

ARCH7278 | Open Building in Transition | Workshop 3 | Group 01

HONG KONG : NO.618 SHANGHAI STREET
Level of Infill

Clarissa Chau, Yuki Lo, Cherry Wong

Workshop 3

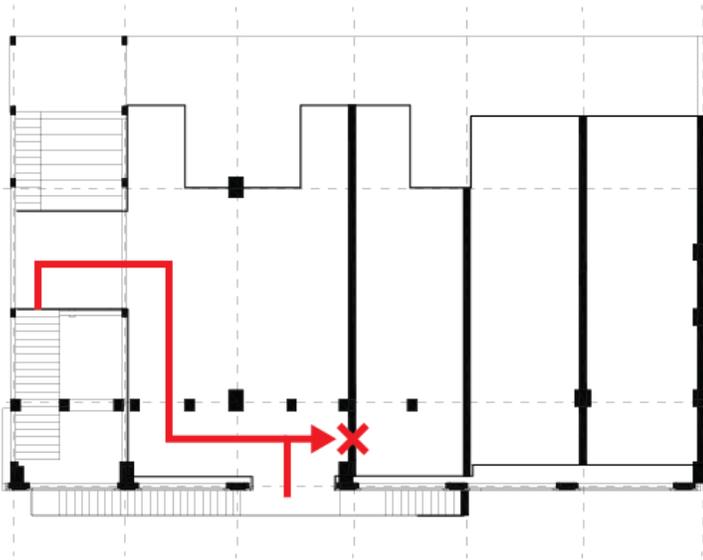
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1. Revised structure

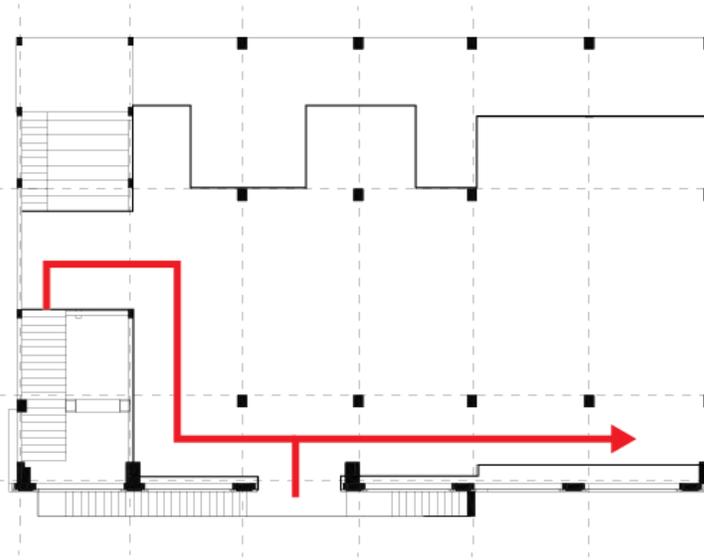
The existing structural shear wall blocks the route of the newly proposed staircase façade by the previous group, so it is suggested to utilize the columns for replacing the shear walls.

2. Potential infill layouts

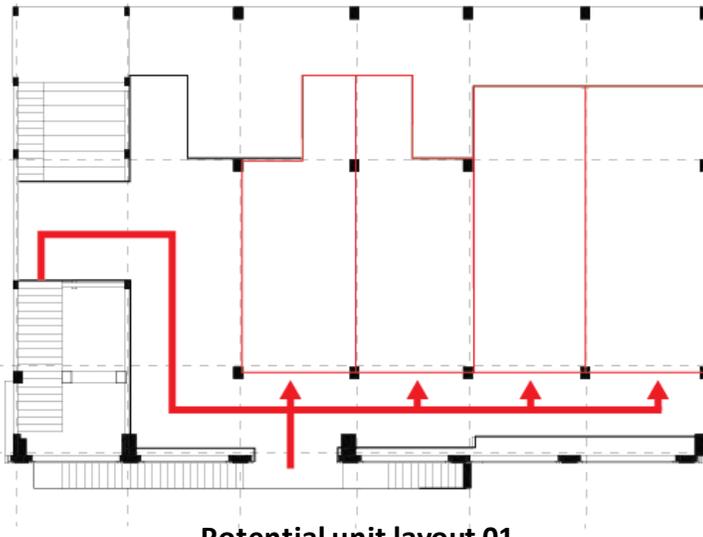
Maintaining access from the façade and the internal staircase on the left, various residential units could be arranged within the grid and connected by a communal corridor.



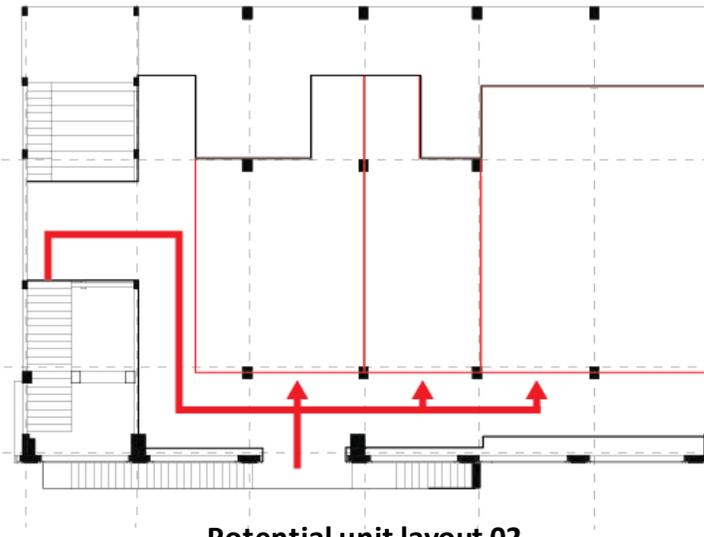
Proposed structure & façade by the
previous groups



