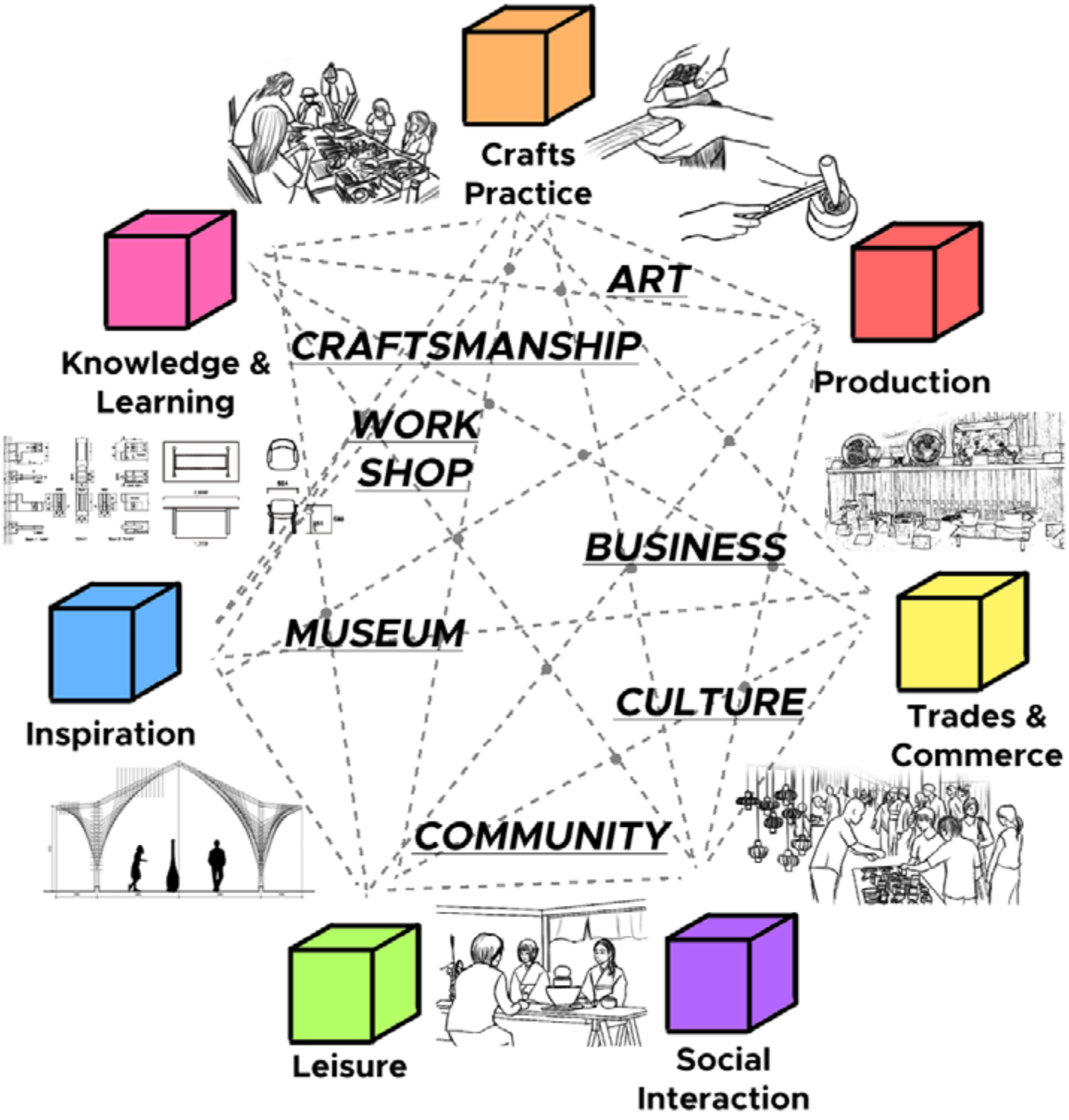
The CRAFT Museum Rotterdam-Zuid

Community-based **R**elational **A**rt **F**actory **T**arwewijk



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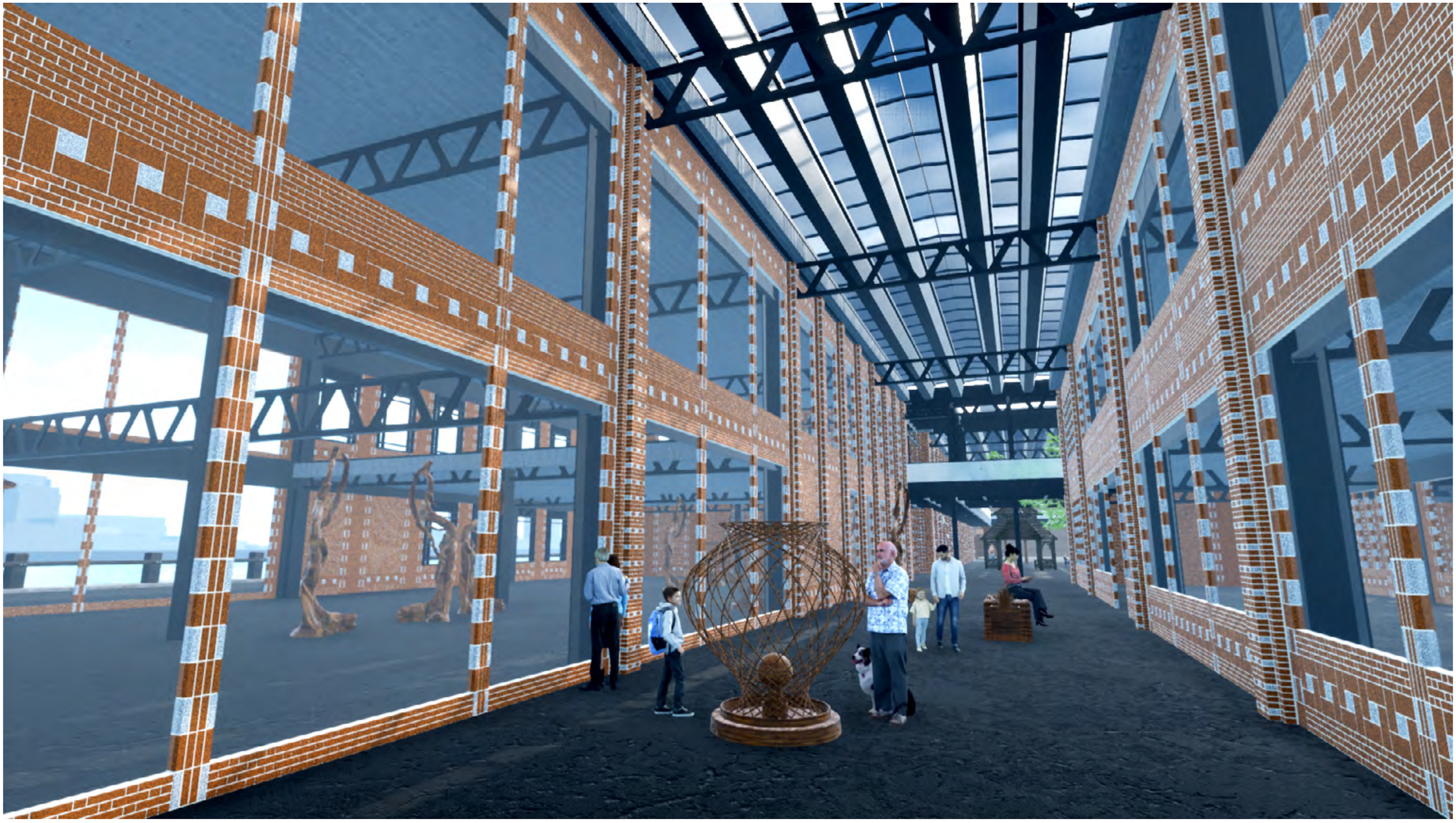
5050251 Yosua Adisapta Pranata Andoko

Welcome to The CRAFT Museum Rotterdam-Zuid

Community-based Relational Art Factory Tarwewijk



AR3AP100 Public Building Graduation Studio 2020-21
THE NEW MUSEUM | Art + the City Re-Wired

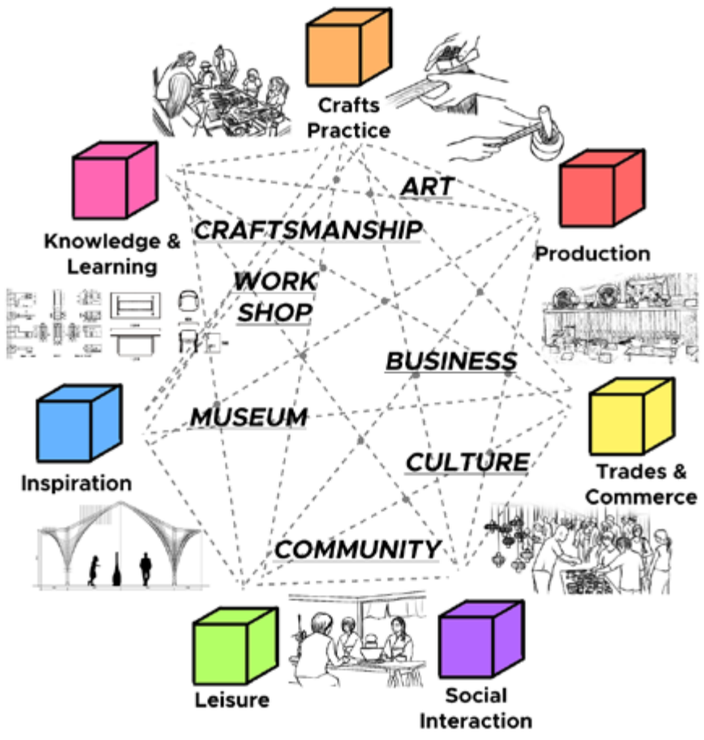
MSc. Architecture, Urbanism and Building Science
5050251 Yosua Adisapta Pranata Andoko

Public Building Graduation Studio Brief

The Public Building Graduation Studio investigates the future of public buildings and the role of the public in the built environment. Research will be conducted on how building design contributes to public programs, public spaces, and their interactions that can act as catalysts for the stimulation and development of the respective environment. Designing for the public means *creating meaningful and culturally valuable civic spaces and buildings for communities as well as individuals, enhancing the quality of life.*

The studio is interested in not only public functions, but also their *combinations with semi-public, commercial as well as private domains and public space*. The Public Building Graduation Studio in Academic Year 2020-21 focuses on architecture for art and culture that is re-wired to the city. We will explore *what the new museums may mean and what they can contribute to today's urban cultural milieu.*

from AR3AP100 Public Building Graduation Studio 2020-21 Studio Handbook



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- Concept Formulation
- Space Composition
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- Facade Material
- Inside the CRAFT Museum
- Conclusion & Reflection

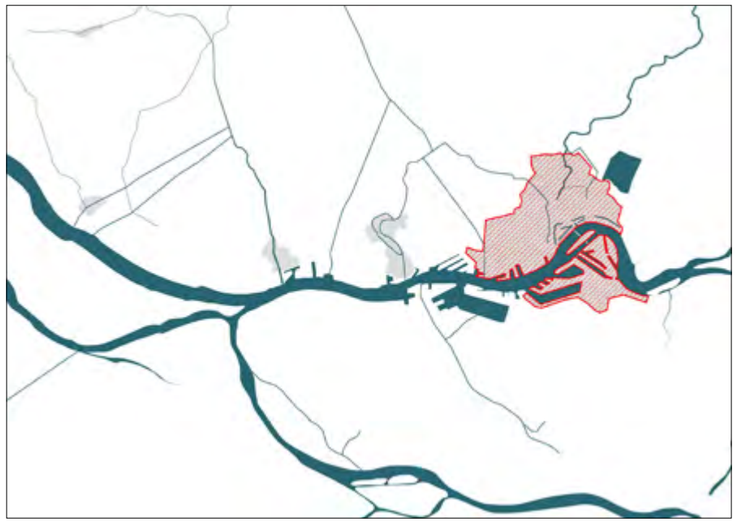
SITE & THEORY RESEARCH

Research: Historical growth of Rotterdam

Images by Group 6 (History): Ricardo Kemp, Yuhang Shi, Hanno de Groot

1850 - Small settlement, fishing villages

The harbours of Rotterdam have done major contribution for the development of the city from small fishing villages into an important international hub.



1920 - Expansion into a port city

Business and economic development was, however, focused on the North from the beginning. The South was reserved as industrial district and worker's settlement area.

2019 - Growth into international hub

The expansion of the city has grown majorly since the 20c. Distinct district zoning cannot work the same way anymore. Rotterdam now requires even development all across the region that addresses multiplicity in various sectors

Research: Building profile in the City

Images by Group 5 (City): Max van Steen, Sharon Ip, Joana Vilaça)

Building Typology Low rise High rise

However, as city development moved towards the north and industrial areas are migrated to the west, all that remained in Rotterdam South are old dense low-rise housings.

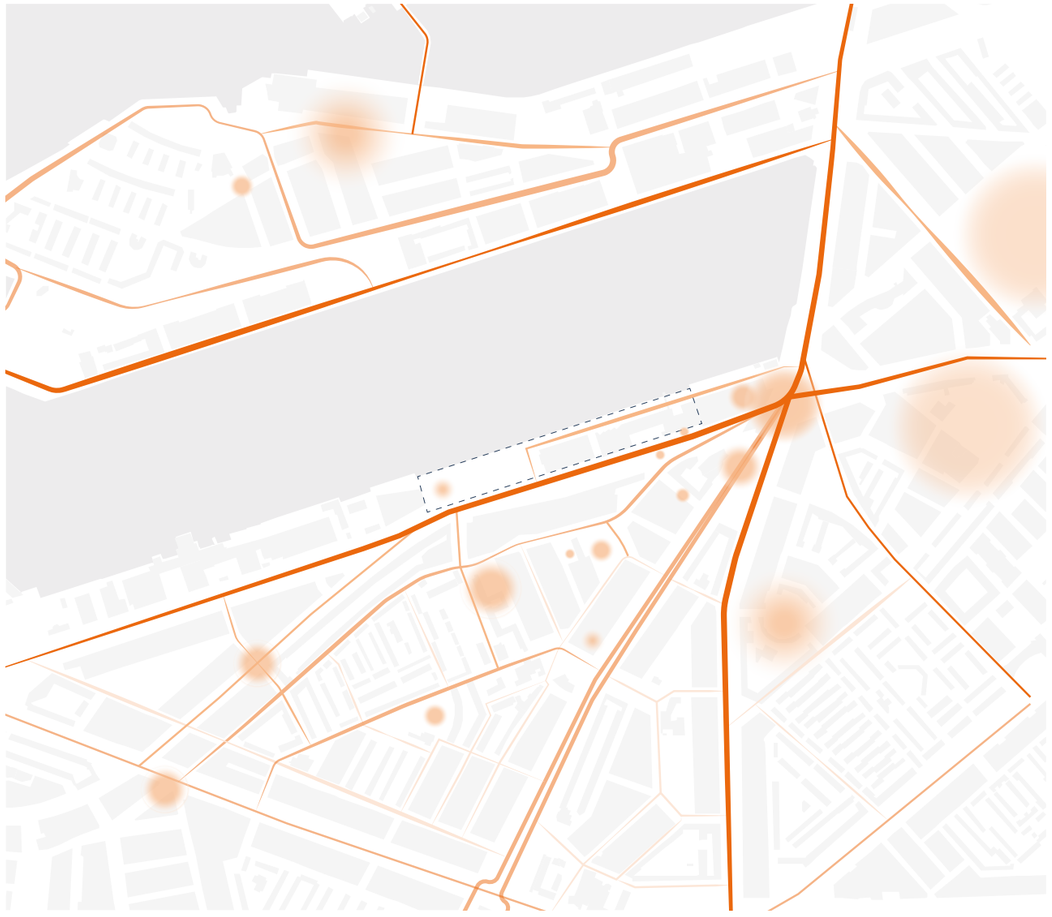
Industrial

Residential

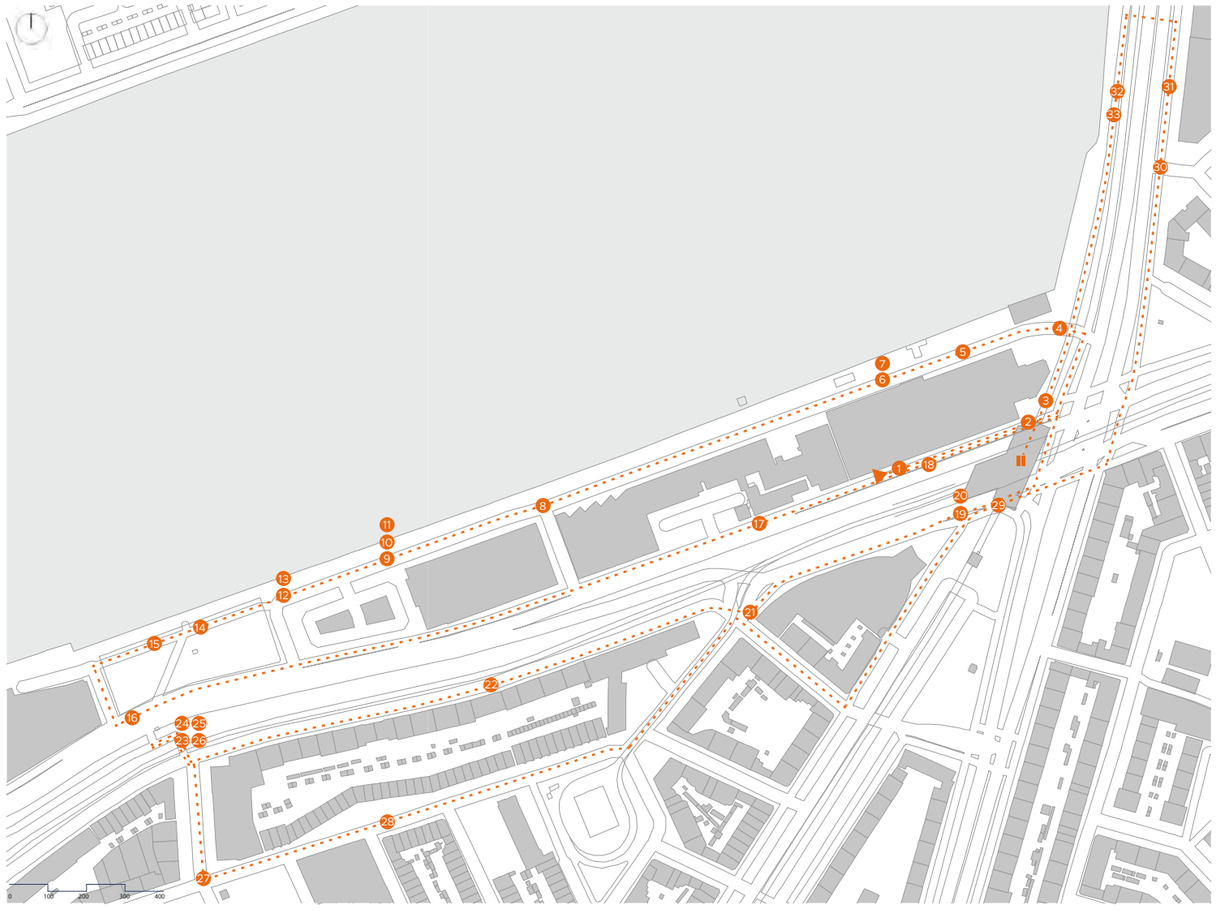
With developments of the South falling behind, the population of the neighbourhood is dominantly monotonous cheap housing blocks. The remaining industrial buildings also have no more relevance to the lilfe of present local inhabitants. The waterfront, industrial district, and neighbourhood have lost their former relational significance.

Research: Connection - Pedestrian density and routing

Images by Group 2 (Connection): Başak Günalp, Daul Chung, Robine van Gaalen



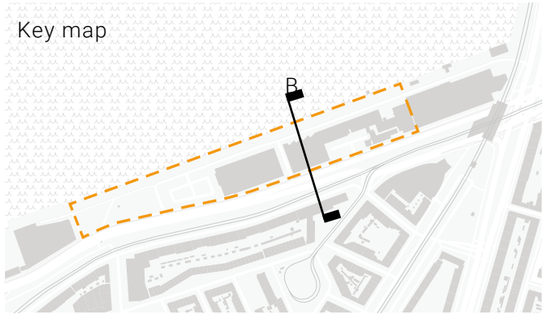
The analysis map shows that despite surrounded by dense transportation infrastructures, the dotted project site is not a focal point where people gather and hang around. The dense line along suggests that most people only pass by.



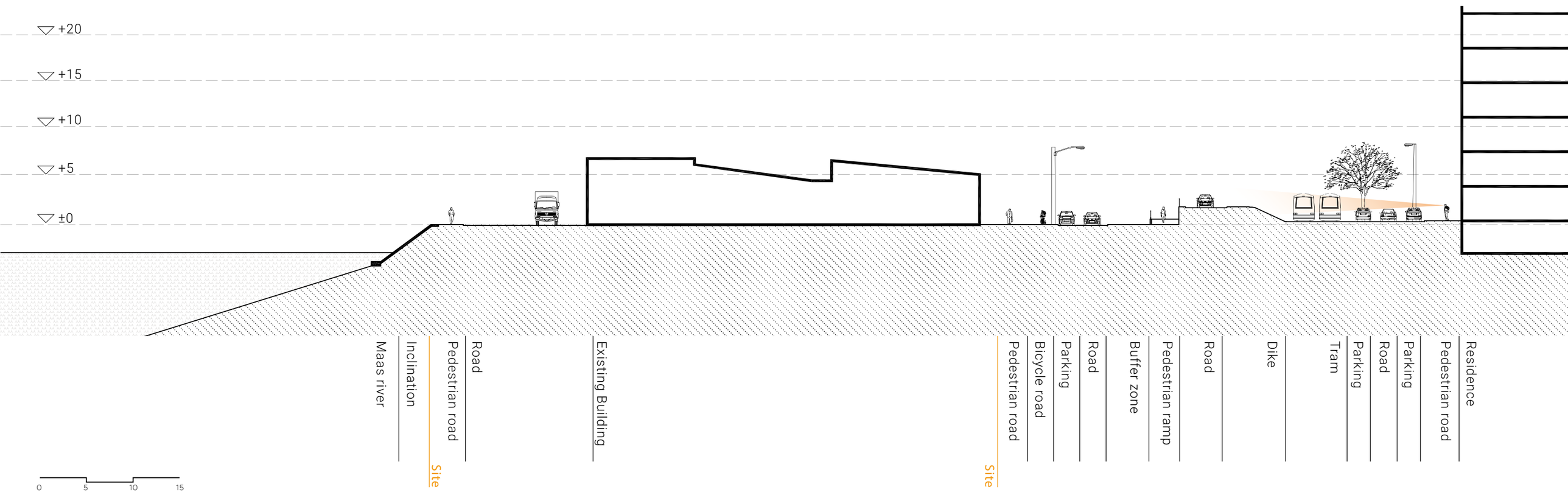
The routing analysis also suggests low direct connectivity from the neighbourhood to the waterfront. The dyke and dense building blocks become almost impenetrable barriers that force people to take roundabouts.

Research: Disconnectivity of the site

Images by Group 2 (Connection): Başak Günalp, Daul Chung, Robine van Gaalen



Porous | Not-Porous | Semi-Porous | Not-Porous | Semi-Porous | Not-Porous

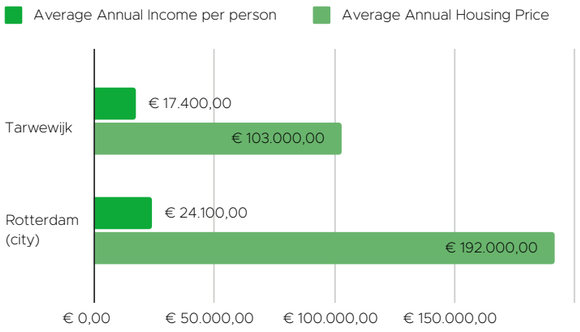


Scale 1:400

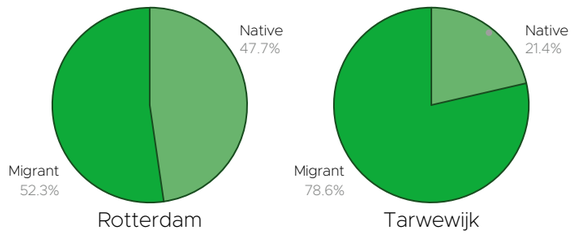
Research: People of Tarwewijk

In terms of economic power and opportunities, the Tarwewijk neighbourhood ranks statistically much lower than the average for the whole Rotterdam. However, participation in cultural activities, especially religious ones, is relatively high as compared to the city's average. Interest in cultural activities remains prevalent regardless of economic and social status.

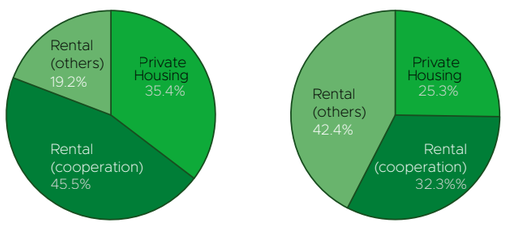
Images by Group 1 (People):
Bart Bonenkamp, Helen Cao, Yosua A.P.



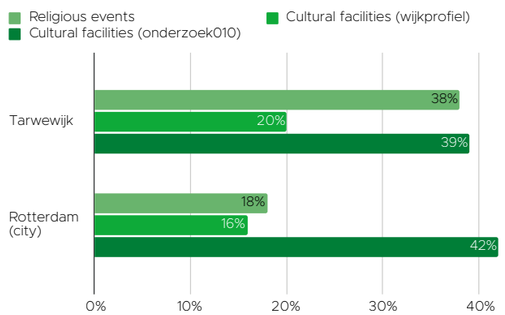
Annual income and housing price



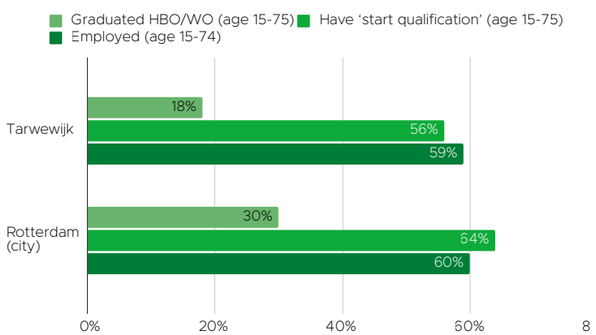
Cultural background



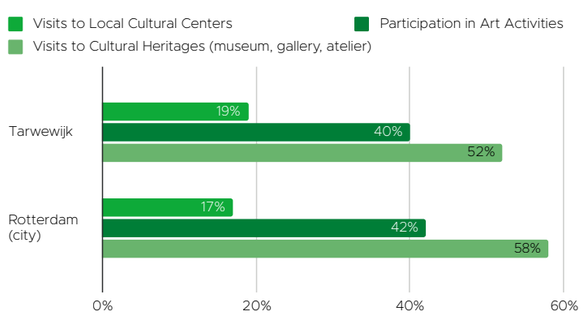
Residence ownership



Monthly visits to cultural places



Education and employment



Methods of cultural participation

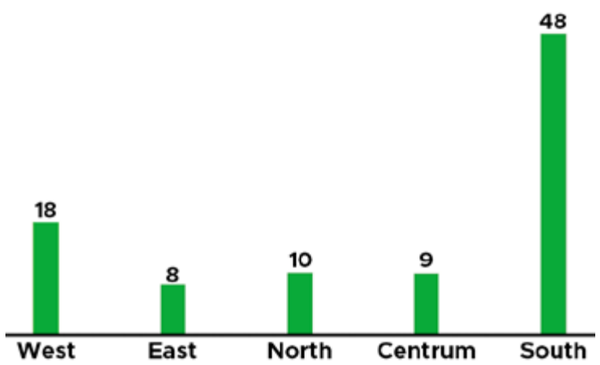
Research: Art & Culture in Rotterdam

Consumption (museum) is targeted at people the center of the major economy district. Meanwhile many artists also choose to base their production further from the city center for mainly two reasons: lower cost of living and more tranquil environment for work. Besides museums and art galleries, cultural activities also occurs in the South in more subtle forms.

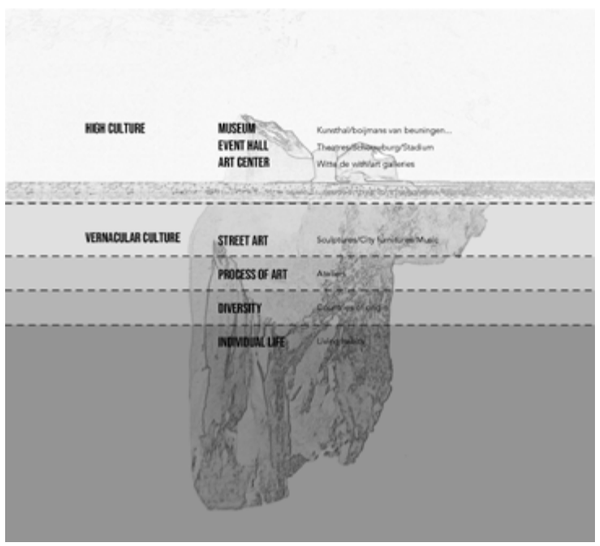
Images adapted from Group 3 (Culture):
Julka Veerman, I-Hsuan Lee,
Marieke van de Plasse

Mapping of Museums in Rotterdam

Mapping of Artist Studios in Rotterdam



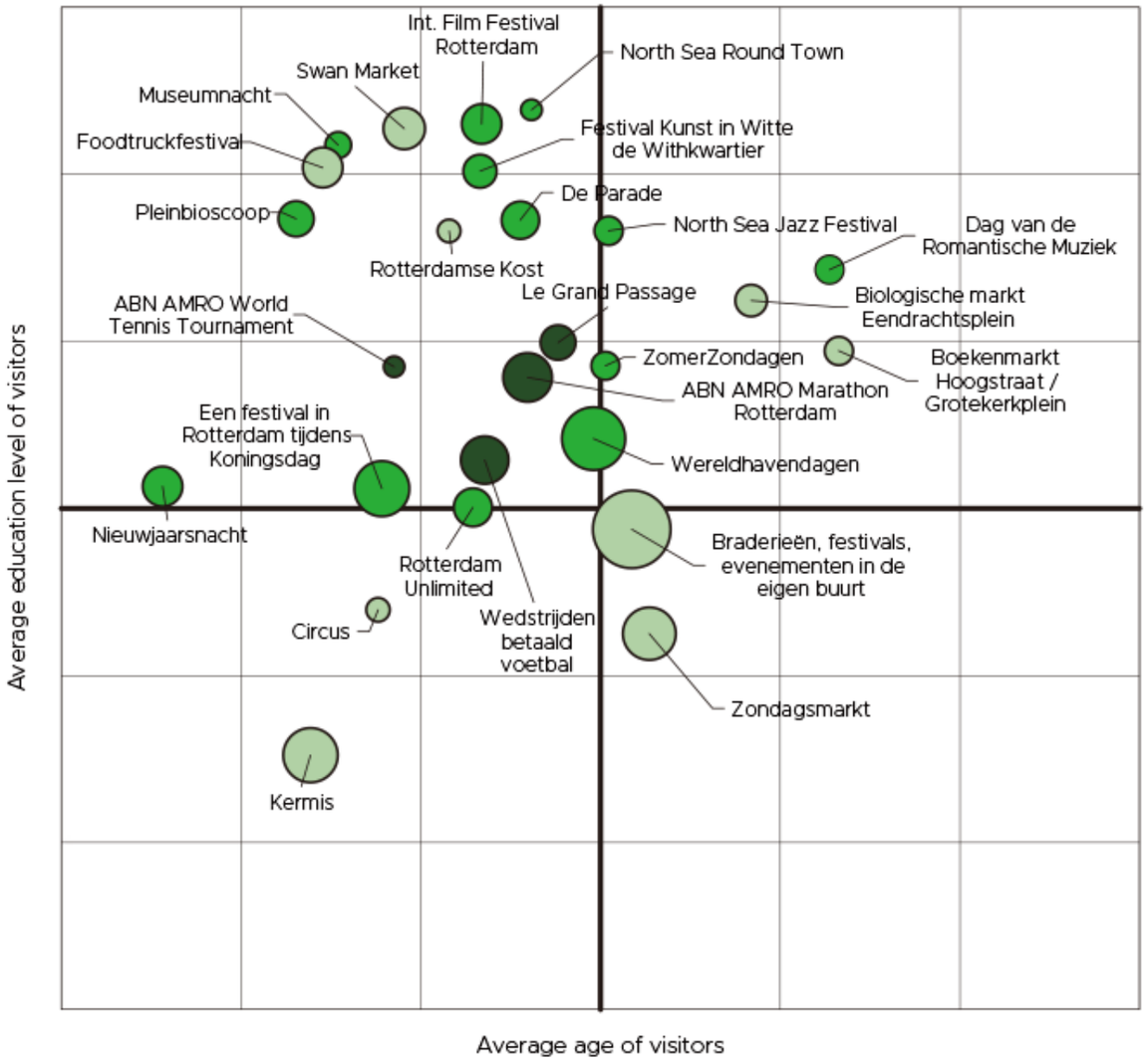
Number of ateliers in Rotterdam



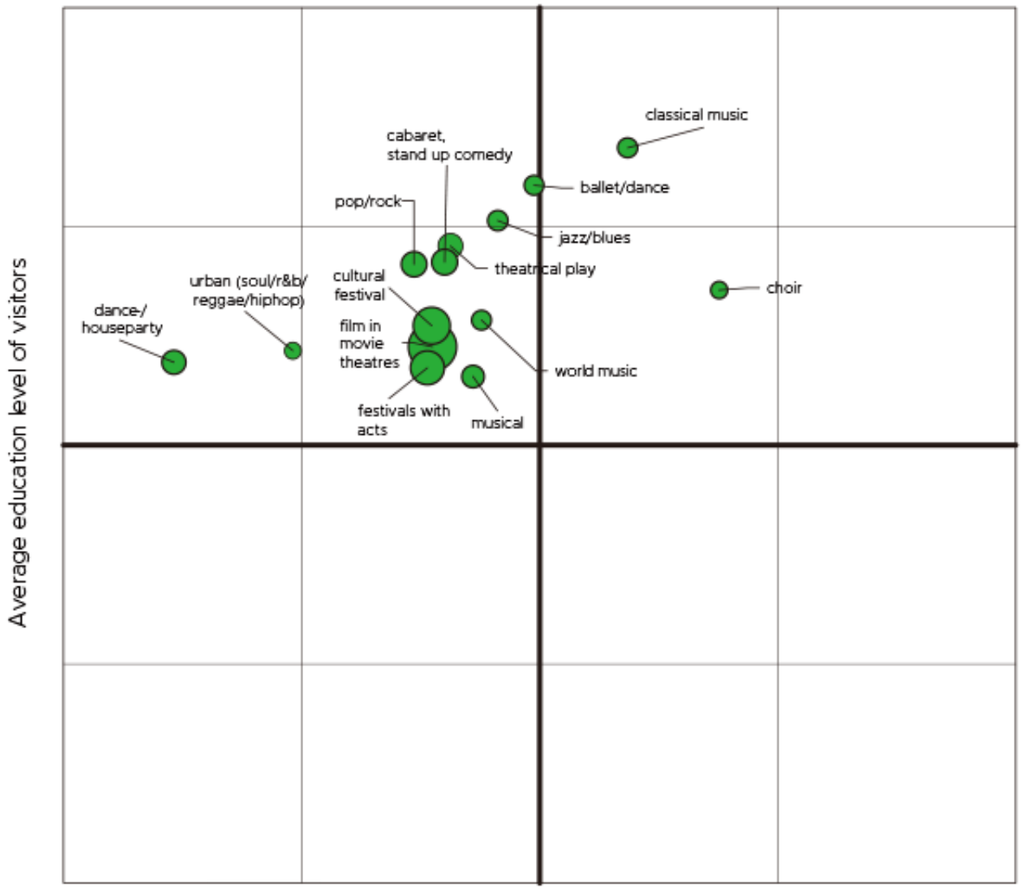
Gradations of cultural activities

Research: Age and educational profile of visitors at cultural place

Images by Group 1 (People): Bart Bonenkamp, Helen Cao, Yosua A.P.
Adapted from 'Cultuurparticipatie van Rotterdammers, 2015' by OBI



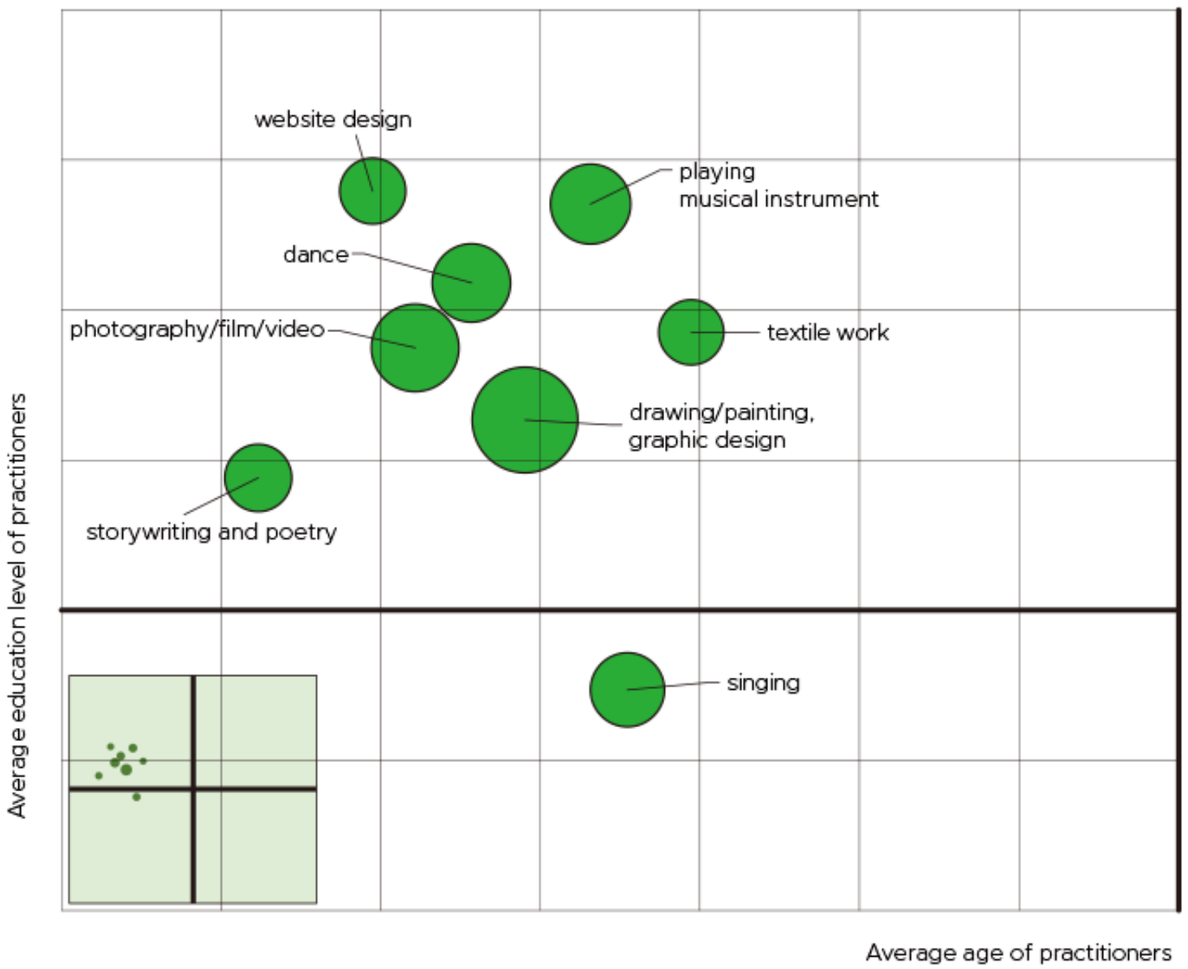
Average age and education level of visitors
of festivals and events in Rotterdam, 2015



Average age and education level of visitors
of performing art in Rotterdam + its public space size

Research: Age and educational profile of visitors at cultural place

Images by Group 1 (People): Bart Bonenkamp, Helen Cao, Yosua A.P.
Adapted from 'Cultuurparticipatie van Rotterdammers, 2015' by OBI

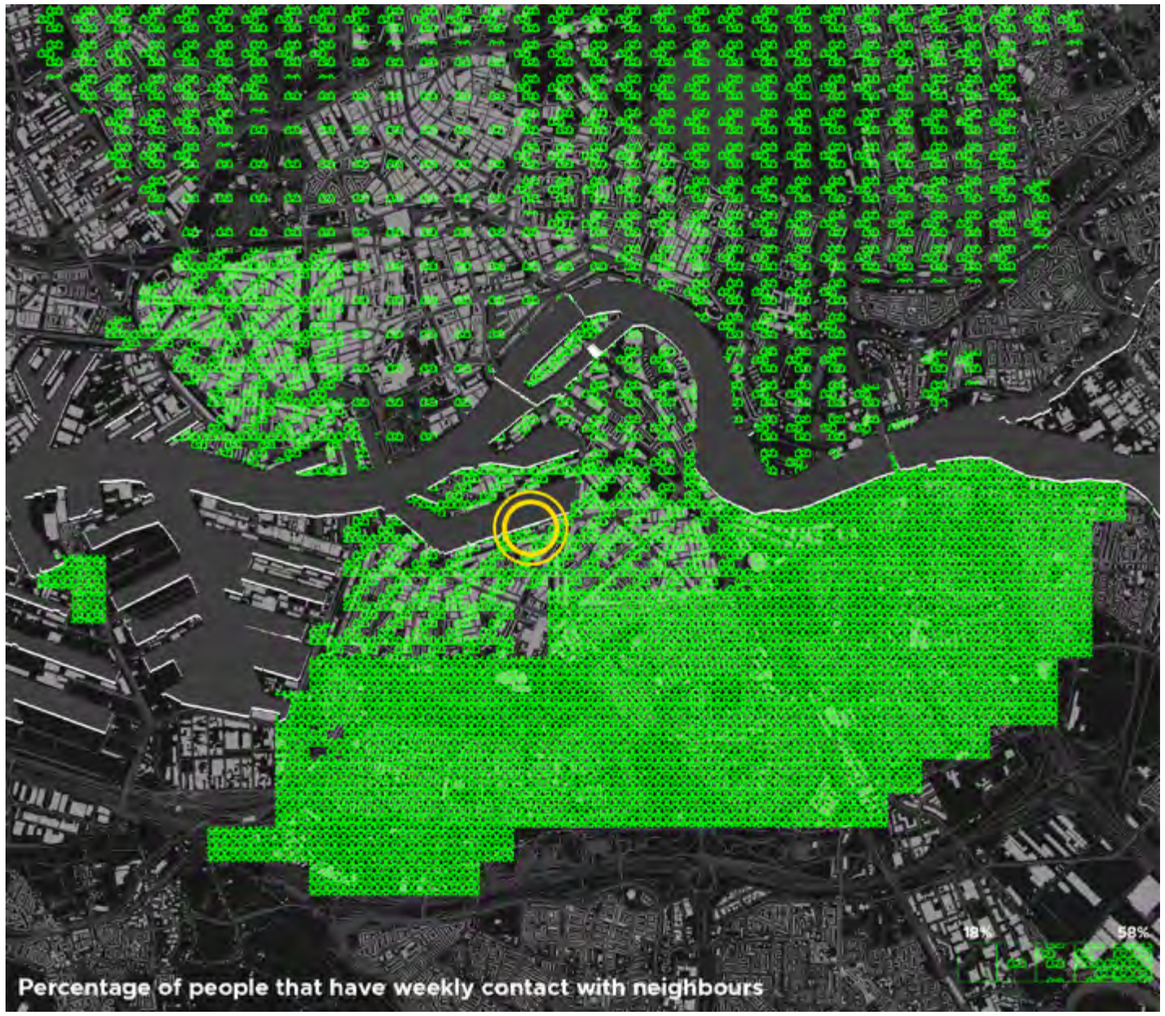


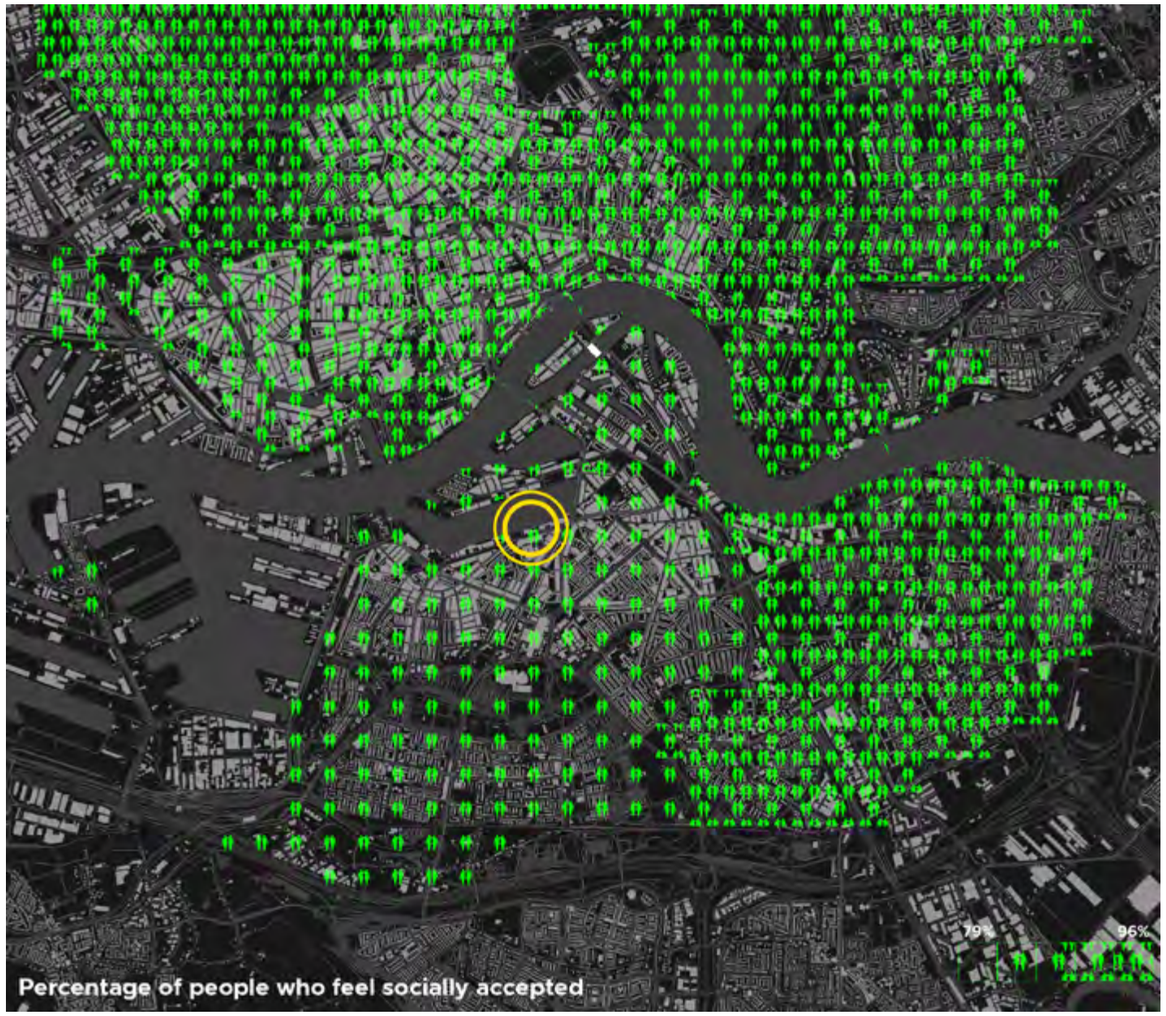
Average age and education level of
practitioners of art activities in Rotterdam, 2015

Average age and education level of visitors
of cultural institutions in Rotterdam + amount of visits

Research: Mapping Quality of Life

Images by Group 1 (People):
Bart Bonenkamp, Helen Cao, Yosua A.P.





