REFLECTION

This last chapter of this report gives a reflection on the research, the process and the researcher itself. The aim of this chapter is to look back on the research. Did the research approach work and what can be learned from this? The reflection consists on the following four subjects: the relationship between the research and design, the relationship between the theme of the graduation project and the subject/case study, the relationship between the methodical line of approach of the graduation lab and the method chosen and lastly the relationship between the project and the wider social context.

Relationship between research and design

In the summer of 2015 I started thinking about possible subjects for my graduation research. The subjects I came up with were mostly based on my personal interest in the soft side of project management. A logical step in the process of choosing a subject was to start reading literature to increase my knowledge in this field.

Discussing my ideas with my chosen mentors, gave me a first step in the right direction. They immediately made clear, was that a graduation project should have clear boundaries. This meant that I had to narrow down my personal interests and knowledge gained from literature, into a researchable subject.

So I had to let go of some of my ideas. Obviously I would have preferred to appoint all of my ideas and preferences into one research. But during this first period of my graduation year, I quickly learned that the time span of one year would not allow this. Focussing on those subjects of my interests and reading more literature made it possible to form a main research question that would be central to this research.

During the master Real Estate & Housing, setting up a research design was addressed occasionally in different courses. Still, I found it difficult to understand what the results of this research design would mean. How solid would this design prove to be? Would I be allowed to differ or change my design during the research? What if a method would not work within this research, would I have to rewrite and redesign my whole research?

Luckily my mentors assisted me in this ‘search’ to the research design. They would let me figure it out all by myself, but with the help of their feedback I believed to have delivered a well thought out research design.

While conducting the research, I have come across some difficulties related to the research design and the research itself:

- It took more than one test run to get the observation checklist correct
- Somehow my telephone did not always record the entire observation, which meant I had to fall back on my own observation.
Observing a project meeting sounds easier than it is in real life. When team members get into a discussion, it is sometimes difficult to observe everything that is going on at the table. I resolved this for myself by adding an extra box, that would indicate such a discussion took place during the ten minutes of observation.

Doing interviews is time consuming. During the first interviews with the project managers I realised that it may not be wise to do similar interviews towards the end of the research as was suggested in the first research design.

Projects never go the way you want them to go. This may sounds a bit dramatic, but during this research I was dependent on the progress of the case studies I selected or was assigned to. In addition to this, as a researcher you are even more dependent on the agenda of others, e.g. the planning of the interviews with the project managers.

Analysing the data using ATLAS.ti was a challenge, since I had never worked with this program. But step by step I got familiar with the program and started to see the benefits of working with it. Beneficial is the fact that you can link all your data.

I still wonder if I should have done more interviews, especially since the two project managers interviewed were not the only stakeholders that showed leadership styles during the meetings.

**Relationship between graduation project and subject**

As stated before, this research started based on personal interests. By doing an internship before I started this master Real Estate & Housing, I learned that creating a good and pleasant work environment is just as important as managing a team and achieving the intended goals and planning. So when each graduate student was asked to come up with a research subject, these personal experiences formed the base for this research.

My next question was how to make these personal interests into a relevant research subject. Out of the different graduation projects, *Collaboration and integration in construction* was the project that immediately appealed to me and seemed like the right choice to post my own research subject.

The graduation project was described as following: This broad research program focusses on the effectiveness of different construction project organisations on an organisational level (top down), project team level (bottom up), and at artefacts that are believed to speed integration (i.e. BIM).

When I formed my research question and worked towards my research proposal, I started to see some linkages with the graduation project and the research itself.

The aim of this research was to identify leadership styles in project team development. With this aim I could match this research with the described focus on the project team level. Also the organisational level is shortly described in the context analysis for both cases.

Within this research, I observed project teams during regular meetings to investigate how a team can develop. This research then aimed on finding out if leadership styles can stimulate this development and can therefore be labelled as artefacts to speed the integration.
Relation between methods of graduation lab and chosen methods

The data was collected through semi-structured interviews and observations. The first method is a method generally used in graduation project for the master Real Estate & Housing. The other method, doing observation, is a method that is not used that often in other graduation researches.

Creating an observation checklist was an important part of this research. Since there were not many graduation researches using this method, I had to do some extra research into how to do observations. Luckily I was smart enough to do a test run with the checklist, to find out if I draw up a useful checklist. Now that the research is finished, doing observations proved to be an useful method for doing research into team phases and leadership styles.

Besides using good methods for collecting data, it is even more important to have a good plan for analysing the data. In this case, ATLAS.ti proved to be very useful. With this program all the transcripts of the observations and interviews were grouped into one library. This made it easy to compare data and see if there were any connections between everything that was observed.

In addition to the program ATLAS.ti, me and one of my mentors took an afternoon to discover how another program, SPSS, can be linked to the data ATLAS.ti. With the program SPSS, the qualitative data is translated into numerical data. Although I think that ATLAS.ti is a suitable program for this type of research, SPSS could also be very useful to make data a bit more understandable for outsiders. But then a researcher should keep in mind to have enough time to work with both programs.

Relationship between project and wider social context

What first comes to mind, when thinking about the wider social context of this research, I think of the differences between SCM and traditional projects. I observed that the meetings of both projects differ from each other on a view points:

- Formal vs informal, where the SCM project, the Lindeplein case, sometimes almost felt like a family coming together to talk about all sort of things. The more traditional project, the Heidelberglaan case, felt more formal most of the time, this did made the traditional project more structured.
- This brings up the next point, structured vs unstructured. Within the Heidelberglaan case the project manager and other team members were familiar with working with an agenda and defined roles and tasks. During the meetings of the Lindeplein case the project manager did structure the meeting, but the team would easily deviated from this agenda.
Besides this social context, I also learned more about the role of the project manager. Not only by observing the leadership styles, but also by doing the internship. Observing the project managers and leadership styles, showed me that the role of the project manager very divers and requires an adaptive capacity of the person. I hope that with this research I have taken a first step in a tool to help project managers develop this adaptive capacity.

I would also like to point out, that I was really enthusiastic about getting to know the method of RealDrives. During my first weeks of my internship at ABC Nova I joined two of these meetings which showed a different way of starting a team. It was a nice way to see how this meetings are used to have team members to get to know each other through their colours and to come up with a joined strategy for the project. Unfortunately, I have seen little of these RealDrives back in the observations. Something I had imagined otherwise at the start of this research.