Revised structural layout



Potential unit layout 01



Potential unit layout 02

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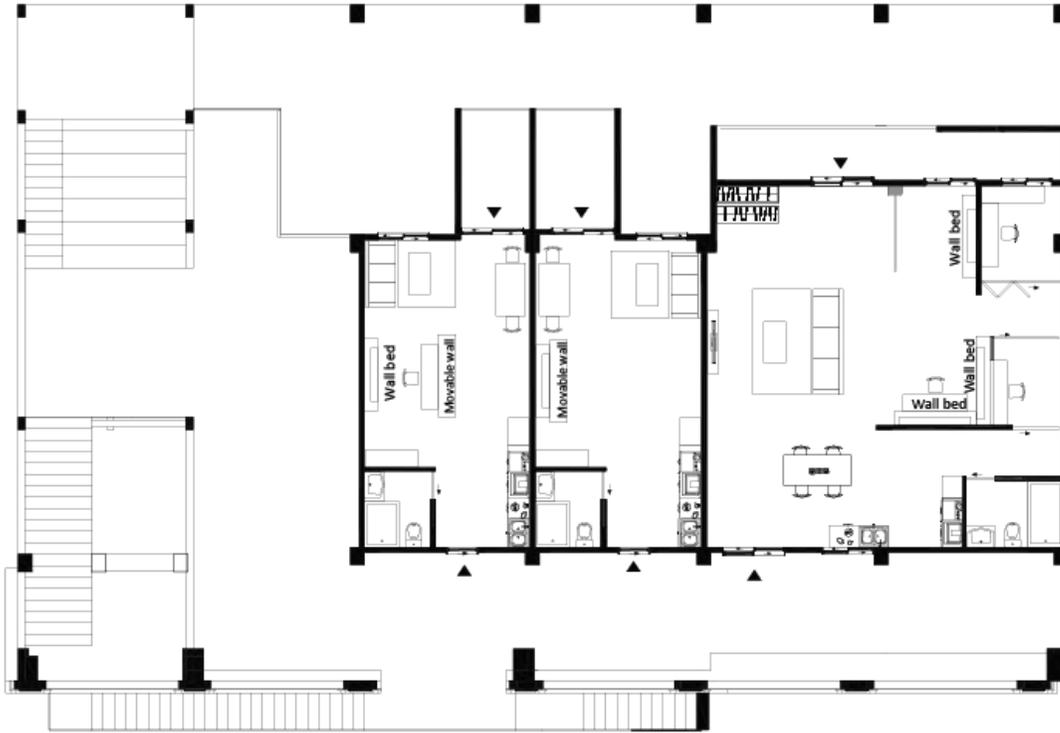
3.1 Change of time – Day Mode

During daytime, the living space is the most frequently-used area.

The family apartment focuses on communication and interaction within the household, so no walls separate the individual rooms during the day, and the living area is greatly optimized.

4. Flexible interior elements

The movable walls and wall beds are flexible in space, allowing the units to accommodate various programs in a single area. The "home" could therefore cater to the changing needs of the residents.



1-room Apartment



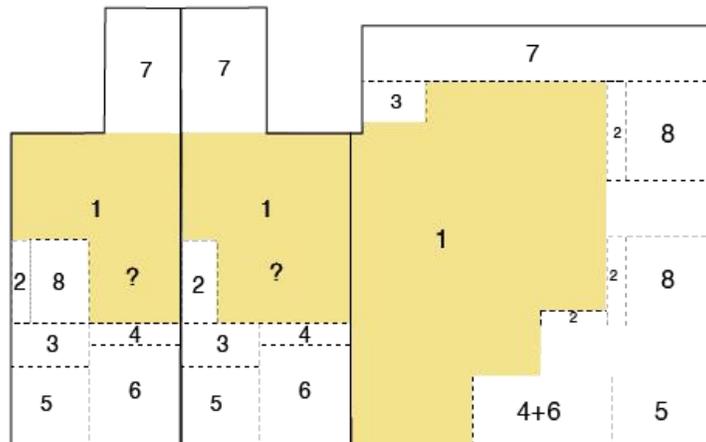
1-room Apartment



Family Apartment

DAY MODE ☀

- 1 Living + Dining
- 2 Bedroom
- 3 Cloakroom
- 4 Laundry
- 5 Toilet/ Bathroom
- 6 Kitchen
- 7 Balcony
- 8 Work/ Study
- ? Customized use



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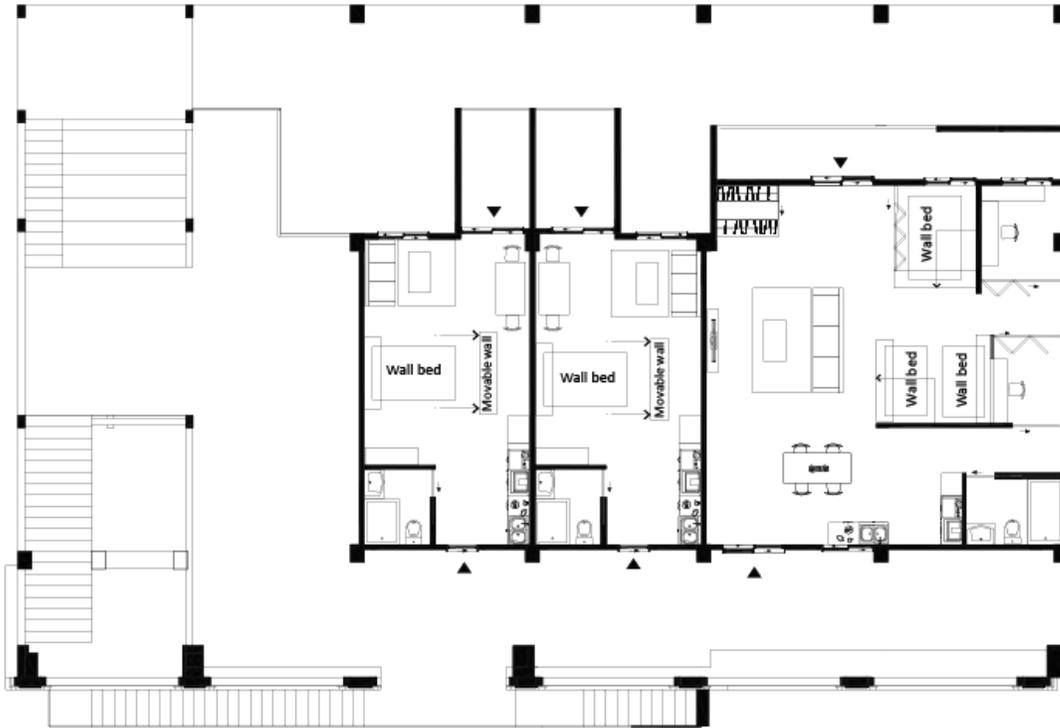
3.2 Change of time – Night Mode

When it comes to the time for rest, living and working spaces are collapsed to make room for bed.

