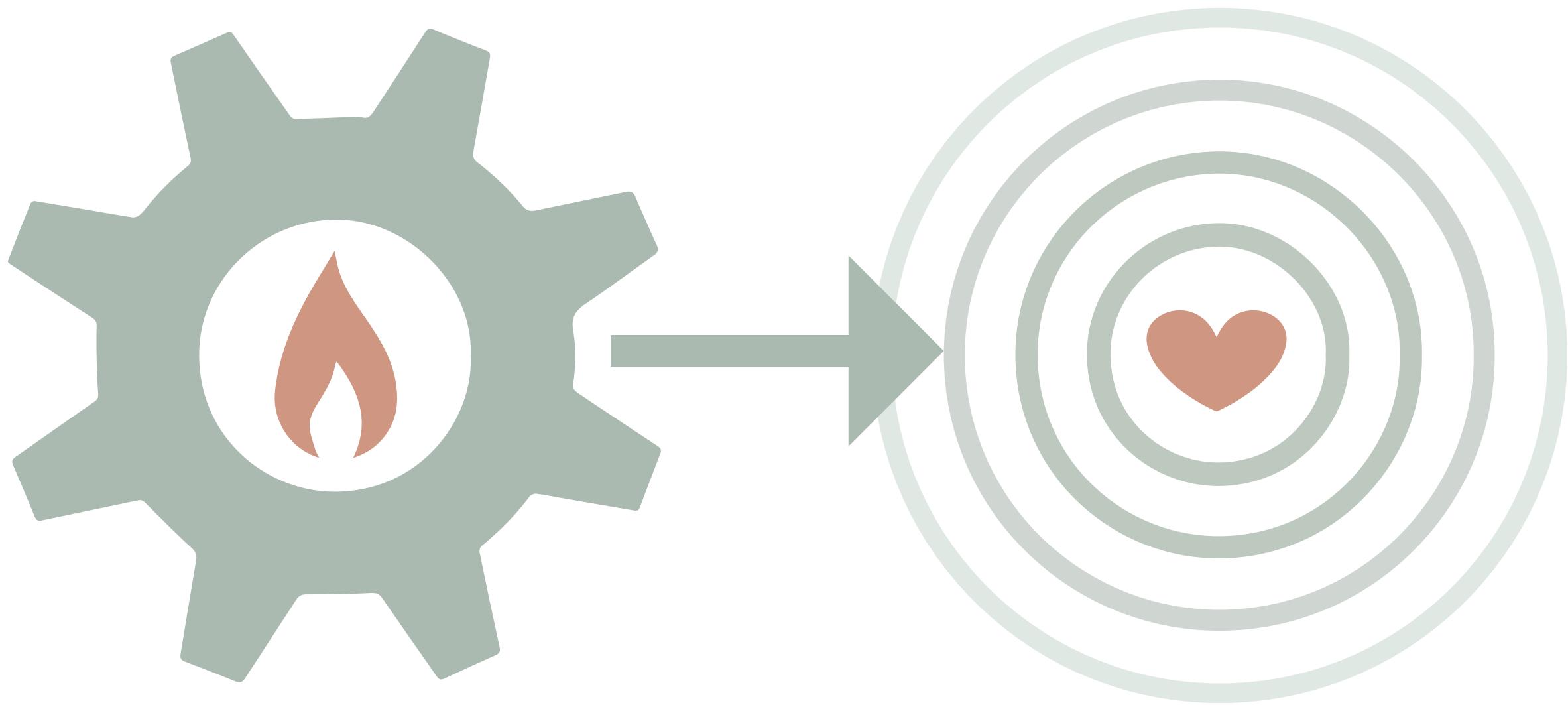


Turning heat into warmth

Re-inserting warmth in the social and sustainable
infrastructures of post-war neighbourhoods



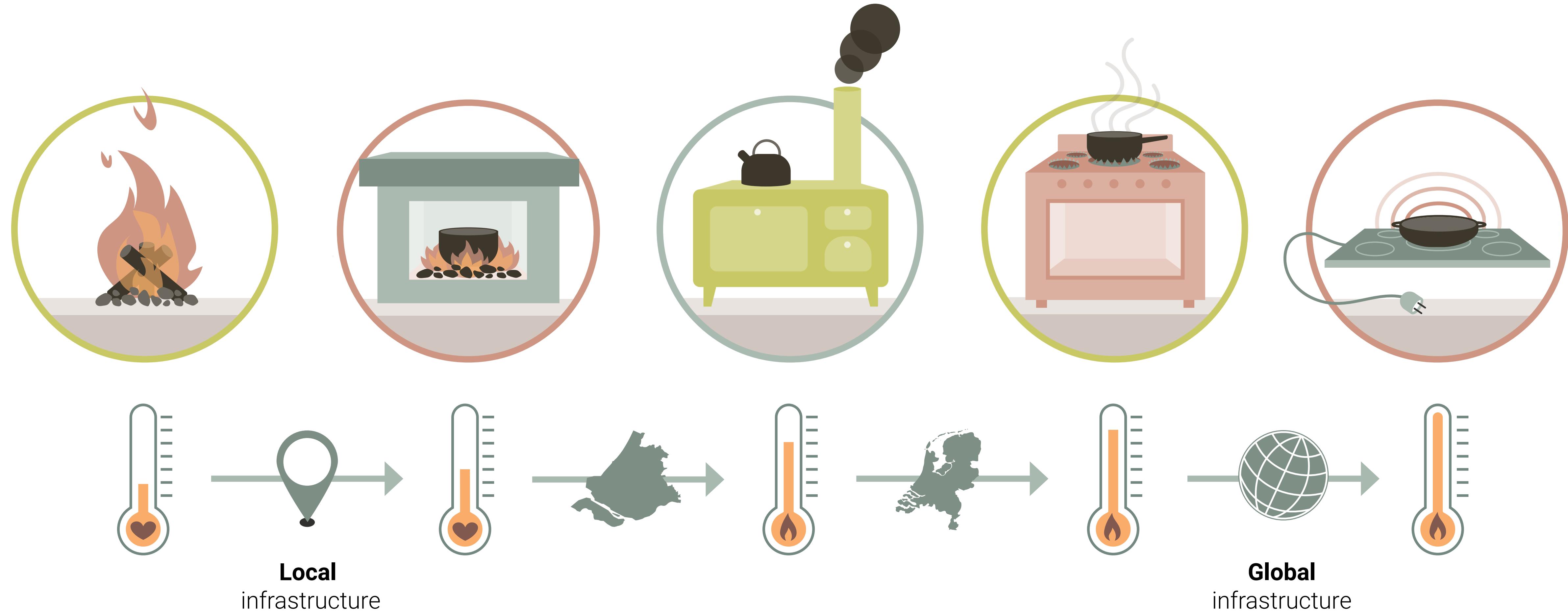
Thomas Misset

P5 Presentation

Architectural Engineering
Graduation Studio

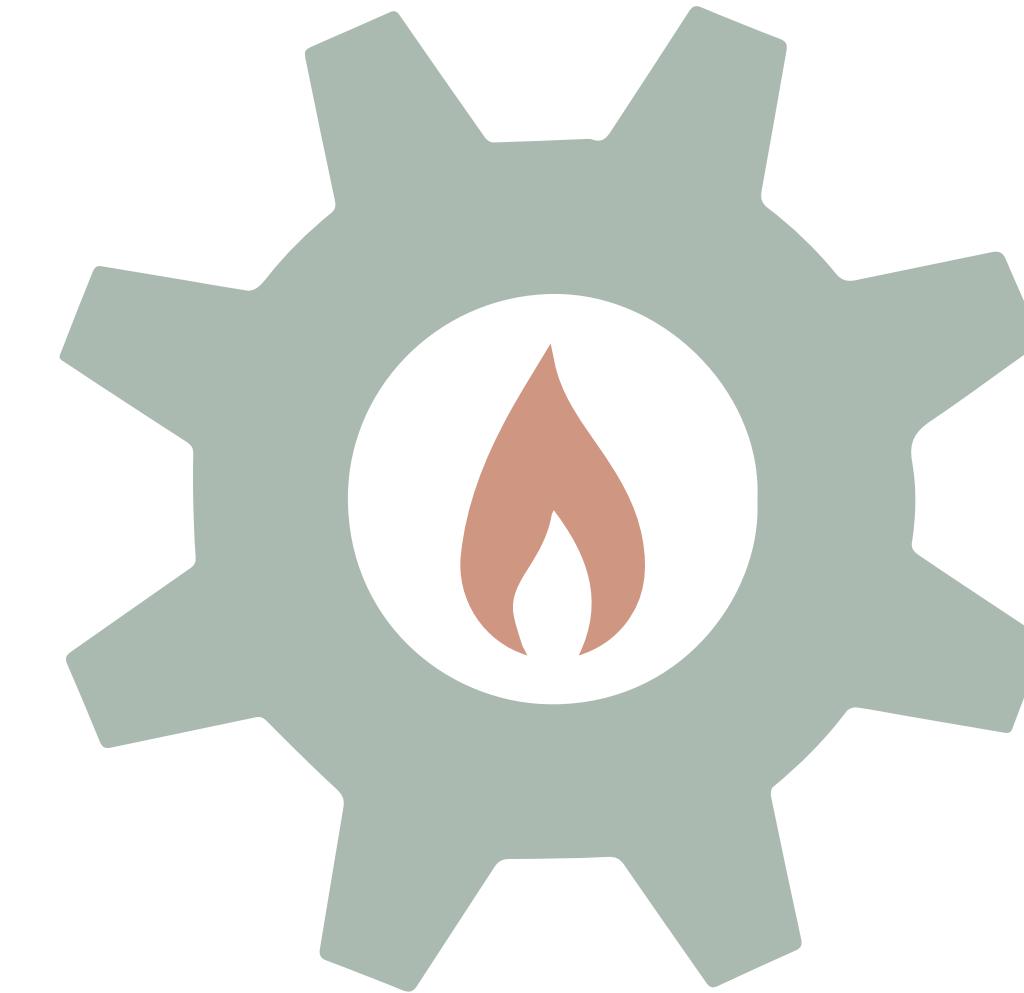
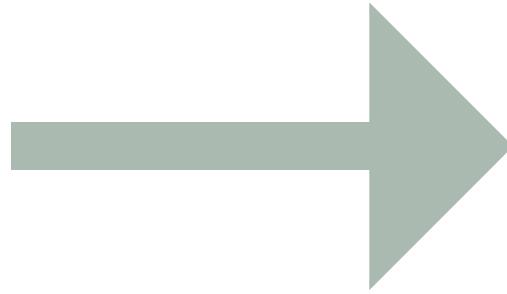
Evolution of technology

Technology has become indirect and stripped down.



Warmth has turned into heat

The warmth of technology, embedded in experience and relating to social activities has become heat: removed from experience and unrelating to humans and their social life.



Warmth

The **human** and **social** qualities of technology and infrastructure

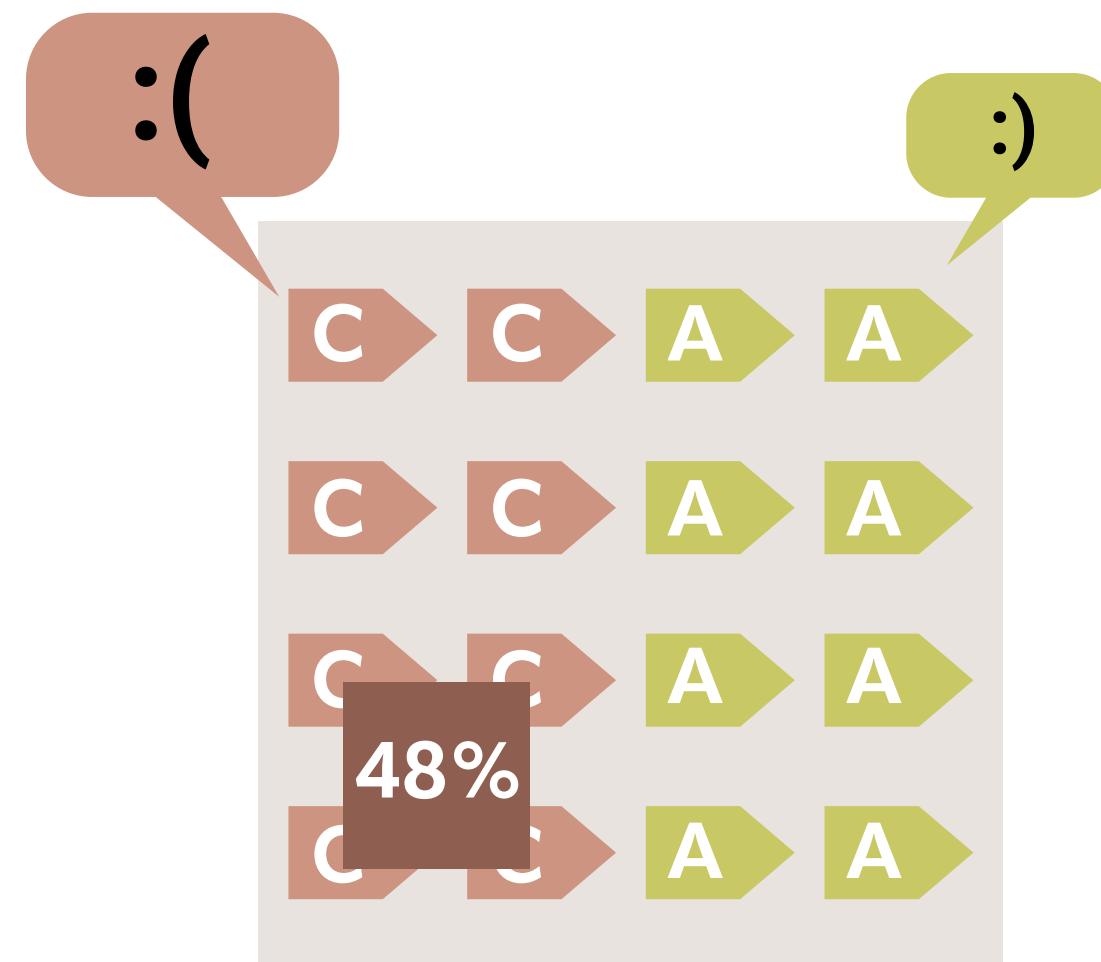
Heat

The **technical** and **performative** qualities of technology and infrastructure

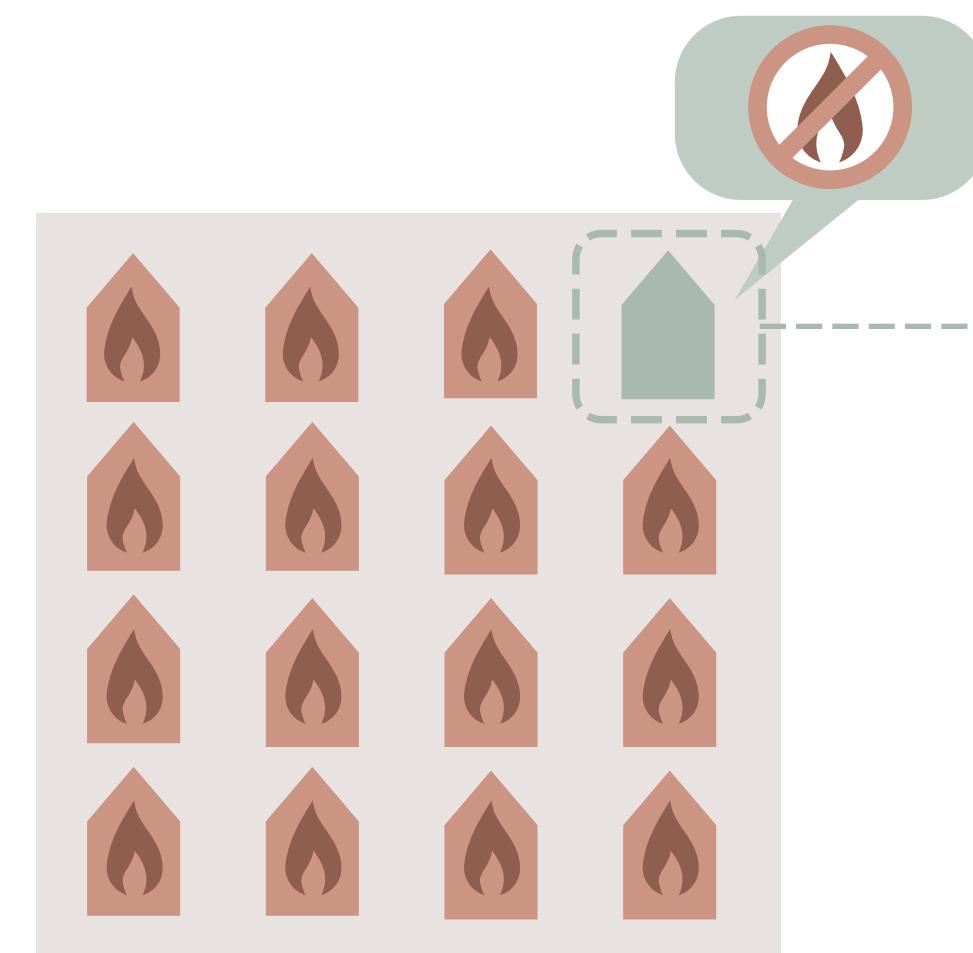
The 'us' in sustainable

Marginalized groups in society have unequally distributed access to sustainable infrastructure, driven by a lack of agency and poverty

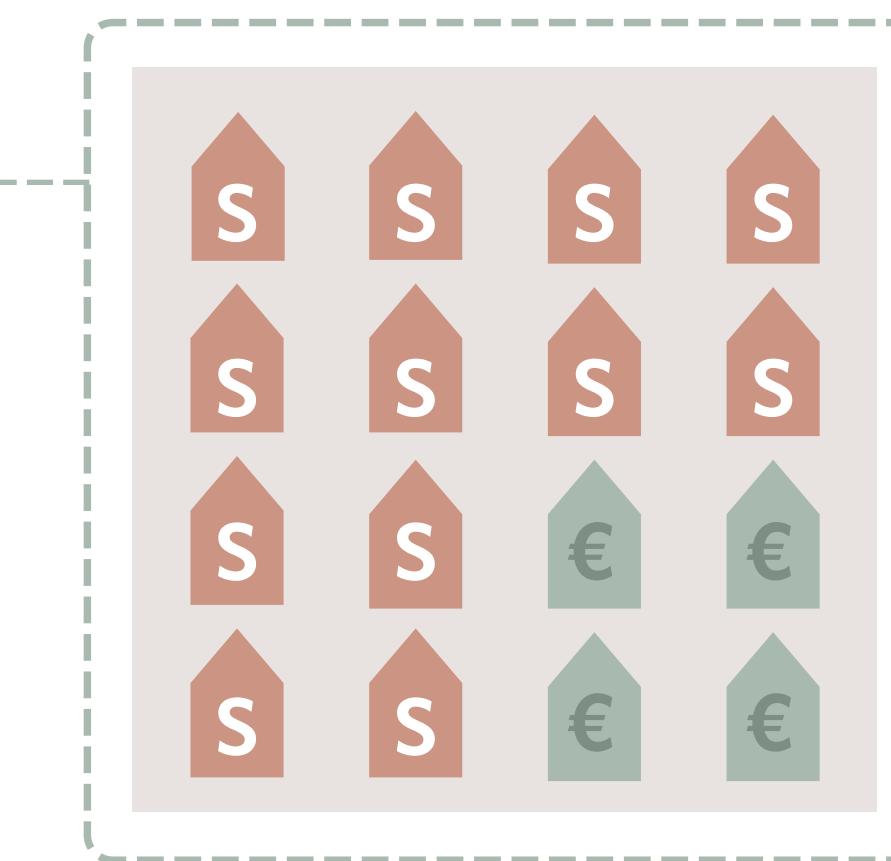
The Netherlands



3.8 million low energy labels



550.000 households
in energy poverty



412.500 renting in the
social sector

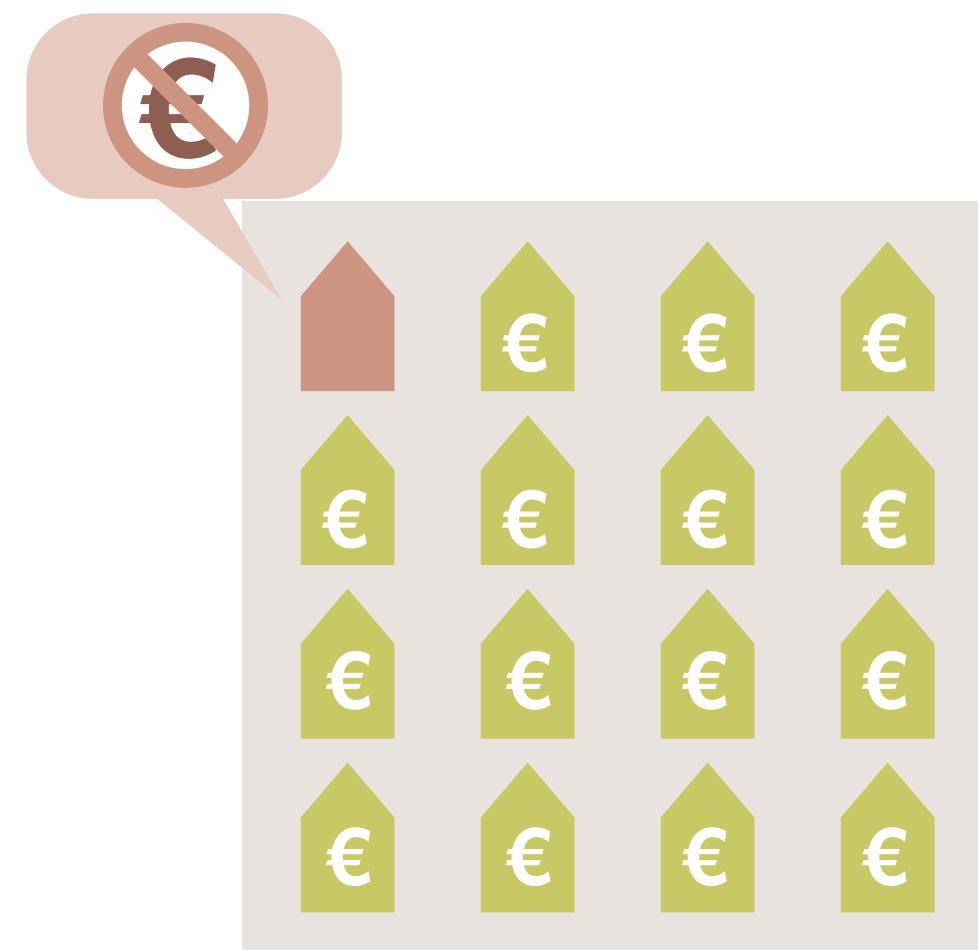


High representation of
marginalised groups

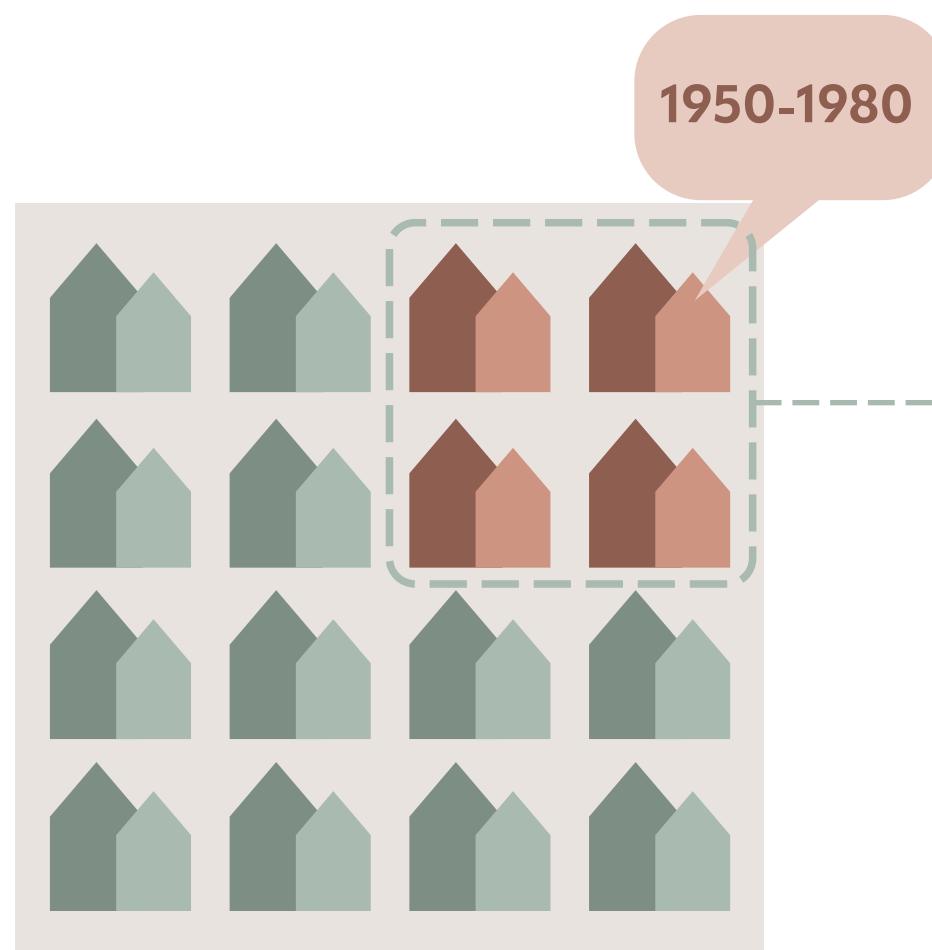
The 'our' in neighbourhood

Post-war neighbourhoods are clusters where inaccessibility to sustainable infrastructure, a lack of agency and poverty concentrate

