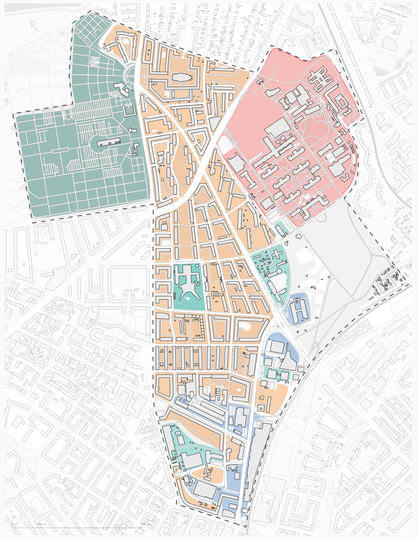
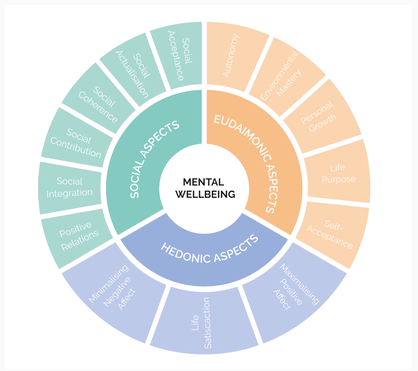
Architectural care. A public building design oriented towards mental wellbeing

Research & Analysis



Context. Area of Bispebjerg is characterised by its residential landscape. Hospital grounds
Residential area Educational facilities Graveyard Services & retail



Concept of mental wellbeing. Currently discourse recognises three subareas of mental wellbe-ing: eudaimonic (self-development), hedonic (pleasure) and social wellbeing.

Provide visual contact with sunlight.

Install large windows or floor-to-ceiling glass walls to maximize natural light penetration.

Design skylights, inner courtyards or light wells to bring sunlight into interior spaces.

Incorporate reflecting surfaces to bring sunlight deeper into the building.

Use curvilinear shapes for better concentration, rest, and emotional levels.

Incorporate curved walls.

Use curves in interior design features, such as seatings, counters or lighting.

Apply curves in landscape design.

Prioritize simplicity over complexity to benefit rest and concentration.

Apply similar floorplans for consecutive levels for easier orientation within the building.

Use symmetry or grid systems that al-low to predict the logic in the structure.

Design built-in storage solutions to ma-intain a clutter-free environment.

Apply wooden materials.

Design exposed wooden structural elements.

Use wooden finishing materials, such as flooring, ceiling or walls.

Provide wooden furniture.

Use expressions of nature.

Incorporate plants into the façade design.

Include natural elements, such as plants, water features or green walls.

Include manifestations of nature, such as patterns or photographs.

Avoid enclosed spaces.

Implement open-plan layouts to avoid unnecessary barriers.

Use glass partitions instead of solid walls to divide spaces while maintai-ining visual openness.

Provide visual connection between the floors.

Do not use extreme proportions of spaces.

Maintain a balanced ratio between space width and length, typically be-tween 1:1 and 1:2.

Design ceiling heights proportional to room size, avoiding overly high or low ceilings.

Provide the possibility of division of the bigger spaces to adjust them to the group size.

Avoid long continuous corridors.

Avoid long continuous corridors.

Avoid sunlight glare.

Install adjustable window systems like blinds or shades to control light levels.

Use non-reflecting wall and flooring materials.

For relaxation use warm, ambient lights.

Incorporate cove-mounted or indirect lighting.

Apply fire-imitating solutions, like flicke-ring LED candles, to resemble a natural light source.

Incorporate dimmable lights for adju-stable lighting.

For focus, apply lower ceilings.

Design study nooks or reading corners with slightly lower ceilings than surro-unding spaces.

Install pendant lighting that hangs lo-wer in work areas to create a perceived lower ceiling height.

Design adjustable light system, that provides both uniform and bright light source, as well as point light on the study subject.

Incorporate smart lighting systems that can be programmed for different act-ivities and times of day.

Use a combination of light sources for different light scenarios.

