

# RE-IMAGINING AMSTERDAM NEW WEST: IMPROVING RESIDENT SATISFACTION THROUGH ADAPTIVE REUSE OF CHRISTIAN RELIGIOUS HERITAGE

*Adaptive reuse of the disused 'Kerk van het nieuwe verbond' in slotermeer to improve resident satisfaction*

*Nienke Smit  
Resourceful housing - adapting 20th century heritage*

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## PROBLEM FIELD

Contemporary use of  
Christian religious heritage

Low resident satisfaction  
in Amsterdam New West

Decreasing adherents of Christian  
denominations leaving an **immense  
building stock unused**  
(Faro & Miceli, 2019)

Religious heritage is **too valuable to warrant demolition**,  
because of the contribution to the creation  
of identity for the location, individuals and groups  
(Davison & Russell, 2017)

Disused religious heritage sites are **easy targets  
to vandalism and environmental decay**  
(Velthuis & Spennemann, 2007)

**One in every four churches falling into  
disuse in the Netherlands**  
(MOCW, 2020)

**The Netherlands** has one of the **highest  
concentrations of Christians religious  
heritage** per inhabitant in Europe  
(MECS, 2021)

**Amsterdam New West** has undergone  
a transformation from a reputable district to one  
grappling with a **deteriorating reputation**.  
(Mepschen, 2012)

**Amsterdam New West ranks notably lower at resident  
satisfaction and liveability** in comparison  
to other districts within Amsterdam.  
(Bos & Dignum, 2022)

**Amsterdam New West consistently scores low** in  
social cohesion, resident prosperity, the condition  
and maintenance of buildings, feelings of safety,  
and environmental pollution.  
(Bricknesse, 2023)

RESEARCH  
QUESTION

# RESEARCH QUESTION AND DEFINITIONS

## MAIN RESEARCH QUESTION

What attributes should an adaptive reuse strategy for Christian religious heritage incorporate to enhance resident satisfaction in Geuzenveld-Slotermeer and Osdorp, considering residents' values and needs?

## DEFINITIONS

### **Adaptive re-use of heritage**

"The Adaptive Reuse (AR) of heritage buildings is a complex process, which aims to preserve the values of heritage buildings while adapting them for use in the present and transferring them to the future."

(Hedieh Arfa et al, 2022)

### **Christian religious buildings**

A church is a building for Christian religious activities

(Cambridge dictionary)

### **Resident satisfaction**

Neighborhood appreciation of the residents established by different factors such as safety, social interaction, amount of diverse facilities, quality and maintenance of the built environment.

(Bos & Dignum, 2022)

## IMAGINE BALLARAT METHOD

### **Imagine Ballarat**

What do you love in Ballarat?

What do you image for Ballarat?

What do you want to retain?

*Buckley, Cooke, & Fayad (2015)*

*Using the historic urban landscape to re-imagine Ballarat: The local context*

### **Imagine Osdorp & Geuzenveld Sloterveer**

What do you love in your neighborhood?

What makes you feel at home in your neighborhood?

If you were to take us anywhere in your neighborhood, where would you take us?

What makes you feel included in your neighborhood?

What do you imagine for your neighborhood?

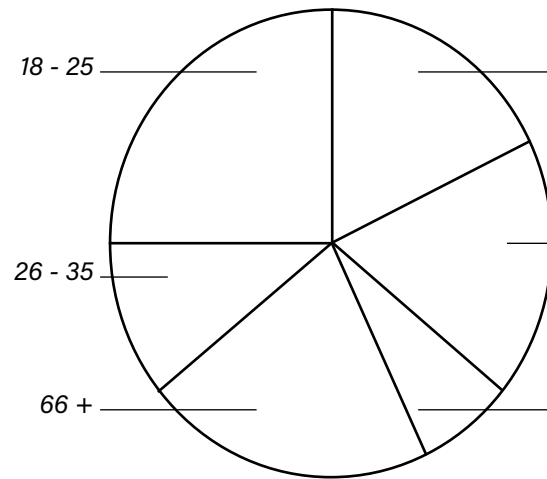
What do you want to retain in your neighborhood?

How would you describe your neighborhood in one word?

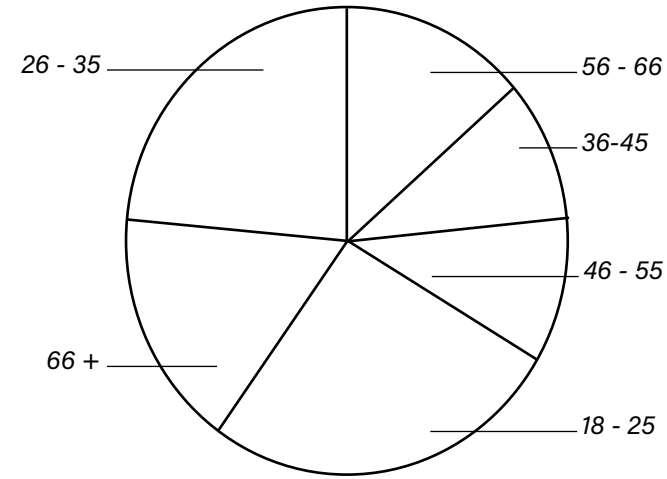
# DEMOGRAPHIC DIVISION INTERVIEW

26 participants Osdorp & 30 participants Geuzenveld Slotermeer

## Age

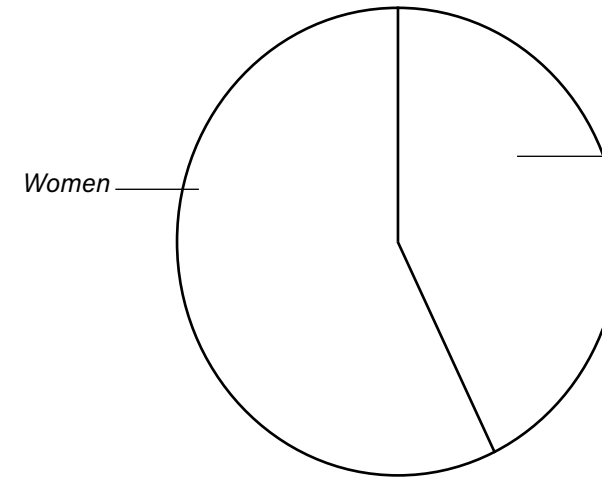


Osdorp

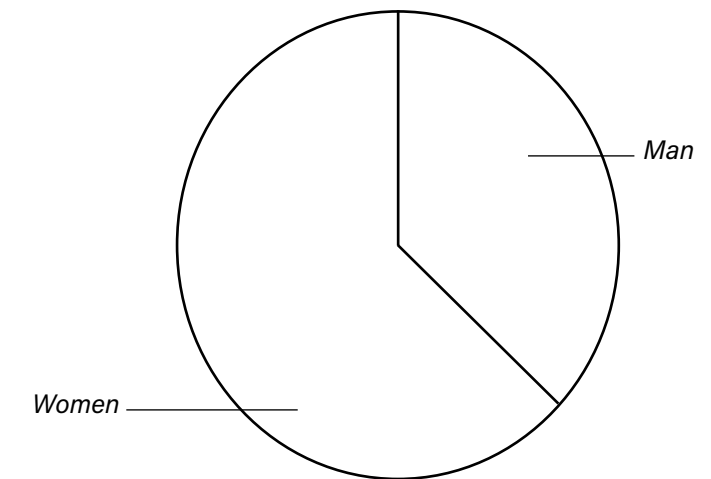


Geuzenveld Slotermeer

## Gender

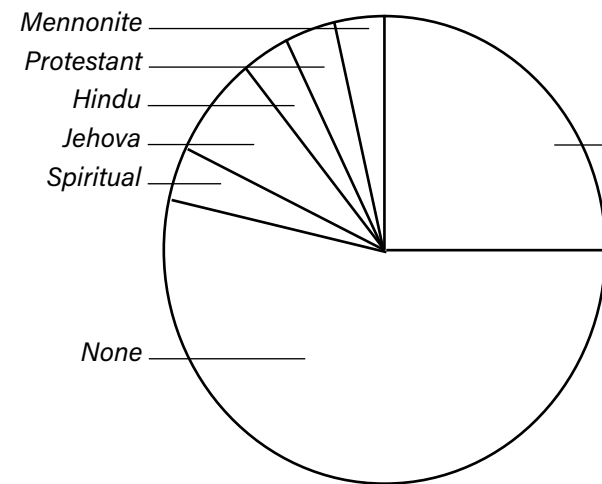


Osdorp

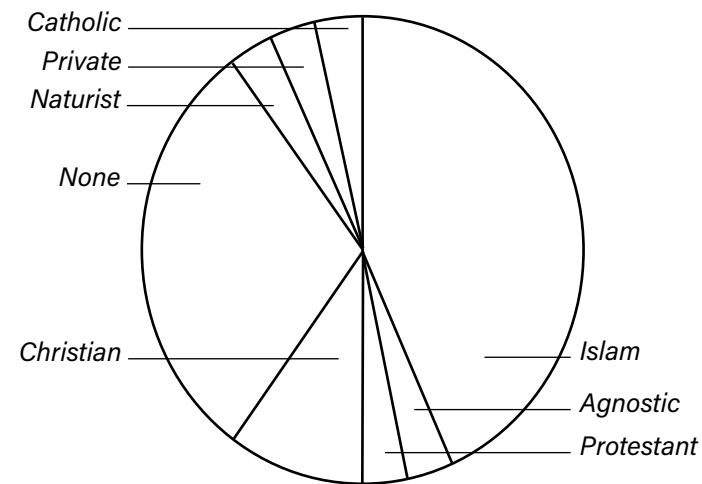


Geuzenveld Slotermeer

## Religion

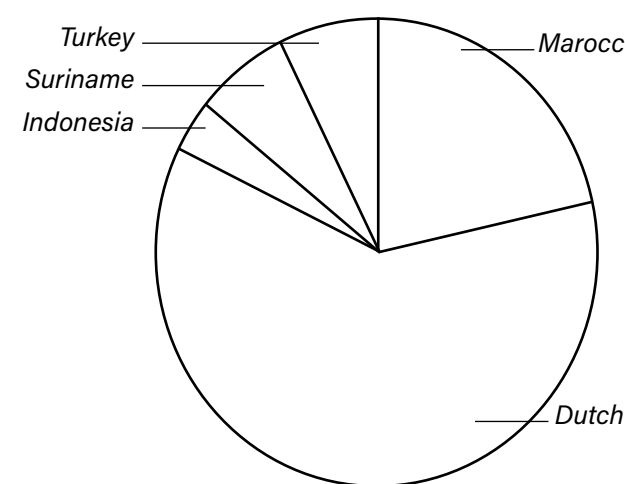


Osdorp

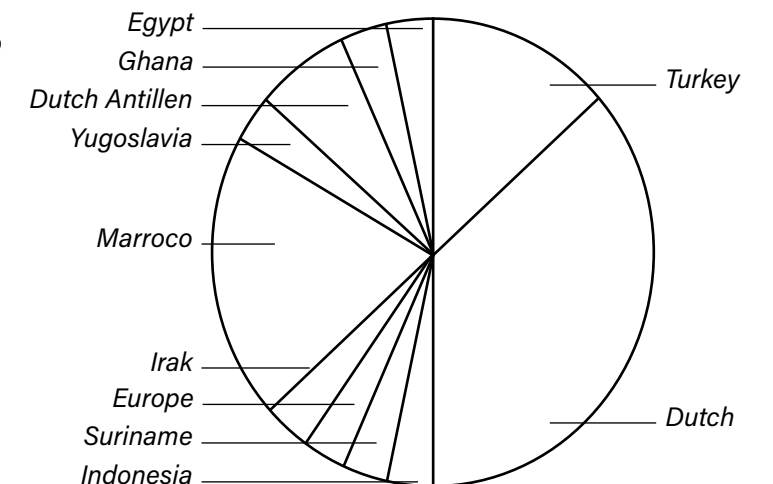


Geuzenveld Slotermeer

## Ethnicity parents



Osdorp



Geuzenveld Slotermeer

# ATTRIBUTES CLASSIFIED IN VALUE FRAMEWORK

*Q1: What do you love in your neighborhood?*

Participant 14 Osdorp: 'It's **multicultural**, especially, and that is well distributed. You **don't see a difference between rich and poor**, there are moderate incomes, **many playgrounds**, and we have a **shopping center around the corner**, at least where I live. We are satisfied."

*Q5: How do you imagine your neighborhood?*

Participant 7 Geuzenveld-Slotermeer: "**Safe** and **everyone feeling involved. Beautiful** and **green** is how I hope to see it."

*Q6: What do you want to retain in your neighborhood?*

Participant 25 Osdorp: "The **greenery**, the **water** here, the **trees**. I think it is very **beautiful**, especially in the summer people come from all over to come and spend the day here. We wouldn't want to see that go."

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	Answer	Categorized answer	Value type
Q1	Multicultural	Multicultural	Social emotional and collective Political management
	Don't see a difference between rich and poor	Income equality	Political management
	Many playgrounds	Children facilities	Economic use
	Shopping center around the corner	Nearby shops	Economic use
Q5	Safe	Safety	Political management
	Feeling involved	Social inclusion	Social emotional and collective
	Beautiful	Appearance	Aesthetical evidential
	Green	Greenery	Ecological spiritual
Q6	Greenery	Greenery	Ecological spiritual Historic-conceptual
	Water	Water	Ecological spiritual Historic-conceptual
	Trees	Greenery	Ecological spiritual Historic-conceptual
	Beautiful	Appearance	Aesthetical evidential

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## POLITICAL

Management

Social safety (17%/18%)  
 Social housing (10%/7%)  
 Progress (10%/4%)  
 Carparking (7%)  
 Traffic safety (3%/4%)  
 Diverse housing (3%/4%)  
 Single family homes (3%/4%)  
 Calm (3%/4%)  
 Public transport (4%)  
 Children safety (4%)  
 Free (3%)

18/14

## ECONOMIC

Use

Diverse shops (13%/11%)  
 Youth facilities (7%/14%)  
 Diverse facilities (20%)  
 Cultural facilities (7%/7%)  
 Greenery (10%)  
 Elderly facilities (4%)  
 Children facilities (3%)

18/10

## SOCIAL

Emotional and individual

Social recognition (10%/4%)

Emotional and collective

Recognizable (7%/7%)  
 Social inclusion (13%)  
 Conviviality (3%/7%)

Allegorical

Generational harmony (7%/11%)  
 Respect (7%)

11/8

## ECOLOGICAL

Spiritual

Greenery (10%/4%)

Essential

Renovation (13%/11%)  
 Clean (21%)  
 Appearance (10%)  
 New Buildings (4%)

Existential

Adaptive re-use (3%)

14/11

## SCIENTIFIC

Technological

Urban agriculture (3%)

1

## AESTHETICAL

Evidential

Appearance (10%/4%)  
 New buildings (4%)

3/2

Imagine attributes in Value Framework by Pereira Roders (2007)



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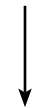
# DESIGN CONCEPTS FOR RESIDENTS NEEDS

SOCIAL SAFETY



Natural surveillance  
*(Jane Jacobs, 1961)*

SOCIAL INCLUSION

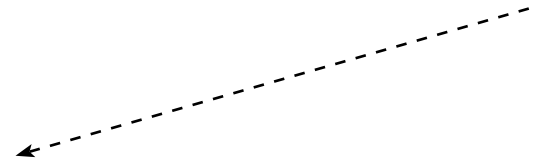


Human scale  
*(Jan Gehl, 2010)*

RENEWED BUILT ENVIRONMENT



Sustainable redesign  
*(Yanovshtchinsky et al., 2012)*



# DESIGN CONCEPTS FOR RESIDENTS NEEDS

## SOCIAL SAFETY

↓  
Natural surveillance  
*(Jane Jacobs, 1961)*

↓  
**Diverse use**  
Eyes on the street  
**Community involvement**  
Vital walk and bike roads

## SOCIAL INCLUSION

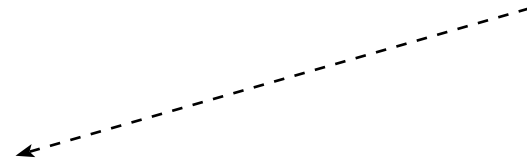
↓  
Human scale  
*(Jan Gehl, 2010)*

↓  
Detailing  
Small spaces  
Walk and bike friendly  
Framed public space

## RENEWED BUILT ENVIRONMENT

↓  
Sustainable redesign  
*(Yanovshtchinsky et al., 2012)*

↓  
Insulate  
Improve indoor climate  
Renewable energy  
Waste reduction  
Durable materials

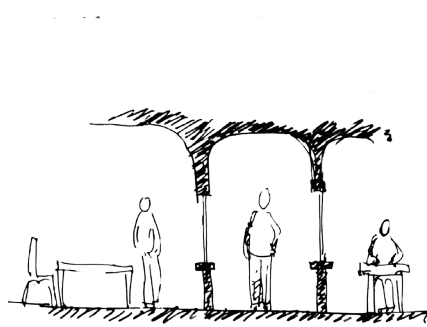


# DESIGN CONCEPTS FOR RESIDENTS NEEDS

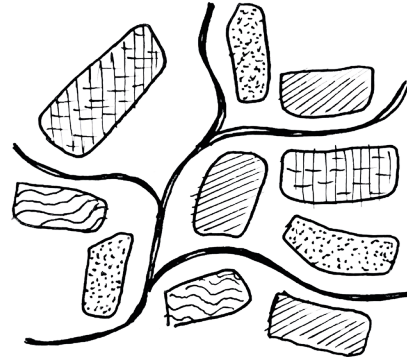
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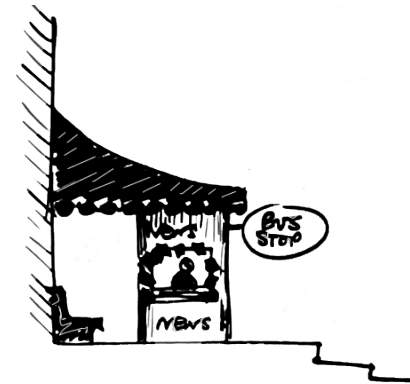
**Diverse use**  
Eyes on the street  
**Community involvement**  
Vital walk and bike roads



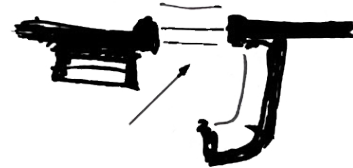
Indoor visibility  
Alexander et al. (1977)



Diverse use  
Jacobs (1961)



Vital sidewalk  
Alexander et al. (1977)  
Jacobs (1961)

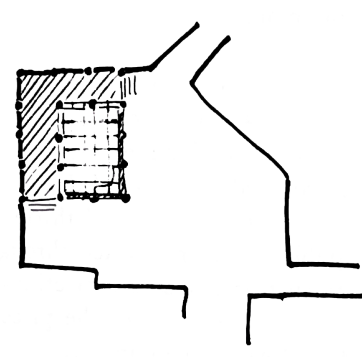


Front door bench  
Alexander et al. (1977)

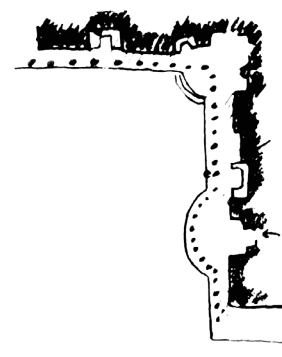
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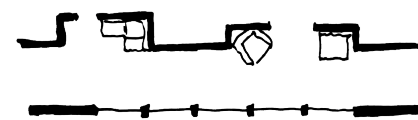
Detailing  
Small spaces  
Walk and bike friendly  
Framed public space



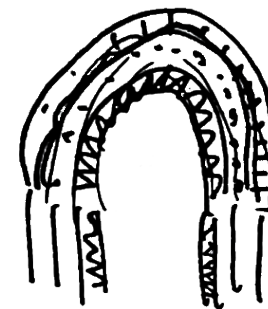
Public space layout  
Alexander et al. (1977)



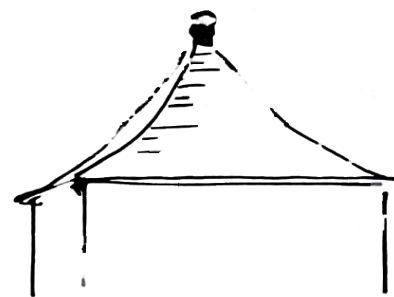
Edge of a building  
Alexander et al. (1977)



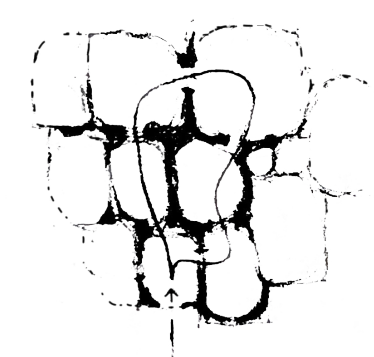
Passages as rooms  
Alexander et al. (1977)



Detailing  
Alexander et al. (1977)



Connection to the sky  
Alexander et al. (1977)

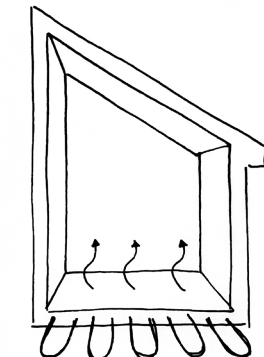


Looped routing  
Alexander et al. (1977)

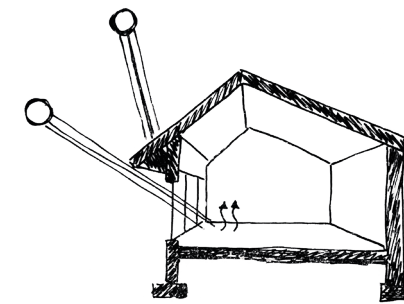
## RENEWED BUILT ENVIRONMENT

Sustainable redesign  
*(Yanovshchinsky et al., 2012)*

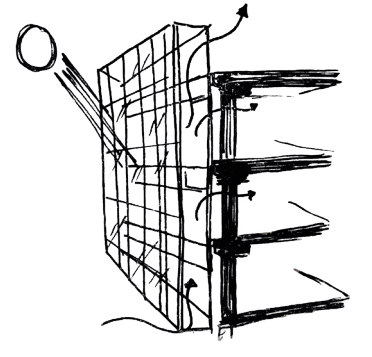
Insulate  
Improve indoor climate  
Renewable energy  
Waste reduction  
Durable materials



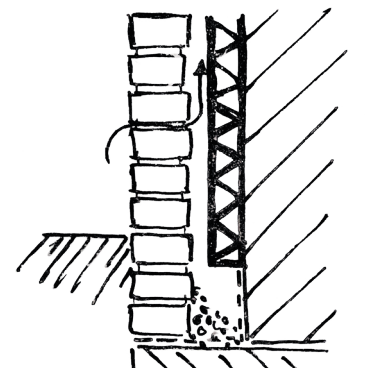
Energy efficient heating  
(Yanovshchinsky et al., 2012)



Passive heating  
(Yanovshchinsky et al., 2012)



Second skin facade  
(Yanovshchinsky et al., 2012)



Insulate  
(Yanovshchinsky et al., 2012)

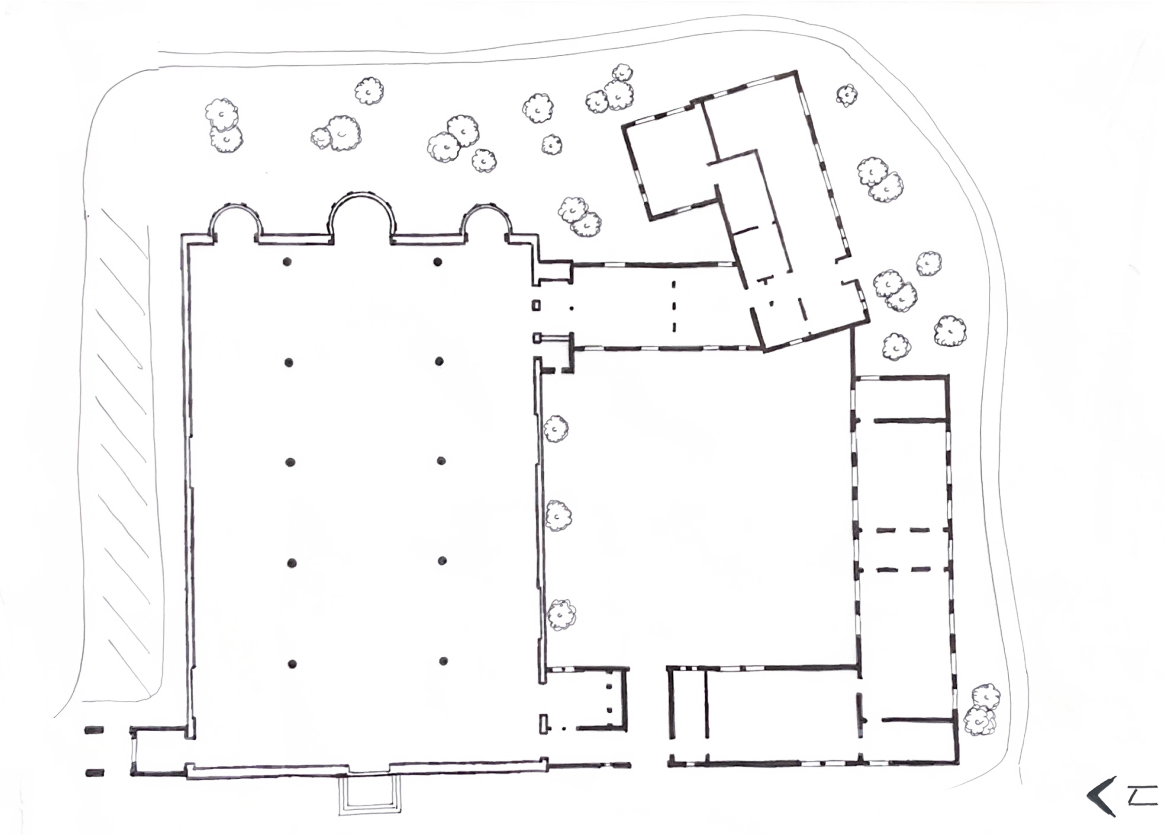


# CASE STUDY 'KERK VAN HET NIEUWE VERBOND'

## BUILDING INFORMATION

Religion: Roman-Catholic  
Year: 1956  
Designing architect: M. J. Granpré Molière  
Executing architect: Evers & Sarlemijn  
Size: 2340 m<sup>2</sup>  
Site context: Neighborhood Noorderhof in Slotermeer  
Monument: Yes, municipal

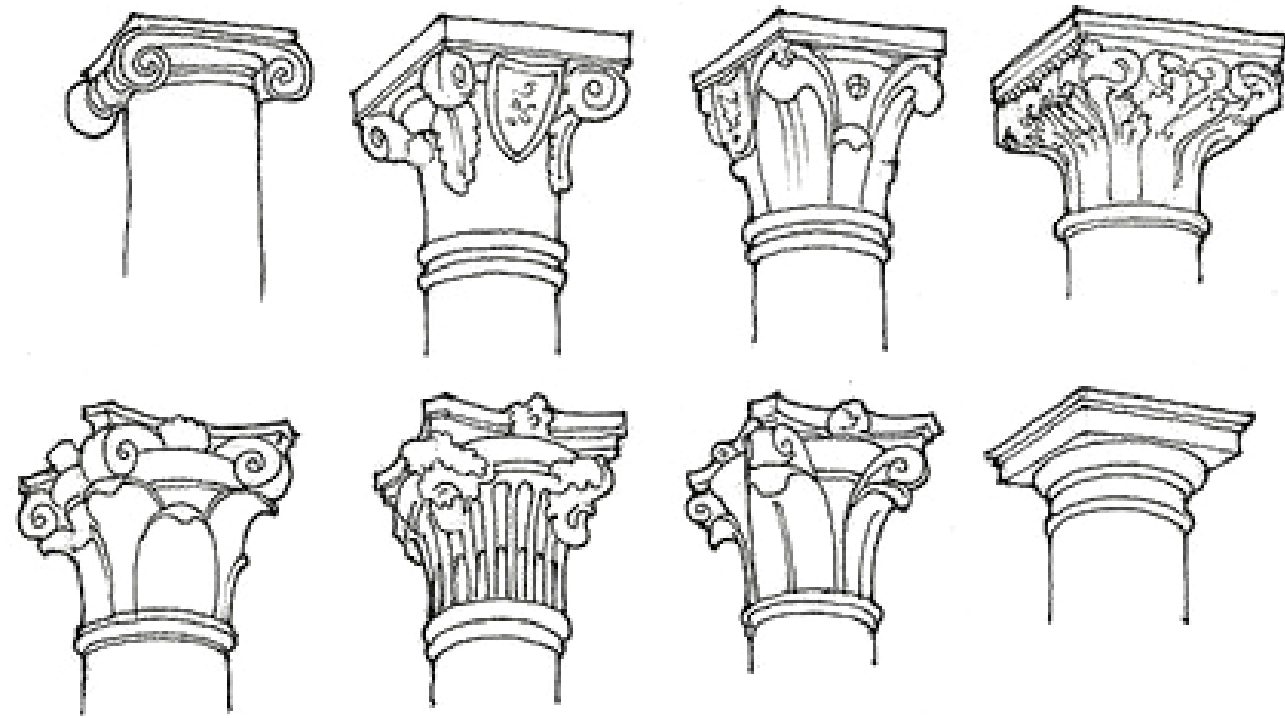
Source: Data Amsterdam & Rijksdienst voor Cultureel Erfgoed





# CASE STUDY 'KERK VAN HET NIEUWE VERBOND'

*Municipal monument explanation 'Monumentenzorg Amsterdam'*



*Cultural historic representing pillarisation Netherlands*



*'Gaaf' - Beautiful and intact*



*Oeuvre M.J. Granpré Molière*



*Bossche School Stijl unique in Amsterdam*



# CO-CREATION WORKHOP

## INCREASE IMPACT OF ADAPTIVE REUSE PROJECT ON SURROUNDING RESIDENTS

“The larger the extent of **public participation**, the higher the satisfaction of these sustainability factors.”

