

aE journal

NR 15 2025/2026

Graduation **Architectural Engineering**

The Art of Making

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Gili Hofland
awarded the **2024 Thesis Award** from
Hoogheemraadschap
Delfland

Larissa Götze
winner of the
CBE Award 2024

aE alumni
interview: building
your own story &
sharing knowledge
(pages 22-23)

Architect or Engineer?

Future plans of aE:
what comes next?

**Discover student projects,
design approaches & more!**

News aE in action

The Art of Making

Dear reader,

Welcome to the new edition of the aE Journal, presenting the graduation plans from the aE graduation studio. Guided by the themes of *framing the freedom* and *open design*, aE students have worked on improving our built environment in diverse and innovative ways.

As I write this edition of the aE Journal, I find myself reading *Thinking Architecture*, a *cahier* by Peter Zumthor - still, for me, one of the true masters of expressing architecture through material.

Designing is inventing

One theme that struck me is what Zumthor describes as “the constant urge to innovate”, raising questions such as: *Who are your role models? What problem are you trying to solve? What role does architectural history play in your design process?*

Even though we rarely create something entirely new, each era brings its own emphasis, its own needs, and its own narrative.

Innovation & knowledge building

When addressing today’s environmental challenges, I enjoy bringing past pioneers into focus during my lectures: Jean Prouvé with his (circular) connection

techniques, Charlotte Perriand with her (bio-based) chalet designs, and Auguste Perret, who - together with fellow architects - created entire city center from a rational approach to material and technology. What all these examples have in common is that their designs often began at a small, craft-based scale, and only when proven promising were they scaled up to industrial applications.

How different things are today, where in some sectors - like housing - “industrial” is the starting point. Rather than growing out of design ambitions, industrial processes are often driven purely by technological possibilities.

Back to Zumthor, who writes: “*Construction is the art of making a meaningful whole out of many parts.*” Where he likely refers to the architectural object itself, I would extend the comparison to include today’s architecture and its contemporary pioneers.

(Structural) engineer as (urban) architect

Today’s discourse on “making cities” seems increasingly reduced to pragmatic discussions of money and numbers. Sustainability and circularity are too often treated as purely technical responses to process-related challenges. But do they also enrich our experience - our perception of space, our physical surroundings, our intrinsic needs?

In the 20th century, a housing shortage led to monotonous construction processes, where tunnel formwork became the norm. Are we repeating this in 2025? Can we advocate for the best of both worlds: using rational manufacturing technologies to support the construction process, while simultaneously striving for architectural expression rooted in human creativity and interaction.

The art of making

Students are encouraged to explore this discourse by placing *the art of making* at the center of their work. Debate and dialogue are essential to maintaining an open attitude toward engineering and architecture, materials and construction. There is still much to gain in developing a culture of open building.

Let construction, assembly, and composition (once again) become foundational knowledge in design education to inspire industrial development - so that, even Vitruvius can be reinterpreted for the modern age.

Anne Snijders
April 2025

2024 Thesis Award Hoogheemraadschap Delfland



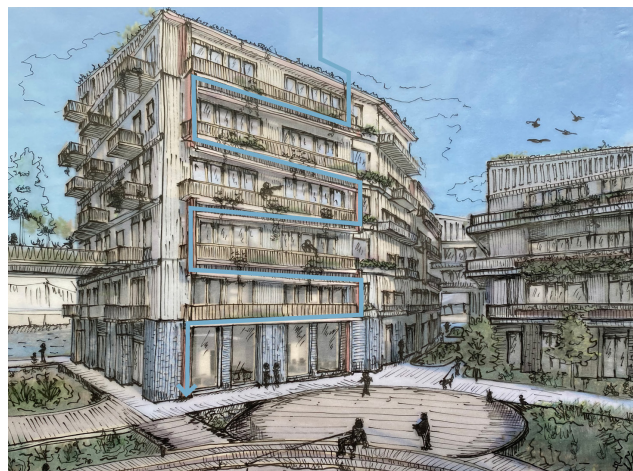
aE Studio student Gili Hofland has been awarded the 2024 Thesis Award from Hoogheemraadschap Delfland. Her thesis “Engaging with water” presents a water-inclusive design for future-proof housing. The project introduces a sponge architecture typology that adapts to changing flood levels, aiming to inspire communities and architects to develop water-saving initiatives by incorporating biophilia and biomimicry (see p. 25).

CBE Award 2024 aE Studio Winner



aE Studio student Larissa Götze has been elected as one of the two winners of the CBE Award 2024 in the category Buildings & Neighbourhoods. The Circularity in the Built Environment award recognizes the contribution BK graduation students make to the transition towards a circular built environment. Larissa’s design proposal “Let’s build a landfill” presents residential building prefabricated from rammed earth elements, produced in a labour-extensive, environmentally friendly way (see p. 6).

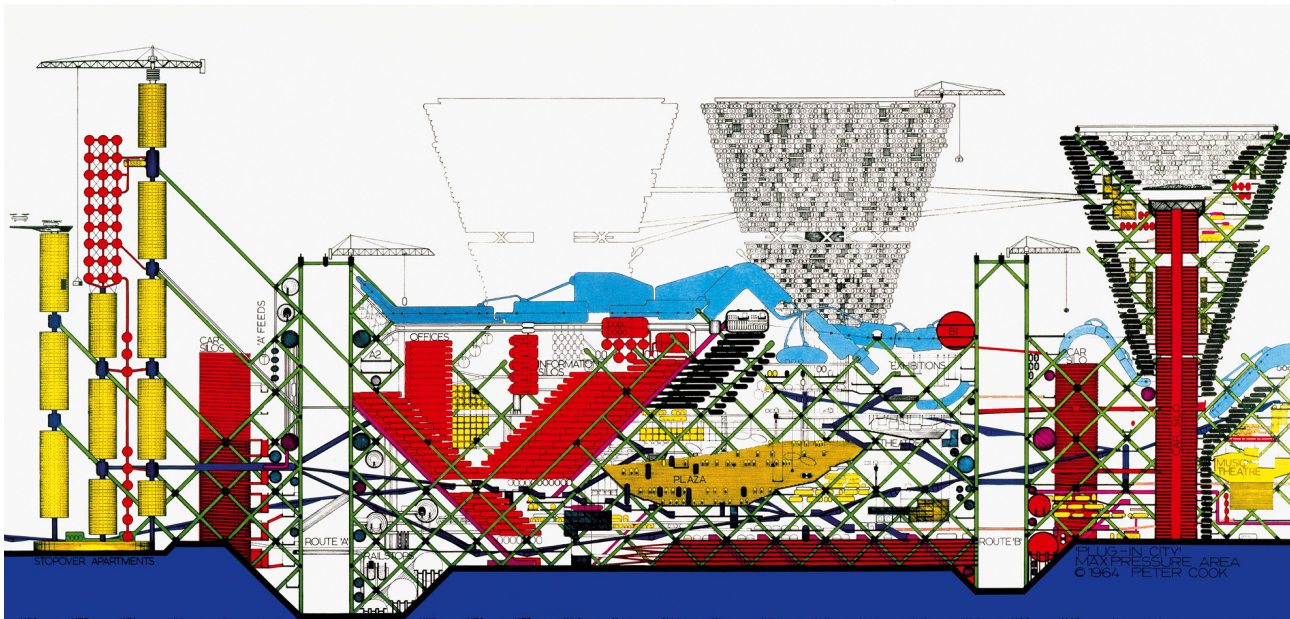
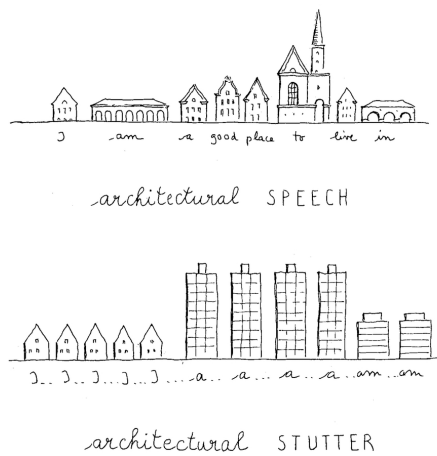
Faculty submission aE Studio Nominee



aE Studio student Gili Hofland’s graduation project was nominated as the faculty submission to the Bataafs Genootschap. The project addresses water-related issues in the built environment at various scales, ranging from the landscape to the technical design of several residential buildings. Gili’s proposal was selected as a good example of how, within our faculty, design is approached across the scales combining different design themes (see p. 25).

aE in action **News****Coming up****Q5 Design for industrial production**

In this course, Architectural Engineering and Heritage & Architecture collaborate with Atelier Rijksbouwmeester and Industrial Design Engineering (IDE). We will explore the role of architecture in industrial production through various disciplines and perspectives. Therefore, this Q5 course is open to TU Delft students from Architecture and the Built Environment and Industrial Design Engineering, as well as sociologists, economists, planners, and all students interested in the development of industrial (housing) construction.



Sources: 1) Sketches by Léon Krier 2) Plug-In City; fantasy city containing modular residential units, by Peter Cook / Archigram

Activities**Field trips and visits**

We visited the International Architecture Biennale Rotterdam (IABR) exhibition Nature of Hope, which explored how architecture can restore ecological balance by placing nature and biodiversity at the heart of design. Together with one of the curators, Catherine Koekoek, we discussed the program.

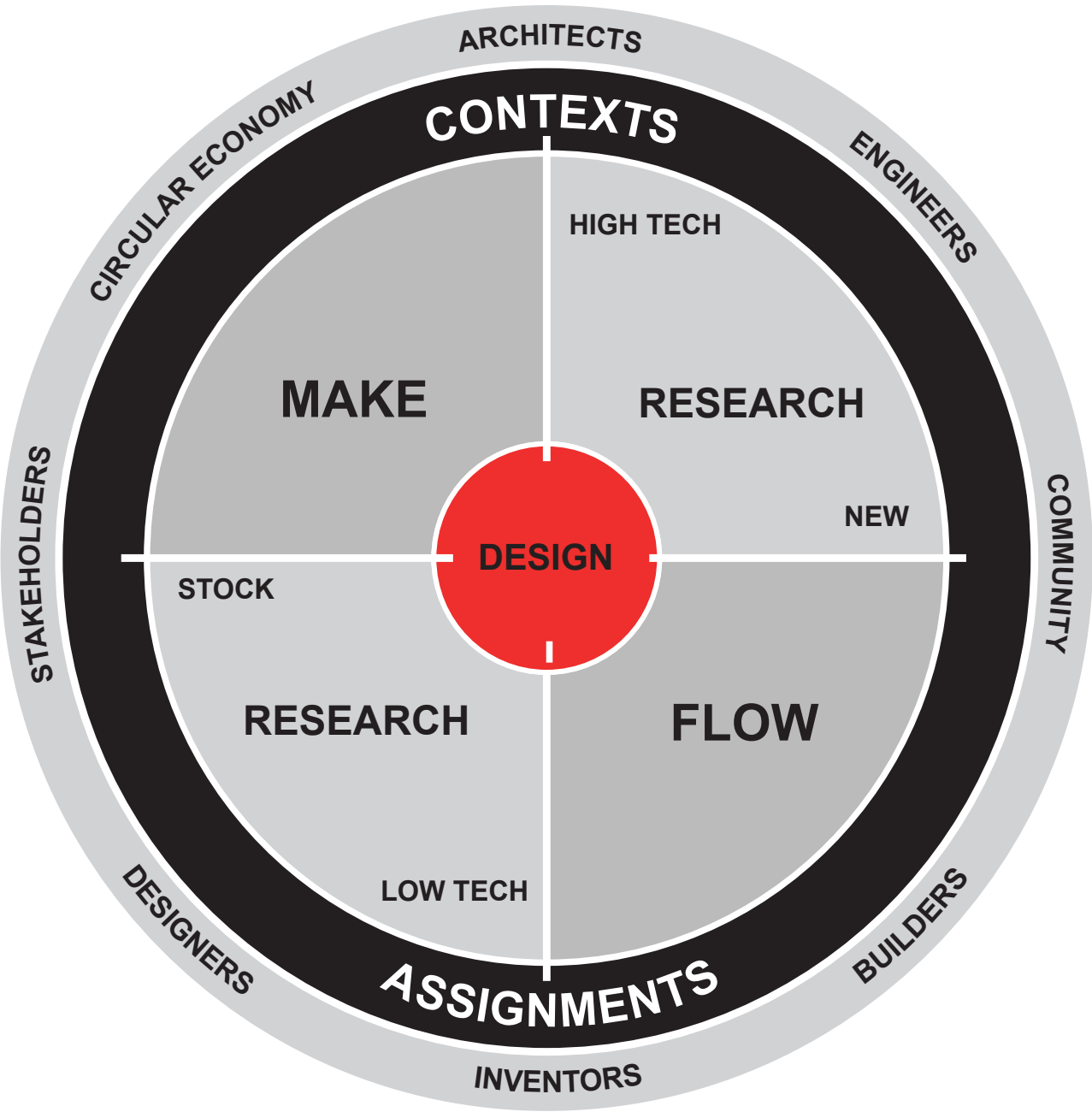
Dialogue**Brainstorming**

In the aE graduation studio, design is shaped through continuous dialogue and exchange. Students, mentors and invited experts engage in open discussions, bringing together architectural and engineering perspectives. This collaborative environment fosters critical reflection and mutual learning, allowing projects to evolve through shared insights and diverse viewpoints across all stages of the design process.

