

PORTFOLIO

Walking through Scaffoldings | Mumtaheena Rifat



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Masters in Architecture and Planning Beyond Sustainability

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This portfolio documents author's studio project from

Matter Space Structure 1 : New Public Landscape, Fall 2020

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Course Leader: Naima Callenberg

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Never have I ever visited a city where I did not find a construction scaffolding surrounding a structure or an infrastructure, and I have been to more than 80 cities in 3 continents - Asia, Europe and Africa. It has always been a matter of great interest for me. As an architect I would always be curious about what architectural intervention is taking place behind the scene and as a user I would reflect on the effects of this temporary addition to my personal experience of a city.

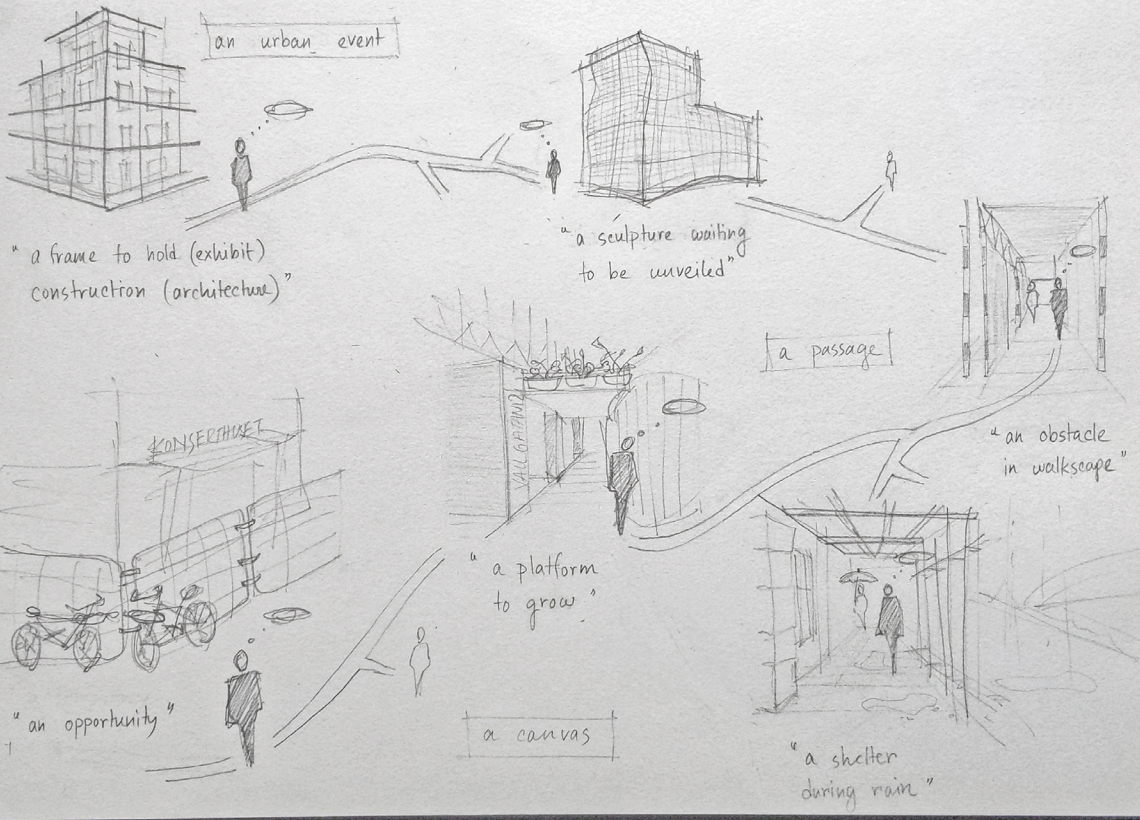
With this project I have tried to both satisfy my curiosity and at the same time conduct research on this temporary but common element of the urban environment, its impacts and potentials. The output consists of an analysis of the current situation in Gothenburg, an investigation through mediating details and a display of possible interventions to start discussions about its potential within the public landscape.

SITUATION

In Gothenburg, Sweden development and growth of the city can be witnessed through the constant change in the built environment around. The way this city is expanding, new property and infrastructures are being developed is fascinating. At the same time, it provokes thoughts about what all these new developments and constructions are adding to the experience of the city and its inhabitants.

As architects we think about the impacts of our design on the surrounding environment, which actually starts from the very moment construction begins at site. In an urban context, especially with construction sites near public places, streets or sidewalks, these impacts are more apparent and extreme. No matter what the scale or timeline of the project is, the activities at site affect everything around it. Keeping this in mind I started analysing the current situation by walking around in Gothenburg and observing parts of sidewalks, streets and public places, which are temporarily occupied with scaffoldings or protection barriers for nearby construction.

While psychogeography guided the primary observations of this unnoticed aspect of the urban environment, Walkscapes was used as a method to investigate the transitions of urban streetscape during construction. It also motivated me to focus the investigation from understanding the effects of an under-construction project, to scaffolded structures that indicated opportunities to improve the walking experience and usage of public or private space surrounding it. Mapping through photography and speculative drawings, helped to both analyze the situation and define the framework of further research.





"The city is lousy with them. And life adapts under the ongoing scaffolding occupation in curious and sometimes delightful ways."