*Yung et al. (2014)*

Use **private-public cooperation** to maximize its sociocultural impact on the widest possible range of participants especially the local community.

*Niemczewska (2020)*

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*Niemczewska (2020)*

## FRAMEWORK FOR PARTICIPATORY DESIGN TOOLS AND METHODS *Sanders, Brandt & Binder (2010)*

### 3 types of activities

#### *Telling*

Stories and storyboarding  
Diaries  
Cards

#### *Making*

2D - collaging  
2D - mapping  
3D - mock-ups

#### *Enacting*

Game boards and game pieces and rules  
Props and black boxes  
Participatory envisioning and enactment  
Improvisation



# CO-CREATION WORKHOP

## FRAMEWORK FOR PARTICIPATORY DESIGN TOOLS AND METHODS

*Sanders, Brandt & Binder (2010)*

### 3 types of activities

#### *Telling*

Make 8 to 12 pictures of attributes that are valuable/important to you

Explain in 1 to 3 sentences why you took the picture

Goal:

Establishing the tangible and intangible attributes that residents value

#### *Making*

2D mapping to the question  
"What functions fit the qualities of this building?"

Goal:

What kind of use and function do residents envision in the case study

#### *Enacting*

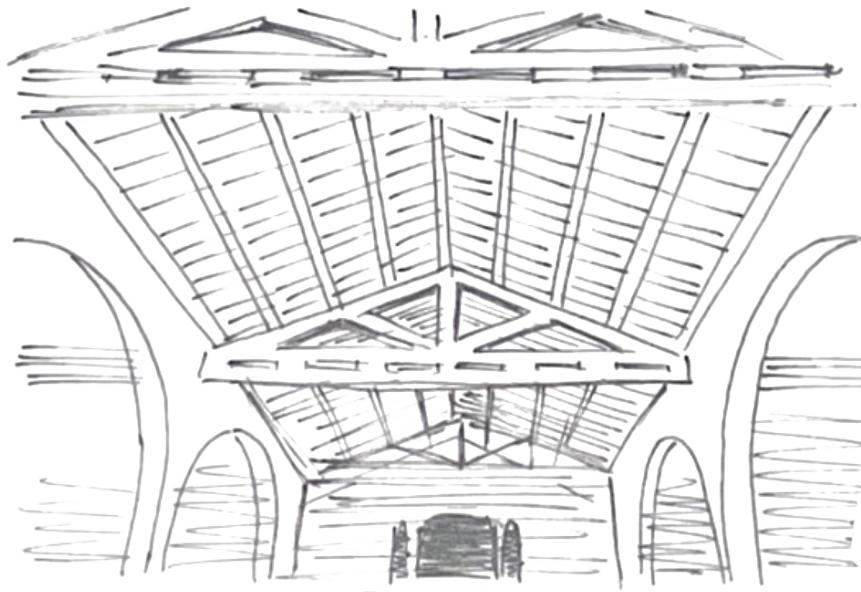
2D mapping to the question  
"If you come here again in 5 years, what is happening?"  
"If you come here again in 5 years, who will be here?"  
"If you come here again in 5 years, what will it look like?"

Goal:

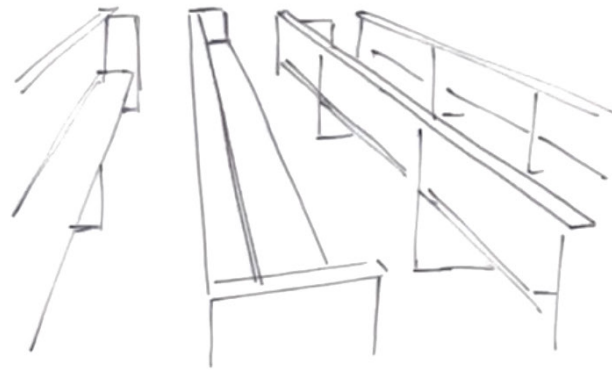
Forcing the participants to set themselves in future scenarios







"I think the inside of the building is very beautiful. I like **those colors** and the **roof**, the **lamps**, with the **construction** of the building."



"I just think these are **cool old benches and chairs**, they don't necessarily have to stay in the hall, but if they have a function. That these kinds of elements just come back somewhere."



"The atmosphere. The church has a **beautiful atmosphere**."

## CO-CREATION WORKSHOP

Results picture assignment



"I photographed the **mosaic**. That's because it beautifully reflects history. That may be something religious, but I see more of the **historical value** of it."

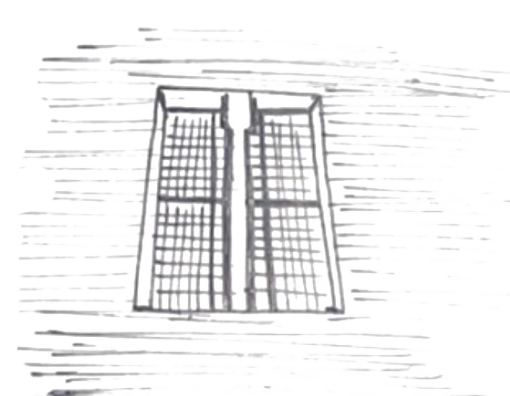
"What I like is that there is still a **Maria chapel**. For me it doesn't have to be a sleek modern building. Please save the **beautiful details**."



"A **church organ** is simply a very beautiful thing. If you were to do something with a church, you would incorporate or use the organ in some way."

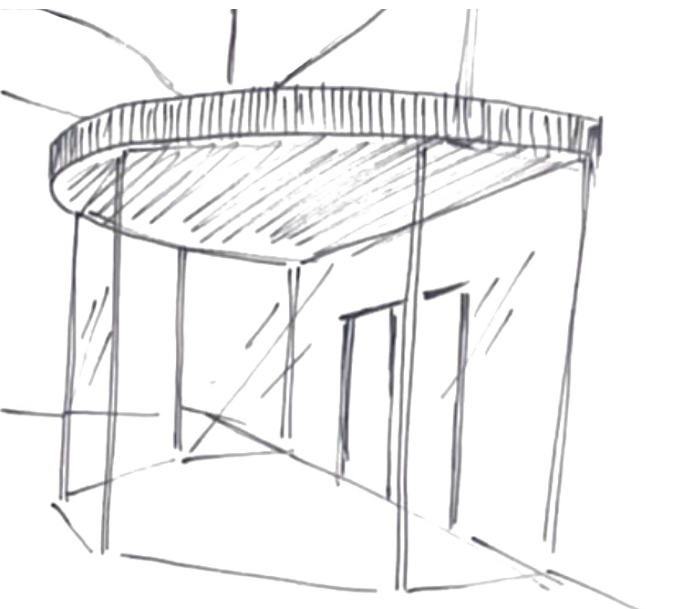
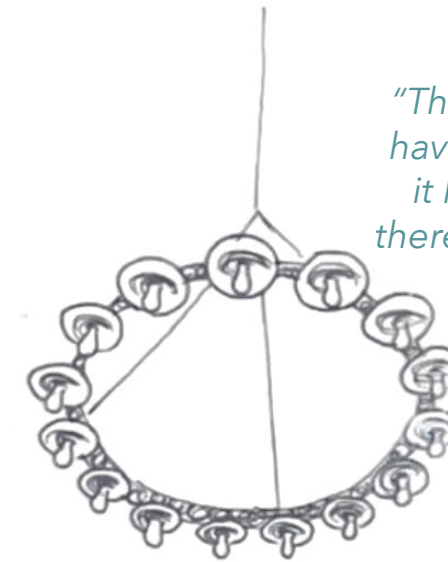


"This is really my image of the church. I live back there and those **stained glass windows** light up during activities that take place in the church."



"**Meeting space**. Being together and that the church has always been a place where people used to come together."

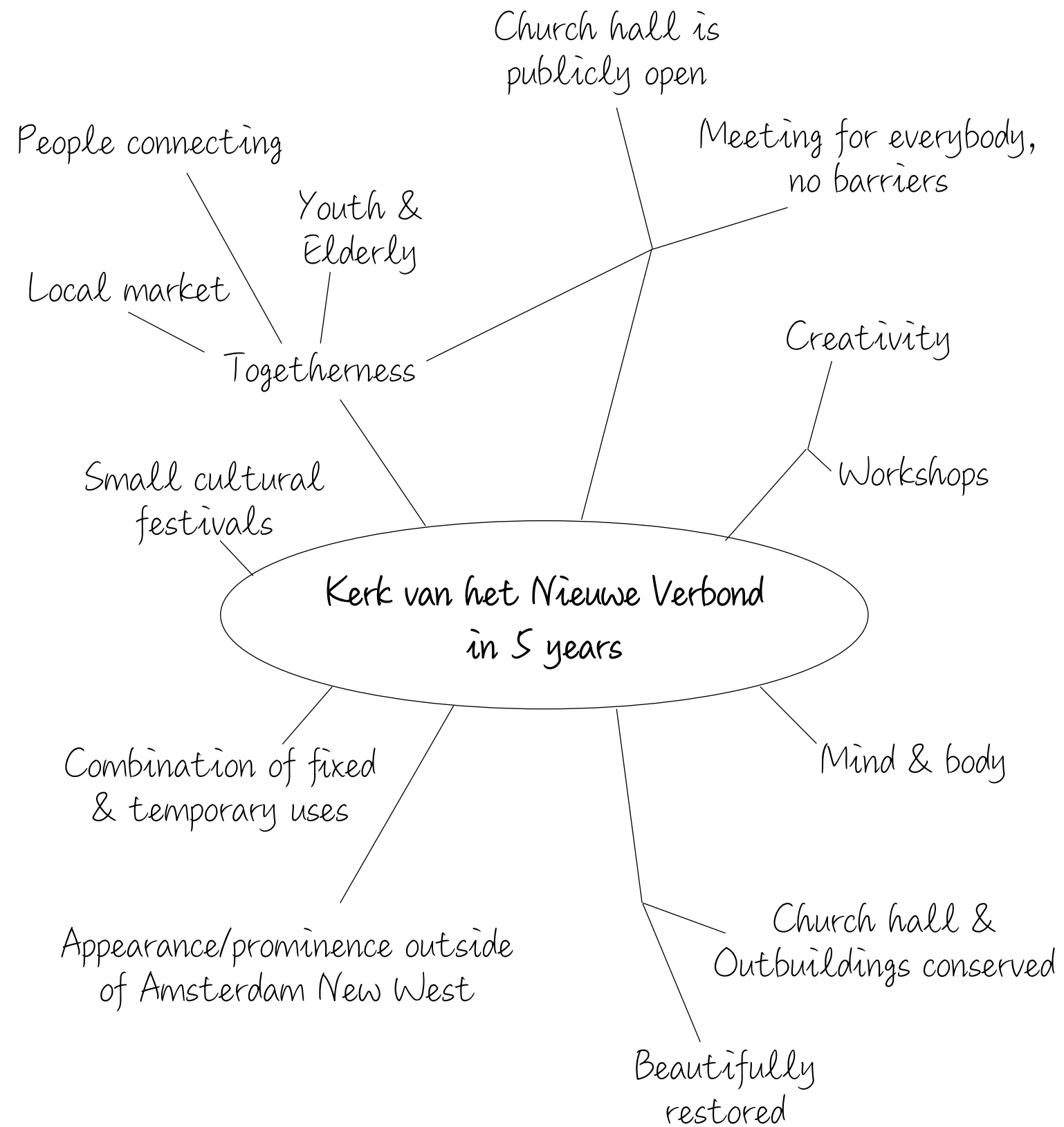
"The **chandelier**, because I always have the feeling with churches that it has to do with light. Very often there is a special light effect through the windows."



"The **glass entrance**, so that the cold stays outside."

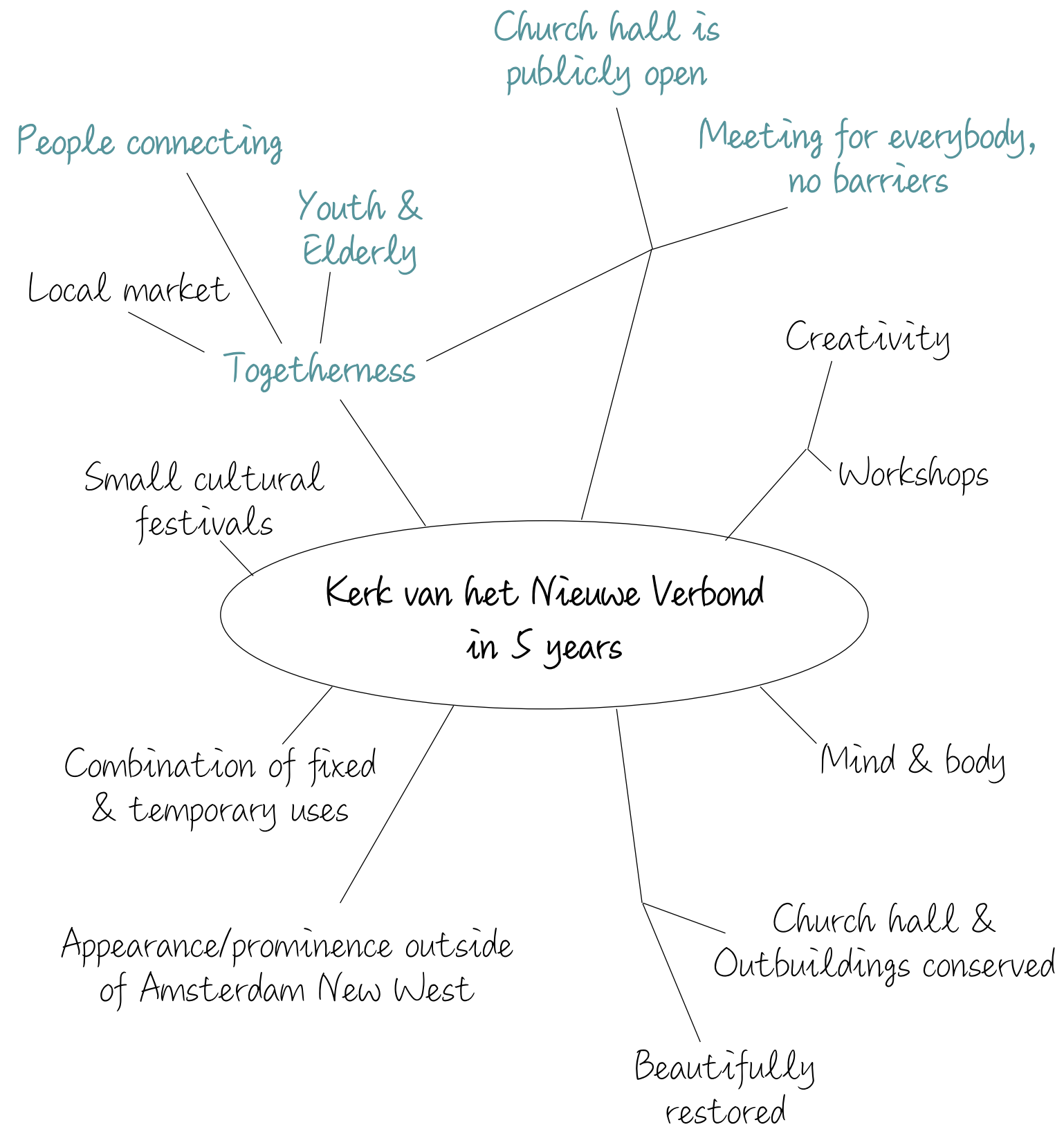
# CO-CREATION WORKHOP

Results mindmap assignment



# CO-CREATION WORKHOP

Results mindmap assignment



SOCIAL



# CO-CREATION WORKSHOP

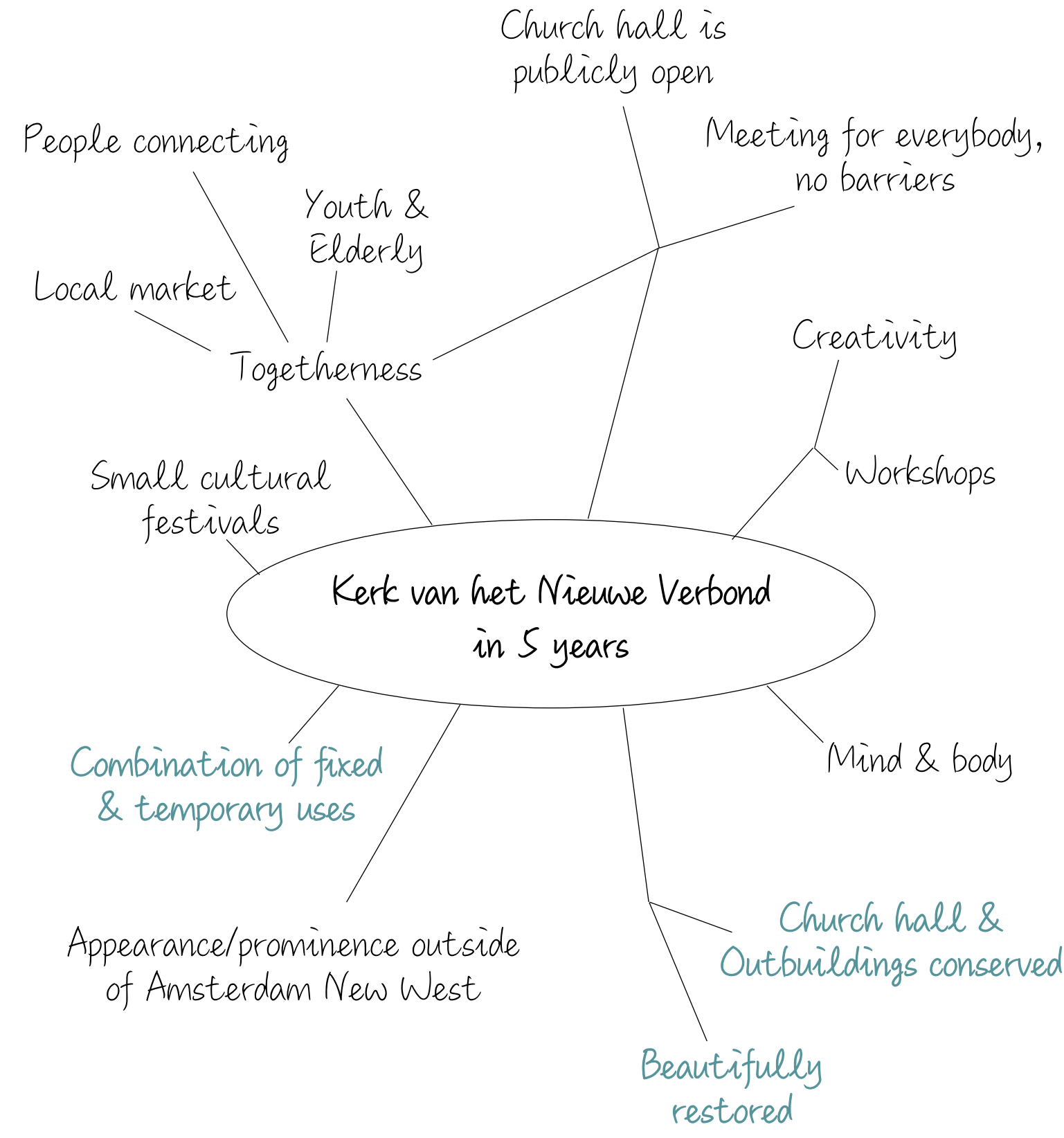
Results mindmap assignment



CULTURAL

# CO-CREATION WORKSHOP

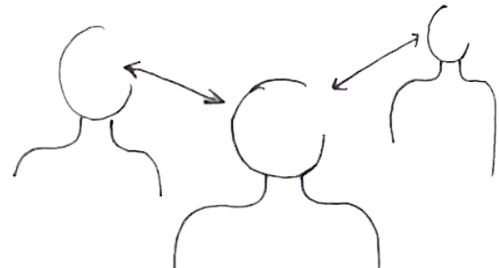
Results mindmap assignment



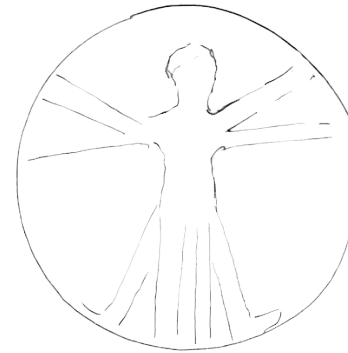
## FLEXIBILITY AND CONSERVATION

# DESIGN PRINCIPLES

## IMAGINE INTERVIEWS



*Natural surveillance*



*Human scale*

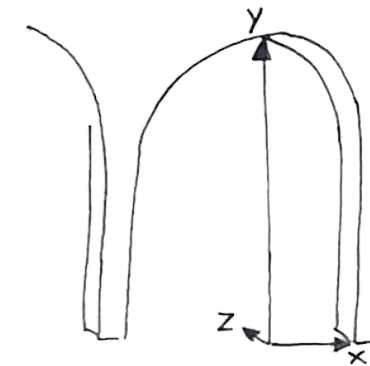


*Sustainable redesign*

## MONUMENTAL REGULATIONS



*Conserve 'Gaaf' building*



*Bossche School Stijl - plastic number*

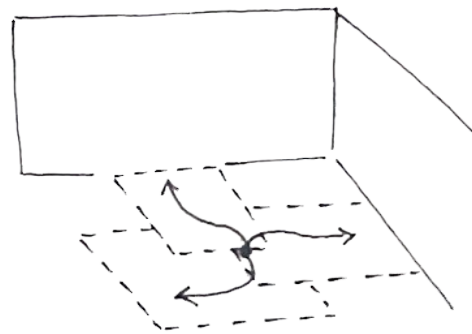
## CO-CREATION WORKSHOP



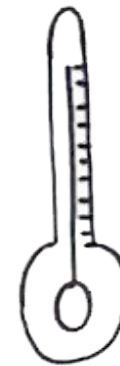
*Social function*



*Cultural function*



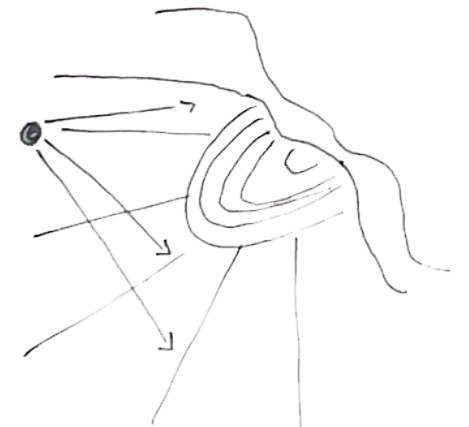
*Flexibility*



*Comfortable indoor climate*



*Reuse church interior*



*Prominence outside New West*

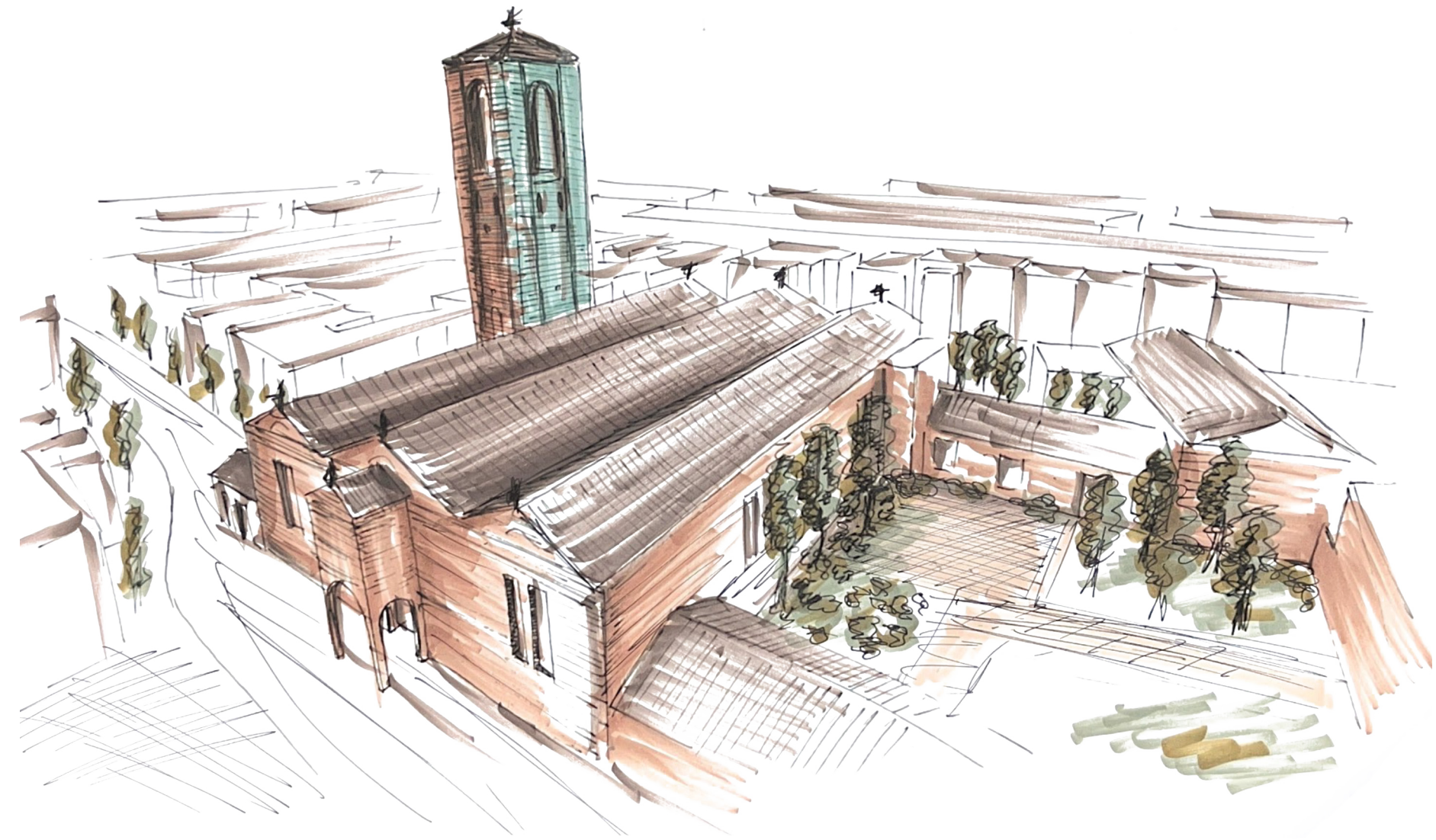
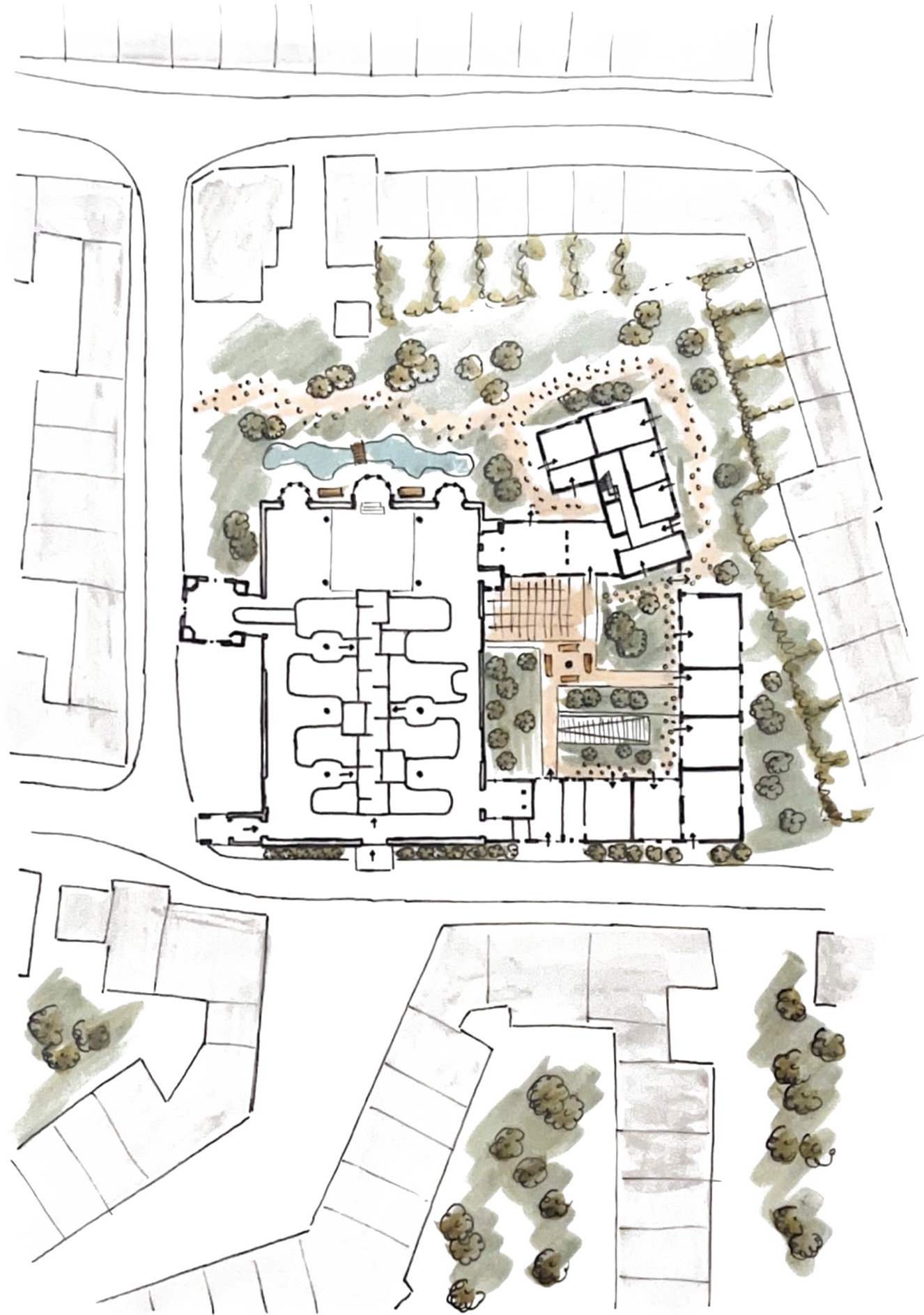


