

**LOTTE VANHULST**

**LOTTE VAN HULST** is a filmmaker, researcher, and designer working across critical spatial analysis, political geography, text, film, and audio.

I examine the spatial narratives and infrastructures through which power, territory, and global governance are produced, visualised, and contested, developing a critical practice with and through OSINT and investigative aesthetics.

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2000 EN/NL**

# 01 FC TECTONICS

2025

**FC Tectonics** is a two-channel video installation that explores how the geopolitical infrastructure of football produces and legitimises territorial boundaries. Developed through a critical spatial practice, the work approaches football not as a sport but as a technology of governance that regulates sovereignty through negotiations of space.

FIFA counts 211 member associations—eighteen more than the UN. This discrepancy exposes the contested nature of legitimacy itself: who counts as a nation, and through which frameworks? Operating as a non-state actor, FIFA mirrors but also exceeds diplomatic structures, selectively granting or denying recognition. In doing so, it creates extraterritorial spaces that compel state compliance while remaining outside state control.

By reframing football as a field of power, FC Tectonics reveals how national legitimacy is continuously contested, redrawn, and negotiated.

## FOOTBALL'S STRATEGIC PLAY IN THE TERRITORIALISATION OF NATION-STATE SOVEREIGNTY

Multi-media installation  
Length: '12  
Date: 2025  
Link: <https://vimeo.com/1096652495>

MA GEO-Design Graduation work, Design Academy Eindhoven. To be exhibited at DDW 2025, NL.

### Technical Methodology

**QGIS** — satellite analysis and geospatial data processing; layering football-affiliated spaces against EEZ boundaries.

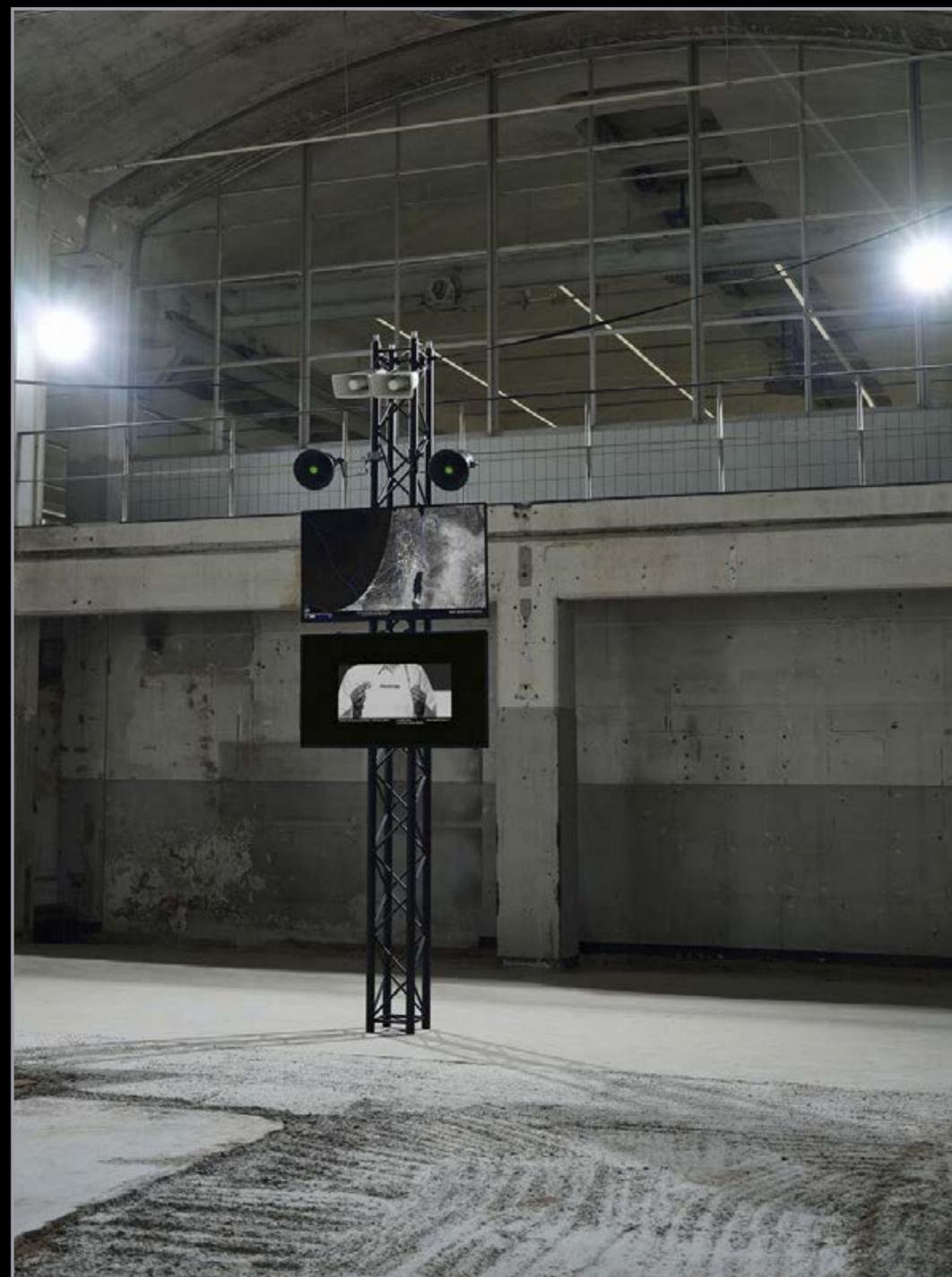
**Blender / Rhino / Unreal Engine** — 3D spatial modeling, animation and environment construction.

**After Effects** — hand-drawn relational trajectories and compositing.

**Premiere Pro** — video editing and sequencing.

**Illustrator** — refinement of maps, diagrams, and visuals.

**Isadora** — two-screen mapping and real-time media control.



What football would look like when treated as a technology of sovereignty production within the territorial dimension of geopolitics?

were transformed into *Fields of Negotiation*.

UEFA MATCH: AFC AJAX - MACCABI TEL AVIV  
NOVEMBER 7-10 2024

— FST (Football Sovereign Territory)

SCALE: AMSTERDAM, MUNICIPALITY

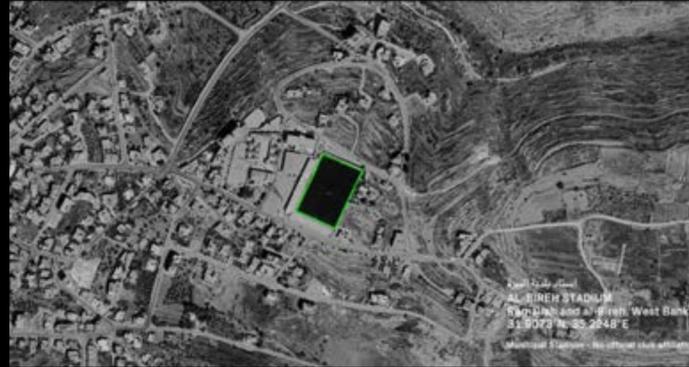
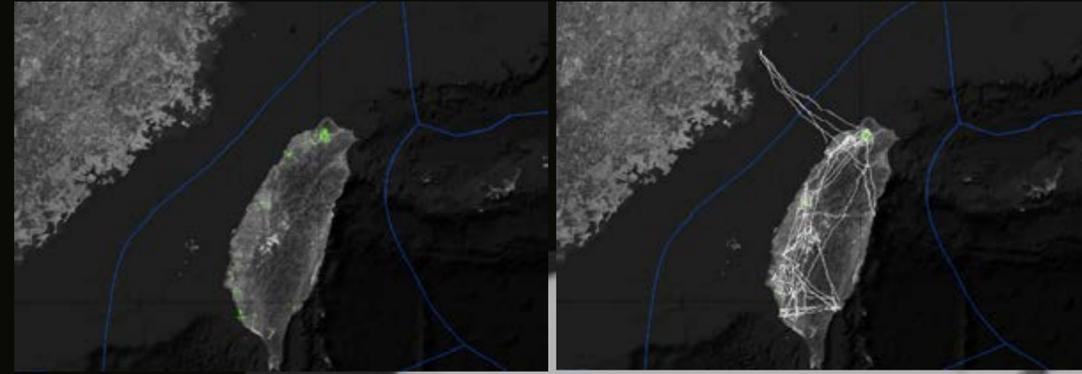


PUBLIC DEMONSTRATION AT NIEUWENDIJK

SOURCE: IN PERSON

Still from FC Tectonics (2025)

Stills from FC Tectonics (2025) showing workflow across scales (L>R):, individual fields, clusters of fields, and a relational network cutting across Exclusive Economic Zone (EEZ) borders (blue lines).



