

ARCHITECTURAL DESIGN ● PORTFOLIO ● NEWCASTLE UNIVERSITY ●

ARCHITECTURE

PORTFOLIO

ATTHAPHAN SESPATTANACHAI
(BRIGHT)

RIBA ARCHITECTURE
PART 1

 ส.กมล

Attaphan Sespattanachai (Bright)

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+66 (0) 97 225 7906
attaphan82345@gmail.com
a.sespattanachai@newcastle.ac.uk

October, 15 2019

To whom this may concerns,

The reason I would like to work at your unique Architecture firm is that I have always been fascinated by the sophisticated process behind each project as well as the outcome. There are always new challenges that need to be solved with different approaches in which I believe that you cannot find in University. These motivated me to learn how to design sustainably with smart materials and planning techniques. I love to learn how to design and build constructions that reflect our era in terms of style and advancement in technology. Most of my designs would focus on people as how they are interacting, overlapping and moving through the space. It is more about how to design a space to fit into the community not how to design a space for community to fit into. However, as a freshly graduate part 1 architect I am still lacking in experience I would like to use this opportunity to learn and design buildings that are liveable, affordable, aesthetic and environmentally friendly by using the surroundings to their advantage. I believe that experiences I gain from practice would help to strengthen my knowledge, creativity and designing skills as an architect as well as how to work and corporate with contractors.

I believe that with a strong passion, skills in architectural technology, design, analysis and rendering I would be able to provide benefits to the company.


Sincerely yours,

Attaphan Sespattanachai (Bright)




ABOUT ME

As a RIBA part 1 architect I am still lack in experience. However, with a strong passion I would love to learn and explore the world of architecture further. This allows me to express my ideas and ambition through building design.

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 attaphan82345@gmail.com

 14 July 1997

 23 Moo 8, Pattamanon Road, A.
Mueng, Surin, Thailand, 32000

238c Westgate road, Newcastle
Upon Tync, NE4 6AP

SKILLS





ATTHAPHAN SESPATTANACHAI (BRIGHT)

RIBA PART 1
ARCHITECTURAL ASSISTANT




EDUCATION


 **2016-2019**
Newcastle University, United Kingdom

 **2013-2015 (High school)**
King's College, New Zealand


 **2008-2012 (Elementary - Junior high school)**
Vajiravudh College, Thailand


EXPERIENCE


 **2018**
RIBA Student Mentoring Program at Kiosk architects


 **2017**
IT international co., Ltd. (INTERN)

AWARD AND INVOLVEMENT

 **2017-2018**
Fashion society
Thai society committee

 **2016**
Boxing society
Architecture society

 **2015**
House Academic Colours Term 2
BMW bonnet design and painting
competition, 2nd place
Cultural night
House archery, Badminton and Basketball
Rugby 4th grade, Senior House rugby,
Intermediate House rugby IHC social
Handicap dancing party

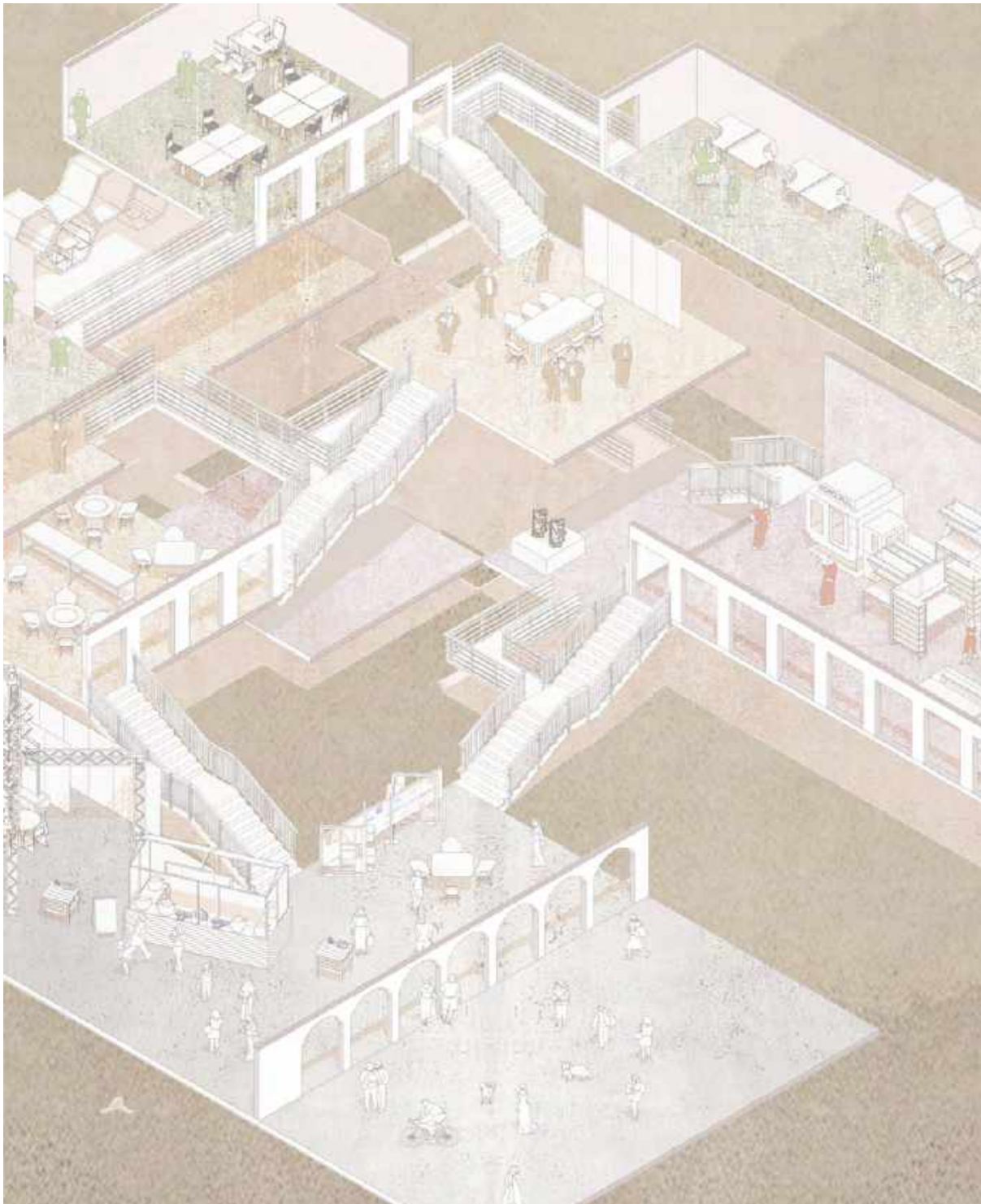
 **2014**
King's College Leadership Camp
Coaching a mentoring primary school
students in reading

01

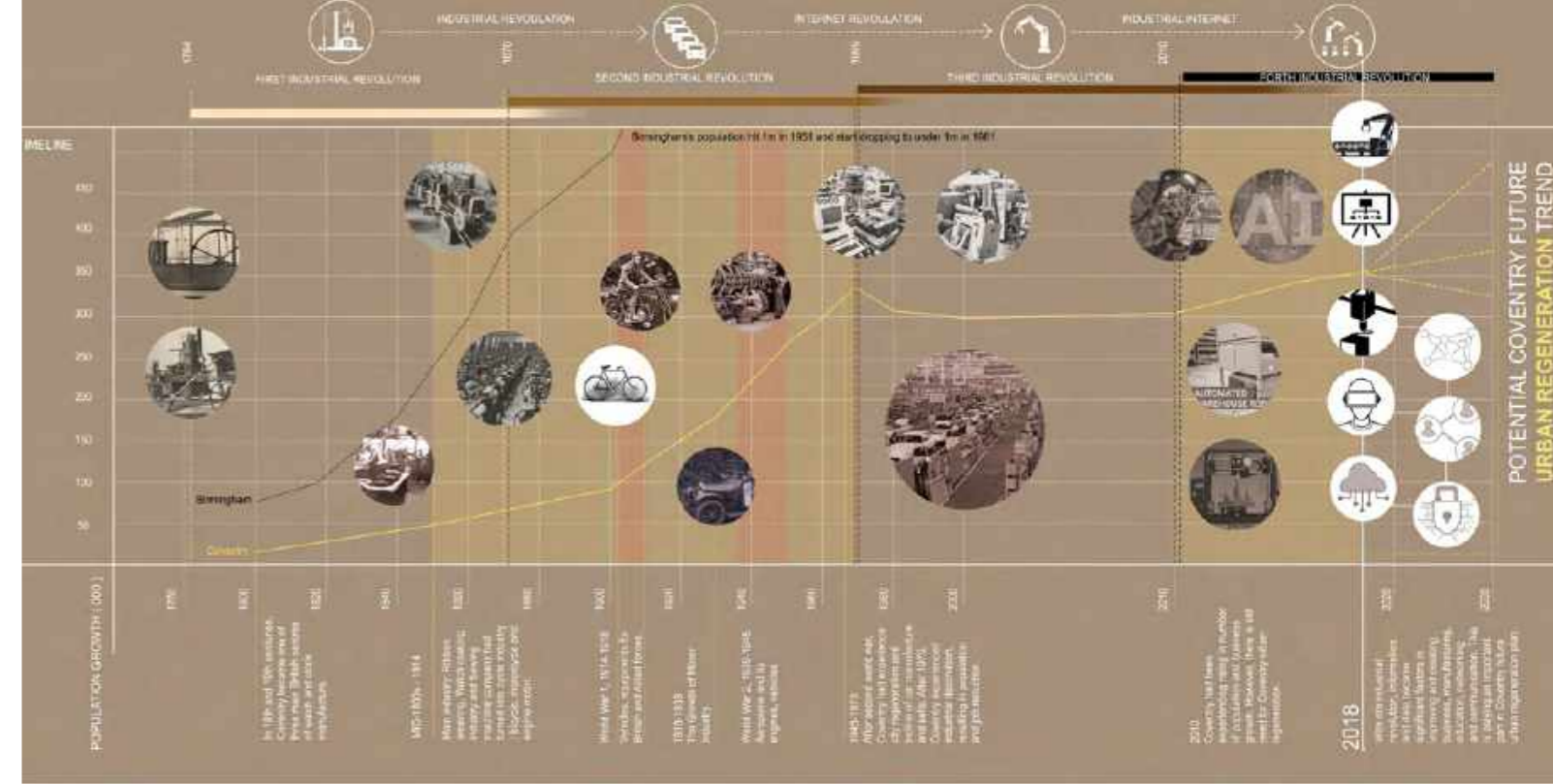
URBAN REGENERATION:

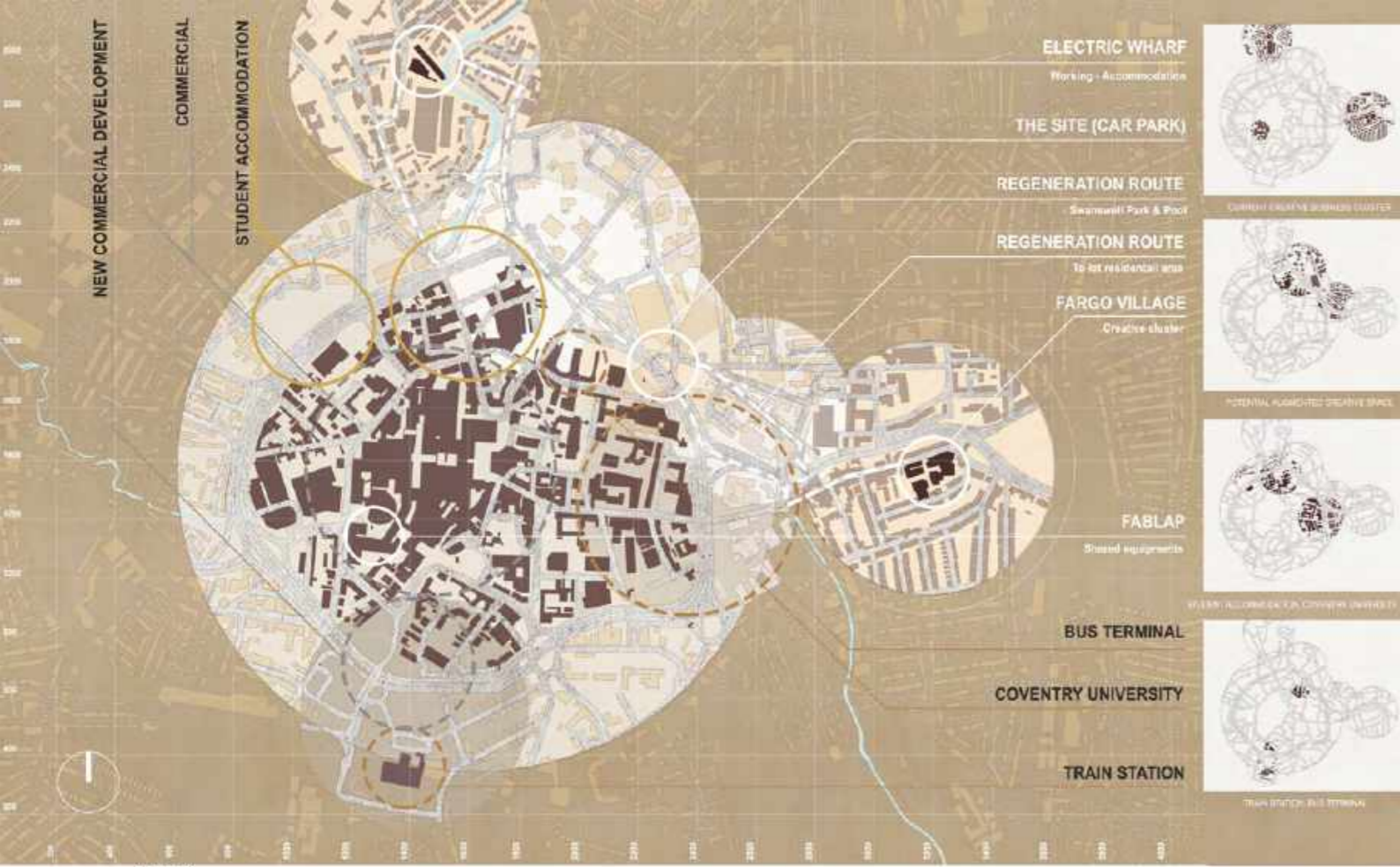
INNOVATION CREATIVE CENTRE

THE INDUSTRIES OF TWENTY-FIRST CENTURY WILL DEPEND INCREASINGLY ON THE GENERATION OF KNOWLEDGE THROUGH CREATIVITY AND INNOVATION