Research: Mapping Quality of Life

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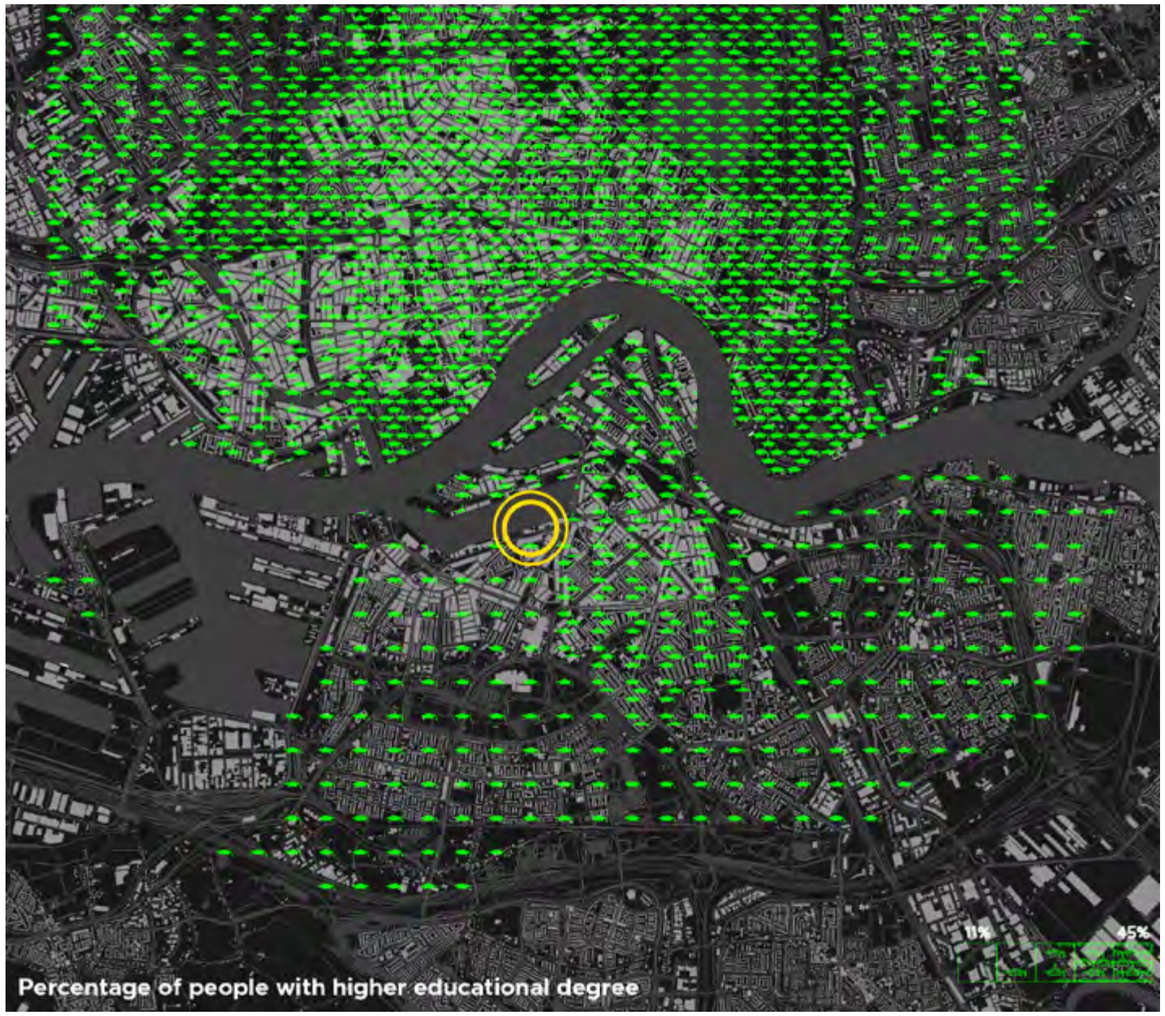
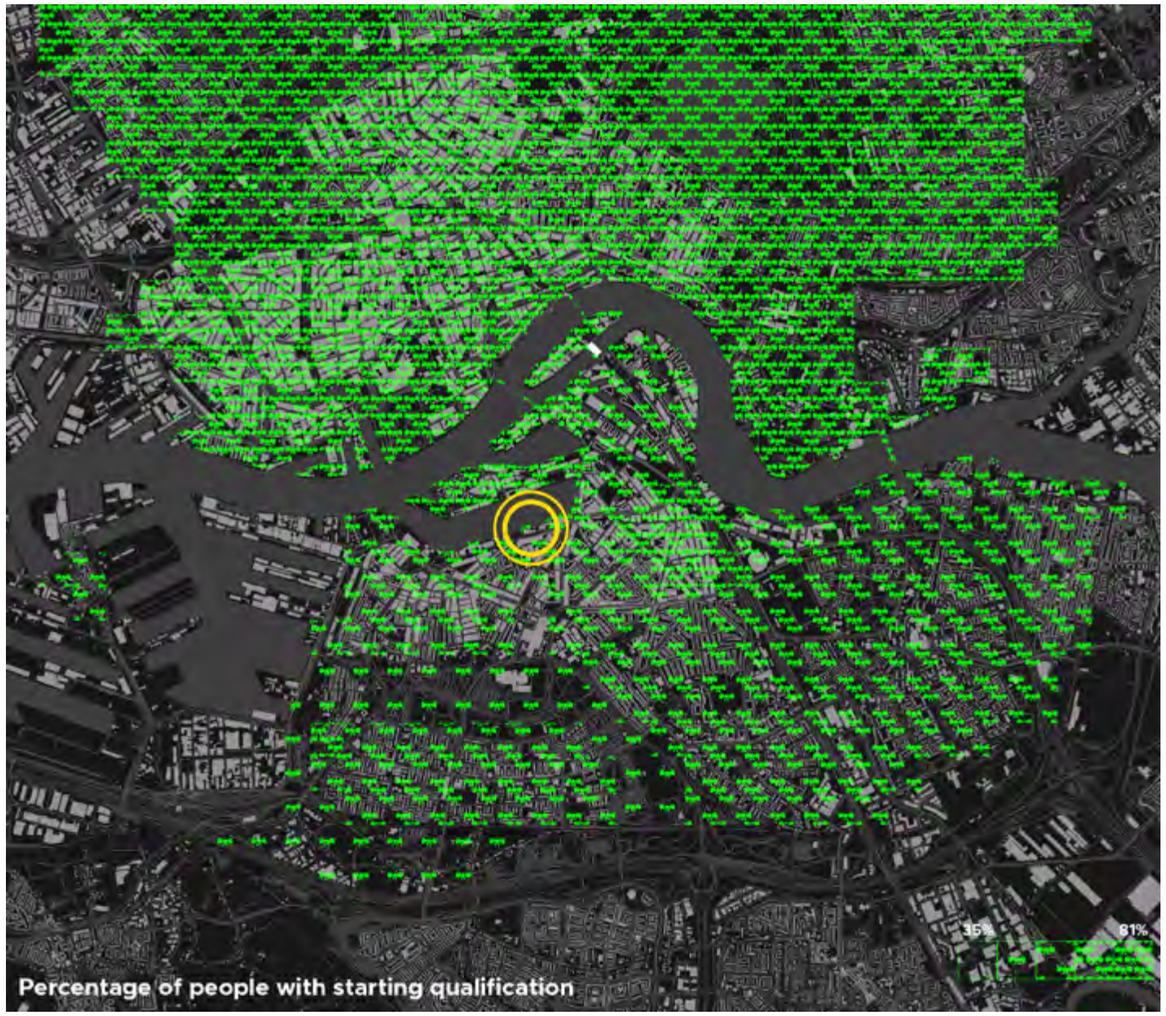


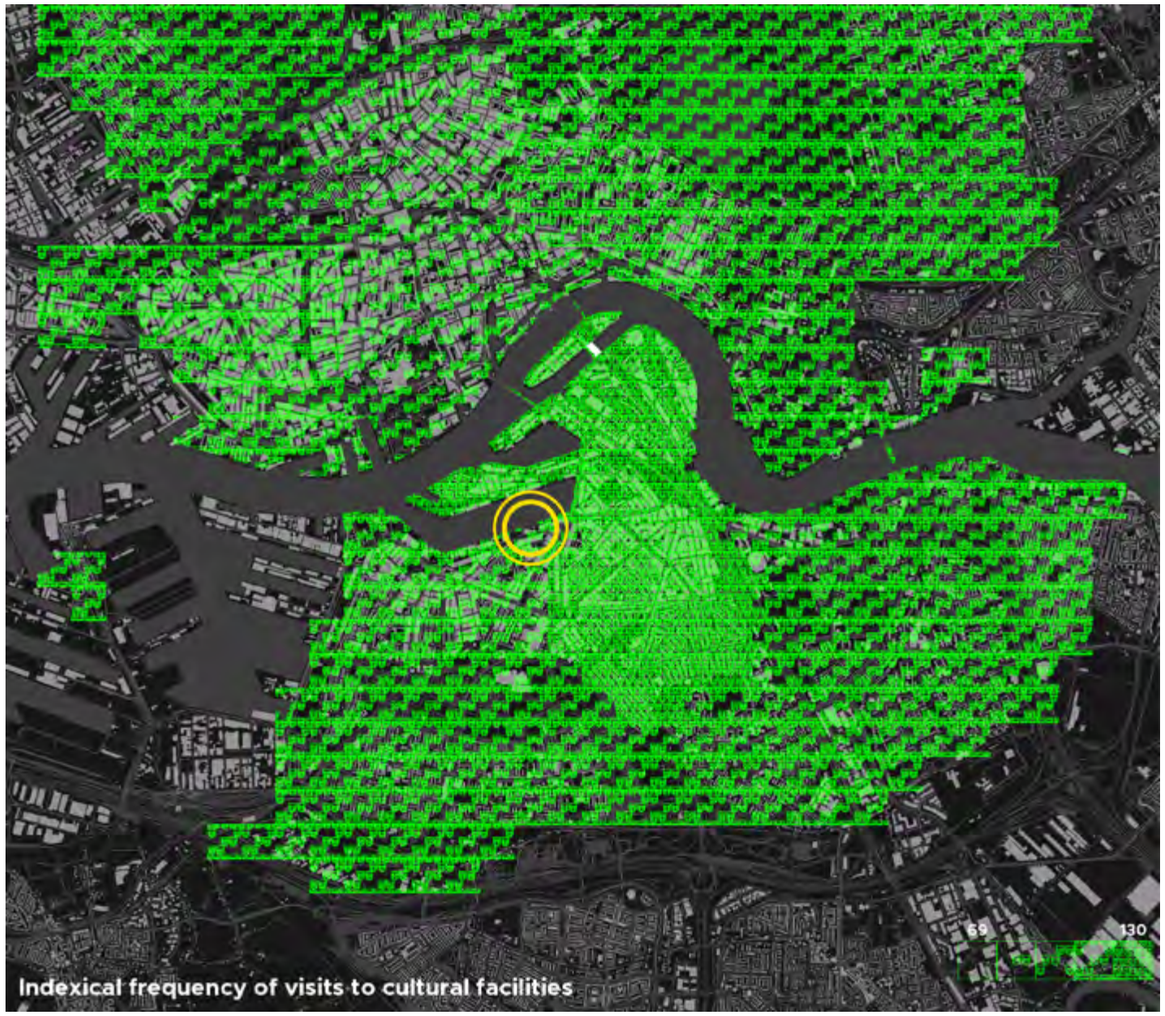
People in Rotterdam Zuid also has relatively very low opportunity of attaining higher educational degree.



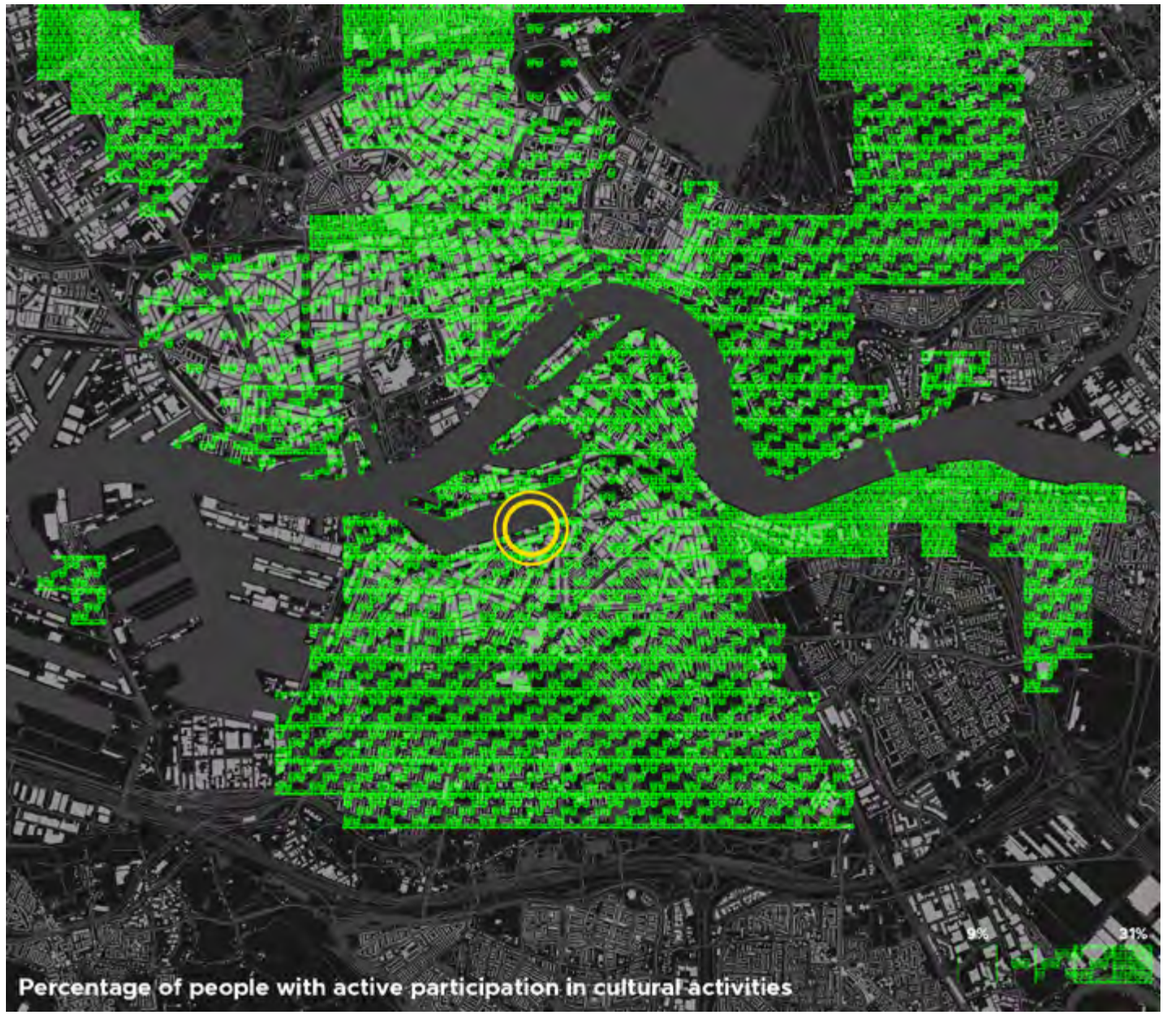
This also correlates to the low number of people possesing starting qualification for applying jobs.

Research: Mapping Quality of Life

Images by Group 1 (People):
Bart Bonenkamp, Helen Cao, Yosua A.P.



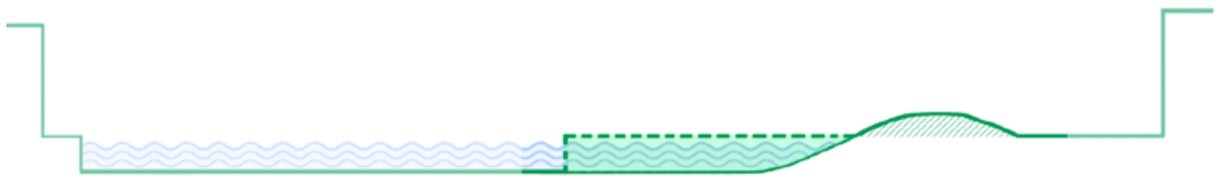
Despite the statistically lower educational degree, people of Rotterdam Zuid appears to frequently visit cultural facilities. Although not necessarily museum, this still proves that there is high interest to cultural activity in Rotterdam Zuid.



Furthermore, the percentage of people who actively participates in cultural activities is comparably high even compared to the whole Rotterdam in general. Nonetheless, with 31% at the highest, participation in cultural activities for the whole Rotterdam in general is objectively quite low.

Research: Summary - Rotterdam

History
Dyke: Natural protection ➡ Demarcation between industrial port & worker's housing



Connection
Fragmented continuity between R'dam North, Maashaven, R'dam South

City
South: Mainly dense, cheap public housings
North: Centre of business & tourism + cultural institutions

Power
South: Weaker academic, economic, and social power

Culture
South: More ethnic diversity
Higher quantity of artist ateliers

People
South: more interaction between neighbours
higher frequency of religious/traditional activities

Strength
- Local interest in art & culture
- Communal cohesion

Opportunity
- Existing vernacular art & culture
- Tradition oriented practice

Weakness
- Link to dyke & waterfront
- Accessibility
- Low opportunities

Threat
- Institutionalisation of art

Art & Culture in the City
- Institutional (museum; gallery)
- Consumption/leisure oriented

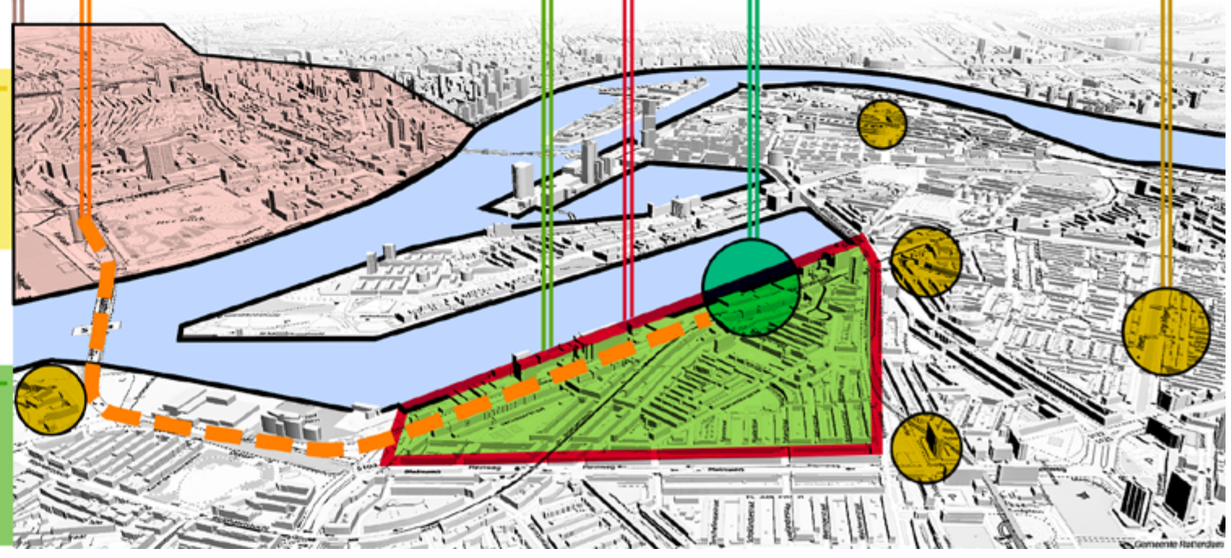
Art & Culture in R'dam Zuid
- Vernacular; non-institutional
- Production/practice oriented
- Existing artists community

People of Tarwewijk
- Local interest in art & culture
- Communal cohesion

Social condition
- Low academic opportunity
- Low skill & job opportunity
- Low social standing

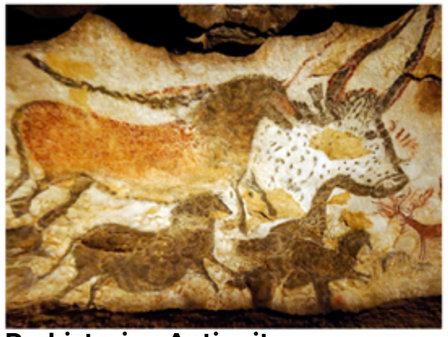
Site accessibility
- Limited pedestrian access
- Fragmented connections

Site context
Dyke & waterfront losing relevance to daily life



Research: Development of Art

Art as **cultural/religious practice**




Prehistoric - Antiquity

→ Old French 'art'; Latin 'ars'
- "acquired skill, craftsmanship, systematic body of knowledge and techniques, profession, artistic achievement" (1)
- "work of art; practical skill; a business, craft" (2)

Art as **knowledge/skill**


Medieval

→ First use of 'Art' in English (ca. 13c.)
- "skill acquired by experience, study, or observation" (1)
- "skill as a result of learning or practice" (2)

Art as **aesthetic perfection**





Renaissance

→ Studies of Art & Aesthetics
- References to Plato & Aristotle
- Poiesis vs. Techne
- Aesthetic art vs. Practical craft
- Pursuit of perfection and ordered balance

Art as **message/self expression**



20c.-

→ Discourse about the definition of 'Art and Aesthetics'
- Meaning in Artwork
- Questions of Authenticity
- Art = the artist's intention/message

Research: Development of Museum

(antiquity-medieval)

Museum as

religious temple/shrine

(age of discovery)

(17c.- 19c.)

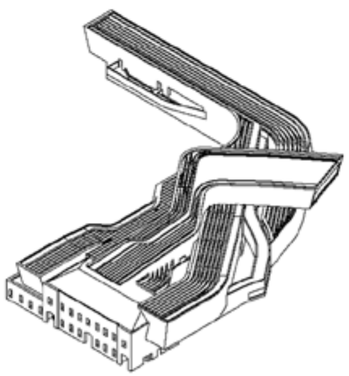
Museum as

private collection

(20c.)

Museum as

curated institution



(21c. - now)

Museum as

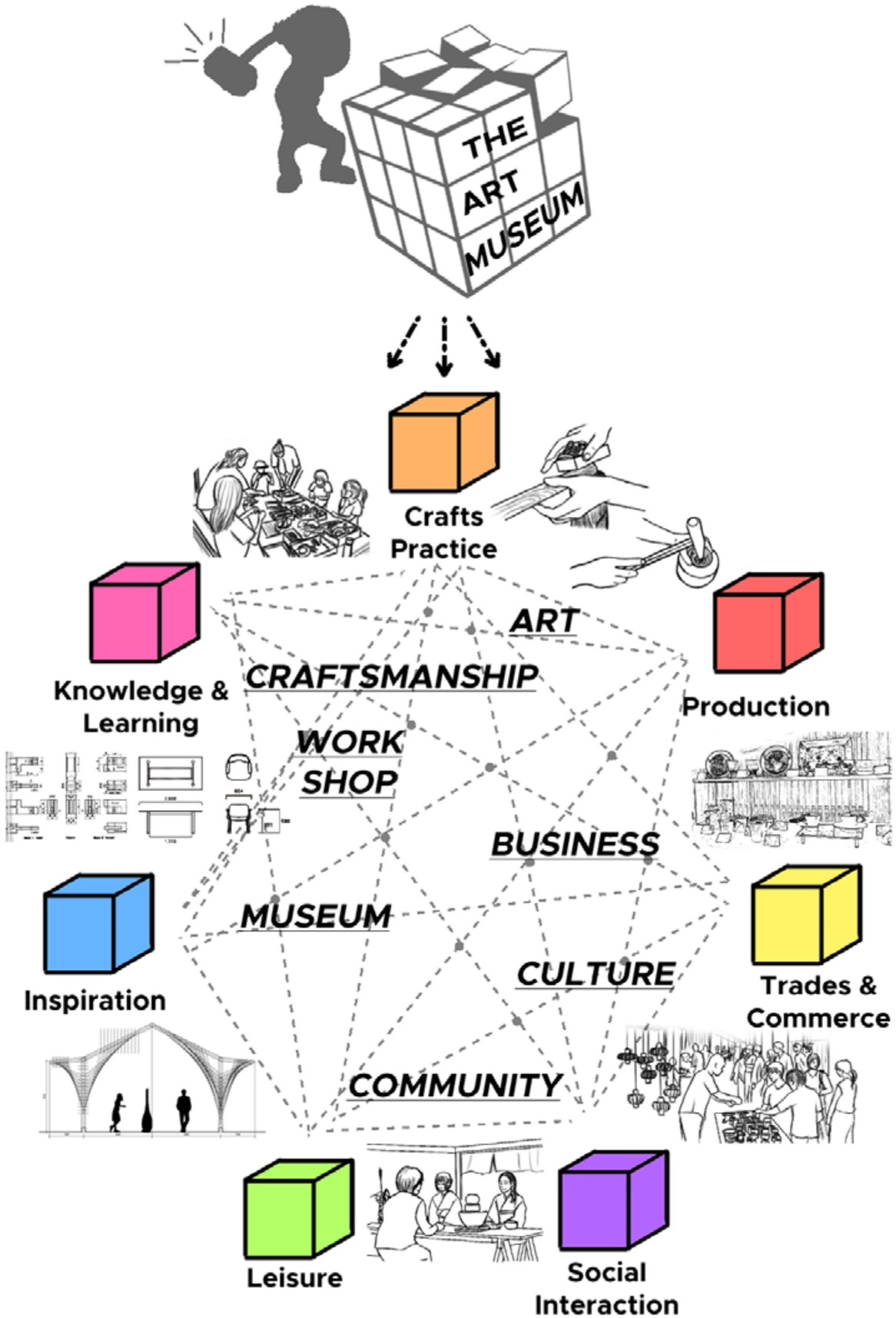
tourism site

(future)

Museum as

???

CONCEPT FORMULATION



Art **intentional** **creative**

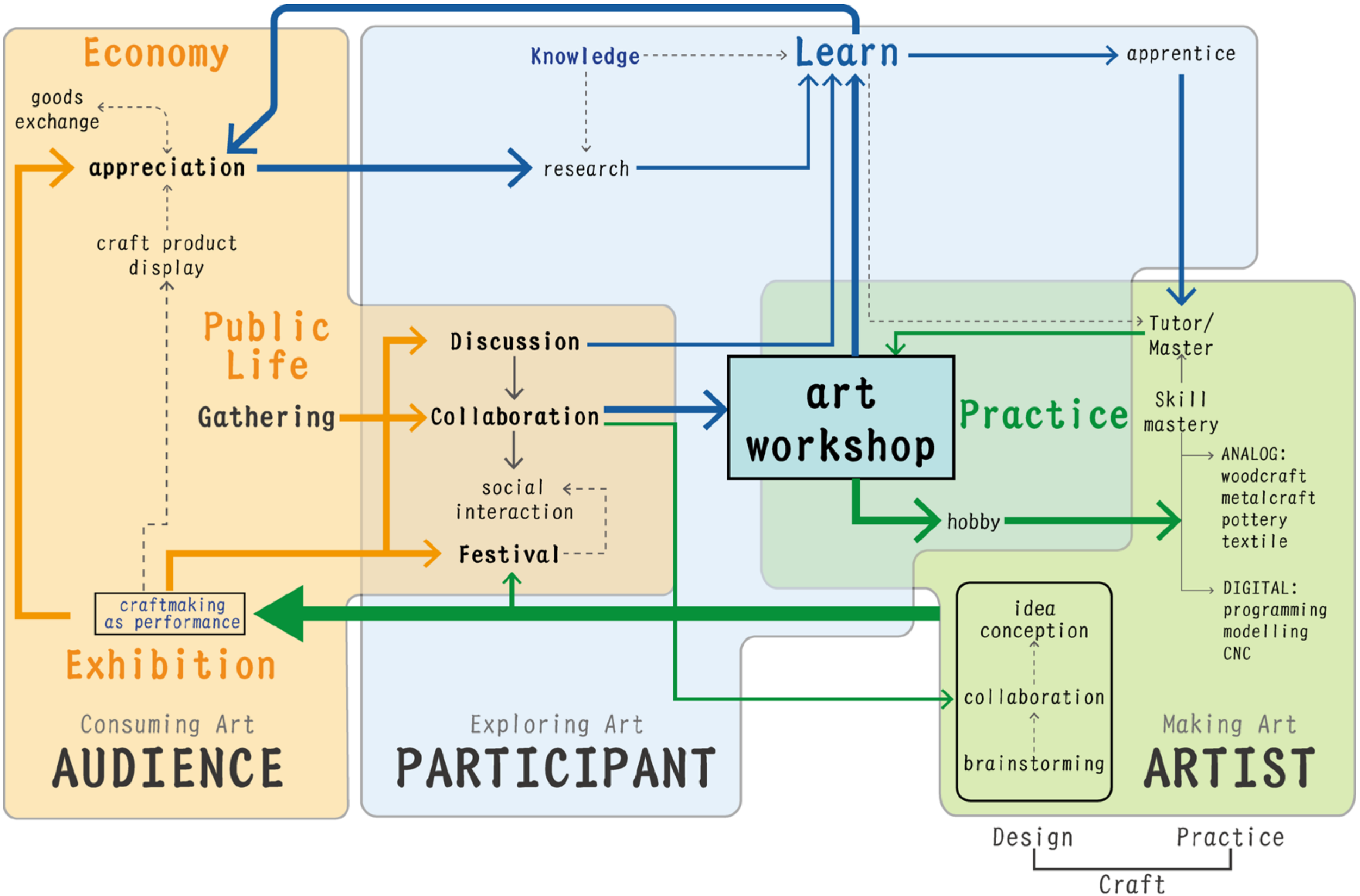
"Poetic art is nothing but a willful, active, and productive use of our organs."

technical craft

(Agamben, 1994. The Man without Content, p. 47)

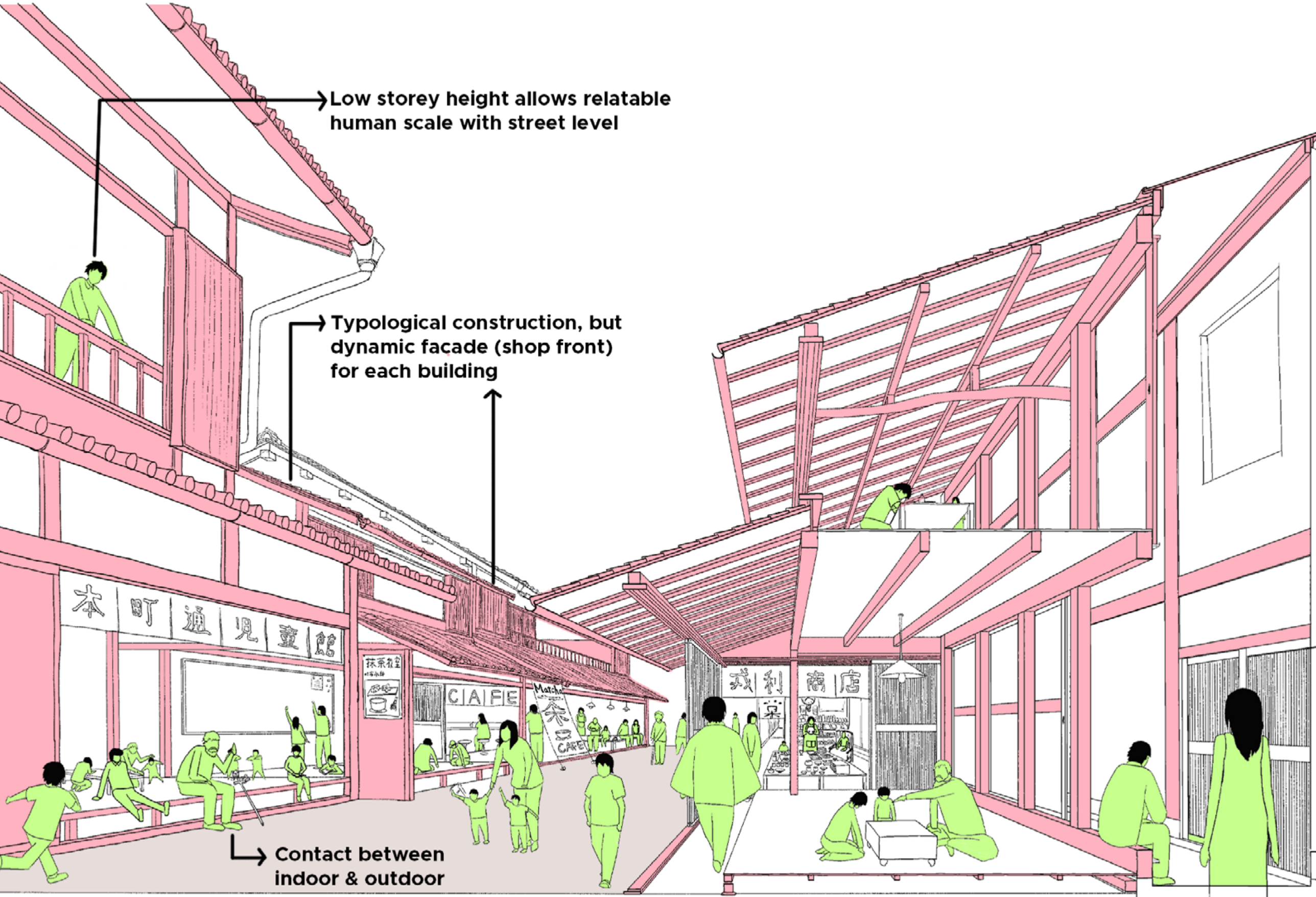
Intention/Thought ⇒ Technique + Action ⇒ Art Production

Diagram of Programmatic Multiplicity

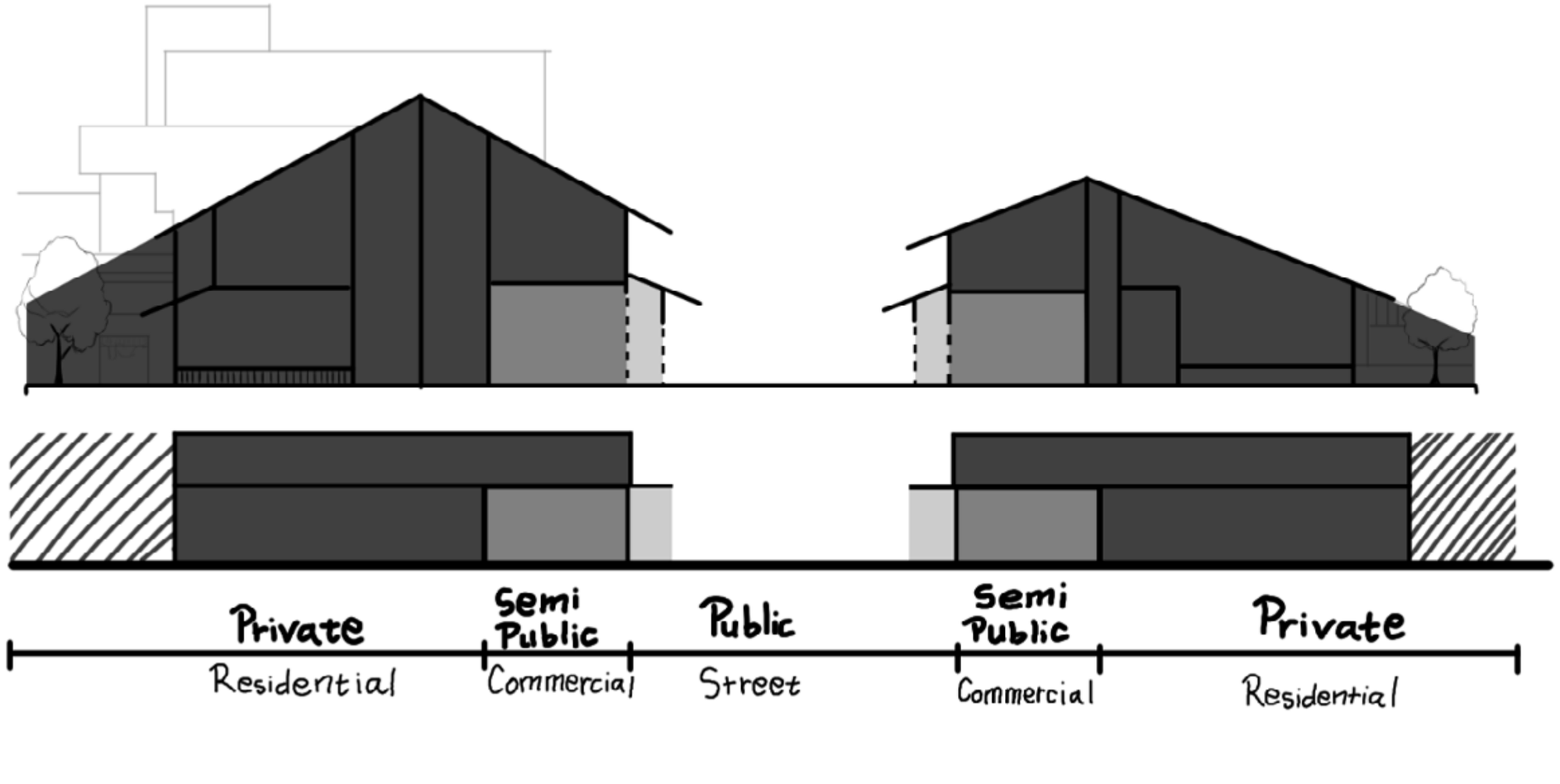


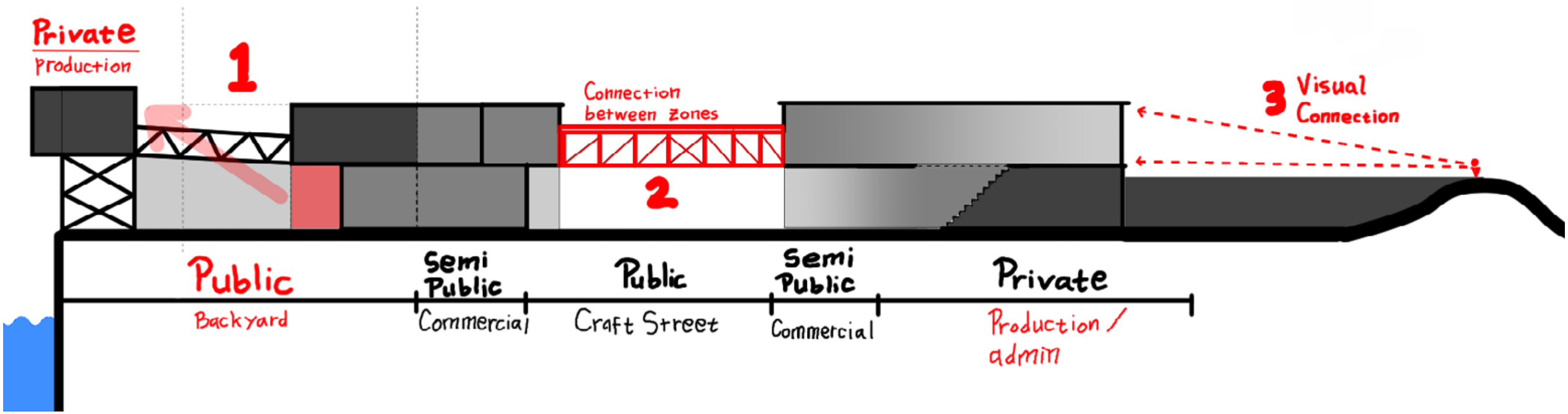
Space Construct inspiration (Machiya street)

image source: https://www.city.tsushima.lg.jp/kurashi/sumaikenchiku/machidukuri/tushimakatamachiya.files/machiyawonuu.pdf