Apply colder light temperatures for concentration tasks and warmer for relaxation and reflection areas.

For creativity, provide higher ceilings and a more spacious atmosphere.

Design mezzanines to provide variety of spatial experiences in single space.

Minimalise window divisions for a conti-nuous view towards the outside.

Develop a colour scheme for the building.

Design a calm colour palette with colo-ur accents.

Use cold hues for focus areas.

Use brown, natural colours for relaxa-tion areas.

Design spaces for play.

Include movable elements such as swings or trampolines.

Provide elements for interaction, such as art installations or landscape featu-res.

Provide rocking furniture, such as ham-mocks or swing chairs.

Promote physical activity.

Design attractive circulation flow.

Provide attractive outdoor areas.

Provide bicycle facilities, such as safe parking, showers and repair stations.

Provide various stimuli to each of the senses.

Use textured finishings for tactile stimu-lation.

Add natural elements providing back-ground noise.

Use scented plants.

Encourage social contact.

Provide visual connection between the floors.

Include open areas for interaction.

Provide smaller areas for intimacy.

Provide novelty within the overall system.

Allow different room arrangements.

Incorporate room divisions, such as movable furniture or curtains.

Provide fresh air flow and air exchange.

Install energy-recovery ventilators (ERVs) to provide fresh air.

Incorporate openable skylights for stack ventilation.

Use wooden surfaces.

Provide olfactory stimulation depending on the area function, such as lavender for relaxation and rosemary or peppermint for focus areas.

Create herb gardens near windows or in outdoor spaces.

Design built-in diffuser systems in parti-cular areas.

Incorporate scented plants in indoor planters.

Provide spaces for outdoor sunlight exposure.

Include outdoor areas for activities.

Incorporate terraces, balconies, rooftop gardens or patios in the building.

Design outdoor corridors or staircases.

Provide temperature adjustment systems.

Install HVAC systems for different zones in the building.

Incorporate floor heating for consistent temperature within the spaces.

Provide trickle vents in the windows.

Apply wooden materials.

Provide wooden furniture.

Incorporate textured finishings.

Provide a barrier from the urban noise.

Design a natural source of white back-ground noise, such as water features.

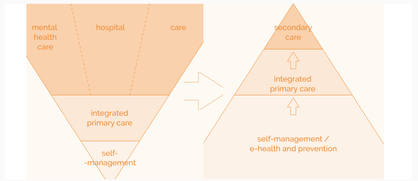
Install triple-pane windows or soun-dproof glass to reduce external noise penetration.

For focus or relaxation, avoid carrying noise inside the building.

Use acoustic panels or sound-absor-bing wall treatments.

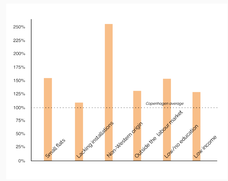
Place rooms strategically, to create buffer zones between the noisy and quiet areas.

Neuropositive architectural guidelines. Outcome of the research review on the neuroarchitecture.
Enriched environments Sight Touch Smell Sound

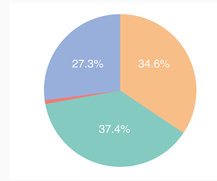


Reform of the healthcare system. This indicates the need to search for new methods of preventive societal care.

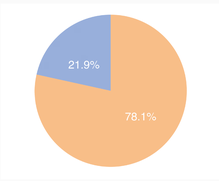
Growing number of admissions to the psychiatric hospitals. This data, as well as growing number of low mental wellbeing score, are some of the indicators of the raising amount of mental wellbeing issues. Source: Copenhagen Statbank and National Health Profile 2021.



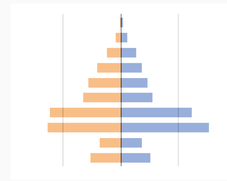
Statistics. Socioeconomical challenges faced by the Bispebjerg population.