## Methodology

The analysis began with compiling datasets of football-affiliated spaces in contested territories—stadiums, pitches, and training grounds—and placing them against **Exclusive Economic Zone (EEZ)** boundaries. Using **QGIS** as a base, I experimented with tracing relational connections across these fields, inspired by the trajectories used in **VAR technology**, where ball trajectories are captured as lines of truth.

Rather than relying solely on hard, computer-calculated geometries, I reintroduced a human materiality to the mapping process. Relational lines were hand-drawn in After Effects, embodying their provisional, situated character.

This method developed iteratively, as I considered how the aesthetics of mapping participate in producing legitimacy: calculated grids, Jeffersonian divisions, and cartographies that strip space of its human and relational qualities.

Through this practice, the work shows how conventional cartographies naturalise borders and legitimise state sovereignty. By visualising insurgent networks that cut across **EEZs**, the project demonstrates how football, as a spatial practice, produces and contests sovereignty, revealing territorial claims not as fixed but as enacted, negotiated and continuously redrawn.

The film is structured into three parts: I. Configuring Territory, II. Localised Negotiations, and III. FIFA Register.

What would football look like as a geopolitical infrastructure? What happens when you trace football fields affiliated with FIFA-recognised nation-states like ball trajectories in football analytics? A territorial network emerges – unbound by conventional political borders.

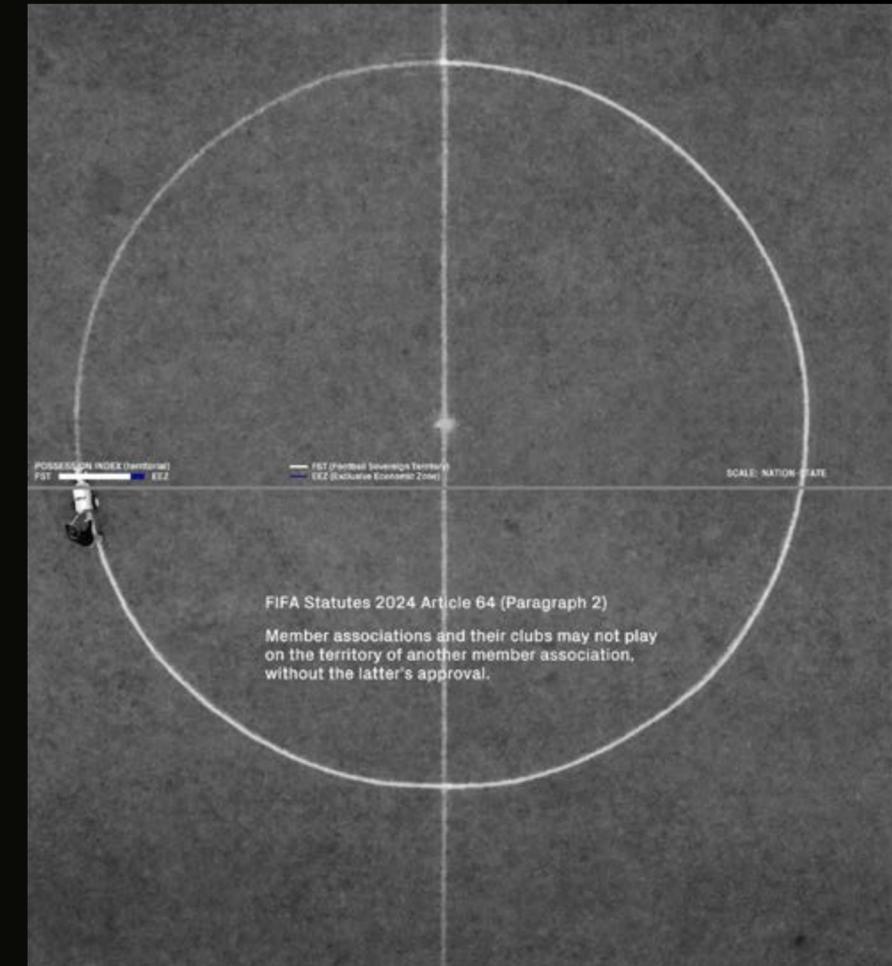
Open-source investigative methods, usually used to evidence or reconstruct events, are retooled here to interrogate how legitimacy is produced through football. At the same time, the work reflects on the aesthetics of investigation itself. By positioning myself as both researcher and designer within these mechanisms, the film questions how football can be mobilised to challenge the frameworks that define which nations count as legitimate.



WORLD CUP 022 QUALIFIERS | OFFICIAL DRAW |

27 APRIL 2021  
LOCATION: DOHA, QATAR

BEIN SPORTS/FIFA TV



Still from FC Tectonics (2025)

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### THREE IN THE FRONT, THREE BEHIND, AND FOUR ON DEFENCE. CROSSING THE LINE, MAINTAINING POSSESSION, OCCUPYING THE FIELD

*Catenaccio, an infamous football tactic, relies on the occupation and control of space, designed to make it impossible for the opponent to move freely. Football is not merely a territorial game between two sides; it is a spatialised contest over sovereignty and legitimacy, governed by systemic demarcations that regulate access and participation.*

#### INTRODUCTION

Nations seek political legitimacy through participation in the formalised infrastructure of international football, rendering the sport a site of contested sovereignties. At the center of this delineated system stands the *Fédération internationale de Football Association*, better known as FIFA, a governing body that operates beyond borders yet continuously redraws them. Football, as organised through the infrastructure of FIFA, becomes a geopolitical apparatus. To borrow the words of Frantz Fanon, political philosopher, Marxist and psychiatrist; what lines of force does this infrastructure imply? In *The Wretched of the Earth*, Fanon writes of the colonial world as one divided by lines: "A world cut in two", where spatial compartmentalisation produces and reinforces hierarchies of power.

Building on Fanon's critique of colonial compartmentalisation, this thesis traces and interrogates the lines of force through which football operates as a mechanism for asserting nation state legitimacy. Football is considered as a medium that both reinforces and disrupts territorial, legal, and geopolitical demarcations.

Expanding the field of analysis beyond the pitch, this thesis adopts a multiscalar approach to examine how FIFA-mediated football sites function as contested spaces where sovereignties are legitimated and where geopolitical realities are reflected, produced, and disrupted. By critically analysing football through the lenses of territoriality, governance, and resistance, this thesis argues that the sport operates as an instrument of political power and a site where territorial shifts in geopolitics are negotiated. FC Technics, the title of this thesis, refers to the drilling of borders, sovereignties, and territorial claims mediated through football's global infrastructure, reconfiguring political and spatial demarcations.

