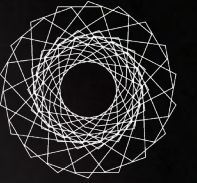


CARNEGIE MELLON\_ARCHITECTURE



# ADVANCED OPTION STUDIOS

FALL 2025



**SALVAGED FUTURES**  
*Unmaking Intelligent Spaces*  
**Daragh Byrne**



**THE AIRPORT OF THE FUTURE**  
*Fentress Global Challenge International Student Competition*  
**Hal Hayes**



**FROM STEEL TO TIMBER CITY**  
*Re-imagining mass timber structural systems*  
**Juney Lee**

**DESIGNING COUNTERPUBLICS**  
*Reclaiming Space and Narrative After Route 65*  
**Christine Mondor**



**METAMORPHIC GROUNDS**  
*Design in Times of Planetary Change*  
**Maryam Karimi**



**OF MOTHERS AND DRAGONS**  
*Compound as Architectural Models, Rice Fields, and Urban Form*  
**Tommy CheeMou Yang**

# SALVAGED FUTURES

Unmaking Intelligent Spaces

Daragh Byrne



## CONTEXT

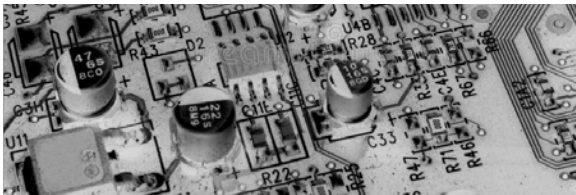
This is the third year of a three-year sequence. It began in Fall 2023 with a ASO entitled Data Dump and subsequently continued in Waste Machines in Fall 2024 and will have a final studio engagement in F2025 with Salvaged Futures.

## PROMPT

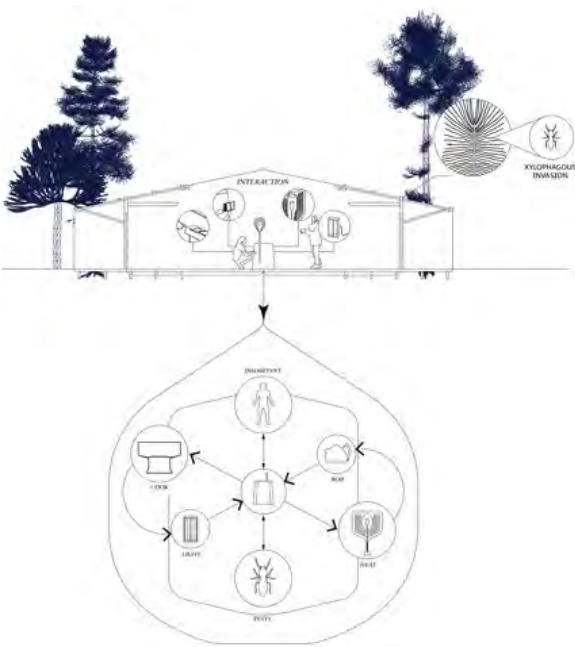
The greenest buildings in the world still rely on short-lived electronics—producing a hidden stream of waste that rivals their own structural footprint. Cities are racing to become “smart,” but have no plan for the e-waste graveyards these technologies will create. In the previous iterations, the studio has focused on unmaking waste as a way to counter and resist unsustainable practices in technology: obsolesces, device abandonment, data consumption, and more besides. In this final iteration, will focus less on the technological matter and more on repairing the worlds that they have created. Students will be invited to consider maintenance, care, and repair as a way to explore alternatives for our relationships to technology and the critical stances we should take on the plethora of sustainability concerns they create for us:

- The energy required to show a new Instagram post from Cristiano Ronaldo to each of his followers could power a house for several years.
- The generative-AI boom is on pace to cost more than the Apollo space missions.
- Americans threw out four times as many small appliances in 2018 as they did in 1990.
- In Goodyear, Arizona, a data center used for generative AI may guzzle as many as 56 million gallons of drinking water each year.

How did we get here? Are there alternatives?  
Can we reclaim these broken worlds?

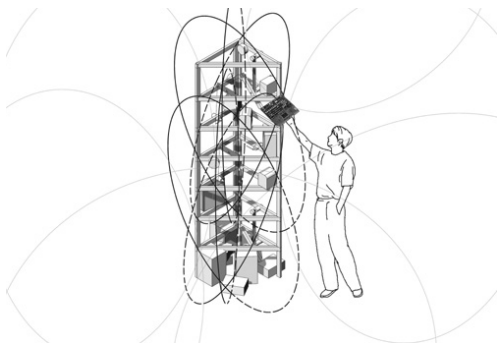


Top: UN-Earthed Networks. Siddhant Salvi. Waste Machines ASO F2024  
Mid: Infill development as repair, Galina Tachieva, Sprawl Repair Manual, 2010. Middle Lower: Electronic circuit board  
Bottom: Brine pools at the Soquimich lithium mine on a salt flat in Chile.



## PROGRAM

Students will investigate the wasteful worlds we’ve created through technology and position alternatives. To explore this, they’ll tour the history and shifting formats of repair manuals. Through readings and interdisciplinary approaches by Stewart Brand, the Maintainers, and Shannon Mattern, students will get to know repair’s relationship to forced obsolesce and corporate ownership of repair. They’ll also get close to repair and develop their own repair manual, by spending time hands-on repairing, mending, or tending to something in their world. In tandem, they’ll study sites in the world affected by electronic waste. Through image making, counter-visuals and creative editing, students will imagine an alternative history of technology that arrives at a more sustainable present. Finally, and for the second half of the semester, they’ll work to materialize this salvaged world as a series of models made from reclaimed and reconfigured waste materials. Throughout, they’ll work across disciplines and build their own voice with technology, critical practices, and repair.



**Week 1: Making / Unmaking** - orientation to ASO.

**Week 2-6: Repair Work** - we investigate repair practices, conduct urban mining, and catalog broken worlds of e-waste.

**Week 7-8: Mid Review / Proposals** - render their explorations through zines, videos and objects as well as propose a repair manual for a broken world.

**Week 8-13: Broken Visions** - will unmaking and remake waste to render an alternative worlding.

**Week 14: Exhibition**

Left: Archaic Smartness by Valentin GRAILLAT. A — The ‘Becoming Smart’ of the Home: a Genealogy of a Techno-Domestic Ideal:

Above: DumpBeat. Charlie Hsu. ASO Data Dump F2023

Left: The Last Whole Earth Catalog back cover from August 1972 showing the ATS-3 satellite image of Earth used on the cover of the first issue.

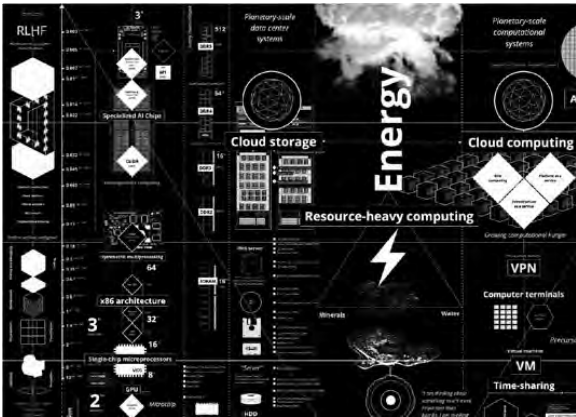
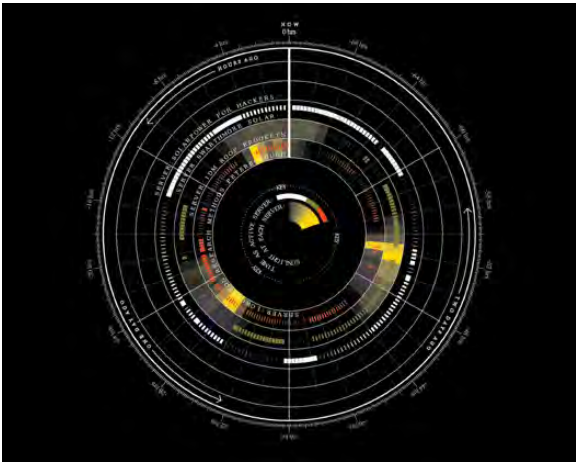
QUESTIONS

- How can we think of (electronic) waste? How do we recognize that treating 'electronic discards as waste is a 'worlding'?"?
- What are the worlds — situations, contexts, material flows, lifespans — of discard, abandonment and waste that we should critically examine?
- How should designers engage with broken world thinking, as well as the end-of-life and end-of-use of things?
- What are the dominant narratives of repair in technology, in materials, and in the world? What should we question? What should we reframe?
- When are dismantling, decay, ruin, and destruction a resource for design?
- How can and why should objects, waste, and technology be unmade: What does it materially and physically afford for (re)use, (re)composition, (re)work, and (un)making?
- What aspects — material, conceptual, technical, social, economic, etc. — and issues of e-waste do you want to reckon with? What do you want to draw our collective attention or our collective imagination to notice, understand, and reflect upon? What are our individual and collective material ethics?