In the family apartment, one single-size wall bed and the King-size wall bed can be rotated and unfolded to form the bedrooms promptly.

4. Flexible interior elements

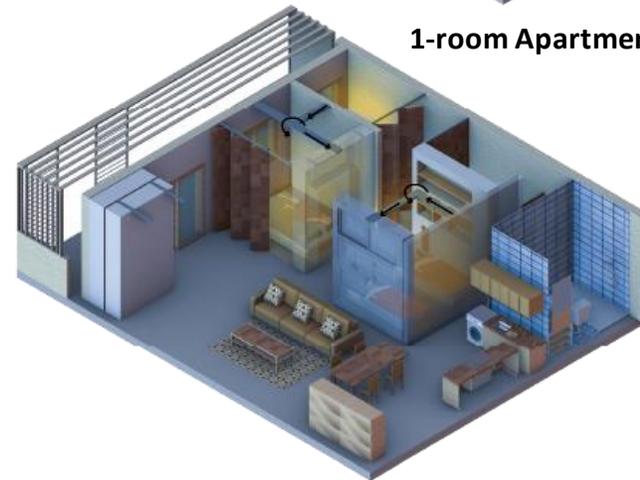
The movable walls and wall beds are flexible in space, allowing the units to accommodate various programs in a single area. The "home" could therefore cater to the changing needs of the residents.



1-room Apartment

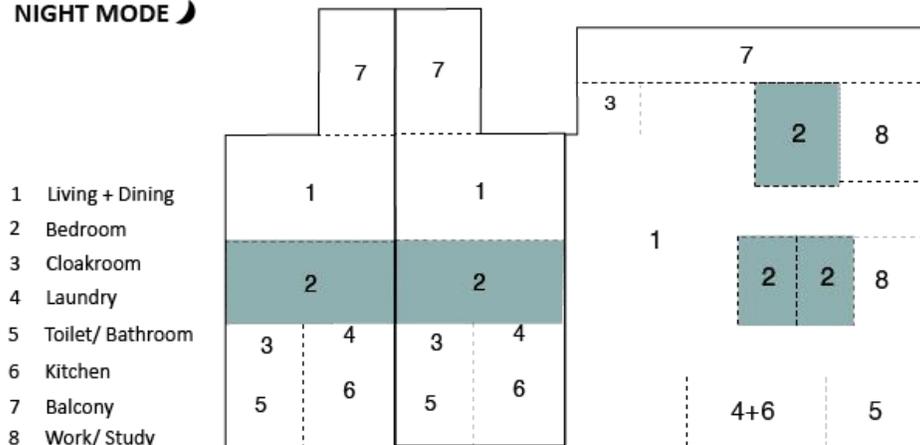


1-room Apartment



Family Apartment

NIGHT MODE ☾



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5. Adaptation to different unit types

The need for different units may vary with the evolution of the era.

The shared apartment has become trendy recently due to its affordability. Its design preserves each occupant's privacy yet has significant shared space for social interaction.

The 2-room apartment can be used as a shared house or rental unit because the two bedrooms are divided by solid walls, providing sufficient privacy to the potential occupants.



2-room Apartment

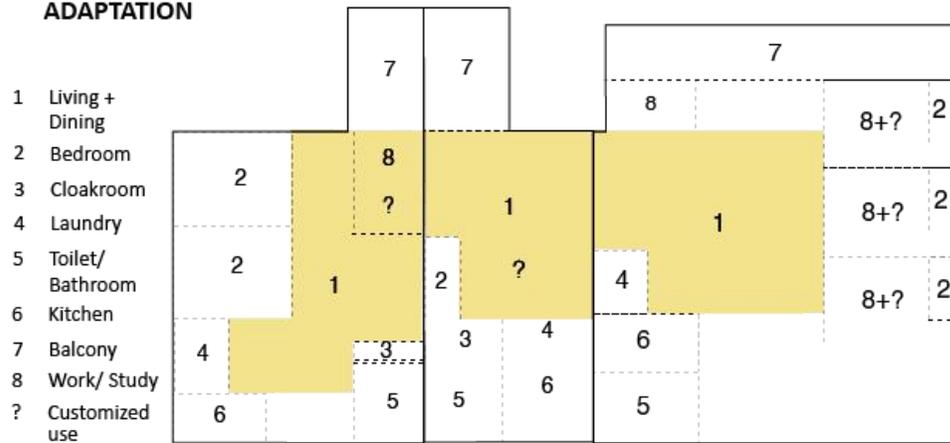


1-room Apartment



Shared Apartment

ADAPTATION



Reflection

Open Building

An open building concept is a contemporary approach to architecture and construction that emphasizes the adaptability and flexibility of living spaces. Unlike traditional construction methods that are rigid and have limited room for customization, the open building promotes the ability to modify structures in response to changing needs or preferences of the occupants. This approach allows for greater user control and implies a collaborative design process between architects, engineers, and residents. Overall, the open-building philosophy challenges conventional thinking in construction and supports a more user-centered approach.

I reckon that it is a fascinating paradigm shift in the field of architecture that enables buildings to evolve with changing circumstances and needs rather than being static and inflexible. This approach represents a significant departure from traditional construction methods and has the potential to revolutionize the way we design and build living spaces.

Yuki Lo

Reflection

The Course

The course was an enlightening experience that allowed me to gain a deeper understanding of the principles and practices involved in creating sustainable buildings. Throughout the course, we were introduced to various concepts and strategies, including thematic or non-thematic buildings and spaces, structure as territory, interactive facades, and so on. One of the key takeaways was learning how open building systems can help address the challenges of today's built environment, by allowing for flexibility and adaptability in design to accommodate changing needs over time.

I also appreciated the collaborative nature of the course, which encouraged active participation and the sharing of ideas with other students. I found that it provided a good balance between theoretical concepts and practical applications, as we were able to apply what we learned in assignments relevant to real-life scenarios. Overall, I feel that the course was a valuable and enjoyable learning experience.