Introduction aE Graduation Studio

Approach

In the Architectural Engineering Graduation Studio we are looking for innovative solutions in engineered architectural design, while encouraging students to explore their role as architects in facing today’s challenges. Understanding existing potentials, knowing the possibilities of renewal and discovering how to design, innovate and initiate change are central themes in the aE Graduation Studio. Under the guidance of a team of enthusiastic (guest) lecturers and tutors, students search for innovative technical solutions for diverse problems in various contexts. The three main research by design domains promoted in the aE studio are ‘Make’ , ‘Flow’ and ‘Stock’, as described below on this page. Each domain requires a different approach and offers unique design solutions, while creating multiple value for the built environment together.



FLOW

In Flow we see buildings as structures interwoven with their wider system. The sustainable performance of buildings has everything to do with flows. Well managed flows of people and resources contribute to valuable, comfortable and healthy spaces and cities.



STOCK

Stock is about the potential of the existing by looking differently to what is already there, by making use of a technical fascination, in relation to current or future needs. Ideas for intervention can vary: the upgrade of existing housing stock, office buildings or product development of interiors.

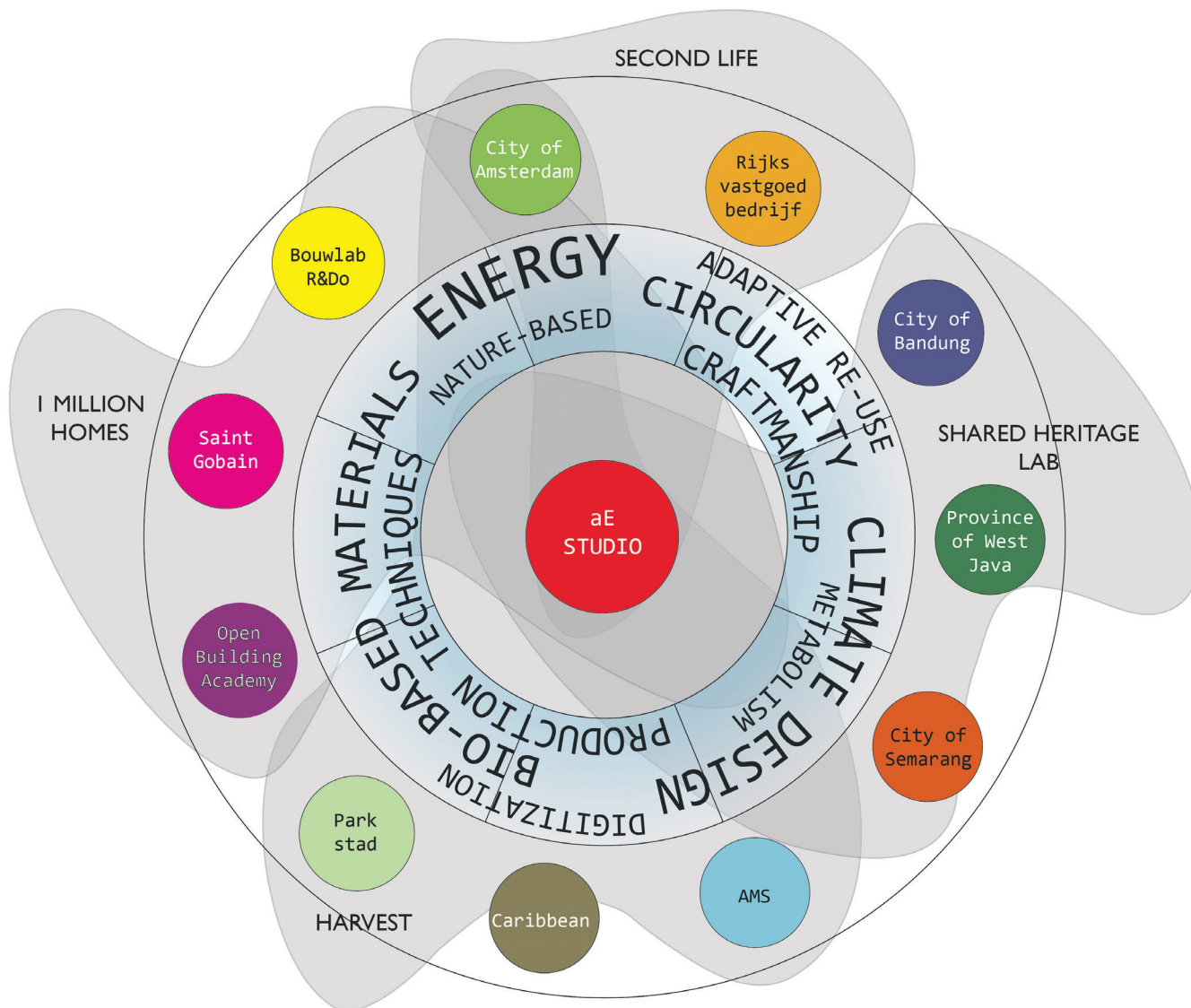


MAKE

Make is about new (digital) production methods, the (re)-use and development of materials and systems for existing and new applications. How do we change the future of our environment, our homes and our cities, using a bottom up approach towards a better and more sustainable future?

Assignment Introduction

Collaboration & Knowledge Exchange

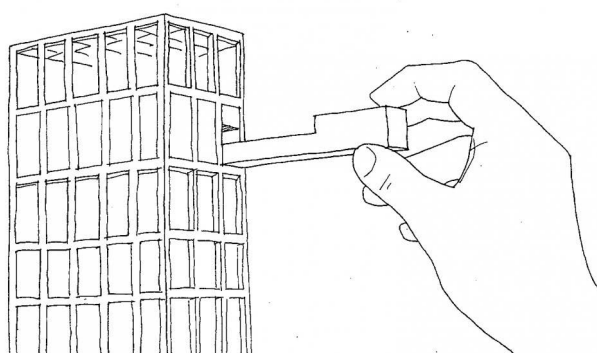


aE Graduation Studio combines design and technical innovation throughout all scales in architecture. In our Architectural Engineering program we seek innovative and inspiring architectural solutions for environmental and societal issues together with various stakeholders. With today's local and global challenges we are driven by the need to think differently about materials, craftsmanship, energy generation and efficiency, user participation and bottom-up or top-down approaches. In view of the current and constant changes of society, we need to see the built environment and the role of the architect in a new perspective. A vast amount of buildings are vacant and unused while a large percentage of the existing housing stock does not meet today's requirements. But also new buildings have to deal with changing circumstances. Smart and responsible solutions are therefore vital in refurbishing and designing new future-proof buildings.

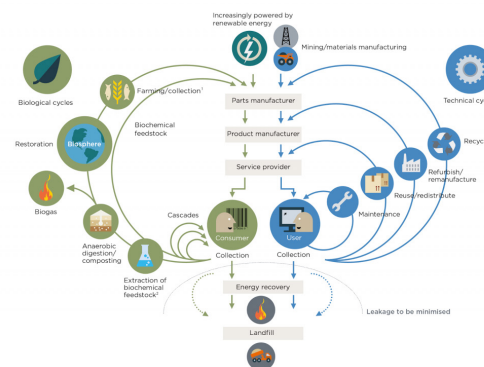
Agenda



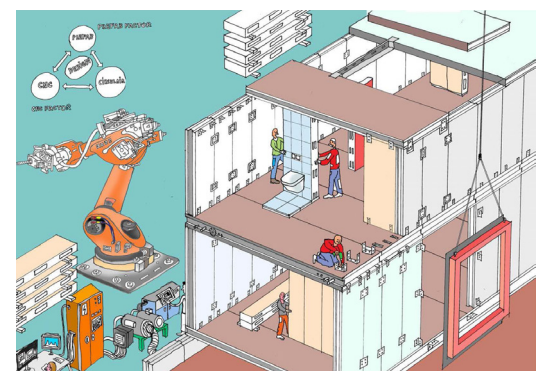
UN SUSTAINABLE DEVELOPMENT GOALS



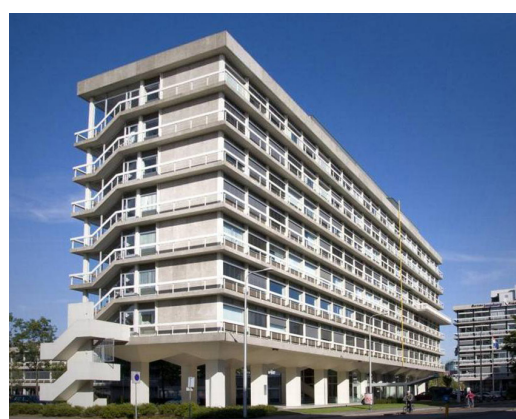
OPEN BUILDING



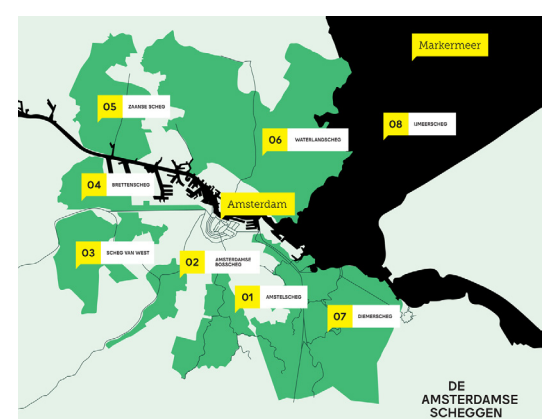
CIRCULARITY



DIGITALISATION



SECOND LIFE



HARVEST

Program Open Building

Adaptable Architecture

Industrial housing can help mitigate the housing shortage but tends to empower builders over residents, restricting housing adaptability. Can the “Open Building” concept, enhanced by digitization and automation, offer a sustainable housing solution while increasing flexibility resident input?

Industrial housing can alleviate the housing shortage but typically limits resident input and adaptability. Open Building, introduced by John Habraken in the 1960s, enables flexible, renewable housing by separating the structure (support) from the interior (infill), allowing easy modifications. Integrating this with digitization and automation promotes dynamic, resident-influenced designs and cost-effective mass customization.

To address housing needs, efficiently utilizing and transforming existing buildings is essential, alongside innovative financing and expanding mass customization to meet environmental goals and manage costs. Open Building research, particularly by aE studio graduates, is advancing adaptable living solutions. More details are available at www.openbuilding.co/academy.



REUSE POTENTIAL

Britt Ligthart

This project explores data-driven design to integrate reclaimed materials into architecture, advancing circular economy principles. Located in Merwehaven in Rotterdam, proposes living hub in the Makers-district based on reuse of materials found on site.



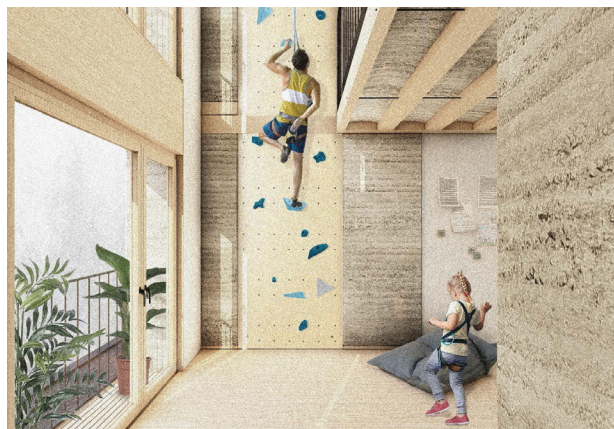
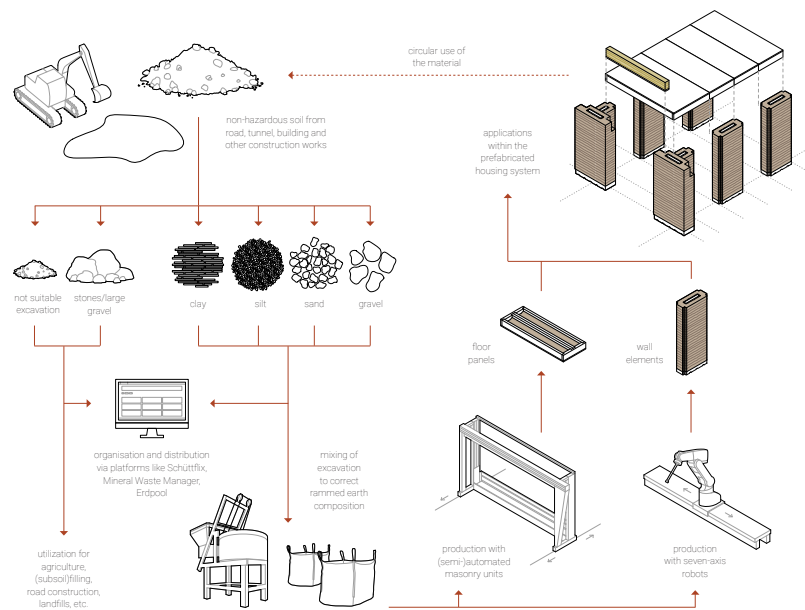
**ARCHI
PRIX**

LET'S BUILD A LANDFILL!