Our Life Under Construction, By Penelope Green

INVESTIGATION ON SCAFFOLDING

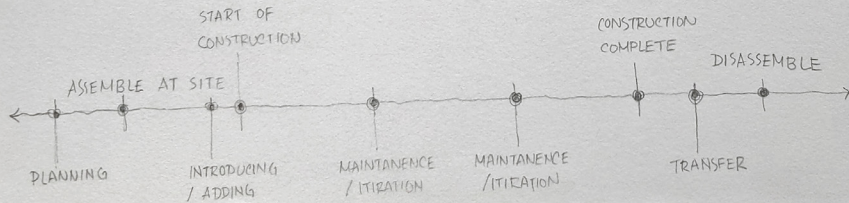
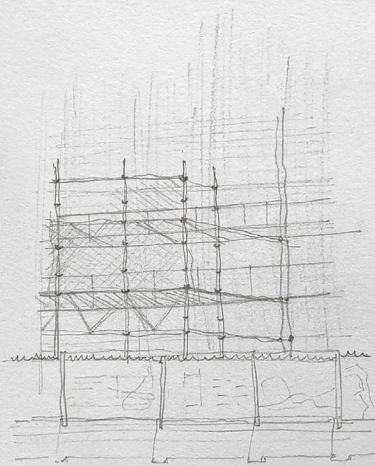
POTENTIALS

FUNCTIONS DURING USE

- PROTECTION
- ACCESSIBILITY
- LOAD BEARING STRUCTURE
- SHUTTERING
- MORE [...]
 - A CANVAS
 - A FRAME
 - A BACKGROUND
 - A PLATFORM

TIMELINE

- NEW CONSTRUCTION
 - LONG TIME
- RENOVATION
 - SHORT TIME
- INFRASTRUCTURE



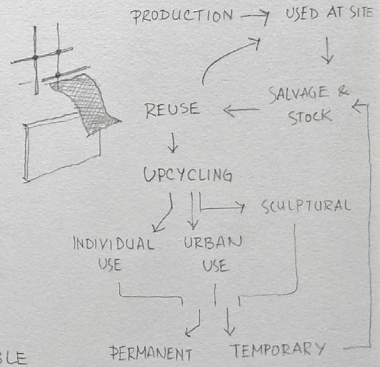
ELEMENTS

- STRUCTURAL
 - MEMBERS
 - JOINTS
 - SUPPORT
- INFILL [...]