Place of birth. Copenhagen Denmark
Faroe Islands & Greenland Foreign country

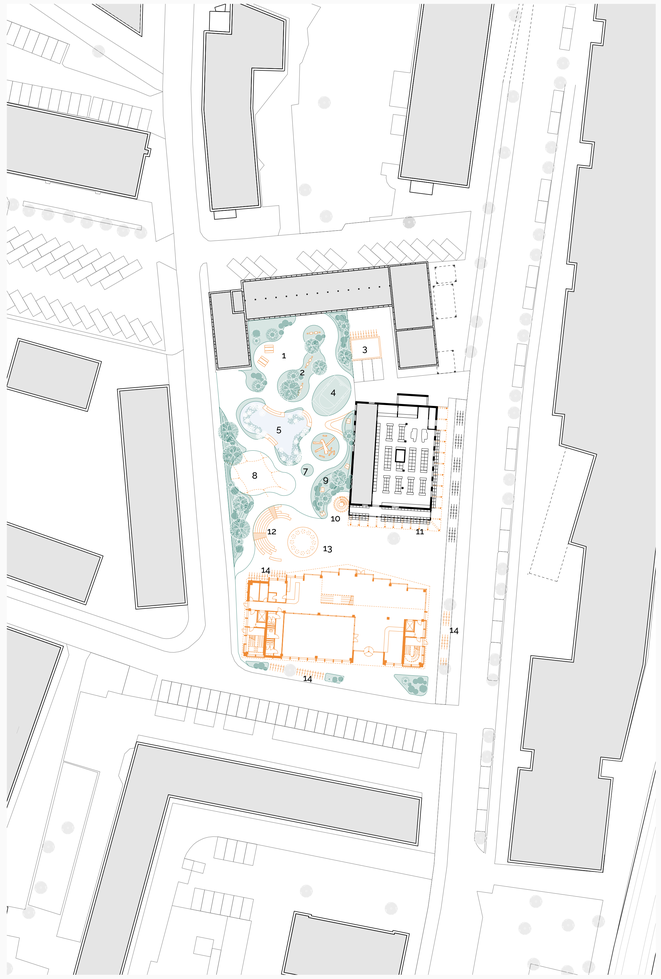


Citizenship. Denmark Another country



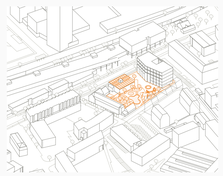
Age distribution. Males Females

Site

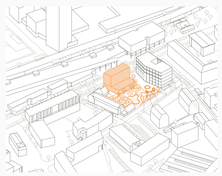


Siteplan, scale 1:500. New green area for the Nordvest district. 1 Outdoor picnic area 2 Swings 3 New parking and storage area for local bussiness owners 4 Basketball court 5 Water pond 6 Natural playscape 7 Olfactory island - herbal garden 8 Area for outdoor activities with a canopy 9 Meadow with insect houses 10 Entryway to the rooftop urban farming 11 Lygten Bazaar extension 12 Elevated seating area 13 Fountain 14 Bike parking

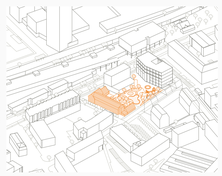
Impression of the building from the square.



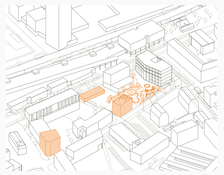
Possible site evolution in the future. Current design.



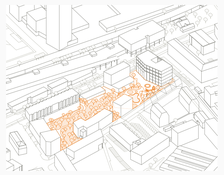
Proposed landscape design allows for further transformation of the bazaar



