REFLECTION

In this reflection I will elaborate on my experiences and study goals set up in the beginning of this graduation project.

Relationship research and the Performance-Service System

This research and the design of the Performance-Service System cannot be seen as two static elements. Both are developed simultaneously and both complemented each other during this graduation project. Due to the iterative process it was possible to easily complement both aspects of this thesis.

The research part consisted of a literature review and interviews from a test case. During the literature review it became clear that a lot of the Circular Economy was still underexposed in the scientific field. Not many articles have been written about the Circular Economy and especially not within the boundaries of the built environment. This made it hard to find common ground in the scientific field. Secondly, this made me think about definitions that should be used in the Circular Economy, because there is not a good definition given within this field. By clearing the definitions of the Circular Economy it was possible to reflect on the Performance-Service System. The Performance-Service System could be tested and compared to what was written.

Methodology and the Performance-Service System

Due to the novelty of this research in the field some obstacles had to overcome. First of all there was the lack of existing literature that would cover this field in the real estate and construction sector. In this case I was fortunate to have two experts of Circular Economy who were willing to advice me through the entire graduation project. Because a lot of research must be done in the field of Circular Economy one should be careful that he/she will not get lost in the broad, but very interesting topic.

After setting up my research design I started conducting interviews in order to understand the principles of the Circular Economy. Furthermore those interviews were very insightful regarding obstacles and opportunities that the Performance-Service System provides. But one should be aware of the communication style between interviewer and interviewee, because in the field many definitions can be found of the Circular Economy. In a lot of cases one simply thinks in terms of ‘cradle-to-cradle’, although the Circular Economy encompasses also the economical part of our society.

Furthermore the theme of the Performance-Service System created flexibility in how to study this subject. However, as mentioned before, one should be careful not to lose oneself in the broad concept of Circular economy. During the process this was an incentive to choose my focus very fast. But due to new insights I would not recommend to focus too much. When focussing too much in such a new topic, one sets up too much boundaries and creativity, which a new subject requires, will find a dead end.

At last, I want to elaborate on the used methods during the graduation project. One of the core methods used is sketching and drawing new insights on a sketch role. It was advised by my mentor to use the sketch role, which I had used a lot during the Bachelor. It helped to figure out
thoughts, organise and structure them in order to communicate them to others (interviewees, mentors, and other interested). It was also fruitful to switch between several layers of the design in order to reflect, evaluate and adapt the model when necessary. One should note that this was not the only method used. A good interaction was sought between the sketch role and other media instruments.

Circular Economy and the graduation Lab Design & Construction Management

Together with Werner Loppies and Zakariya Chebli we are the first group at the faculty of Architecture and the Built Environment at the Delft University of Technology graduating at the topic of Circular Economy. Students, even mentors were not familiar with this topic. For both actors it was sometimes difficult to understand the matter. During the whole process everyone learned from each other by discussing this topic a lot. Every session new findings or thoughts were shared until we got to the core of the Circular Economy in the built environment.

The Circular Economy fits partly the graduation lab of Design & Construction Management. This is not too shocking, because it is a very broad subject and has links with every lab on the faculty of Architecture and the Built Environment and even beyond this faculty. The Circular Economy would affect whole societies if implemented. Therefore a second mentor in another field is advisable.

I had the opportunity to link my graduation with a research of two PhD-students at the faculty of Architecture and the Built Environment. Both study this subject within the boundaries of the built environment. Therefore thoughts could be shared and I could learn from all preparations they had done for their own research.

Although the subject is new at the Faculty of Architecture and the Built Environment I would recommend other students and researchers to study this subject more thoroughly. There is a need in our society to alter our economic system. The Circular Economy could be the solution to all issues.

A Performance-Service System

One of the hardships of this subject is the exploring phase. It takes a lot of time in order to get grip on the subject. Due to the lack of information and scientific evidence, it was hard to devise a result for this graduation project. Difficulties in finding a relevant end result were part of a major part of this graduation project.

In addition to the model that is elaborated in this report, I wanted to design a decision support model. One could think of a multi-criteria model or a decision tree. Due to lack of time and boundaries of this graduation such a model is not developed. Therefore I would like to see if new graduate students could develop these models.

At last, I am proud of what is developed. This model shows a lot of various insights regarding the Circular Economy in the built environment. First of all a lot of different opportunities have been shown. Tools and thoughts on how to make a transition in our economic system have been explored. Furthermore obstacles are exposed and therefore new students can explore for solutions of these obstacles.

Another advantage of this model is that it made it possible to communicate with stakeholders and made them clear what the Circular Economy is all about. By using figures a lot of the Circular Economy became clear to all people spoken to.

During the graduation research a lot of sustainable measures inspired me. However, not
all my thoughts could be written down in this report. Therefore I committed myself to start a foundation with fellow students in order to stimulate research in the field of Circular Economy. As this moment, the group of students and professionals who are interested in this topic is growing. There is certainly a demand for more knowledge within this field. Hopefully my study can contribute to this knowledge.