



## Studio 401\_design matters

We make things better

Studio 401 views architecture as a form of action and an optimistic way of speculating about a better world. The umbrella that ties our work together is the idea that architecture should be responsive and that we take our relationship with nature seriously. At the intersection of architecture, ecology, and related disciplines, we look to environment, infrastructure, culture, morphology, materials, and fabrication process are key drivers for project development. As a studio, we focus on the prospect of architecture to build community by questioning existing power structures and notions of ownership.

The point of thesis is to develop skills that give you **agency** in the world, to make a **more equitable, resilient, and imaginative world**, and positively affect people's lives through design. The structure of the studio is a 'loose-fit' model to enable skill building and design exploration. Projects range from environmental remediators such as cloud makers and mine remediators, to new civic infrastructures, to urban insertions that positively impact social change.

Contact me if you would like to know more about the studio. [dtcliffo@calpoly.edu](mailto:dtcliffo@calpoly.edu)



## On the creative practice of our studio building community

*“The conditions in which we learn become the conditions we practice and reproduce.”*

*Womxn in Design on shifts in design pedagogy:*

As in the most creative practices, our studio supports a culture of experimentation, **knowledge exchange, confidence, and trust**. The studio is considered open-source, where ideas are freely exchanged and the momentum of the group benefits the individual. I believe creativity is learned and I strive to set up an environment of risk-taking combined with a playful and experimental attitude. These thoughts are structured on professional models I have experienced in multidisciplinary practice, specifically in architecture, biotech, and industrial design. As in the quote above, the learning environment that we shape, **shapes our future** practice. In this studio, students have a **voice** in the shaping of our learning environment.

This studio supports alternate modes of thinking and is designed to inspire the imagination. As Ken Robinson notes, **‘creativity is as important as literacy’**, and our studio opens new conversations for idea development and creates a climate of possibility. We all have creative sensibilities, though our standardized educational system has made us fearful of making mistakes. Once fearful, the prospect to make discoveries is diminished. So, we draw, we make, we discuss, and **we make a lot of mistakes** as fast and as often as possible.

### Also some of our previous work here:

Check out 2021 work here: <https://dalesdolls.cargo.site/>

And last year’s work here: <https://calpolythesis.weebly.com/>

And – if your interested in the relationship of biology to architecture, check out: <http://biologicarchitecture.com/>

## Studio culture

*It's a loose fit*

*"There are no passengers on spaceship earth. We are all crew."*

*Marshall McLuhan*

The structure of the studio is a 'loose-fit' model to enable skill building and design exploration. This means that we have a non-hierarchical model, and that we take all voices and ideas into account. We support creative thinking and skill development by working as a collective as we draw from the experiences and abilities of other disciplines and practice. The studio method draws from firms such as IDEO, Snohetta, and others that look closely at the opportunities afforded by design, materials, construction techniques and knowledge exchange.

As a collective, we focus on the creative development of each individual. Projects range widely in scale and content, may be static or mobile, may be material studies, guerilla installations, full-scale builds, or public interventions, though all have the common thread of addressing environmental/social/political issues through design. The studio is a tinker lab/ maker space where ideas are discovered, not preconceived.

It is a place where skills are developed and unorthodox ideas are nurtured. It's a bit nerdy, but with purpose. In this studio there is the opportunity to work individually or collectively on thesis coursework.

## Feel like you don't fit into a precise mold?

Welcome to the studio.

*"Art cannot change the world, but it can contribute to changing the consciousness ... of the men and women who could change the world." (Herbert Marcuse)*

*"I try to create a forum where everyone doesn't have to mold into the idea of what's expected ..."*  
*Lindsey Adelman on how her experience at RISD influenced her approach to her office.*



Students often begin with tools and materials as a means to develop project ideas.



### Pedagogy – It's about creativity

Our studio is a human-centered, maker-thinker space, built upon curiosity, wonder and play. We are experimental and do not have a predetermined style or dogma. As a studio, we balance theory and practice, to make a difference - through the creative and social enterprise of design. This year, I suggest we continue to learn through the making of things and that we have a strong presence in the shop. By bridging research, thinking, making, and drawing, I expect we can go beyond the prospects of the traditional thesis. If you like developing ideas from making things through the equitable engagement of hand and mind – this studio may be a good choice.