# BUILDING CONTEXT



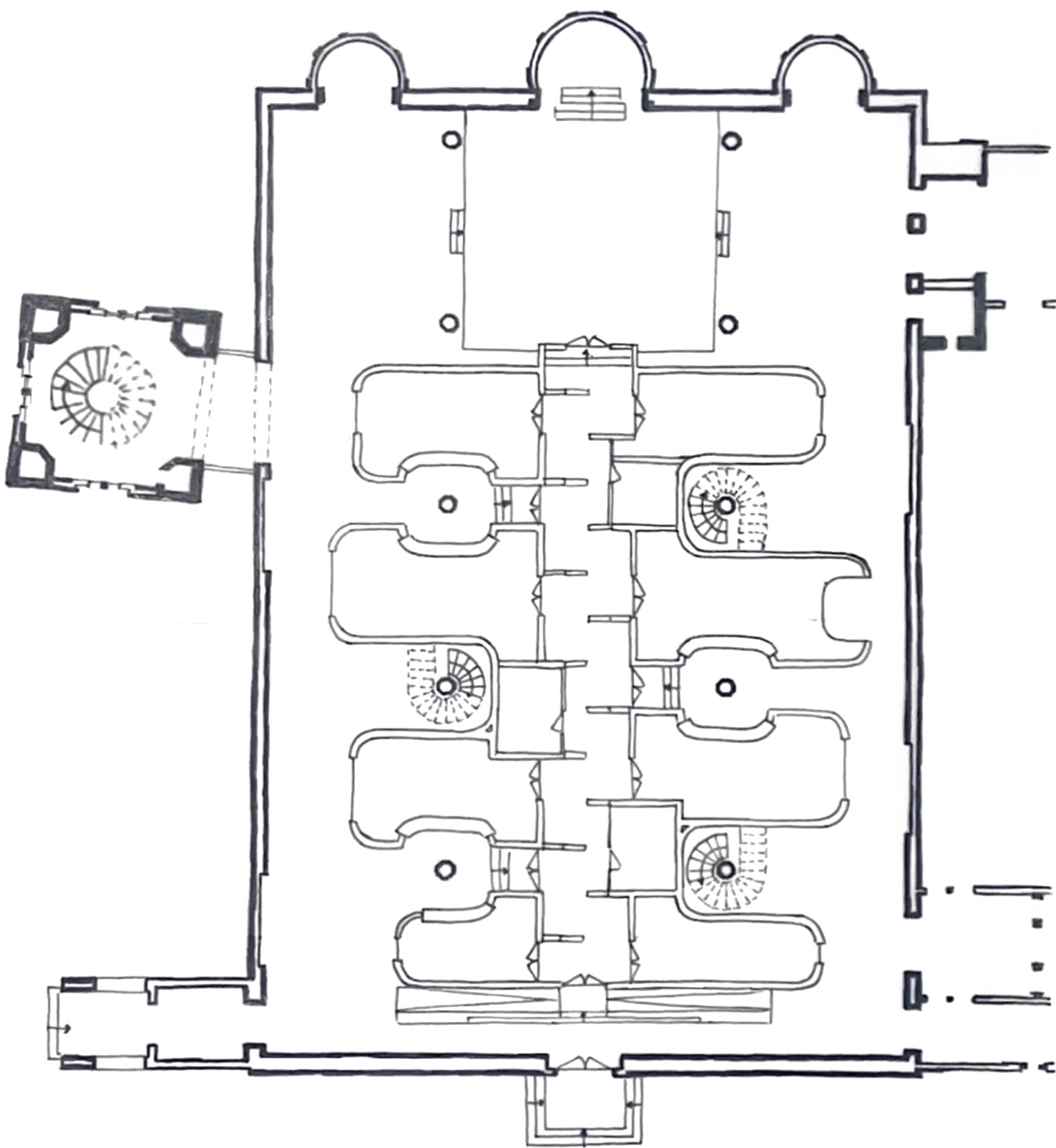


# GROUND FLOOR BUILDING

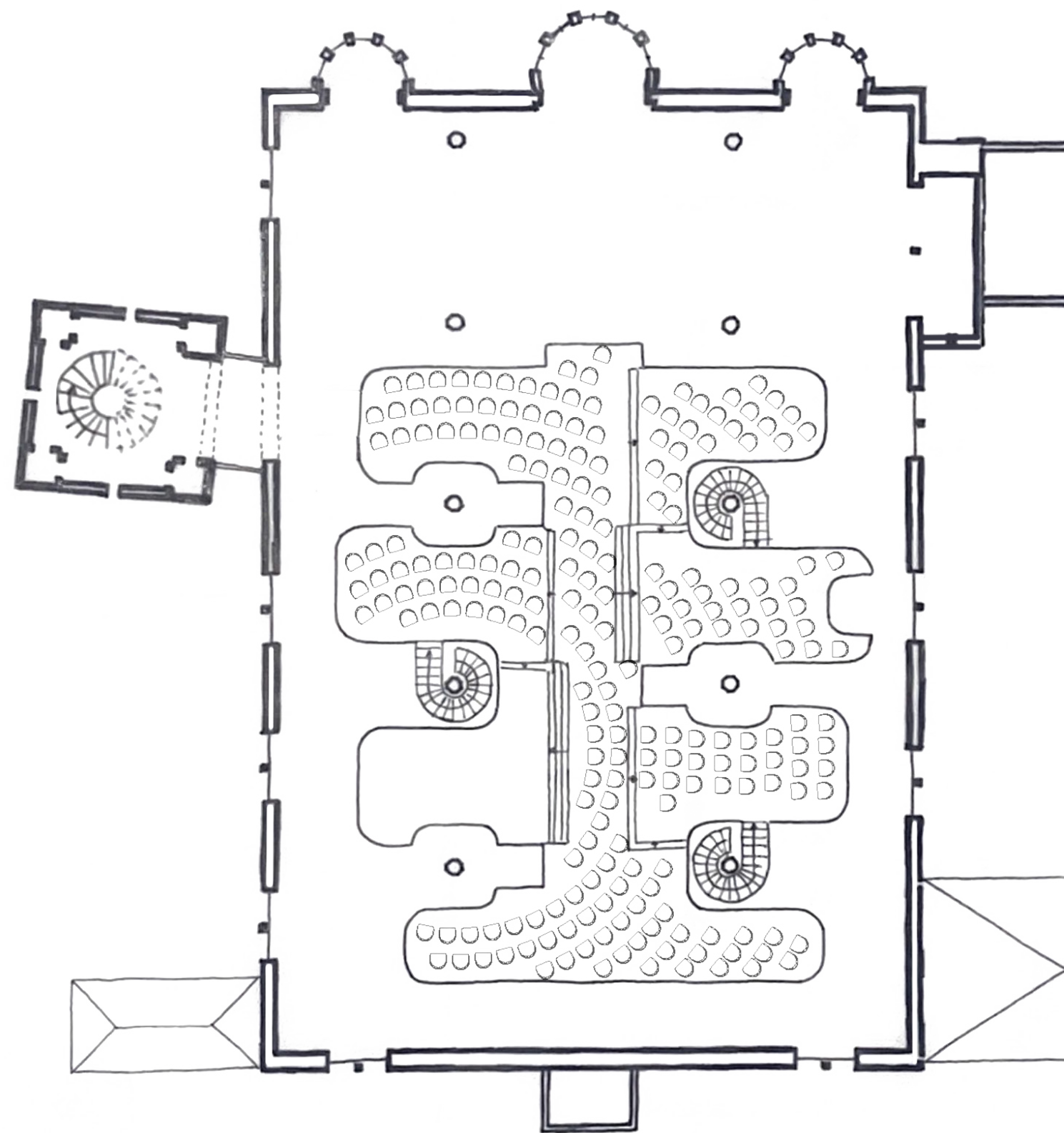




GROUND FLOOR

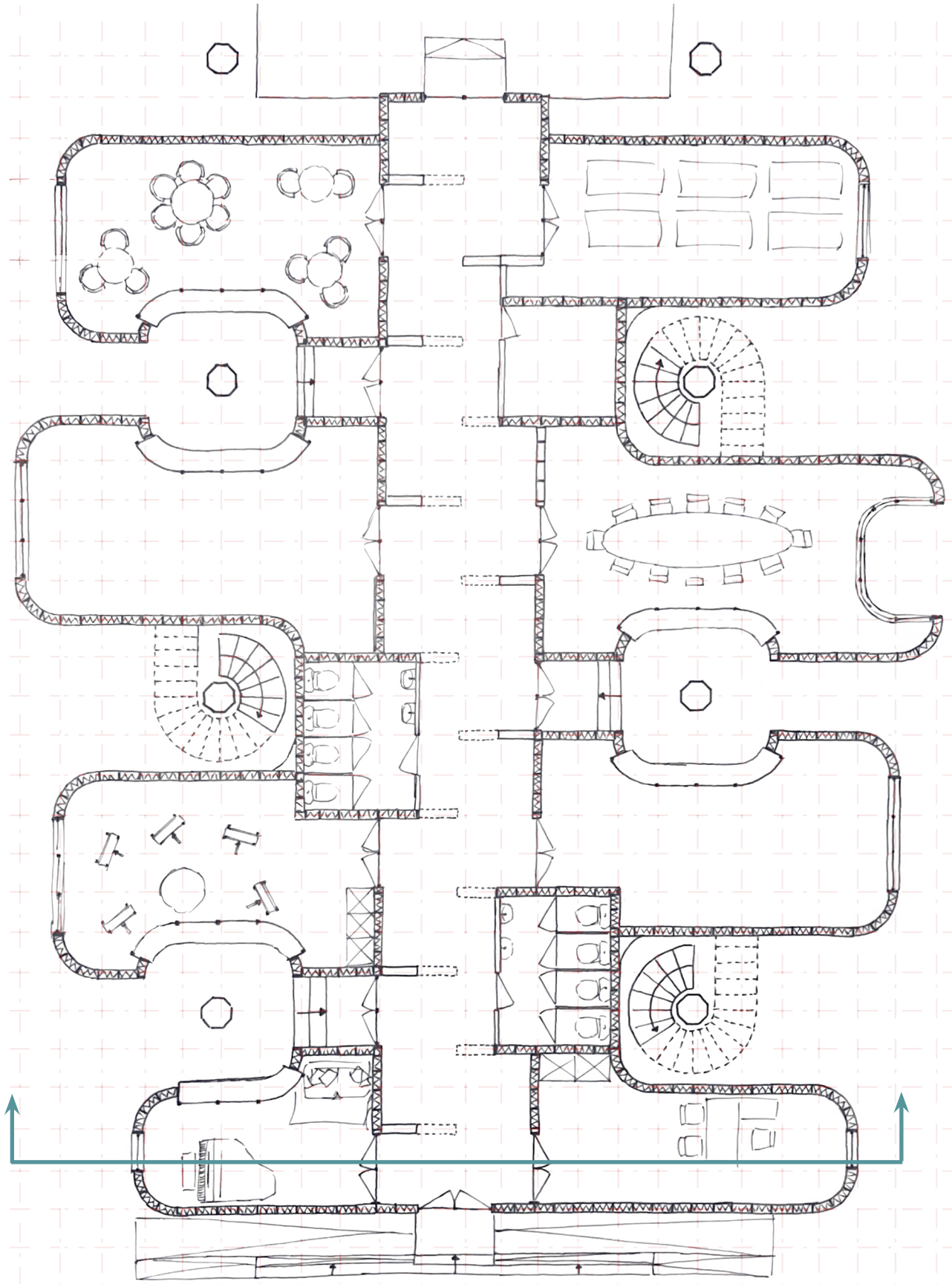


FIRST FLOOR

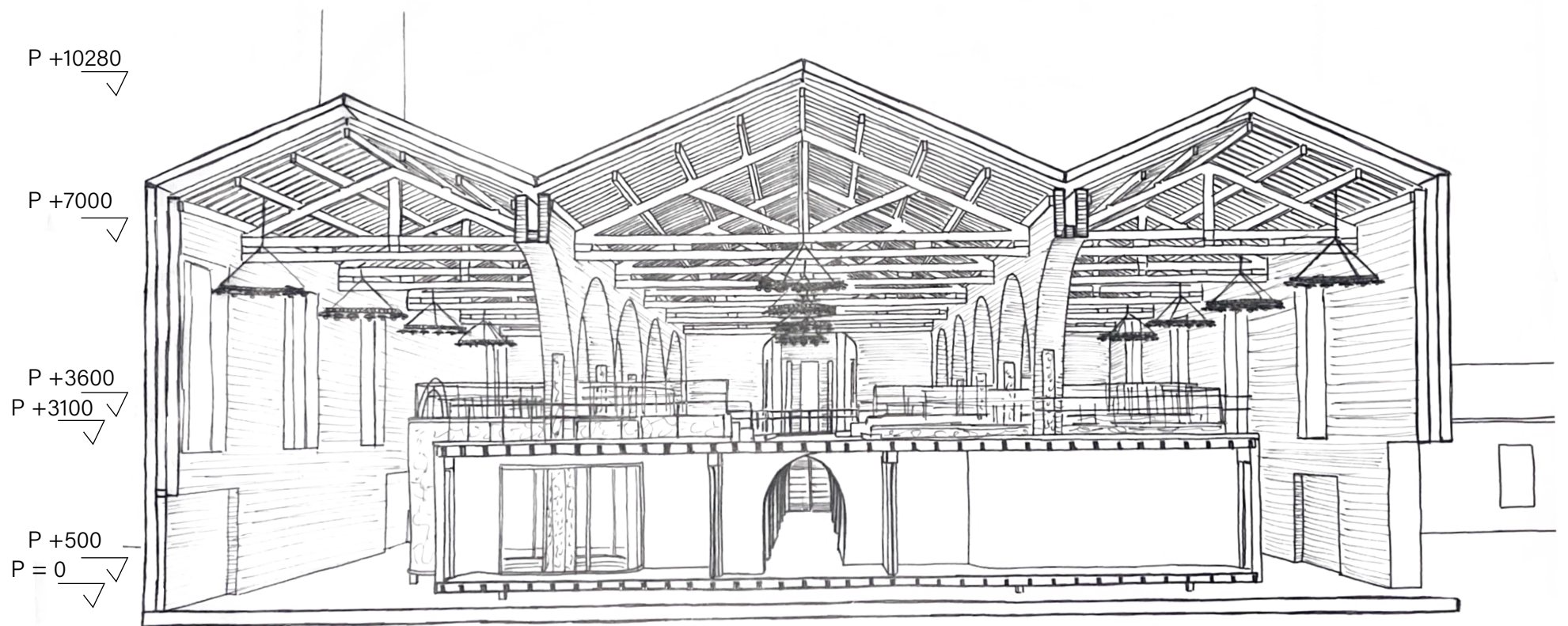




# GROUND FLOORPLAN PODS

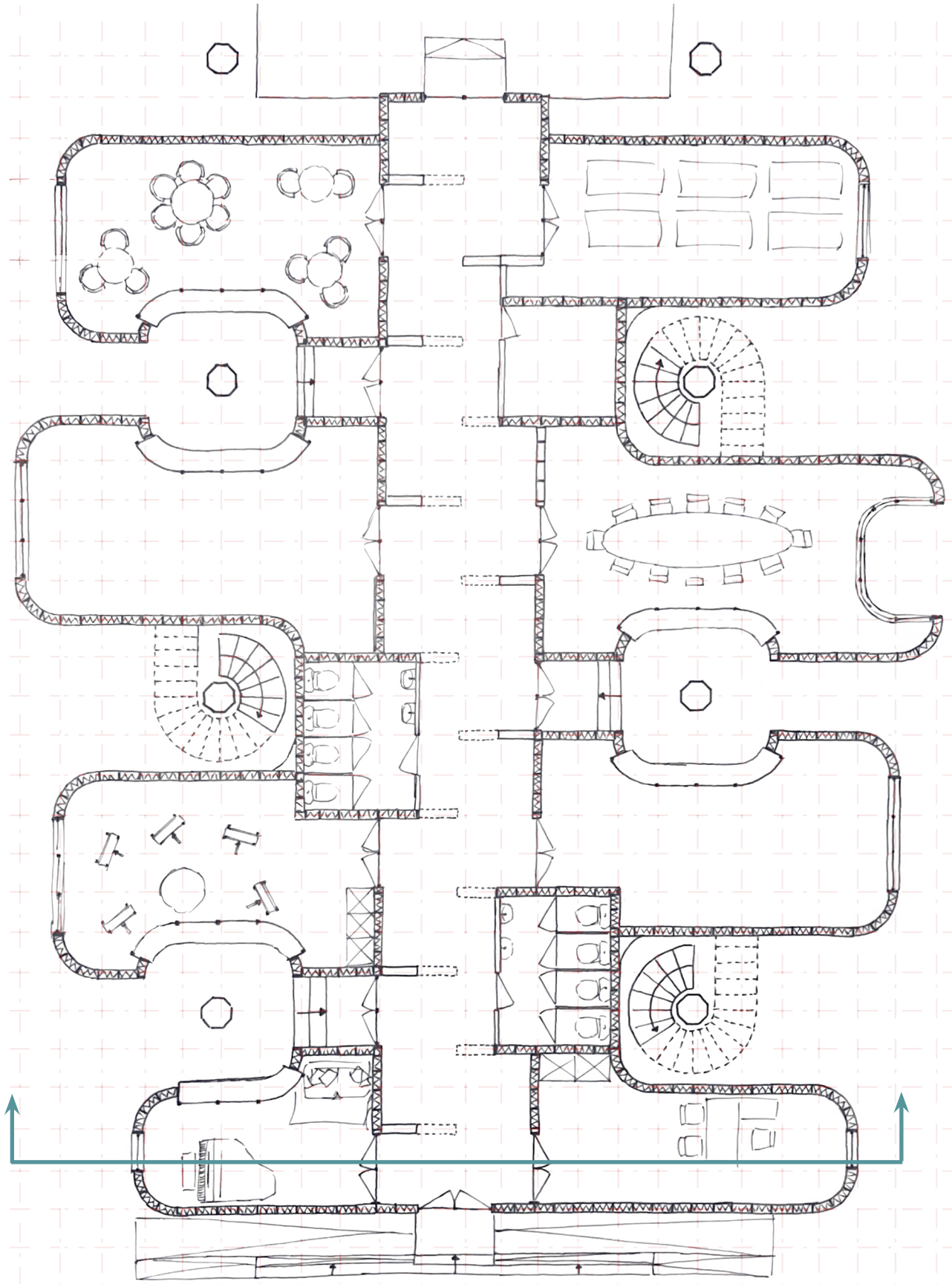


# SECTION

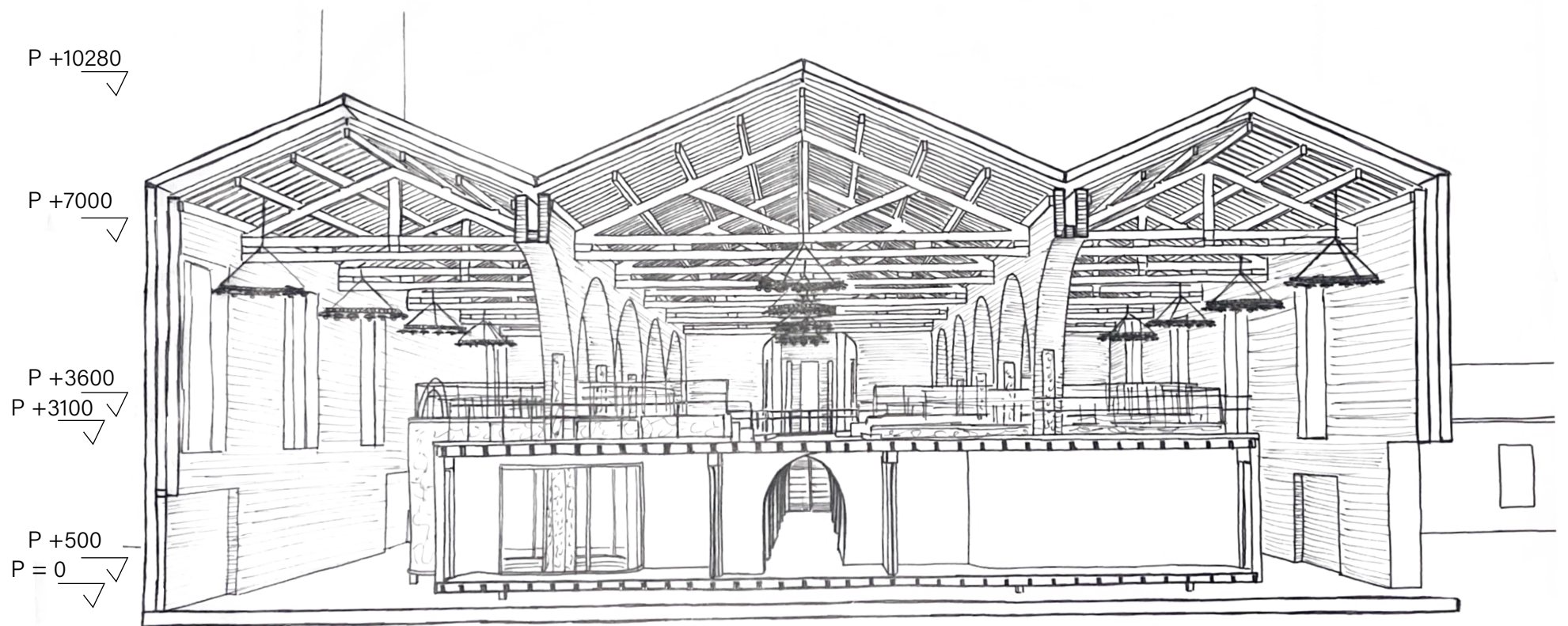




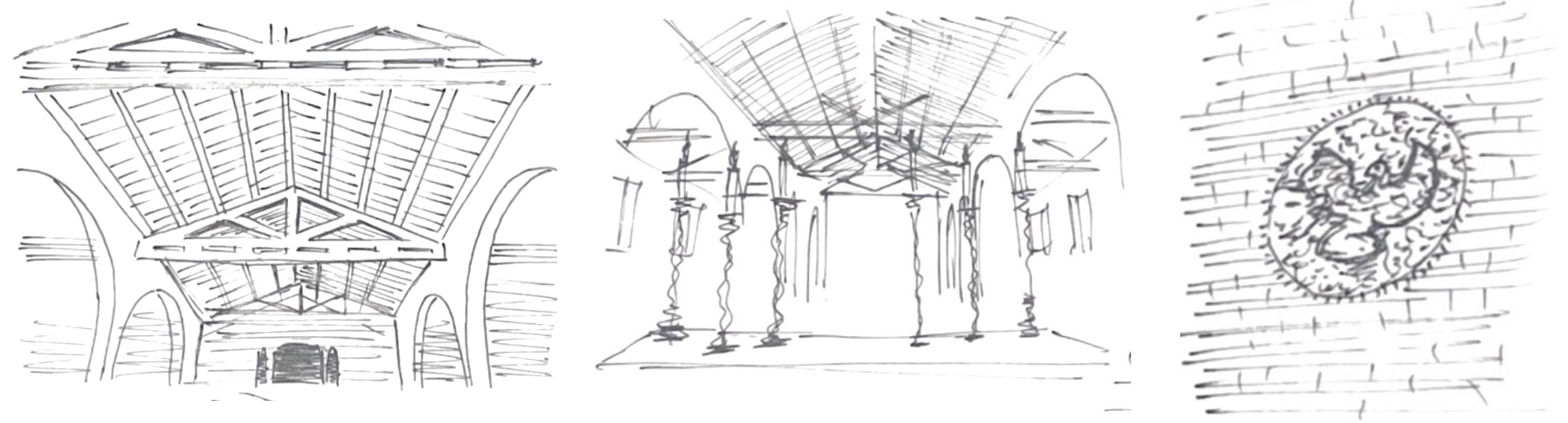
# GROUND FLOORPLAN PODS



# SECTION

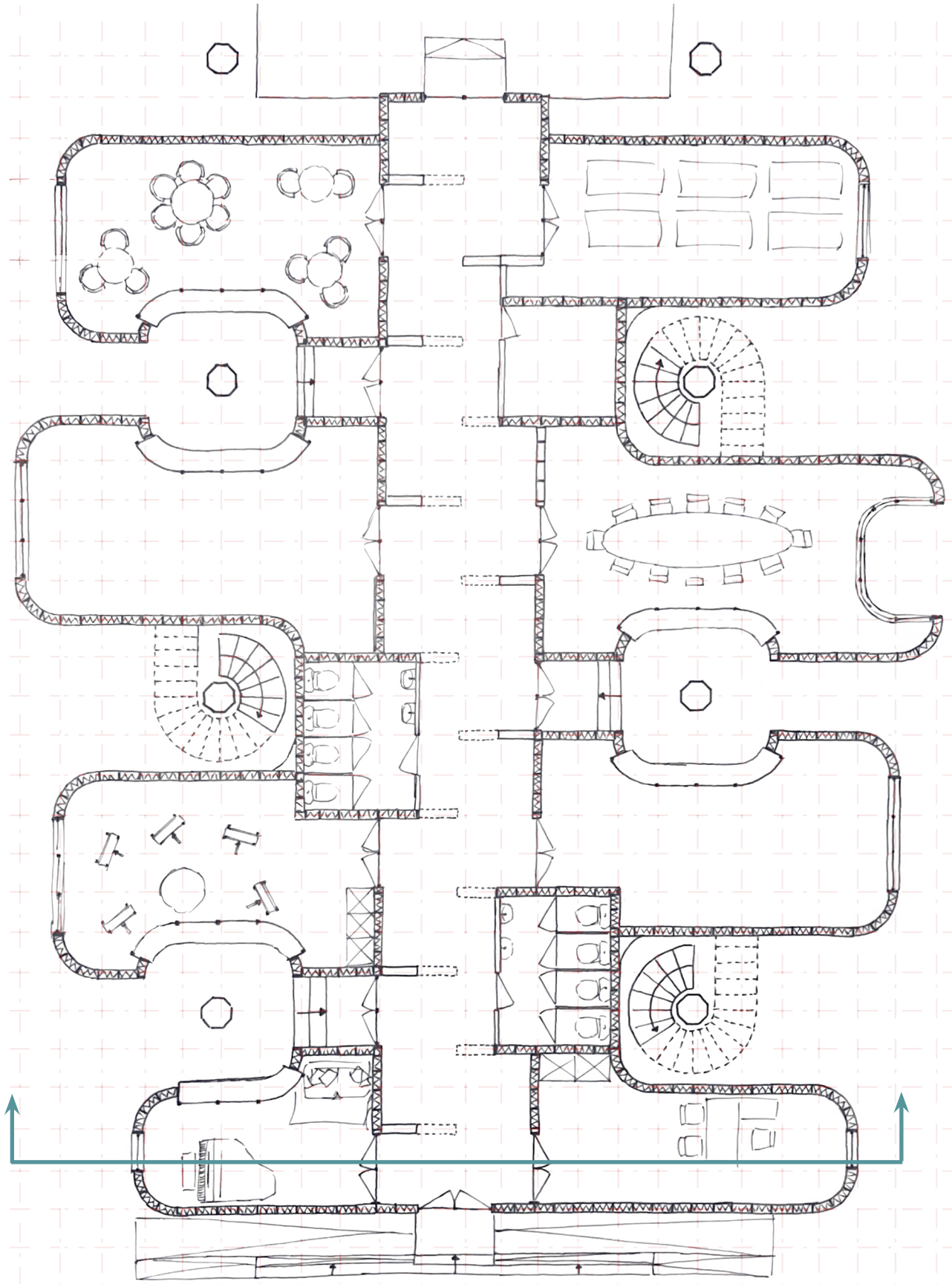


# DESIGN PRINCIPLES CO-CREATION WORKSHOP

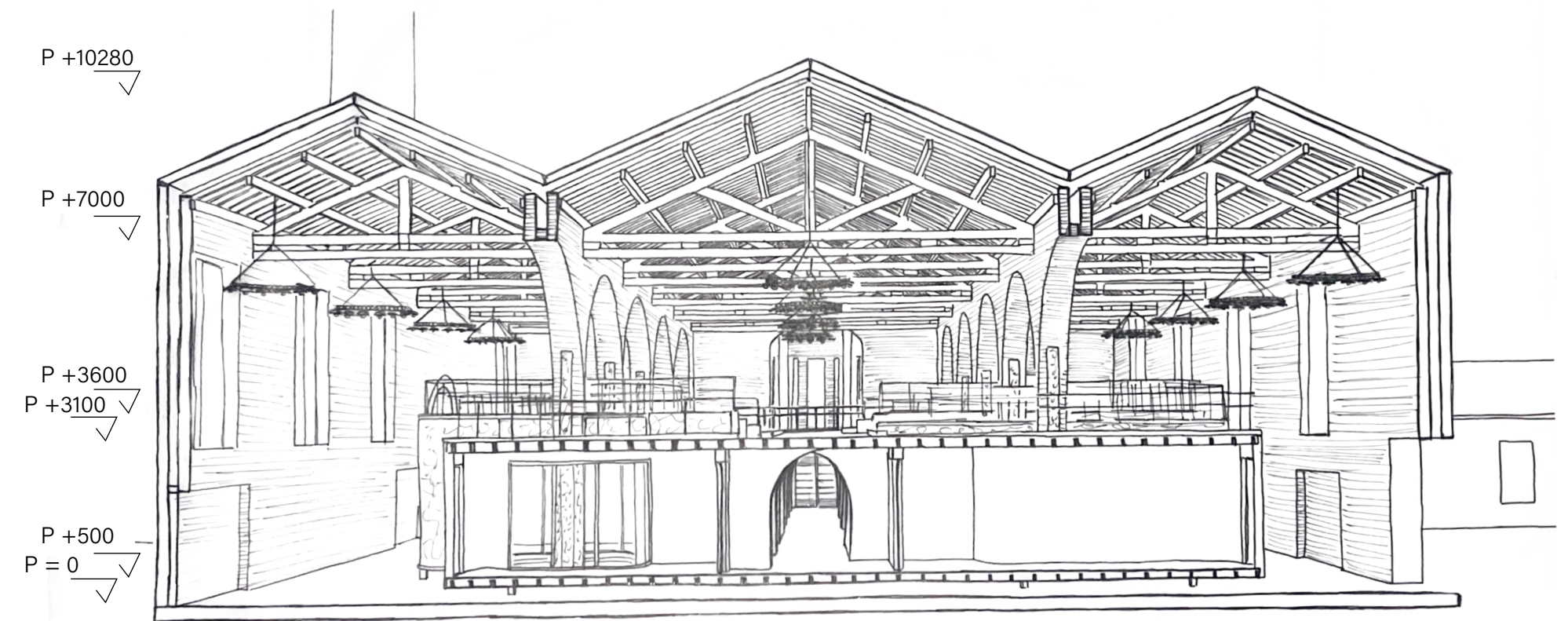




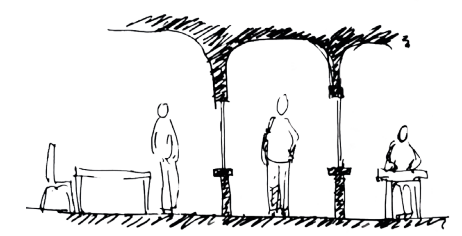
# GROUND FLOORPLAN PODS



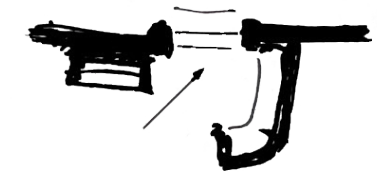
# SECTION



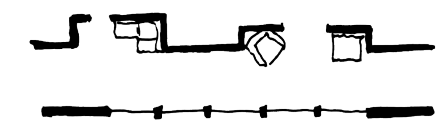