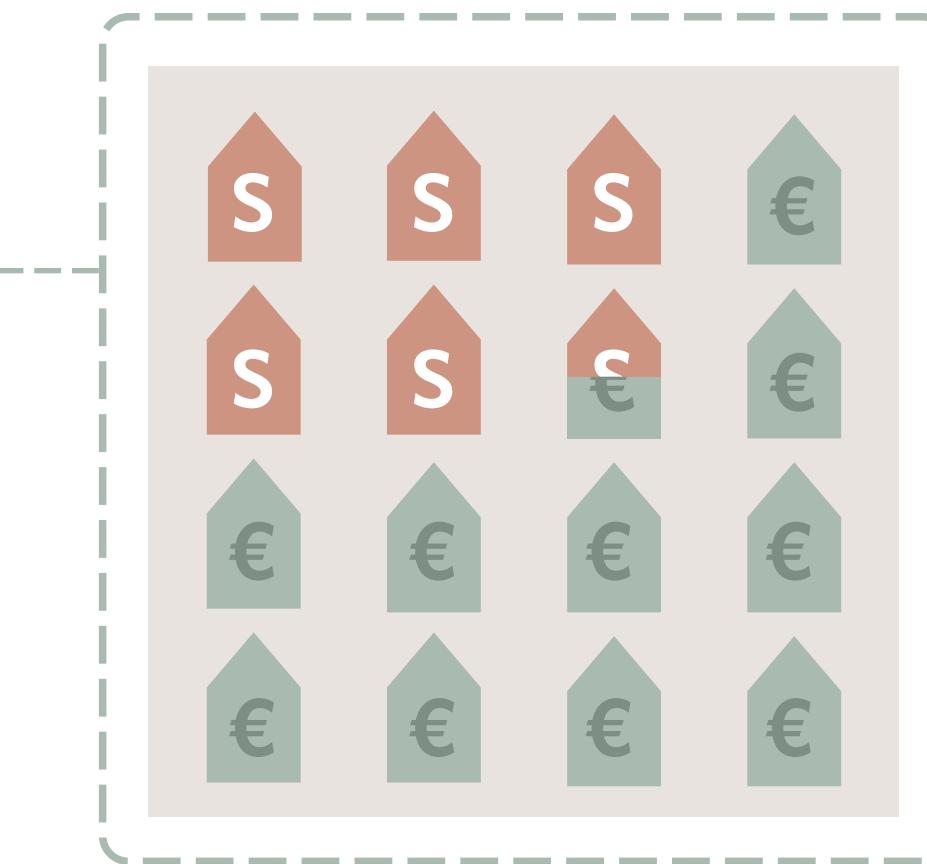
Post-war neighbourhoods



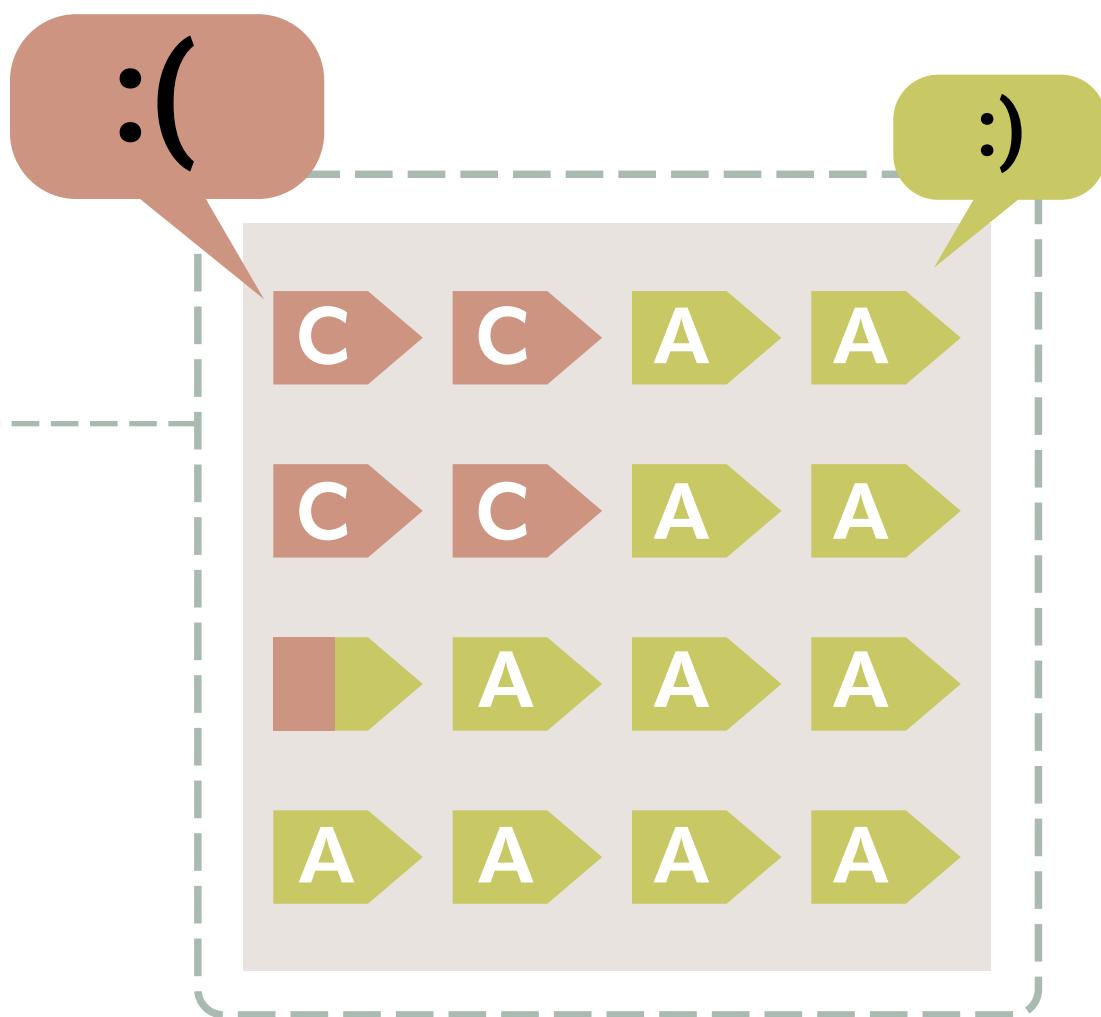
1.1 million social minima



1800 post-war neighbourhoods



720.000 social housing units



514.000 low energy labels

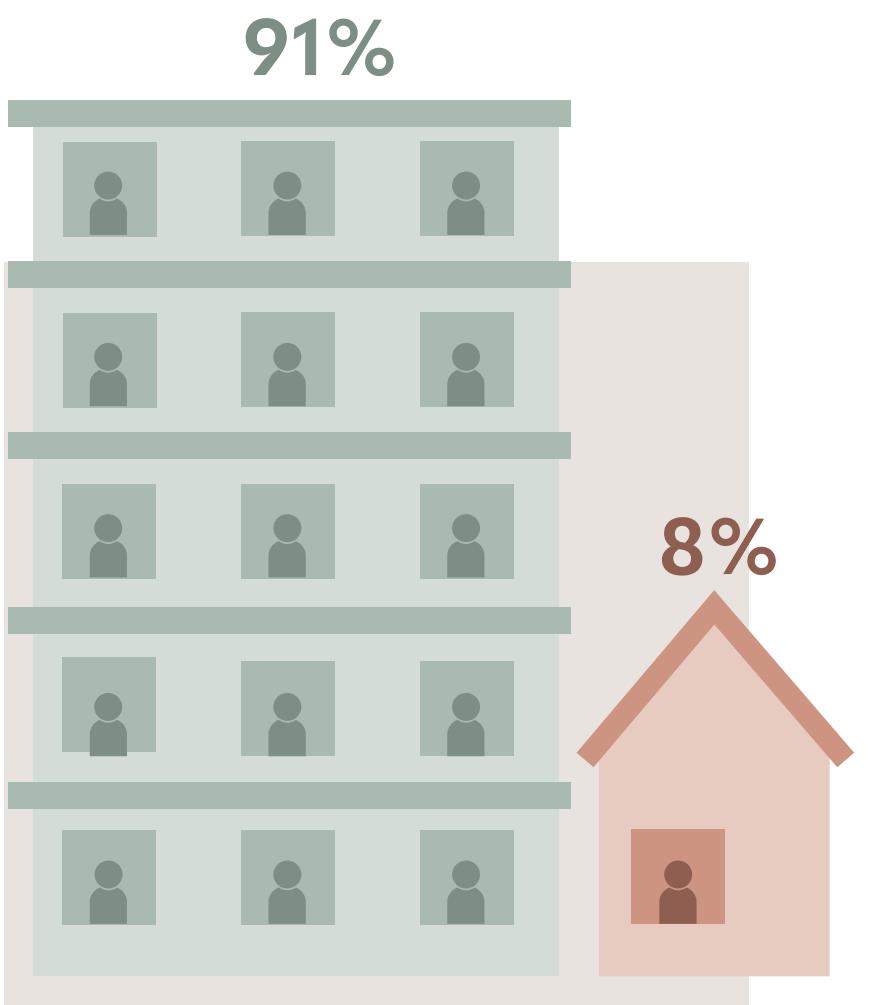
The 'wij' in Moerwijk

Moerwijk shows a higher concentration of these problems than the average post-war neighbourhood

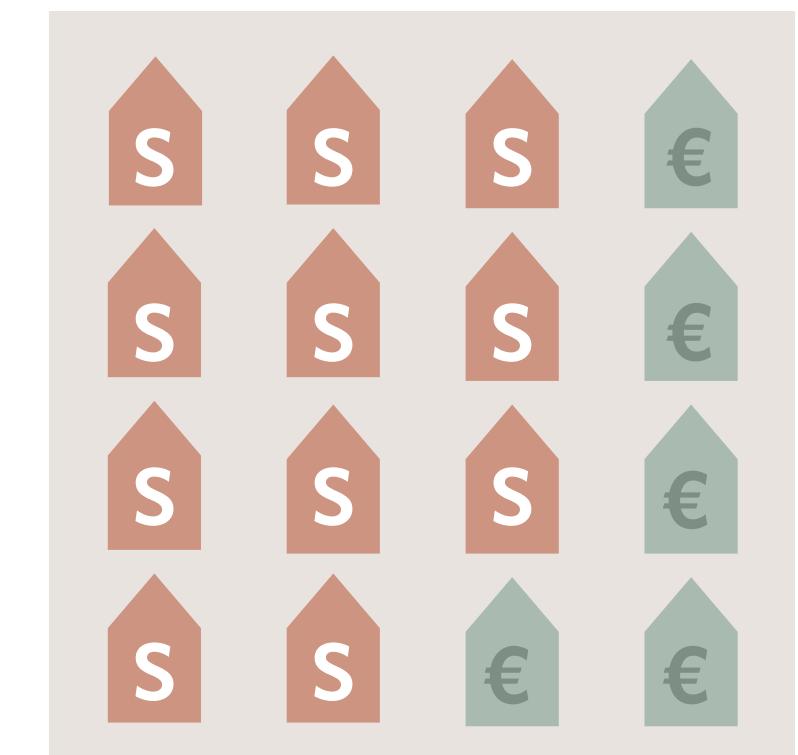
Moerwijk, The Hague



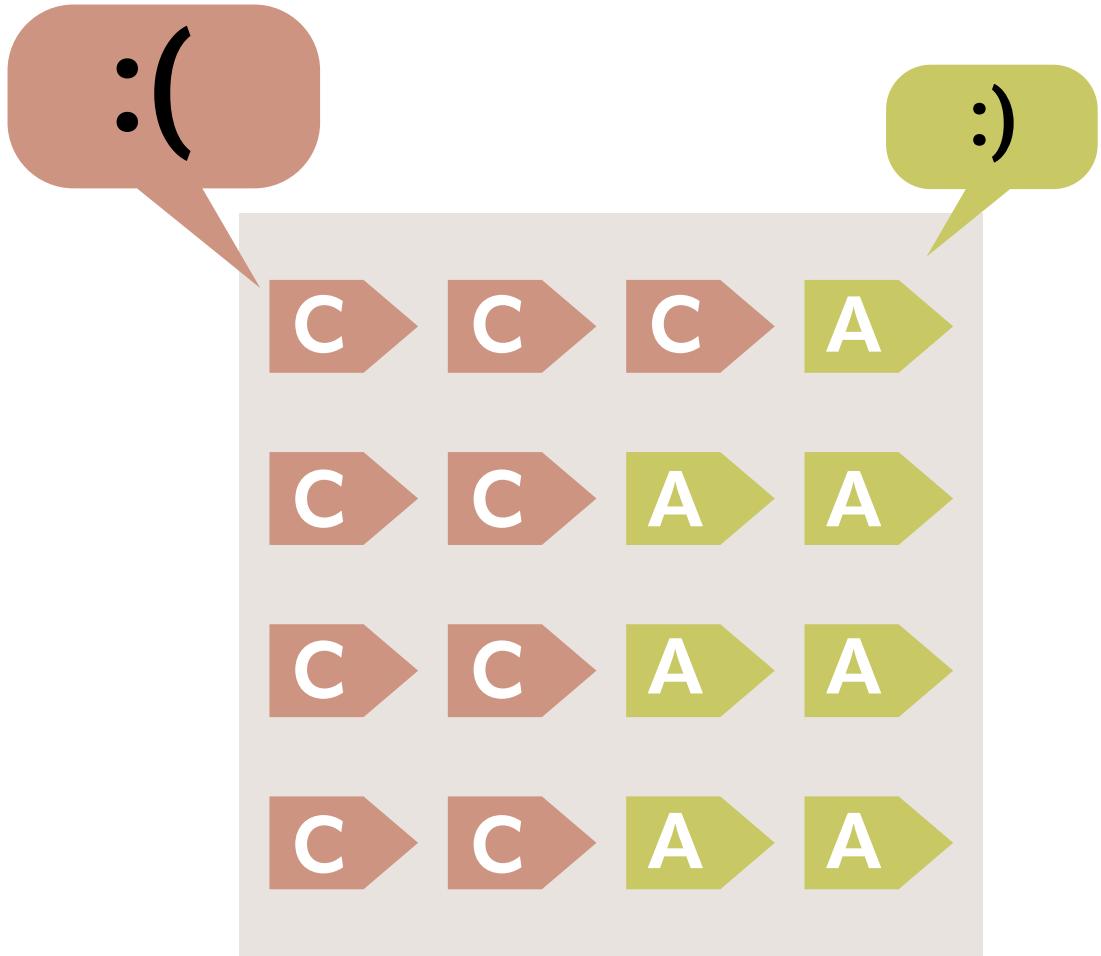
2336 social minima



10.670 apartments

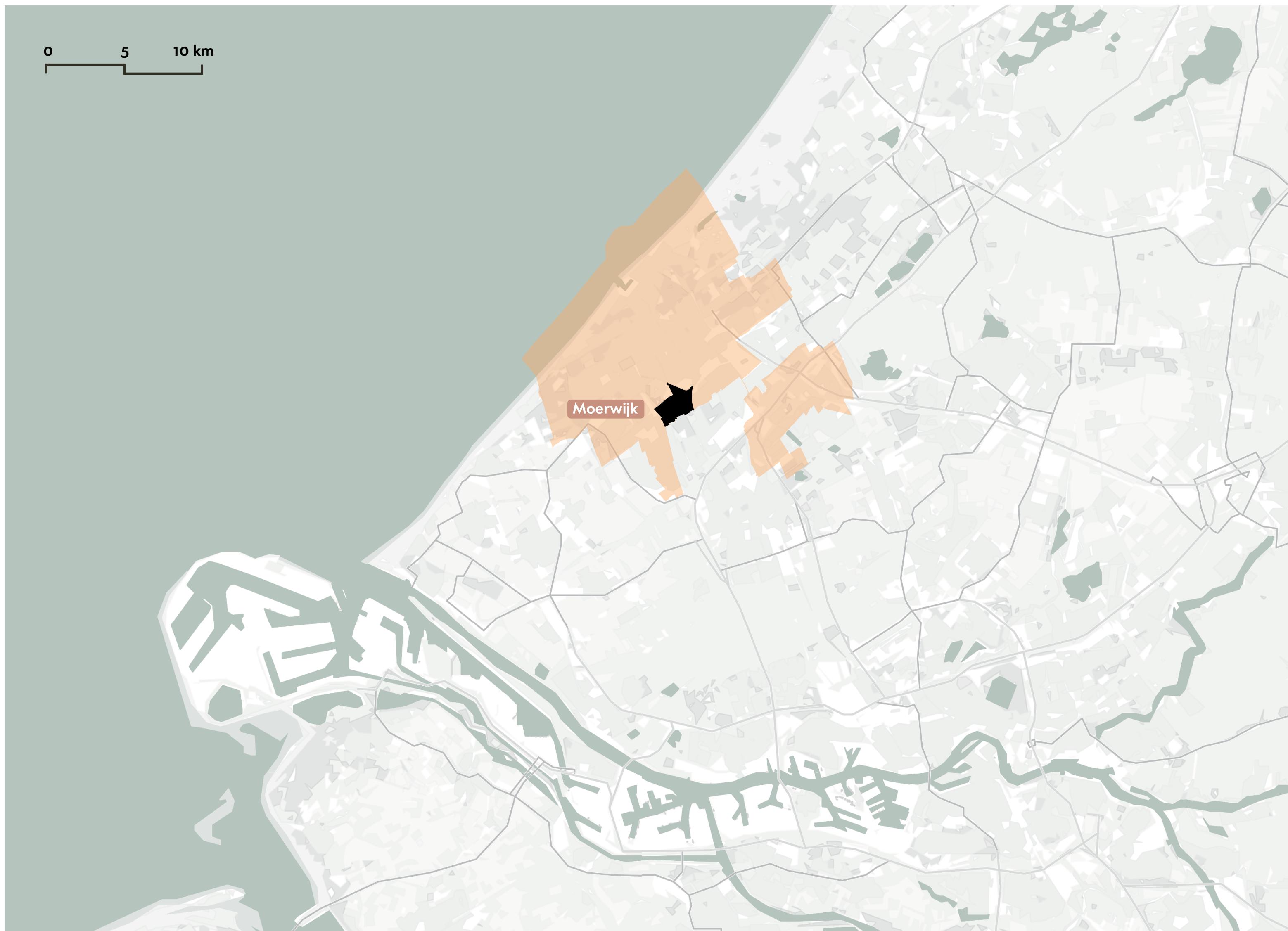


7819 social housing units



6151 low energy labels

Provincial plans



Provincial plans



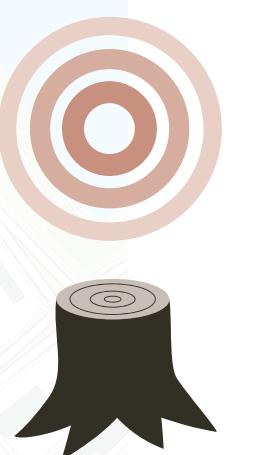
Local consequences

- Heat distribution point
- ↔ Open excavation
- ↔ Directed ground drilling

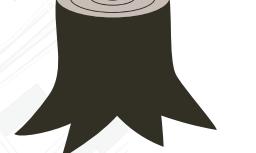


Local consequences

- Max. pipe diameter = 800 mm
- Min. pipe depth = 1500 mm
- Min. excavation depth = 2500 mm
- Working width = 15 m



Nuisance

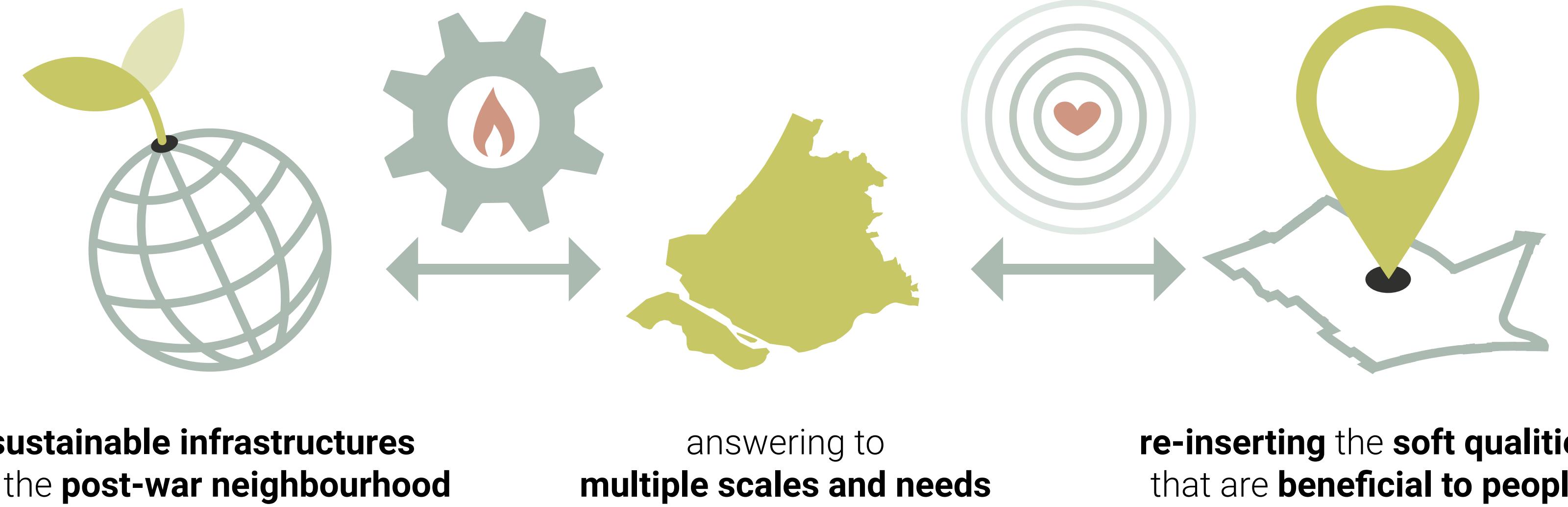


Tree removal

Local potential

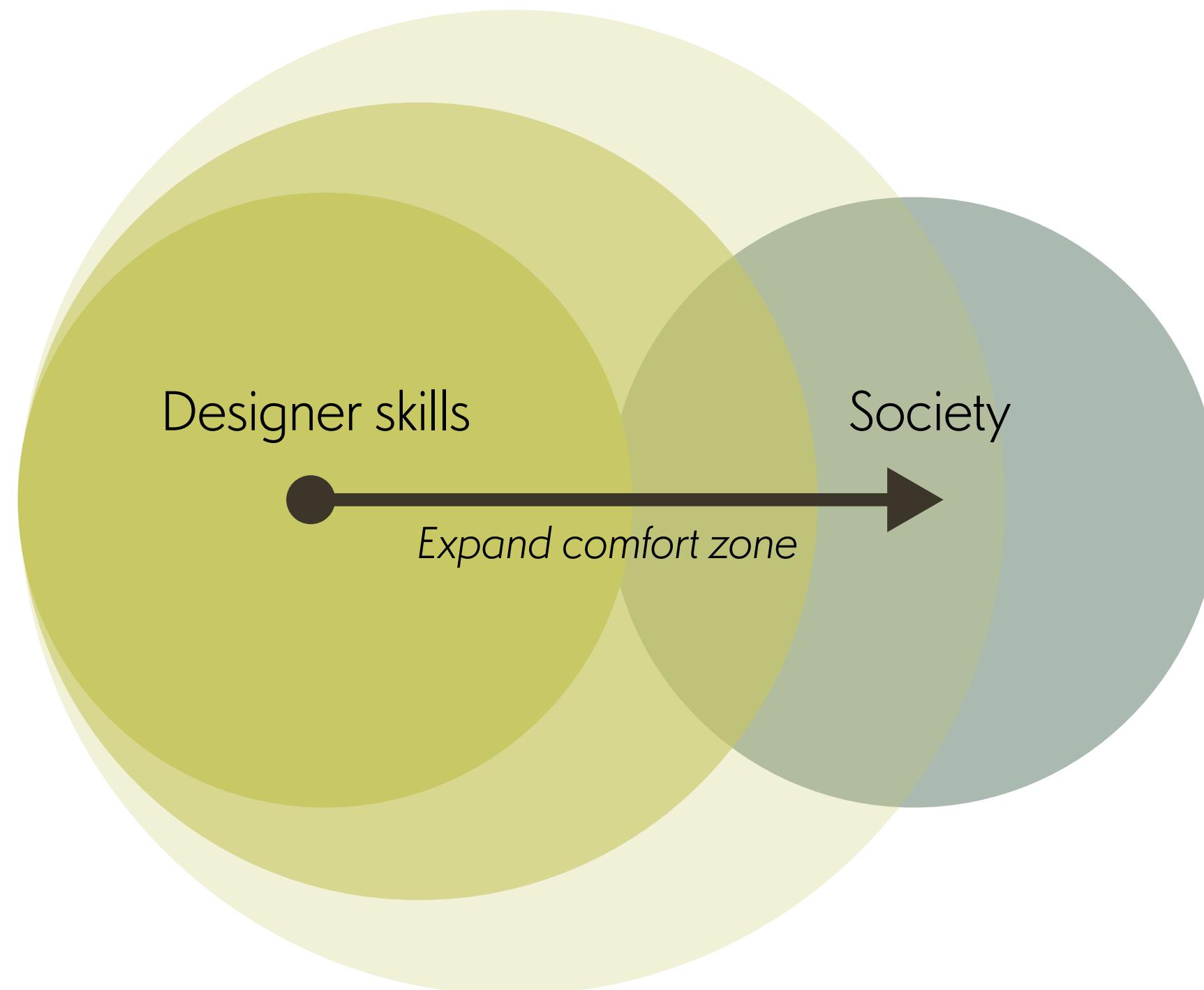


Turning heat back into warmth



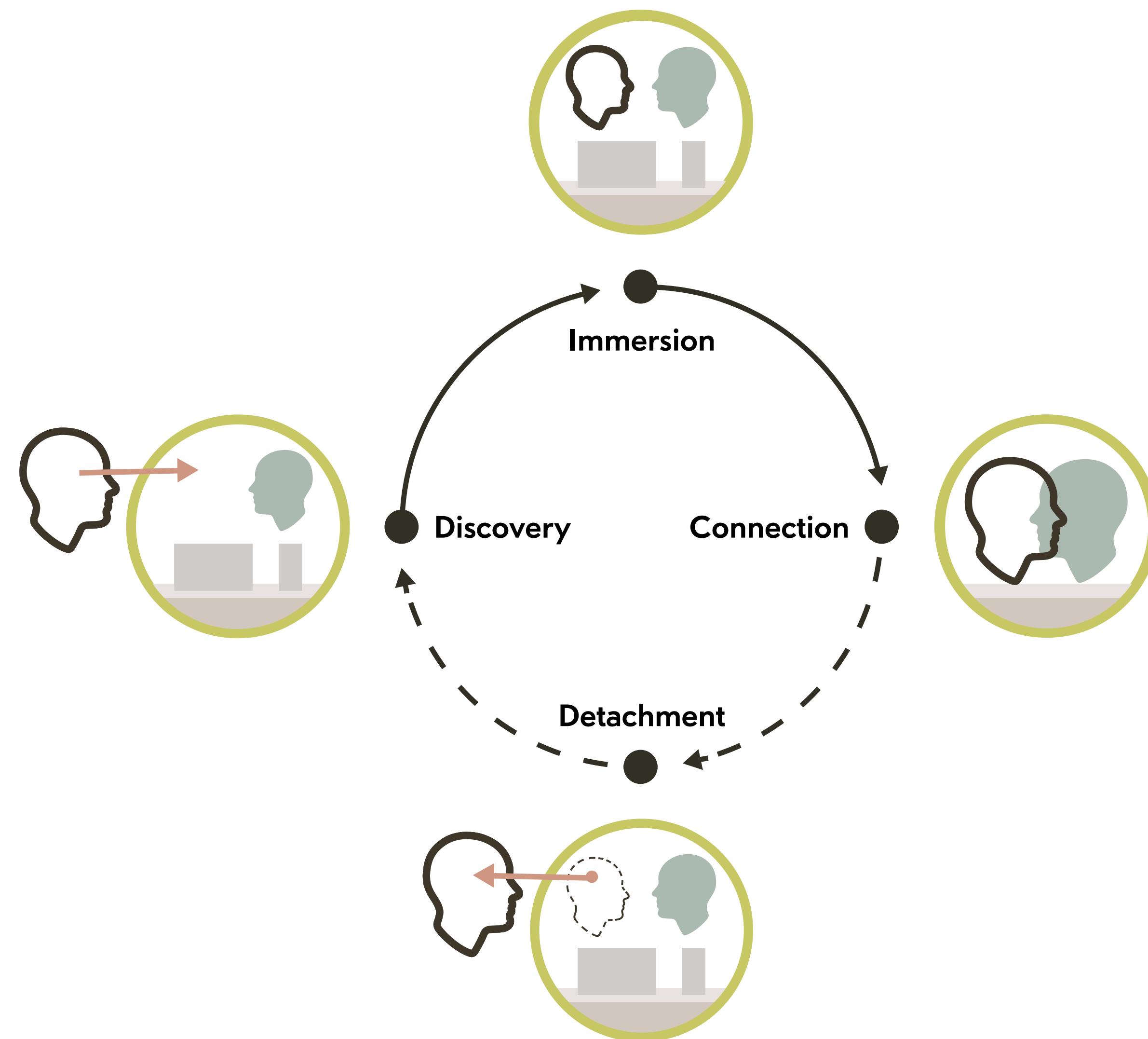
Expanding the comfort zone

Methods



Empathy in design

Methods



Ref: Adapted from Merlijn Kouprie & Froukje Sleeswijk Visser (2009) A framework for empathy in design: stepping into and out of the user's life, Journal of Engineering Design.

