Study Plan

The study plan consists of (at least) the following sections:

Personal information	
Name	**Leander**
Student number	**4029798**
Address	**Franselaan 220a**
Postal code	**3028AN**
Place of residence	**Rotterdam**
Telephone number	**0620099923**
E-mail address	**jetflaque@hotmail.com**
Studio	
Theme	**Hyperbody: NS&IA**
Teachers	**Henriette Bier, Nimish biloria**
Argumentation of choice of the studio	- The focus is on architecture and IT technology as opposed to (almost all) other studios while it still deals with realizable architecture - The studio is challenging in the sense of not only generating complex architecture but also making it realizable. - I don't want to graduate with a "generic architectural product" I want my graduation project to be something special. Hyperbody, as a studio, encourages this whilst still maintaining a structured approach.
Title	
Title of the graduation project	**NDSM-wharfs future public Expo and Exhibition**

Product

Problem Statement

Located on the North side of the IJ river, separating the north side from the south side of Amsterdam, the NDSM wharf is a site with long history of shipbuilding and industry, which, mainly due to the uprising of Rotterdam harbor, was terminated back in 1978. After the abandoning of the several shipbuilding companies there, the deserted industrial site gradually became a "breeding ground" for artists and artistic companies. Nowadays the site is a cultural hotspot in Amsterdam, hosting a large number of creative companies, several events and attractions, as well as large media companies such as MTV. The municipality of Amsterdam is currently developing plans for further development of that area and intends to make the NDSM wharf "part of the city centre" located on the other side of the IJ river.

This plan however collides with the policy of creating more housing and business opportunities in Amsterdam. The current master plan for the NDSM wharf as such is thus mainly focused on housing and offices, leaning more towards the creation of a business centre or a suburb. My intention as such is to generate a building which acknowledges and possibly reinforces the existing cultural and historical qualities on site. This raises the question:

"How can I reinforce the existing historical and cultural qualities of the NDSM wharf in Amsterdam?"

Goal

The goal is to create a publically accessible building which exhibits the different historical monuments and characteristics of the NDSM wharf as well as being host to a changeable expo of the different cultural products, creations and events on site. The project will also take in account another graduation project from the same studio by Lieke Kraan.

Process

Method description

One specific trademark of the context is its large vastness, the site is a large open area with several historical and cultural attractors. To map and visualize the relation between these attractors and factors on site agent based simulations will be used. By analyzing the results of these simulations, conclusions can be made with regard to public/private zones, topology and location as well as morphological translations. From these conclusions, different agent based simulations can be set up that allow the mapping of functions. State of the art digital research tools will be used such as Grasshopper, Processing and Ecotect.

Further research will involve the works and theories of conceptual artists Joseph Kosuth and his ideas on how the (meaning of) different elements of the exhibition can be re-enforced by the context in which they are placed in, and how this can be translated to architecture. Another research focuses on the use of electro chromic windows and how they can be applied in CNC produced building components.

Theoretical and practical references

Joseph Kosuth - Re-defining the Context of Art: 1968 - 2004 'The Second Investigation', Exposition VanAbbemuseum,

Joseph Kosuth – Art after Philosophy (1969) essay
http://www.scribd.com/doc/32913914/Art-After-Philosophy-1969-Joseph-Kosuth

Adviseurs BVR, DRO Amsterdam, Masterplan Noordelijke IJ-oever Amsterdam: Noord aan het IJ, Oktober 2003, BVR & Dienst Ruimtelijk Ordening Amsterdam

De Architekten Cie, DRO Amsterdam, Strategiebesluit NDSM werf: April 2008, de Architekten Cie, & Dienst Ruimtelijk Ordening Amsterdam.

Gemeente Amsterdam Noordwaarts, Factsheet NDSM –werf 2011

Syrrakou, E. and Papaefthimiou, S. and Yaianoulis, P. 2006 Eco-efficient evaluation of a smart window prototypes, Elsevier, Science of the Total Environment 359, pp. 267-282

Sbar, N. and Badding, M. and Budziak, R. and Cortez, L. and Laby, L. and Michalski, T. and Ngo, T. and Schulz, S. and Urbanik, K. 1999 Progress toward durable, cost effective electrochromic window glazings, Elsevier, Solar Energy Materials & Solar Cells 56, pp. 321-341

Eleanor, L.2006 Design guide for Early-Market electrochromic windows , Lawrence Berkeley National Laboratory, California.