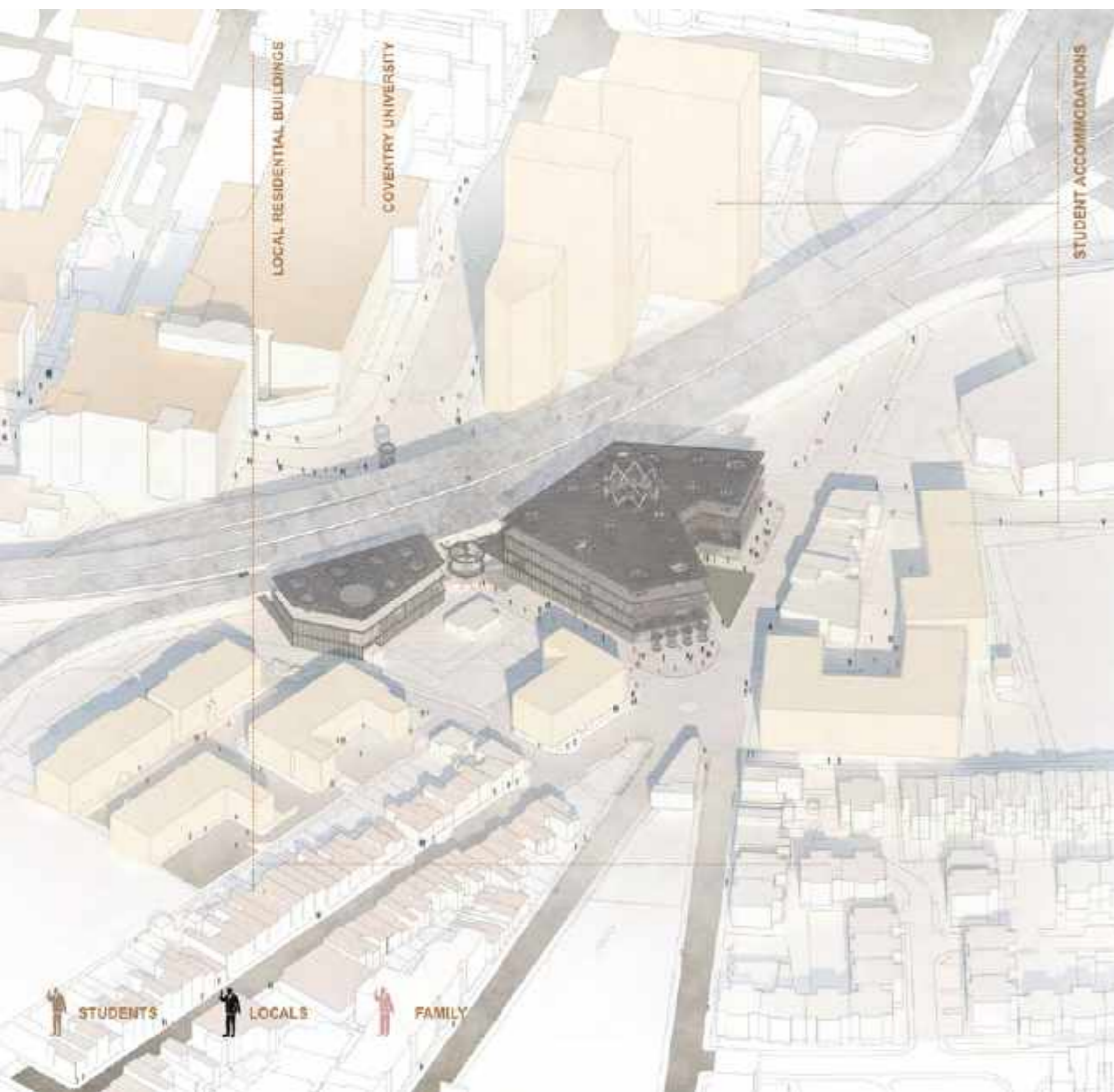


INITIAL CONCEPTUAL PROGRAMME | Four main spaces : Entrance (central space), Collaboration, Workshop, Business

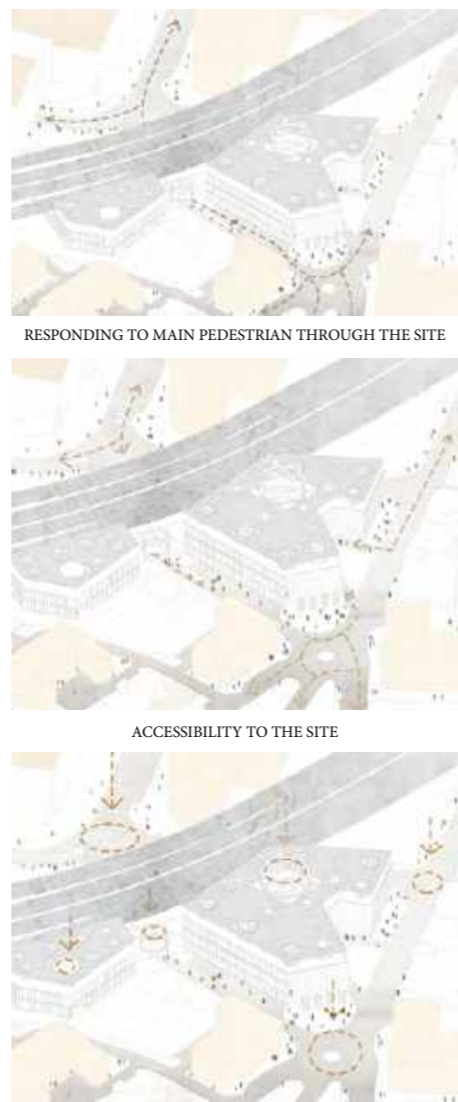




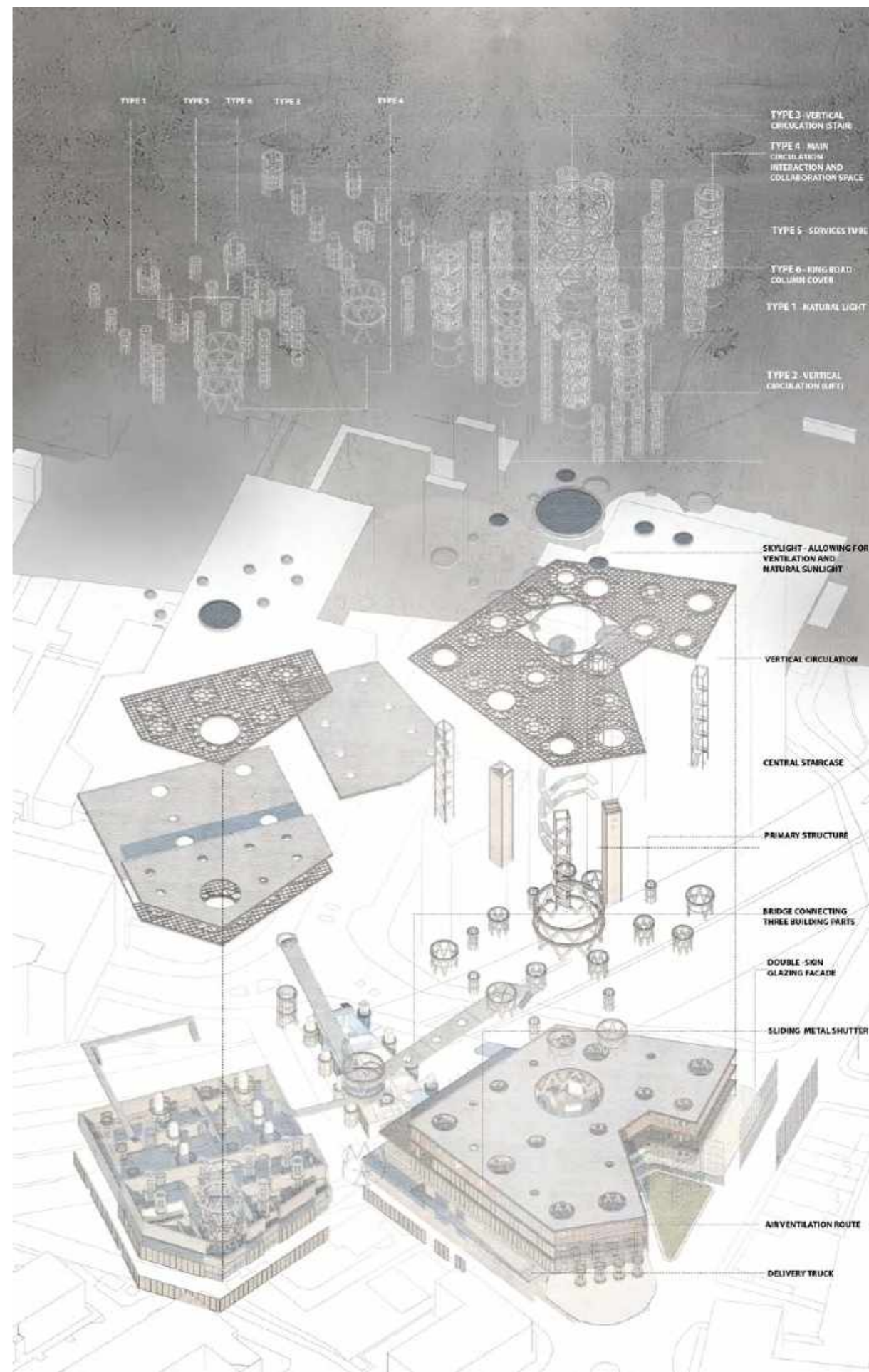
COVENTRY SITE ANALYSIS | Coventry City Centre site analysis



URBAN CONTEXT - RESPONDING TO DIFFERENT GROUP OF PEOPLE



MAIN EXTERNAL INTERACTION AREAS



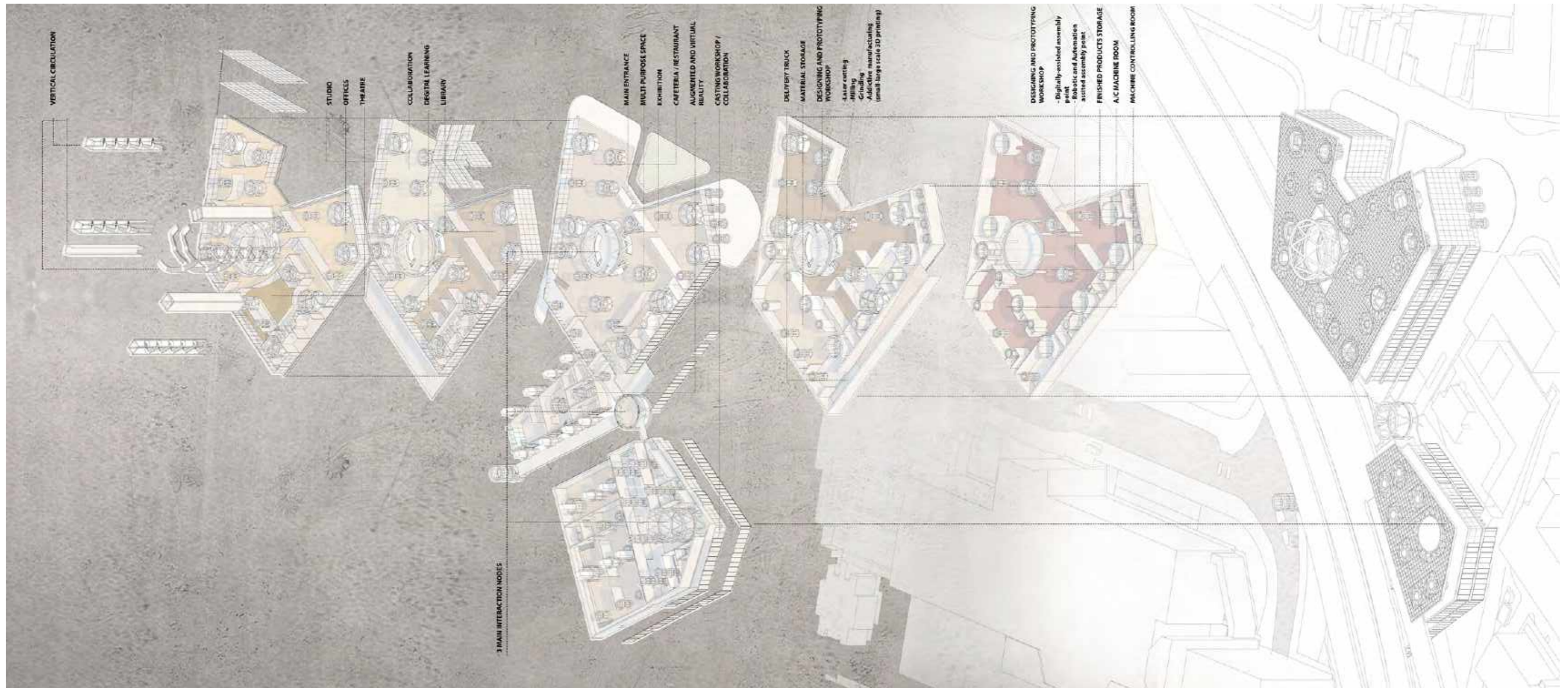
SECOND FLOOR

FIRST FLOOR

GROUND FLOOR

BASEMENT (B1)

BASEMENT (B2)



