

PART 1: BORDERS & TERRITORIES

of the Tarim Basin

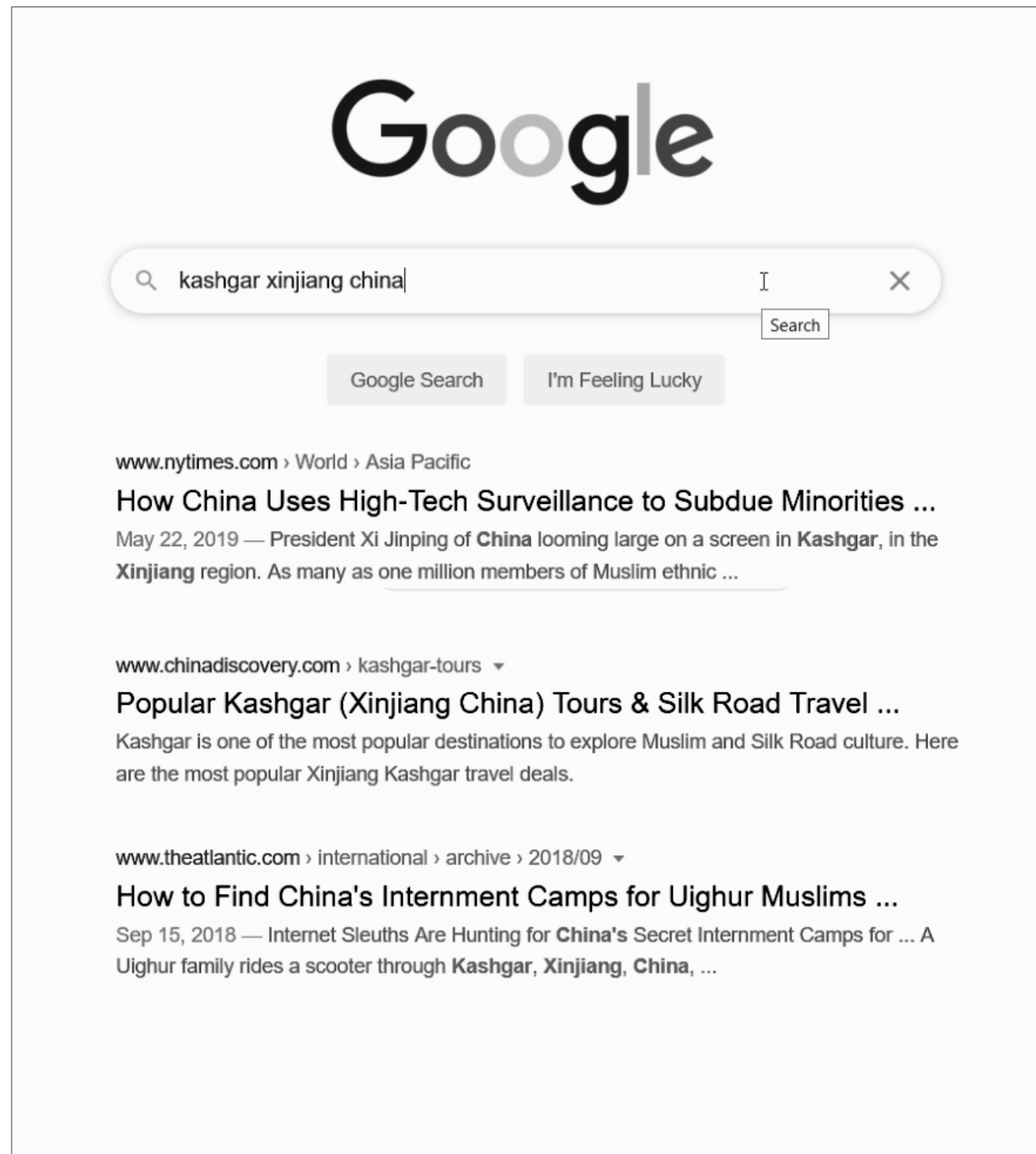
type: Group Research by Mapping
location: Xinjiang, CN
supervisors: Filip Geerts, Negar Senaan Bensî
collaborators: Qiaoyun Lu, Katherina Bruh, Mine
Çelik, Filippo Testa

A global pandemic presents us with physical limitations to the world. Access to a site is restricted to the algorithm of a search engine, as well as the presence of the site's digital counterpart on the internet. These limitations thus provide a unique opportunity to research the mysterious and already restricted parts of the world.

My group chose to study the Tarim Basin of Western China, the heart of the ancient Silk Road, where the history and culture of the indigenous people are blurred by the immensity of the Taklamakan Desert.

Our task was to develop a six-by-six-foot map of the Tarim Basin's borders & territories as collective research. My contribution to the research was an analysis of the territory's global discourse.

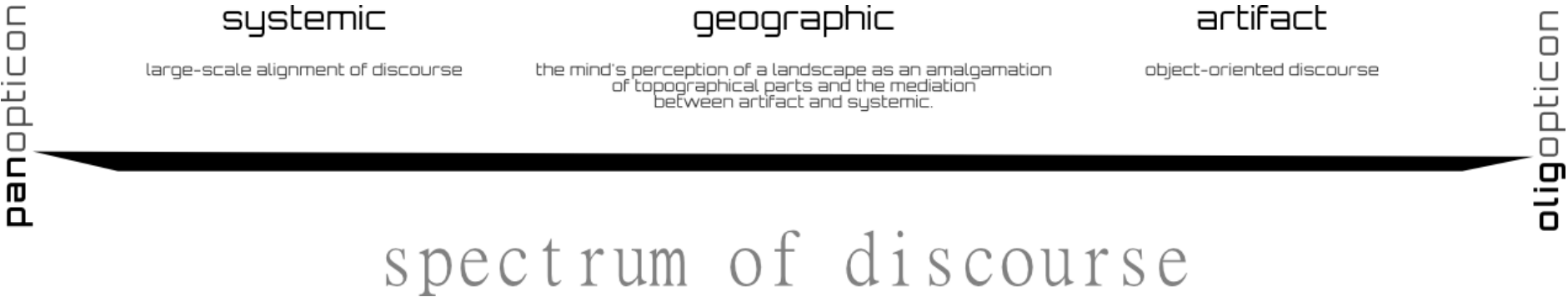
I was interested in the systems of digital media and online discourse and how they affect our perception of a place. I was curious if the words, messages, and statements available to us on the internet can be systematically analyzed and mapped to uncover the subtle and immaterial aspects of a territory.

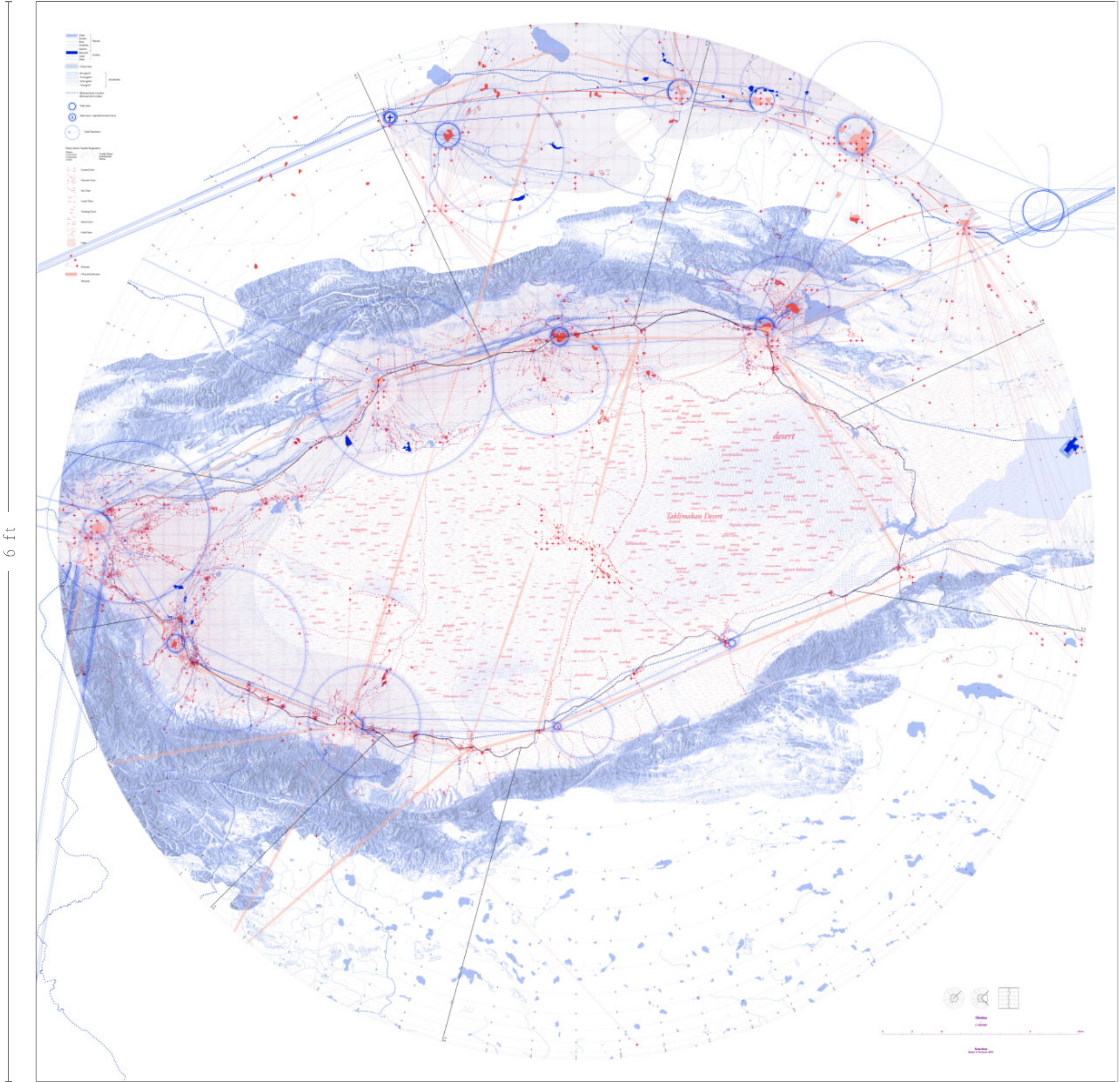


online discourse - western

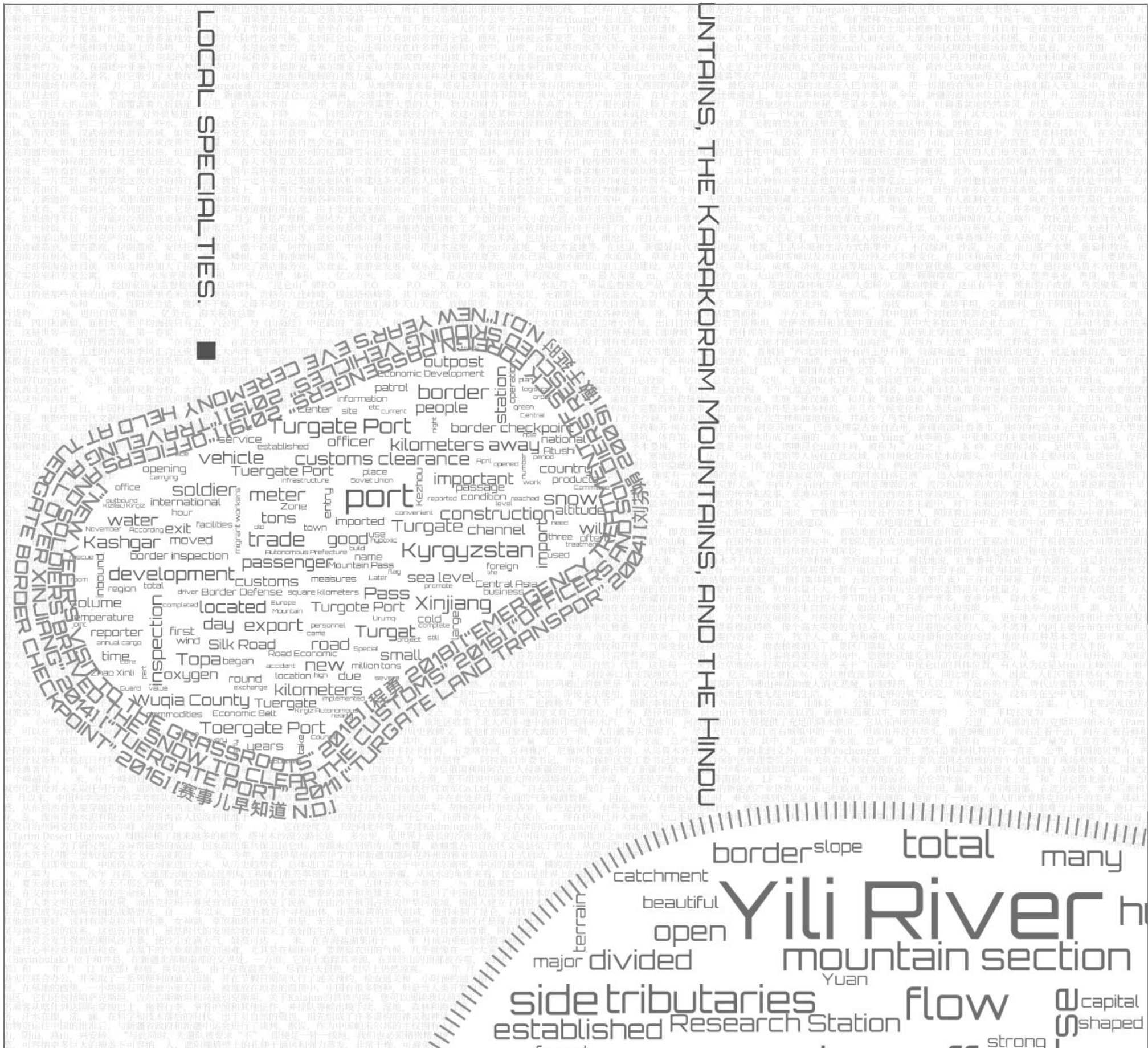


online discourse - eastern





final map



Python, Illustrator, Photoshop

PART 2: DISCOURSE INFRASTRUCTURE of the Tarim Basin

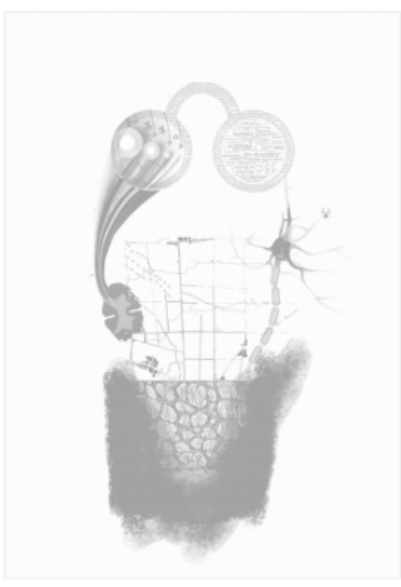
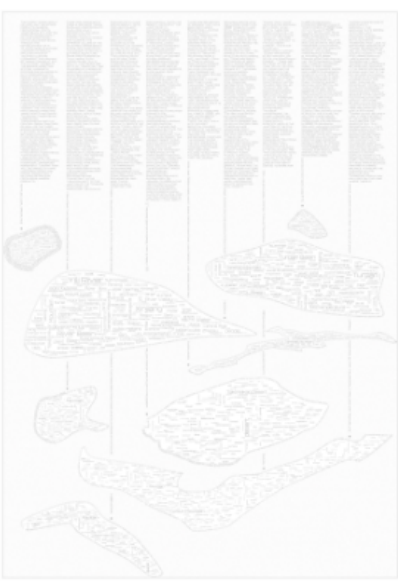
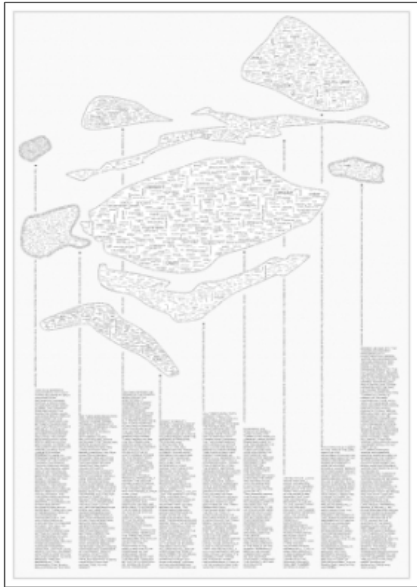
type: Independent Research by Discourse Mapping
location: Xinjiang, CN
supervisors: Filip Geerts, Negar Senaan Bensi

Part 2 of the project involved the beginning of independent research. My goal was to uncover aspects of the territory that provoke further architectural inquiry.