HYPERNORMALISATION

This studio confronts the normalized invisibility of technological waste and the illusions of sustainable progress. While cities pursue smart futures and green certifications, few question the environmental and political costs of the electronics embedded within these systems. The studio resists the complacency of this narrative by shifting focus from extraction to repair, and from progress to maintenance. Students are invited to see repair as a counter-practice to obsolescence—a way of reclaiming agency in a world where the rapid churn of devices masks deeper systemic harm. By tracing repair manuals as epistemological tools, studying global e-waste ecologies, and building speculative counterhistories, the studio activates imagination against passive participation in a hypernormal world and begin to craft portals to alternatives—ones rooted in care, stewardship, and critical making.

**Top: Solar Protocol** (2021-2024) Tega Brain. Data visualization of network activity. Solar Protocol explores natural rather than artificial intelligence. The work takes the form of a network of solar powered servers, installed and maintained by volunteers around the world that collectively hosts the Solar Protocol web platform.  
**Middle: Asunder** (2019). Exhibition views from the The Eternal Network, Transmediale 2020. Photography by Luca Girardini. Assunder speculates on an artificially intelligent environmental manager that generates, proposes and models future alterations to the planet in an attempt to keep it safely within planetary boundaries.  
**Bottom: Calculating Empires: A Genealogy of Technology and Power Since 1500.** Kate Crawford and Vladan Joler. 2024. Calculating Empires is a large-scale visual manifesto illustrating how technical and social structures co-evolved over five centuries. It traces technological patterns of colonialism, militarisation, automation, and enclosure since 1500 to show how these forces still subjugate and how they might be unwound.



Above: Two excerpts from Nova, N., & Bloch, A. (2020). Dr. Smart-phones: an ethnography of mobile phone repair shops. IDP.

LEARNING OUTCOMES

Within this studio, we'll engage emerging practices and methods in critical speculation — namely unmaking — to materialize and explore alternative histories and futures for e-waste. We'll work to find new relationships by un-making, un-crafting, un-designing existing e-waste — considering the collateral of technology abandonment to counter, resist, and rethink how design can respond. Our goal will be to engage creatively with these materials, reconfiguring waste into artifacts that build conversation, debate, and dialogue about material ethics, the worldings of waste that are and the worldings of waste that could have been.

On successful completion of this studio you should be able to:\*

- Define why and enumerate ways in which e-waste and technology abandonment are relevant to design and architecture, specifically how they relate to material economies, infrastructure, the environment, sustainability, and geographic place..
- Appraise course materials (readings, cases, etc.) and identify supplementary materials of relevance and personal interest to generate discussion and insight.
- Evaluate sources to bring to light matters of concern and recognize the differing voices, disciplines, and perspectives in discourse on waste and technology.
- Understand unmaking and speculation as forms of design research inquiry.
- Identify and explain the methods and approaches for design and speculation around waste.
- Identify relevant design factors, issues, and considerations and articulate opportunities for creative response.
- Demonstrate familiarity with repair practices.
- Demonstrate familiarity with how electronic devices work.
- Be able to take apart and rework electronic devices.
- Have used and experimented with using e-waste as materials for unmaking and making.
- Be able to articulate the ecological impact of waste in emerging technologies such as AI

\* This is a quick summary. A full and detailed account of the learning objectives is provided in the course syllabus.

Lepawsky, J. (2018). Reassembling rubbish: Worlding electronic waste. MIT Press.

# The Airport of the Future

Fentress Global Challenge International Student Competition

Hal Hayes

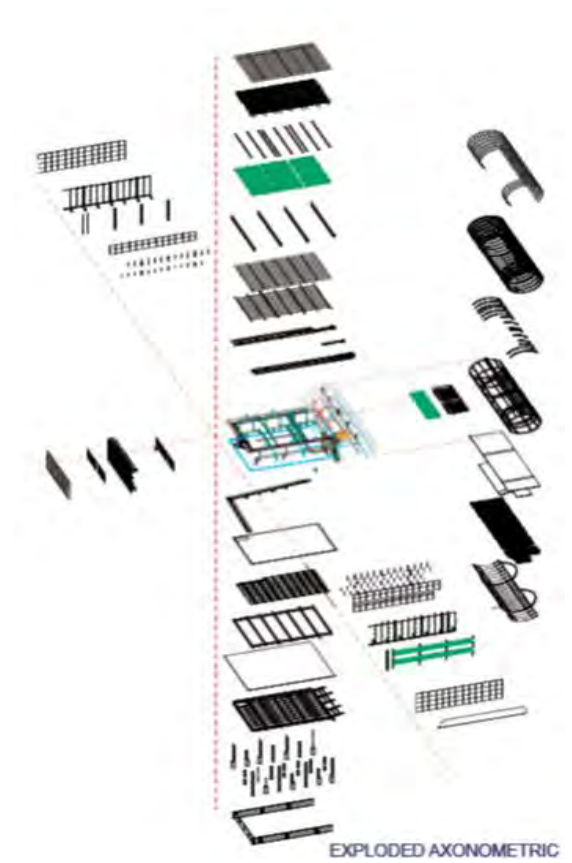


Jacob Douenias, CMU f12 JFK T4

## QUESTIONS

This studio will address four strategic challenges for the design of a 22nd century airport. While airports are among the largest and most complicated structures, these challenges also directly apply to the programming, planning and design of most major buildings

- Resilient & Sustainable Infrastructure.** How can we design airports to withstand rising sea levels, extreme heat, and storms, while also achieving zero-emissions operations and integrating harmoniously with the environment?
- Autonomous & Intelligent Systems.** What role will AI, robotics, and predictive data play in optimizing passenger flow, security, logistics, and maintenance with minimal human intervention and maximum efficiency?
- Multi-Modal Hubs.** How must infrastructure evolve to support VTOL aircraft, electric planes, drones, and even suborbital or space-based travel while seamlessly connecting to urban and regional transport systems?
- Human-Centric Experience & Safety.** In a hyper-digital world, how do we ensure airports are accessible, emotionally intelligent, and health-conscious with biometric identity systems, inclusive environments, and designs tailored to diverse passenger needs?



Above: Timothy Khalifa, LGA Terminal B, 2017  
Bottom: Madrid Barajas T4, Rogers Stirk Harbour, 2006



## PROMPT

### Designing the 22nd-Century Terminal

Architecture is often perceived as static, but the experience of space, particularly in transportation environments, is inherently dynamic. Nowhere is this more evident than in the airport terminal: a complex, high-performance typology defined by movement, flow, and interaction at an enormous scale. As a symbol of global connectivity and one of the most rapidly evolving building types, the airport reflects shifting technologies, cultural patterns, and infrastructural demands.

This studio challenges students to design a terminal for the next century, engaging the full spectrum of interdependent systems that define large-scale public architecture. Emphasis will be placed on holistic, integrated thinking treating morphology, program, structure, and systems as co-dependent drivers of design. Key areas of nvestigation include the following.

- Function:** programmatic organization, adjacencies, and passenger wayfinding
- Context:** environmental response, local identity, typological evolution, and precedent analysis
- Concept:** spatial narrative, sequence, hierarchy, sense of place, and morphology
- Systems:** structure, envelope, mechanical integration, sustainability, resilience, and coordination

## CONTEXT

Airport terminals have a unique combination of roles. They are significant civic landmarks. They are typically one of the largest buildings, most complex sites, and one of the largest employers. They symbolize civic aspirations and self-image. They are used by a large and diverse population. They are critical regional passenger transportation and freight logistics hubs. And they are key nodes in a global system that has strict requirements that are constantly evolving through technological and cultural change.

