In this paper I reflect on my graduation project and process. To give a short introduction of my process and to understand the answers on the questions of this reflection better, I will start with a short timeline:

The project started in September two years ago, I followed normal procedures. Took the P1, P2(no-go), P2 and P3. Nearing the P4 I realised I wasn't going to make it and stepped out. From that moment I tried to work on my own and finish the project, this didn't work out. Somewhere in early December I contacted my first mentor again. I joined the 'lang afstudeerders' group and late February I got two new mentors appointed and restarted the project from scratch.

In the reflection I follow the questions stated in the graduation manual. See the manual for more context of these subject.

- if your approach worked
- your understanding on the "how and why"
- your reflection upon the feedback that was given by your mentors
- how you have translated the feedback into your work
- how you've learned from your own work.

There are also 5 aspects mentioned in the manual which I will address as last.

How and Why of the study plan

The posed problem and research question of the graduation report changed when the P2 was a no go. After the no go I evaluated my research and concluded that I put too much weight on some of the findings. This changed the scope and research question of my project. I didn't change the report then, so this will be the starting point of the reflection.

Graduation report

The posed problem.

The problem still lays in the weak social economical neighbourhood, high housing prices and lack of development. Also the area is still vulnerable to flooding, where small companies and households will be affected.

> In this area at the waterfront the municipality has plans for new development. Stadiums, businesses, residential units and entertainment. This might bring new opportunities for the community, however there is a major disconnection between the development area and the community, caused by a high- and railway.

Source: Own graduation report

This stated 'disconnection' is where I put too much emphasis on. Firstly the area is sufficiently reachable by car, secondly in the new development plans a pedestrian walkway is proposed which is highly accentuated and will become the new boulevard of the plan. This walkway crosses the railway,

streets, river and connects the current Oakland neighbourhoods with the waterside and new development plan.

Without this disconnection statement there is still more than enough problem to address. The weak demographics and vulnerability for flood is on its own a significant problem. New statement:

The Oakland community adjacent to the San Leandro bay is underdeveloped. Poor population, low graduation rates and high crime rates. This is not something from today, after World war II due to people and jobs leaving Oakland plus planned racial segregation in the city, the area has been lacking behind in development. This in contrast with the booming silicon valley.

Another problem are the house prices, these have been sky high last years, which do not match the income level in any means. Prices are much higher than the average of the USA. This takes a big cut out of peoples income.

These weak demographics are a precursor of upcoming problems of an area which is prone to flooding. As shown with New Orleans the social vulnerable areas are the least resilient to flooding. The areas most exposed are those direct to the waterfront and along creeks. Small businesses and companies will be effected first, households will follow, if no precautions are taken.

Secondly, while the project is directly located at the waterfront is doesn't address enough the sea level rise which will cause flooding in the near future. Especially with the scale of the project flood precautions could be easily integrated.

Concluding the social economical weak area is extra vulnerable for floodings, this is a proble which should be adressed.

The research question:

How can the community be connected tot he waterfront and stadium project in such a way that the connunity can fully benefit from the developments and bay area, while also maintaining a safe level of flood risk. Brond repport

As stated at the posed problem, the question emphazises the disconnection too much, the problem is much simpler.

How can the vulnerability to flooding's of residents of the newly build neighbourhood be decreased, while also providing a platform for forming a stronger social economic community.

The design assignment:

The design asks for an intervention which bridges the physical boundaries, next to this it should support the community in terms of job/education opportunities and give space for own initiatives.

In a more practical description, the design will be a bridge typology crossing the railways and creek and sets up the crossing for the highway, towards the waterfront. The program will contain a community centre which provides room to set up own initiatives and gives support by job education. The bridge is located in such a way it can provide extra flood protection but also makes a green connection to the waterfront.

The design assignment has changed, the focus lays now in the development of a terp or levea in the neighbourhood which provides a safe haven in times of need. This terp will support the community in that it provides a space for recreation, meeting people and education. 3 important factors which reduce social vulnerability. The main objective is designing a school on this tarp which functions an educational institution and as an evacuation centre.

Method description:

Literature study: Reviewing literature.

Case study: Typology studies and comparing relevant architecture. Review design solutions in other deltas and areas.

Site analyses: comparing/tracing/abstraction of maps, history, demographics, planned developments.

Research by design: Sketching, 3D modelling, abstracting, analysing own design

Discussing and reflecting choices and ideas: Self monolog written or in doc. Tutoring.

Sketching: Hand, tracing

3D Modeling: Revit, sketchup, experimenting with parametric design

Digital drawings: rendering, photoshop

Diagrams: sketch, illustrator

I agree in the methods proposed, this is exactly what I did, but in my opinion it is about the process and not the method. I have proposed sketching as method, this is obvious of course. I should have been more specific in my methods and mainly the process. I think this should be the main part of the report and get more attention. The problem statement and research question is the easy part, designing the whole project and being lost in your own process is what it was about in my graduation. When I was on the right track again in being aware about my own process it went much more easily.

Questions

- if your approach worked

Did it work, apparently not. This mainly due to a few key factors missing in my process. The research went well and is okay. The design process went wrong on two aspect: firstly missing an guiding theme in my project, secondly I had a wrong approach on the design process itself; I wanted to go step by step, each step well-reasoned and rational. Nothing wrong with this thought, but it turns out you need a much more flexible process in designing. If I made a decision I stayed with it, also early in the process, in the end this limits you and takes the fun out of designing.

