Title: Reflection P4
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Abstract: In this document a reflection is given for the results gained during the graduation phase. This consists for the research and design phase. An answer is given to the question if the approach method that was chosen has worked and to what extent.
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Introduction
During the graduation studio of Architectural Engineering students have the possibility to choose a technical fascination, research this to the best as possible and implement this into a given location. For my graduation I had the fascination to build with cardboard. I have chosen the coastal area to challenge myself.
First the relationship between the way the research and design has been done in line of the graduation lab and the relation between the research and design itself. Then the relation between the subject and the theme of the graduation lab concluding with the subject in a wider social context.

Graduation Method and Process
During the first half of the graduation studio it is all about finding answers to question that will be used in the design later on. In the second half year these answers will be used to make the design and hopefully will give body to the design. Of course new questions will arise but it is all about making yourself an expert about your subject.

In the beginning it is hard to make the process iterative. The gaining of knowledge is good but some questions are only relevant if they can be implemented in the design. Therefor it is essential to start this process as soon as possible. Of course in the beginning a finding of a research question is a linear process. The defining of this takes a few months but also the implementation in the context. A context can give lots of guidelines to the research.

I had chosen to make the research as realistic as possible. Because I chose a material which has almost no literature in relation to construction I had to find my answers elsewhere. I made appointments at cardboard factories, cardboard knowledge centers, did my own test with cardboard and tried to get in contact with people whom tried this before. In a very short time I had a lot of data but by starting to implement the location some data became less relevant then other.

This is quite a different method then other students of the study but I know have the idea that I know almost everything there is to know about cardboard and specifically in relation to the coastal area. For the design phase drawing cardboard connections is not sufficient. The making of these connections is the only proof of the working. Therefor the constructional method was for me more relevant which gave me a setback on architectural design. The method to make the design as realistic as possible definitely has pro’s and con’s.

Relation Research and Design
The research phase gave me a lot of feeling for the material. I knew its possibilities, the different types and the strengths and weaknesses. But this was for a design perspective not enough it was the configuration of this data into useful facts for designing. The question what the cardboard derives for has been mentioned many times and it took me quite some time to acknowledge this. This translation took the most time but was also the most important. In my design I have made sure that the cardboard is only used where its properties are benefited to the maximum, also in relation to the assignment.

Relation Subject and Case Study
During the graduation study of Architectural Engineering the locations of Van Gendthallen, A12 near Utrecht, IBA, Amsterdam Sloterdijk and Coastal Area were presented. Also there is the possibility to choose an own location if your subject did not suit the locations. I chose for the Coastal Area since this is the most challenging for cardboard. Later during the research I found some properties of cardboard which could be benefited on the beach; lightweight, digestible and foldability. These properties needed to be translated into design principles and this resulted in the design for the case study but also the assignment.
Graduation project in a Wider Social Context

In the wider context I wanted to prove that building with cardboard is possible and change the image of cardboard. But not only that, after the research I knew it would be possible to make the whole structure out of cardboard but that it would not be the wisest thing to do. Therefore I want to show that building with cardboard can be done and should be done smart.

Figure 1: Combination of cardboard and other materials in the beach house.