### Networking – We learn a lot from others

We also develop networks with interesting architecture, design, and engineering firms to build collaborative opportunities between studio and creative practice. These relationships often continue after graduation. Most recently we have been in contact with NBBJ, BCJ, Tei Carpenter, Jan Gehl's office, and TriPyramid, to name a few. We have a network of students that enter offices and graduate school that stay in contact with the studio to share skills and current experiences. We bridge research, academia, and practice, and set up a network for your future prospects.

### Travel – Experience matters

In terms of travel, there are a lot of possibilities. I am setting up relationships with the Aarhus School of Architecture in Denmark, so a Scandinavian trip may be an option, as is field work in Columbia. Another possibility is to look into extreme environments and take an extended field trip to the Sonoran Desert which runs through the urban and rural areas of West, Southwest, and Mexico. I am always sensitive to trip cost, and we will work out cost effective travel.

### Course Structure – Thinking and making

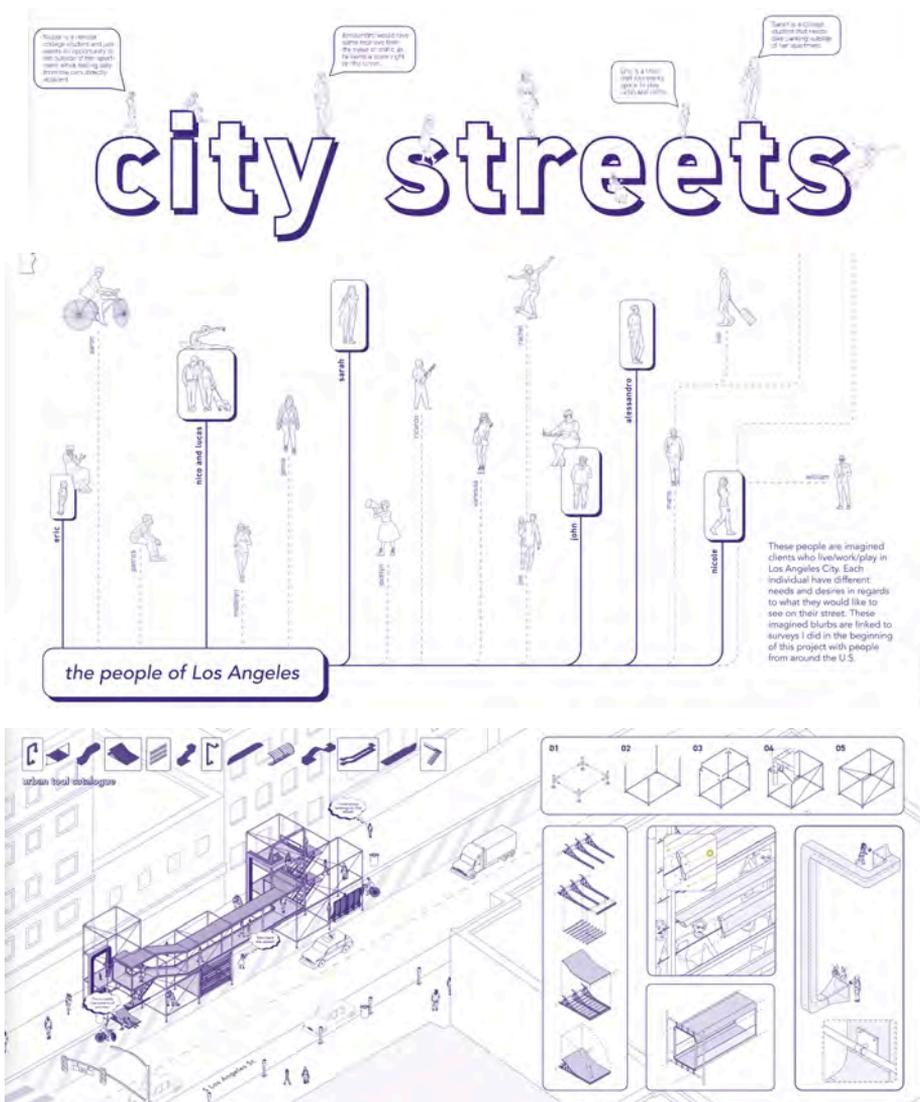
Term 1 is highly experimental, coupling theory with onsite field studies/expeditions, data collection and mapping, and 1:1 scale prototypes. Collaborative - we may construct an installation as shown on 1 - and individual projects are planned to build mapping and site response skills. See [https://issuu.com/davidgarcia122/docs/kadk\\_aee\\_fin\\_screen\\_72dpi](https://issuu.com/davidgarcia122/docs/kadk_aee_fin_screen_72dpi) as precedent.