PROPERTIES

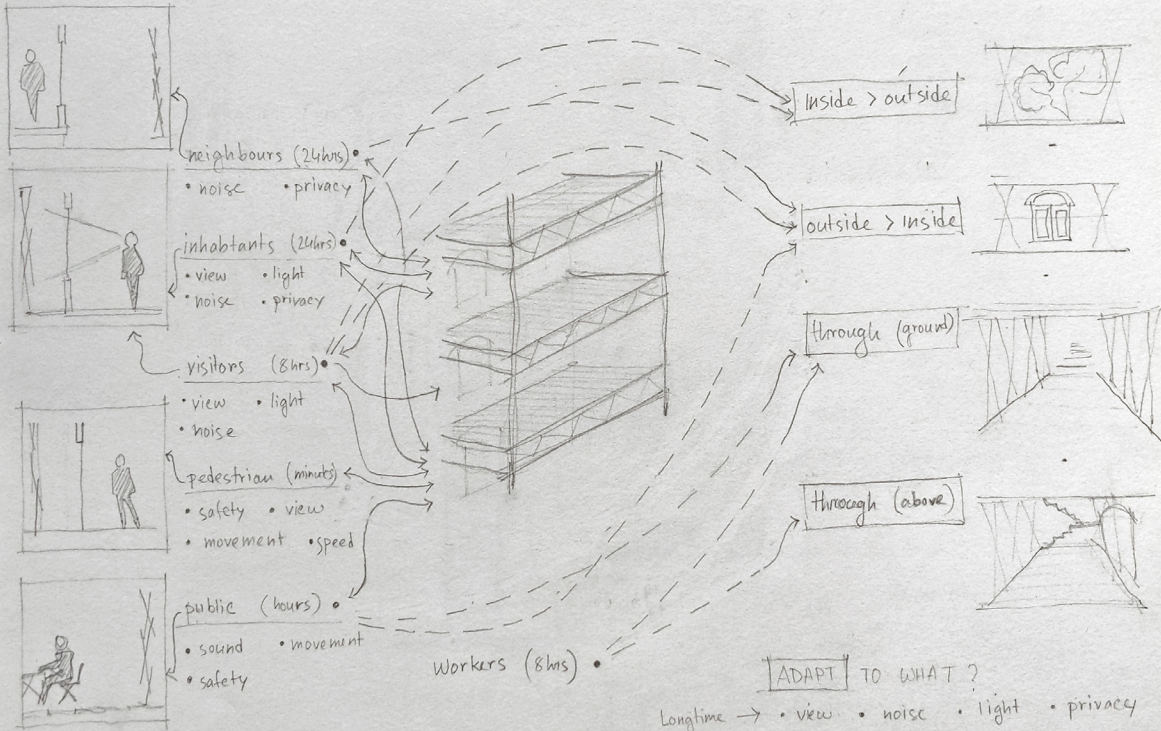
- QUICK, EASY TO ASSEMBLE
- INEXPENSIVE
- VERSATILE
 - TEMPORARY
 - PERMEABLE

LIFETIME



OPPORTUNITIES

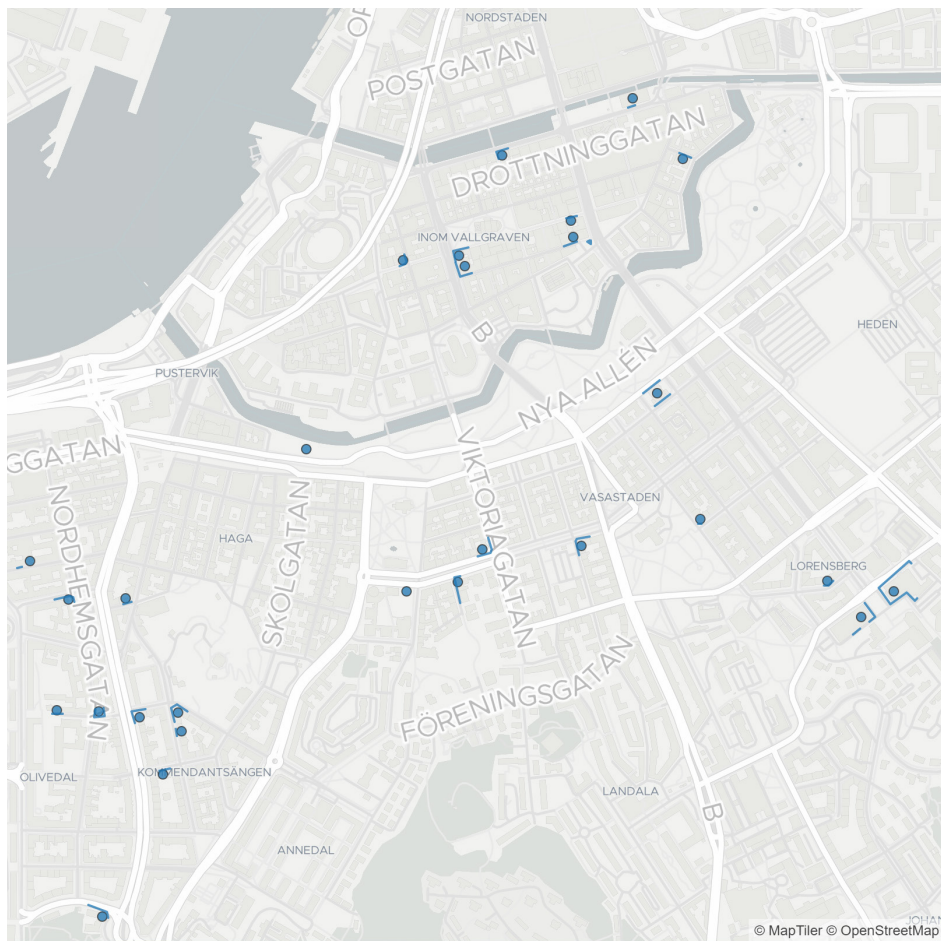
HOW USERS ADAPT? > WHICH USERS?

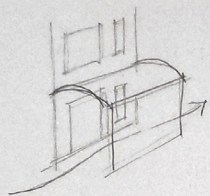


- neighbours (24hrs)
 - noise
 - privacy
- inhabitants (24hrs)
 - view
 - light
 - noise
 - privacy
- visitors (8hrs)
 - view
 - light
 - noise
- pedestrian (minutes)
 - safety
 - view
 - movement
 - speed
- public (hours)
 - sound
 - movement
 - safety
- Workers (8hrs)

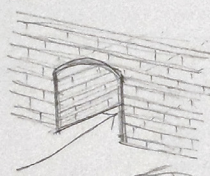
ADAPT TO WHAT?

- Longtime → view • noise • light • privacy
- Seasonal → rainwater • snow •

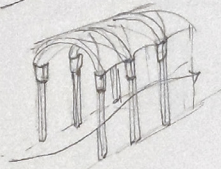




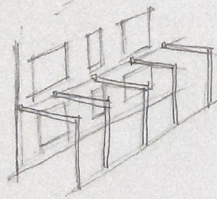
... covered street
... shaded walkway



... tunnel
... passage

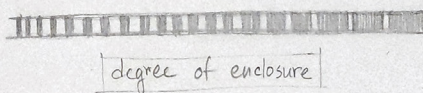
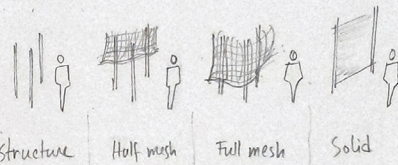


... arcade
... gallery



... pergola
... canopy
... fence

open space	semi-open semi-enclosed	enclosed space
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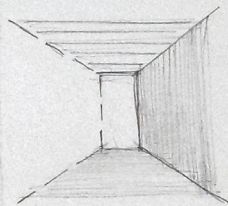
How ENCLOSURE CONTROL/AFFECT ?

- air • heat • sound • access
- privacy • view • daylight

WHAT TO CONSIDER ?

- aesthetic • visual • durability

sense of enclosure
continuity & direction

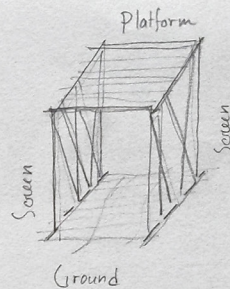
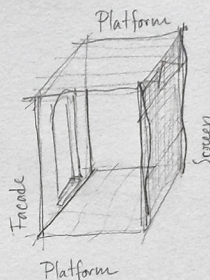
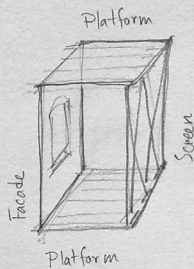
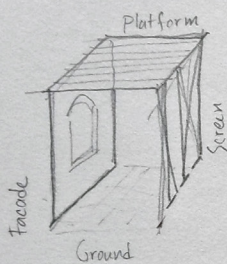
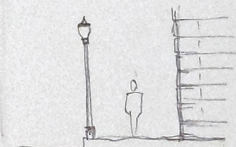


connectivity to exterior

walkability

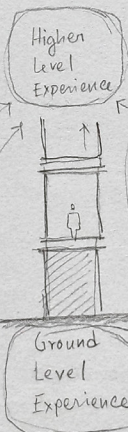
street space

side-walk experience



Facade > Windows = View
Doors = Access
Shops = Display

Screen > Structural
Solid
Fabric/Mesh



Ground (occupied) > Pedestrian
Cycle route
Public place (unoccupied?)

