 Kwh/cap	8 588 Kwh/cap
Residential space per inhabitant	49.6 m2	38.3m2
Car ownership	0.185 cars/capita	0.364 cars/capita

The impacts

- Increase of energy demand by at least 44.5Gwh/year (0.3%)
- Increase of height of buildings
- Introduction of new building technologies and standards
- Further integration of renewable energy technologies
- Reduced dependency on automobiles

Challenges

- Integration of new technologies
- Change the behavior of residents
 - Consumption habits
 - Transport habits
- Social integration