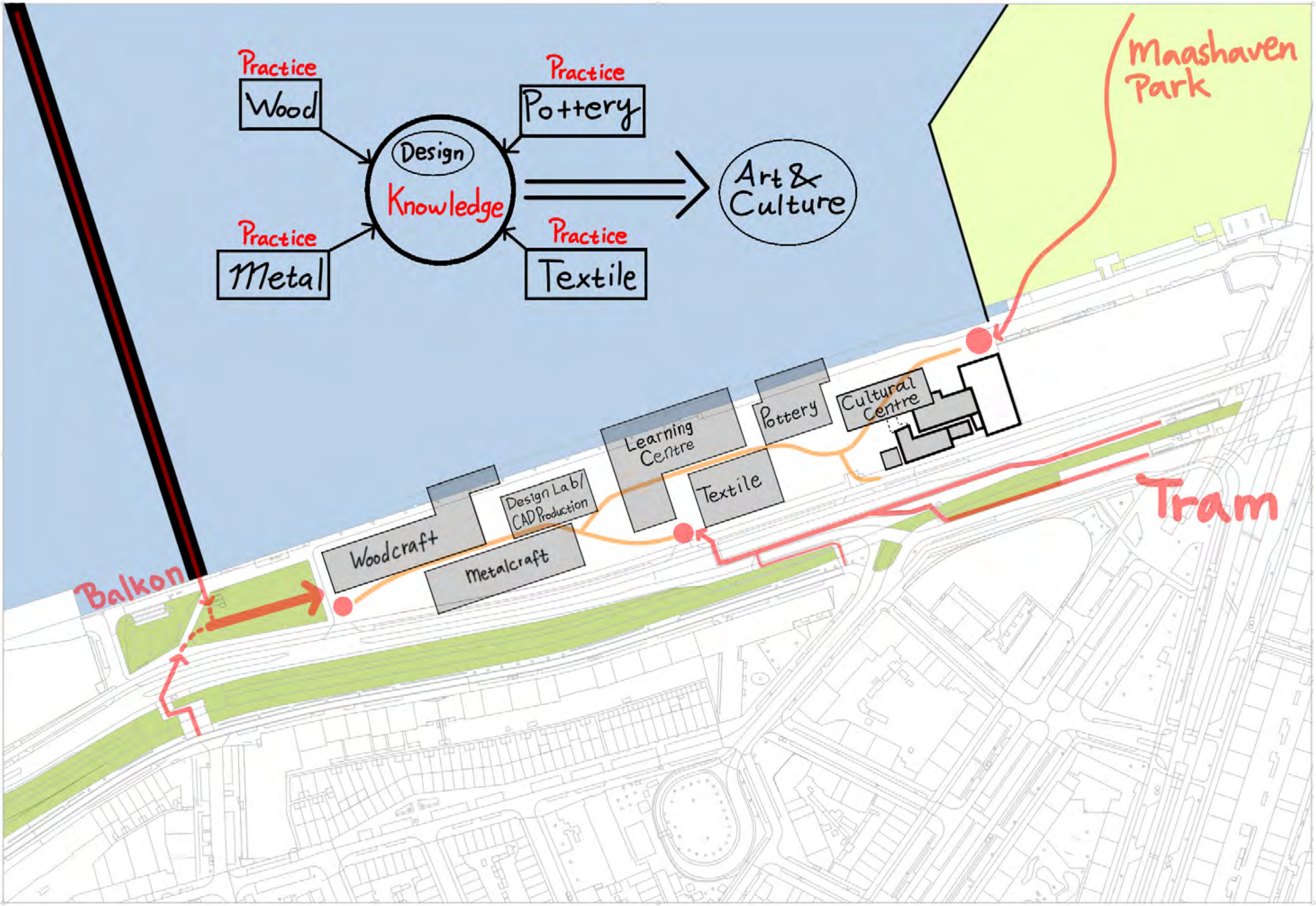


Adaptation & contextualisation of dwelling to public typology





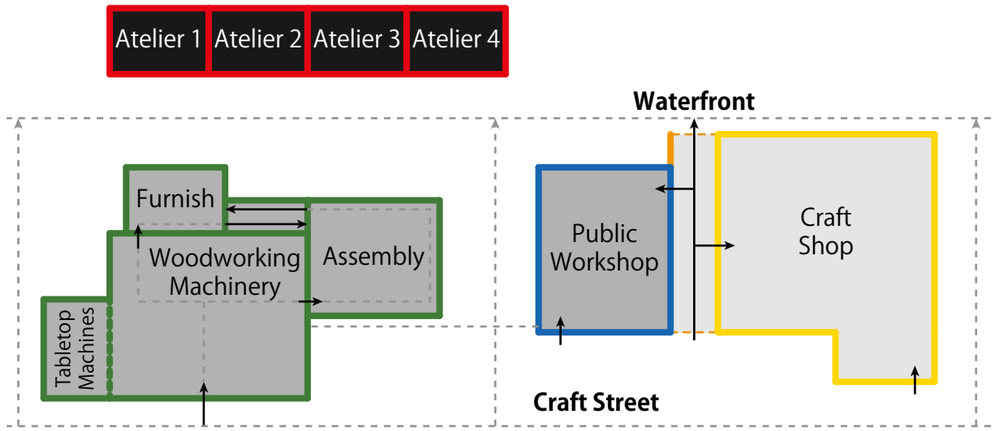
Museum Program Concept



Conceptual program arrangement & space flow study

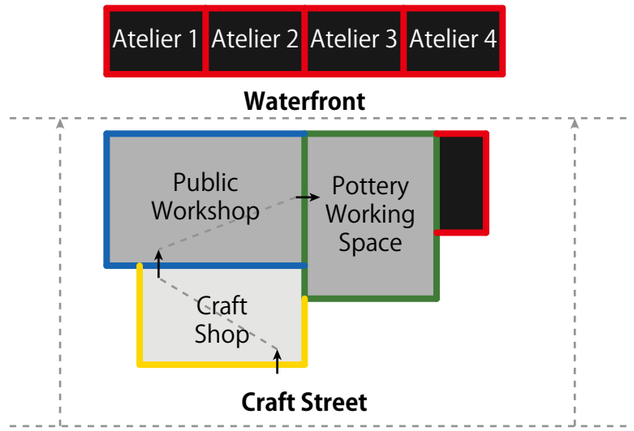
Wood

All-Detached



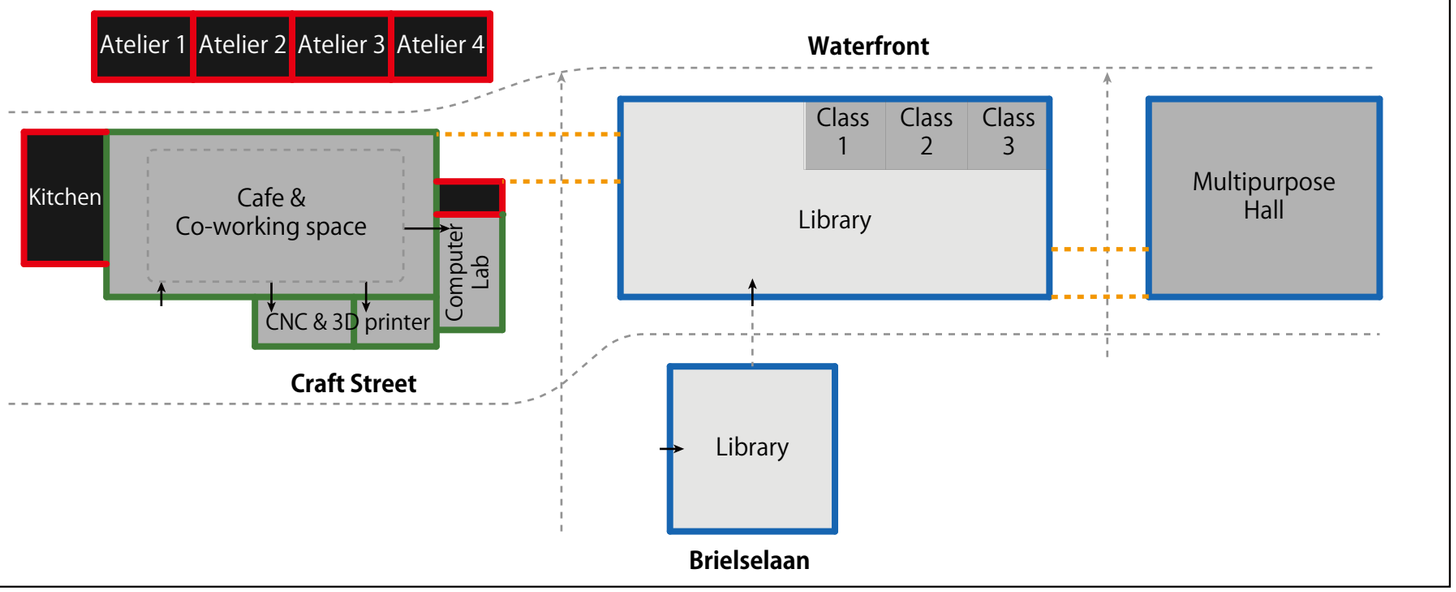
Pottery

Exhibit-Learn-Practice



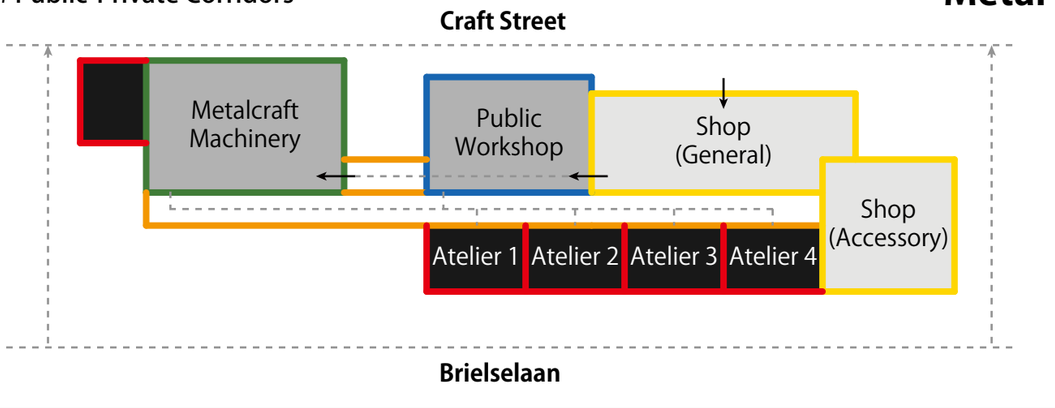
Design & Learning Knowledge

Detached; linked by outdoor corridors



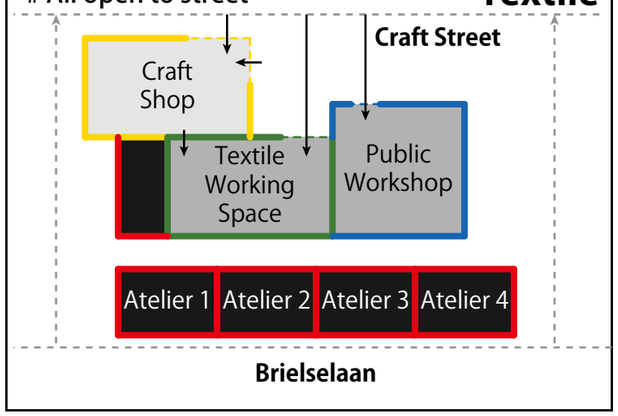
Metal

Public-Private Corridors



Textile

All open to street



Accessibility/Permeability

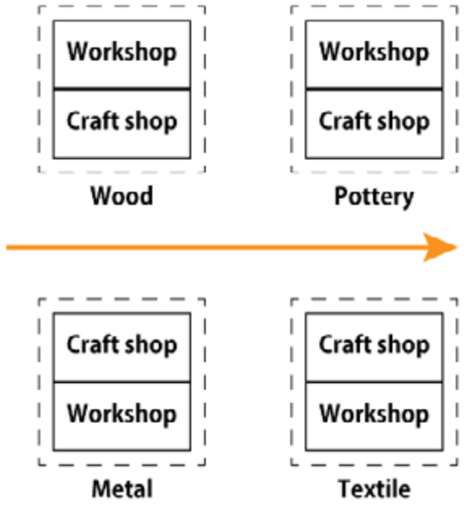
- Open space
- Public_Unconditional
- Public_Conditional
- Restricted

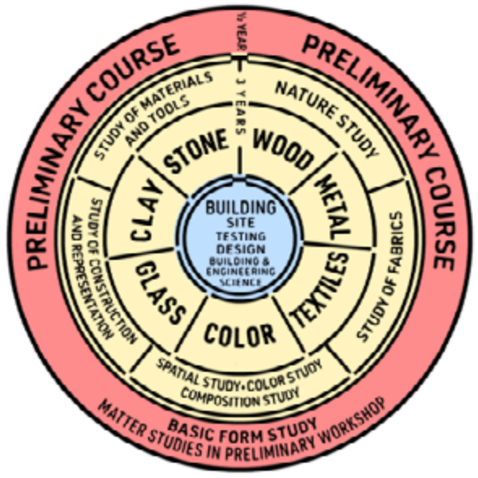
Program Category

- Staff only area
- Exhibition
- Learning
- Art (Craft) Practice & Collaboration

\# Variation of spatial arrangement

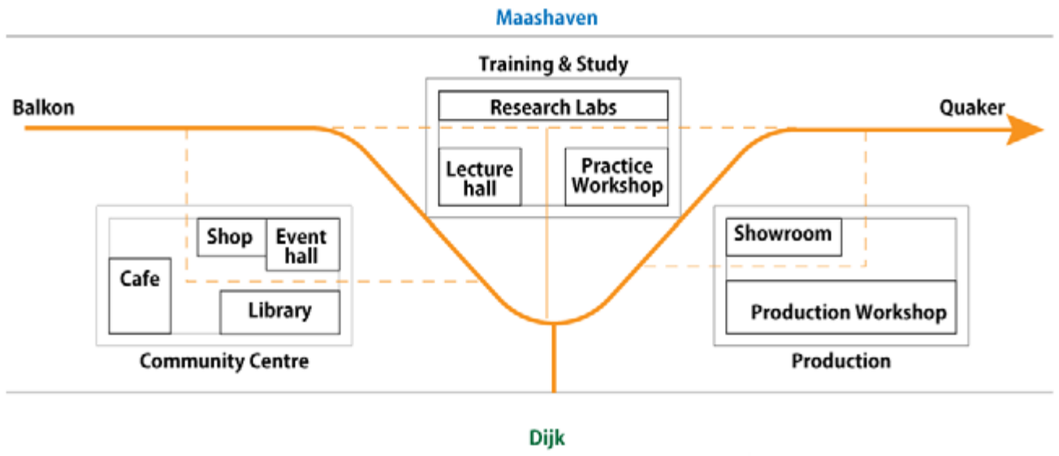
Rewiring the Traditional Shop-Atelier Typology





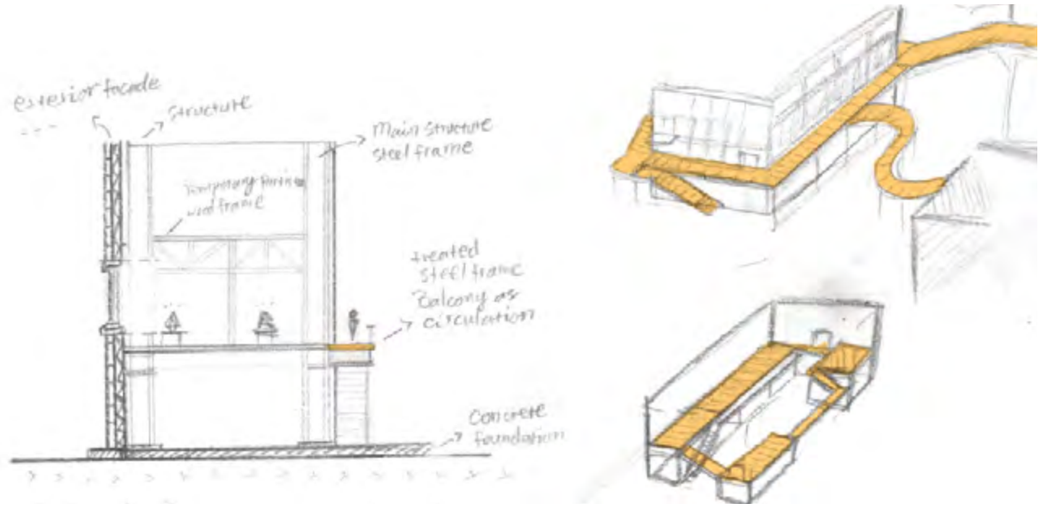
One of the feedbacks at P2 was to reconsider the spatial layout of the museum components, which took direct reference to traditional machiya layout.

By studying the program division of Bauhaus school, I largely approachedof the museum design with programmatic approach between P2-P3.



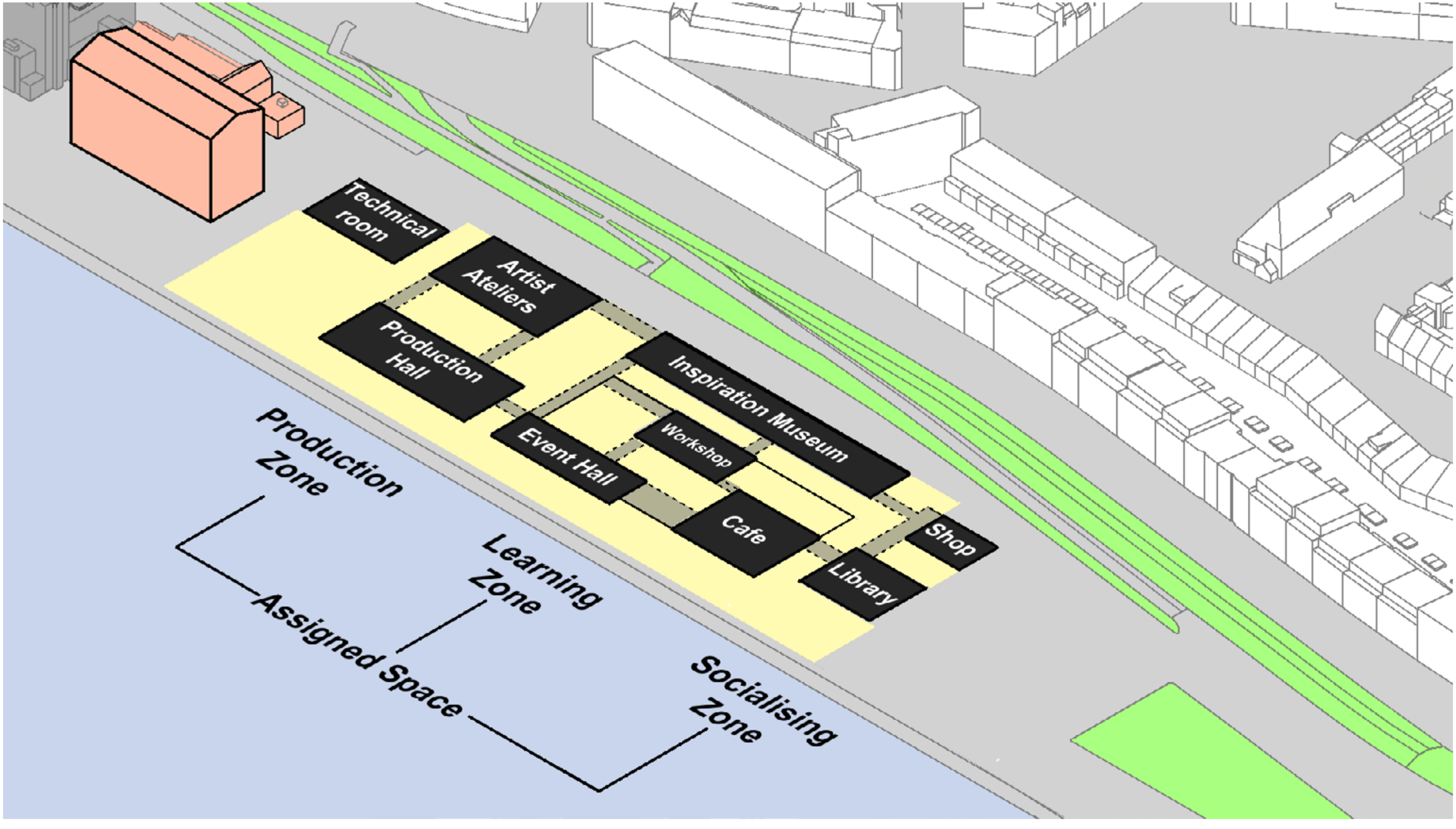
The study resulted in a new way of categorising the components based on the types of basic function rather than based on the type of craftsmanship.

In the new arrangement the museum clusters are categorised into 3 major zones: Socialising zone (community centre), Learning zone (training & study), and Professional production zone.

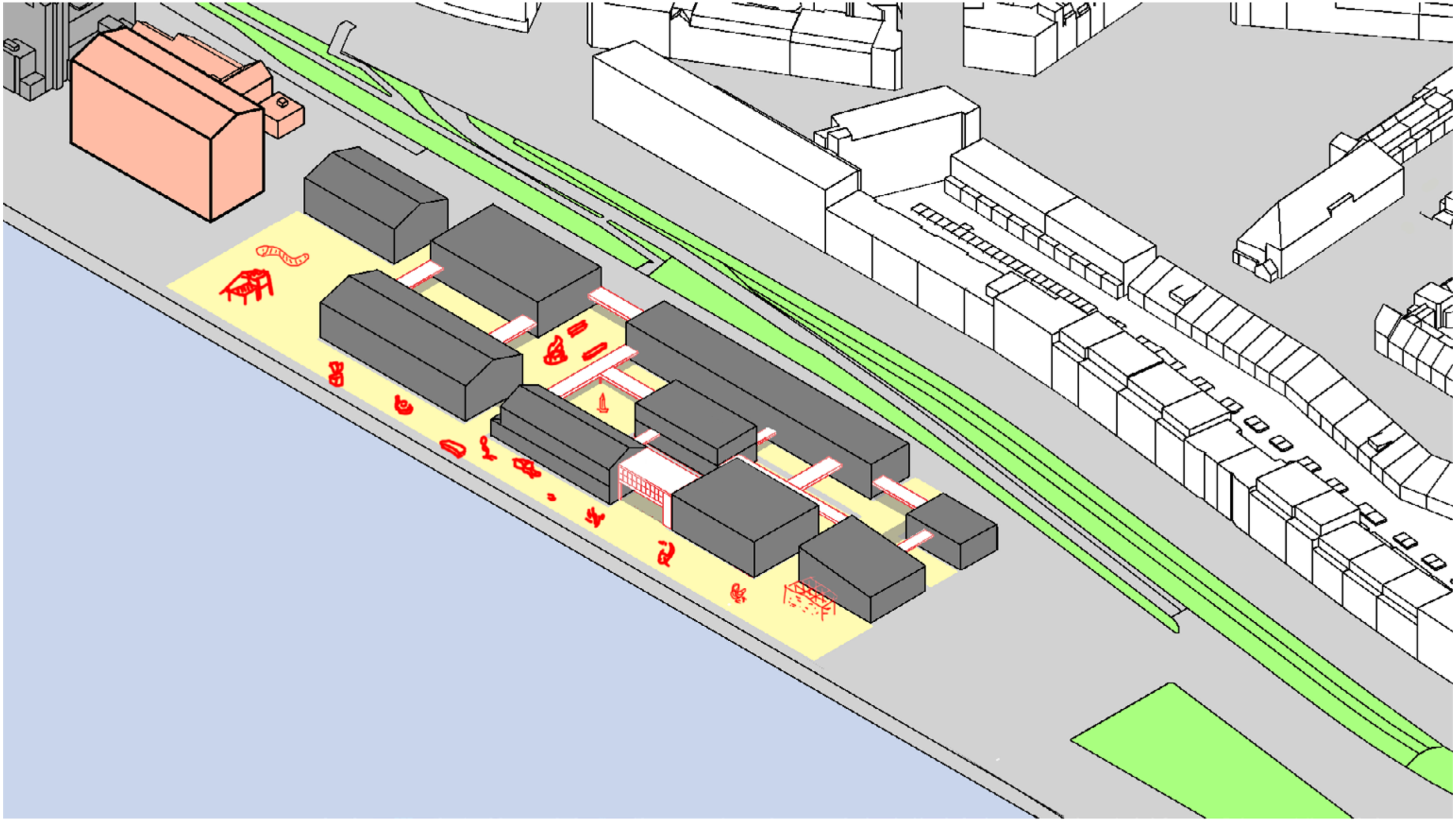


The development of the museum layout also took references to the steel structures in Emscher Park (Germany) and Rende Ten Drum Village (Taiwan) as conceptual inspirations for connecting the routing between clusters.

Reorganised concept of cluster categories (assigned spaces)



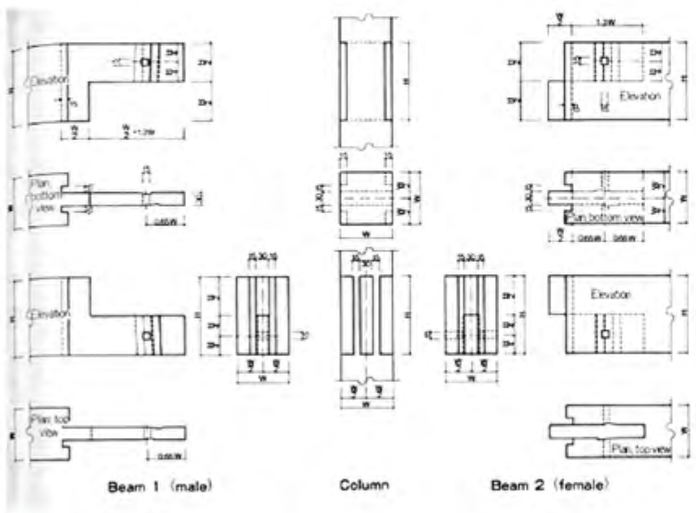
Reorganised concept of cluster categories (in-between spaces)

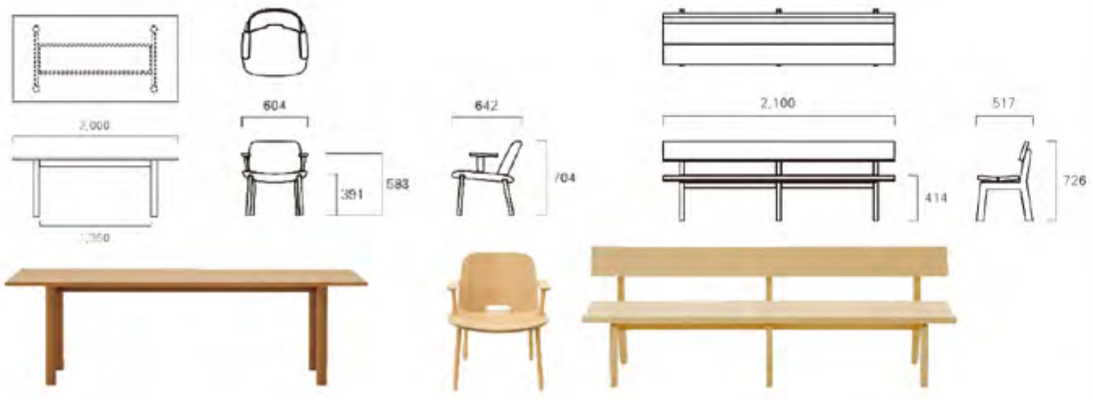


Multiplicity of craftsmanship types & scales

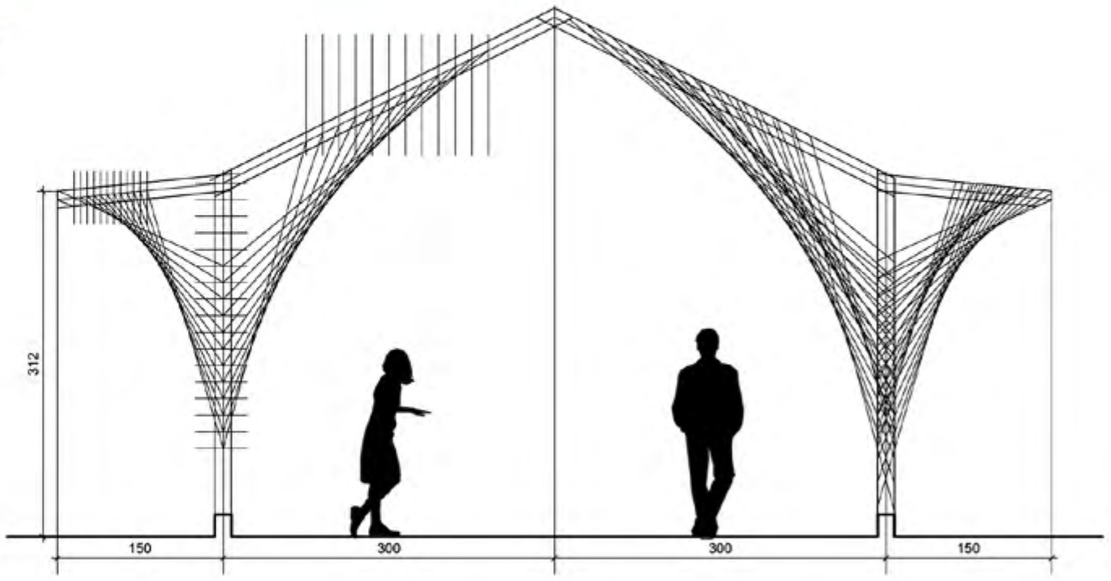
S

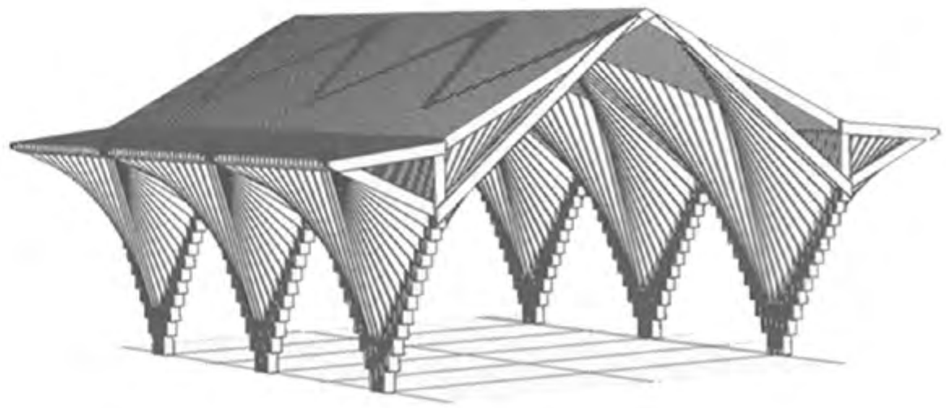
M





L





Multiplicity of modes of exhibition & interactivity

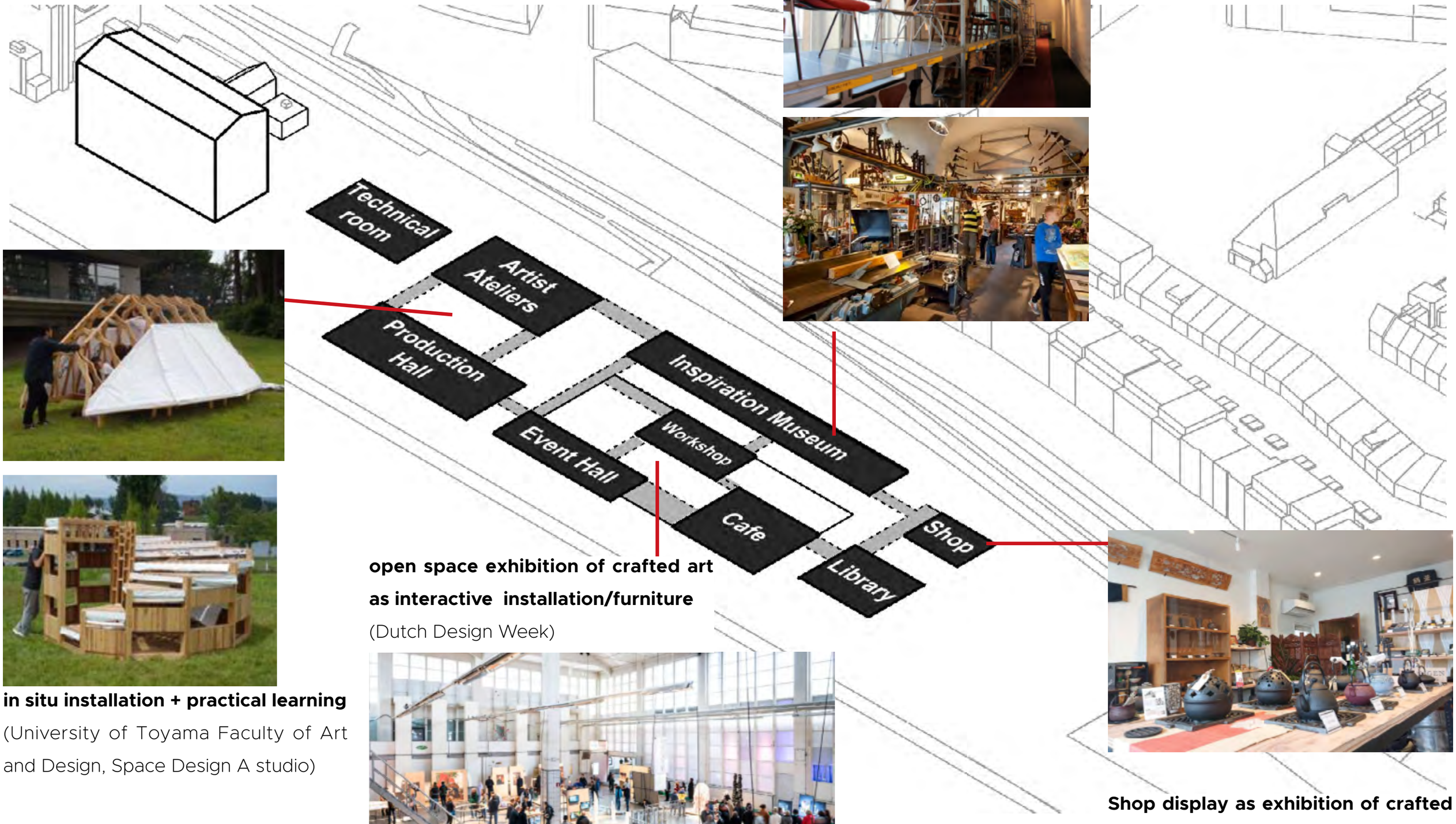
in situ installation + practical learning

(University of Toyama Faculty of Art and Design, Space Design A studio)

Crafts as educational material

(TU Delft chair collection)

(Gereedschapmuseum Mensert)



open space exhibition of crafted art as interactive installation/furniture

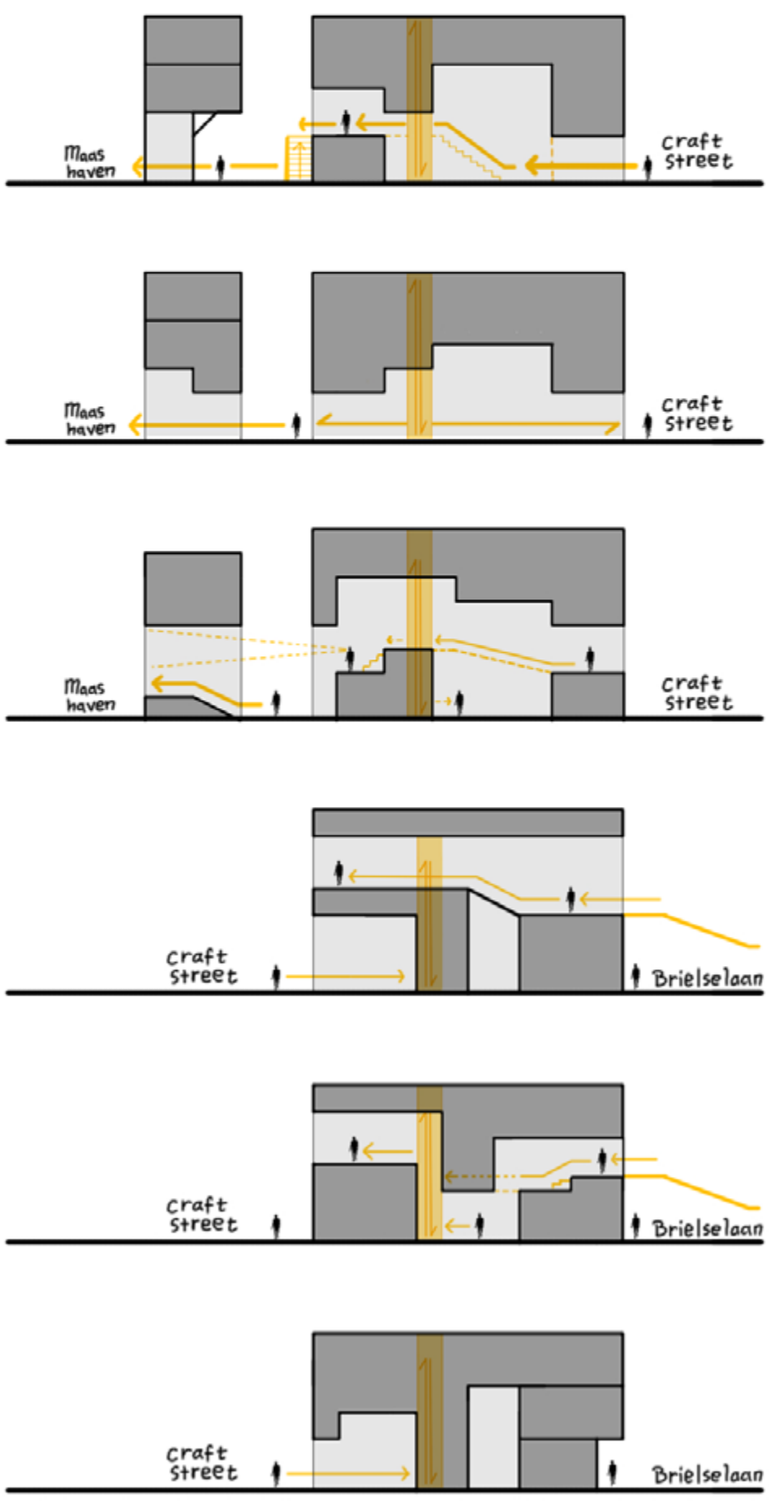
(Dutch Design Week)

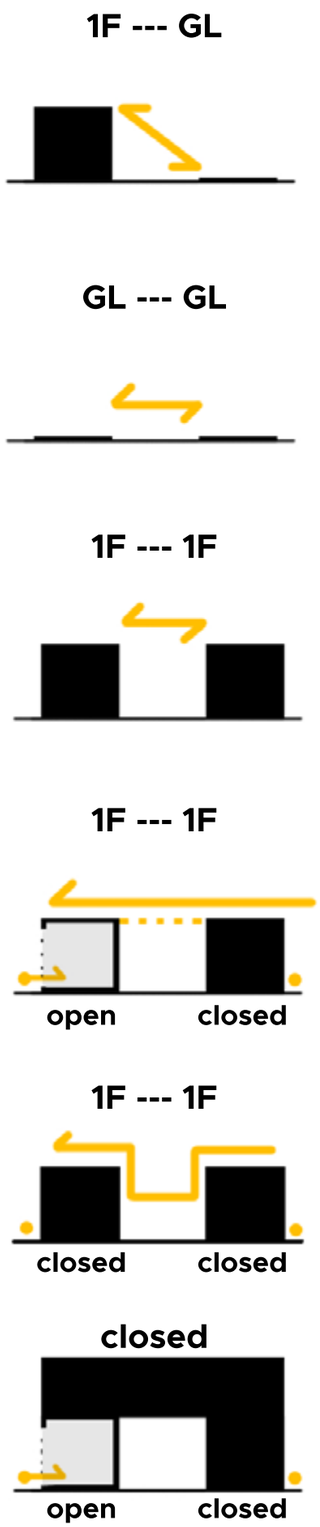
Shop display as exhibition of crafted arts used in daily life

(Chikiriya Craftswork Shop)

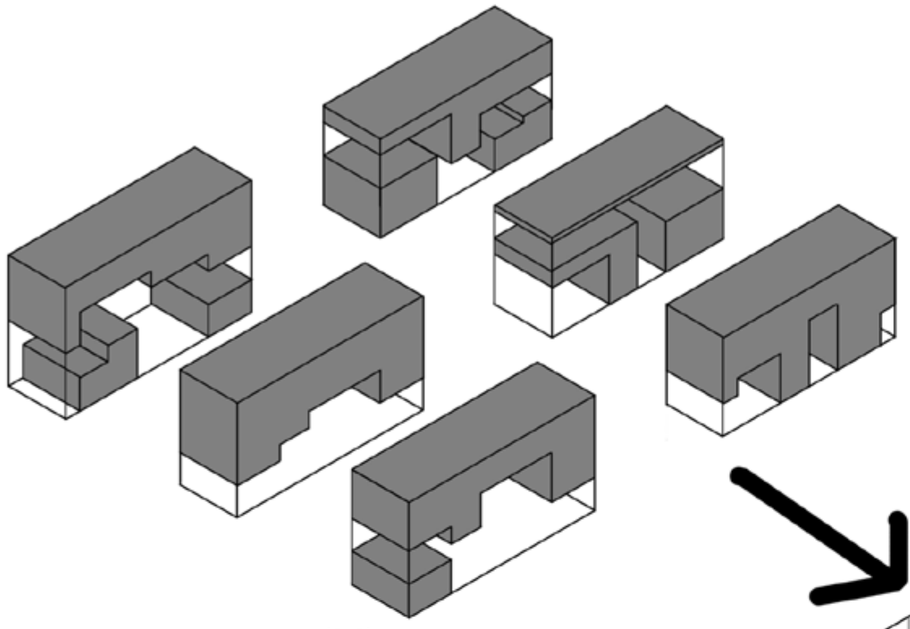
SPACE COMPOSITION

Abstract space study

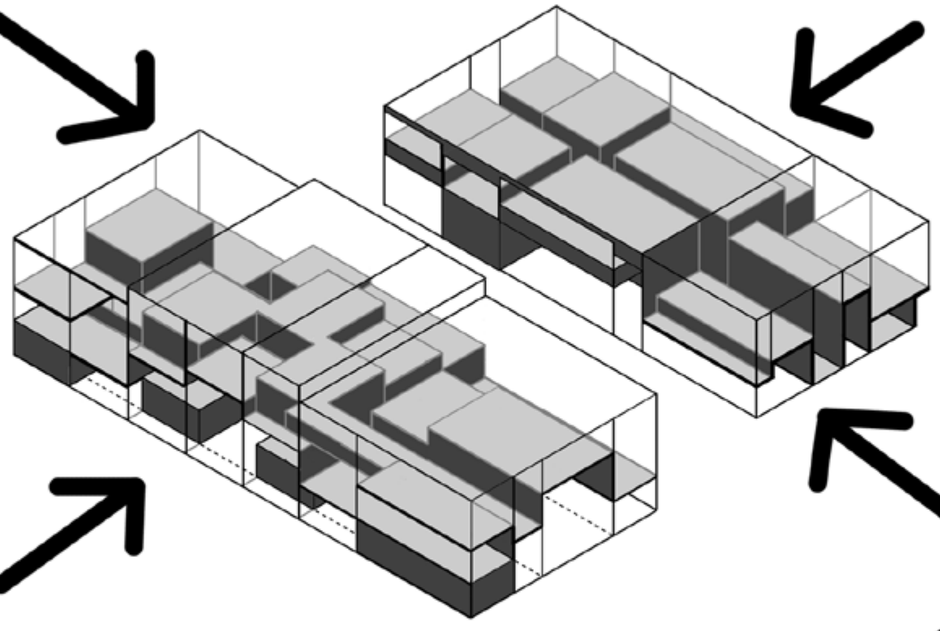




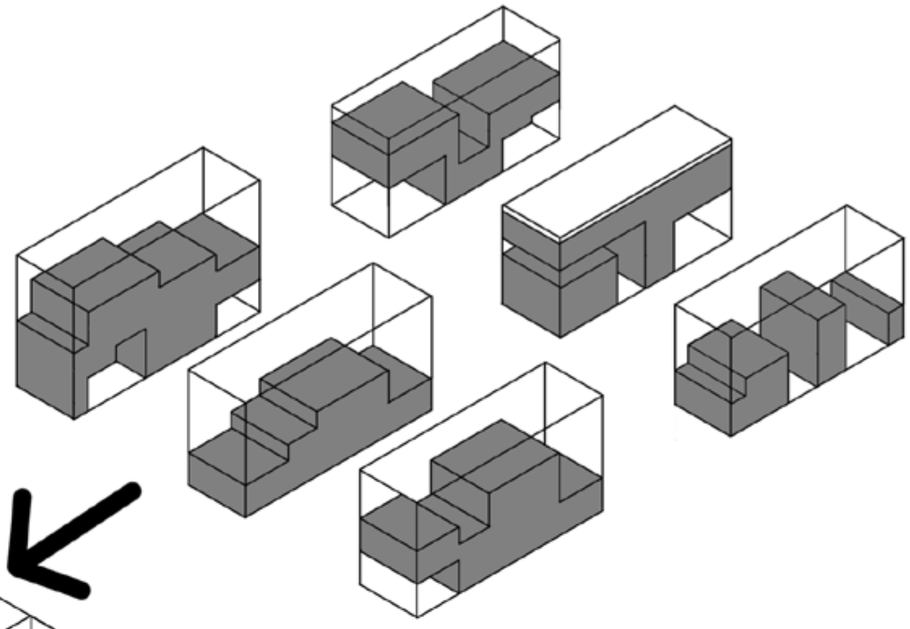
Abstract space study (P2)



