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THE FLOATING FUTURE
A floating pavilion on the Markermeer

MSc. Architecture - Delta Interventions
P5 Reflection

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01. Delta Interventions as graduation lab

The relationship between the theme of the graduation lab and the subject/case study chosen by the student within this framework (location/object)

This project, The Floating Future, is a project that has been done within the Delta Interventions studio. By choosing the Delta Interventions studio as the graduation lab, the main theme of this studio, designing with water related issues such as flood risk management, automatically became the main theme of this project.

‘Due to a changing climate and new insights concerning sustainability, new interventions will be needed. In addition to safety and better water-systems, there is a need for stronger spatial identities and new cohesion between cities and their water-landscapes.’ ‘Delta Interventions therefore is an interdisciplinary studio which, on a wide variety of scales, deals with transformations in delta landscapes.’ (Semester booklet Delta Interventions 2014)

By interpreting climate change and sustainability as the main reasons for new delta interventions, the urge to intertwine these subjects into this project became important as well, the urge to develop a design in which not only current (water) problems will be tackled but also future (water) problems will be reduced and tackled.

The location of this project is one of the two (Houston Bay, USA and the IJsselmeer area, NL) assigned locations within the delta interventions studio: the Markermeer, NL. The Markermeer is a water body that completely regulated by the Dutch delta interventions that have been done in the history to protect the country against water and a water body that has been assigned as the first water body for large-scale building-on-water projects of the Netherlands.

02. The assignment

The relationship between the theme of the graduation lab and the subject/case study chosen by the student within this framework (location/object)

Delta interventions students are free to choose their own subject of interest. The subject of this project is based on both the fight against water in the Netherlands and the urge to become more sustainable to save our civilization from future problems. Becoming more sustainable is not only in the hands of architects; it’s in the hands of every single individual. Awareness is one of the ingredients needed to change an individual from being unsustainable into sustainable. The most effective way to provide people with awareness about sustainability is to reflect on them by showing an example of how it should be, an ideal world.

Therefore, this project is a design of an education centre, a floating pavilion that is floating around on the Markermeer. The pavilion is self-sufficient and all the measures made to become self-sufficient are visible to create awareness.

A research question is formed at the beginning of this project:

*How to design a floating pavilion that provides awareness about climate change and sustainable future design on water?*

Research questions:
- What takes the pavilion from nature and what does it return?
- Which existing techniques can be used to create a self-sufficient pavilion?

Design questions:
- How can the building shape (orientation) contribute to self-sufficiency?
- What programme of requirements is needed for providing awareness?
Awareness of climate change and sustainability!

A floating pavilion ... on the Markermeer ... in a sustainable way.
03. Methodology

The relationship between the methodical line of approach of the graduation lab and the method chosen by the student in this framework.

The relationship between research and design

Research and design methods in the delta interventions studio have been done to give students an insight of delta system. Three of these methods are:

- Case study analysis
- 3*3*3 analysis
- Research by design

The case study, done in the beginning of the graduation process created the first ideas for this project. By analysis an existing building with strong relations with water, tools that the architect used in his/her design become visible.

The 3*3*3 analysis is an analysis in which the locations will be separated into three time scales, three location scales and three types of infrastructural elements. During this analysis, different disciplines such as architects, urban planners, urban designers, landscape designers and civil engineers are working together. Analysing the location by three different times provides information about the way the location changed over time and can be helpful to predict the location in the future. The scale analysis has been done on the following scales: the regional/delta scale, the city scale and the neighbourhood scale.

The case study analysis and 3*3*3 analysis were mainly used to create ideas and a starting point for this project. The methodology applied during this process started with the problem statement (see chapter 01). The goal, objectives and assignment (see chapter 02) where formed in a way that the end product is a solutions to the problem statement. A lot of research has been done to develop a design that fulfils the objectives and goals of this assignment.

The research can be divided in two kinds of researches:
- Research by literature
- Research by design

The research by literature was needed to enlarge knowledge about different aspects such as building on water, building sustainable, etc. Research by design is making the design itself and finding a solution to every problem appears. The research by design phase has been an iterative process in which a step back in the methodology is needed to make a step forward. Once the problems were solved and the objectives and goal were achieved, the design can be called final. From this final design conclusions can be drawn.

04. The architectural and social relevance of this project

The relationship between the project and the wider social context

The architectural relevance

The end product, this project, has become a pavilion that is flexible in many ways, that is self-sufficient and offers a solution to future water problems. Floating buildings is not something new, neither are flexible buildings and self-sufficient buildings but the combination of these three aspects is something I haven’t seen before and in my opinion is the basis for future design on water.

The wider social context

The function, an education centre, provides awareness to the visitors in a subtle way to change their mind and become sustainable, because in the end every individual should change his/her behaviour to save the world from depletion and save our civilization.
Depletion of the world
Lack of space
Changing water patterns

Problem statement

Goal and objectives

Site
3*3*3 analysis

Sustainability
Trías energetica
Renewable energy
Self-sufficiency
Materials
Flexibility
Water use

Adaptable constructions

Building on water

Awareness
Conscious - receiving information
Conscious - uptake information
Unconscious - uptake information

Climate change
Changing water patterns
Rising water level
Depletion of the world
Increasing temperatures

Precedents
Papaver - Delft
Floating pavilion - Rotterdam
Solar Decathol - Revolt House
Thales Naval - Delft
WNF headquarter - Zeist
And more

Research by design

Research

Assignment

Programme of requirements

Planning

Target group

Use

Self-sufficient

Providing awareness

Conclusions

THE FLOATING FUTURE