Müller, A. and Ritter, A. 2007 Colour-and optically changing smart materials, , Smart materials in architecture, interior architecture and design, Brinkhäuser publishing, pp. 72-97

Hellinga, HY. And Lelieveld, CMJL. 2011 Intelligente daglichtsystemen: de toepassingsmogelijkheden, TU Delft faculty of architectur and building technology.

Websites:
http://nl.wikipedia.org/wiki/Mediawharf
http://www.ndsm-werfmuseum.nl/de-werven/ndsm
http://ndsm.nl/
http://ndsm-museum.nl/
http://www.ilovenoord.nl/

Reflection

Relevance and output

The projects main aim is to create a public space/building with a distinct connection to the NDSM's history and present culture, in order for the NDSM to develop further as a unique attraction point and future part of the city centre. A place for the former dockworker to be proud of and the preservation of the site's history, the local artist and the continuation and development of the current breeding ground, the local yacht component manufacturing company who can provide parts for the building, the inhabitant from the other side of the IJ river and his or her visit to a new part of the city centre to the tourist from abroad exploring this to his/her unknown part of Amsterdam. The Technical relevance lies mainly in exploring the various state of the art design tools as well as the translation to a (CNC) component(s) to materialize/construct the building with regard to the possible incorporation of electro chromic windows and the research on that. On top of that there is the research regarding the work of Joseph Kosuth on how an (art) object and the context in which it is displayed are intertwined and if executed properly can reinforce one another. Research on this will translate into an architectural result.

Time planning

P1: April 2012
- *initial concept*
+ Thematic and theoretical research.
+ Situation and statistical research of the general area.
+ Problem statement and exploration of the tools to address it.
+ Computational tool development to understand the optimal location and characteristics of the project according to the distinct datasets.

P2: June 2012
- *Defining the approach*
+ Architecture:
Location plans (Urban draft) - *1:5000 / 1:500*

Plans, façades, sections and basic volumes (Draft Design) – *1:200 / 1:100*

+ Project functional requirements.
+ Process overview of the parametric model determined by a multi-agent system that manages the morphological changes of the building according to the topological mutations required by the program..
+ Preliminary structural and climatic research.
+ Graduation plan.

P3: Januari 2013

- Defining the project (architecture).

+ Determine the final design by critically improving the previously created tools for P2.
+ Architecture:
  Location plans (urban scale) - *1:1000 / 1:500*
  Plans, façades, sections - *1:200 / 1:100*
  Plans and cross-cuts of relevant sections of the building - *1:50*
  Façade fragment - *1:20*
  Details - *1:10 / 1:5*
+ Exploration of the Interactive and/or kinetic systems within the building.
+ First structural and climatic results.

P4: March 2013

- Refining the building (construction).

+ Theoretic and thematic support of design and research to frame the position of the project within the Interactive Architecture Domain.
+ Architecture:
  Location plans (urban scale) - *1:1000 / 1:500*
  Plans, façades, sections - *1:200 / 1:100*
  Plans and cross-cuts of relevant sections of the building - *1:50*
  Façade fragment - *1:20*
  Details - *1:10 / 1:5*
+ Structure and materialization design for the Rapid Prototyping and CNC fabrication process.
+ Rapid Prototyping and CNC production of the physical model as a proof of concept of construction system.
+ Modification and further refinement of the architectural design due to the structural and climatic results.
+ Interactive and kinetic system.

P5: April 2013

- Wrap-up presentation

+ Theoretic and thematic support of design and research to frame the position of the project within the Interactive Architecture Domain.
+ Architecture:
  Location plans (urban scale) - *1:1000 / 1:500*
  Plans, façades, sections - *1:200 / 1:100*
  Plans and cross-cuts of relevant sections of the building - *1:50*
  Façade fragment - *1:20*
  Details - *1:10 / 1:5*
+ Perspectives and orthogonal views of the design.
+ Physical model by means of Rapid Prototyping and CNC production.
+ Interactive presentation showing concept, information models, and behavioral diagrams.

Attention

Part of the graduation (especially in the MSc 4) is the technical implementation of the building design. Therefore a Building Technology teacher will be involved in the tutoring team from the P2 presentation on. This should be taken into account when writing the study plan / personal graduation contract, with

respect to the time planning as well as in the relation to the content (e.g. statement, method and /or relevance).