There are few existing examples of discourse analysis that translate words into the architectural language of drawing. The major challenge was, how do I map these immaterial aspects of the territory graphically and provocatively?

Using the 'spectrum of discourse' diagram as a guide, the methodology utilizes natural-language-processing algorithms with the Python programming language, with the analyzed discourse mapped according to the various algorithms, geographic locations, and quantity of available online discourse. What results is a graphic representation of a territory that highlights immaterial aspects unavailable in satellite imagery.

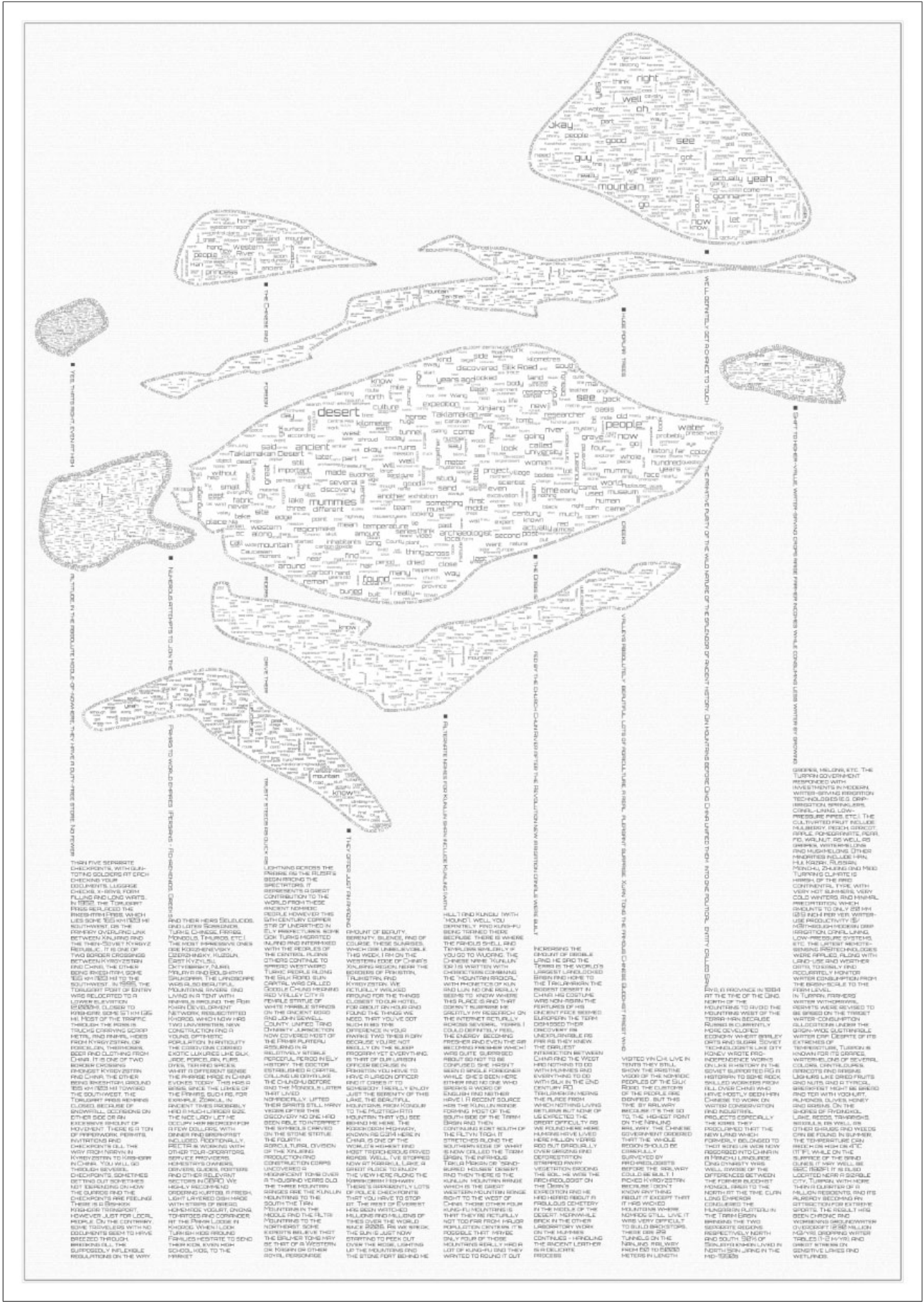
I discovered scattered, yet consistent evidence regarding border crossings and trade, as part of the Silk Road mythos and the Belt Road Initiative's development of telecom infrastructure. This discovery led to the next inquiry: telecom infrastructure in China, its role in online discourse and surveillance, and the social implications for the indigenous culture of Xinjiang.



discourse mapping - geographic western, geographic eastern, infrastructure

The nine major geographic regions of the Tarim Basin were used as search queries. The resulting discourse was scraped and analyzed with word cloud (word frequency) and sentence frequency (a weighted value of each statement based on the number of high-frequency words) algorithms.

The geographic regions are drawn in their rough proximities with their sizes scaled by the quantity of available discourse.



geographic western - A2 with Python, Illustrator, Photoshop

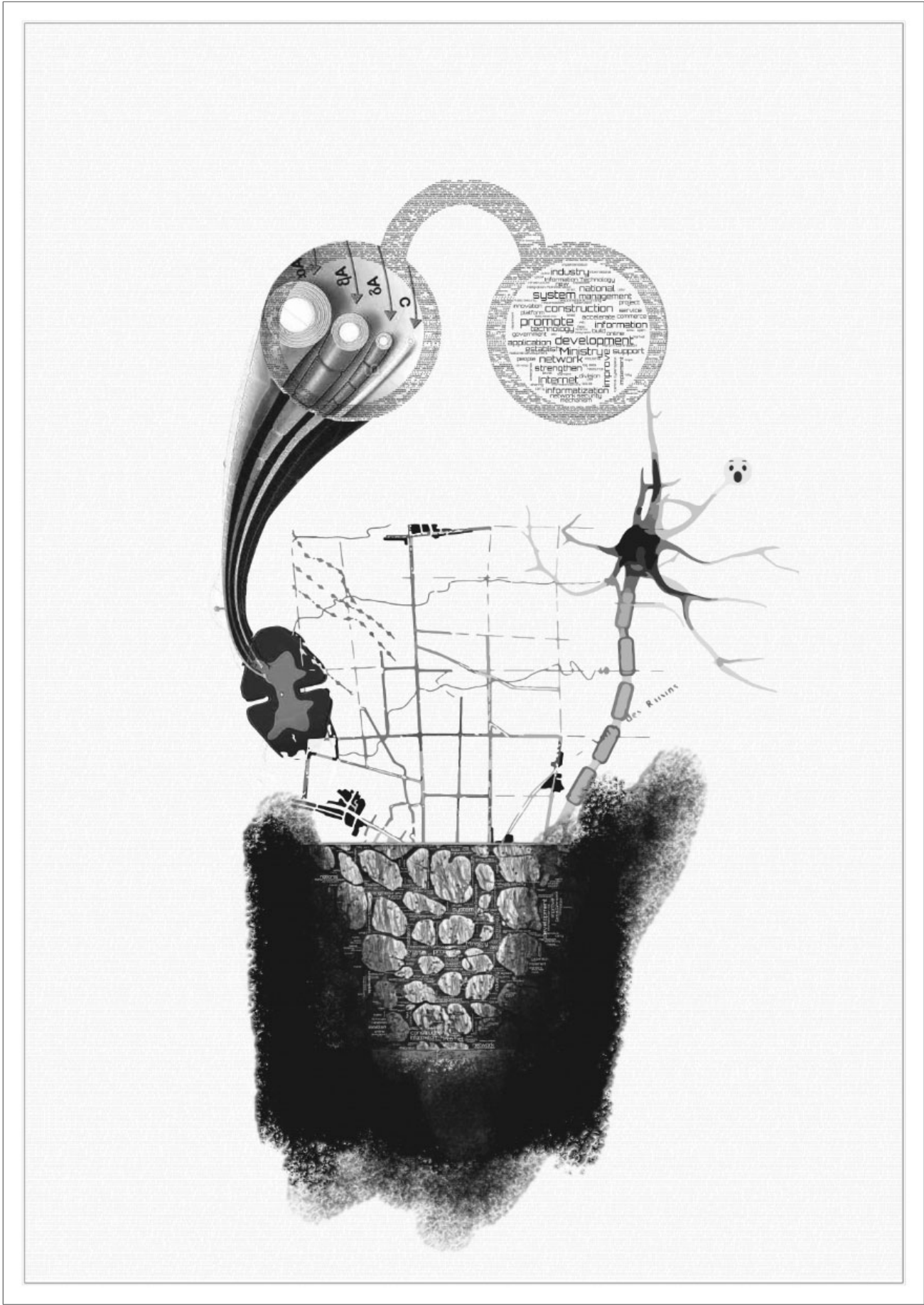


discourse mapping - geographic western, geographic eastern, infrastructure

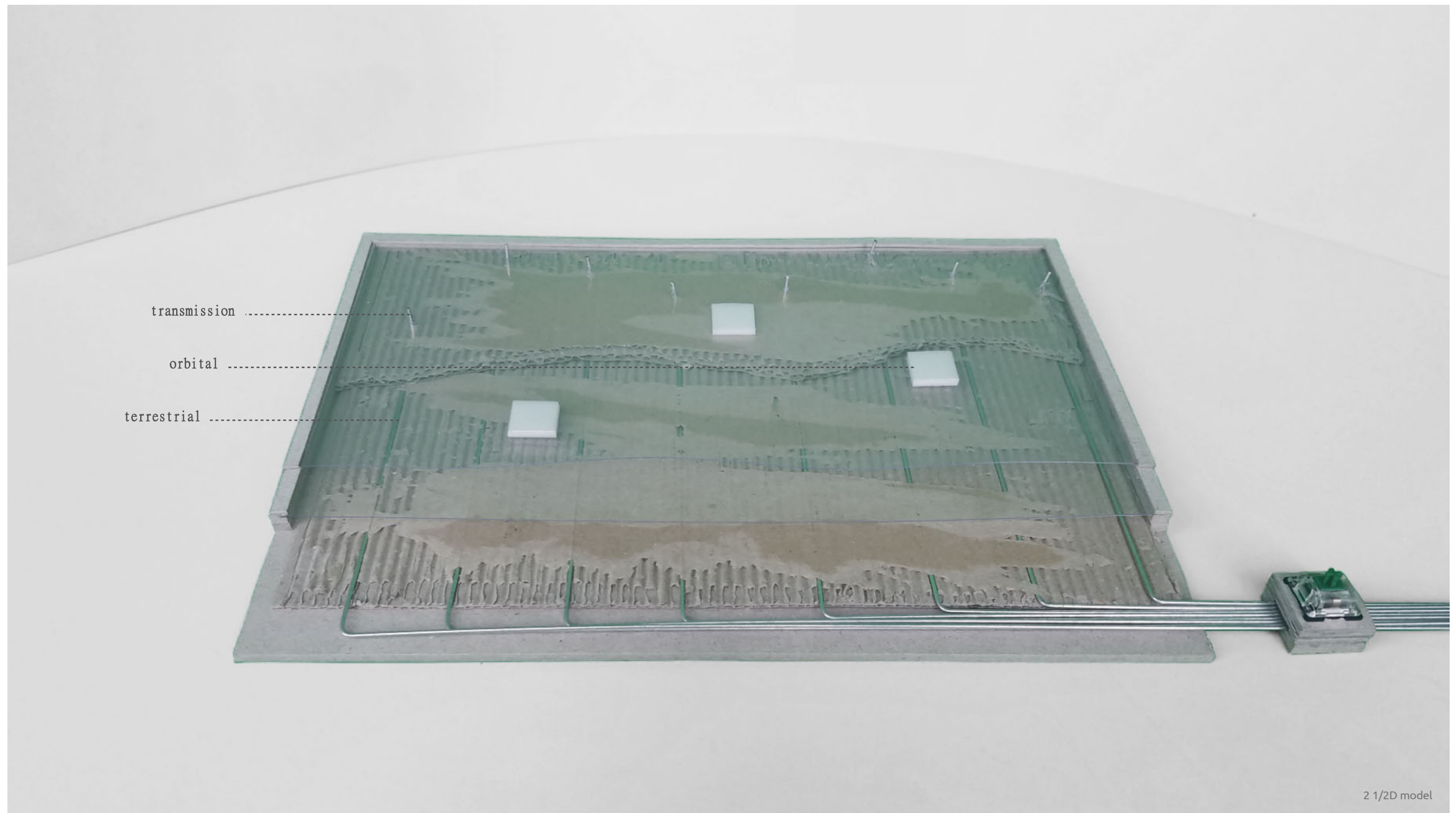
Fiber-optic cables are below ground and invisible to us, but we interact with them through terminals and the discourse that we consume and subject ourselves to. The discourse shapes our perception of a territory and how we frame our viewpoints.

We also have an emotional connection with these cables triggered by exposure to sensational statements.