Term 2 + 3 are dedicated to the design of the thesis project, which may be individual or collaborative, your choice. The plan is to increase design and representation skills and set you on a path to work in exceptional offices (good work and good culture), graduate school, or ride you van into the sunset.

# Want to make a difference?

Our projects are linked by the idea that we can positively impact the world through good design and that small changes can lead to big effects. The studio is a creative platform where ideas are discussed and developed - it is a place to incubate good ideas and launch them into the world.

Larissa Muller's project looks at the approaches of tactical urbanism and giving people agency to make positive change in their environment. We look into what Atelier Bow Wow calls Architectural Ethnography - an in-depth study of the people of a place, and how **the built environment can support culture and build community**. Larissa is now getting a master's degree at UDelft in the Netherlands. I encourage students that are interested in graduate study to consider a number of schools abroad as they are excellent in terms of academics and they are often far lower in cost (some are free) than schools in the US.

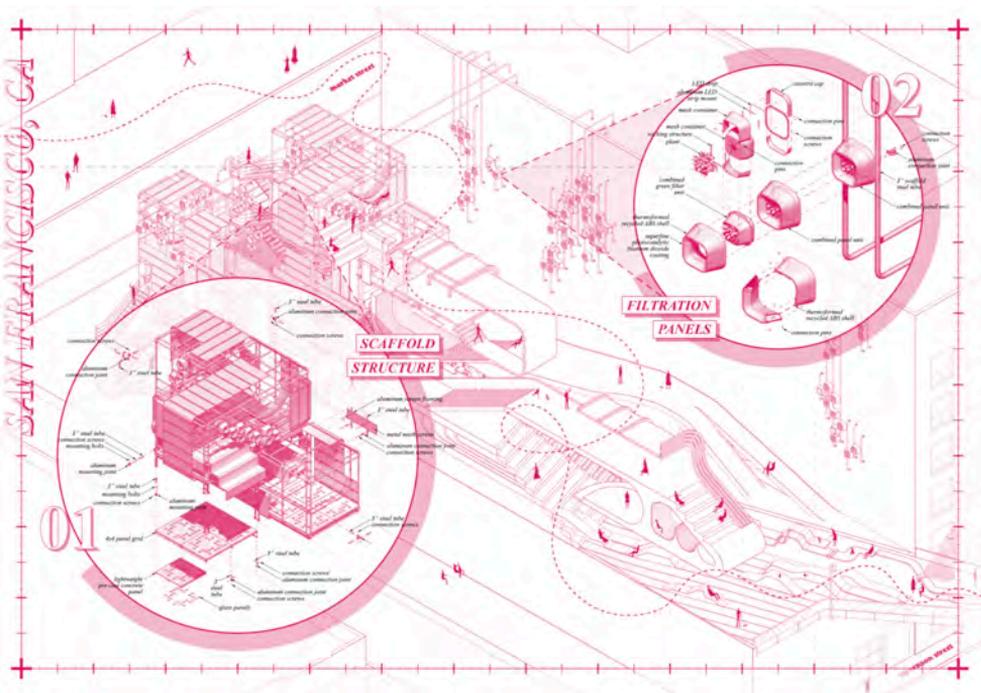
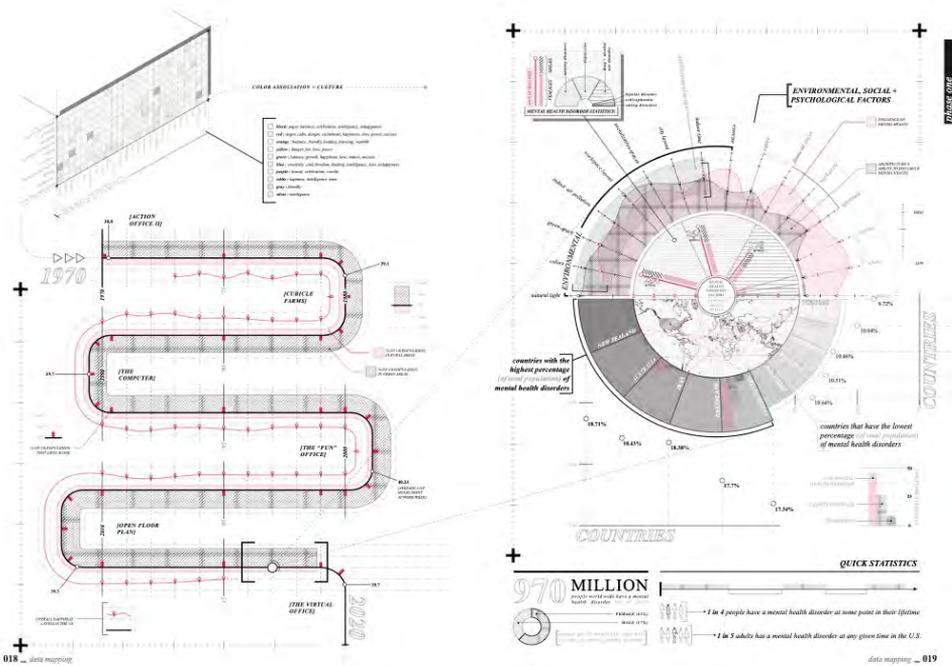


