On May 28th, 2019 scientists voted in favor of classifying the age we live in as a new geological epoch—the Anthropocene, to mark the profound ways in which humans have altered the planet. In the Anthropocene thesis, there is no distinction between natural and man-made. Nature has been remade by the practices of human civilization. Human activity has affected all ecologic, geologic and biological systems and has eroded the boundary between human and non-human life, between nature and culture. Regardless of the controversy surrounding this classification, the concept of the Anthropocene has brought a new understanding of nature as partly a human creation. What is the role of architecture in this new context?

Our project is a speculative alteration and addition to the Grain Terminal Building and surrounding site in Red Hook at the mouth of the Gowanus Canal. In the Anthropocene, building and ground are equally artificial, especially in an urban setting. Red Hook is a neighborhood of Brooklyn with a rich industrial past. It was a marshy wetland that was filled in to create street grids. Red Hook and the rest of the New York city waterways became polluted from decades of waste due to industrial activity. The waterfront of Red Hook has also never had public space.

The primary program is oyster aquaculture and algae farming as a source of food for the oysters. Oysters act as filters, meaning that they have the capability of assisting with the cleanup efforts of the waterways once they are reestablished in the marine environment. Their reefs attract diverse species and are the basis for robust ecological environments. Oysters were once prevalent in New York Harbor and in the Gowanus Canal. Pollution and dredging of the harbor destroyed their habitat. There are major efforts underway to restore their population.

The project required a public component which was developed by each student individually. Housing, cultural, educational, and commercial programs were incorporated into different project proposals.

Anamorphic projection, where 2d images are projected onto a 3d surface, was used as a design strategy to create spaces that are oriented along specific human and non-human vantage points. Projects also considered short and long-term timelines of programming and occupation.
As mentioned before, **anamorphic projection** was used to derive the form and manipulate the historic **Brooklyn Grain Terminal** and the silos which occupy the interior. The result is a **speculative aesthetic** that is appropriate for the new epoch, the **Anthropocene**, and a new relationship between human and non-human occupants.

**URB.AG.INC**, or Urban Agricultural Incubator, is a proposal for a shared work space that incubates small businesses that are addressing **food shortage issues**, or **urban agriculture** in response to **climate change** and the need for a **resilient food network** within urban environments today.

**URB.AG.INC**, in addition to incubating small businesses, acts as an **ecological node** by embracing its impact on the environment and **creating an open loop system**, which will improve the environment around the site and beyond.
URB.AG.INC is an open loop system directly engaging with the local ecology of New York City. The new environment pumps bay water into the building and filters it. Then redistributes the water to the oyster habitats and the salt water aquaponic habitats.

These various habitats act as a phasing system to clean the water and release it back into the bay, both servicing the needs of the space while cleaning the bay. In addition the landscape is reinvigorated with local plant species, which bleed into the building through the integrated park space and roofscape. The park space and roofscape act as a habitat for local pollinators to aid in rebuilding the ecology in New York City.

The various spaces result in a new type of space for the public to engage the ecology, luring them to the site and promoting an equal relationship between the human and non-human.
The series of open loop systems are paired with various closed loop systems to create the necessary working environments for food production, experimentation and cultivation. In the section diagram one can see the interaction of all the spaces which are designed for human and non-human occupants. In addition there are various spaces which are open to the public from a marketplace to an open parkscape which is integrated into the building via the atrium and roofscape.
The various integrated processes of URB.AG.INC result in a unique space especially equipped to promote the importance and education of healthy eating, food resiliency and climate change. The specific habitats offer a diverse set of relationships that helps address each of these topics.

The Lecture Hall allows for both small businesses to have the space for larger conversations, while also offering a space for the public to engage in community talks on health and wellness.

The various open loop systems, like the Pollinator Sanctuary, Local Flora Habitat, Bay Water Filtration System and Oyster Aquaculture seen in the section, are both opportunities to enrich the local ecology while simultaneously engaging the public.
In addition to the promotion of local habitats URB.AG.INC is committed to supporting small business innovation in food production and cultivation in order to address food resiliency in urban environments. Multiple food research and production labs have been designated throughout the space and can be customized further for the specific research of the company occupying the space.

The predesignated areas seen here are the Aquaponics Lab, the Hydroponics & Aeroponics Lab and the Animal Habitat. Each space offers some flexibility so the occupants can customize them to their needs.
The interior of the space expresses the anamorphic projections in novel ways, creating the potential for vertical systems (or more accurately diagonal) to be implemented.

The Oyster Aquaculture process utilizes this arrangement in a top down fashion by splitting the areas into two main labs; one for the Brood Stock and Spawning Trays, and the second for the Larvae Conicals and Spat Tanks. These spaces are connected via stairs on the cat track surrounding the silos.
The relationship between the exterior and interior of the building both contrast and complement one another simultaneously. The manipulation done to the exterior of building, driven by the anamorphic projection, extends into the interior shaping the lab spaces and re-organizing the processes in a less conventional way. In addition the shift from the stone gray exterior to the opalescent interiors and the sterile white lab spaces, offer distinction and contrast.

The result is a novel aesthetic, which is appropriate for the Anthropocene, an architecture that equally considers its environment and its occupants, both human and non-human. URB. AG.INC can be considered a speculation on alternative conceptions for the built environment, where society’s pre-conceived notions can be challenged and innovation is embraced.
URB.AG.INC is a space that both promotes private small businesses and innovation, while maintaining a strong connection to the local community. The new environment offers both the space for spontaneous public interactions and the necessary resources for small businesses to develop. In addition, to the space open to the public, URB.AG.INC offers educational opportunities and a new way for New Yorkers to engage with the ecology, one that is appropriate for the Anthropocene.
Ultimately URB.AG.INC is a speculative response to the Anthropocene and the need for a new relationship between landscape and building and the human and non-human. The landscape both offers park space while housing a series of eco-pools where the oyster nurseries continue to mature before being released in the harbor.

The landscape continually engages with the building by interacting with it through the interiorized park space and roofscape as well as the bay water filtration system. In addition the building continually engages the landscape by promoting local ecosystems and redistributing both water and oysters into the bay.