Thesis Hub / Testing

Scriptiewerkplaats Den Haag Zuidwest
Leiden-Delft-Erasmus Universities



TU Delft

Erasmus
University
Rotterdam
Erasmus

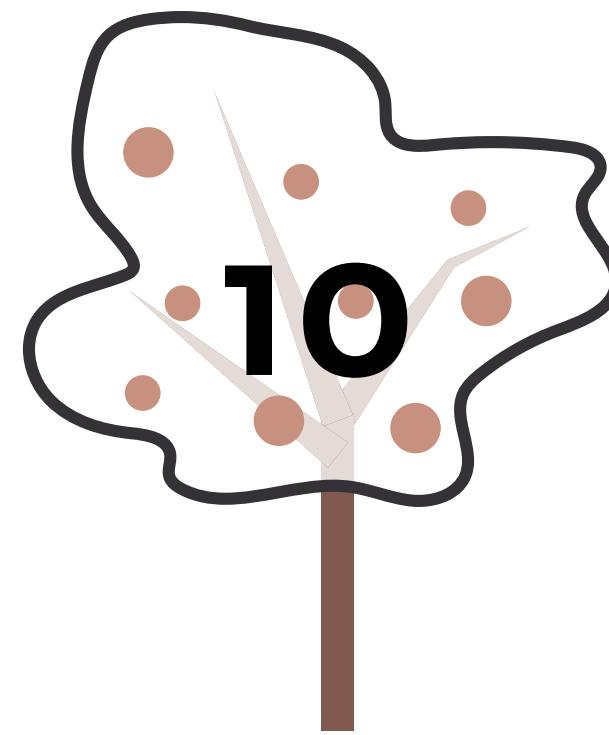


Ethics workshop - dr. Rodrigo Mena Fluhmann & Nanneke Winters

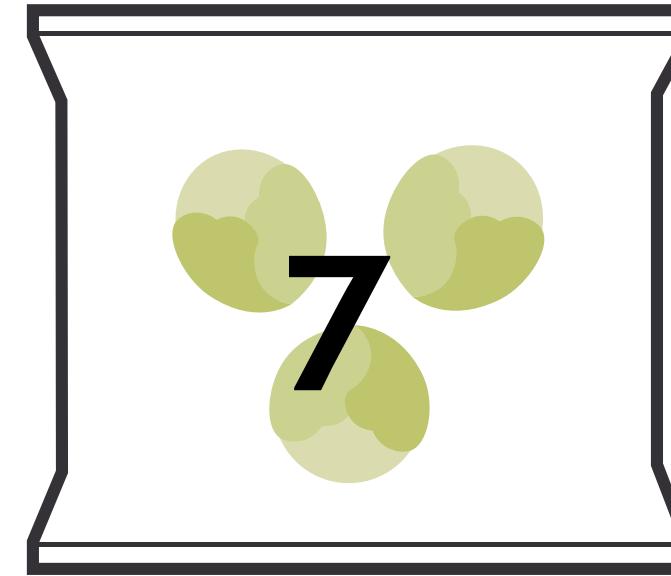


Winning analysis - praktijkdag WijWest Delft

Ten days in Moerwijk



Fruit trees



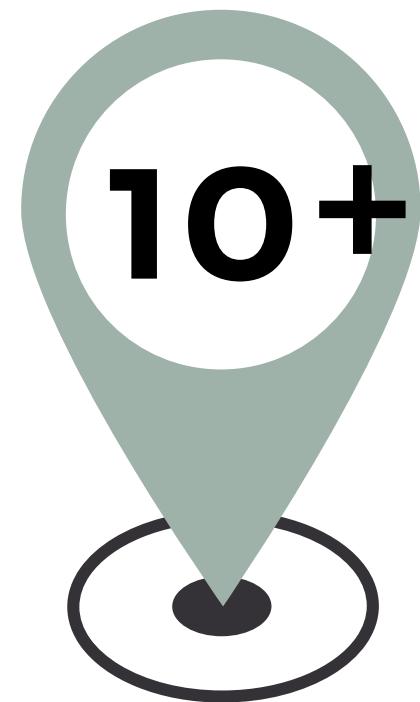
Bags of brussel sprouts



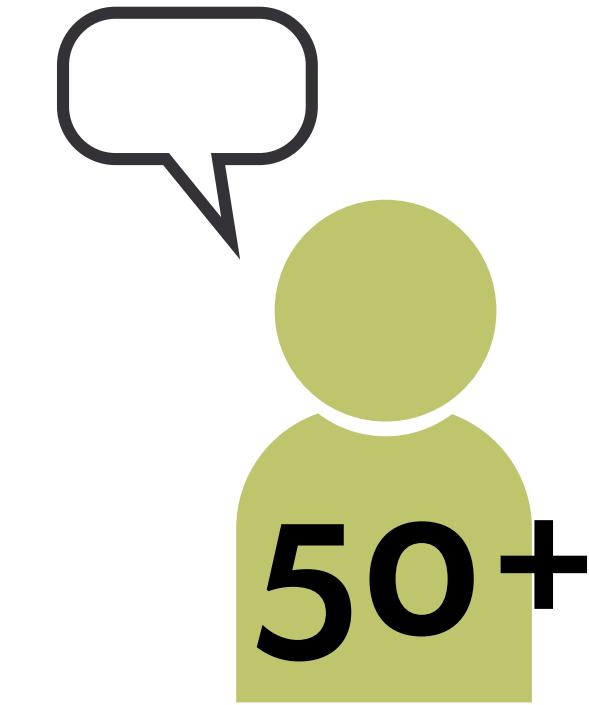
Elderly helped



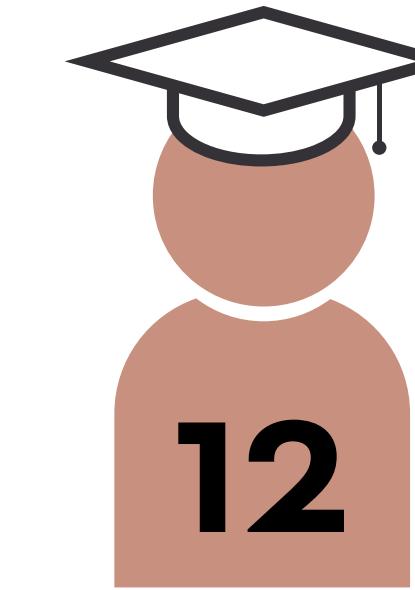
Affordable meals



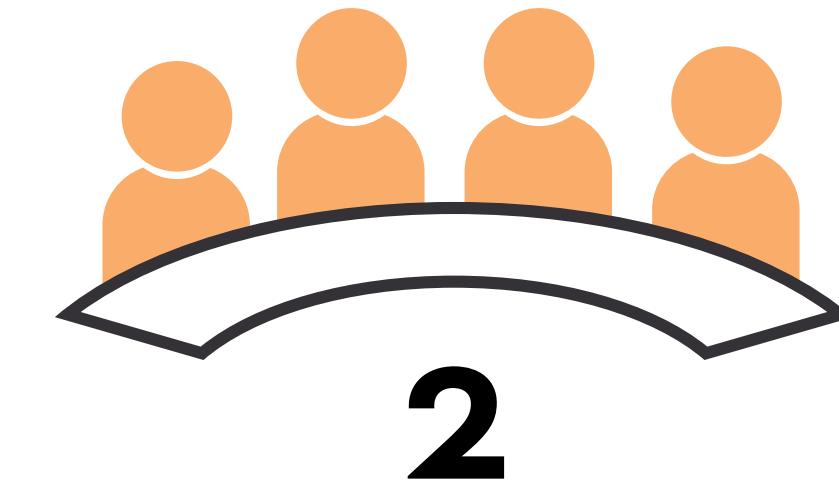
Local organisations



People spoken to



Social work interns



Council meetings

Participatiekeuken



Serving affordable meals



Helping in the kitchen

Buurttuin Moerwijk



Michel's Shed

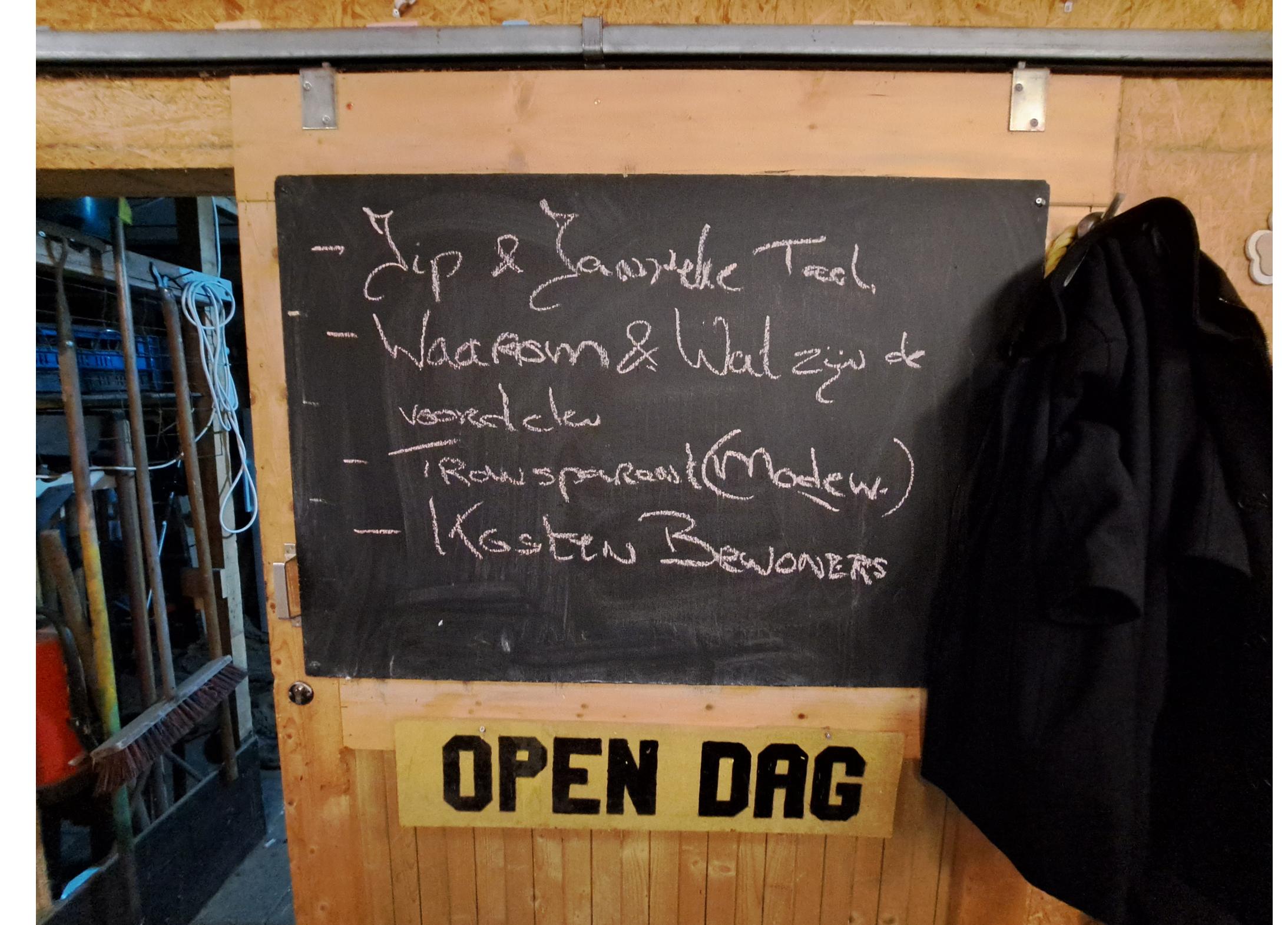


Planting Fruit trees

Buurttuin Moerwijk



Michel's shed



Points of attention

Marcuskerk / Food bank



Handing out food packages



Brick mozaique

Marcuskerk / Community garden



Community garden



Oven for pizza parties

Block 33 / Bondgenoten



Youth-hub Block-33



Meeting buurtagenda bondgenoten

Openbare bibliotheek Moerwijk



Public library in care complex



Klik & tik digital skill workshop

Buurtkamer de Luyk



Neighbourhood living room

A woman with dark curly hair, wearing a blue long-sleeved shirt and a black apron with the text "AANSCHUIF TAFELTJE" on it, is holding a clear plastic dish filled with food. She is standing in front of the "BUURT KAMER" building. The building has large blue letters spelling "BUURT KAMER" on its facade. To the right of the building, there is a window with a colorful display of various items. The background shows a street with a car and some trees.

**Gezonde lunch elke dinsdag
van 11:00 tot 13:00**
Kosten € 2

**Gezonde Wereldkeuken elke
woensdag van 17:00 tot 20:00**
Kosten €3

*Locatie: Buurtkamer de luyk
Jan luykenlaan 119
2513JM Den haag*

Reserveren kan via Tel:0613511587

Healthy lunches

Al-Hikmah Mosque



Geloven in groen / faith in green



Solar panels on the mosque

Beauty & Friction



Green axes along the erasmusweg



Rules and signs

Beauty & Friction

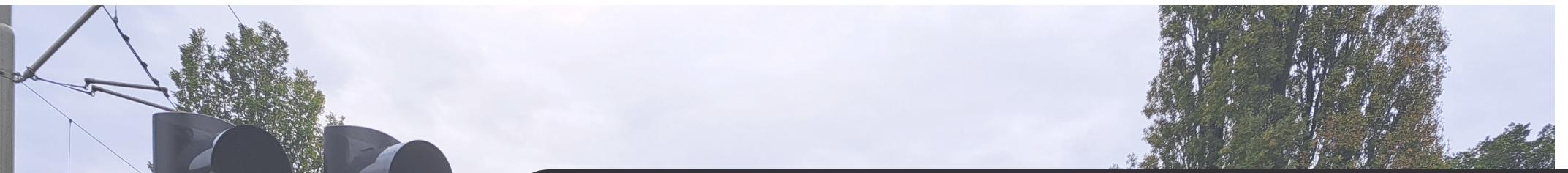


Car-centrism



Clutter

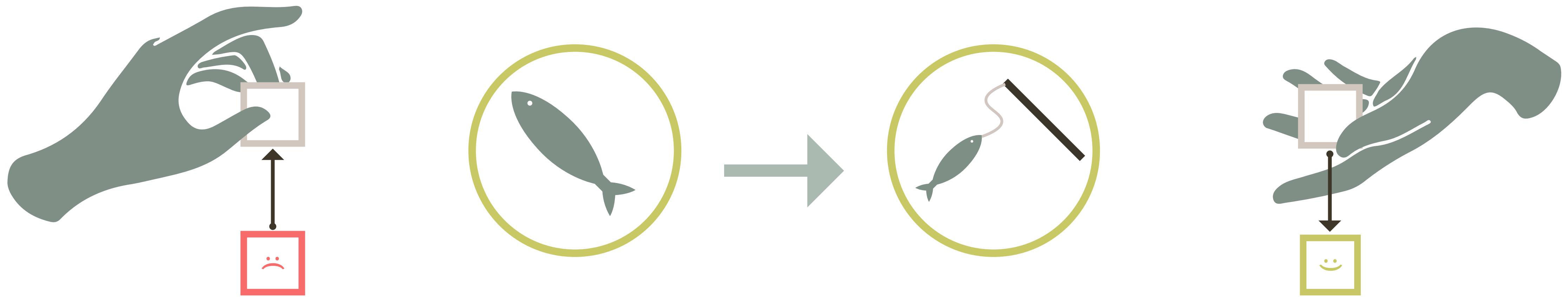




“Instead of giving them fish, you should teach them how to fish”

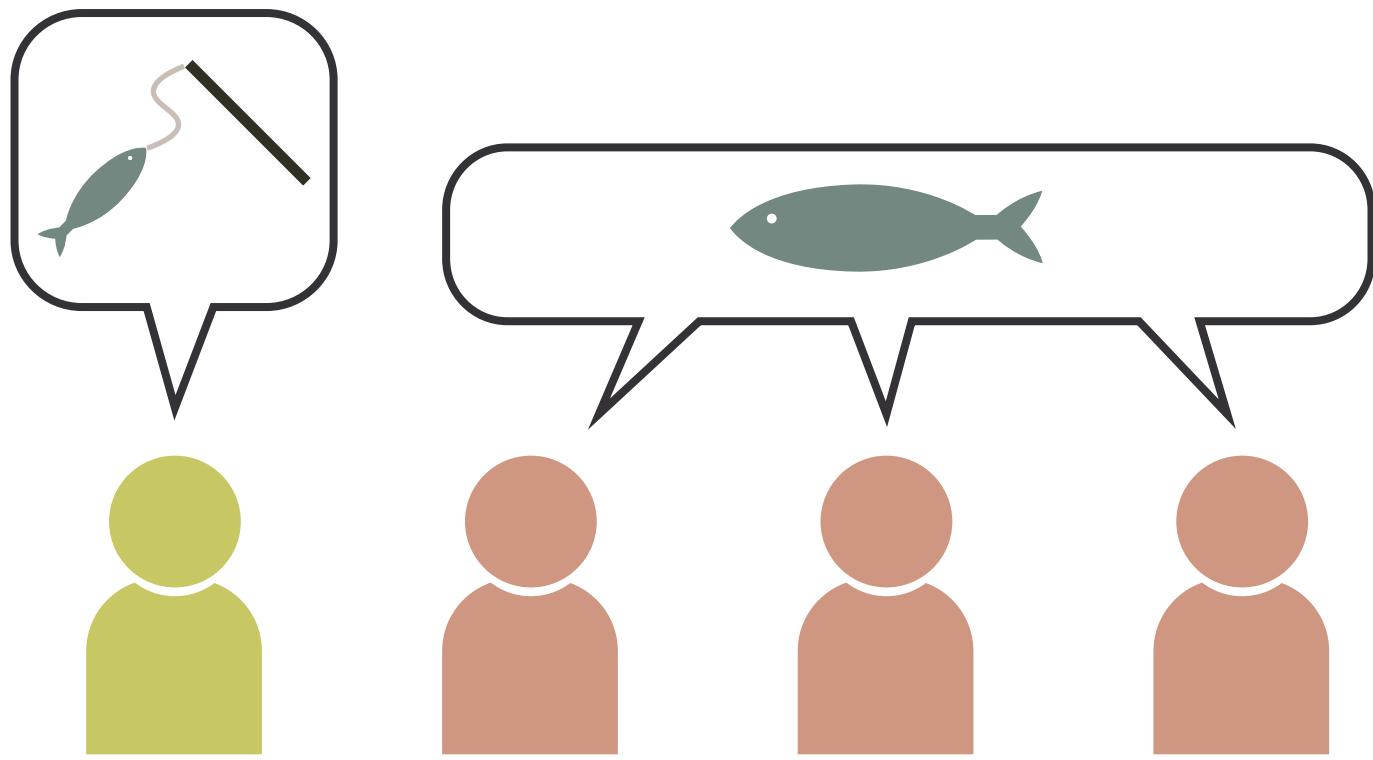


Teaching people how to fish



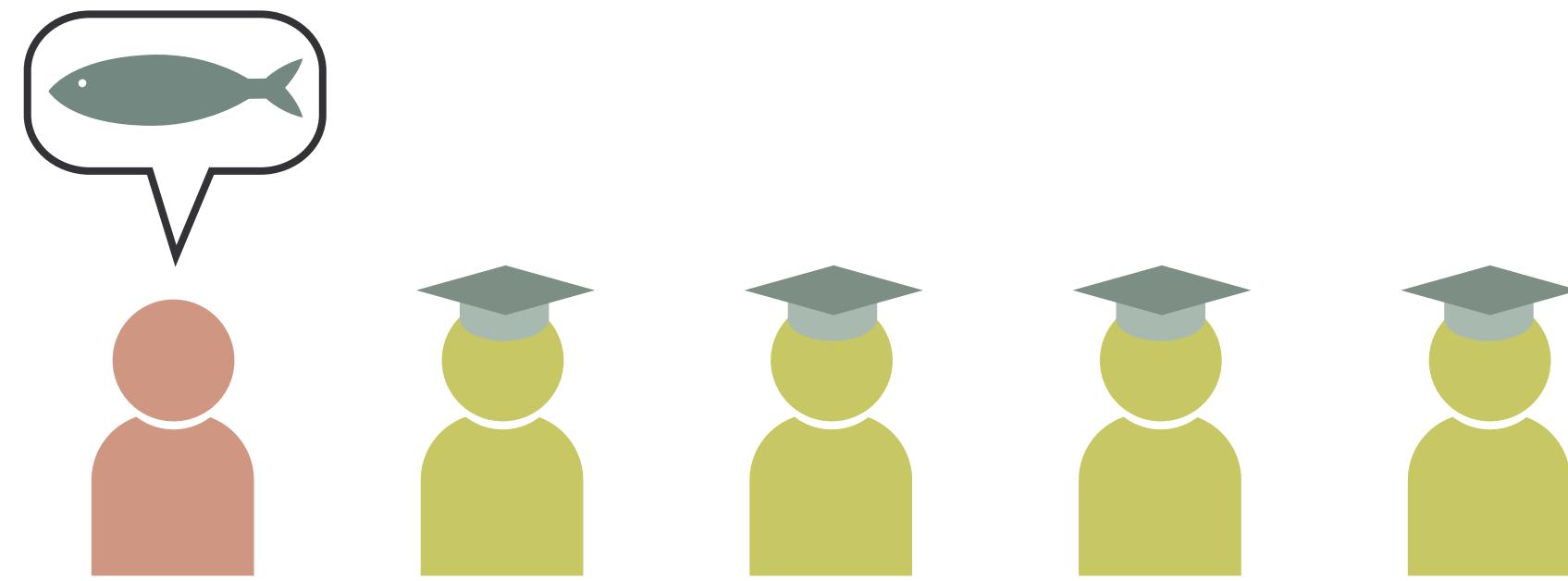
*“I wish to be the instrument of my own, not of other men’s acts of will.
(...) to be moved by reasons, by conscious purposes, which are my own,
not by causes which affect me, as it were, from outside.”*

Berlin, I. (1969). Two concepts of liberty. *Four Essays On Liberty* (p. 142). Oxford University Press.



Age 15-75 without a job

11.530 unemployed



Age 18-30 without start qualification

920 drop-outs

A place for the youth

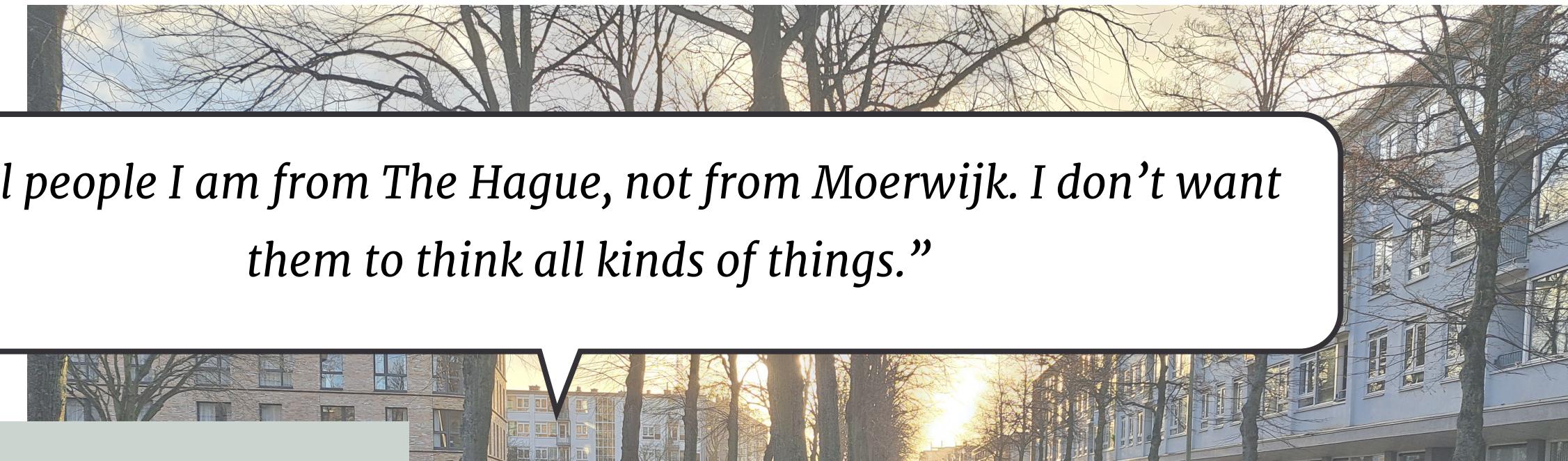


Organised youth places

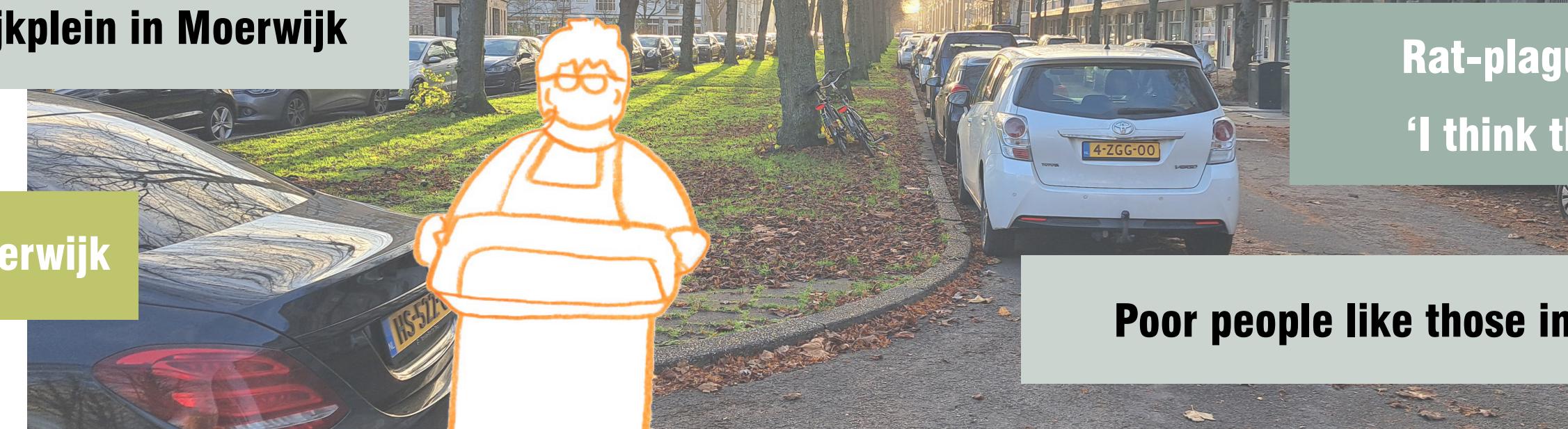


Public space

Stigma



"I tell people I am from The Hague, not from Moerwijk. I don't want them to think all kinds of things."