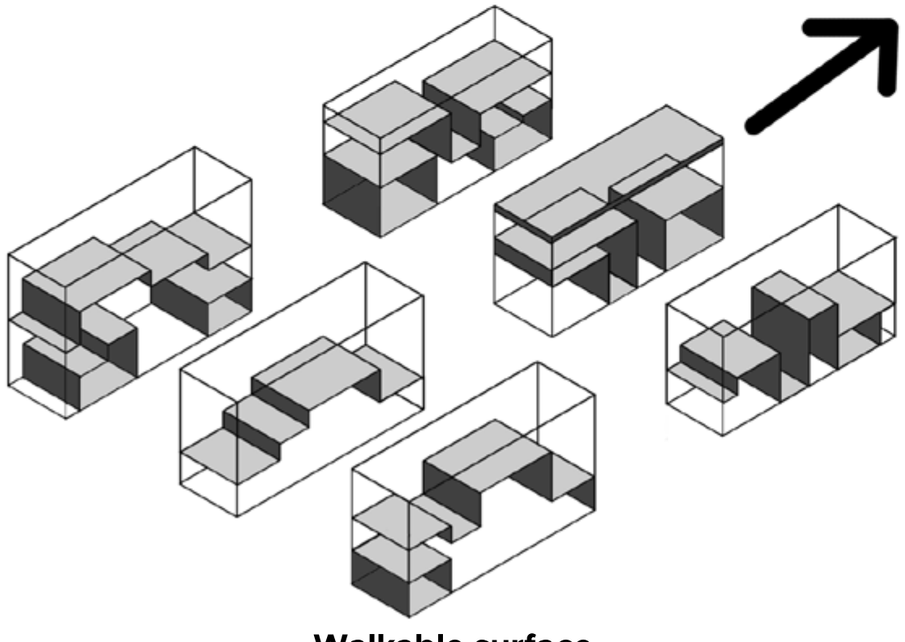
Building components
(default)



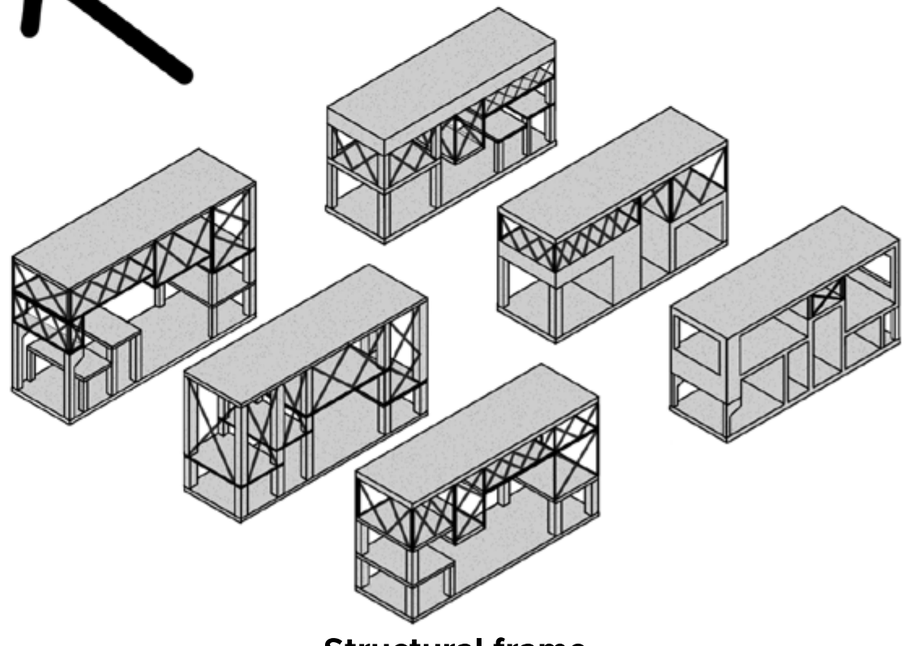
Building assembly



Building components
(inverted)

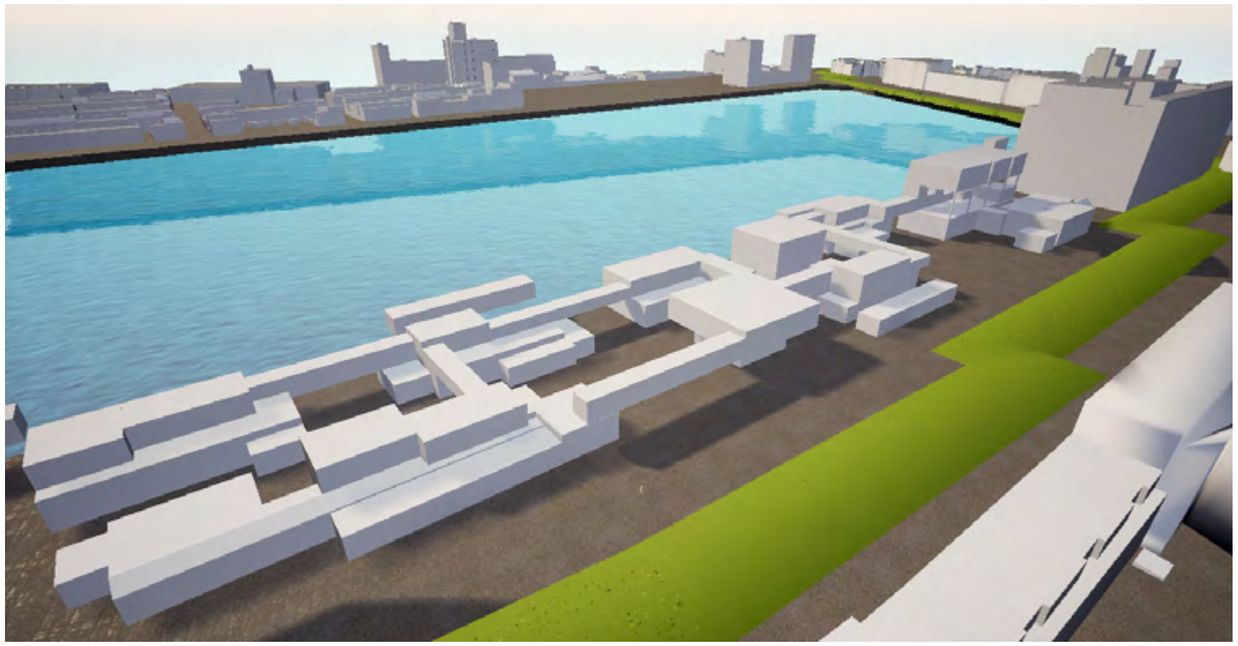


Walkable surface

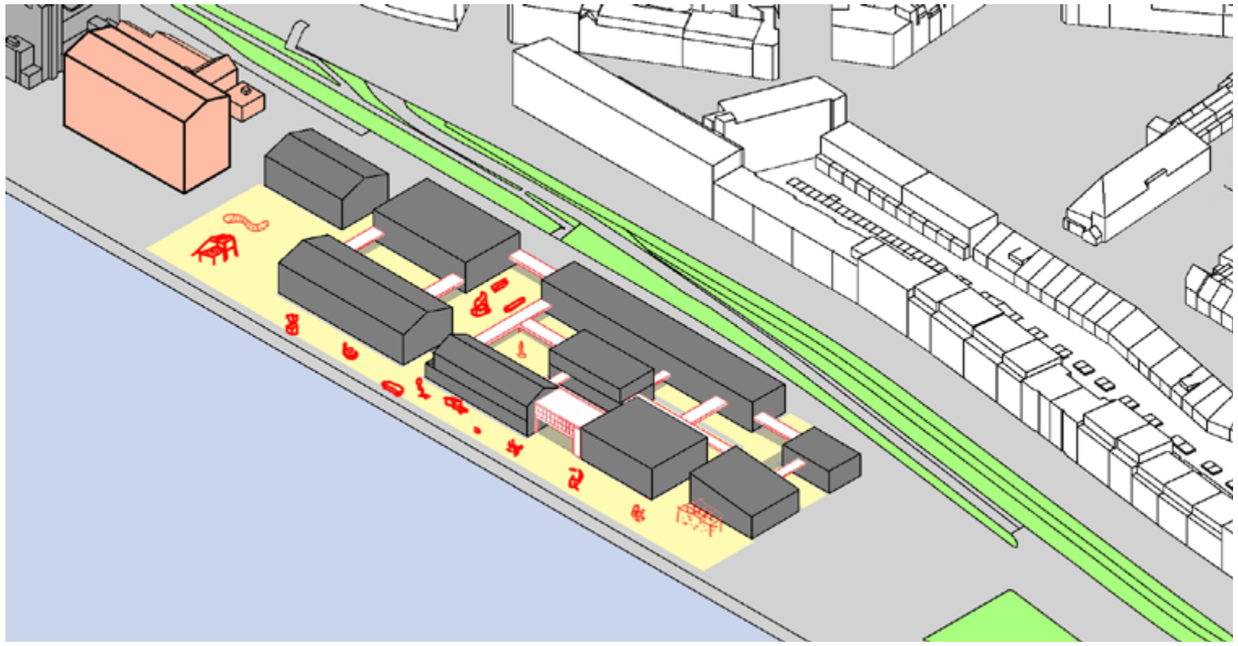


Structural frame

Space study progress (P2-P3)



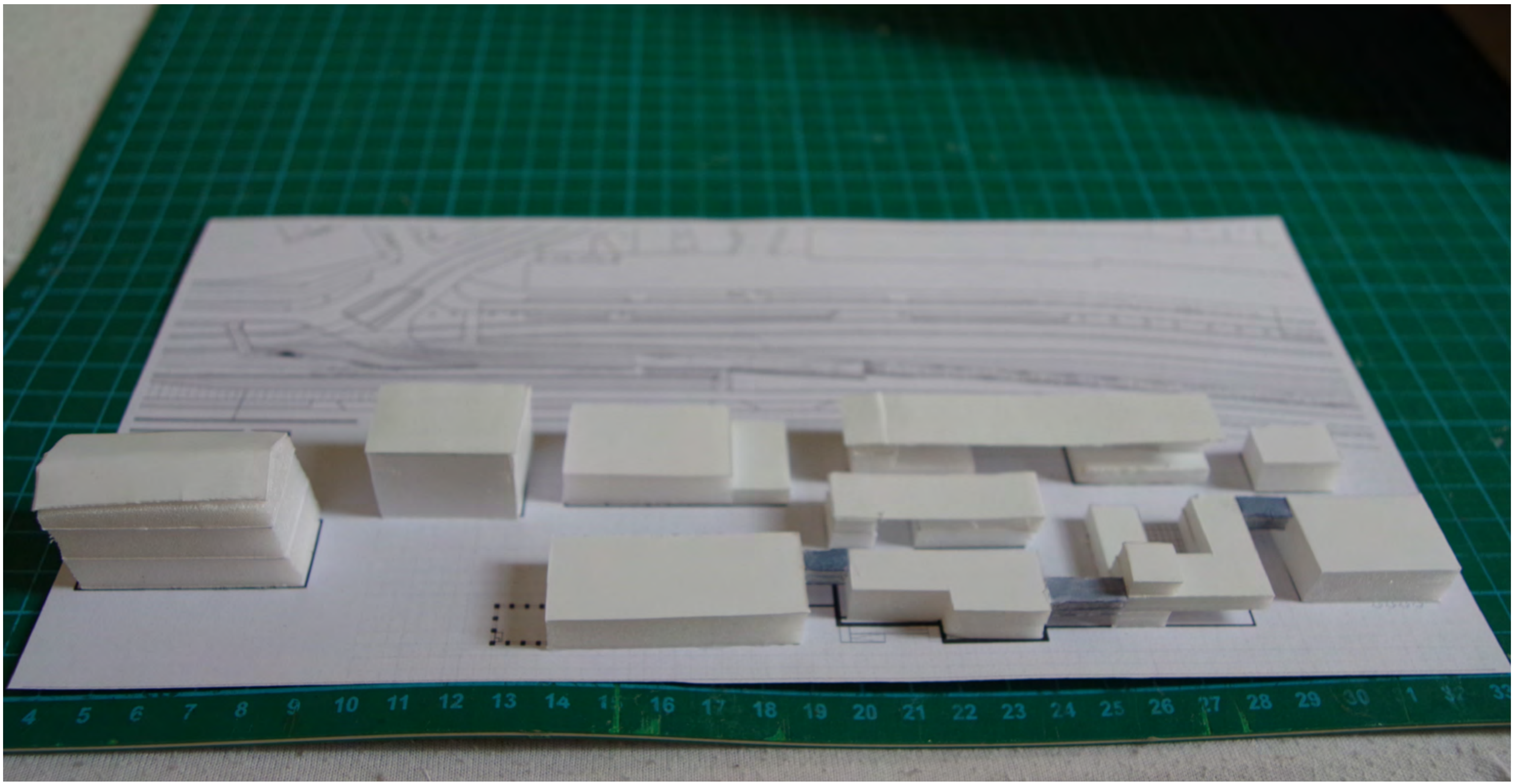
P2: Conceptual/abstract approach
Feedback: too complex; better to simplify the architectural language



P3: Programmatic/Functional approach
Feedback: too simple; losing the architecture part

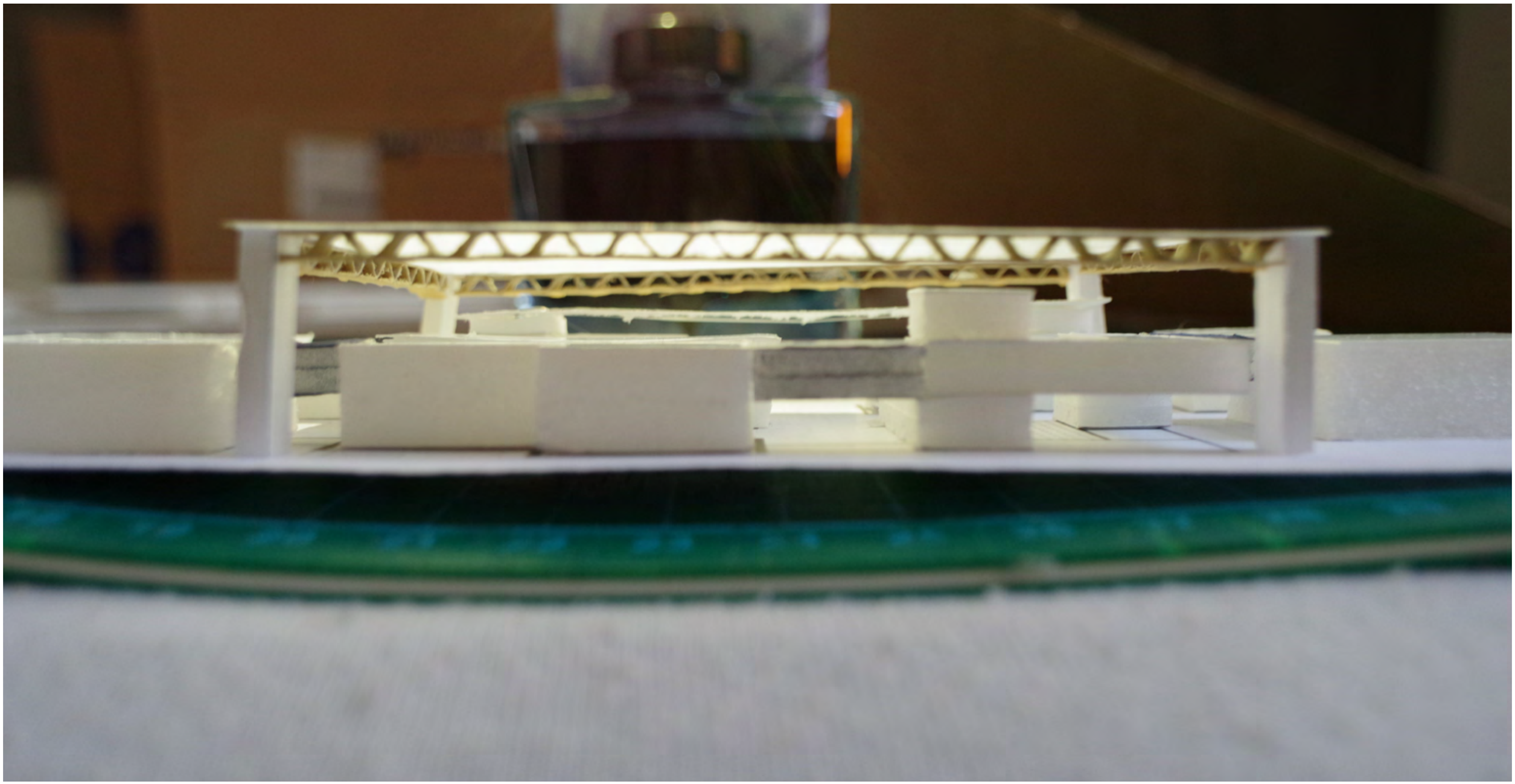
1:1000 Model study: Reintroduction of complexity with negative space

The model study is intended as a volume study for architectural expression of the space characteristics while maintaining the developed programmatic distribution. Variation and complexity of space is created by introducing voids (negative spaces) to the bounding box of the component



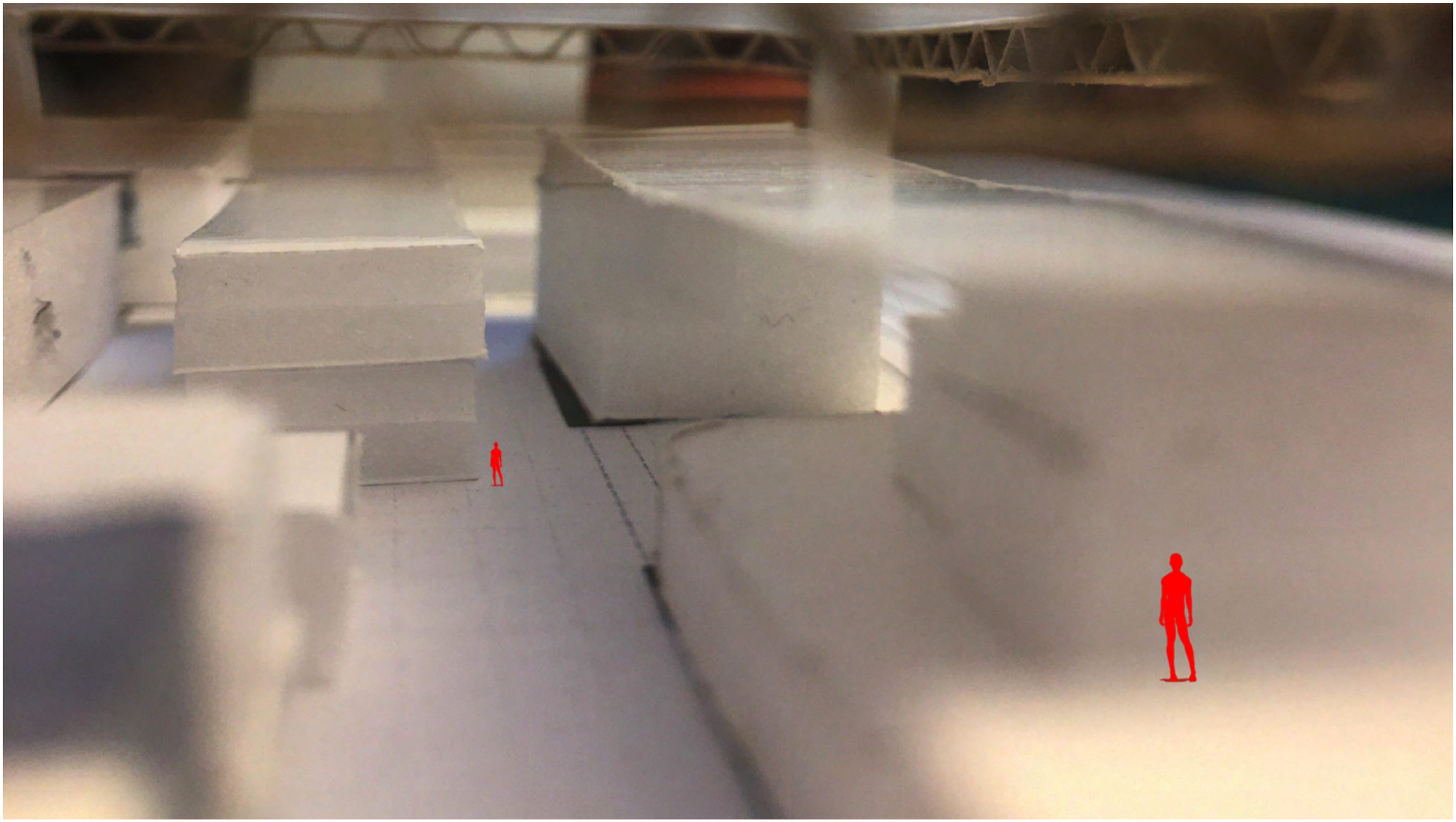
1:1000 Model study: Reintroduction of complexity with negative space

With these negative spaces introduced to the spatial composition, more natural light may diffuse around, thus offering mor even distribution daylighting to the in-between spaces altogether.



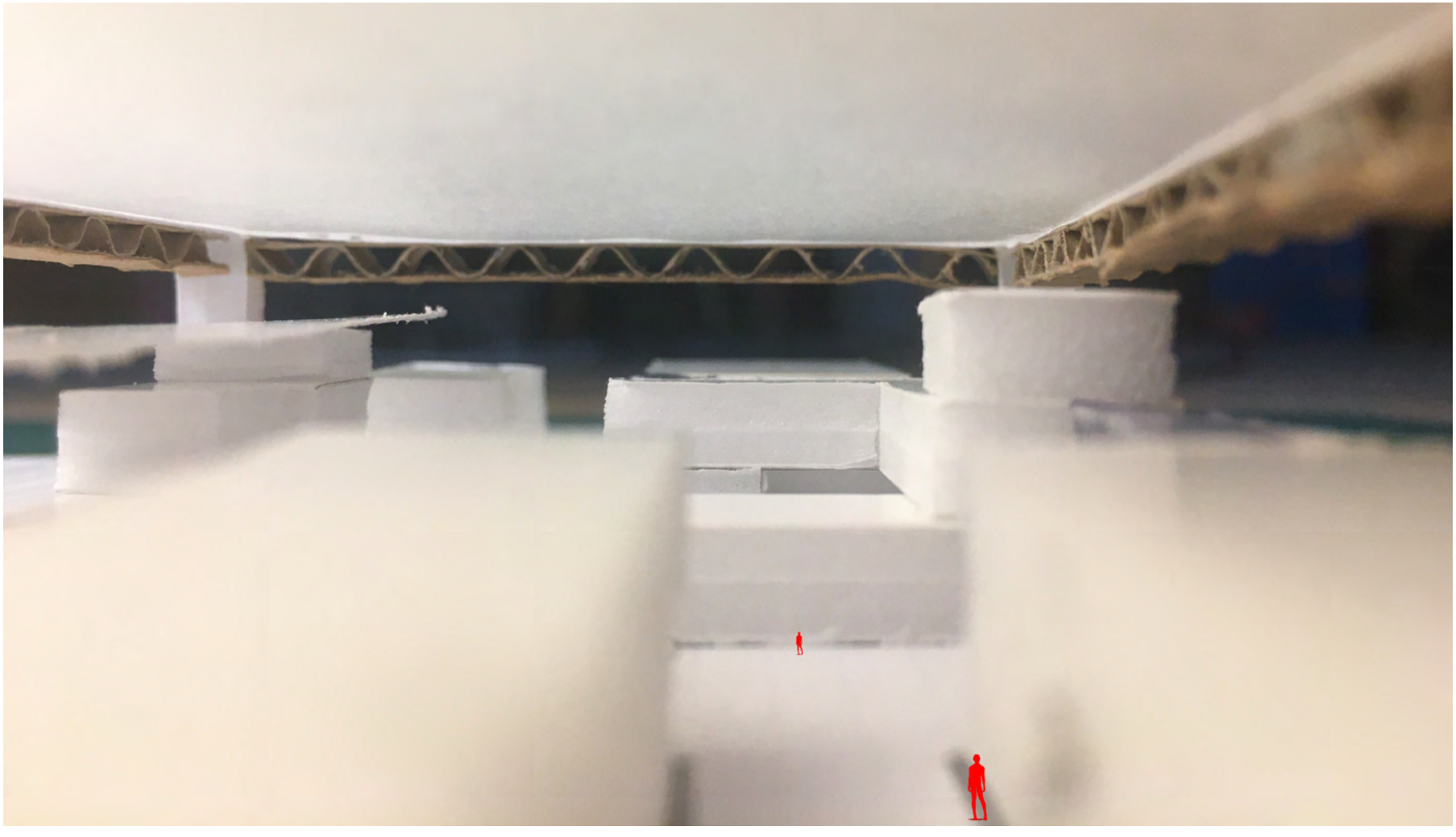
1:1000 Model study: Reintroduction of complexity with negative space

Simultaneously, varying the position of the negative spaces with respect to the neighbouring components also creates a non-uniform contour of lighter and darker shades on the surfaces. This adds complexity of depth to the visual spatial perception.



1:1000 Model study: Reintroduction of complexity with negative space

The negative space also contributes to emphasise the shape of the positive spaces of each cluster, thus enabling subtle, yet distinct transition between clusters as visitors walk along from one end to the other end.



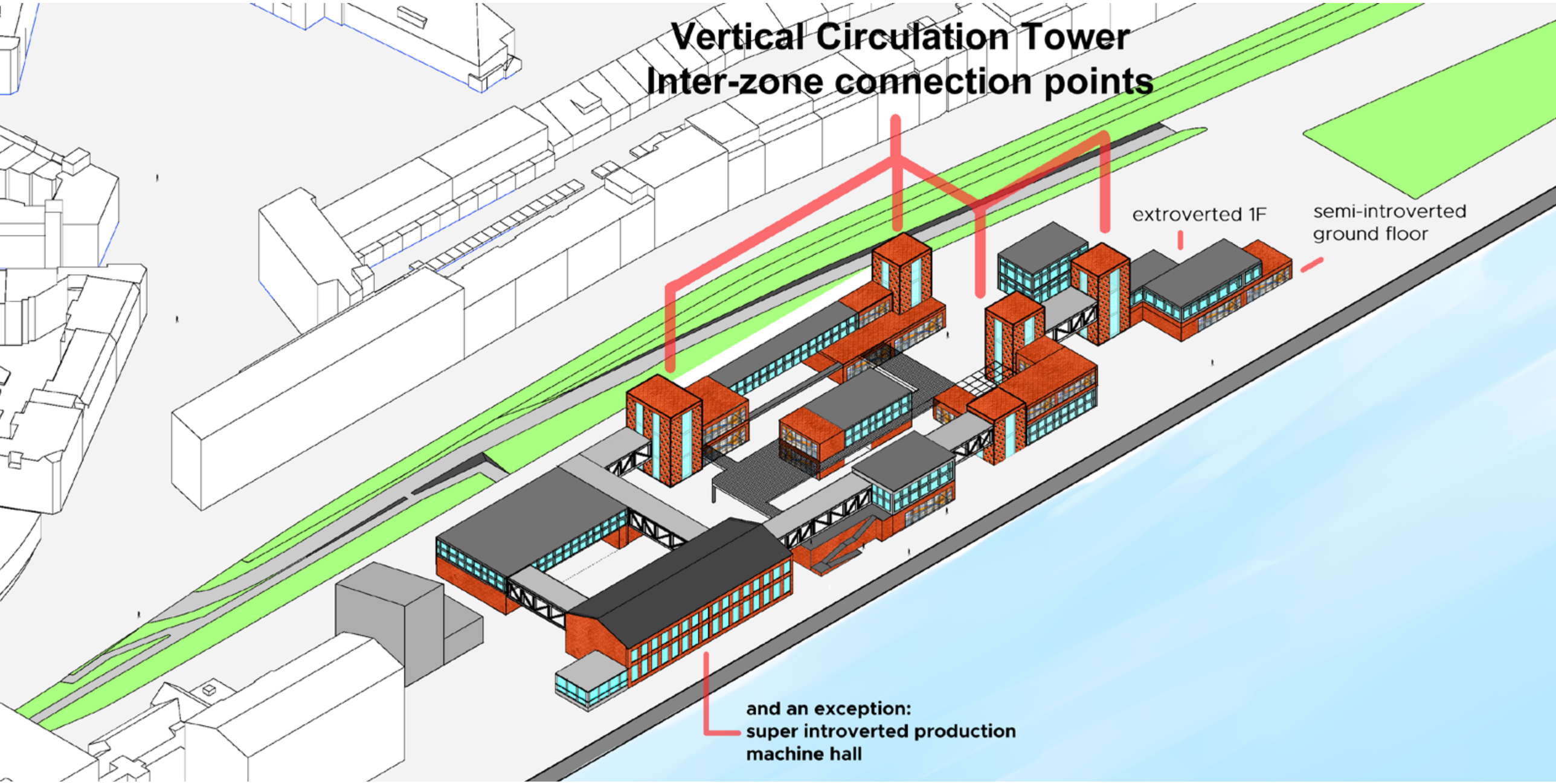
New Concept of Architectural Language

The study model inspires the development of a set of combinable elements to compose the building complex.

- Brick facade indicates spatial introvertion. More private zones will have higher density of brick element.

- Glass facade indicates spatial extrovertion. It informs public appeal to the interior space. At the same time, it allows transparency of ongoing activities in that space.

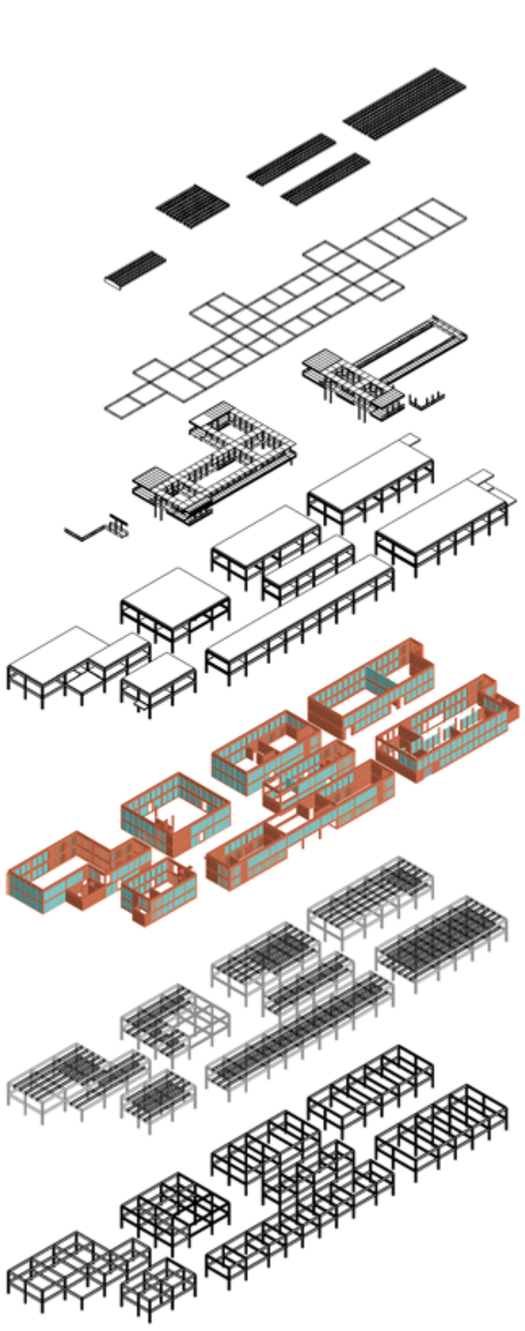
- Vertical circulation element and steel bridges as characteristic connection points between clusters, especially on 1F

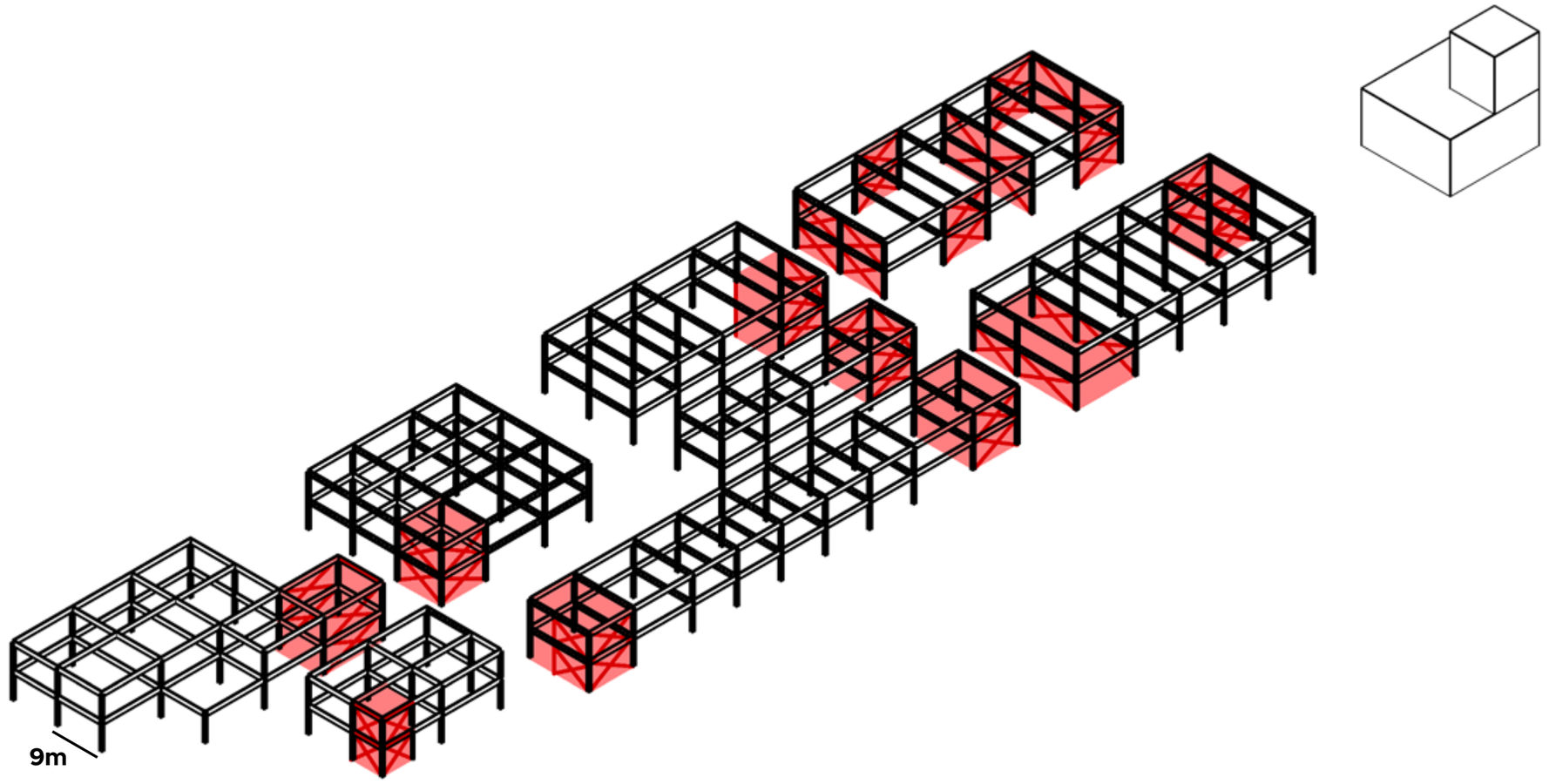


Space Composition: Structural Elements

In consideration to the required span of the space and consistency to the industrial characteristics that the museum complex is intended to create, the main construction element uses steel columns and beams.

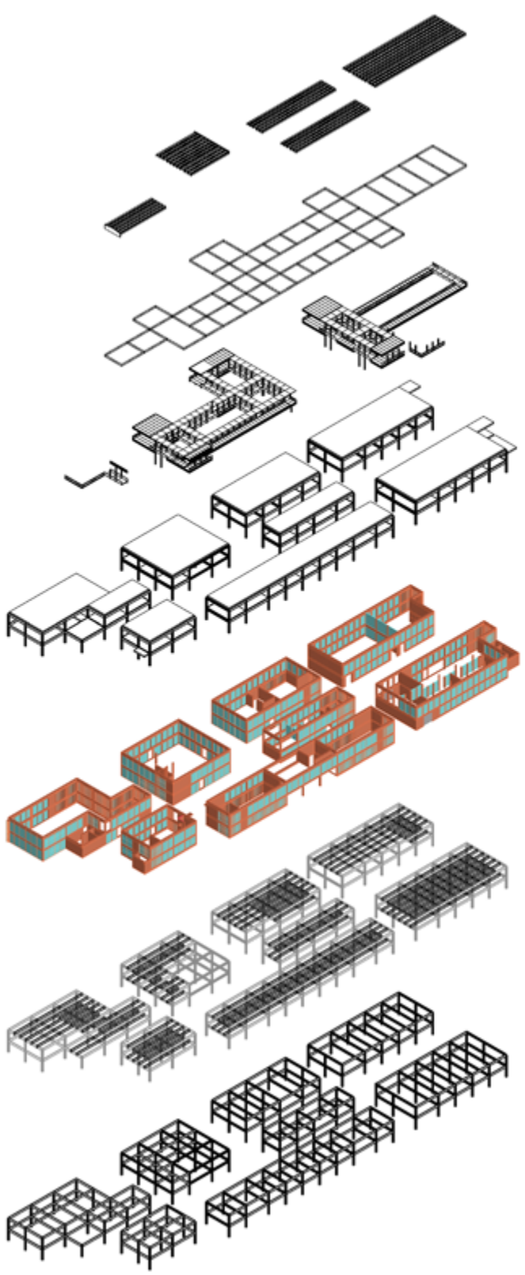
Stability elements (core) are placed at points where the vertical circulation elements are located.

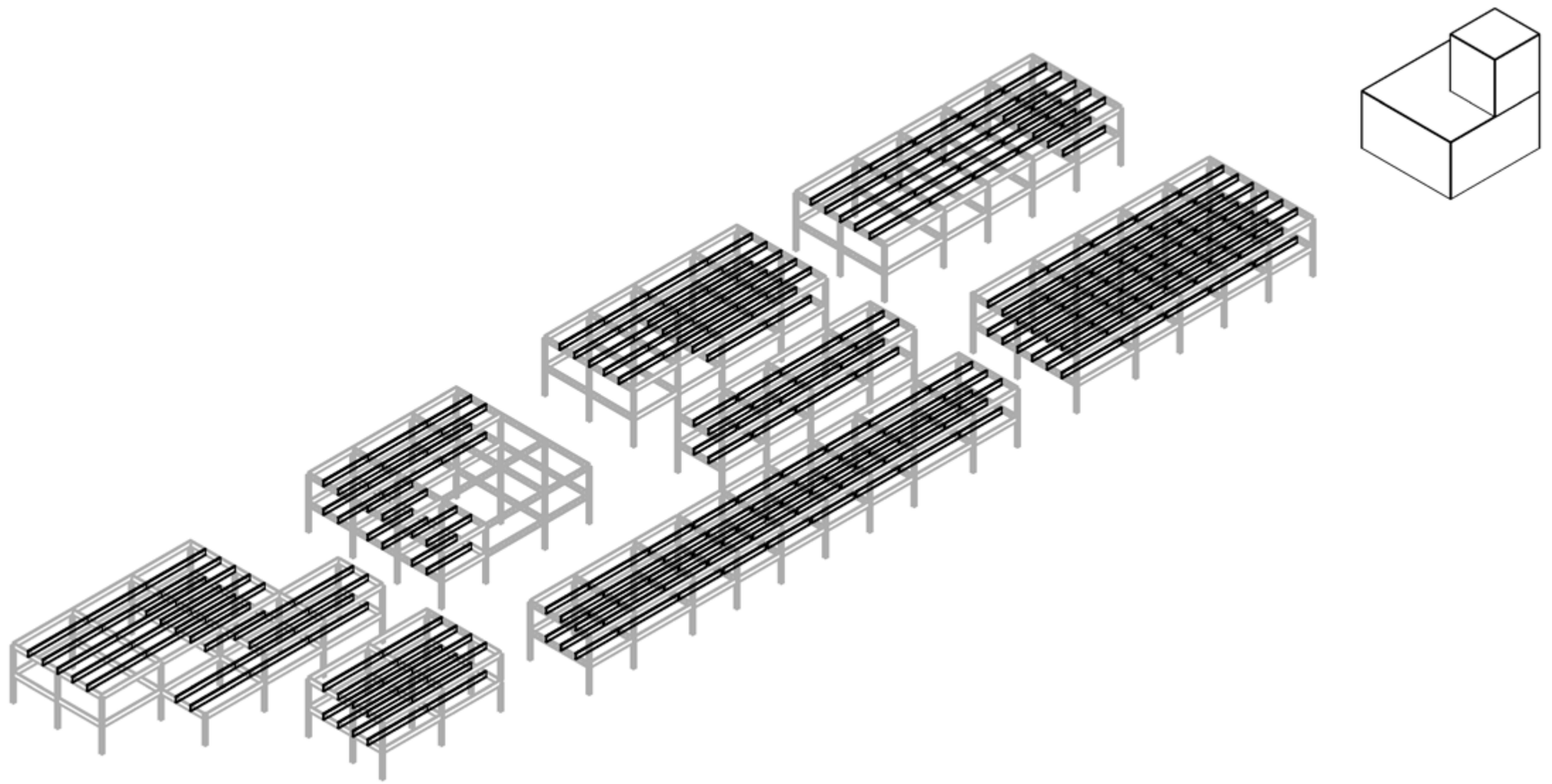




Space Composition: Slab span

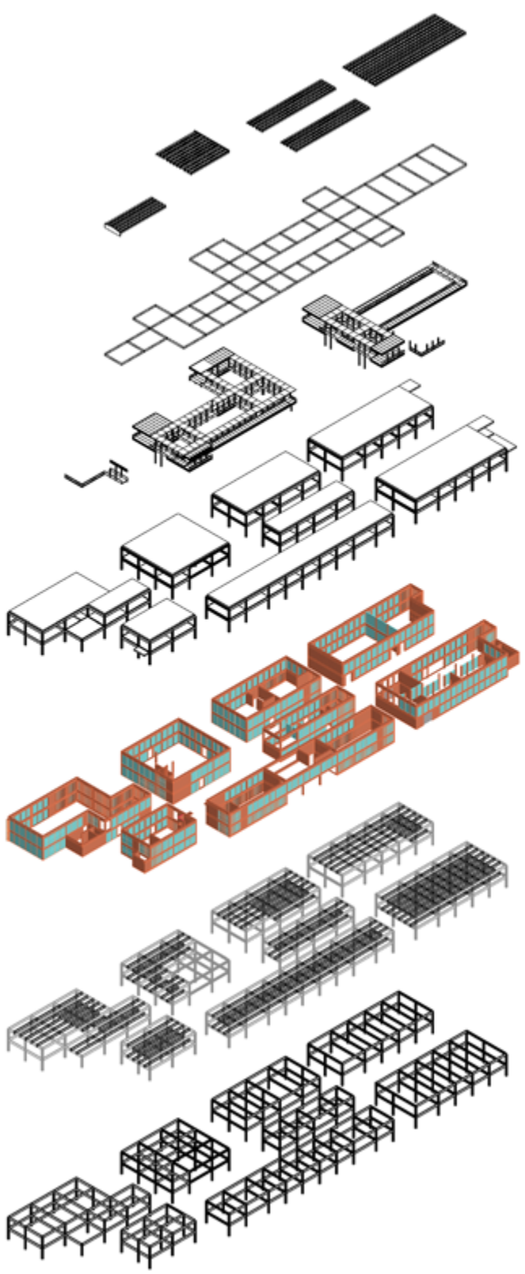
Floor/roof spans longitudinally, following the direction of the main direction axis.