## About our design methods

The following is walk through our (partial) project sequence. All projects started simply, then gained in resolution, complexity, and relevance. In our studio, drawing and modeling are viewed as a means of research and as an extension of thinking.

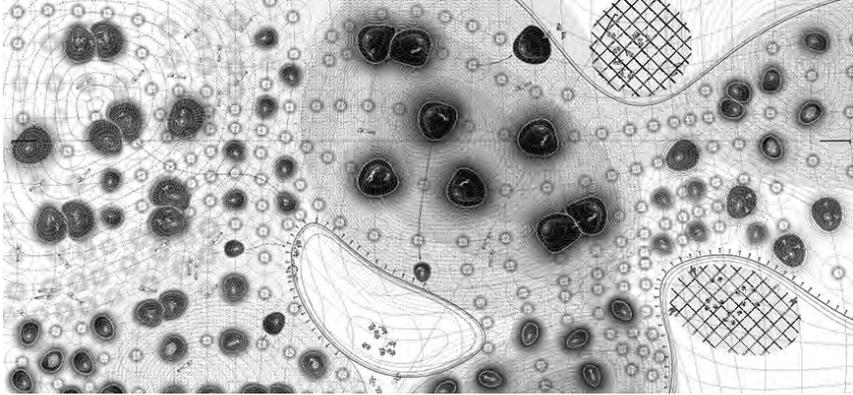
### [Data mapping] Getting to know a place

We study a diverse range of information and search for new relationships. The study below by Claire Mitchell looked into the relationship of income levels, mental health, happiness levels, average hours worked, and country of origin. She uncovered fundamental social and economic issues behind the architectural questions. The image at the bottom of the page is an outcome of her design process.