Historical examples such as the Algerian U.S.A. team in the 1960s demonstrate how football spaces were instrumentalised for anti-colonial resistance. Contemporary cases, such as the Moroccan Tel Aviv fans occupying the streets of Amsterdam in November 2024, illustrate how international football events spill out beyond the pitch and stadium grounds, to then extend in the city, transforming it into a politically charged space where football spectators slip into events with geopolitical, territorial, and contested sovereignties. These events at the scale of spatial and territorial dimensions of football reveal the sport's dual function as a tool of state narratives and a site for counter-state insurgencies.

To understand the spatial dimensions of these political events, this thesis examines the role of the pitch, the stadium, the territorialisation of stadium space and Robert Scott's concept of territoriality as mechanisms of power. Additionally, I draw from Frantz Fanon's epistemology of colonial occupation and Partha Chatterjee's work on sovereignty, alongside Mustafa A. Hali's *Sovereignty as a Weathered Power*. By linking Chatterjee's concept of perforated global order to FIFA's system of arbitration, I aim to position football governance as an entity that transcends traditional nation state structures to operate within a non-scalar geopolitical framework.

This thesis conceptualises football spaces as dynamic entities in continuous flux—they are produced, appropriated, and manipulated by governance but remain open to disruption. I also question the territorial or legal boundaries typically associated with state governance and propose as a global authority governing the legitimacy of nation state sovereignty in football, military and state-like structures. This power is exercised by replicating

membership and access to international tournaments, creating dependencies and creating nations with a form of associated international football maps. By categorising FIFA's legal frameworks with state law and the United Nations' legal frameworks, I look closely at FIFA's role as a non-state governing entity and the implications of its lines of force on the geopolitical order, an influence that continues to evolve, shaped by the legal and political legacies of European colonialism.

Through site-specific and global research, involving both case studies and participant-observation in the abstract spaces depicted, together with archival research, critical social theory, and multiscalar comparative case studies, this thesis investigates football as a contest of the territorialisation of nation-state sovereignty.

MA Thesis, 2025  
GEO-Design Department,  
Design Academy Eindhoven.

Thesis Tutor: Margarida Mendes  
External Examiner: Susan Schuppli

Scheduled for publication in October 2025 in *Across A Flock's Orbit*, the MA Geo-Design department's collective thesis publication.

Link for full read: [https://drive.google.com/file/d/1fQkY9svHwCcNq\\_cTpR-k8vwMr2Kjdpvc/view](https://drive.google.com/file/d/1fQkY9svHwCcNq_cTpR-k8vwMr2Kjdpvc/view)

# 02 RESONANT TERRITORIALISATIONS

2025

RESONANT TERRITORIALISATIONS: ON/OFF THE PITCH

Sound installation  
Length: '7  
Date: 2024  
Link:

Shown at Design Academy  
Eindhoven, part of ongoing  
research.

“Resonant territorialisations” is an experimental spatial sound installation that orchestrates field recordings and diverse sound fragments into a multi-layered soundscape across four speakers. A strong base sound sourced from the line demarcation machine of a football pitch travels sequentially through the speakers, grounding the composition and adding an embodied layer.

The audio excerpts and recordings used are listed on the right. Together, these sounds produce a charged acoustic territory shaped by politicised events of instrumentalisation, narrative negotiation, and governance through football.

ON THE SONIC PRODUCTION OF POLITICAL SPACE  
THROUGH REVERBERATIONS SOURCED FROM  
FOOTBALL

## Technical Methodology

**Field recordings** — recording environmental and event-specific sounds on site, including pitch line-marking machines and protests.

**Reaper** — multi-track sound editing, layering, and sequencing.

**Rhino** — prototyping and 3D spatial modeling.

**Isadora** — spatialisation of sound across four speakers; real-time audio control.

**Physical fabrication** — welding, custom speaker mounting, and radio modification.

FIELD RECORDINGS: AMSTERDAM [NOVEMBER 10, 2024]  
Illegalised pro-Palestine demonstration,  
“Amsterdam says no to genocide”, Dam Square.

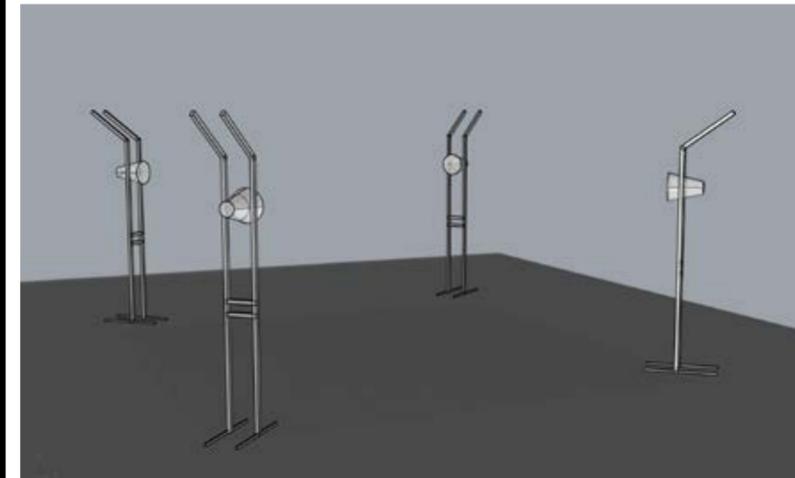
FIELD RECORDINGS: AMSTERDAM [NOVEMBER 6, 2024]  
Taxi and car horns in the evening before the football match  
between AFC Ajax and Tel Aviv Maccabi.

FIELD RECORDINGS: AMSTERDAM [NOVEMBER 7, 2024]  
Tel Aviv Maccabi supporters on the Dam square on the day of the UEFA  
football match against Ajax (November 7, 2024)