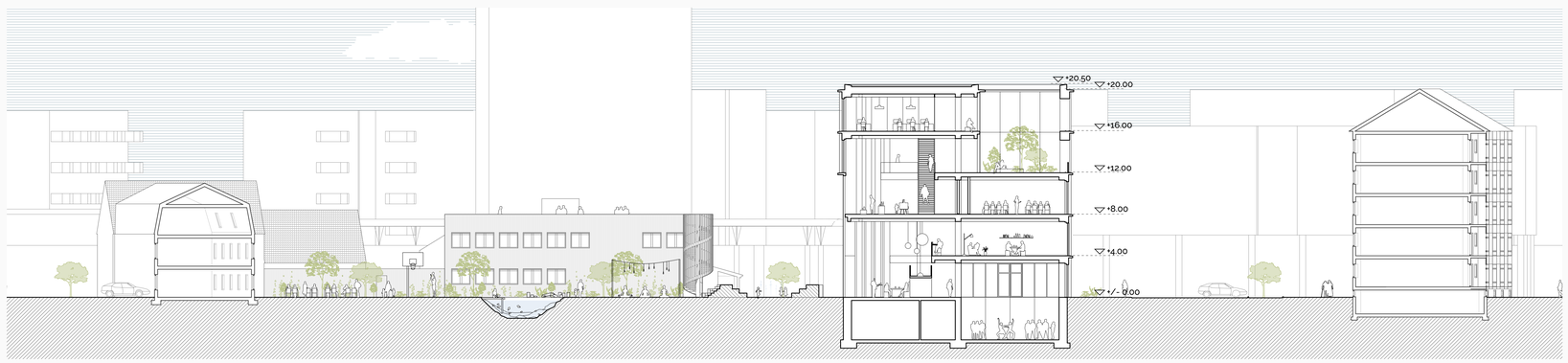
In the future, existing urban tissue may be removed.



In this case, I propose placing new building volumes around the city block.



In this way, green square can be further developed and constitute a new park in the district.



Urban section, scale 1:200. Public square offers a variety of stimuli, at the same time creating a soft transition towards the building.

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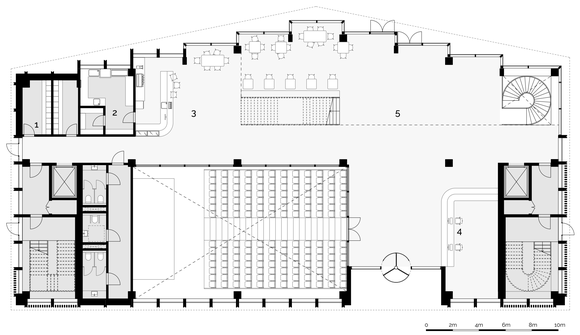
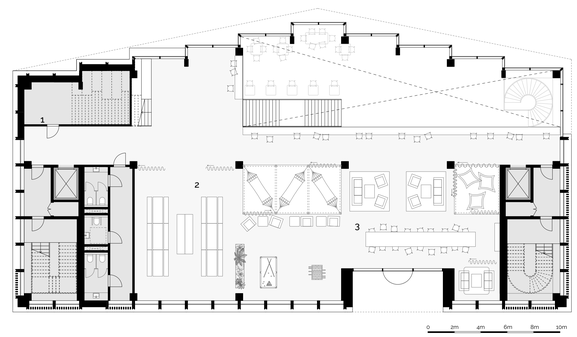
Programme

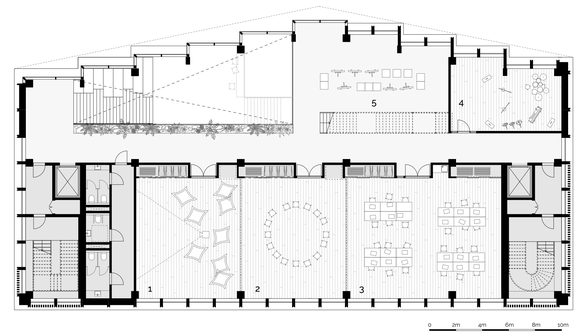


Level 0, scale 1:100 (rescaled). 1 personel changing rooms 2 cafeteria preparation 3 cafeteria 4 reception desk 5 foyer

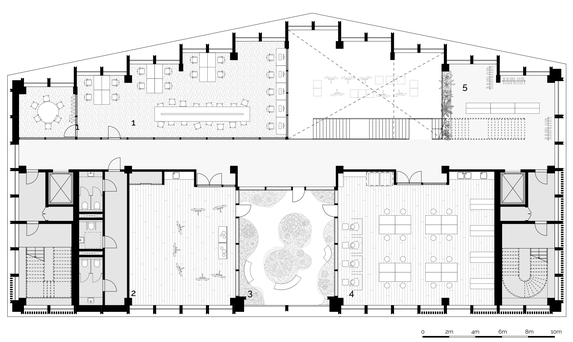


Level +1, scale 1:100 (rescaled). 1 storage 2 community kitchen 3 social living room