Larissa Götze



This project reimagines rammed earth construction by integrating digital platforms and automation to enhance circularity, affordability, and efficiency. Using seven-axis robots and semi-automated masonry, it repurposes excavated soil, reducing labor, costs, and reliance on specialized production sites. The proposed housing system prioritizes flexibility for irregular occupancy, passive climate control, and resource efficiency. By involving external stakeholders and adapting ownership roles, the project fosters a circular building lifecycle and sustainable urban development.

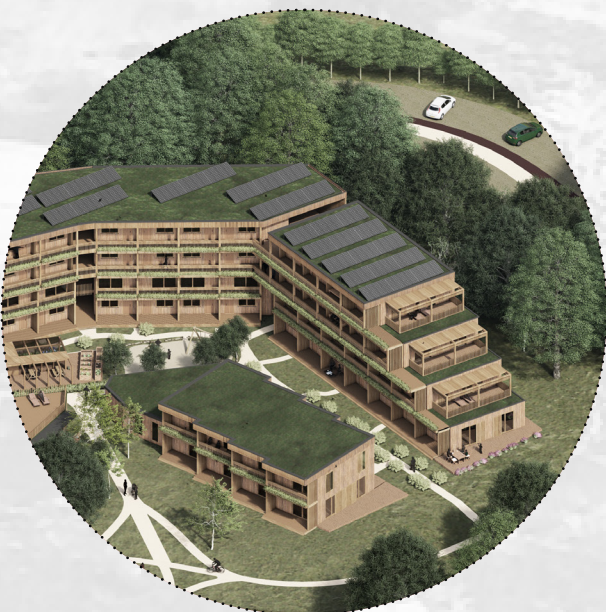


**MOKUKAI****Gideon de Graaf**

This project explores self-building as a strategy to empower students in creating their own adaptable housing on campus, fostering social interaction and transforming the TU Delft campus from a business district into a vibrant urban living environment. From the thematic research, a timber building system is developed along with established guidelines for Design for Self-Building (DfSB).

**HER OWN HOME****Julia Garcia Sanjuán**

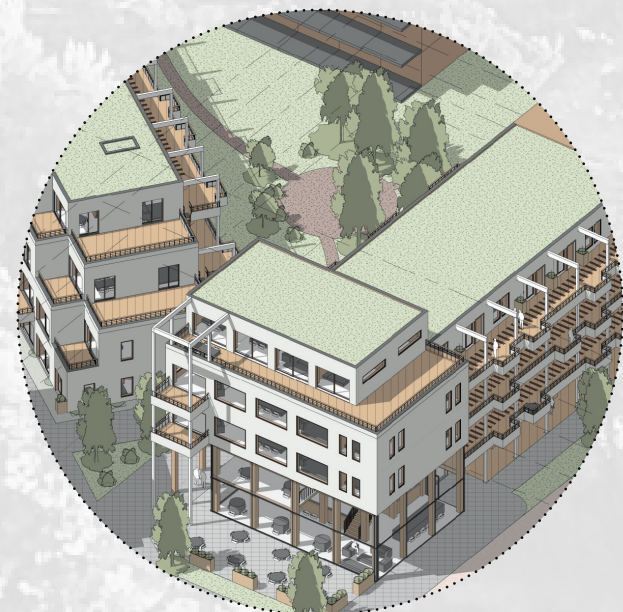
This project applies parametric design to create inclusive, sustainable housing in Los Arenales, Chile, with a feminist perspective. Prioritizing women's needs (soft parameters) and local materials (hard parameters), it develops adaptable housing typologies tailored to the community. By fostering safety, empowerment, and community leadership, the design enhances social sustainability while incorporating local construction materials and craftsmanship for environmental resilience.

**HIGH QUALITY AFFORDABLE SOCIAL HOUSING****Tim de Boer**

This project addresses the housing crisis and climate impact by designing social housing in Buurtschap Crailo using prefab construction and local wood from GNR's sustainable forests. It integrates shared spaces and community living while minimizing environmental impact. The approach upgrades local wood in the value chain, promoting sustainable mass housing.

**TIMBER HIGH-RISE DESIGN****Ruben Pot**

This project develops a parametric design tool for tall timber construction, addressing challenges like economic feasibility and fire safety. It explores timber's potential to reduce carbon footprints while balancing costs and computational design aids for sustainable high-rise timber structures.

**THE MELTING POT****Catharinus Veenema**

This project explores 3D prefab housing to tackle the Netherlands' housing crisis, focusing on corner modules for urban integration. Inspired by Rotterdam's architectural heritage, it enhances flexibility and sustainability. It densifies the city while restoring a natural border along the Maas, demonstrating prefab's potential for cohesive urban growth.

Program Second Life

Strategies for Post '65 buildings and neighbourhoods

The program “Second Life” focuses on the transformation of Post-65 buildings, (built from 1965 to 1995). Many of these are currently under the national spotlight, as they must be either repurposed or renovated to meet modern performance requirements. This is particularly relevant since demolition is no longer a solution in the current environmental climate.

In light of climate change, innovation in the construction sector is in the public interest. Utilizing existing structures (instead of demolishing them) can help cut CO₂ and NOX emissions, reduce the demand for new infrastructure and lead to a more carefully and sustainably designed built environment participating to healthier spaces and lifestyles.

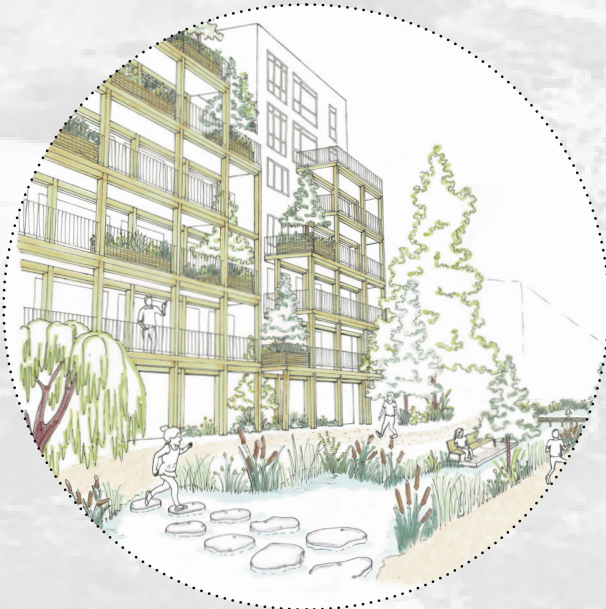
Besides Post-65 residential areas, many existing building typologies are going out of use. Students from the aE graduation studio have focused on rethining several structures to give them second life and take advantage of their existing qualities. Their goal was to explore potential roles these buildings can fulfil in the contemporary urban fabric. Starting points for their designs included material circularity, energy management, and the creation of flexible work-living spaces.



WEDEROPBOUW 2.0

Sanne Buser

Wederopbouw 2.0 revitalizes post-war neighborhoods by densifying and upgrading homes with lightweight, bio-based facades. This approach enhances sustainability, enables rooftop extensions, and diversifies housing types while preserving green living principles. By creating smooth transitions between private and public spaces, the design fosters community interaction and offers a sustainable housing solution.



REPEAT

Lisa Blok

The project focuses on densifying and revitalizing post-war neighborhoods through the integration of ecosystem services. Its overall goal is to create a healthy and pleasant living environment for residents while also considering other species and the impact on surrounding ecosystems. This is achieved through the implementation of various natural and technical measures.



DENSIFYING

Joris Hondtong

This project transforms post-war staircase entrance apartments in the Netherlands through rooftop and in-depth expansions, increasing housing by 450,000 units. Using bio-based structural insulated panels, it enhances flexibility, aesthetics, and sustainability. A public gallery and collective plinth activate the front, while the rear prioritizes privacy, greenery, and spacious balconies.



NATURE-BASED RENOVATION

Coby Bianco

This project reimagines 1960s East-West row houses to address social isolation, demographic shifts, and climate challenges. By reorienting homes toward communal gardens, introducing flexible extensions, and integrating nature-based solutions, it enhances biodiversity, water management, and microclimates. Energy-efficient upgrades and shared spaces foster a resilient, adaptable, and socially connected community.

ARCHI
PRIX



TURNING HEAT INTO WARMTH

Thomas Misset

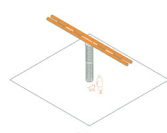
This project designs a local heat network in Moerwijk, The Hague, integrating urban, technological, and community needs. By constructing the pipeline above ground, it enhances efficiency, preserves trees, and enables social interventions. Strategic spatial additions at pipeline endpoints transform industrial heat into social warmth, embedding sustainable infrastructure into the neighborhood.



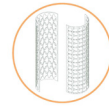
basic column



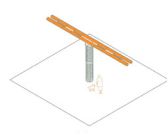
Lighting fixtures



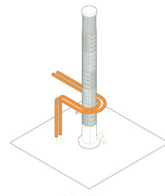
Bended contour sheets



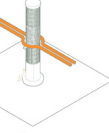
Accents



Column



Solar chimney

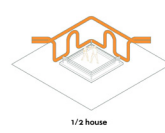


Tower

Spaces



House



1/2 house



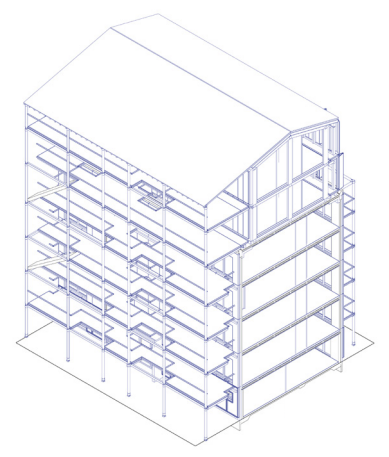
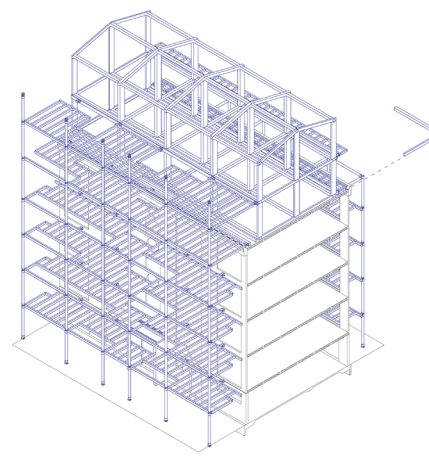
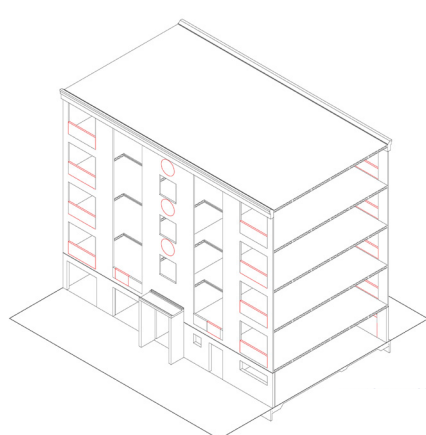
Service station



SYMBIOSIS UNEARTHED

Nona Dalman

Symbiosis Unearthed renovates three post-war flats in Amsterdam's Westelijke Tuinsteden, creating a regenerative, symbiotic community. The project adds two storeys, introduces communal spaces, and transforms green space into a regenerative forest. Using locally sourced wood for construction and maintenance, it fosters a sustainable urban environment where people co-live with the surrounding land.



Program Second Life

Strategies for Post '65 buildings



HERE WE GROW

Dost Şahingöz

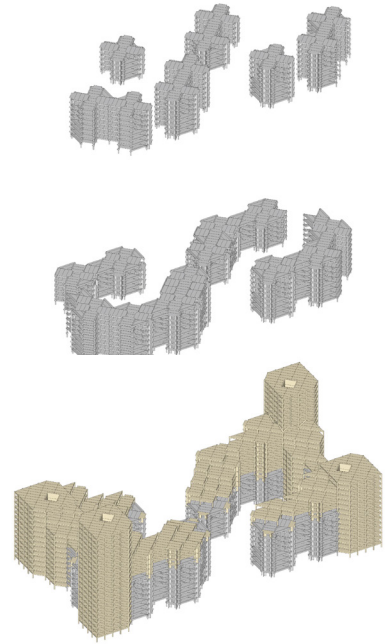
Here We Grow integrates urban agriculture into Boerhaave, Haarlem, to enhance social cohesion and well-being. A mixed-use neighborhood center combines communal housing with public spaces, including a food market and library. A community farming campus fosters engagement, offering produce in exchange for participation, promoting health, sustainability, and social interaction.



SOZawe AND ITS FUTURE

Wouter van Oekel

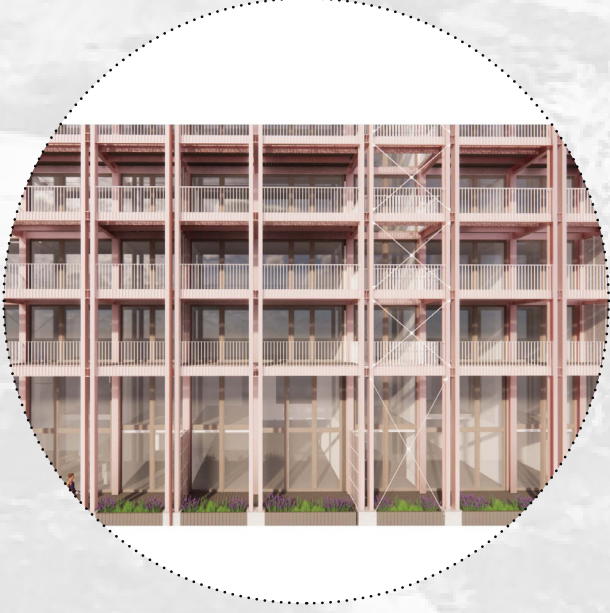
This project transforms the former Ministry of Social Affairs in The Hague by reusing its concrete structure. Following the Design for Reuse principle, it explores reclaiming load-bearing elements from the 1990 Herman Hertzberger-designed building. The study demonstrates the feasibility of circular construction, maximizing sustainability and environmental benefits.