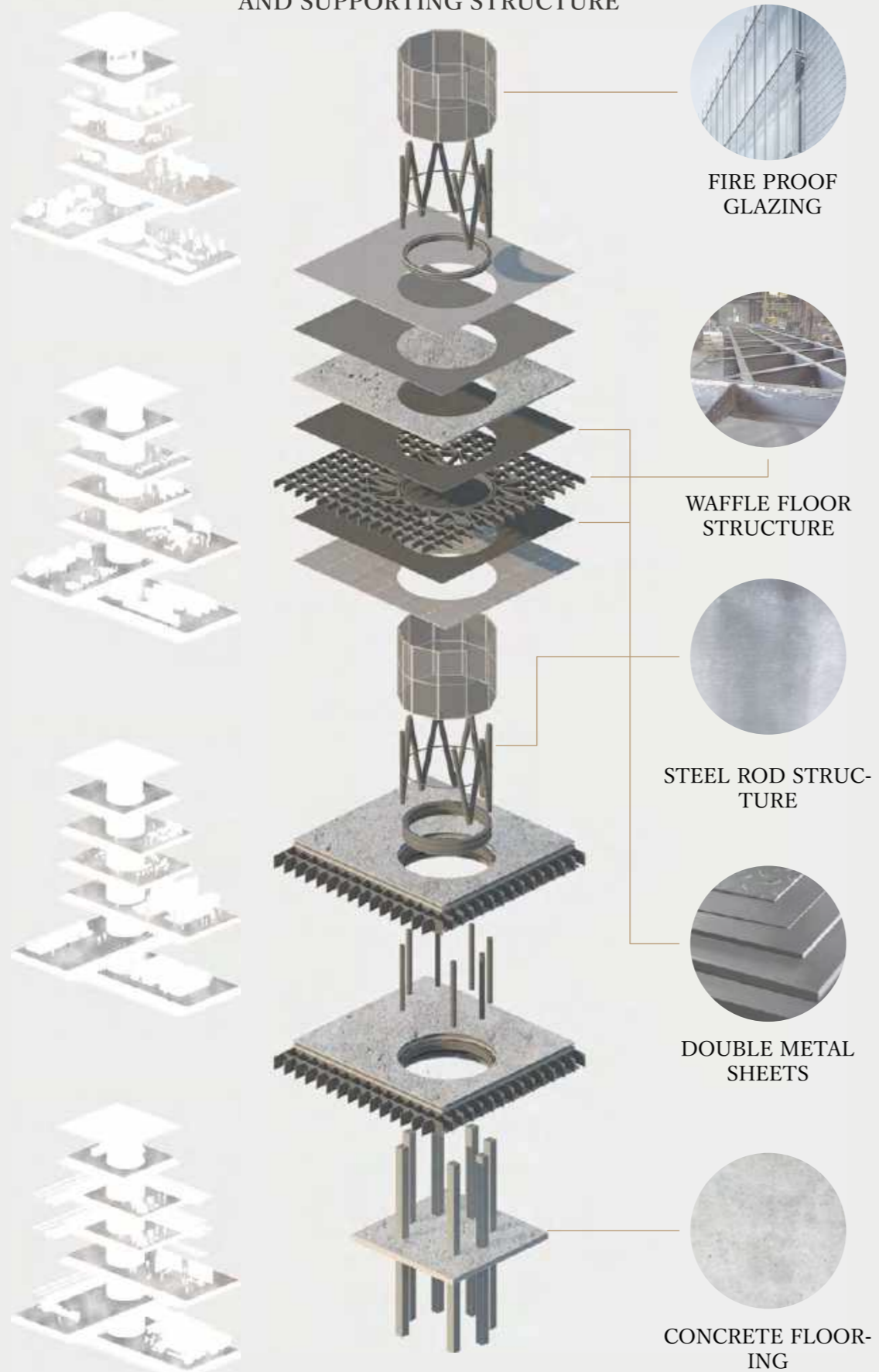
EXPLODED ISOMETRIC DIAGRAM

This diagram illustrates essential programmes and elements of the building

1. Basement (B2)
2. Basement (B1)
3. Ground floor
4. First floor
5. Second floor

Programme / Building elements

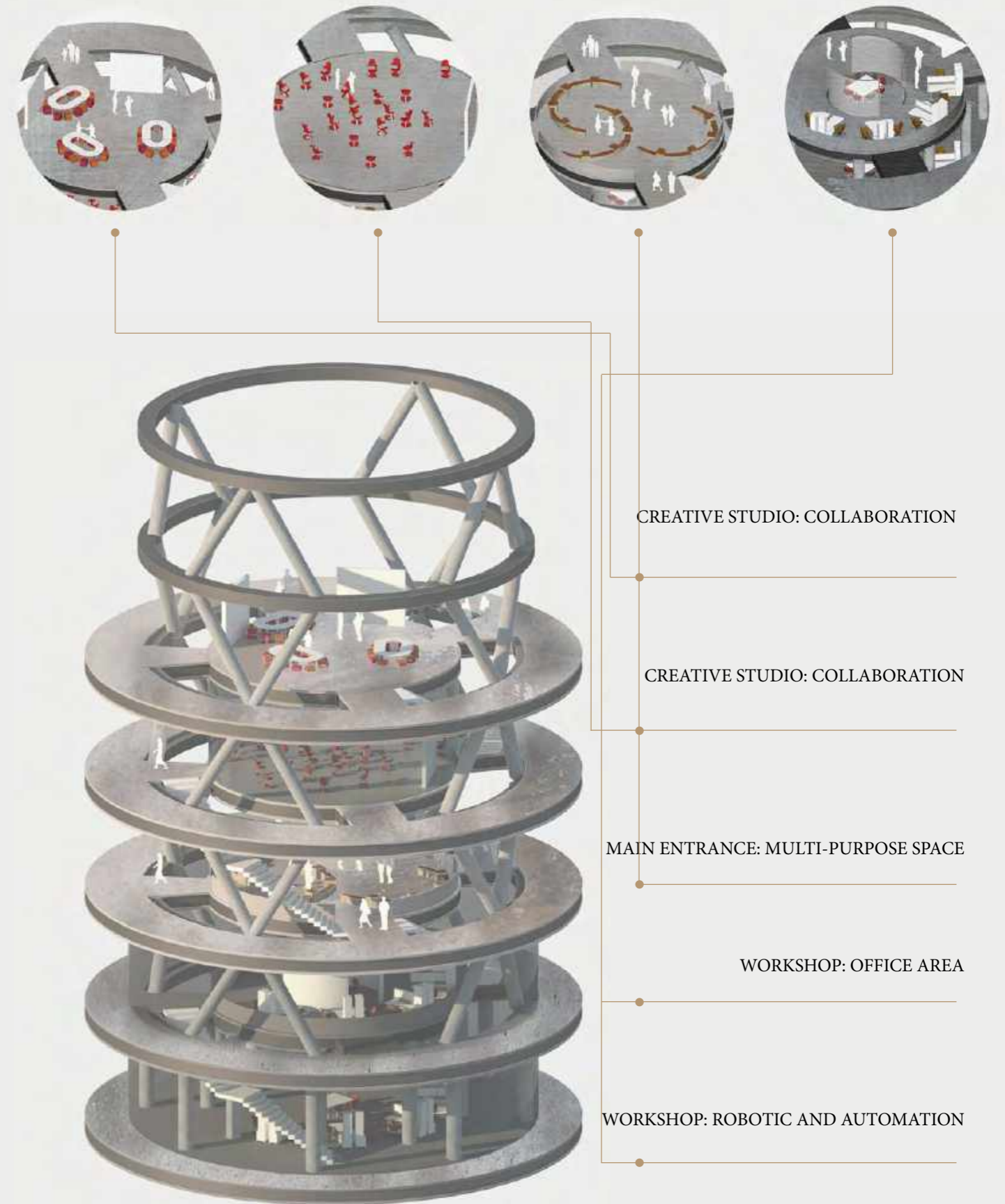
GENERAL TUBE COMPONENT - INTERACTION NODE AND SUPPORTING STRUCTURE



EXPLODED DIAGRAM - TUBE COMPONENT

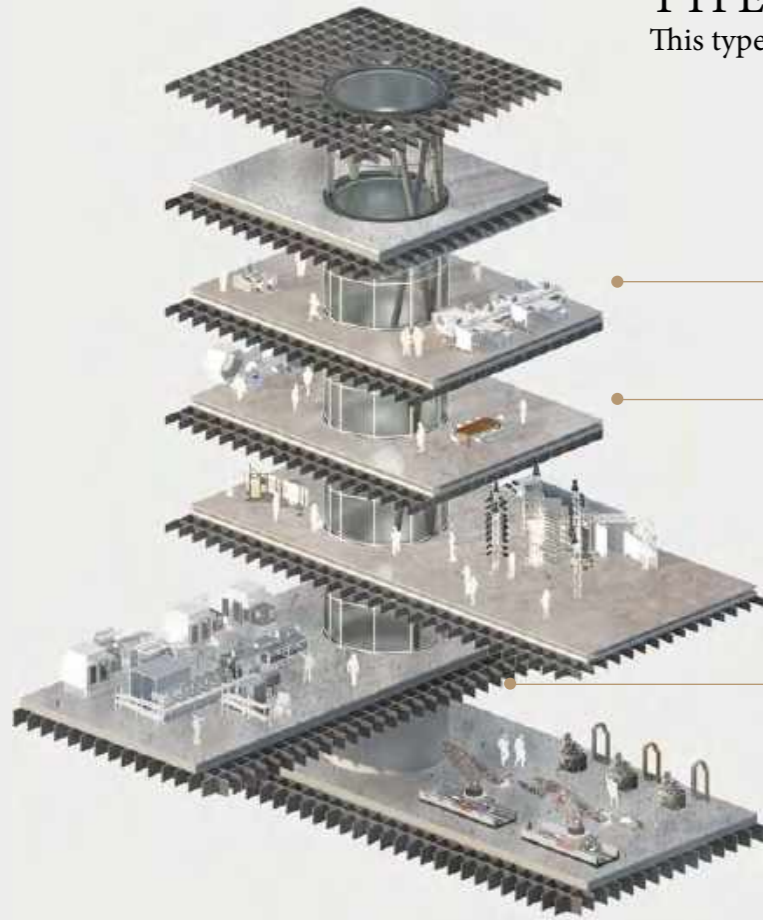
TYPE 0 : COLLABORATION CENTRAL

This type allow for virticle circulation



TYPE 1 : NATURAL SUNLIGHT

This type allow natural sunlight to come into the building



CREATIVE STUDIO: OFFICE AREA

CREATIVE STUDIO: COLLABORATION SPACE

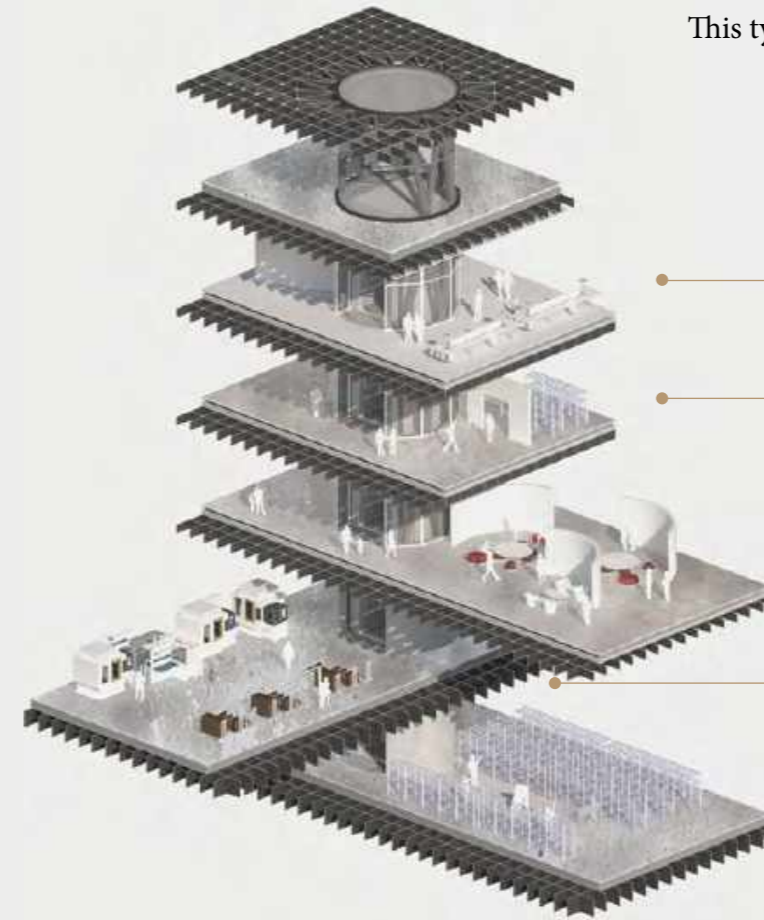
MAIN ENTRANCE: MULTI-PURPOSE SPACE

WORKSHOP: ADDICTIVE MANUFACTURING

WORKSHOP: ROBOTIC AND AUTOMATION

TYPE 3 : LIFT CIRCULATION

This type allow verticle circulation



CREATIVE STUDIO: OFFICE AREA

CREATIVE STUDIO: COLLABORATION SPACE

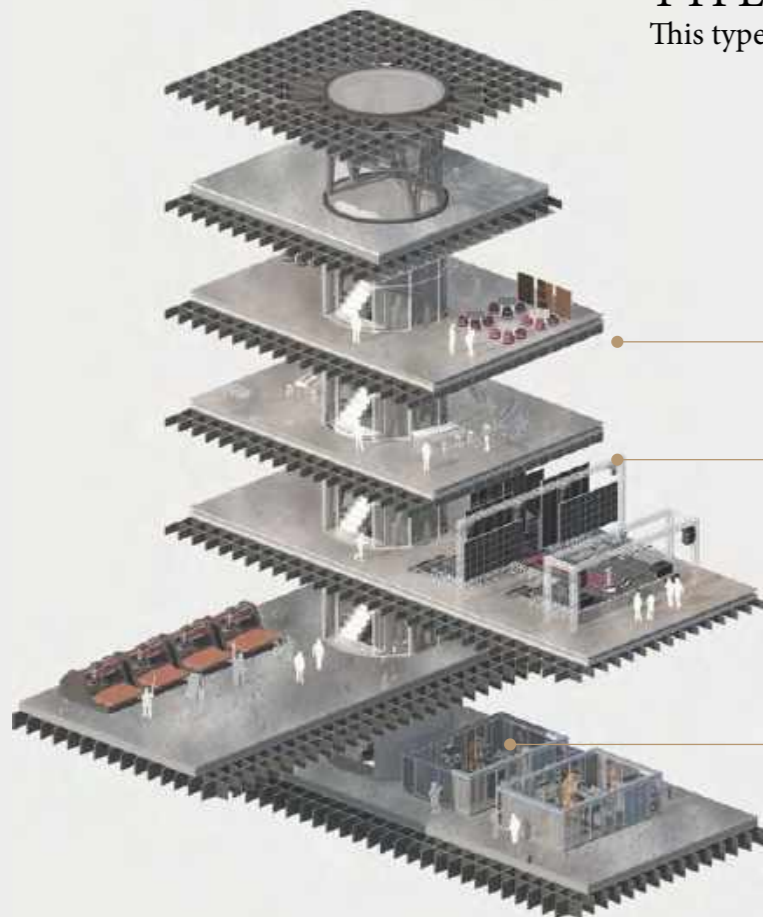
MAIN ENTRANCE: CAFETERIA

WORKSHOP: ADDICTIVE MANUFACTURING

WORKSHOP: STORAGE SPACE

TYPE 2 : STAIR CIRCULATION

This type allow for virticle circulation



CREATIVE STUDIO: COLLABORATION SPACE

CREATIVE STUDIO: COLLABORATION SPACE

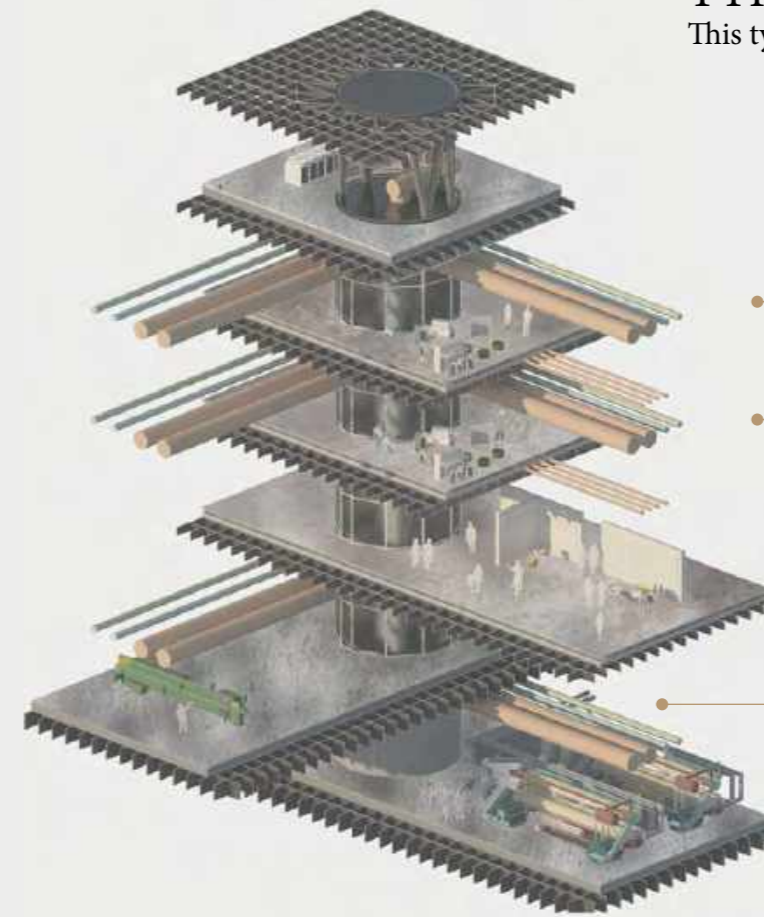
MAIN ENTRANCE: MULTI-PURPOSE SPACE

WORKSHOP: ADDICTIVE MANUFACTURING

WORKSHOP: ROBOTIC AND AUTOMATION

TYPE 4 : SERVICES

This type allow services to run through the building



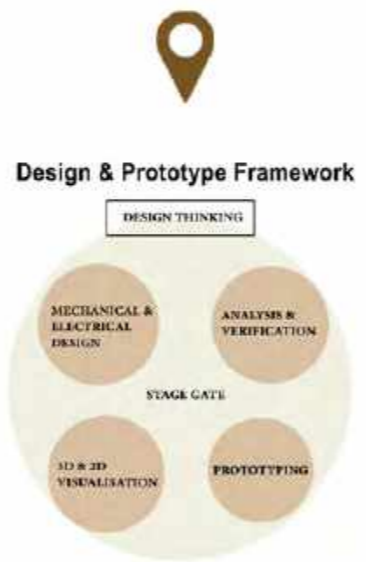
CREATIVE STUDIO: OFFICE AREA

CREATIVE STUDIO: COLLABORATION SPACE

MAIN ENTRANCE: EXHIBITION

WORKSHOP: ADDICTIVE MANUFACTURING

SERVICES AREA



- 1) Stage gate product development**
- 1.1) Initiation - Brief is defined and set
 - 1.2) Concept - Initial idea
 - 1.3) Design - Develop idea
 - 1.4) Validation - Prototyping and testing
 - 1.5) Learnings - Ensure our future projects benefit from the outcomes of the past projects



2) Story board design - Design thinking

Hybrid design methodology
 Linear design visualisation
 -Visually plotting out elements of one's idea, creating rough plan for key determined factors of who, where, and how the product can be used



3) Design for Additive Manufacturing (AM)

Allows complex design geometries to be produced in polymers and metals



4) Analysis

-Finite Element Analysis and Computational Fluid Dynamics tools allow us to undertake a variety of analytical tasks Capability to develop and validate analyses for many structural, fluid flow and thermal design questions