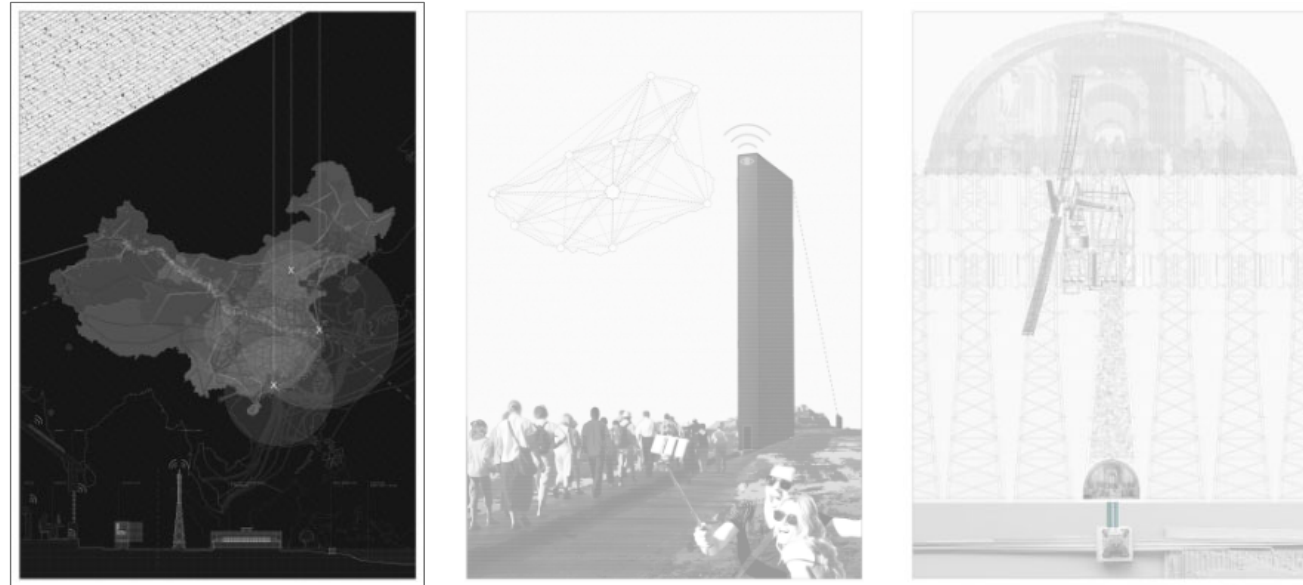
As the data passes from the physical to digital, to biological and back, it oscillates between material and immaterial states in a silent yet pervasive manner.



infrastructure - A2 with Python, Illustrator, Photoshop



The floating satellites in orbit, the cellular transmission reaching towards the sky, and the routing of terrestrial cables through the landscape, all condense at a major terrestrial intersection, the switch.



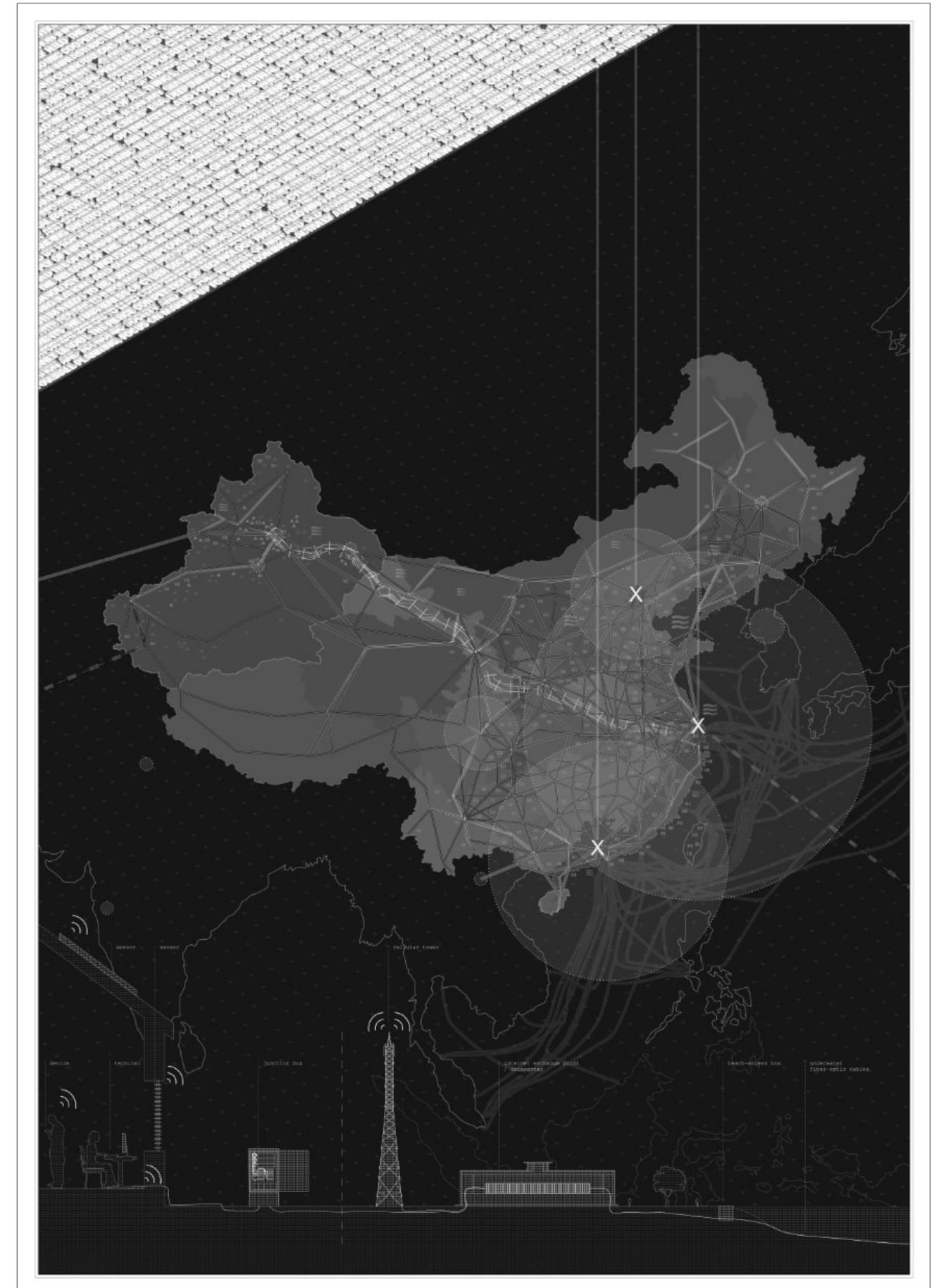
concept proposal - site, program, material

I began mapping the telecom infrastructure in China. What I found is that China is one of the most well-connected countries in the world with an extensive international network that is expanding via the BRI with several major data-cable landings, large concentrations of data centers, and three World Internet Exchange Points along the eastern shore.

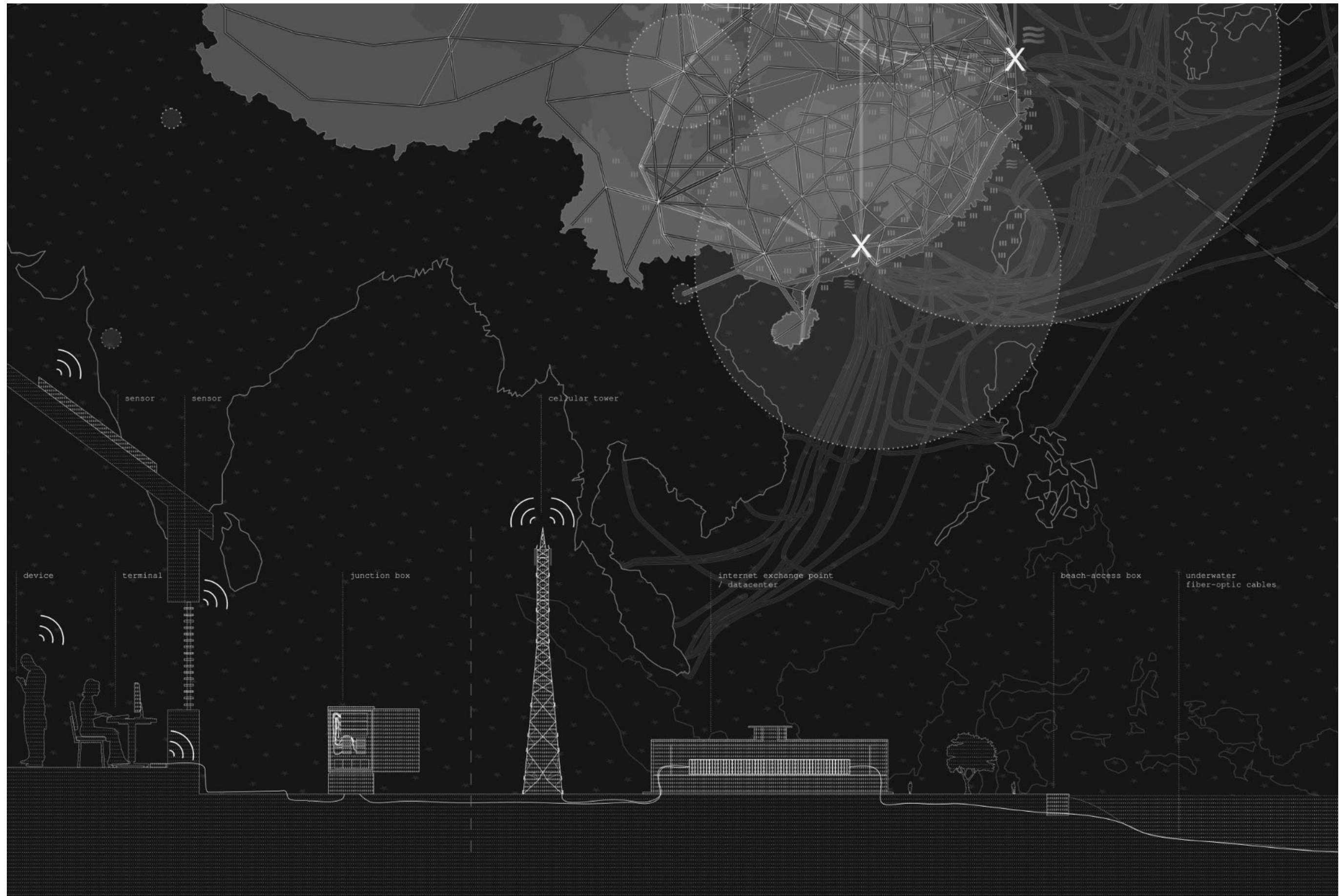
Xinjiang hosts the largest concentration of the nation's coal-based power plants and many wind/solar farms are being built to harvest renewable energy. China has also completed the world's longest and highest-capacity transmission corridor that runs from Urumqi in Xinjiang to Shanghai. This corridor (non-)coincidentally follows the same route of the ancient silk road.

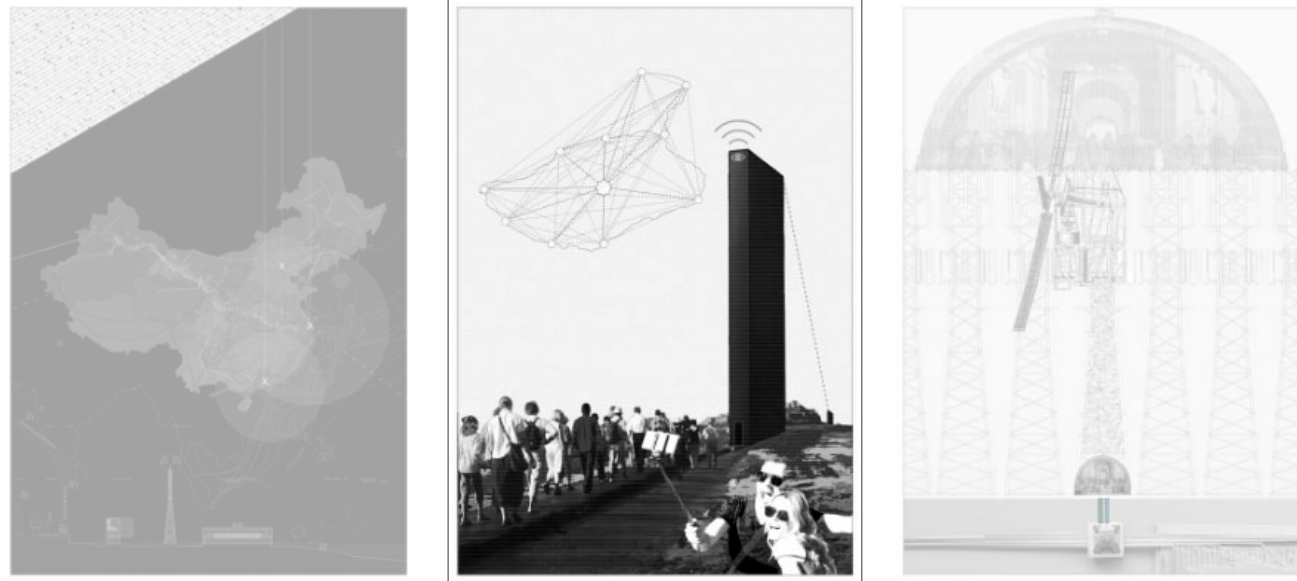
I find it interesting that despite the supposed lack of infrastructure, Xinjiang is well connected, in a way that perhaps correlates with the degree of surveillance activity.

Particular to the Uighur people, many heritage sites are being discretely destroyed by the government. They are important places of social gathering and religious pilgrimage.