# DESIGN PRINCIPLES IMAGINE METHOD



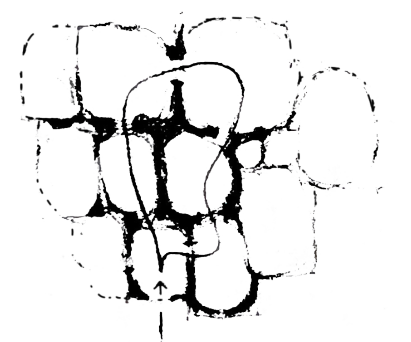
Indoor visibility  
Alexander et al. (1977)



Front door bench  
Alexander et al. (1977)



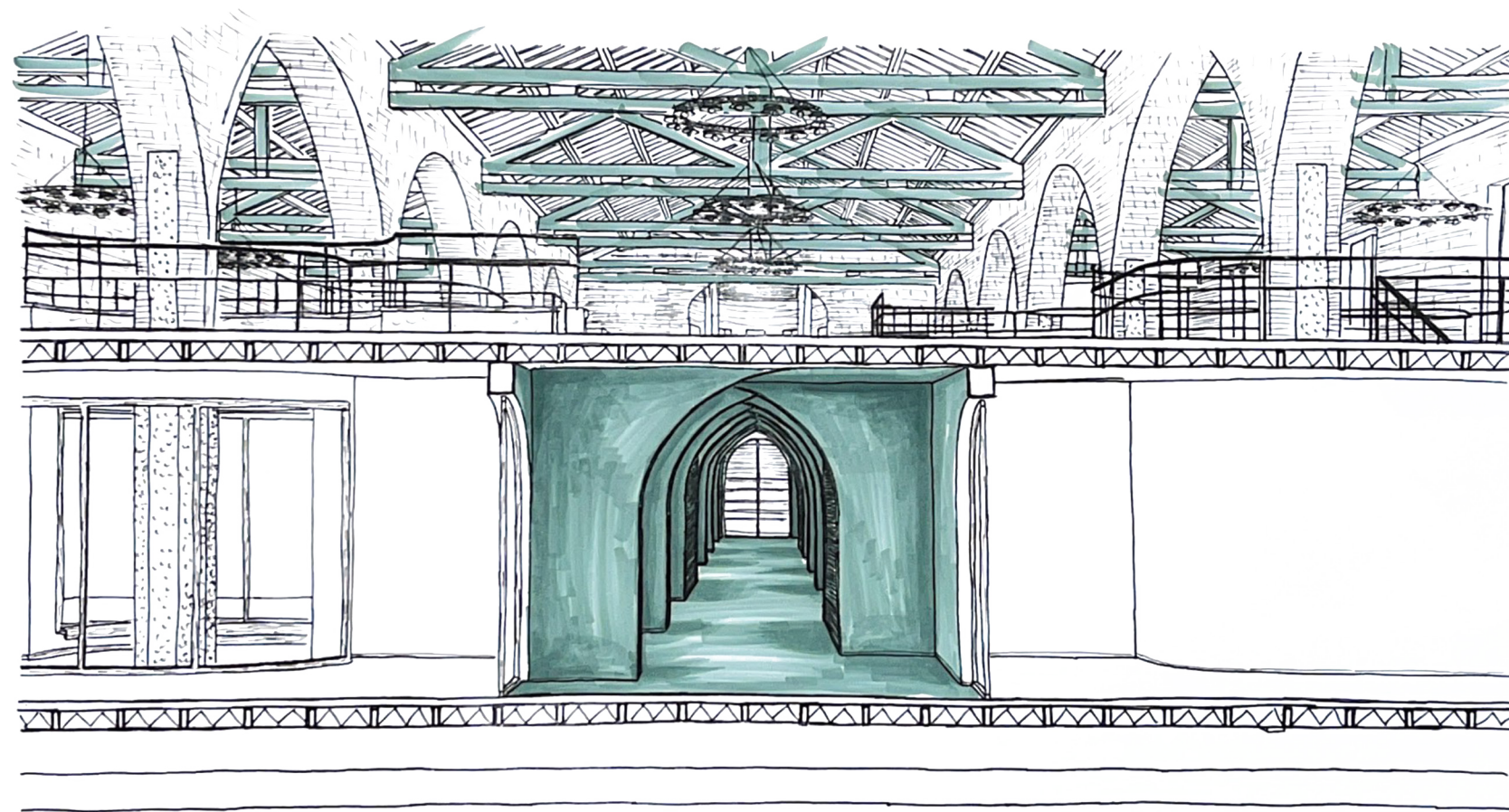
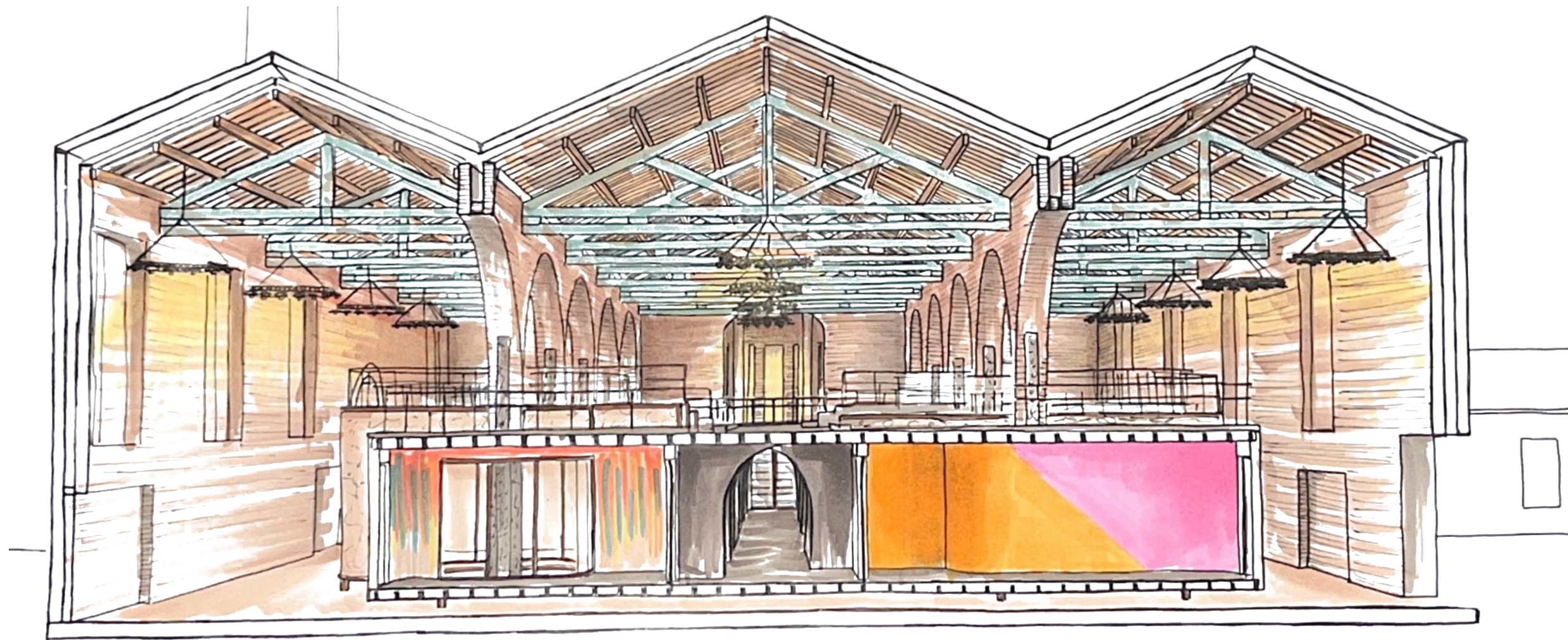
Passages as rooms  
Alexander et al. (1977)



Looped routing  
Alexander et al. (1977)

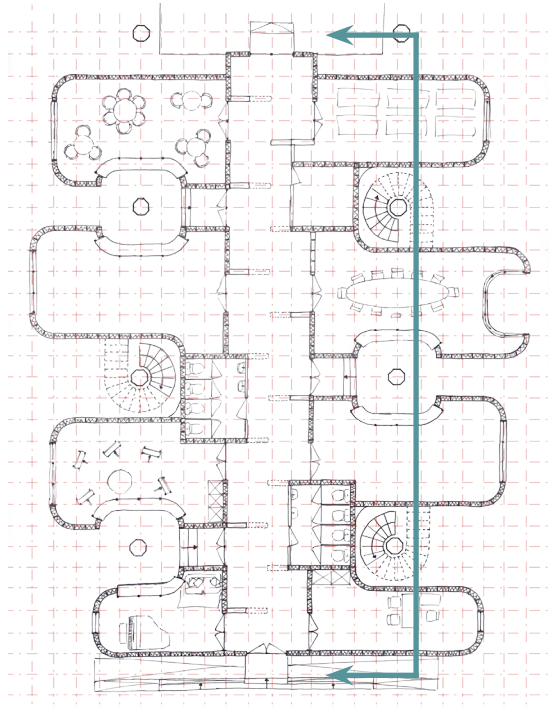




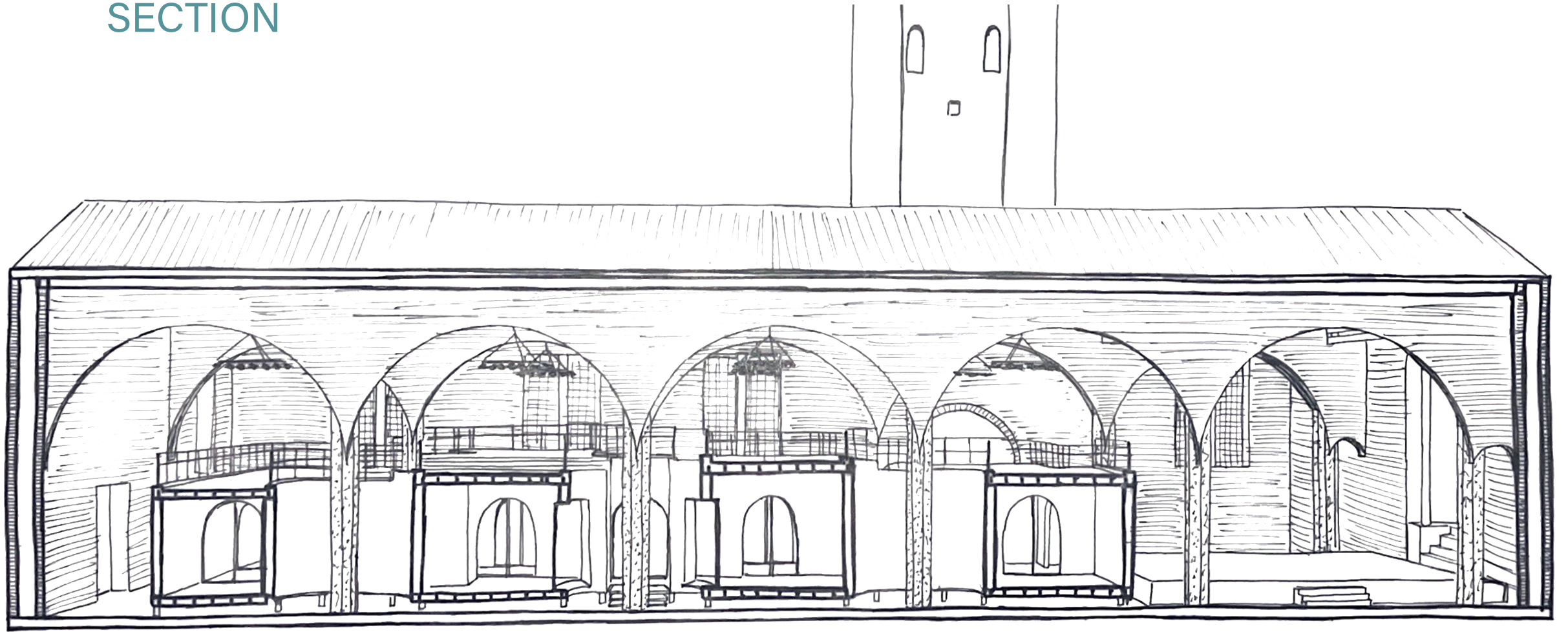




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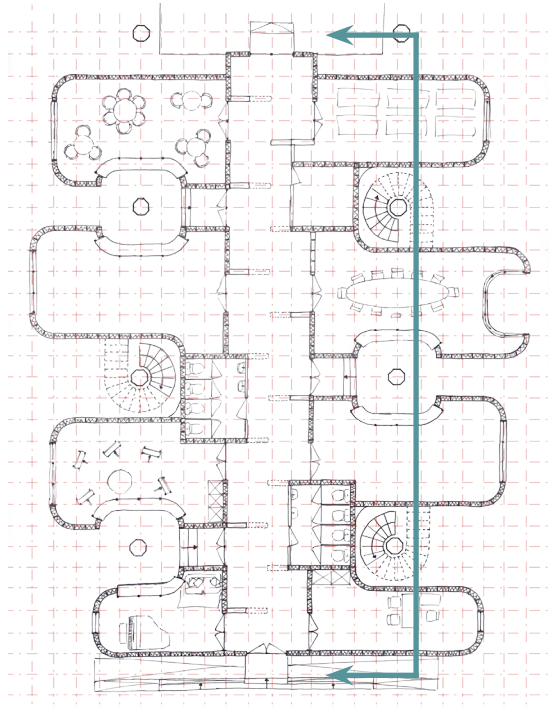


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P +8000  
P +7000  
P +3600  
P +3350  
P +3100  
P +500  
P = 0

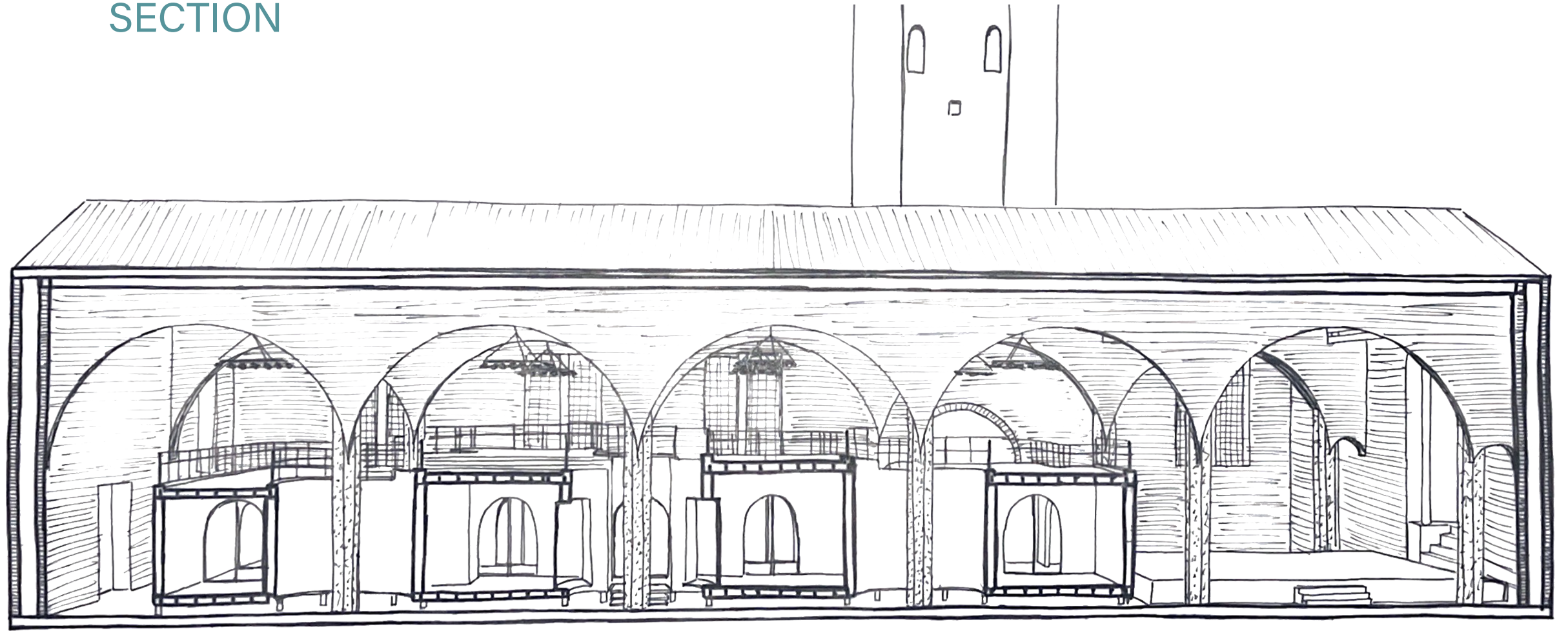


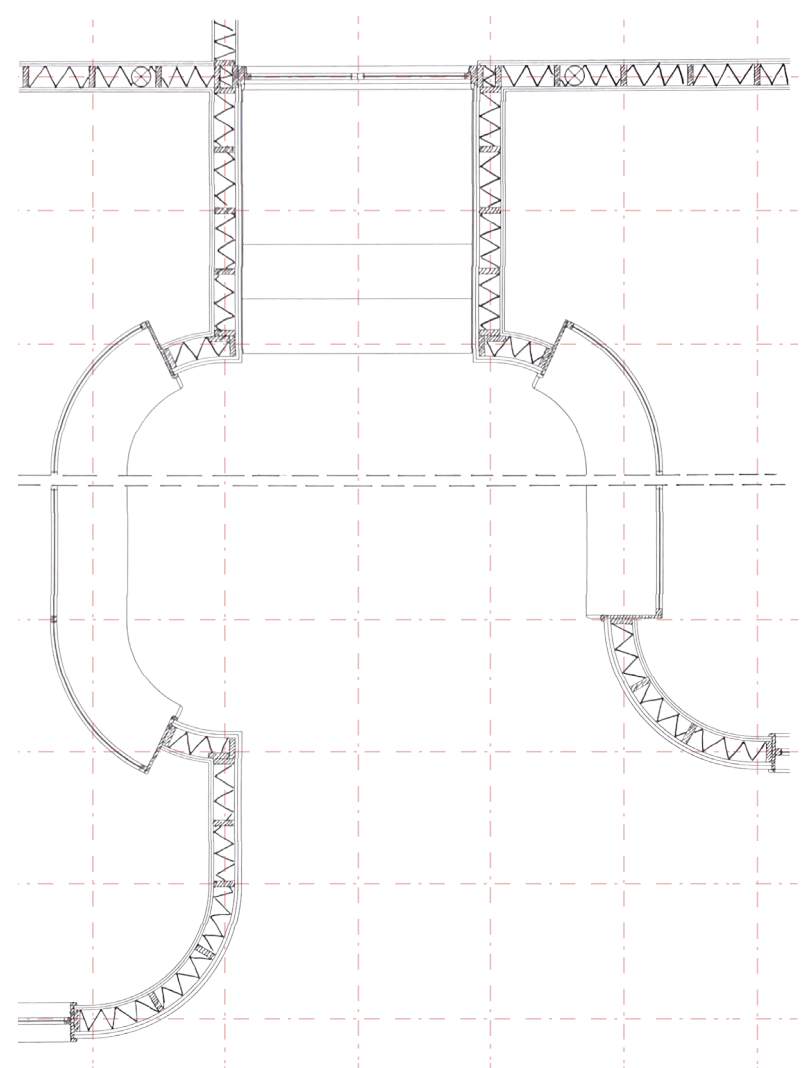
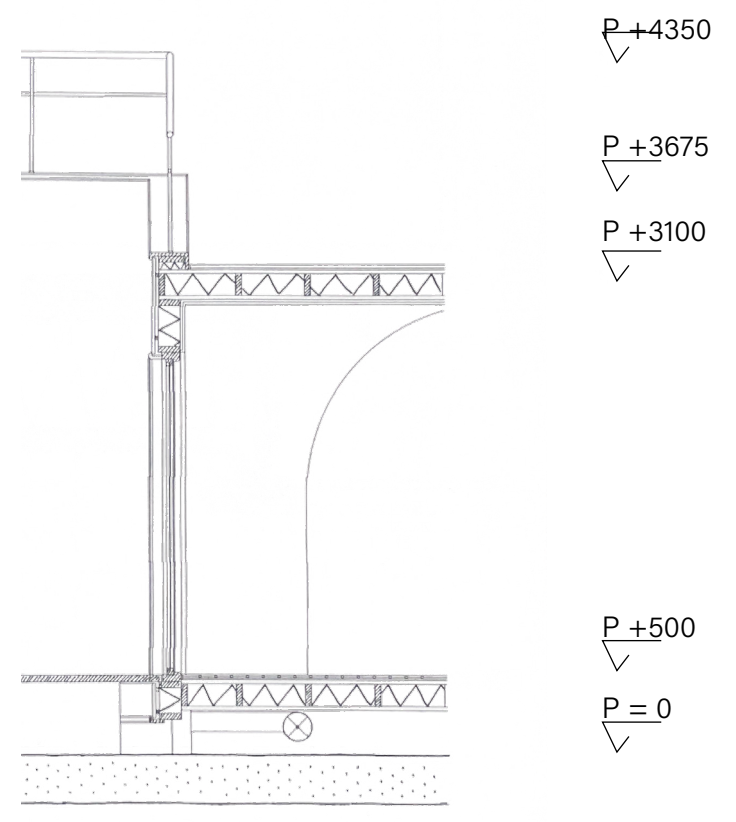
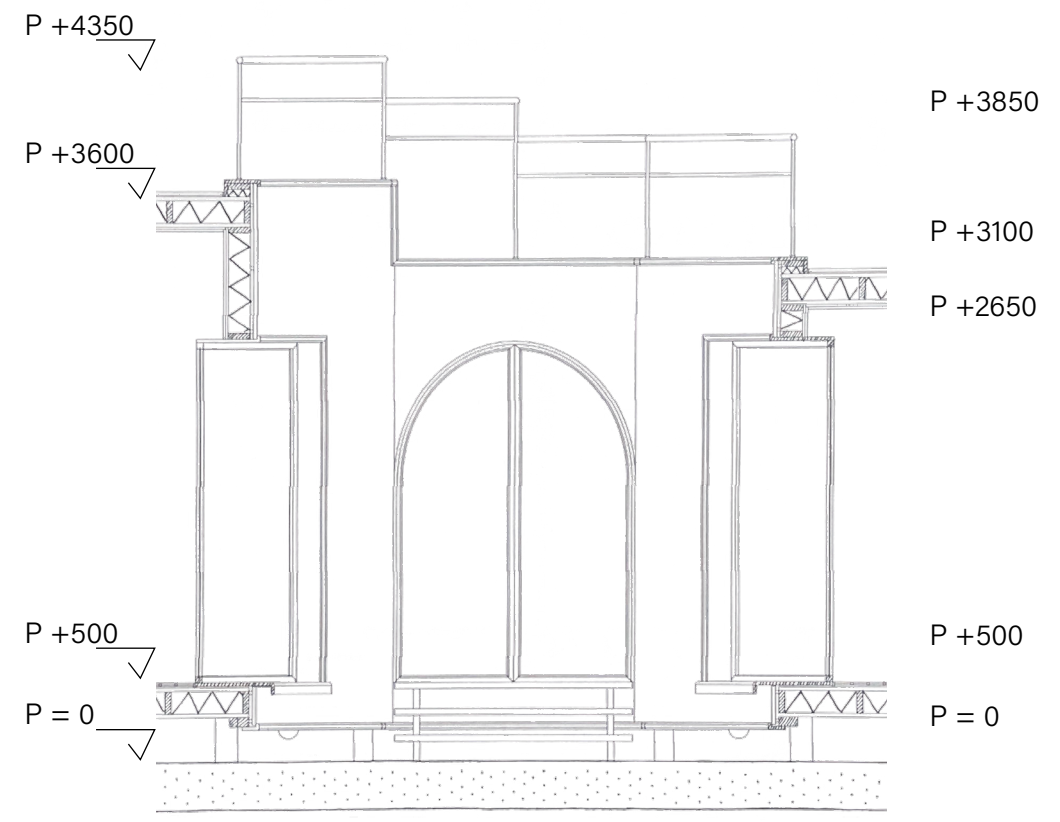