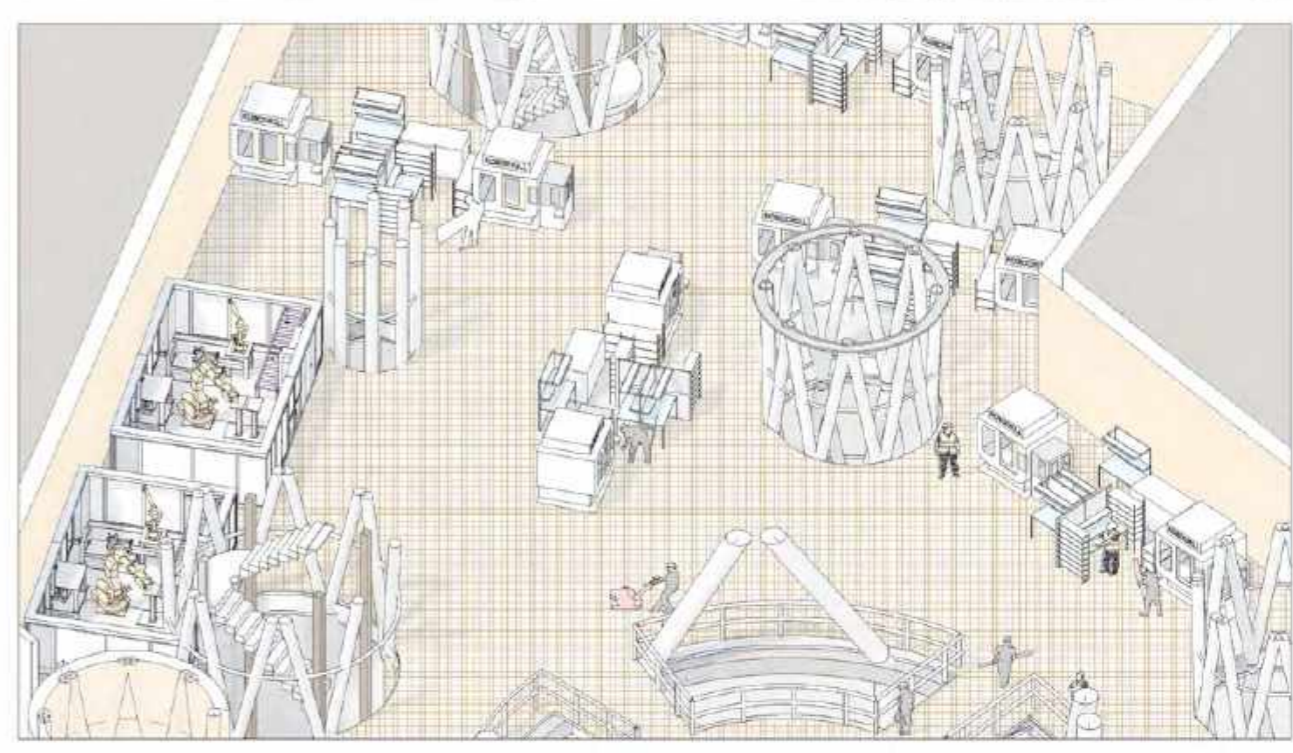
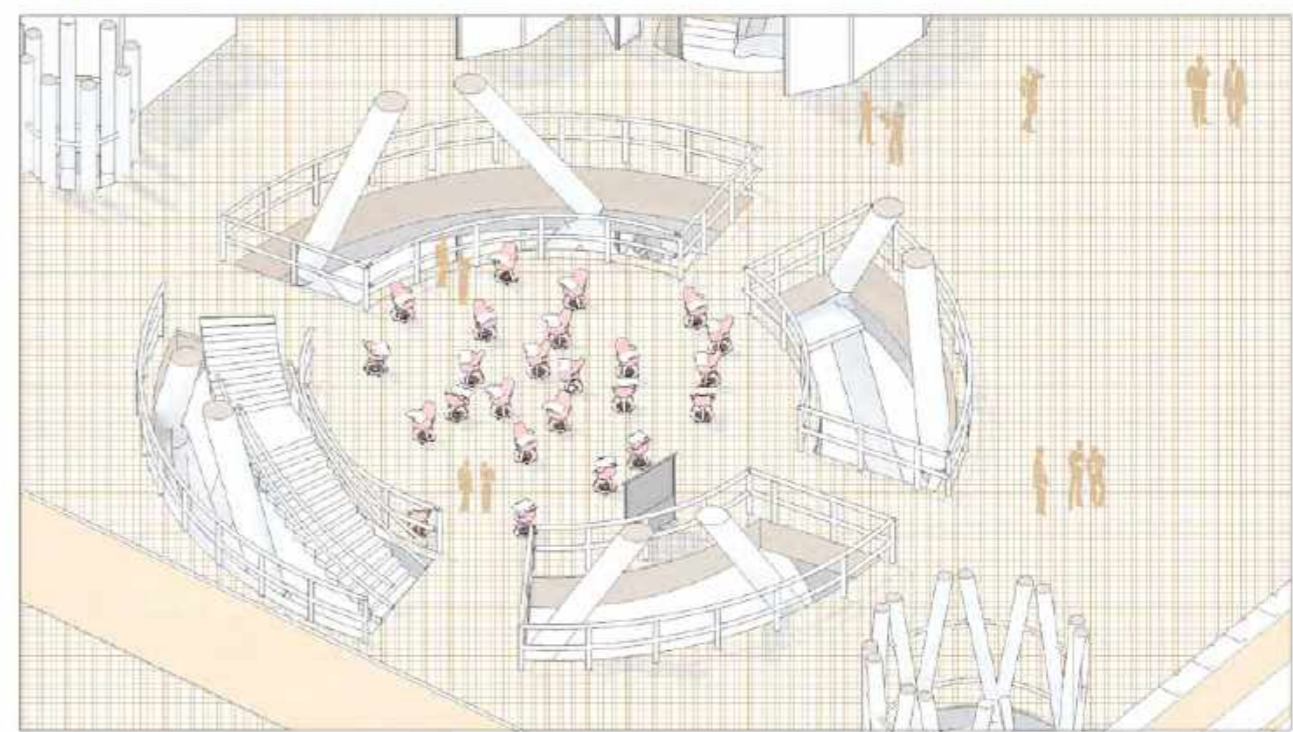
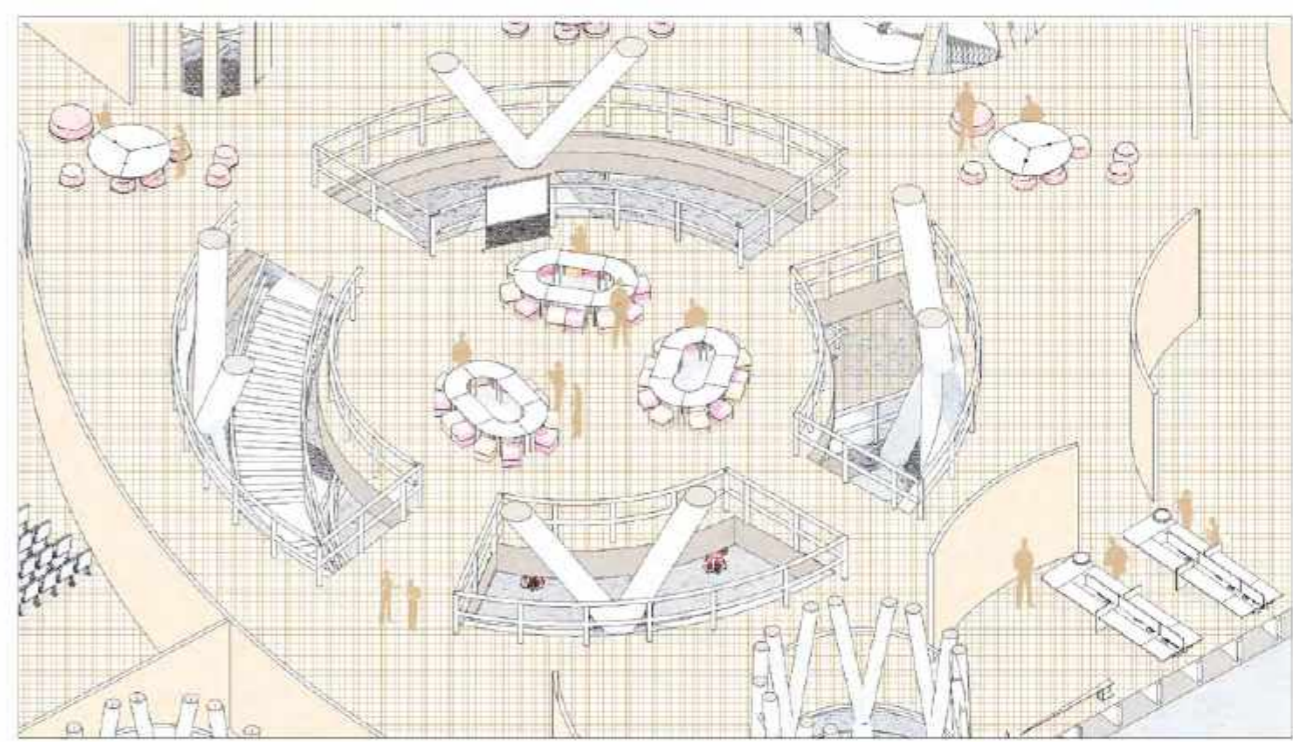
5) Mechanical design

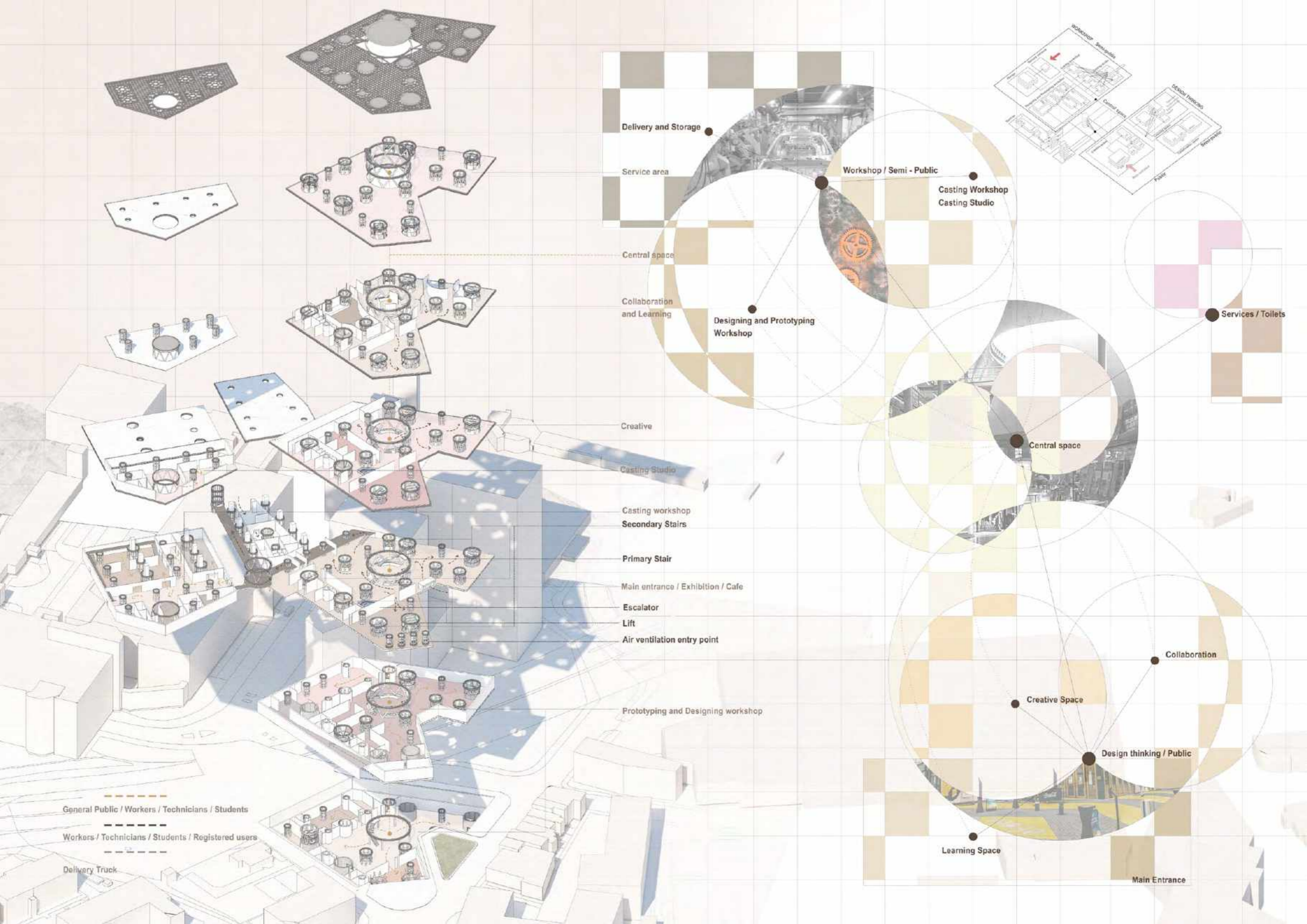
-Broad range of engineering expertise, allowing to respond to a variety of project requirements



6) Electrical design

-Develop solutions from "proof of concept" through to "manufacturing ready prototype" in a way that is aligned to ones manufacturing and testing methods and the core functional requirements





Delivery and Storage

Service area

Central space

Collaboration and Learning

Creative

Casting Studio

Casting workshop
Secondary Stairs

Primary Stair

Main entrance / Exhibition / Cafe

Escalator

Lift

Air ventilation entry point

Prototyping and Designing workshop

General Public / Workers / Technicians / Students

Workers / Technicians / Students / Registered users

Delivery Truck

Workshop / Semi - Public

Casting Workshop
Casting Studio

Designing and Prototyping
Workshop

Central space

Services / Toilets

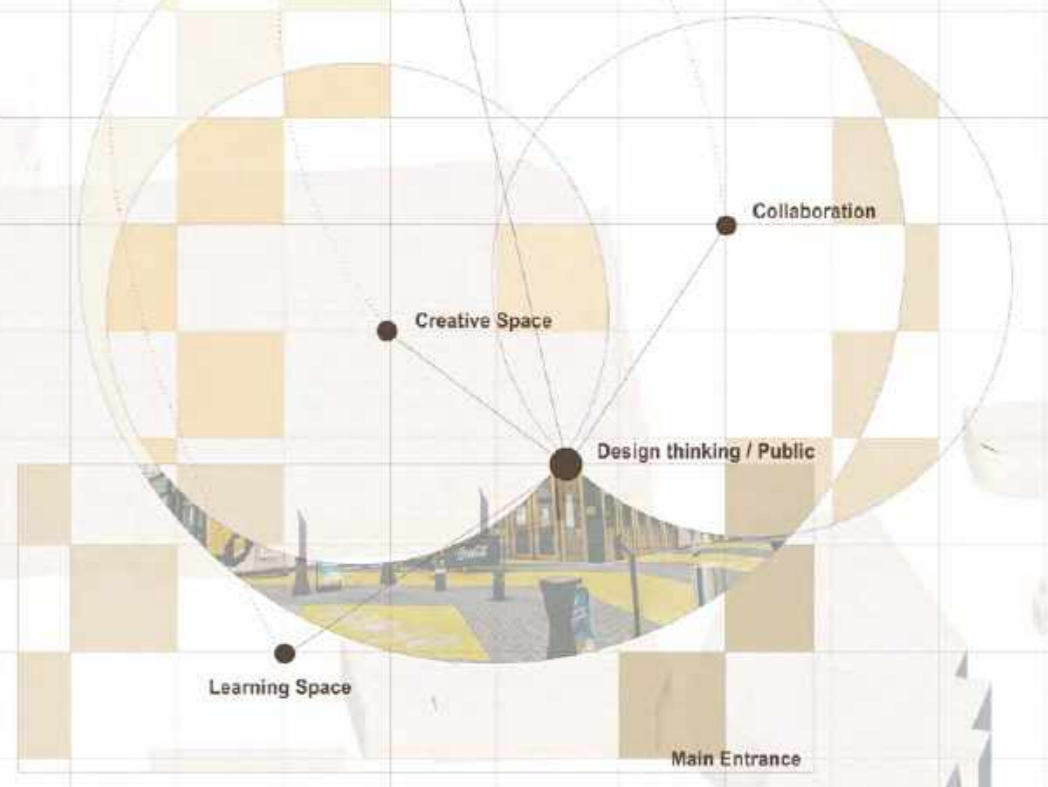
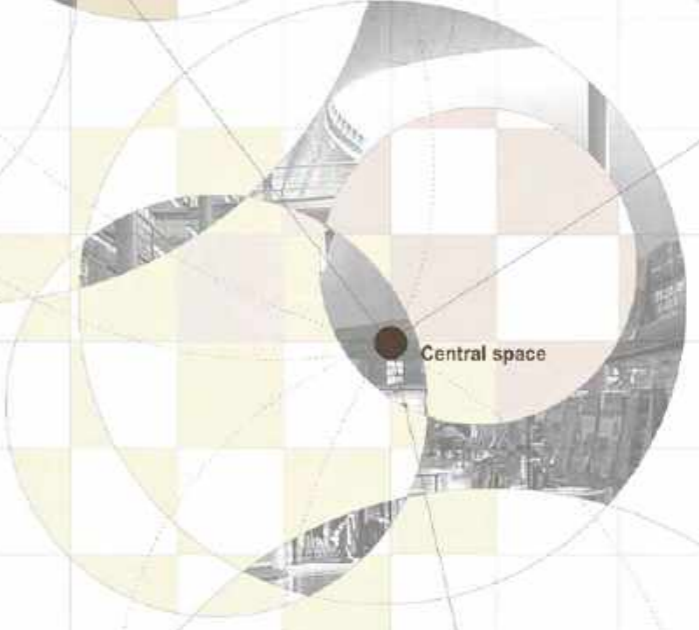
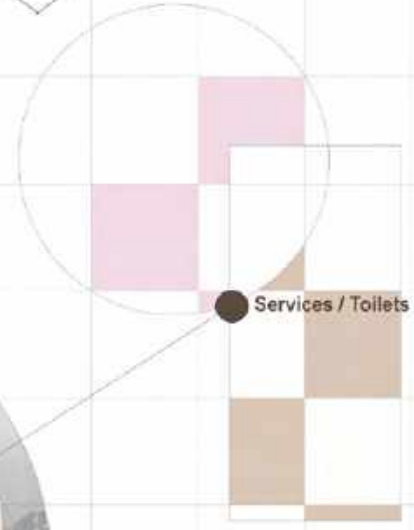
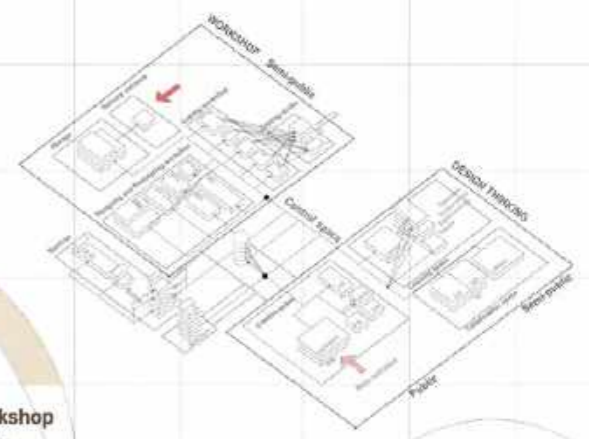
Collaboration