site - A2 with Illustrator, Photoshop



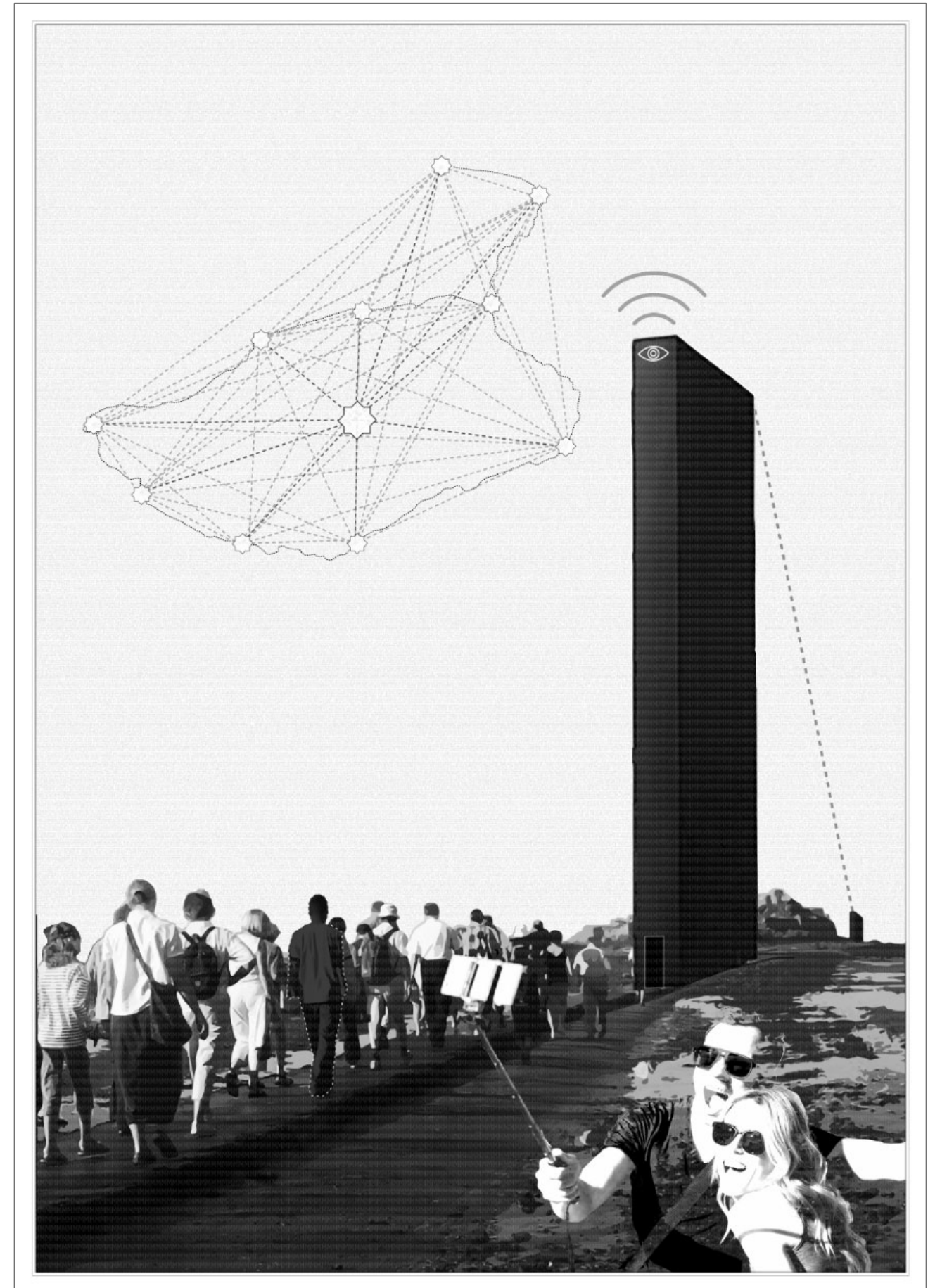


concept proposal - site, program, material

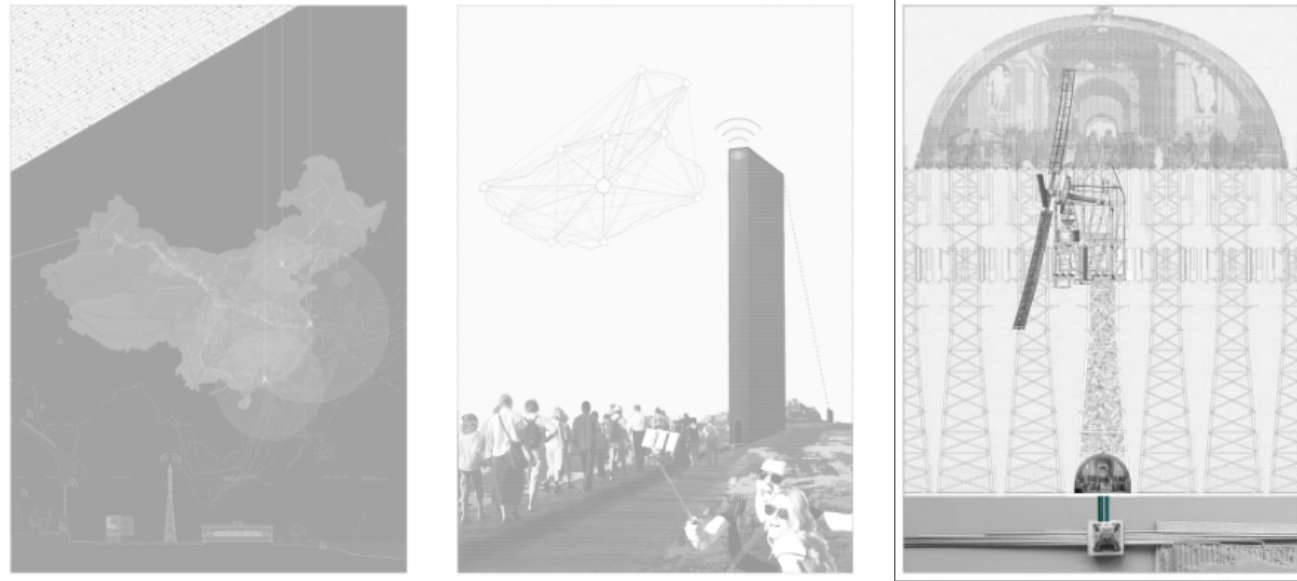
For their Brasserie project, Diller and Scofidio confront the issues of this new digital realm of space and surveillance by connecting the atmosphere of a bar with the surveillance cameras that permit entry to it.

I believe that this project also confronts these issues by connecting the vulnerability of the diminishing social realm with the vulnerability of data. Or per the work of Leon Krier, becoming a nameable object as a central symbol of the region, placed along the ancient silk road at the locations of destroyed heritage, creating community-oriented urbanism with historic context and enabling a new social ritual of pilgrimage.

The project is also protected by the harsh terrain of the desert and facilitates a kitsch spectacle for the commodification of culture and a grand allure for tourists.



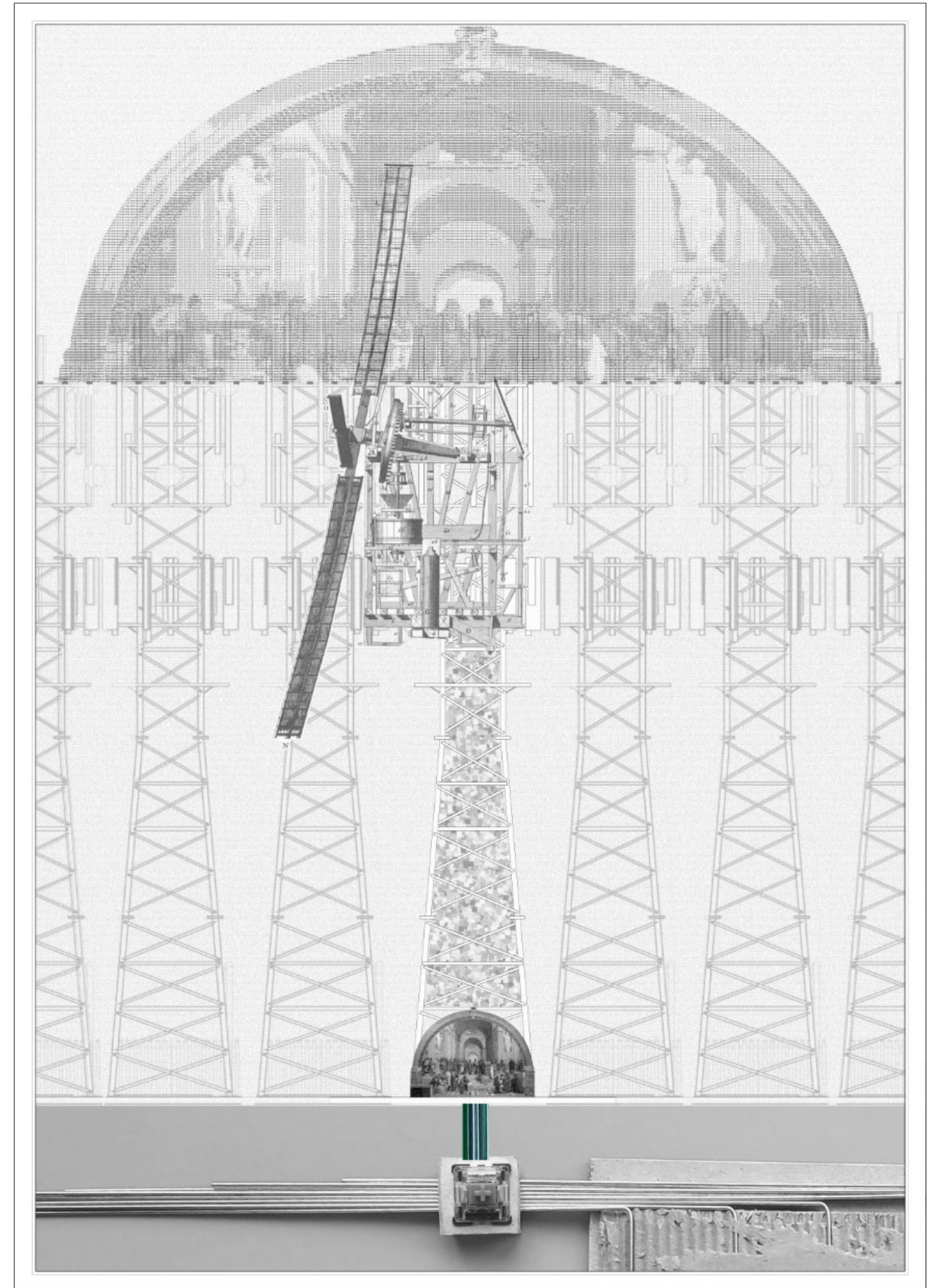
program - A2 with Illustrator, Photoshop



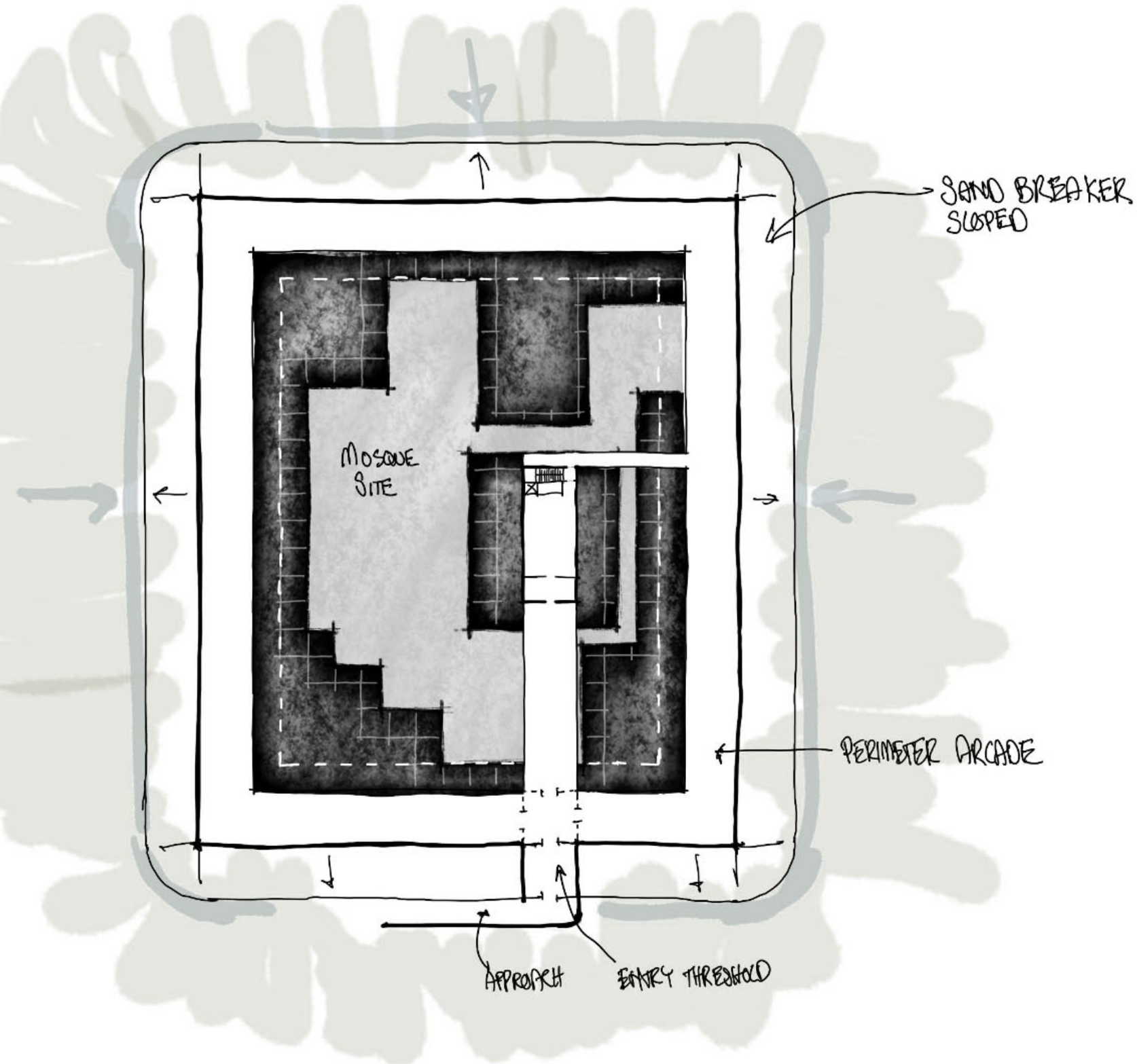
concept proposal - site, program, material

I decided that the project is best-suited as a data center with a public program, either democratic forum or an authoritarian equivalent; a grassroots operation of self-sustaining and self-supporting infrastructure, or a proposal in support of the BRI agenda.

I learned that the project's development requires a major consideration for how we as researchers naturally rely on our moral paradigms to understand a foreign territory for architectural intervention.



material - A2 with Illustrator, Photoshop



PART 3: DESTROYED PILGRIMAGE DIGITIZED

heritage conflicts within a new paradigm

type: Project Development

location: Xinjiang, CN

supervisors: Filip Geerts, Negar Senaan Bensi, Gilbert Koskamp

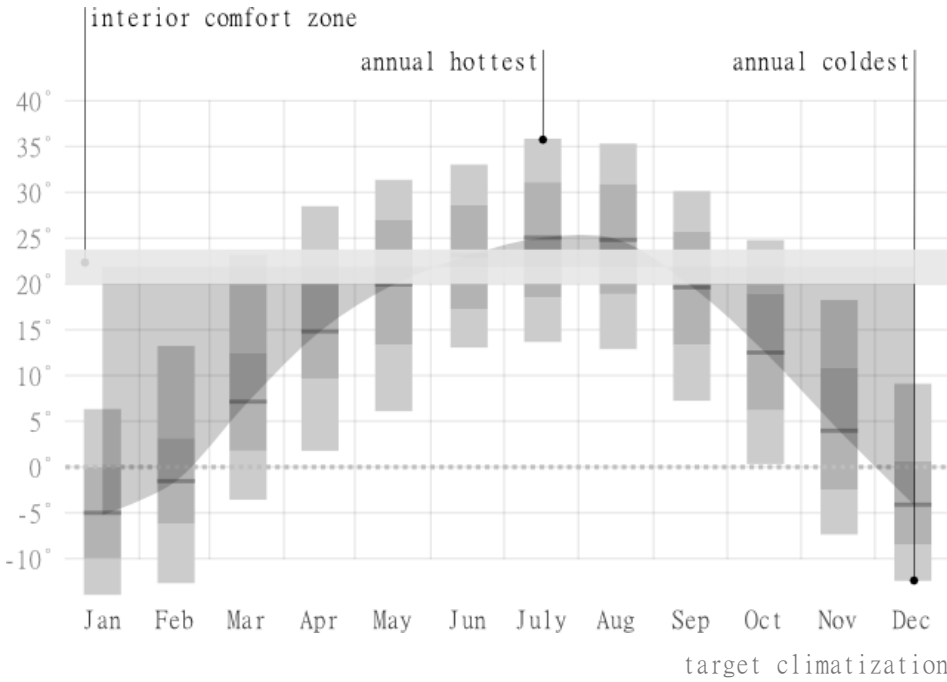
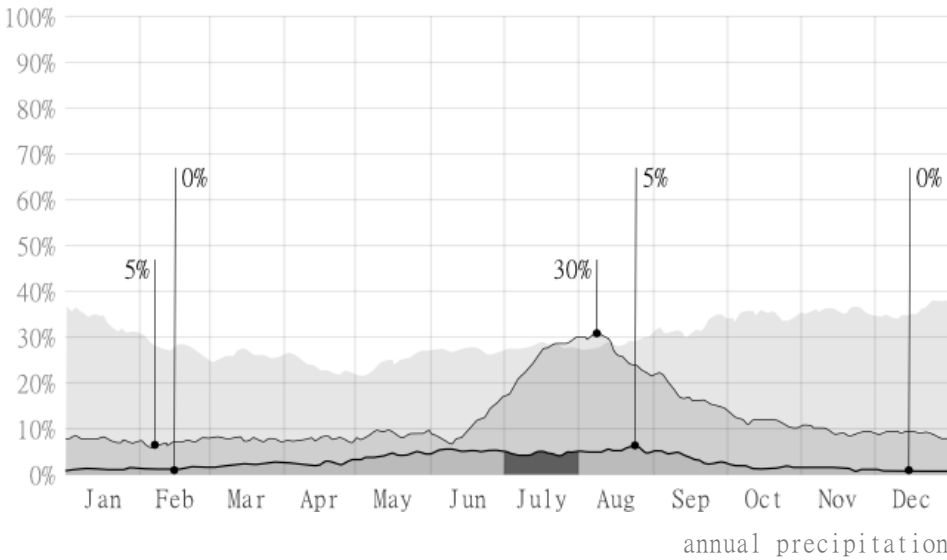
The goal of Part 3 was to begin materializing the project proposal, an assimilation of data centers from destroyed heritage sites with a public program, and archaeological preservation on the ground floor.