Yuki Lo

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Infill Proposal - Office

1 Revised structure

The existing structural shear wall blocks the route of the newly proposed staircase façade by the previous group, so it is suggested to utilize the columns for replacing the shear walls to create a fully free plan, allowing freedom in configuration to meet different program's needs.

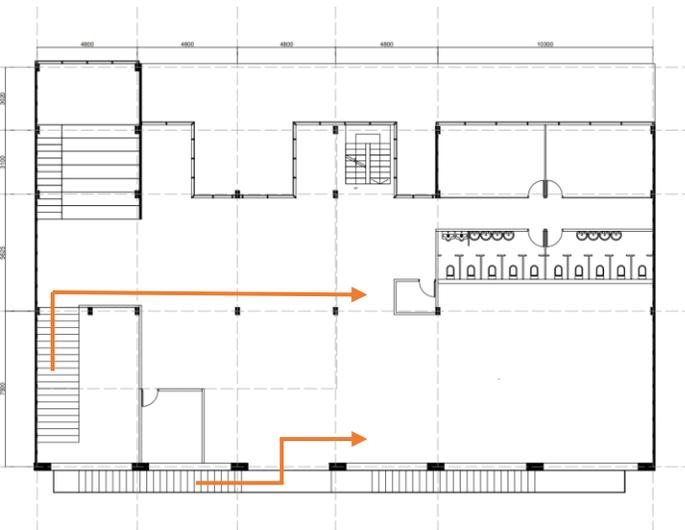
2 Service core

The access from the façade into the 2/F and the internal staircase on the left remains unchanged. The toilets on all floors are in the same place on each floor for ease of plumbing.

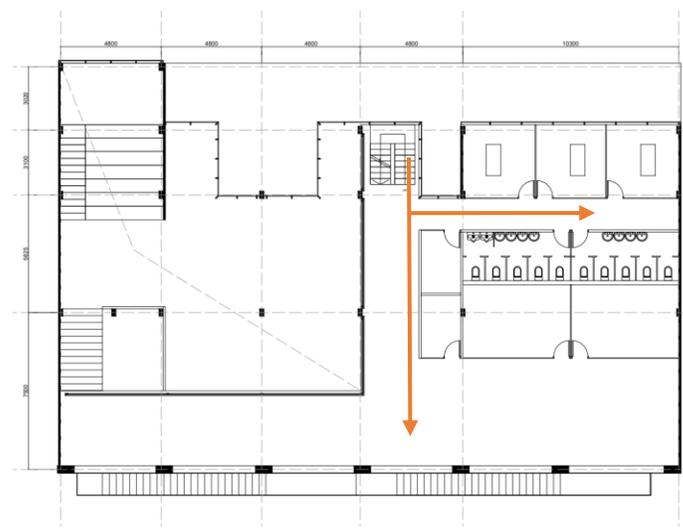
Clarissa Chau



Proposed structure, layout & façade by the previous groups



Proposed structure - 2/F floor plan



Proposed structure - 3/F floor plan

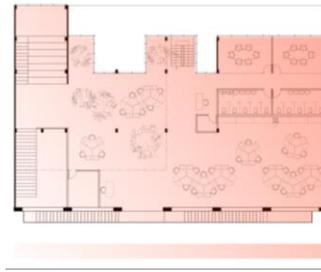
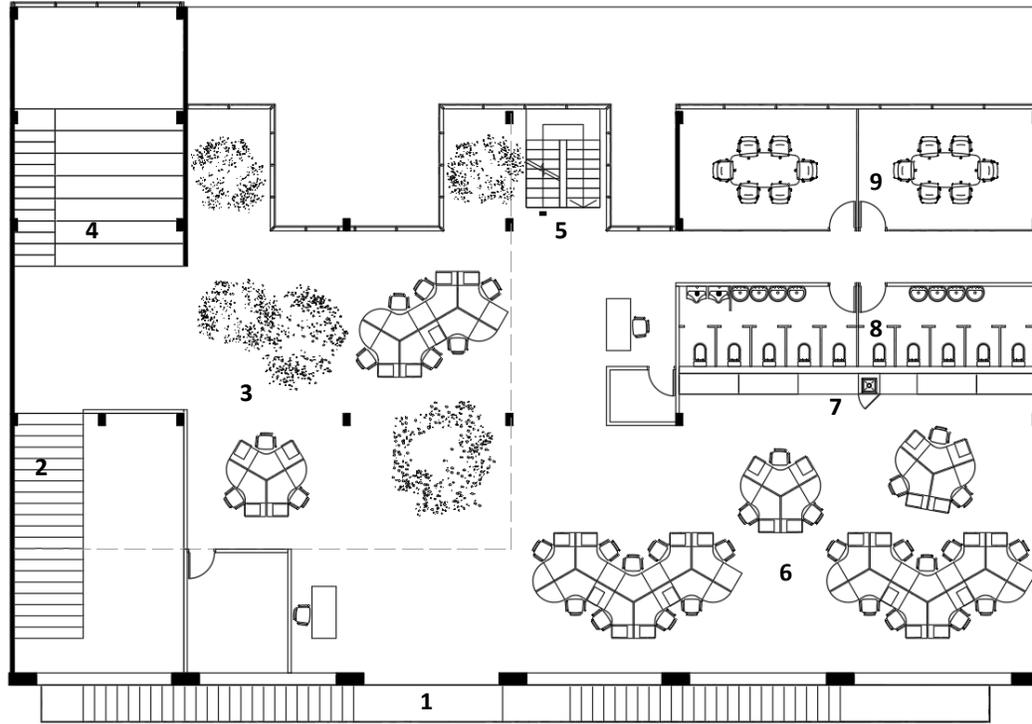
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3 Openness infill layout
 Minimize the no. of wall adding flexibility and versatility of layout possibilities for the users to reconfigure in the future

