Buiksloterham in Transition

Developing tools to support processes of urban transition

P5 PRESENTATION 1-7-2014

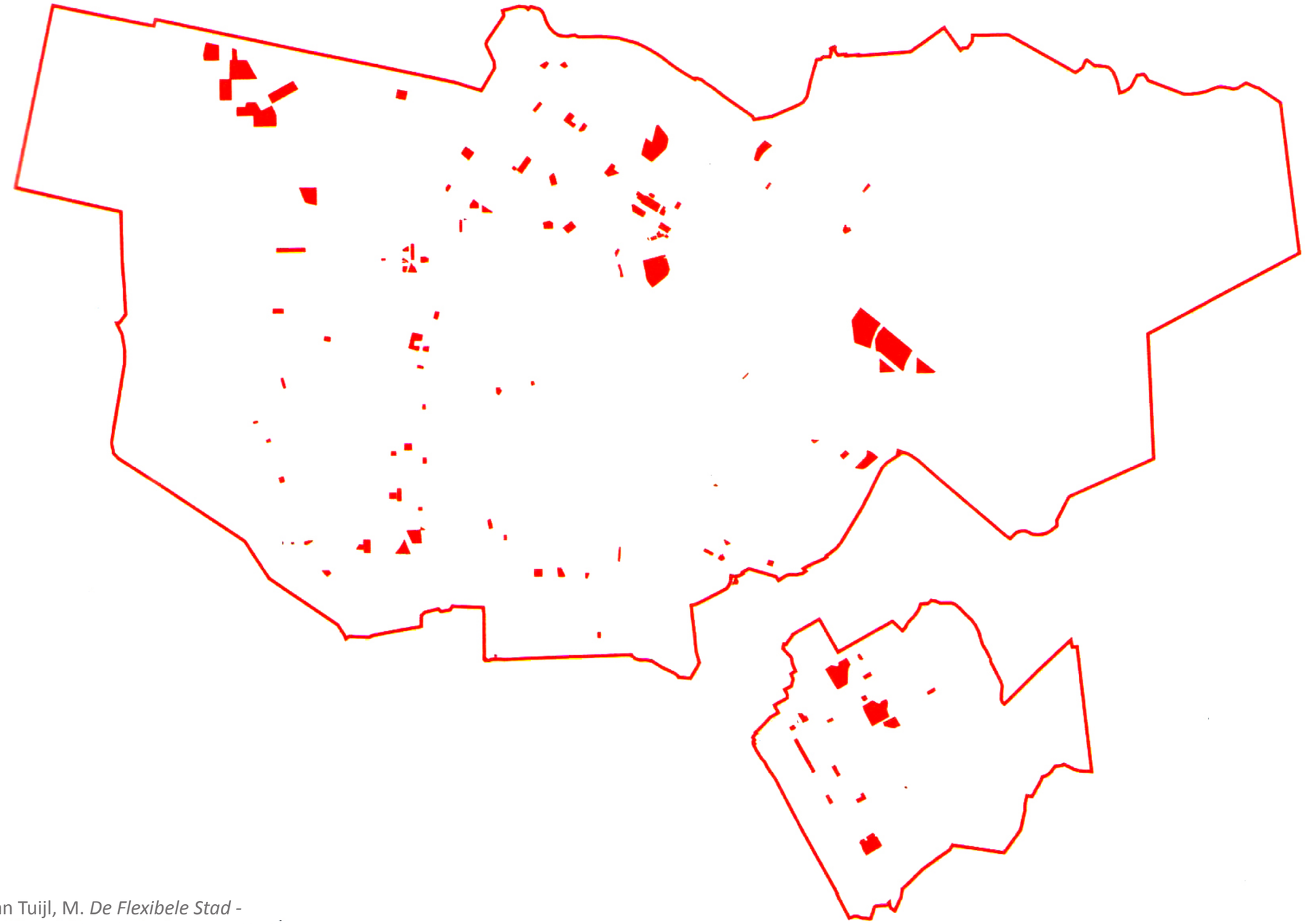
Eric de Ridder - 1303376 - Architecture Explore Lab 16 - TU Delft
Mentors; Robert Nottrot, Suzanne Groenewold, Heidi Sohn

Amsterdam, historische stad

Amsterdam, moderne stad

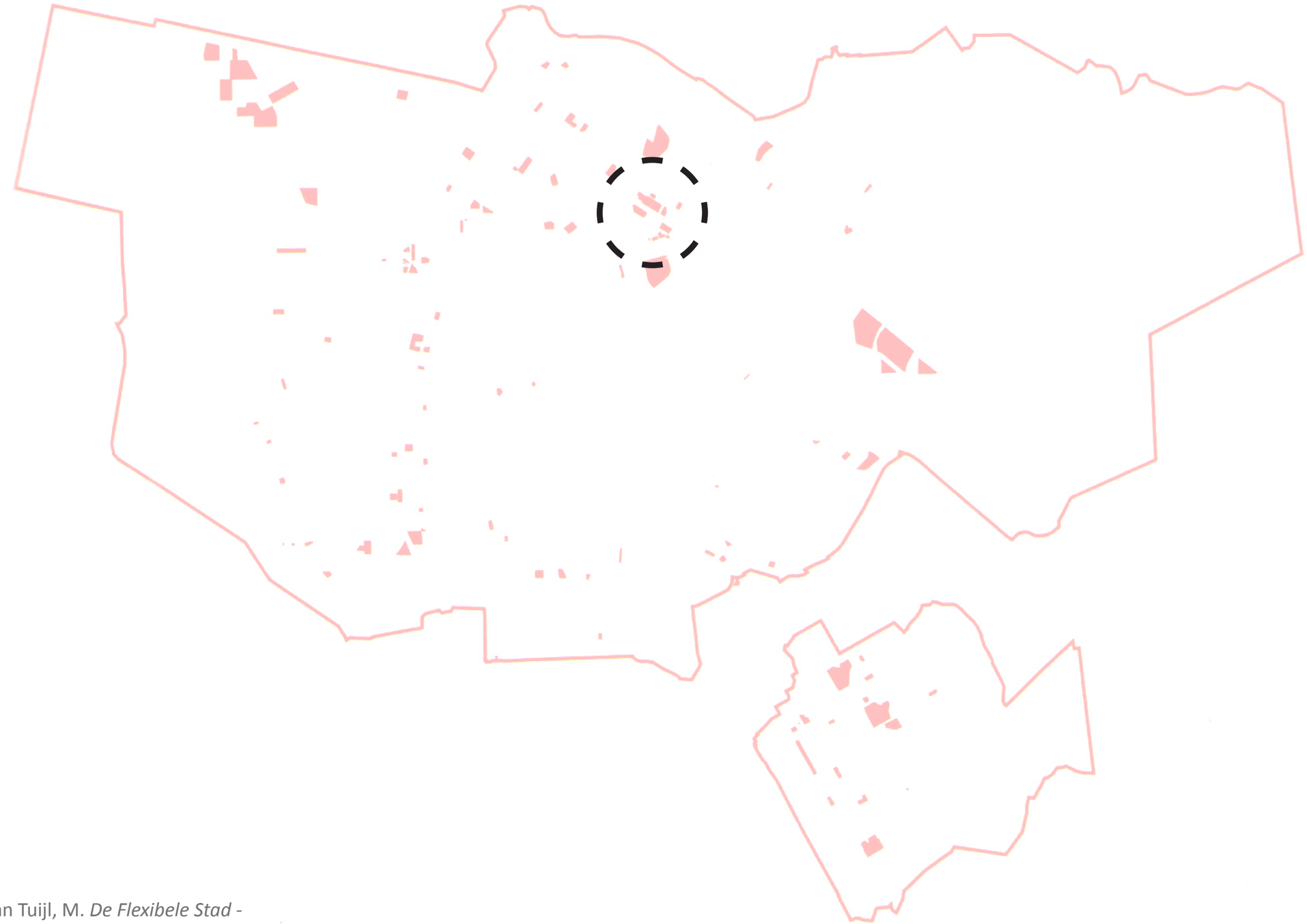
Amsterdam, stad met structurele leegstand

Source: Bergevoet, T., Van Tuijl, M. *De Flexibele Stad - Oplossingen Voor Leegstand En Krimp* (Rotterdam: nai010 uitgevers, 2013) p. 22



Source: Bergevoet, T., Van Tuijl, M. *De Flexibele Stad - Oplossingen Voor Leegstand En Krimp* (Rotterdam: nai010 uitgevers, 2013) p. 29


EIGEN TERREIN
Geen doorgaande weg
Rijwielen met motor verboden
Vereniging Beheer Overhoeks
VERBODEN TOEGANG
VOOR ONBEVOEGDEN
Art. 461 Wetb. v. Strafr.



Source: Bergevoet, T., Van Tuijl, M. *De Flexibele Stad - Oplossingen Voor Leegstand En Krimp* (Rotterdam: nai010 uitgevers, 2013) p. 29


N.D.S.M.


Boels
Boels
Boels
Boels
BIO BOX
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Siemensma
Meester 21 Schagerbrug
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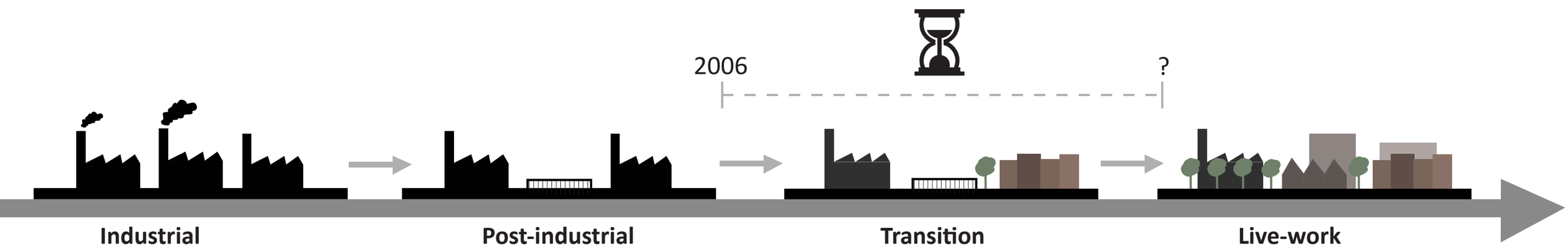
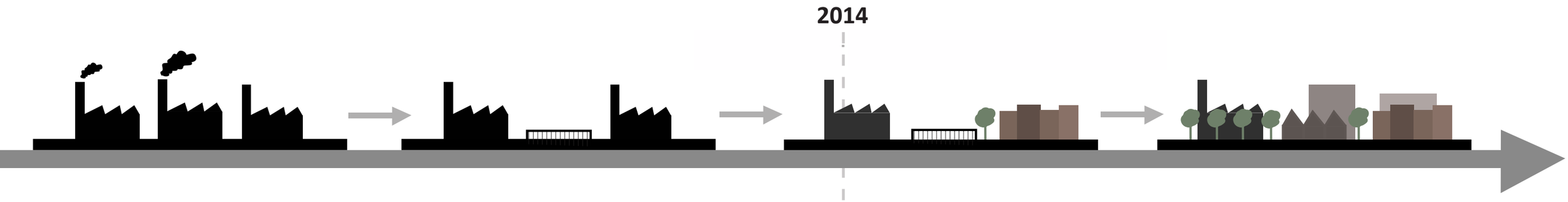
www.bouwbedrijfsiemensma.nl



Research and design goal

Produce a set of tools for the stakeholders of urban development in Buiksloterham, that supports and catalyzes the urban transition of the area.

How can I develop an urban strategy for the stakeholders of urban development in Buiksloterham, as a tool that catalyzes the process of urban transition by supporting the transformation of the networks of public space, based on social and environmental principles and self-organization?



RESEARCH: ANALYSES

- Theoretical framework
- Historical analysis
- Urban analysis
- Stakeholder mapping

RESEARCH:

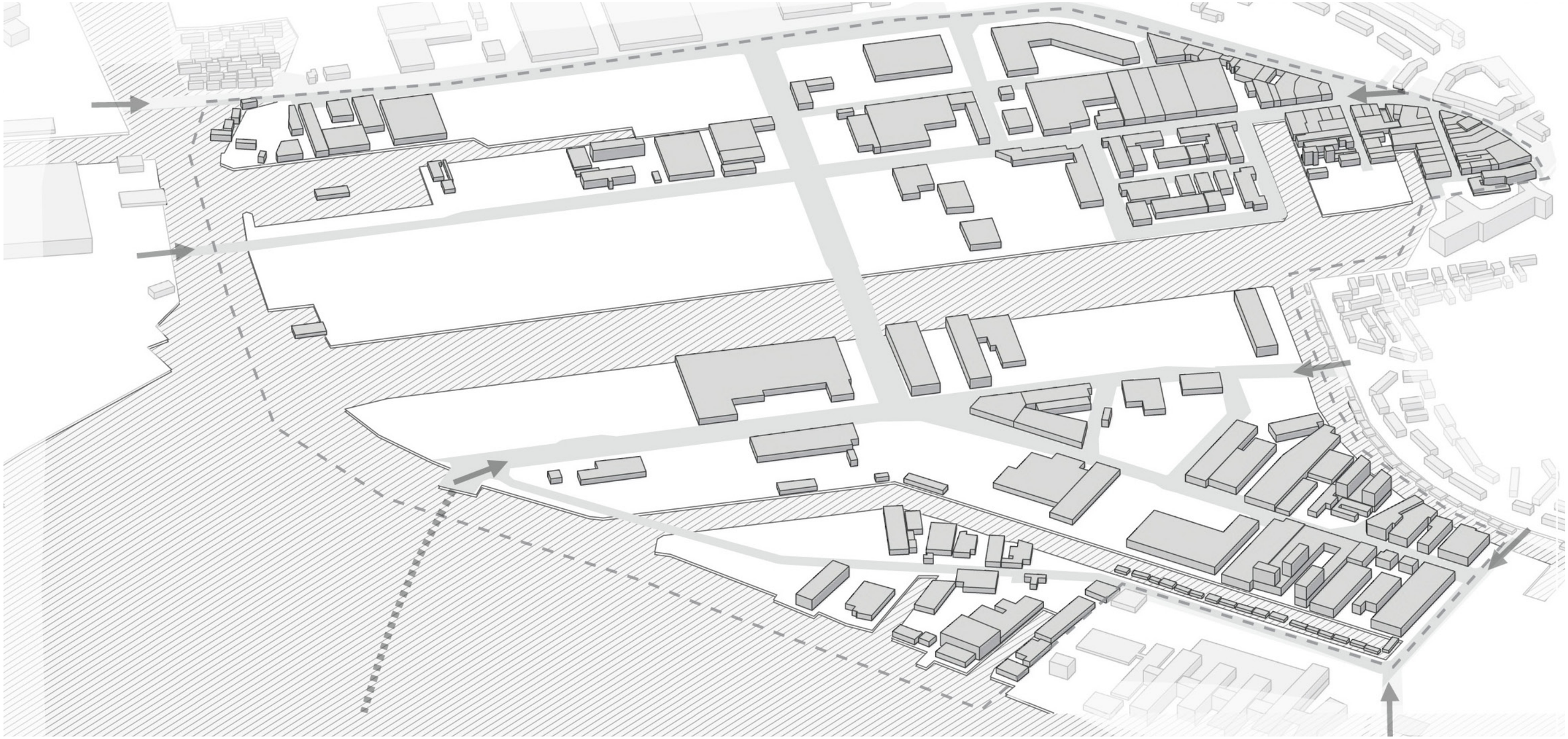
- Urban strategy

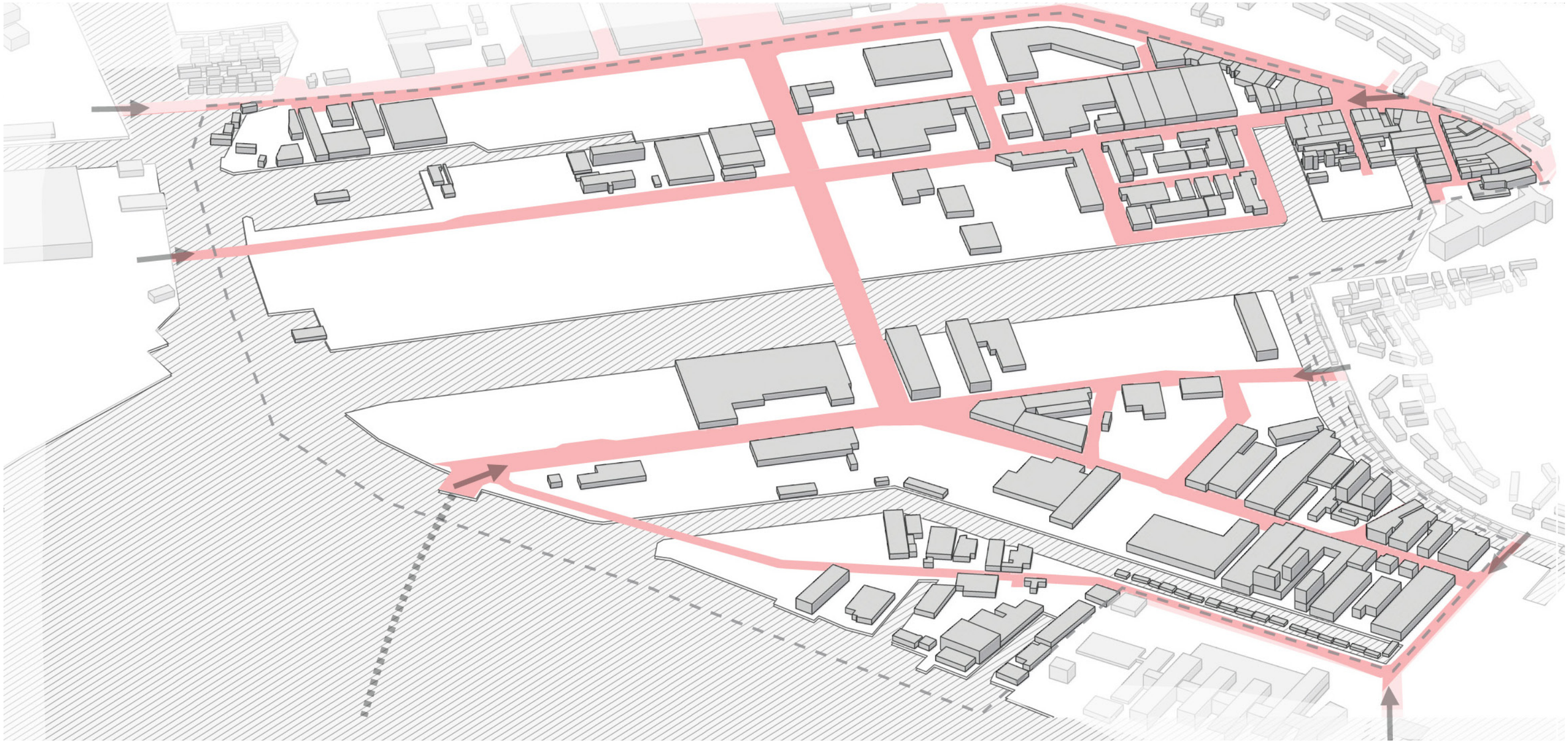
RESEARCH & DESIGN:

- Urban scenarios

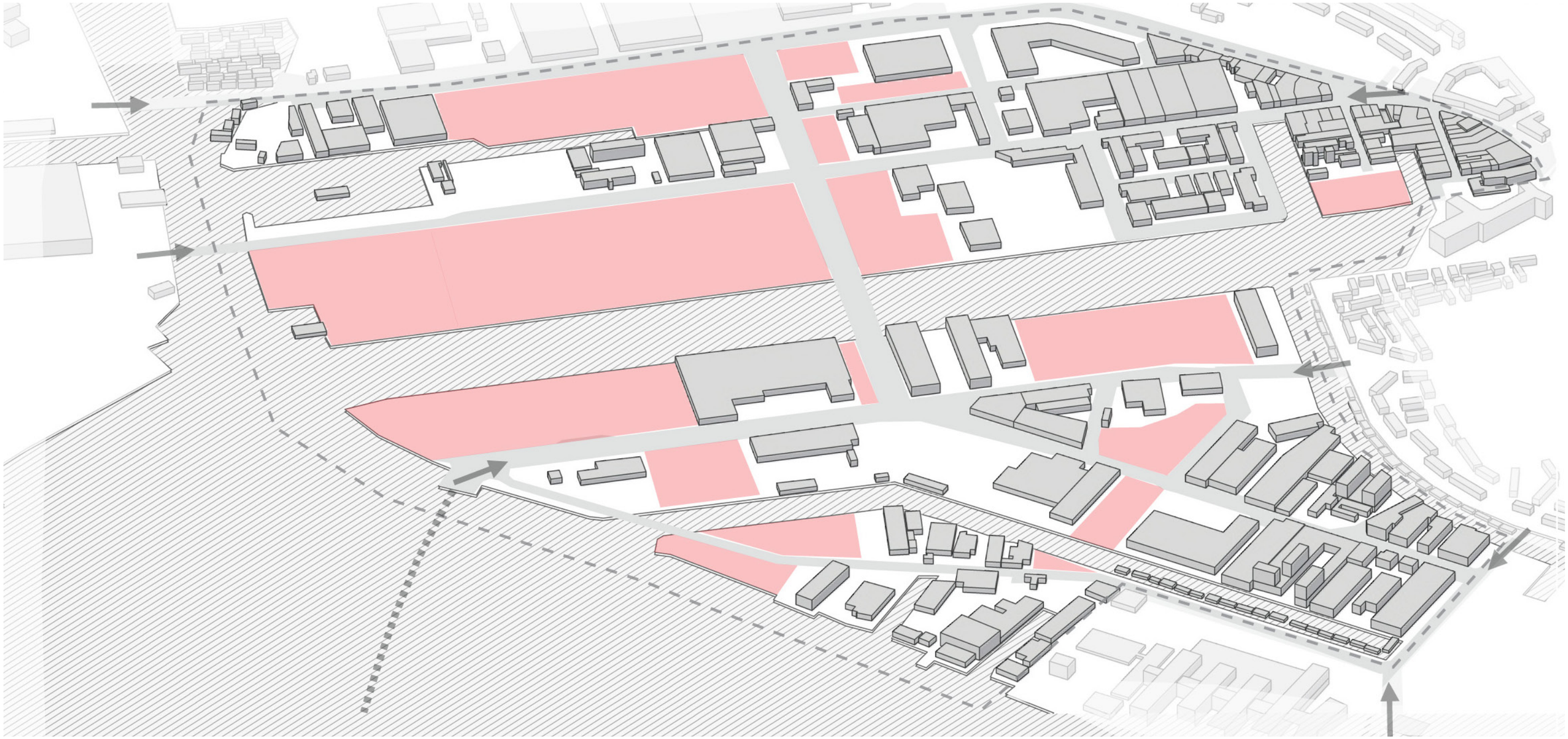
DESIGN:

- Architectonic tools

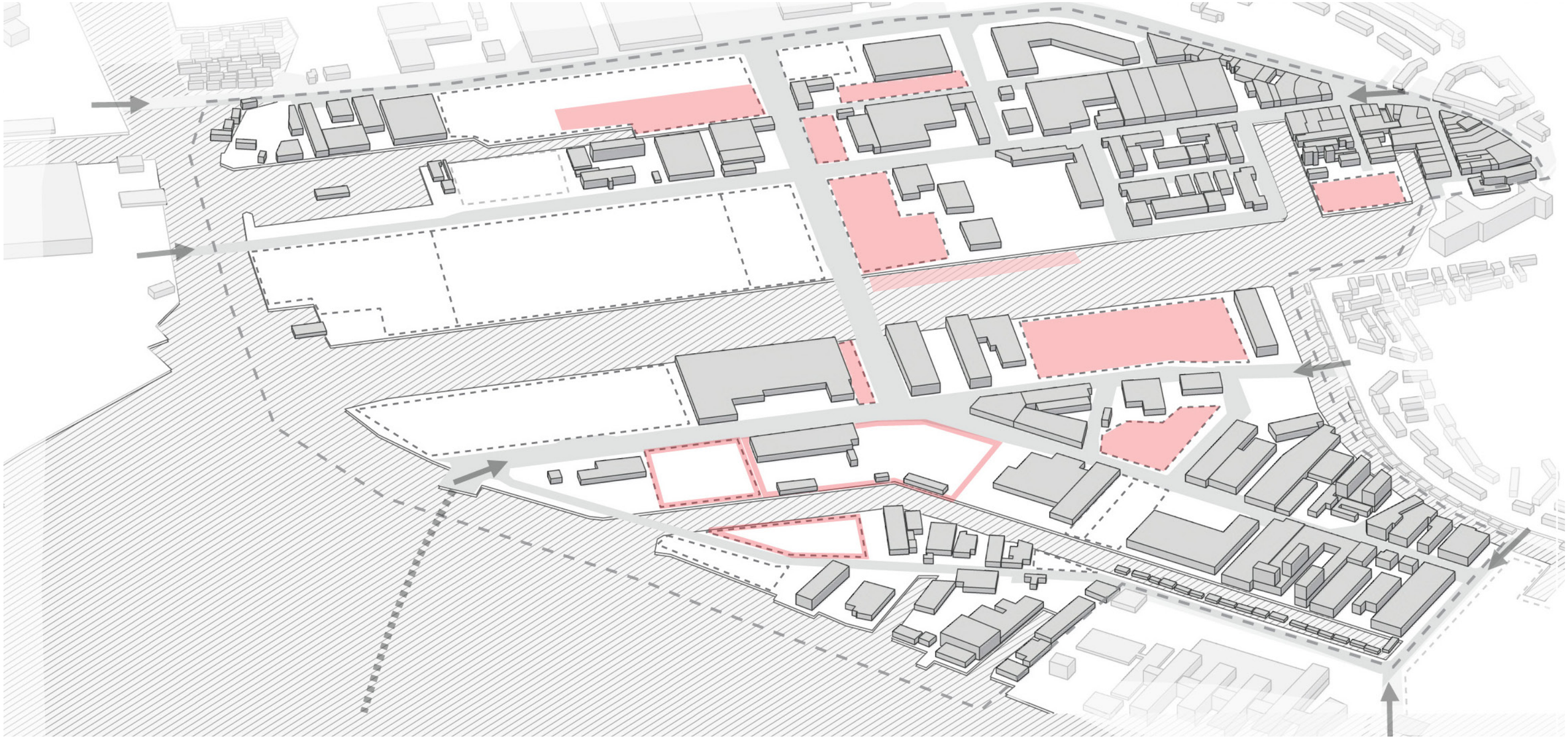




Post-industrial public space; water network and roads for industrial flows



Post-industrial urban wastelands; surplus of vacant (polluted) grounds



Urban development; clustered & fragmented transformation

Buiksloterham Transition area

- Dynamic, unpredictable transformation context

- Spatial and organizational fragmentation;
urban fragments and clusters of small-scale (informal)
local initiatives as driver of developments