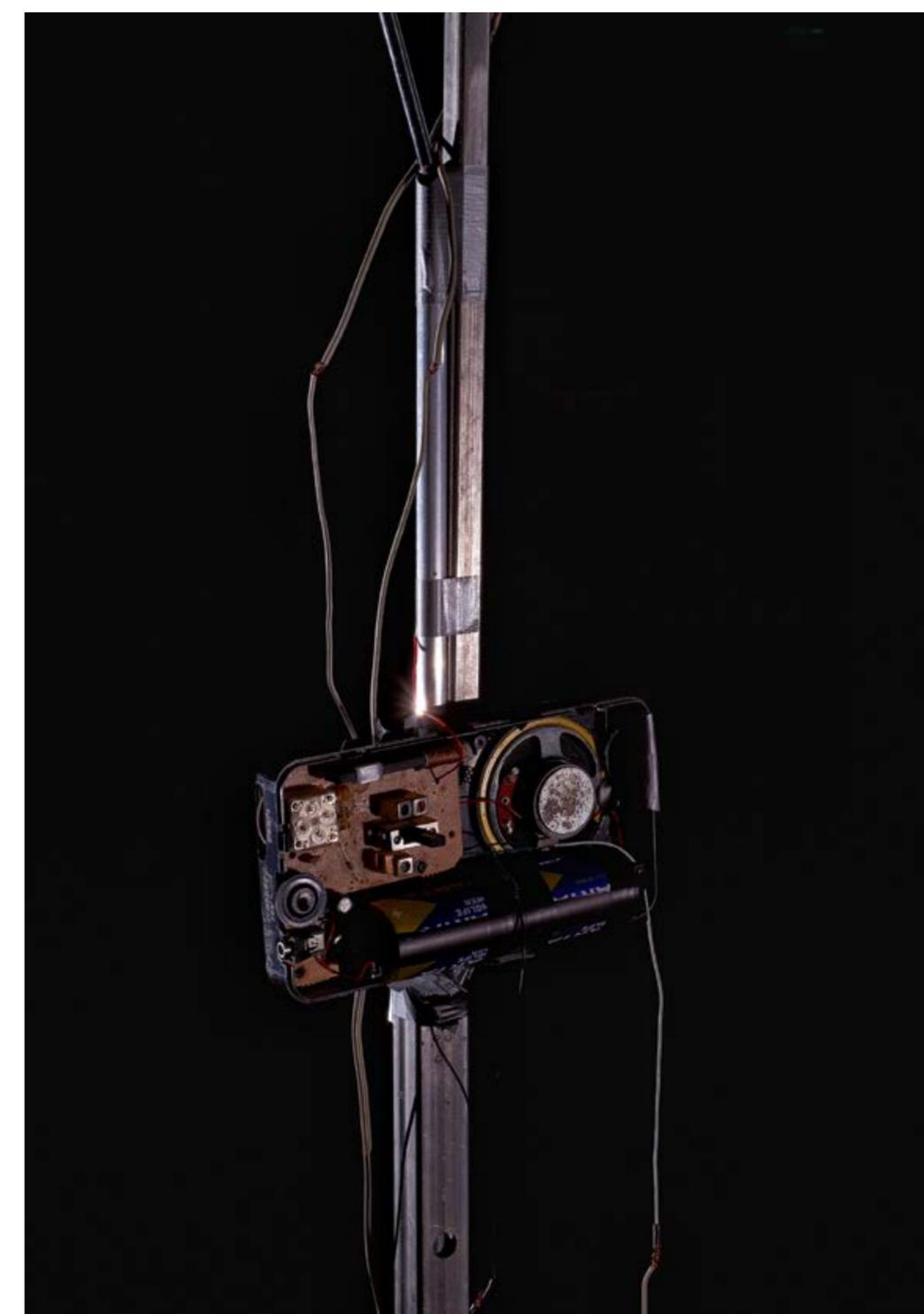
LINE DEMARCATION MACHINE: FOOTBALL FIELD [JUNE, 2024]  
“White as the marker, and the eraser”  
— Yara Sharif, on the act of rendering into an invisible state,  
in the context of Israeli (architectural) occupation of Palestine.

OUTTAKES: FIFA STATUTES [1992, 2016, 2024]  
Excerpts from different editions of FIFA’s and the IOC’s governing  
documents and definitions.

NATION-STATES DRAWN FROM THE LOTTERY FOR  
INTERNATIONAL FOOTBALL TOURNAMENTS  
Including Palestine, Kurdistan, Kosovo, Hong Kong, Taiwan  
(called out as Chinese Taipei), and Northern Ireland.  
Political sovereignty vs. Football sovereignty.

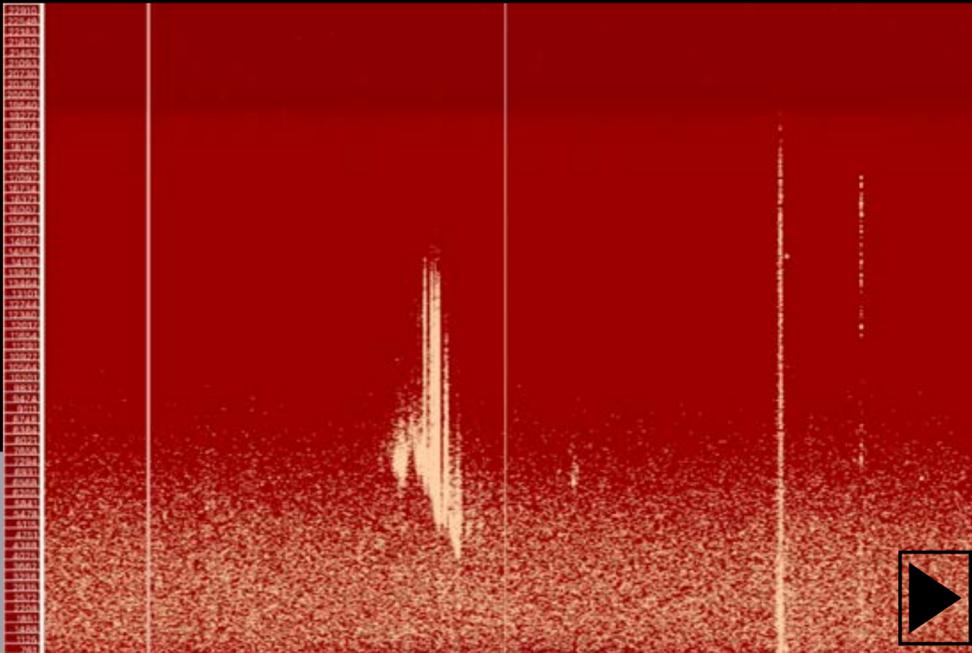


Digital model of the setup in space (Rhino).



# 03 COMPLEXIFYING ECHOLOCATION

2024

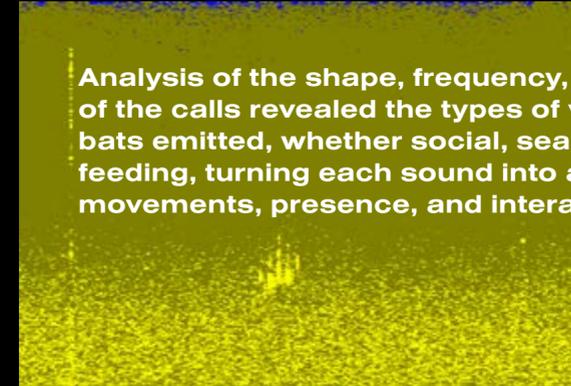
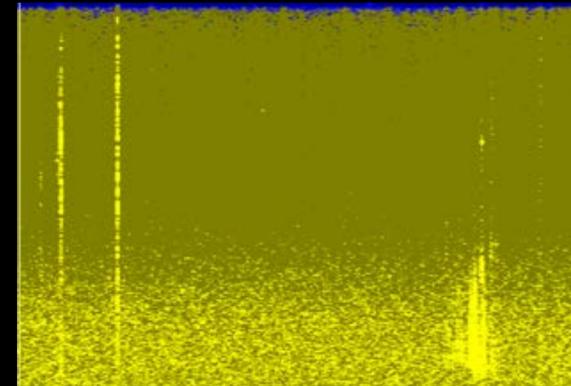
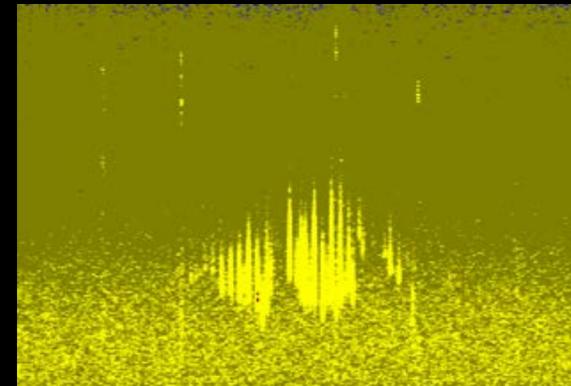


Still from Complexifying Echolocation (2024)

Audio-Video [as part of Installation performance]  
 Length: '2/'15  
 Date: 2024  
 Link: <https://vimeo.com/1115764212>

With Leto Keunen, Ottavia Ferraris, and Emma Zerial.  
 Shown at Design Academy Eindhoven and upcoming DDW 2025, Eindhoven, NL.