# SECTION



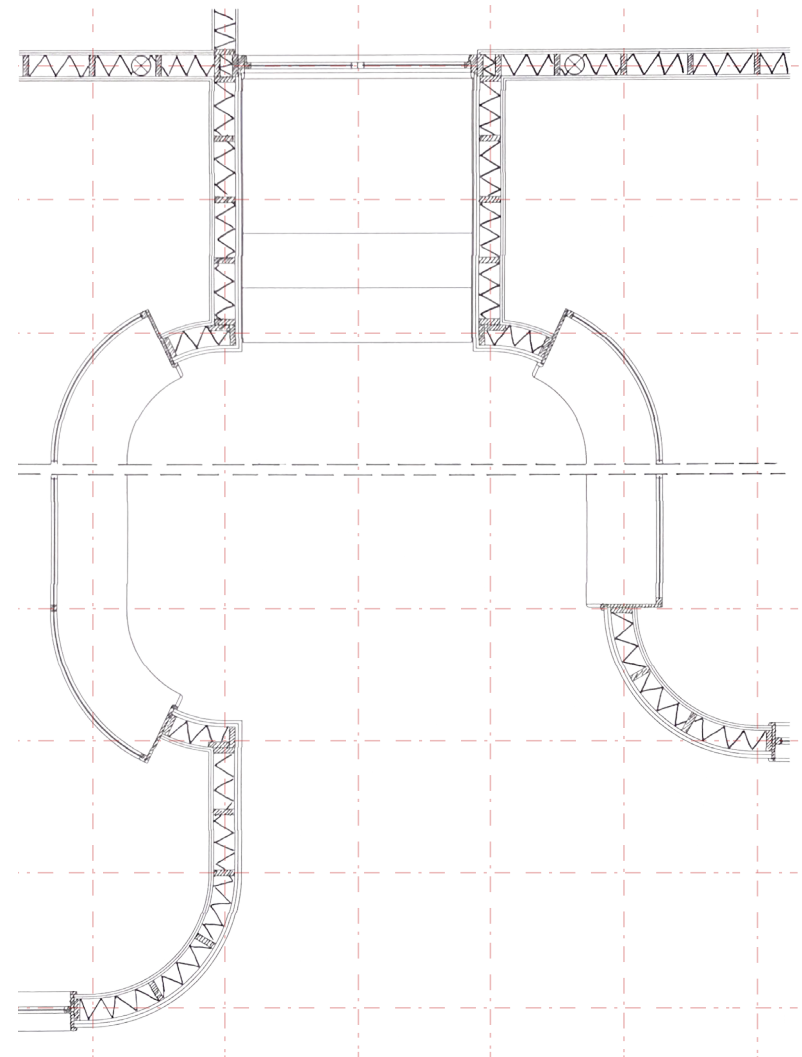
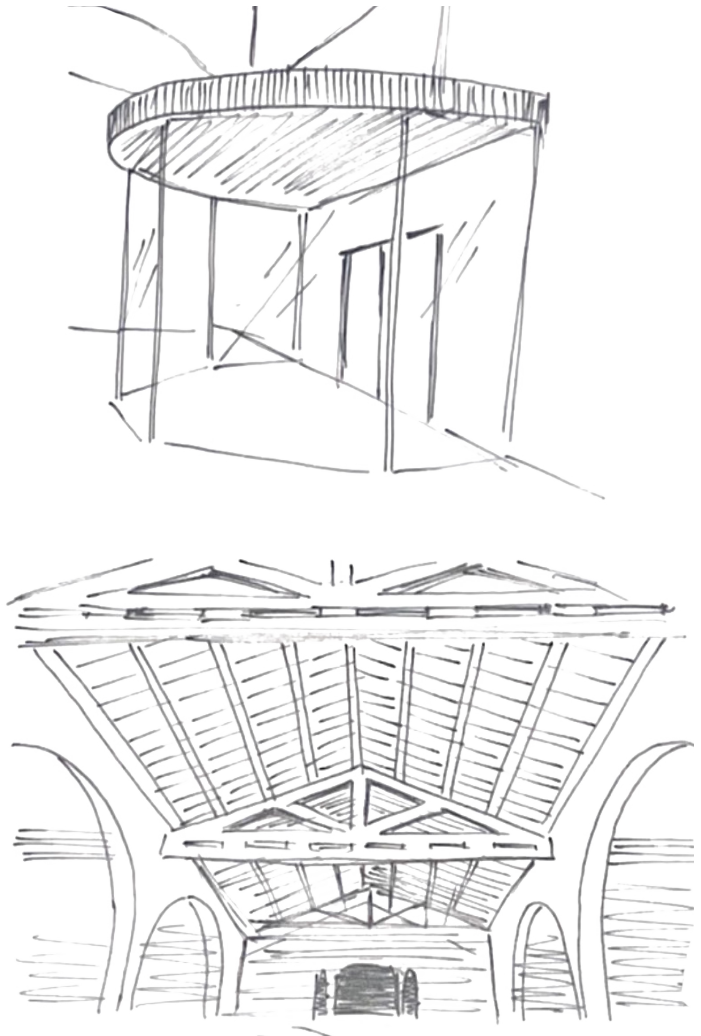
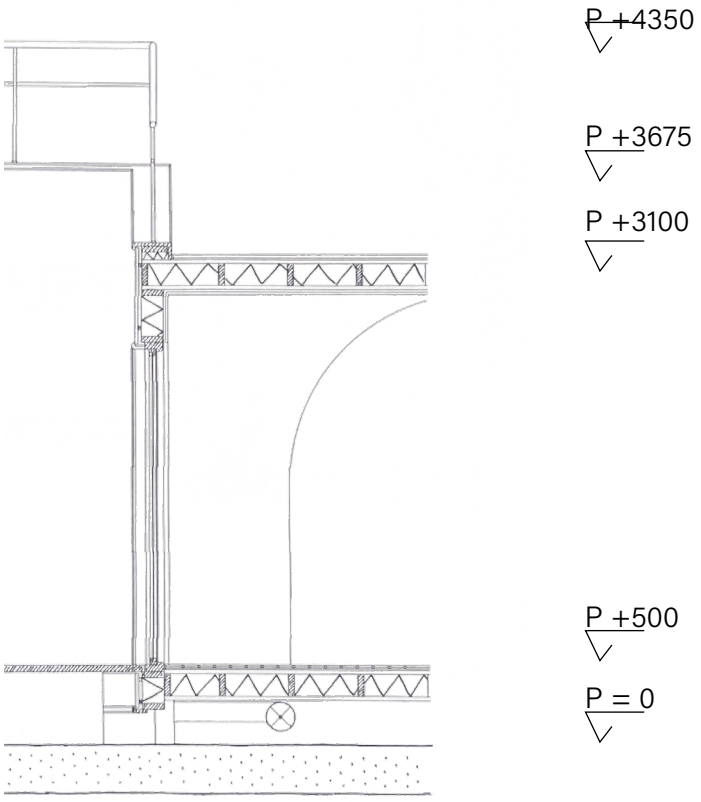
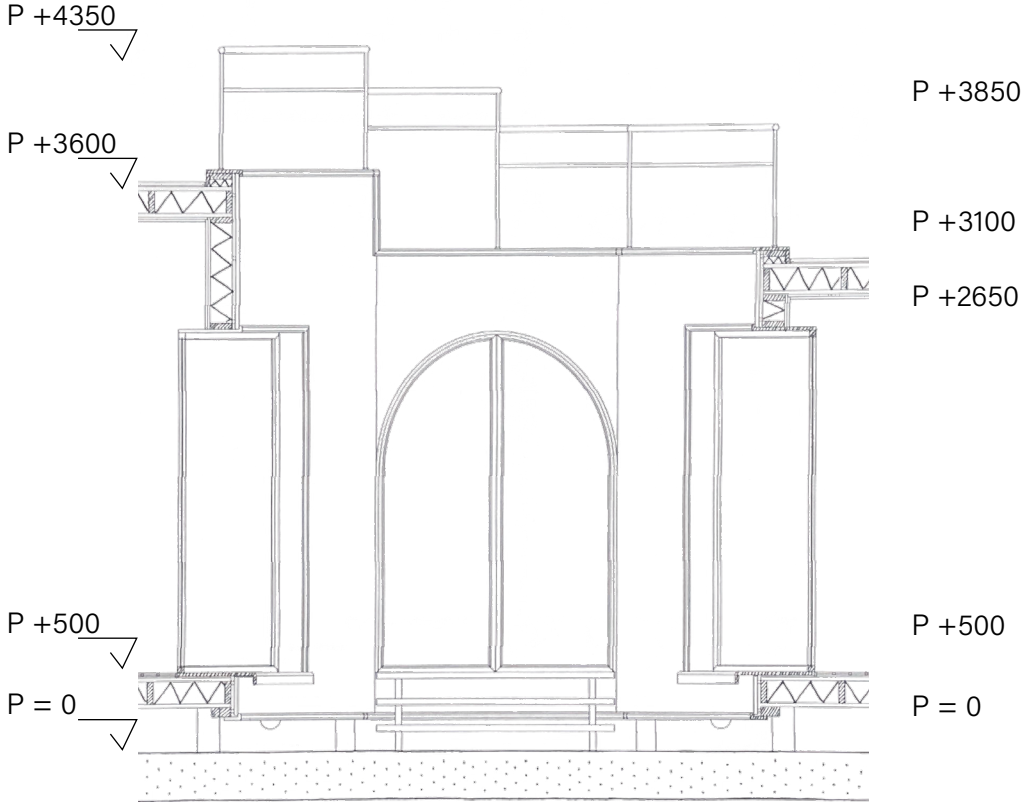
P +10280  
P +8000  
P +7000  
P +3600  
P +3350  
P +3100  
P +500  
P = 0



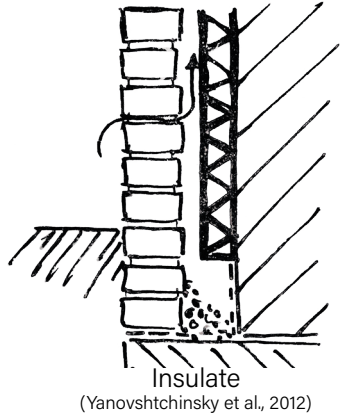
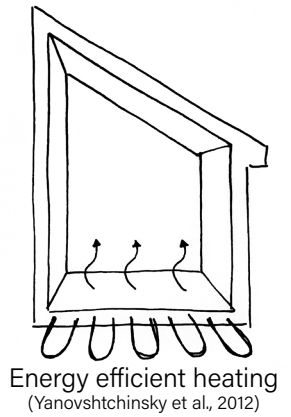


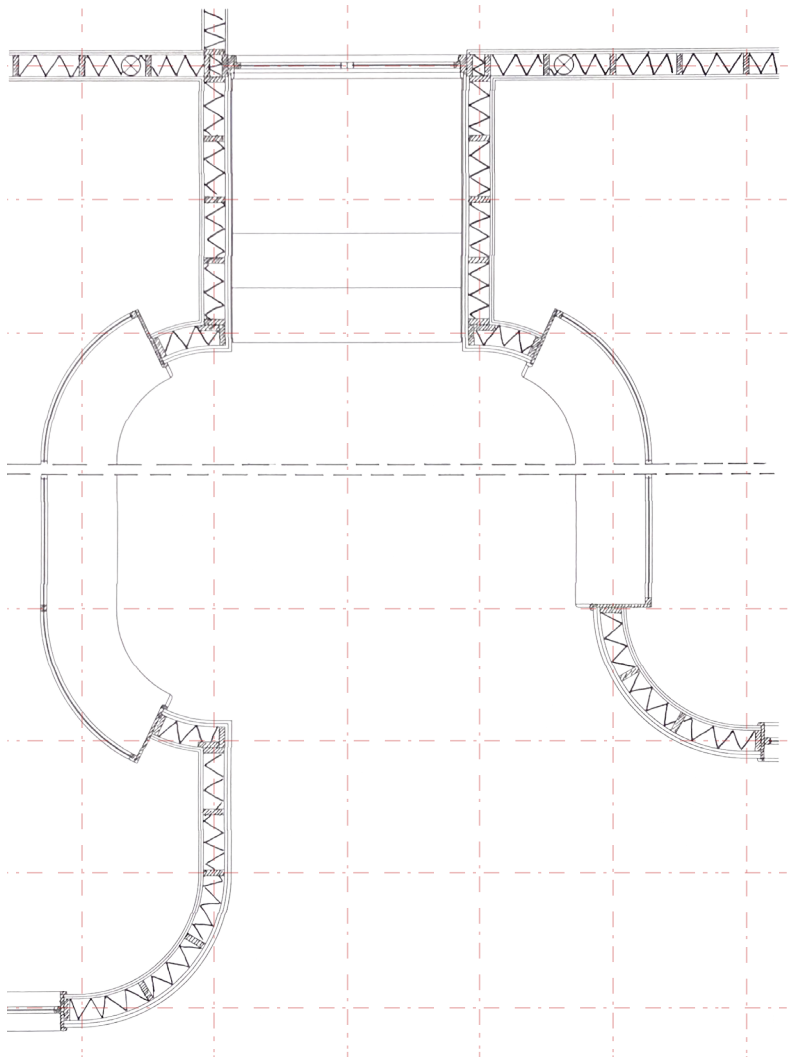
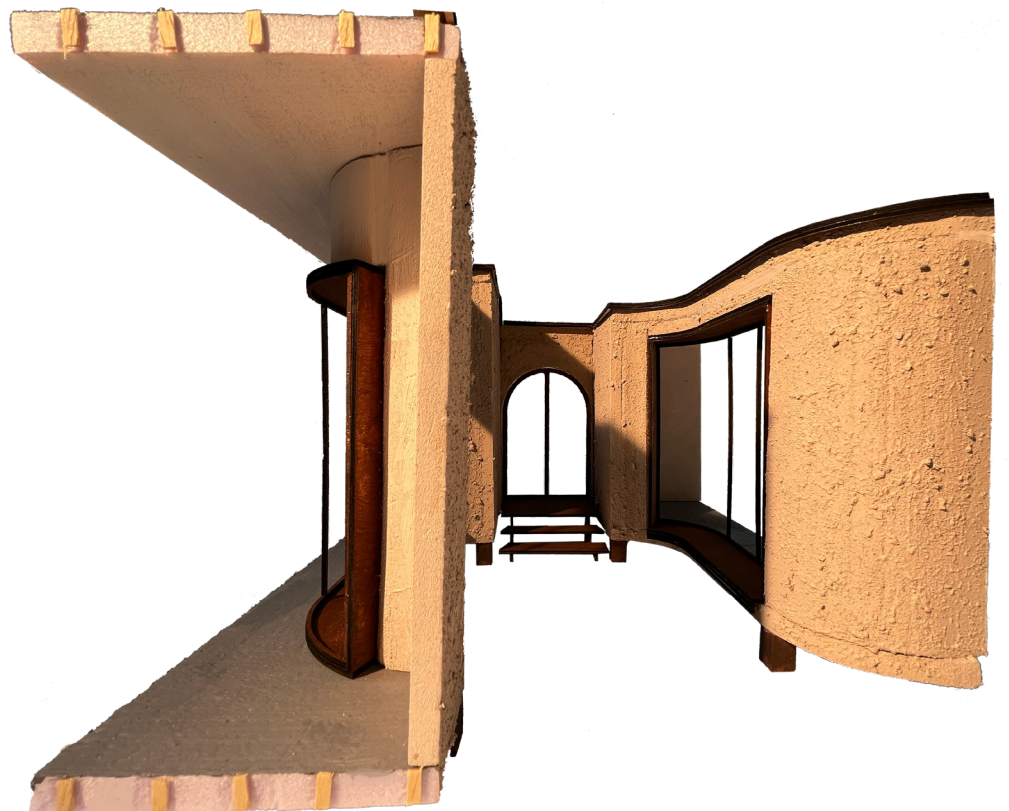


# DESIGN PRINCIPLES CO-CREATION WORKSHOP

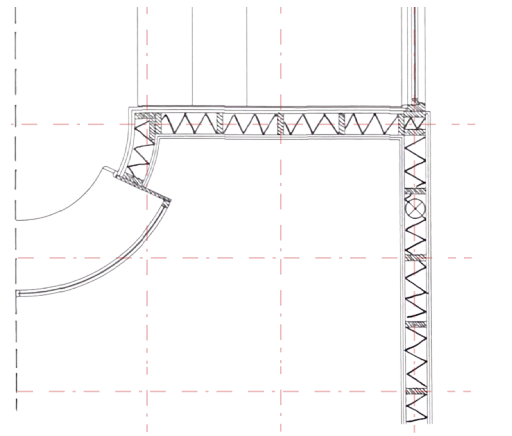
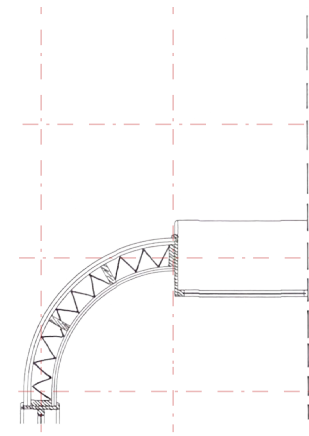
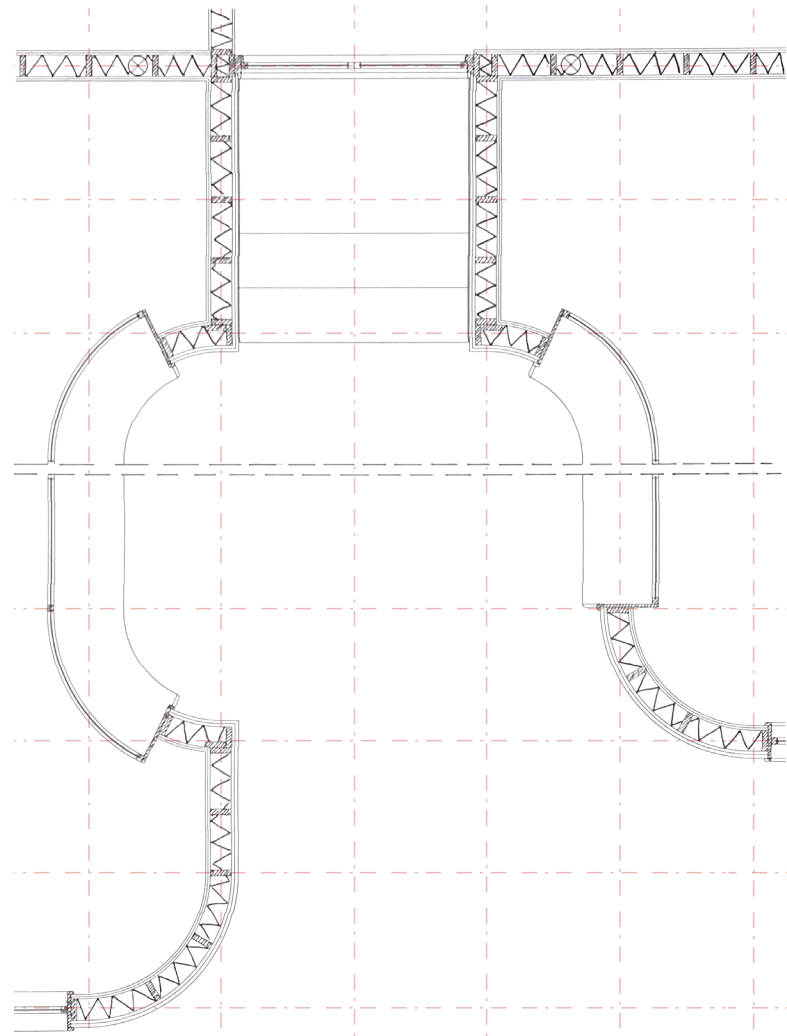
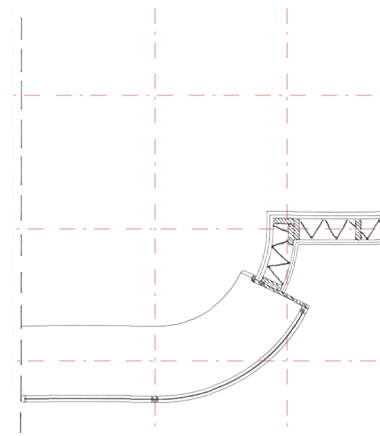
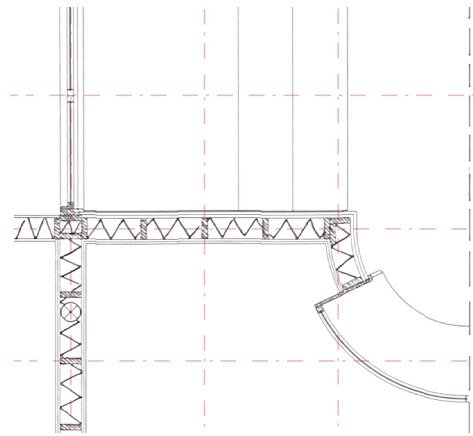
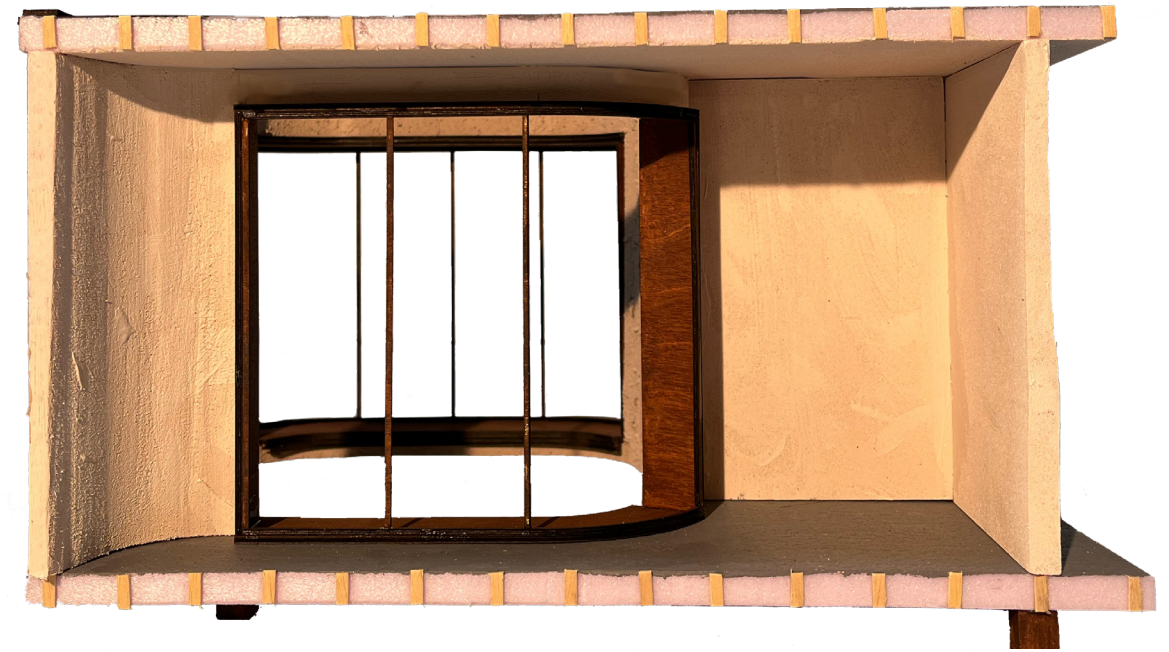
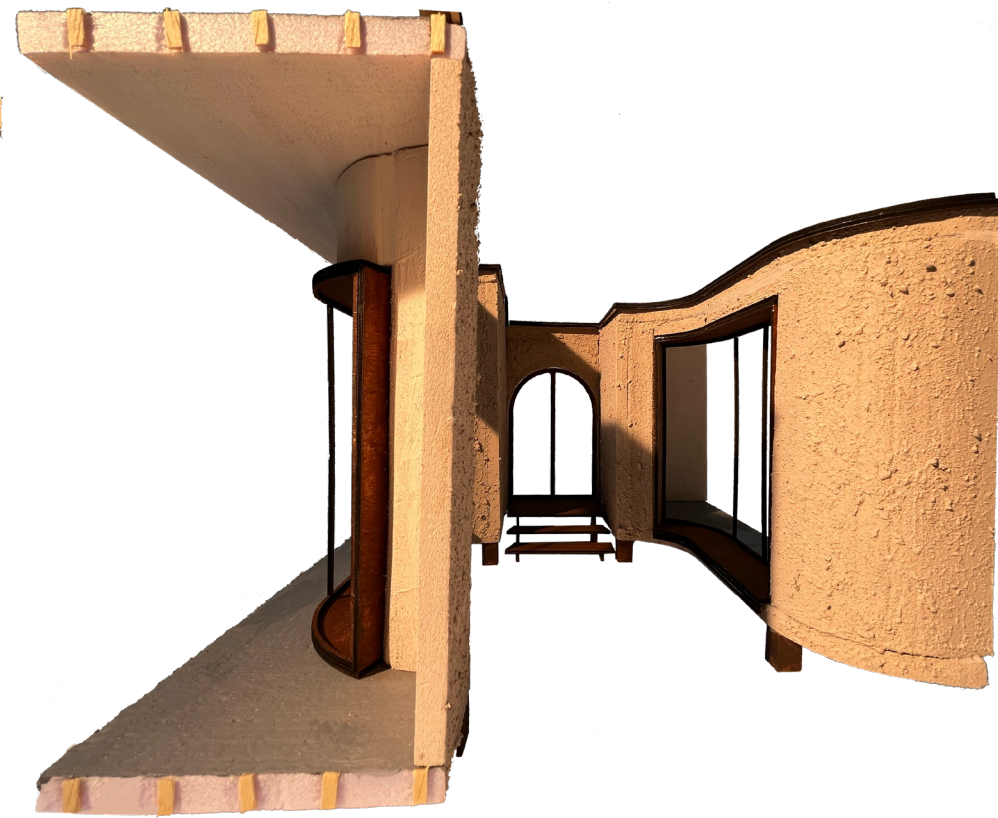
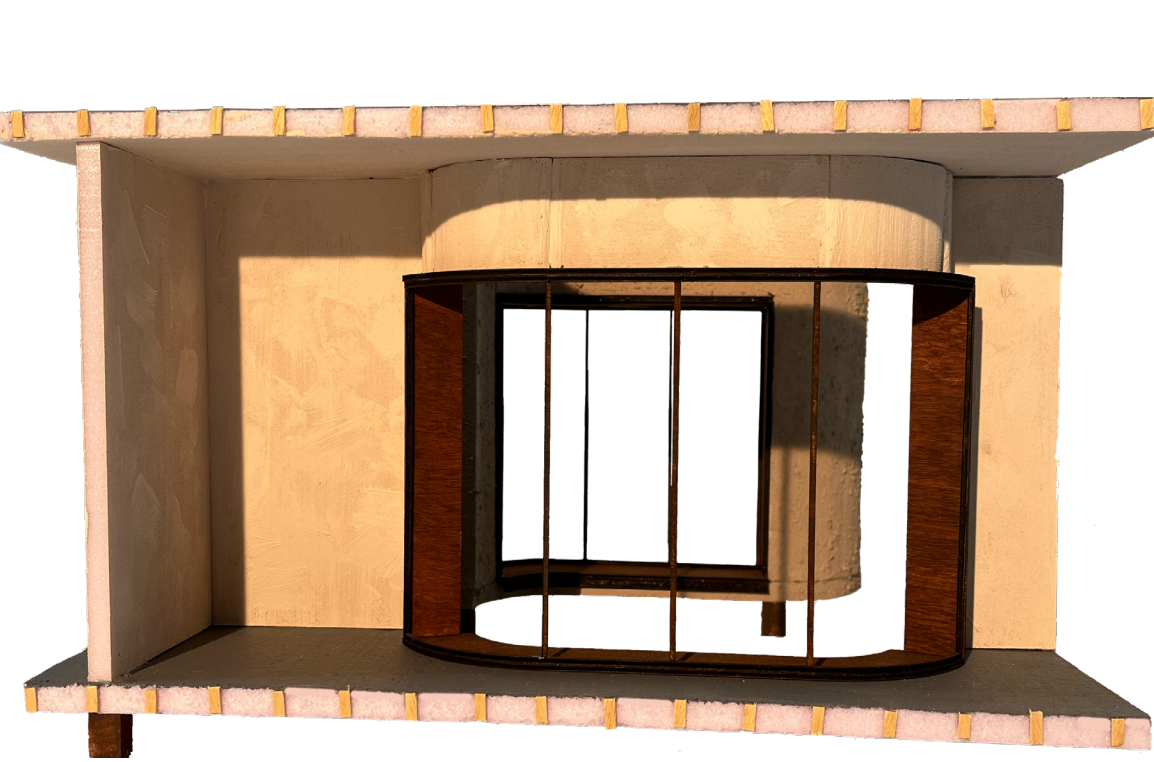


