

Reflection

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This project was sparked by finding out that the Netherlands has been importing 1,5 billion kilograms of waste each year, to address an overcapacity of its Waste-To-Energy plants. This dependency on waste was striking and alarming. I began wondering what would happen to this massive system under the threat of climate change, as we strive for a circular economy, and what role architecture could play in it.

Taking the country's largest Waste-To-Energy plant as focus (AEB Amsterdam), the project has explored the role of architecture in maintaining and adding value in a transitioning system. It positioned architecture as a mediator between society and its resources, as Amsterdam attempts to transform from a linear to a "doughnut" economic model. The end result being a parasitic urban campsite and chapel, hijacking one of the chimneys of the incinerator, weaving a spiritual thread into the monofunctional industrial fabric.

Aspect 1: relationship between research and design

To begin, the framework for the project was established through thematic research. This was done by pairing a quantitative approach (Material Flow Analysis) with more traditional qualitative research approaches (literature review and site analysis). This was an effective combination, as an in depth understanding of the site, flows and culture surrounding waste was gained, from which the design could depart. Scenario's were also built which could be used as a starting point for the scenario based planning used during the design phase.

Although the points of departure were clear, creating a concrete design was still an enormous challenge. The program in particular proved difficult. The doughnut model did not provide as concrete a guide as was hoped, and the scale and technicality of the site made any potential programs feel superficial, insignificant or out of proportion. In the end this was addressed through the use of metaphor and narrative; framing the site in a new light made it possible to create a convincing proposal. So although the thematic research alone was not enough to guide the design, it could be paired effectively with a variety of design approaches.

Aspect 2: relationship between topic, studio, track and masters

Within the Architectural Engineering graduation studio, much like the masters as a whole, focus is placed on tackling today's challenges through innovation. The project feels highly relevant because architecture, as an intersectional and diverse discipline, is a field with great potential to tackle the complex problems associated with the transition to a circular economy. This is because systems thinking is a central part of the new economic model, and architecture has the capacity to combine and create dialogue between many scales and disciplines simultaneously. In this particular project, that is done by using architecture as a mediator between culture and industry; society and its resources.

Aspect 3: scientific relevance - elaboration on research method and approach in relation to the graduation studio methodical line of inquiry

My graduation topic falls into the scope of the *Harvest / flow* track under the chair of Architectural Engineering. This is largely because of its connection to urban metabolism. Waste management, and particularly the study of flows and circular systems are important themes within the track. The use of Material Flow Analysis as a core analytical method is evidence of this, and an example of how architecture can be informed by, and work with, methods from other disciplines (in this case industrial ecology).

Aspect 4: transferability of results. Implications on wider social, professional and scientific framework

This project takes an icon of the industrial era: the chimney, and appropriates it in a near protest-like fashion. This is not only a symbolic gesture, but one that can be repeated across all industrial areas. It challenges us to view our industrial zones (the back-end of our lifestyles) in a new way. Industrial zones near urban areas, in particular ports, will become critical in the transition to a circular economy. This is not only because of their access to resources and high connectivity, but because of their proximity to urban areas (hubs of knowledge and innovation).

With so much uncertainty related to the transition, this project embraces improvisation. This means altering a typical design process by beginning with the materials available. The project also strays from convention by focusing on just one part of a massive in-use complex. The scale and complexity of industrial sites is usually tackled by large scale, long term, expensive redevelopments after they have become completely redundant. But this way of doing things does not fit with the urgency of climate breakdown. This project demonstrates that we can appropriate one step at a time, at a more human scale and time frame. Here the project acts as an activator and entrypoint, empowering citizens in a more bottom-up approach. The intention is that it acts as a gateway to the further development and gradual appropriation of the complex. Introducing cultural functions to the site before it becomes redundant, to let them inform each other.

The coming decades will be critical in determining how we respond to the threat of climate change and resource depletion. Innovative architecture projects can spark conversation, make us question the status quo, and offer inspiration for systemic transformation and pathways to a thriving planet and society.

Aspect 5: ethical issues and dilemmas

Throughout the project it was important to question my role as an architect as well as the values I was leading from. Dealing with a site of this scale and importance carried a lot of responsibility. I often felt a reluctance to make statements about the future functions of the site, as this is so dependent on technology. And noticed a certain level of hypocrisy in the proposals I was making.

Particularly when it came to program it was challenging to create a convincing narrative which did not perpetuate the consumerist and capitalist values I was trying to escape. Many ideas came to mind for the complex: a remanufacturing plant, a materials auction, marketplace, etc. Much more commercial functions. But it was important for me not to just create another tool for capitalism, and propel these materials back into a linear system.

Focusing on a spiritual and recreational program allowed me to do this, but also felt a bit removed from the core functions of the site, as if I was somehow avoiding the question.

Determinism was a pitfall I (and every graduate) had to face; whatever question I posed, an architectural intervention had to be my solution. Problems within complex systems demand multifaceted, layered solutions. And it felt very limiting and rigid only focusing on spatial interventions for a problem which is so much more than spatial. It was important to realise that these architectural interventions do not exist in vacuums; they are part of an intricate web of interactions. So although the control and impact we can have as designers is limited, it is important for us to play our role within this system and process, and learn from those interactions and how we can make the most of them.

Towards P5

Following P4 I plan to strengthen the project by creating some high quality visuals and renders. Since I position myself as a storyteller in this project, how I craft the final narrative will be very important. The use of striking, informative visuals with a consistent and carefully chosen style will be a powerful tool in making the project accessible and convincing. I intend to do this through a digital and physical model, and storyboard supporting my narrative. It would also be nice to work out a few more spaces along the route.