In this studio, students will identify the site of an existing or proposed airport with which they are familiar and/or have access to. They will research its history, current conditions and proposed development, and then take that further, considering how their subject airport could evolve, or be replaced, to serve the needs of the 22nd century.



Singapore Changi Jewel Terminal, Safdie Architects 2014



HyperNormalisation

## PROGRAM

**The Fentress Global Challenge** is an international student competition seeking an innovative design concept for the future airport. Student projects will be eligible for submission; see more at [www.fentressglobalchallenge.com](http://www.fentressglobalchallenge.com)

Airport terminals are among the most complex and symbolic building types of modern global civilization. Defined by mobility, infrastructure, local culture and regional building practices, airports present a rich ground for speculative design at the intersection of technology, climate, and human experience. This studio is framed as a guided architectural thesis; students will work individually or in small groups (2-3 people) to define their site, program, and vision for a new terminal or entirely new airport for the year 2100. Projects may be located anywhere in the world and must address context-specific challenges such as geography, climate, mobility systems, urban integration, and cultural or political factors.

Students will develop a robust and rich design narrative, research complex and interdependent systems, and engage in iterative morphological design exploration.

## HYPERNORMALISATION

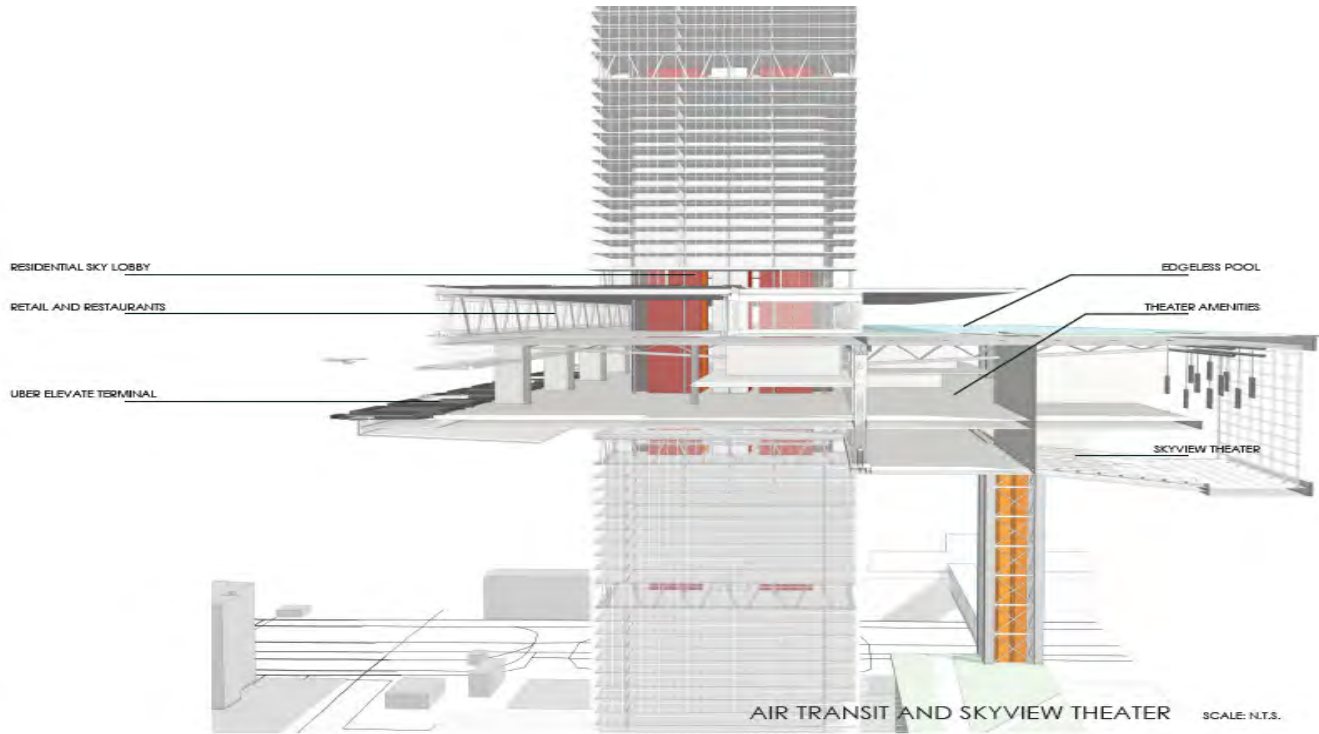
*"People knew the system didn't work—but no one could imagine an alternative, so they acted as if it did."*— Adam Curtis, HyperNormalisation

HyperNormalised Airport Design  
Airports touting "seamless travel" while passengers still face:

- Long queues at every step of the process
- Frequent delays and cancellations
- Poor quality services and facilities

People accept frustration as that's "...just how air travel is. We pretend it's convenient, even though we all know it's not."

London Stansted, Foster + Partners 1989



DK Wang, CMU F18, Manhattan Skyport

## LEARNING OUTCOMES

By the end of the semester, students will be able to:

**Formulate speculative design problems** that engage with multiple variables and uncertain futures, drawing from technological, environmental, and geopolitical transformations.

**Translate critical research into spatial strategies**, programmatic frameworks, conceptual architectural narratives and coherent, meaningful morphologies.

**Synthesize structural, environmental, and infrastructural systems** as integral, co-dependent components of large-scale, future-oriented design.

**Address global challenges** through design proposals that prioritize resilience, equity, and civic imagination.

**Articulate complex architectural ideas** through clear, persuasive visual, verbal, and written communication.

Pittsburgh International New Terminal, Gensler/Luis Vidal 2026

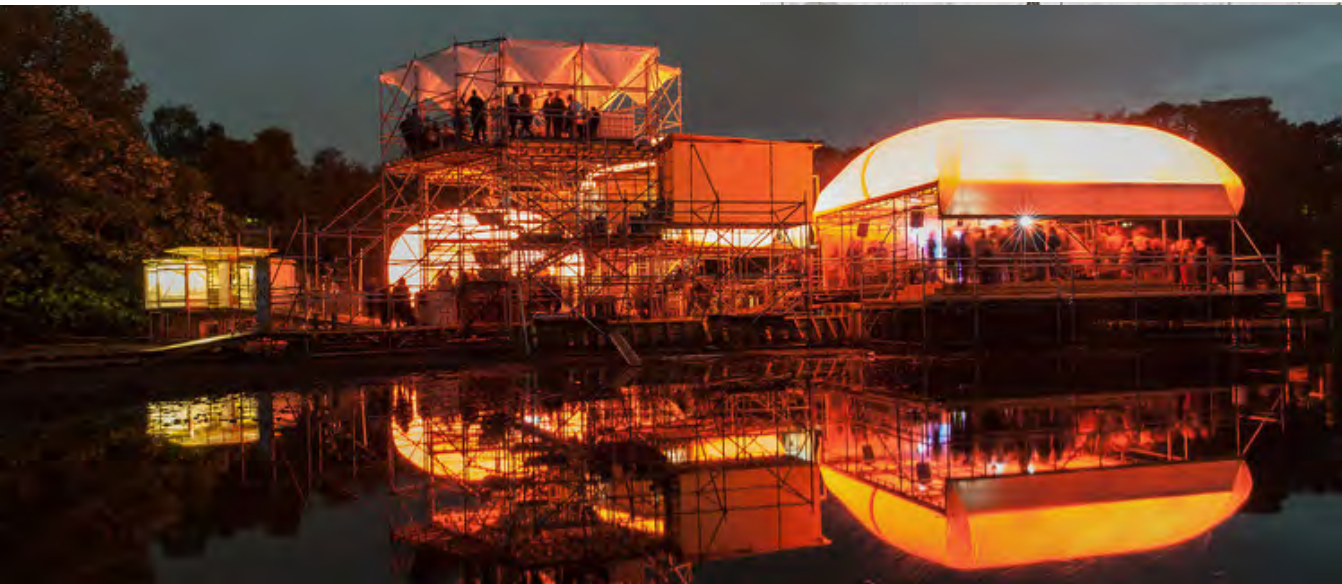


Carnegie Mellon\_Architecture

# Metamorphic Grounds

*Design in Times of Planetary Change*

Maryam Karimi



## QUESTIONS

How can architectural research translate theory into material reality, speculative thought into built propositions?

How can ideas move beyond abstraction to build consciousness, catalyze collective knowledge, and stage acts of quiet revolution?