Spectrogram analysis of Pipistrellus bat echolocation, recorded in the marlstone caves of Maastricht.



**Analysis of the shape, frequency, and timing of the calls revealed the types of vocalisations bats emitted, whether social, searching, or feeding, turning each sound into a trace of their movements, presence, and interactions in space.**



Inspired by a cipher wheel, the device central to the performance installation translates calls from the Pipistrellus bat into fortune-telling readings on light pollution. Using Morse code and spectrogram analysis, the installation highlights bats' advanced biosonar, which surpasses human technology. This project acknowledges bats as sophisticated communicators and environmental sensors, urging us to appreciate interspecies' technological advancements.

COMPLEXIFYING ECHOLOCATION

Complexifying Echolocation (2024) is a performance installation incorporating digital and analogue methods of coding, recoding and decoding, through various approaches to science, including what is considered conventional in Western Europe as well as more cultural and mythical connotations of bats.

Designed in collaboration with Leto Keunen, Ottavia Ferraris and Emma Zerial. Highlighting the complex communication of bats and reflecting critically on interspecies perspectives.

## Technical Methodology

- My part included:*
- Field recordings** — recording bat sounds in Marl caves.
  - Reaper** — multi-track sound editing, layering, and sequencing.
  - Sonic Visualiser** — spectrogram analysis and identification.
  - Python** — programming bat sounds input into numerical readings to be translated into morse code and printed.

# 04 BORDER POLITICS FOR SEMICONDUCTOR SUPREMACY

2024

*Border Politics in the Battle for Semiconductor Supremacy* investigates how global power, economic coercion, and border politics shape the production of critical technologies. Through the lens of ASML, Mapper Lithography, and the entangled interests of the state governments of the US, Europe, China, and Russia, the film traces the invisible infrastructures, legal instruments, and corporate government networks that govern the movement of knowledge, labor, and control, revealing how sovereignty and technological supremacy are contested on and across borders.

*The film is an assemblage of extensive research, archival news footage, legal documents, 3D environmental reconstructions, and conceptual storytelling. It is framed around an exclusive interview with a scientist drawn into the forced takeover of Mapper by ASML under the direction of the Dutch and US governments.*



Stills from *Border Politics for Semiconductor Supremacy* (2024).

Video Essay  
Length: '17  
Date: 2024

In collaboration with  
Kimia Amir Moazami  
& Thijs Vleeschouwer.

Link: <https://vimeo.com/1115819100>  
Shown at Design Academy Eindhoven.



Stills from *Border Politics for Semiconductor Supremacy* (2024).

## Technical Methodology

**Satellite imagery & GIS** — analysis of semiconductor production sites and global supply chains

**Unreal Engine** — 3D environmental modeling and character animation

**Premiere Pro** — editing and sequencing moving-image material

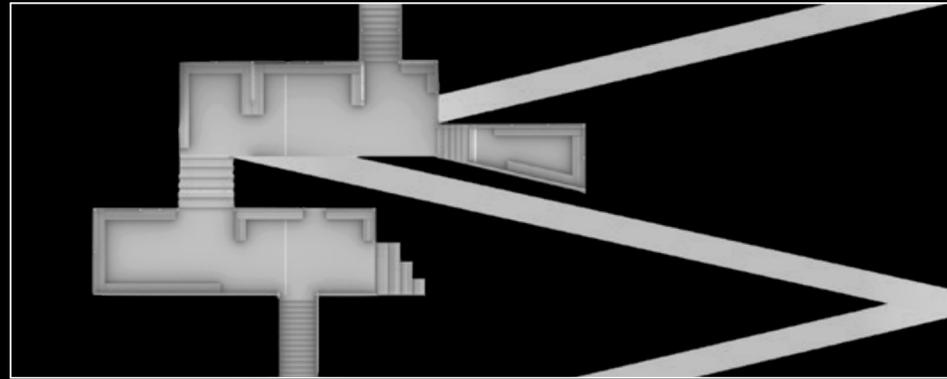
**Drone** — aerial footage capture of sites and surroundings

**Adobe Audition** — sound anonymisation of interview subjects, voice-over recording, and audio editing

**Script writing & research** — development of narrative using theoretical frameworks (Yuval-Davis *Bordering*, Chuang *Social Contagion*); investigative methods including legal readings, media analysis, archival research, interviews, site visits, and online deep search

# 05 DESIGNING WITH PUBLIC SHARED SPACES\_ROTTERDAM

2022



Top view plan of the social embankment design.



Spatial analysis of the Rotterdam focus area showing seclusion and physical barriers.

The following three projects examine how spatial design can reveal and address social and physical barriers within Rotterdam's urban landscape. Through collaborative design processes, each project demonstrates a commitment to working directly with residents to understand and address the spatial dynamics that shape daily life.

The projects employ methods across urban planning, spatial design, and critical practice, using visualisation and reconstruction tools including Unreal Engine, QGIS, and Rhino to translate community insights into spatial interventions. Each project interrogates a different urban condition: physical segregation, social cohesion amongst different communities of residents, and the spatial dimensions of consumption and waste. Central to this practice is positioning residents as collaborators rather than subjects, co-creating solutions that transform overlooked urban spaces into sites of connection, storytelling, and collective action across Rotterdam.