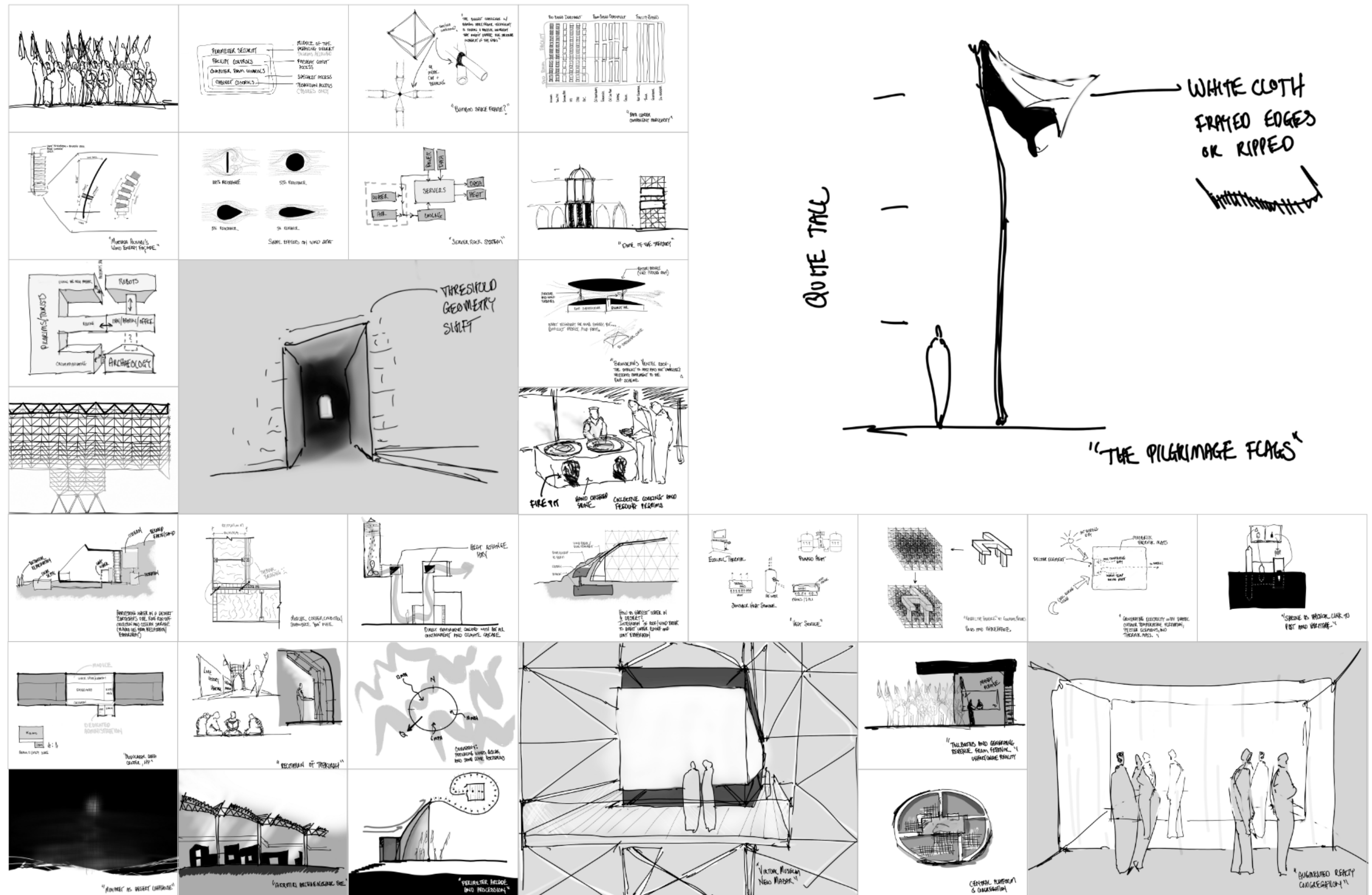
The research was collected and organized via Miro boards, values and goals established through sketch explorations, and massing studies conducted through 3D modeling and section studies.

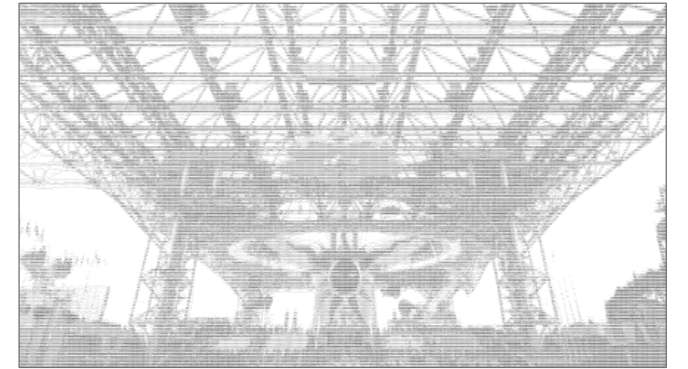
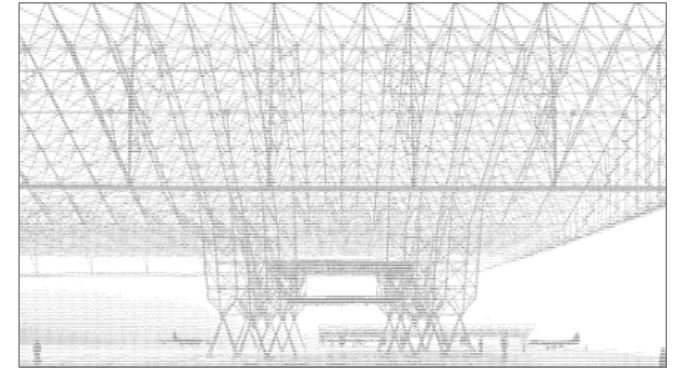
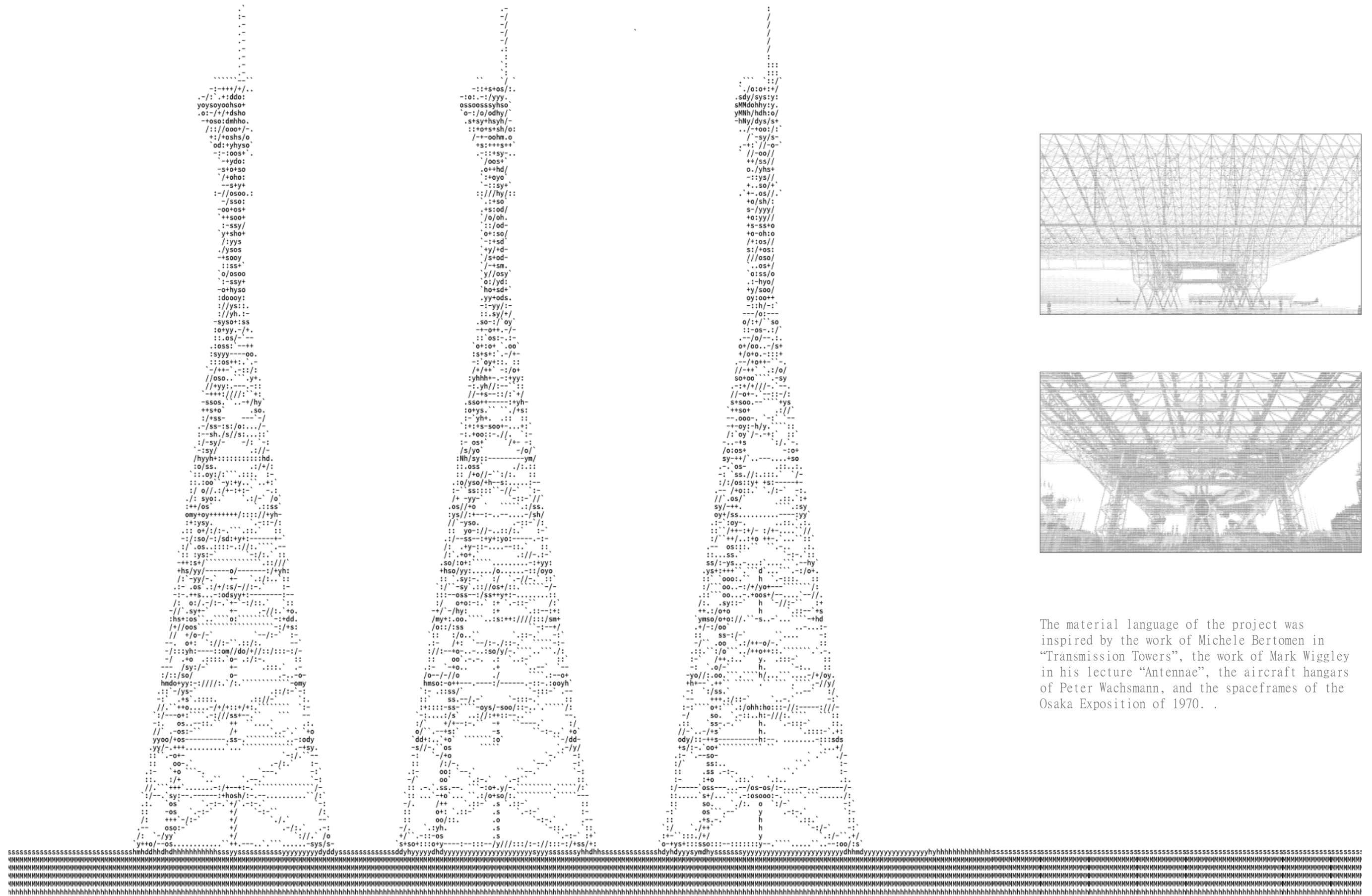
I learned that architectural insight can be found in the frictions and contradictions of a site. In this case, by embracing the discovered latent tensions and conflicts within the Taklamakan Desert.



miro board







The material language of the project was inspired by the work of Michele Bertomen in “Transmission Towers”, the work of Mark Wiggley in his lecture “Antennae”, the aircraft hangars of Peter Wachsmann, and the spaceframes of the Osaka Exposition of 1970. .

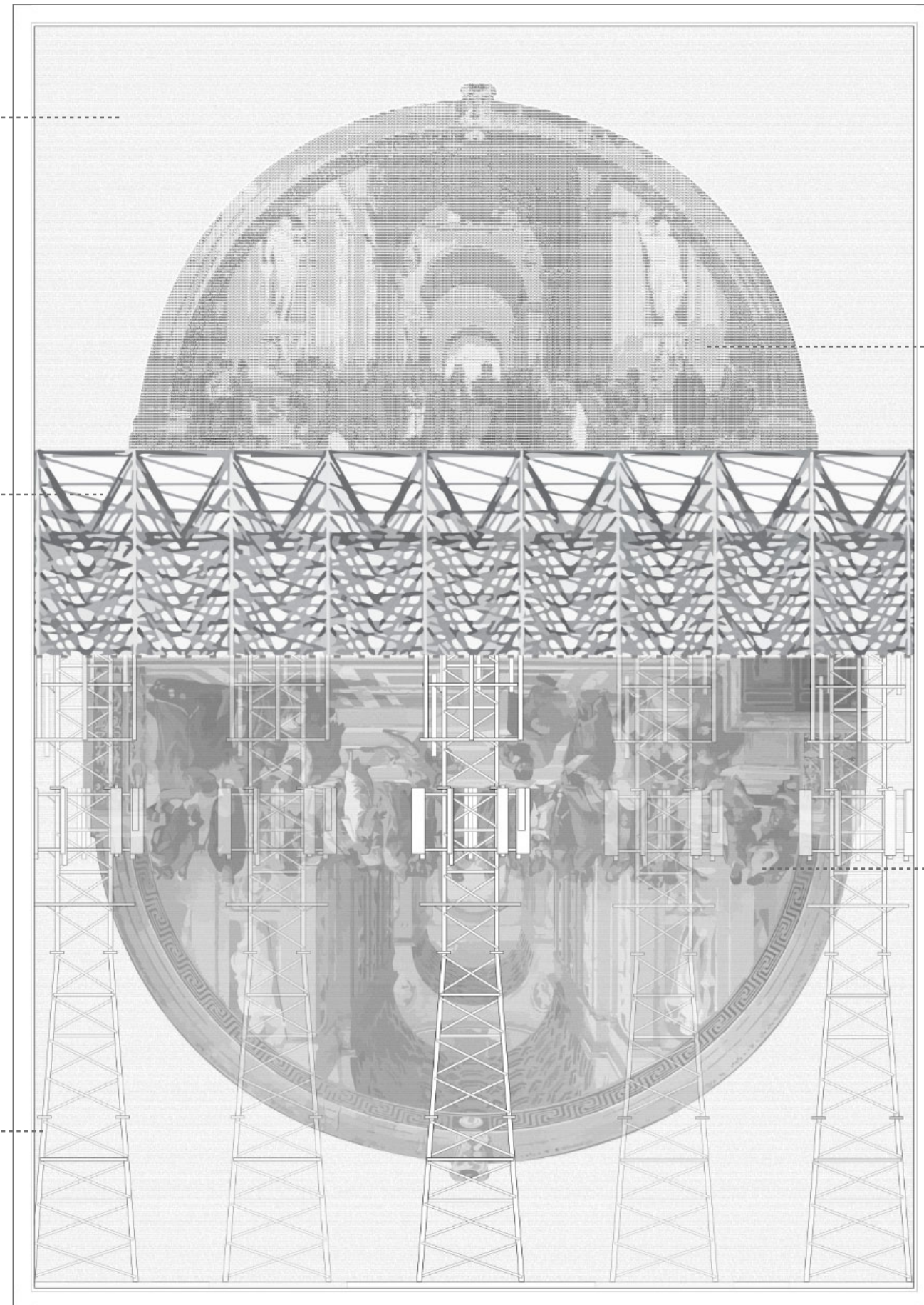
perception of the landscape built from
digital discourse