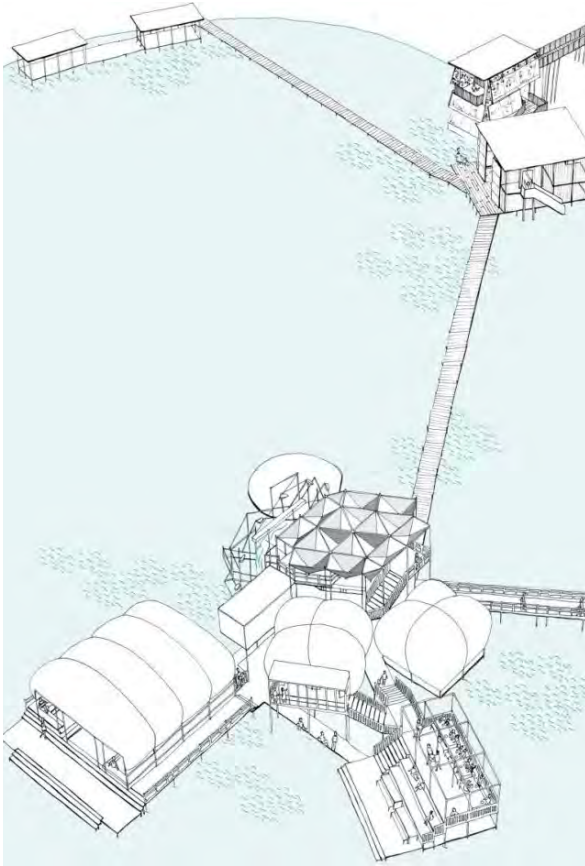
How might attunement guide us toward more empathetic and situated design practices?

How can architecture create conditions for care, reciprocity, and cohabitation between humans and other species?

How can craft, ritual, and memory help architecture engage the layered narratives of a place, its histories, voices, and cultural practices, to produce a design language that is grounded, situated, and resonant with its context?

What would it mean to design spaces that make visible the labor of care, the texture of everyday life, and the rhythms of mutual aid?

[Berlin Floating University](#)



[Osthang Project](#)



[living places copenhagen](#)



## PROMPT

This guided thesis studio situates itself at the convergence of critical research and spatial design, urging students to ground their architectural proposals in rigorous theoretical frameworks while exploring bold and experimental interventions. The studio embraces an interrelational design ethos that weaves together the residues of the past, present urgencies, and speculative futures within layered socioecological entanglements. Research is approached not as preparatory, but as a generative, insurgent act—one that challenges normative design logics and fosters architectures rooted in ecological reciprocity, collective labor, and contested cultural memory. In this studio, we draw from the spirit of molecular revolutions—a concept that locates transformation not in grand gestures, but in the quiet force of everyday actions, intimate collectives, and embodied spatial practices.

To deepen these inquiries, six thematic lines drawn from the upcoming [World Congress of Architecture](#) have been integrated into the studio's pedagogy: Becoming More-than-Human, Becoming Attuned, Becoming Embodied, Becoming Interdependent, Becoming Hyper-Conscious, and Becoming Circular. These themes offer critical frameworks and entry points for rethinking architecture's role in planetary transformation. They guide students in producing research and design work that will culminate in conference presentations, publications, and collective exhibitions in preparation for next year's global gathering.

## CONTEXT

We use the post-industrial river edge of Pittsburgh as a living laboratory, an active terrain for experimentation and situated inquiry. Once a site of industrial dominance and environmental degradation, the riverfront now becomes a testing ground for reimagining urban futures: tracing cycles of labor, pollution, displacement, and repair. Through critical spatial practice, students confront the layered histories inscribed in the site, polluted soils, rusted infrastructures, marginalized communities, and transform them into speculative propositions for collective care, ecological reciprocity, and spatial justice. This studio resists the erasure of industrial memory and instead cultivates an architecture that works with, and not against, the complexities of site.



[Adaptive reuse - from industrial relic to public amenity](#)



## PROGRAM

This studio invites students to critically engage with emerging paradigms of urban design through a constellation of interconnected interventions. While each project focuses on the articulation of distinct architectural typologies, the design process is fundamentally relational, fostering dialogue and negotiation between projects to collectively compose a series of dynamic urban commons. The program, deliberately open-ended, encourages expansive and radical imaginaries rooted in ecological and social justice. Potential typologies encompass collective and relational living configurations that challenge conventional social structures; archival spaces that surface marginalized and fluid histories; adaptive resilience nodes that merge care, shelter, and sustenance; creative commons that support alternative economies; transient and mobile spatial forms responding to displacement and impermanence; landscapes of ecological healing and remediation; sites of transformative justice that propose alternatives to punitive systems; and reclaimed interstitial spaces that serve as platforms for assembly, and emergent civic practices.

## HYPERNORMALISATION

This studio confronts hypernormalization—a condition where false narratives and broken systems are accepted as normal—as both context and design challenge. In a world shaped by ecological collapse, extractive capitalism, and algorithmic control, architecture often reinforces illusions of progress while masking deeper crises. Instead of smoothing over contradictions, students will develop counter-typologies that reveal hidden labor, support mutual aid, and foster ecological reciprocity. Here, design is not about restoring order, but about exposing, unsettling, and reimagining the structures that define our hypernormalized reality.

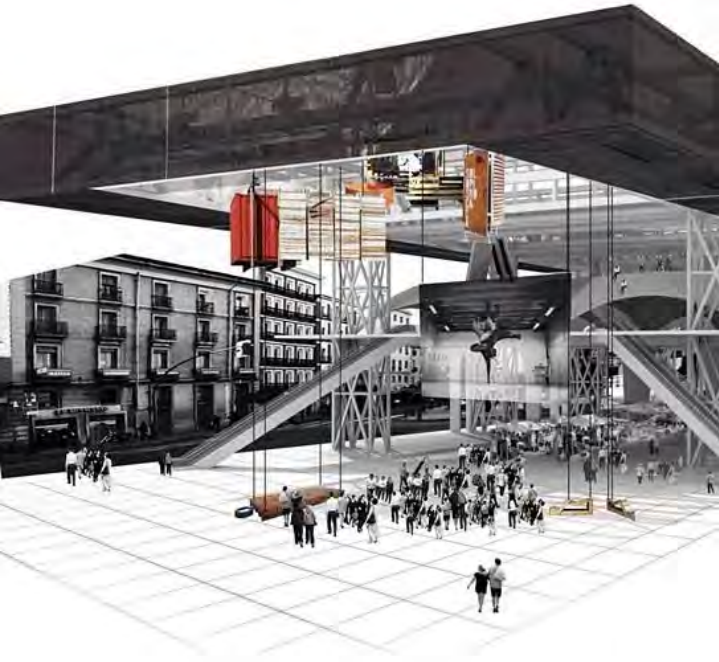
[Design Anthology PG15](#)



## LEARNING OUTCOMES

By the end of this course, students will embrace a rhizomatic approach to design research—one that resists linear, hierarchical thinking and instead fosters a dynamic, interconnected network of ideas spanning theory, material culture, spatial practice, and socio-political discourse. This non-hierarchical framework encourages students to situate their design inquiries at the intersections of multiple disciplines, enabling the creation of speculative architectures deeply rooted in contextual awareness and critical synthesis. Through this lens, architectural practice becomes a form of advocacy, critically engaging with labor, extraction, and environmental justice. Additionally, the course develops students' abilities to attune architecture to affect, memory, and cultural narratives, while honing communication skills essential for public and professional discourse.

[Duisburg Nord Landscape Park, DE. Metamorphosis of the blast furnace plant Thyssen-Meiderich into a landscape park](#)



[Architectures of Becomings frames design as a relational, evolving practice—rooted in care, resistance, and radical possibility.](#)

# From Steel to Timber City

Re-imagining mass timber structural systems

Juney Lee



## QUESTIONS

“You say to brick, ‘What do you want, brick?’ Brick says, ‘I like an arch.’ If you say to brick, ‘Arches are expensive—I could just use a concrete lintel instead. What do you think of that, brick?’ Brick replies: ‘I like an arch.’”

— Louis Kahn

What shape does a material want to take when it spans from point A to point B? We know a humble brick can form arches that can span great distances, yet how often do we see brick arches today?