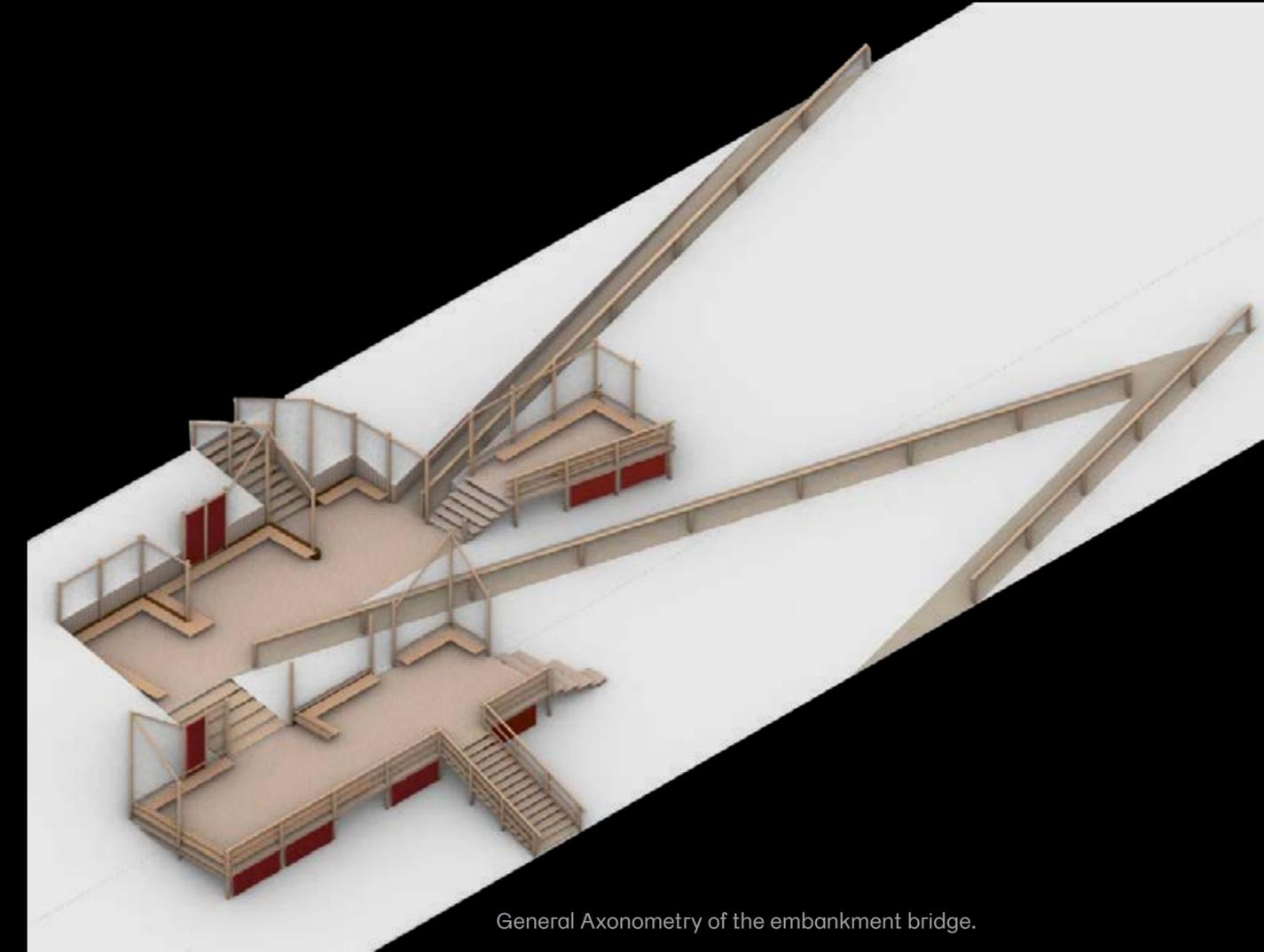
## .1

**Social Embankment** - As part of the studio CMSI (Cities, Migration, and Socio-spatial Inequality), we focused on the Rotterdam neighbourhoods of Oud-Mathenesse and Witte Dorp, areas that are, in different ways, spatially segregated from the rest of the city. This physical separation contributes to social isolation and limits interaction between communities.

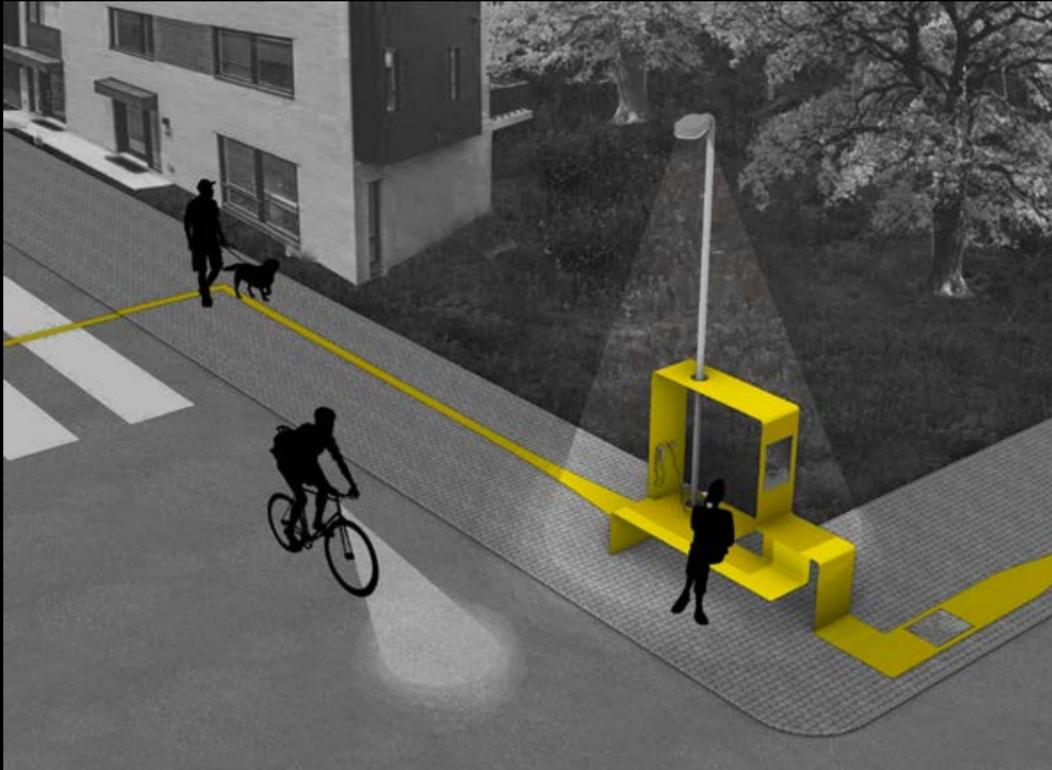
Through interviews and socio-spatial analysis, our team developed strategies and design proposals for the local council to enhance inclusiveness and engagement. One of the (preliminary) outcomes was a wooden structure bridging the embankment, which otherwise acts as a green wall isolating the neighbourhood. The design creates a multifunctional space for pedestrians, cyclists, and residents, providing places to meet, sit, and interact, while opening up the neighbourhood's edge to the surrounding city.

### Technical Methodology

**Rhino** (Spatial design, 3D modelling), **QGIS** (Urban, environmental research and analysis), **Illustrator** (visual communication).



General Axonometry of the embankment bridge.



Render showing possible placement of a Vertelspoor listening bench.

## .2

*Vertelspoor (Telling Track)* is a sound walk that shares the voices and stories of residents along a route through Witte Dorp. The installation is made up of nodes that highlight existing features of the neighbourhood. People can pause, sit, listen, and interact—by responding to the audio, adding their own recordings, or engaging with others passing through. In this way, Vertelspoor is shaped by the residents themselves.

### Technical Methodology

**Rhino** (spatial design, 3D modelling), **Reaper** (sound layering, sequencing), **Illustrator** (design visual aesthetic), **Photoshop**.



## .3

*Koffiehuis* was my graduation project in Industrial Design Engineering, developed under a client brief from a coffee capsule company. The task was to design packaging that would make their quasi-biodegradable capsules appear more sustainable. I treated the brief not as something to solve but as a chance to question what really needed addressing, while taking a critical stance toward the company and working within their framework.

*Koffiehuis* shifts attention away from the capsule as an object and toward coffee as a social practice embedded in urban systems. Installed in the street, it placed waste and circularity at the center of public life, turning a daily routine into a collective and active moment.

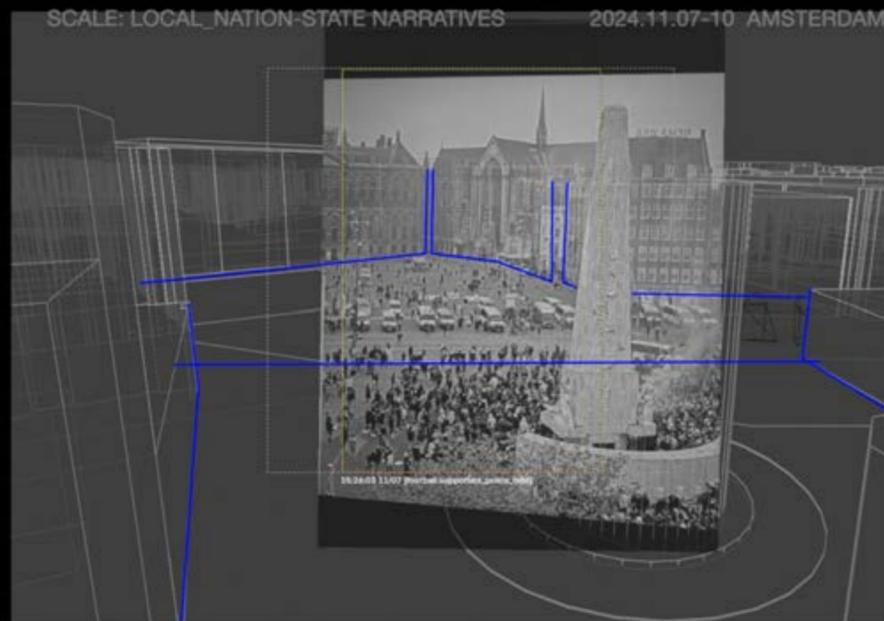
By reframing the client's request spatially rather than through product design, the project showed how design can act as a counter-instrument, making visible the hidden circuits of consumption, disposal, and circulation that shape everyday environments.