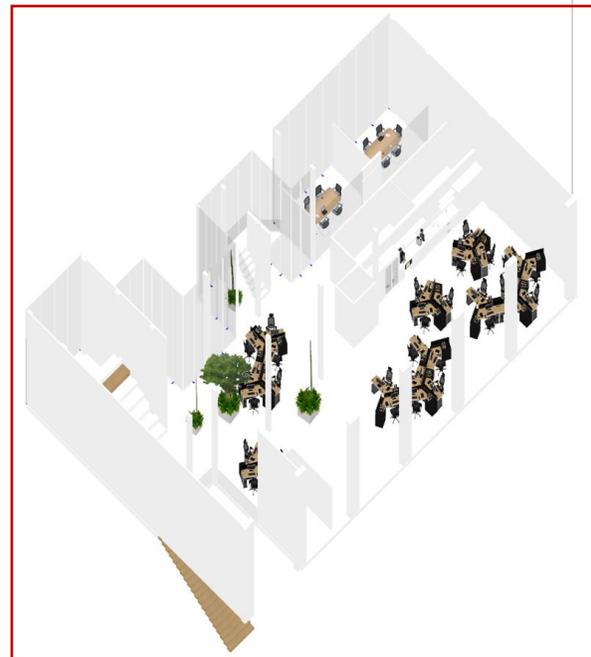
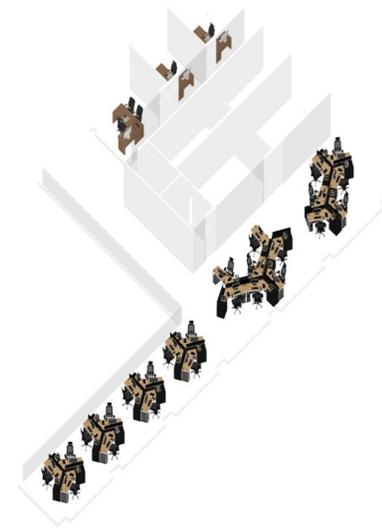
4.1 Degree of privacy

The two access from the façade into the 2/F and the internal staircase on the left turns the atrium into a buffer zone. This semi-public area creates the flexibility to either extend the office space [through the form of hot desks] or expand the communal space, from the stair seating into the atrium.

Clarissa Chau



Public Private



Office 2/F plan

- 1 proposed new façade access (by previous group)
- 2 public staircase
- 3 double height atrium + hot desk
- 4 existing proposed stair seating
- 5 private stairs to upper floor for office staff only
- 6 office space
- 7 pantry
- 8 toilet
- 9 meeting room

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5 Double-heighted atrium

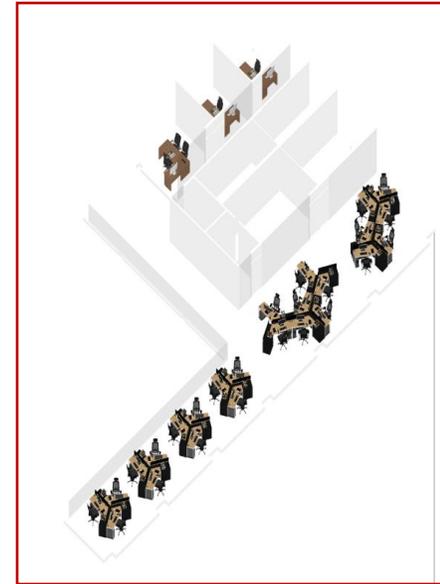
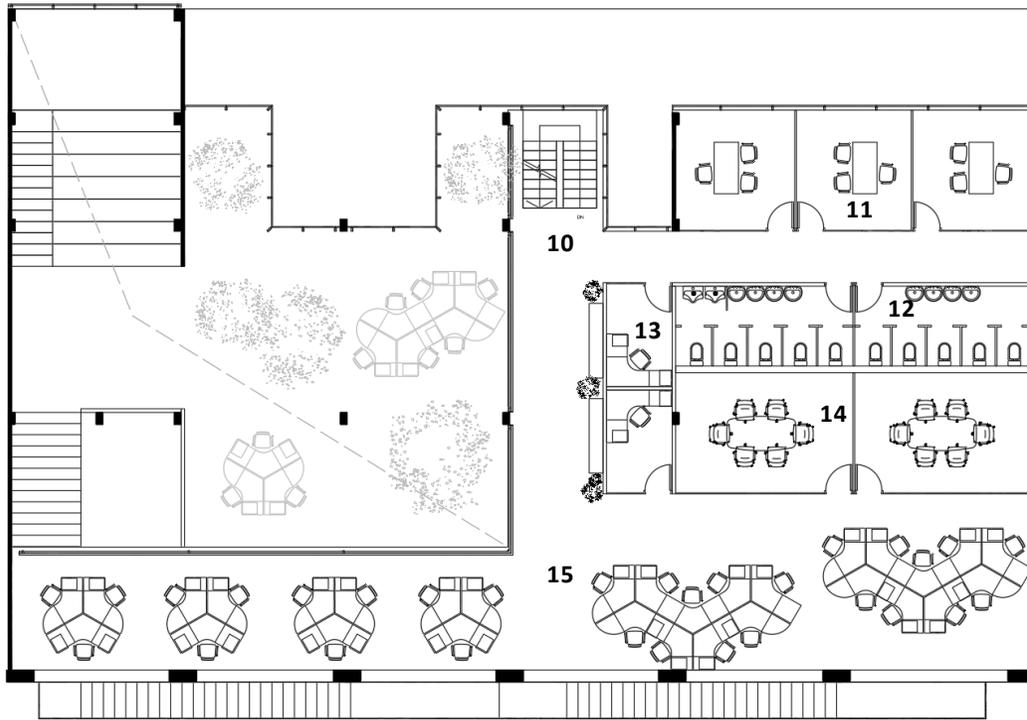
Maximized the flexibility to the agent to decide for the infill on the future. The visual connection it provides between 2 floors create a sense of cohesion and unity.

4.2 Degree of privacy

A staircase for private use for the office spanning two floors is added next to the proposed double-heighted atrium.

The upper floor allows for a more private and formal office spatial configuration, it is where the executive rooms are located.