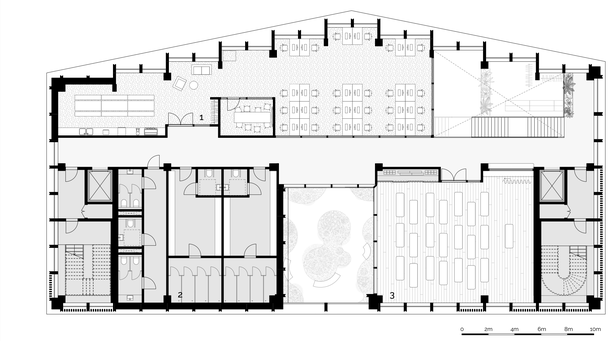
Groundfloor impression. Attractive vertical communication encourages physical activity.



Level +2, scale 1:100 (rescaled) Multipurpose area, arrangement proposal: 1 movie screening 2 book club meeting 3 children workshop 4 music practise room 5 exhibition area



Level +3, scale 1:100 (rescaled) 1 quiet reading room 2 art studio 3 outdoor terrace 4 ceramics studio 5 swap corner



Level +4, scale 1:100 (rescaled). 1 admininstration 2 changing rooms with showers 3 yoga studio

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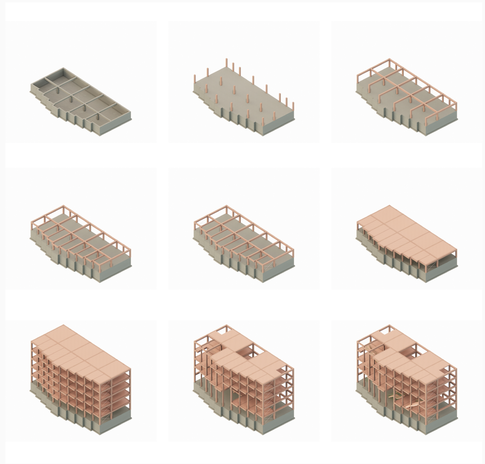
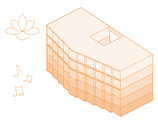
Atmospheres

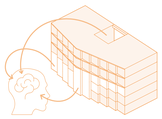


Structure build-up diagram. Glulam post and beam system is visible in the interior.

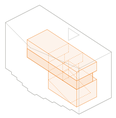


Hybridity is understood as a combination of different atmospheres one building can provide, to answer different human needs: from the open and social environments to quiet spaces promoting looking inwards. The programme has been organised vertically in a way that those areas can coexist in one volume, allowing people to use them in parallel.

The main focus of the sustainability aspect has been put on creating a new green area for the district, which can benefit the neighbourhood independently of the building itself through the public space activation, enhancing biodiversity and multisensory stimulation in a dense urban fabric.



The multiplicity in the project is understood through ensuring that spaces are not only functional or aesthetic, but also beneficial for visitors through the application of neuroarchitectural findings.



Through providing a variety of spaces, programme, natural environment and evidence-based design, this project represents resilience to changing conditions that can affect mental wellbeing of the local community. Although the stressors might change, the design offers a complex environment that creates beneficial conditions for human wellbeing.

All of those solutions are concluded in the promotion of **healthiness** of the built human environments, with a focus on mental wellbeing, which is often overlooked, despite the profound impact of the architecture on our mental welfare.

Aspects of building as a public condenser.

Impression of the mezzanines. Providing spaces for display is one of the ways of giving people the ownership of the building.

Creating affordances for building users: agency. Different possibilities of seating.

Movable space divisions.

Adjustable lights.

From institutional to home-like environment.

Areas for display.

Adjustable sun shading and ventilation systems.