### Technical Methodology

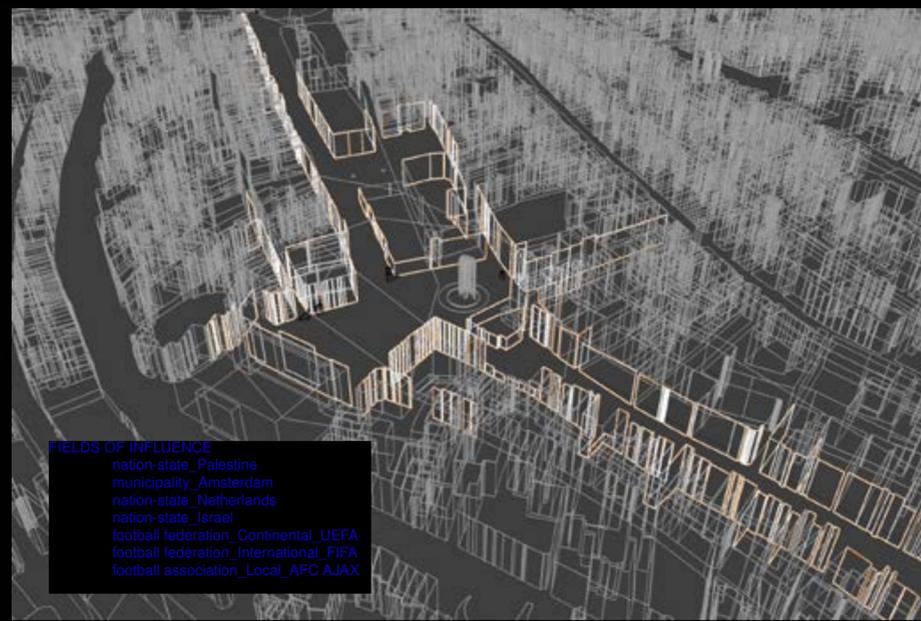
**Unreal Engine** (environmental modelling, character animation), **Rhino** (spatial design), **Premiere Pro**, **SolidWorks** (design of mechanical components), **Indesign**, **Illustrator**.

Renders of the *Koffiehuis* design in Unreal Engine, highlighting materiality, spatial experience, and lighting.

## .1 Reconstructing Amsterdam football riots



Still from two-channel video experiment.



This video shows experimentation with the reconstruction of the spatial dynamics of November 2024 in Amsterdam (NL), when Maccabi Tel Aviv supporters arrived for a UEFA match against Ajax. Supporters chanted anti-Arab and anti-Palestinian slogans and committed acts of violence under heavy police protection. These events temporarily transformed the streets into a charged football space, a field of negotiation.