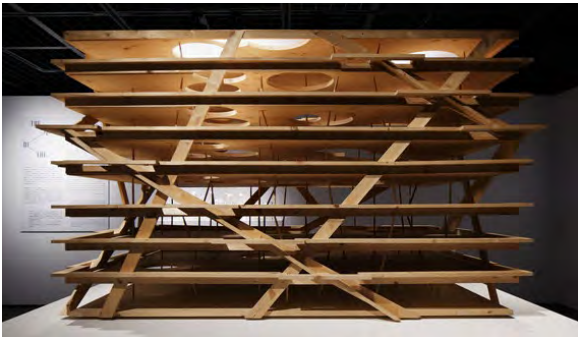
Too often, economies of scale and standardization override the geometric potential of materials. While mass timber has emerged as a much more sustainable alternative to steel and concrete, its “kit of parts” design and construction logic (e.g. beam, planks, steel connectors), often results in orthogonoal grids and repetitive frames that seems to predetermine what mass timber buildings will look like even before we design them.

If we were to ask:

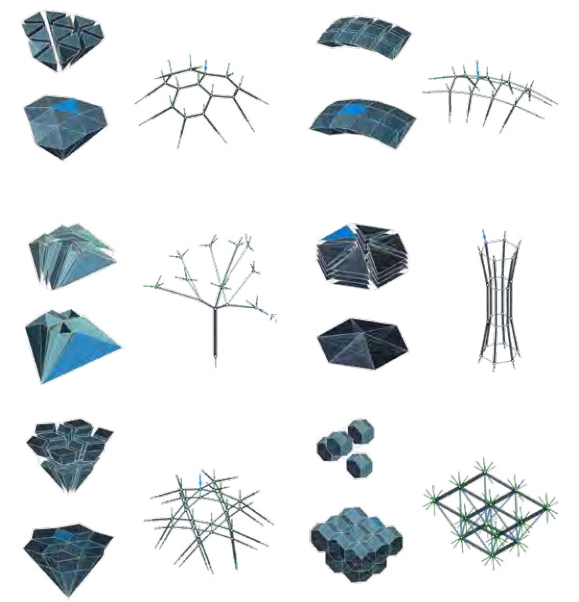
“What do you want, mass timber?”

What would mass timber say?

Top “Mass Timber and the Scandinavian Effect” - Jennifer Bonner & Hanif Kara (2020)  
Right Blumer Lehmann Headquarters - ICD Stuttgart (2025)



The Holcim Competence Center competition entry - Christian Kerez (2015)



3D graphic statics - Masoud Akabarzadeh (2015)



Aerial view of Pittsburgh's Hazelwood Green neighborhood

## PROMPT

This advanced option studio will explore new mass timber structural systems for mid-rise buildings (8–12 stories) and investigate the spatial opportunities that emerge. Using computational structural design techniques to analyze and shape efficient forms, students will learn to think beyond the conventional column-beam “grid” of standardized mass timber construction. The studio will focus on developing unconventional structural shapes and systems that respond to programmatic needs while examining digital fabrication methods to translate complex geometries into practical, buildable solutions.

Throughout the semester, students will tackle the challenge of designing a mid-rise research and innovation hub, integrating the sustainable benefits of mass timber with innovative structural strategies to unlock new spatial, functional, and experiential possibilities. The ultimate goal is to use structure as a generator of architectural form and to test the limits of what is geometrically and spatially achievable with mass timber. Could these explorations help define a new design paradigm for mass timber architecture—what Jennifer Bonner and Hanif Kara describe as the “Scandinavian Effect”—which blends material innovation, structural advancement, constructability, and architectural expression?

The studio will be organized into four progressive phases: (1) development of the structural module and system; (2) aggregation and materialization; (3) site strategies and massing; and (4) final synthesis. Through targeted design assignments, students will address different building components in each phase. Final deliverables will include digital drawings, renderings, and large-scale physical models that communicate the underlying structural logic.

As a research-based studio, students will be expected to formulate individual research questions and agendas to inform and direct their projects.

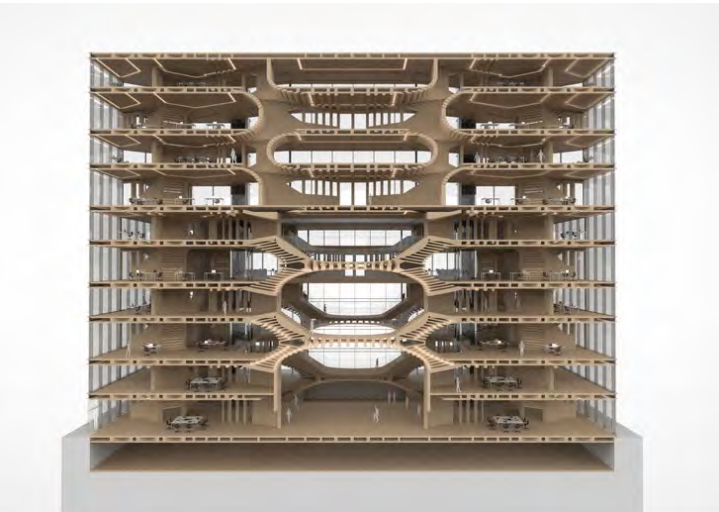
## CONTEXT

The project will be set in Hazelwood Green, Pittsburgh, a site that embodies the city's transformation into a hub of innovation and sustainability. Once the heart of local steel production, Hazelwood Green has been reimagined as a center for advanced manufacturing and research, now home to the Mill 19 facility and soon to host the Robotics Innovation Center (RIC), deepening Carnegie Mellon University's connection with the Hazelwood community and the region's evolving economy. Hazelwood Green will serve as the studio's site, challenging students to explore how mass timber can help shape and inspire the future of the Steel City.

PROGRAM

The mid-rise building explored in this studio will serve as a technology hub and incubator, supporting research-driven startups. Its program will feature a diverse mix of spaces, including private and open-plan offices, high-bay areas for large-scale equipment or prototyping, robotics laboratories, and flexible coworking environments. The facility will also host sustainable design education and skilled workforce development programs, integrating workforce training, research, and exhibition spaces in alignment with ongoing initiatives at Hazelwood Green.

A central design challenge for the studio will be developing a structural and modular system capable of adapting to these varied programmatic needs. Students will explore how the building’s structural logic can accommodate different spatial scales, technical requirements, and future changes in use. The goal is to design a mass timber building that is not only sustainable and efficient but also spatially dynamic and responsive to the evolving needs of a technology-driven community. Ultimately, the studio will explore how rapid, tech-driven development can coexist and connect with the broader Hazelwood Green community.



Sina Lee & Jingyi Chen, UPenn



Roundhouse co-working space at Hazelwood Green



Community events at Mill 19 in Hazelwood Green

HYPERNORMALISATION

The HyperNormalisation theme invites us to question what has become routine or “normal” in architecture and society—practices and assumptions we rarely examine, even when they no longer serve us well. It’s about uncovering hidden systems and habits that keep us repeating the same patterns, and imagining new ways forward.

In architecture, this means moving beyond superficial sustainability claims, trendy materials, or standard design solutions to ask deeper questions: Why do we build the way we do? Who benefits? What alternatives could truly transform our cities and our future?

Rather than simply swapping steel for mass timber because it’s “greener,” HyperNormalisation urges us to rethink how timber could fundamentally reshape building forms, urban experiences, and cultural values—transforming not just what we build, but how we design.



LEARNING OUTCOMES

Upon successful completion of this studio, students should be able to:

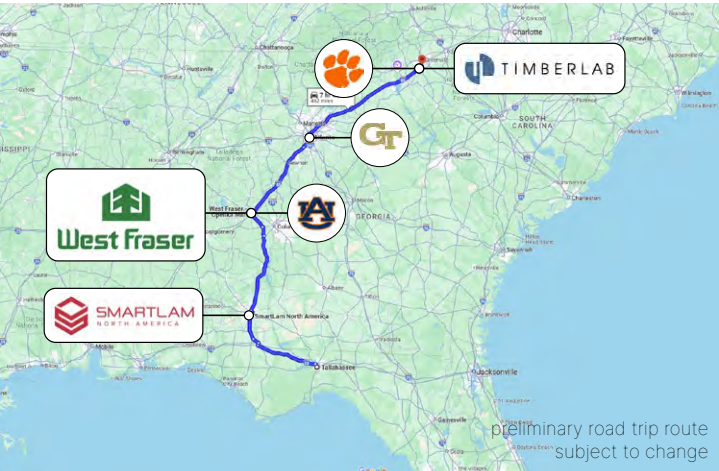
- 1. better understand the geometric limits and constraints of mass timber components
- 2. construct parametric structural models and generate feasible design iterations
- 3. analyze the relationship between form and forces in spatial structures
- 4. develop structurally informed strategies for materialization and digital fabrication
- 5. translate abstract structural systems and concepts into architectural layouts accommodating various programmatic requirements
- 6. formulate individual research questions and pursue independent investigative strategies

Prerequisites:

- Students interested in this studio should have successfully completed the required Structural Design courses at CMU with a good standing.
- A strong working knowledge of Grasshopper is expected.

