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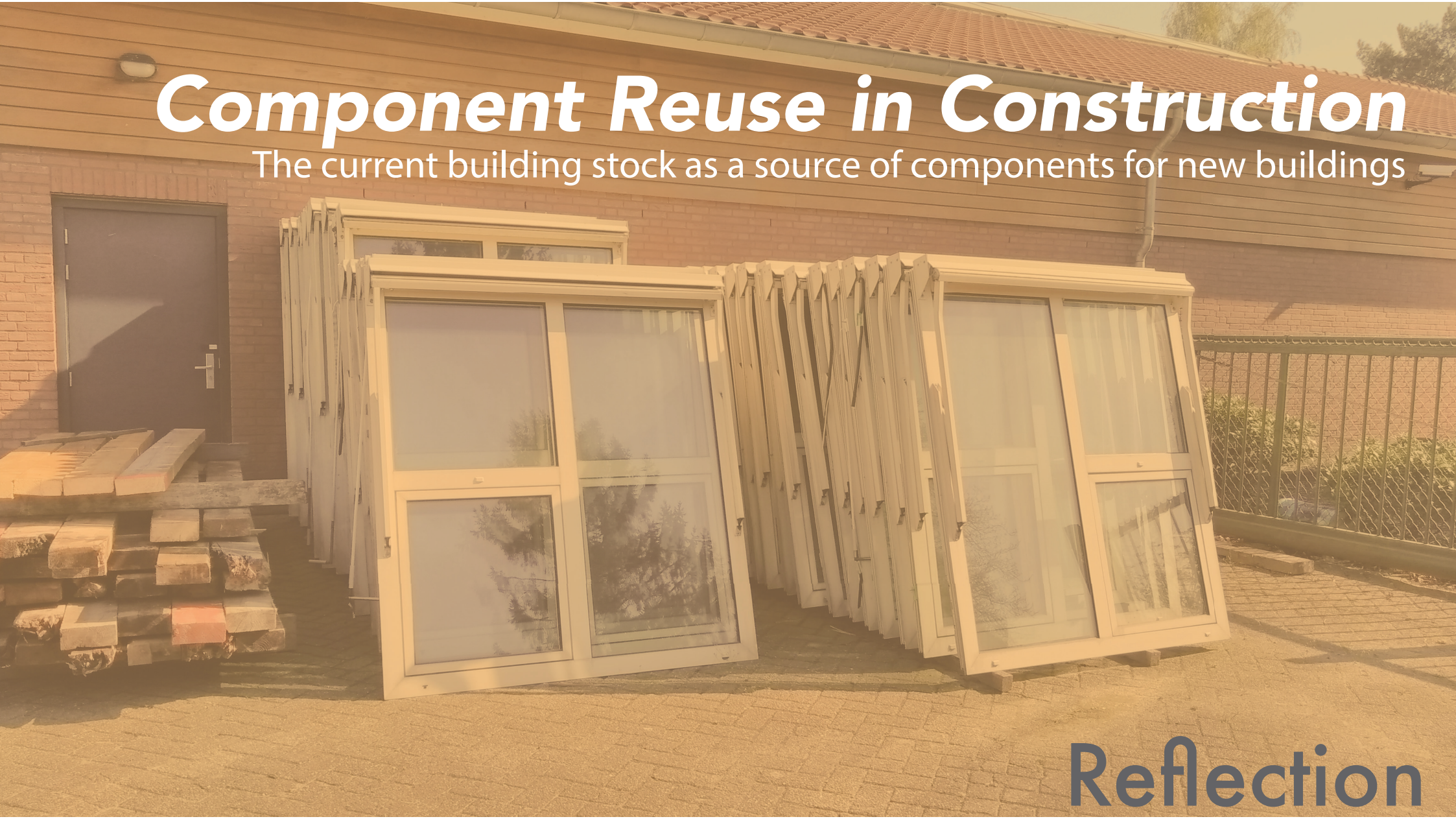
6th of July, 2018

Component Reuse in Construction

The current building stock as a source of components for new buildings



Reflection

Master's Thesis - Reflection
Delft University of Technology

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Reflection

I started this study without much experience in conducting research. Even though I had learned a lot from the smaller studies I did scattered throughout my bachelor and masters, nothing had prepared me for something with the magnitude of a masters' thesis. This inexperience has sometimes stalled the pace, at times led to questionable decisions, but above all allowed me to gain experience and learn a lot during the process.

This research is driven by my interest in urban mining and circular economy and the challenge to make these mainstream practices. The focus of the research has shifted many times, from this original starting point, with the shifts being instigated by unstructured interviews, literature research, and supervision sessions. Some changes immediately made the research more focused, others first led the study astray, but all changes have eventually contributed to improving the research. The original goal of developing a supply chain model for a circular supply chain in the construction industry proved to be too broad to answer. However, with this research on component reuse in the construction industry I hope to have added a new piece to the puzzle. Some changes immediately made the research more focused, others first led the study astray, but all changes have eventually contributed to improving the research.

In spite of an extensive literature study and well considered research goal, I simply lacked the knowledge necessary to set up a sound methodology from the start. Many of the decisions made at the start of the research would have benefited from a deeper understanding of the research process. While my understanding of both research methodology and the topic in question have grown, every new insight leads to new questions, making me believe that there is always more to learn on this topic.

The relevance of this study comes primarily from its unique focus. From the start of this study, circular building was approached with the current buildings stock as a starting point. Finding drivers and barriers for component reuse in the construction industry from this starting point provides a perspective different from the academic studies that mostly focus on waste management (current building stock), or the realisation of new circular buildings. Many initiatives using the current building stock as a source for components have been started either as big projects funded by the EU, or as pilots led by enthusiastic individuals. I think the collection and interpretation of all these different cases done in this research will be highly relevant for future research as well as current entrepreneurs and policy makers.

I have no doubt about the societal relevance of the research into circular economy, but my original ambitions for this research to come with definitive answers proved not to be attainable based on this explorative research. Nonetheless, the findings show that interest in circular demolition and component reuse is growing in the construction industry. Because of this I believe that the progress made on the topic of reuse of building components will prove to be relevant.