REIMAGINING DE SCHALKWEIDE

Florian Holtbernd

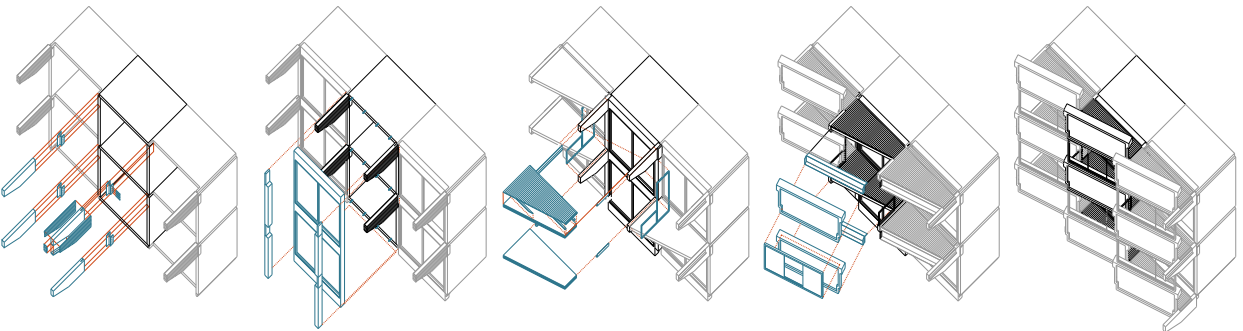
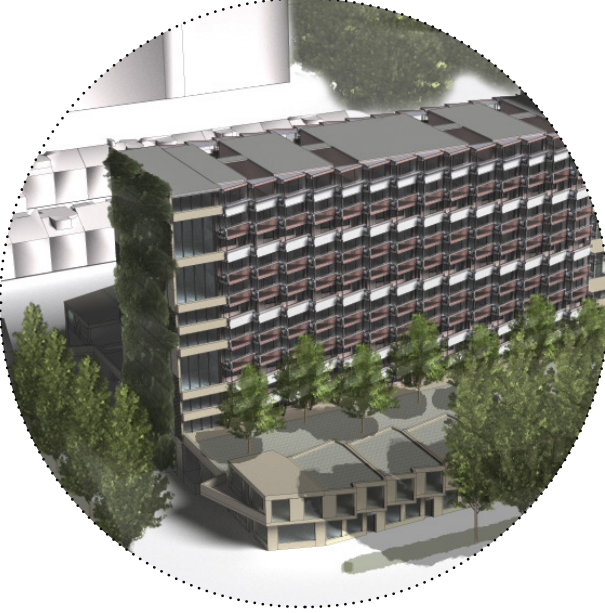
This project transforms a former high-rise care facility in Boerhavewijk into adaptable housing, addressing changing societal needs. Inspired by European open-building concepts, it densifies the site with spacious, flexible dwellings. By unlocking the potential of vacant post-war structures, it promotes social sustainability through spatial versatility and long-term adaptability.



FRAMING IDENTITY

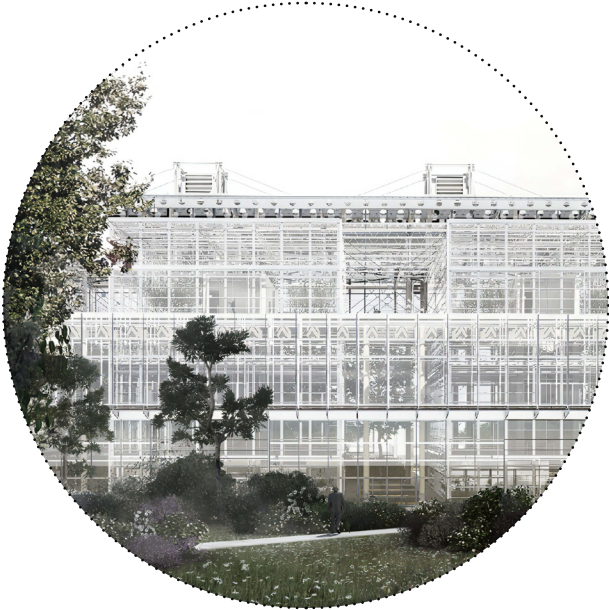
Emilia Bonniot

This project develops a framework for guiding restoration efforts followed architectural identity in post-war housing estates. Applied to a Haarlem suburb, the framework identifies areas for improvement, informing the redesign of a post-war apartment block. This approach helps preserve identity while adapting to contemporary needs.



Program Second Life

Rethinking Structures

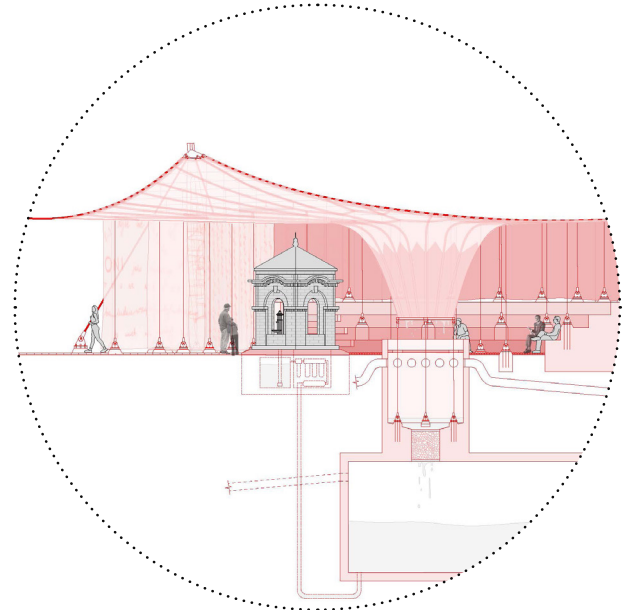


PUBLIC BOTANICAL RESEARCH INSTITUTE



Junhyeon Song

This project transforms an abandoned coal power plant into a carbon sink and research hub. It captures CO₂ to accelerate crop growth, supports urban farming, and fosters sustainable innovation. Linking universities and the community, it reverses past pollution, creating a transparent, public-facing model for carbon-neutral architecture.



BEYOND DIVISIONS



Julka Lewandowska

Beyond Divisions addresses social cohesion erosion in Lublin, Poland, by reviving its multicultural past. Positioned among historic religious sites, the design integrates sacred symbolism and water as a symbol of renewal. A textile exhibition of WWII survivor testimonies fosters dialogue on cohesion, prejudice, and respect in intimate gathering spaces.



WAREHOUSE 52



Anna Serysheva

This project transforms Warehouse 52 at Rotterdam's Fruit Wharf into adaptable housing while preserving its industrial identity. A timber framework supports modular student studios with reconfigurable layouts. Offset circulation fosters social interaction, while collective balconies enhance communal living. Designed for scalability, it ensures optimal light conditions and future expansion.



architectural engineering presents:

Constructor of Stedenbouwer?

I need more
residential units!

Beams! Timber
beams!

(structural) Engineer or
(urban) Architect?

Het Belang van Maaktechniek

The Art of Making is about

Circular architecture
Material thinking
Assembling, constructing
and composing

Who v
spare

Anyone have a spare facade?

2025/26

What comes next?

The Art of Making & excursions

A key focus of Architectural Engineering is understanding materiality, connections and construction. Therefore, in the fall semester, we offer excursions to various maker spaces, ranging from local crafters to industrial production facilities. We discuss the role of digitization and industrialization with industry stakeholders and experts. Craft(wo)manship, in both low-tech and high tech forms, will be taken under scrutiny.

Studio Structure

The studio revolves around three research by design domains: 'Stock', 'Make' and 'Flow'. Each domain requires a distinct approach and offers unique design solutions, while creating multiple value for the built environment together.

In the first quarter you will define the assignment, analyze the role of technology, and formulate design approaches and principles based on thematic research methods such as comparative case study analysis, simulation modeling, flow analysis, cataloguing, value chain mapping etc.

The second quarter is about prototyping across scales (S,M,L,XL) to explore architectural concepts. In the third quarter you will finalize a detailed architectural design that integrates context, user functionality and technology.

Experts

With experts from AE+T, LA and U you are invited to exchange and develop knowledge on building technology, landscape technology and water & soil technology. Students are inspired through transdisciplinary workshops to formulate a strategic approach in their design assignments. Invited experts come from both the faculty and professional field.

If technology is the answer, what is the design question?

See for inspiration:

<https://books.bk.tudelft.nl/press/catalog/series/AE>

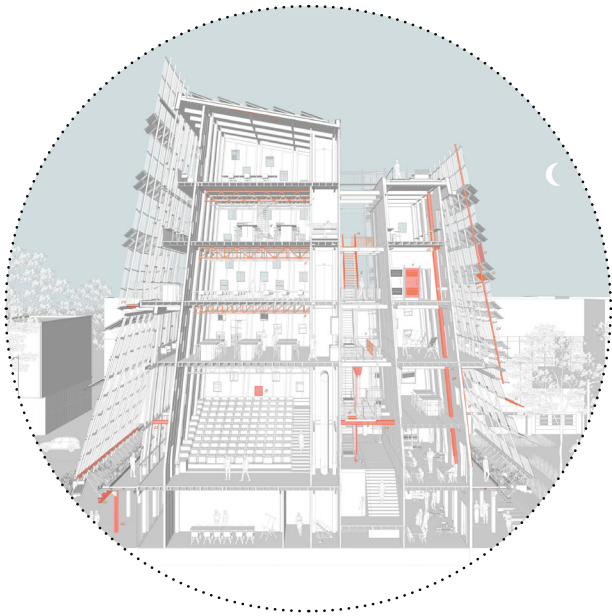


Sources: 1) Arboretum office building, Nanterre, Leclercq Associés
2) Facade component prototype, Niels Teunissen

wants modules?

Program Second Life

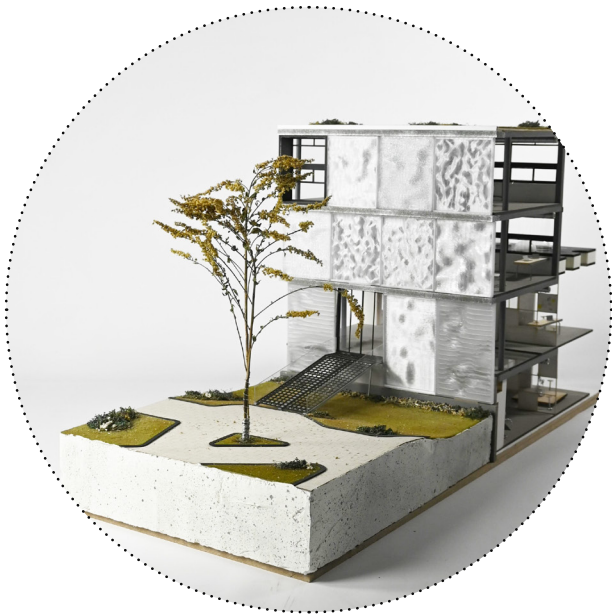
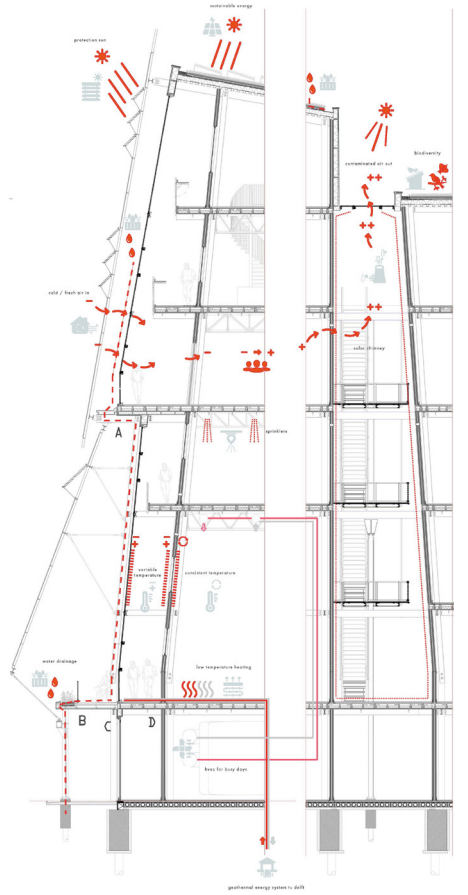
Adding a New Layer @TUDelftCampus