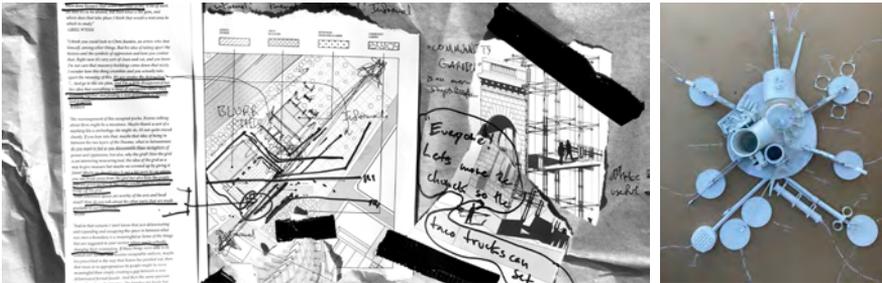
## [Site mapping]

We look at site as a series of dynamic conditions, rather than a static entity. The project below by architect S. Lally is an example of visualizing normally unseen relationships. We also support alternative methods of getting to know a place, through storytelling, interviews, and other creative means. Have a look at this article if you are interested in the transformation of the normative site survey into participatory design. [http://field-journal.org/wp-content/uploads/2016/07/Site-Seeing\\_Butterworth-Vardy.pdf](http://field-journal.org/wp-content/uploads/2016/07/Site-Seeing_Butterworth-Vardy.pdf)



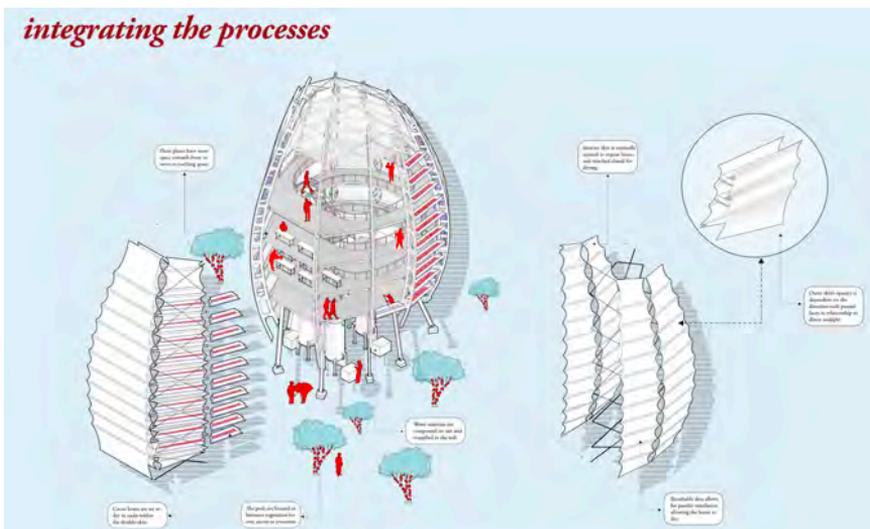
## [Process] sketch and collage

We use a wide range of methods to create dialogue, uncover creative possibilities, and spur the imagination. **Liam Lautze**, adaptive reuse project in Oakland and Jake Baldouf, sea urchin harvesting facility somewhere in the Pacific.