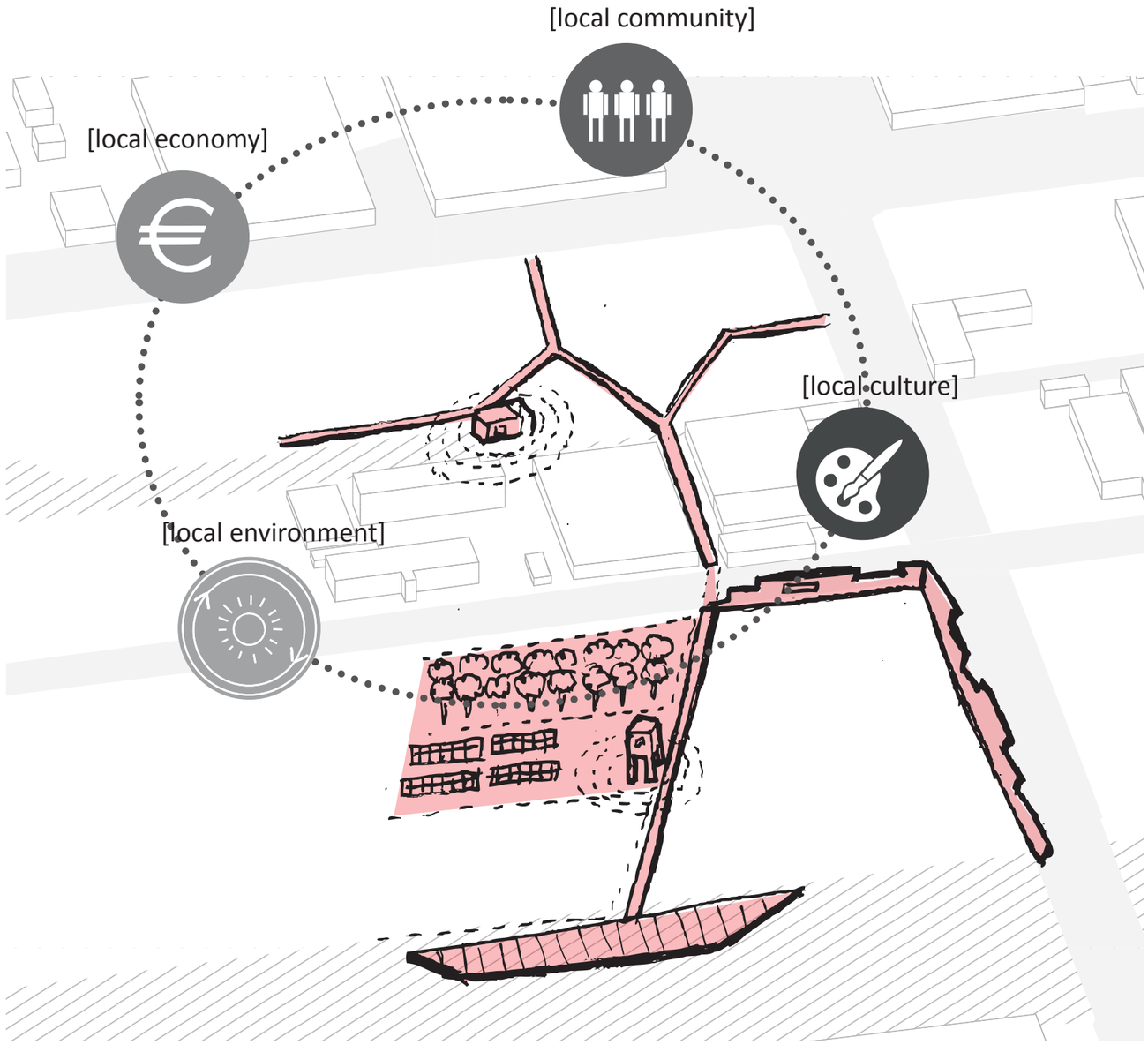
- Economic crisis; cutbacks on public space,
stagnation traditional large-scale urban development,
forced self-organization

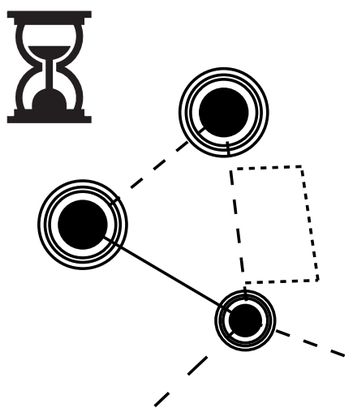
- Active citizenship, sharing economy and sustainability as central themes

Buiksloterham Urban Transition Network

Organizational and spatial framework, based on active citizenship, that deals with the economic crisis and the dynamic urban context, a model for;

flexible and participative urban development -
focussing on the transformation of the networks of public space



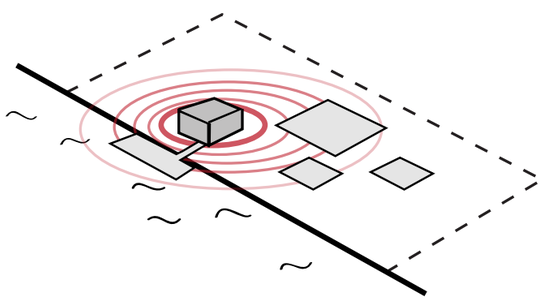


EVOLVING NETWORK
of temporary public spaces

NODES;
centers of activity

LINES;
movements, routes,
connections

FIELDS;
parks, urban farming,
energy production



ACTIVATING WASTELANDS
& CONNECTING URBAN FRAGMENTS

- Crisis architecture: low-cost, big impact

- Flexible, adaptable, mobile

Goals:

- Attract new inhabitants, entrepreneurs, investments, building projects

- **Support neighborhood life in state of transition**

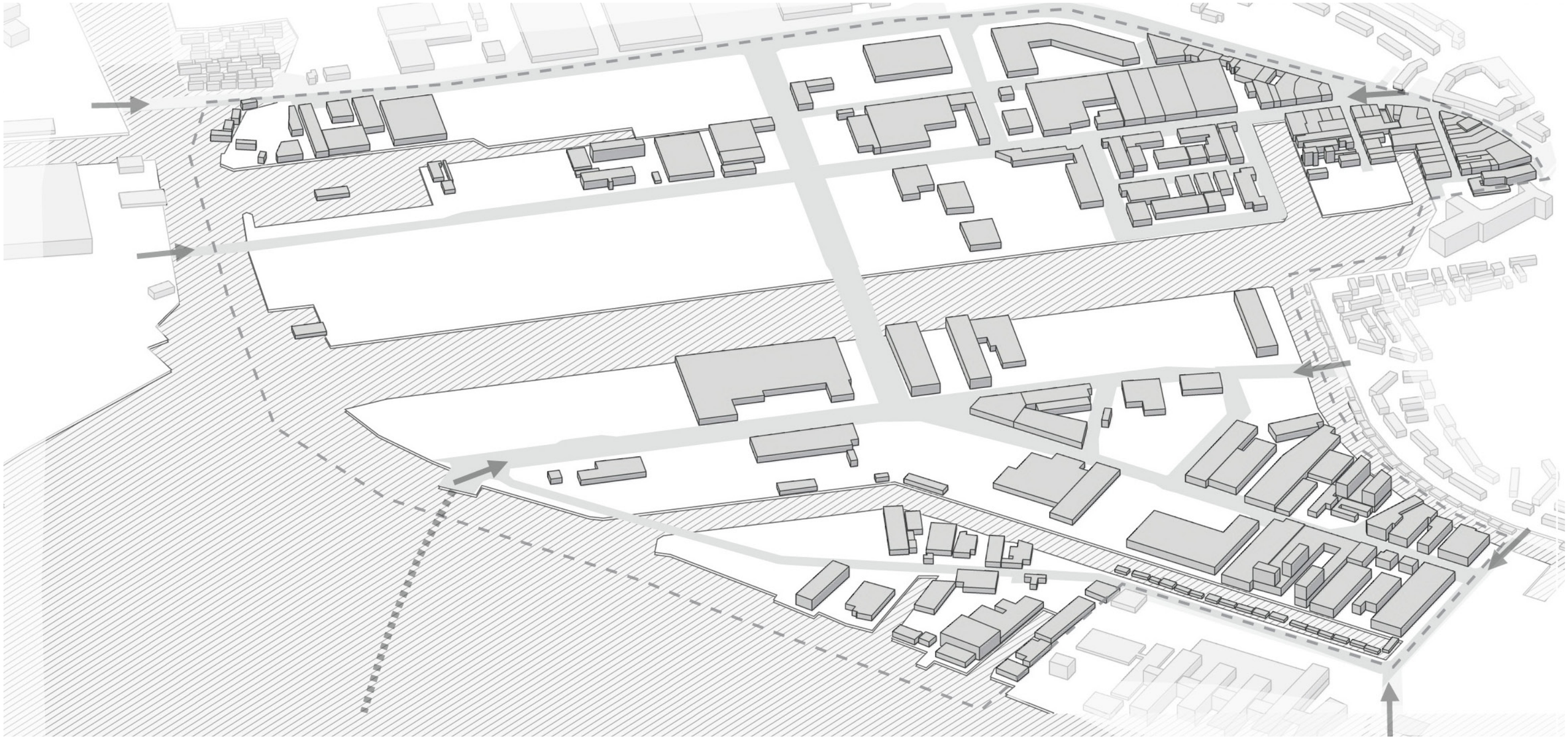
Open Lab Ebbinge - Groningen (source: Prima Focus 2014)

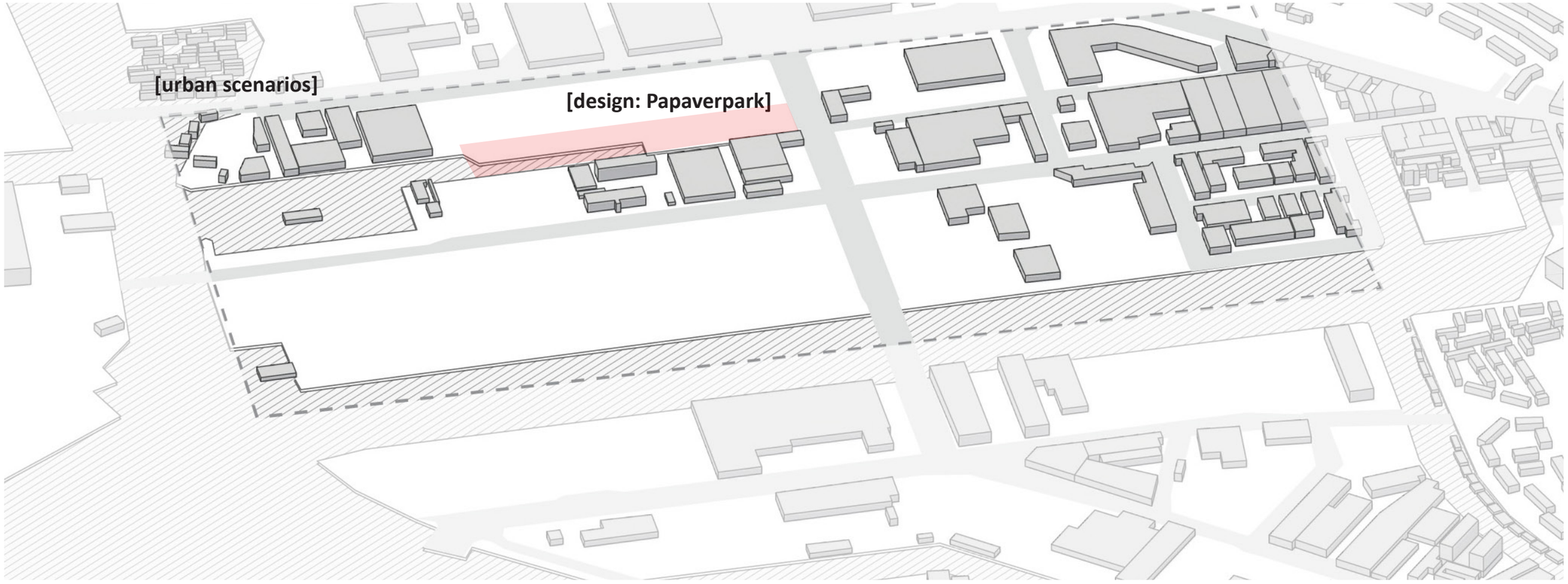
2016

PILOT PROJECT - 10 YEARS
Papaverpark Transition Lab (architectonic design)

2026

DISSEMINATION
Buiksloterham Urban Transition Network (urban scenarios)




[urban scenarios]
[design: Papaverpark]

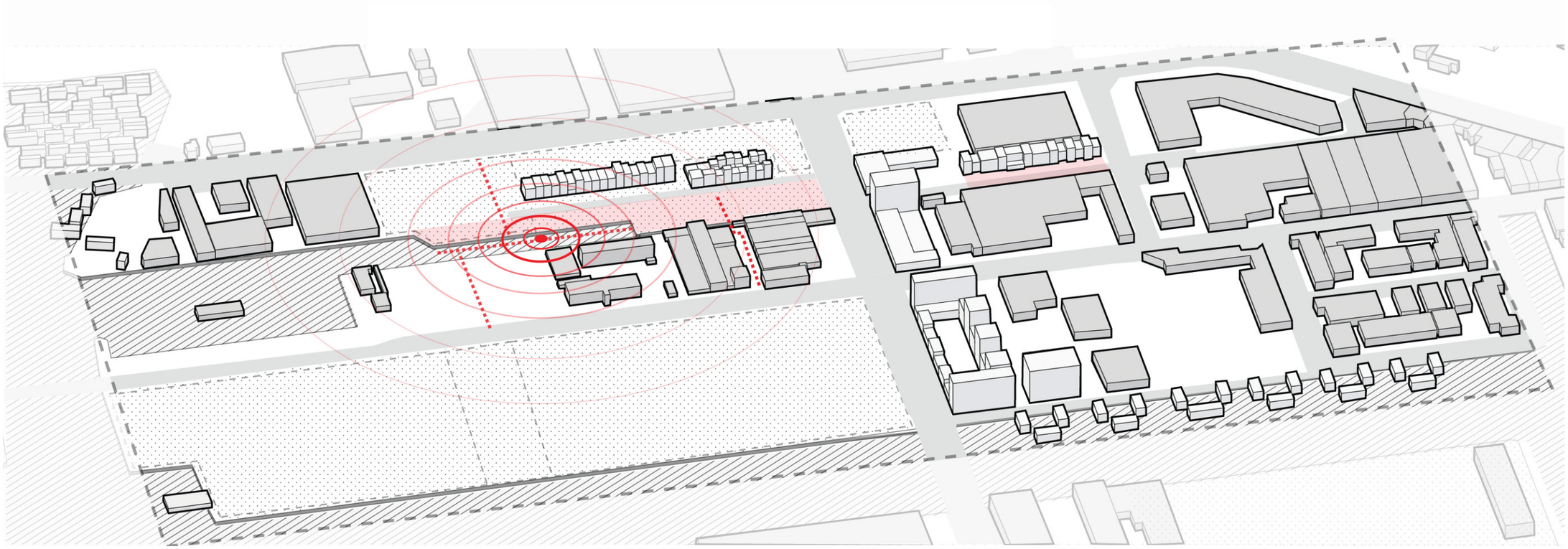
2016

2019

2026

PILOT PROJECT PAPAVERPARK

DISSEMINATION TRANSITION NETWORK



2016

PILOT PROJECT PAPAVERPARK

2026

DISSEMINATION TRANSITION NETWORK

2028: Gradual transformation

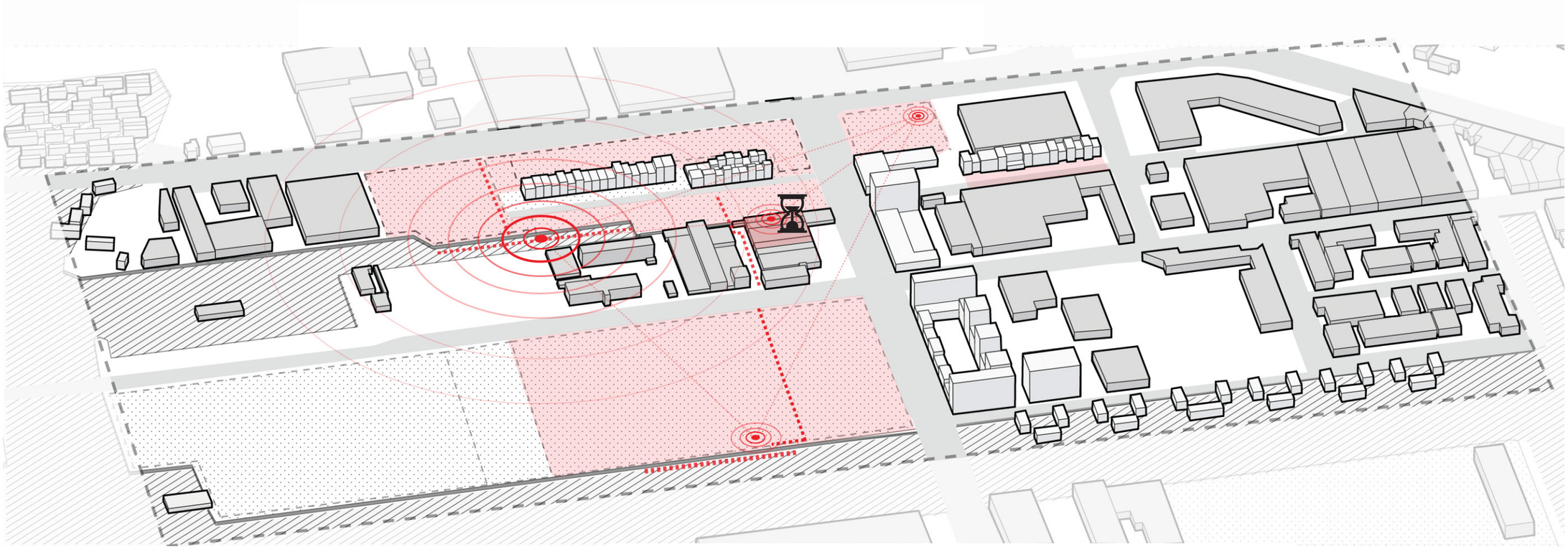
2028: Stagnation: Double dip recession

2016

PILOT PROJECT PAPAVERPARK

2026

DISSEMINATION TRANSITION NETWORK



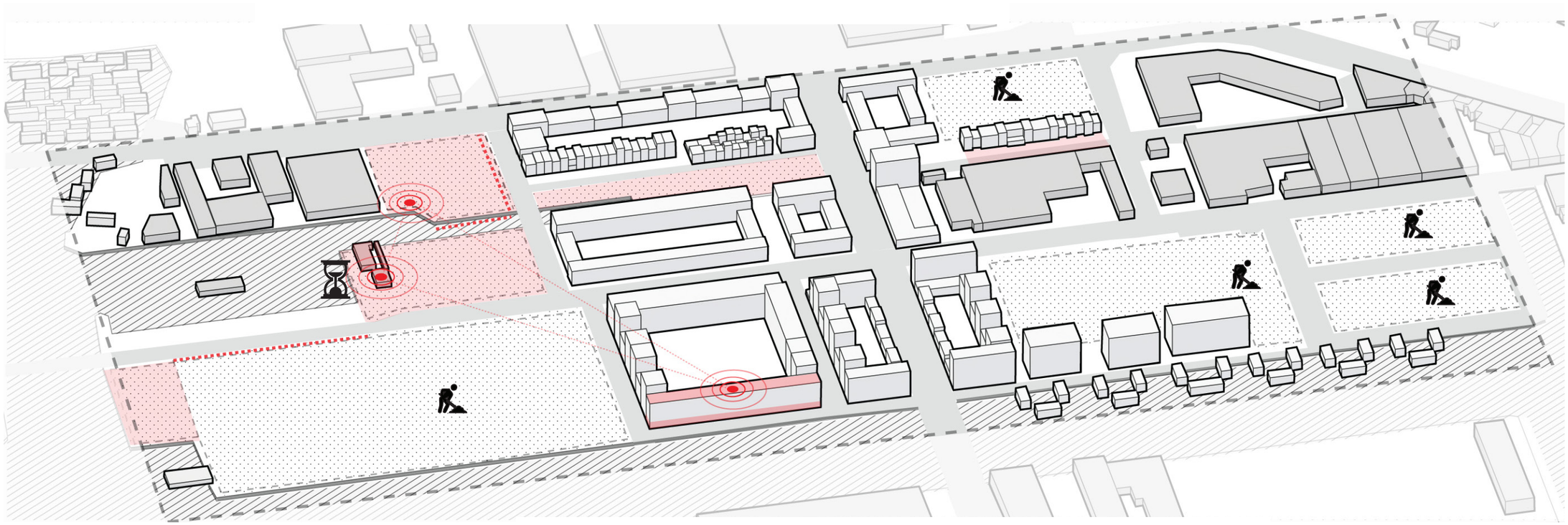
2016

PILOT PROJECT PAPAVERPARK

2026

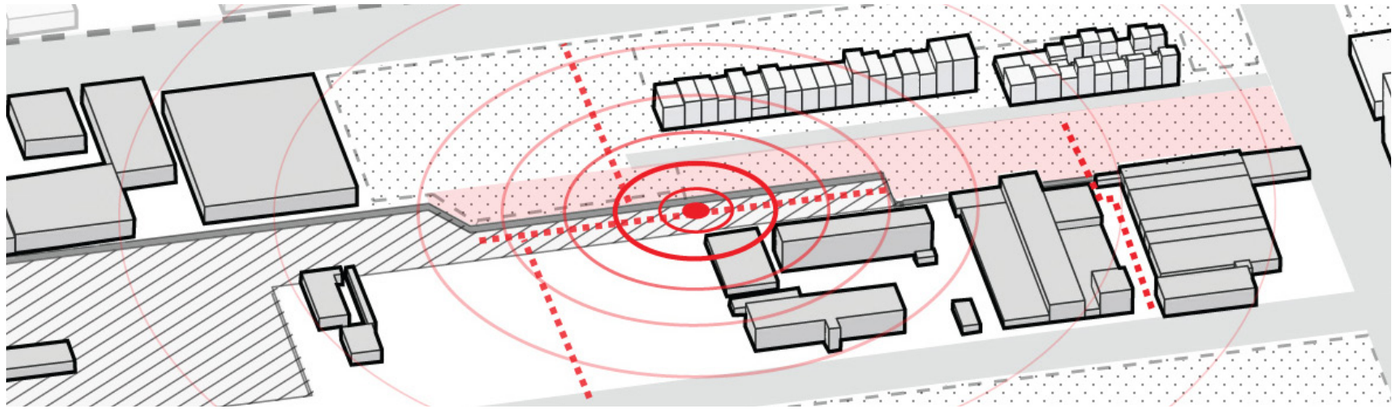
DISSEMINATION TRANSITION NETWORK

2028: Economic growth



2016

2026



- Focus design project on a temporary public building in the Papaverpark,
the first public space to be realized in the area

- The goal is to design a CATALYST FOR URBAN DEVELOPMENT
in Buiksloterham, for use in the early phase of transition

- To achieve this goal, architecture is interpreted as an open, flexible framework
as support for local initiatives

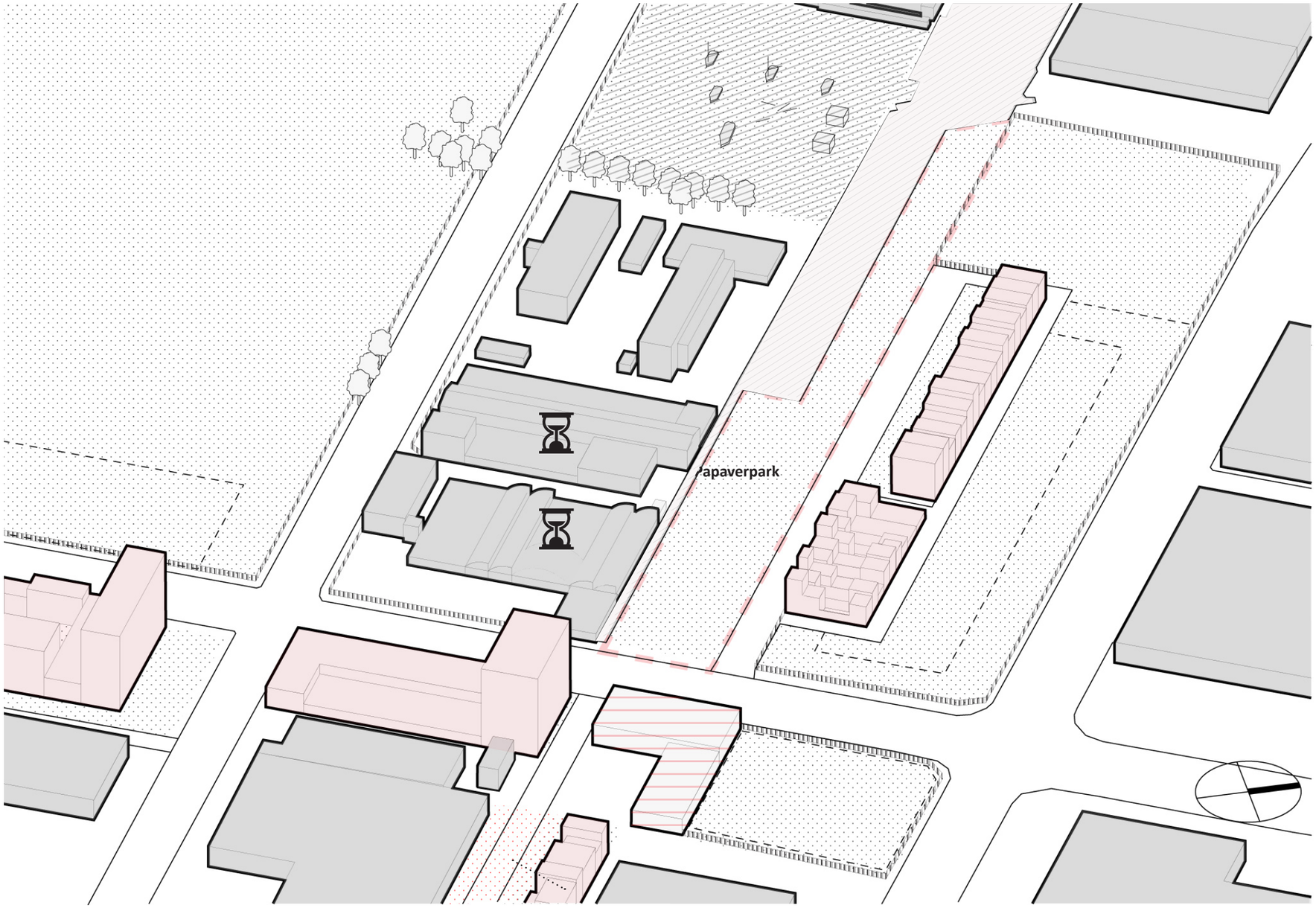
PHASE 1
Information and event center
Buiksloterham in Transition

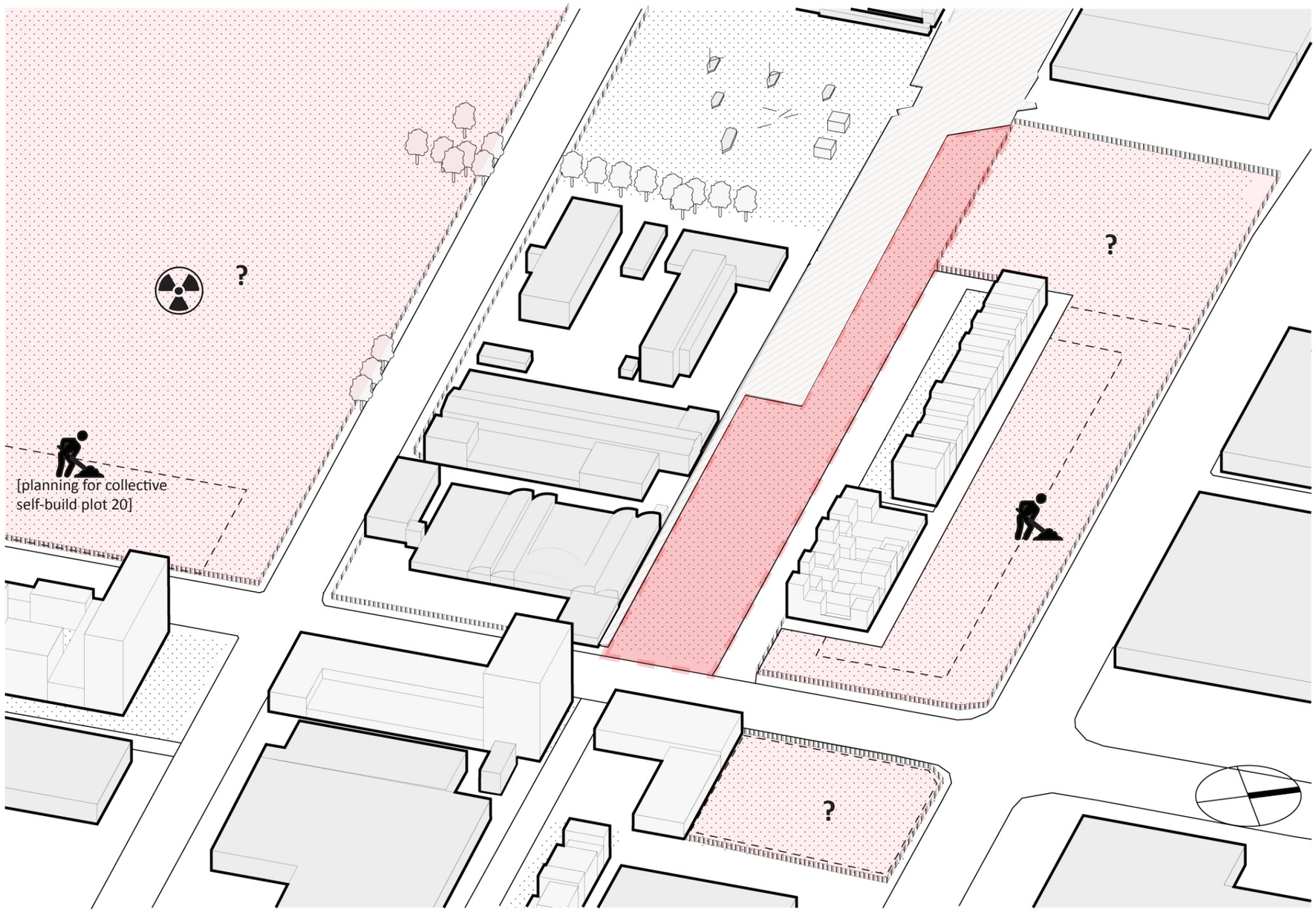
A place where all stakeholders of urban development in Buiksloterham can meet, discuss, receive and spread information, give lectures and workshops