TU DELFT CAMPUS

Gabi Janse

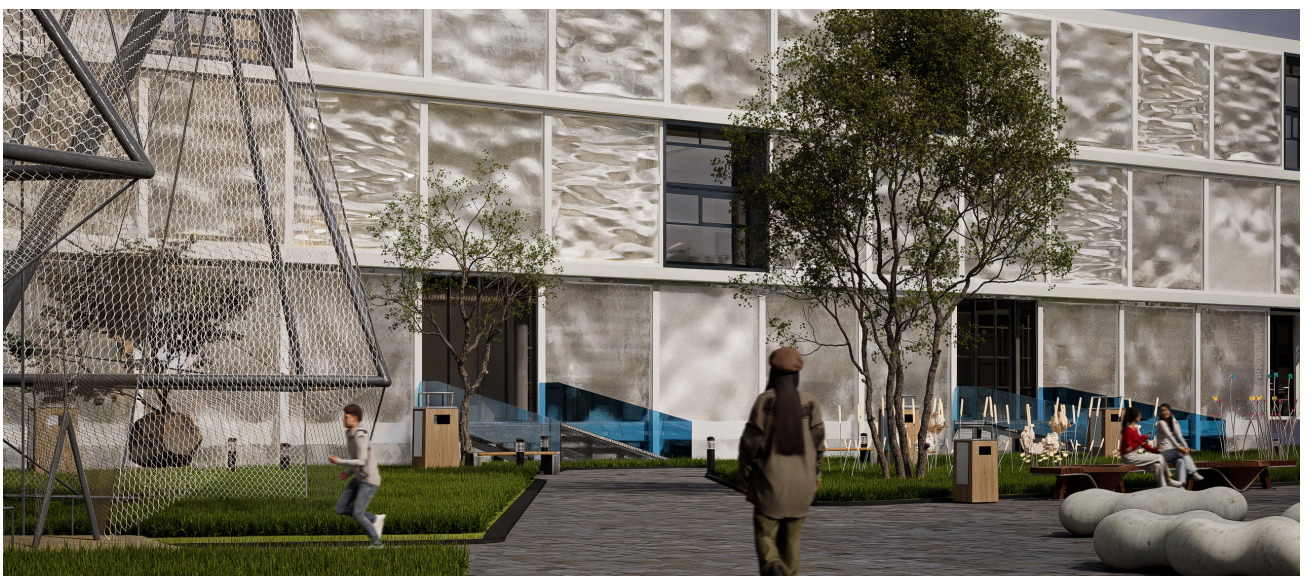
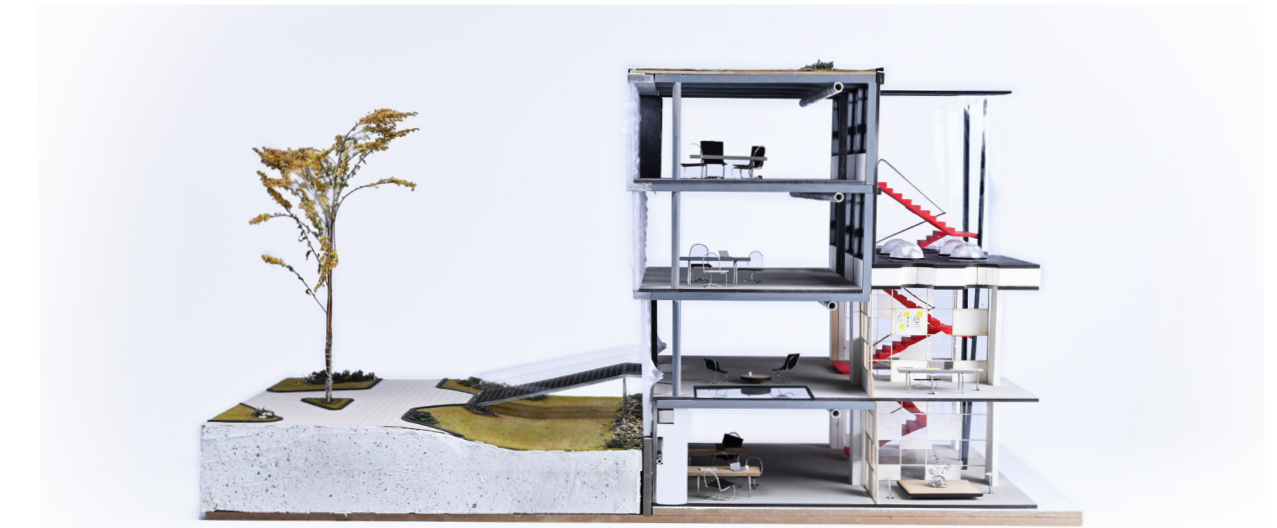
This project develops an assessment method for reusing steel components to promote circular construction. Analyzing thirteen common steel product groups from TU Delft case-study buildings, it identifies reuse potential and challenges. The research culminates in a circular campus building design, demonstrating practical applications and possibilities for repurposed steel components.



RENOVATING TU DELFT SCIENCE CENTRE

Su Müstecaplıoğlu

Monomaterial Multifunctional Facade explores 3D-printed recycled PETG for adaptive facade systems in renovations. Applied at TU Delft Science Center, the modular panels integrate sun shading, ventilation, insulation, and rainwater collection. Emphasizing circular economy principles, the design upcycles waste into construction materials, creating a sustainable, adaptable facade without heavy machinery.

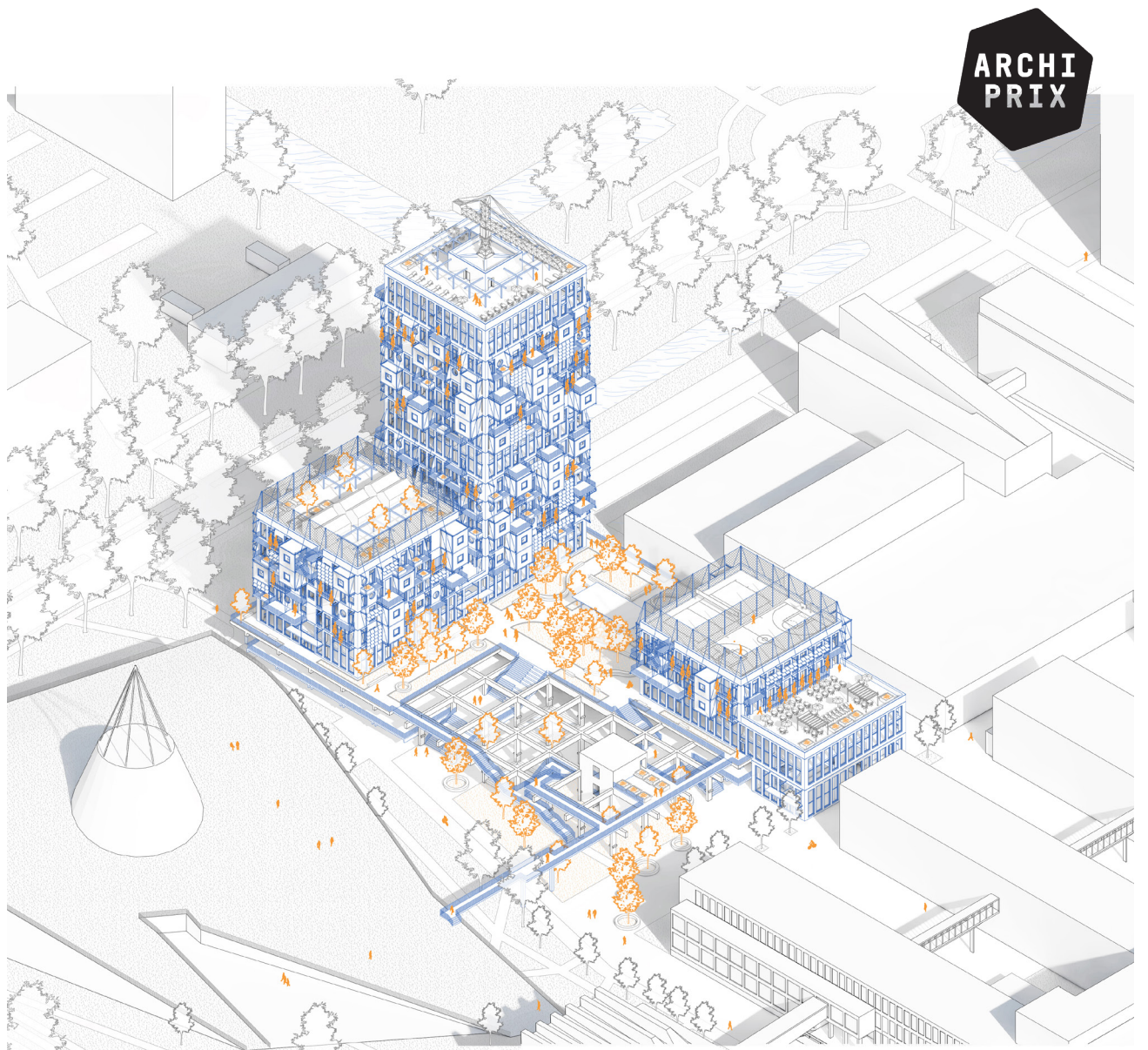




TOWARDS AN EVERLASTING ARCHITECTURE

Lorenz Eschke

Towards an Everlasting Architecture reduces embodied carbon by combining a durable concrete skeleton with adaptable wooden modules. Inspired by the Pantheon, it uses self-healing concrete to extend lifespan and minimize environmental impact. This approach envisions sustainable architecture that evolves over time, offering a low-carbon alternative for future construction.



Program Harvest

Locally Sourced Architecture

Working on healthy cities, villages and landscapes asks for multi-scalar design strategies and decision making with regard to the integration of urban resource flows within the built environment. Circular value chain thinking is needed to find regenerative and inclusive solutions for the future.

Students from Architectural Engineering experiment with regenerative strategies leading to strong designs for productive and recreational landscapes, valuable neighborhoods, buildings and (infrastructural) objects. Sustainable solutions for urban resource management are increasingly organised in a decentral way and need to be spatially embedded and supported by local communities. This transition therefore requires new forms of design processes for the (re)development of urban areas.

As part of the cross-domain Harvest program, research is being done in the working fields of urban metabolism and urban ecology. Closing the loops of urban resources, such as water, materials, energy and food, forms the starting point for interventions leading to interesting new programs, biodiversity, joy and quality of life.

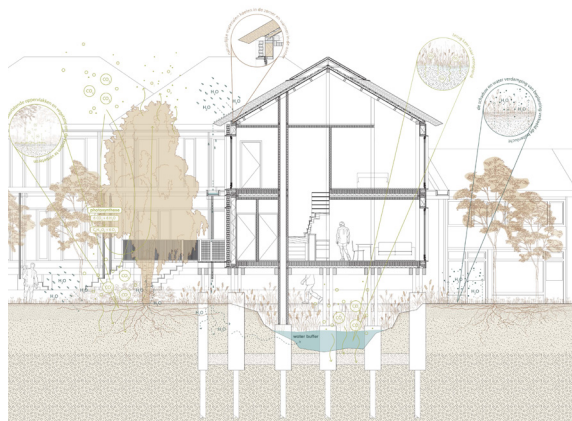


A TERRITORIAL APPROACH TO INDUSTRIAL HOUSING

Valery van Heijst



This project explores industrialized construction to address the Dutch housing shortage while preserving local identity. Combining prefabrication with critical regionalism, it balances repetition and specificity. Applied to Boerhaavewijk, the design integrates the historic peat landscape, prefabricated elements, and car-free public spaces to enhance sustainability and community engagement.

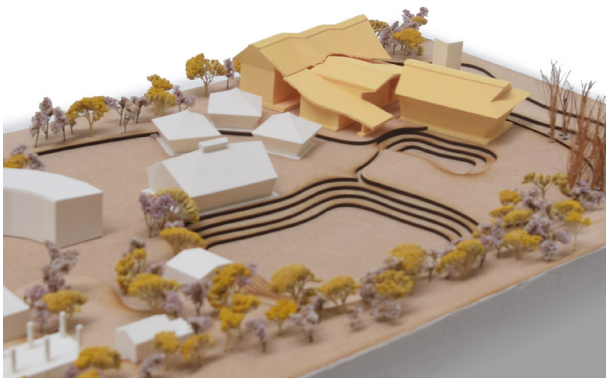
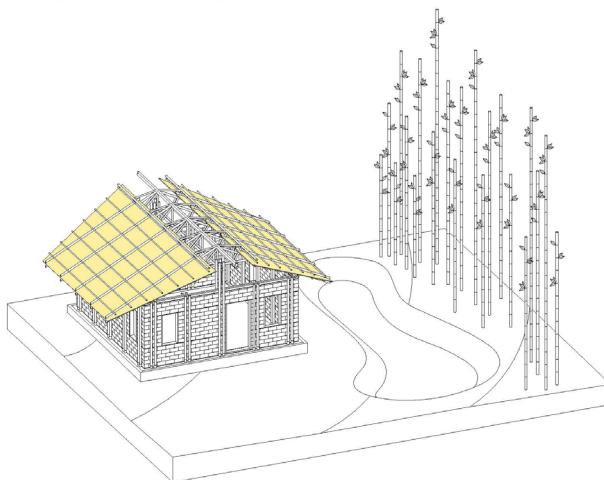


CONTEMPORARY VERNACULAR

Alexander Lorenz



This project applies Contemporary Vernacular Architecture (CVA) to create resilient, sustainable buildings in Assam by blending traditional practices with modern techniques. Designed for Akshar School in Guwahati, it develops a structural system tailored to local needs, resulting in a dorm and workshop that empower Assamese youth through awareness and innovation.