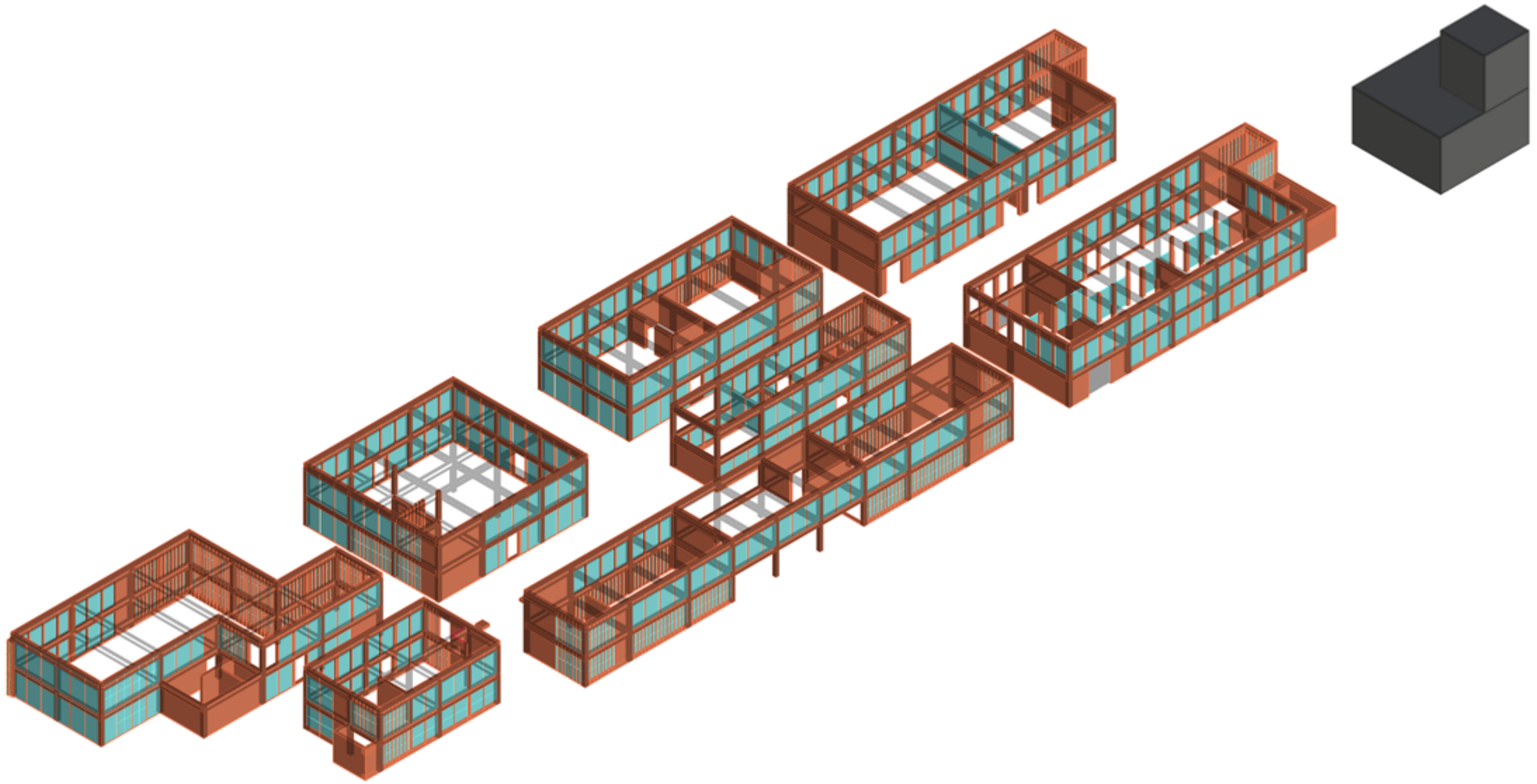




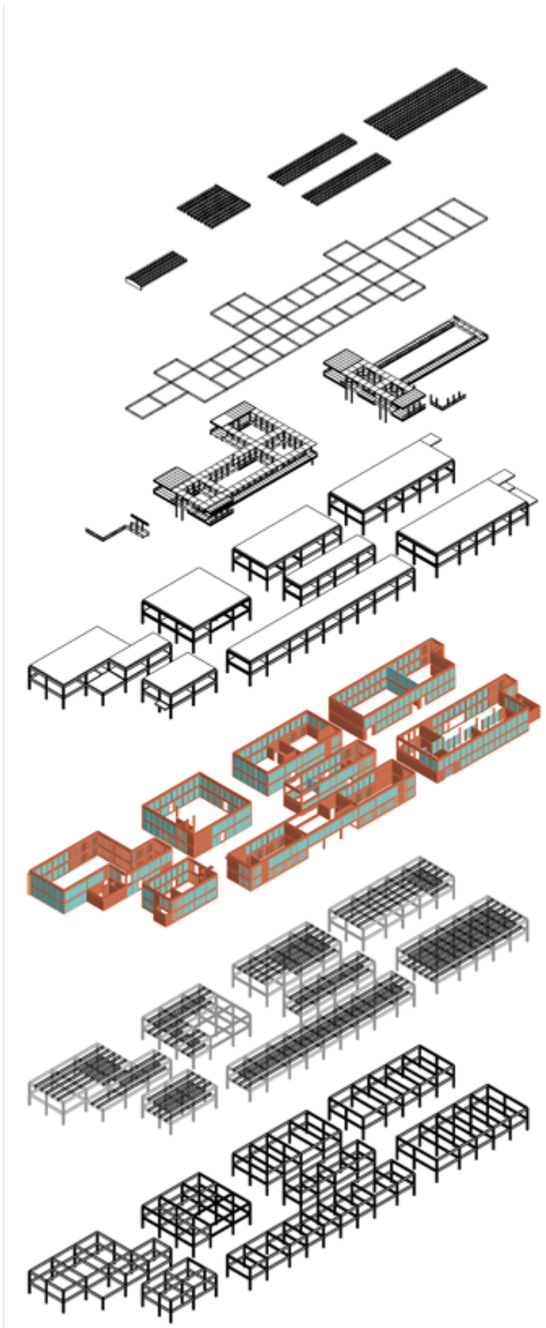
Space Composition: Building Envelope

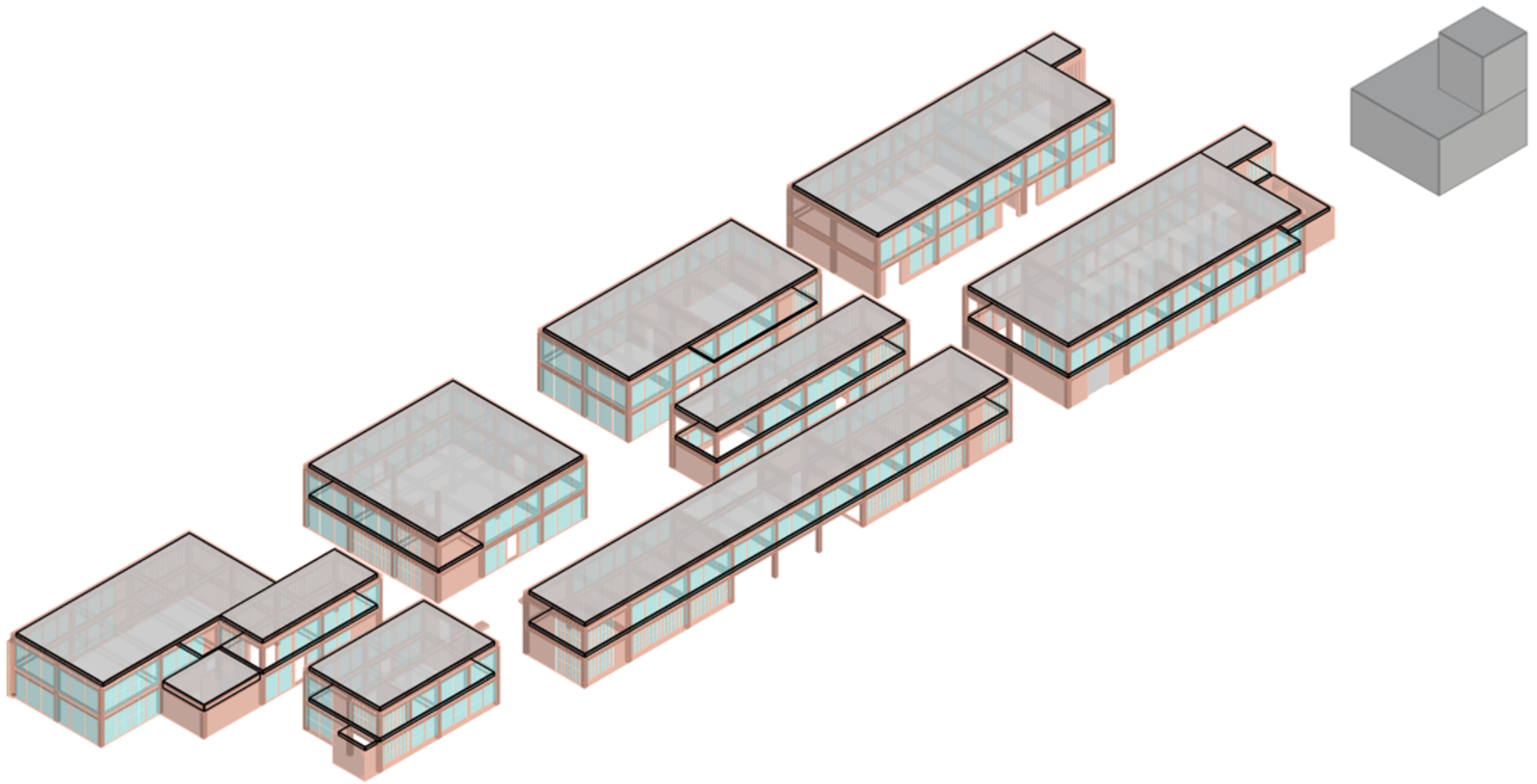
Using steel frame as the structural element allows for the building envelope to be non-structural, thus adaptable to potential future changes/renovation





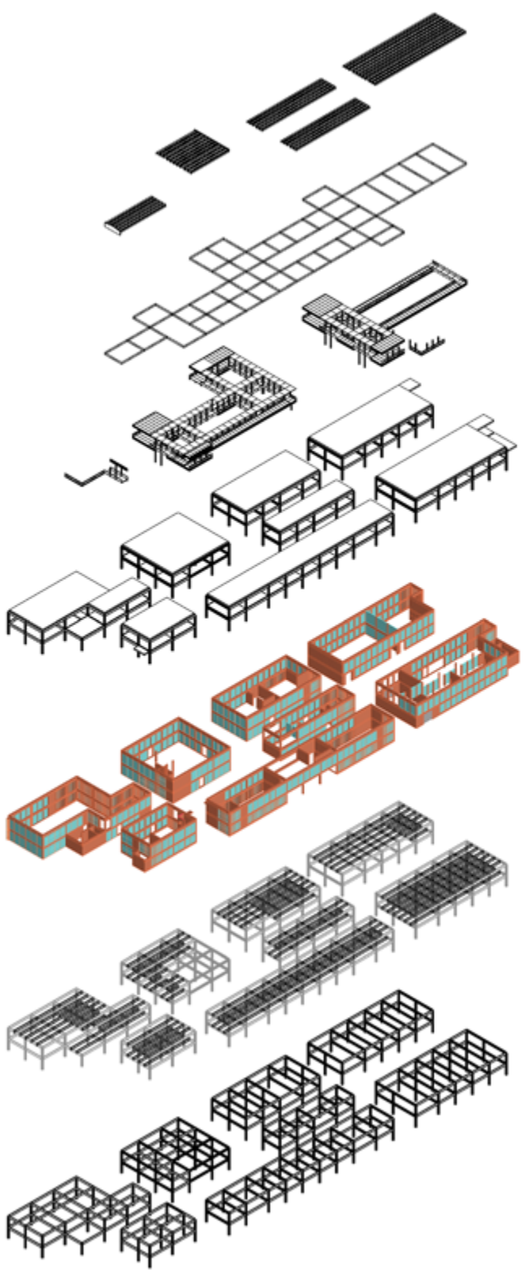
Space Composition: Floor & Roof Slabs

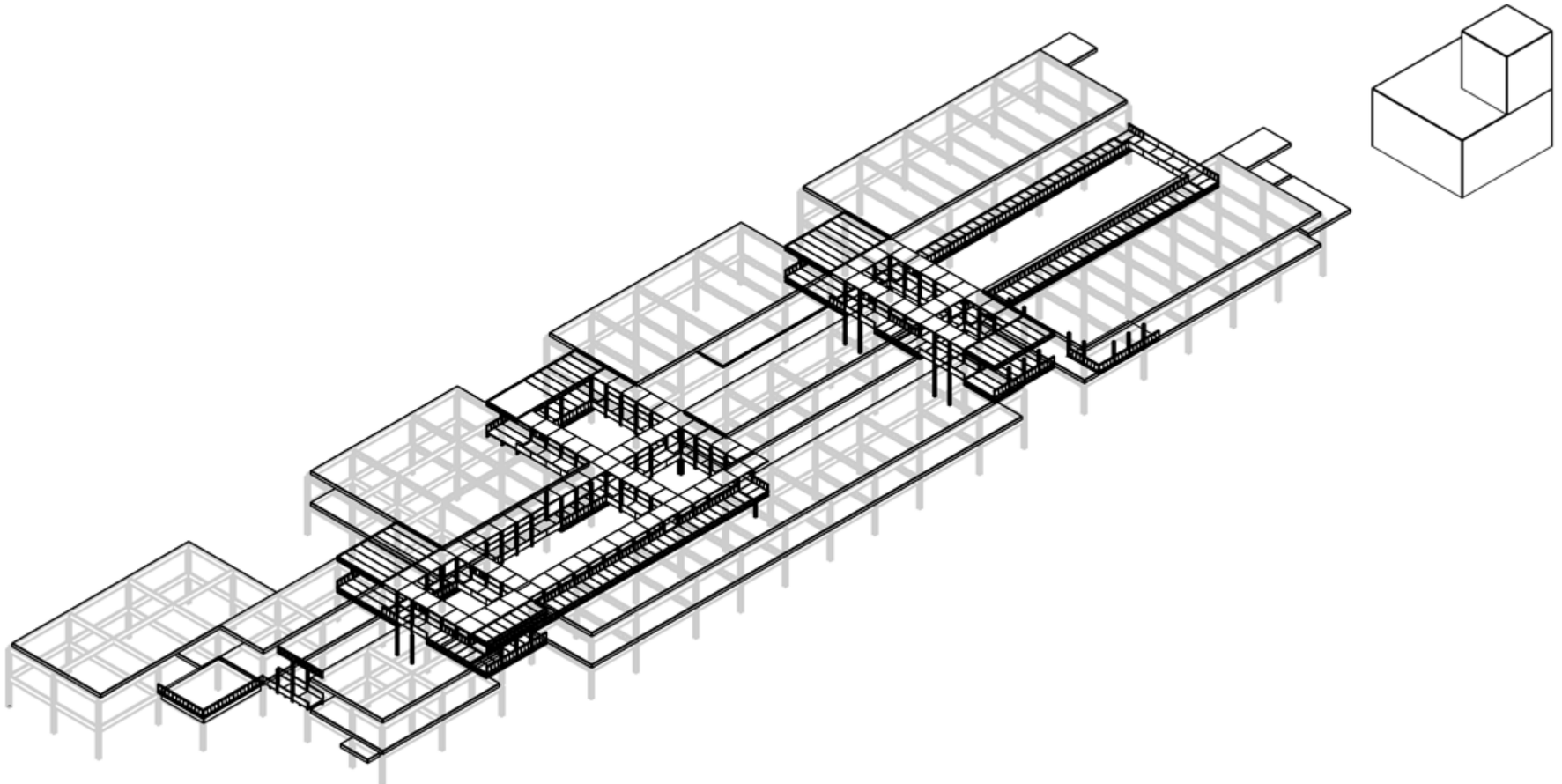




Space Composition: Steel-frame Connection Bridge

Connection bridges become the main mode of circulation on 1F, closing the loop of the empty spaces between the clusters.

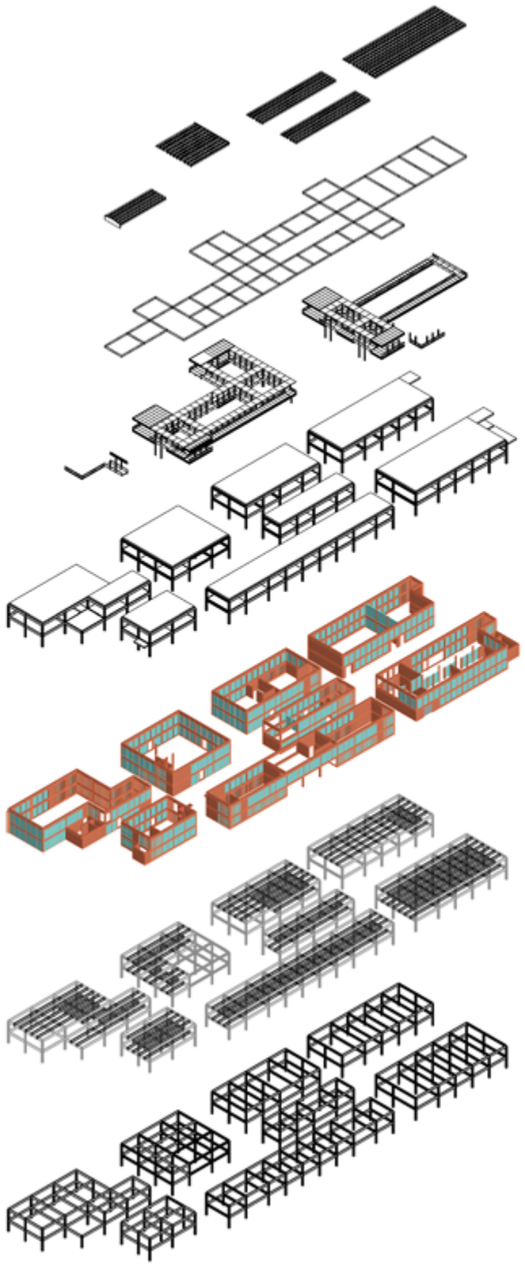


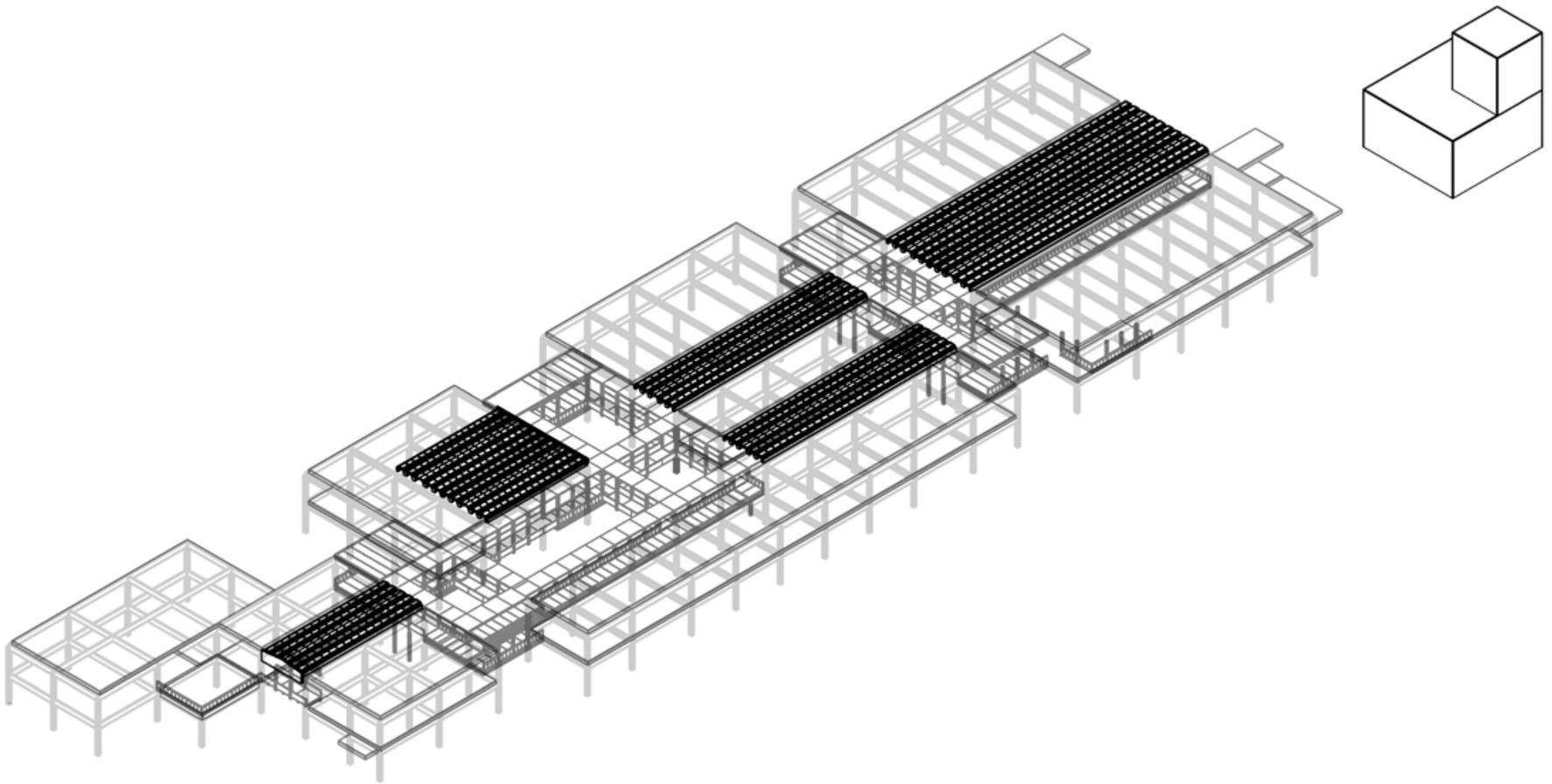


Space Composition: Atrium Rooflight

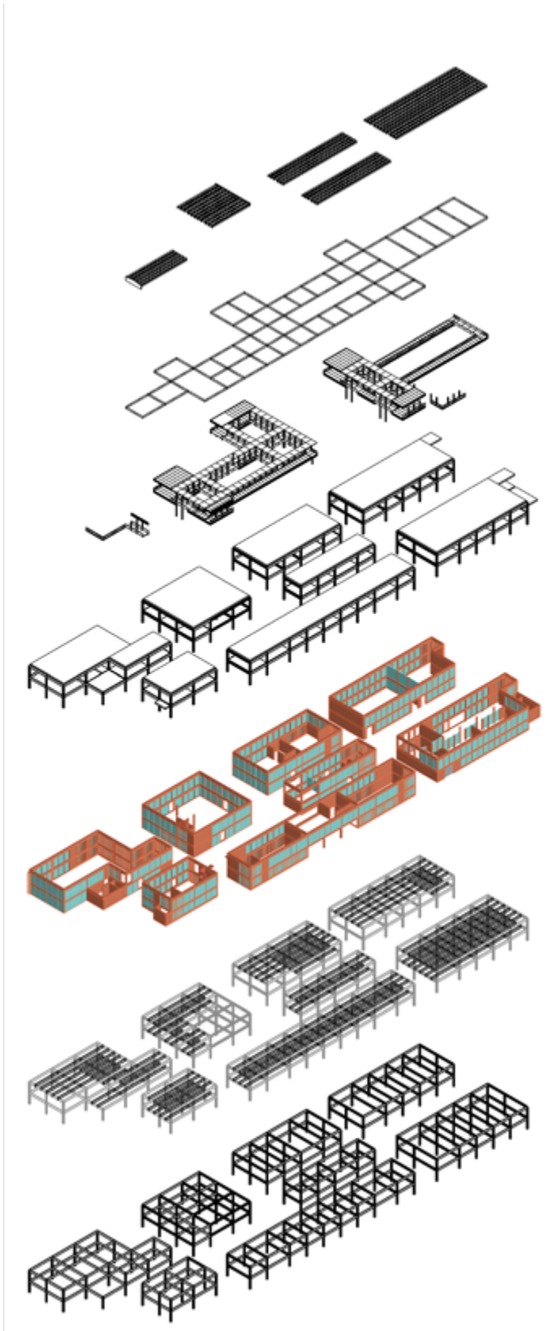
Several in-between spaces is then covered by rooflight element. This turns the covered parts into semi-outdoor atrium that still allows for daylighting, while at the same time offers protection against rain.

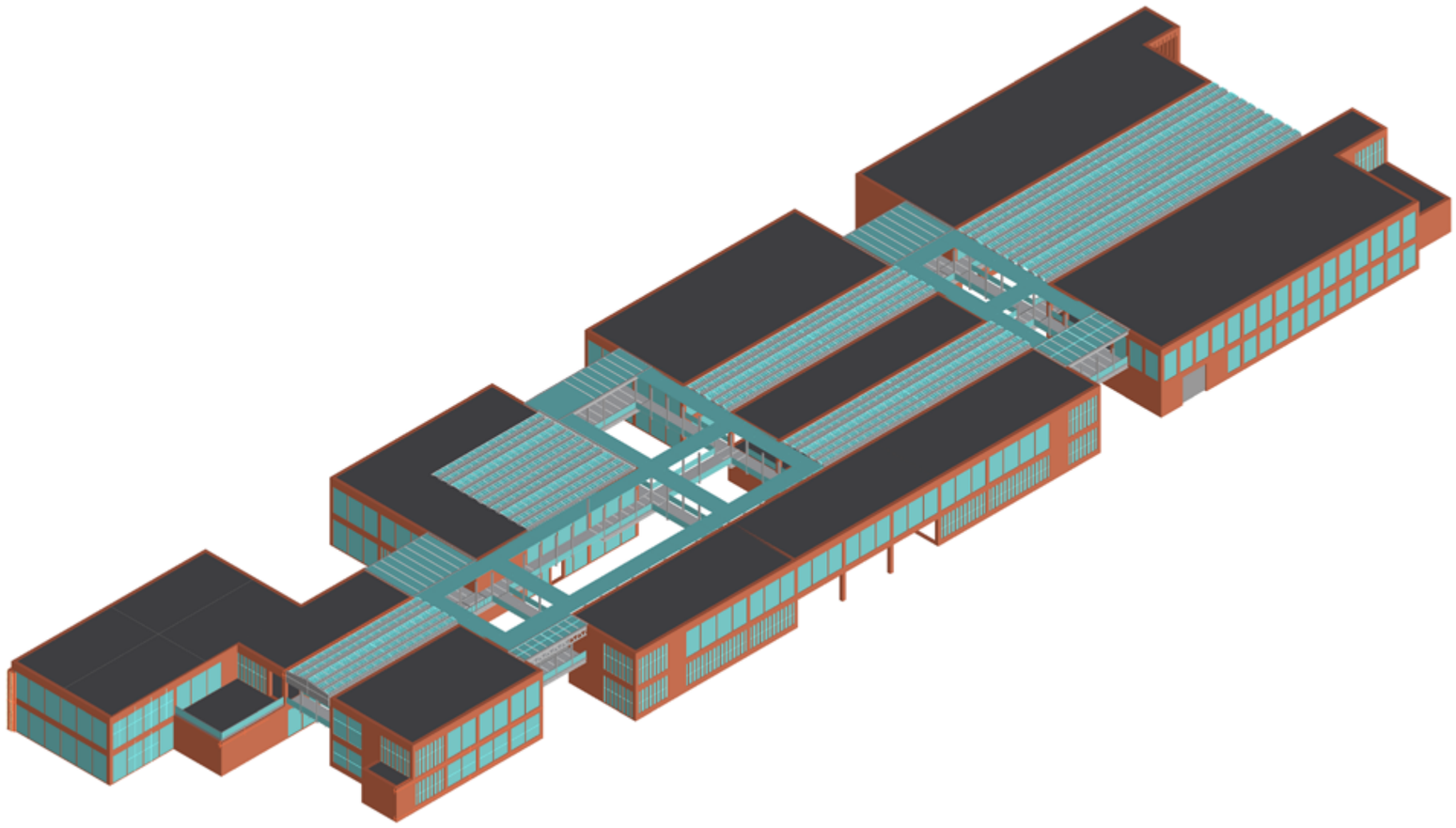
Simultaneously, the rooflights also act as a binding element of closely-related clusters. The connected spaces define a larger cluster category as a group.





Space Composition: Resulting 3D Impression



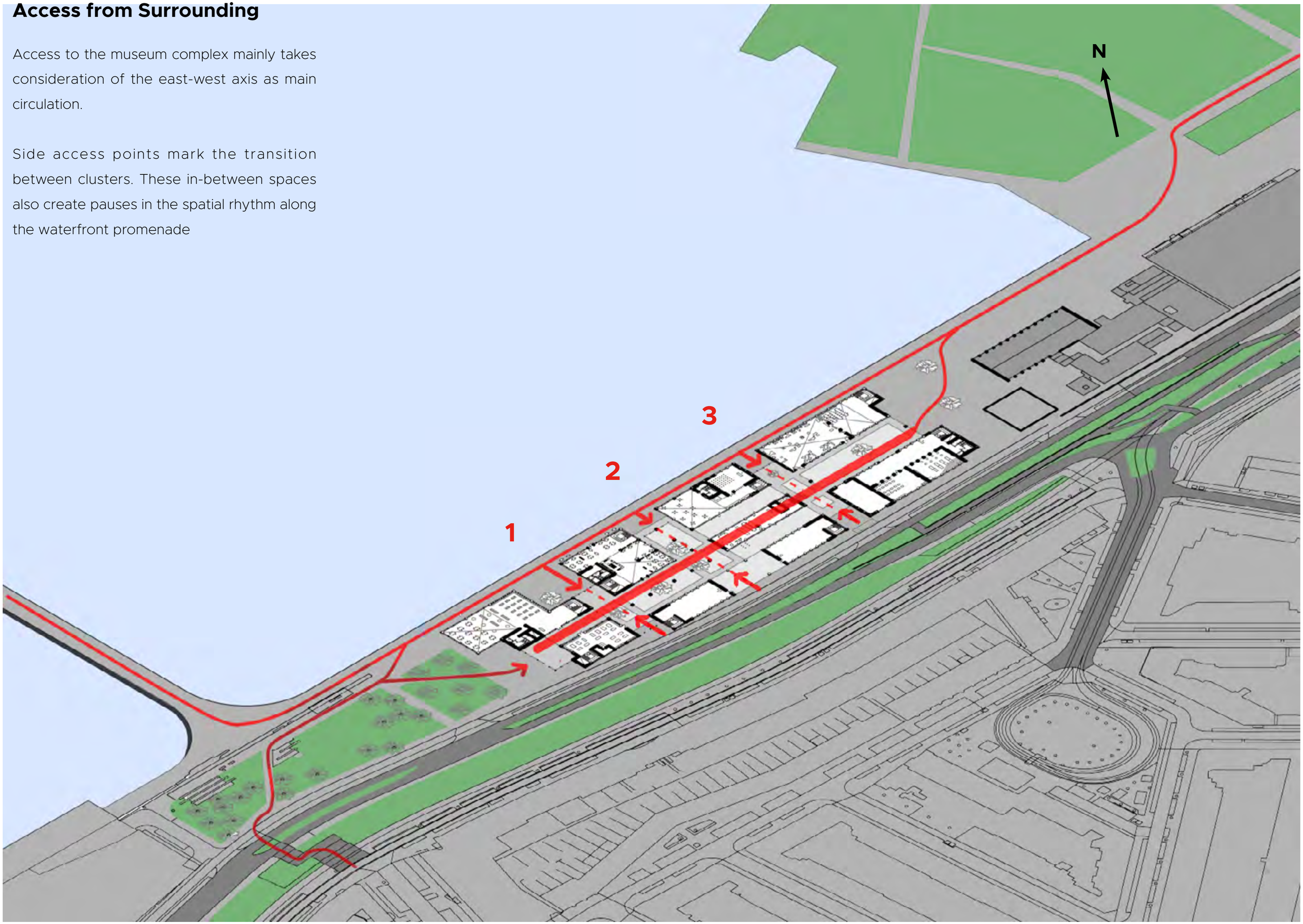


SPACE RELATIONSHIP
& ROUTING

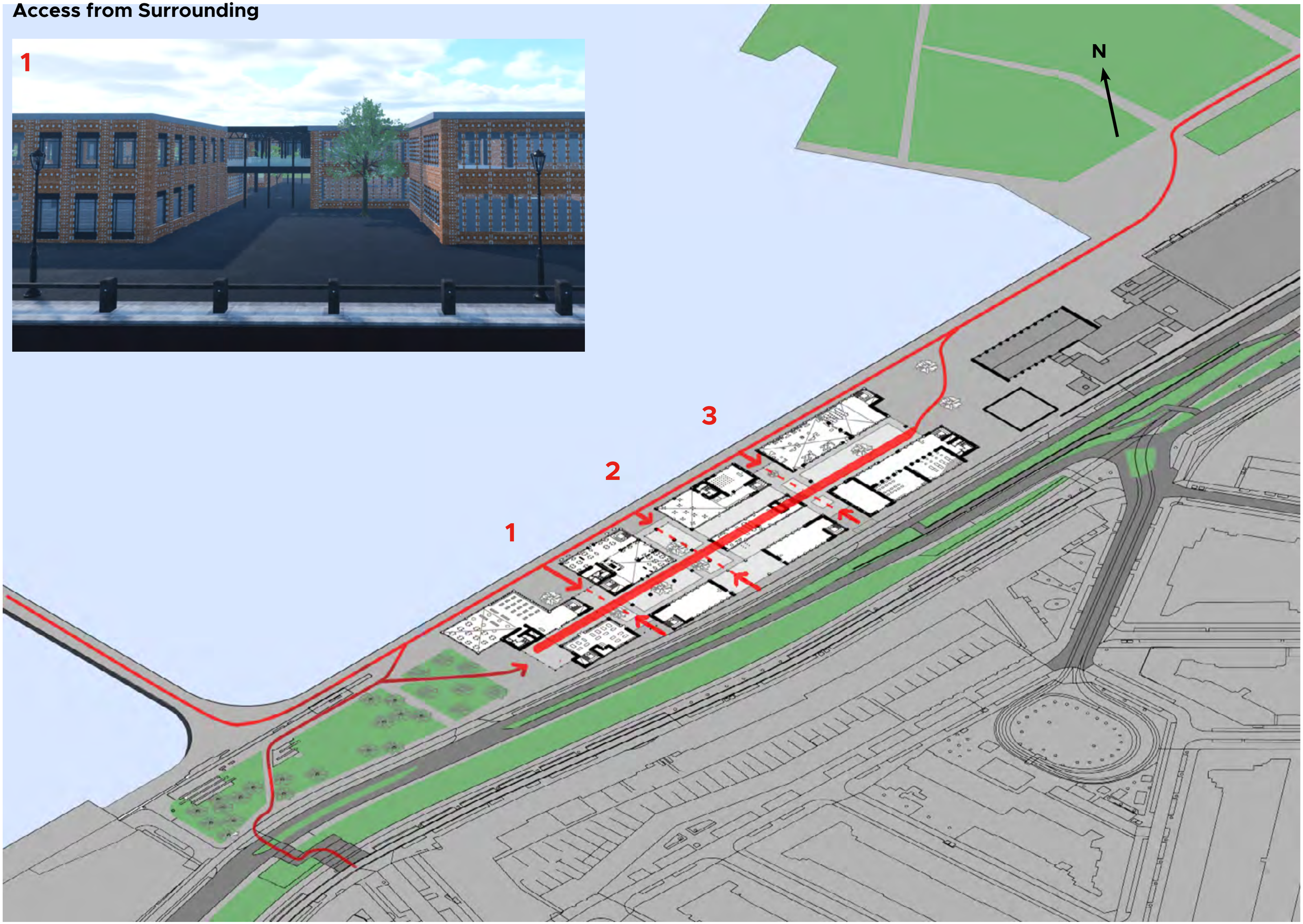
Access from Surrounding

Access to the museum complex mainly takes consideration of the east-west axis as main circulation.

Side access points mark the transition between clusters. These in-between spaces also create pauses in the spatial rhythm along the waterfront promenade



Access from Surrounding



Access from Surrounding

Access from Surrounding

GF Routing

The In-between space surrounded by the building blocks also act as the main mode of circulation around the museum complex.

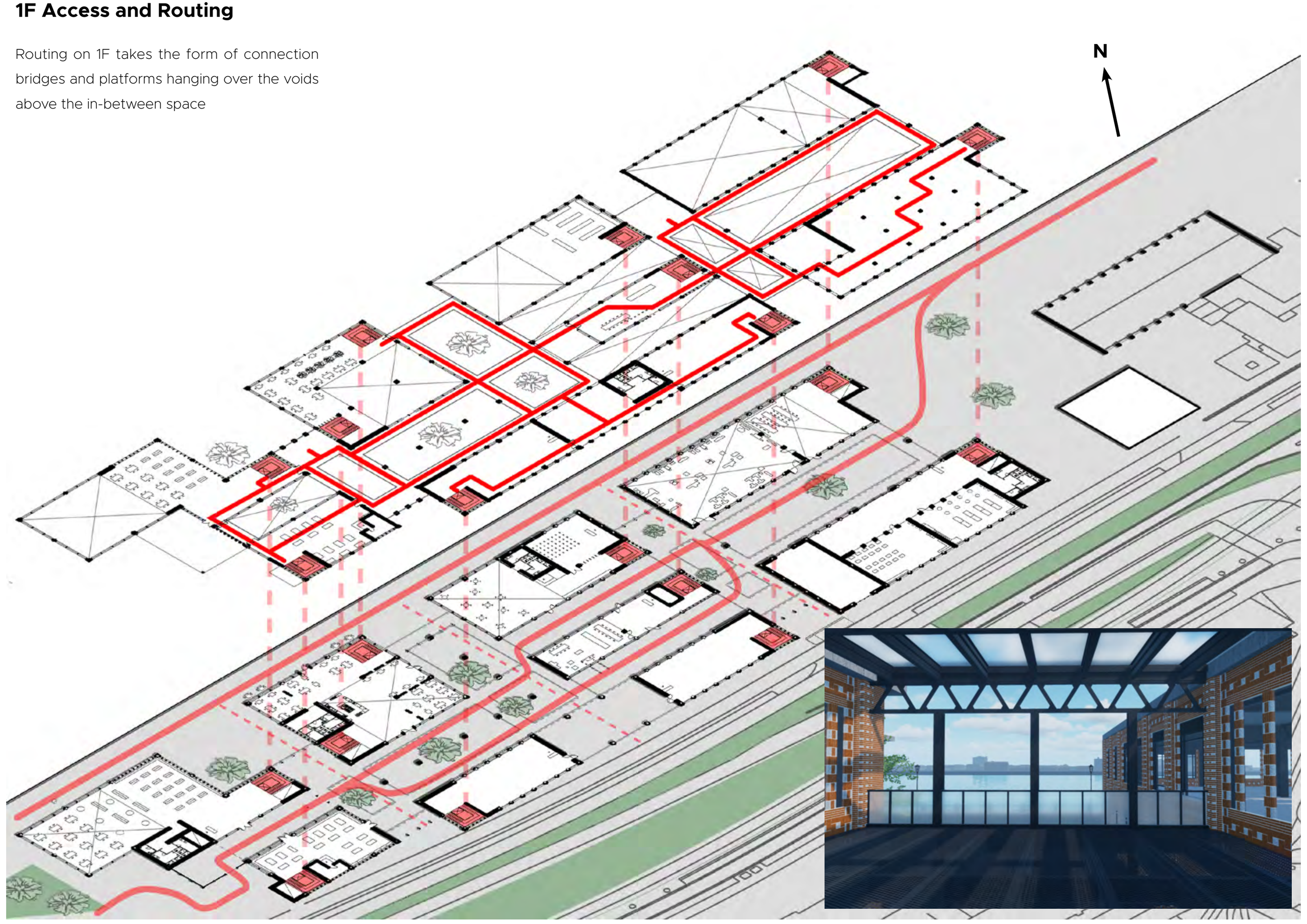
In this manner, the museum circulation blends with the sourrounding environment as if it is a network of streets and plazas

1F Access and Routing

Routing on 1F takes the form of connection bridges and platforms hanging over the voids above the in-between space

1F Access and Routing

Routing on 1F takes the form of connection bridges and platforms hanging over the voids above the in-between space