moerwijk the hague criminality

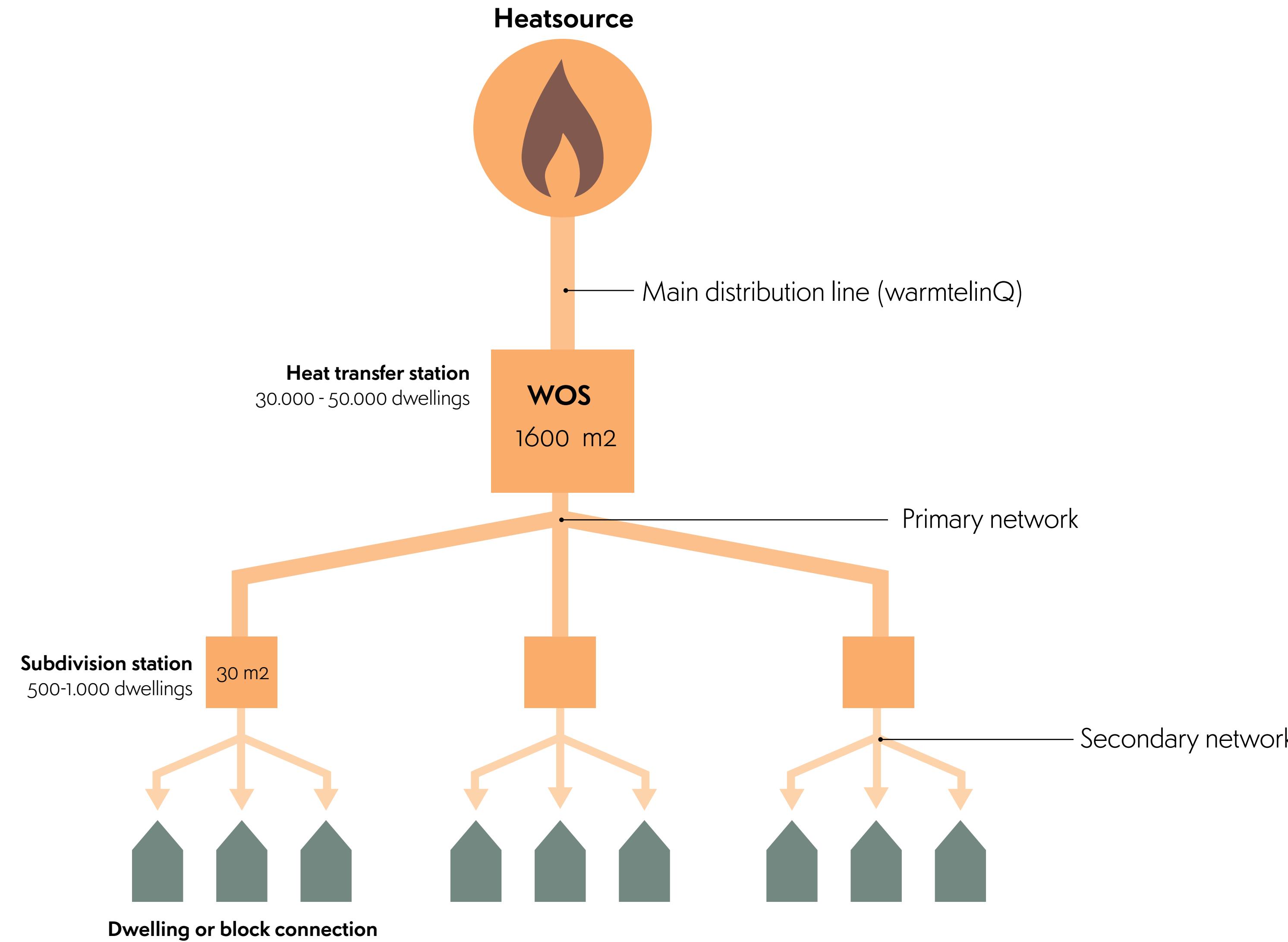


moerwijk poorest neighbourhood

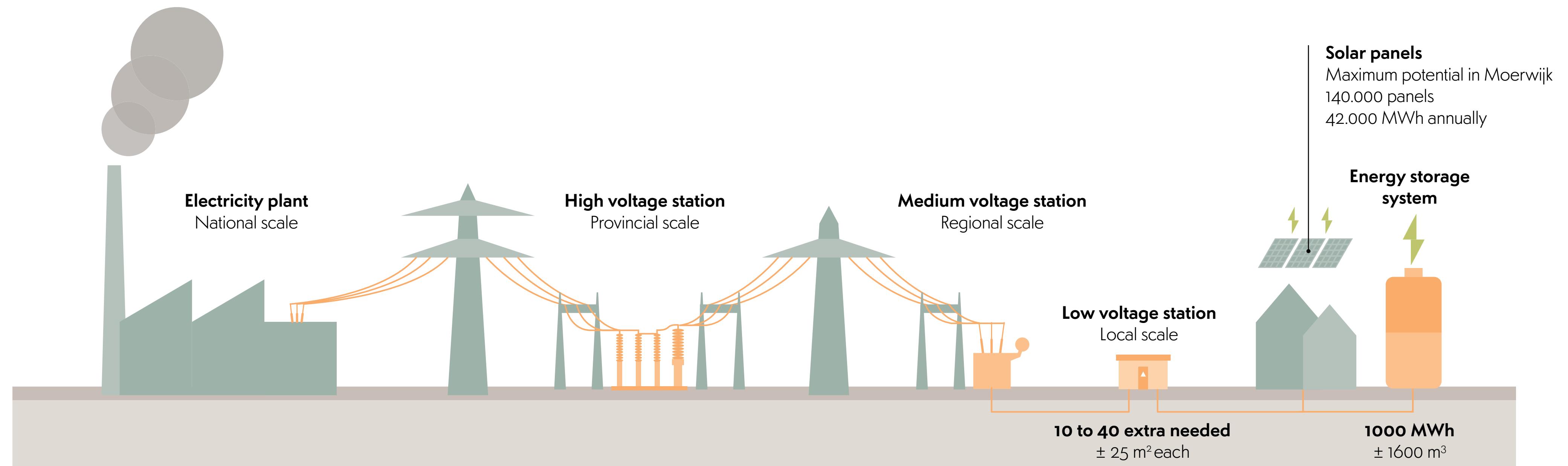


moerwijk deprived area

Infrastructure for district heating



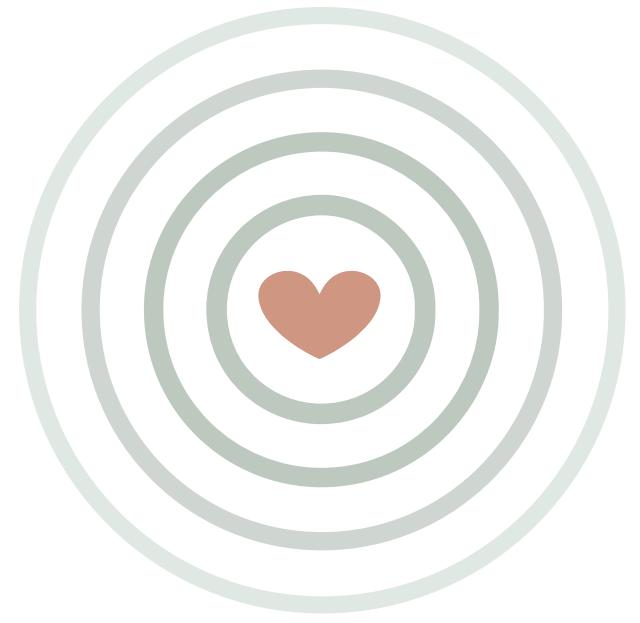
Infrastructure for electricity



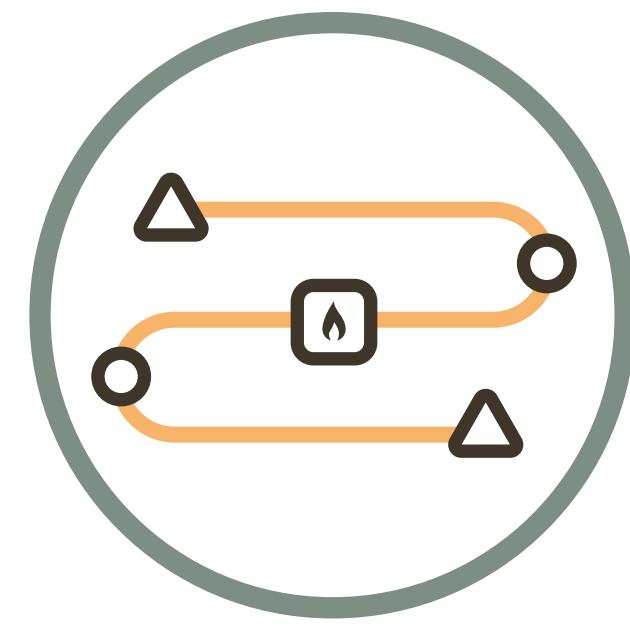
Existing strengths and potential



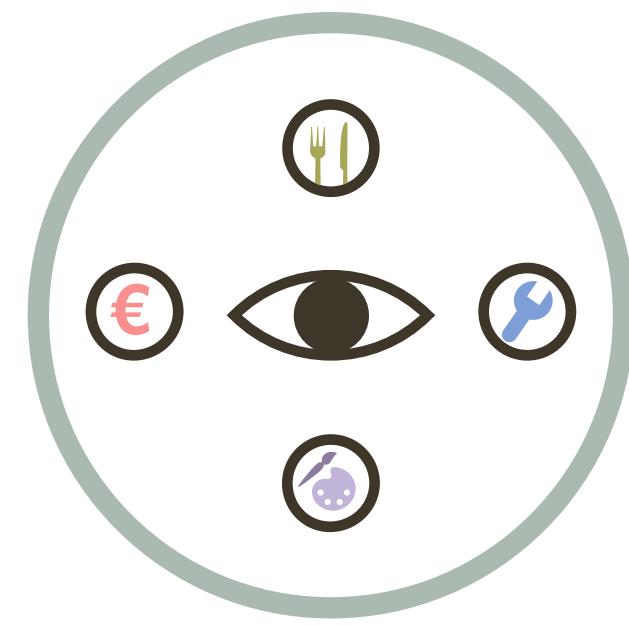
Research conclusions



**Improving the soft qualities in
the neighbourhood**



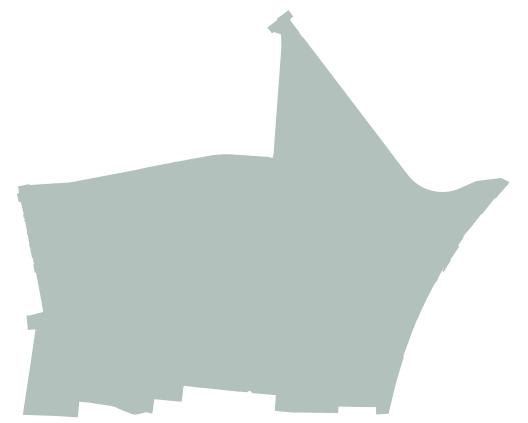
**Along stations and
infrastructural axes**