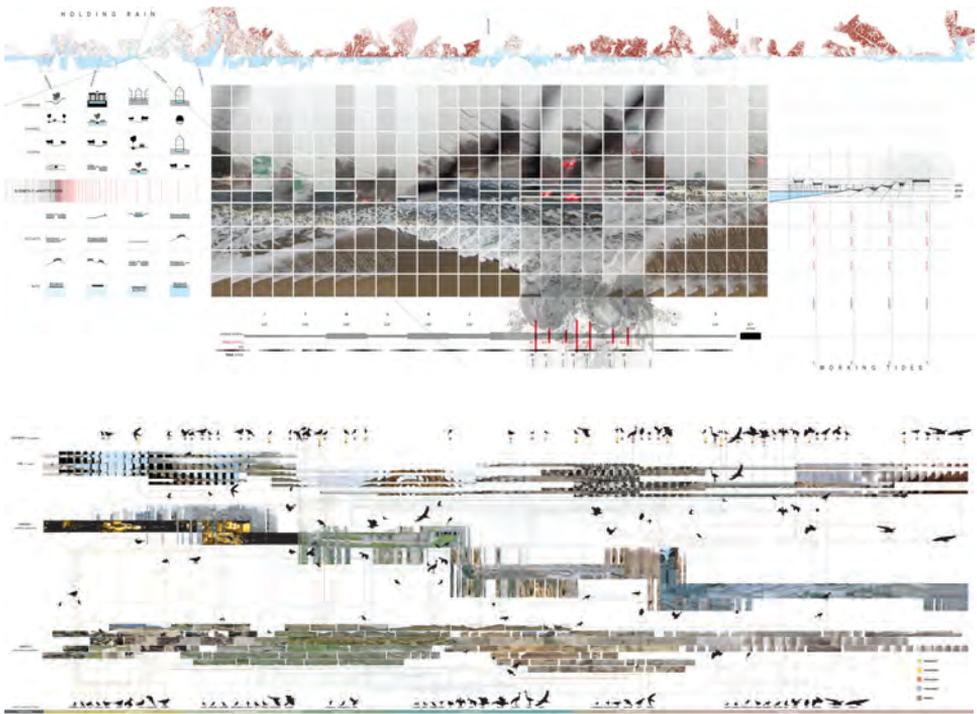
## [Drawing] we make great drawings!

We spend a lot of time on conveying ideas through drawing. Guaranteed, you will make amazing drawings in the course. Don't worry if drawing is not your strong point at the moment - **we will learn together**. The plan is to use **drawing as a means of discovery**, and as a means of developing ideas. **Antonia Angel's** thesis combines aspects of structure, environmental design, and community building in an effort to provide stable income for displaced farmers in Columbia.



## [Media] photography, hybrid drawing and collage

We often take field trips to interesting sites. The one below is the Moss Landing Power Plant. Photography became a way into **Robin Johnston's** thesis on industrial materials, ephemerality, and space. Hybrid drawing techniques are an important synthesize data and observations, and skill-building workshop is being planned for Fall term with **Dilip da Cunha** on mapping and collage techniques (images at bottom of page).

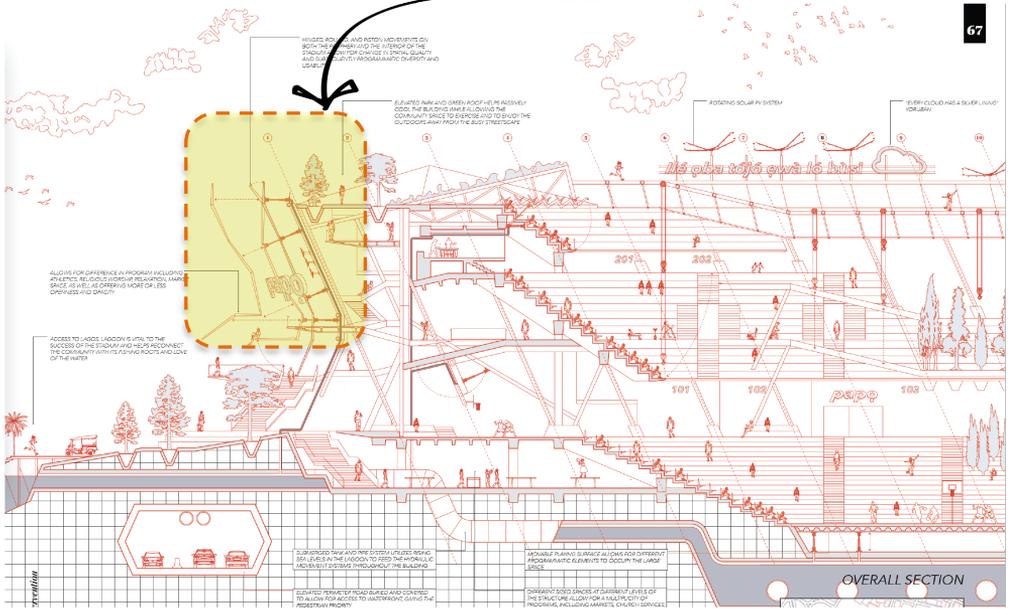
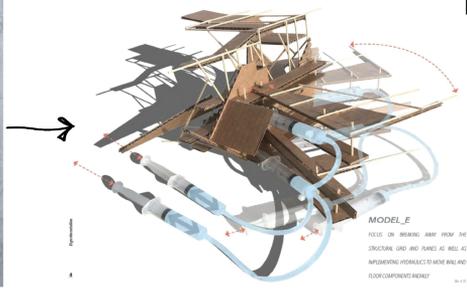
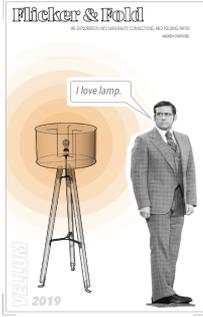