Creative Space

Design thinking / Public

Learning Space

Main Entrance





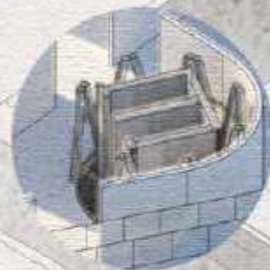
Work shop



Storage



Connecting bridge



Lift



Stairs



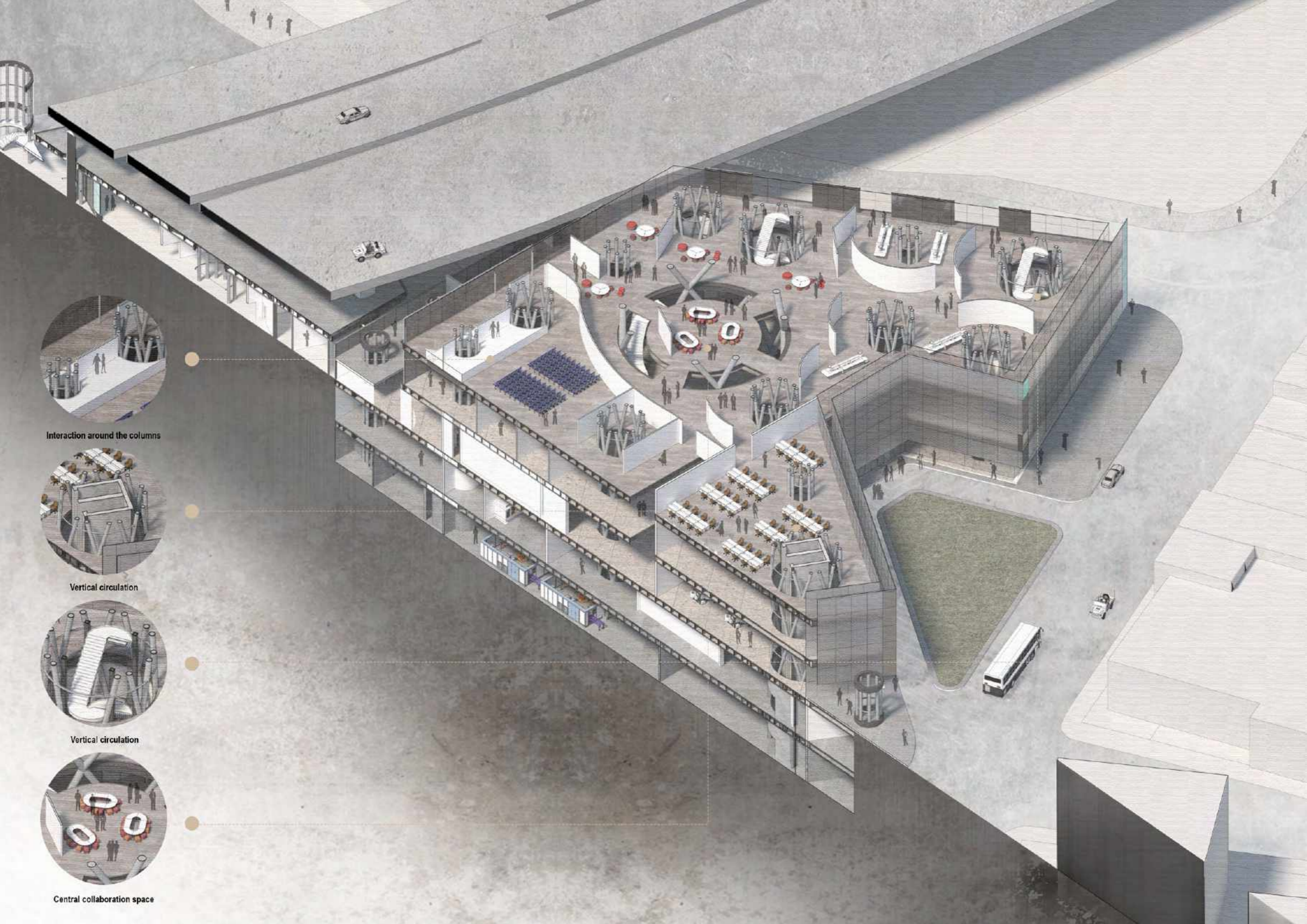
Gathering



Entrance



Entrance



Interaction around the columns



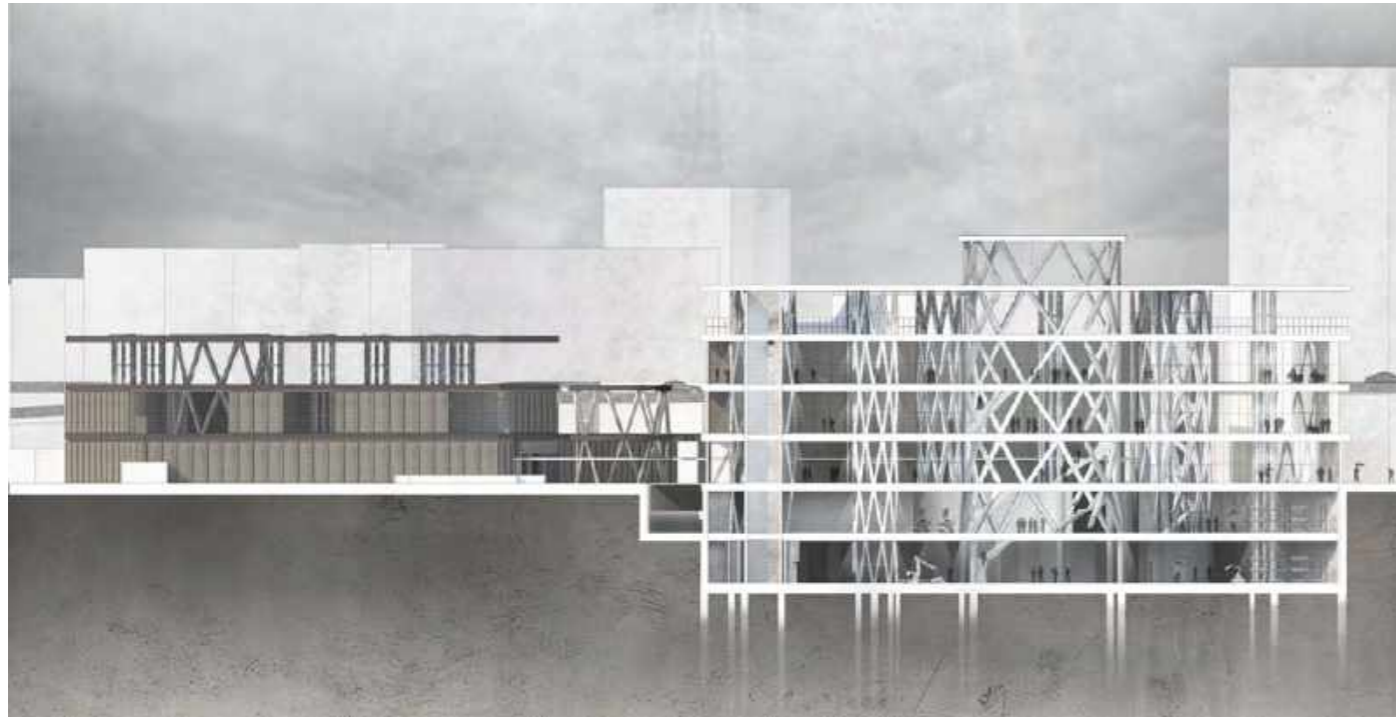
Vertical circulation



Vertical circulation



Central collaboration space



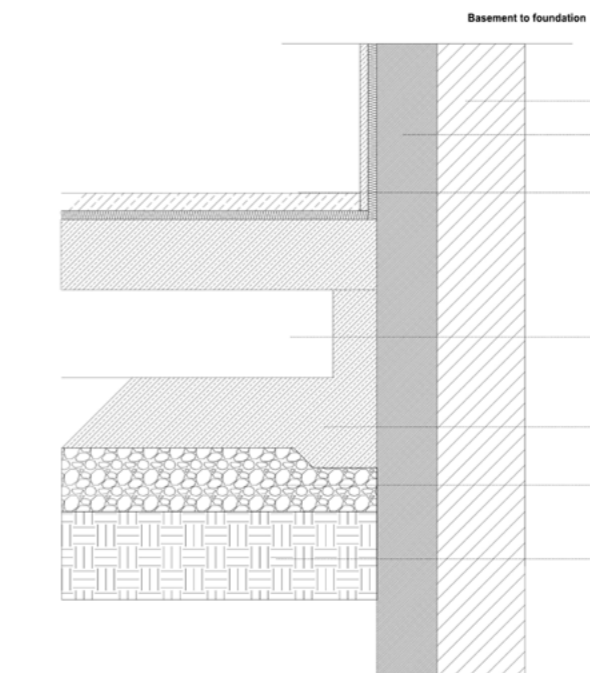
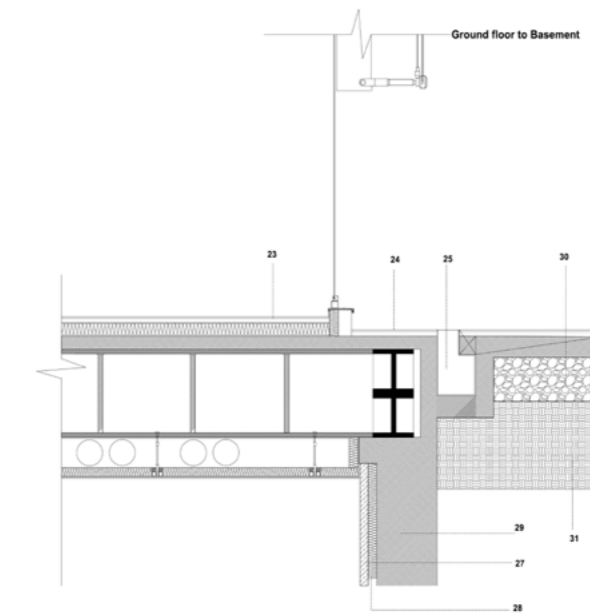
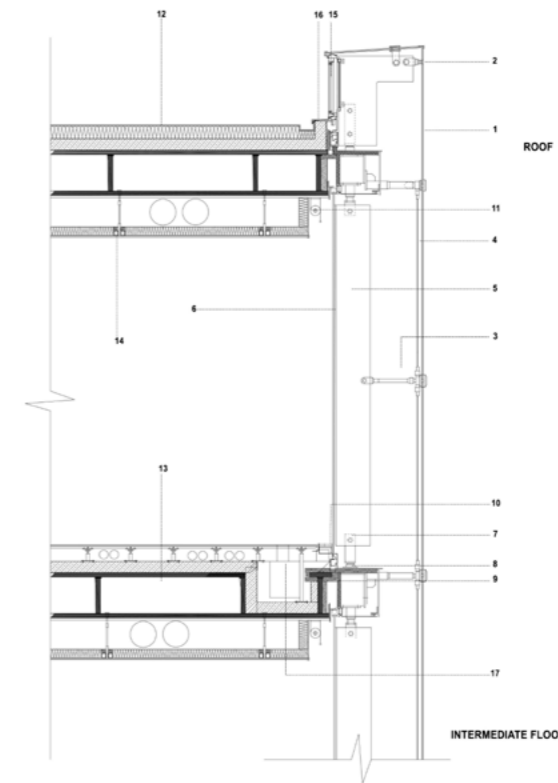
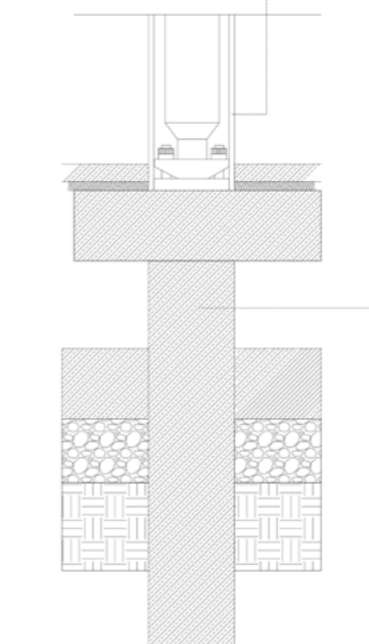
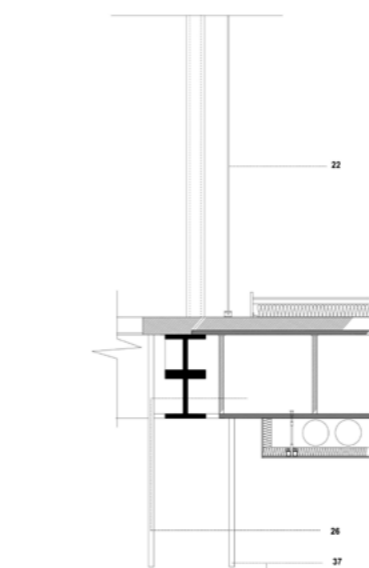
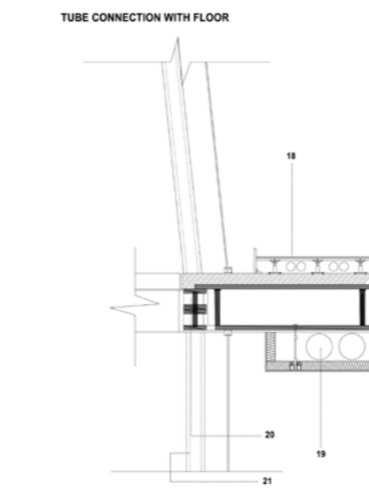
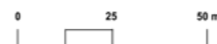
SECTION A - A

Shows building material experience, human interaction, and how the space would be inhabit: Workshop space, Studio space, and Educational space.