Clarissa Chau



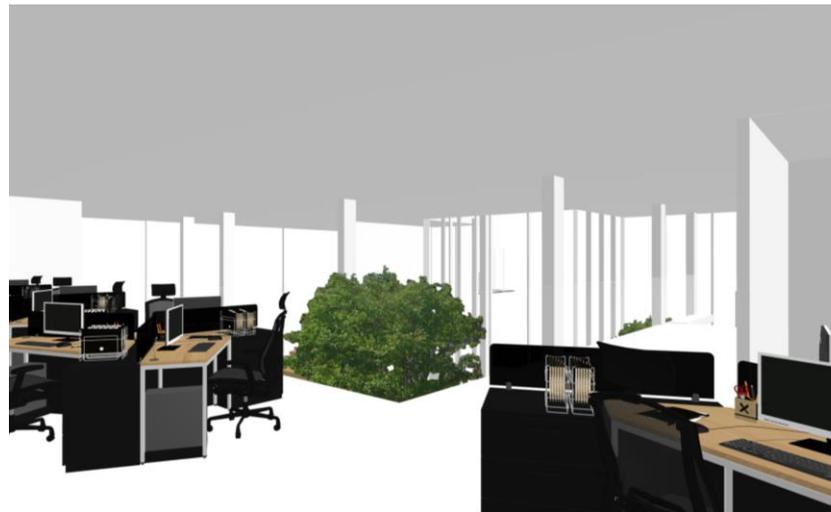
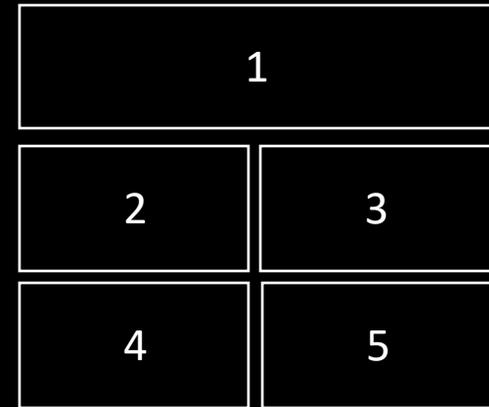
Public

Private

Office 3/F plan

- 10 private stairs to lower floor for office staff only
- 11 private office
- 12 toilets
- 13 office
- 14 meeting rooms
- 15 office space

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5 Service core

- 1 External elevation (non-street facing)
- 2 Stair seating
- 3 Atrium hot desk area
- 4 corridor adjacent to executive room
- 5 upper floor office space

Clarissa Chau

Reflection

Open Building

Open building is a concept that emphasizes flexibility, adaptability, and sustainability in the design of buildings. Unlike traditional building methods, which typically rely on rigid and inflexible design approaches that offer limited opportunities for customization or evolution, the open building approach is adaptable. It provides users with the capacity to change layouts according to their evolving needs and technical requirements, allowing for greater control for users and extending the lifespan of a space as it can adapt and evolve to different needs throughout time.

Clarissa Chau

Reflection

The Course

The course emphasized the importance of sustainability in building design, providing us with a comprehensive understanding of sustainable principles and practices. We learned about thematic and non-thematic buildings, interactive facades, and other strategies that can be implemented to address the challenges of sustainable building design. Furthermore, the course provided insights on how open building systems can contribute to sustainable design by ensuring the adaptability and longevity of buildings.

I believe that the knowledge and skills acquired from this course is invaluable in shaping my mindset and approach to designing in the future. Hopefully, my designs and projects in the future will be able to benefit from what is taught in this class, contributing to a more sustainable built environment.

The collaborative nature of this course also provided a great opportunity for us to work with classmates. The system of exchanging projects facilitated an interesting learning experience, exposing us to a more realistic mode of designing in the workplace.

Clarissa Chau

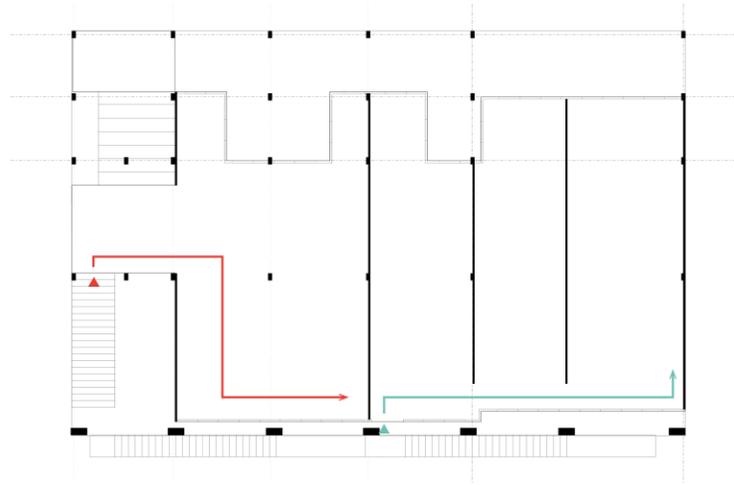
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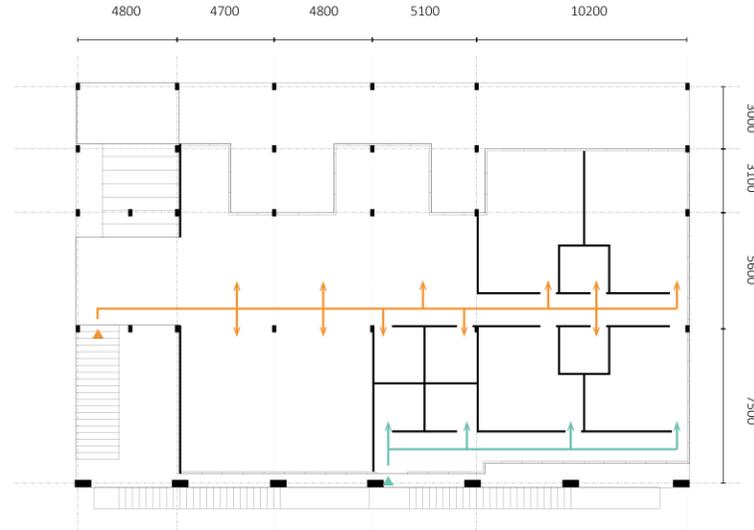
1. Proposed Structure

The two entrances will remain the same as the existing, targeting public and private users.