Platform (built) > Horizontal = Base
Stairs = Connection

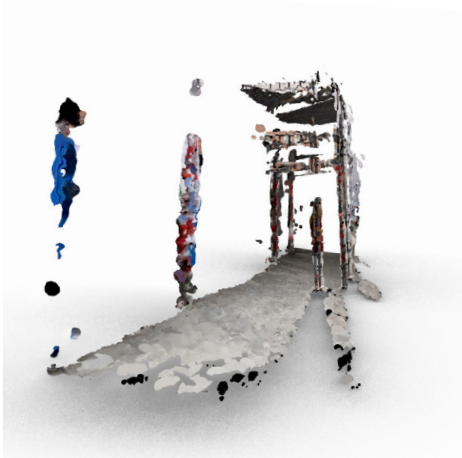
Space = Journey

MEDIATING DETAIL

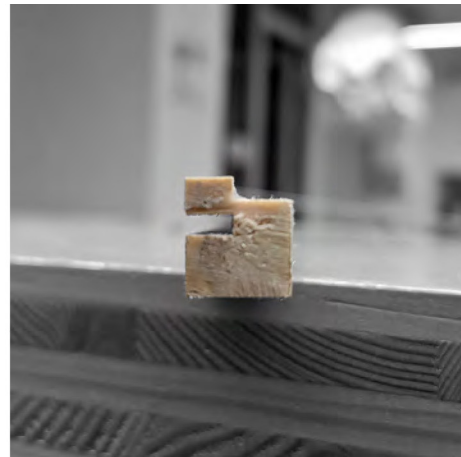
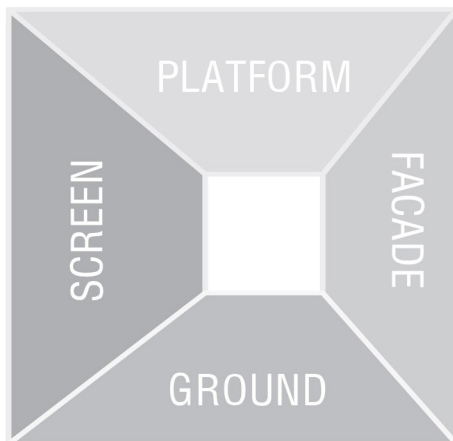
The experience of the 'active users' while walking through a scaffolded sidewalk or street was investigated with a focus on peripheral vision which gets obstructed by the structure of a scaffolding and the four planes of the sidewalk room⁴. Photogrammetry was used as a tool and generated 3d scanned environments brought details into notice. Merging or overlaying different scanned environments i.e. a generic scaffolded sidewalk and one of the Friplanket⁵ exhibits resulted in an interesting transition of space and pointed out the potential of interventions.

For further research on materials, specially the tactility and reaction to sunlight and environment, a scale model of the scaffolding structure was used. This provided better flexibility of changing and manipulating materials of the four planes of the sidewalk room. The scale model was designed as a frame, with flexibility to slide in and out materials of the four planes. Experimenting with different materials in different environments - indoor and outdoor brought out more scopes of intervention that could improve the walking experience.

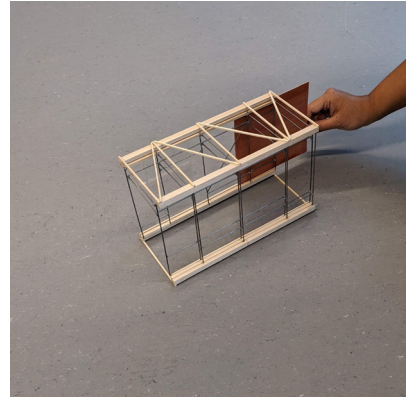
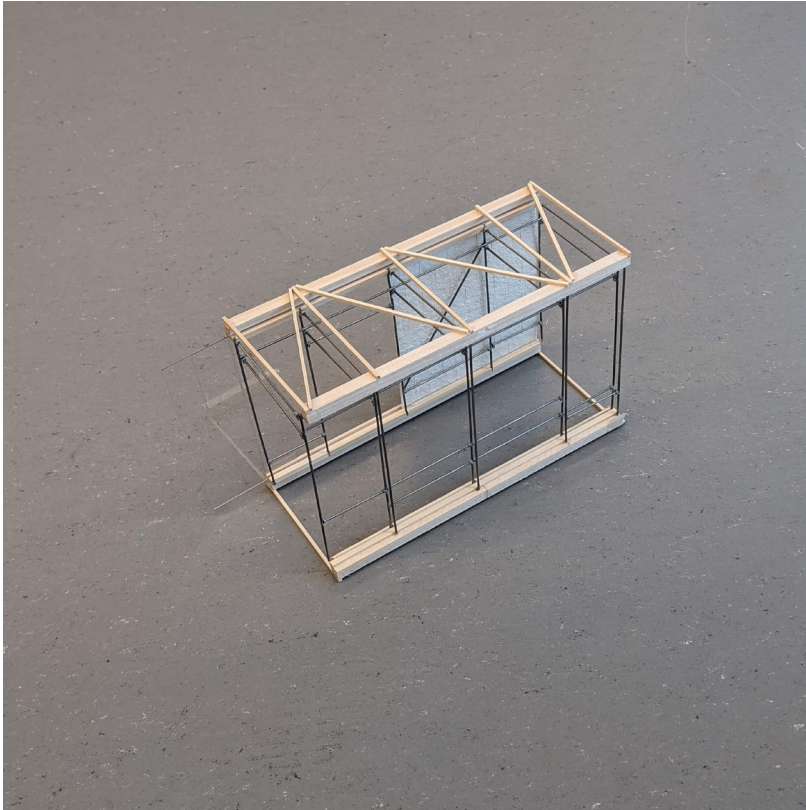
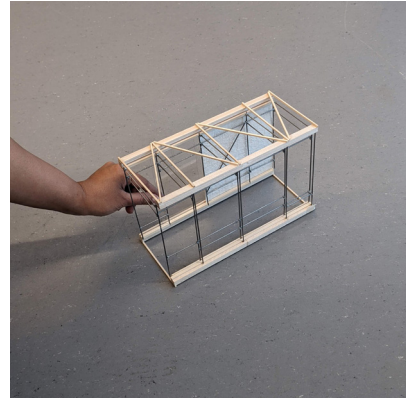
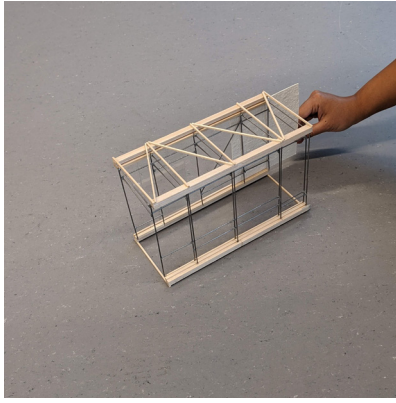
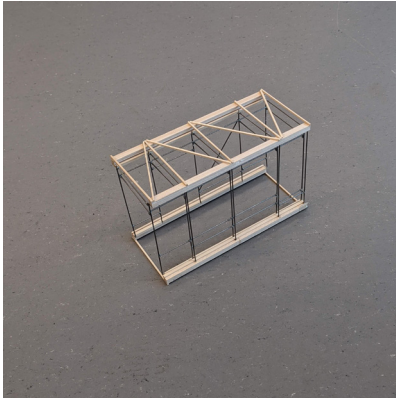
While working with the scale model mostly found materials or recycled materials were used. For example fabric /plastic mesh from unused shopping bags, leftover model making papers, laser cut-out boards etc were used in the four planes. Working with a physical model helped to understand the limitations of the scaffolding structure as well. Like the actual scaffolding structure itself, it was needed to ensure that the scale model was stable, sturdy and safe to bear the intended load and tasks. The hands on work also supports the following outcome that minimal effort and small changes in the materials or compositions of one or more of the four planes can transform the environment inside and near a scaffolding and affect the experience of active users.