GF Floor Plan

N

Library

Cafe

Public Hall

Production Hall

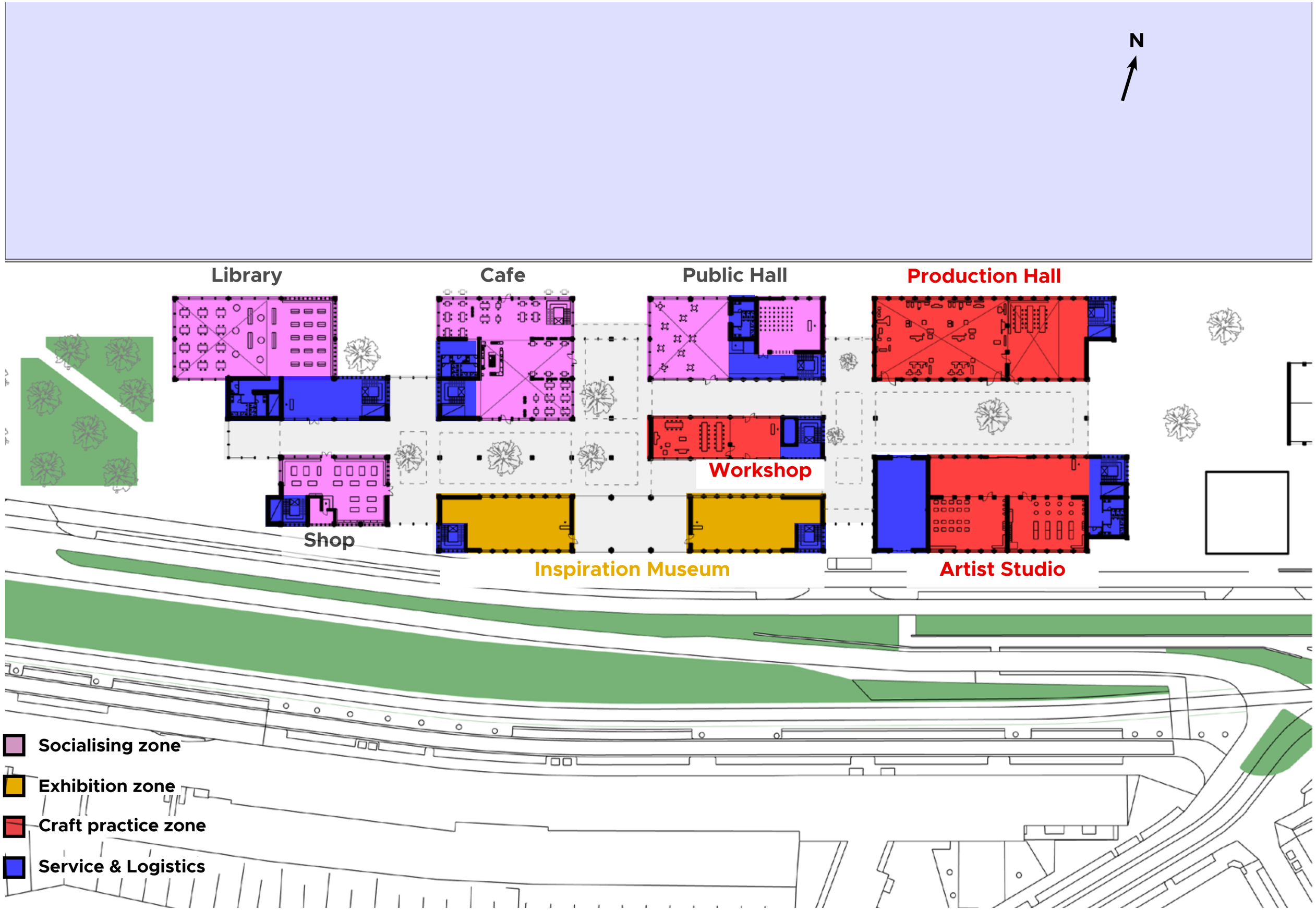
Workshop

Shop

Inspiration Museum

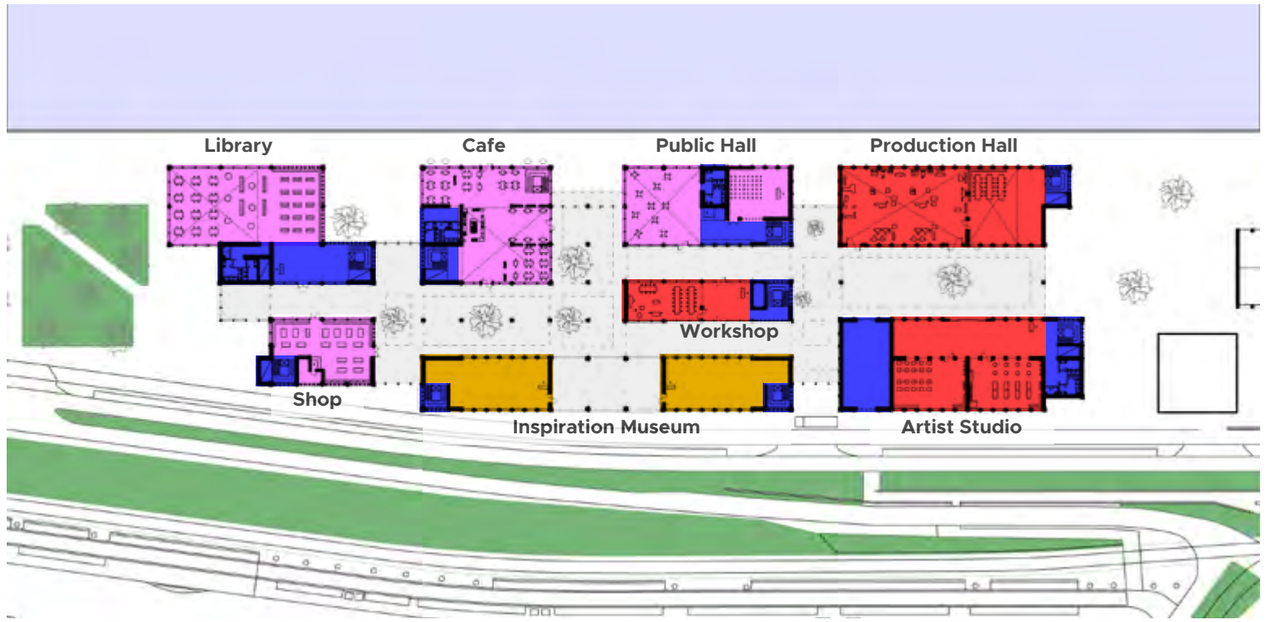
Artist Studio

GF Floor Plan

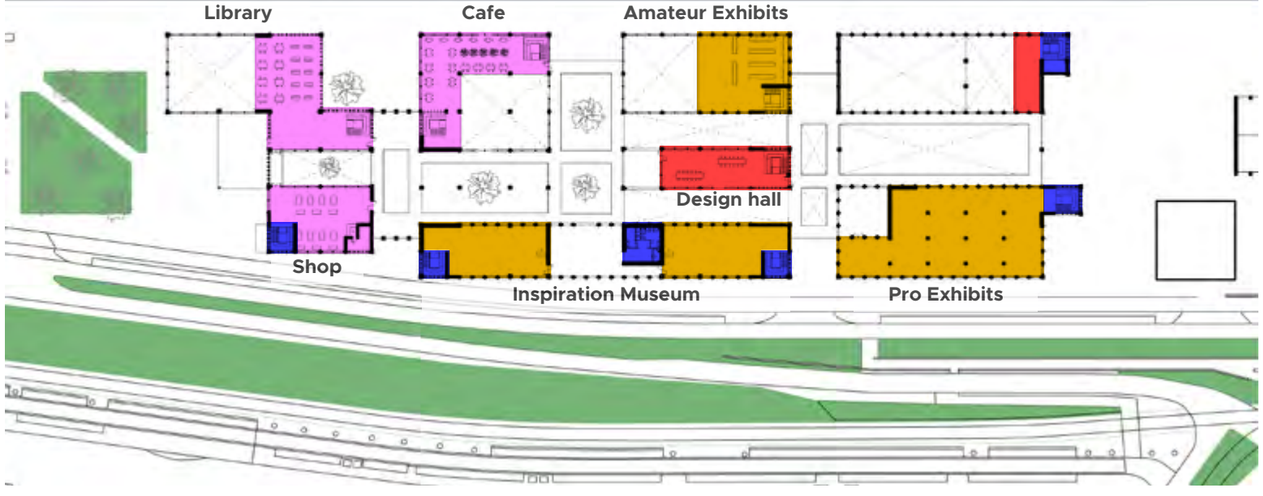


1F Floor Plan

GF Floor Plan



1F Floor Plan



Socialising zone

Exhibition zone

Craft practice zone

Service & Logistics

Final Program Brief

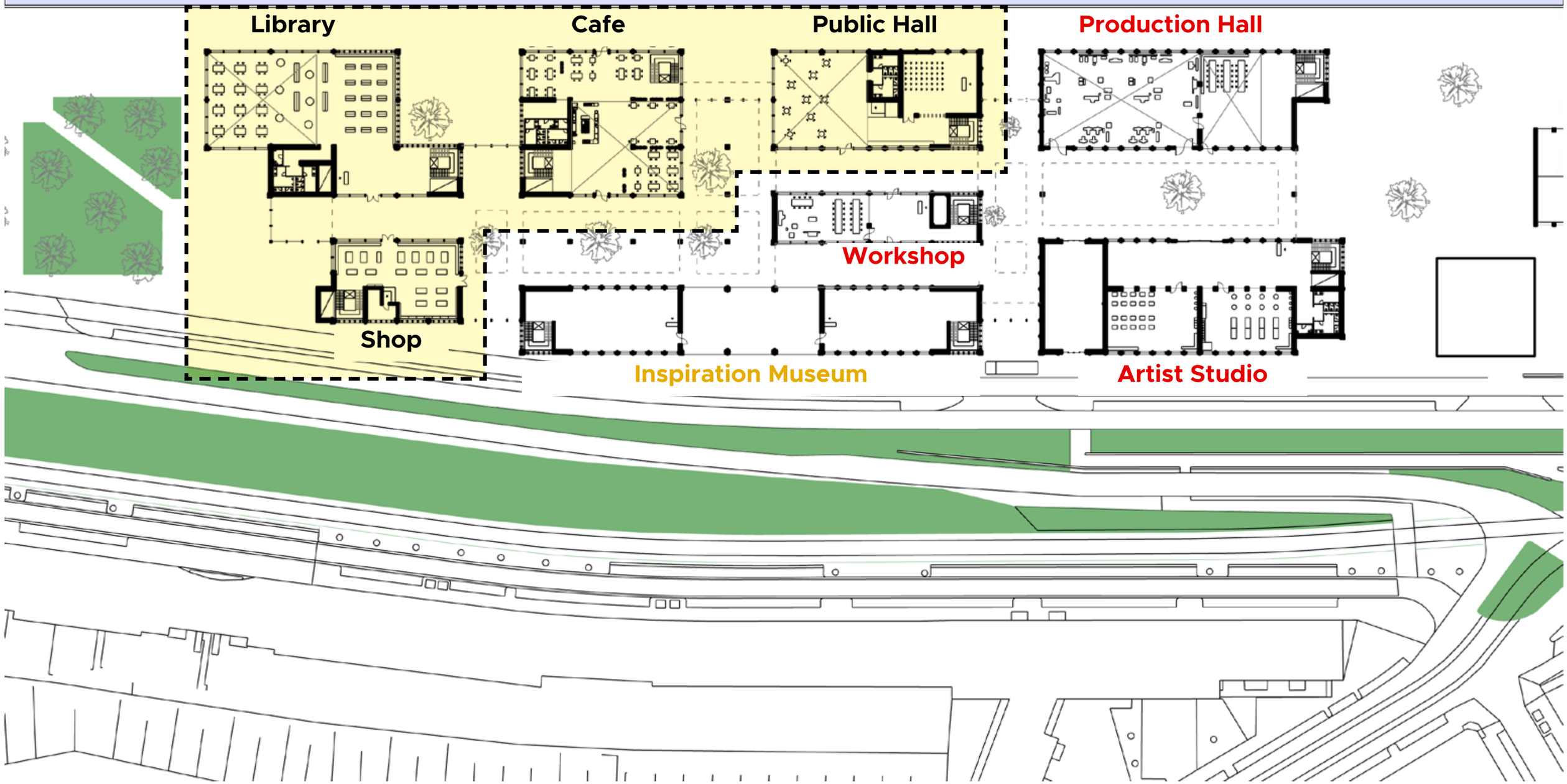
Socialising Zone	**(3168 m^2)**
Library	864 m^2
Shop	720 m^2
Cafe	1080 m^2
Public Hall	
- Community centre	324 m^2
- Lecture hall	180 m^2
Exhibition Zone (Indoor)	**(2574 m^2)**
Inspiration museum	1440 m^2
Amateur exhibition	378 m^2
Professional exhibition	756 m^2
Crafts Practice Zone	**(2160 m^2)**
Practical workshop	270 m^2
Design workshop	270 m^2
Production Hall & Artist Studio	1620 m^2
Nett (59%)	**7902 m^2**
Unassigned spaces (41%)	**(5533 m^2)**
Services & Logistics	1233 m^2
In-between space (Informal exhibition+circulation)	4300 m^2
Gross (100%)	**13435 m^2**

GF Floor Plan - Program Multiplicity

socio-cultural cluster

- Library: knowledge exchange & archive
- Shop: promotion & trade of crafts
- Cafe: leisure & social interaction
- Public Hall: community gathering & event

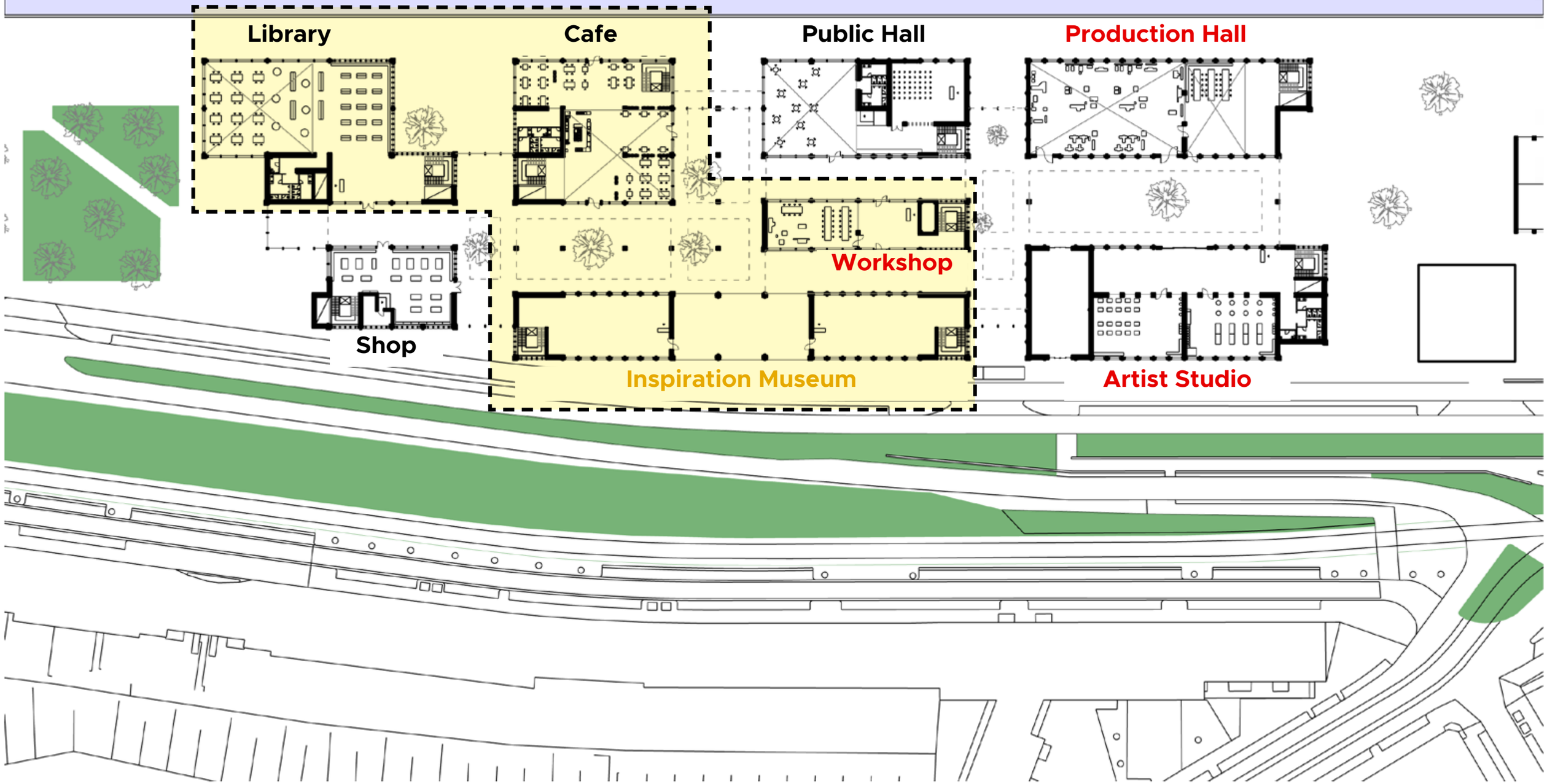
N



GF Floor Plan - Program Multiplicity

collaborative learning cluster

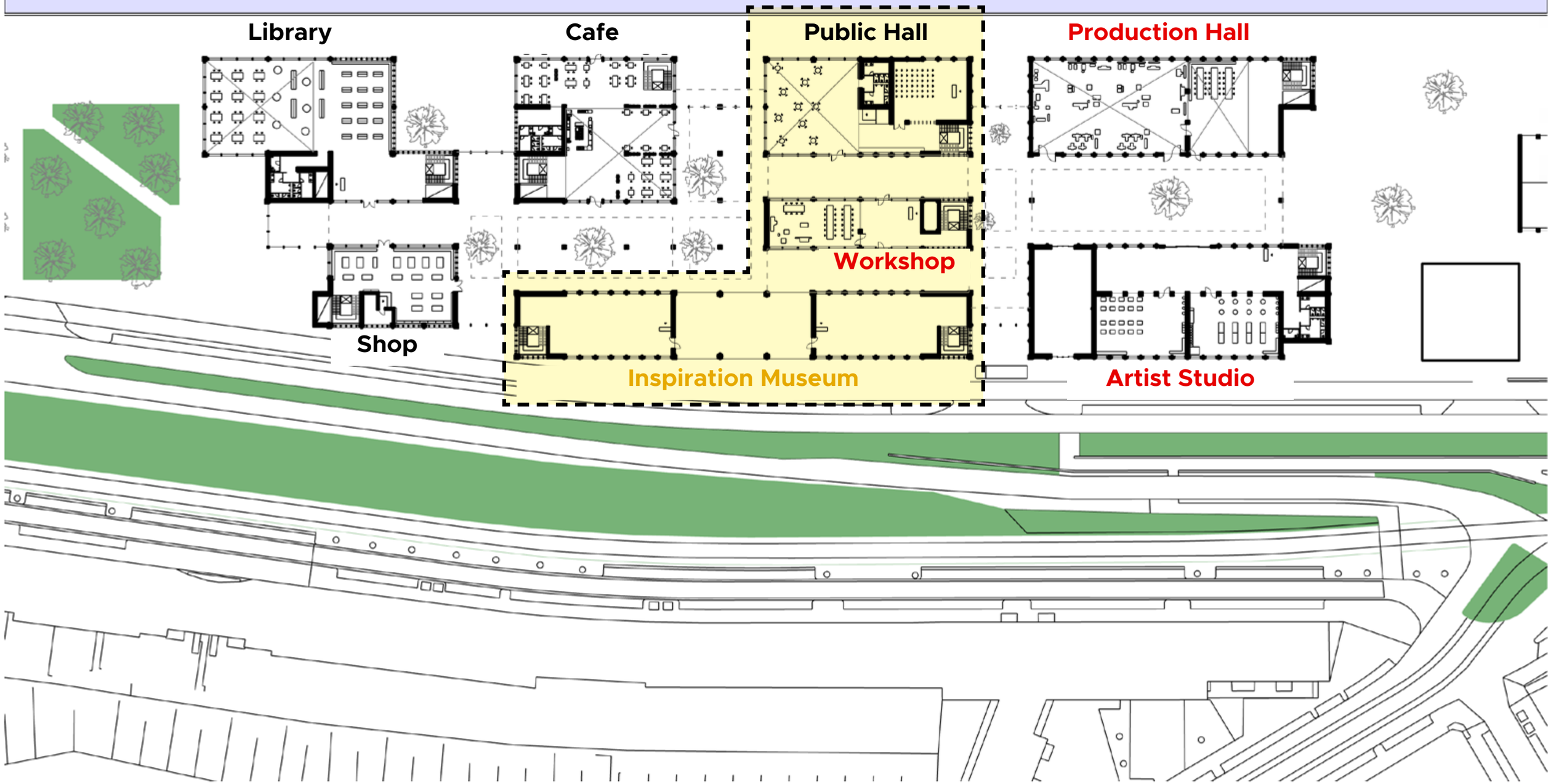
- Library: theoretical knowledge
- Cafe: group discussion & meeting
- Workshop: practical training
- Inspiration Museum: idea generation and physical references



GF Floor Plan - Program Multiplicity

crafts tour/leisure cluster

- Public hall: crafts event & expo
- Workshop: amateur trial workshops
- Inspiration Museum: appreciation of crafts masterpiece

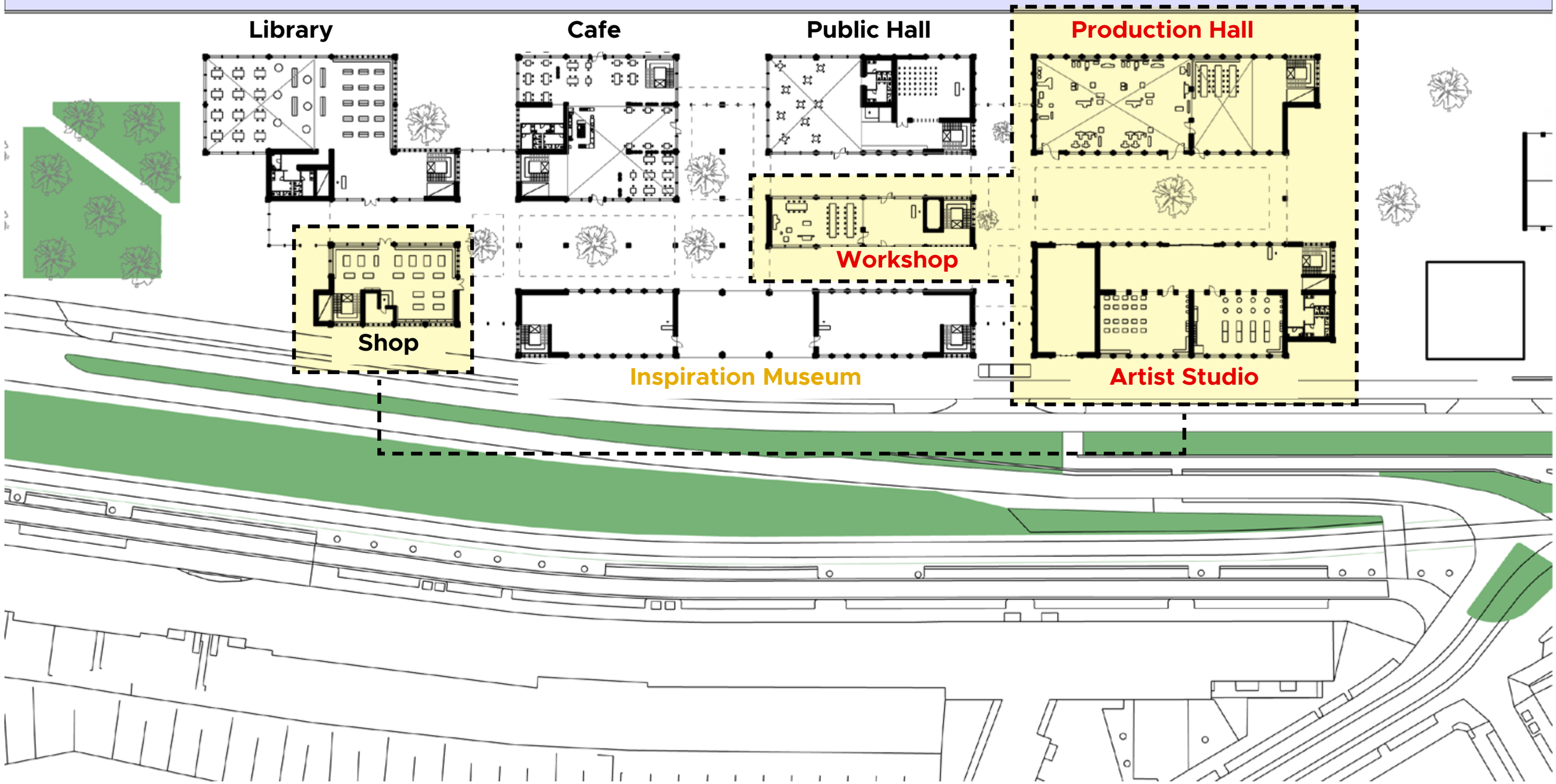


GF Floor Plan - Program Multiplicity

professional production cluster

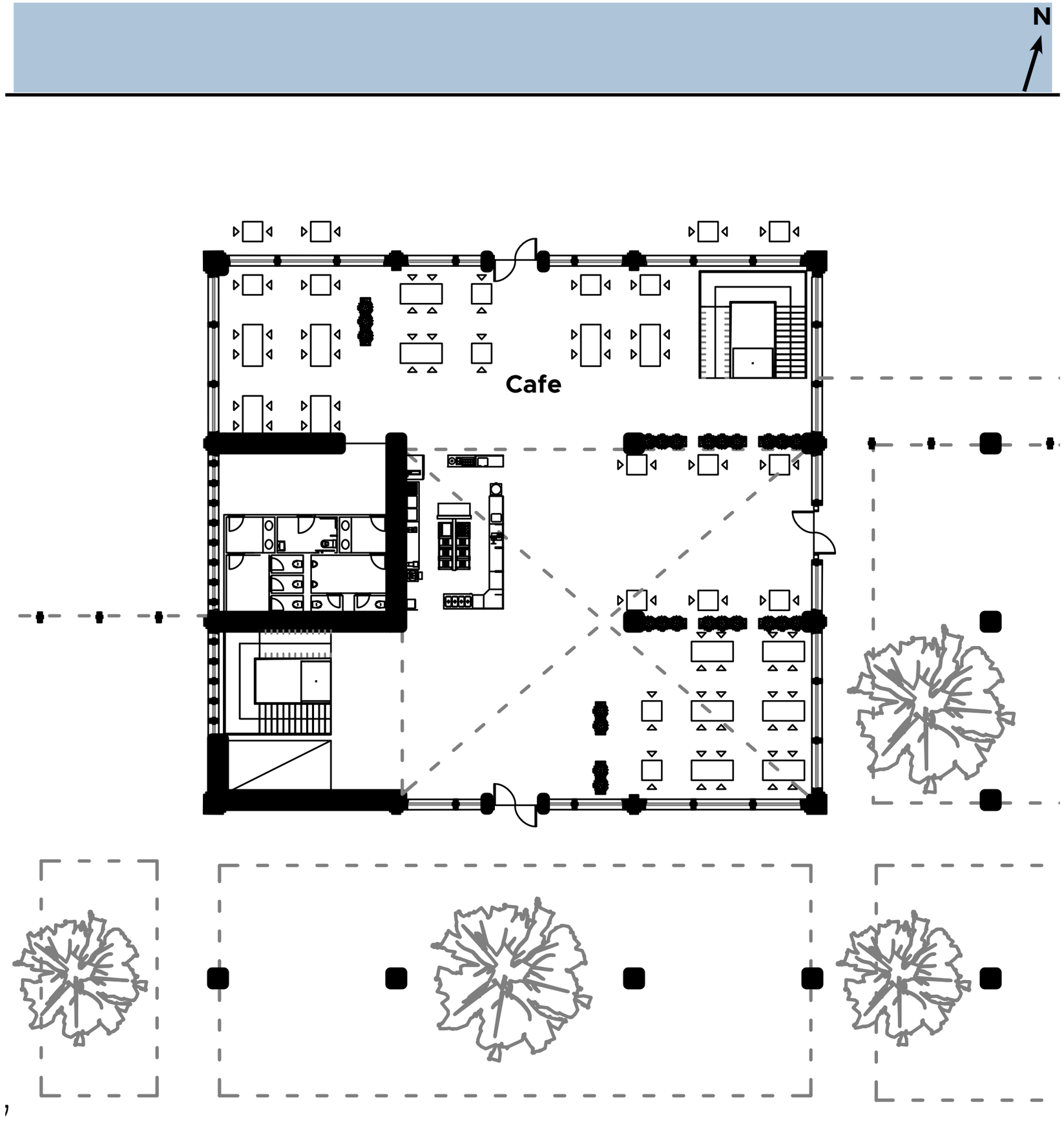
- Production Hall: large scale crafts production (furniture, installation, wooden shelter)
- Artist Studio: small scale crafts production (accessories, tablewares, decorative interiors)
- Workshop: collaborative idea generation & cross-learning
- Shop: Distribution of non-exhibition crafts products

N

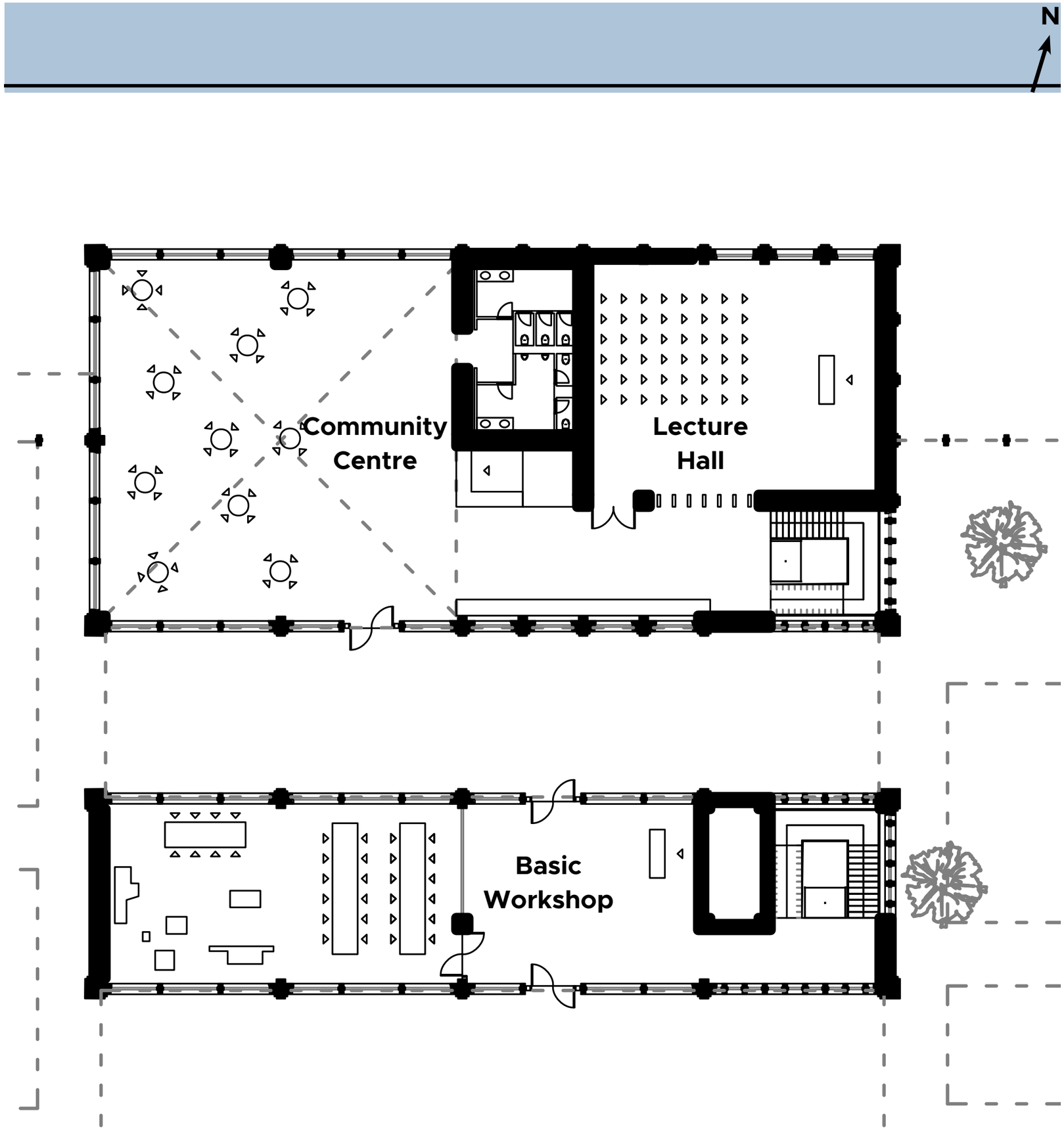


1:200 GF Floor Plan - Library & Shop

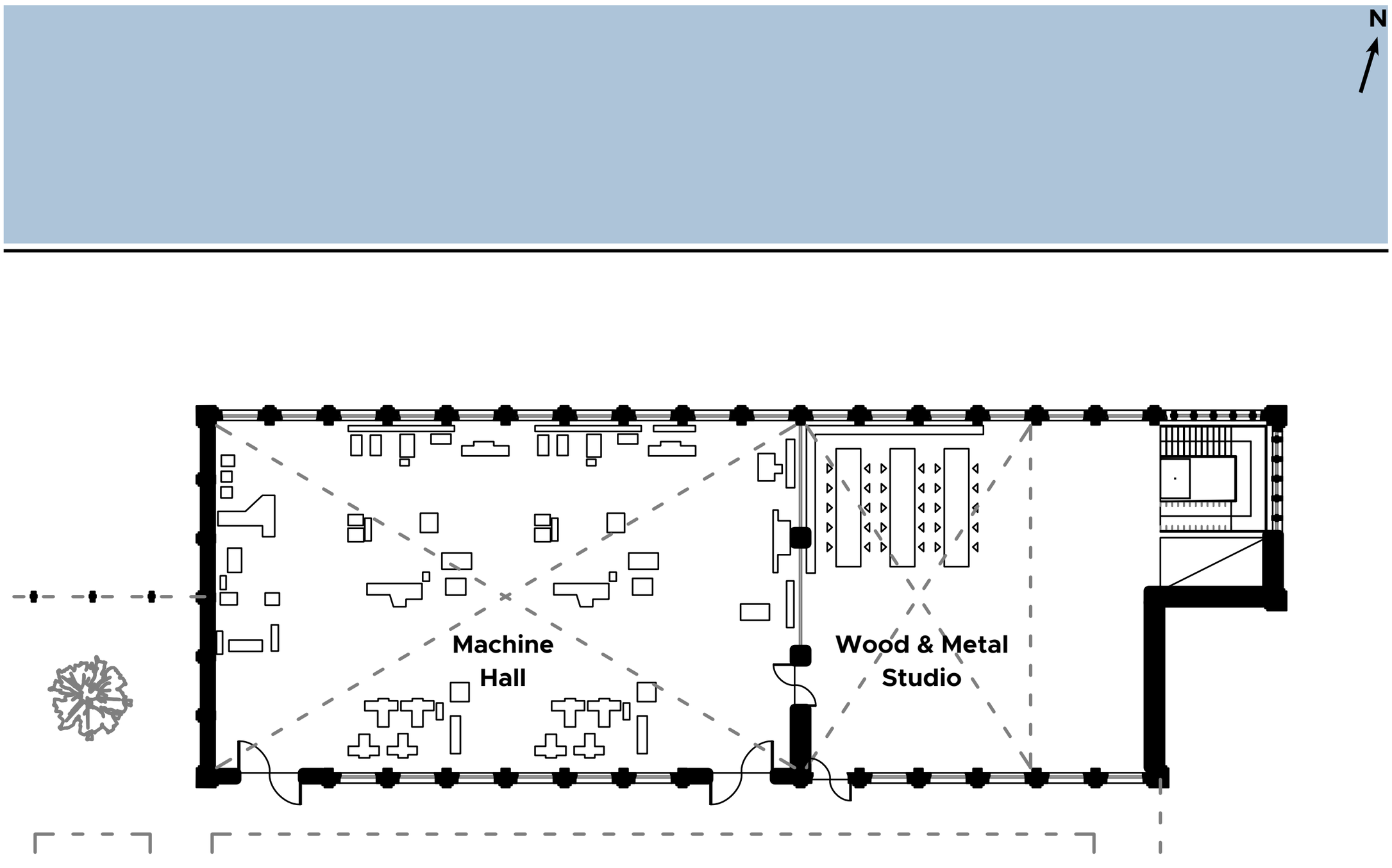
1:200 GF Floor Plan - Cafe



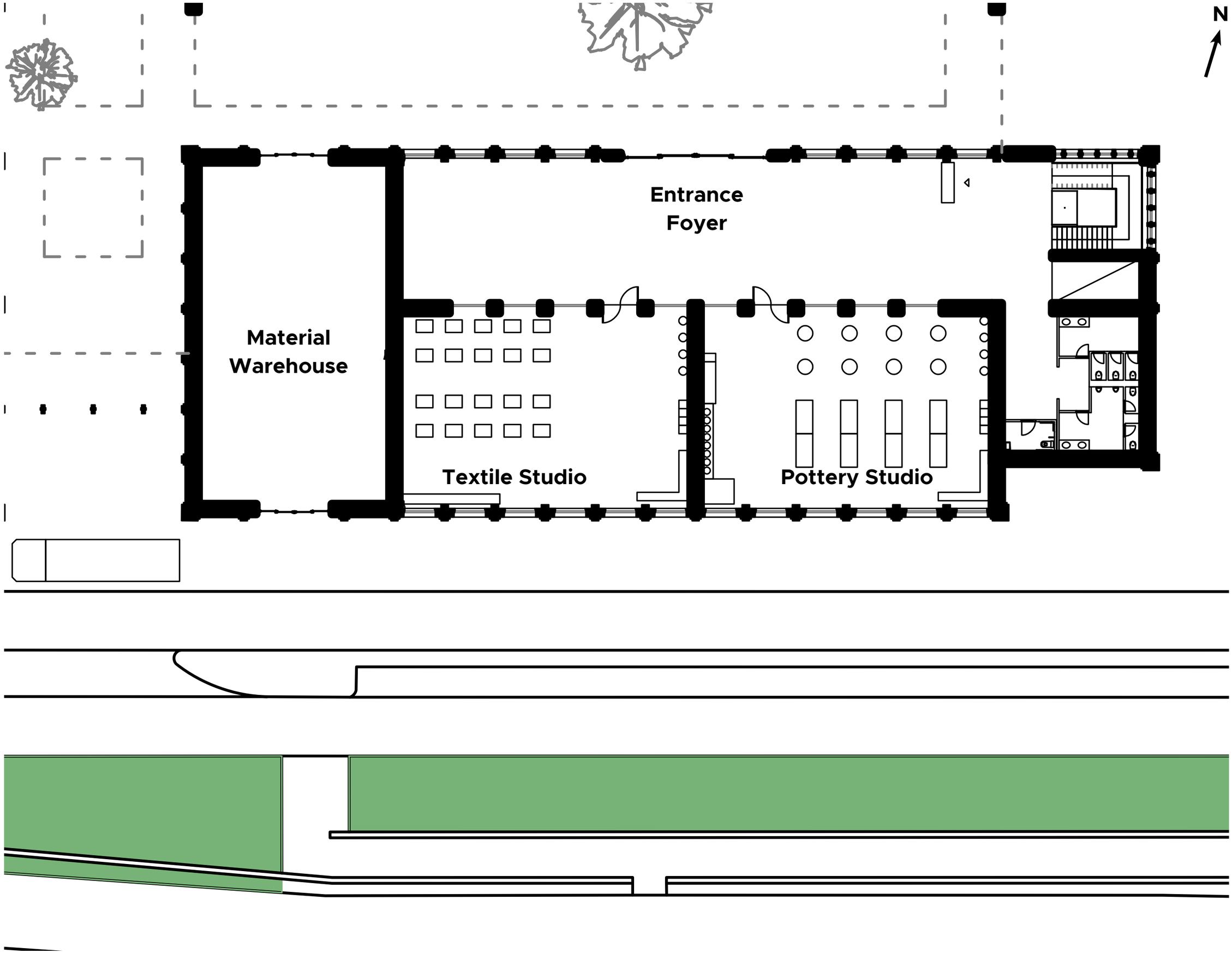
1:200 GF Floor Plan - Community Centre & Workshop



1:200 GF Floor Plan - Production Hall



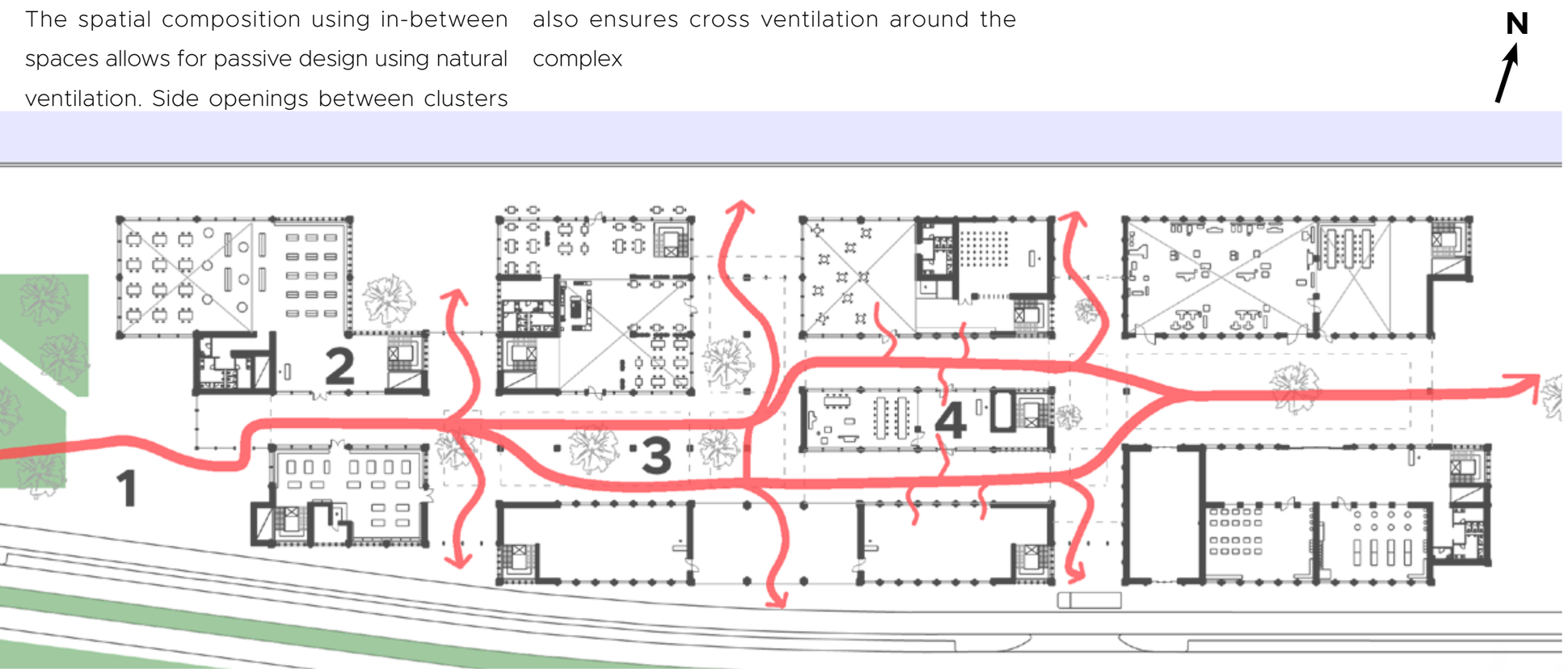
1:200 GF Floor Plan - Artist Studio



CLIMATISATION

Natural Ventilation

The spatial composition using in-between spaces allows for passive design using natural ventilation. Side openings between clusters also ensures cross ventilation around the complex



1

Wind from west bends, then enters from opening on the side.

2

Wind circulates through the corridor as source of natural ventilation

3

Open courtyard acts as green lung and buffer zone to normalise excess wind pressure

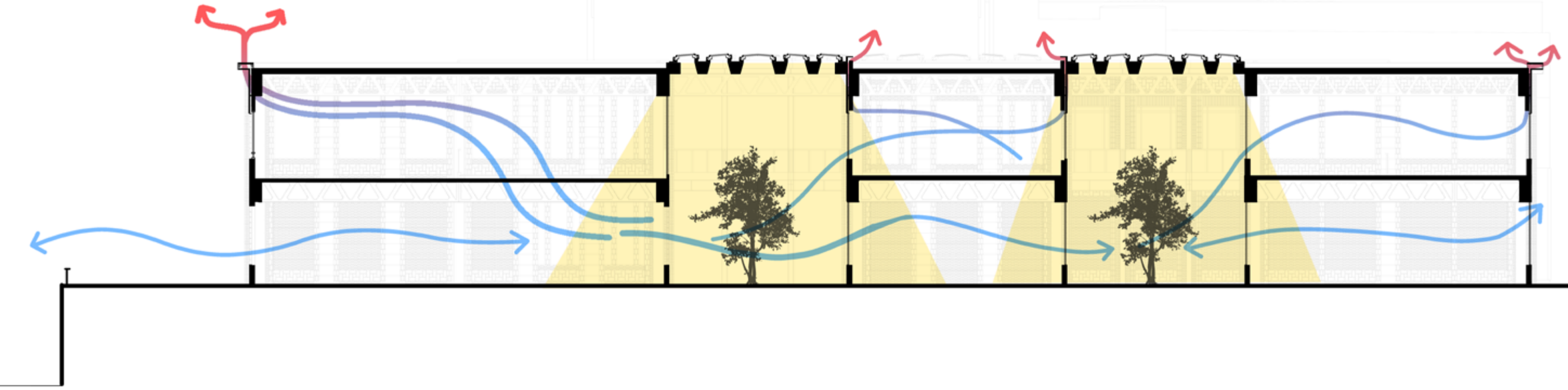
4

Wind enters the clusters sideways, providing clean air as it passes along the atrium

Natural Ventilation & Daylighting

As clean air from the green lung atrium gets cross ventilated across the indoor spaces, warm air that raises due to stack effect will be extracted via venturi chimney.

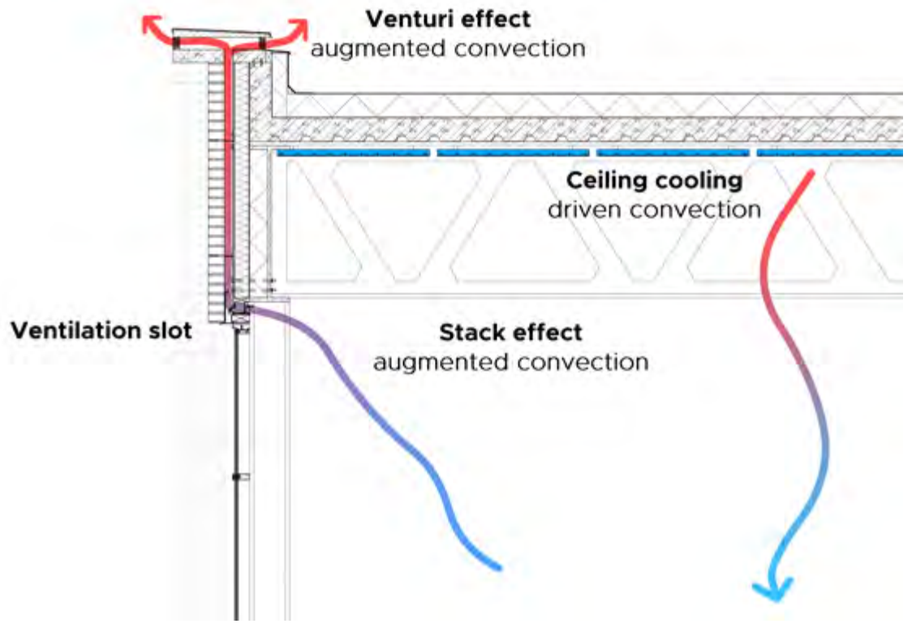
Simultaneously, the rooflights provide diffused daylighting from atrium to the surrounding inddor spaces.