horizontal spaceframe ceiling as datum
and mediation of physical to digital

radio towers as supporting structure
and connectivity between sites

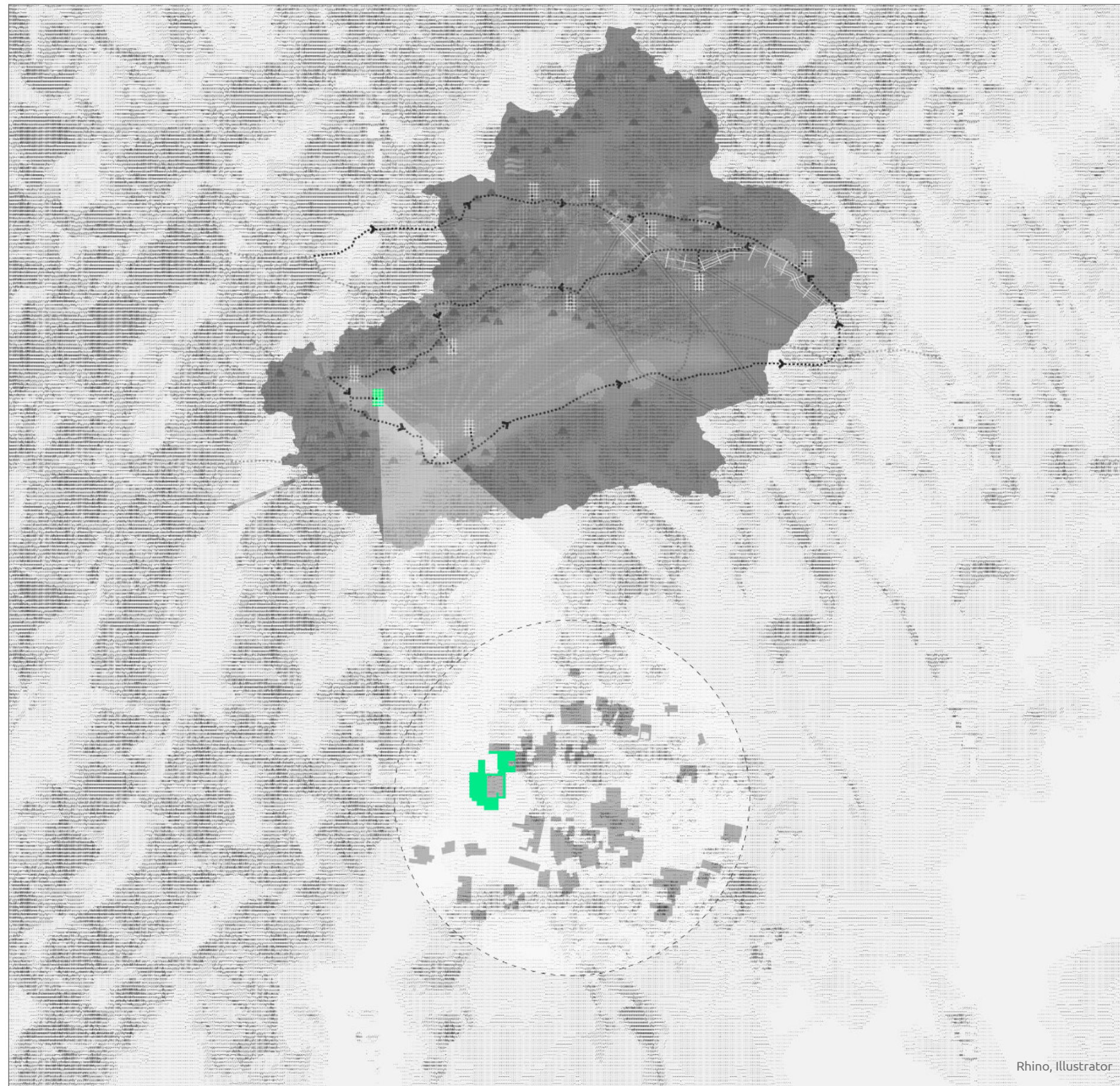
digital double of the pilgrimage sites

archaeological site of ancient
pilgrimage mazar



concept collage - Illustrator, Photoshop

[illegible]



During the pilgrimage, each site (Mazar) provides for paying tribute to the shrines of buried saints and the recitation of the Tazkirah, the cultural lore of the territory.

Among the chosen heritage sites, the Ordam Padishah Mazar held the largest annual festival of the territory and was one of the first to be destroyed. The ruins are buried below the dunes. This proposal intervenes at the mosque and tomb of the buried saint, the most important location of the site for the old festival.

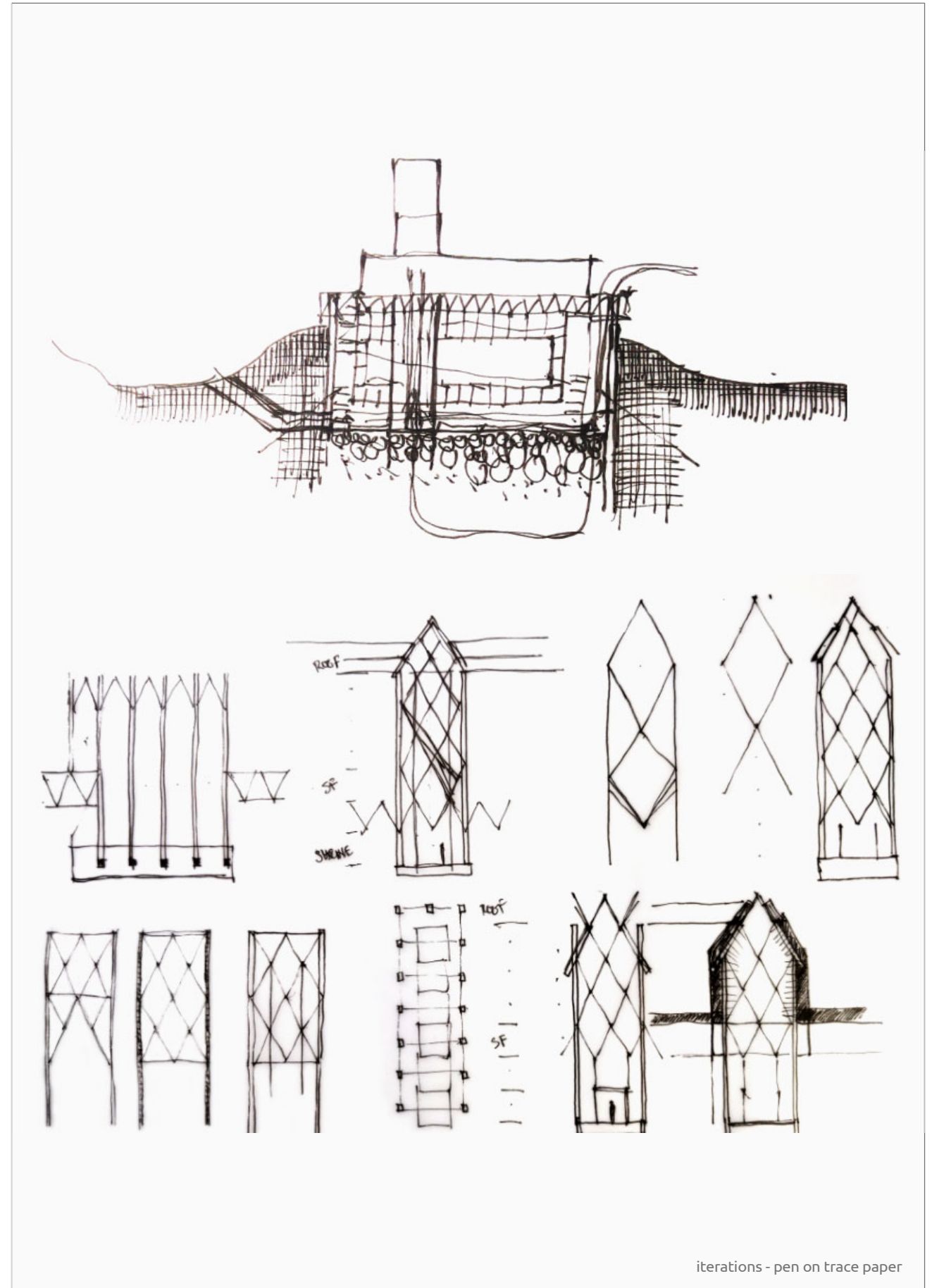
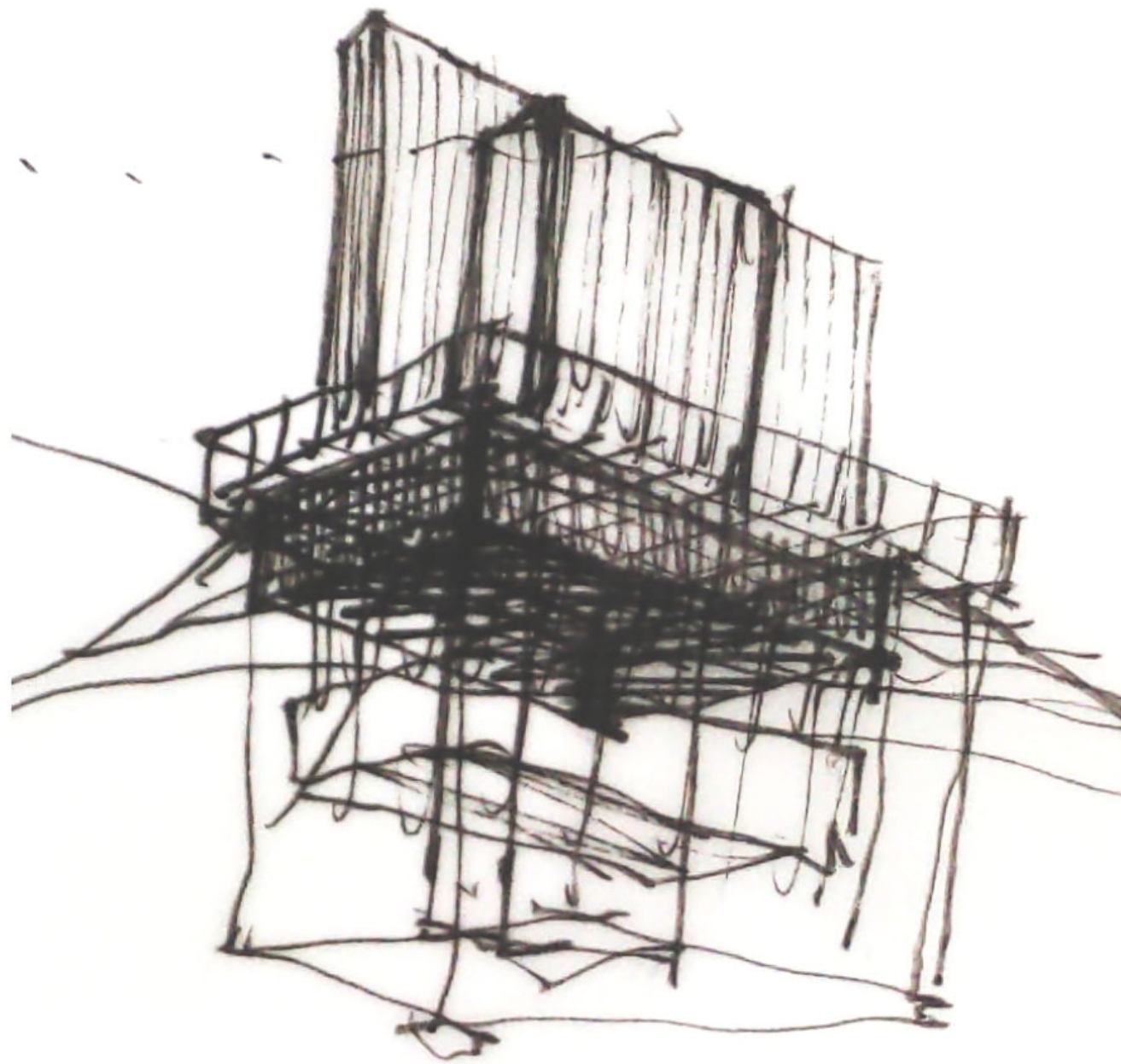
pilgrimage sites, ordam padishah mazar, and social blockchain



Akotiri Archaeological Site - perimeter access to archaeological site and overhead protection

Ardeatine Monument - subterranean tomb protected by a 'floating' ceiling

Immersion Rack Coolers - energy efficient cooling in 'tombs'



iterations - pen on trace paper



tectonic model

PART 4: MAZAR OF THE TREASURY

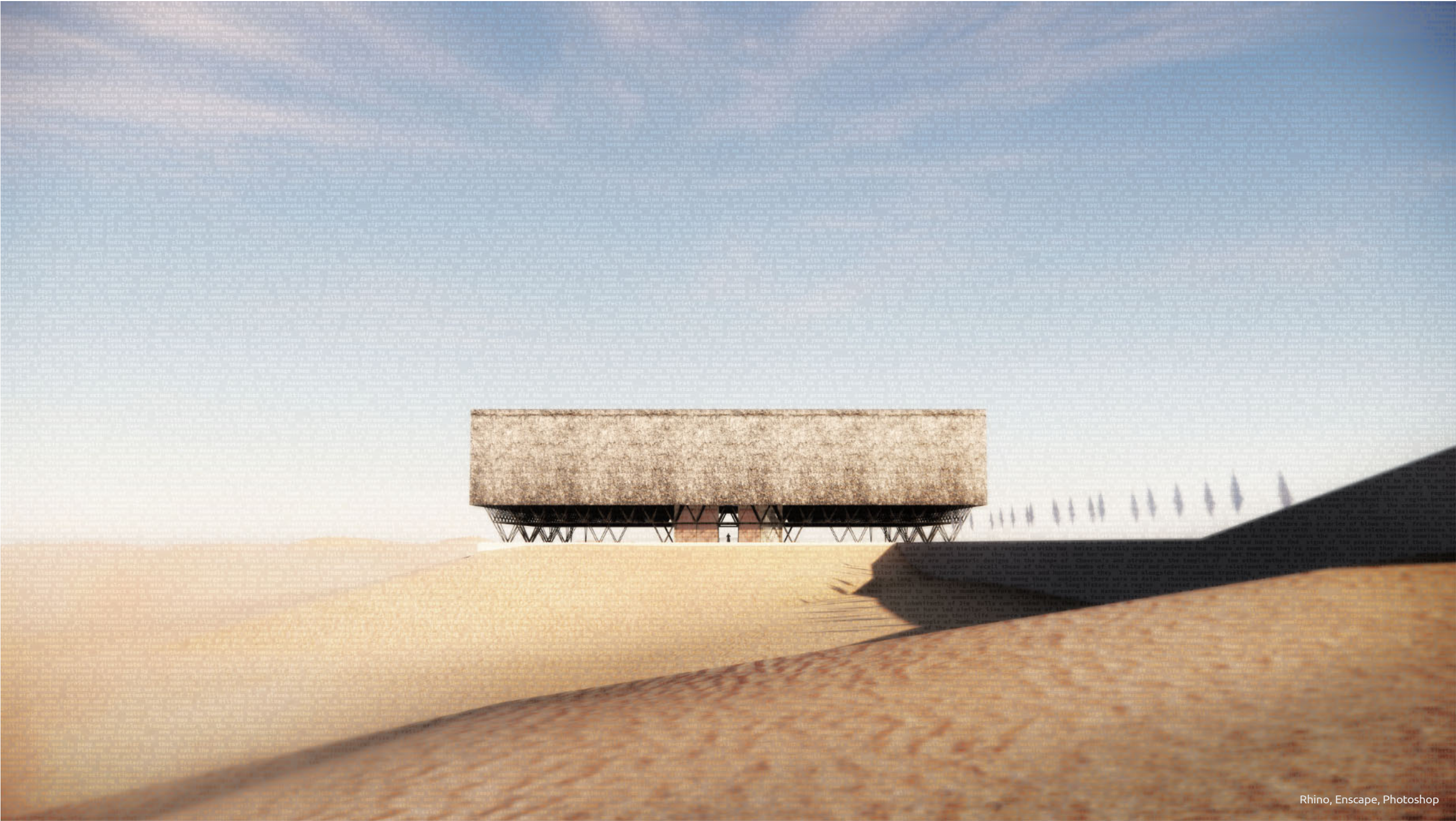
convergence of dissimilar realities

type: Materialization and Final Proposal
location: Xinjiang, CN
supervisors: Filip Geerts, Gilbert Koskamp, Nishat Awan

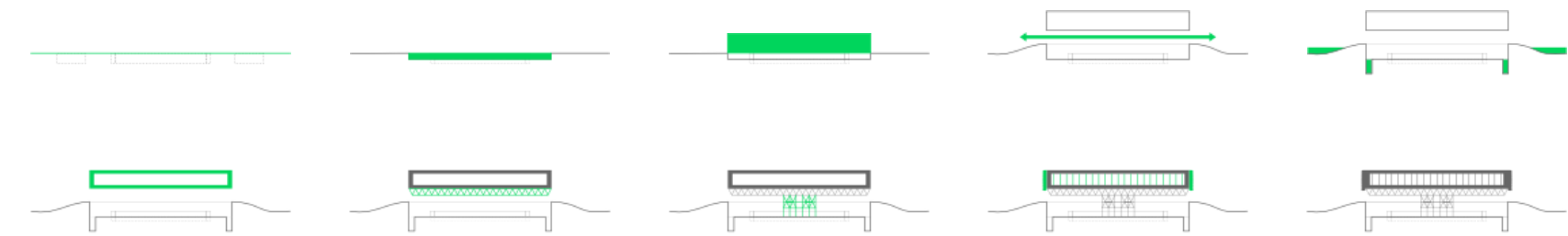
The goal of Part 4 was to finalize the materialization and building technology of the project.