**building from existing
strengths and challenges**

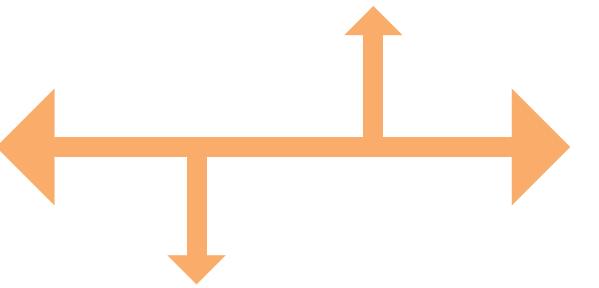
A simple formula

**Sensitive
understanding**



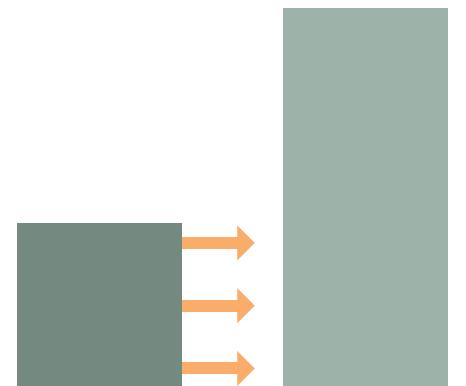
Urban

**Network of
pipes**

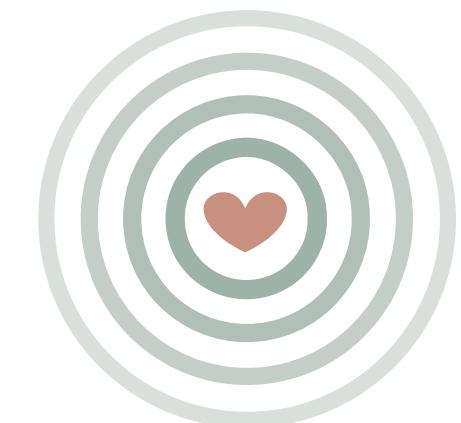


Visible distribution along axes

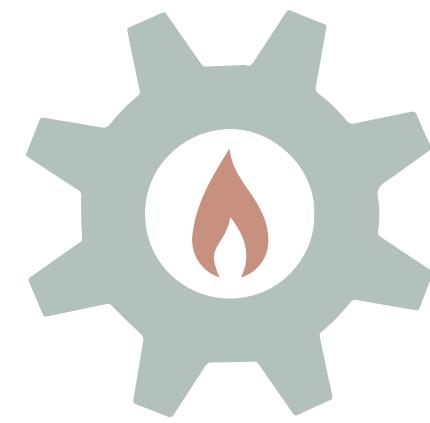
**Upgraded
endpoints**



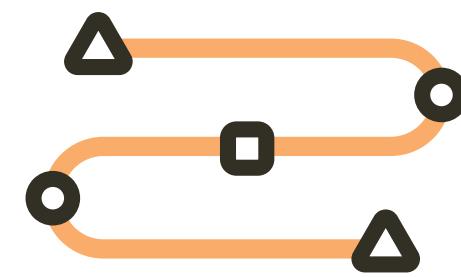
Attach / Infill



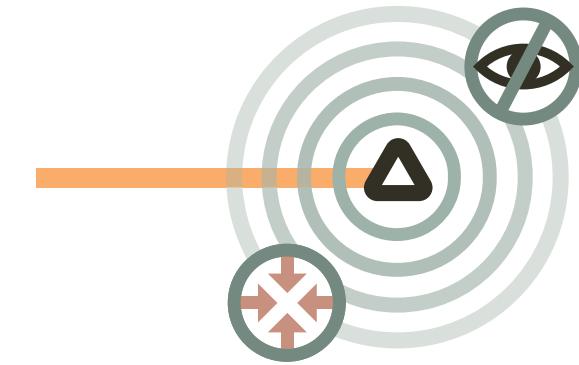
Community



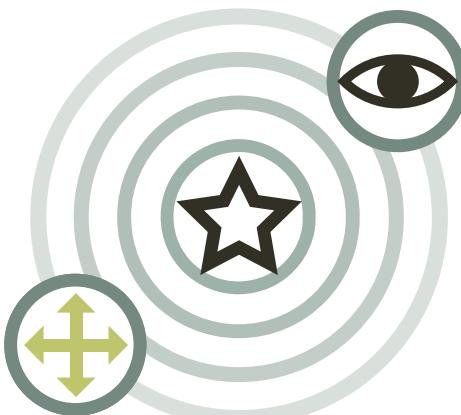
Technical



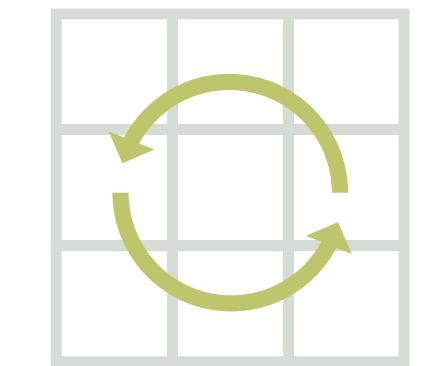
Intervention nodes



Strategic endpoints

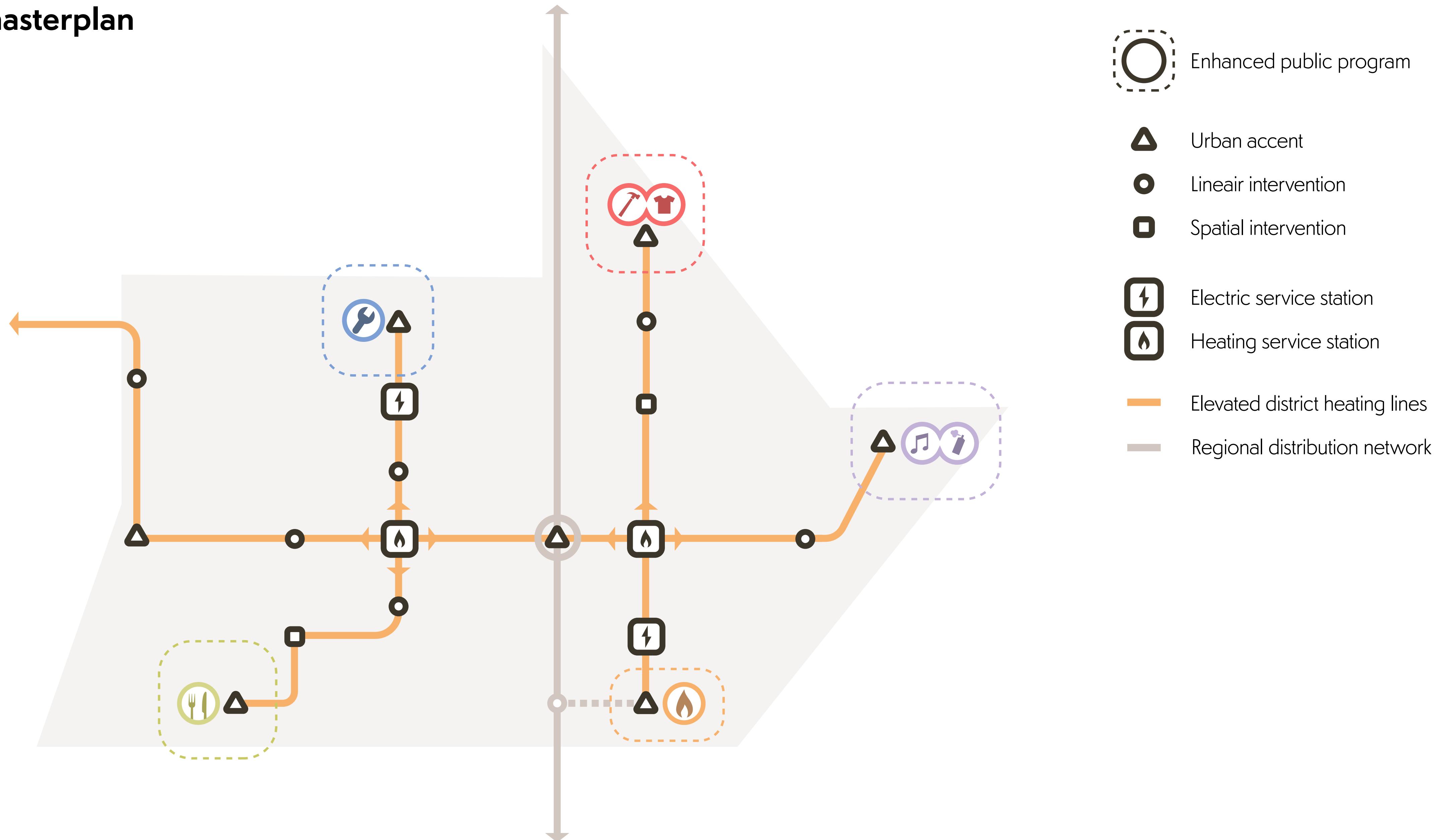


Landmark / contrast

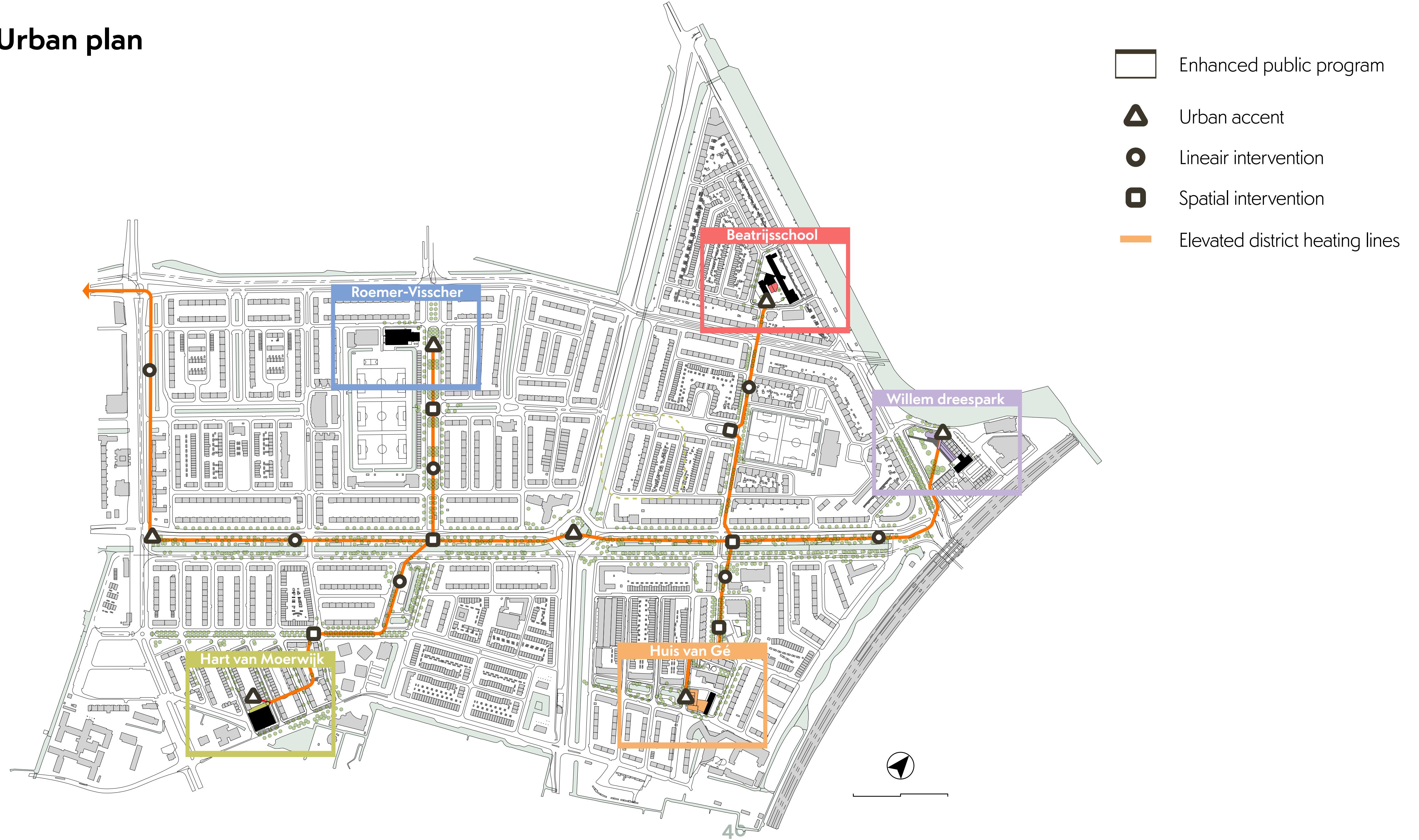


Reuse / Material logic

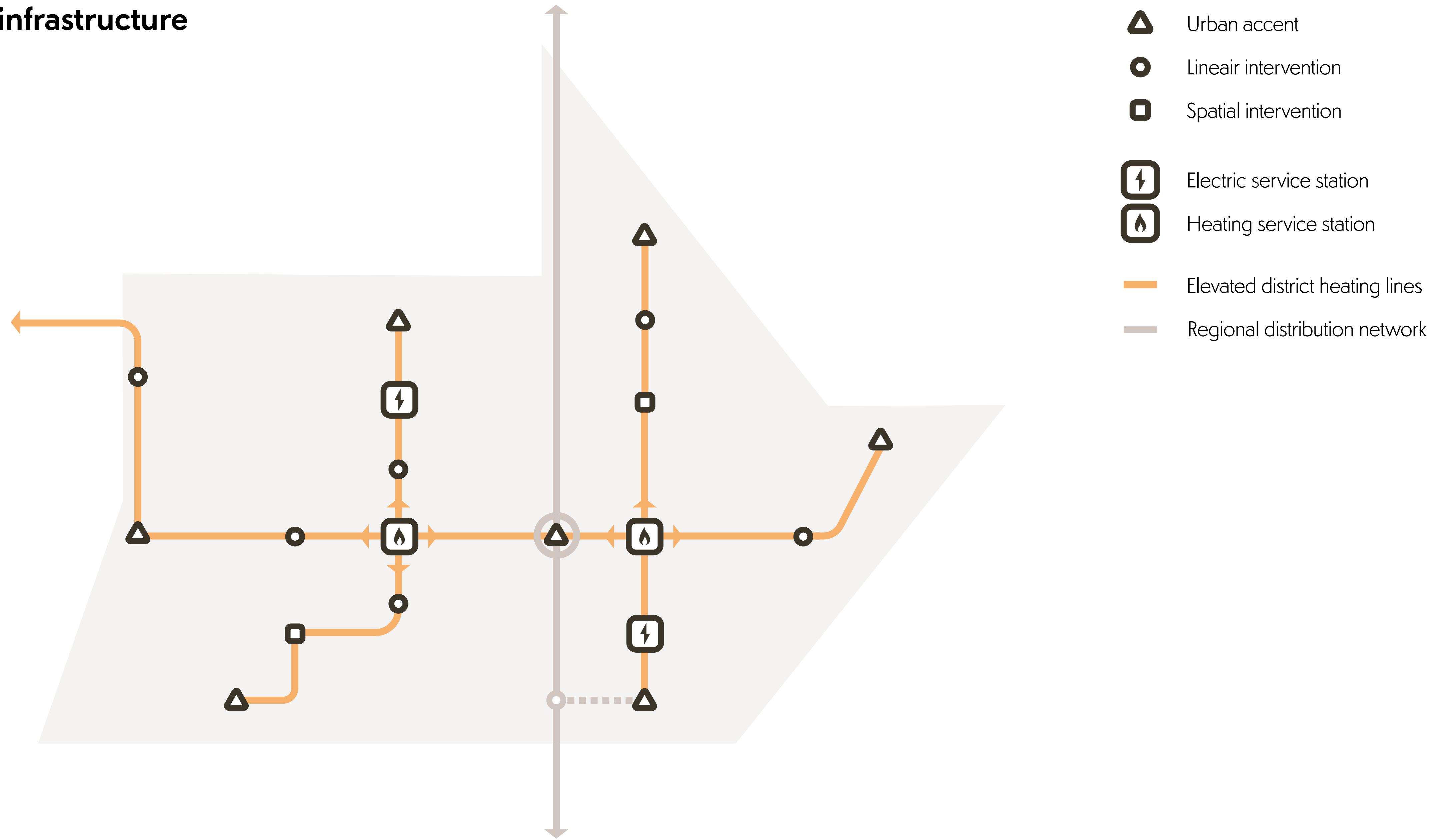
The masterplan



Urban plan



Hard infrastructure



The pink pipes of Berlin

Pollems GmbH

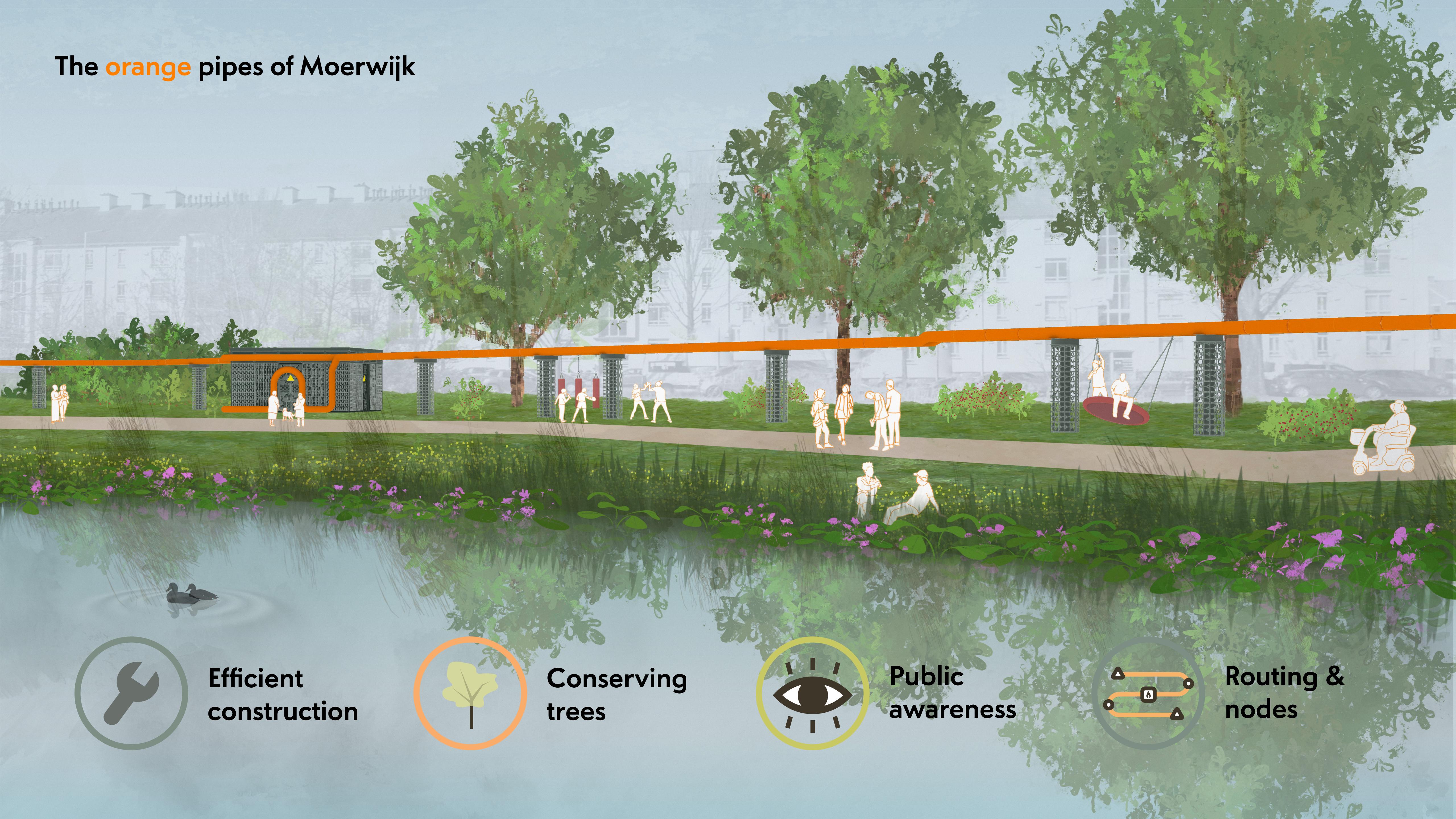


Bends and streetscapes



Contrast and flexibility

The orange pipes of Moerwijk



Efficient
construction



Conserving
trees



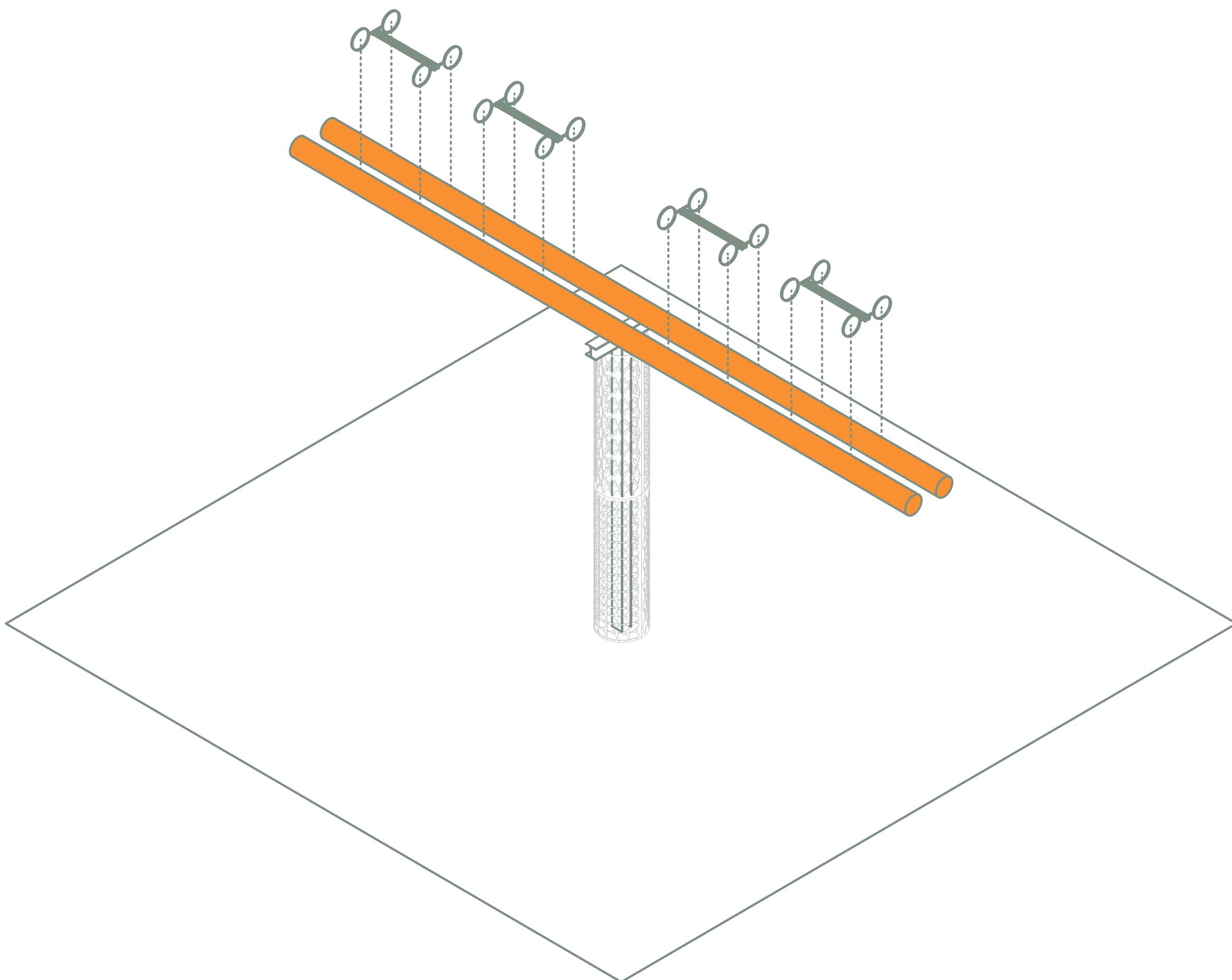
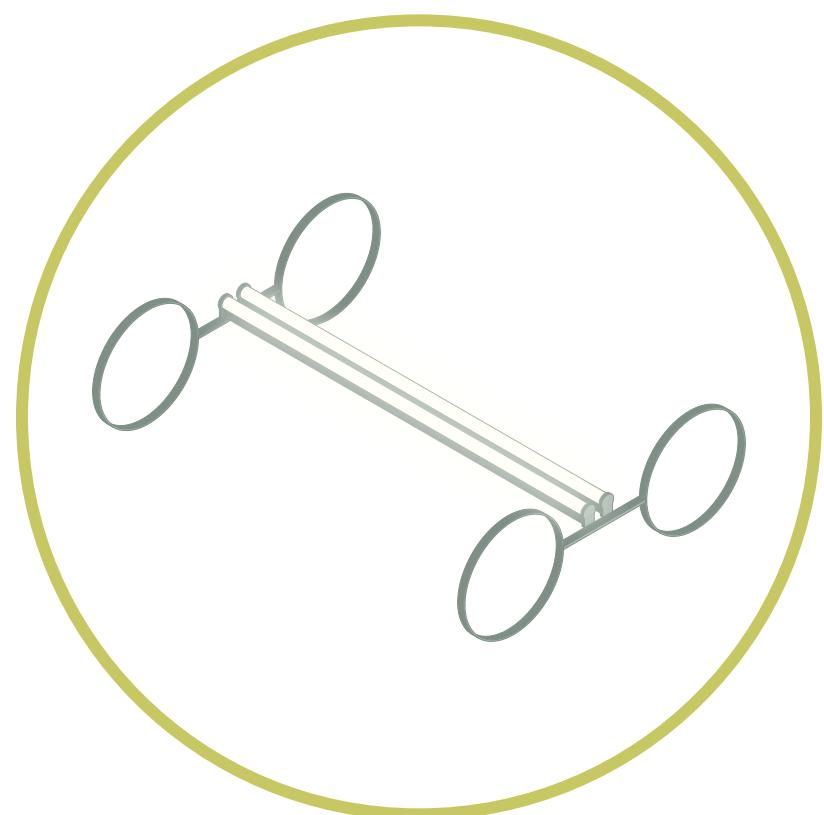
Public
awareness