SITE SECTION B - B

Shows building sitting on the surrounding context



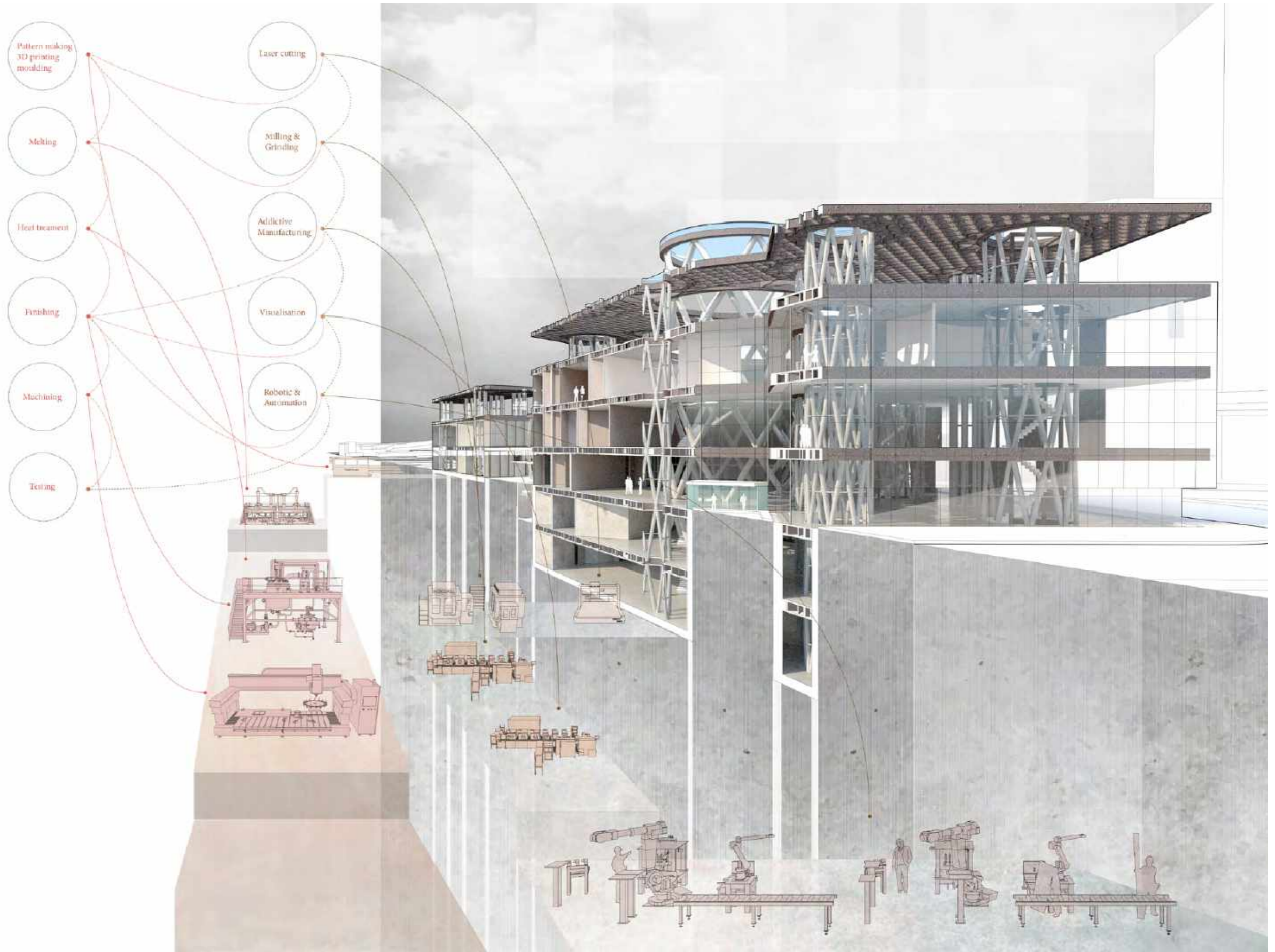
1:20 TECHNICAL SECTION
(1300 mm x 2100 mm)
ATTHAPHAN SESPATTANACHAI
160408311

1. Safety glass: 19 mm toughend glass
2. 0.125 mm Stainless steel point fixing
3. 0.25 mm stainless-steel cylinder
4. 0.14 mm stainless-shell tension rod
5. Safety glass fin: 19 mm toughendglass
6. Internal double glazing: 19 mm obscured toughened safety glass
7. Stainless-shell glass fixing piece
8. 1.6 mm sheet steel fix
9. 1.6 mm sheet steel
10. galvanized steel ventilation grating
- 11 adjustable sunshading
- 12 Roof construction:
Roof sealing layer (water proof membrane)
100 mm thermal insulation
130 mm lightweight concrete
13. 405 mm steel sandwich floor construction:
50 mm steel plate
50 mm steel flat ribs
50 mm steel plate
14. Fire-resisting cladding
15. Ventilation flap
16. Sheet-aluminum covering
17. Heating / ventilation duct

18. Flooring t = 12 mm
impregant paint
structural plywood t = 9 mm
CB floor 500 x 500 mm t = 23 mm
Dust protective paint
structural lightweight concrete
19. Clearance for equipment
lightweight steel frame ceiling substrate
t = 38 + 19 mm
plaster board t = 12.5 mm rubber
plaster board t = 12.5 mm elastic lithin spraying
20. Tube ring: fireproof painting UP on FR steel
21. 200 mm steel tube

22. Heat shield glass t = 15 mm fire proof sash
23. Ground floor (interior)
- marble t = 20 mm
- base mortar t = 45 mm
- rigid insulation = 300 mm
- Slab: reinforced concrete t = 300 mm
24. Ground floor (exterior)
- Granite 600 mm x 600 mm burner finish
- Base mortar t = 45 mm
- Slab: reinforced concrete 150 mm min.
- Damp proof membrane
- 25 Rain gutter
- 26 Honey comb floor structure of 1000 mm thickness
- 27 Concrete slab 90 mm
28. Rigid insulation
29. concrete load-bearing wall with thickness of 500 mm
30. Sand layer 500 mm
31. Hardcore layer 1000 mm
32. Sand layer 500 mm
33. Hardcore layer 1000 mm
34. Bottom part of cellular raft foundation 800 mm
35. Water tank for collecting rain water
36. Concrete floor finishing 300 mm
- Thermal insulation 100 mm
- Damp proof membrane
- 37 Extracted hollow cement plate t = extracted hollow cement plate t = 60 mm filled with rock wool
38. Concrete load bearing wall t = 500 mm
39. Secant pile wall 1000 mm
40. Pile foundation

Perspective Section cut - showing workshop programmes in relation with the spatial quality in the building



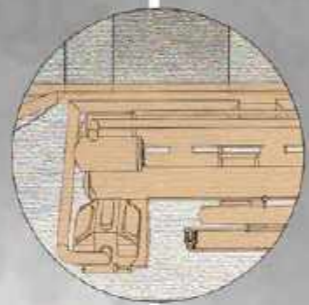
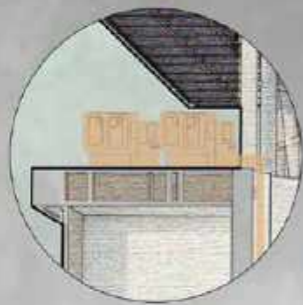
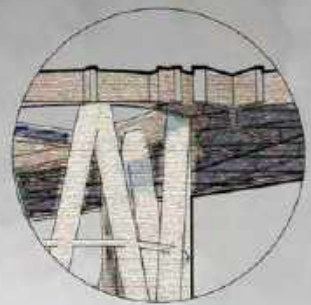
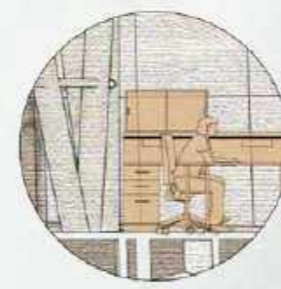
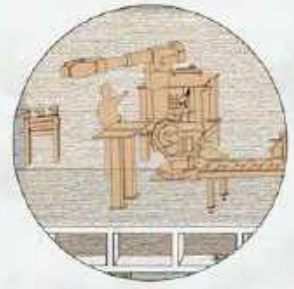
MANUFACTURING

STORAGE

PUBLIC SPACE / OVERLAP SPACE

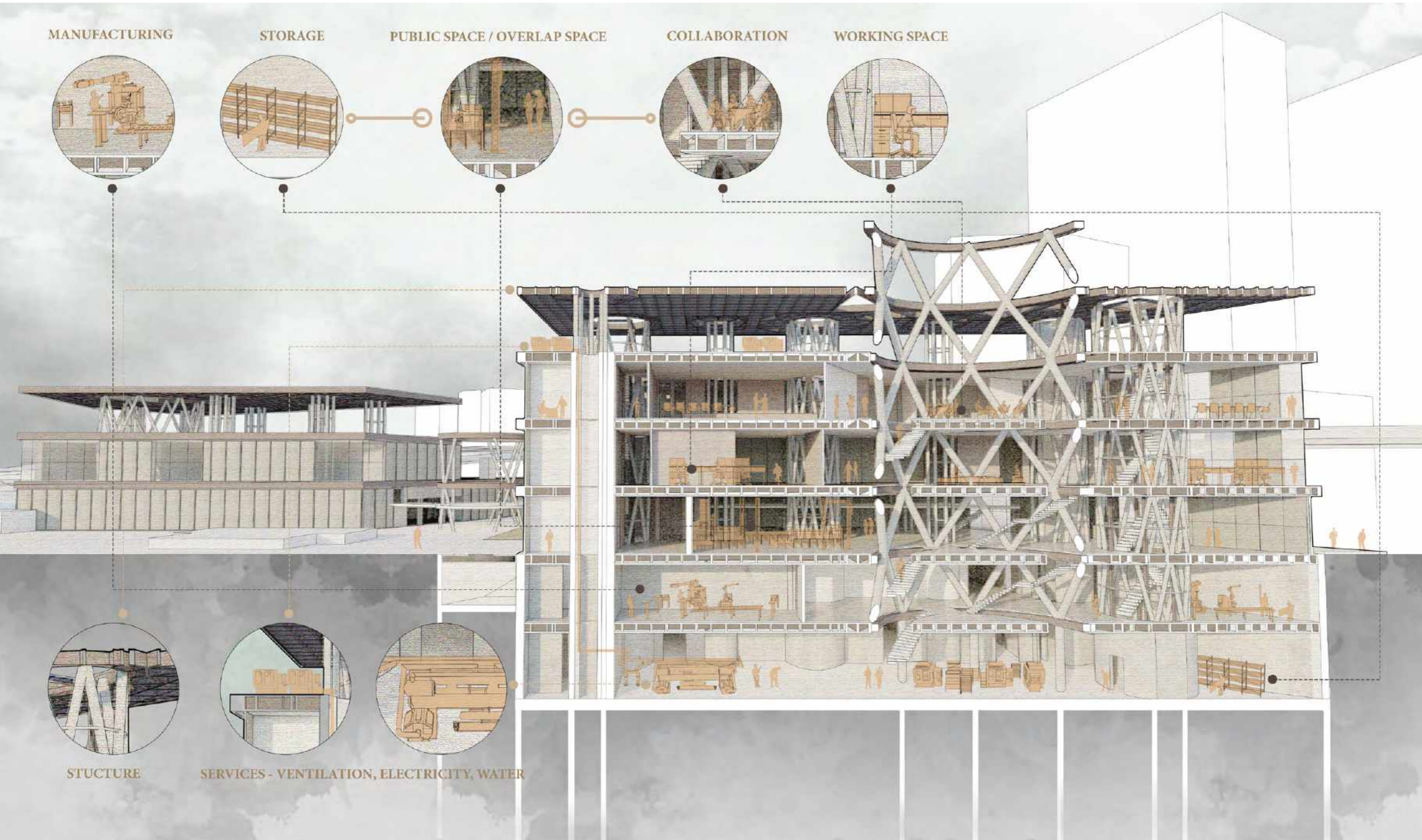
COLLABORATION

WORKING SPACE



STRUCTURE

SERVICES - VENTILATION, ELECTRICITY, WATER





ATMOSPHERIC DRAWING 1. - Collaborations centre top floor



ATMOSPHERIC DRAWING 3. - Testing products roof top



ATMOSPHERIC DRAWING 4. - Creative centre



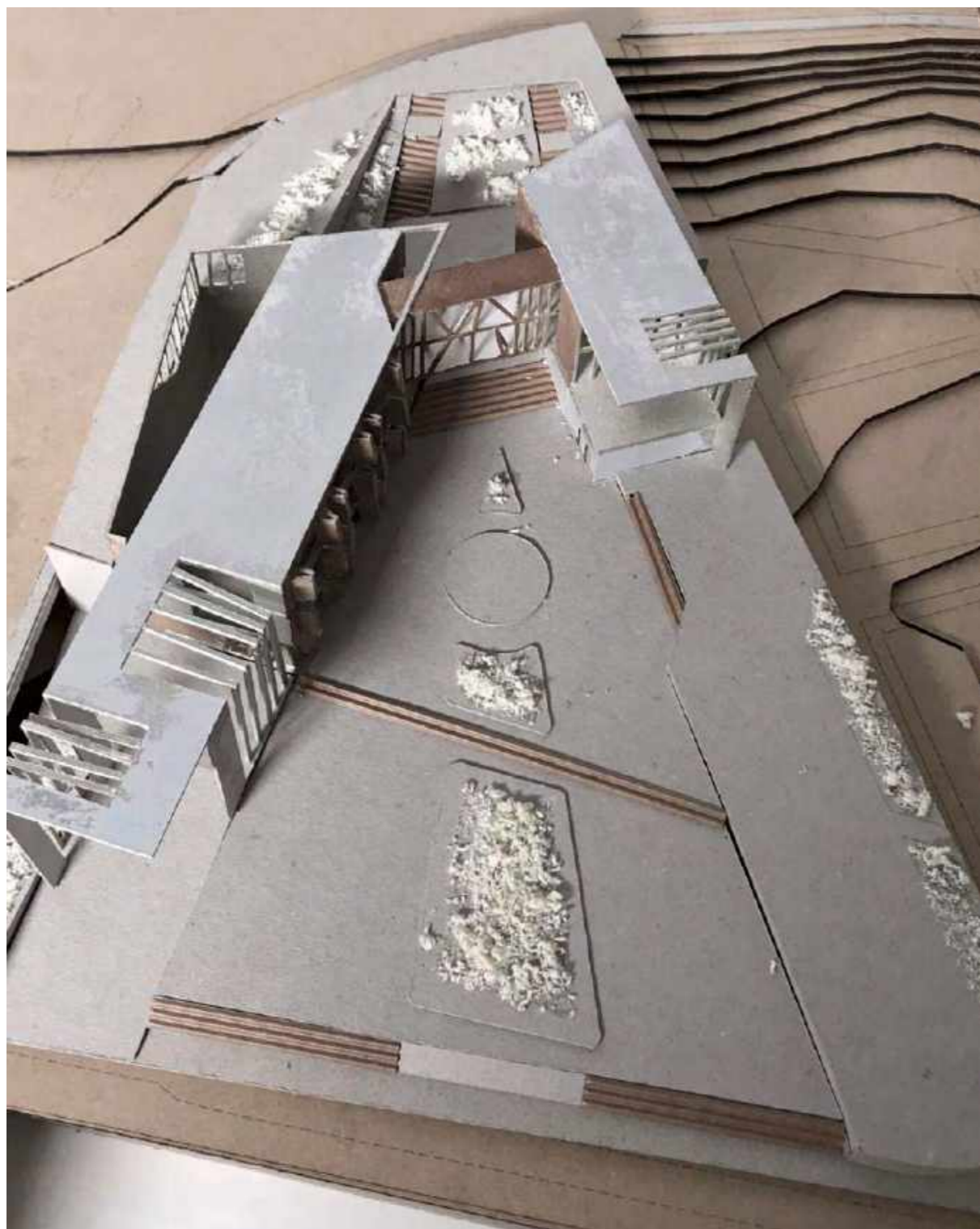
ATMOSPHERIC DRAWING 4. - Augmented workshop space

02

EXPLORING EXPERIENCE :

