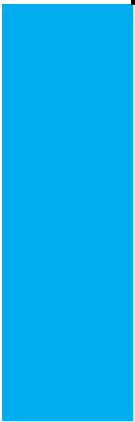


Graduation Plan

Master of Science Architecture, Urbanism & Building Sciences



Graduation Plan: All tracks

The graduation plan consists of at least the following data/segments:

Personal information	
Name	Guus Mostart
Student number	1316753
Telephone number	0613398043
E-mail address	guusmostart@gmail.com
Studio	
Name / Theme	Hyperbody: Non Standard & Interactive Architecture
Teachers	Dr. Henriette Bier, Dr. Nimish Bilorla
Argumentation of choice of the studio	The studio offers the possibility to step away from the 'standard' architecture and offers a fresh look at modern and state of the art design approaches and computational techniques and knowledge, which could be 'in my opinion' very useful for professional use in the future.
Graduation project	
Title of the graduation project	Reintegrate M4H
Goal	
Location:	Merwe-Vierhavens Rotterdam
The posed problem,	Merwe-Vierhavens is an old harbor area of Rotterdam, which currently is losing its original function with the relocation of the harbor functions to the 'Maasvlakte 1 & 2', on the outskirts of the City of Rotterdam. The increasing vacancy of the existing buildings and the isolated character – due to disconnected infrastructure, the monolithic existing program and the overall low quality of public space – are the main problems of the Merwe-Vierhavens.
research questions and	This raises the following questions: How can an architectural intervention in the Merwe-Vierhavens give new meaning and bring new life in the area? How can the Merwe-Vierhaven be reconnected in its surrounding urban fabric? And what does it take to increase the overall quality of the public space?

<p>design assignment in which these result.</p>	<p>The goal of this architectural assignment is to design a building that reconnects – both on a physical as well as on a social level – the port of Merwe-Vierhavens and the project location to its direct surrounding and to the city of Rotterdam. The aim is not only to inject a variety of program and functions – those of which are lacking – into the area, but also to create, transform and shape the public space, in a way the variety of program and use of public space can maintain its own intervention as well as its surrounding in a social and architectural sustainable way.</p>
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<p>Process</p>
<p>Method description</p>
<p>Research analysis and problem/opportunity finding on different scales: City of Rotterdam and the ports of Rotterdam Merwe-Vierhavens and the SOM towers</p> <p>Workshop conducted Hyperbody studio: exploration of computer aided robotic fabrication of architectural elements.</p> <p>Design: The design methods employed in this project revolve around the research of emergent swarm behavior and interaction of intelligent agents. Social, functional, physical and climatic factors will inform the agents to change their behavioral patterns. This fits the parametric and computational approach to architectural design of the studio Hyperbody. Top down design strategies will give form to agent bases bottom up design choices.</p>
<p>Literature and general practical preference</p>
<p>Bier, H and Knight, T., Digitally-driven Architecture, Footprint Issue 6, Stichting Footprint, 2010</p> <p>Borries, F. v., Walz, S. P., Böttger, M. (2007). Spacec Time Play: Computer Games, Architecture and Urbanism: The Next Level. Birkhäuser</p> <p>Marušić, B. G., Nikšič, M., Coirier, L. (2010). Human Cities: Celebrating Public Space.</p> <p>Lefebvre, H. (1987). Right to the City</p>

Schubert, D. (2014). Contemporary Perspectives on Jane Jacobs. Ashgate Publishing Ltd

Negroponte, N. (1975). Soft Architecture Machines. Cambridge, Massachusetts, London: The MIT Press.

Haque, U. (2006). Architecture, interaction, systems. Arqitetura & Urbanismo, AU(149).

Reflection

Relevance

There are many city just like Rotterdam who are facing the same problems of isolated and vacant old industrial areas, mostly in or directly against the city center. The moving out of the industrial functions leave a hole in the urban context. A non standard bottom up approach that aims to tackle these problems on multiple levels could generate successful results or helpful design approaches for other comparable situations.

Time planning

Week 36-40

Research and analysis

Week 41-43

Workshop Robotic Fabrication

Week 44

P1 preparation and P1 Presentation

Week 45-51

establishing a parametric model and design strategies

Week 2-4

extending the parametric model.

run simulations

formulate individual concept design proposal

formulate graduation plan

Sketch plans, sections and volumes

produce P2 presentable products

P2 presentation

Week 5-9

Refine concept if needed

Further development of parametric model and agent simulations according to P2 critiques

Week 10-15

Finalize agent simulation methods and parametric model

Structural and climatic research and optimization

Plans, sections, façade and details

proposal for 1:1 prototype

produce P3 presentable products

Week 16

P3 Presentations

Week 17-19

1:1 prototype

Structural and climatic research and optimization

Plans, sections, façade and details

produce P4 presentable products

Week 20-21

P4 Presentations

Week 22-25

finalize all design aspects

architectural visualizations and animations

Produce P5 presentable products

Week 26-27

P5 Presentations