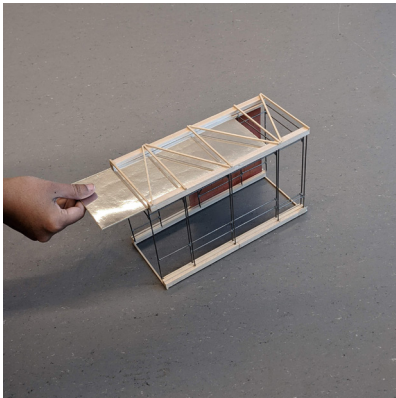
Juhani Pallasmaa in 'Hapticity and Time: Notes on Fragile Architecture' has referred to peripheral vision as the rightful domain of architecture, the perception that 'transforms retinal images into a spatial and bodily involvement and encourages participation.'⁵



We can dissect the sidewalk room into four planes ... while separating the planes is helpful for delving into the details of each of these elements, there are also many overlaps. The pedestrian never experiences a single plane in isolation: each plays a critical role in the sidewalk room's overall composition.⁶



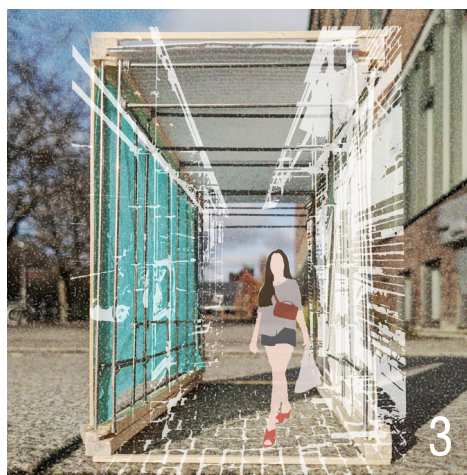
Scale model of a scaffolding unit, with frames that allow flexibility to slide in and out different materials on the four planes of the sidewalk room⁴.

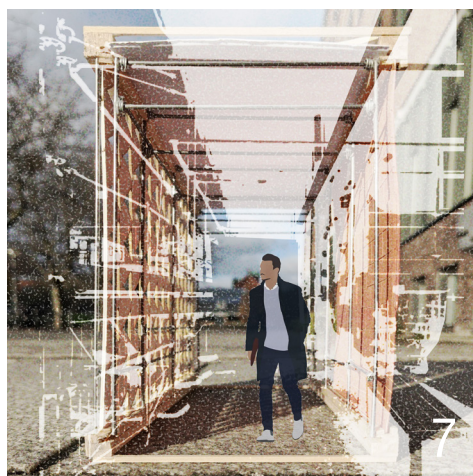




Using reflective material in the *Platform* showed significant changes in the interior space (1, 4). Putting plants along with the *Screen* added a layer before the exterior than can create a pleasant view (1).

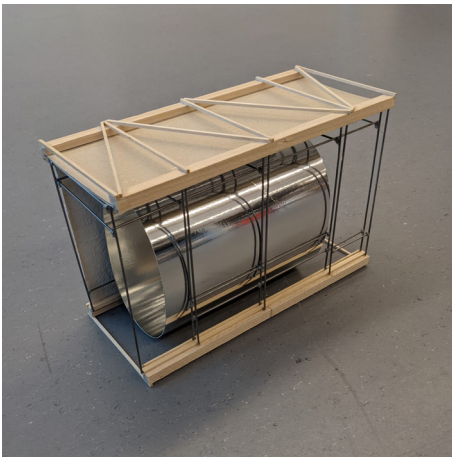
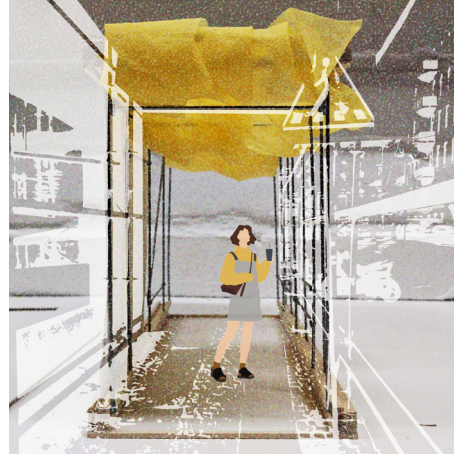
Similarly plantation on on the *Platform*, could also extend and create a canopy to the exterior also benefiting walking experience (2). Adding colourful but translucent material along the *Screen* showed intersting effect with and without the presense of light (3, 4).