Top Agri Chapel - Yu Momoeda (2016)

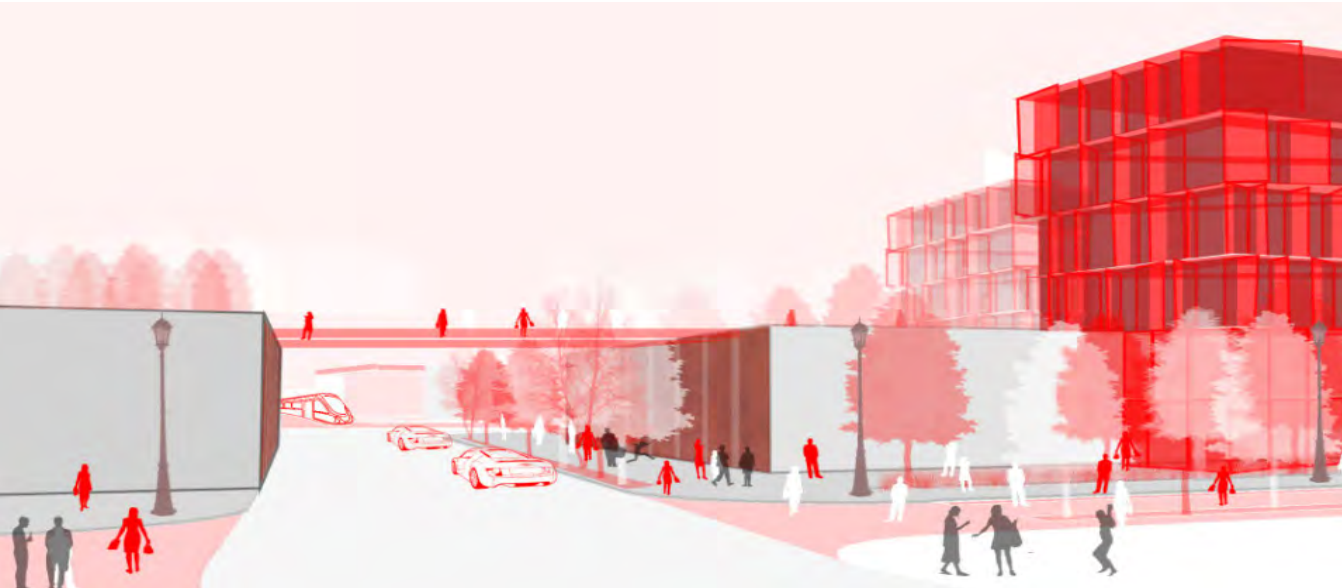
There will be an optional, self-funded trip during fall break to visit some of North America’s largest mass timber manufacturers and fabricators in Alabama. The studio is currently working to secure funding to help offset some of the travel costs for students. If funding is secured, the expected out-of-pocket expenses per student will be limited to flights (self-organized) and meals. Full details will be confirmed by mid-July.



# Designing Counterpublics

*Reclaiming Space and Narrative After Route 65*

Christine Mondor, FAIA



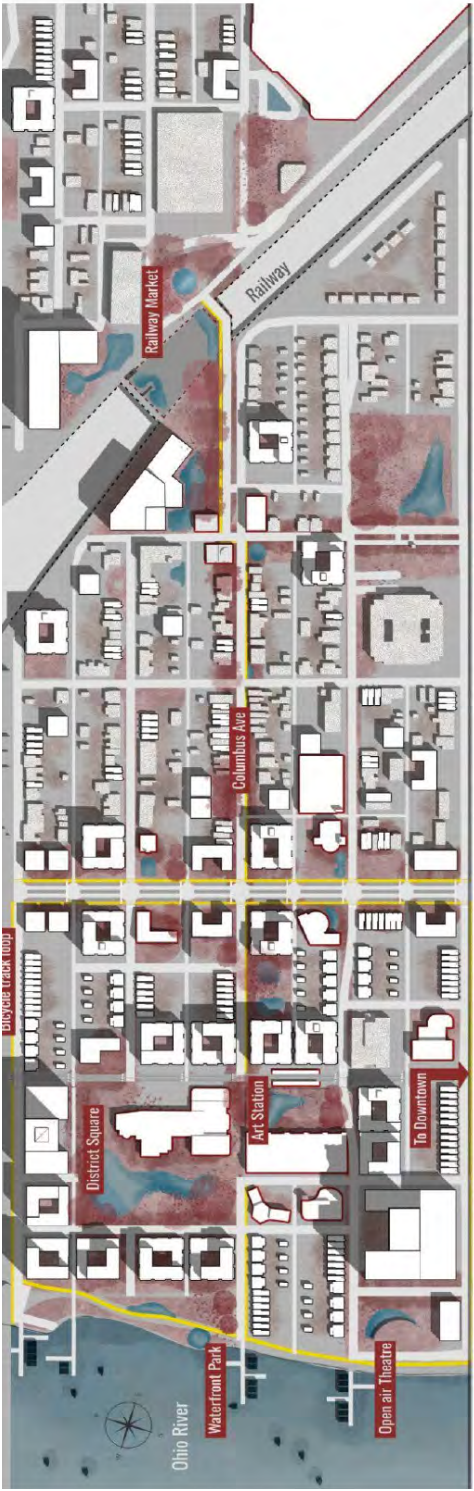
## QUESTIONS

This third studio in the Reclaiming 65 series poses the central question: How can spatial design and civic practice reinforce community sovereignty in Manchester as the physical trace of Route 65 disappears? Students will consider how architectural and urban design can engage with power through critique and the creation of tools, relationships, and rituals that enable collective agency. Design is never neutral; it carries ideological weight. Where we gather, what we remember, and how we dwell are political and cultural questions, not merely technical ones. Through this lens, the studio positions spatial practice as a mode of resistance, negotiation, and meaning-making rooted in everyday life.

In previous semesters, students examined the highway as a physical barrier and proposed strategies for reclaiming the land, considering how the removal of infrastructural boundaries could reshape connectivity and public life. This year's studio aligns with ongoing city-led planning efforts to reimagine Route 65 and will participate alongside these formal processes. Students will engage in narrative and systems analysis, co-develop spatial practices with community partners, and synthesize these into an urban design proposal that supports community sovereignty in a post-highway Manchester.



THIS PAGE: Student work, Sakshi Aparajit and Jiaxi Wu, Fall 2023.  
OPPOSITE: Student work, Cyphana Arshad and Tamuna Cherkeshishvili, Fall 2024. Student work, Cyphana Arshad and Tamuna Cherkeshishvili, Fall 2024.



## PROMPT

The studio draws from contemporary architectural theory that redefines the term “publics.” No longer viewed as a unified civic audience, publics are now understood as plural, constructed, and relational and are co-produced through spatial practices, discourse, and access. Scholars such as Michael Warner, Nancy Fraser, and Sheller and Urry emphasize that participation in public life depends on space as well as on mobility, legibility, and systemic positioning. In this light, design becomes a means of either reinforcing or disrupting conditions of exclusion. In this studio, we will explore the concept of counterpublics, or groups that form in response to exclusion from dominant narratives and systems. Unlike mainstream publics, which are often aligned with normative forms of participation and visibility, counterpublics create their own discursive spaces, rituals, and spatial practices. These practices challenge the terms of inclusion itself, often by redefining what counts as participation, expertise, or visibility.

## CONTEXT

The physical and political context of this studio is shaped by the history and pending removal of State Route 65 in Manchester, Pittsburgh. With its roots in the 1930s national highway plans, Route 65 emerged later as part of postwar traffic planning and urban renewal. Its alignment through Pittsburgh can be traced to a cursory sketch by Robert Moses, whose interventions across U.S. cities prioritized automobile flow over neighborhood continuity. As with many highways built in this period, Route 65 was constructed through low-income and minority neighborhoods, disrupting social, economic, and spatial networks. In Manchester, the highway divided the community, fragmented the street grid, and devalued adjacent property, accelerating disinvestment and reducing neighborhood cohesion.

