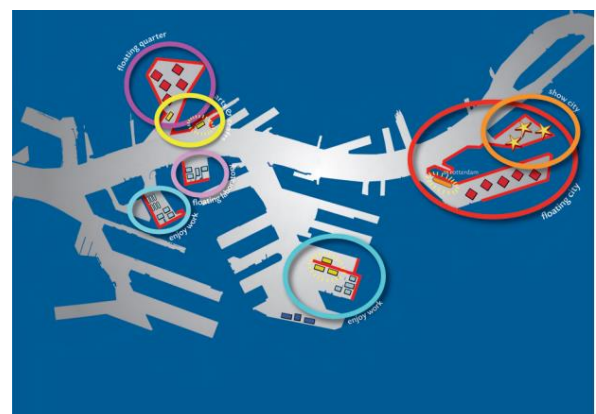




Within this plan every part of the inner harbor has been appointed a strategy. Some have already been developed; de Loydpier, de Mullerpier, Wilhelmina Kade, Entrepot gebied and of course Katendrecht.

The Maashaven has been appointed as a test case for floating houses. By developing this area and inhabiting this huge empty surface. The connection with the southern areas will be made and the border will be crossed.

This plan, stadshavens, has been made in collaboration with Rotterdam Climate initiative. Taking the climatic changes into consideration the sea level will rise. The amount of water surface in Rotterdam is quite big. The areas to develop new buildings will be scarce and therefore building on the water seems to be the solution for both those problems. Rotterdam is investing into technologies of floating structures. Examples are already being build, the dome in the Rijnhaven next to the Wilhelmina kade. The RDM-Campus, a school were different levels are participating and working together to work on floating structures is situated nearby at the Heijplaat and organizations such as Deltasync are exploring the possibilities of building in or on top of the water surface.



Stadshavens Rotterdam 2011, "floating community"

### *Social connection*

The social connection is aimed on the cultural difference in these two areas. Katendrecht is a mixture of families and relatively high income people together with the original inhabitants which are part of the social housing. The Tarwewijk consists mostly of immigrants and low income people. To draw these people into each other's neighborhood research will be done to find the optimal mix of functions.

### *Objectives*

The social and physical connection is the final objective.

However in this project focus will be on phase 1. which means connecting the 2 shores and including some main functions to draw people into this area from both target groups. This will help to draw potential investors into this area and to showcase the floating community possibilities. It will be the starting point for the entire floating community in the future.

The building will not only be a bridge to make the physical connection. But will be part of the landscape to create a public landscape in which people flow will determine the spaces occupied by the functions. Different target groups have different routes based on different behavior.

The traditional top down design strategy will be combined with a bottom-up strategy. Data acquired from urban analysis; think about people flow, solar radiation, ship restrictions and environmental functions will be mapped and used in the computational design strategy. The software will help to create the necessary simulations which will be used in the eventual design process.

### **The relationship between the methodical line of approach of the Hyperbody graduation studio and the chosen design method.**

Hyperbody is about Research driven design to create nonstandard and interactive Architecture. Therefore the relation between research and the actual design process is important and will be treated as one system. With the help of parametric design methods input data is used to determine design steps. These steps influence the input data. This is called bottom-up strategy and treat the input data as parameters. This system is used in several stages along the process for example the function location determination resulting in a self-organising program distribution system. The research driven design process helps to create simulations such as people flow or solar radiation studies. This will help to create a building not only most sufficient to these subjects but also interactive on these matters.

### **The relationship between the theme of the studio and the chosen subject**

The theme of the studio covers Climatic Ecologies. The building will be situated on the water preparing for a floating community. This floating community is prepared for the rising water level and will be showcasing the floating housing.

With help of a solar radiation simulation the building and its openings can be orientated on the most sufficient places to gather as much solar radiation as possible and provide in as much sunlight as possible.

The building serves as a bridge and will be a building based on the people flow which is simulated using computer models and different data input. The surfaces occupied for the functions are determined by the paths which are a direct result of the path simulations. These paths are following a shortest walk and minimal path strategy, both optimized by computing multiple iterations.

### **Project in the wider social context**

The ambition of this project covers a wide social context. It is about connecting two completely different areas in a physical matter as well as a social matter.

The project aims on phase 1 in an urban strategy which will influence the entire area. The surrounding will benefit from the innovative structure by drawing potential investors into the empty buildings.

And tourism as well as higher incomes will arrive at the newly developed parts of the city.

These goals meet the goals set by the municipality. They are developing former harbor areas into high quality living environments. And following the examples such as the Wilhelmina kade and Katendrecht, the Tarwewijk will benefit from these investments.

The project is all about connecting two parts of Rotterdam South. Getting people from both sides into the building and to use the public space this building offers. And eventually the Tarwewijk will follow the Katendrecht example and become one of the more popular areas to live in.

*I hope to inspire the municipality of Rotterdam by this project. Show them that the revitalization of Katendrecht should be used to inspire the less attractive neighborhoods on the other side of the Maashaven. Not by investing into the area itself but by using innovative architecture playing to the municipality desires and future ambitions concerning floating structures and developments in empty harbor sites. The Hyperbody graduation studio helped me to create a non-standard, research driven design which is not only innovative on terms of location and purpose but also in architecture and design process.*