# DESIGN PRINCIPLES IMAGINE METHOD

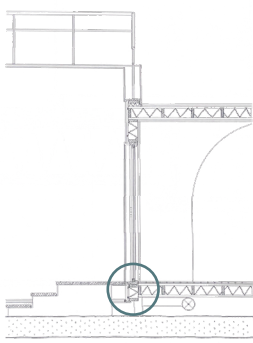
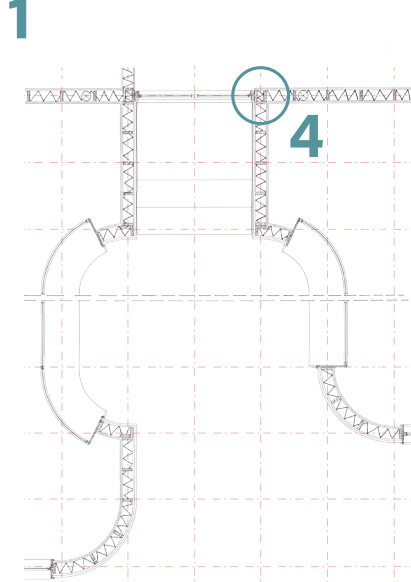
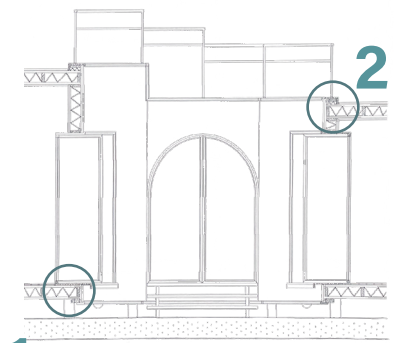






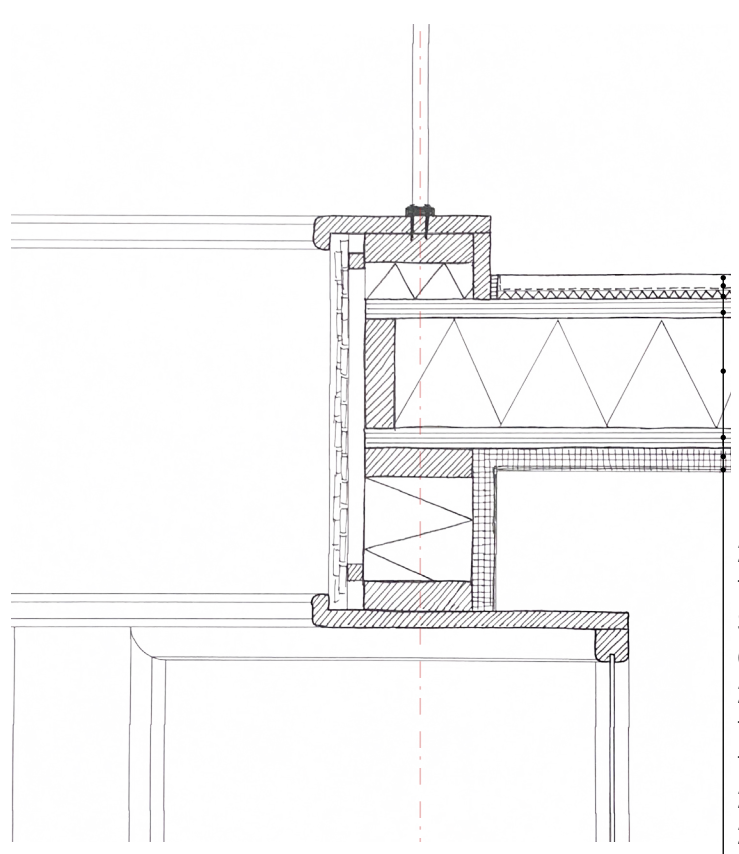
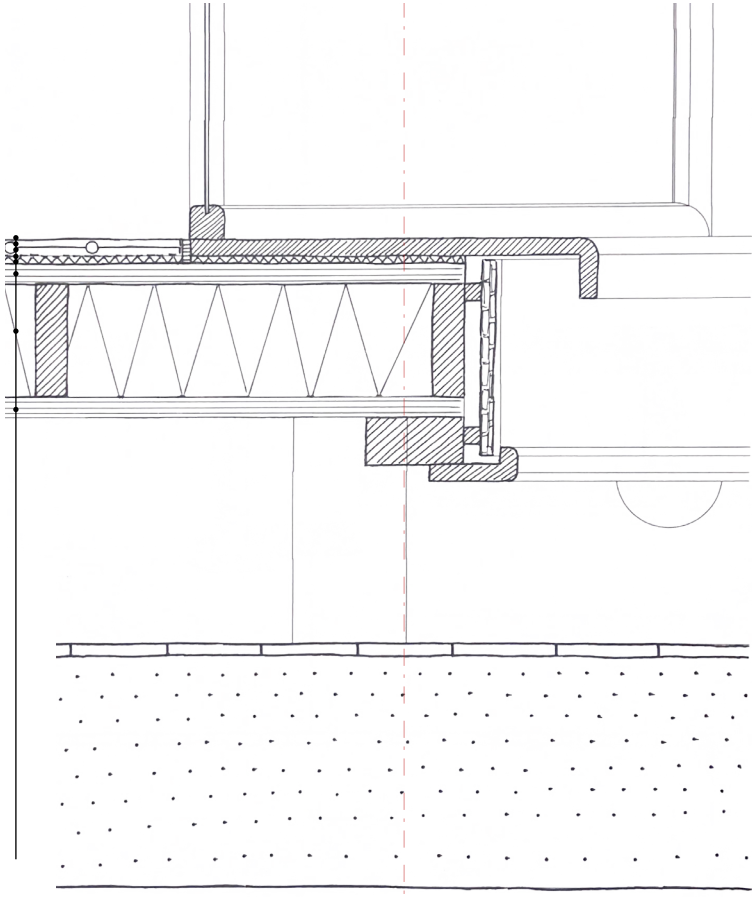






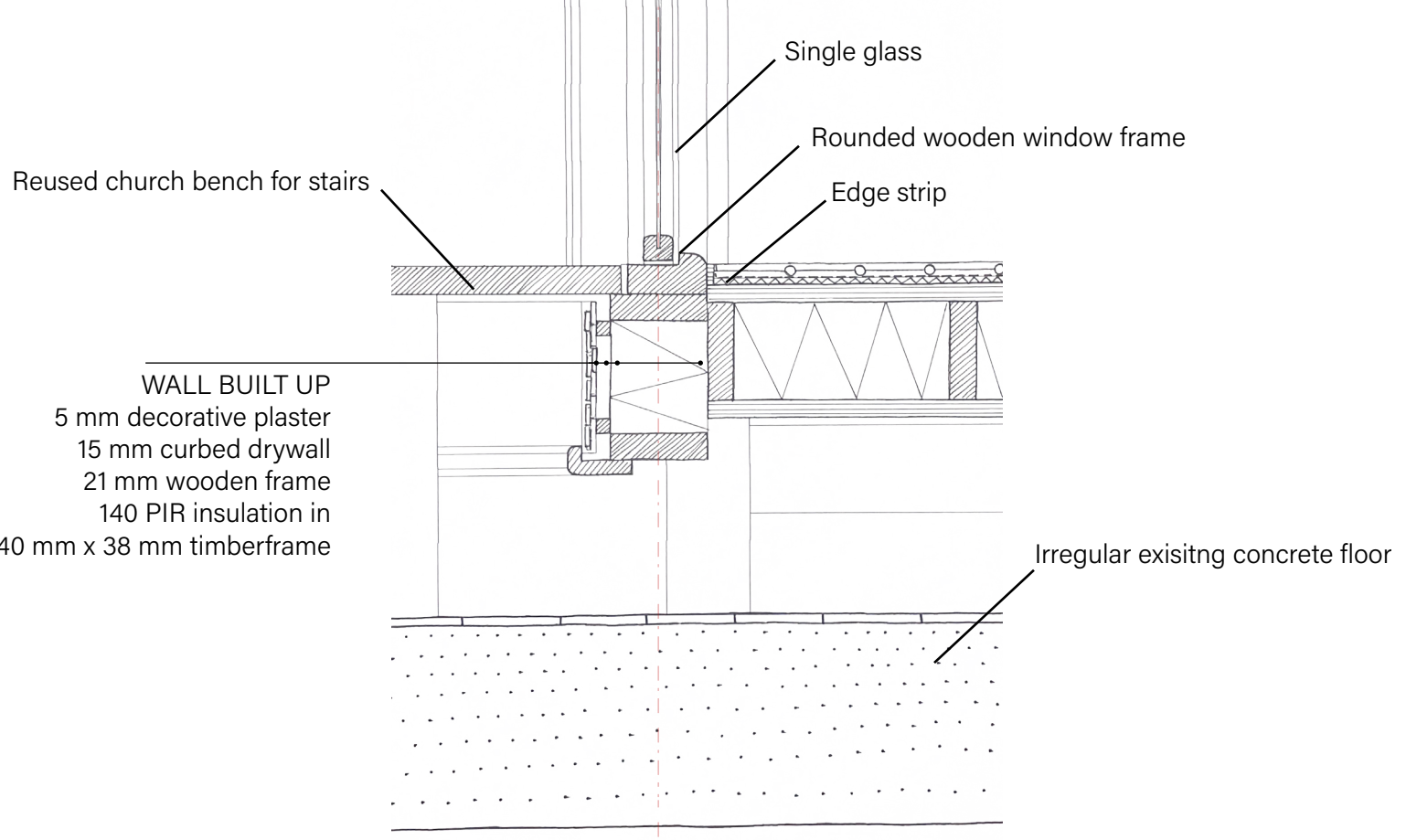
**FLOOR BUILT UP**  
 10 mm castfloor  
 15 mm floorheating pipes  
 10 mm cast floor  
 Separation foil  
 Compressive layers  
 25 mm plywood  
 140 mm insulation in  
 140 mm x 38 mm timberframe  
 25 mm plywood

**DETAIL 1**

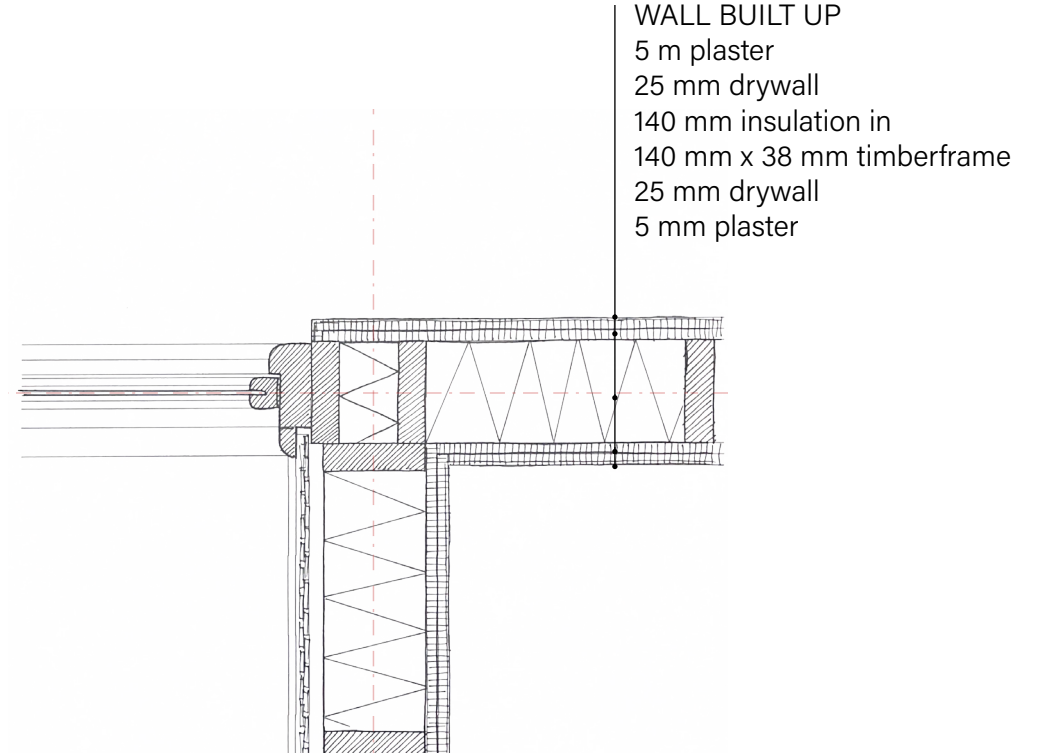


**ROOF BUILT UP**  
 20 mm castfloor  
 10 mm cast floor  
 Separation foil  
 Compressive layers  
 25 mm plywood  
 140 mm insulation in  
 140 mm x 38 mm timberframe  
 25 mm plywood  
 25 mm drywall  
 5 mm plaster

**DETAIL 2**



**DETAIL 3**



**WALL BUILT UP**  
 5 m plaster  
 25 mm drywall  
 140 mm insulation in  
 140 mm x 38 mm timberframe  
 25 mm drywall  
 5 mm plaster

**DETAIL 4**







ORIGINAL DESIGNED TOWER

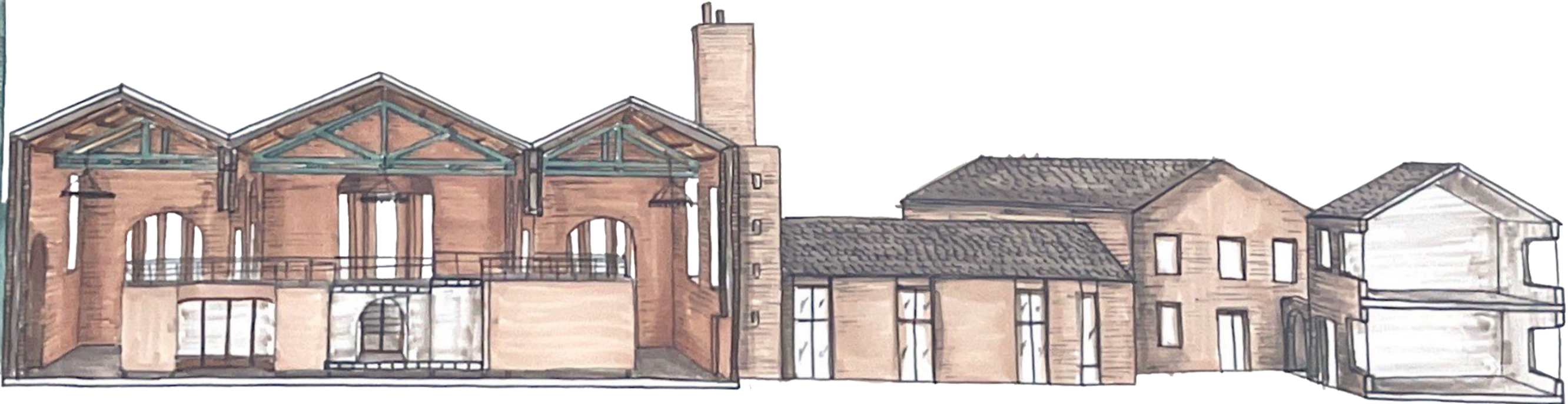
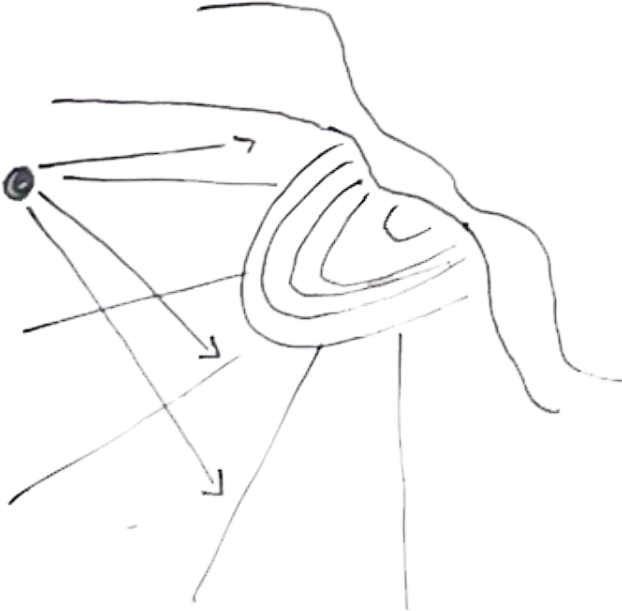




ORIGINAL DESIGNED TOWER

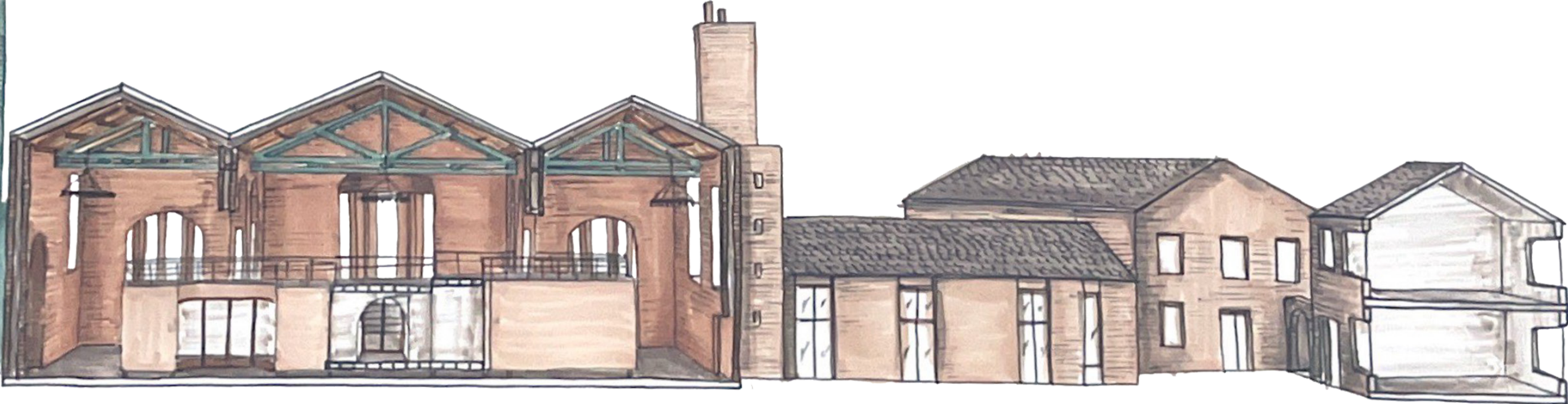
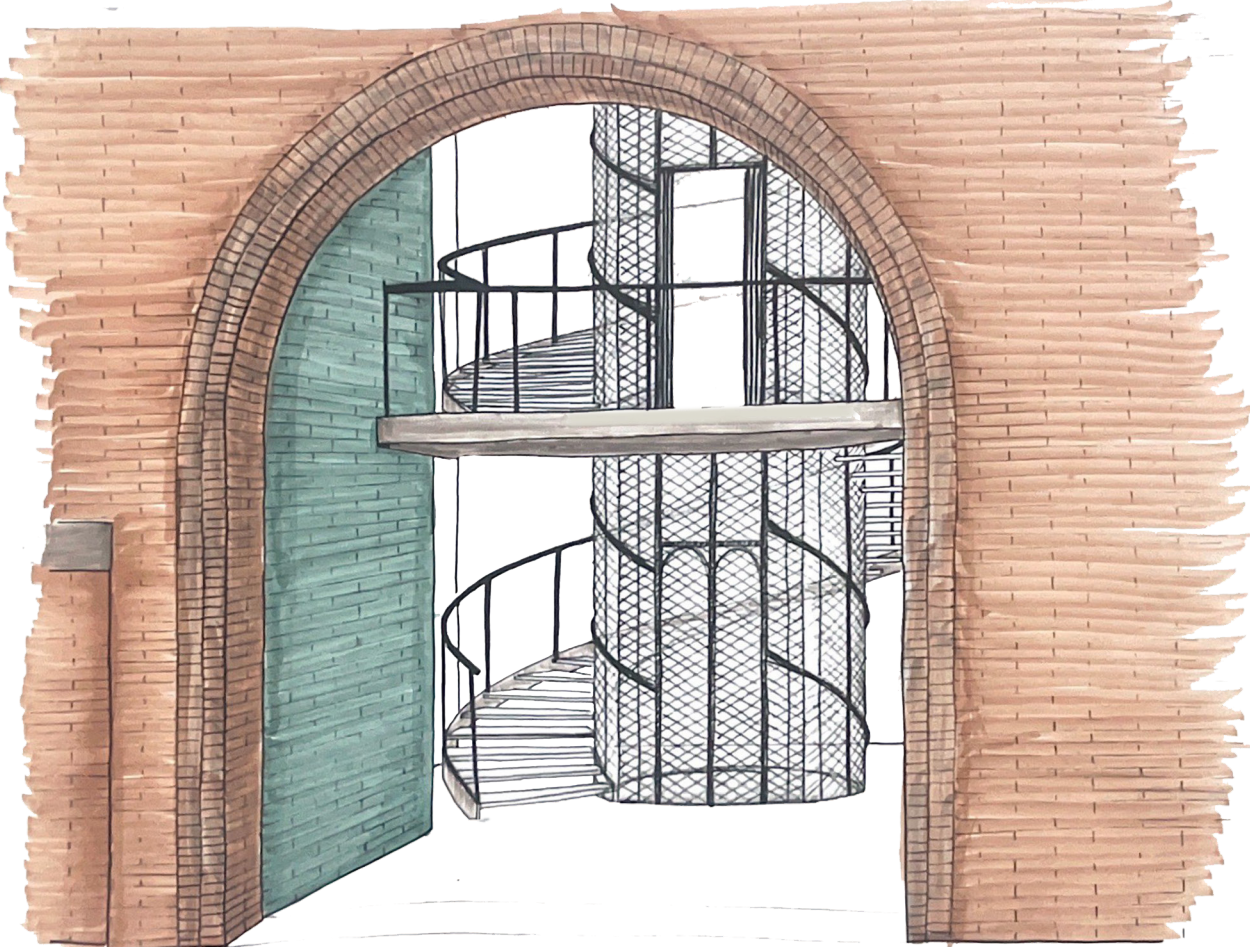