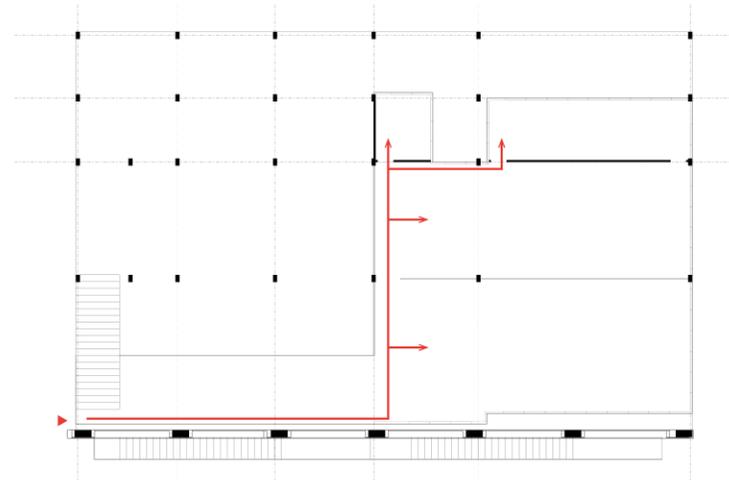
Shear Walls in the existing structure will be demolished as it limits the infill potential. Only columns are kept.



Existing structure & façade



Proposed structure (2/F)



Proposed structure (1/F)

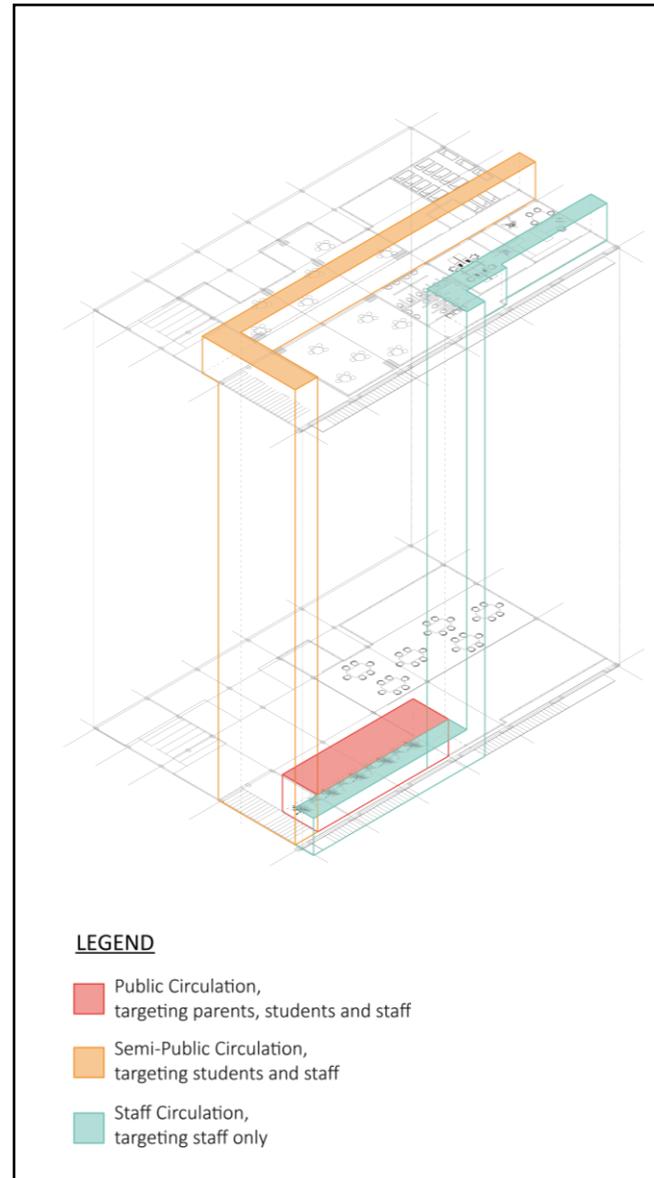
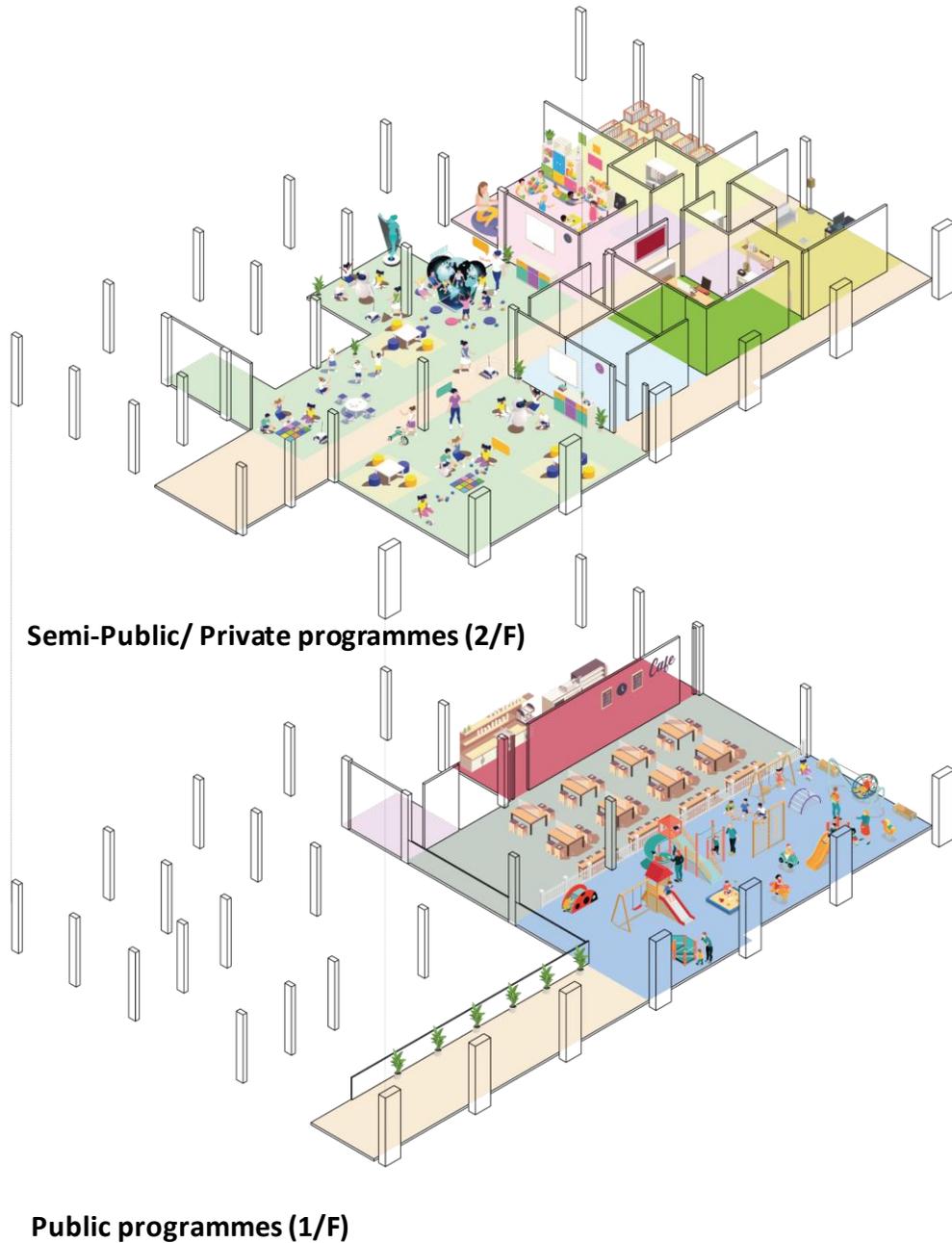
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2. High Degree of Privacy

