My graduation project involves the transformation of an existing 1960's building on Amsterdam’s Marineterrein, the former site of the Dutch Royal Navy, into an integrated food waste-to-energy plant and public bathhouse. The intention of this unordinary combination is to create a self-sustaining water-related and socially amplified program that can support (both energetically & socially) the possibility for a variety of other future informal and formal public activities in and around the transformed former Navy building.

My technical research examines how the flows of food waste, energy, and water can be locally managed and integrated into the design of a public bathhouse. The primary methods of research were scientific literature and case studies. My final technical report included existing analyses and various innovative best-practice techniques for managing the flows of food waste, energy and water, as well as their associated spatial implications. This method acted as an extremely useful reference tool during the design process. In retrospect, a drawback of this approach was that the techniques became so literal in my design that I feel as though it limited my creative explorations of variety in architectural form.

Another aspect of the design that I had underestimated was the challenge of using an existing structure. The integration of the climatic and structurally demanding programs of a bathhouse and food waste-to-energy plant into a 1960's structure was a naively unanticipated and time-consuming task. As the design process unfolded, and more research and studies were conducted, many adaptations of the plans were made. This process, at times, has monopolized the project and I feel that it many have hindered my original creative ambitions. This realization has encouraged me to take the opportunity to continuing designing until the very end. In conjunction with this goal, my plan for the period between my P4 and P5 will include strengthening my project narrative I have tried to establish and create final drawings/visuals/models that clearly encompass the layered aspects of my design.

The Municipality of Amsterdam is proposing an innovative approach to the future development of the Marineterrein. In recent years, the Royal Dutch Navy has decided to abandon its base in Amsterdam and is currently in the process of incrementally handing over the site to the City of Amsterdam. As of present, around 30% of site is now accessible to the public, and by 2018, the intention is that the entire site will belong to the city. This is a huge piece of land that has suddenly become available to the public. The Municipality of Amsterdam in collaboration with the organization, Bureau Marineterrein, are aware that such a large plot of land in the centre has many opportunities. An essential demand that they would like to enforce in the future development of Marineterrein is to apply an innovative approach of gradual growth with no final goal, in order to adapt to the future needs of society. I am fascinated by the role and approach of today’s architect within the complex urban environment because I am
increasingly aware that our individual architectural interventions cannot react to a distilled moment in time, rather it is an intervention in an evolutionary process. In my project, I have tried to react to this by designating space for future intervention and adaptation. In the design there are two fixed & integrated programs, the bathhouse and energy production. My position is that the bathhouse, a program that has endured centuries, draws users to the site and establishes community and social interaction. Energy production serves the operating needs of the building, and by making it an active and visible part of the design, it becomes a showcase of sustainability. The need for energy is constant. However, the way we manage our energy resources is constantly evolving and improving. Right now I see the potential of food waste as the energy source, but perhaps in the future, a different energy source will be more practical for the site. Most importantly in addition to these fixed programs, I have purposely allocated almost half the building floor plan as undetermined space- by which I mean anything can happen here - office space, studio, etc. The fixed programs of the bathhouse and energy production lay the foundations and infrastructure for social activity, and the unprogrammed space allows for flexible and adaptive needs on the Marineterrein. Reaching this idea was a process that needed to be constantly revised. I found that one of the most helpful tasks in concretizing this was through writing - and in particular, by writing out my final presentation in order to make my position as clear to the audience as possible. An aspect of this idea that I found to be more difficult was representation through drawings and other visuals. Does one need to visualize all the future programs and possibilities that can happen in the design, or is imagination and representation of the infrastructure in place to support these activities enough? I am continuously trying to find a balance with this conundrum.

Upon reflection, I really enjoyed the process of my graduation project. The structure of research and design, in combination with approaching it from both social and technological aspects created a complex project that I am proud of. As a perfectionist, I found it difficult to accept that after one year, this project is only a point on the line, however I think this concept also parallels the approach of the Marineterrein, in that it is continuously development.

I want to thank Roel van der Pas for his constant support of my creative ambitions, reminding me to present with confidence and our discussions about what makes great public space and how can we, as architects, support these interventions. Thanks to Mauro Parravicini for helping me translate my design ideas into physical structure, for helping me be critical in my design decisions and raising questions I had sometimes overseen. Thank you Jan Jongert for introducing me to the methods for better understanding circular economy and its various flows, and the techniques and analyses that follow it. Finally, thank you to Dirk Visser and Eric van den Ham for taking time to help me resolve and innovate the structural and climatic systems (respectively) within in my design.