DESIGN PRINCIPLES  
CO-CREATION WORKSHOP





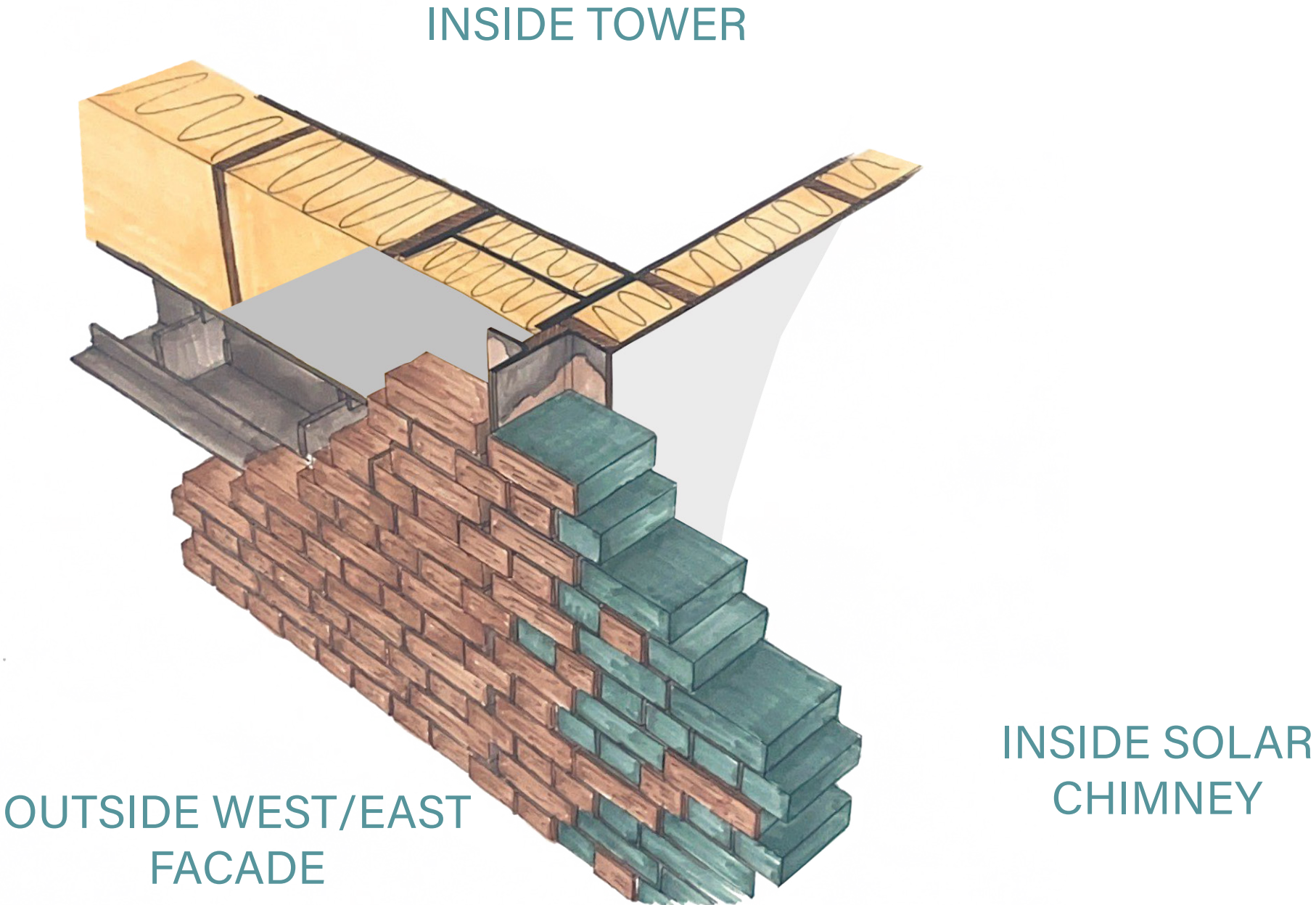
ORIGINAL DESIGNED TOWER





# 3D BUILDING TECHNOLOGY TOWER

*Connection glass brick south facade and brick north facade*



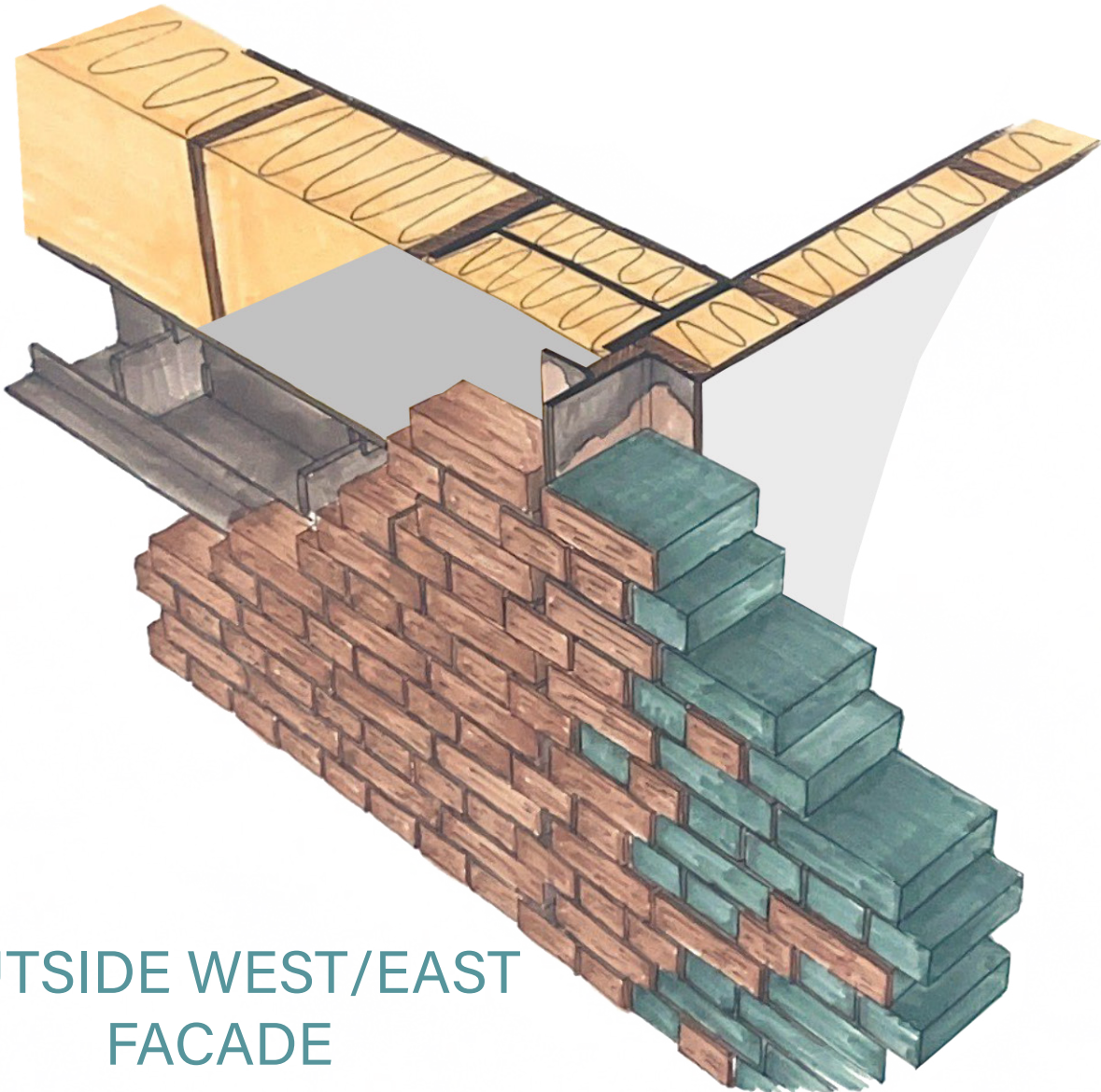


# 3D BUILDING TECHNOLOGY TOWER

*Connection glass brick south facade and brick north facade*



INSIDE TOWER



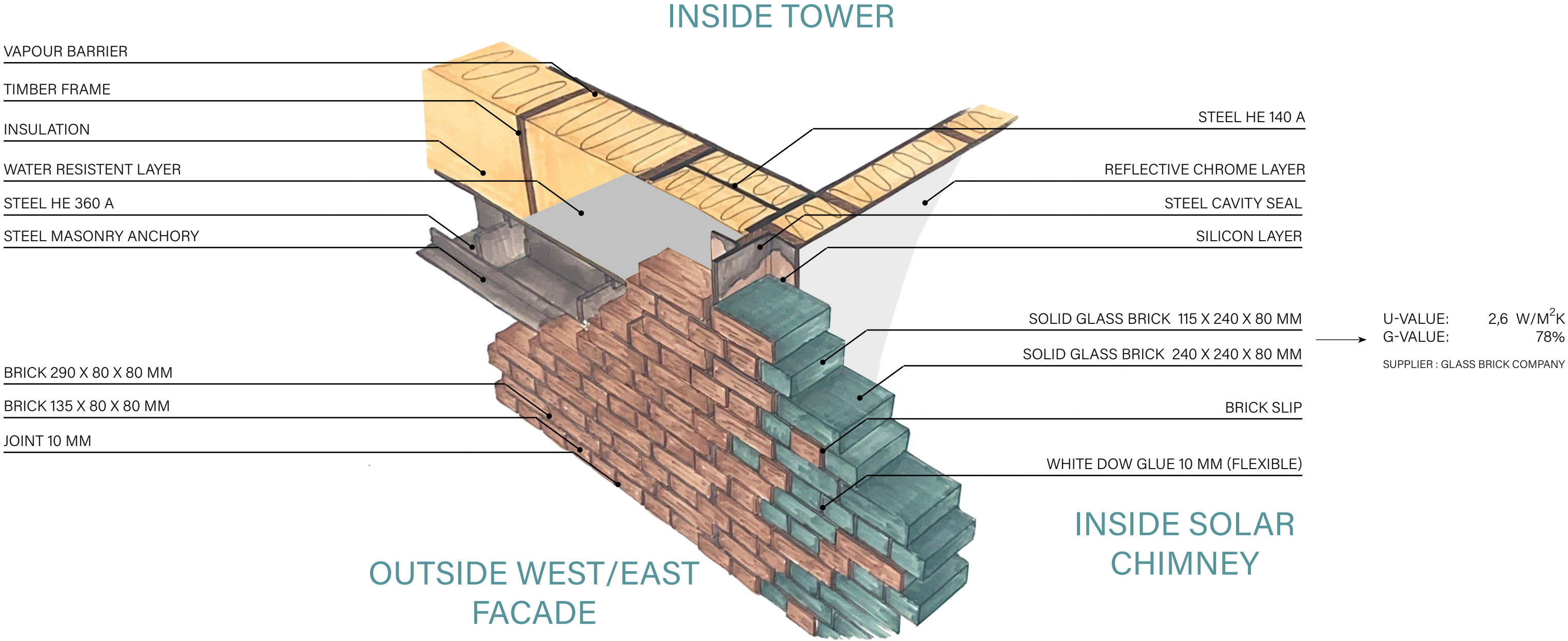
OUTSIDE WEST/EAST  
FACADE

INSIDE SOLAR  
CHIMNEY



# 3D BUILDING TECHNOLOGY TOWER

Connection glass brick south facade and brick north facade



INSIDE TOWER

VAPOUR BARRIER

TIMBER FRAME

INSULATION

WATER RESISTENT LAYER

STEEL HE 360 A

STEEL MASONRY ANCHORY

BRICK 290 X 80 X 80 MM

BRICK 135 X 80 X 80 MM

JOINT 10 MM

OUTSIDE WEST/EAST FACADE

STEEL HE 140 A

REFLECTIVE CHROME LAYER

STEEL CAVITY SEAL

SILICON LAYER

SOLID GLASS BRICK 115 X 240 X 80 MM

SOLID GLASS BRICK 240 X 240 X 80 MM

BRICK SLIP

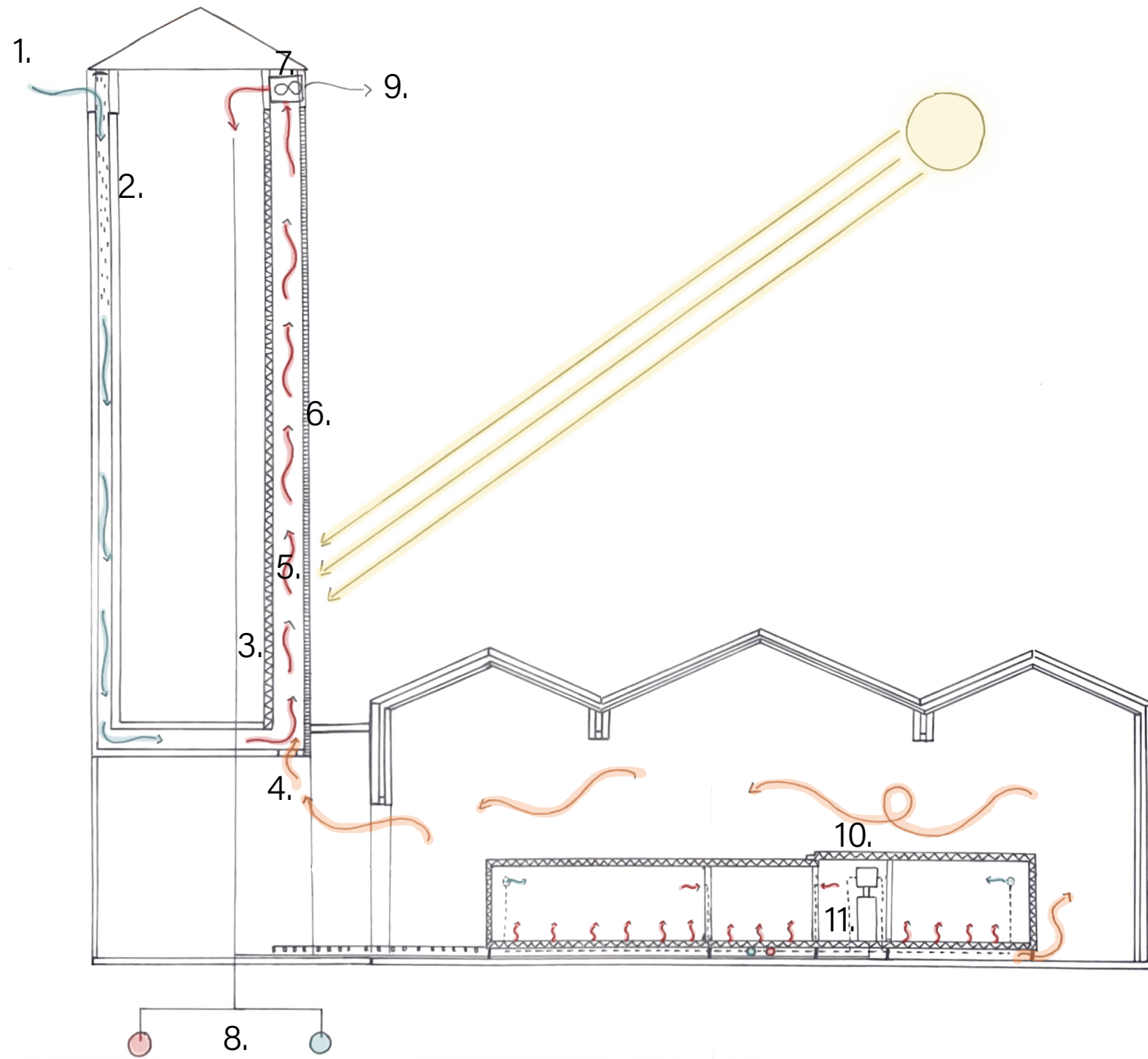
WHITE DOW GLUE 10 MM (FLEXIBLE)

INSIDE SOLAR CHIMNEY

U-VALUE: 2,6 W/M<sup>2</sup>K  
 G-VALUE: 78%  
 SUPPLIER: GLASS BRICK COMPANY



# CLIMATE CONCEPT EARTH WIND AND FIRE

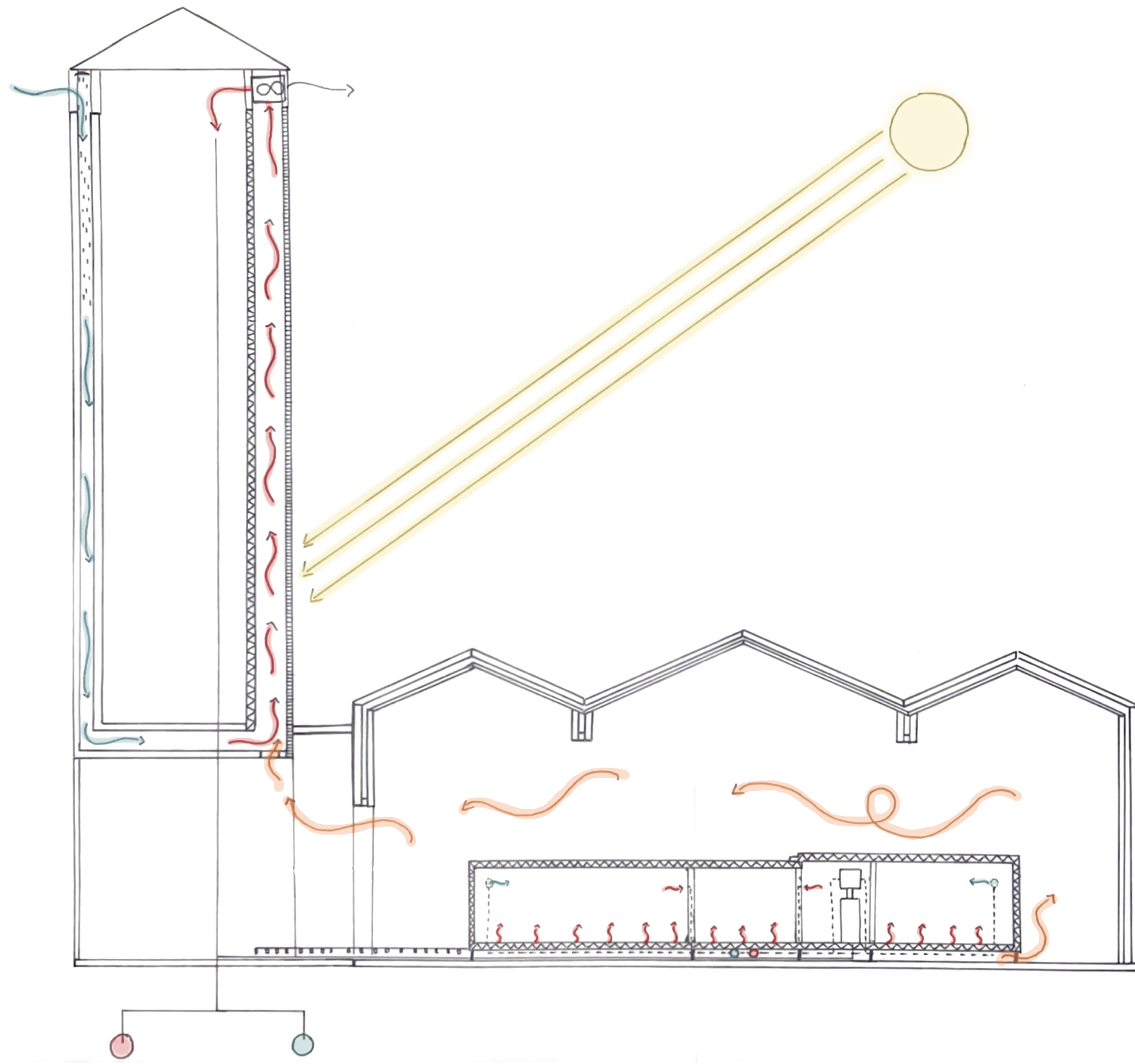


NORTH

SOUTH

1. Fresh air
2. Air humidification
3. Insulated indoor wall
4. Passive air suction
5. Heated air through solar chimney
6. Glass bricks (U value = 1,1 W/m<sup>2</sup>K, G value = 0,75 %)
7. Heat exchanger
8. thermal energy storage system (WKO)
9. Outlet air
10. Heat exchanger ventilation type D
11. Heat pump

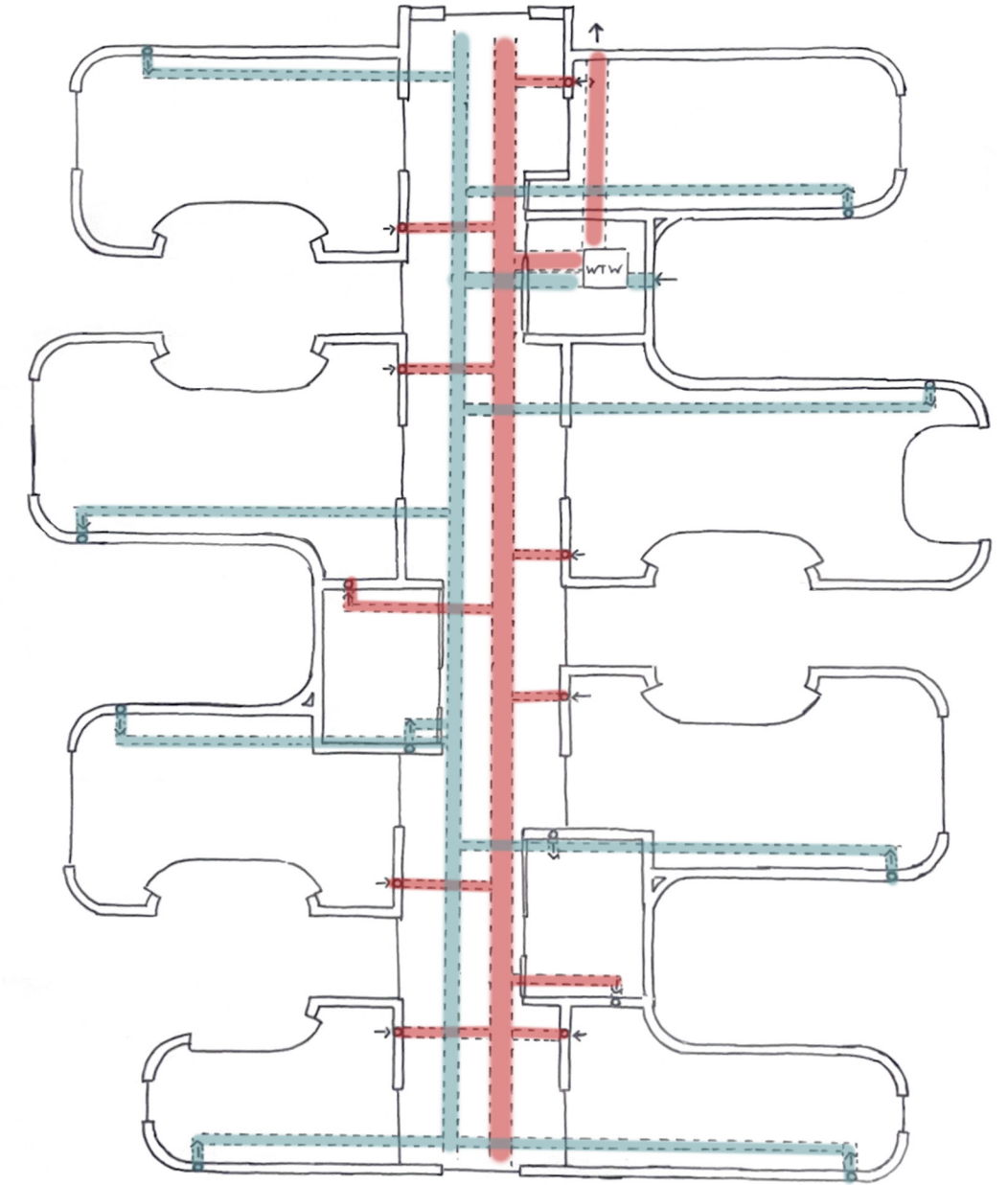
# CLIMATE CONCEPT EARTH WIND AND FIRE



NORTH

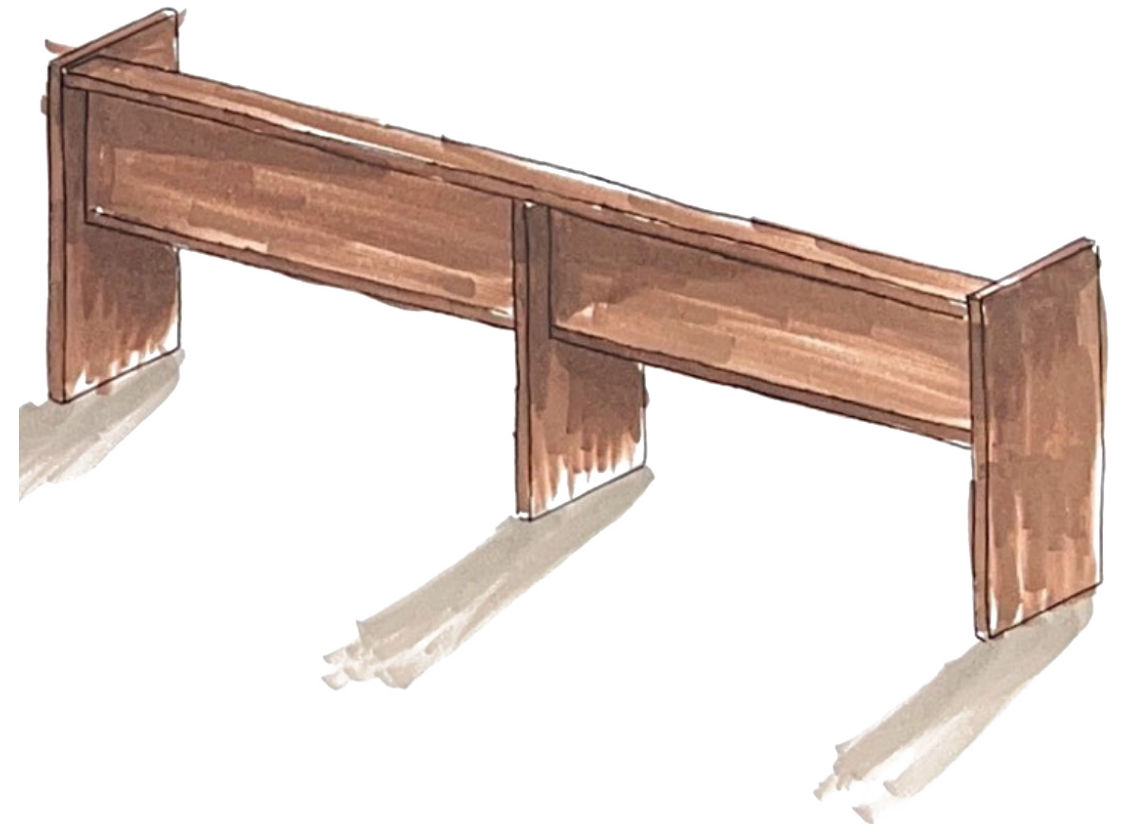
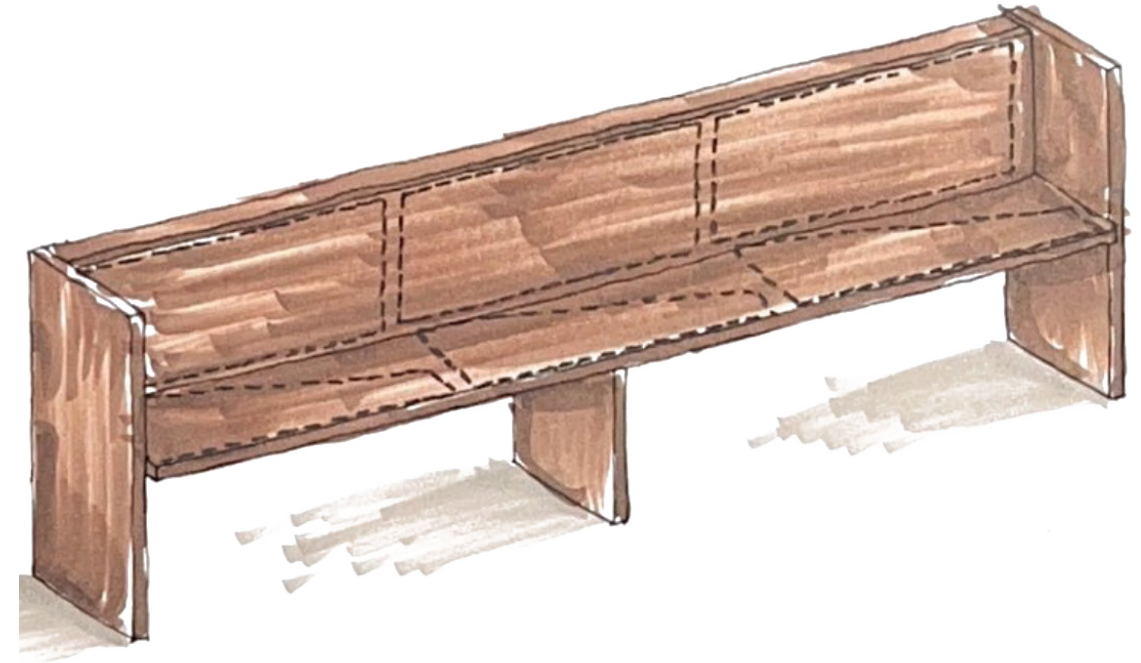
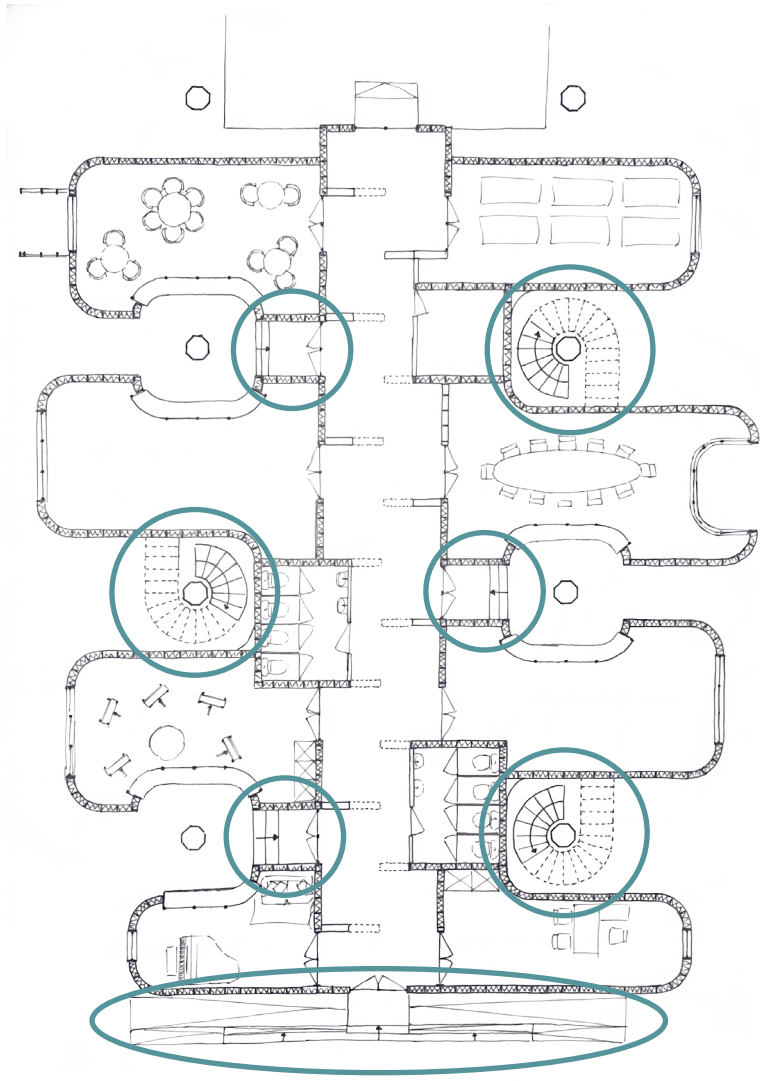
SOUTH