Now, as the highway nears the end of its engineered life, federal funding has been allocated to explore its removal and the reconnection of surrounding neighborhoods. This studio takes place at a moment of opportunity and complexity. The act of removal is not simply about taking something away; it raises new questions about land use, access, memory, and civic identity. Students will investigate what reclamation can mean in the context of overlapping histories, evolving institutions, and the ongoing struggle for self-determination in place. While anchored in a Pittsburgh neighborhood, we will also explore how pervasive this story is by meeting and documenting similar efforts in other cities.

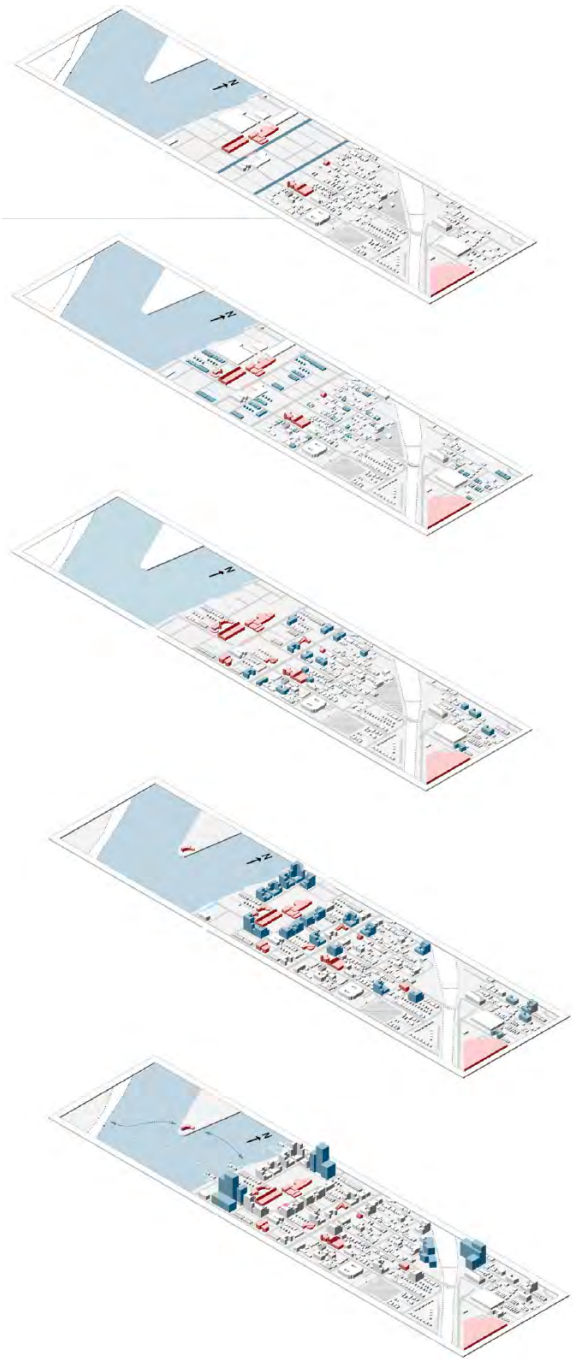
PROGRAM

The workflow is designed to help students move from narrative research and systemic critique to speculative and material interventions. Over the semester, we will map power structures, co-author spatial practices with community institutions, and propose design strategies that operate within, against, and beyond the existing system. Through this process, students will develop design vocabularies while contributing to new forms of spatial sovereignty.

Students will engage with a series of interrelated assignments that scaffold their understanding of spatial narrative, community agency, and urban systems. Early exercises emphasize observational design and systemic critique, helping students interpret power structures embedded in the built environment. These shorter assignments also support the development of visual and conceptual clarity through quick design responses and narrative cartography.

As the semester progresses, students will create a set of spatial practice cards and speculative interventions that respond to community histories and aspirations. These exercises will draw from community research, legacy institution visits, and counterpublic theory to identify where design can act as a support, amplifier, or challenger of existing conditions. Each student will be asked to align their project with one or more identified practices that operate within, against, or beyond current systems.

The studio culminates in a comprehensive urban design proposal that integrates spatial, civic, and narrative strategies. These proposals will be presented through a series of schematic drawings, models, and public-facing materials, including an exhibition panel and a visual brief for a local institution. In all deliverables, students are expected to propose interventions that are grounded in Manchester’s lived realities and contribute to long-term community sovereignty.



THIS PAGE: Student work, Cyphana Arshad and Tamuna Cherkizishvili, Fall 2024.  
OPPOSITE: Student work, Sagarika Kulkarni and Xuan Peng

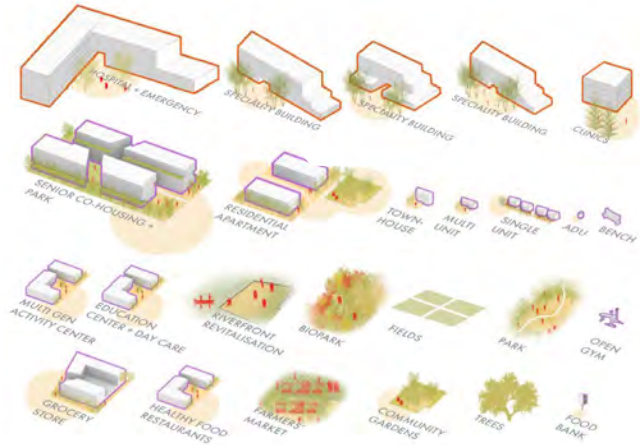


LEARNING OUTCOMES

- Students will be able to:
- Understand and apply theories of publics, counterpublics, and spatial politics to urban design work.
  - Analyze the historical and infrastructural forces that have shaped the Manchester neighborhood.
  - Design spatial interventions that respond to and reinforce community-defined narratives and practices.
  - Develop a multi-scalar design proposal integrating social, material, and governance considerations.
  - Co-create visual and narrative tools with community institutions to support future planning.
  - Practice design as a relational and political act through embedded, reflective, and context-aware methods.

HYPERNORMALISATION

As we will explore in school-wide dialogues, hypernormalization describes a condition in which complex, contradictory, and often unjust systems are accepted as stable and inevitable. Our studio’s reframing of public life challenges narratives that simplify and depoliticize reality in the name of stability. We will question where systems of control are so pervasive that even resistance risks reproducing their assumptions. Rather than evade this complexity through utopian ideals or nostalgic returns, the studio invites students to work productively with ambiguity and contradiction.



# Of Mothers and Dragons เรื่องของแม่และมังกร

*Compound as Architectural Models, Rice Fields as Urban Form*

Tommy CheeMou Yang



**Sink**  
The teak wood sink at Sala Yangnar illustrates how daily life can blend seamlessly with nature. Naturally water-resistant, the sink allows used water to flow gently into the garden behind. Sunlight from the south and a soft breeze keep the sink clean and dry throughout the day. The brick floor absorbs the water effortlessly, preventing any overflow. This architectural piece reconnects us with the natural world, reminding us of where we truly belong.

Sala Yangnar by Yangnar Studio, 2024. + Stitching Fragments by Brian Hartman B.Arch '24.

## QUESTIONS

Lived histories are spatial confrontations, powers, ideologies, ideas, and everyday existences. Through distant fact-finding, cinematography, procedural modeling, and design – we will construct a series of transcalar narratives to amplify the stories of the urban villagers we are working for. In this process, we will imagine and (re)discover forgotten values of resources and use design research to imagine new forms of architecture. We will ask:

- How can peri-urban practices, shaped by ritual, repair, and seasonal rhythms, inform planetary models of architecture?
- What can be learned from vernacular wisdom, such as handcraft, repair work, materials, and community rituals, to recalibrate contemporary architectural design?
- How do people create spaces to live and work with limited resources? What can we learn from their ways of making?
- What happens when designers listen to stories embedded in labor, land, and leftover space?
- What does toys, comics, and stories offer as part of the architecture process?

right: Shelter and Resting Place (The Sun Room), by Superpositions, 2017.



top: Weaving Ecologies by Hyperlocal.work, 2025. Venice Biennale  
bottom: Chiang Mai Maps by Tommy CheeMou Yang, 2024.  
Cultivating the Map by Danny Wills, 2012.