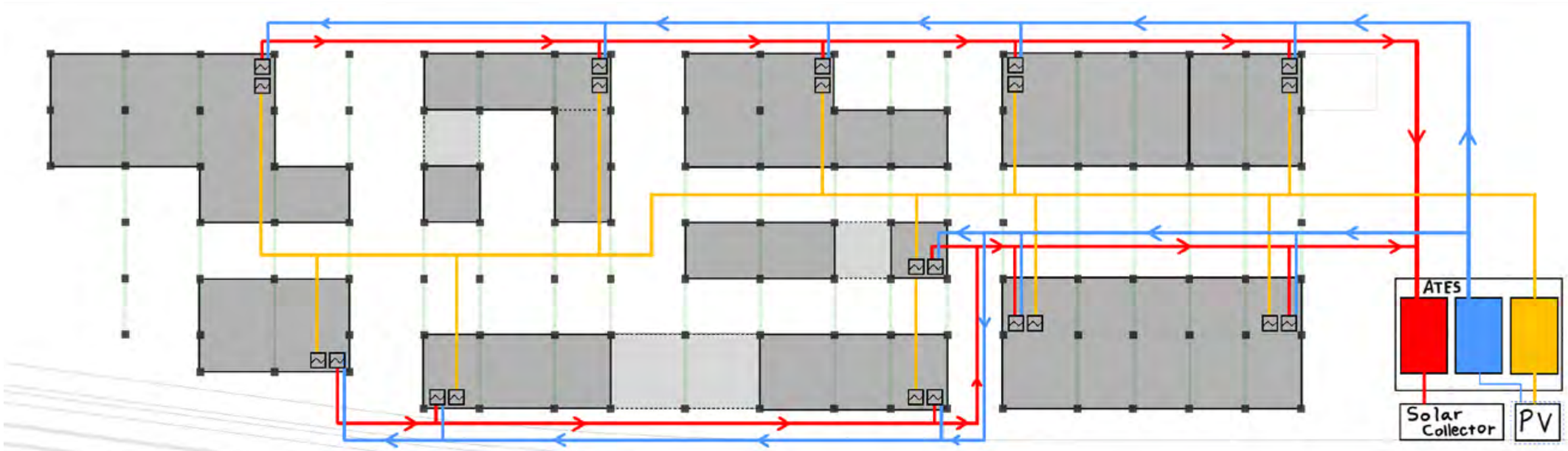


H/C Control: Summer

Heating and cooling control will make use of centralised technical room with underground aquifier thermal energy storage as the central means of thermal energy circulation. Each cluster may have individual customised climate with each heat exchanger units.

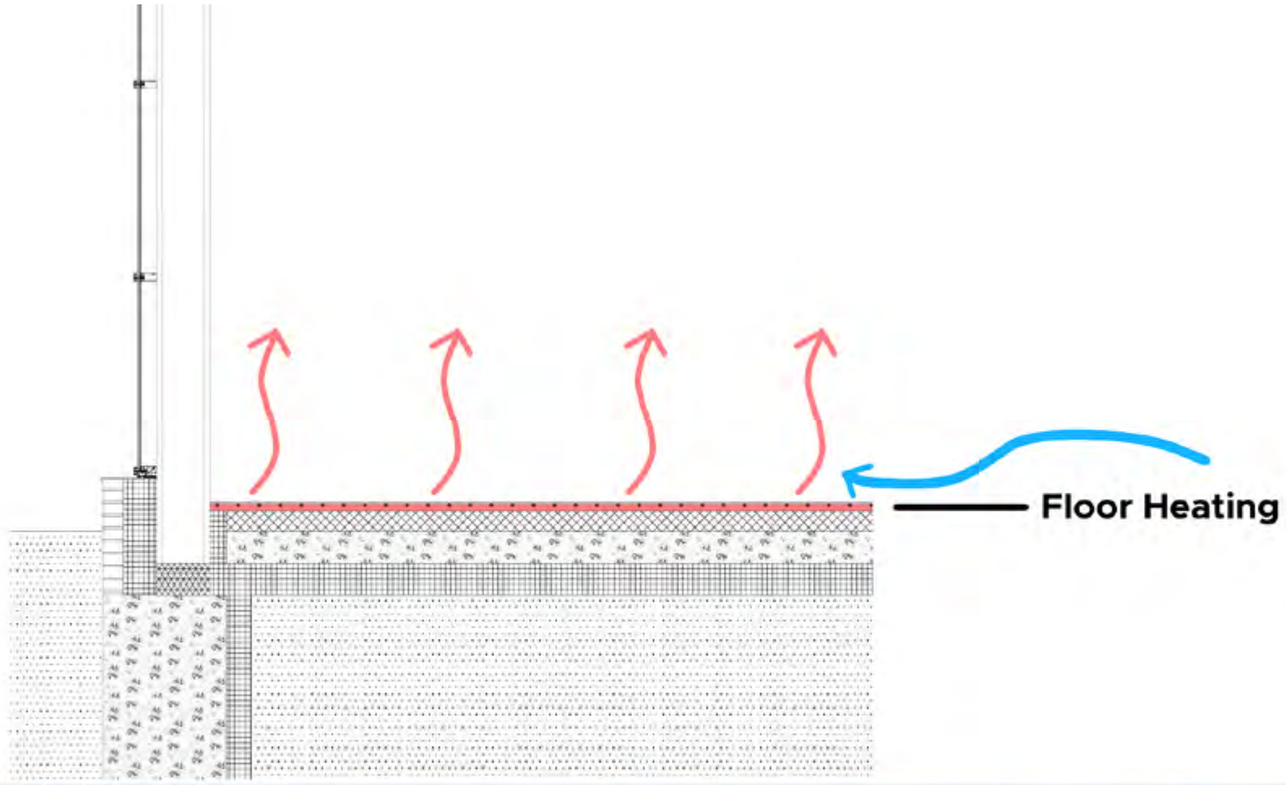
In summer situation, ceiling cooling will also assist the natural ventilation driven thermal control . Ceiling cooling also ensures continuous convection cycle in the space.

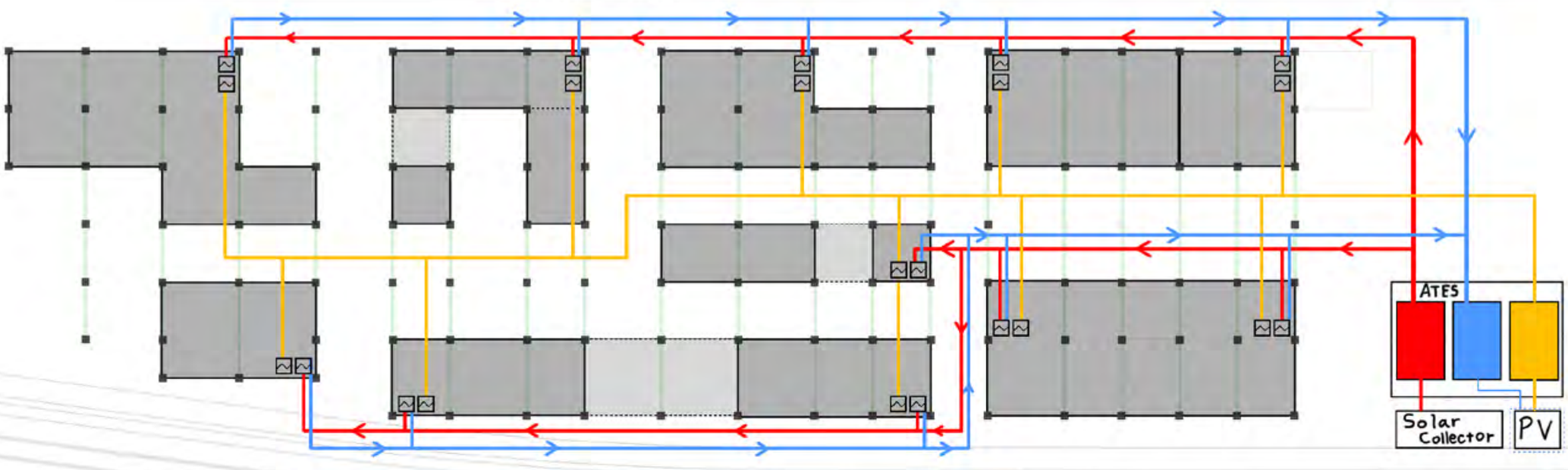




H/C Control: Winter

In winter situation, floor heatingl ensures that the cold air that enters from below via natural ventilation will get warmed up before it circulates areound the space





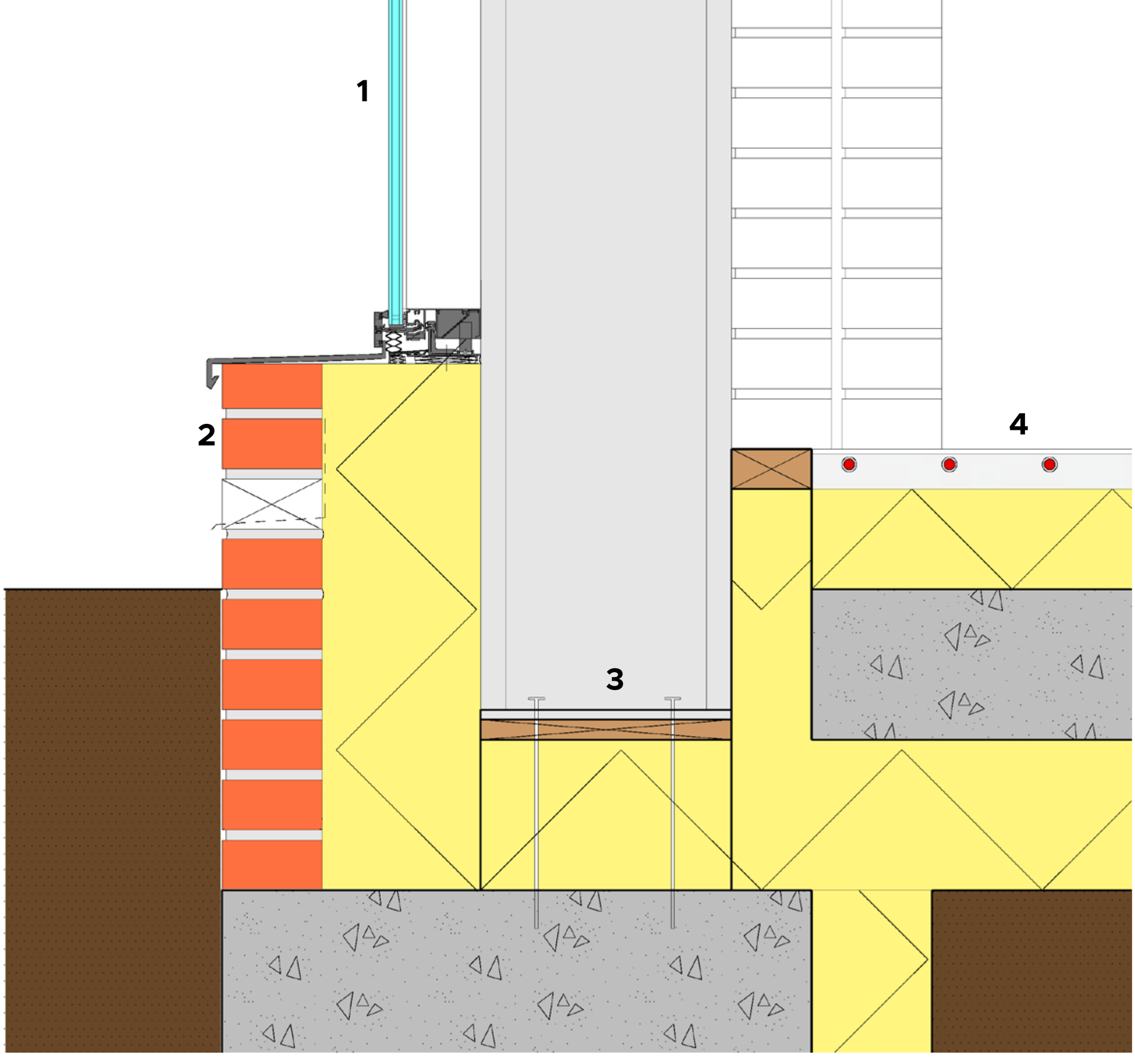
1:5 Detail - Foundation

1 curtain wall exterior cap 15mm
double-glazed glass 26mm
aluminium frame 80mm
steel stud 50mm

2 brick masonry 100mm
rigid insulation 150mm
steel column 250mm
weep holes

3 steel column base plate
grout 25mm
anchor bolts
thermal insulation block 150mm
concrete foundation

4 floor finish 5mm
screed 20mm
floor heating pipes d=10mm
rigid insulation 100mm
concrete slab 150mm
rigid insulation 150mm

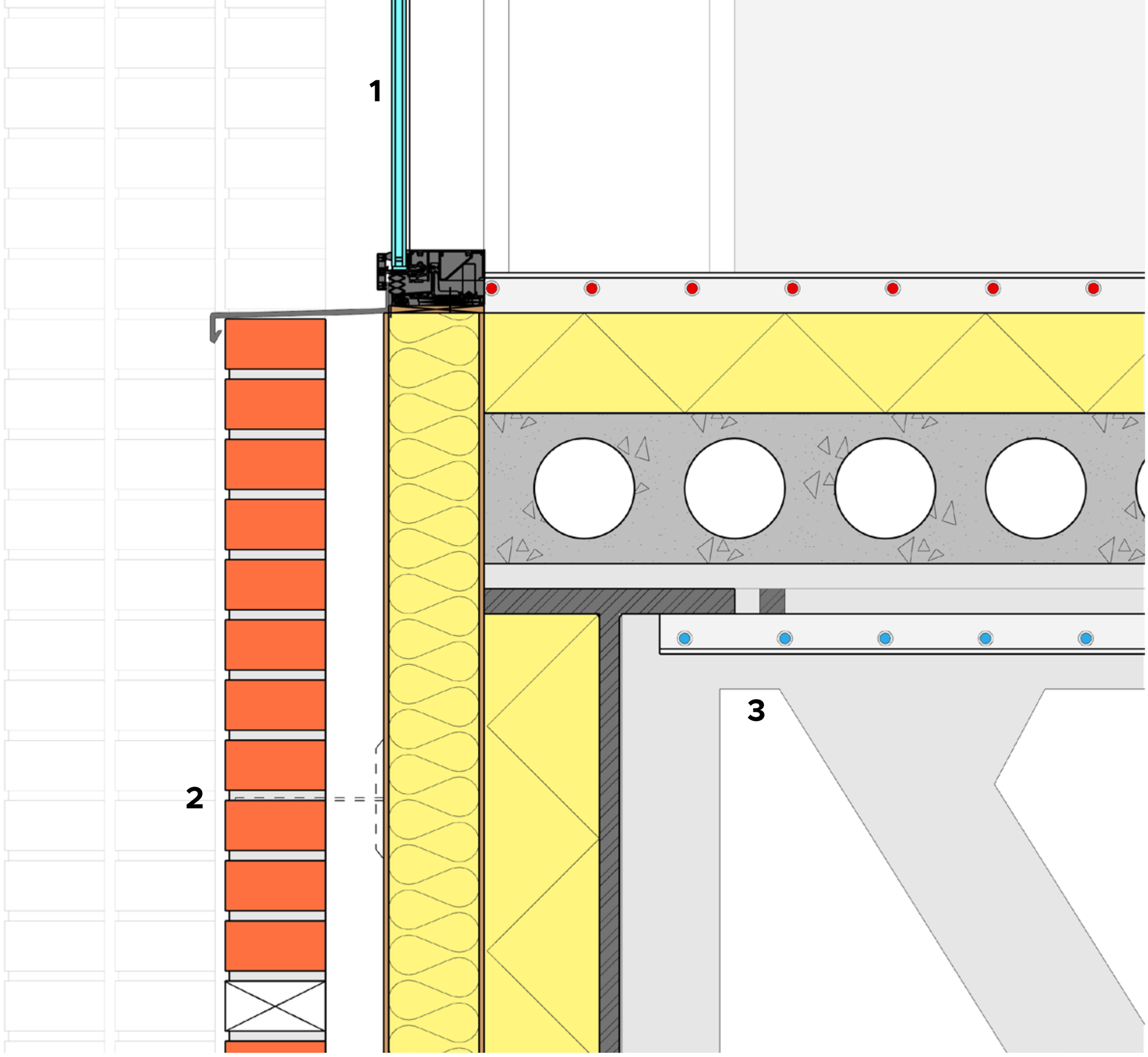


1:5 Detail - Ceiling/Floor Slab

1 curtain wall exterior cap 15mm
double-glazed glass 26mm
aluminium frame 80mm
steel stud 50mm

2 brick masonry 100mm
brick tie
ventilation cavity 50mm
insulated structural panel 100mm
rigid insulation 150mm
steel joist h=1000mm w=250mm

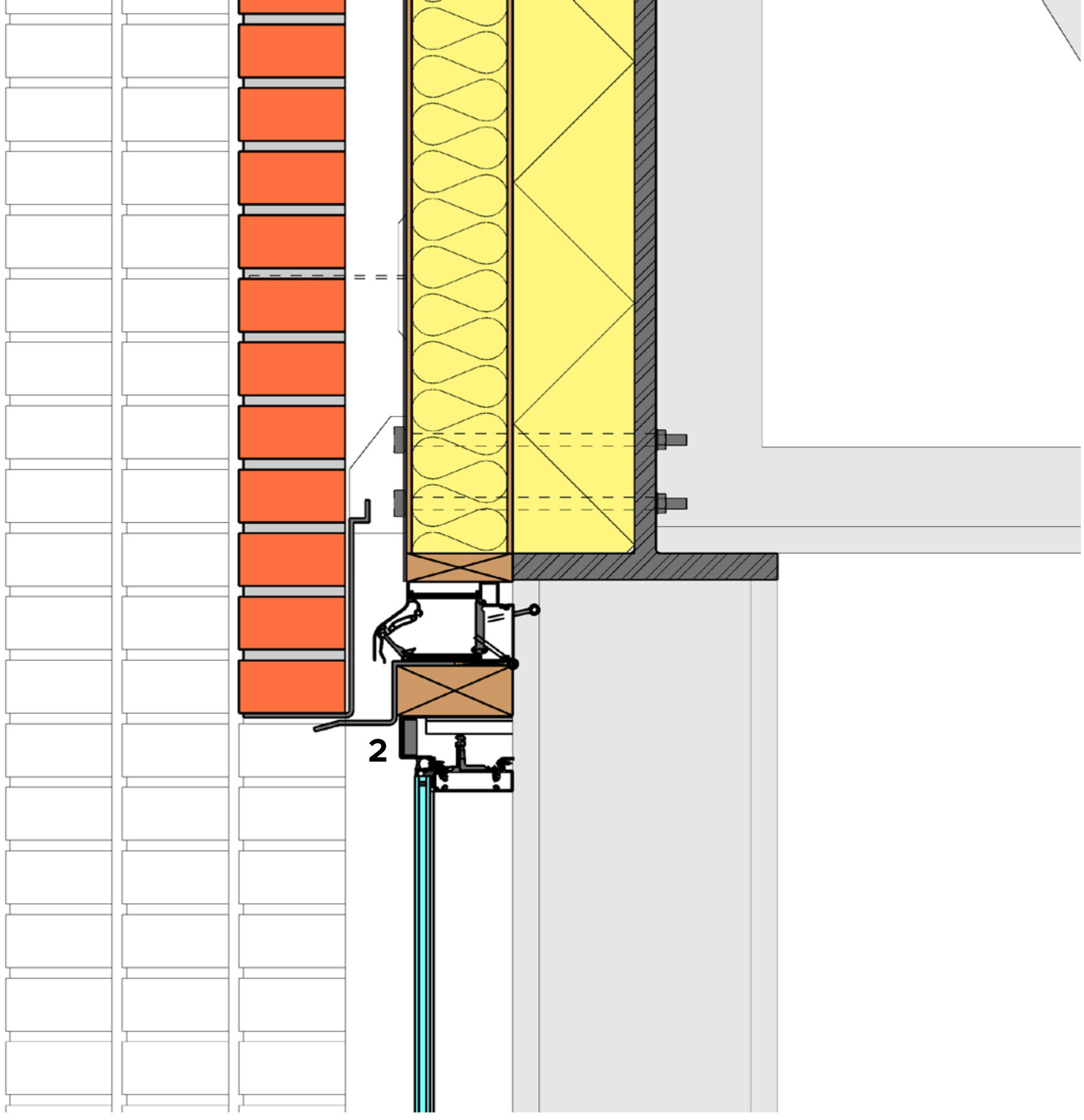
3 ceiling cooling panel
cooling pipes d=10mm
steel frame 25mm
(attached to structural beam + ceiling)
hollow core concrete slab 150mm
rigid insulation 100mm
floor heating pipes d=10mm
screed 200mm
floor finish



1:5 Detail - Opening

1 brick masonry 100mm
steel L-profile lintel
(lintel attachment module + bolts)
ventilation cavity 50mm
insulated structural panel 100mm
rigid insulation 150mm
steel joist h=1000mm w=250mm

2 ventilation slot
moisture flashing
spacer
curtain wall frame

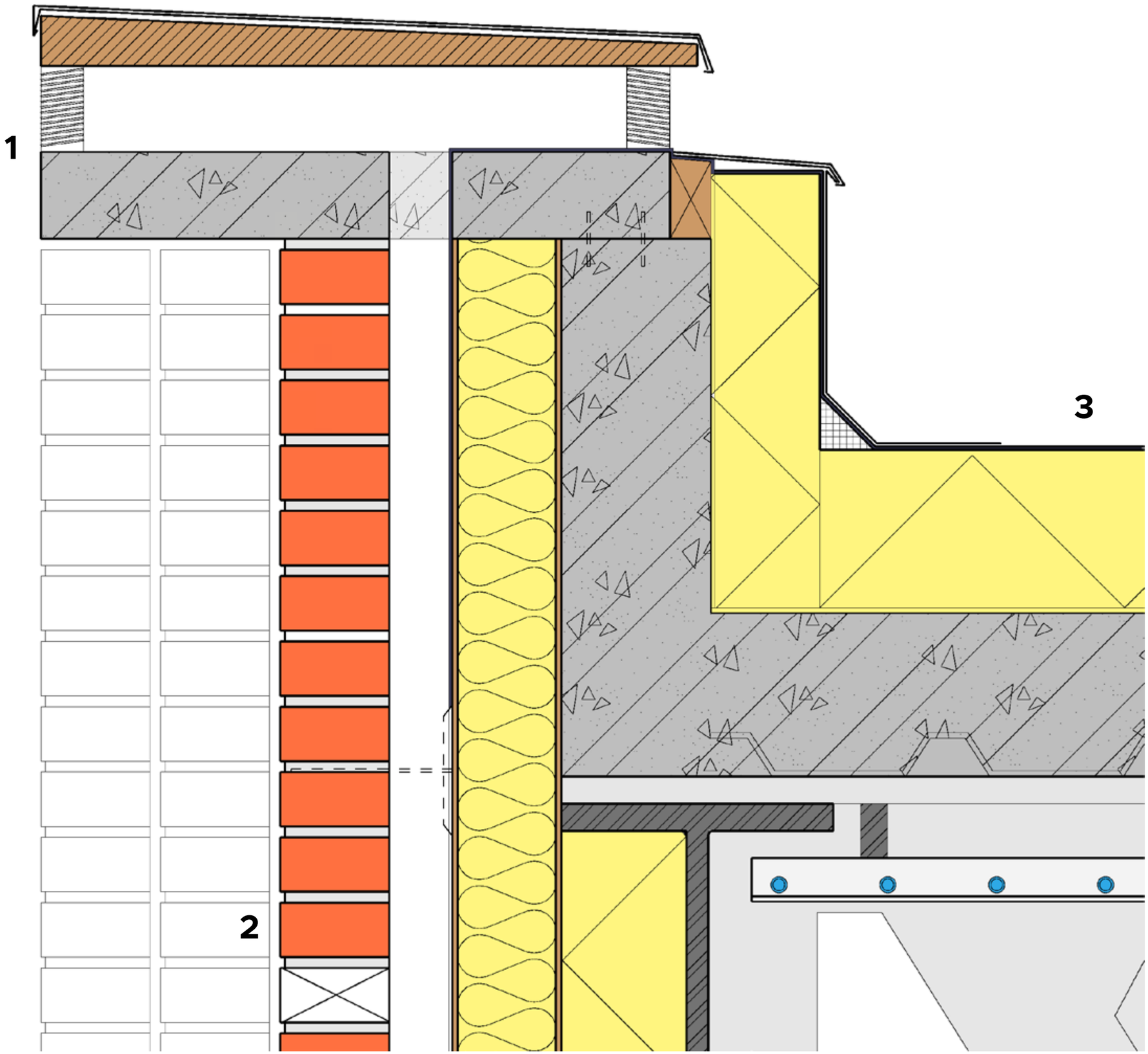


1:5 Detail - Roof + Venturi Chimney

1 rainwater flashing
air ventilation fins
prefab reinforced concrete base
(paint treated - white)

2 brick masonry 100mm
brick tie
ventilation cavity 50mm
insulated structural panel 100mm
rigid insulation 150mm
steel joist h=1000mm w=250mm

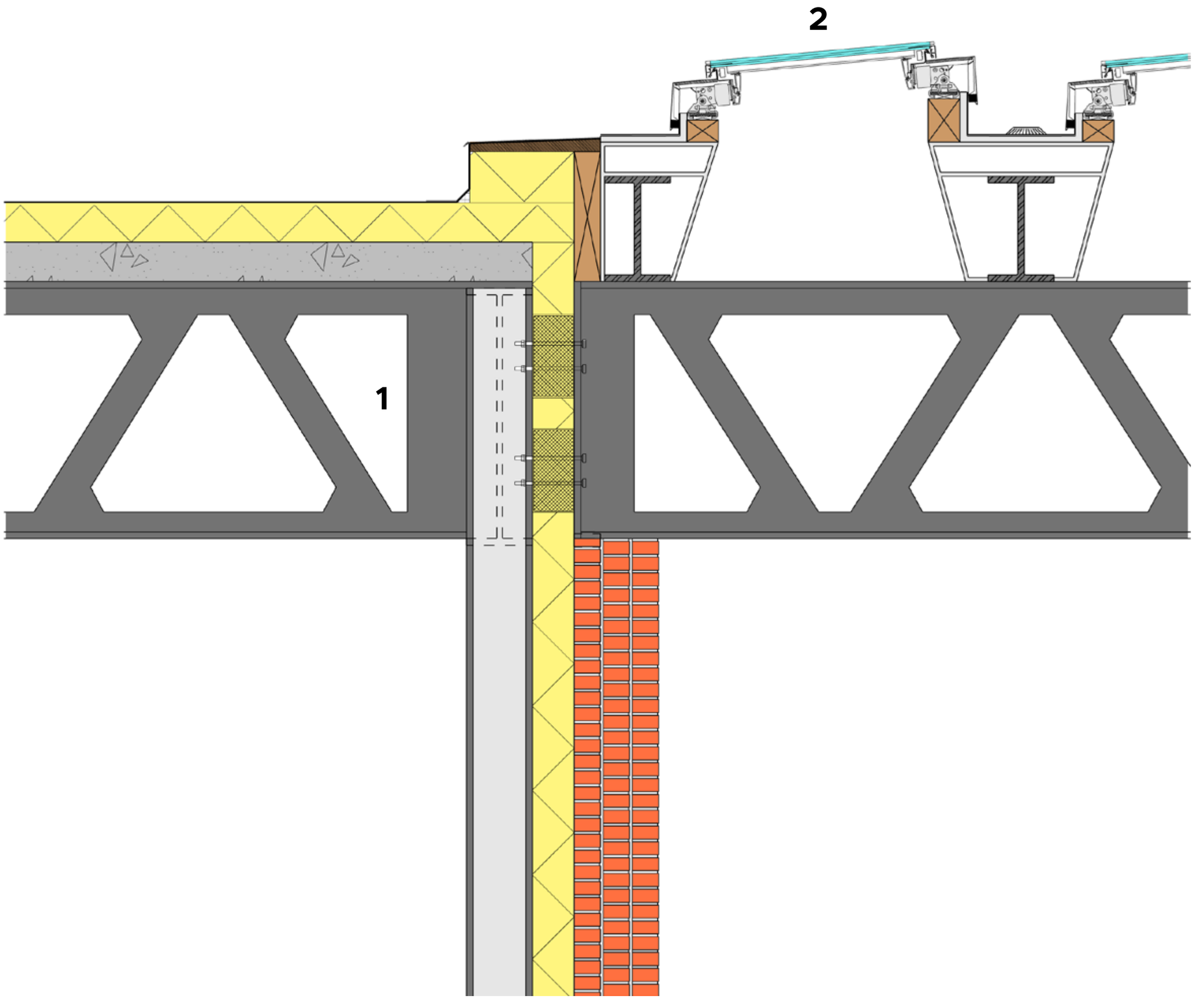
3 structural steel beam h=1000mm
reinforced concrete roof slab 150mm
rigid insulation 150mm
waterproofing membrane



1:20 Detail - Atrium Structure

1 structural beam h=1000mm
max span ~18m
structural column 250mm
Isokorb structural thermal break 100mm
structural beam h=1000mm
max span ~18m
brick masonry sub-structure

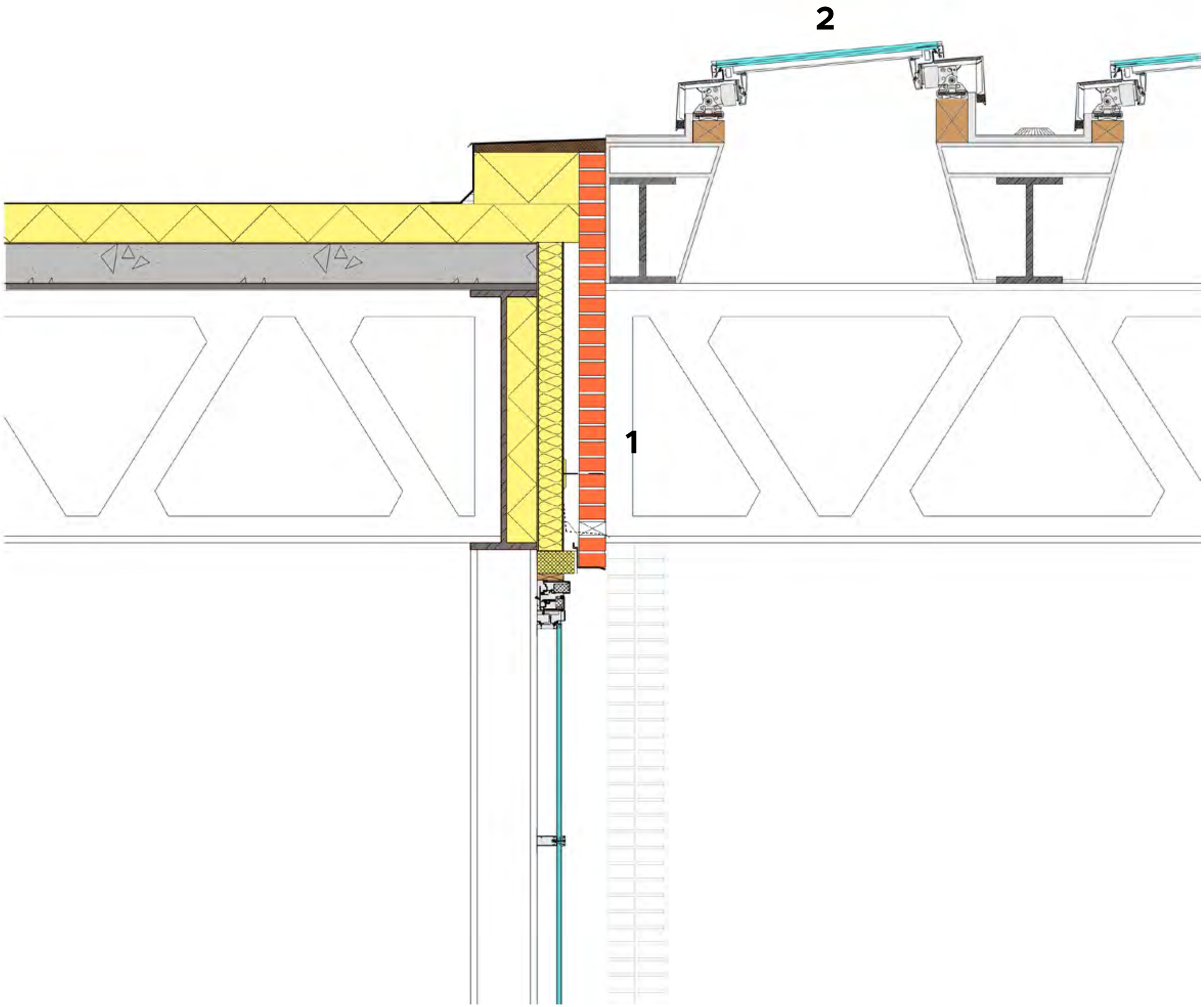
2 laminated inner panes 5mm
argon filled cavity 10mm
low-E coating
outer pane safety glass 3mm
photocatalytic coating



1:20 Detail - Atrium (wall/glass facade side)

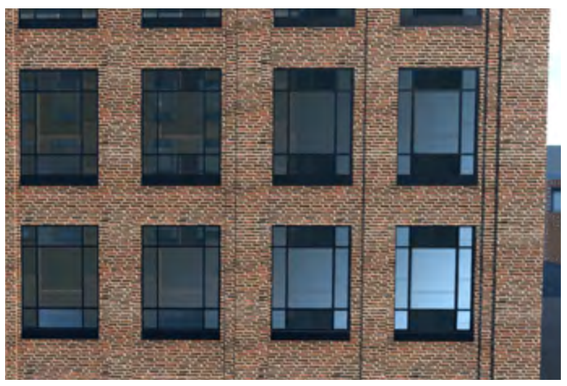
1 brick masonry 100mm
brick tie
ventilation cavity 50mm
weep hole + flashing
insulated structural panel 100mm
rigid insulation 150mm
steel joist h=1000mm w=250mm

2 laminated inner panes 5mm
argon filled cavity 10mm
low-E coating
outer pane safety glass 3mm
photocatalytic coating



FACADE MATERIAL

Reference to Quaker Building's characteristics

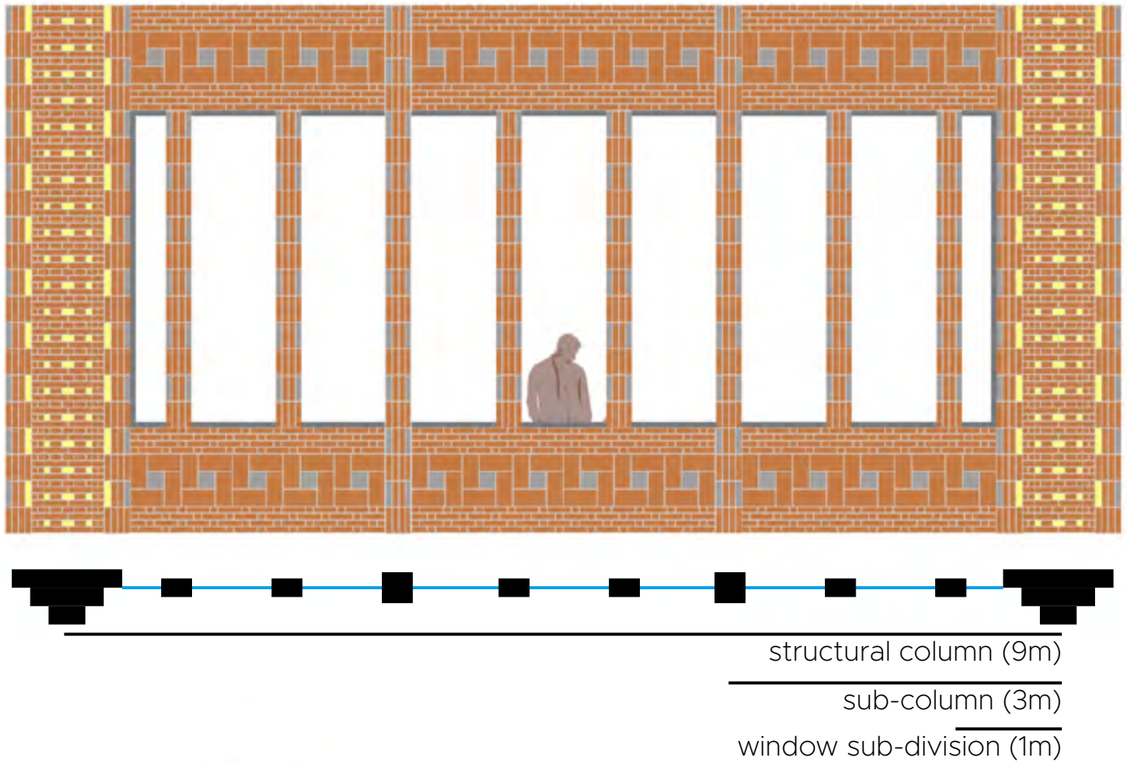


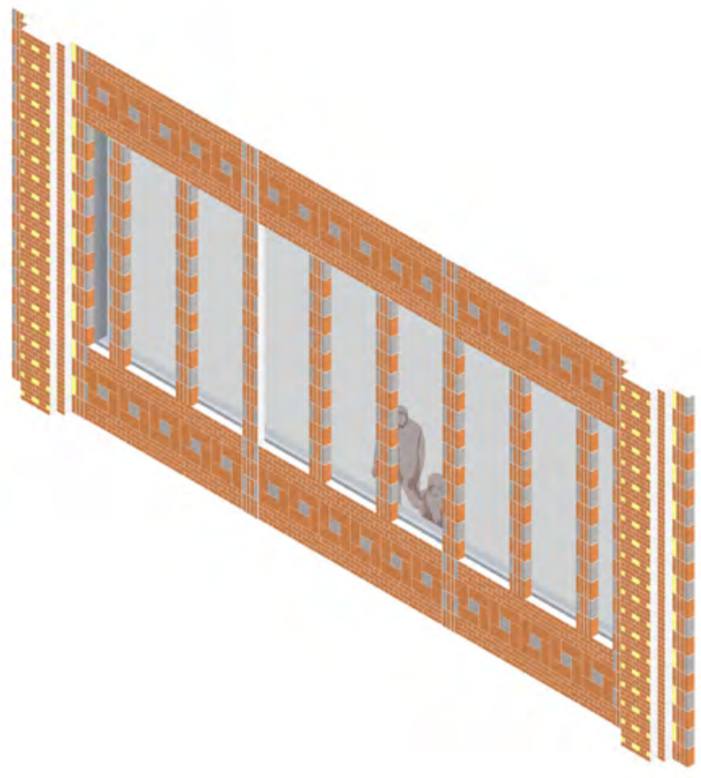
- 1 metre wide major vertical elements
- 3 metre span distribution.
- cascaded layers defining the contour of the vertical element
- recessed window position

- distinct white horizontal element defining the roofscape.
- overhanging element that defines the pattern of the roof vicinity.
- facade variation using materials of multiple colour shade

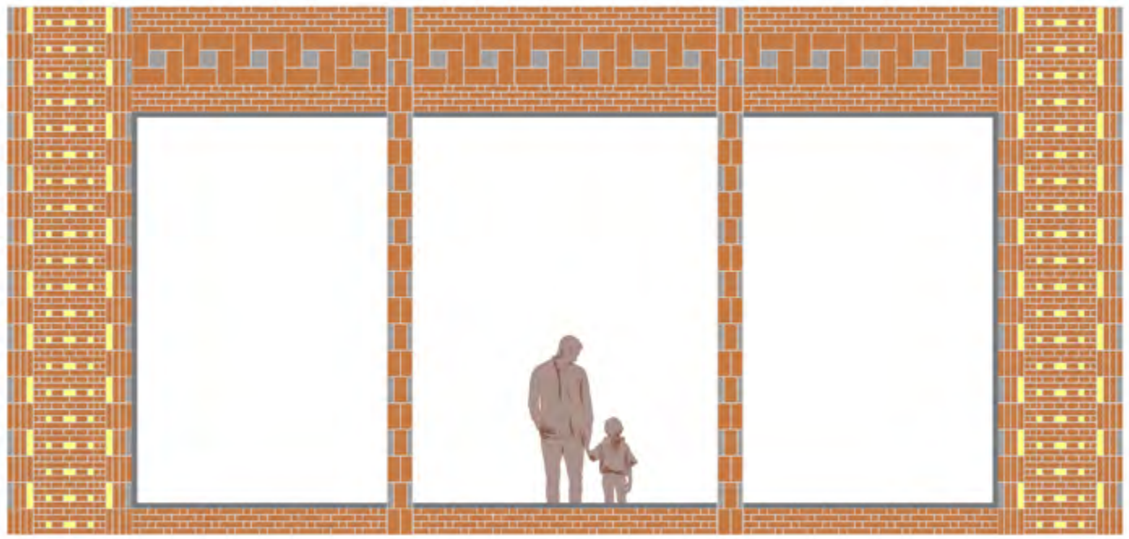
Facade study 1: Introverted space (dense brick elements)

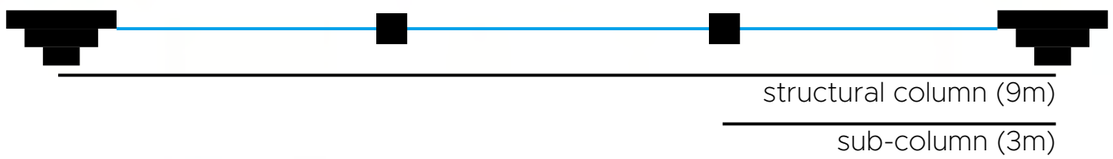
9m span structural column; 3m span sub-column; 1m span window sub-division



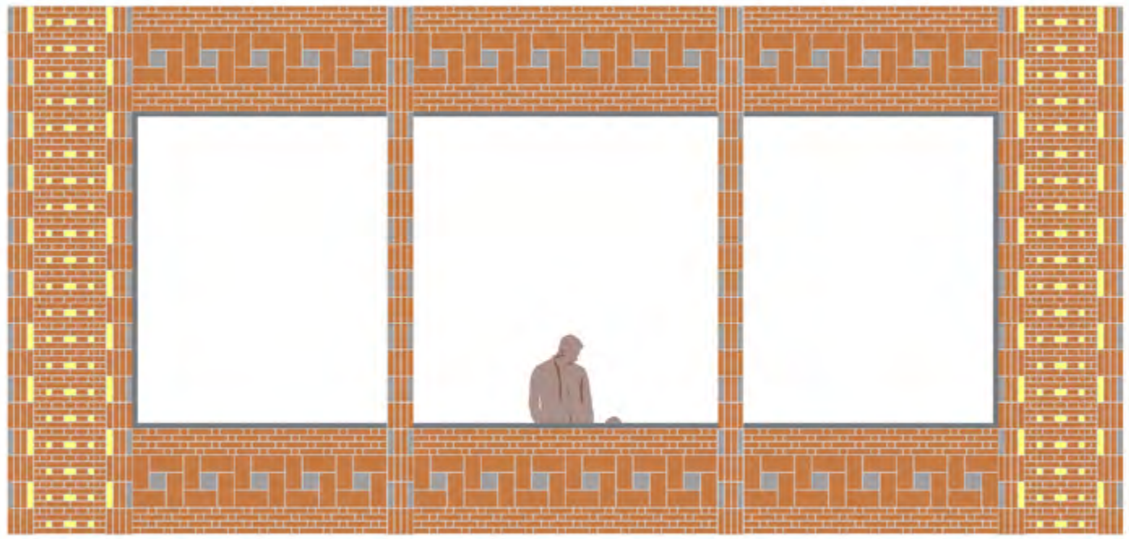


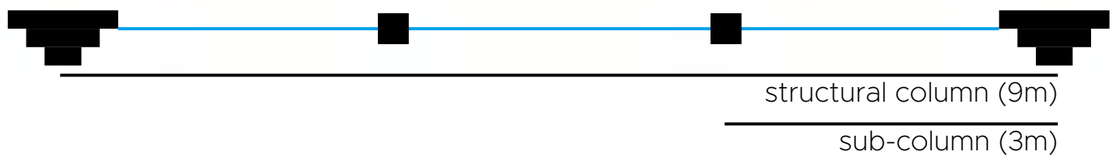
Facade study 2a: Extroverted space (curtain wall)