Video  
Length: '2  
Date: 2024  
Link: <https://vimeo.com/1115981157>

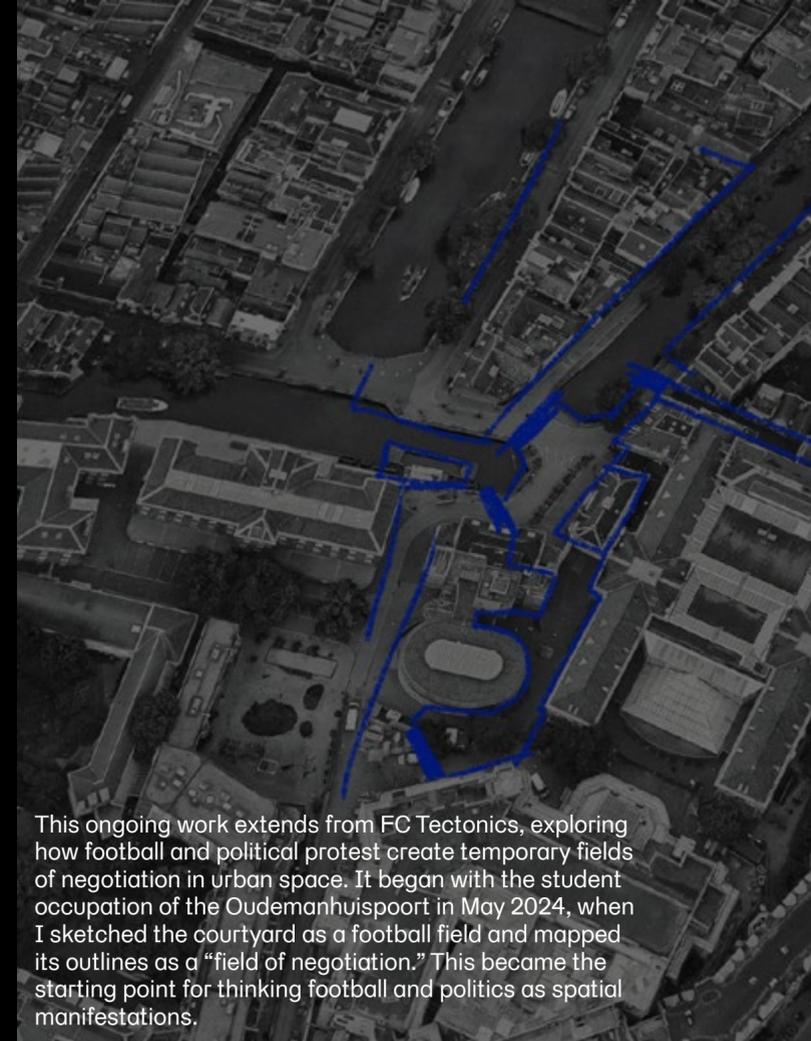
### Technical Methodology

**Unreal Engine / Blender** — 3D reconstruction of urban environments, image-matching of footage in 3D environment.

**Blender GIS plugin** — integration of geospatial data for accurate spatial context.

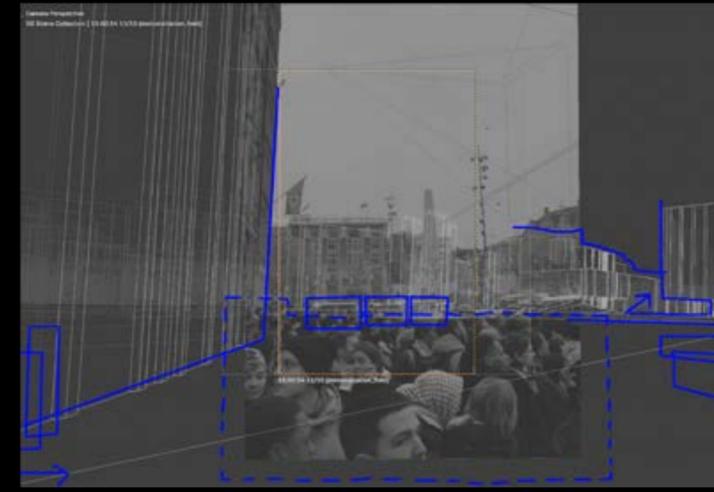
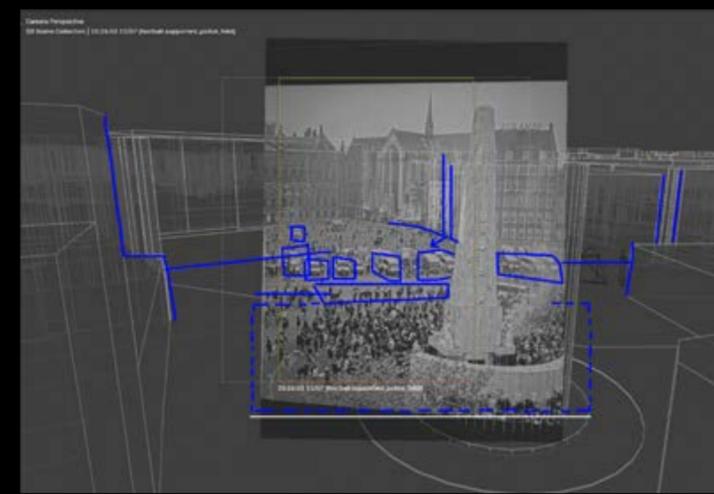
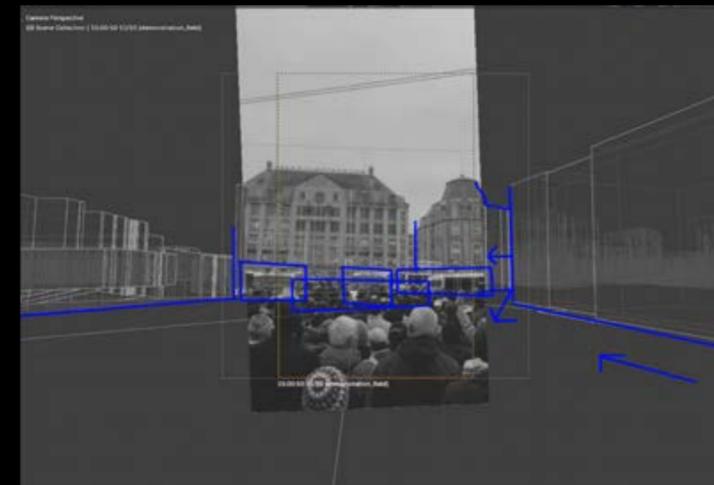
**Premiere Pro / After Effects** — editing, compositing, and visual integration of reconstructed scenes.

**Research & documentation** — collection and analysis of media sources, archival imagery, and field observations to guide reconstruction accuracy.



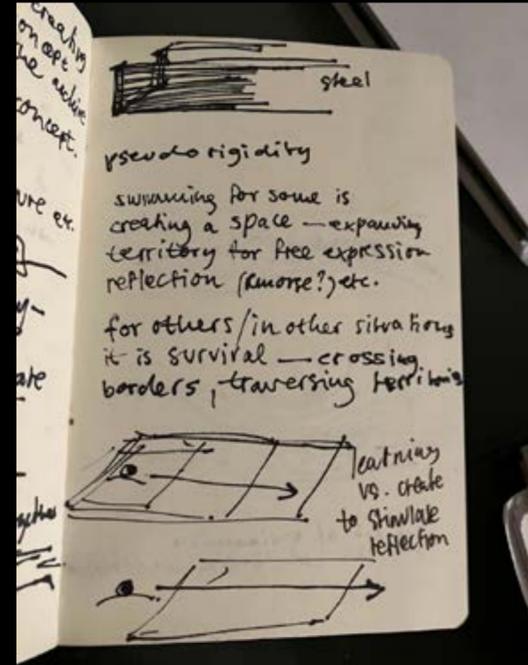
This ongoing work extends from FC Tectonics, exploring how football and political protest create temporary fields of negotiation in urban space. It began with the student occupation of the Oudemanhuispoort in May 2024, when I sketched the courtyard as a football field and mapped its outlines as a “field of negotiation.” This became the starting point for thinking football and politics as spatial manifestations.

Translating the physical boundaries into digital models allowed me to align on-site footage and photographs, revealing not only the occupied space but also the different actors at play: police, Maccabi supporters, and pro-Palestine activists. The work captures how these actors negotiate and contest the space, showing the spatial tension that emerges between them and how the built environment shapes the flow, movement, and configuration of these temporary fields of negotiation.



Stills of analysis experimentation and technical workflow in Blender, using spatial image-matching.

## .2 City currents: spaced reclaimed

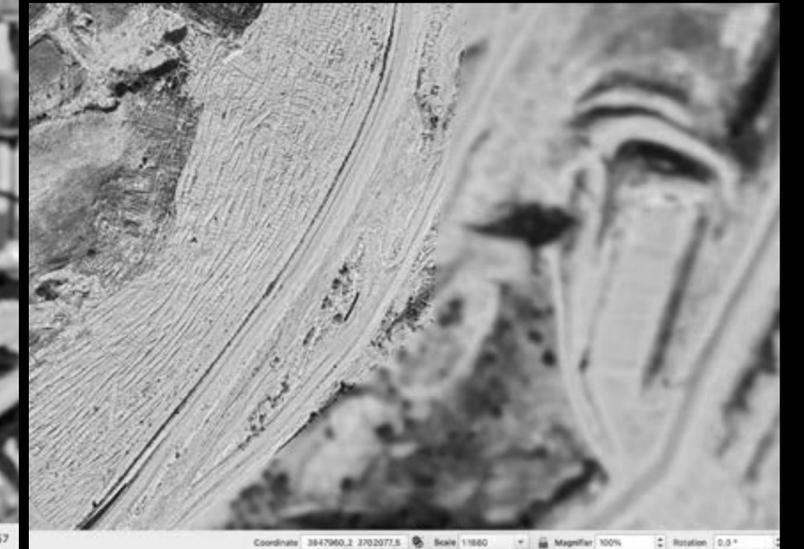


An exploration of the transformative act of reclaiming space through the gesture of swimming. Referring to Lefebvre's spatial triad — conceived, perceived and lived space (Lefebvre, 1991, 33) — waterfronts in the East of Amsterdam are examined where a form of placemaking is found in the ways in which people create their own entrances to the water. Ladders serve as gateway to the currents: a fluid space, perhaps one of the last spaces in city centers, that has not been subjected by commercialization and economic exclusion. The city currents are liquid public space. Could swimming in cities be seen as a performative critique on city rules and structures, evading urban rationality?

Presented as a work-in-progress in an Open Studio, in the form of a film and sculptural installation. Future developments could include a cartographic visualisation of the potential and placement of these "blue" spaces, mapping the points of access and flow to further explore how public water in the city is claimed, negotiated, and experienced.



## .3 The Politics of Resolution: Satellite Imagery and Contested Borders



While researching satellite imagery for my graduation work in the context of football fields situated along conceived borders — in this case, those segregating Gaza from the rest of Palestine — I found that the resolution on either side of the border differs systematically. This finding cannot be separated from the ongoing genocide and devastation in Gaza and Palestine: the systematic destruction of homes, infrastructure, and livelihoods, and the unbearable human suffering it entails. In such a context, the politics of visibility becomes even more charged. Who is permitted to be seen clearly, and who is kept obscured, is not only a matter of pixels, technology, or satellite negotiations, but one of recognition, accountability, and the right to evidence.

Another line of inquiry during my graduation work involved systematically mapping the locations and surroundings of football fields in Palestine. Amid intensified genocidal destruction, many of these fields, along with nearby homes and infrastructure, have been destroyed or repurposed as shelters. Using the football field as a unit of measurement and observation, I documented the scale and patterns of destruction, revealing not only the dismantling of everyday life but also the politics of visibility: who and what is recorded, recognized, and made legible to the outside world. This research is still in its early stages but remains ongoing.

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