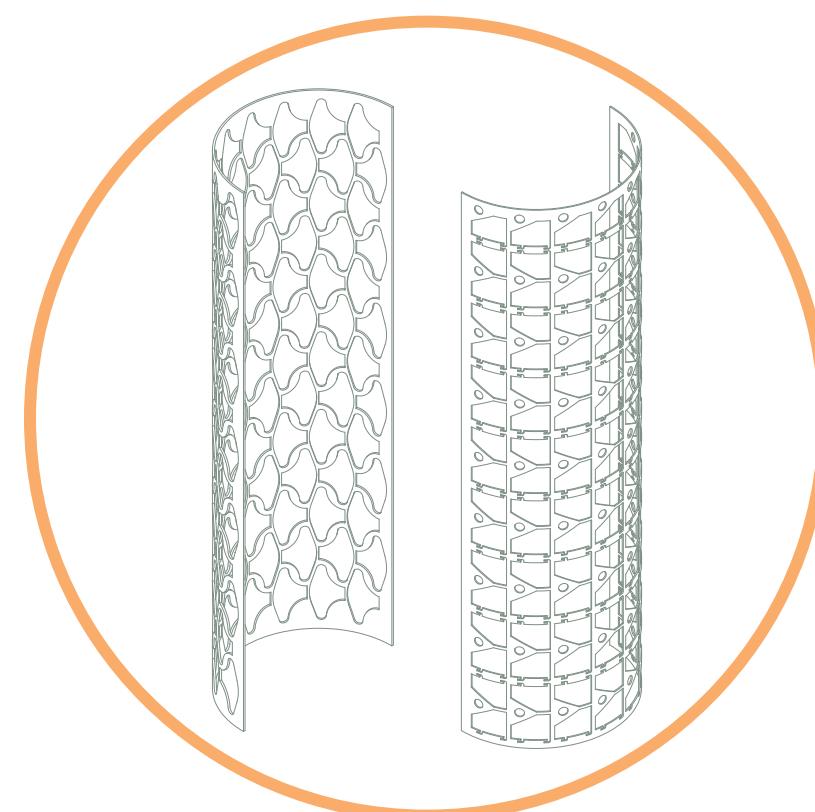
Routing &
nodes

The basic column

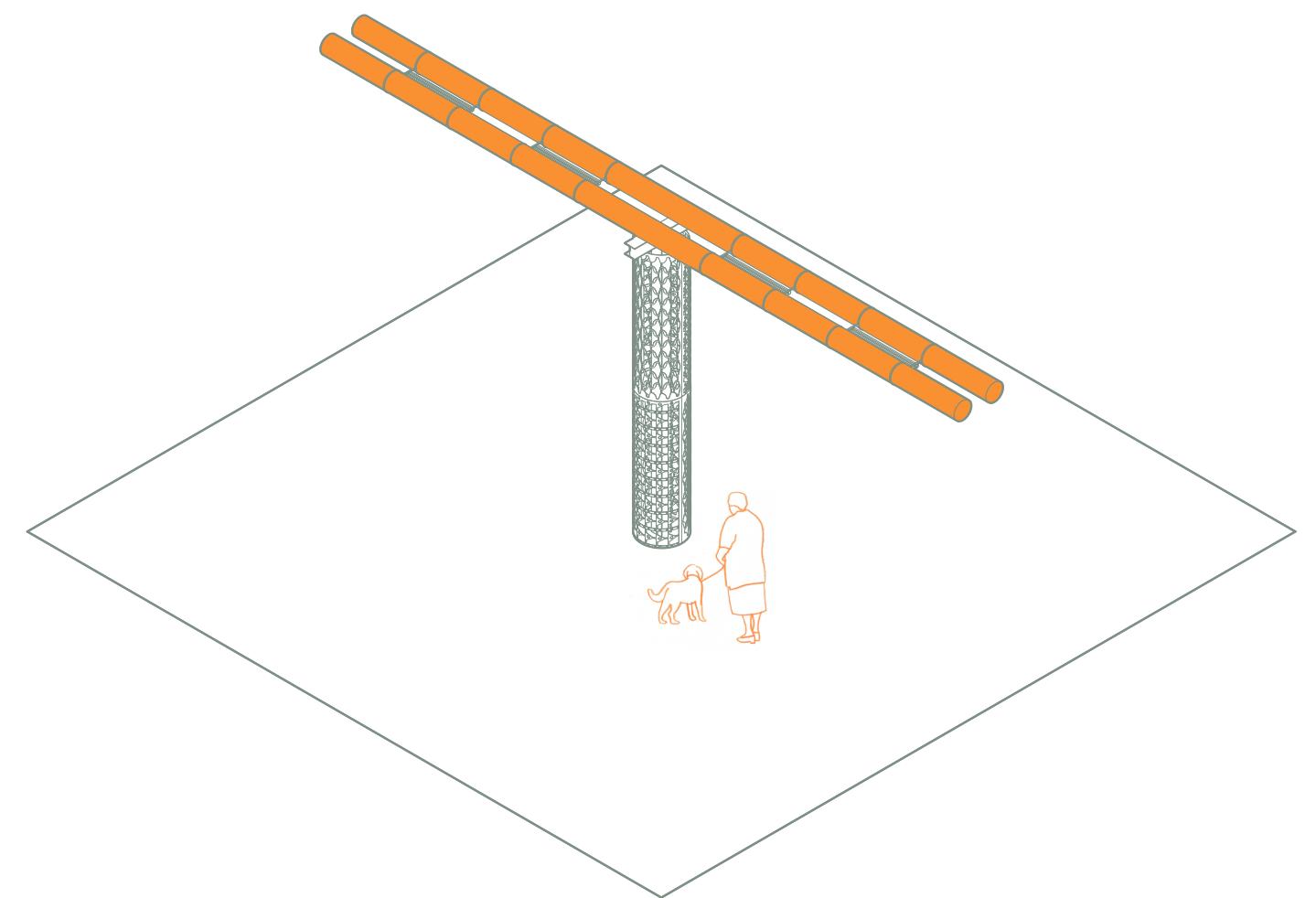
Lighting fixtures



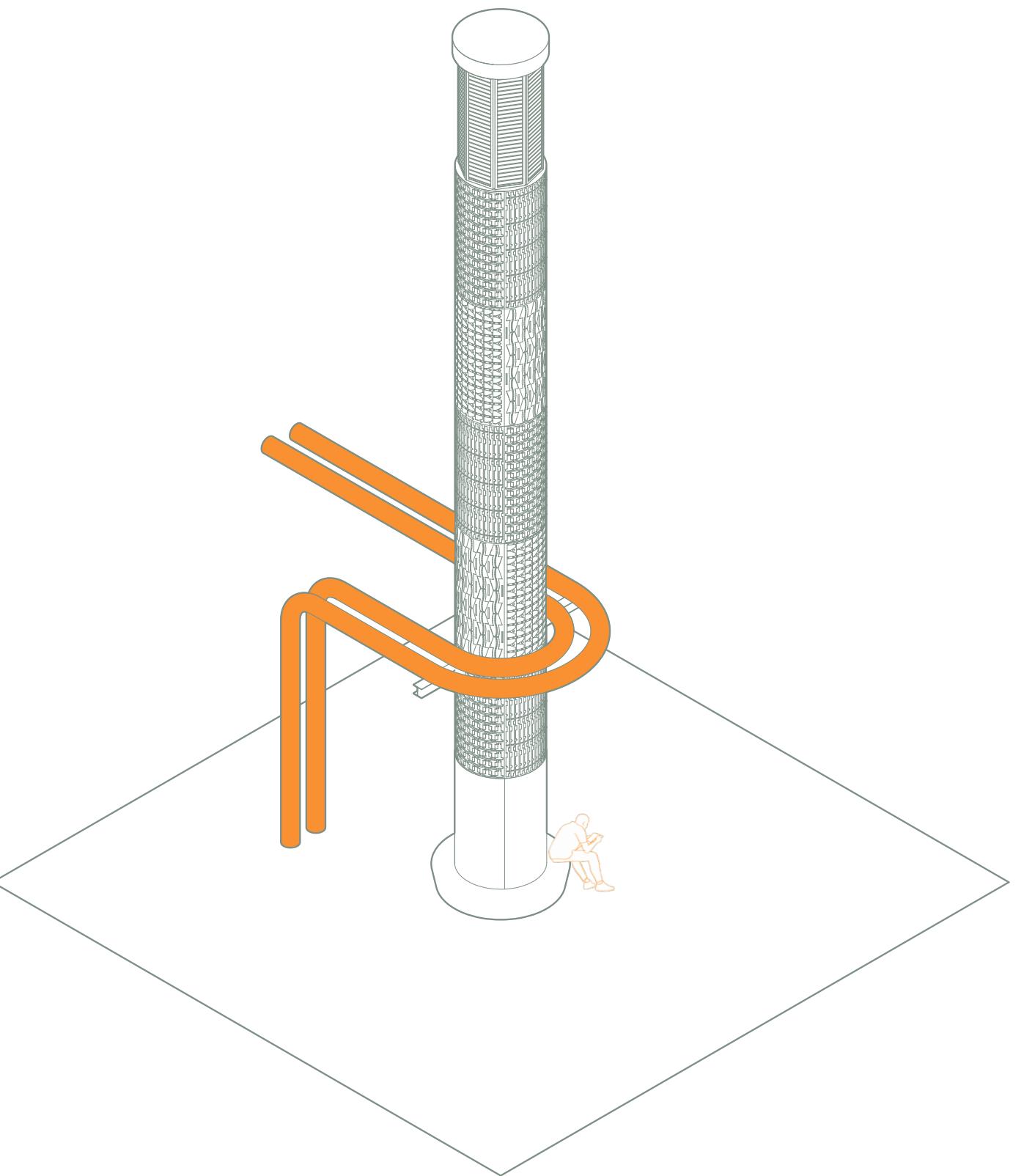
Bended contour sheets



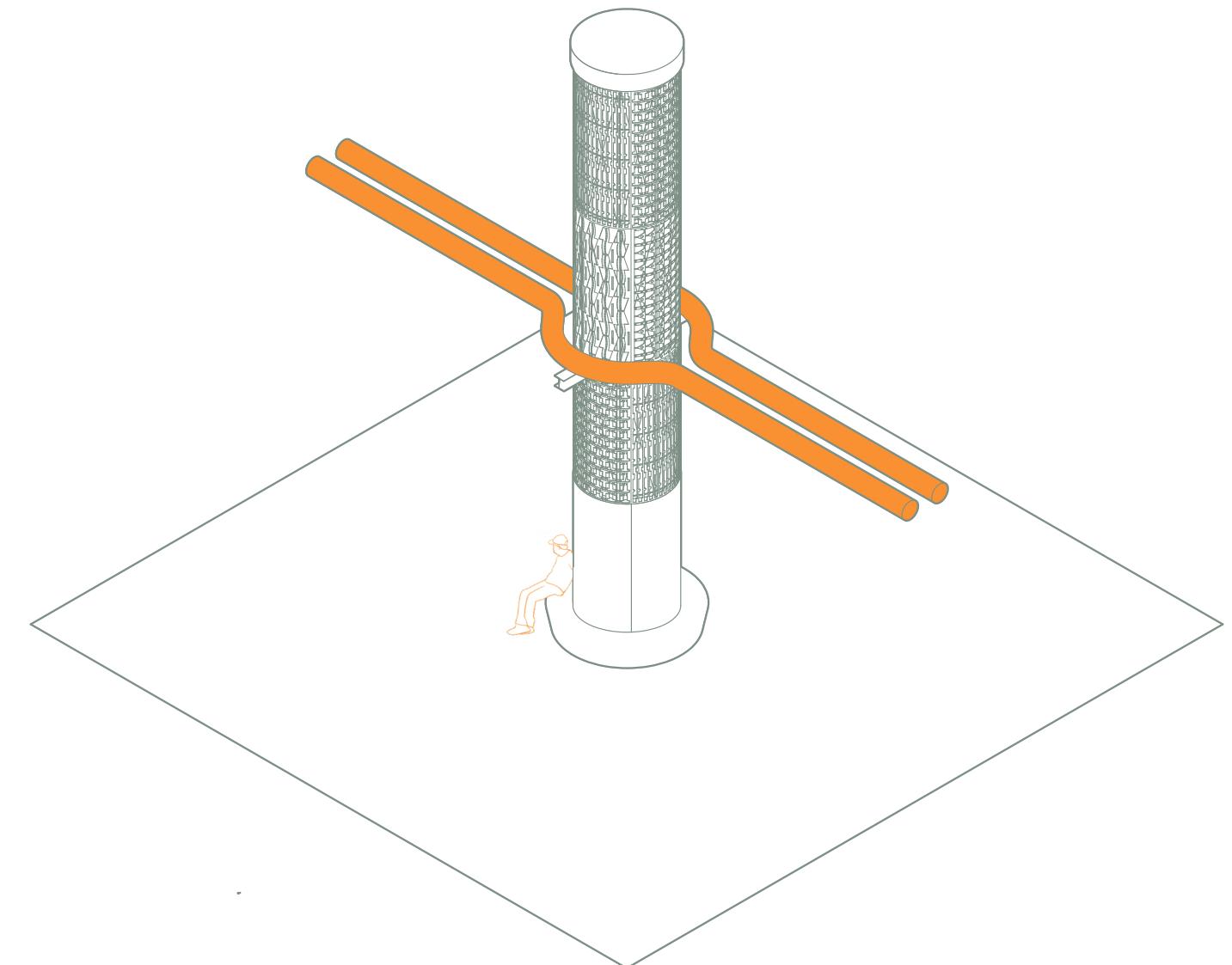
Accents



Column



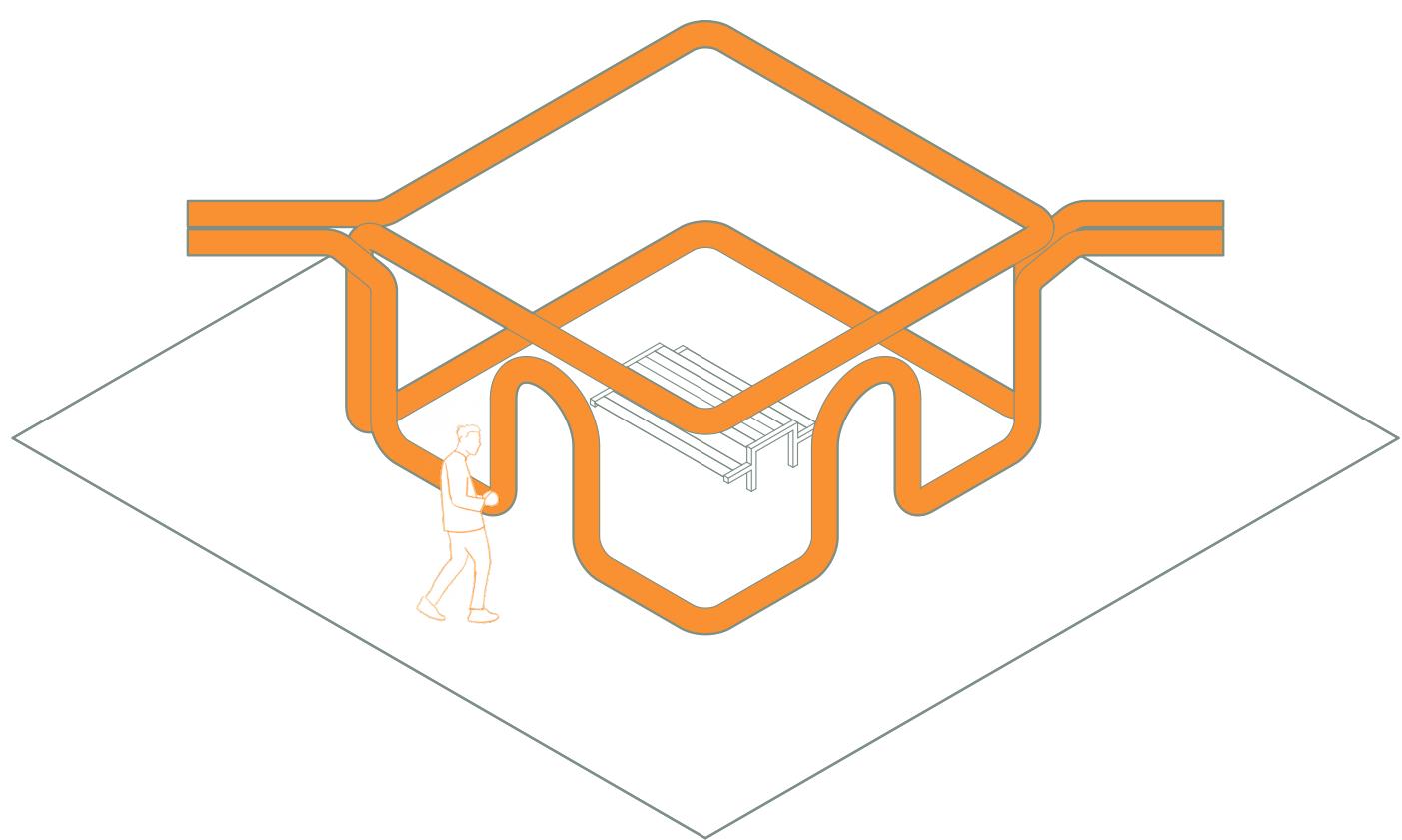
Solar chimney



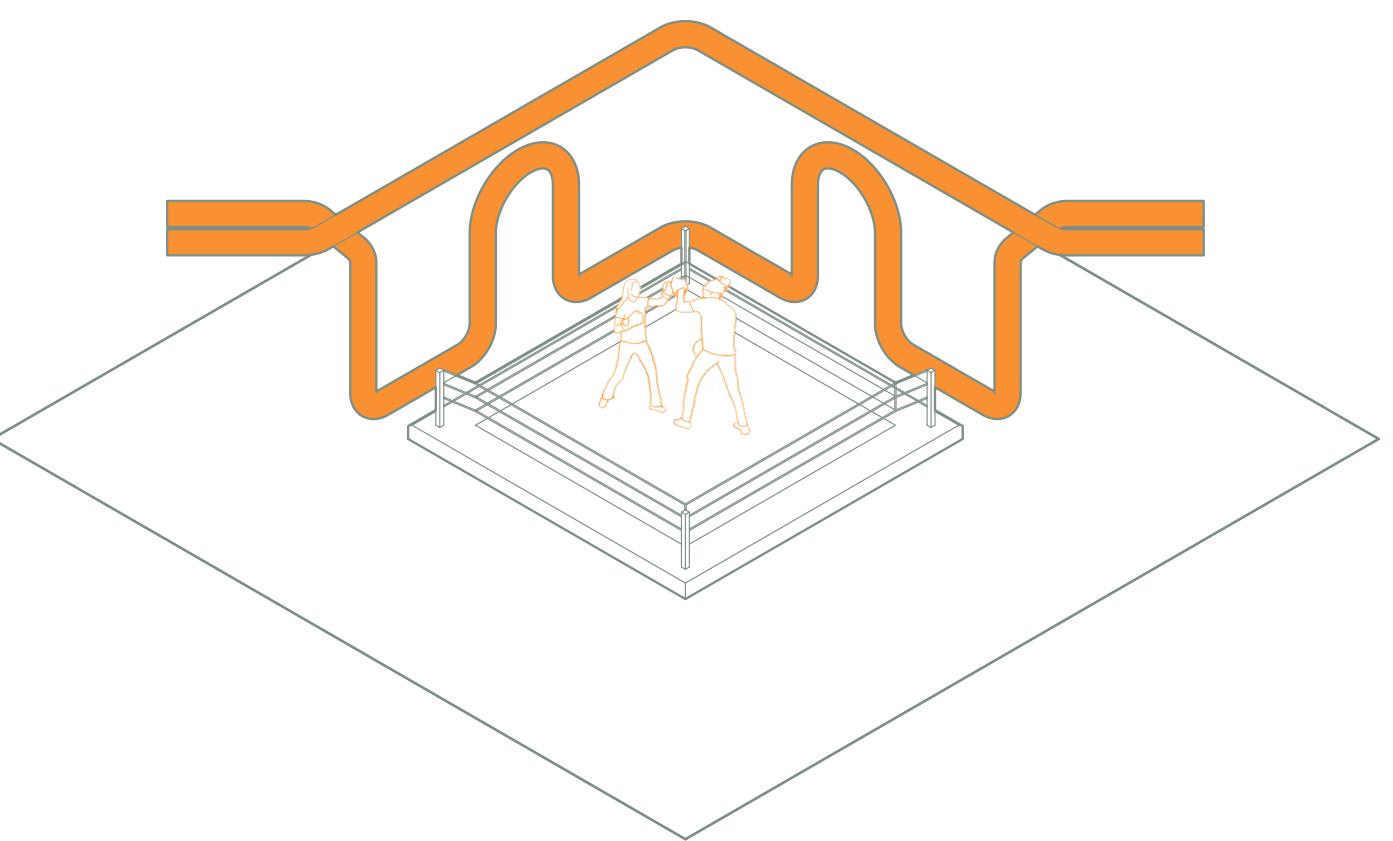
Tower



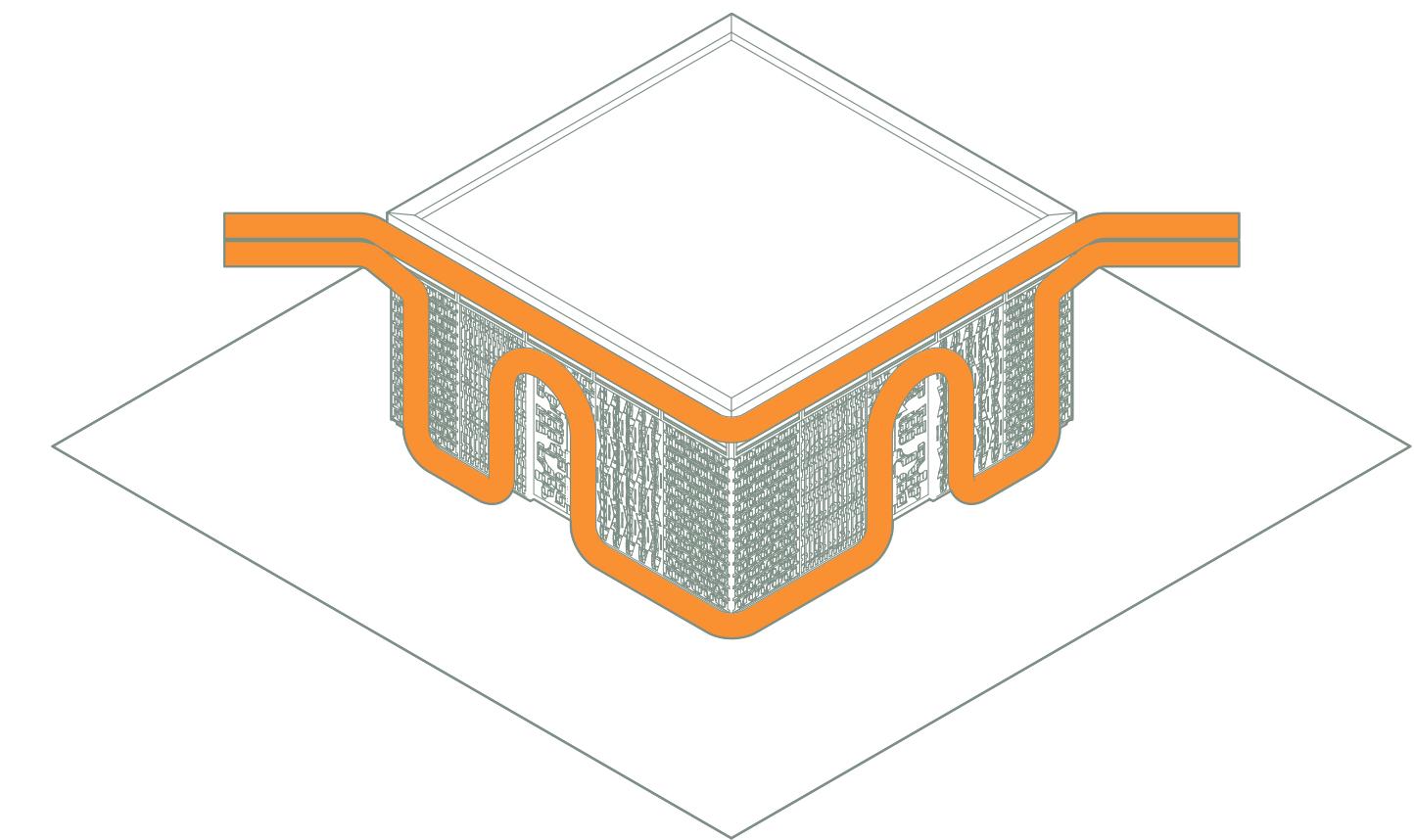
Spaces



House



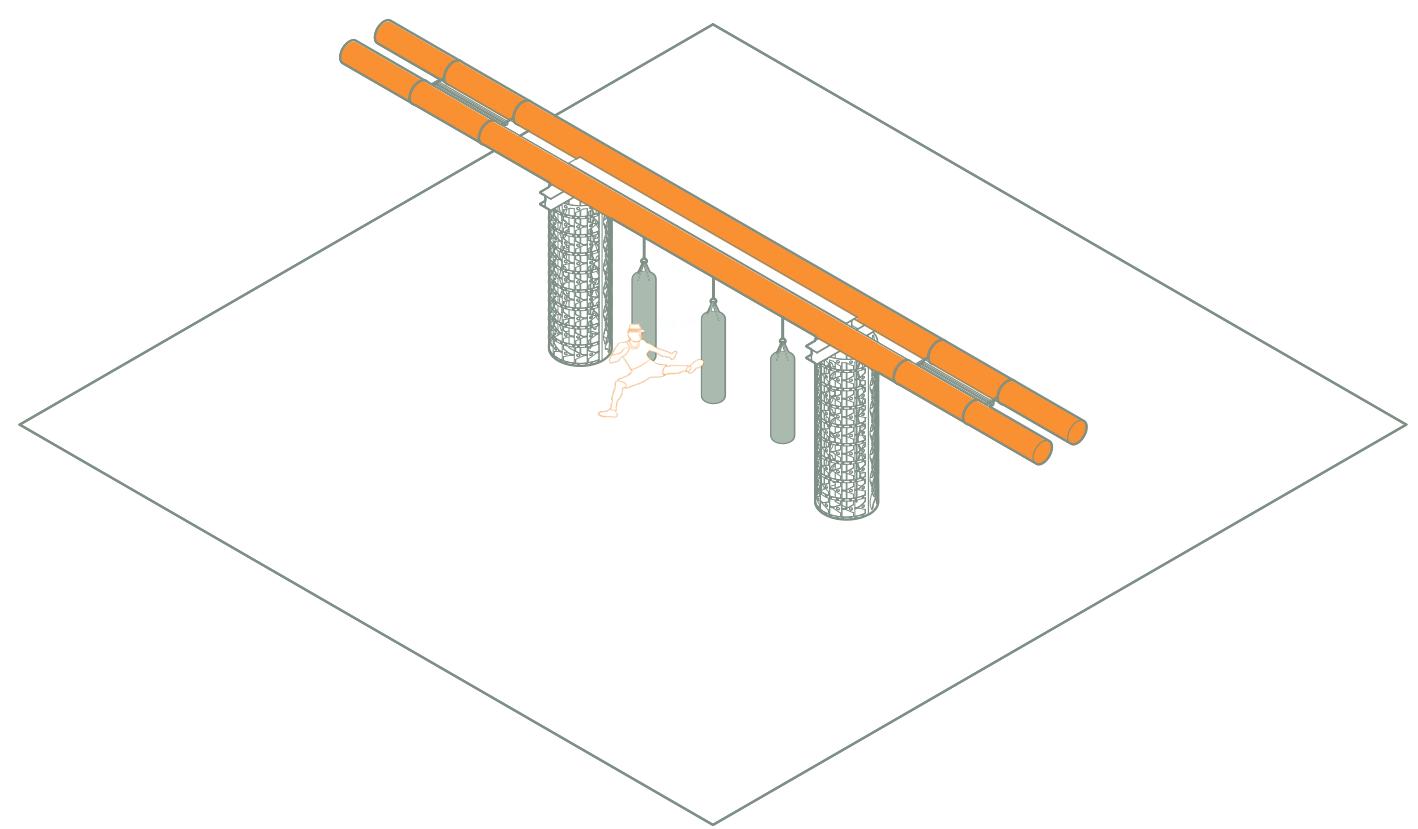
1/2 house



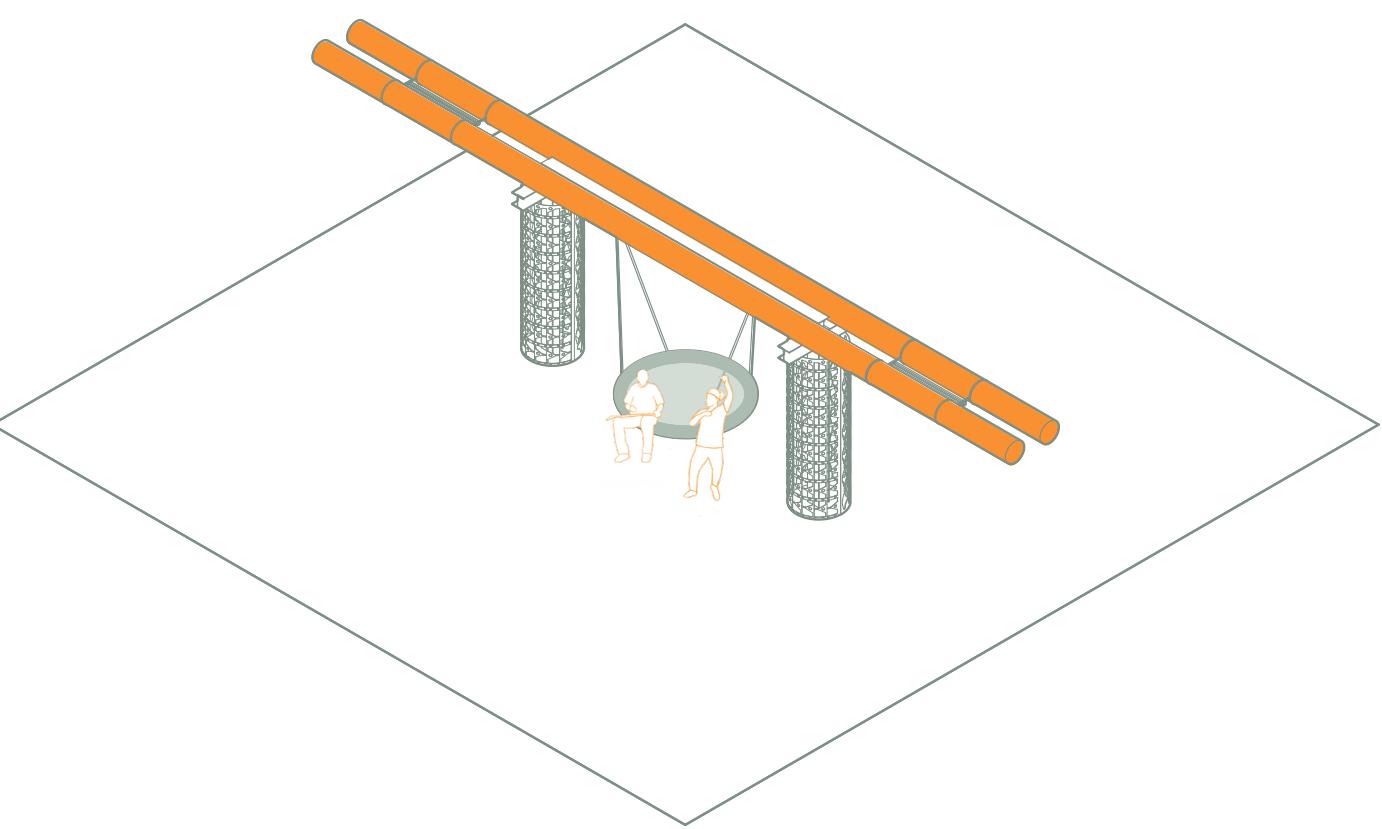
Service station



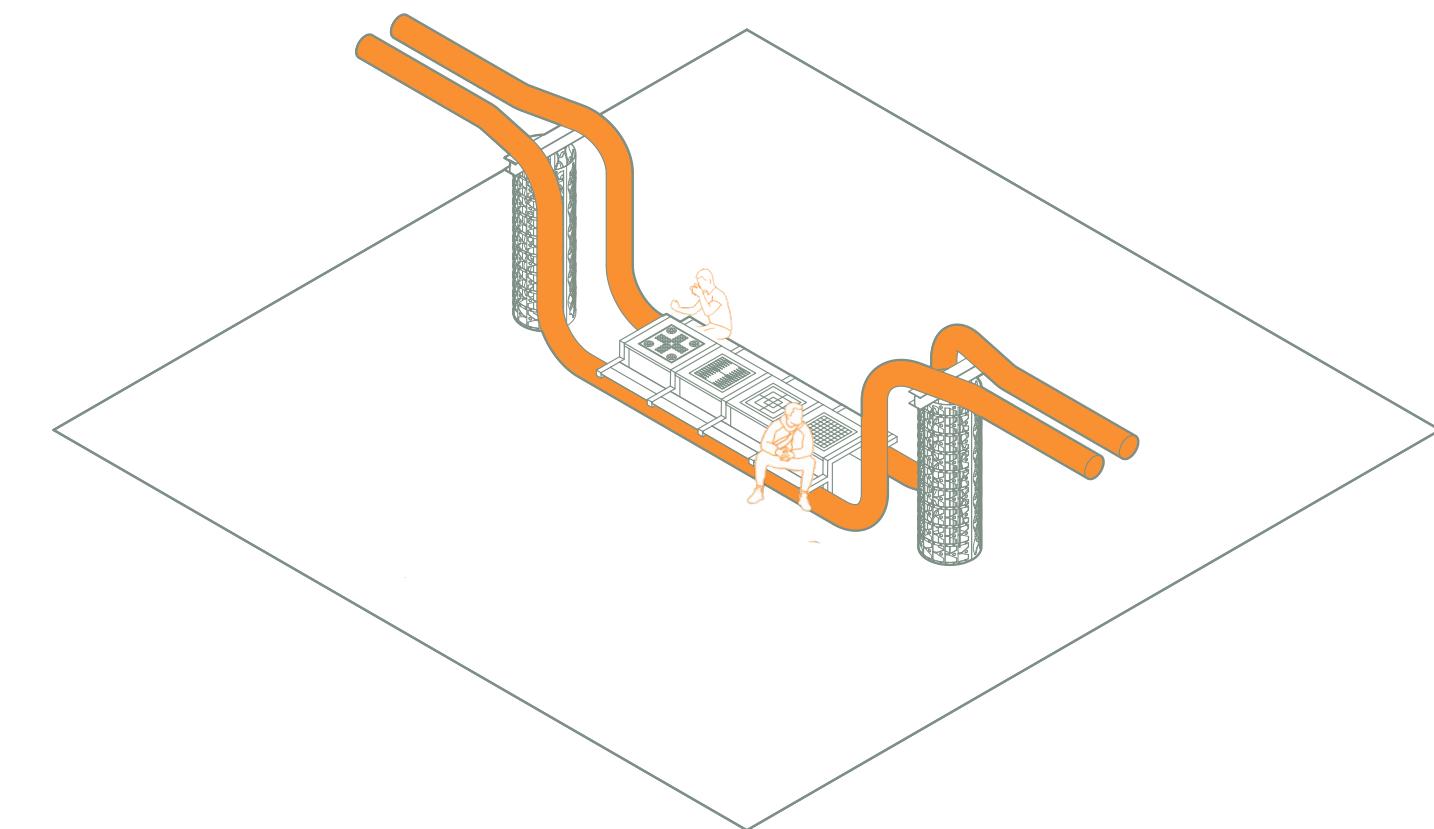
Lines



Boxing



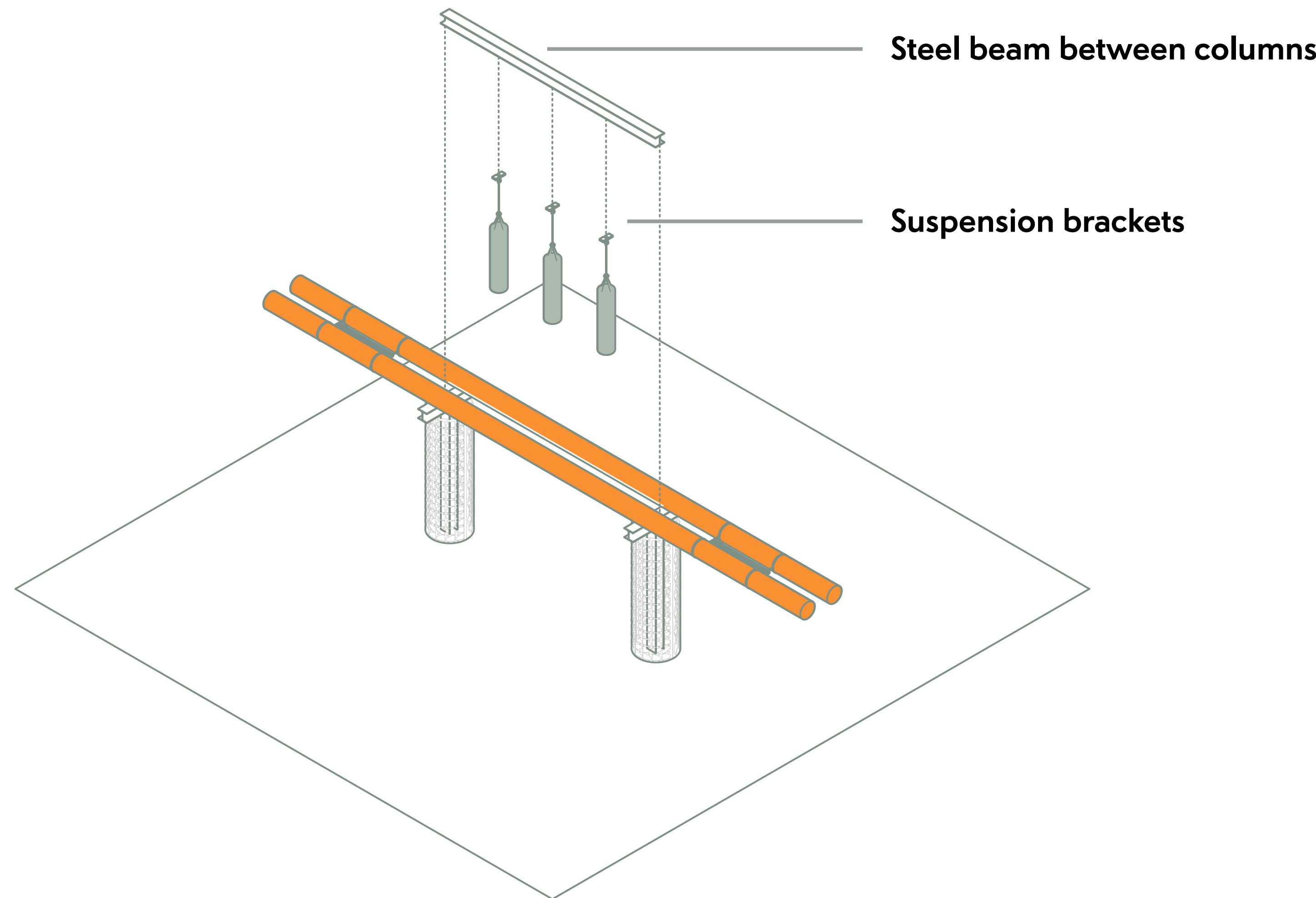
Swing



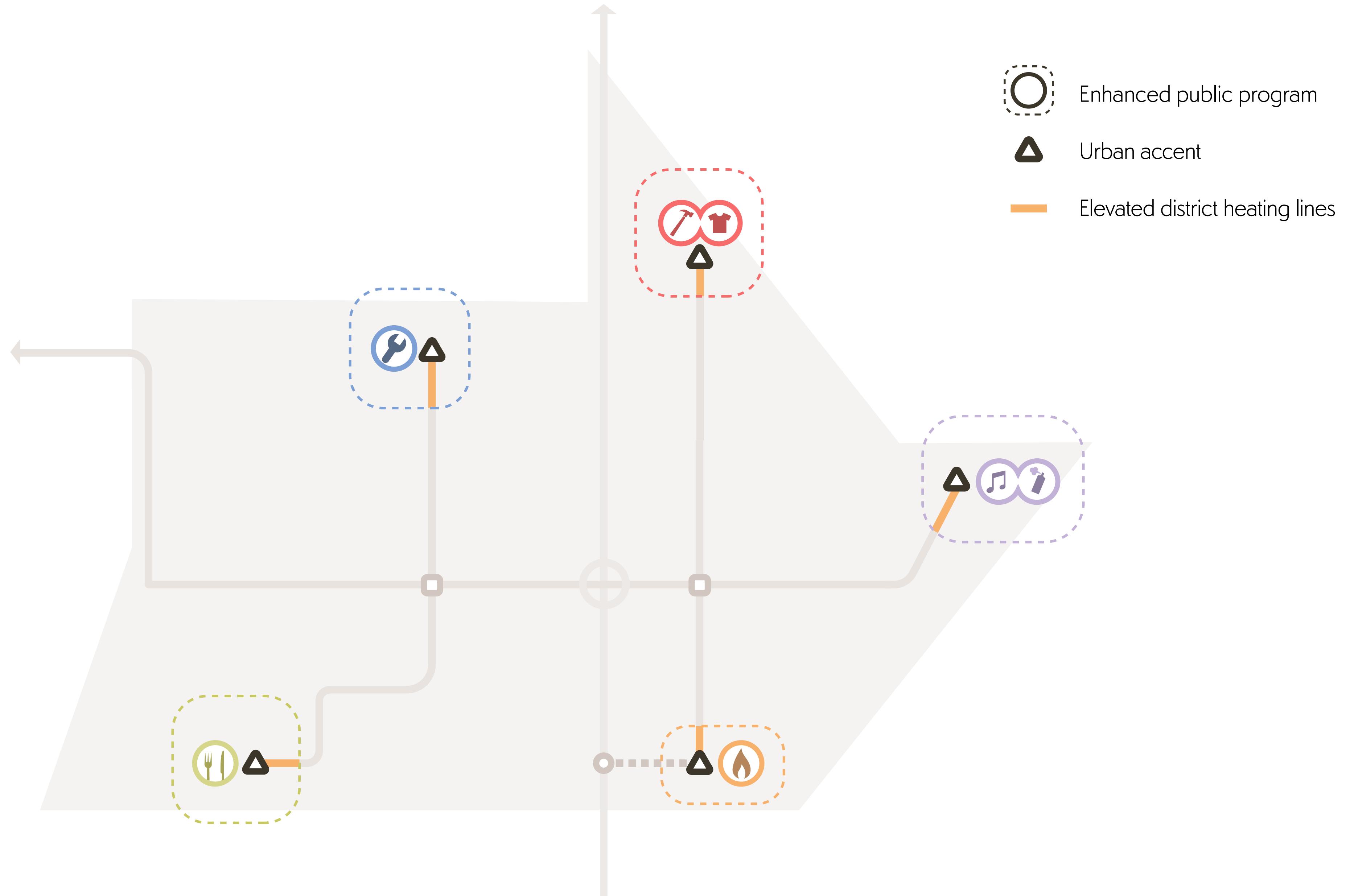
Games



Suspension element



Soft infrastructure



Soft infrastructure

Hart van Moerwijk



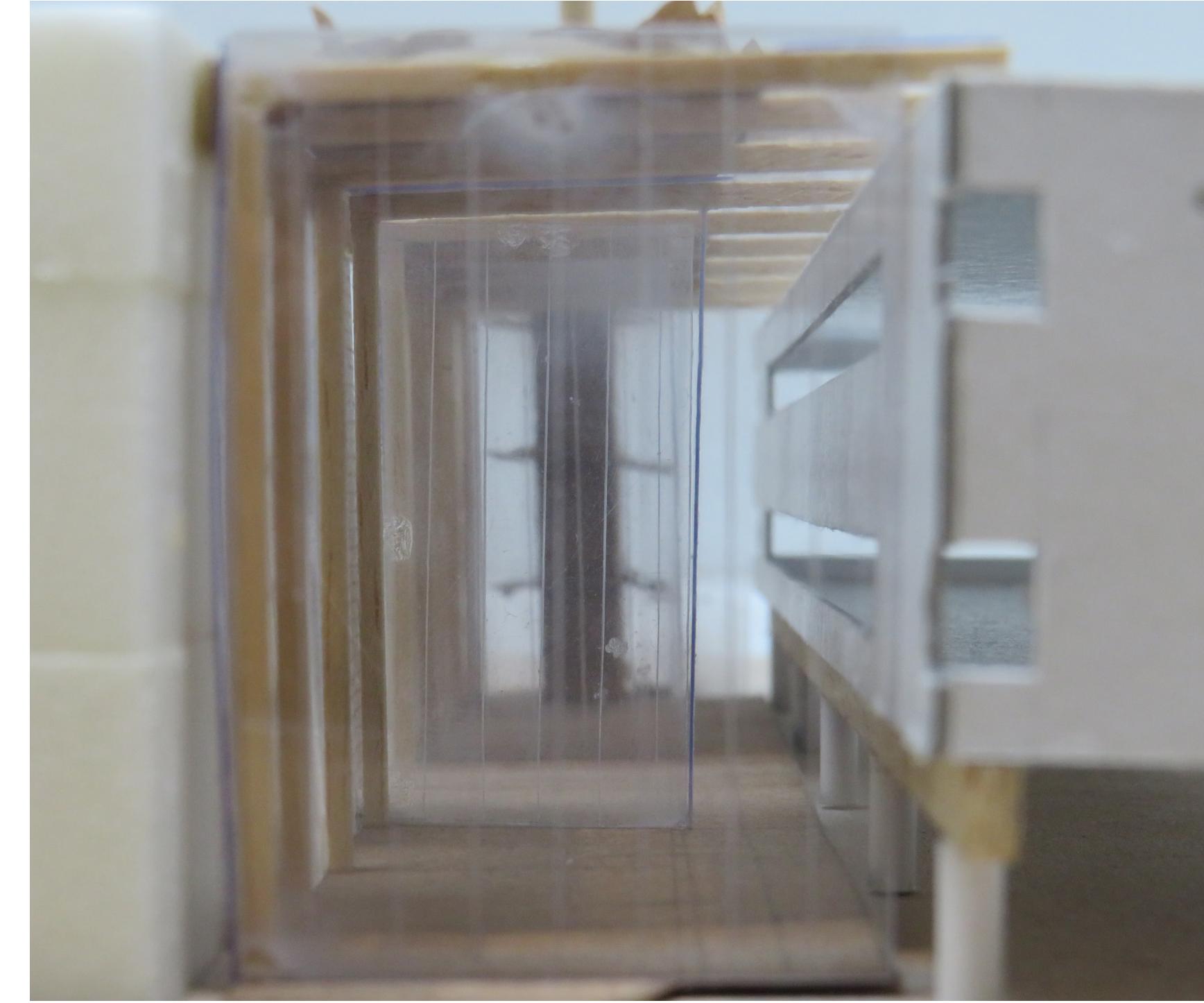
Backstreet restaurant



Unworthy entrance



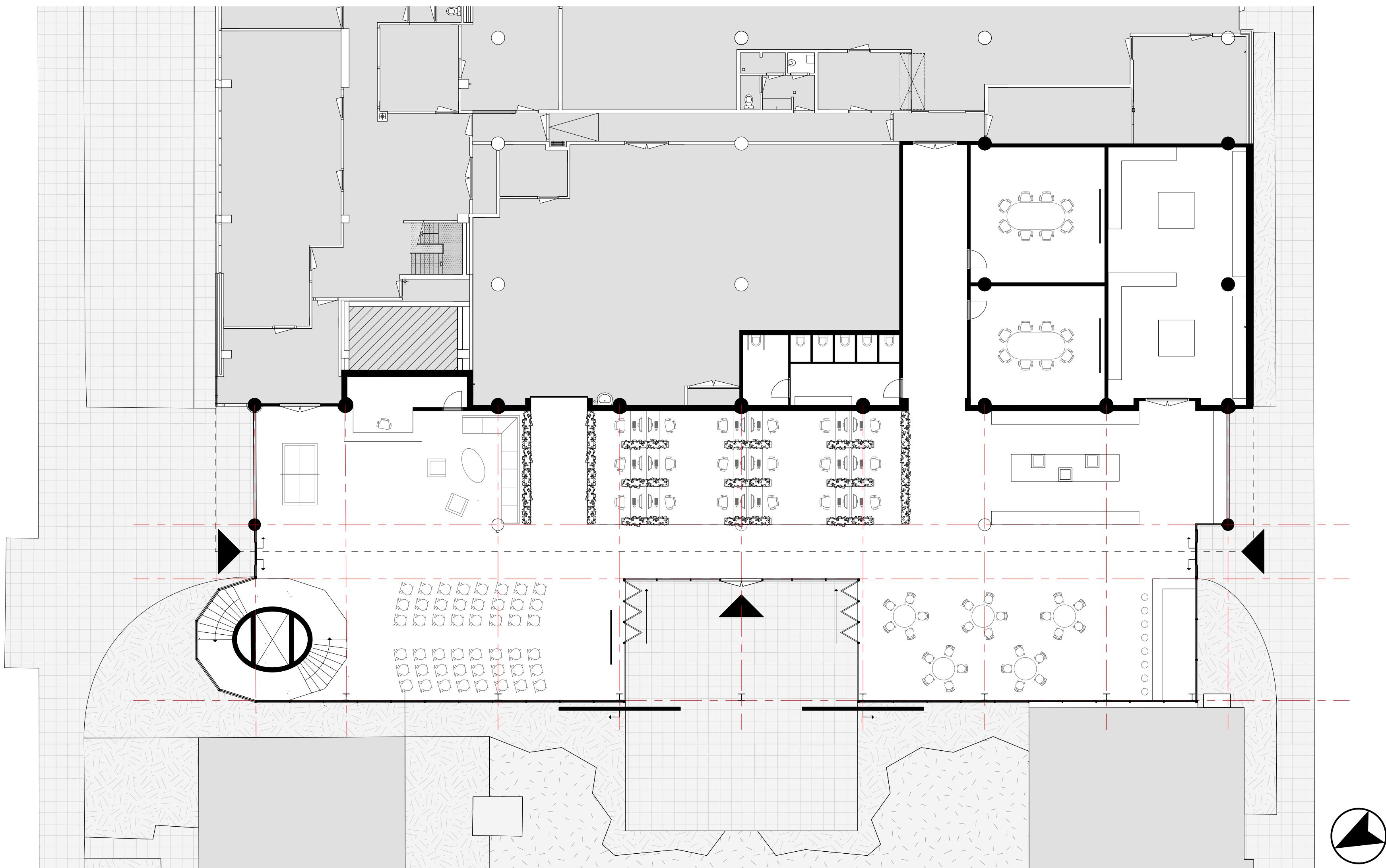
Lack of light and windows



Situation



Floorplan







Willem Dreespark

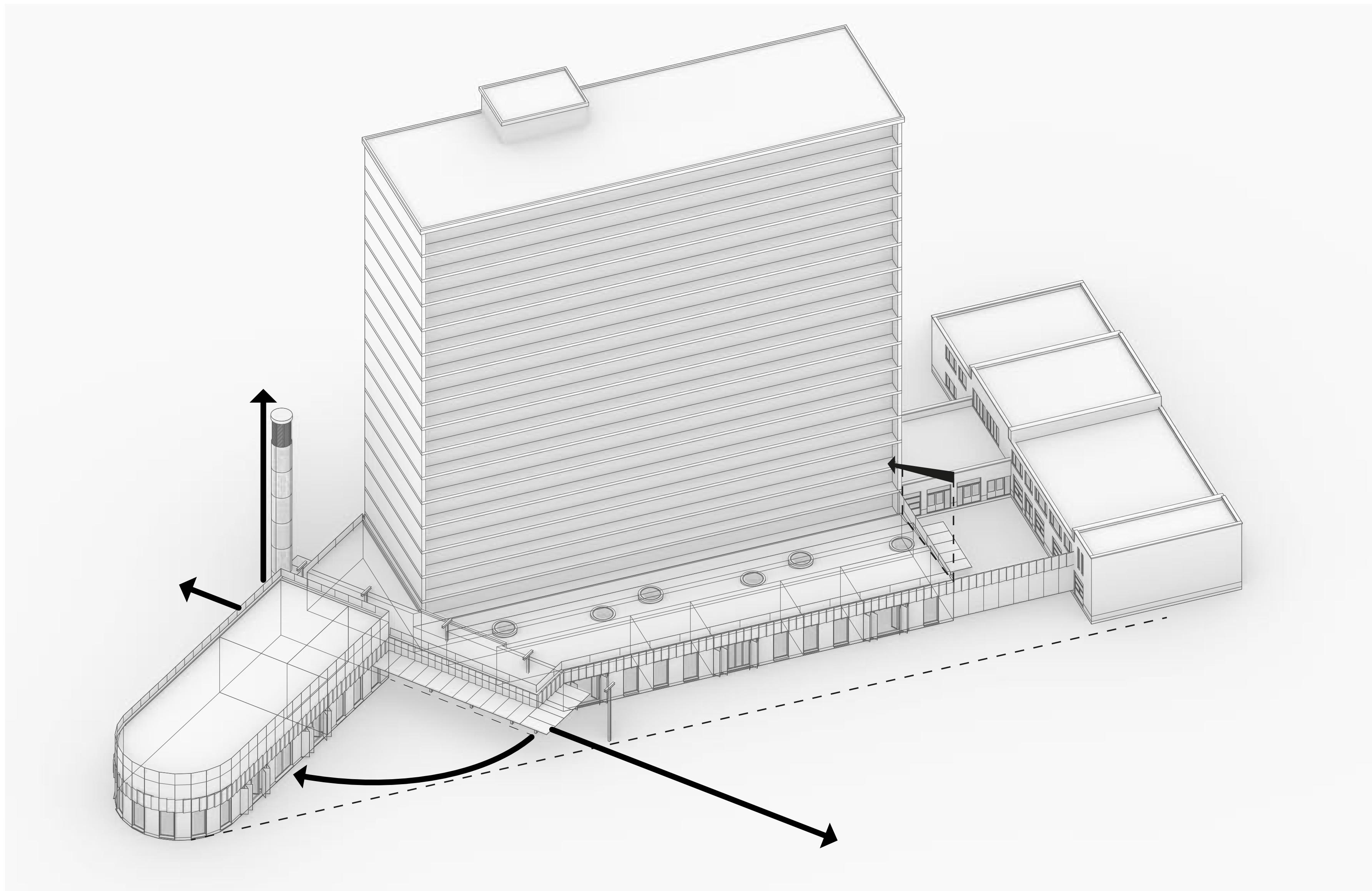


Google Earth

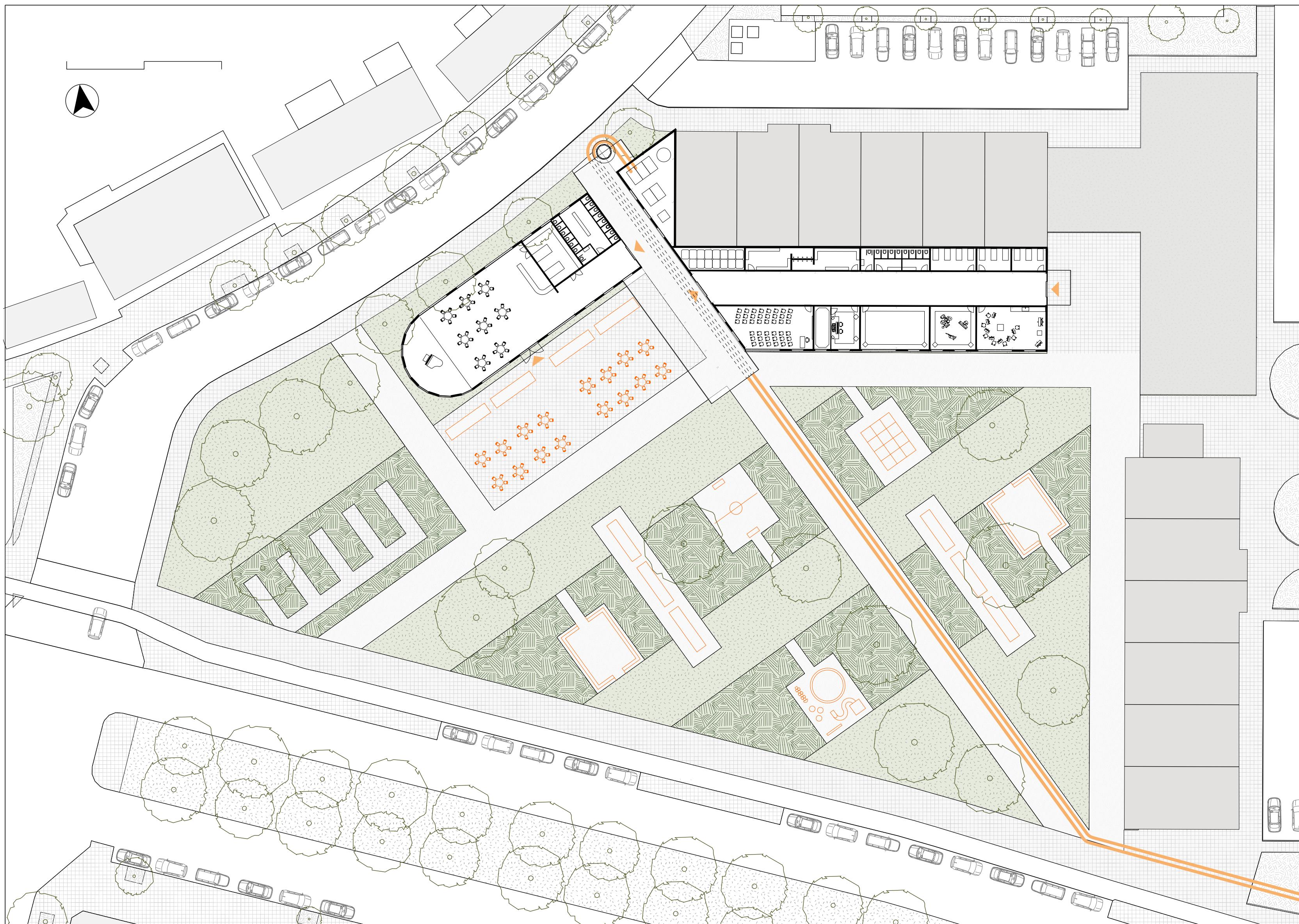
Willem Dreespark



Form



Plan







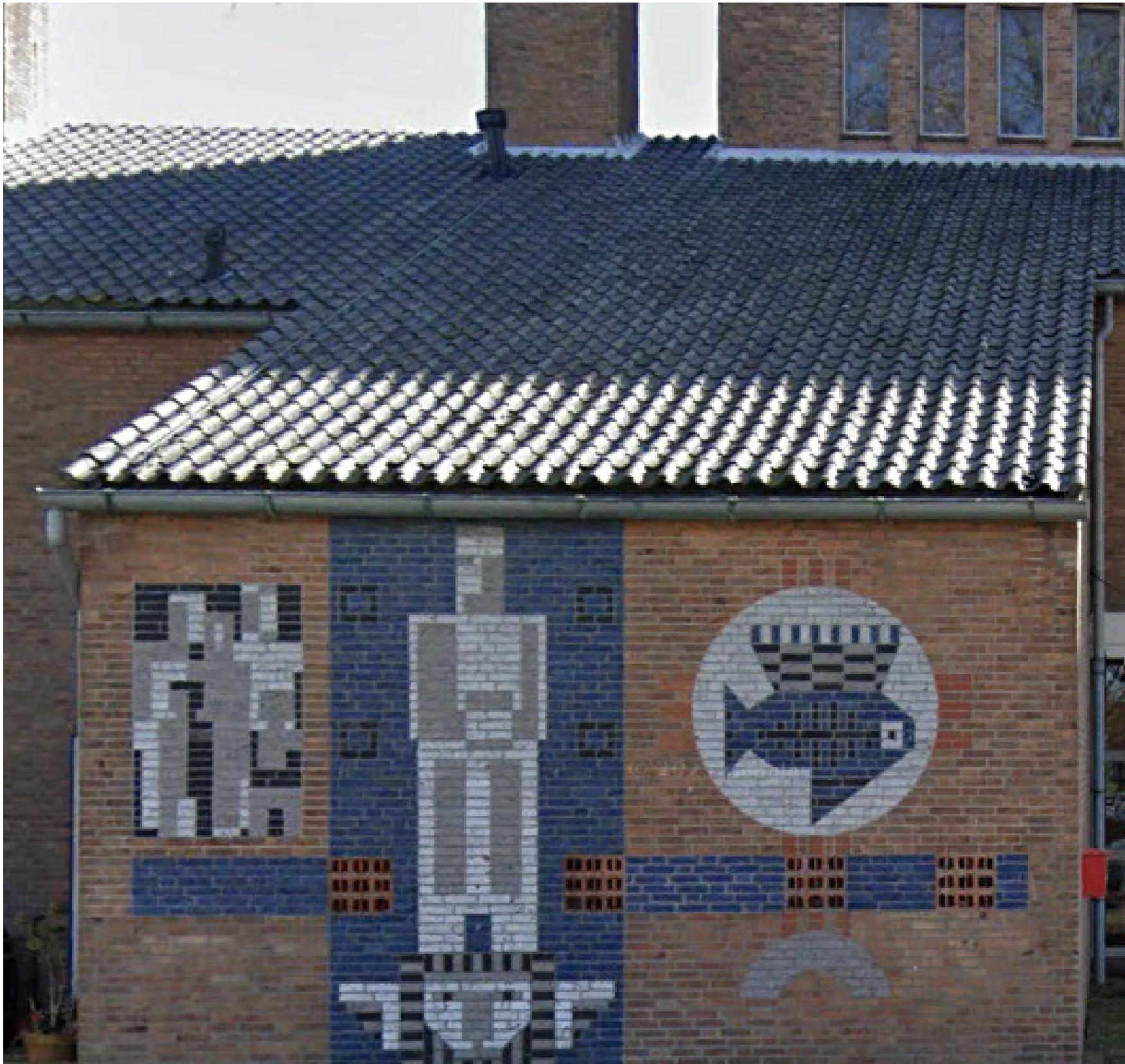








Facade inspiration

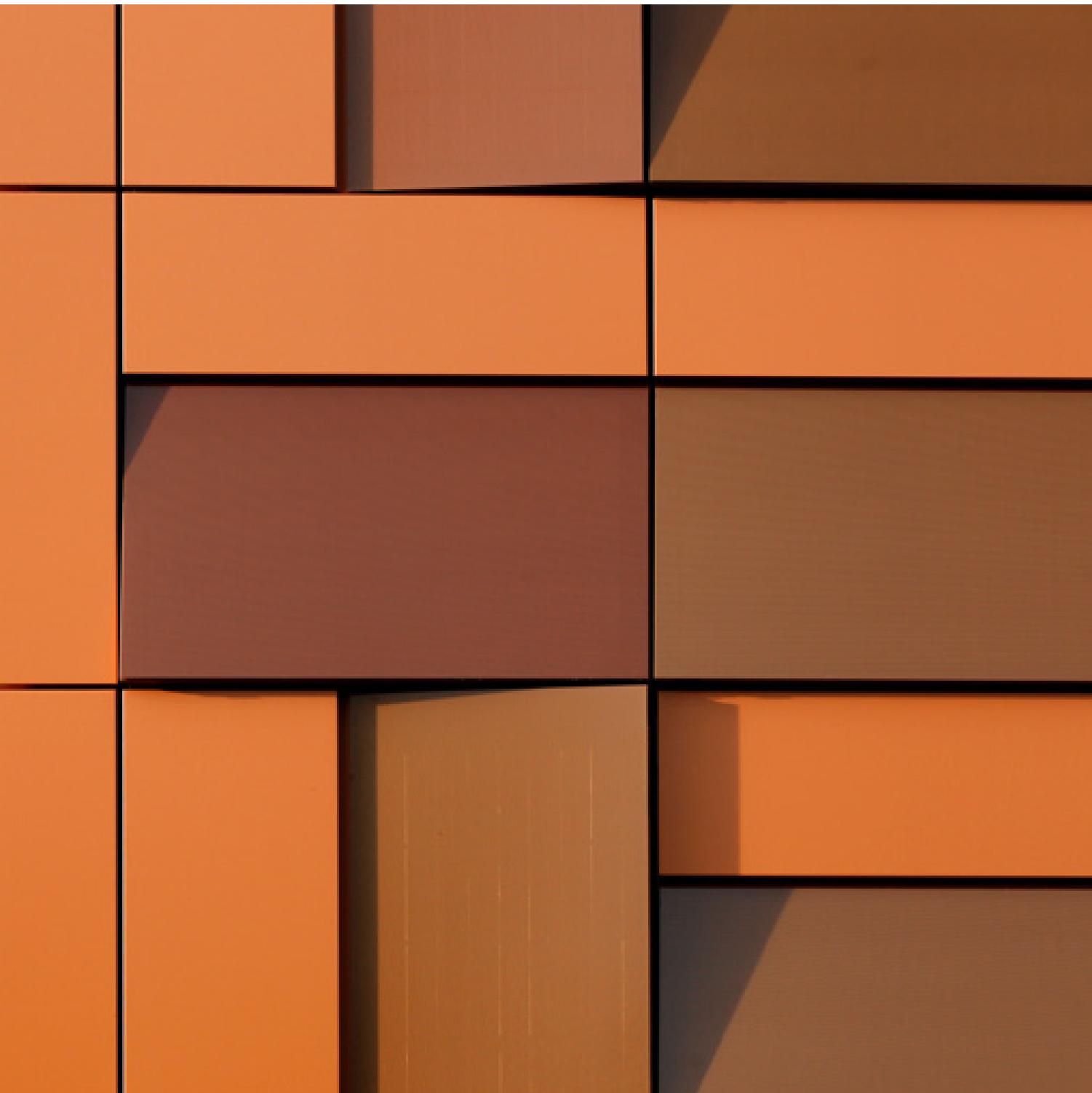


Marcus church

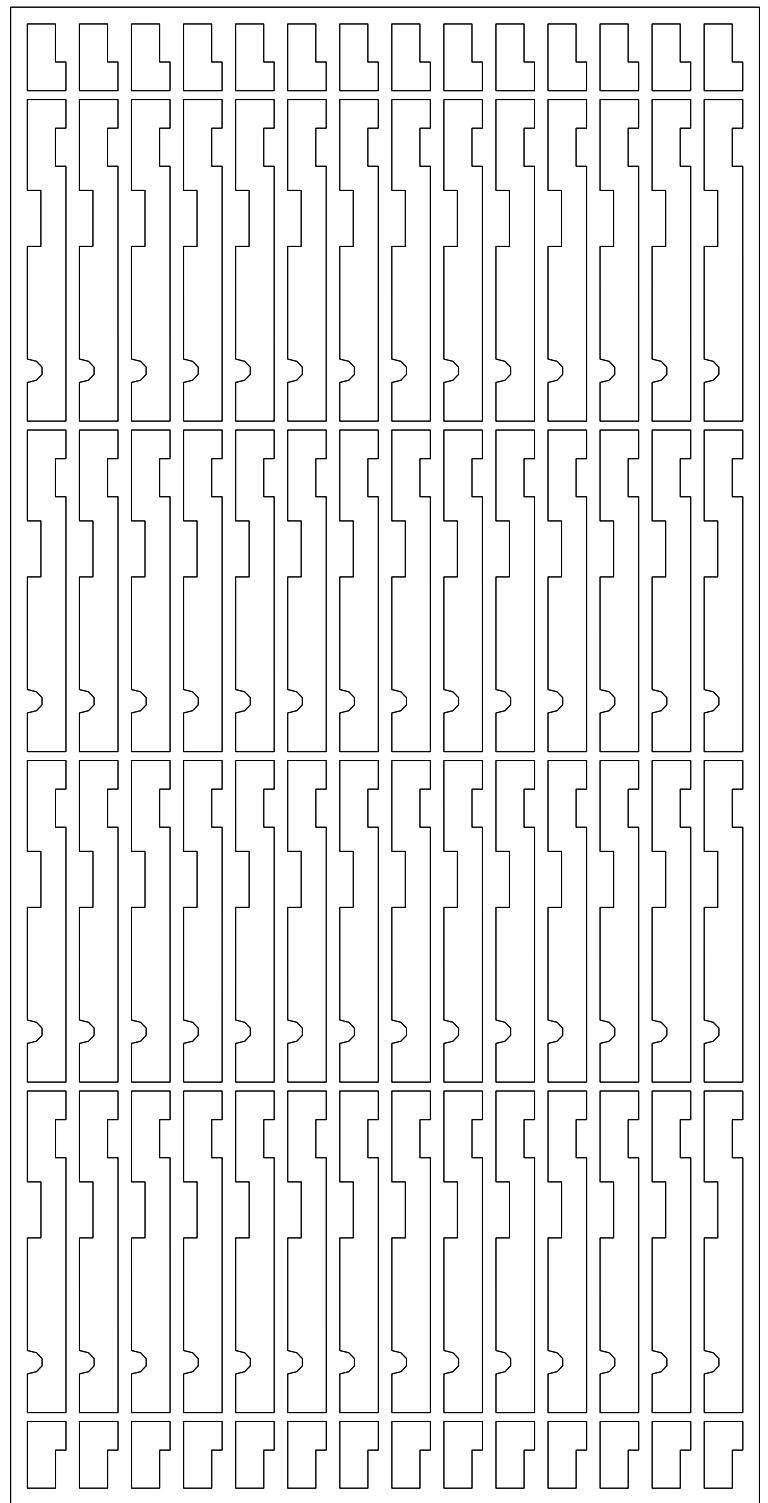


Al-massid Mosque

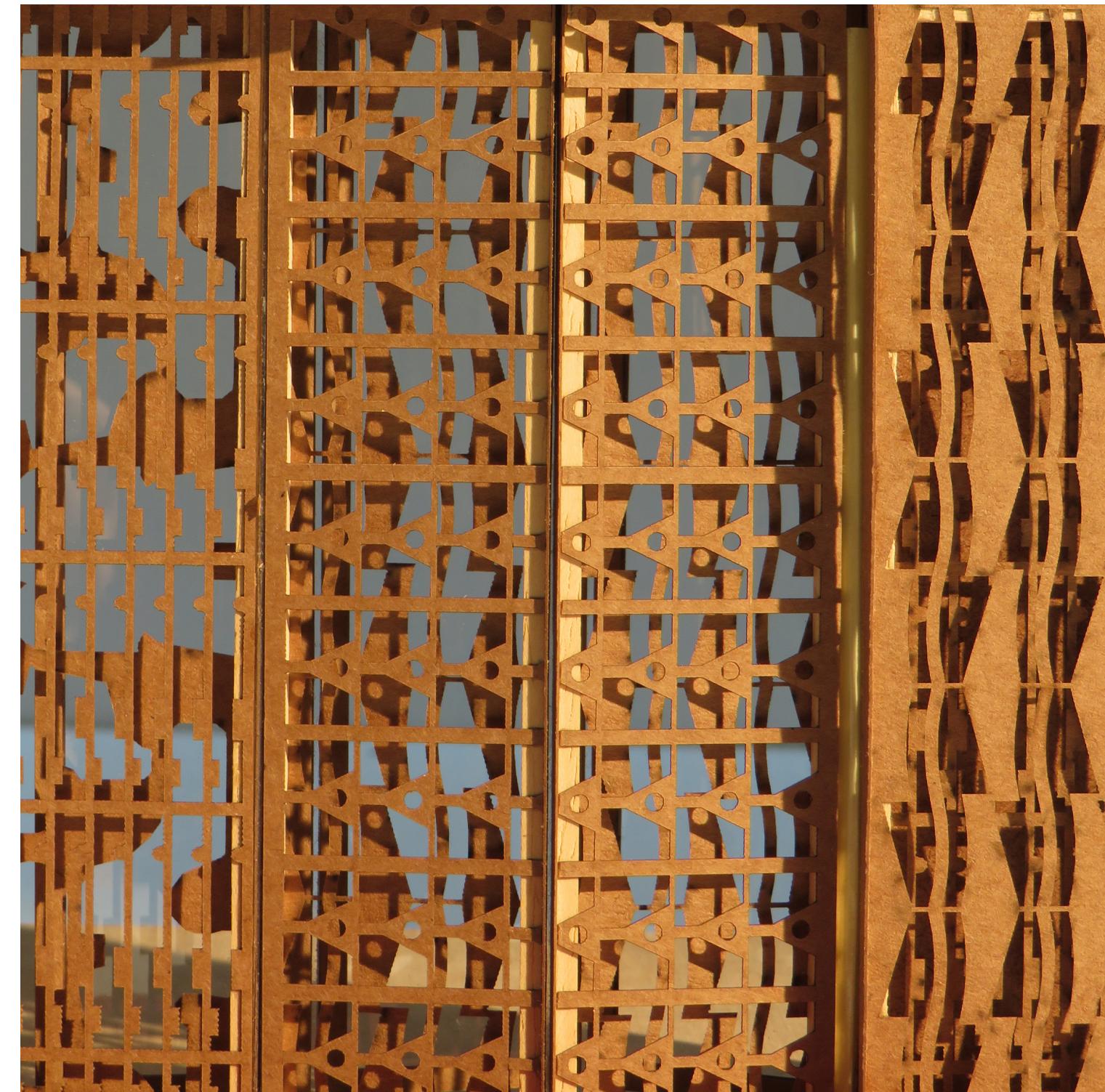
Facade materials



Solar facade



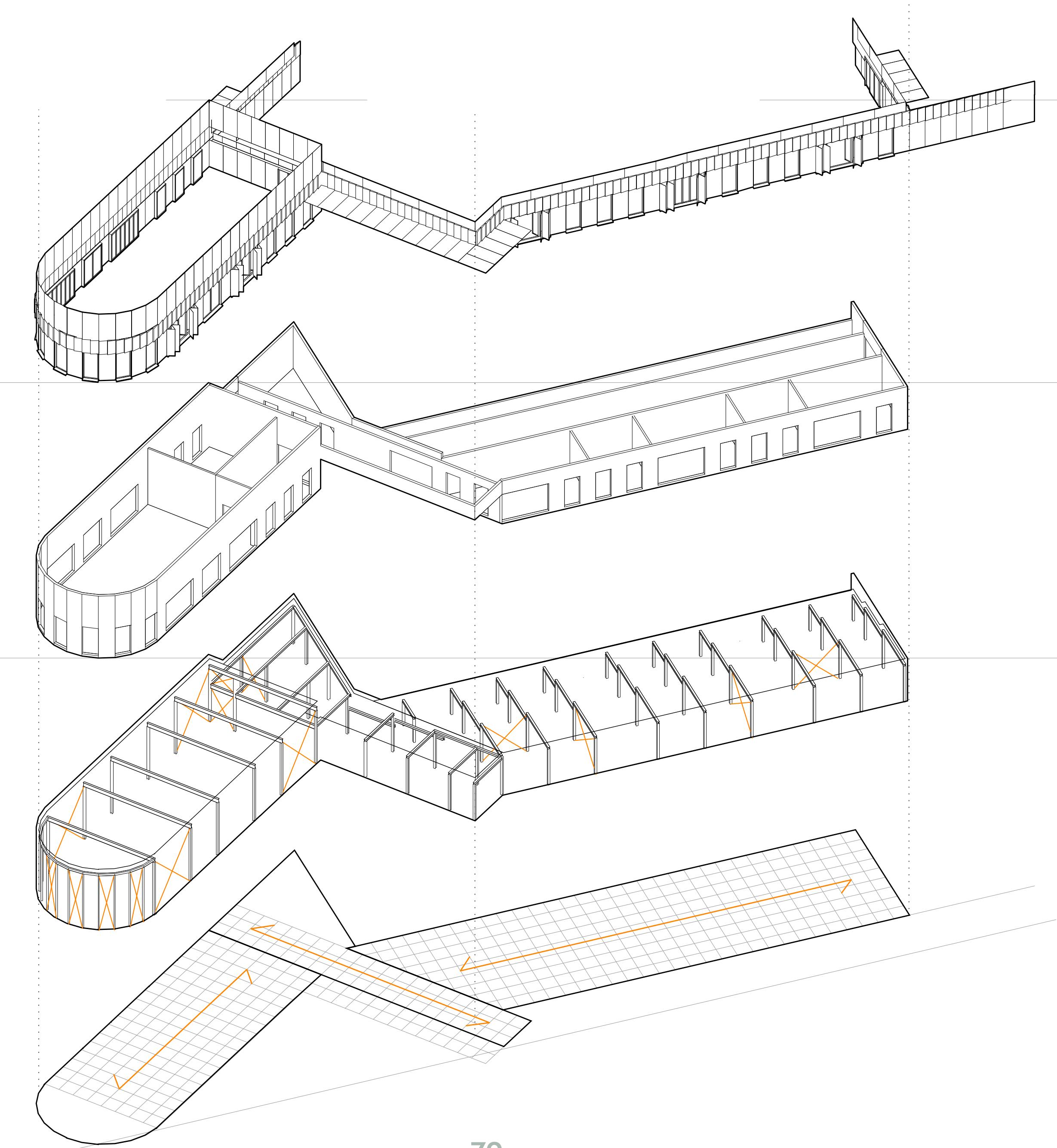
1500 x 3000 mm



Contoursheets

Construction / Materials

Facade of metal contour sheets and solar elements

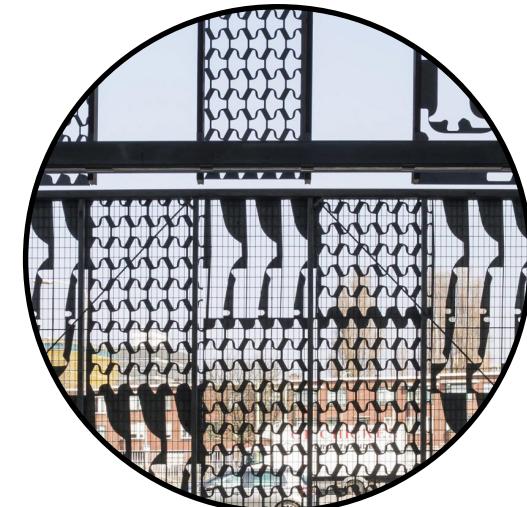