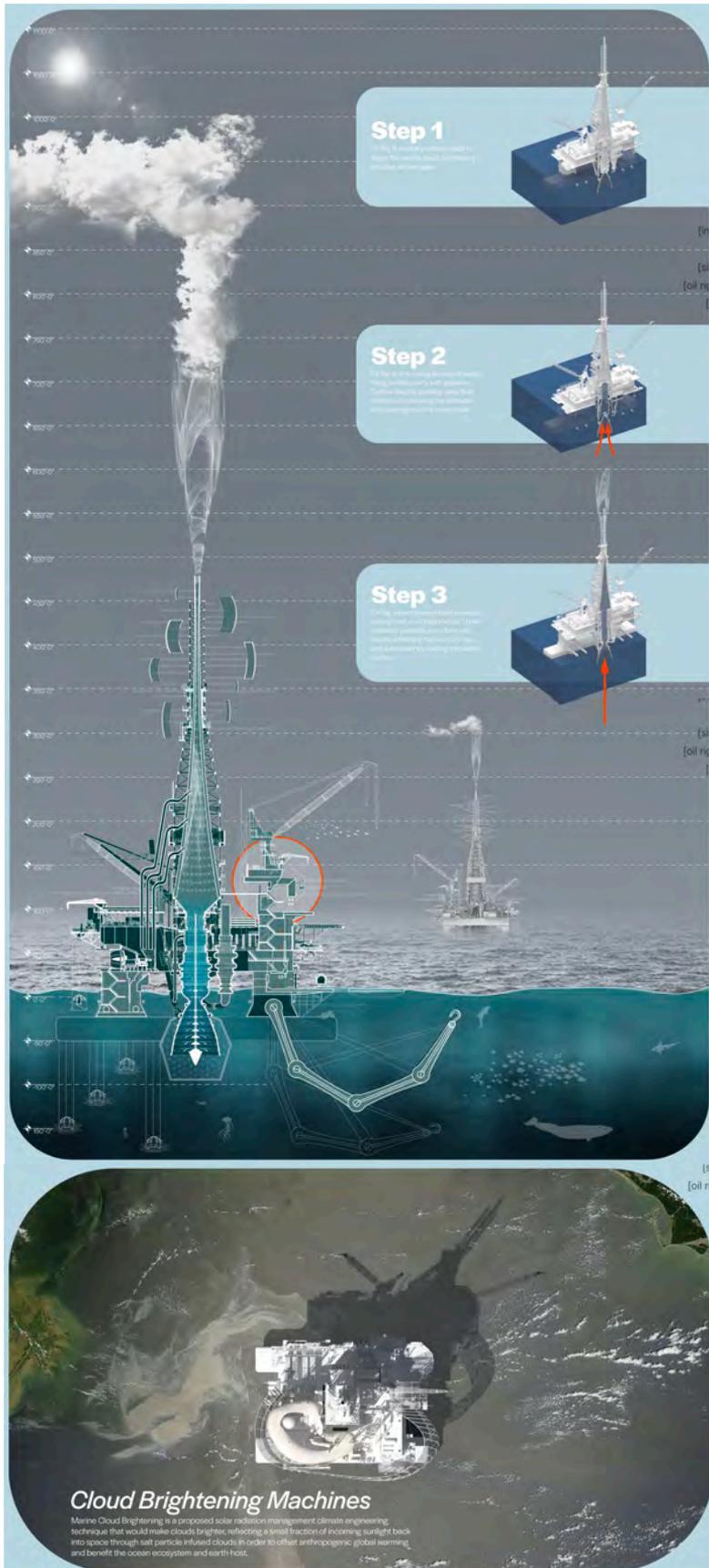
### A NEW SHARED GROUND // THE ELEMENTS OF THE KIDRON