METAL WORKSHOP, MATERIAL EXPERIMENTING

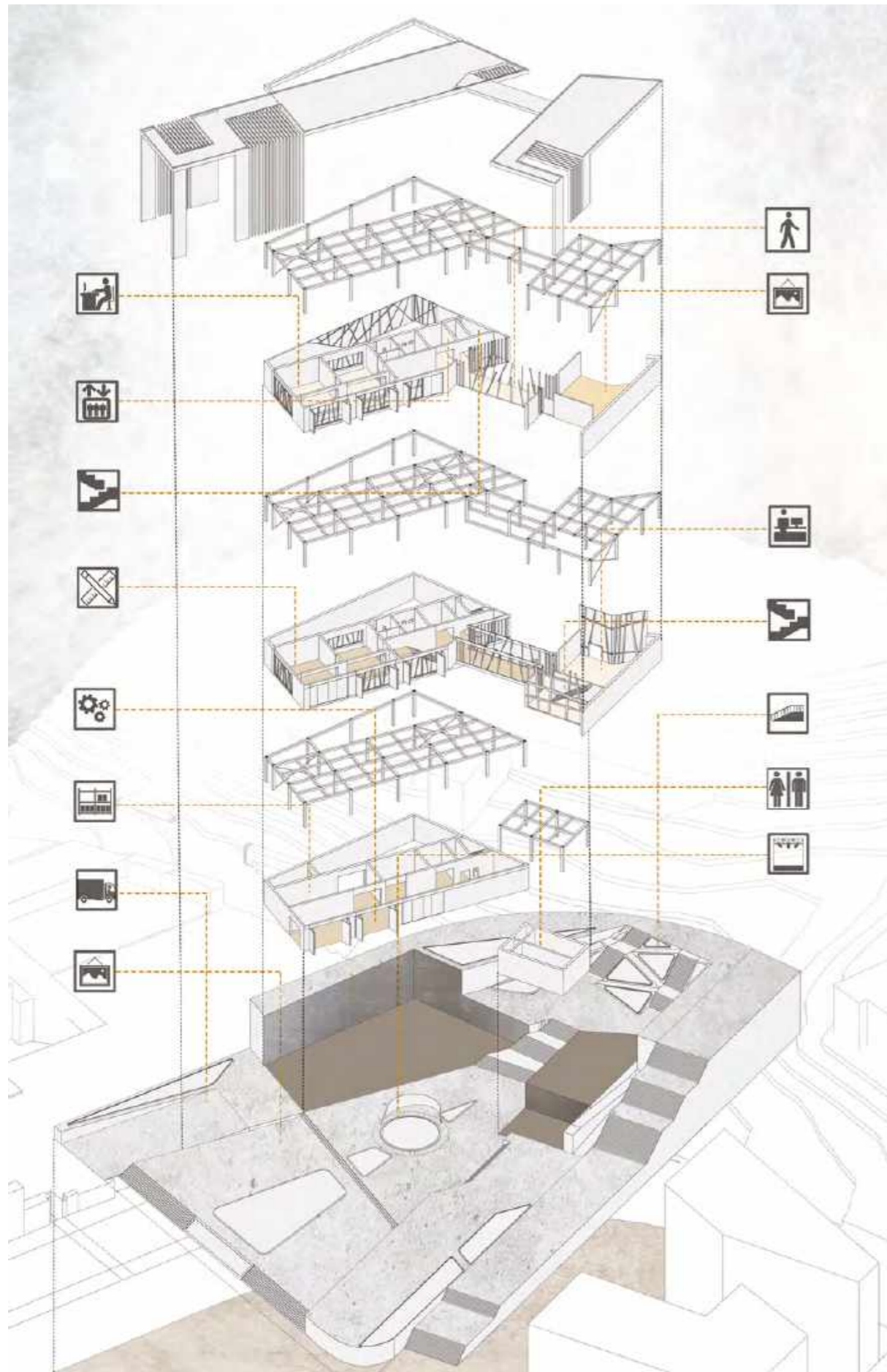
EXPLORE THE QUALITY AND PROPERTY OF STUDIO MATERIAL, AND USE THE PROPERTY TO DESIGN A BUILDING FOR EXHIBITION AND WORKSHOP SPACES.



- 1. Stair
- 2. Main building entrance
- 3. Bridge
- 4. Facade

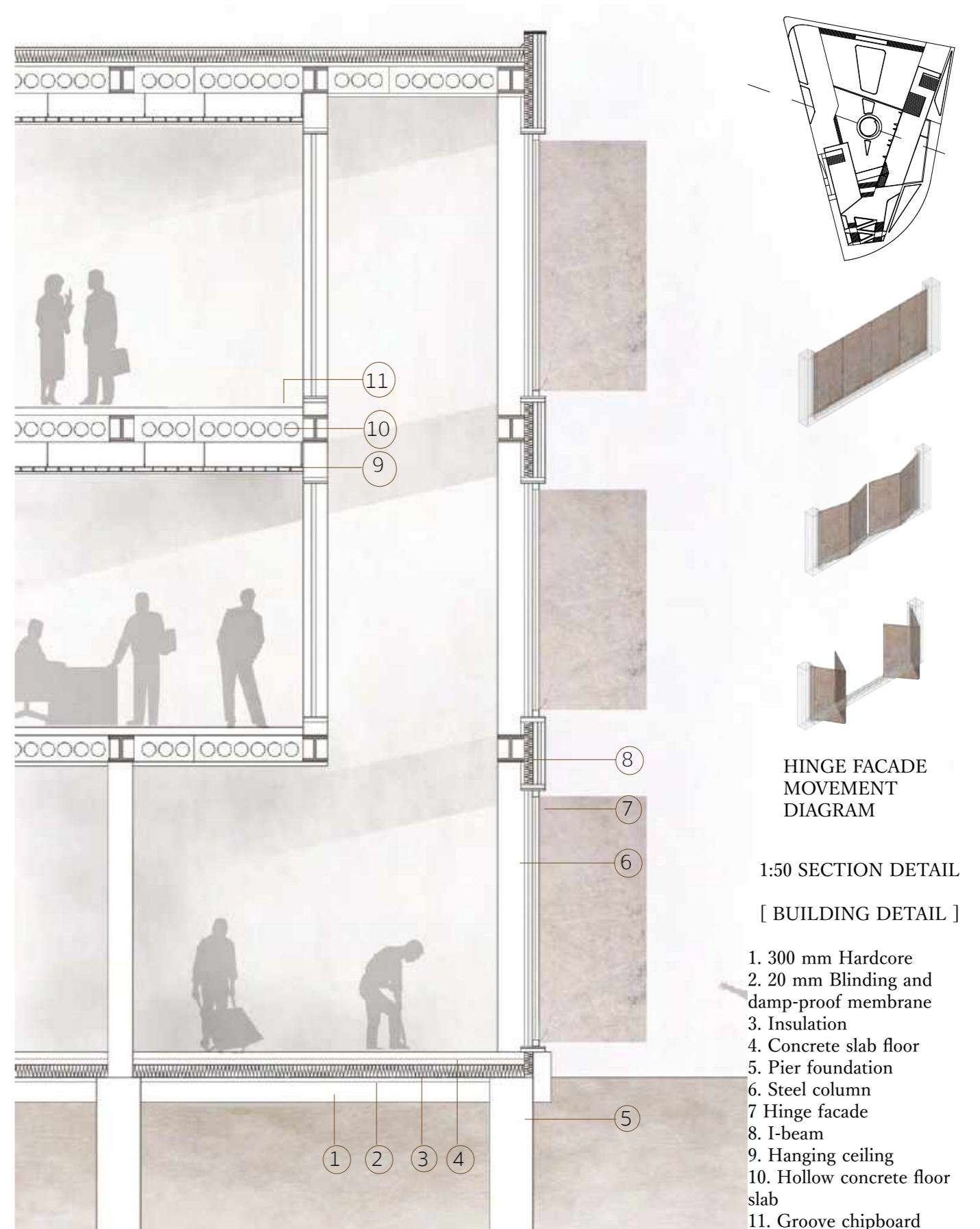
- 5. Delivery
- 6. Market stalls
- 7. Chilling space
- 8. A central space

- 9. Transitional space
- 10. Balcony



EXPLODED ISOMETRIC DIAGRAM

This illustrates the building program, structure, facade and landscape.



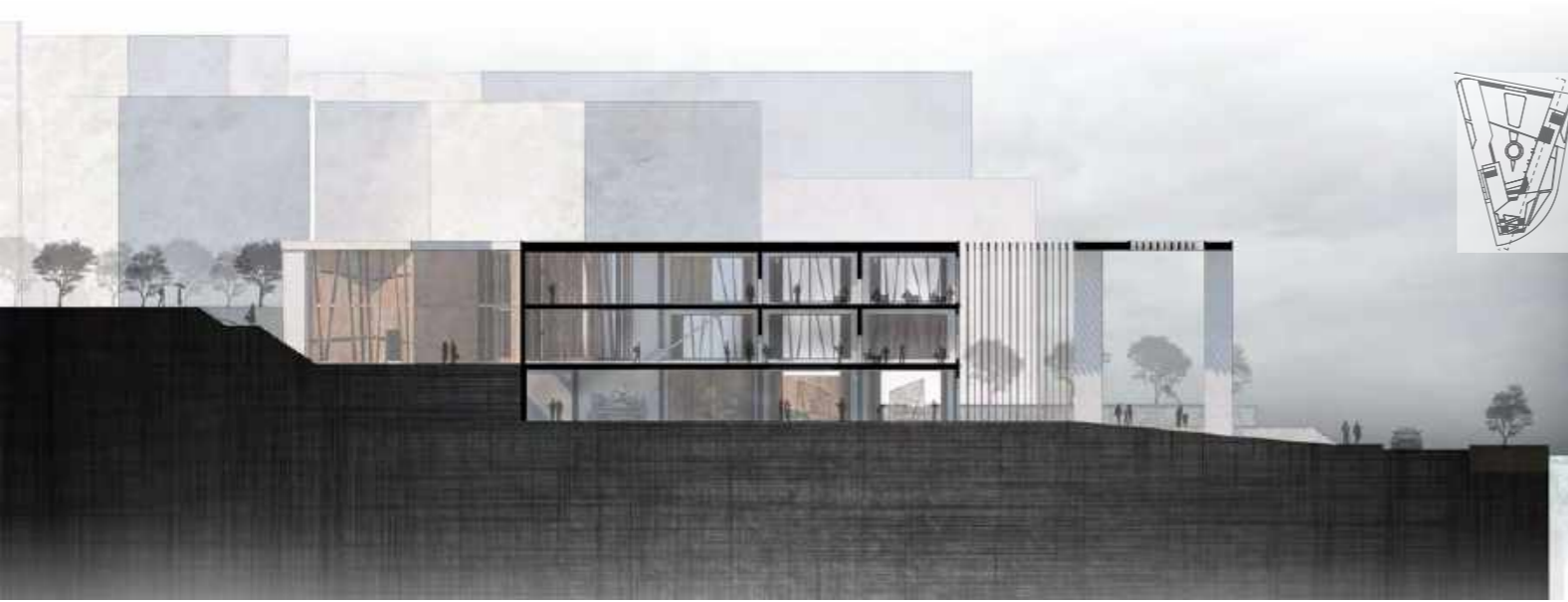
HINGE FACADE MOVEMENT DIAGRAM

1:50 SECTION DETAIL

[BUILDING DETAIL]

1. 300 mm Hardcore
2. 20 mm Blinding and damp-proof membrane
3. Insulation
4. Concrete slab floor
5. Pier foundation
6. Steel column
7. Hinge facade
8. I-beam
9. Hanging ceiling
10. Hollow concrete floor slab
11. Groove chipboard

0 1 2 3 m



1:200 SECTION A - A (A2)

Shows building material experience, human interaction, and how the space would be inhabit: Workshop space, Studio space, and Educational space.



1:200 SECTION B - B (A2)

Shows external exhibition space (market area) and people interaction with the space.



Market stalls



1:50 section model

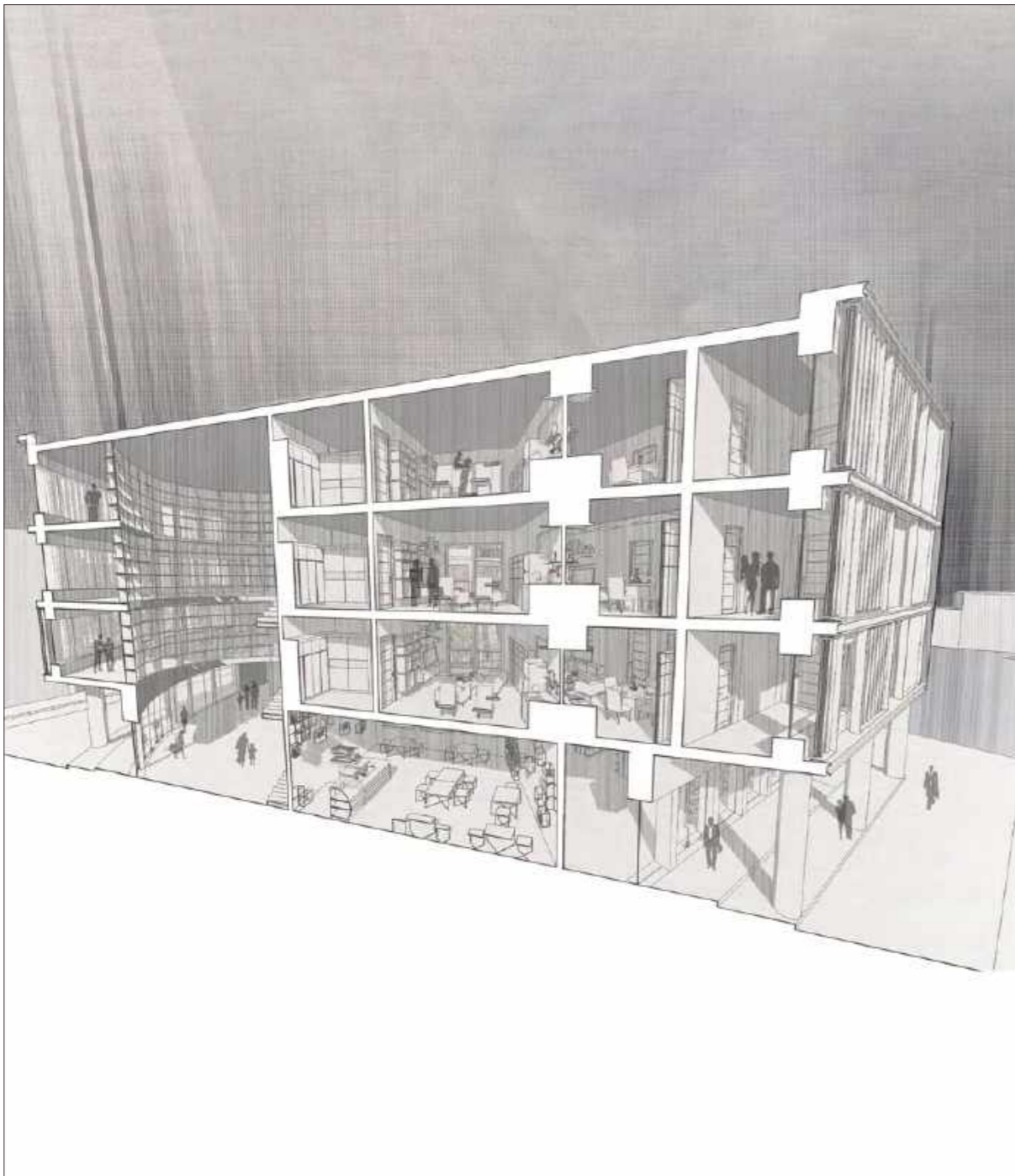
Market stalls

03

LEITH PROJECT :

DWELLING PLUS, BUILDING ACCOMMODATION

MY INITIAL BUILDING IDEA IS AN INCORPORATE SPACE WHERE RESIDENTIAL, COMMERCIAL AND LEISURE SPACES EXIST IN ONE BUILDING. ACCORDING TO THE MASTERPLAN, THIS AREA IS A BOUNDARY BETWEEN PUBLIC AND PRIVATE SPACES, WHICH MAKE THE AREA SUITABLE TO ADD EXTRA ACTIVITIES TO RESIDENTIAL SPACE.