PHASE 2
Incubator of local start-ups

In a later phase, start-ups such as pop-up stores, flexible work places, cafes, urban farming, ateliers, can join


neef LOUIS
DESIGN & INDUSTRIALS


Papaverpark
New living(-work) buildings
Existing (light) industry
Temporary uses existing industrial buildings
New facilities



Living(-work) zones

Public space
Papaverpark

Planning / construction
waiting for development

? Vacancy for unknown period

Polluted grounds

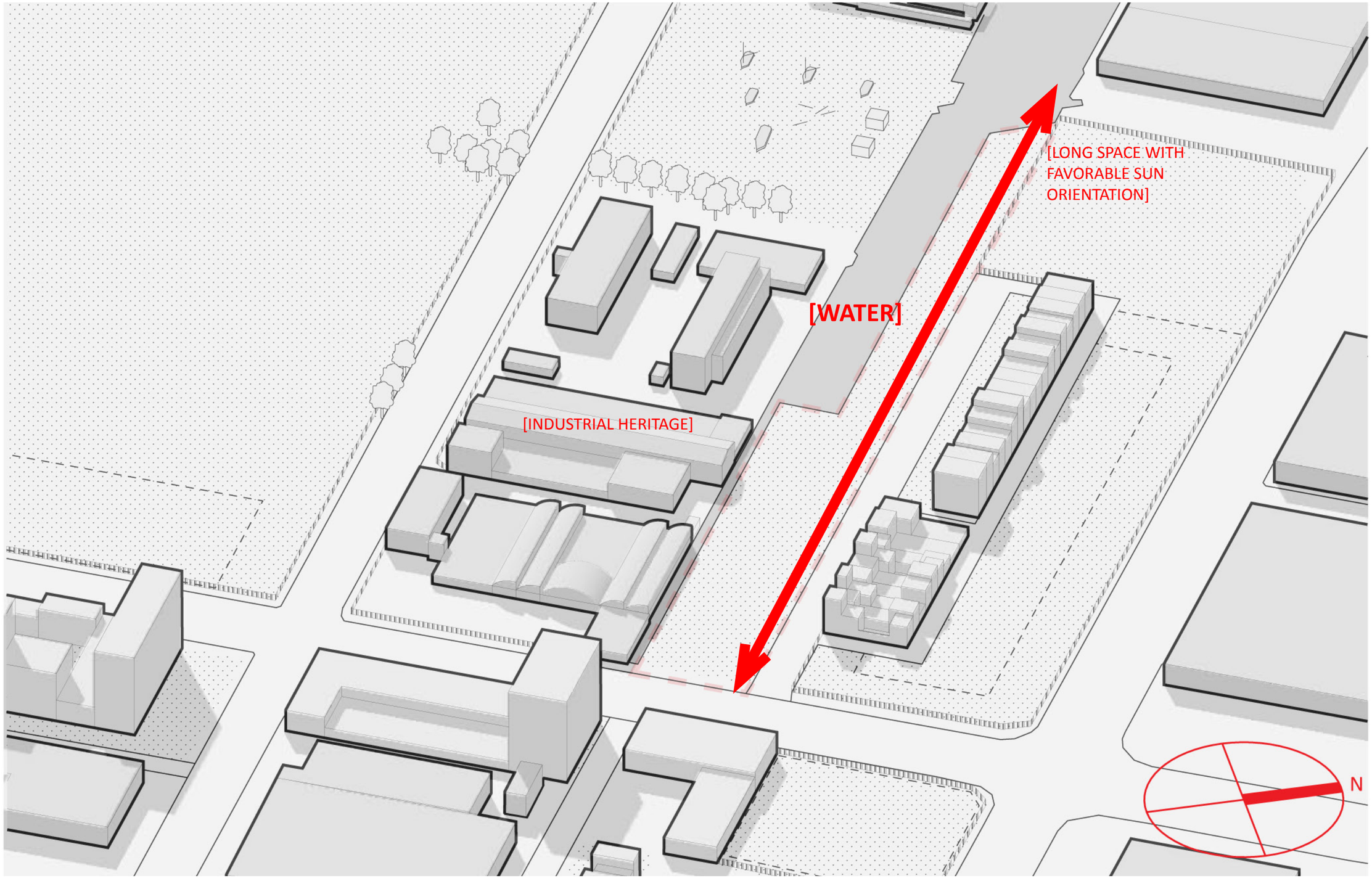
Future re-use or demolition industrial buildings

Recently built

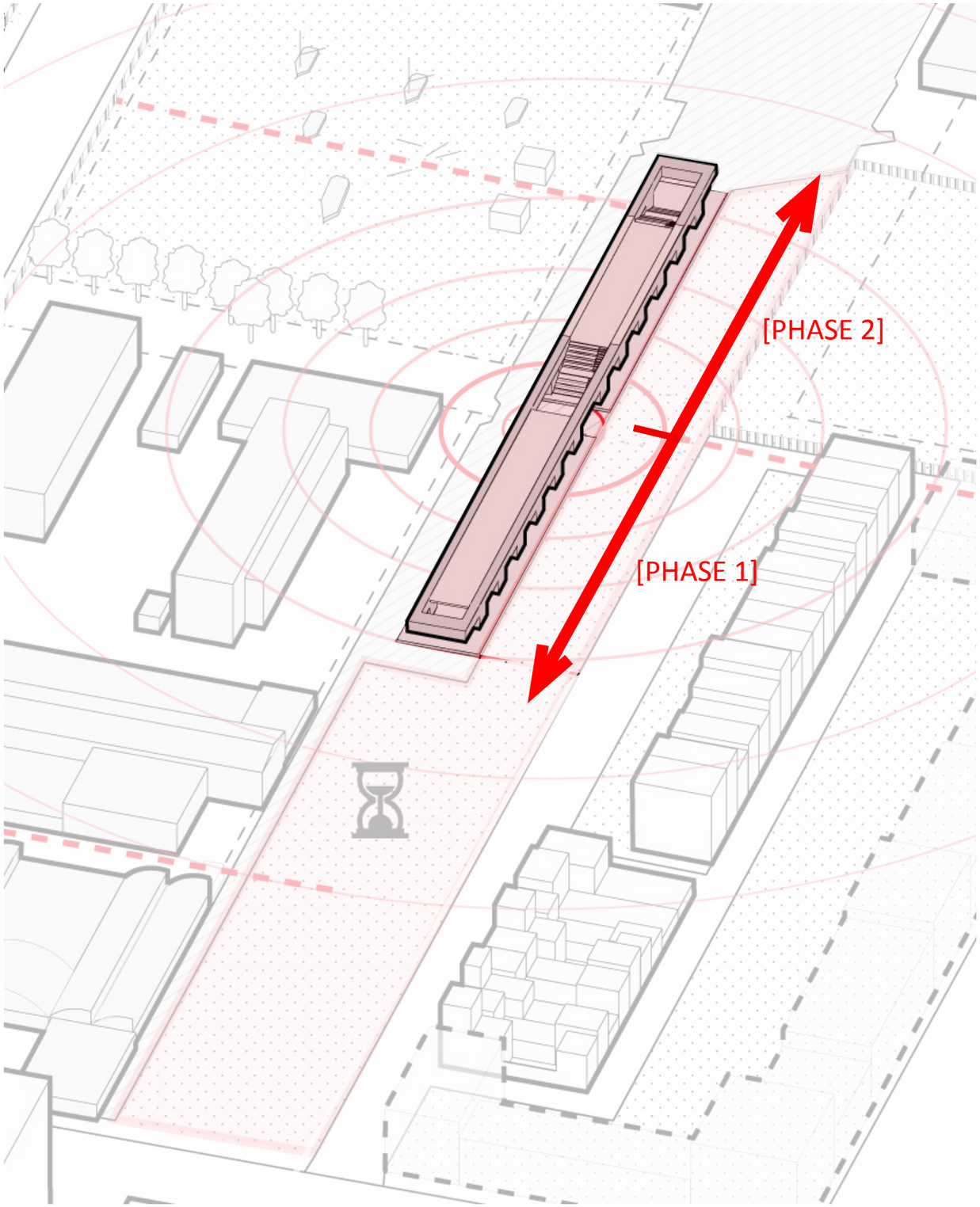
live-work transformation zone

living-zone

public park (Papaverpark)


[LONG SPACE WITH FAVORABLE SUN ORIENTATION]
[WATER]
[INDUSTRIAL HERITAGE]
N

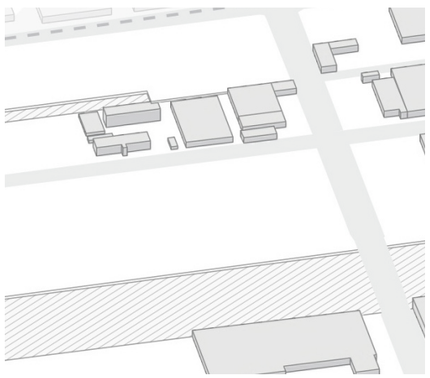

50 voet
25 m

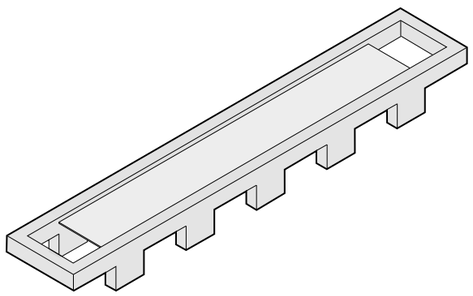


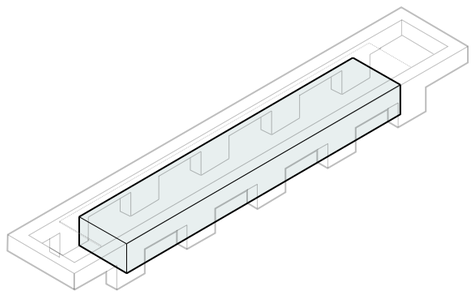
- Rectangular building on the water;
a mobile structure, based on a system of modular expansion

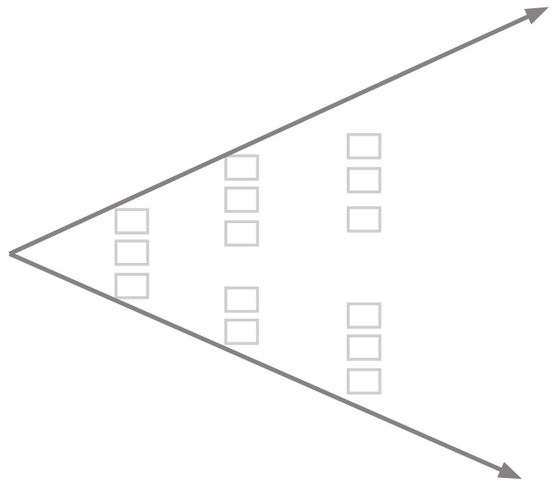
- Relation to industrial history;
repetitive industrial form language and the building manifests similarly to former industrial boats on the location

- The space of the park remains free to experiment with different types of urban program, such as sports fields, urban farming, greenery and leisure.









[CONTEXT URBAN TRANSITION AREA]

+

[FRAME]

+

[INFILL]

+

[METHOD TIME-BASED INTERVENTIONS]

=

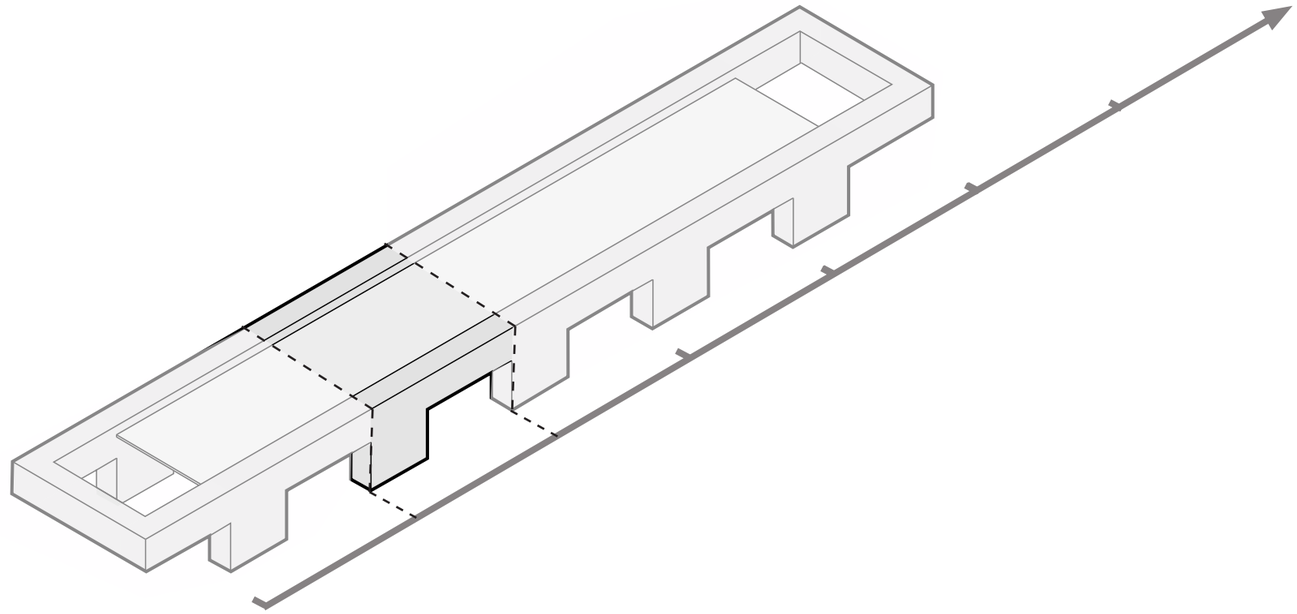
The role of the temporary structure in the transition process, determined by the location, program, actors, and the budget

IFD building (Industrial, Flexible, Demountable) Using affordable standardized building products that can be re-used after the project

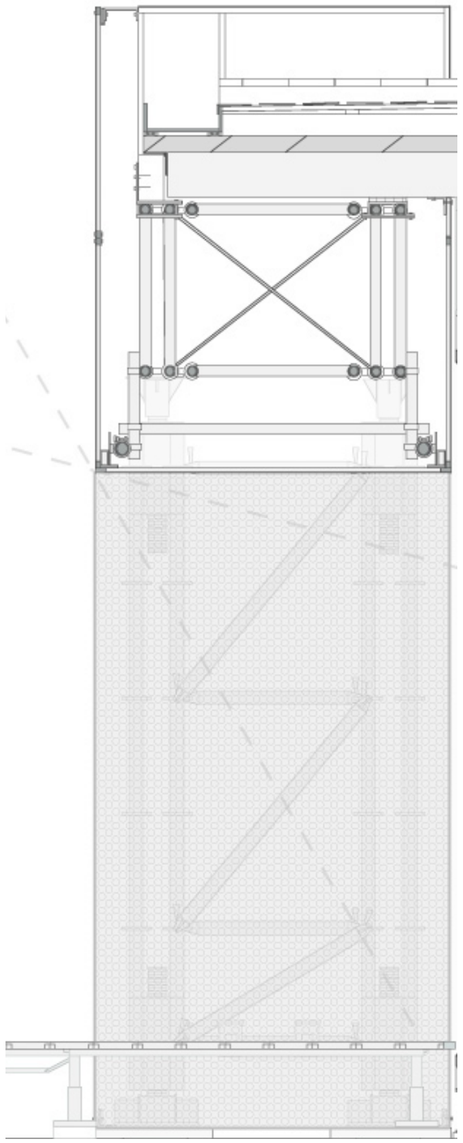
Multi-use spaces, multi-use elements and movable elements ensure flexibility in use

The building is developed in phases, step by step, using a multi-optional time-line method, to ensure flexibility and participation throughout the building life cycle

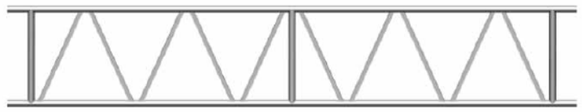
[SYSTEM FOR PRODUCTION ARCHITECTONIC TOOLS FOR FLEXIBLE, PARTICIPATIVE URBAN TRANSITION]



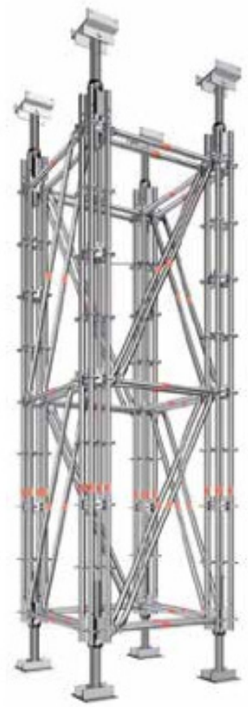
[MODULAR EXPANSION FRAME-CONSTRUCTION]



- Quantum Deck Floor (TATA Steel); relatively lightweight steel/concrete floor

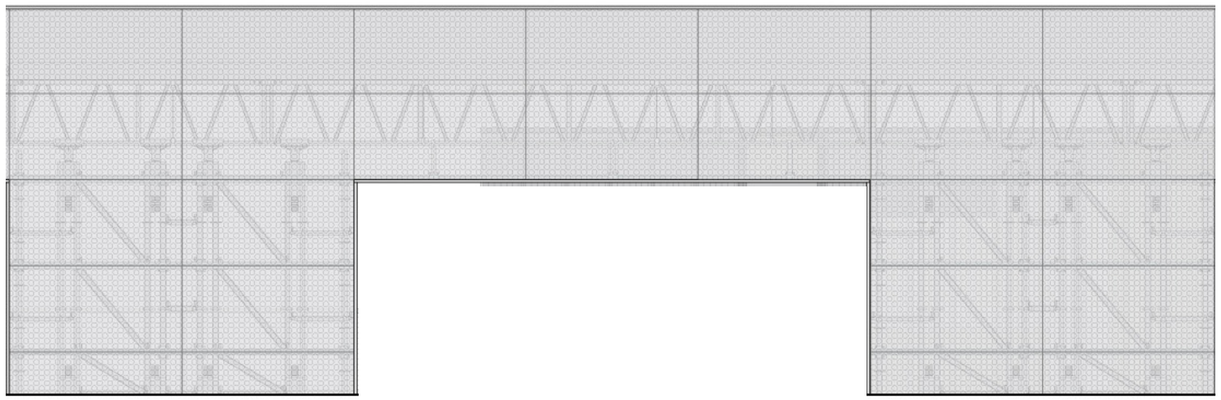


- Scaffolding trusses, steel (Layher); multiple trusses combined with distancers to form strong spatial trusses



- Scaffolding tower, steel (Layher); two towers combined

- Foundation type



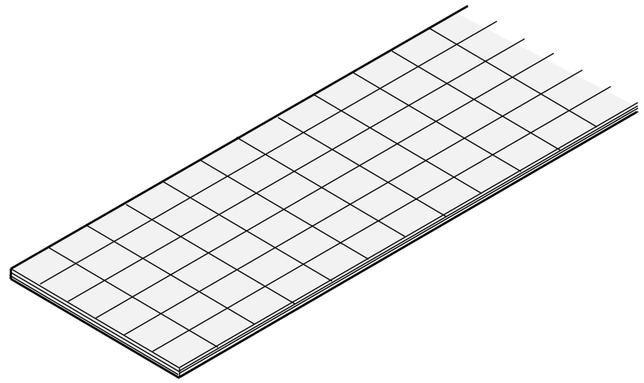
- The construction is cladded with perforated metal sheets , to function as sun shading and to unify the building image of a transparant, open framework

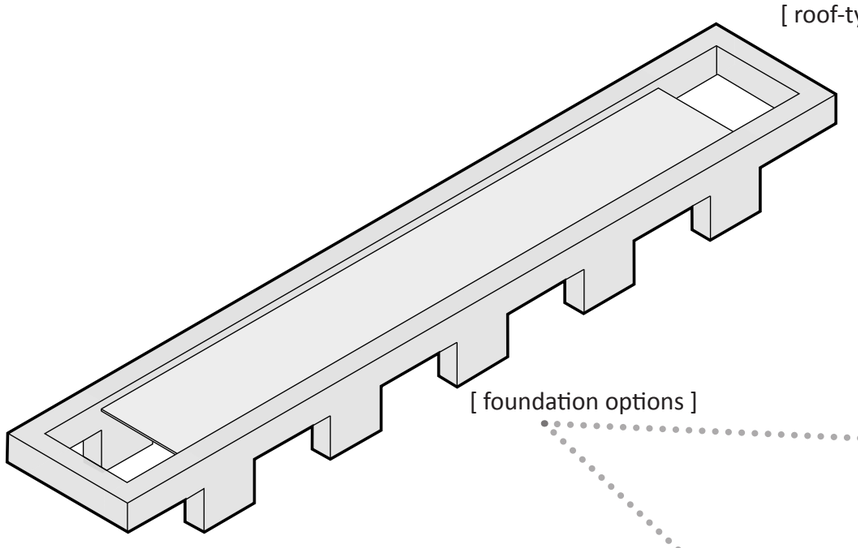
source: Derksen/Windt architecten

[ROOF TERRACE]

[ROOF WITH OR WITHOUT PV-PANELS]

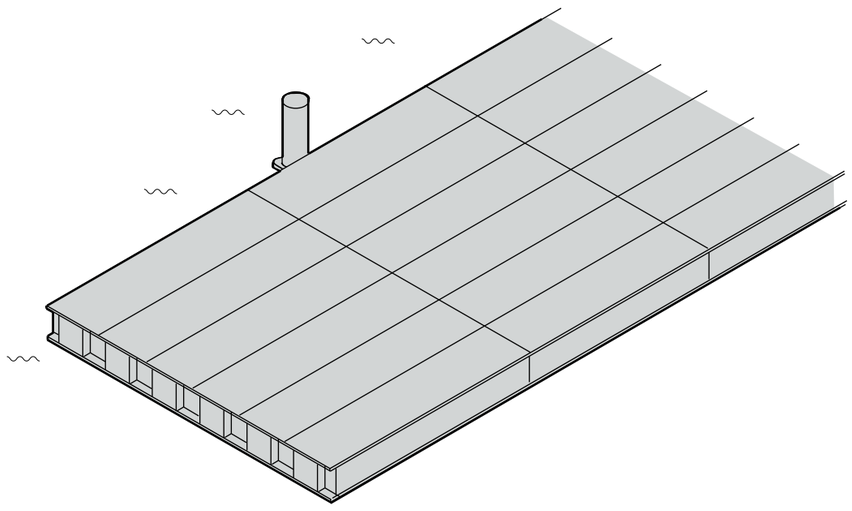
[roof-type options]





[foundation options]

[ON LAND: STELCON PLATES + LOCAL GROUND IMPROVEMENT]

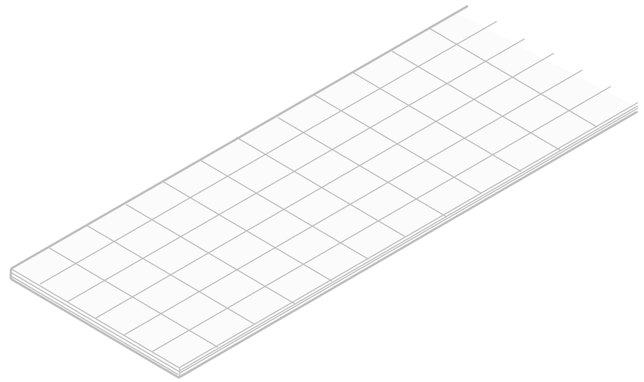


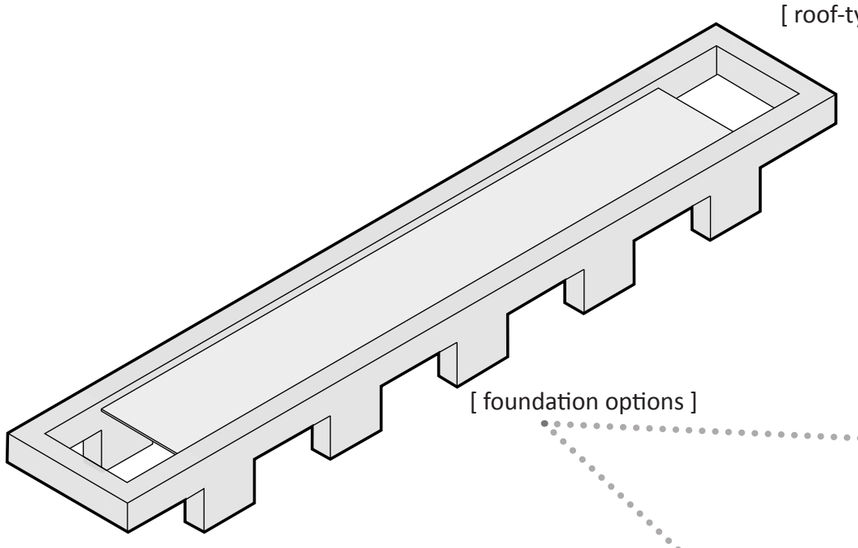
[ON WATER: MODULAR PONTOON SYSTEM + MOORING POLES]

[ROOF TERRACE]

[ROOF WITH OR WITHOUT PV-PANELS]

[roof-type options]





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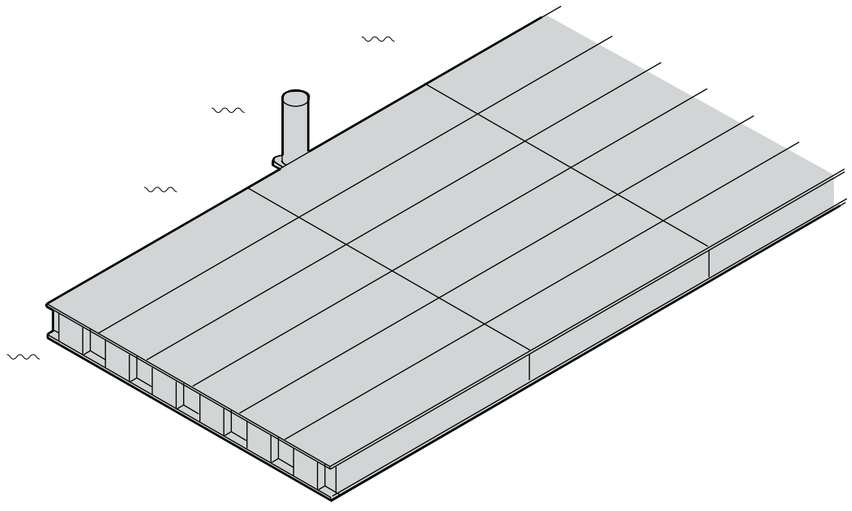