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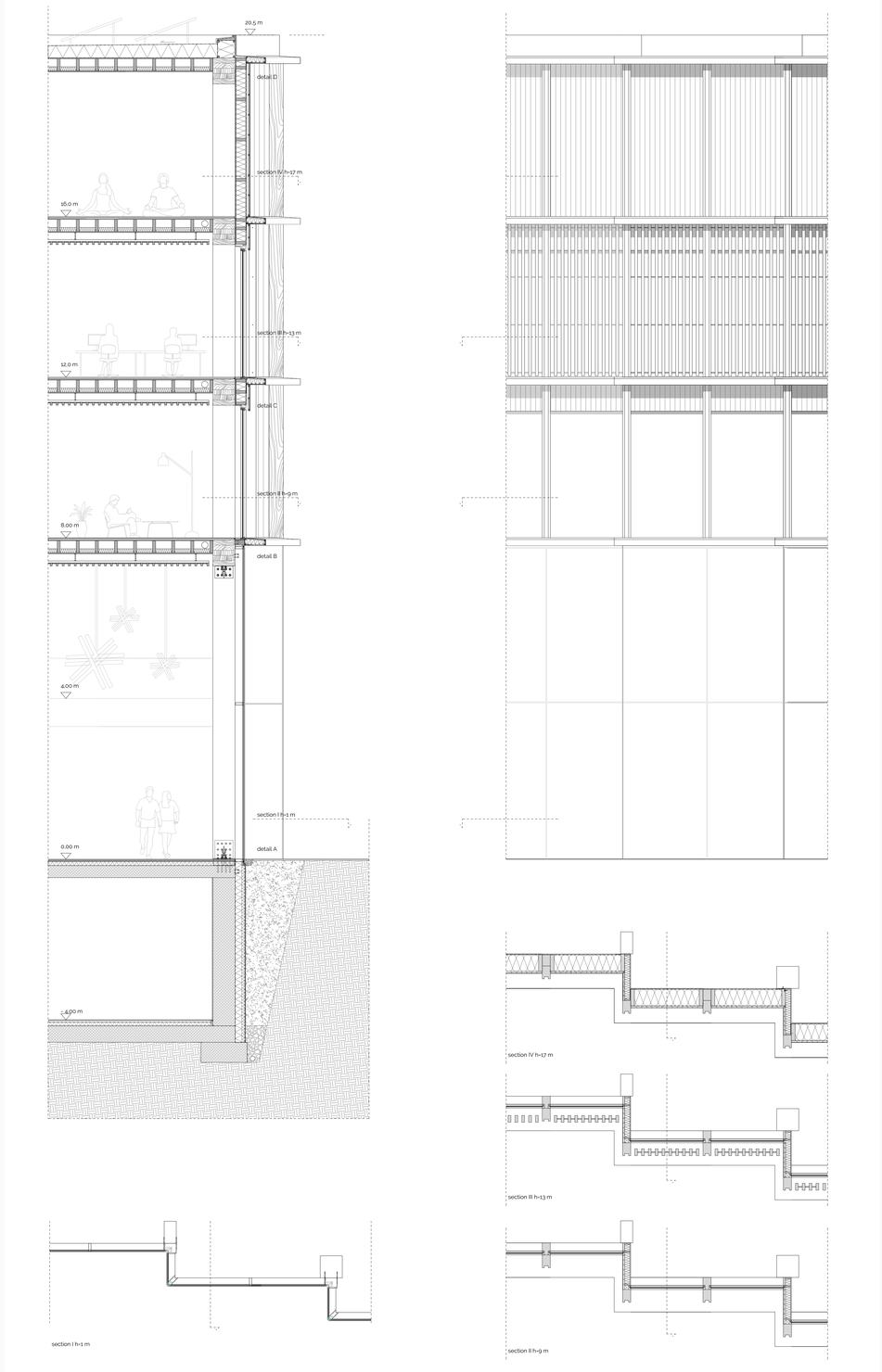
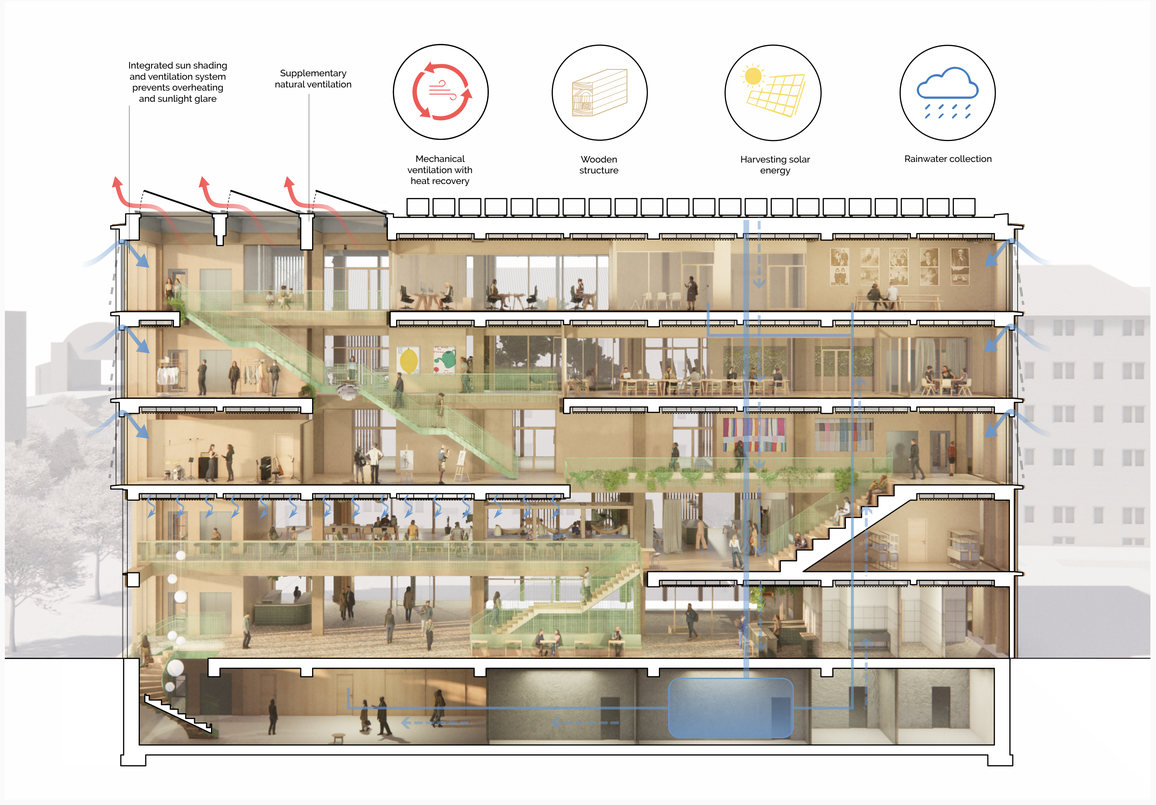
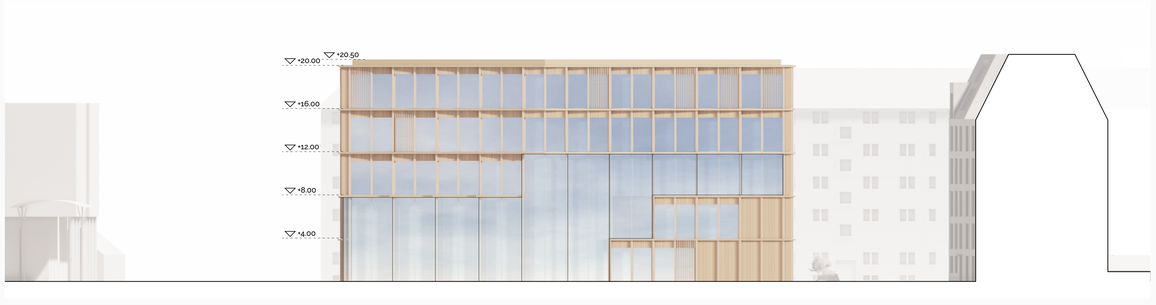
Technical design



Facade view and section, scale 1:50.



Building section, scale 1:100.



North facade, scale 1:200.

South facade, scale 1:200.