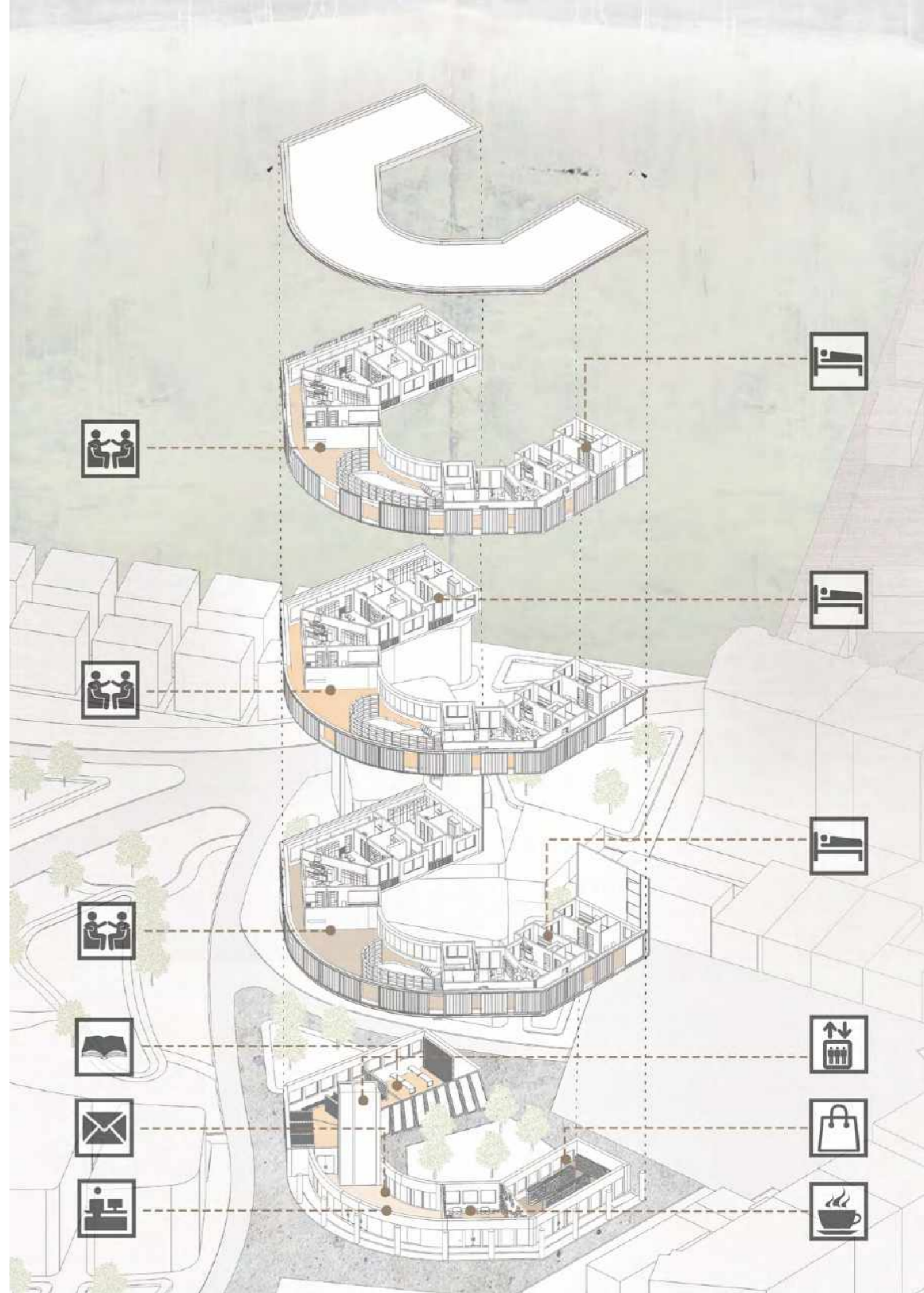
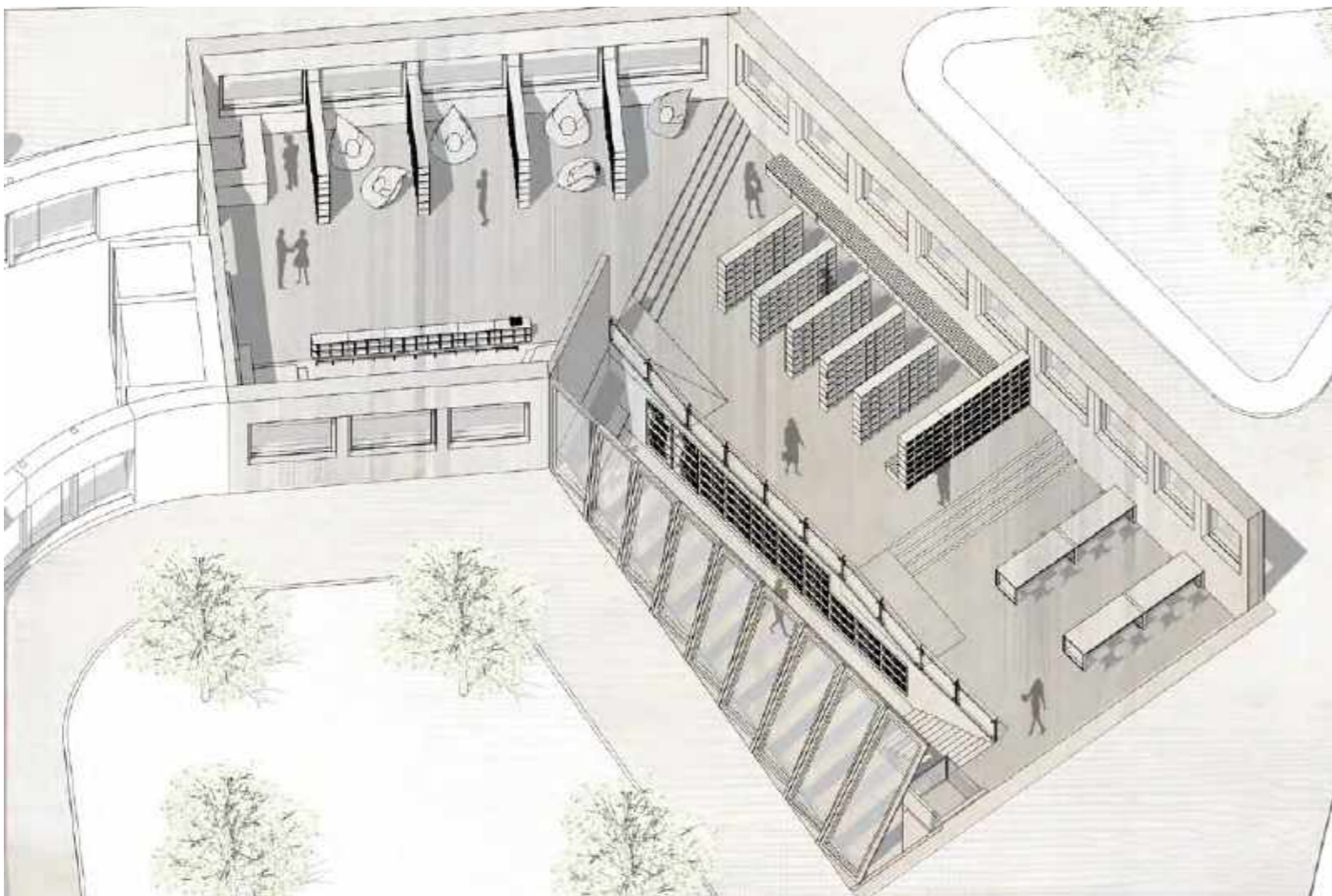
1:200 WEST ELEVATION

These two sections show how people would interact with the spaces. Upper floors are residential area, ground floor is library space, reception, cafe and convenient store.



1:200 SOUTH-EAST ELEVATION

This section shows human interaction in an individual space, and between spaces: how would they see each other through different floor levels.







Socialising space



Open Kitchen



Private space



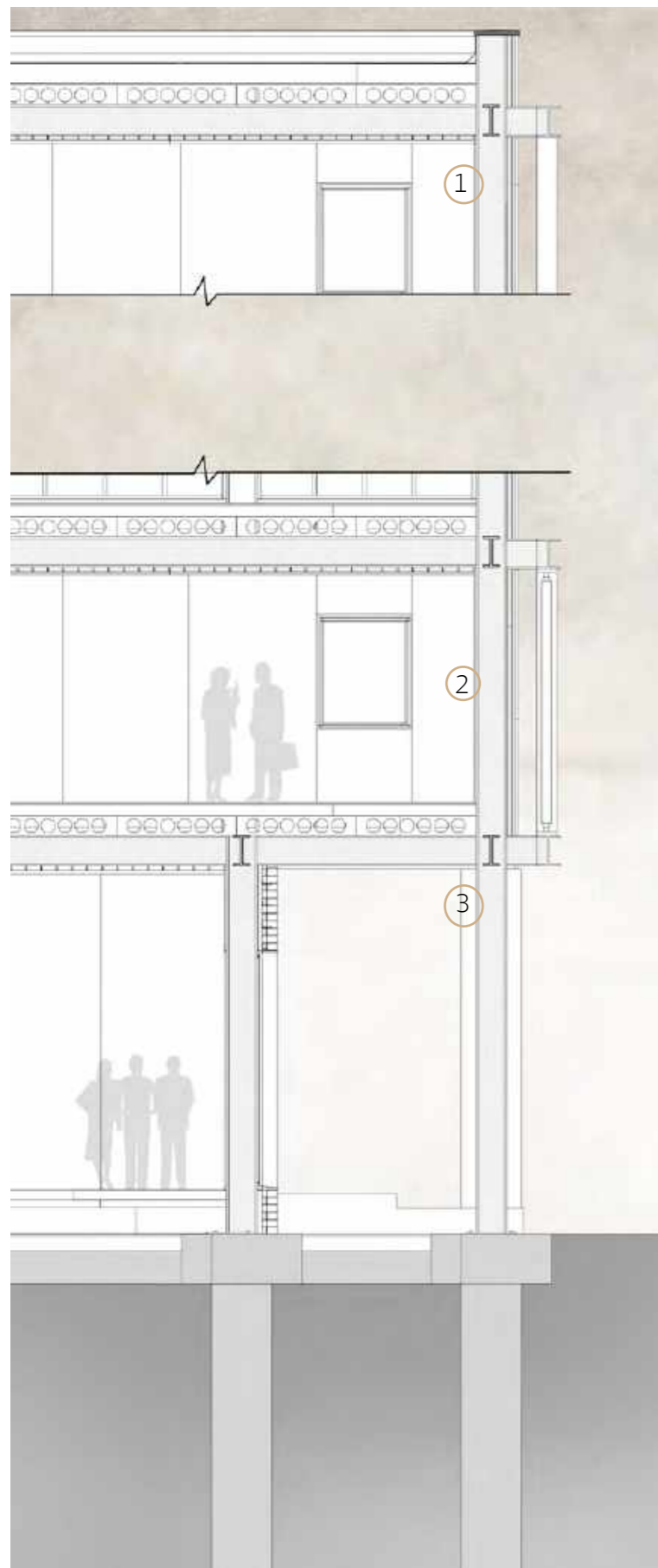
Central courtyard



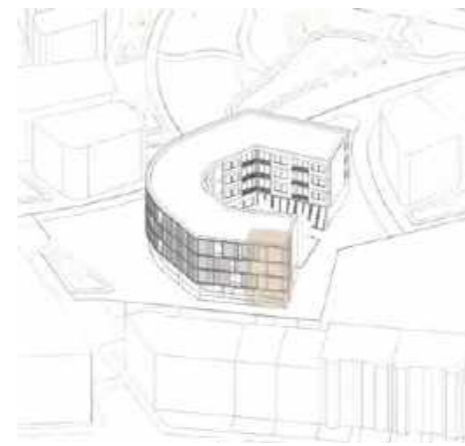
Sharing space



Movable shading



0 1 2 3 m



Shutter facade diagram



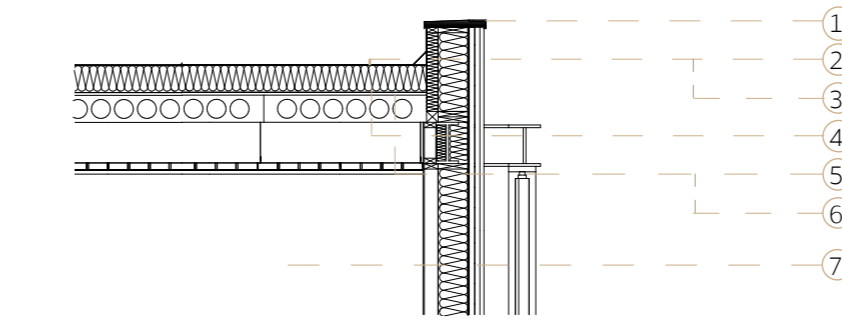
Close



Open

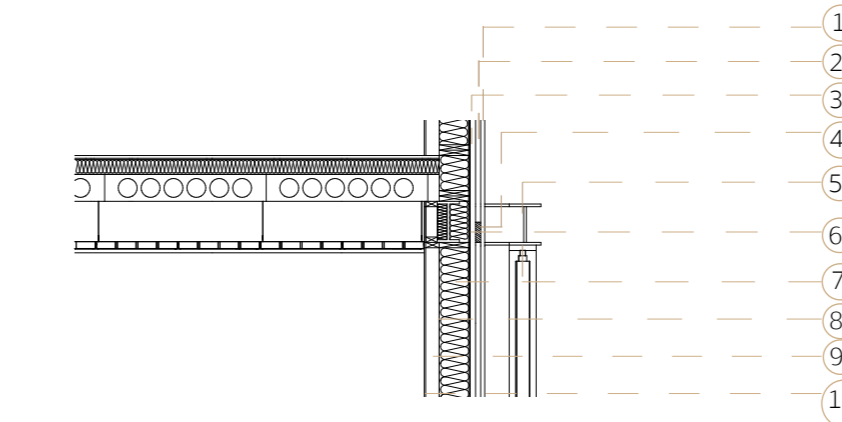
1:50 Section detail (A3)

1. Roof sectional detail
2. Floor - Floor sectional detail
3. External wall - Ground floor detail
4. Forundation sectional detail



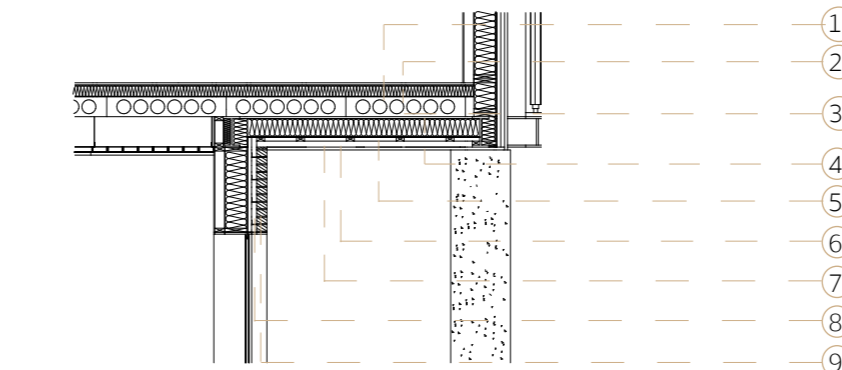
1:50 Roof detail (A3)

1. Zinc head
2. Bituminous membrane (asphalt) 3mm
3. Damp Proof Membrane
4. PIR Thermal insulation board
5. Vapour control layer
6. Leveling screed
7. Pre-cast concrete slab



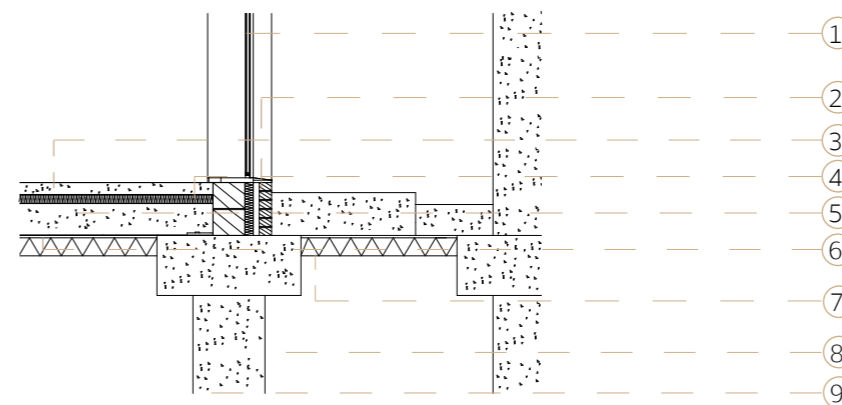
1:50 Floor- Floor detail (A3)

1. Cement Cladding
2. Timber Batten
3. Sheathing board
4. Fire stopper
5. Quiebravistas: Woodbrise
6. Breather Membrane and OSB board
7. PIR Thermal Insulation Board
8. Vapour Control Layer
9. Timber Batten
10. Plasterboard



1:50 External wall - Ground floor detail (A3)

1. Polished Concrete Floor
2. Leveling Screed
3. PIR Thermal Insulation Board
4. Vapour Control Layer
5. Pre-cast Concrete slab
6. Vapour Control Layer
7. Cement cladding
8. External Masonry Wall
9. Wall tie



1:50 Foundation detail (A3)

1. Double-Glazing Window
2. External Masonry Wall
3. Polished Concrete Floor
4. PIR Thermal Insulation Board
5. Concrete Slab
6. Damp Proof Membrane
7. Sand Binding
8. Hardcore
9. Concrete Pier Foundation

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