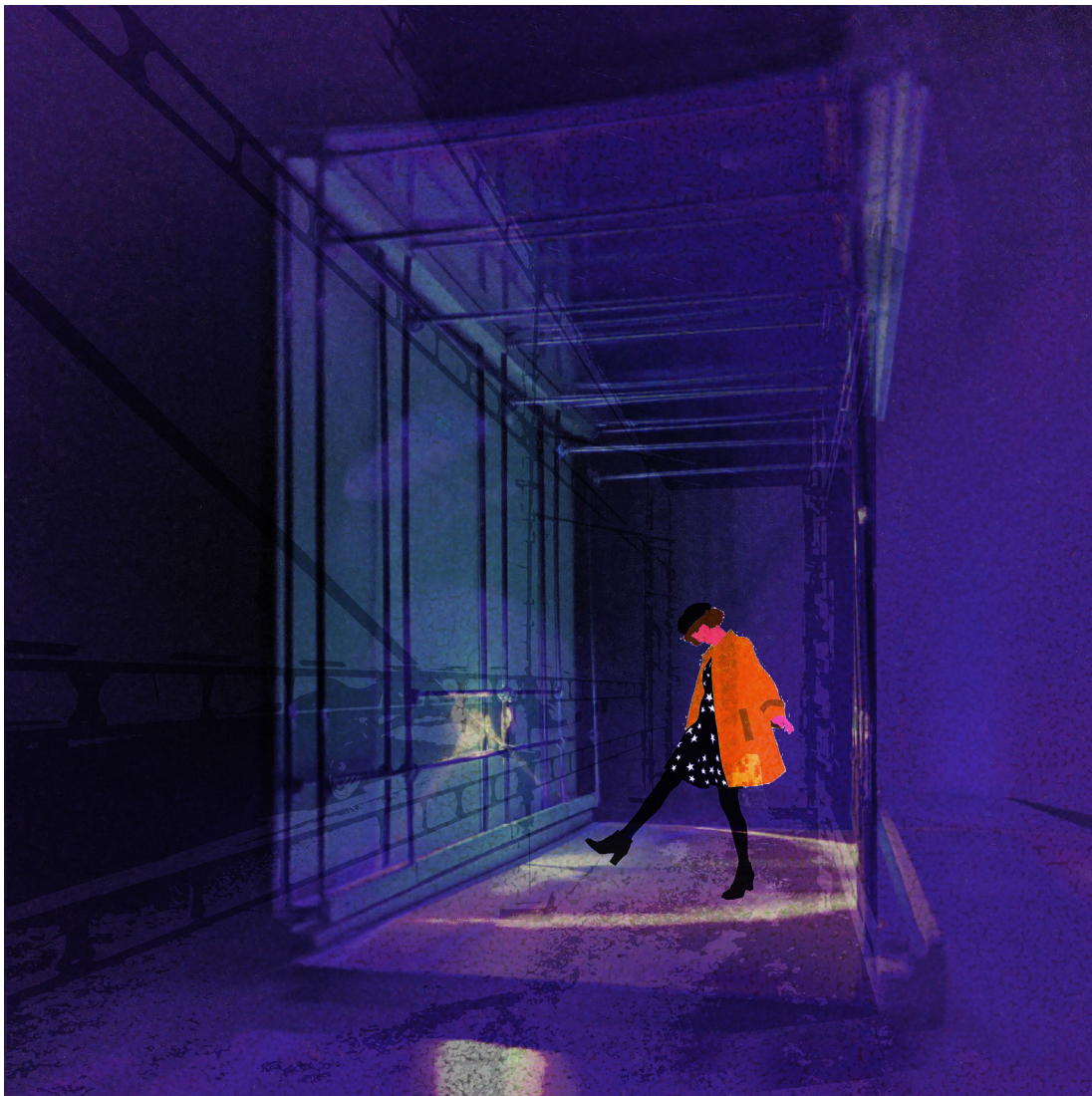
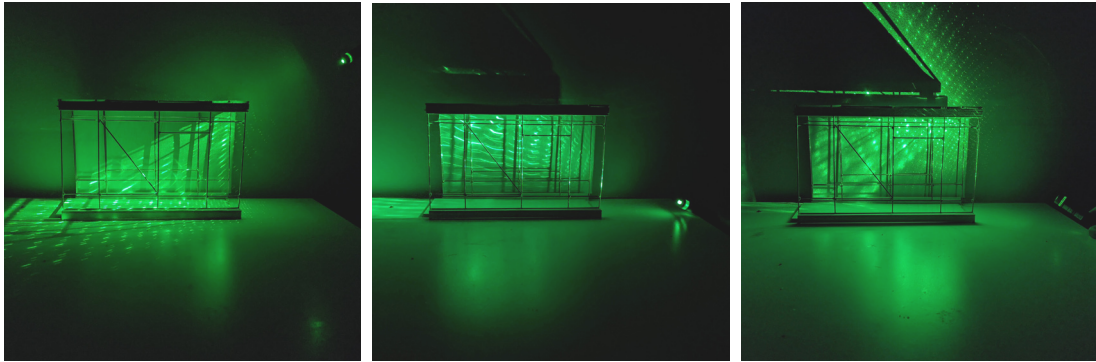
Transluscent *Screens* can easily accomodate posters and exhibits viewed from both outside and inside (5).

Additional texture and perforation quality to the materials of *Screen* or *Platform* or both created an interesting pattern of shadow both inside and outside in presense of light outside or inside (5, 6, 7). Differenct *Facade* materials were used only to represent the common facade textures and colours seen around the Gothenburg.



The structural members of a scaffolding can be used to create three dimensional installations and offer fun and playful space inside.