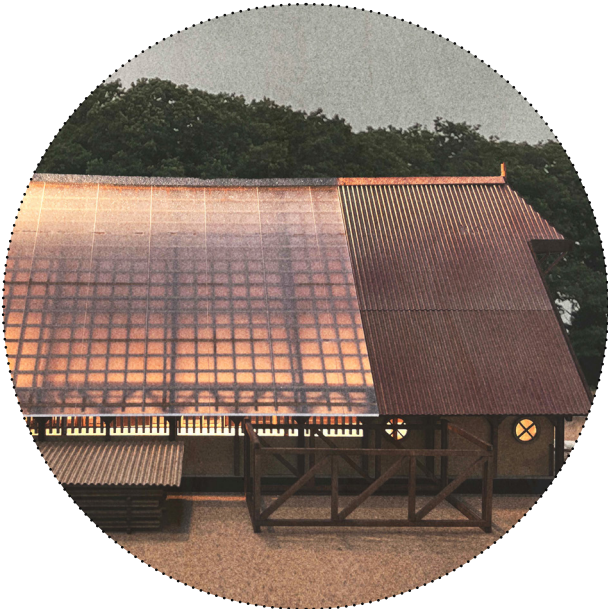


ROOTED

Pien Adank



This project applies biophilic design to improve refugee resettlement housing in the Netherlands, enhancing well-being and flexibility. A toolkit for architects, developed through case studies and regulations, guides the design. Using bio-based local materials, the fully demountable structure adapts to changing needs while integrating seamlessly into the landscape.



REVITALISING RURAL HERITAGE

Daan van Dortmont



Revitalising Rural Heritage redevelops the Nederrijk estate in Nijmegen through adaptive reuse and biobased materials. It addresses rural depopulation and polluting agriculture by creating a self-sufficient community engaged in estate maintenance. Blending private and public spaces, the design fosters human-nature interaction while introducing new economic activities for long-term sustainability.



GROW TO BUILD

Luka Brandsma



This project envisions a regenerative center for self-builders in Drenthe, fostering local material chains and a self-build community network. Inspired by historic farms, it evolves with growing skills and needs. Rooted in regeneration, production, and education, it offers a roadmap for a building industry aligned with ecological boundaries and urban peripheries.



STAHLSTADL

Catherijne Schot



STAHLstadl envisions a circular Alpine hospitality model, blending tradition with sustainability to close Austria's Circularity Gap. It explores circular building strategies using locally sourced, renewable, and reclaimed materials to minimize environmental impact. Positioned in the Alps, the project fosters sustainable tourism while preserving fragile ecosystems and cultural heritage.

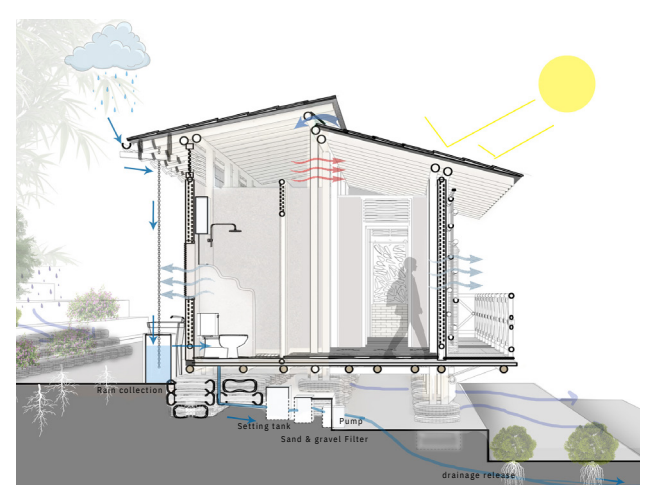
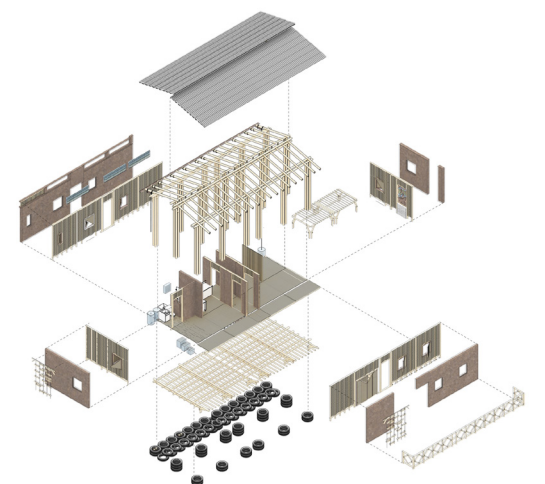


RESILIENCE

Daniela Diaz Avila



This project designs a safe, sustainable housing typology for displaced communities in informal settlements. It integrates bio-based and recycled materials while addressing structural risks in landslide-prone areas. Expanding beyond housing, the design forms a self-sustaining block with landslide mitigation, social spaces, and communal facilities, fostering resilience and community well-being.



Program Harvest

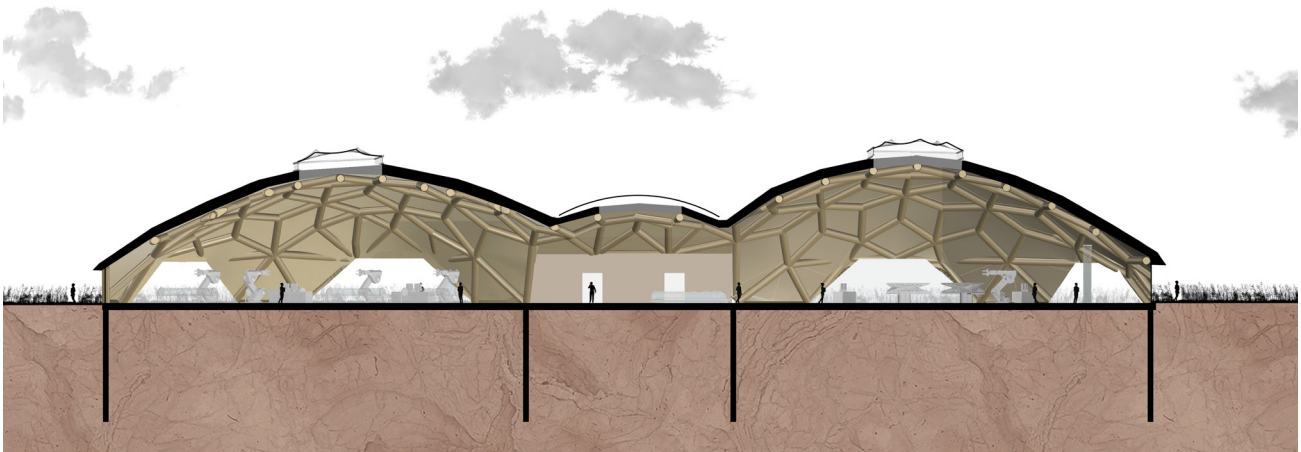


THE FLAX WEAVING HUB



Ruben Tjebbe Steinfort

The Flax Weaving Hub in Groningen explores coreless-filament winding (CFW) with flax fibers to create modular, demountable building systems. Inspired by local treescapes, the design demonstrates flax's structural potential while promoting resource efficiency. This project revives Groningen's flax heritage, showcasing sustainable construction techniques through education and innovation.



AL HIJLA VERTICAL FARM



Addeen Shahar

This project addresses food insecurity in Doha, Qatar, exploring climate change impact and the shift toward self-sufficiency. It examines vertical farming as a strategy to enhance local food production in arid conditions. By optimizing yield and scalability, it promotes automated, sustainable urban agriculture to reduce reliance on imports.

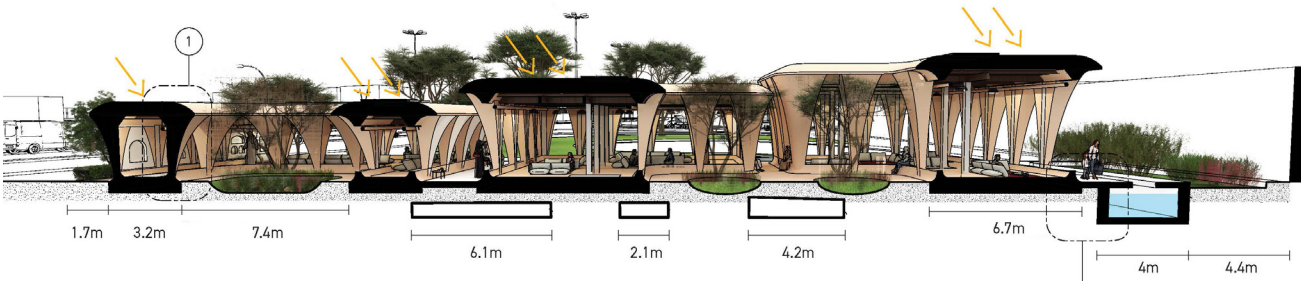


RECONNECTION: THE URBAN OASIS



Sara Tesselaar

This project explores emotional architecture as a means to reconnect urban environments with nature, enhancing well-being. It develops design principles that engage the senses, honor local culture, and integrate nature into city spaces. The Urban Oasis concept transforms urbanization's challenges into restorative, human-centered environments that foster emotional and ecological balance.



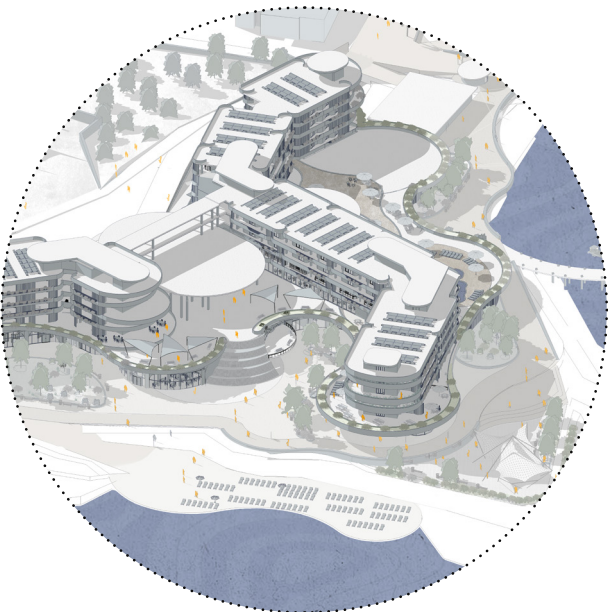
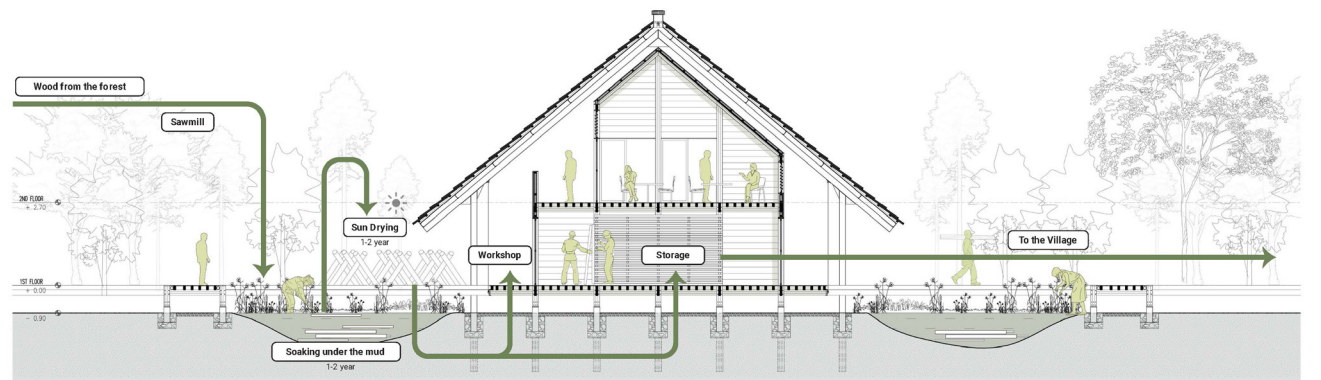
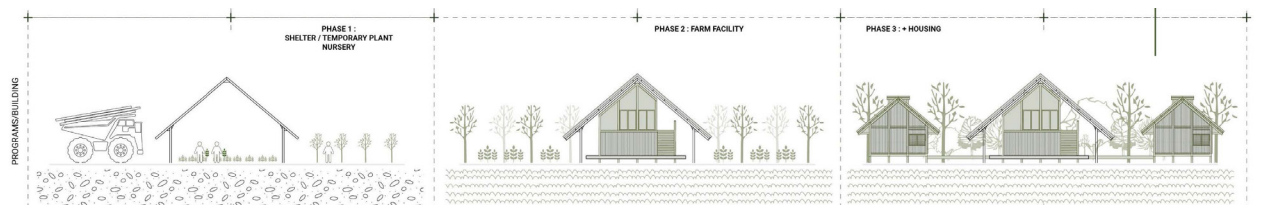


RISING FROM THE [COAL] ASHES



Alfian Reza Almadjid

This project envisions a circular Post-Coal Community in Muara Enim, integrating energy transition, land reclamation, and agroforestry. It repurposes mining infrastructure for materials, transforms pits for reforestation, and employs phytoremediation plants and fast-growing timber. This regenerative strategy fosters a sustainable, non-extractive building culture in former coal regions.