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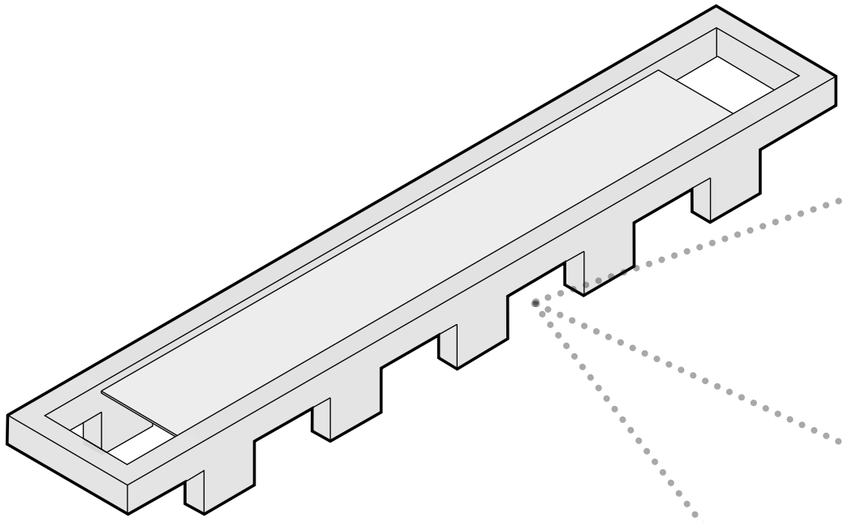
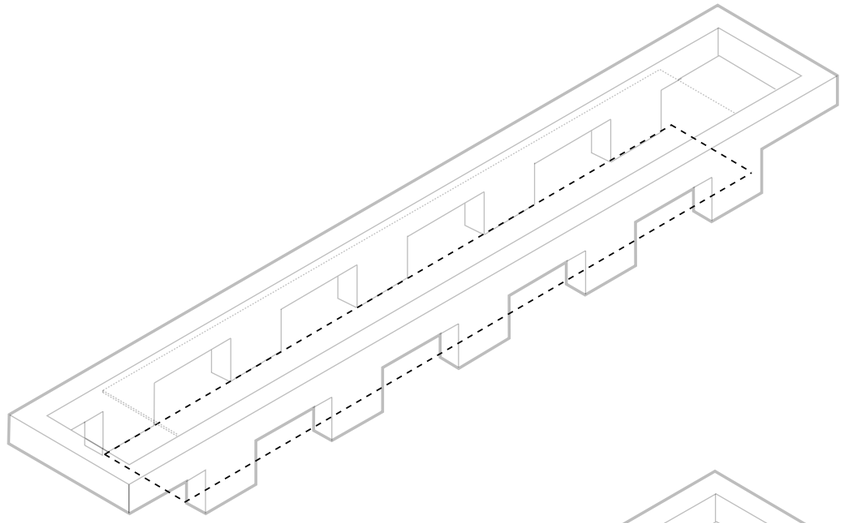
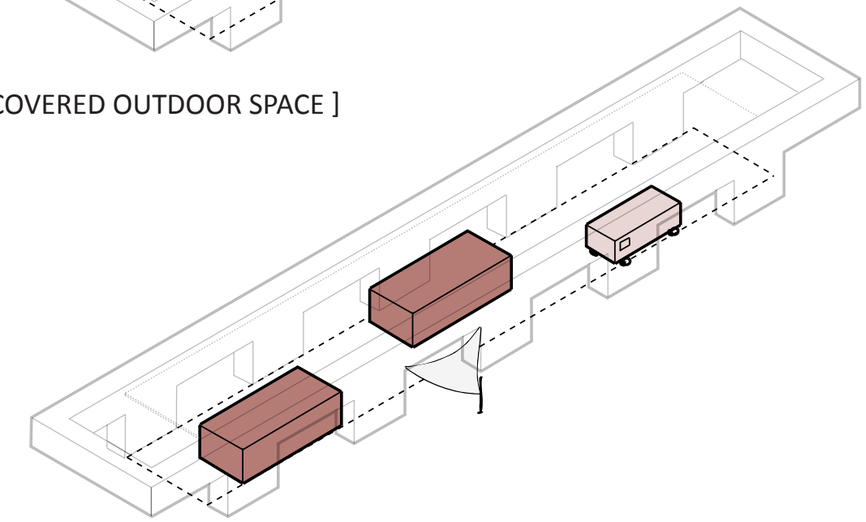
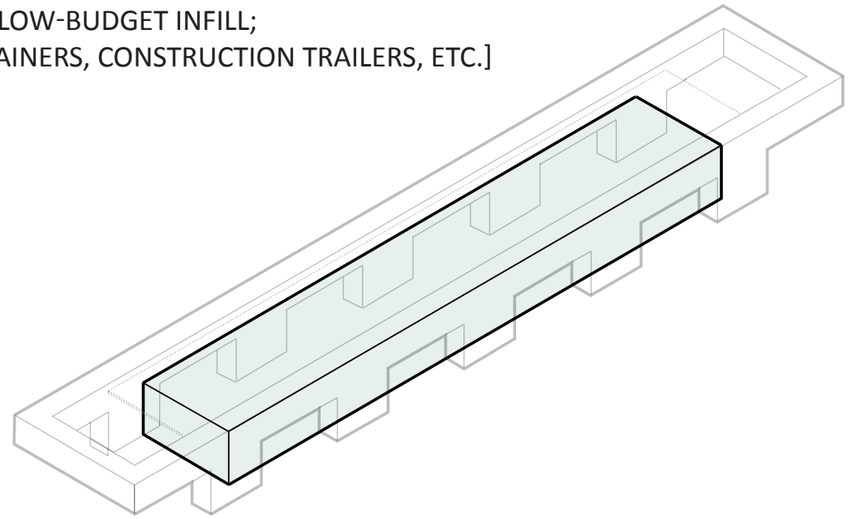




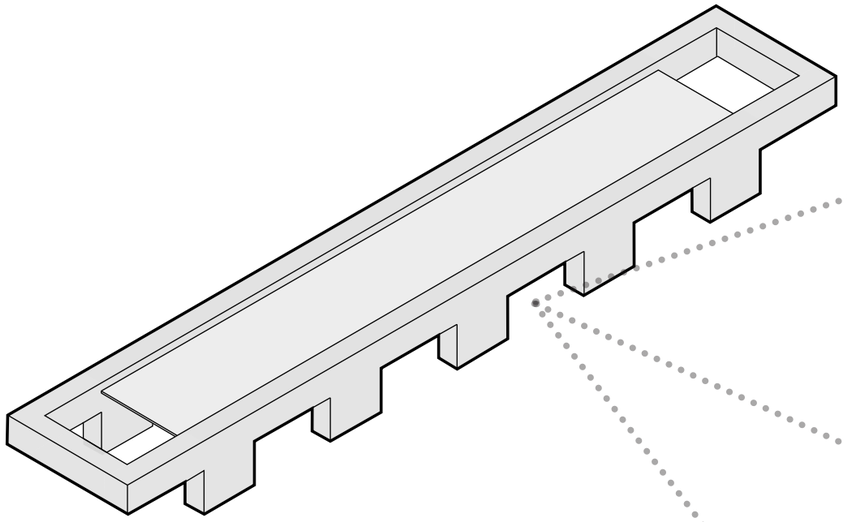
[NO INFILL - COVERED OUTDOOR SPACE]

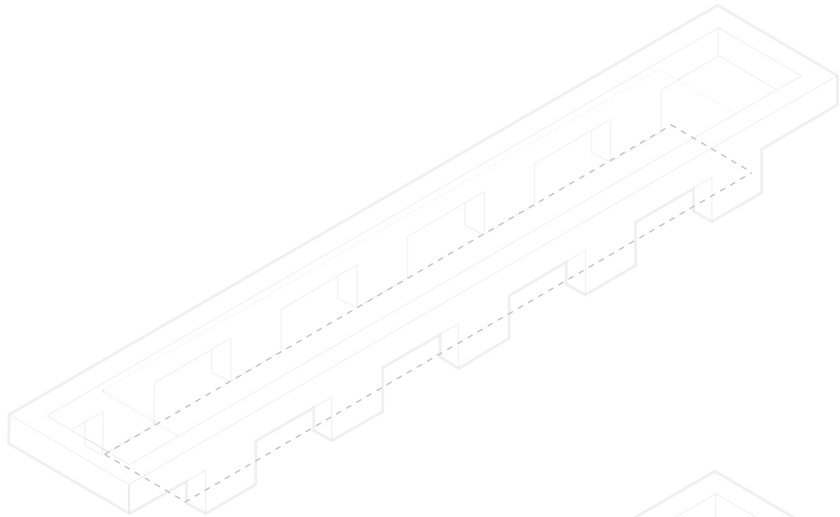


[SHORT TERM LOW-BUDGET INFILL;
RE-USED CONTAINERS, CONSTRUCTION TRAILERS, ETC.]



[MEDIUM BUDGET INFILL;
DESIGNED INFILL BOX SYSTEM WITH LONG-TERM RE-USE OPTIONS]





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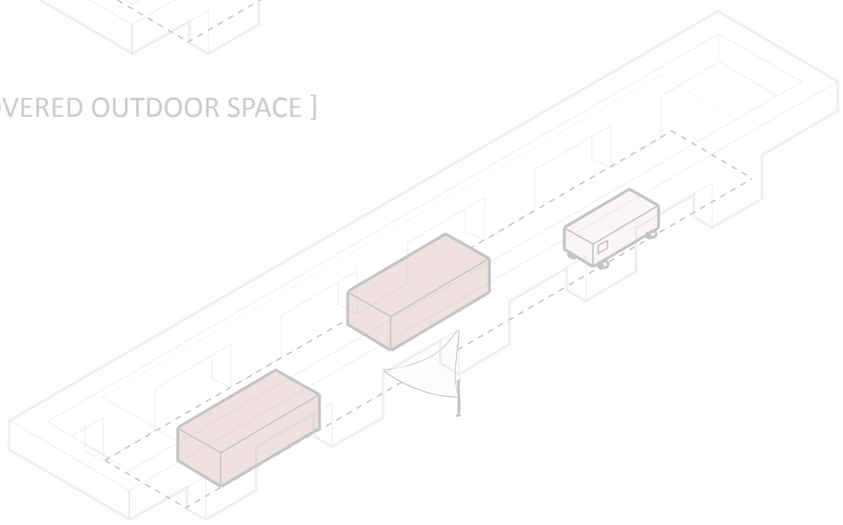

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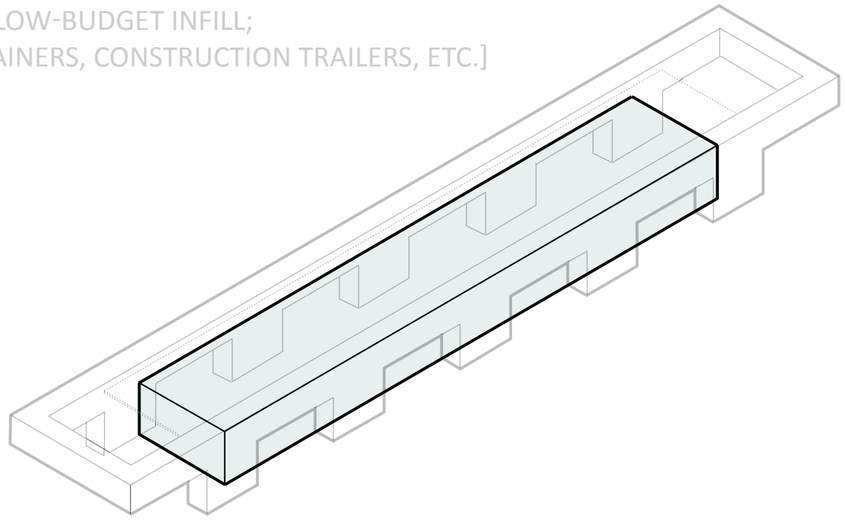
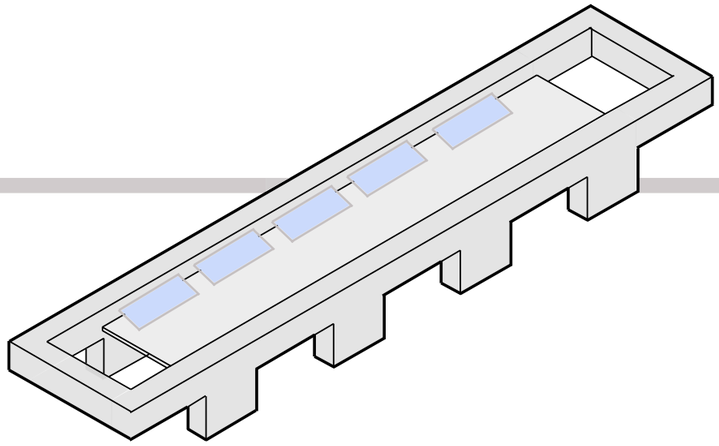


[MEDIUM BUDGET INFILL;
DESIGNED INFILL BOX SYSTEM WITH LONG-TERM RE-USE OPTIONS]

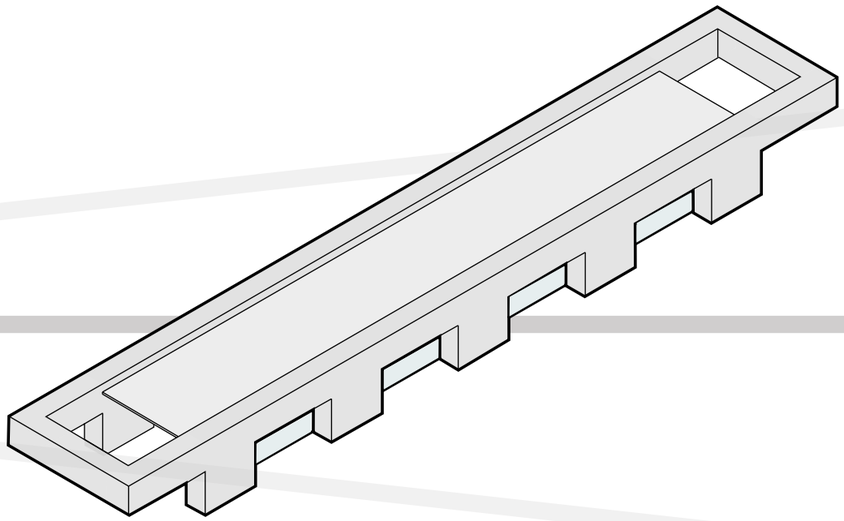
5 years

[OUTDOOR CONSTRUCTION WORKSHOP]



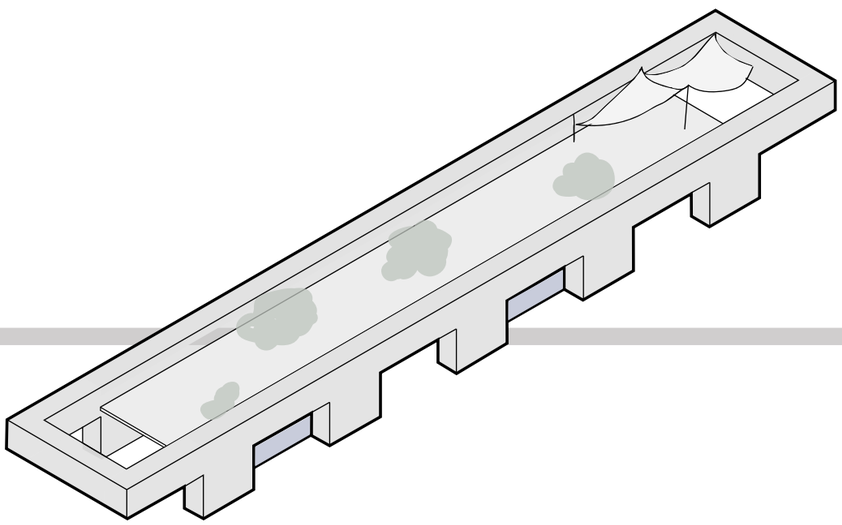
10 years

[URBAN CATALYST PAPAVERPARK]



10 years

[URBAN FARMING CENTER]

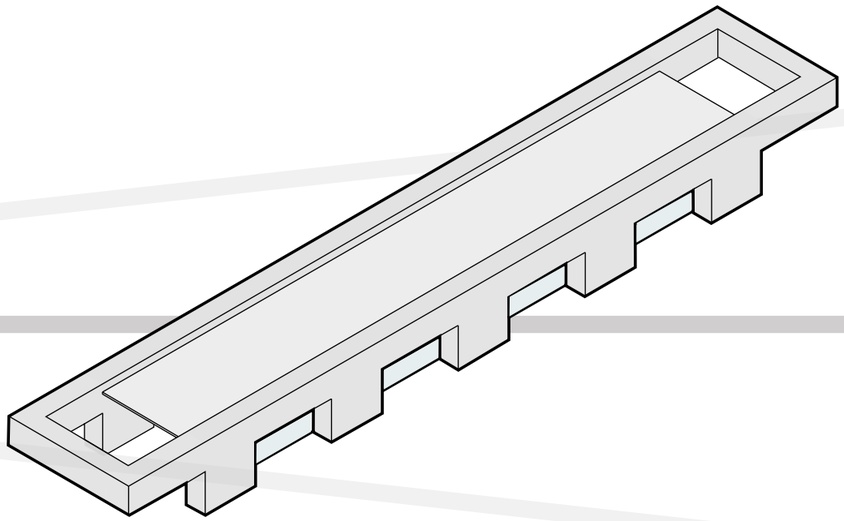


5 years

[OUTDOOR CONSTRUCTION WORKSHOP]

10 years

[URBAN CATALYST PAPAVERPARK]



10 years

[URBAN FARMING CENTER]

- Reduced financial risks in phased investments

- Integrating neighborhood participation during the entire life-cycle of the building

- Responding to the dynamics of the site

10 years

[URBAN CATALYST PAPAVERPARK]

2016

PHASE 0
PROTOTYPE

2016

PHASE 1
ACTIVATION

Multi-use information center

2018

PHASE 2
TRANSITION PLATFORM

Incubator local start-ups

2026

PHASE 3
LIFE CYCLE ASSESSMENT

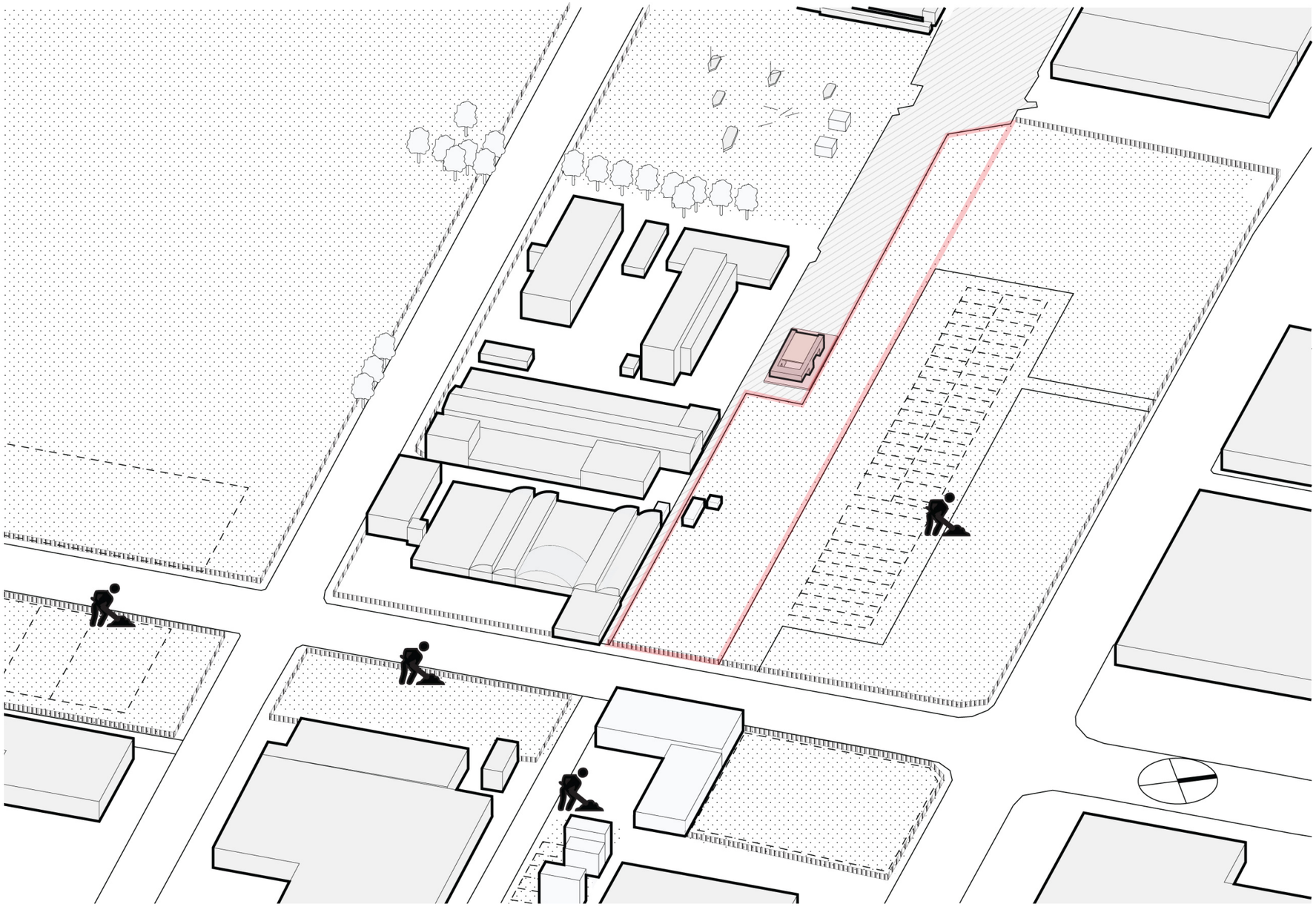
2016 | 2018 | 2026

PHASE 0
PROTOTYPE

PHASE 1
ACTIVATION

PHASE 2
TRANSITION PLATFORM

PHASE 3
LIFE CYCLE ASSESSMENT



Prior to the start of the project , a prototype is built, sponsored by the companies that provide the building materials

2016

PHASE 0
PROTOTYPE

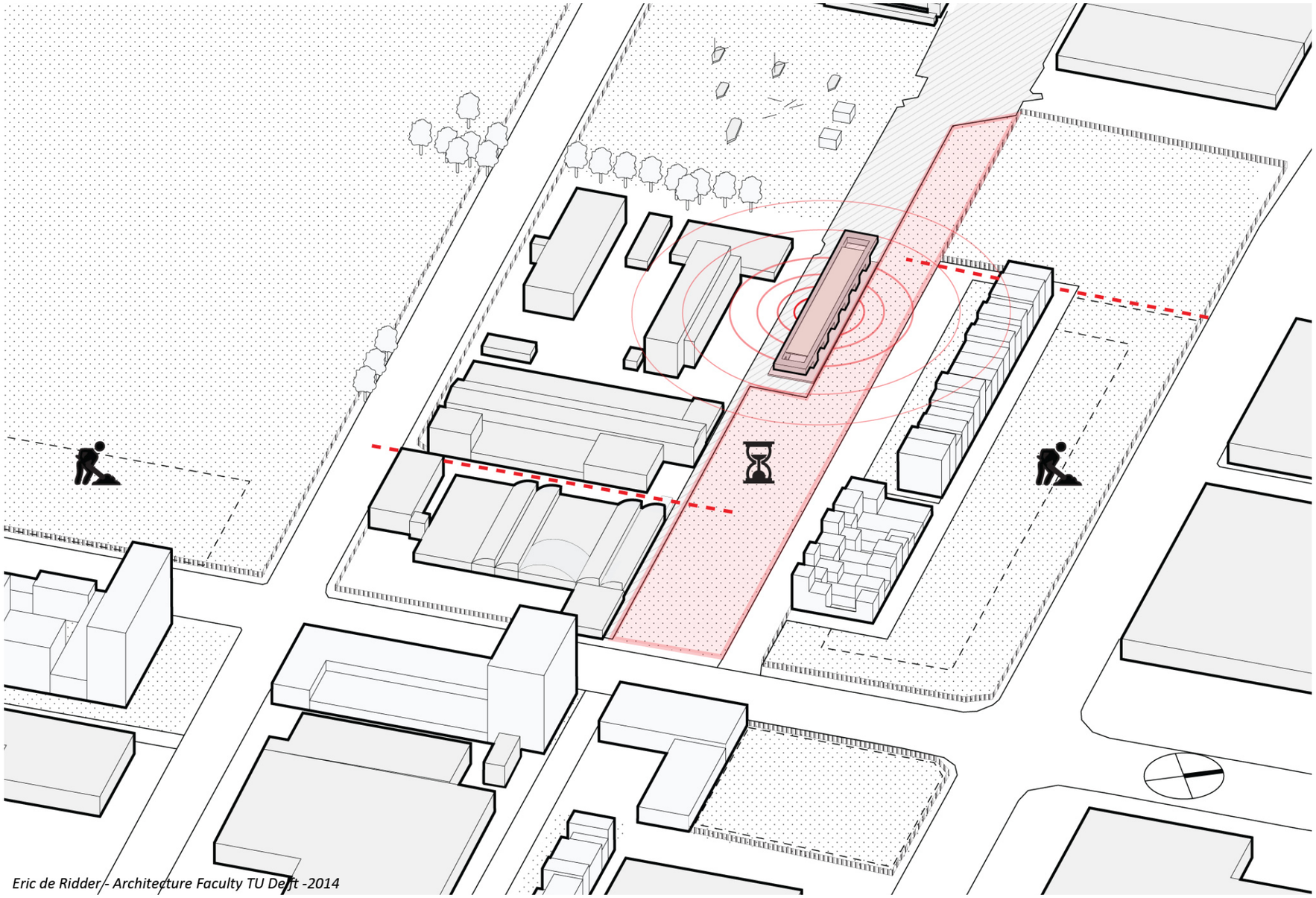
PHASE 1
ACTIVATION

2018

PHASE 2
TRANSITION PLATFORM

2026

PHASE 3
LIFE CYCLE ASSESSMENT

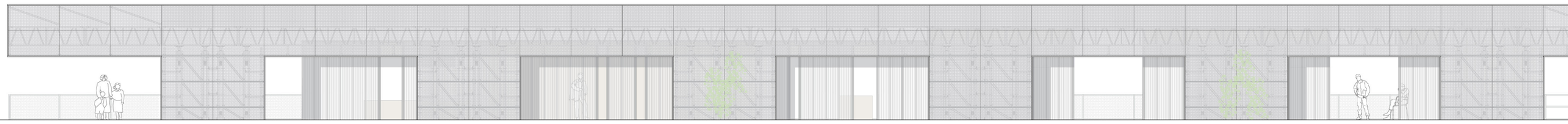


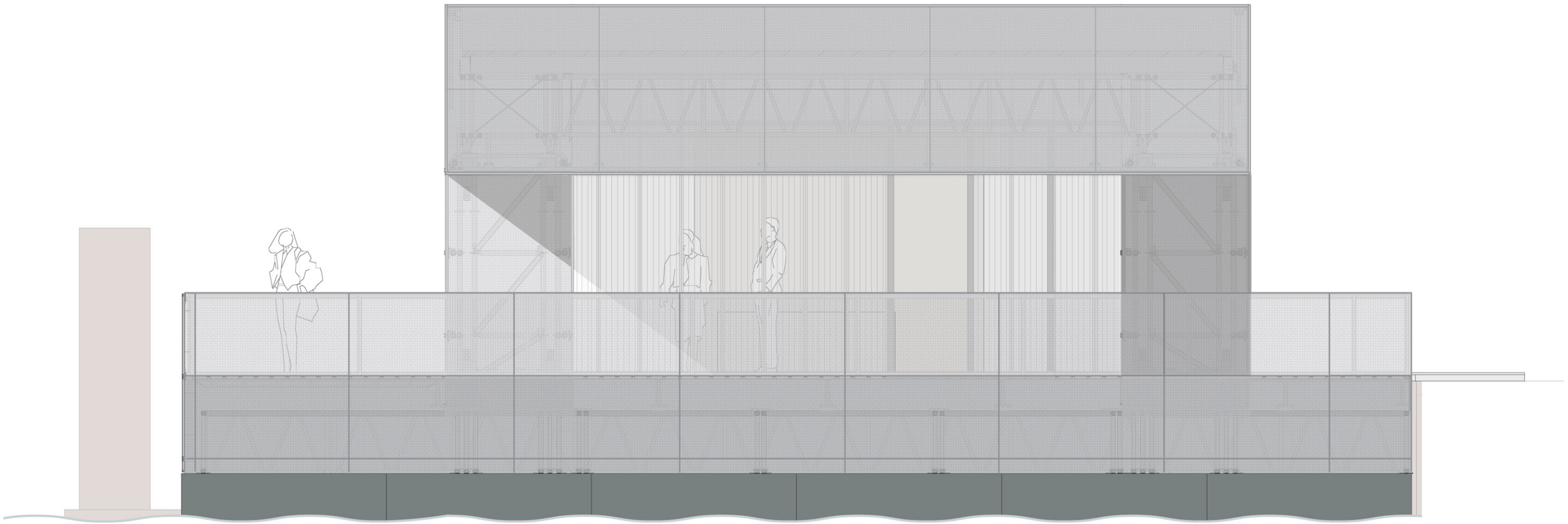
Eric de Ridder - Architecture Faculty TU Delft -2014