# VENTILATION SYSTEM PODS



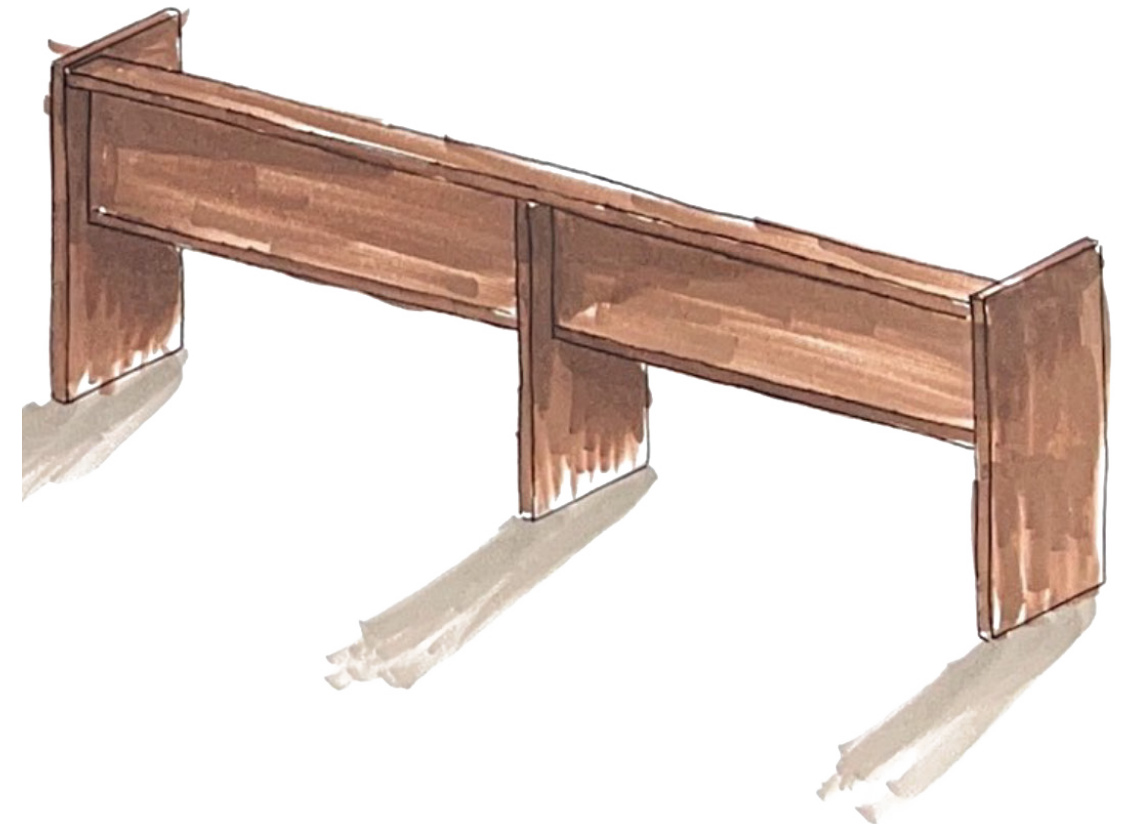
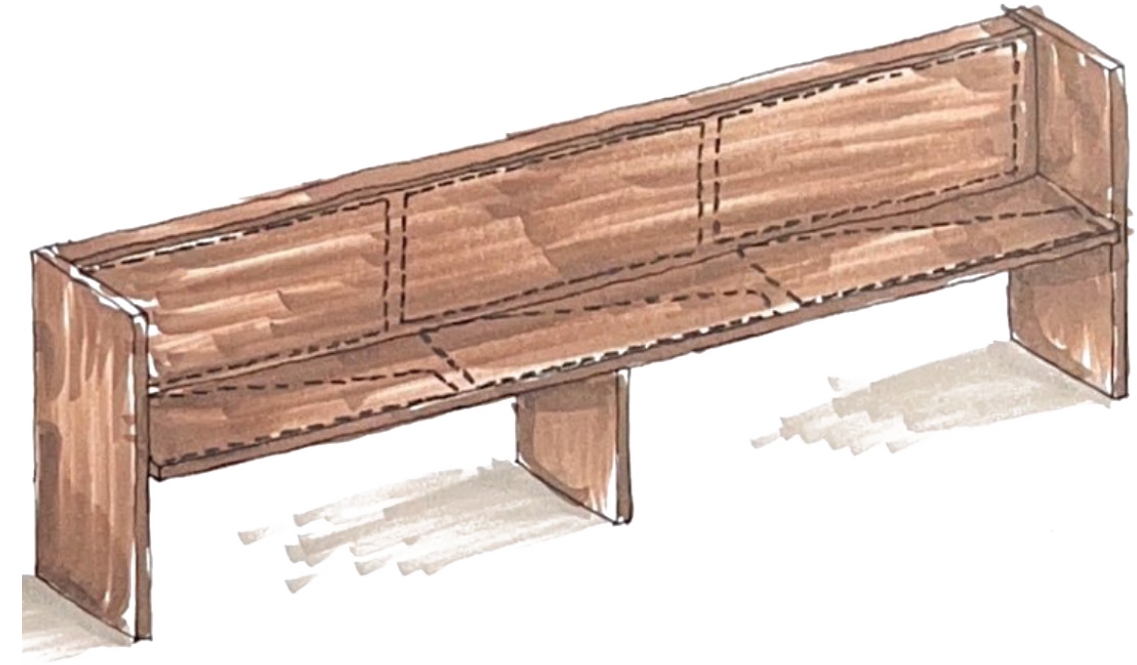
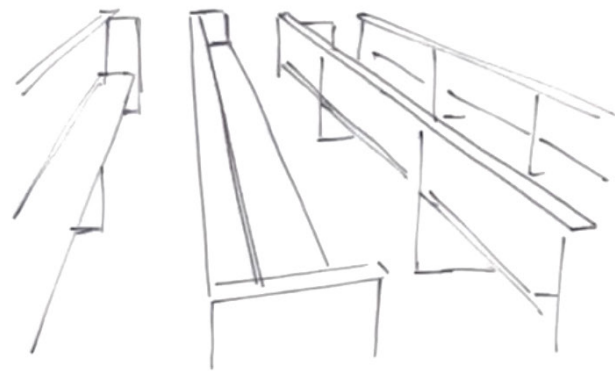
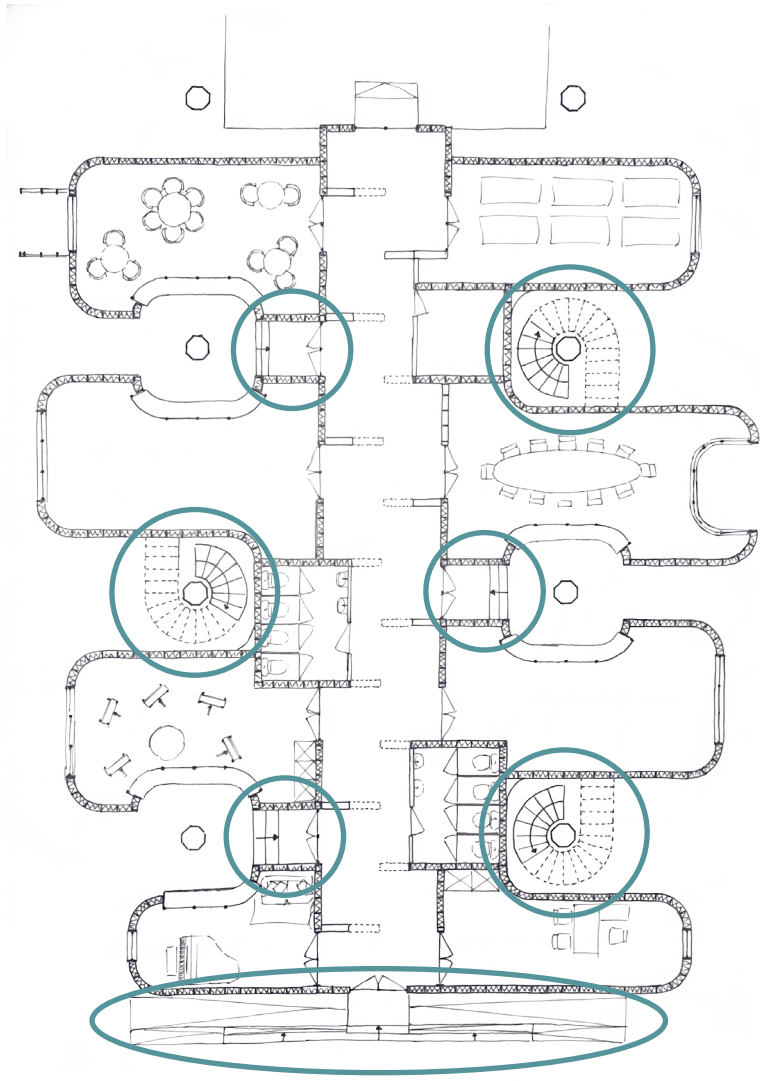


# REUSE CHURCH BENCH





## REUSE CHURCH BENCH



*"I just think these are cool old benches and chairs, they don't necessarily have to stay in the hall, but if they have a function. That these kinds of elements just come back somewhere."*



# CO-CREATION WORKSHOP EVALUTATION

*Second meeting, 23th may*

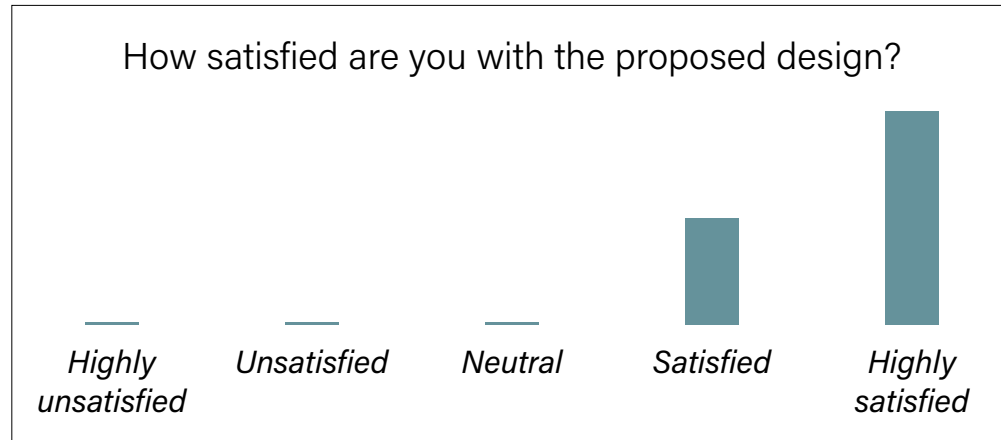
Interactive presentation  
evaluation survey





# CO-CREATION WORKSHOP EVALUTATION

## Satisfaction



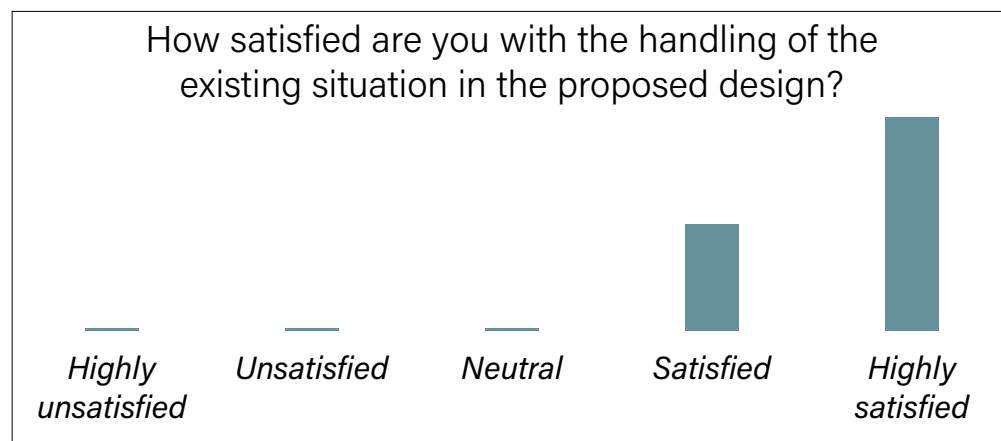
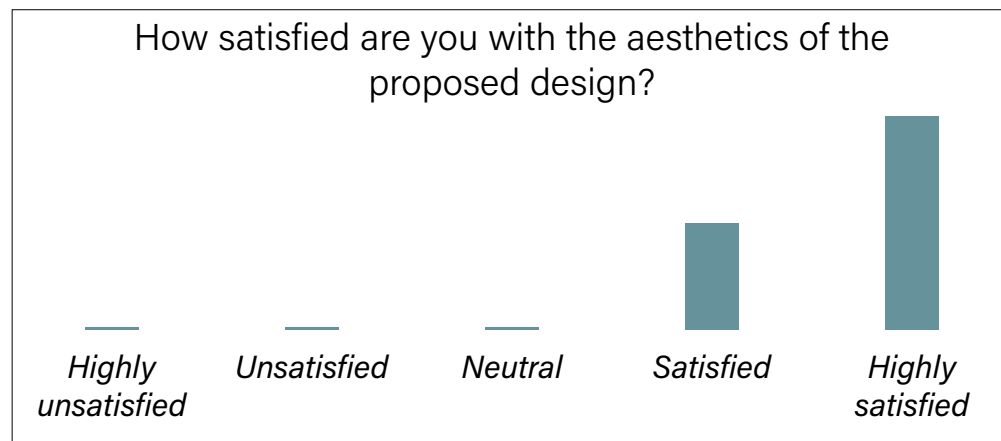
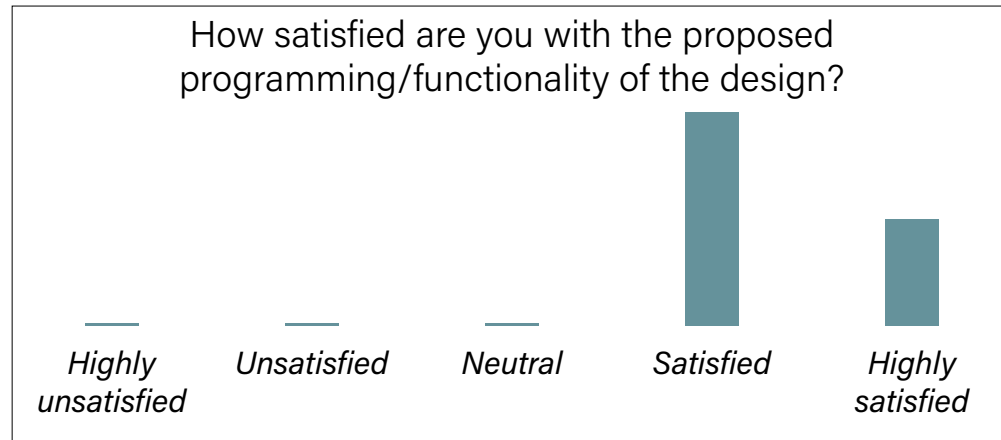
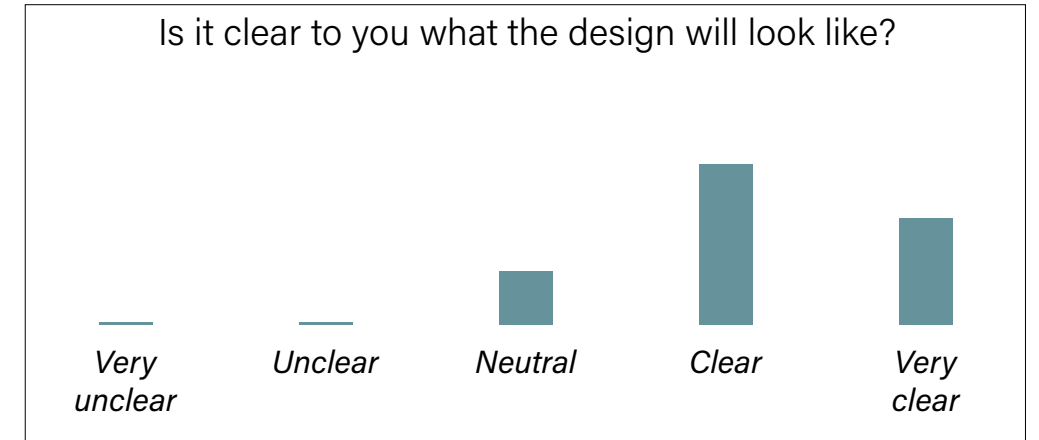
*"Surprising solutions, such as the height, heating of the space, and the spiral staircases."*

*"I'm very impressed by the solar chimney."*

*"First floor is needed in 3D"*

*"Great drawings. that give a good impression of the proposed idea."*

## Direction



*"Very beautiful! The application of the plastic number works very well."*

*"Beautiful staircase, where the wood from the benches is reused."*

*"Great respect for the existing monument."*

*"A lot needs to be done to be able to execute the plan"*

*"I can totally see this happening!"*

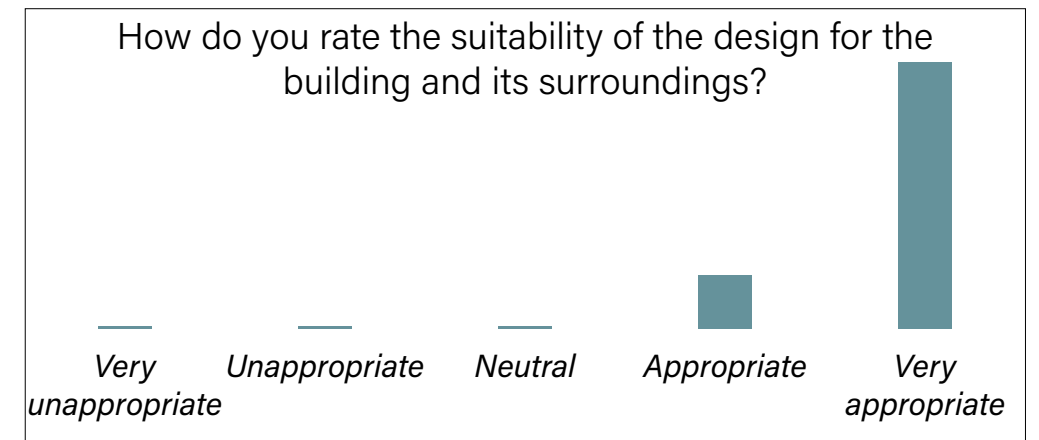
*"The use as a concert hall is not yet fully developed."*

*"There was a lot of input where it's impossible to address everything."*

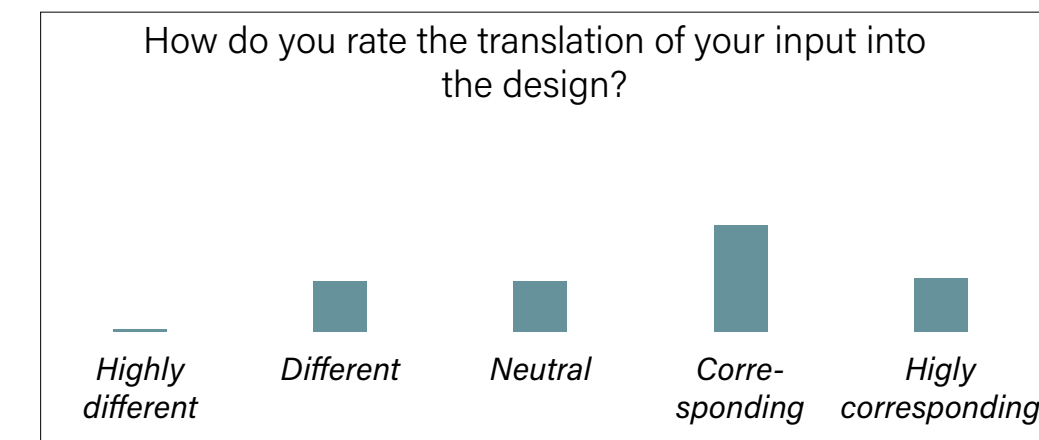
*"I see and hear a lot in the design of what was brought up!"*

*"I was hoping to see more of the dwellings in the outbuildings. Unfortunately you only focussed on the church hall."*

## Appropriateness

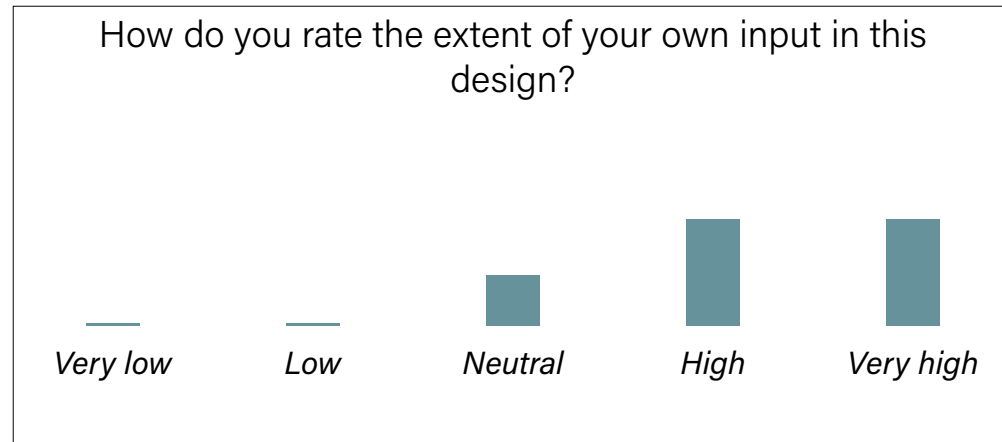


## Alteration and deviations





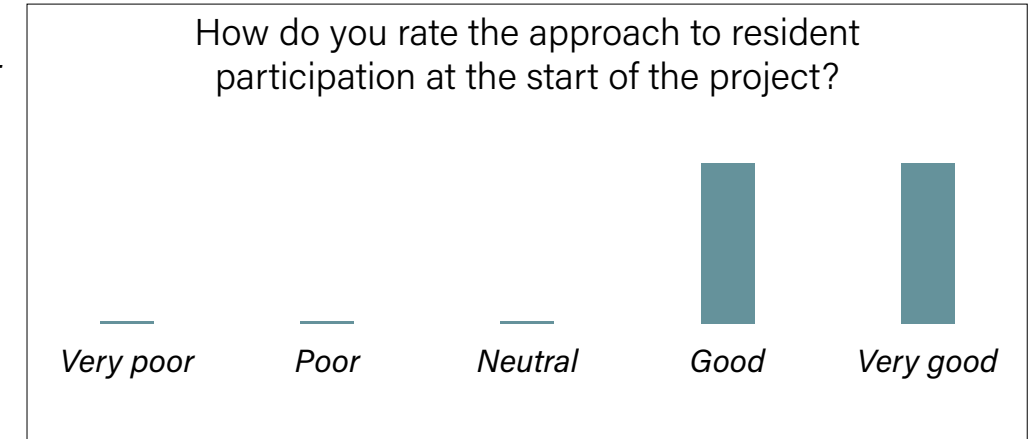
## Contribution



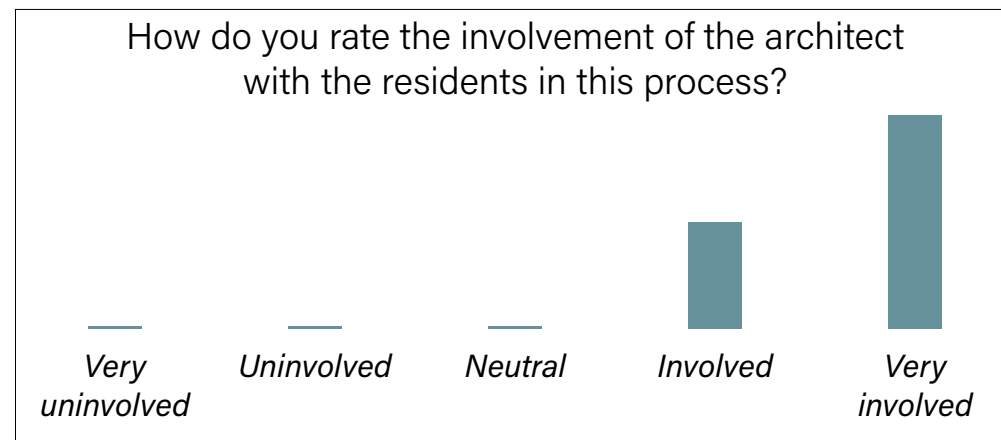
*"Good opportunities for participation."*

*"I am amazed by your ability, your creativity, your patience, and your social skills. It's beautiful to see."*

## Communication

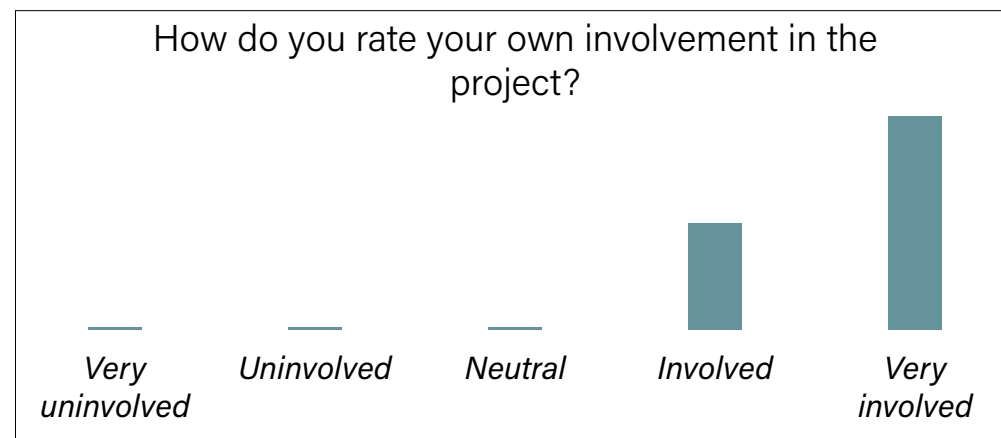
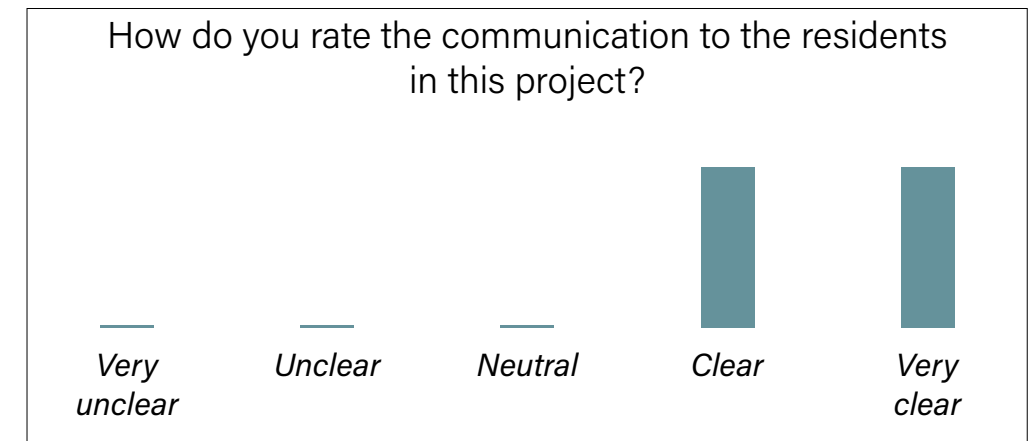


## Inclusion



*"There were quite a few complications; you handled them well."*

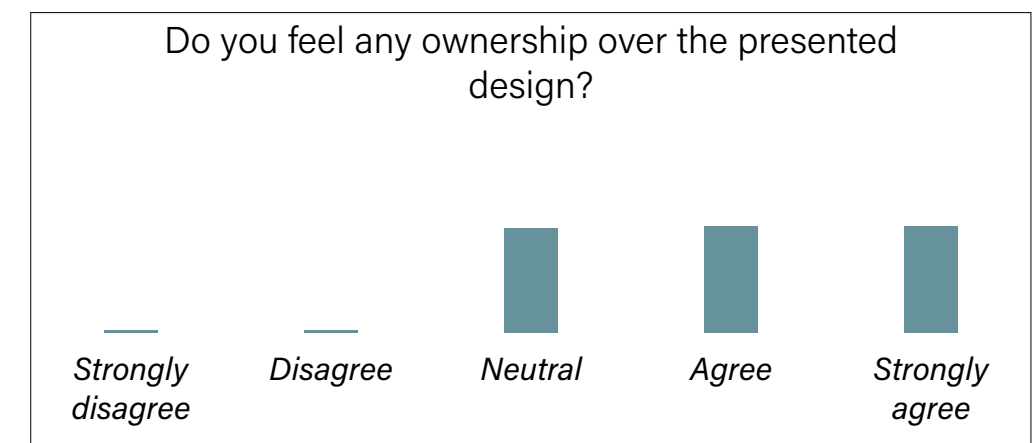
*"You listened well and took everything into account."*



*"A lot needs to be done to be able to execute the plan"*

*"It was fun to participate, but ownership requires a much more intensive/frequent contribution."*

## Ownership



# FUTURE STEPS



THANK YOU