My graduation project embraces the latent tensions and conflicts within the mysterious Taklamakan Desert, where cultural heritage is being rewritten within the contemporary paradigm of surveillance capitalism.

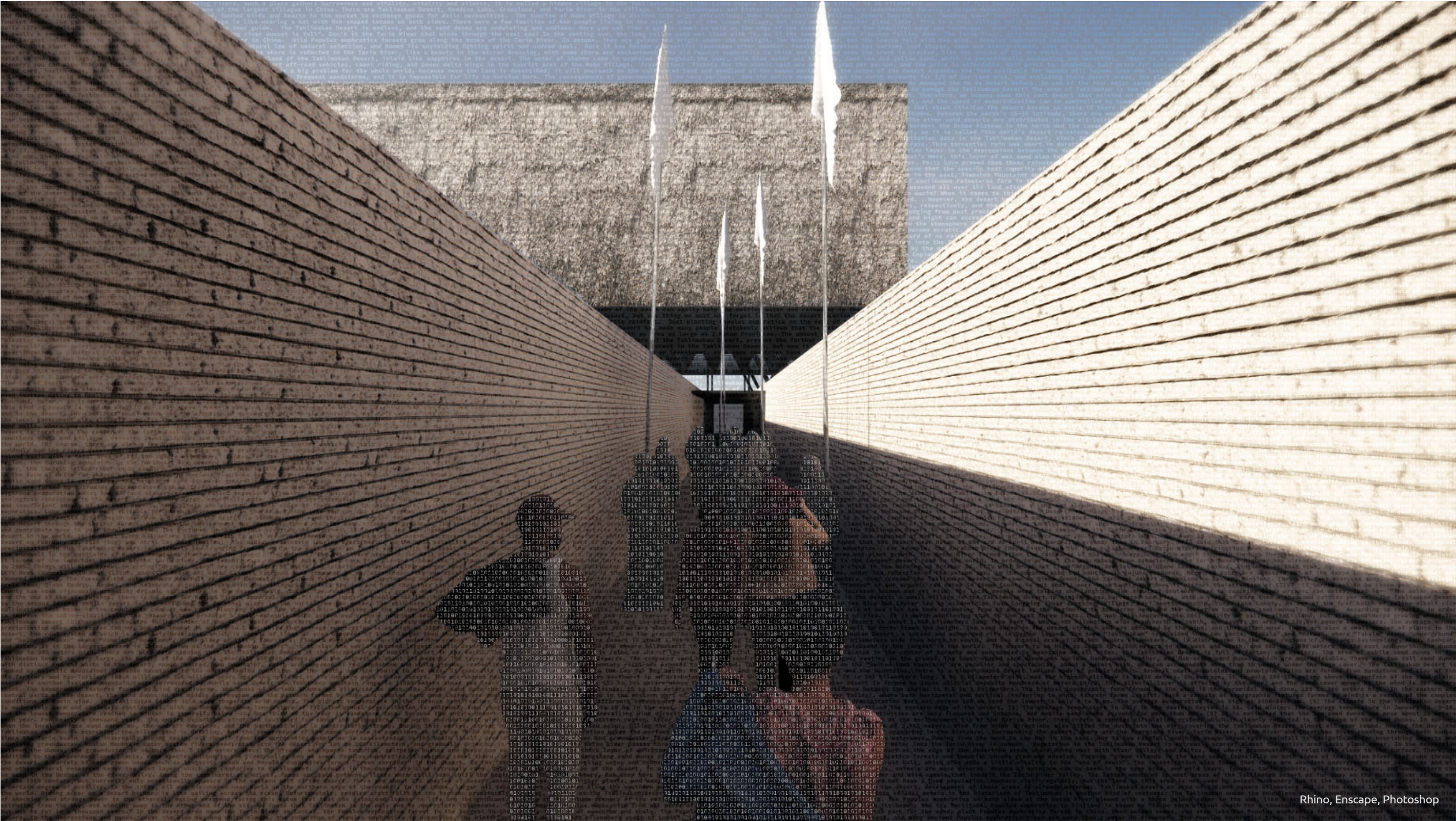
By binding the demand for data centers with the archaeological excavation of destroyed heritage sites, the material and cultural memory of the people remains with a translation to the digital realm, and the forbidden rituals are facilitated in a subdued manner that avoids conflict with the larger national agenda.



Rhino, Enscape, Photoshop



From the landing point, the approach begins with a view of the enclosure hovering above the site with a viewpoint through the horizon of the landscape.

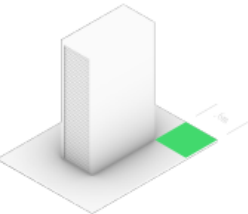
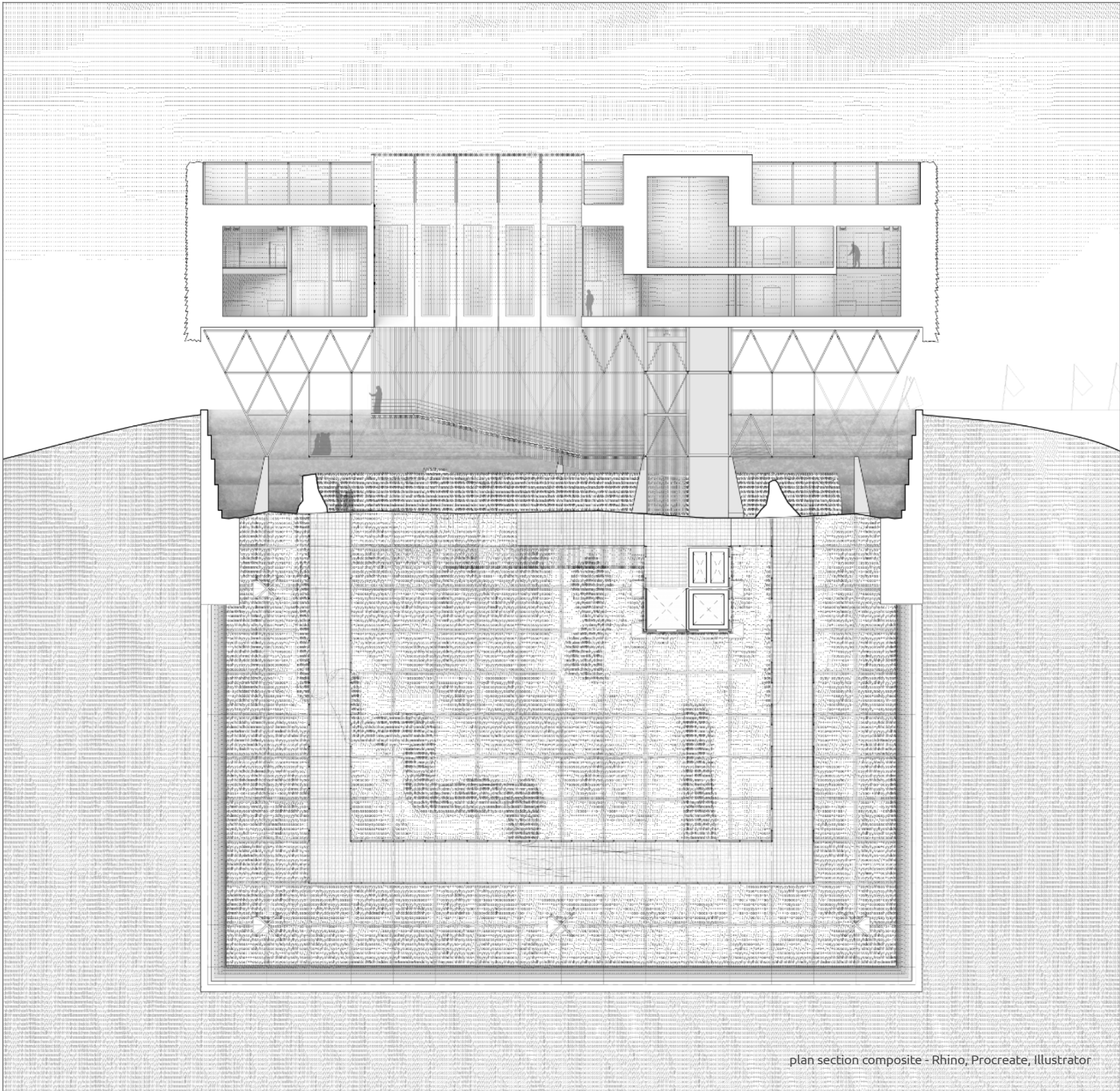


As the pilgrims and tourists approach the entry, the walkway gradually becomes fully enclosed, beginning to add protection from the harsh climate. The flags carried by the pilgrims are reminiscent of the ancient pilgrimage, handmade and carried across the desert to be placed at the entry of the Mazar.

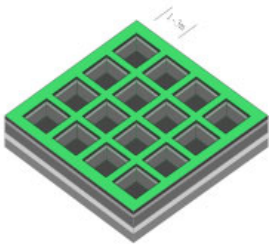


Rhino, Enscape, Photoshop

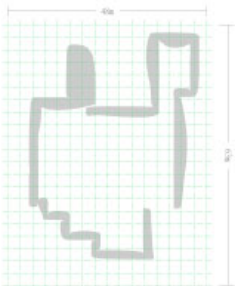
As they pass through the compressed threshold, the pilgrims and tourists are suddenly suspended in the air above the ruins. They experience a transition of rustic and warm materials to industrial and cold.



grid logic for the data center determined by a standard tile unit



grid logic for the archaeological site determined by an archaeological standard



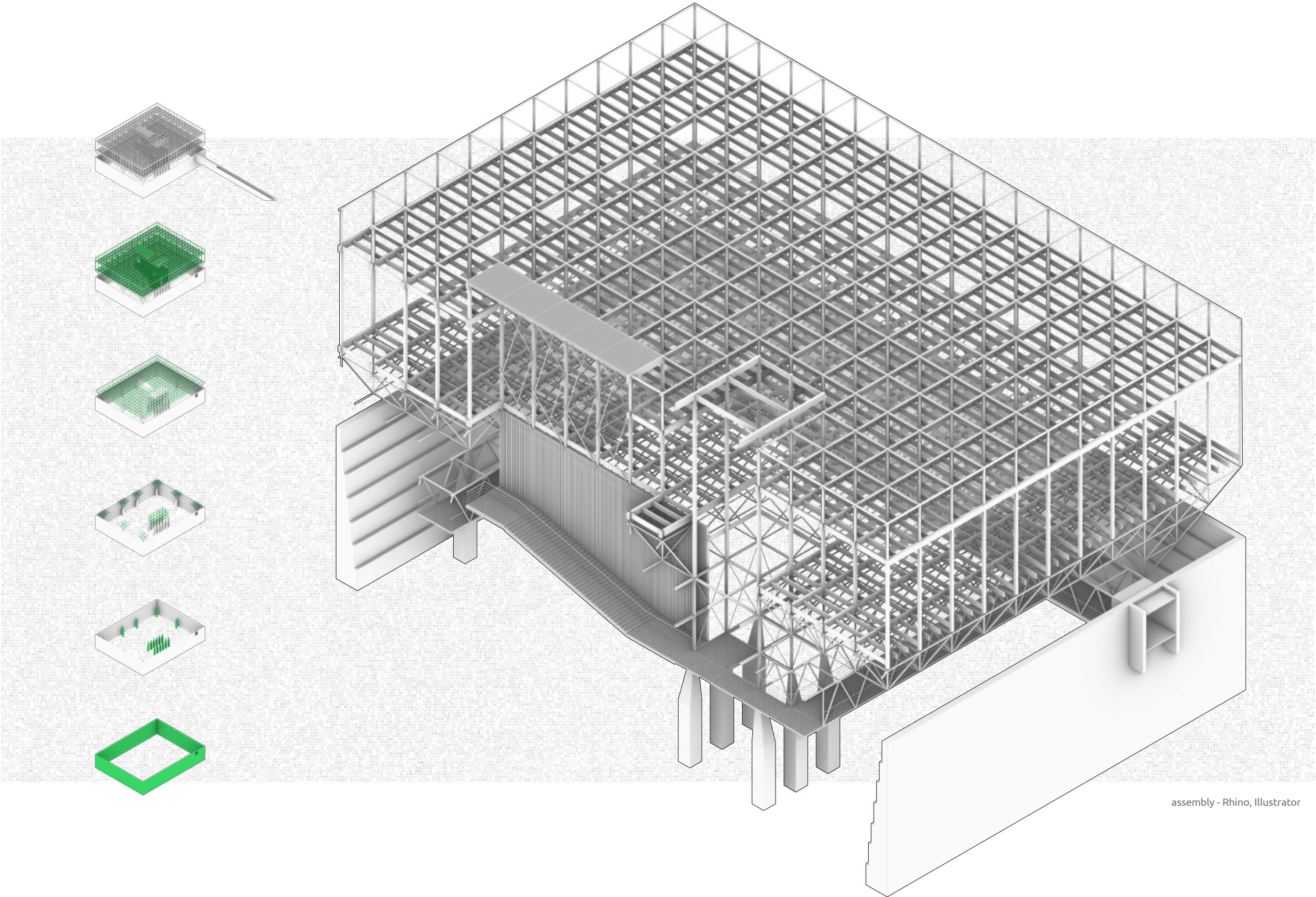
a 3m grid unit is chosen as a common multiple between the two logics