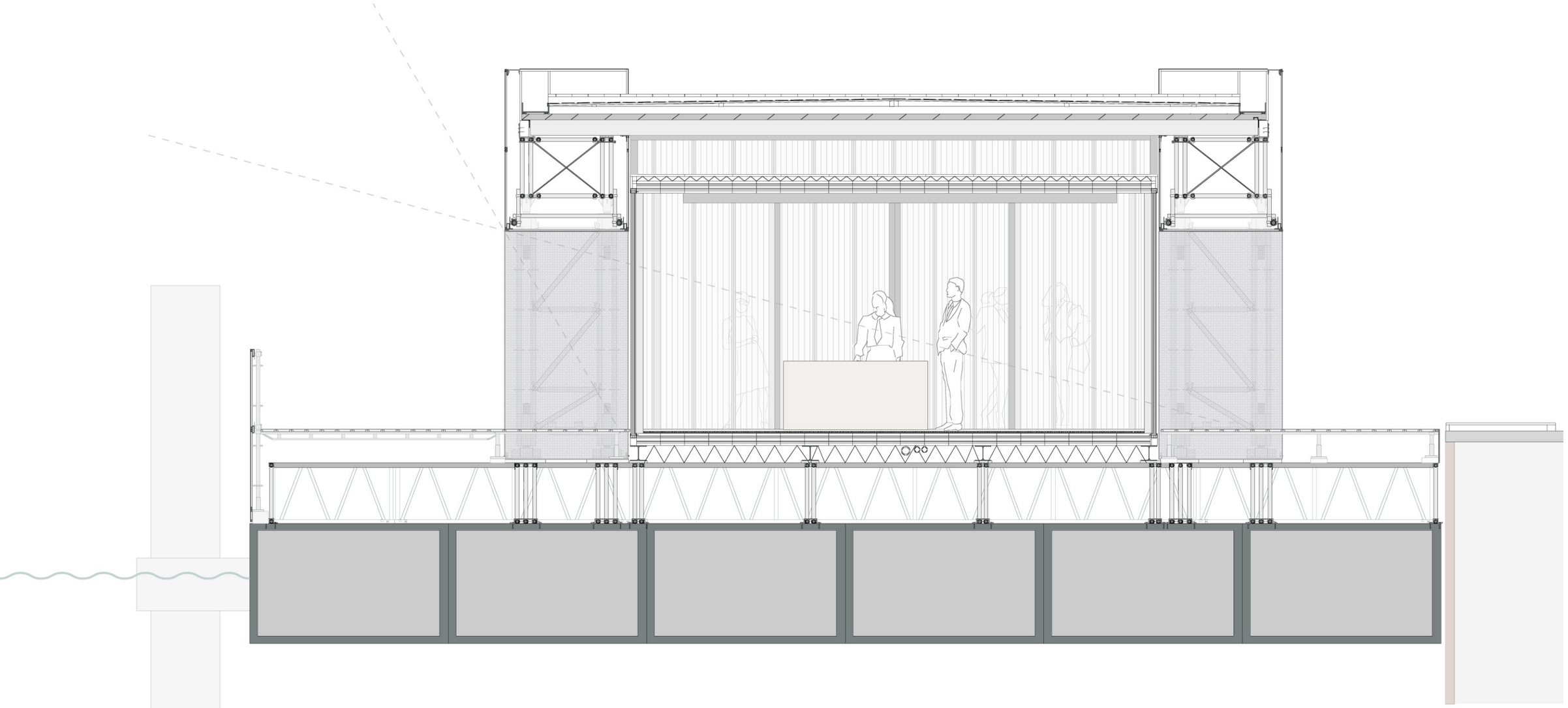
The project starts in 2016, after the first houses in the neighborhood are finished

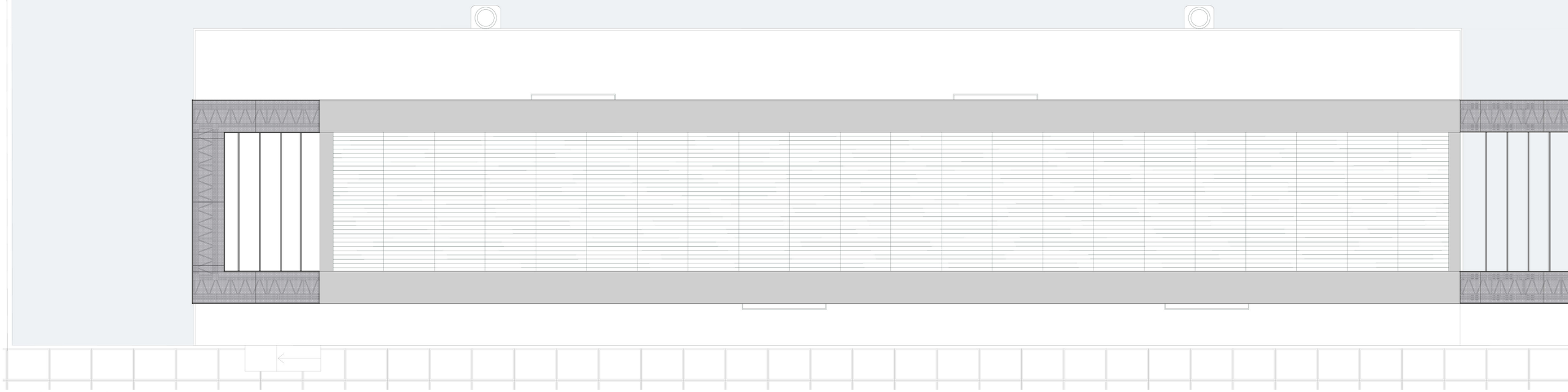
In the first phase an information center is built, with multi-use spaces that can be appropriated by the different stakeholders for a variety of uses. The spaces can also be rented to cover costs.

North facade - [phase 1 - activation]

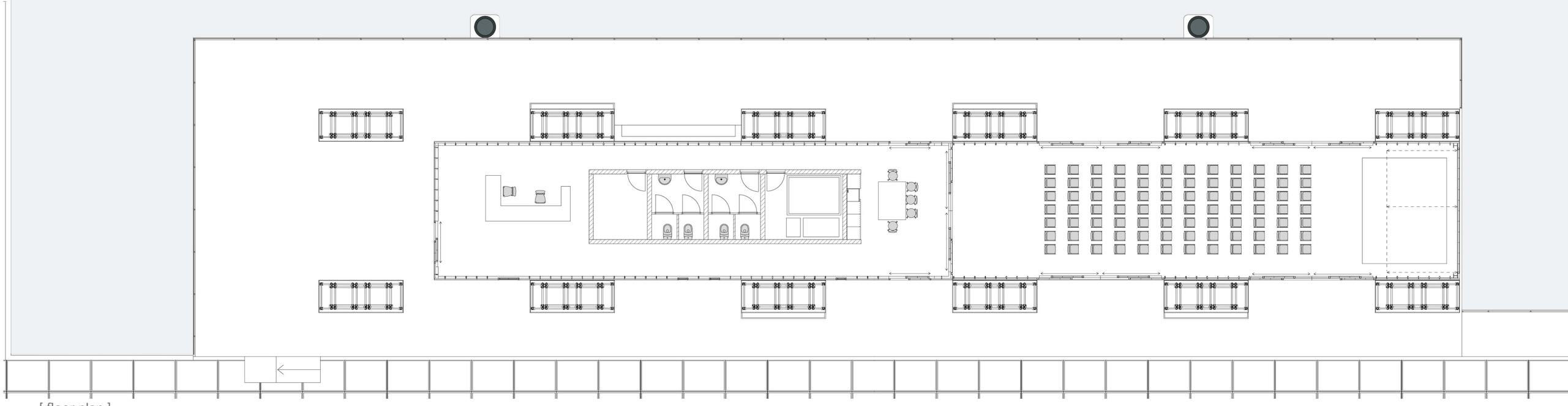




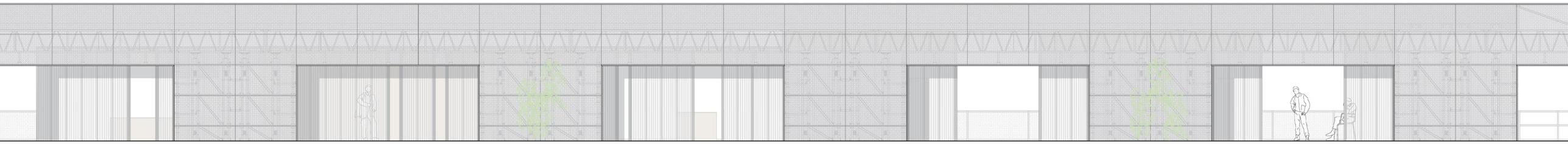




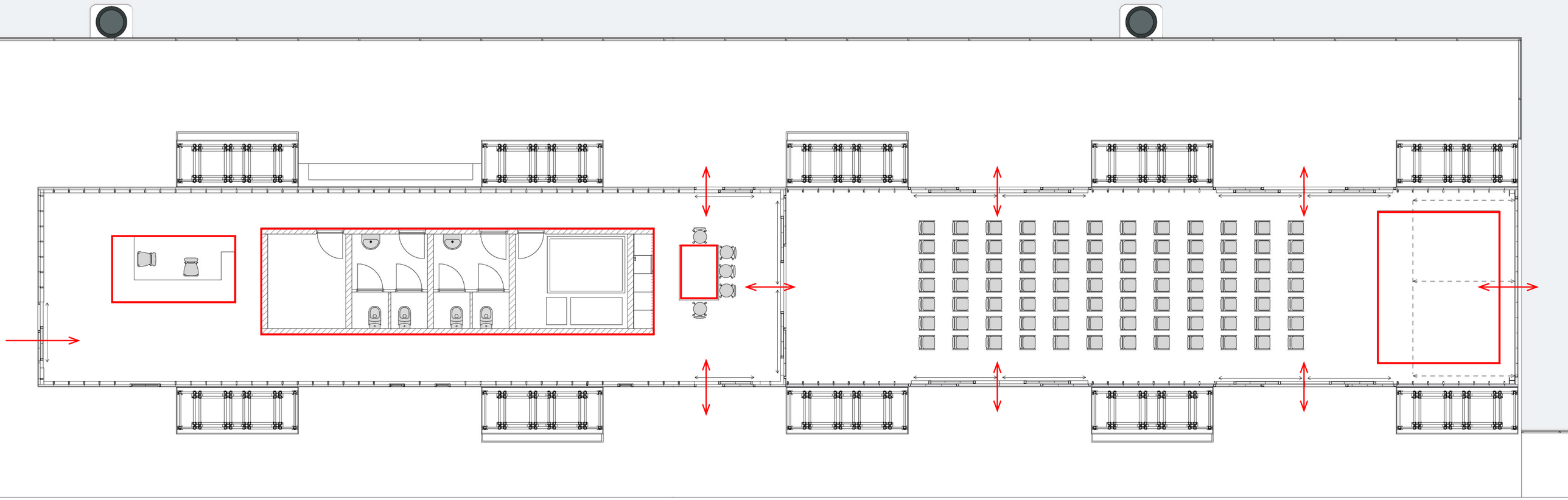
[roof view]



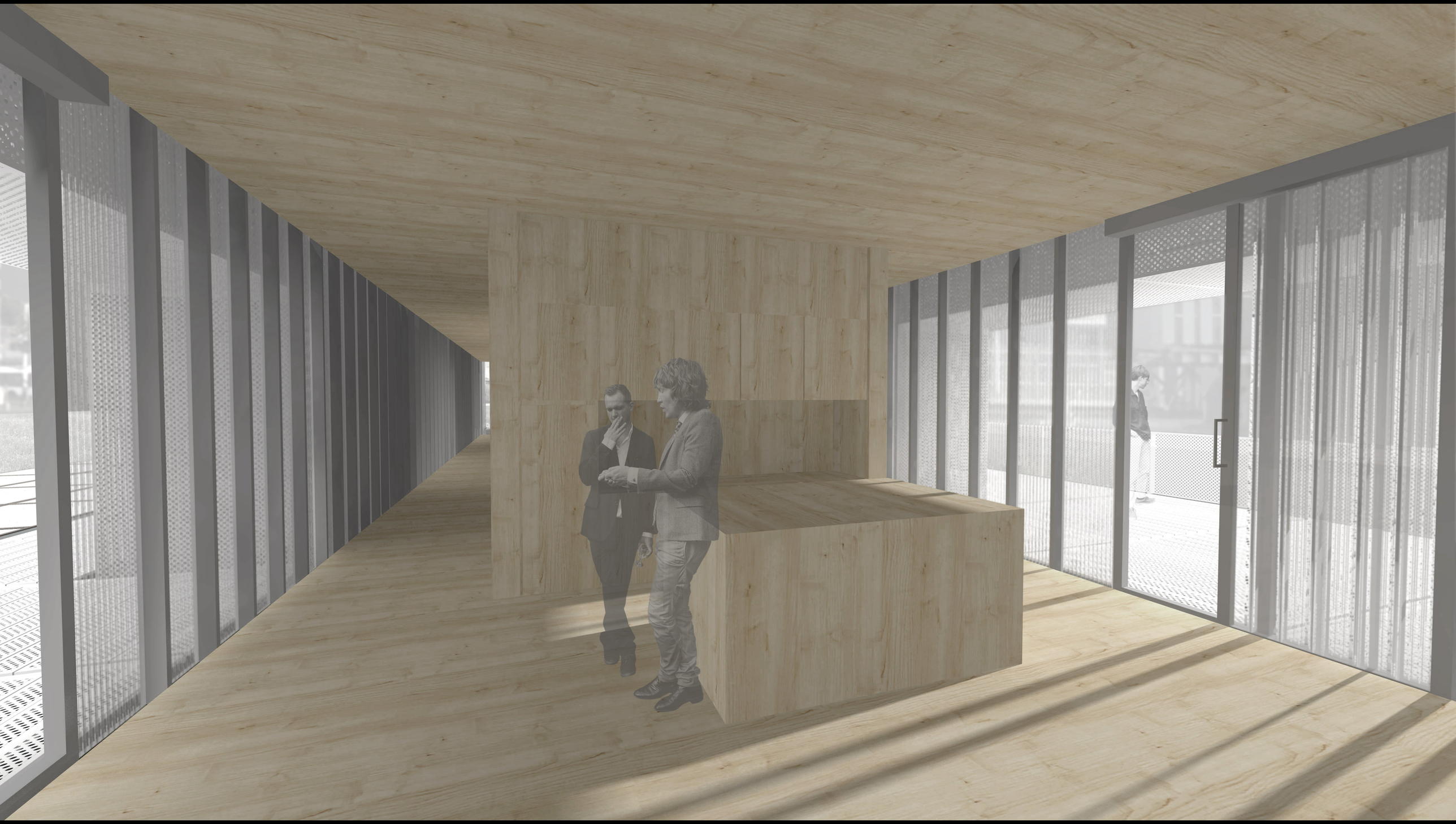
[floor plan]

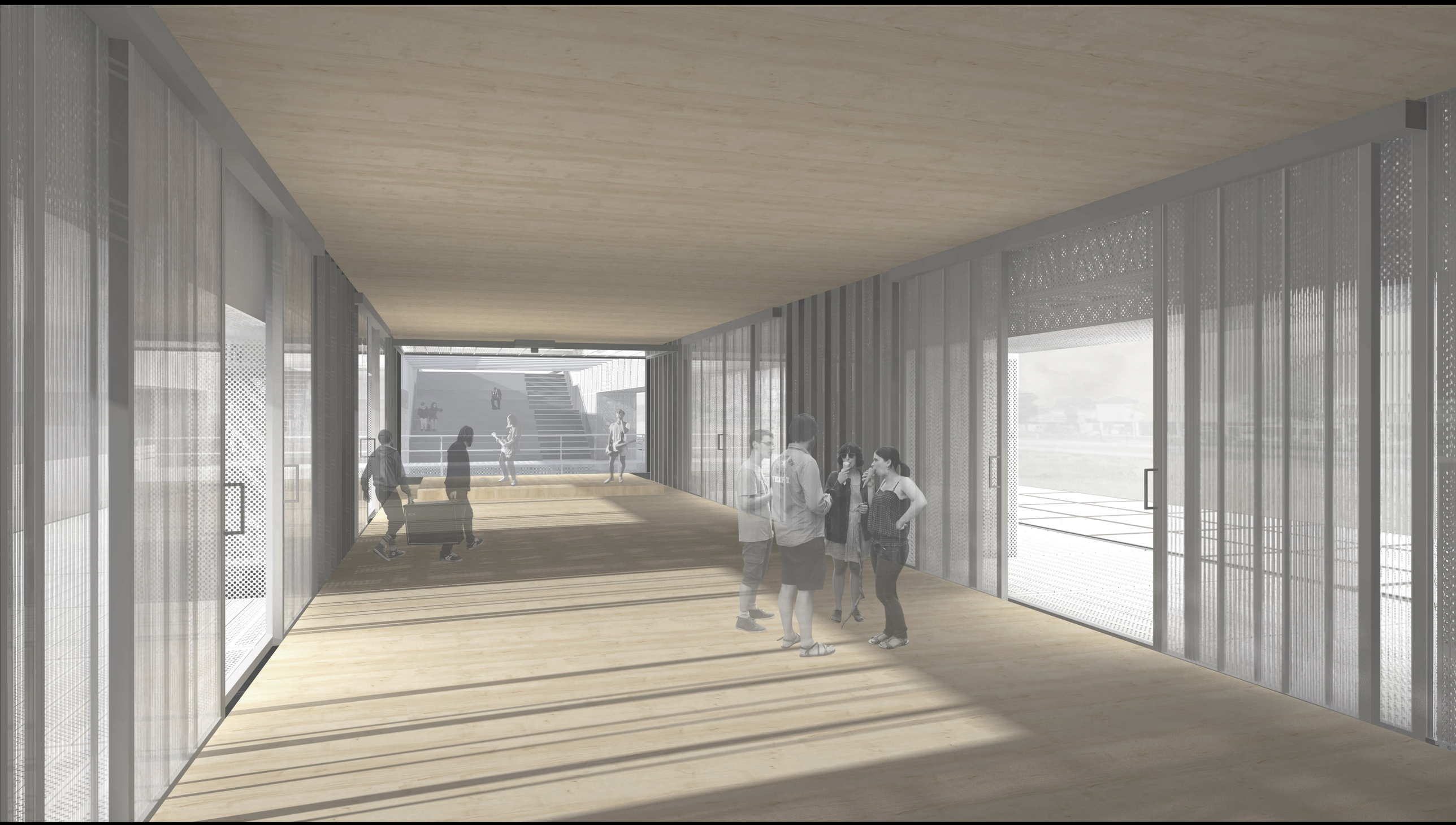


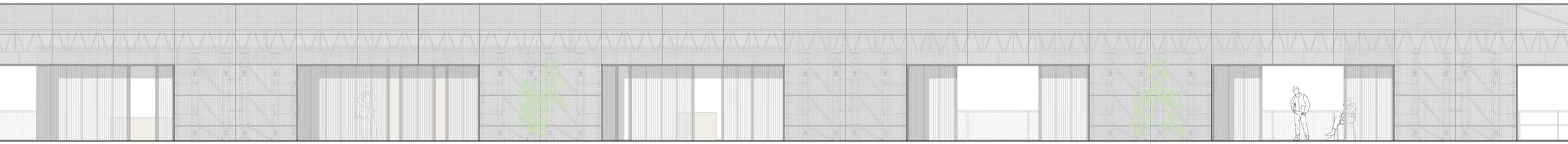
[north facade]



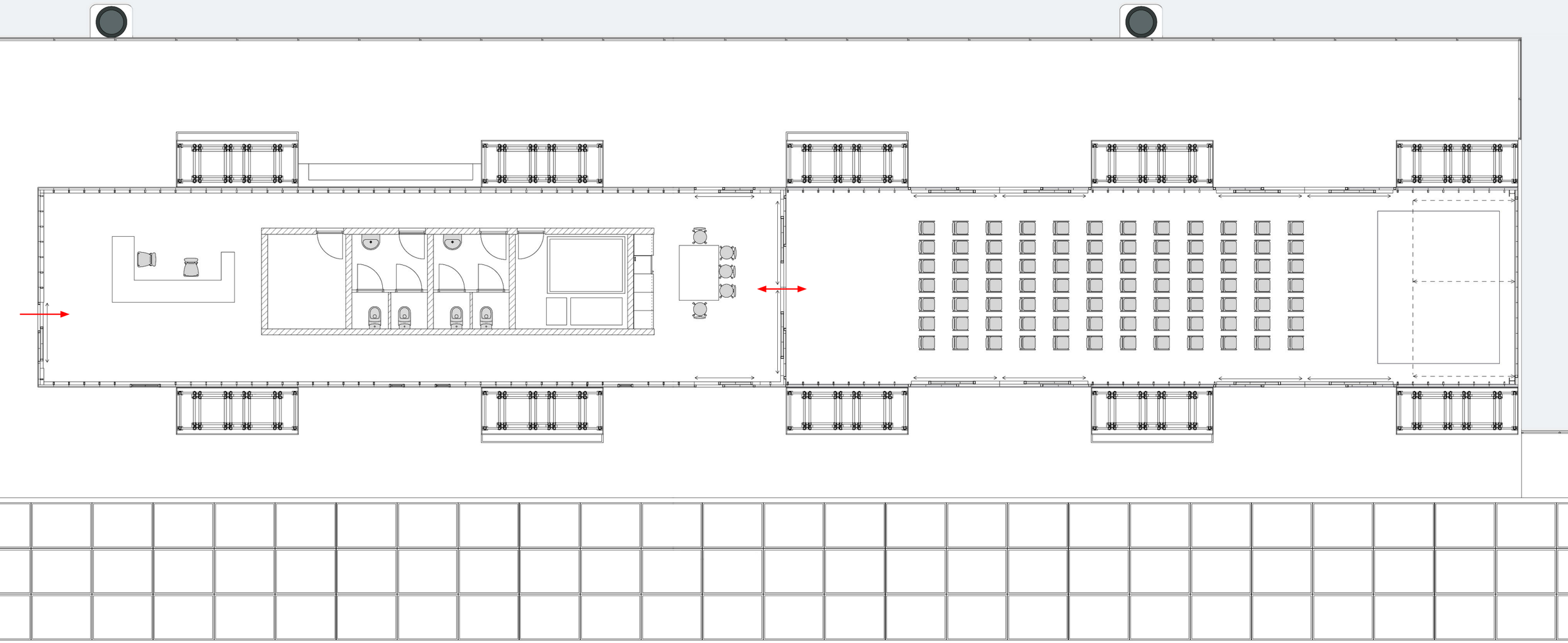
[floor plan]



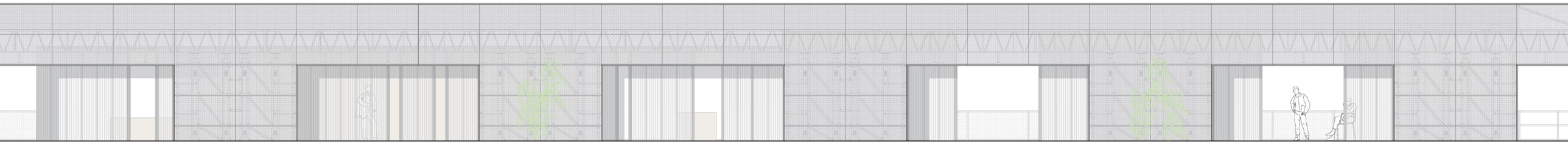




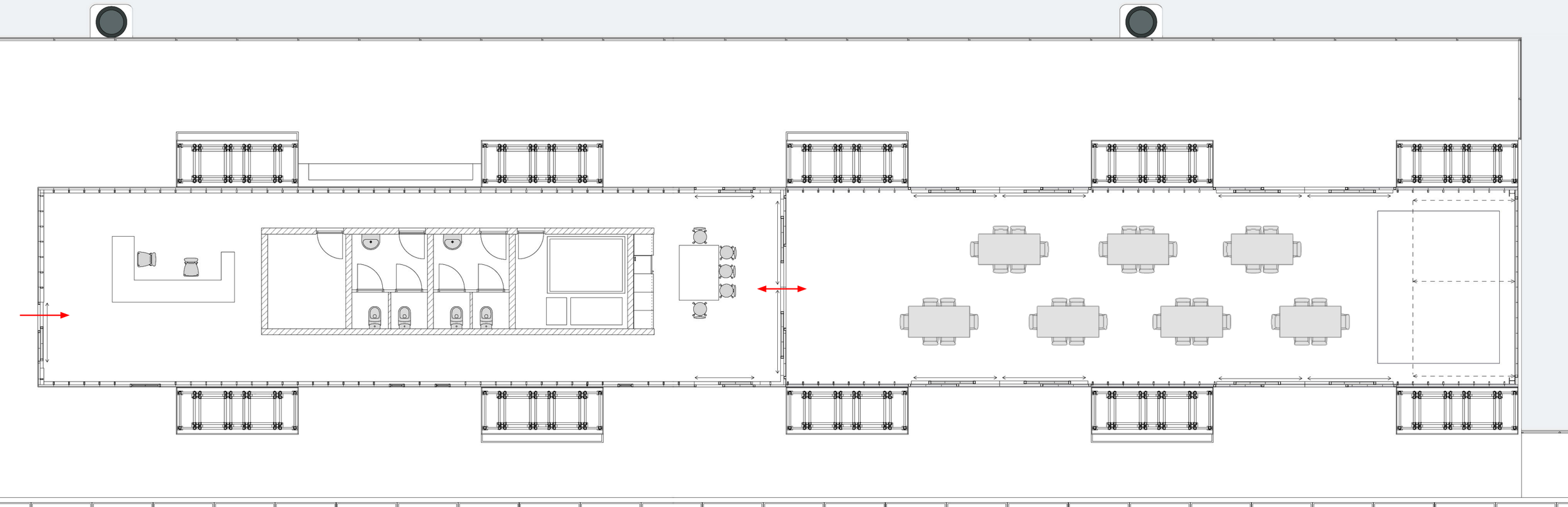
[north facade]



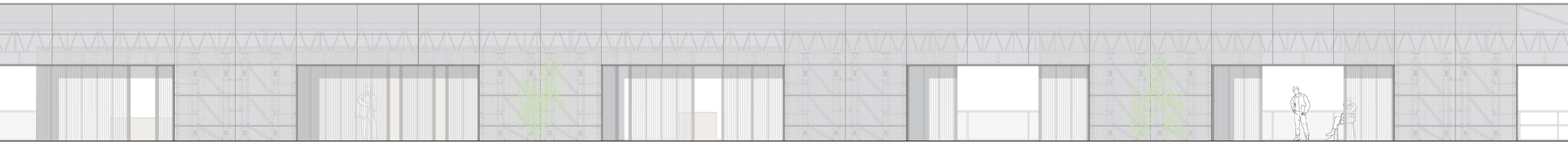
[floor plan]