The aesthetic perception resides not with objects alone, but rather with the constructive interaction of the organism (and its experiences) with the social and cultural environments. We should center our design efforts less on the formalist 'objects' of linguistic expression and more on the deeply rooted dimensions of human experience.⁵



Experiments with lights, both pointed and with pattern resulted into unexpected but fascinating environment inside the scale model of scaffolding as both the reflective material as *Platform* and the metal members of the scaffolding structure reflected the lights everywhere.

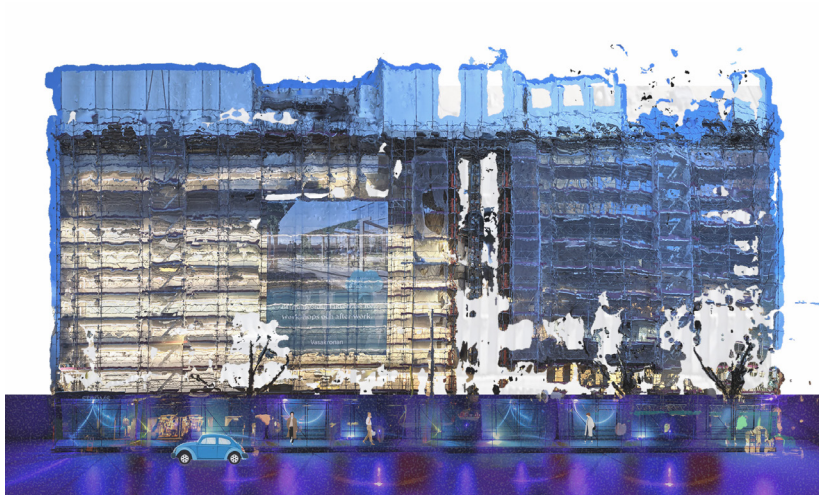
DISPLAY

After mediating detail through the physical model and scanned environment, several scopes of interventions came out. This led to the final analysis of how scaffolding occupied buildings affect the urban environment and how it could contribute to the public experience of a city. Using a digital 3d model of scaffolding structure, different compositions and capacities were observed. The idea that developed is that the scaffoldings can hold exhibits or installations and be used for display in public places. Another idea is to use creativity to design the screen in a way that instead of blocking the view and sunlight, it creates a pleasant experience for the time being.

The ideas put together in collages with a digital model of Gothenburg represents the potential of scaffoldings on a larger scale. Previously scanned environment of scaffolding occupied sites, as well as existing graffiti and exhibitions found at different sites around Gothenburg, were used to create more relatable visuals. Two sites were chosen for the final representations - Götaplatsen and Domkyrkan, two prime locations with adjacent scaffolding occupied buildings.

If construction scaffoldings are utilized more to host exhibits, it can be an opportunity for local, underprivileged or aspiring artists. With sustainable construction practice, scaffoldings and materials would keep being reused and recycled to other sites, Proposed design interventions or exhibitions on Scaffolding, would keep moving too, creating scope for a moving exhibition. This could ensure an inclusive public landscape with meaningful, diverse artworks or installations from local artists, public awareness promotions and provide local, regional or even national exposure.

The key objective of the project was to start a critical discussion around the topic. The display summarizes the overall research and initiates a conversation on a ground of existing sites, personal explorations and concepts of recycling, reusing and rethinking materials, space and experience.



By returning the focus of design to what Dalibor Vesely once referred to as ‘the practical nature of situations’ or our everyday activities, we might begin to see that architects are not charged with designing structures or spaces for specific functions but places for human life to flourish. And only by viewing design within the full temporal spectrum of our affective, perceptual, social and cultural dimensions will we begin to see the range of our responsibilities as designers.⁵



The Stadstheatre building at Götaplatsen has been covered with scaffolding during the whole project period.

Scaffoldings near a public site could have participatory graffitis or other artistic exhibitions on ground level. On the levels above, the *screen* could have material suitable and safe to hold projected exhibits during dark. It could even host audiovisuals on special occasions or events taking place at the adjacent public place.





Installations or three dimensional exhibits could be accomodated by the scaffoldings with the help of additional structurals members outside, mantaining all safety measures.

On ground level this could create place for public activies after hours and on occasions. With additional lighting it could create safe and inclusive urban public place during dark.