Timber structure walls chalk-hemp insulated

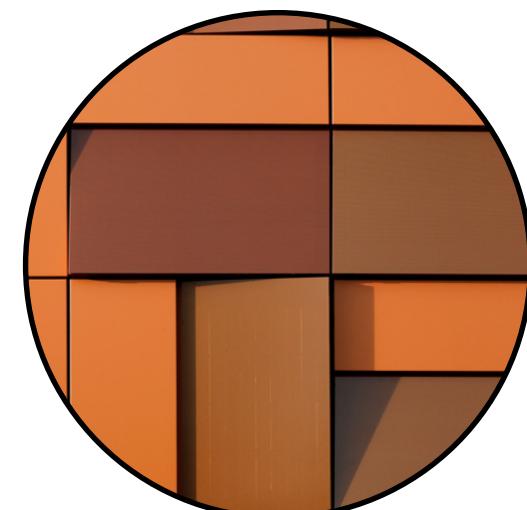
Reclaimed steel structure

1.5 meter grid to fit facade elements

Metal contour sheets 1500 x 3000 mm



Solarlab PV facade panels 1500x750 mm



Chalk-hemp insulation fibres

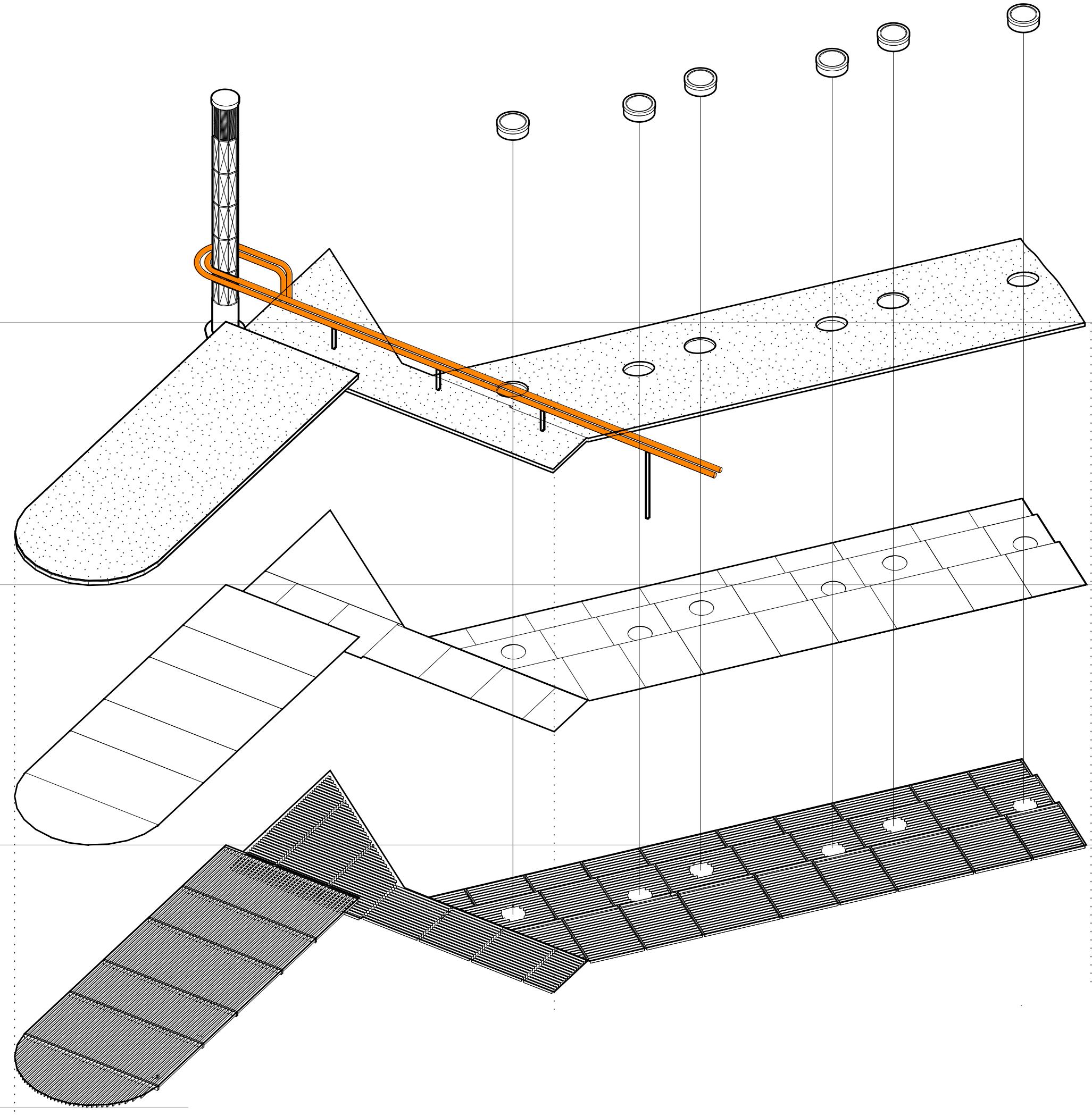


Reclaimed steel various sizes



Construction / Materials

Green roof and solar chimney



Screw-mounted concrete slabs

Reclaimed scaffolding elements

Green roof 250 mm substrate



Rooflights Ø 1600 mm



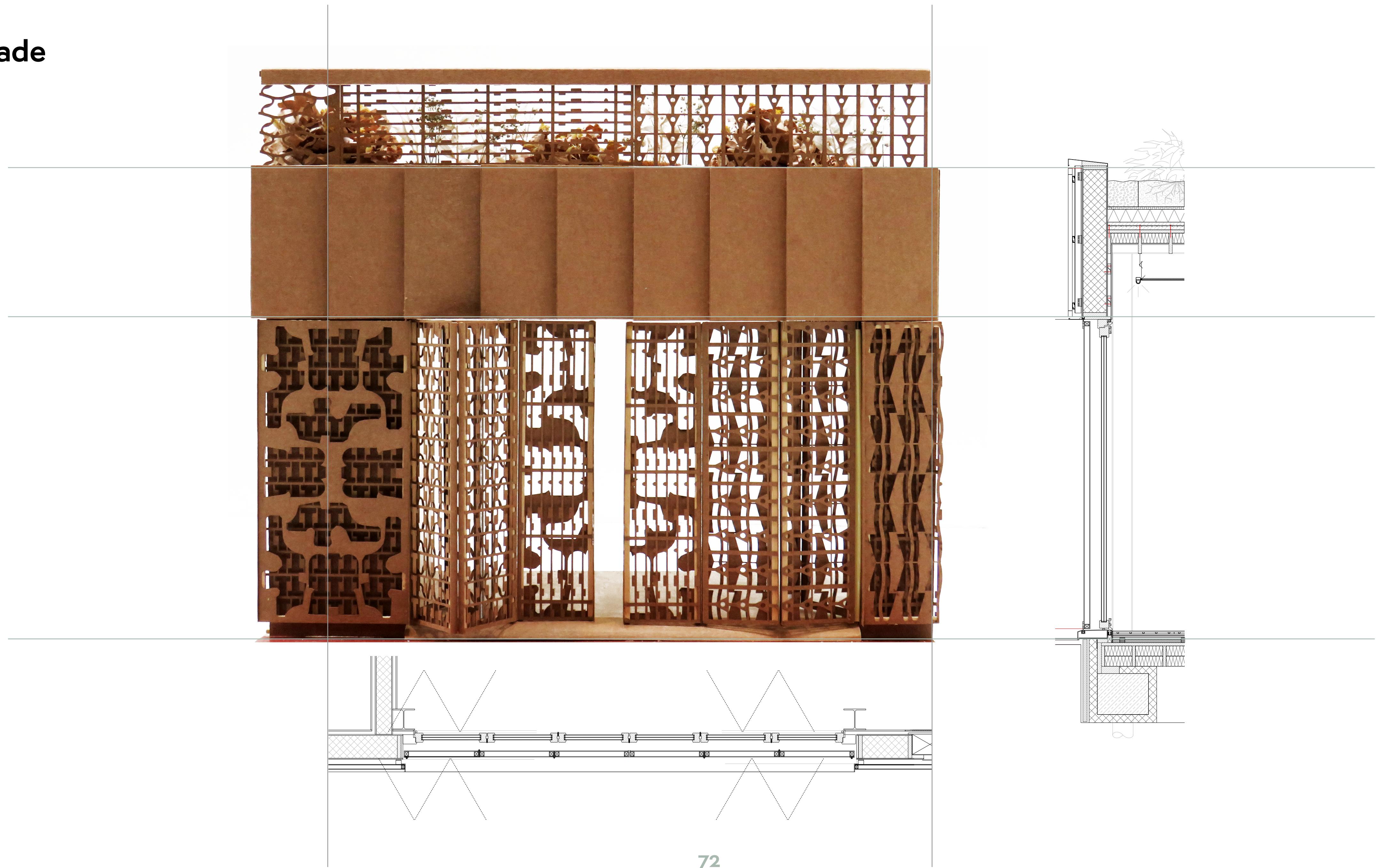
Screw-mounted concrete 75 mm

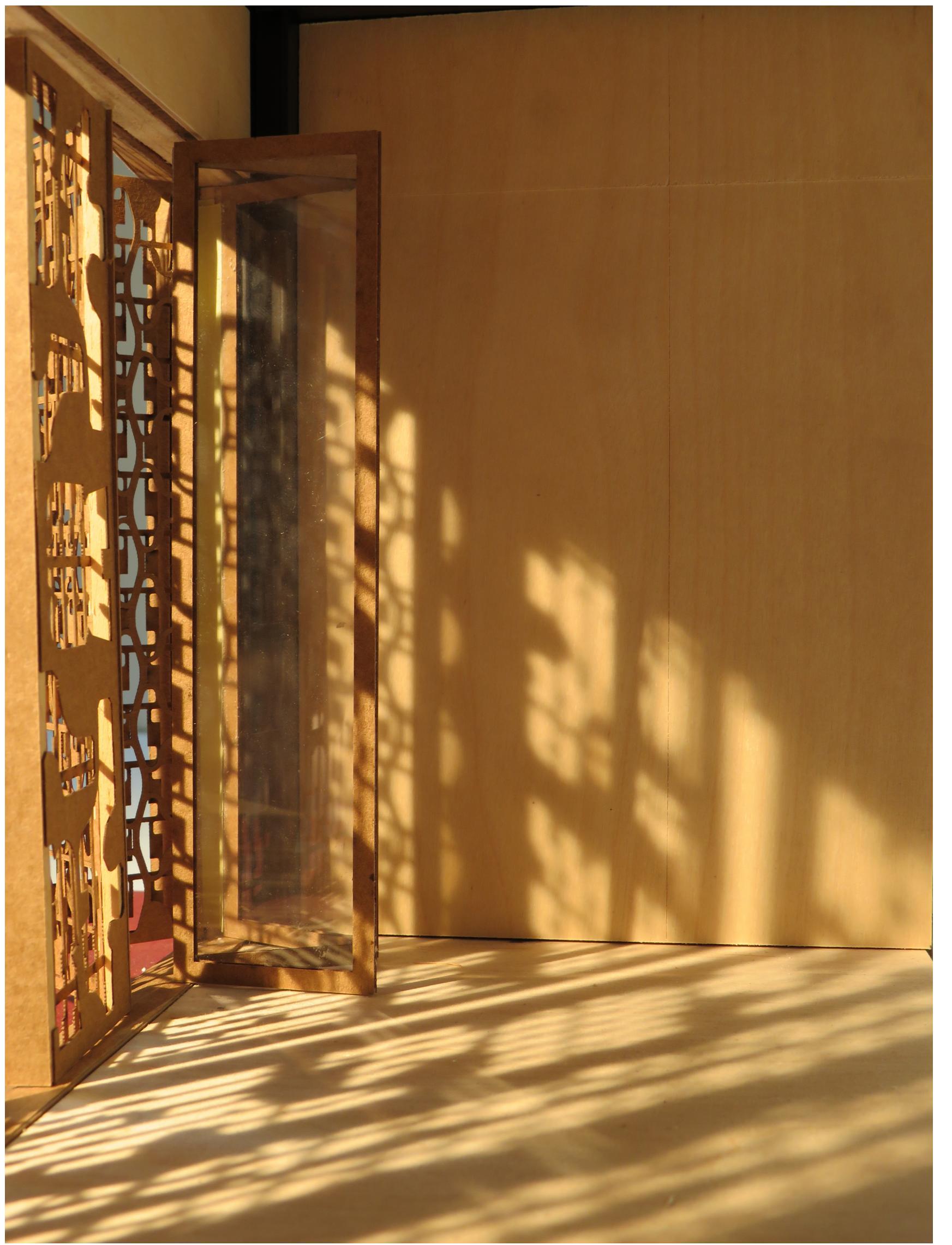


Reclaimed scaffolding 32x200 mm



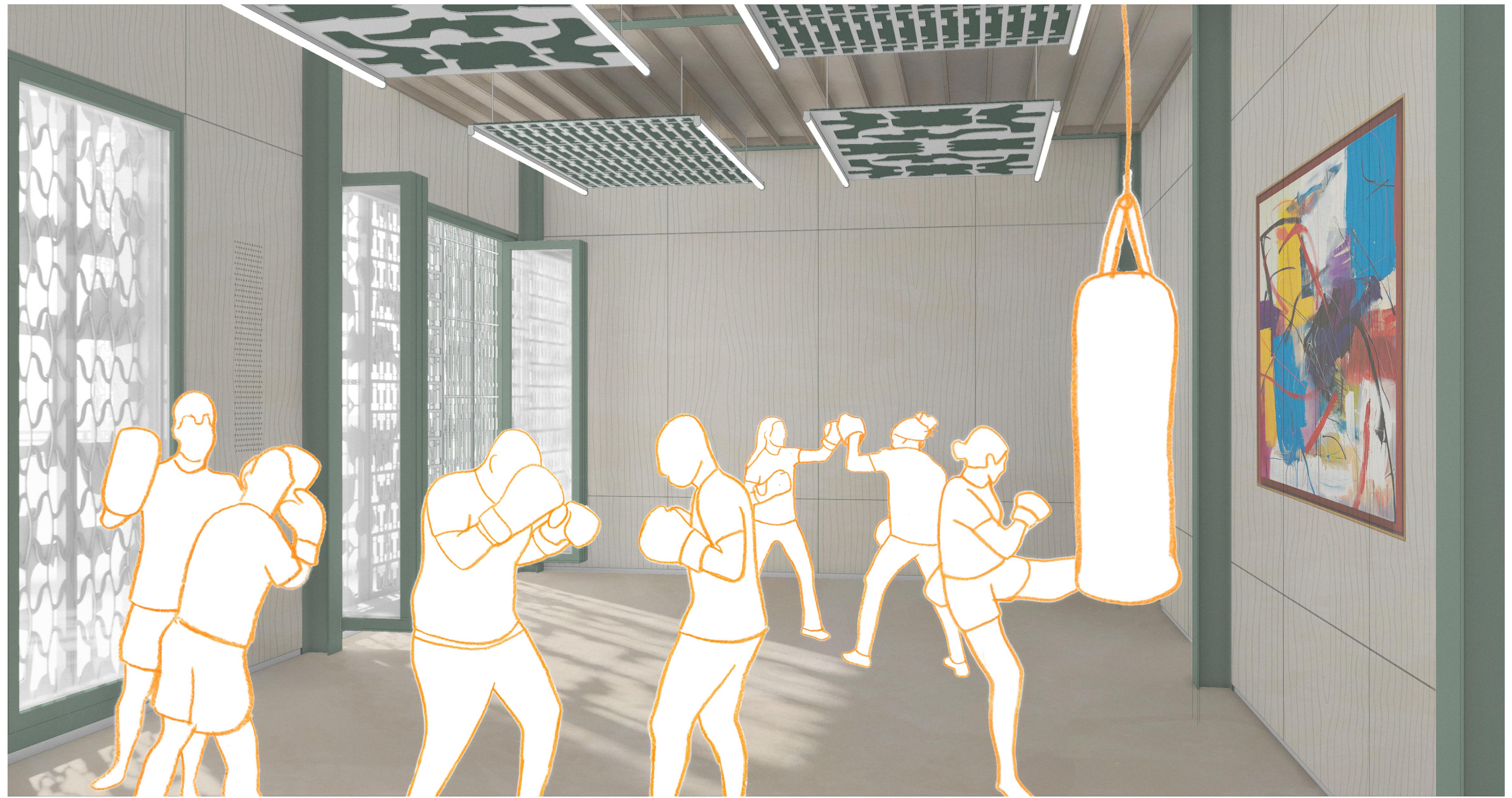
Facade



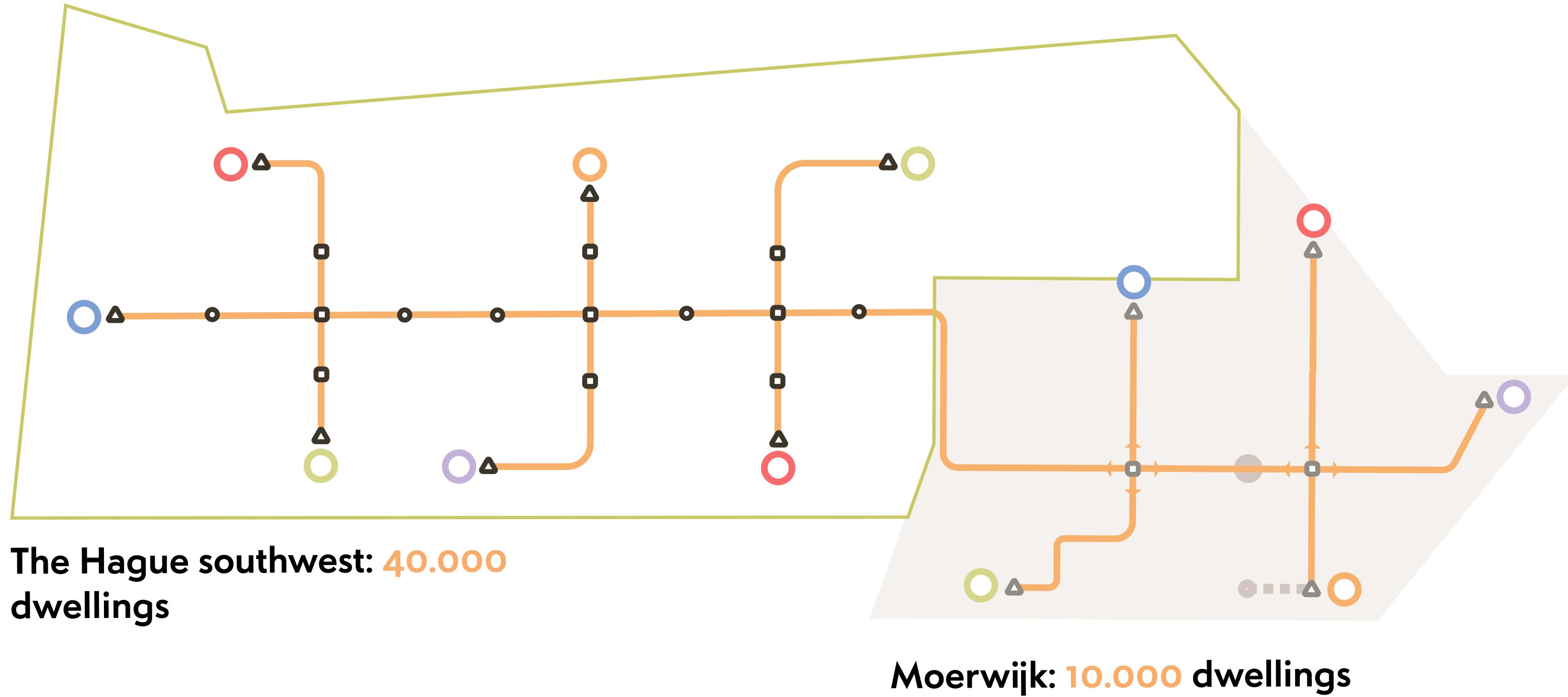


Fresh-r unit





Expansion



1800 post-war neighbourhoods
25% of total housing stock



Coming full circle

Scriptiewerkplaats Den Haag Zuidwest
Leiden-Delft-Erasmus Universities

Slotbijeenkomst

Start date: Wednesday 10 July 2024 - 10:00
End date: Wednesday 10 July 2024 - 13:00
Location: BLOCK 33, Van Baerlestraat, Moerwijk

Op het event gaan we in gesprek met elkaar over de onderzoeksresultaten en communicatieproducten van de studenten. Het doel is om de vertaalslag van onderzoek naar beleid/praktijk concreet en zichtbaar te maken, en integraal kennis te delen.

Wilt u bij de slotbijeenkomst zijn? Aanmelden kan [hier](#).

 Universiteit Leiden
 TU Delft
 Erasmus University Rotterdam



TU Delft TU Delft Stories


Van industriële hitte naar sociale warmte