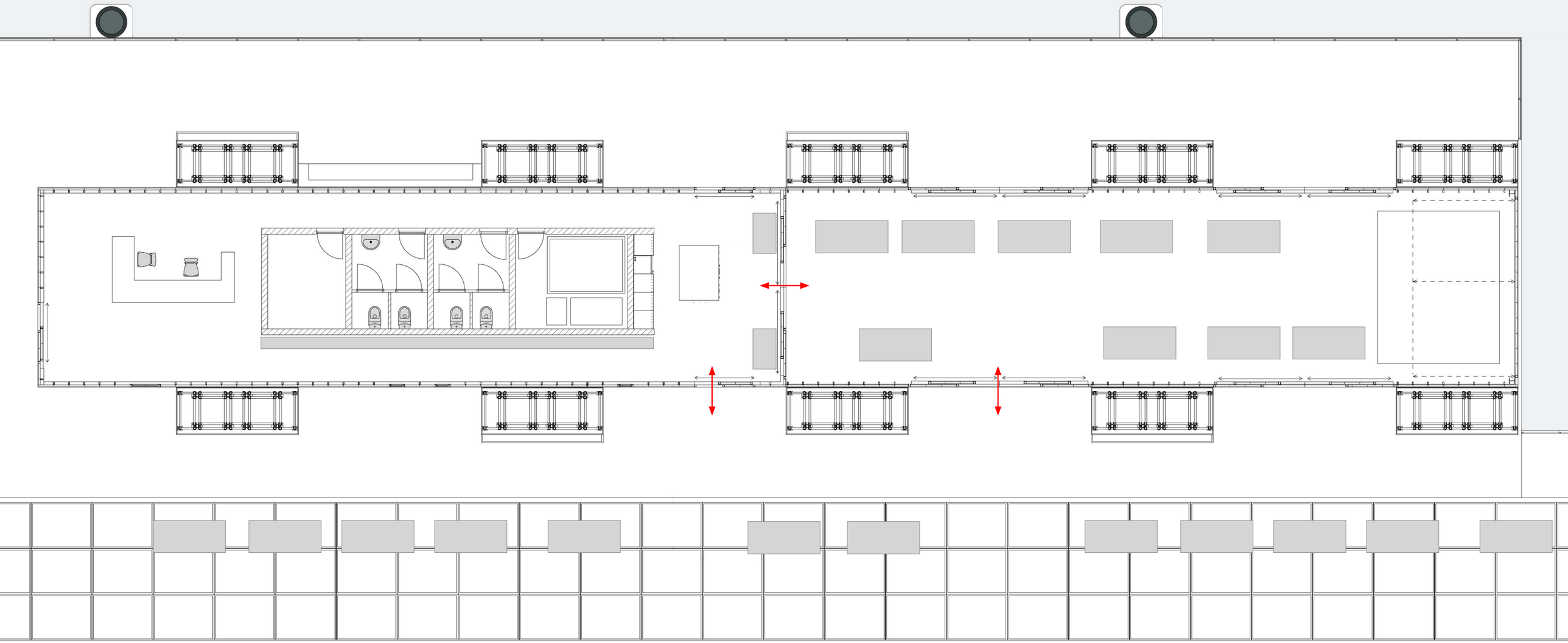
[north facade]



[floor plan]



[north facade]



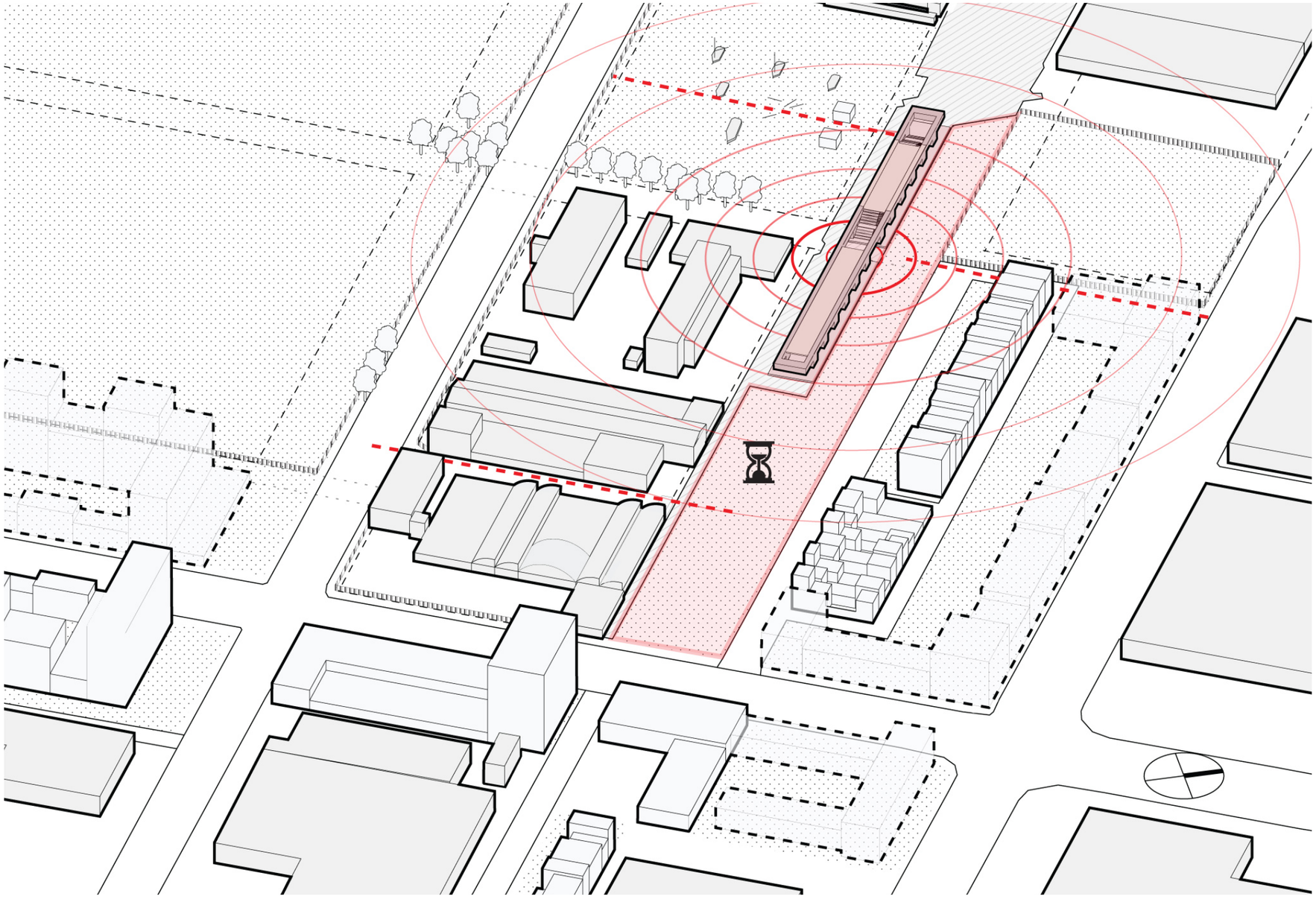
[floor plan]

2016 PHASE 0 PROTOTYPE

2016 PHASE 1 ACTIVATION

2018 PHASE 2 TRANSITION PLATFORM

2026 PHASE 3 LIFE CYCLE ASSESSMENT

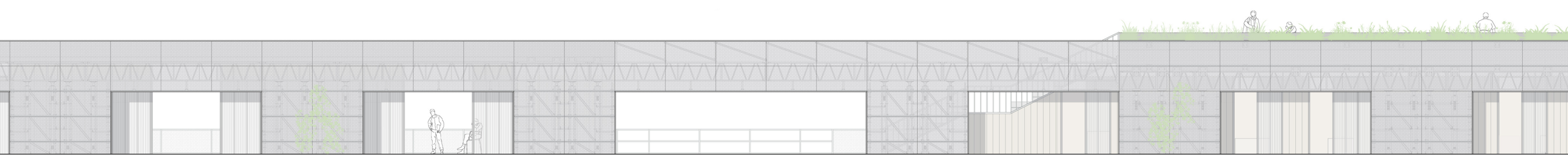


Dependent on the local needs and available budgets, the building is expanded to include a platform that functions as incubator for local start-ups

The presented design is a possible scenario for an expansion with;

- pop-up stores
- flexible work spots
- a roof garden for the neighborhood
- an open air theater

North facade - connection building parts phase 1 & 2

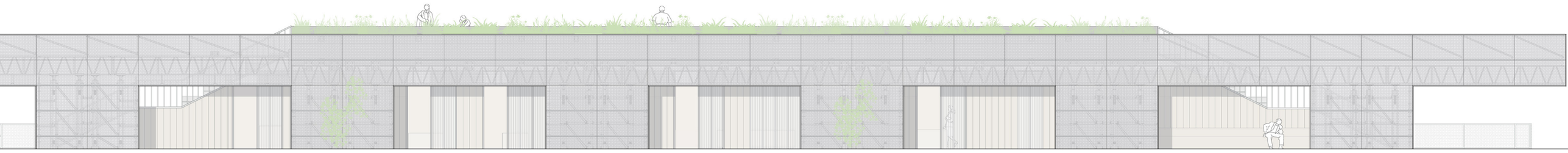


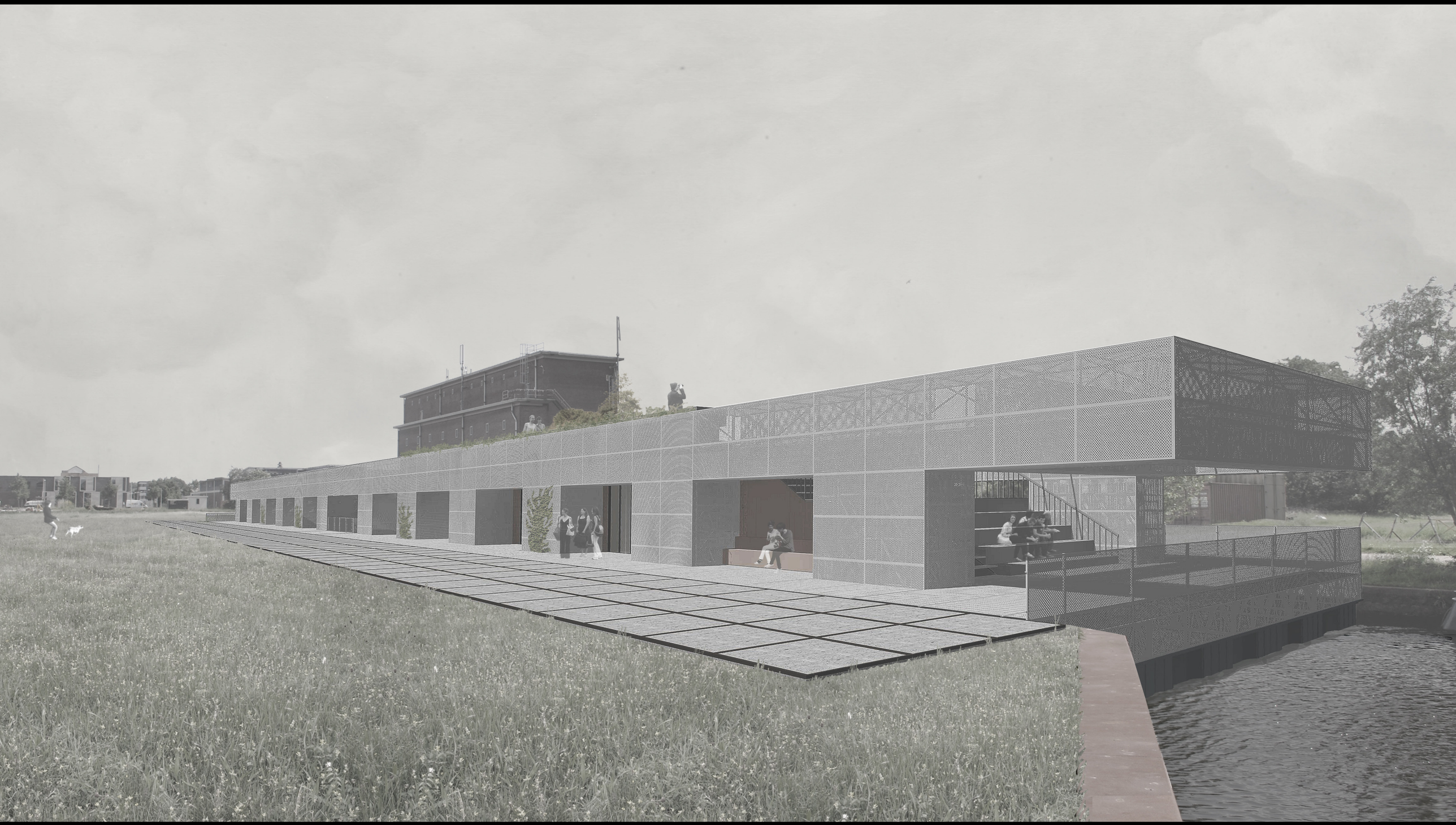
[PHASE 1]

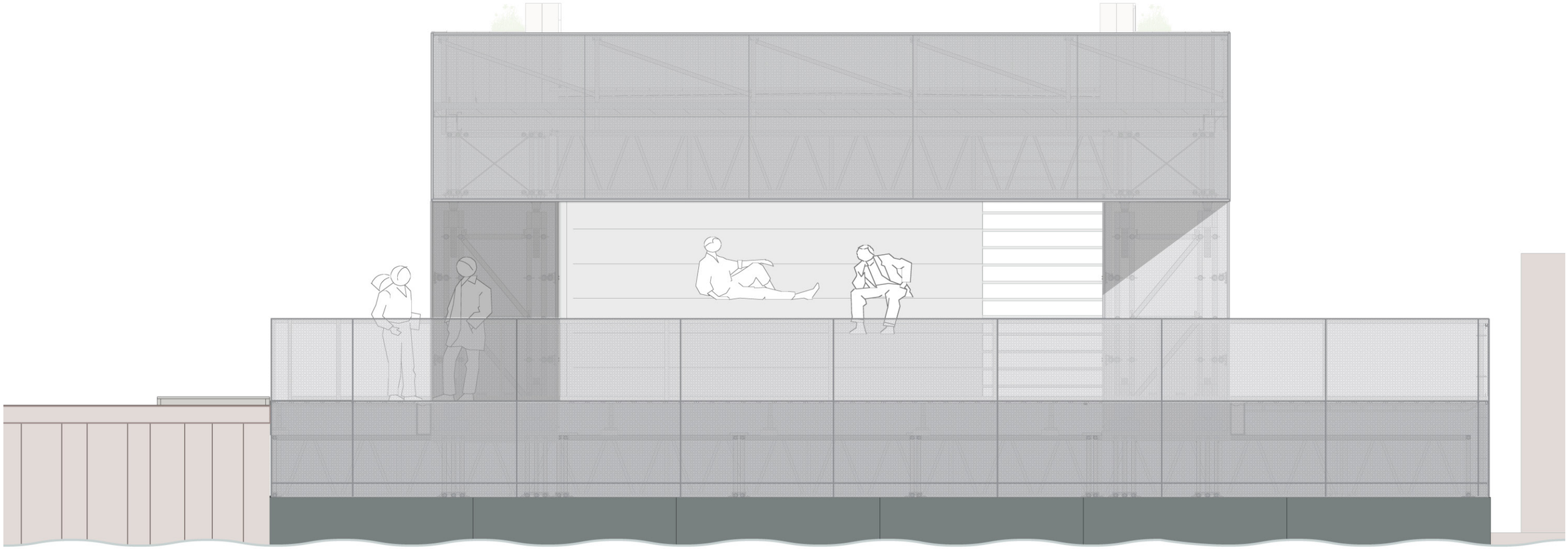
[PHASE 2]

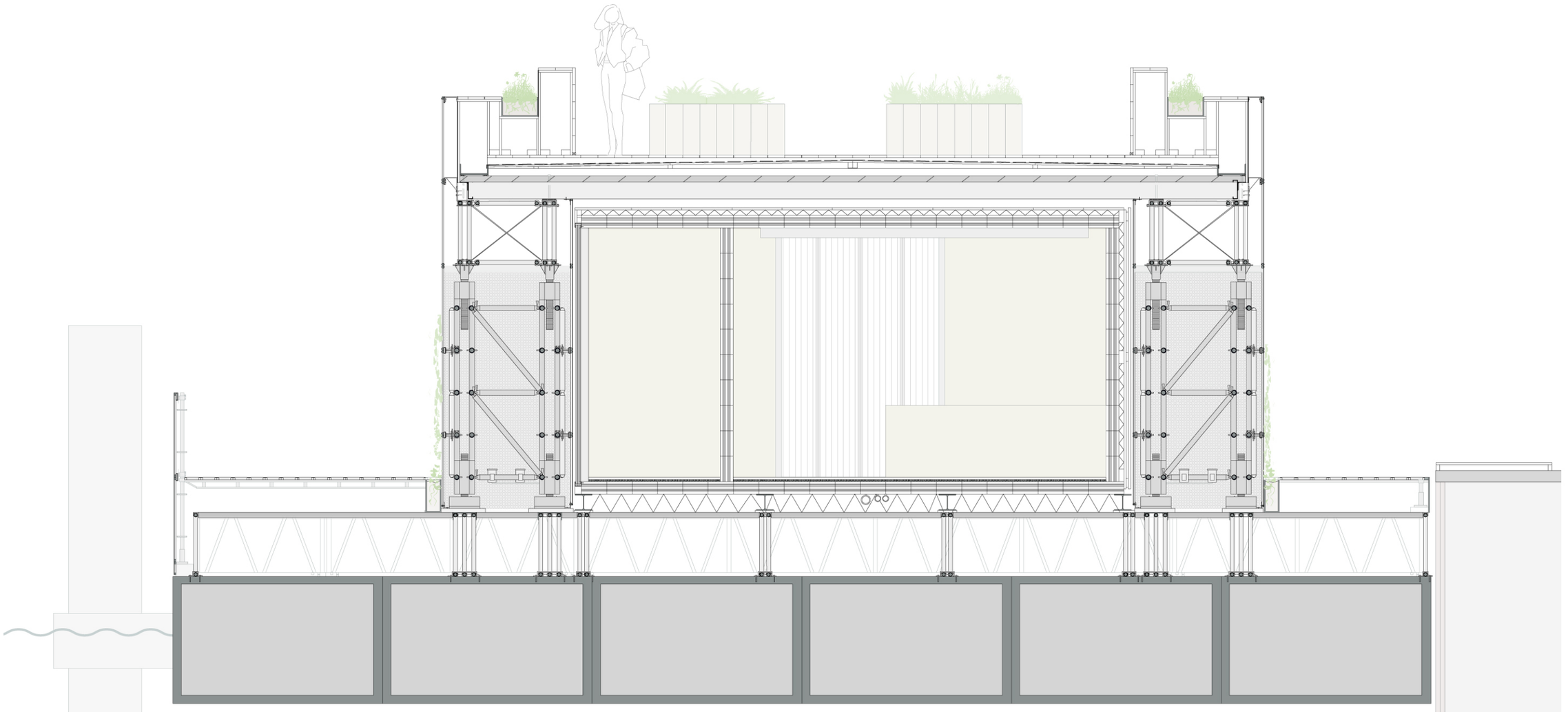
- Open air theater & stairs to roofgarden
- Line of sight to neighbouring plot

North facade - [phase 2 - transition platform]

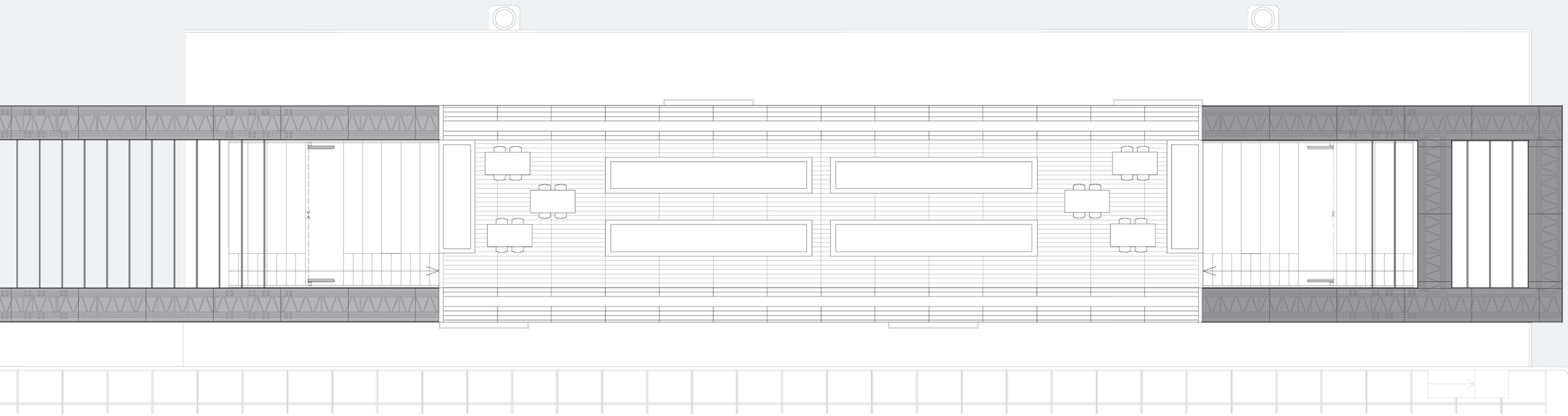




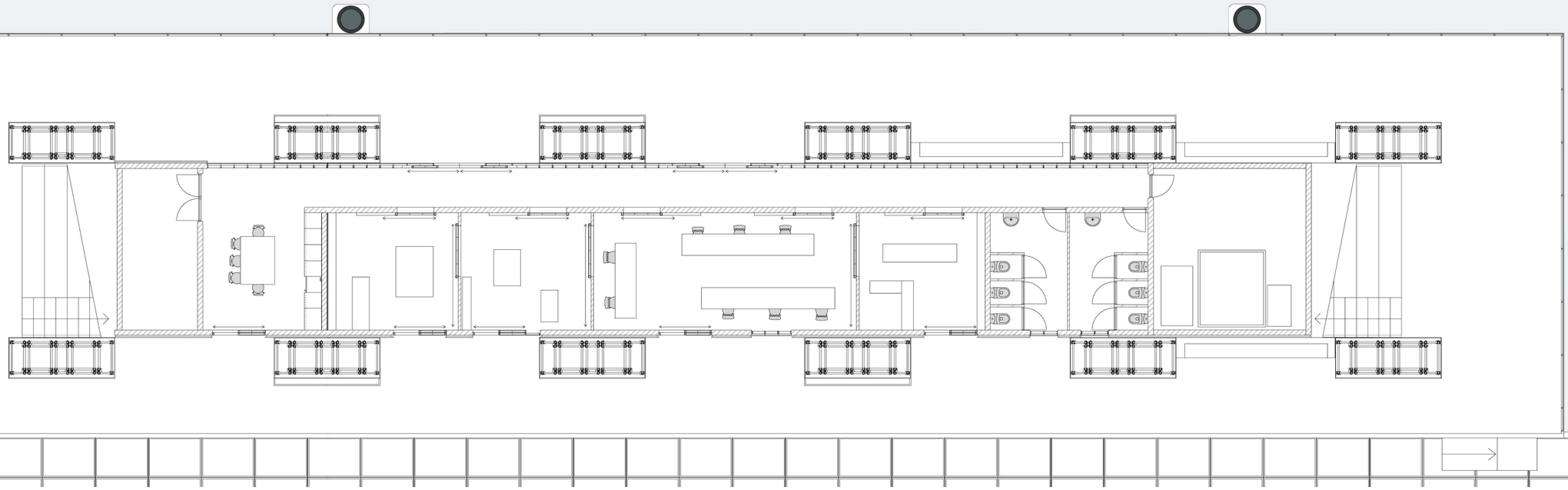




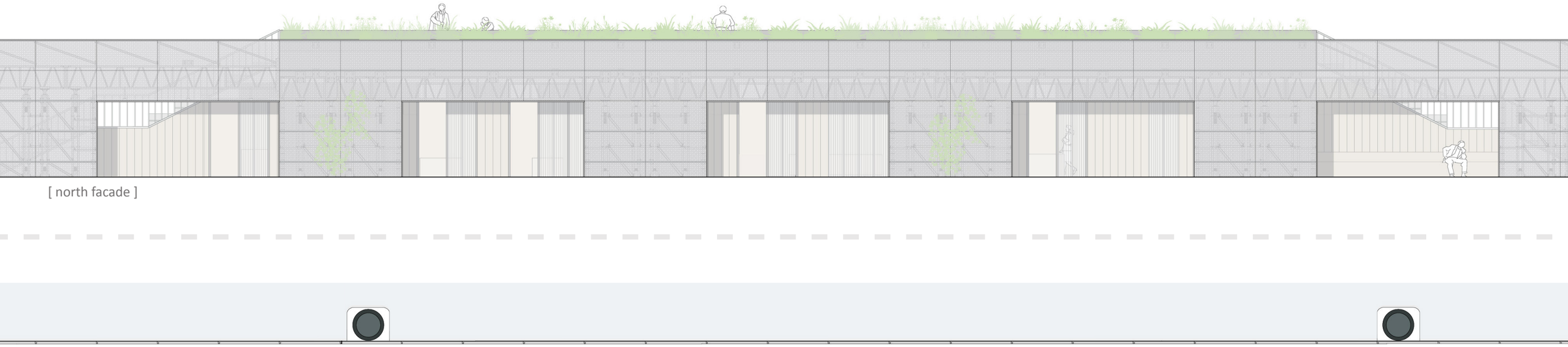
Floor plan & roof view - [phase 2 - transition platform]



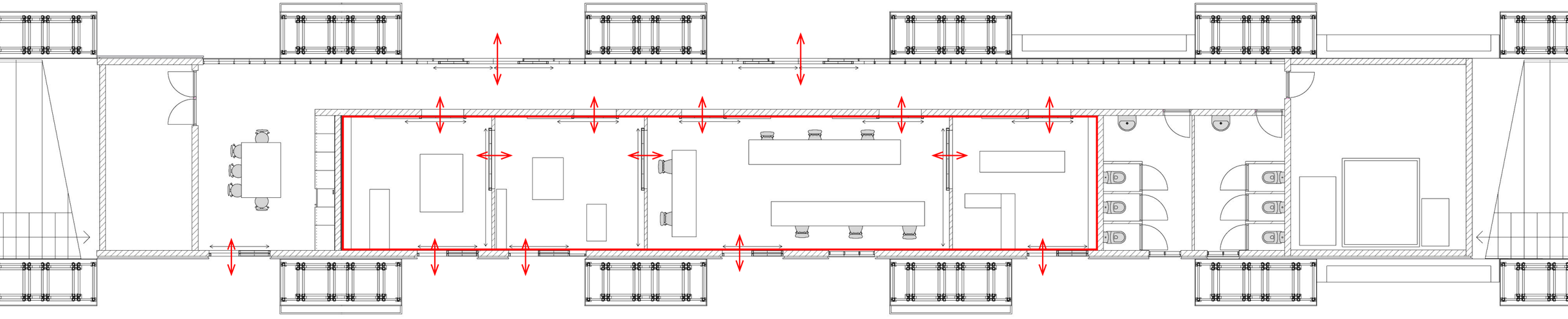
[roof view]