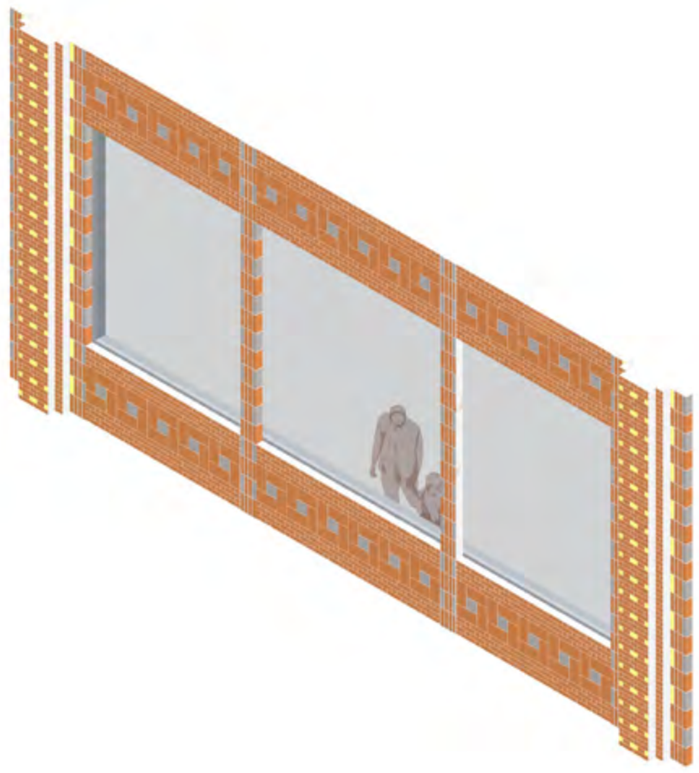




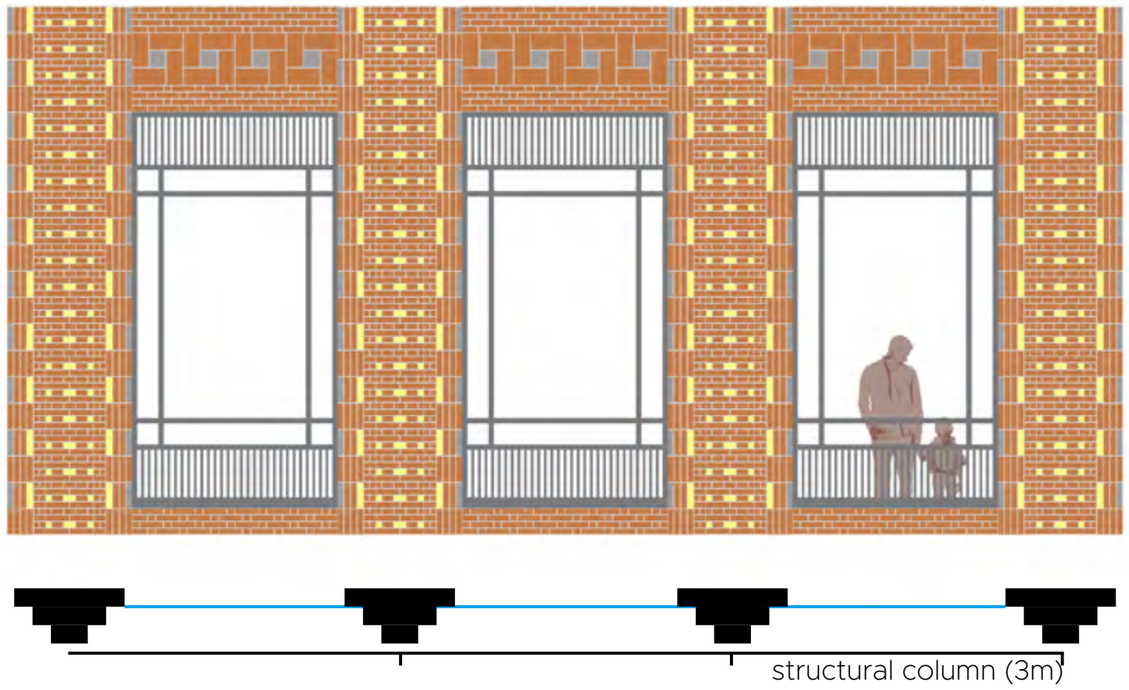
Facade study 2b: Extroverted space (curtain wall; with low wall)

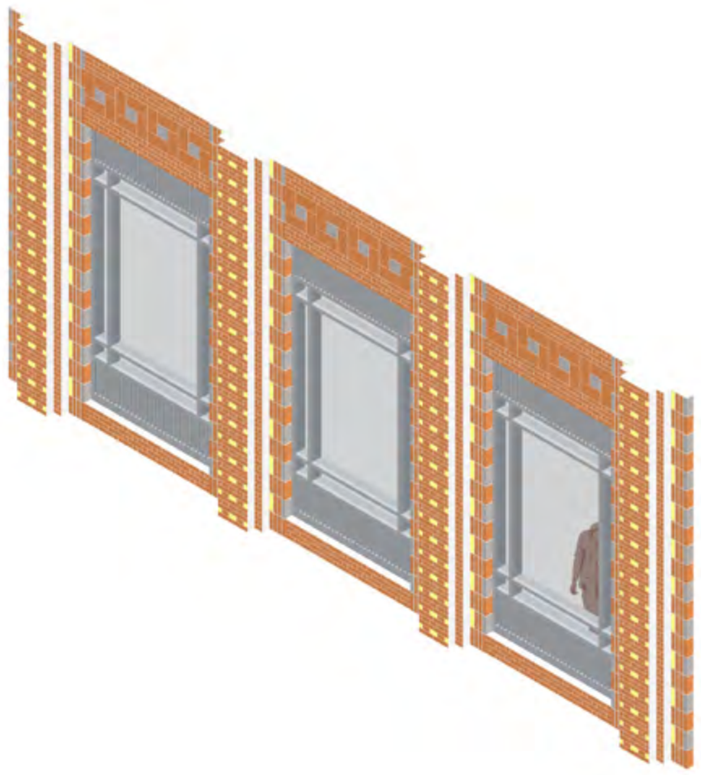




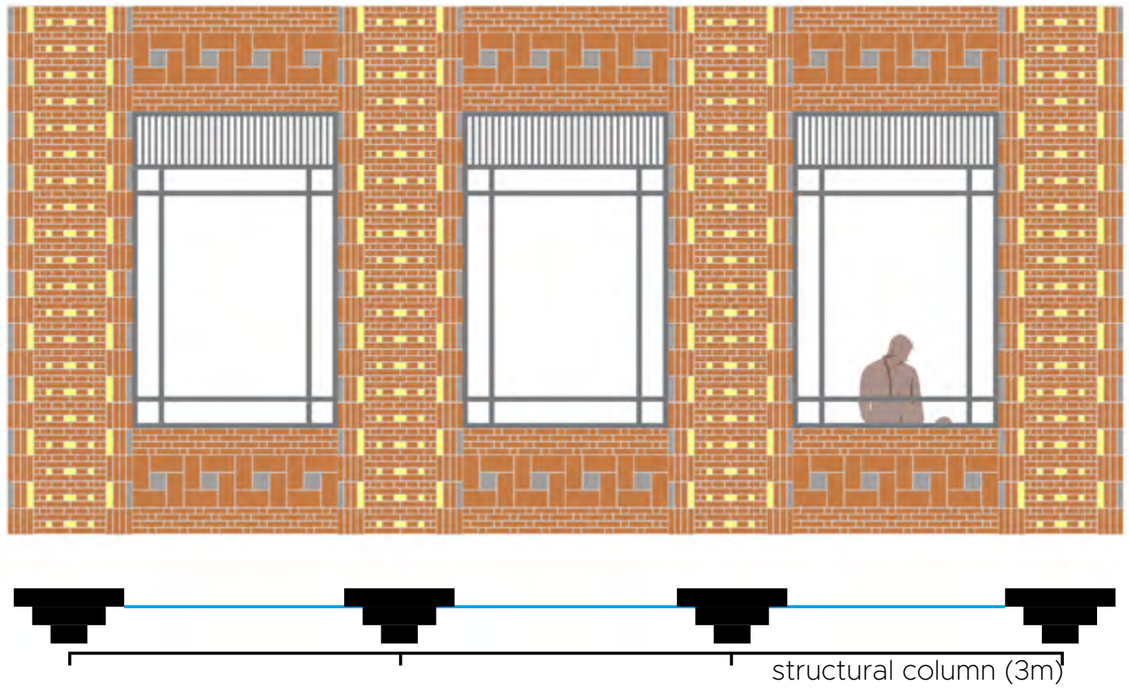


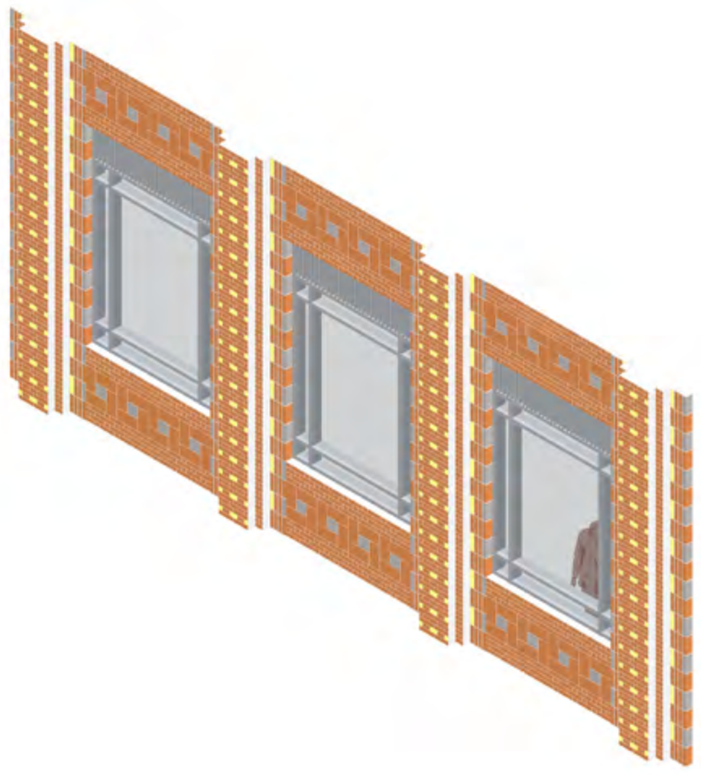
Facade study 3a: Ambiverted space



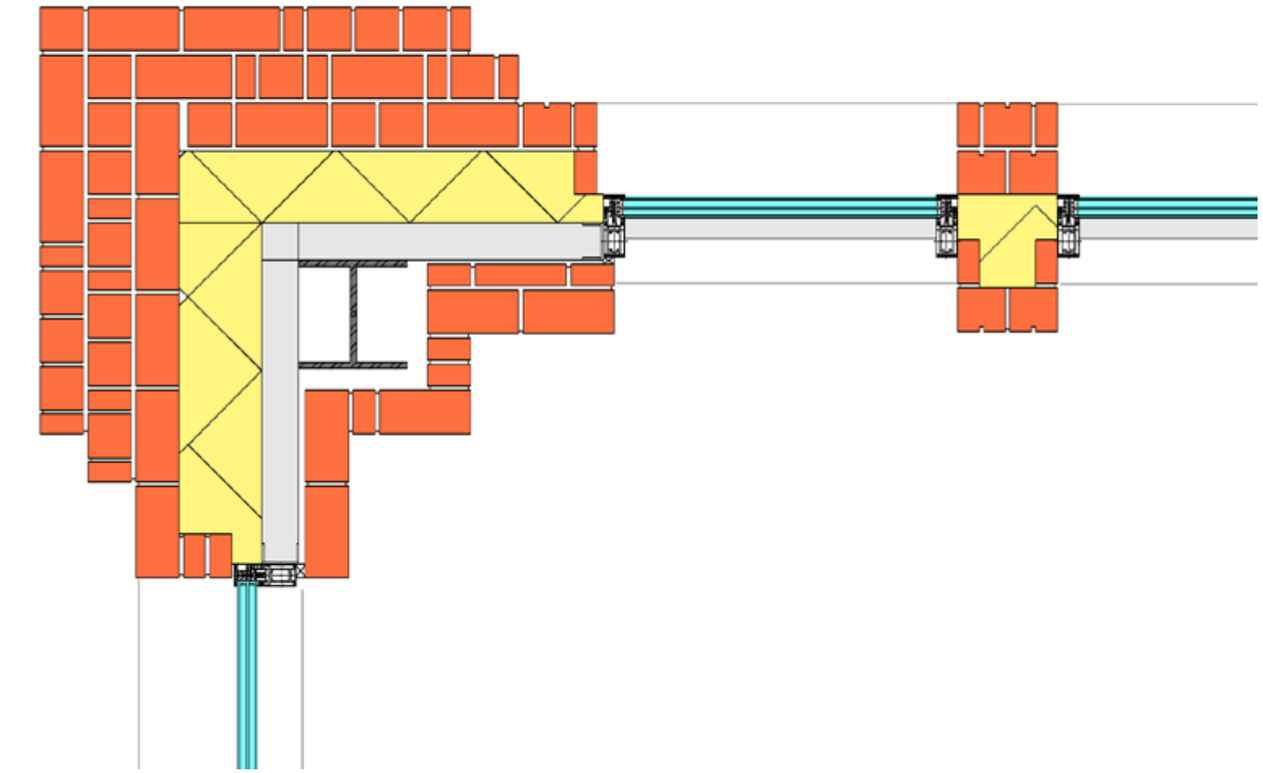


Facade study 3b: Ambiverted space (with low wall)

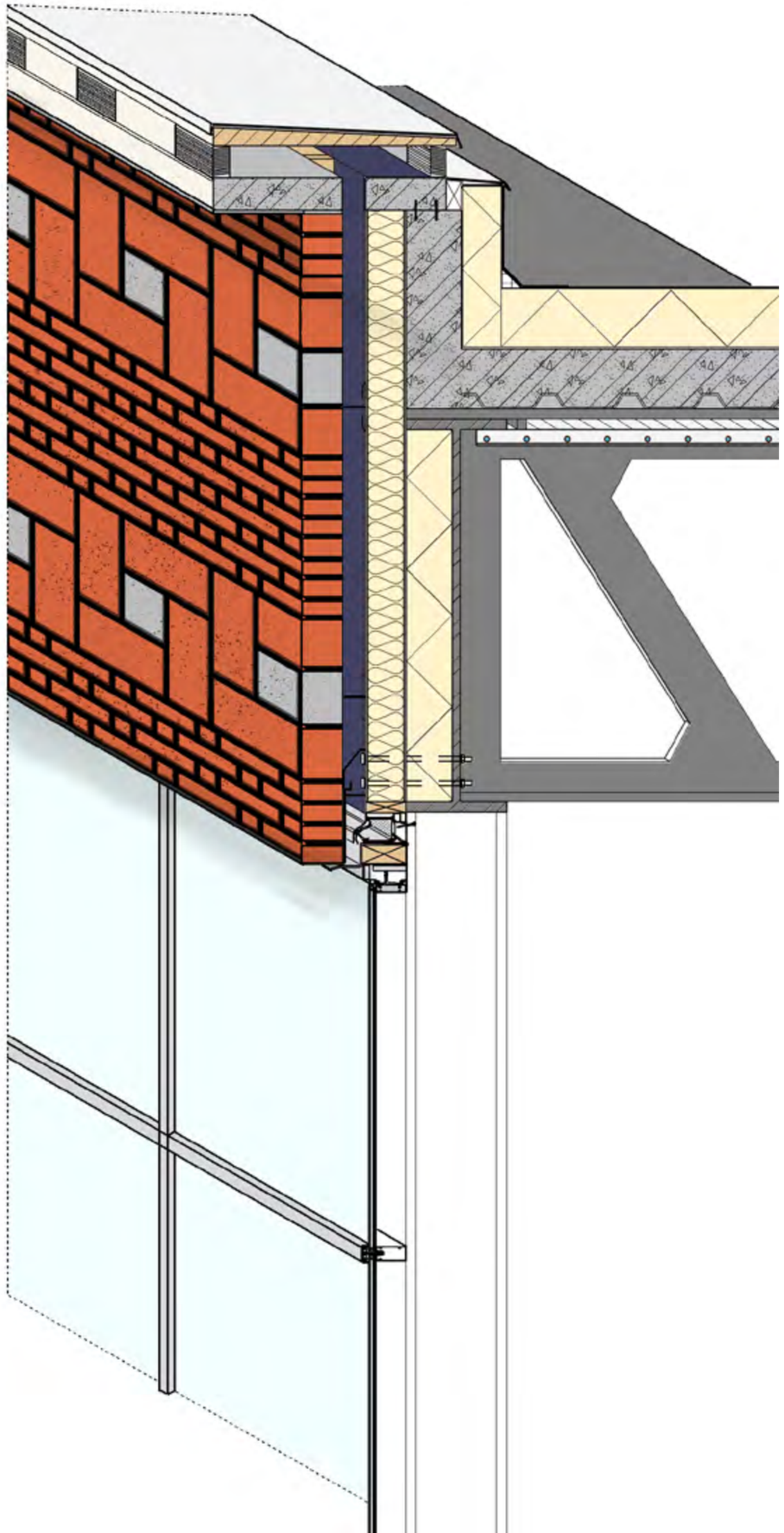


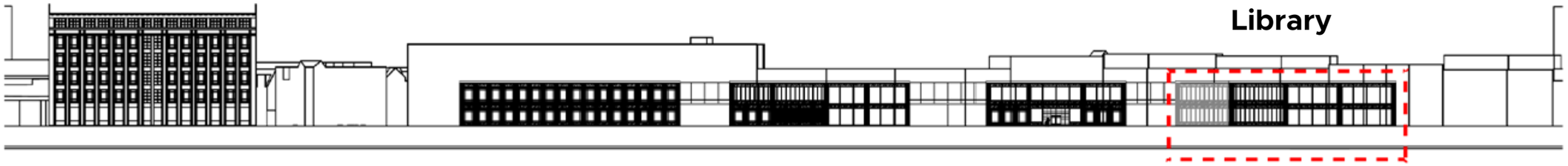


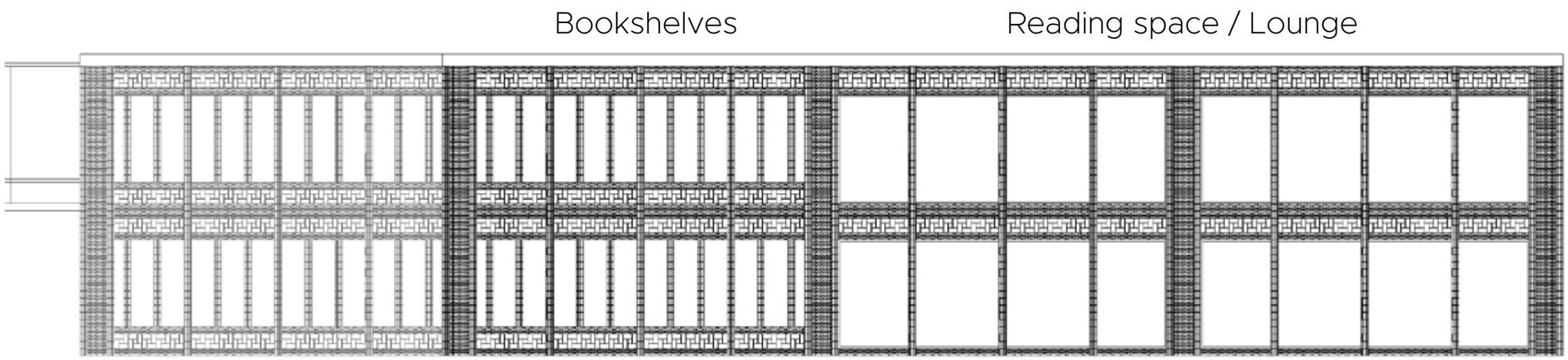
1:20 facade horizontal section

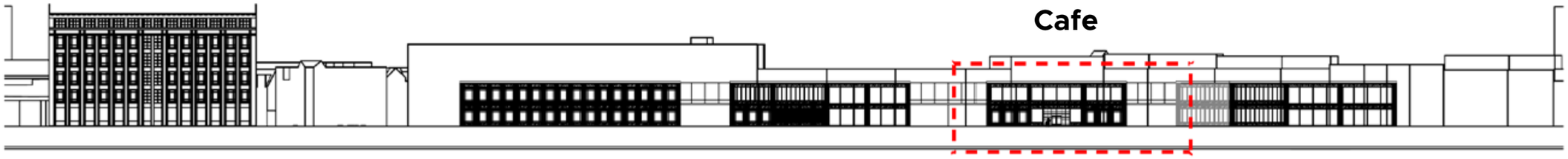


1:20 facade vertical section

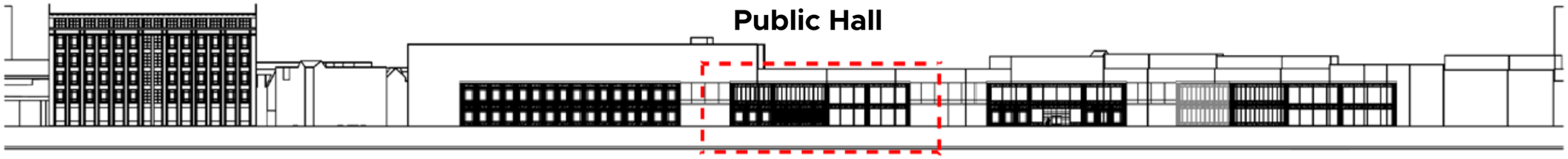


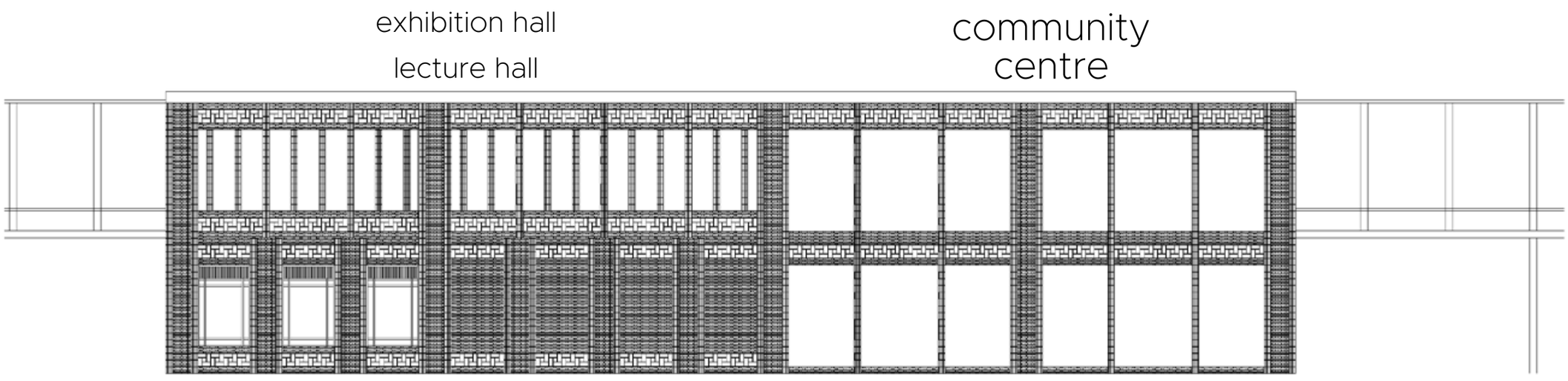

Library

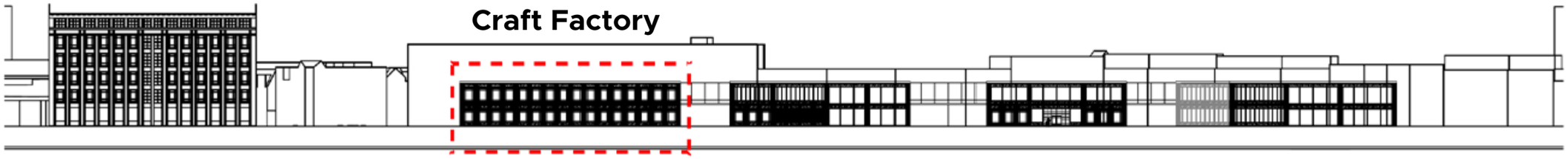

Bookshelves
Reading space / Lounge



waterfront viewing cafe seats

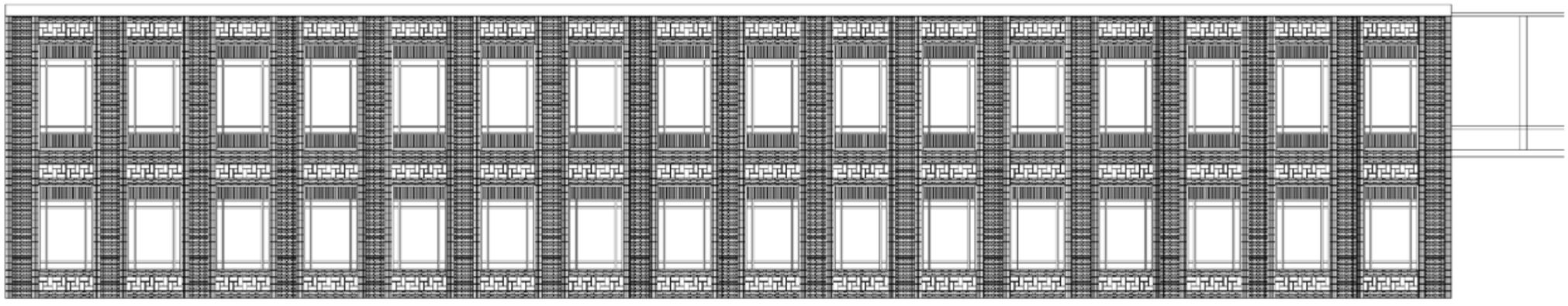

Public Hall


exhibition hall
lecture hall
community
centre



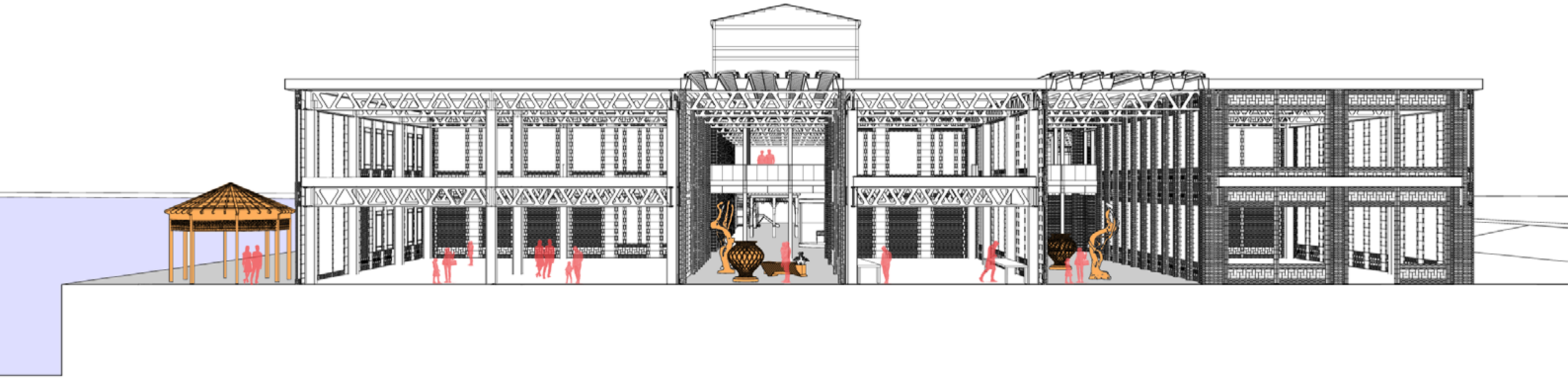
wood-& metalcrafts studio

production machine hall



Inside The CRAFT Museum

Cross Section Exhibition Concept of In-between Spaces

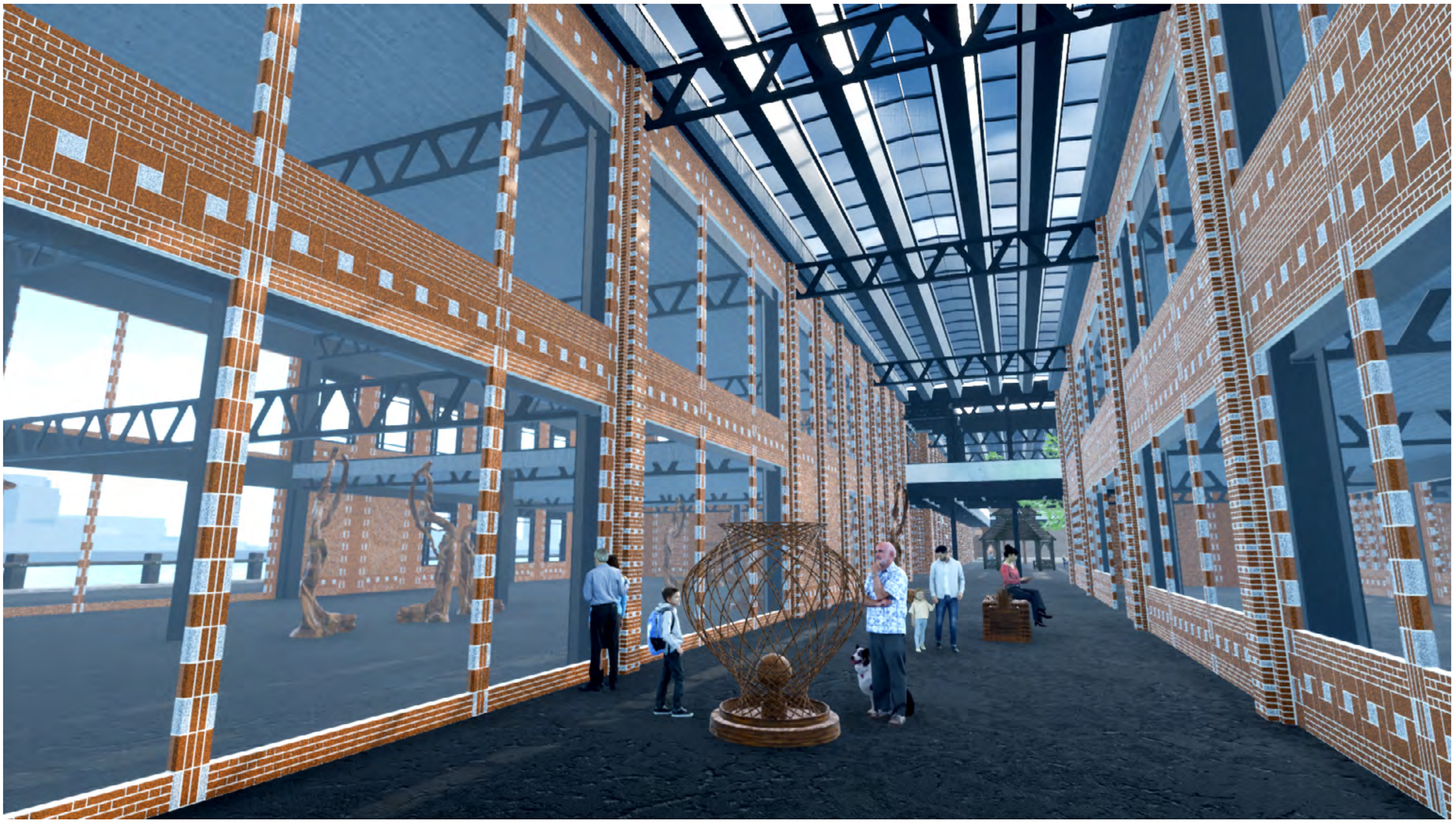


3D Render of Exhibition In-between Spaces

3D Render of Exhibition In-between Spaces

3D Render of Exhibition In-between Spaces

3D Render of Exhibition In-between Spaces



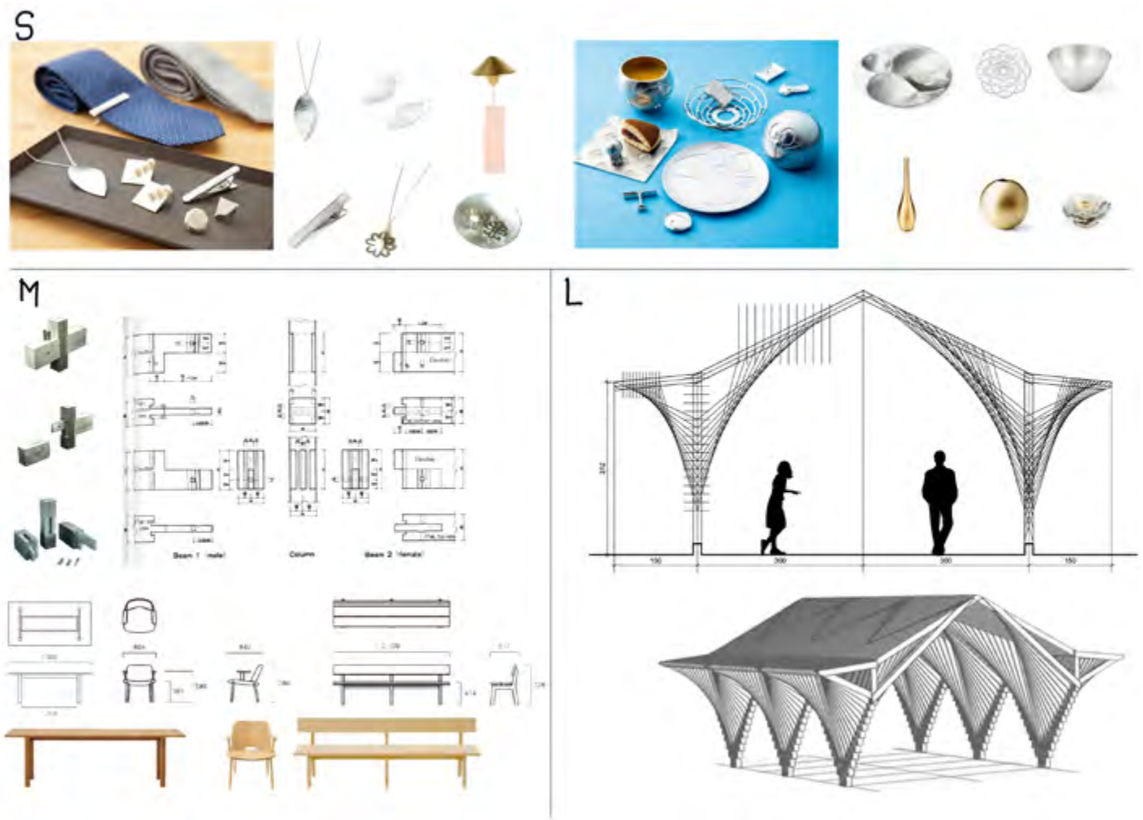
3D Render of Exhibition In-between Spaces

CONCLUSION & REFLECTION

The Re-wired Museum

Multiplicity of access networks with in-between spaces

Multiplicity of crafts of art



Multiplicity of modes of exhibition

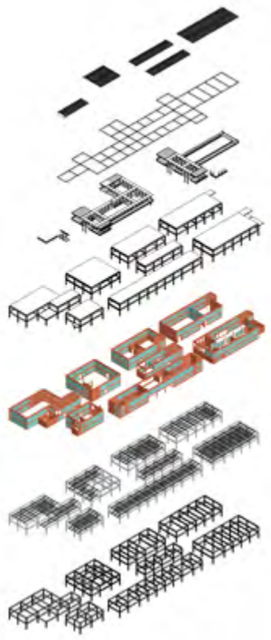
in situ installation
(University of Toyama Faculty of Art and Design, Space Design A studio)

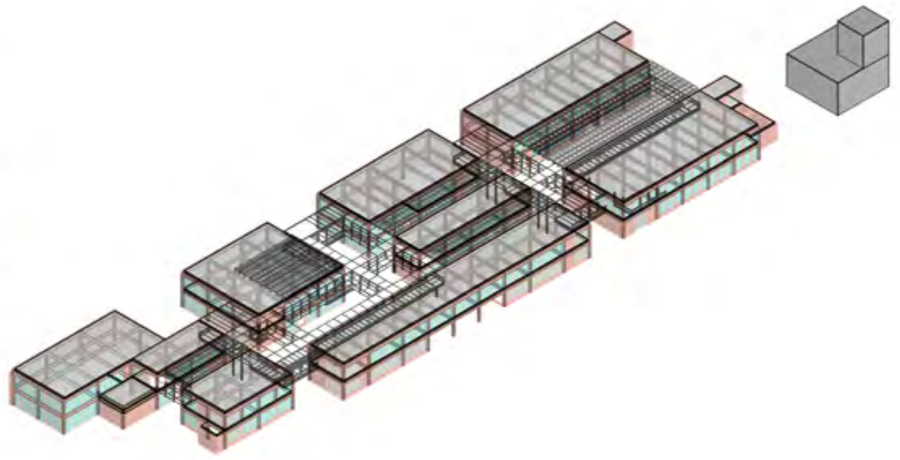
open space interactive exhibition
(Dutch Design Week)

Crafts as educational material
(Gereedschapmuseum Mensert)

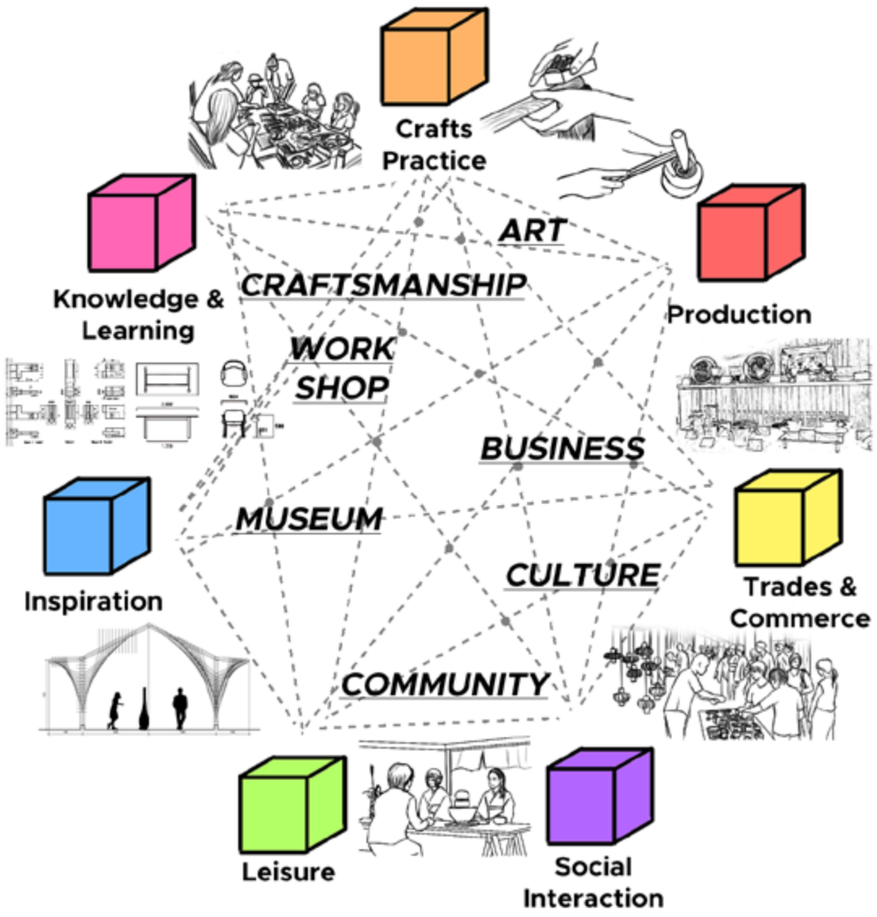
Shop display of daily life crafts
(Chikiriya Craftswork Shop)

Multiplicity of material and construction flexibility





Multiplicity of re-wired programs



CRAFT Museum Rotterdam-Zuid

Community-based **R**elational **A**rt **F**actory **T**arwewijk

Final Reflection

Challenges and dilemmas during the graduation studio

Reflecting on the design process up until P4 in overall, the biggest challenge has been on developing a workable and easy to understand architectural language while at the same time attempting to consolidate the complexity of the museum design on the scale of both spatial design and various programs of the individual cluster components. Finding a balance of spatial complexity and simple legibility of the architectural elements requires comprehensive study approach on multiple scales, which is rather a challenging task to do with limited resources due to the restrictions during the work from home period. The restriction of design process and presentation on small computer screen has limited the effectiveness of approaching the design with proper grasp of the scale. Therefore, understanding and evaluating the consequences of any design decisions required considerably longer time to do.

The integration of considerations on the topic of materiality, building construction, and climatization into the design has also been a very challenging dilemma that also added to several delays in making well-reasoned design decisions. As an international student coming from outside Europe, the most significant challenge during the first half of design concretisation stage has been the need for extra time to search for reliable source of references, to understand the unfamiliar European standard of building construction system, and to research the know-how of using bricks as a building material.

Relationship between research and design

Since the design part of the studio has been done as a reaction to the outcomes of the site and theoretical research, in overall I evaluate that research and design are highly relevant to each other in this graduation studio. The design proposal attempts to apply the new museum brief in the site-specific context of the neighbourhood of Tarwewijk and the South port of Maashaven. The new museum is designed as a public space with multiple roles of not only an exhibition space for works of art, but also as a collaborative centre of art education and production through craftsmanship. The design also aims to react to the findings by proposing a medium to augment the local interest in cultural activities and translate that into an opportunity to empower the people with knowledge and skills in the fields of art.

Despite the aforementioned challenges on the design concretisation stage, the continuous feedbacks and support from the responsible tutors have guided me to acquire the necessary know-how to address the design challenges and give more relevance to the design decisions based on the research results.

Relationship between your graduation project to MSc AUBS and the wider social, professional and scientific framework.

As a part of the graduation studio course offered in the MSc. AUBS programme, I believe that the project is very relevant to the academic field of Architecture. The graduation project has been relevant as an academic study to consider the dynamicity of spatial boundaries and function in the public sphere. As an academic project, the studio promotes a multi-faceted architectural design of public space in response to the increasing dynamic constructs of contemporary society. However, despite the studio's aim to reconsider space in public realm as a whole, the title of the studio topic for the academic year of 2020-21 has also been rather restrictive by framing the idea of "public space for art" to the limited boundaries of museum typology. Although students were indeed allowed to construct novel proposal of how the NEW museum system will work, the topic could have rephrased the "museum" label to allow for more liberty of research options of public space aimed at promoting works of art.

In relation to the wider social and professional aspect, the project may serve as an inspiration to rethink the way public space architecture is planned and designed. The research part of museum typologies and the relationship between public space and cultural life may provide insights on how the boundaries between public architecture and public life often do not intersect each other. The current construct of public architecture often comes with some form of restriction of accessibility. The public architecture is thus, in economics term, not a public goods due to its excludability. This project offers a proposal to reconsider a museum system as an element of streetscape in urban life with gradational permeability while still taking account the necessity to restrict certain parts of the museum as private zones.

Final Overall Reflection

In summary of the final reflection, the graduation studio has been a fruitful opportunity for me to pursue the following personal learning objectives as an international student:

- Study the transitional boundaries between indoor/outdoor and public/private spaces
- Explore the design of public built environment as an extension of the immediate urban environment, blending the spatial experience as a part of the surrounding streetscape.
- Learn integrating techniques of building technology (construction, climatization, materiality) and details as a holistic part of the architectural design.

For this project, I focused on the objectives of learning the important technical principles of the building as a construction system and programmatic relationship between spaces. Therefore, the design of project admittedly comes with limitations regarding a more thorough consideration on possible alternatives from aesthetic point of view and optimum modes of presentation of the artworks in the museum.

In the event of possible future continuation of this research with more time and resources, the project may be improved by involving other experts in the relevant in the fields, such as exhibition curators and crafts artisans in the design process. This will enable the project design to better bridge the needs of various stakeholders involved in the operation of each museum components, thus developing the museum's performance as a multi-faceted melting pot of art and crafts activities.

Evaluation on the building aesthetics may also involve objective research experiment involving the general public to assess the spatial impression that common people outside the architectural field receives. The experiment may be developed based on the existing 3D model of the project that is ready for interactive simulation in virtual reality environment. Through the implementation of this sort of simulation, the design may be assessed on the following parameters:

- Weather and seasonal change (e.g. dynamic daylighting, routing in rainy scenario, night time artificial lighting)
- Impression of the space quality in 3-dimensional environment from better representation of eye level height and closer 1:1 scale of the whole building complex. This may also involve experimentation on the curation of the exhibitions and assessment on how they affect the building experience in terms of visual aesthetics and volumetric scale.

The benefit of using VR in this case is the cost-efficiency for preliminary assessment of the overall building visual experience. Nonetheless, more accurate assessment of non-visual parameters such as touch of materiality, wind speed, temperature, and noise level will require the use of experiment using partial 1:1 physical model of the crucial elements on the site. All in all, the graduation project design has served as a testbed to outline the possible architectural language in terms of spatial relationship of the museum components, materiality and façade expression, building construction, and climatization concept. Developments on possible alternatives of the museum setup that can be designed with this architectural language requires further objective research involving experts on related fields at stake.