THE RIPPLE

Zeynep Yelken

This project transforms an abandoned coastal site in Malta into a vibrant social hub, integrating passive design strategies for efficiency and cost-effectiveness. It explores community-engaging tourism through a mixed-use development. A design manual outlines passive principles across tourism typologies, promoting sustainable, luxurious, and inclusive architecture in the Mediterranean.



TRANSHUMANCE

Jurre de Zwart

This project repurposes Italian Alpine farms, addressing materiality, indoor climate, and seasonal migration. It integrates biobased materials from abandoned fields into regional architecture. Adapting to extreme weather contrasts, it introduces architectural fragments that enable flexible use, ensuring responsiveness to environmental and population changes throughout the seasons.



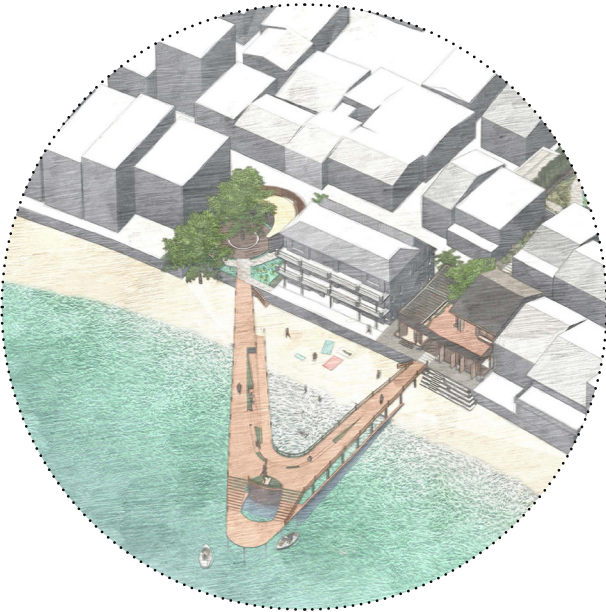
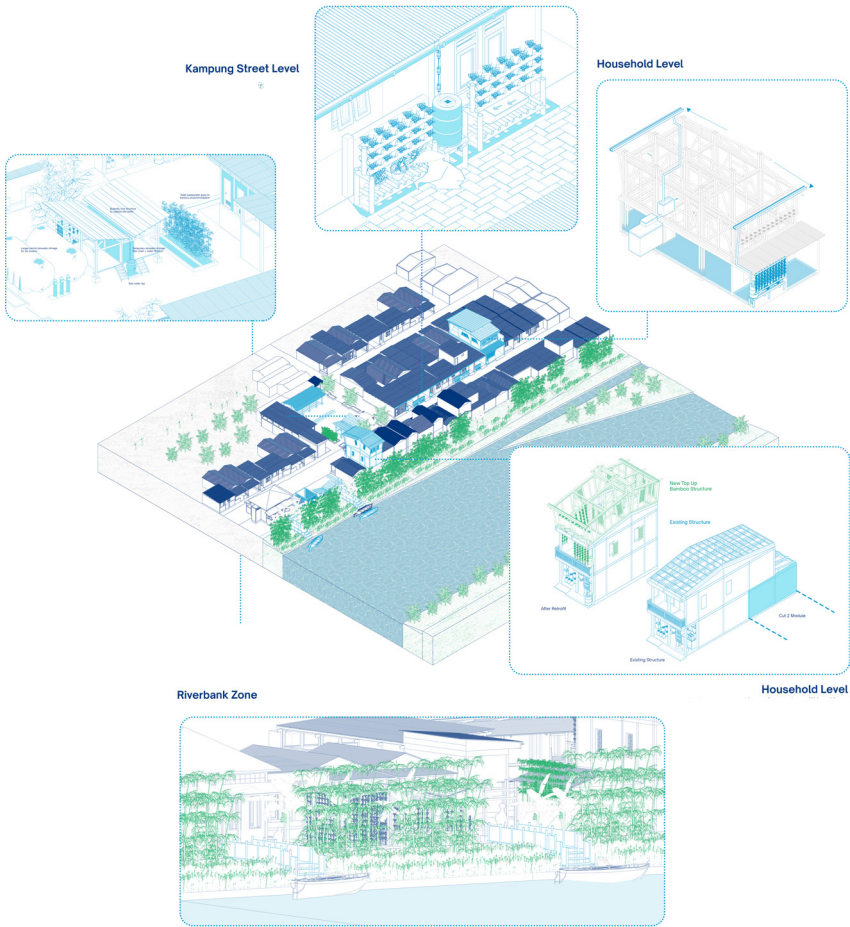
Designing with Water



RECOVERING THE WATER

Aprisia Rasya Murran

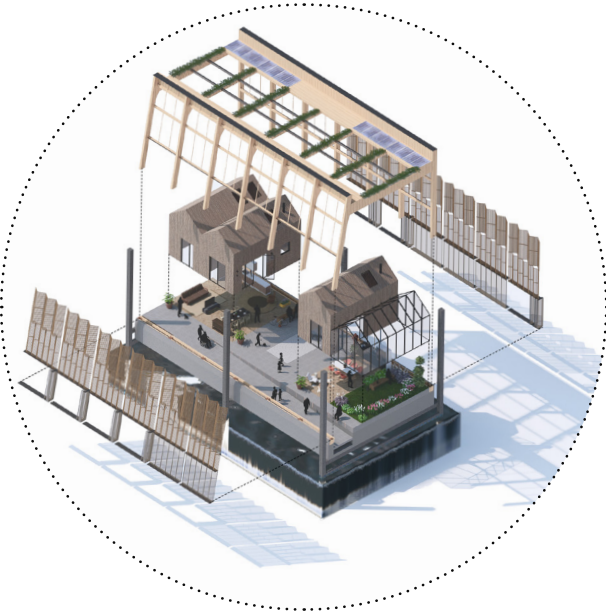
This project tackles water challenges in informal Surabaya communities through circular economy and nature-based solutions. It introduces river buffers, rainwater harvesting, flood shelters, and shared purification systems. Using blue-green infrastructure and biobased materials, it fosters self-sufficiency, well-being, and climate resilience across urban, community, and household scales.



MODERN SALA

Else Wintermans

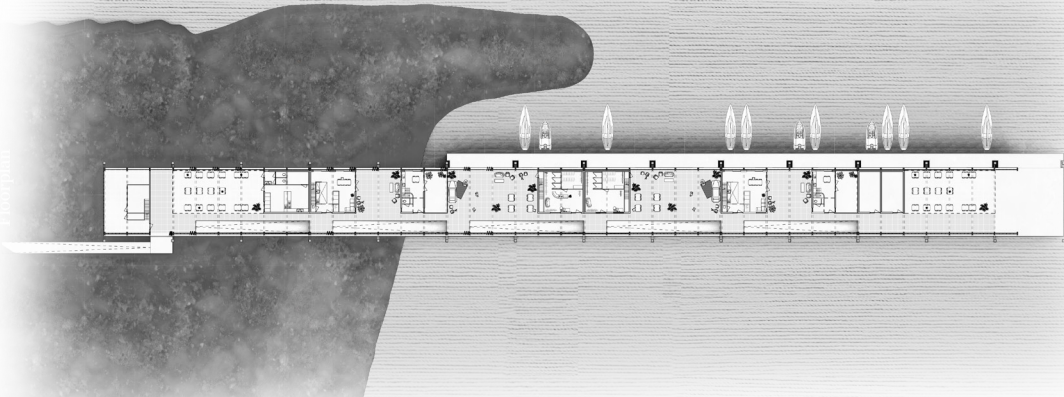
This project addresses mass tourism's impact on Thai islands, focusing on water shortages and ecological damage. "Modern Sala" transforms a site into a self-sufficient recreational space for locals, integrating sustainable water management, local materials, and seawater purification. Flexible spaces restore the environment and promote balanced, community-driven tourism development.

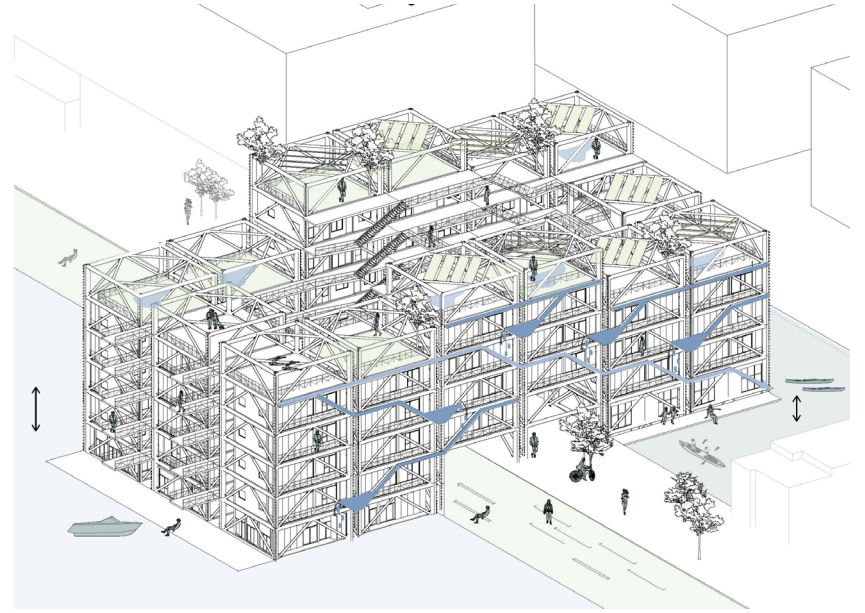
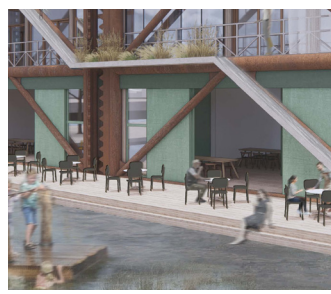
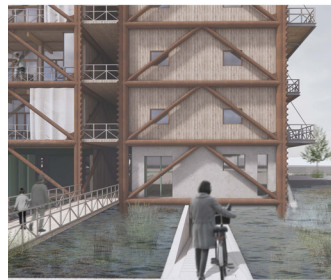
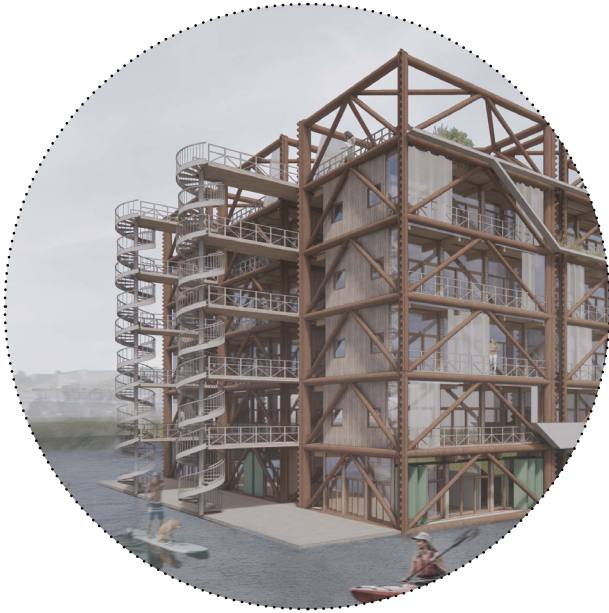


HYBRID DAM

Jenna Zuidmeer

This project envisions a future Netherlands where rising sea levels transform dikes into dams, embracing water rather than resisting it. Focused on Zeeland, it integrates a flexible, adaptive hybrid dam with six moving parts, creating a resilient water-based society that responds to tidal fluctuations, economic shifts, and social transformation.