The overlay of movements of resident and visiting birds on our photoworks become a new ground for two drawings that explore the generative potentials of intersection between nature and culture, as well as elements.

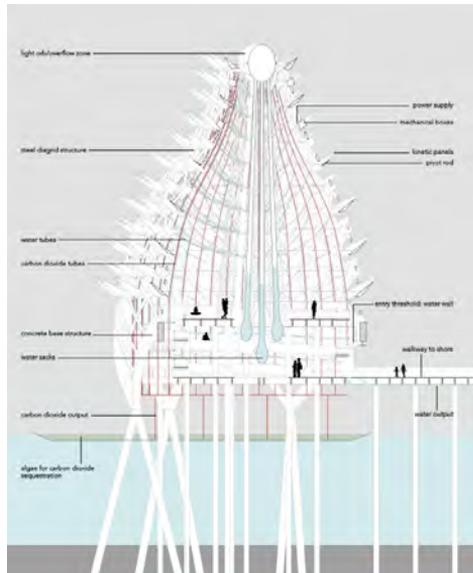
# [Vellum]

Vellum is not required, but many use it to develop ideas through an **ethic of making**. It's also a good excuse to go to the shop. The work below shows **Andrew Stratford's** progress through Vellum (study of light/space/folding patterns) to a study model made of flexible components, to a kinetic façade design that responds to changes in venue.





Sometimes we retrofit aging industrial infrastructure, such as a network of oil rigs, to make large-scale geoengineering proposals such as **Ben Will's Cloud Brightening Machine** designed to reflect solar radiation back into the atmosphere.



Velum entry that led to the design for a water treatment facility, by **Kristin Fauske**. The project studied the strategies succulents use to store water. Work from her thesis became the winning student entry in the Biomimicry Design Challenge and her team is competing for the final \$100,000 prize. A recent team won the \$100,000 prize and formed a start-up business making water collection devices. **Ryan Daley** on the deck of Bldg 5 with his model for a mobile lab to increase soil health in agricultural areas depleted by pesticides.



## Why make things interactive and responsive?

American author, marine biologist and conservationist, Rachel Carson stated "the control of nature is a phrase conceived in arrogance, born of the Neanderthal age of biology and philosophy, when it was supposed that nature exists for the convenience of man." Carson went further and identified the complex, interactive and interdependent network of life and made clear that human action disproportionately impacts the network. The control of nature has been a fundamental underpinning for architecture and engineering and they might well be added to the disciplines in Carson's list. We have entered a more responsive age of architecture, biology, politics, environmental engineering, and computation where the boundaries of our discipline are being redefined.

Advances in computation, technology, and philosophy (among other disciplines) have enabled designers to conceive of a built environment that is in continuous exchange with the local environment. Currently, there is a shift in building design toward systems that adapt to environmental variations such as in humidity, temperature, light, and pollution. Adaptive architectural design varies in its underlying strategies, from the computational and electronic to more passive material-based systems that are reactive to environmental stimuli. An equally important aspect of adaptive architecture is to engage the senses and appeal to the imagination.

**The Fine Print:** The teaching method is not prescriptive, and it is helpful if you are prone to curiosity and motivated to think for yourselves, to think your way into, and out of a problem, and to invest time and energy to creatively address your thesis to the best of your ability. The teaching | learning method is intended as a 'loose fit' model that is fluid and adaptable to new scenarios as they develop.