Sinds 2023 werkt men aan een pijpleiding die hitte vervoert van Rotterdam naar Den Haag. De werkzaamheden leidden in tussengelegen Moerwijk tot een koeling van enthousiasme voor warmtenetten. Toch ziet MSc-student Thomas Misset juist hier en nu een kans. Hij maakte een inclusief plan voor een bovengronds warmtenet, wat de wijk naast duurzame energie ook verbinding en kleur levert. Want de juiste ontwerpkeuzes brengen fysieke én sociale warmte.

In gesprek met Thomas merk je al snel zijn enthousiasme voor het vak. "Ik zie architectuur als de verbinder tussen mensen, maatschappij, kunst, techniek... Meestal doen mijn projecten op uitwisseling tussen de tekentafel en de gebruikersvering. Ofwel, het betrekken van bewoners bij het plannen van projecten." Voor zijn eindopdracht kwam hij uit bij Scriptiewerkplaats Den Haag Zuidwest, waar studenten hun ink vinden met de stad. Hij was dit jaar de enige van de TU Delft. Vanuit de werkplaats trok Thomas de Moerwijk in.

"Wat moeten wij met een warmtenet?"

Opeens stond een Delftse student buiten te planten in de buurthuif, of te helpen bij de voedselbank. Ook seneerde Thomas betaalbare maaltijden in de participatiekuiken. Bij vragen gaf hij eerlijk antwoord: "Ik wil een ontwerpproject doen voor een lokaal warmtenet." Daar was niet iedereen even gecharmeerd van, en soms werd dat pijnlijk duidelijk: "De mensen hier kunnen niet eens energie-transitie spellen! Wij hebben andere dingen aan ons hoofd." Op dat soort momenten moet Thomas maar op zijn tong zitten. Hij was niet in de wijk om de discussie aan te gaan, maar om perspectief te krijgen.

Thomas Misset

Thank you!