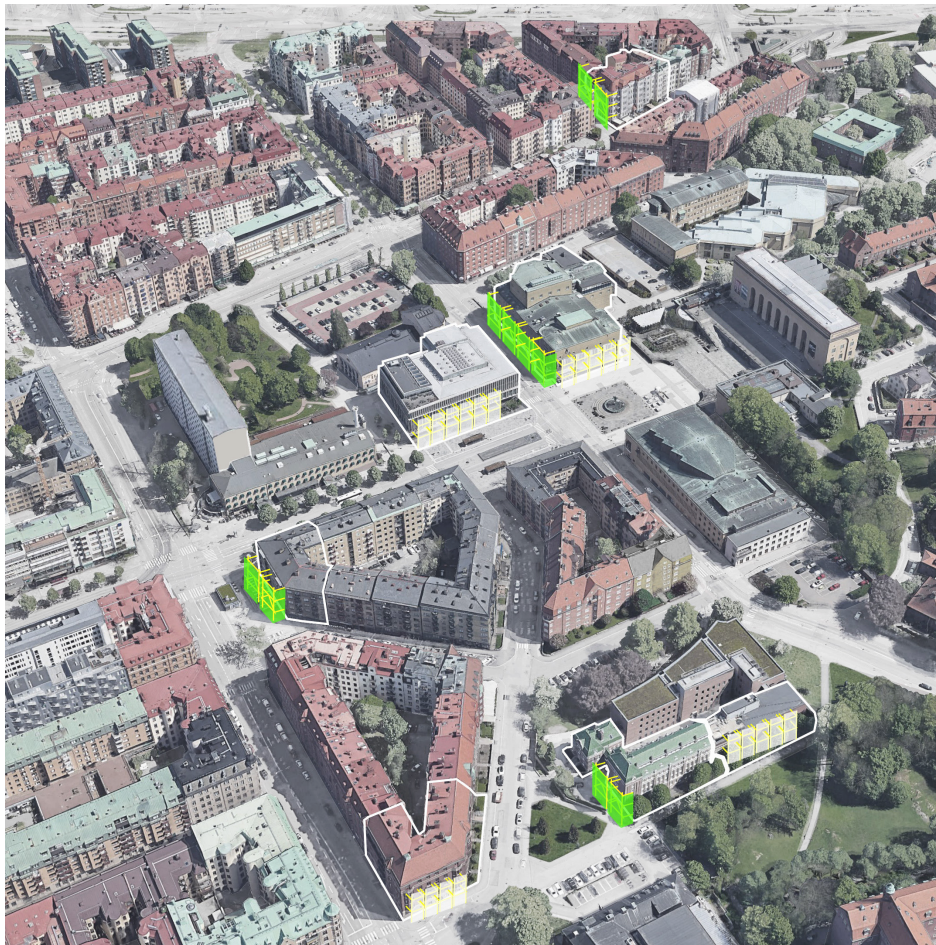


The scaffoldings could be covered with textured materials or transparent ones with creative pattersns. The renderings show that this could create a better screening from inside rather than obstacling the view and sun light, also add a pleasant aesthetic in the building elevation temporarily. For example, a pattern inspired from the shadows of tree banches could create interesting composition of light and shadow.



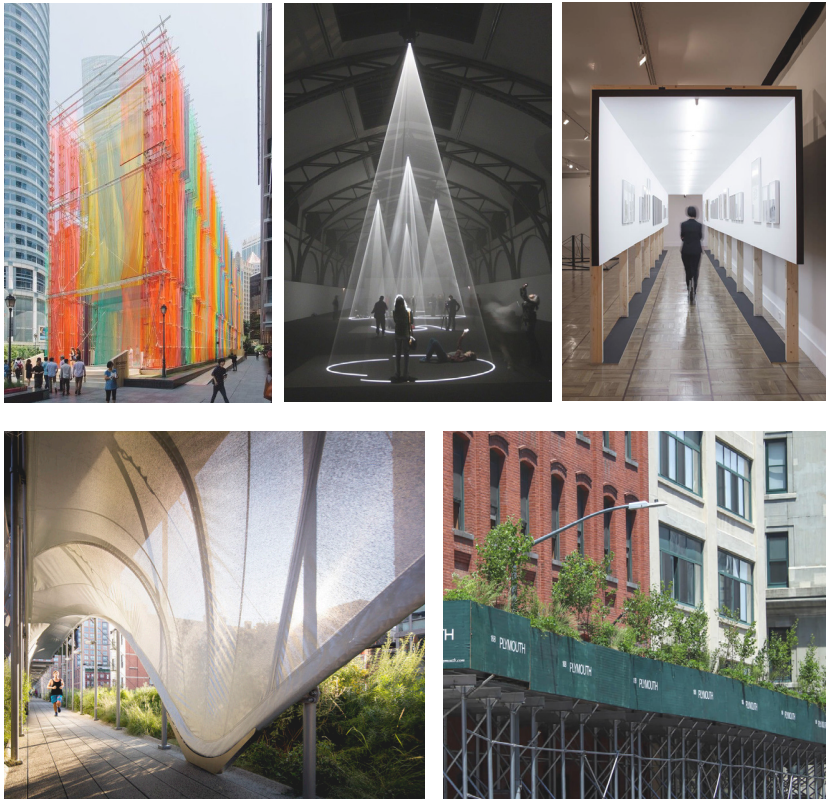


Scaffoldings are temporary themselves ...



... but consistent in any urban fabric.

The investigation brought forward a lot of potentials for intervention along the physical structure of scaffoldings, as well as an opportunity to contribute to the social structure of the city. The idea of reformation of this public landscape element invites us to reflect and rethink architectural practice and our responsibility towards society and people.



REFERENCES

In Text

1. Antigoni Geronta, *Psychogeography - Radical movements and contemporary practices*, 2010
2. Francesco Careri, *Walkscapes: Walking as an Aesthetic Practice*, 2017
3. Penelope Green, *Our Lives, Under Construction*, The New York Times, Jan. 2, 2020
4. The Department of City Planning, New York, *Active Design - Shaping the sidewalk experience*, 2013
5. Harry Francis Mallgrave, *From Object to Experience - The New Culture of Architectural Design*, 2018

Projects

1. Friplanket by frilagret, Gothenburg
<https://www.frilagret.se/kalender/friplanket/>
2. Scaffolding Exhibition by OMA
<https://oma.eu/projects/scaffolding>
3. High Line installation by Zaha Hadid
<https://www.phaidon.com/agenda/architecture/articles/2015/august/20/zaha-hadids-high-line-installation/>
4. Garden on Top of a Sidewalk Shed in Dumbo, by Future Green.
<https://www.brownstoner.com/brooklyn-life/brooklyn-garden-future-green-168-plymouth-street-dumbo/>
5. Archifest 2016 Pavilion by DP Architects
<https://www.archdaily.com/796471/archifest-2016-pavilion-dp-architects>
6. Temporary structures for festival in Rio de Janeiro by Estúdio Chão
<https://www.designboom.com/architecture/estudio-chao-temporary-structure-festival-rio-de-janeiro-brazil-08-09-2019/>
7. Exhibition design by Cadaval & Solà-Morales At the Museo Casa de la Moneda in Madrid
https://www.domusweb.it/en/architecture/2013/06/17/cadaval_sola_-moralesexhibitiondesign.html
8. Exhibitions by Anthony McCall
<http://www.anthonymccall.com/solid-light-works>



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