## PROMPT

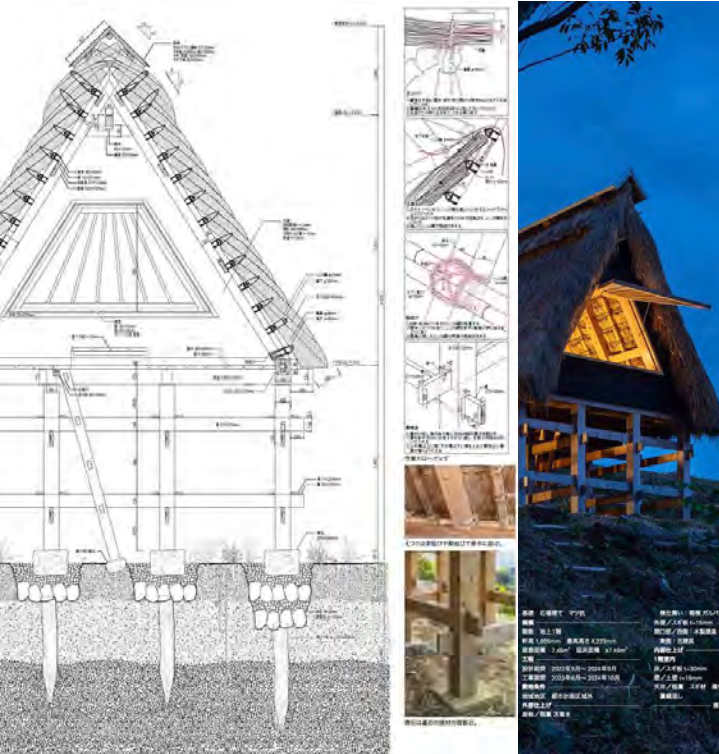
This studio seeks to recover the spatial entity of the *Mae Kuang* (Mother River Kuang) and its distributary offspring, by studying how locals steward in four mutually cooperative peri-urban villages take care of each other and their water-based lifeworlds. With a focus on the annual reconstruction of the artifacts and landforms that maintain the hydrological landscape water access and care produce locality. This studio believes that contemporary urban and architectural practices can be recalibrated with the embodied knowledge of everyday stewards, ultimately transitioning object-based approaches to address systemic issues that frame water-based resilience. We will trace a territory shaped for agriculture, craft, and water distribution along the Mae Kuang through its weirs and canals.

The semester-long journey will nurture a comprehensive project that includes **detailed fabrications inspired by toys, illustrations of an architecture between four villages, and fabrication film.** A pilot exhibit will close the design studio, holding a larger conversation around community empowered architectural design, regenerative practices in architecture, storytelling, and activism.

## CONTEXT

Chiang Mai is in an alluvial plain the confluence of the Mae Ping and Mae Kuang River basins in mountainous Northern Thailand, approximately 685 kilometers from Bangkok. Just 7 1/2 km from the center of the rapidly expanding city farmers gathers and direct the monsoon waters through an intricate pattern of weirs, canals and sluice gates to fill rice paddies, as their ancestors have for centuries.

Constituting an urban/rural desakota; the rice fields fed by the century-old weir-canal system are now cut and hardened by the new highways systems. At the intersection of these changing landscapes, the architecture of the compound emerges as a vital mosaic where urban form, river, and field meet. We will identify and learn skills in translating vernacular practices translating it into design offerings. The studio propose the compound model as designed microsystems, an architectural reinvention of land forms and building practices that have endured for centuries guided by matrilineal spirits and weir keepers



里山タイニーハウス 結庵 [Satoyama Tiny House] by Fuminori Nousaku, 2024.



PROGRAM

While each project will have a unique programmatic scenario—the architecture, materials, and research should respond to seasonal rhythms of wet and dry cycles in Northern Thailand. Evolving alongside the shifting needs within the villages as they face pressures of urbanization and climate change, we understand design within the larger ethno-ecological system of the Mae Nam or “mother river.” Design with the land and from indigenous knowledge encompass local cosmologies, forest, water rituals, harvesting cycles, building traditions, and collective maintenance of shared resources.

Program components and hybrids will be developed through archival work listening/drawing/mapping/modeling stories from a collection of ethnographies. These include narratives on aquatic biodiversity, gastronomy, craft, agriculture, building repair, and productive commons.

HYPERNORMALISATION

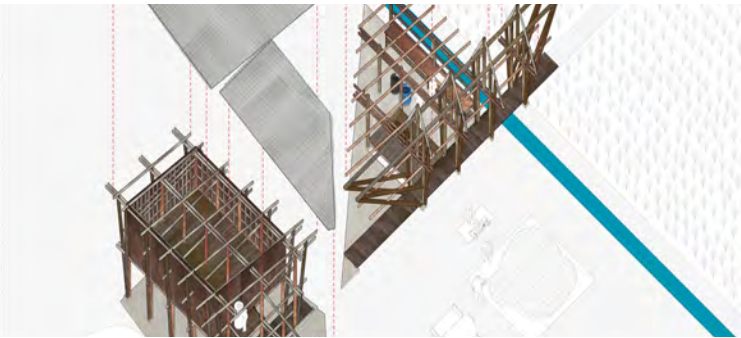
*Of Mothers and Dragons* embraces alternative methods and perspectives that challenge dominant architectural narratives by centering marginalized voices, vernacular knowledge, and overlooked practices.

Northern Thailand's indigenous construction methods are deeply connected to the local environment, seasonal cycles, and community collaboration. Through hands-on experience using materials like timber, earth, and makeshift structures, we will engage in epistemic disobedience, challenging conventional Western ideas about permanence, authorship, and “form” in architecture. This approach treats traditional building practices not as outdated relics, but as a dynamic source of adaptable techniques that are intrinsically linked to the landscape.

left: Pingtan Book House (Hunan) by Condition Lab, 2022.  
right: Learning House Togo by Max Otto Zitzelsberger, 2025.



Baan Dam by Housescape Design Lab, 2023.

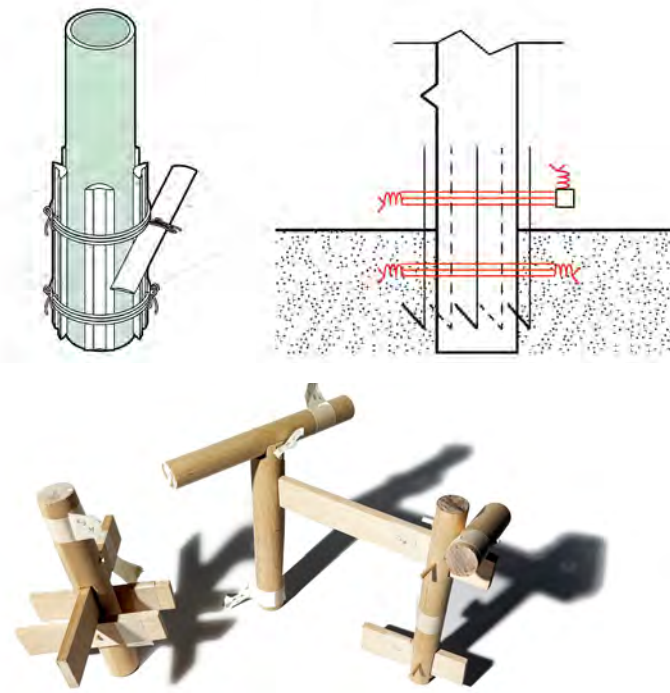


Chiang Mai Projects by John Brody Ploeger and Chengming Jacky Jia BArch 2025 in the Compoundologies Studio coordinated by Tommy CheeMou Yang

LEARNING OUTCOMES

Upon completion we will be able to:

- Research and analyze the typology of a compound in Chiang Mai, TH in the synthesis of material, structural, and spatial strategies
- Apply working knowledge around timber, earth, and vernacular constructions
- Appraise hand and digital tools in the fabrication of “operative models”
- Translate design research into spatial strategies, program, stories and offerings that are integrated into the land of Chiang Mai, TH
- Address and recalibrate architecture by centering overlooked practices from Thailand
- Reinvigorate indigenous ingenuity and adapt them to the contemporary design-builds
- Curate research, design, and ethnographies into a design monograph



Of Mothers and Dragons Joinery Grammars and Prototypes by Kailin Chen, Jiaxin Lin, Lukas Yao, 2025. Project Lead: Tommy CheeMou Yang.