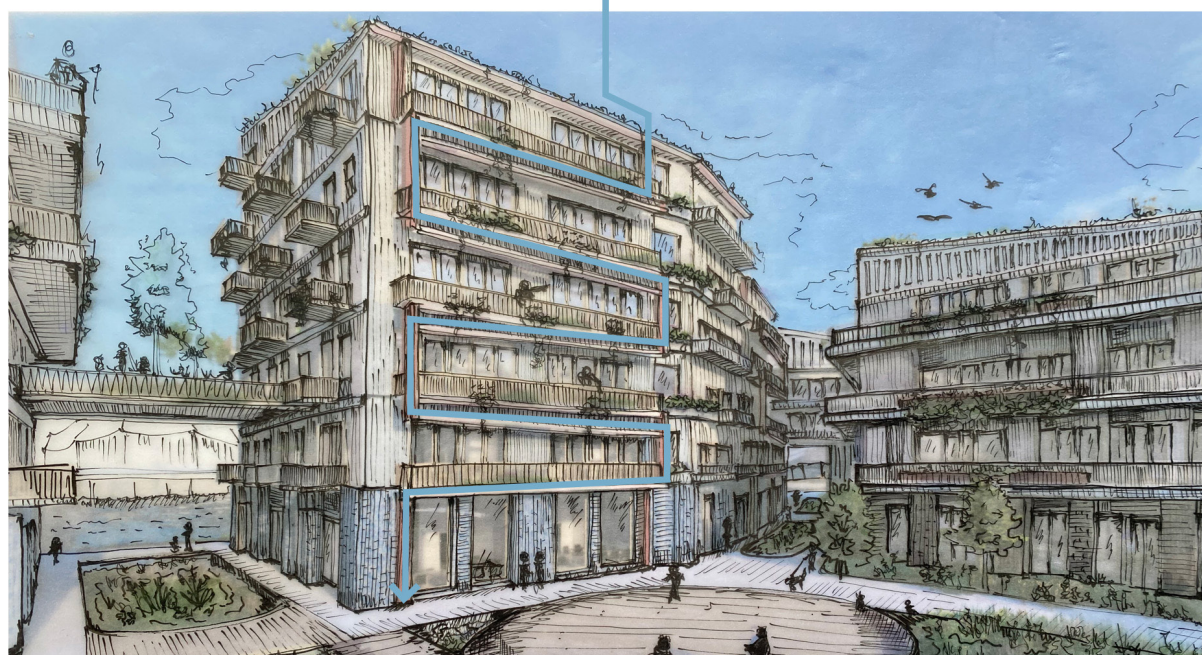
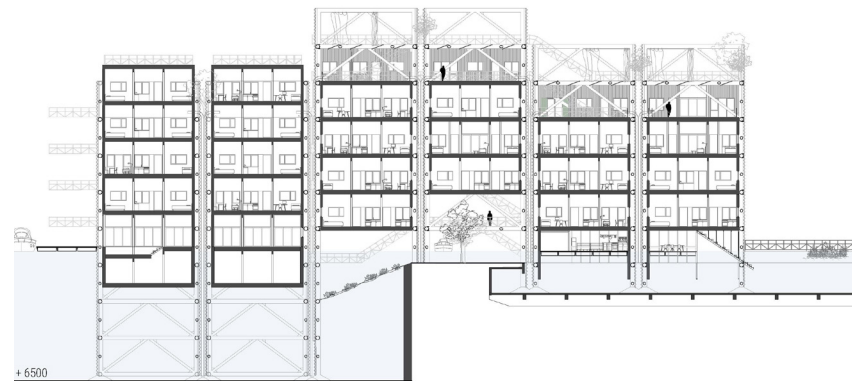


LIVING WITH WATER



Nicolette van den Bos

Living with Water explores water-resilient architecture in Rotterdam's Merwehaven, integrating floating and amphibious housing to adapt to rising sea levels. Using sustainable materials and innovative construction, it enhances human engagement with water while fostering social and cultural value. This project serves as a model for climate-adaptive urban living in coastal cities.



LEVELING UP: ENGAGING WITH WATER



Gili Hofland

This project introduces a sponge architecture typology that adapts to floods, promoting water resilience through biomimicry and biophilic design. Using London's landscape, it integrates water as a design element to enhance well-being and community engagement. By linking urban planning, social awareness, and investment, it encourages sustainable, water-saving initiatives.

Alumni

Interview with aE alumna Tslil Strauss



When did you graduate from @aE Studio?

In the summer of 2021, with the project Urban Transplant: Concrete Transformation Methods with Reuse. The project took a circular approach, supported by in-depth research into the reuse of in-situ structural concrete as components - offering transformation methods for the built environment, and proposing the deconstruction of buildings as an alternative to demolition. Urban Transplant is a tool for post-capitalist architecture.

After your graduation you started working at Superuse Studios, also now teaching at the TU Delft and the Academy of Rotterdam. How can you relate your graduation project and your interests at the time to your current activity?

The freedom that the aE graduation studio gave me to develop any subject that I found to be interesting was really important - it allowed me to focus on where my true interests lie. There was a shift in my understanding of what the built environment needs, and what gives me real, intrinsic motivation to do architecture.

The topics I deal with in my work now - especially when it comes to materials - are quite similar to those I explored during my graduation year.

That project was the beginning of considering the reuse of existing materials as a truly sustainable solution, which is something we try to implement on a daily basis at the office. As a tutor, I guide the student with structuring their research and focusing on topics that are genuinely meaningful to them - and in a way, quietly pushing my agenda - advocating for more conscious, environmentally aware design.

In my projects at work, there is still that same kind of freedom I experienced during graduation - every project is different, and there's room to explore. The biggest difference between practice and studies, in my experience, is the constant presence of budget constraints and costs, and the broader economic system that affects everything. I keep on learning and recently I focus on how to combine circular ideas and ambitions for systemic transition within the limits of our current economic model. That is something I may have only touched on during my studies, showing the Urban Transplant can be technically and economically viable. In a way, I feel like our work at Superuse is quite academic - in a sense, it is always a combination of making and producing, but also exploring, researching, and learning.

How does your background as an architectural engineer influence you?

I believe it taught me a way of thinking and approaching design - always trying to see architecture as a response to a problem in a practical, pragmatic way. Starting with a problem statement and developing from there. It's architecture with a clear sense of direction - aimed at problem-solving, in a systematic way. We often worked with scenarios, which allows exactly the kind of distance from reality you sometimes need to be able to say something a bit more innovative or a bit more critical.

I think the Architectural Engineering studio is quite unique. It offers a lot of freedom, which gives students the time and space to really find their own topics - even to define the location or program themselves. That flexibility, being able

to shape your own brief, is something that often happens in real-life projects when working with clients and other stakeholders. So in that sense, it feels like very relevant skills to have.

Furthermore, the diversity of the tutors stands out. Tutors come from different backgrounds and that way the student is exposed to a wide range of perspectives - some with a strong artistic focus, others with a clear social agenda, or an environmental and systems-thinking approach. That combination of approaches is an excellent preparation to future practice.

Where or how do you see yourself in the future?

I'm quite happy where I am. I love the combination of practicing, working with clients, doing research, and teaching. I'm a big fan of the TU Delft - both from my own experience as a student and now as a teacher - so I really enjoy this kind of synergy, where I can act as a link between those worlds of practice and academia.

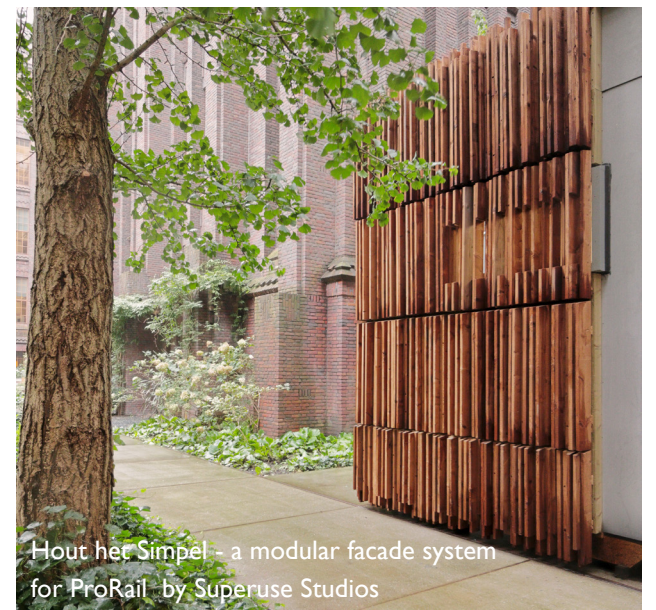
Professionally, I hope to be in a similar place, and hopefully working with bigger budgets and to make bigger impact. I also hope that building regulations will evolve - just as our students evolve - so that we can realize the kind of projects we imagine and develop within academia.

Do you have any additional tips or experiences you would like to share with potential future aE graduates?

Really take the opportunity to explore the topics that interest you!

It is the best way to discover what satisfy us and keep us motivated while doing. The studio is a great environment to test out those interests freely. Explore, try things out, and don't stress too much about getting it right immediately.

I believe a good graduation project always comes from a real passion. Take your time, make full use of the facilities and learn from the people around you. Try to mix and match different perspectives until you find your own.



Hout het Simpel - a modular facade system for ProRail by Superuse Studios

Interview with aE alumnus Yannick Warmerdam



When did you graduate from @aE Studio?

I graduated in 2017 with a project titled Return to Eden: The School for Contentment. It was an unusual project for the Architectural Engineering Studio, as it explored the idea that technology alone won't be enough to make our lifestyles sustainable. Instead, we need to change how we live - learning to become content, rather than always striving for more comfort and technological progress. Only later did I realize that the project was really about the relationship between a person and a building - how space becomes personal to us, and how attachment and longing for a place can form over time.

After your graduation you started your own architectural practice, develop projects as an illustrator, and teach at the TU Delft. How can you relate your graduation project and your interests at the time to your current activity?

I divide my work now between architecture and architecture dreams - through hand drawings, animations, and more utopian architecture projects. I'm still fascinated by the close relationship between people and buildings, something that truly originated in my graduation project. That's also when I started using a medium

I still work with today: hand-drawn animation.

The freedom I was given in the studio, combined with the trust from my tutors, Annebregje Snijders and Marcel Bilow, gave me the confidence to get close to what I really wanted to do. I learned during that year that good things come from following your genuine fascinations. The aE studio had this honest attitude - combining a dreamy, utopian vision with a critical, down-to-earth technical approach - which forced me to ensure that even my fairy tale was technically sound. I still carry that confidence with me and use it to pursue projects that are a bit unusual. I honestly believe that if I had chosen a different studio, my life might have turned out completely differently.

Now, as a tutor, I try to strike a balance. On one hand, I'm critical of what the student is proposing or trying to do. On the other, I strongly feel that my main role is to create conditions in which students can get as close as possible to their passion and their heart - within the expectations of the graduation project at the faculty.

How does your background as an architectural engineer influence you?

When I look at how I approach architectural projects, it's very much grounded in a down-to-earth, practical way of designing. I learned how valuable drawing and making models is for me, so I always use them to test ideas - and I strongly encourage my students to do the same.

This approach of testing things at a smaller scale also carries over into my utopian drawings. Physical models often serve as a base for the images, helping to get the light, materials, and perspectives right - and often sparking new ideas. Whether a project comes from imagination, or, like the one I'm currently working on, from envisioning and recreating cities and architecture based on detailed book descriptions, there's always this practical, physical aspect.

Even though at first glance it might seem like there's little engineering involved, I think there's

actually a very practical and material side to it. The textures, the lighting, the atmosphere in the illustrations and animations - they're all grounded in a process that starts with visualizing through models. It's a kind of prototyping. In that sense, it feels very real - very physical.

Where or how do you see yourself in the future?

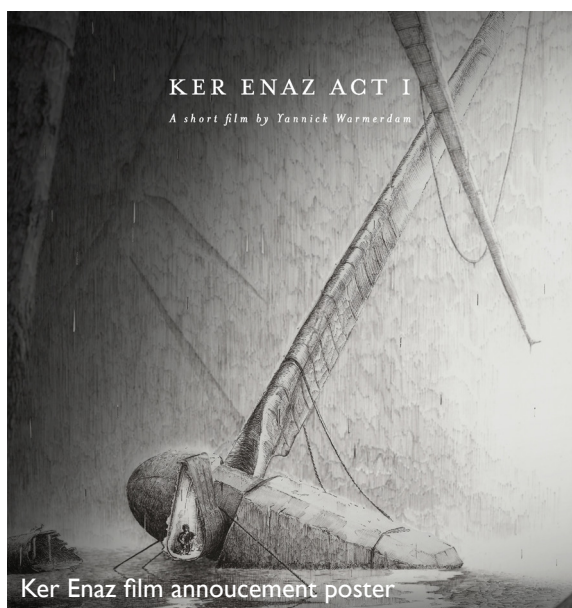
Doing what I'm doing now - I really hope I can keep it that way. One or two days at the university, two days on architectural projects, and then two days working on my architectural dreams, which are my drawings and utopian ideas. It gives a great balance. In the real architectural projects, I stay grounded, while in the architectural dreams I can zoom out and imagine how I think society could look - even with a bit of magic, where the physical laws no longer apply.

I do have a dream where these architectural dreams - my drawings - and real architectural projects come together. Right now, they still feel quite separated, even though I see a lot of bridges between them. The outcomes are so different: a hand drawing versus a physical building. But I would love to see a project where they truly blend. I'm currently working on something that moves in that direction - creating a space where my art, like the drawings, actually becomes part of the architecture. I hope that in the future I'll discover many more ways for these two worlds to become one. I'm full of ideas and confident I won't ever be bored.

Do you have any additional tips or experiences you would like to share with potential future aE graduates?

Use the freedom of the Architectural Engineering studio to dream and explore your interests. Even after graduation, I'd recommend making space in your agenda for your own dream projects - something you really love to do. It might be difficult in the beginning, but if you stay close to your ideas and passion projects, and if you're patient, things get easier. Eventually, all the pieces start to fall into place, and it's a great feeling to stay true to yourself.

I also feel that not enough people reach out to those they admire - even though, in most cases, you've got nothing to lose. For example, in my short hand-drawn architectural animation film, I worked with India Bourne, a British cellist I'd been a fan of for years. I never expected her to be interested in composing music for the film - but she was, and the collaboration made the project so much better. I always think: even if they're not interested, it's still a compliment to let someone know you admire them. It's about taking chances - reaching out, trying something - especially outside your own field.



Ker Enaz film announcement poster



Return to Eden: School of Contentment graduation project

Graduation Architectural Engineering



Kick-off meeting aE Studio nr. 33, 15 September 2024

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COLOPHON

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