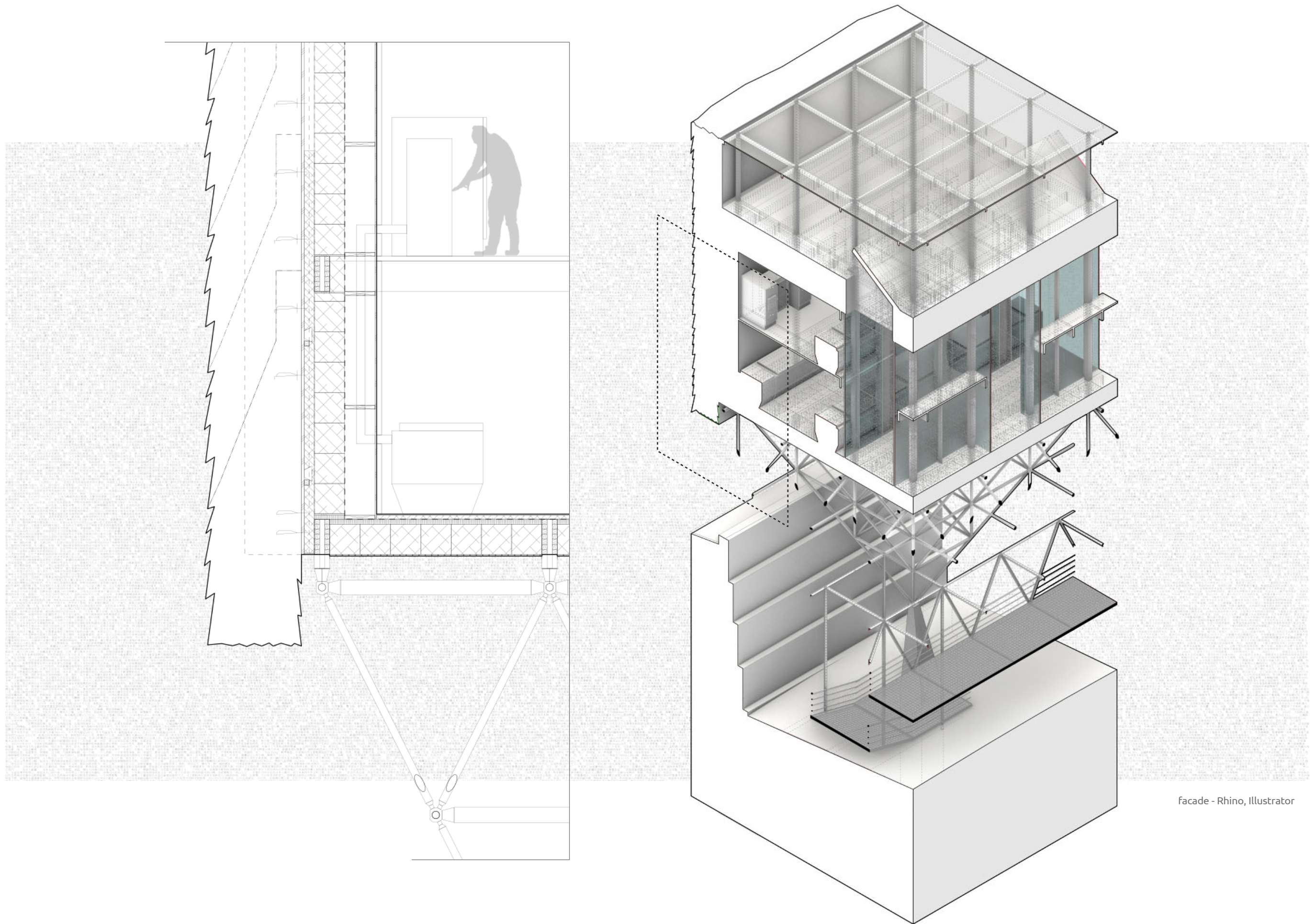
The raised platform is built from welded steel angles and perforated flooring in an open design language that facilitates a visual connection to the ruins below.

The platform wraps along the perimeter, allowing the pilgrims to circumambulate the shrine before entering the center platform.

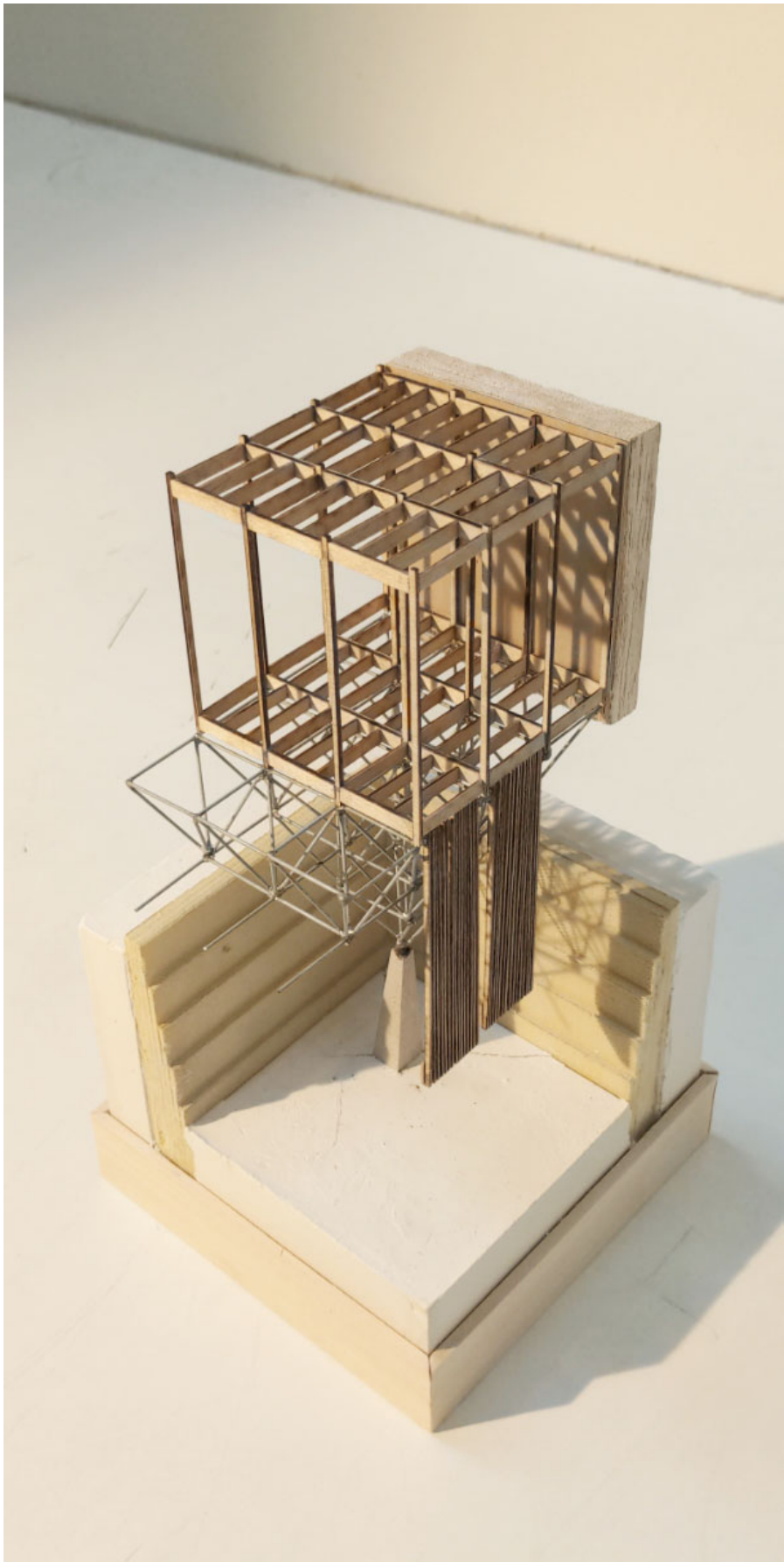
The rectangular logic is determined by the necessity for the structure's adaptation across the different sites, and a grid that mediates the two programs.

plan section composite - Rhino, Procreate, Illustrator

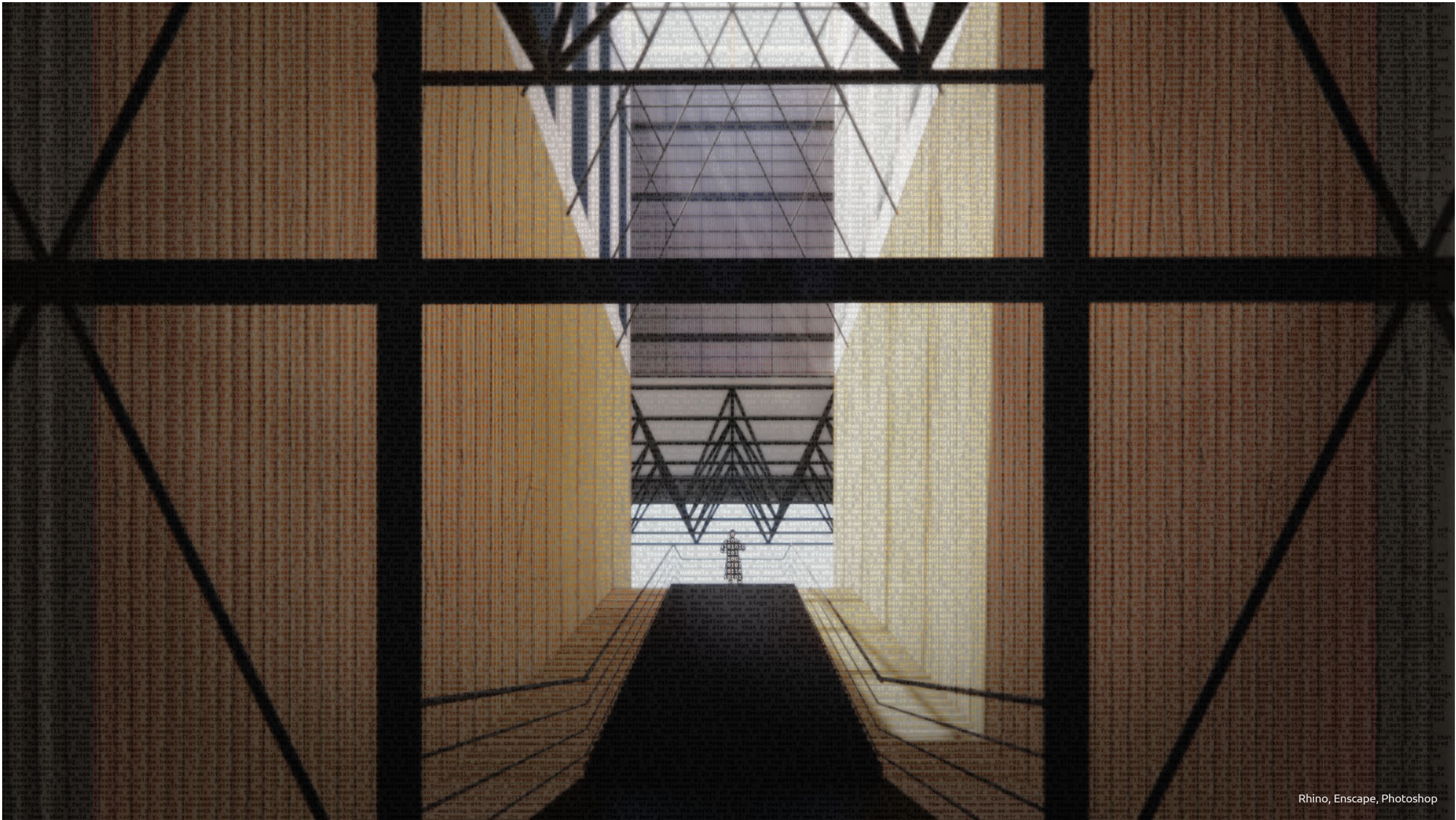




facade - Rhino, Illustrator

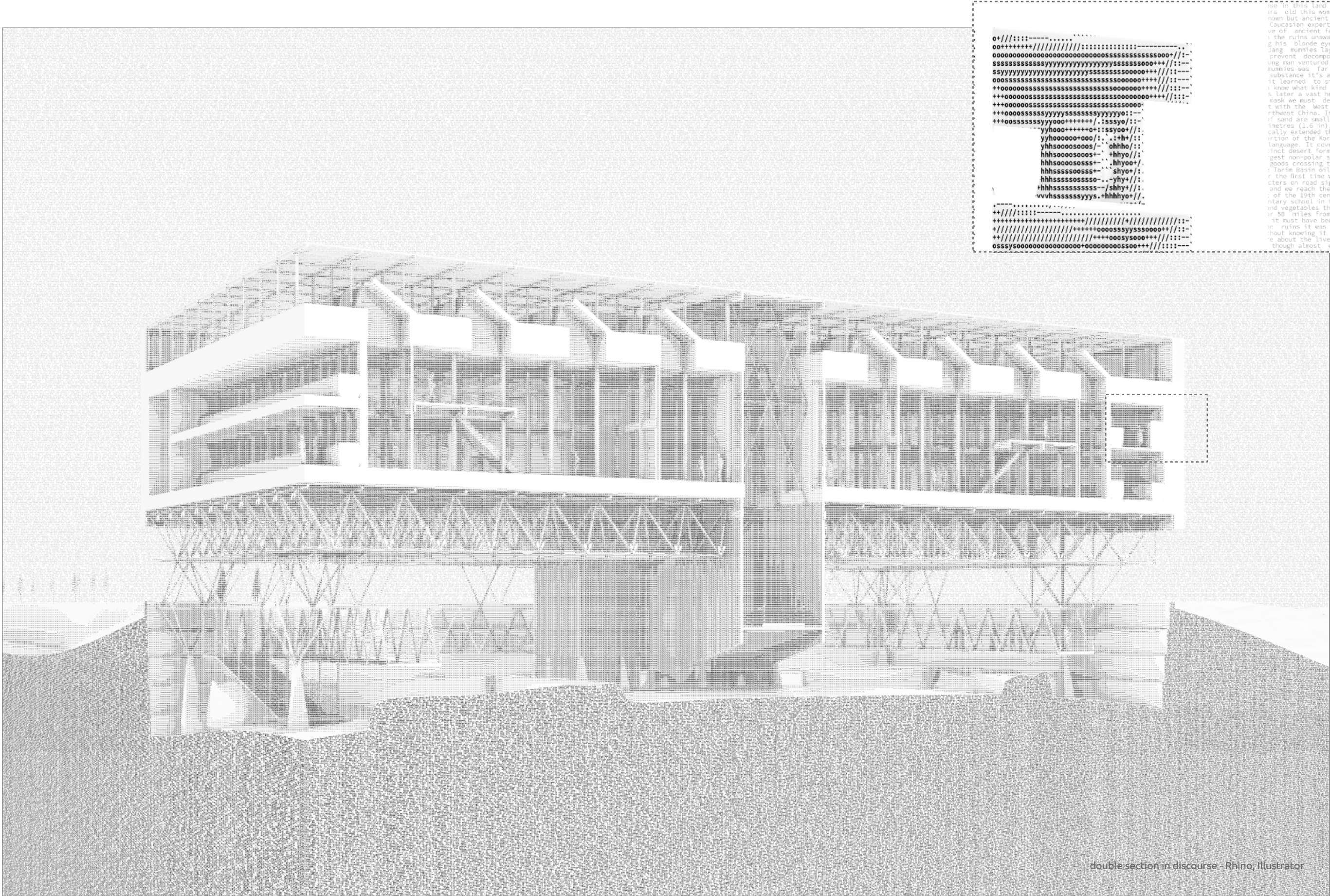


tectonic model



Rhino, Enscape, Photoshop

The new shrine acts as the mediating space between the old shrine below and the data center above. To reach the end platform, a pilgrim ascends the gentle steps suspended from the space frame. The platform is placed directly above the ancient tomb of the buried saint, at an elevated position that frames a view through the horizon to the West, and a vertical connection to the data center above. From this platform, the Tarzkirah of the Ordam Padishah Mazar is recited.



double section in discourse - Rhino, Illustrator