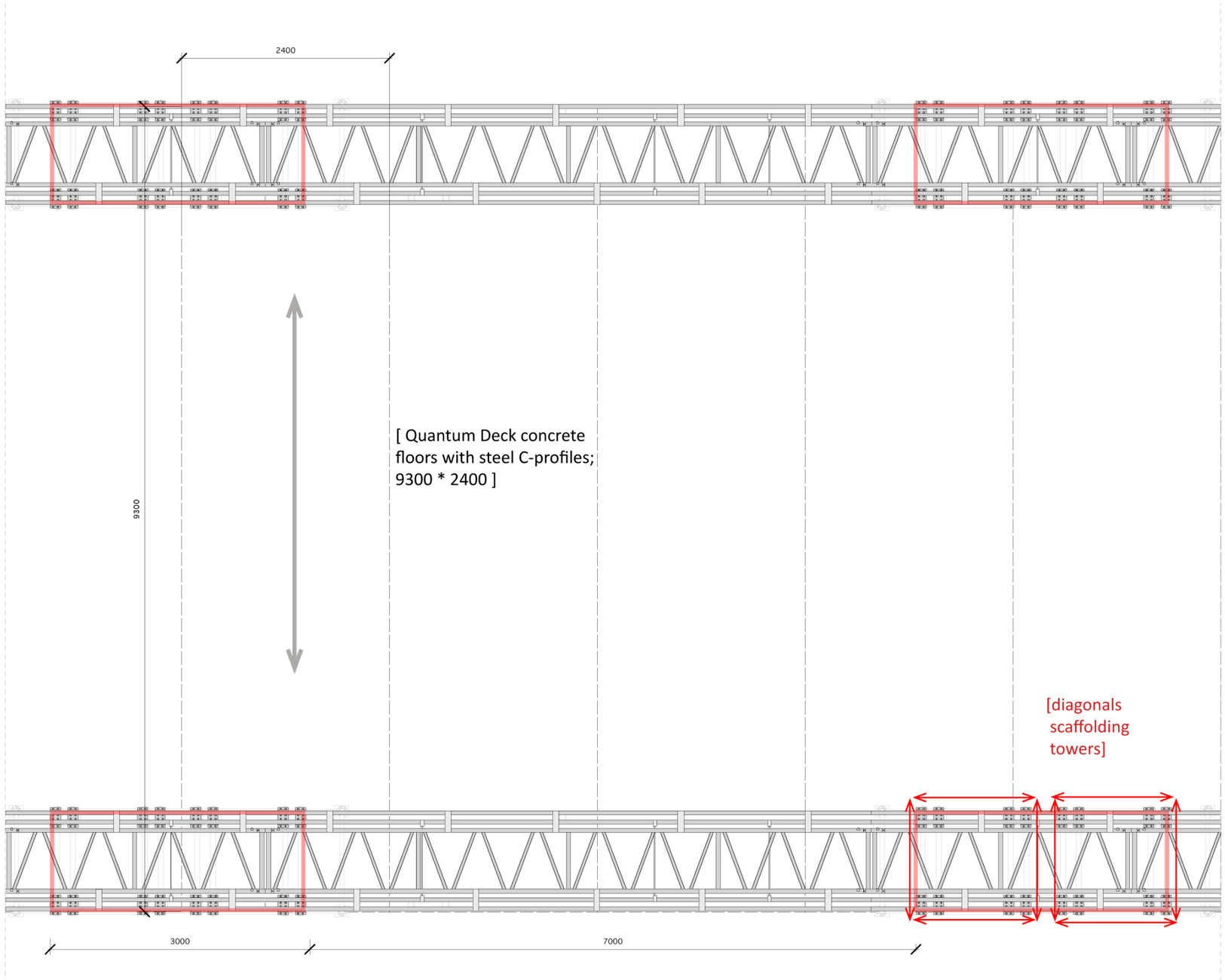
[floor plan]

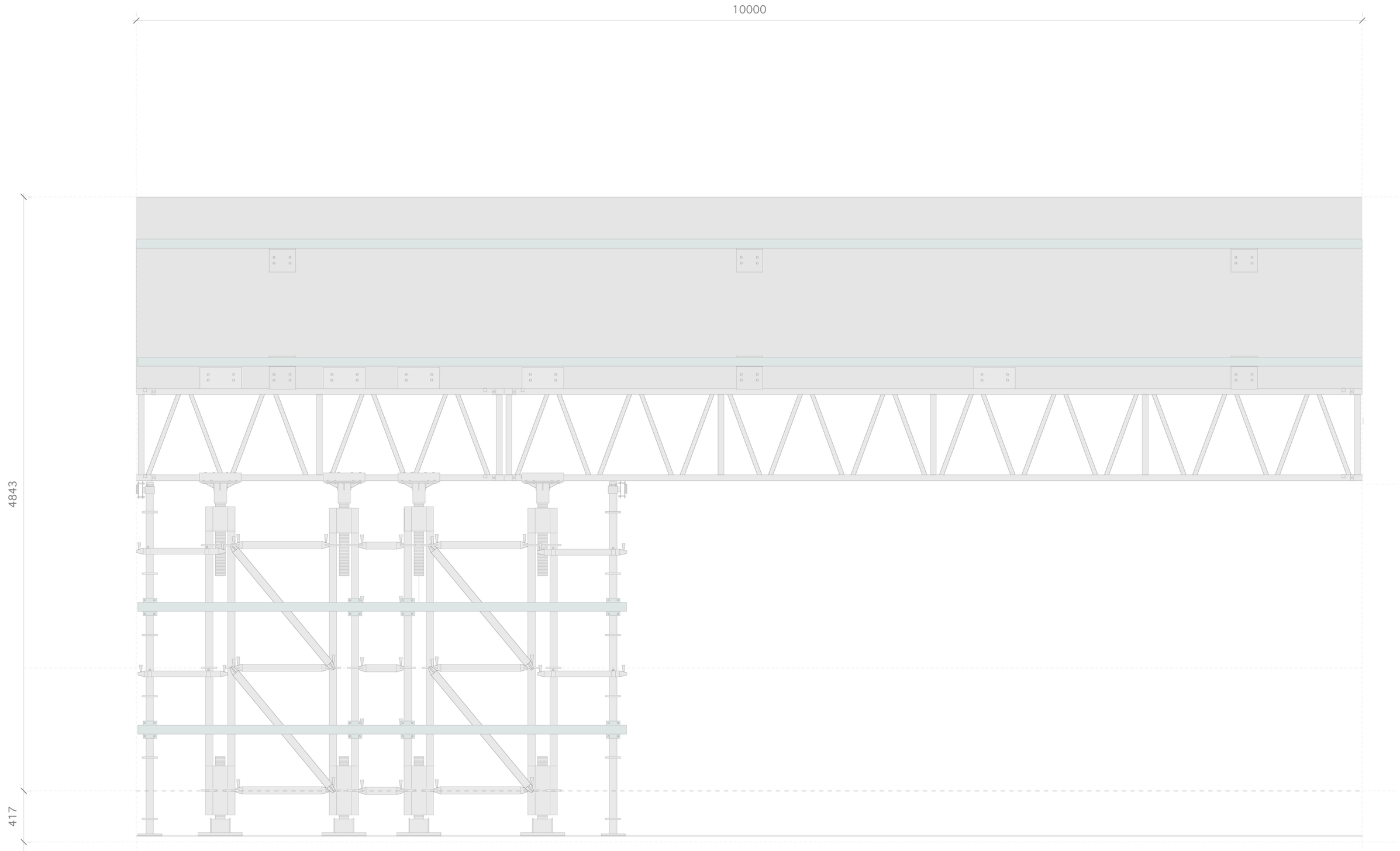


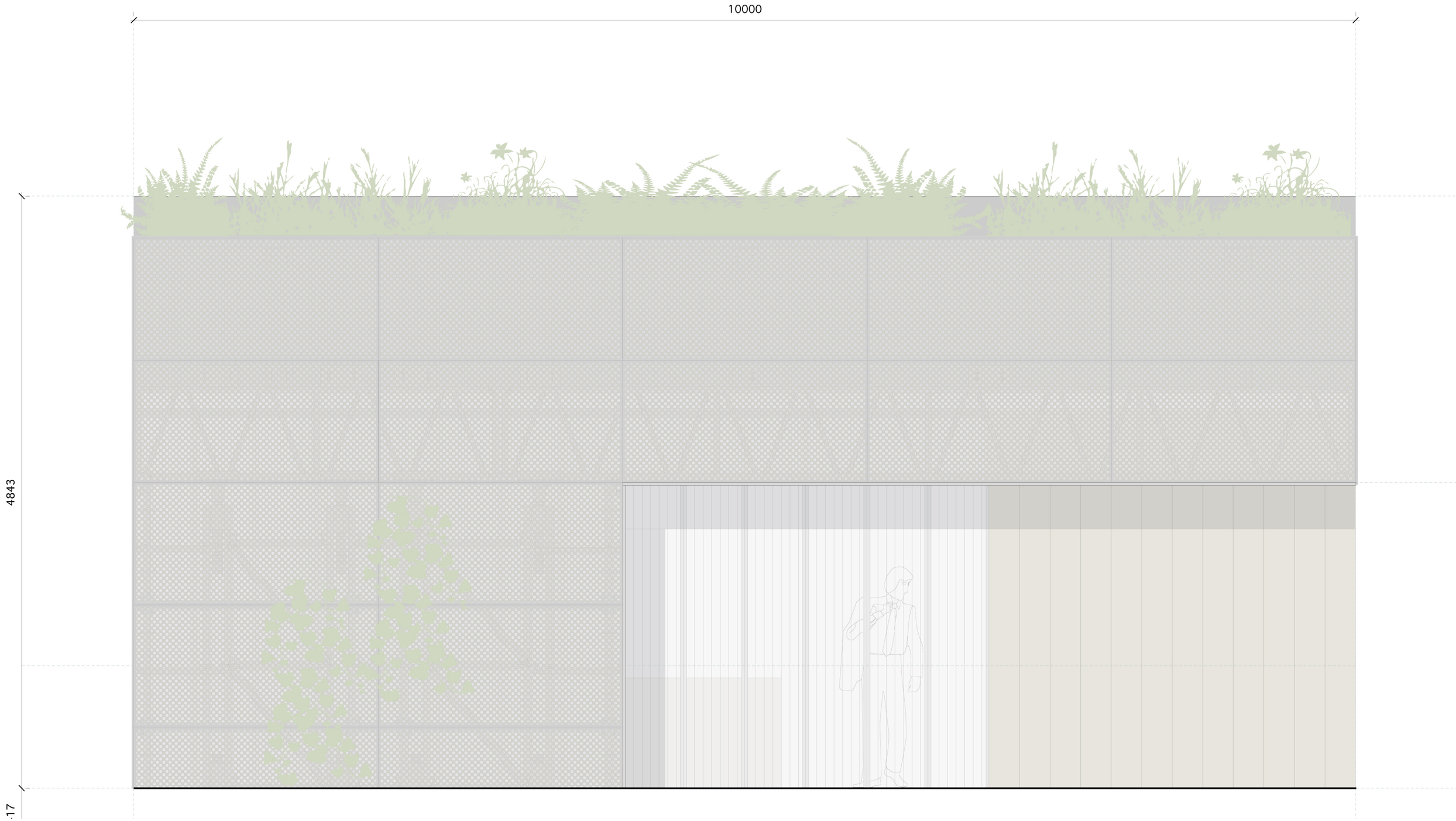
[north facade]



[floor plan]


2400
9300
[Quantum Deck concrete floors with steel C-profiles; 9300 * 2400]
[diagonals scaffolding towers]
3000
7000


10000
4843
417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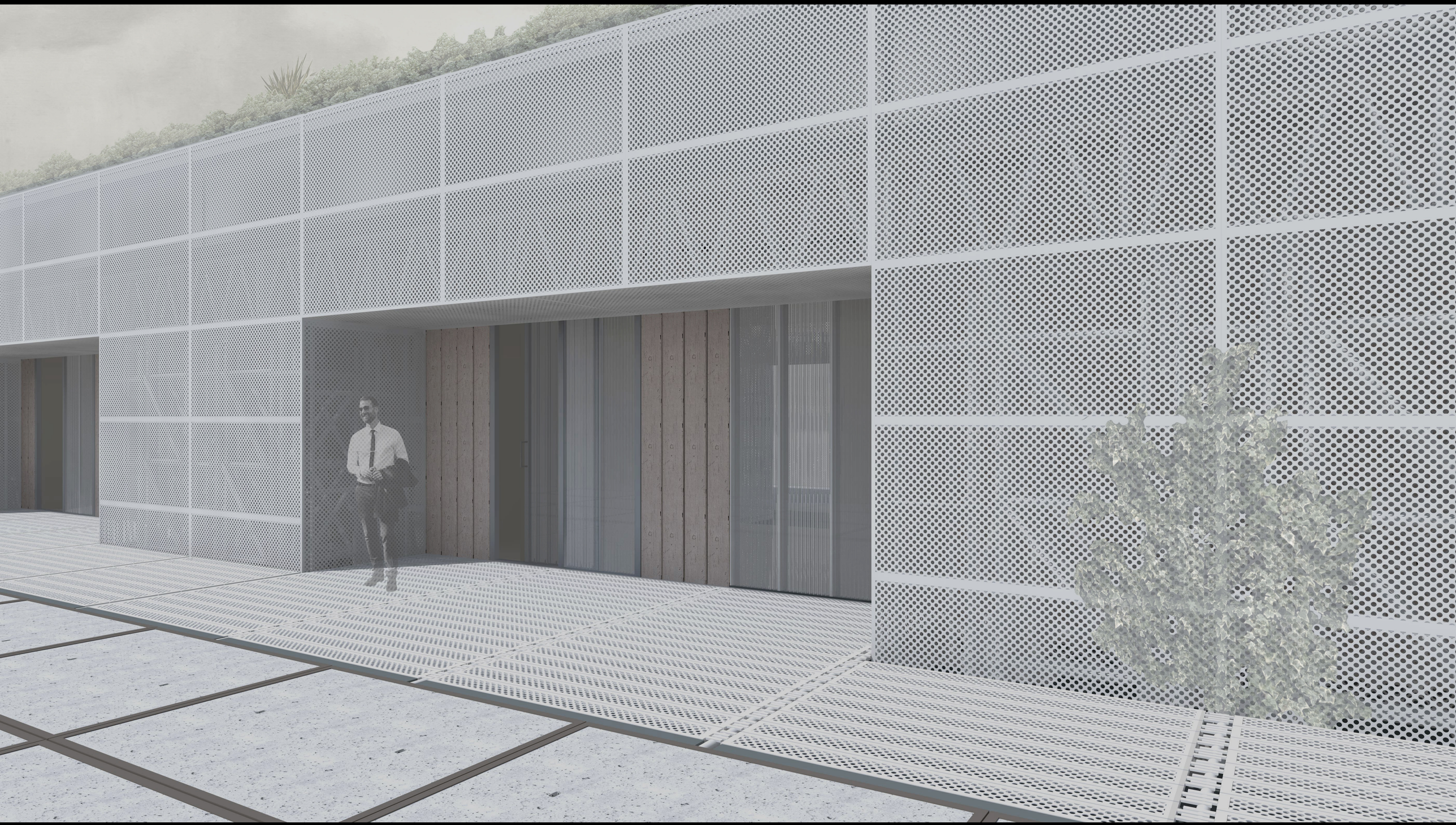

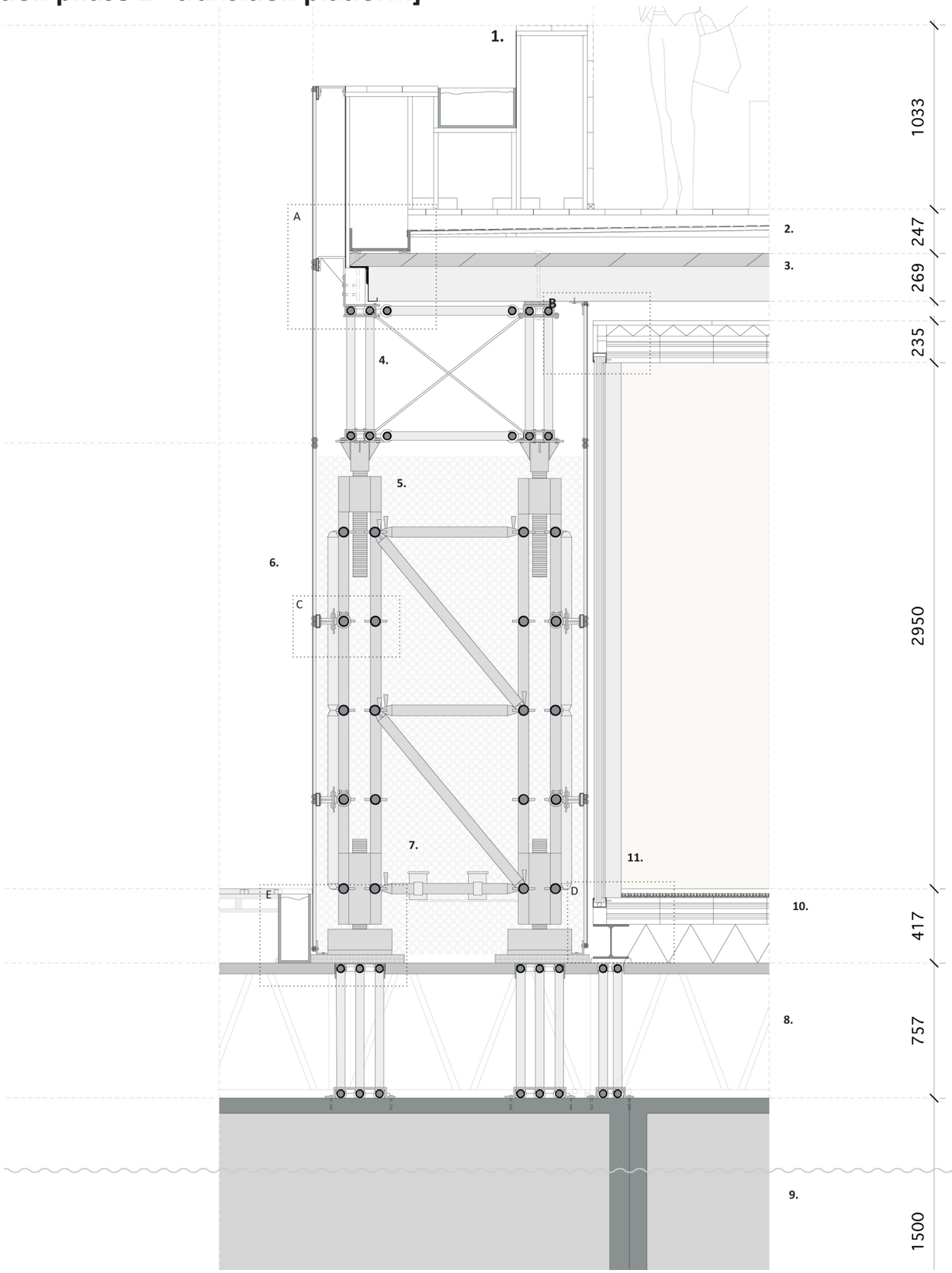
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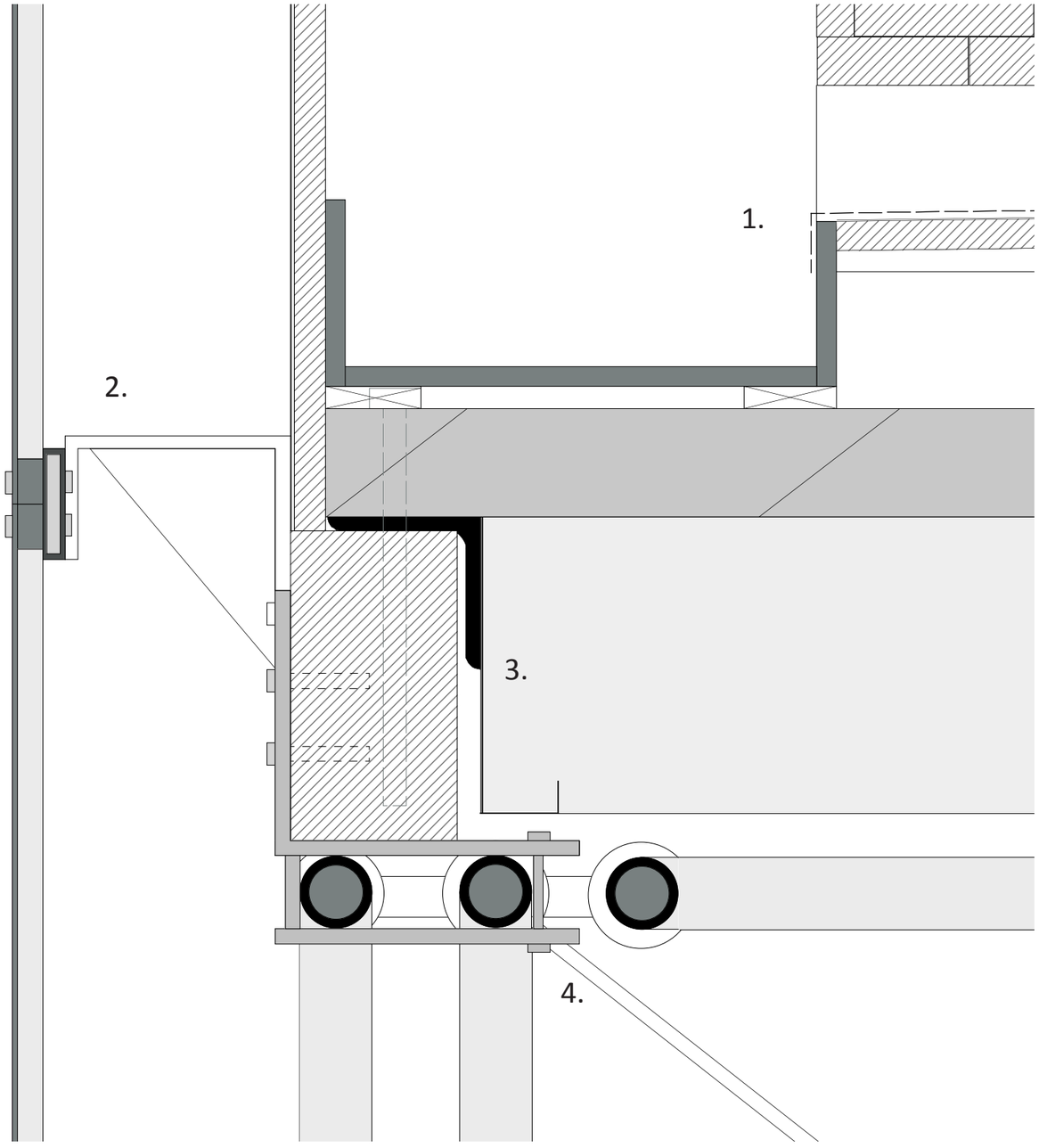
757
1500



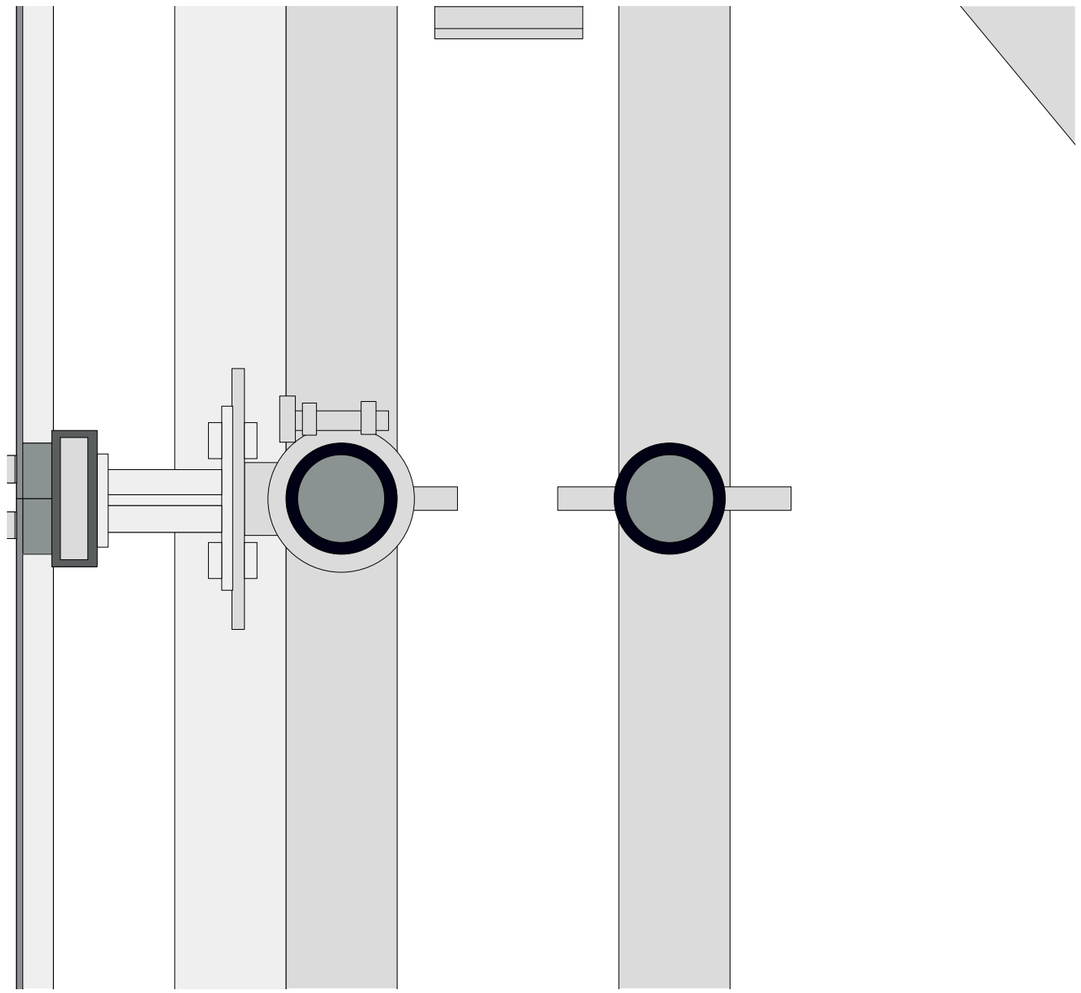
DETAIL A - 1:5

1. Drainage; EPDM foil on OSB boards and wooden beams,
plastic rain gutter (120 x 340)

2. Steel corner profile bolted to wooden beam; horizontal steel fixation tube welded to corner profile; bolted RMIG perforated steel sheet covering (R6T9)