- your understanding on the “how and why”

The why or in other words the problem statement was very clear for me. The why resulted in a concept which addressed the issues from multiple angles. The how is something different, how do you approach a project? In my case I formed over the years a wrong understanding of how a design process should look like. It became a linear process in which the next decision is based on the previous, if I discovered something which would change a previous decision it became difficult to change the project, because it change the complete line of thinking. Next to this I missed a guiding theme, so I missed something which gave the idea or incentive of what the project should become, feel like or be the character. Without the theme I could spent hours and hours on what the façade should look like and at the end of the day I still hadn’t decided what it should be.

When restarting the project this where the two most important things I changed. I developed different ideas and concepts parallel to each other and it was easier to switch between and change them. After also forming the guiding theme the project felt finally fun again and I was reminded of my bachelor projects where I had a similar but more intuitive process flow, which where fun and exciting.

- your reflection upon the feedback that was given by your mentors

I had multiple mentors, first Taneha and Sjap. Taneha her feedback was great: good intelligent questions, kind, positive and stimulating you. With Sjap I didn't had so much sessions because my project didn't developed enough. Feedback was not always helpful, I can't recall it exactly but it had always a bit of a own agenda.

Second mentors where Elise and Frank. Feedback of Elise was exactly what I needed, it was focussed on the process and my decision making, it was always positive, stimulating and had an infectious energy. This really changed everything, designing became fun again and the process became flexible and open. Frank's feedback is about giving open directions of where you can look into. It is focussed on getting the architecture involved into building technology instead of seeing it as an something technical you have to solve.

In my opinion the best first mentor would be a combination of Taneha and Elise. The combination of Taneha's question about the design and Elises look on the process would be gold.

- how you have translated the feedback into your work

Sometimes slow. Most of the time in an exploring way, considering the options. Some remarks can really broaden the horizon and pull you more outside the box, it learns you to, from time to time, to take a step back and look at it from a different angle.

- how you've learned from your own work.

Well. I learned allot. As mentioned before I rediscovered designing again, this was the most important lesson. The linear approach I had developed in my masters didn't work, mainly due to Elise I became aware again of a broader approach in where you have different small studies and slowly converge to a more definitive version of the project.

-How will the P5 period look like.

In the period P5 I will lift the project from it's current state to a more presentable form. Finishing the 3D model, give more detail to the surroundings, work out renders and build a maquette.

Aspects

Aspect 1

The relationship between research and design

The whole design assignment is a result of the research. Where is differs is when the design becomes a solution for the problem. This solution is substantiated by research but in the end are some parts an educated guess in which the only way to know the answer is to form a hypothesis and build the project in real life.

Aspect 2

the relationship between your graduation (project) topic, the studio topic (if applicable), your master track(A,U,BT,LA,MBE), and your master programme (MSc AUBS).

In my opinion the project perfectly relates with the studio. The Delta Interventions studio's project that year was about exploring solutions for a rising seal level in the San Francisco Bay Area. I think that is exactly what I did. Relating it to the architecture track; because of intervening in large delta areas the studio is not entirely focused on architecture, there is also focus on the bigger urban and geological scale. I think studying the maps of all the surrounding waterbodies, landscape features, possible future scenario's and timescales really gives the project a stronger basis and more durable approach.

Aspect 3

Elaboration on research method and approach chosen by the student in relation to the graduation studio methodical line of inquiry, reflecting thereby upon the scientific relevance of the work.

The start of the studio was very map based on a very large scale, more an urbanism track approach. I think this is a good basis and start of any project, it lets you zoom out more than you would have done yourself. Combining multiple maps and finding correlations between certain aspects or timescales is very interesting, it is about combining big data. This is something which is scientific relevant. Allot of the maps that where produced had something in them that could be the subject of new scientific research, at leased it triggered many of the students projects and research scopes.

The architectural line focused on the relation between land and water, architecture and water and people and water. Where working with the maps had a much more scientific approach, this was more about exploring your own view on the relationship between water and the build environment. The urban approach plus the relationship with water created an interesting dialogue between the broader problems within the project areas, possible solutions, the way water is involved and how to approach this in an architectural way.

Aspect 4

Elaboration on the relationship between the graduation project and the wider social, professional and scientific framework, touching upon the transferability of the project results.

I think the project could be an interesting research project for the future projects in areas where safety can't be provide through big civil structures, due to costs, landownership, priorities, to small risk or combination of risks. Also important is what for impact it has on the degree of resilience of a community, will it be easier too bounce back after a flood. Next to this it would also be interesting to let the project be a social study. What would the role of a terp be in a community. Could it full fill the role of a social hub with the right functions, is it too high or just not relevant in this case.

On a technical level it would be interesting to see if it indeed provides the right safety, is it cheap enough to consider it regarding dikes. An other question is how do you design the rest of the neighbourhood; do you implement walking bridges, water-resistant facades or floodable housing/buildings.

Aspect 5

Discuss the ethical issues and dilemmas you may have encountered in (i) doing the research, (ii, if applicable) elaborating the design and (iii) potential applications of the results in practice.

In choosing for a terp design you also say, let the surroundings flood and drown. A terp is also a limited to a certain number of people or area. It really has its limitations. You decrease the risk but not by as much as when you would building large dike. On the other hand it could also be a statement towards the government, we need a terp because you won't build us dikes. I think this is a dilemma you should address at a political/public level. From out a Dutch perspective you should protect your civilians for rising water levels and floods in almost all ways necessary. Apparently they need idea competitions and students to come up with solutions for problems which should be addressed on a public scale by the government with support of large engineering firms.