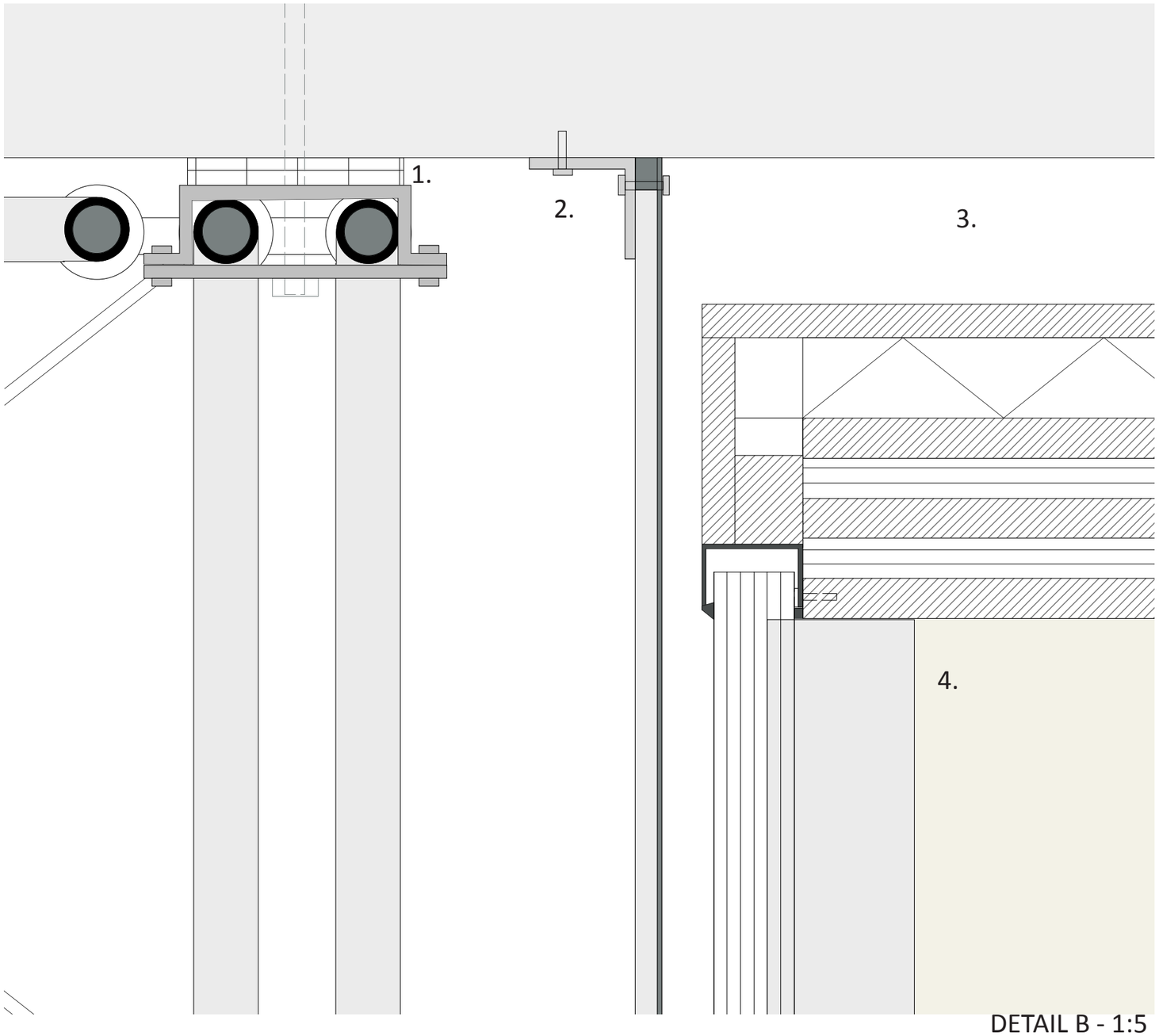
3. Quantum deck floor (TATA steel) - (2400 x 9300)
lightweight, prefab concrete floor with steel C220-profiles
bolted on wooden beam, bolted to steel corner profile, welded to demountable custom designed steel connection profile for combined trusses

4. Combined vertical and horizontal steel scaffolding trusses with distancers (750 x 7000 & 750 x 3000) (Layher); with steel diagonal cables in center



Perforated steel sheet covering (1000*2000)(RMIG R6T9) bolted to horizontal steel fixation tube, welded to half coupler on plate, connected to scaffolding tube (60mm) connected to scaffolding tower using cross coupler (Layher)

DETAIL C - 1:5



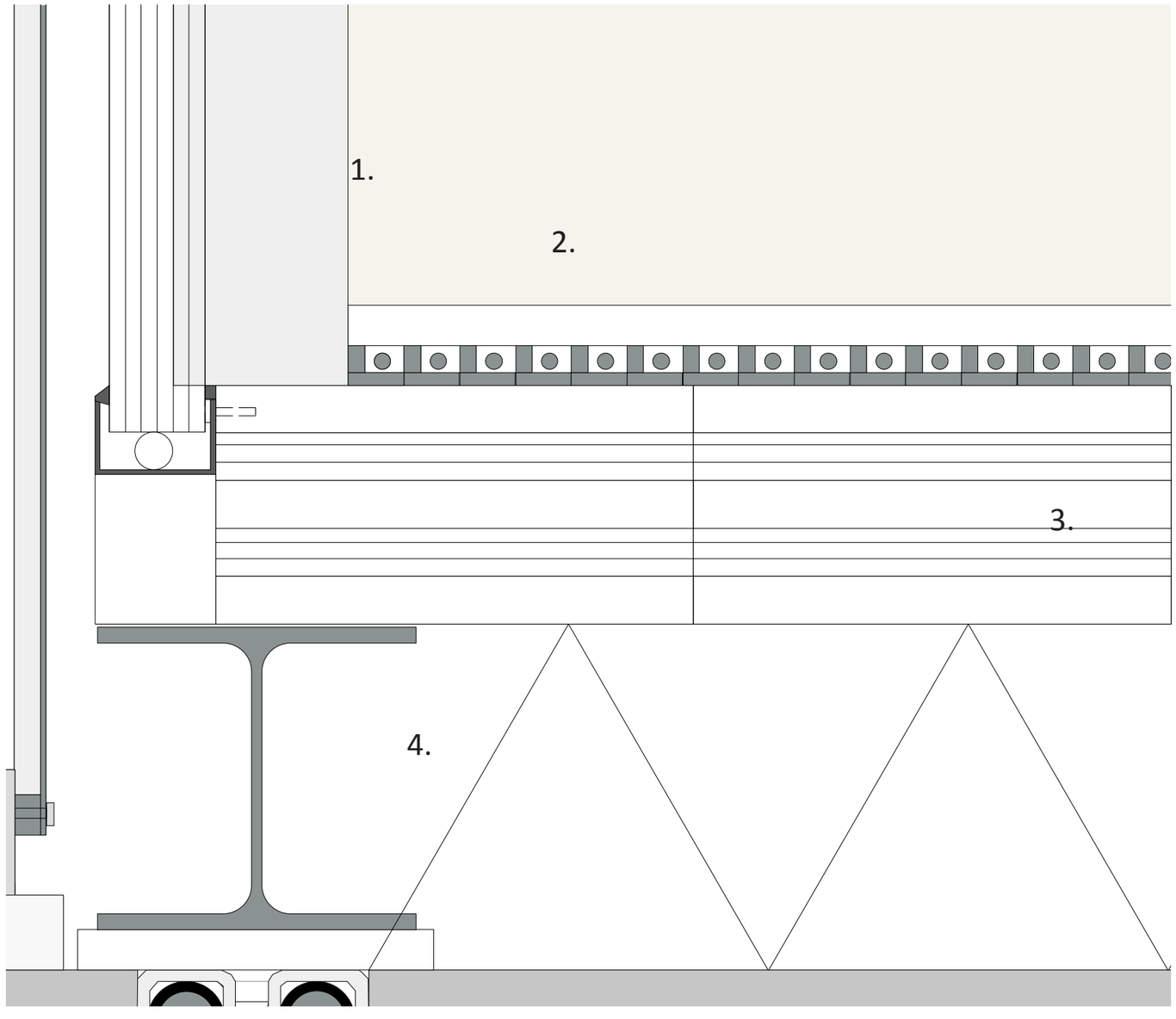
DETAIL B - 1:5

1. Combined vertical and horizontal steel scaffolding trusses with distancers (750 x 7000 & 750 x 3000) (Layher); with steel diagonal cables in center - custom designed steel profile for fixation Quantum deck floor with rubber footplate

2. Steel corner profile bolted to QD floor; to fixate RMIG perforated steel sheet covering (R6T9)

3. Prefab cross-laminated wooden roof panel (Lenotec 170 mm) with 80 mm insulation panels covered with OSB boards

4. Polycarbonate facade elements (500 x 3000*60) with aluminum anchor profile (89 x 45) (Rodeca)



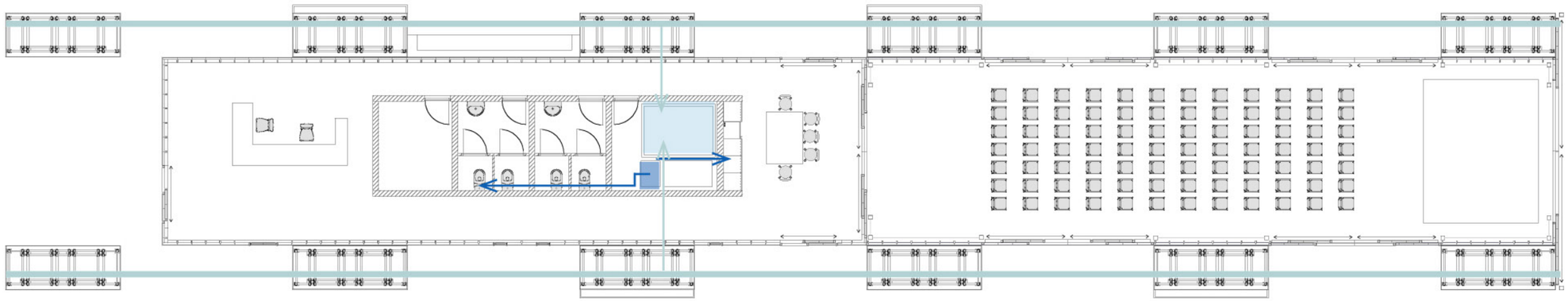
1. Polycarbonate facade elements (500 x 3000*60) with aluminum anchor profile (89 x 45) (Rodeca)

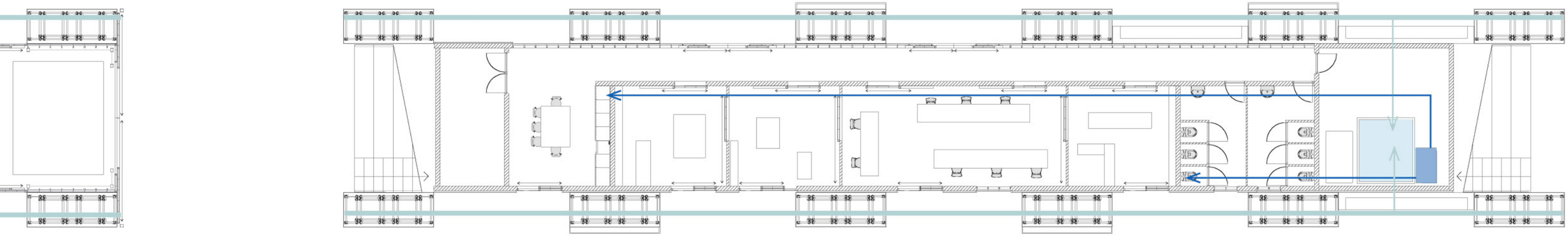
2. Dry floor heating system with rubber naps and OSB board finishing

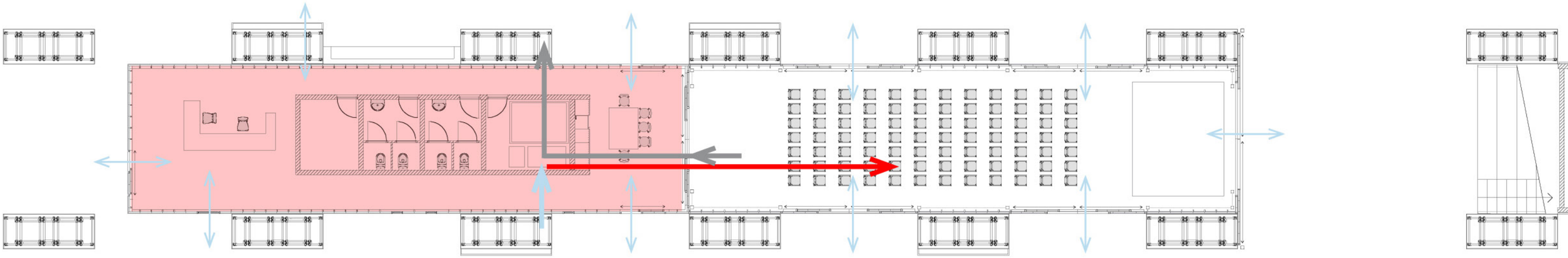
3. Prefab cross-laminated wooden floor panel (Lenotec 170 mm)

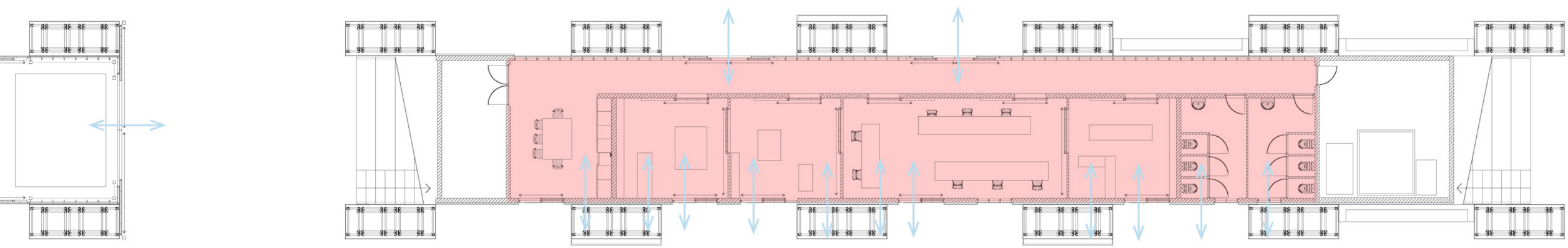
4. Steel HEA 200 profile on rubber footing

5. Supportive spatial truss frame - combined steel scaffolding trusses (750 x7000) with steel scaffolding platforms



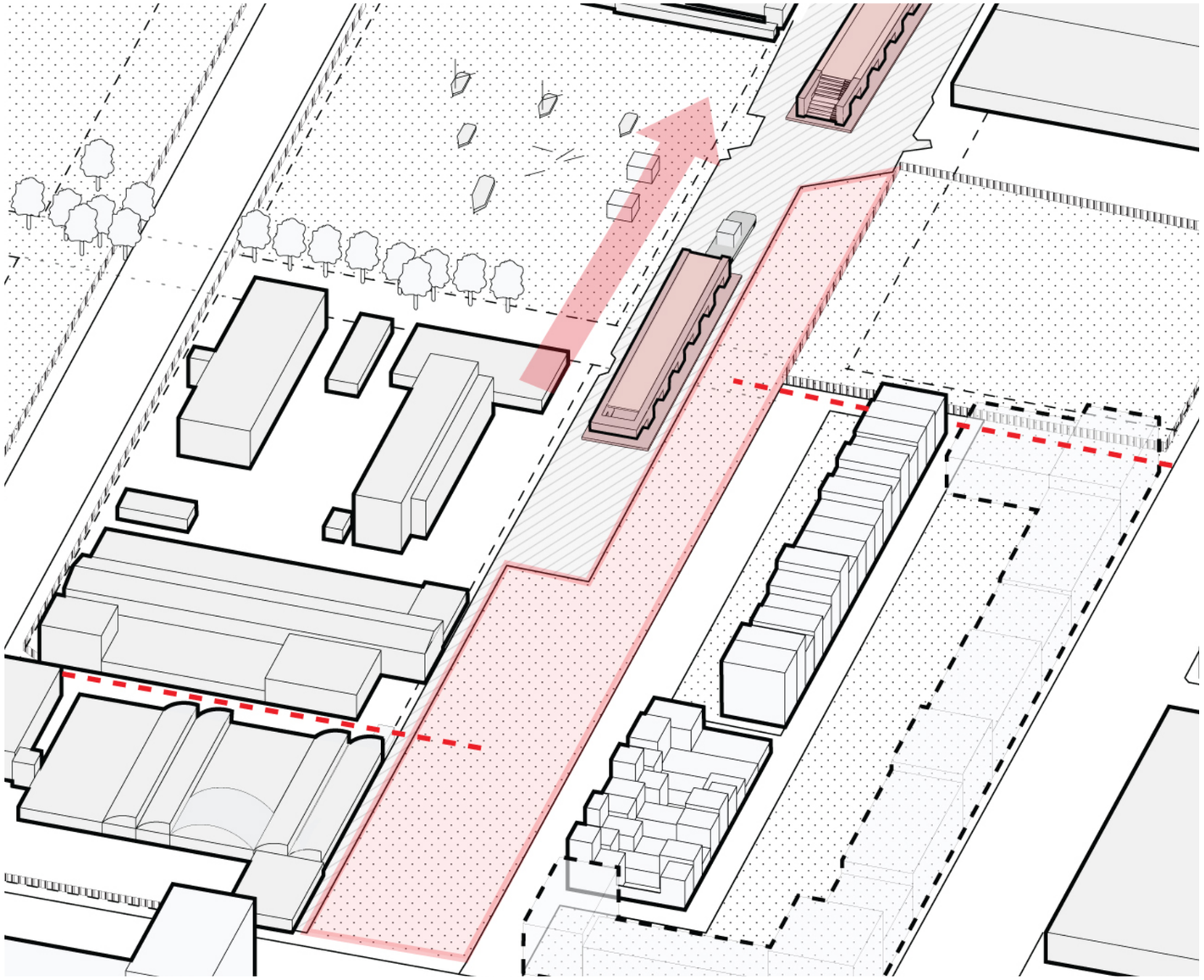






2026

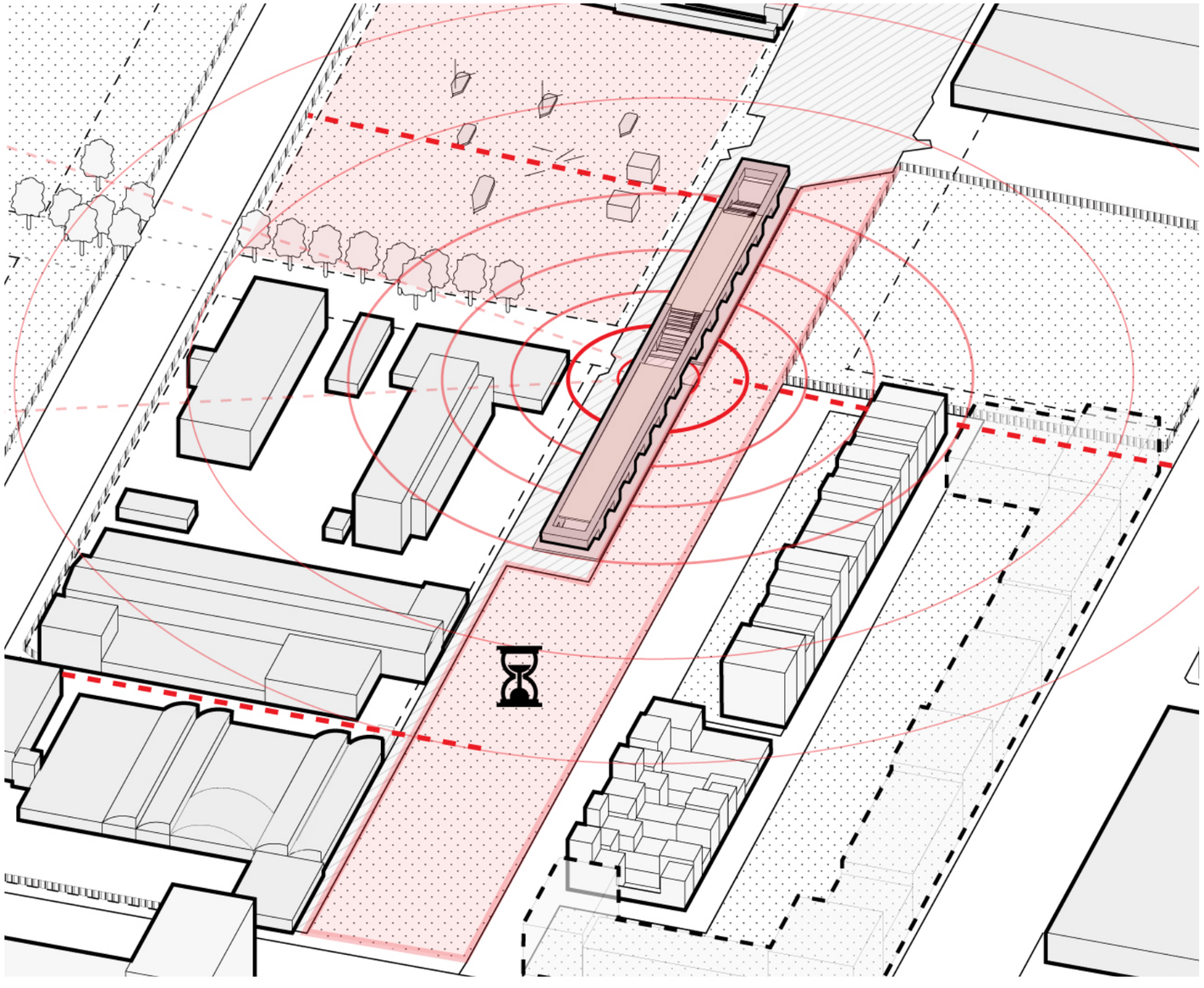
PHASE 3
LIFE CYCLE
ASSESSMENT



After the 10 year period, the building is transported over the water to a new location, in Buiksloterham, or elsewhere in the city

2026

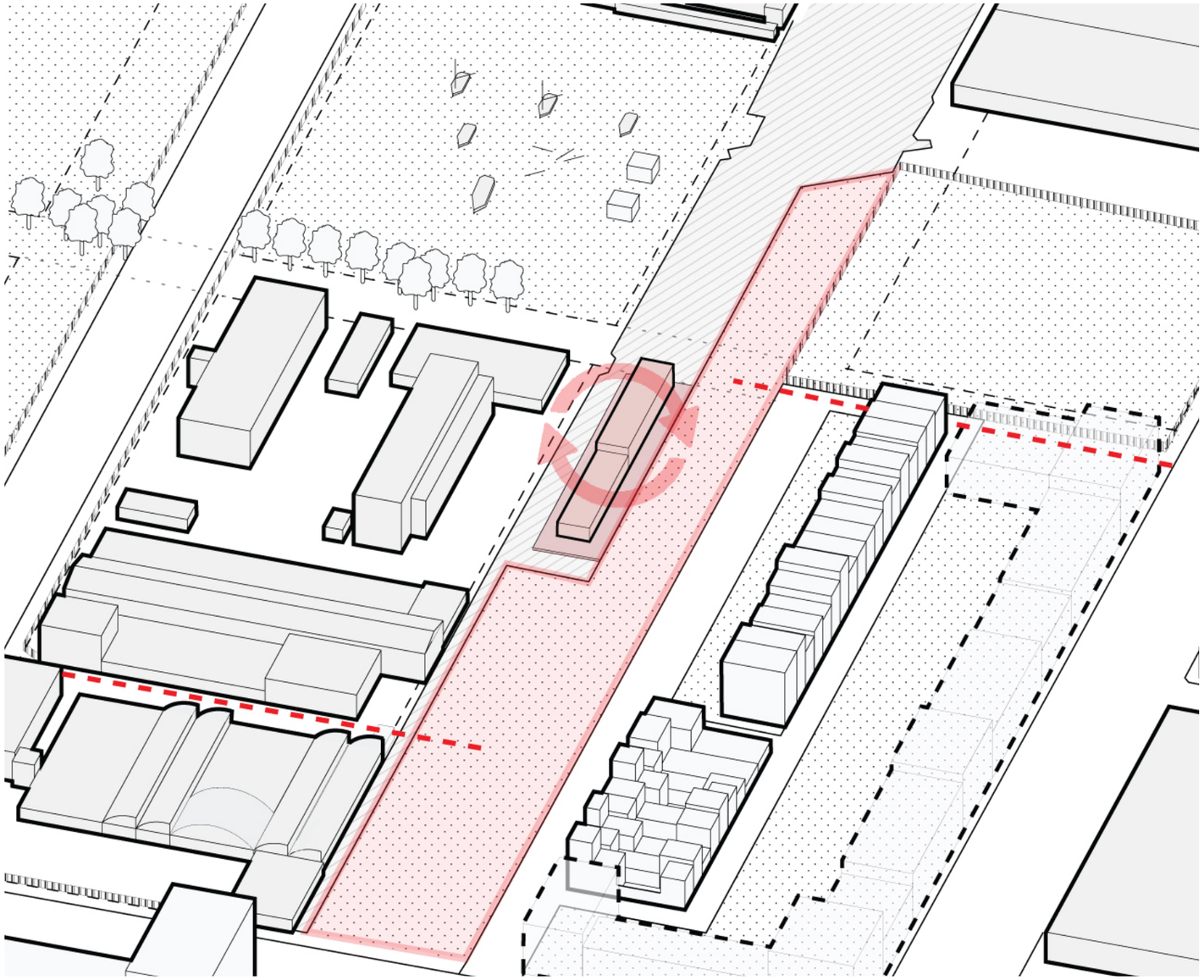
PHASE 3
LIFE CYCLE
ASSESSMENT



The building continues to play a role as urban catalyst, for as long as it is necessary for the urban transition of the area.

2026

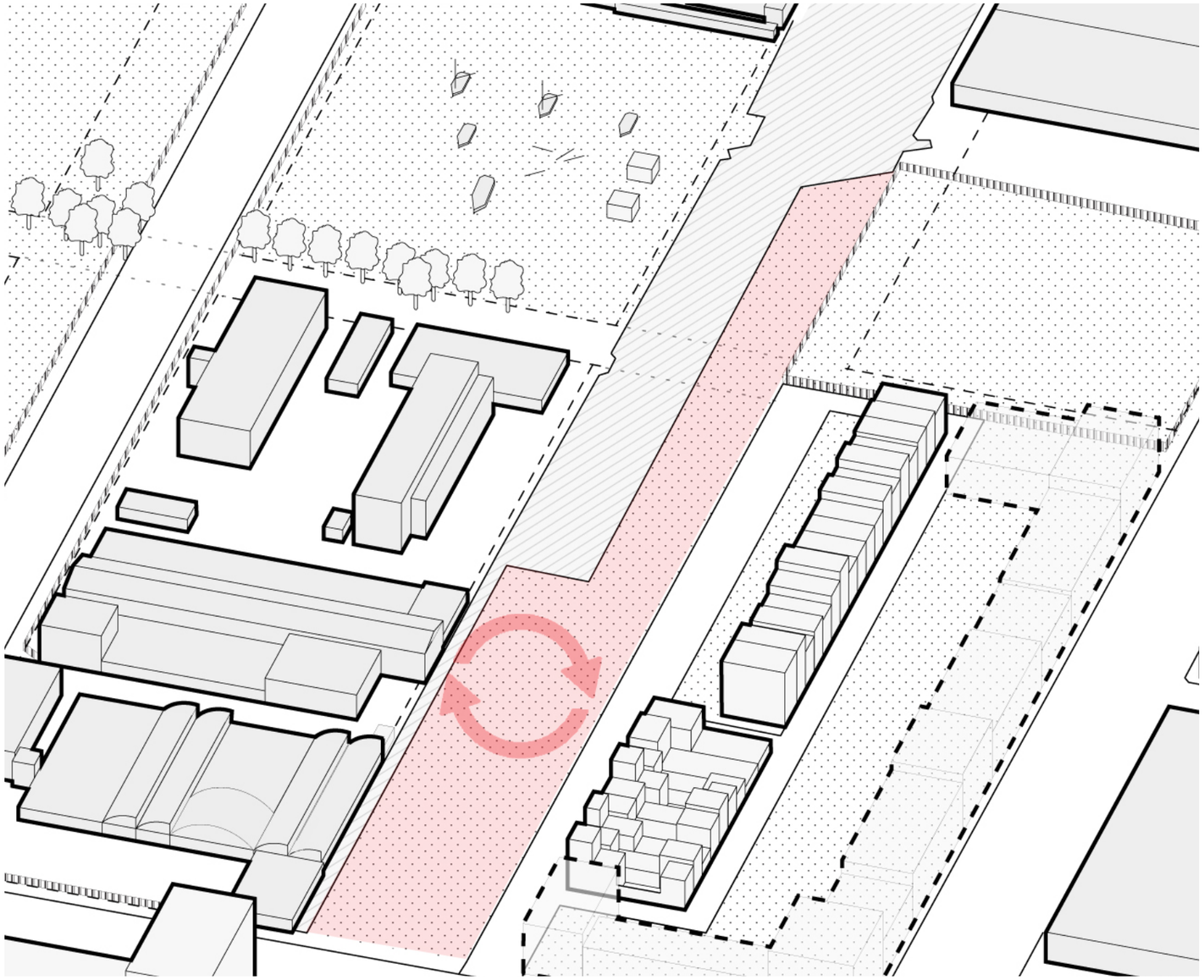
PHASE 3
LIFE CYCLE
ASSESSMENT



The scaffolding construction is removed and re-used elsewhere, the infill is transformed into a permanent building

2026

PHASE 3
LIFE CYCLE
ASSESSMENT



The building is dismounted and the materials are sold and re-used elsewhere.

This also applies to all the previously discussed options, as the end of the building life cycle.