The internal circulation starts on the first floor, where students and parents arrive at the pick-up lobby (red). Students will continue their journey along the staircase to the second floor, where the classroom situate (orange).

The external circulation will serve as the private circulation for the staff (blue).



LEGEND

- Public Circulation, targeting parents, students and staff
- Semi-Public Circulation, targeting students and staff
- Staff Circulation, targeting staff only

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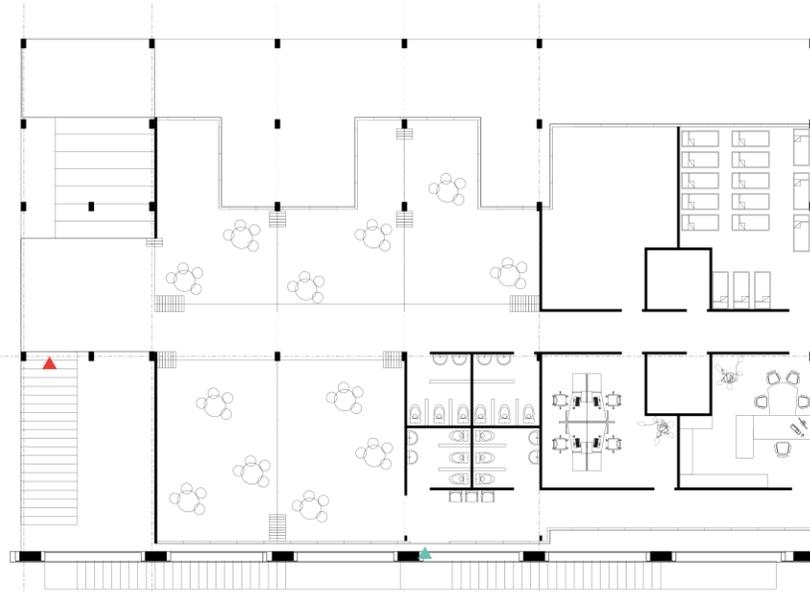
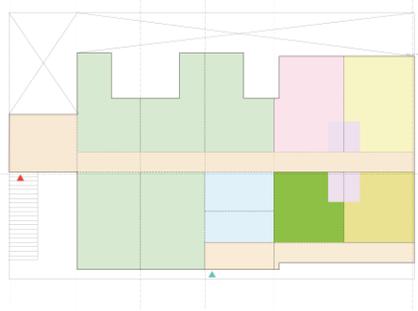
3. Minimal Infill solution

Various physical barriers to be installed according to the degree of privacy.

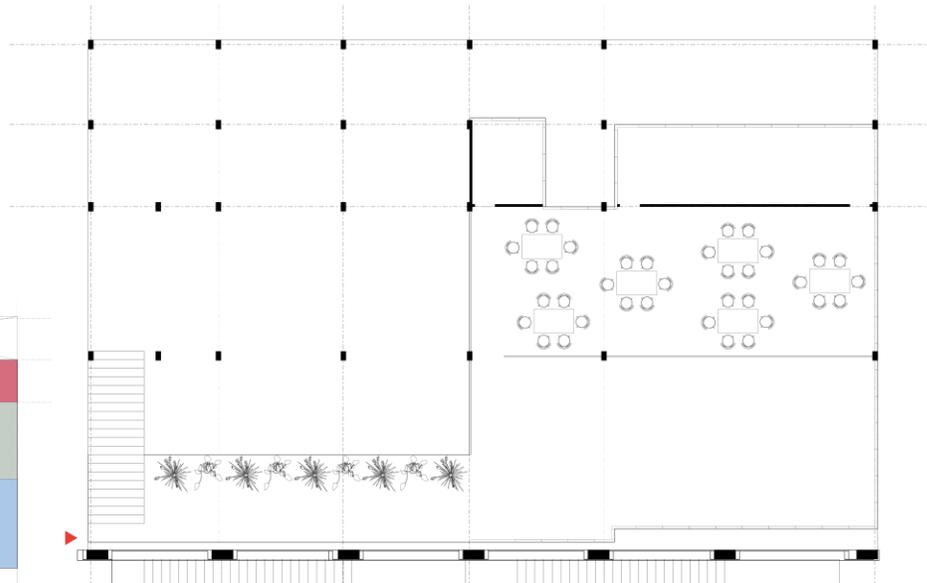
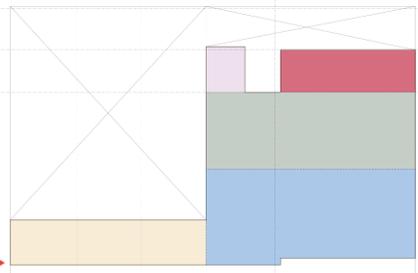
For private programmes like washroom, staffroom, nursery, storage and kitchen that deals with privacy and safety issue will be bounded by **walls**.

For semi-public programmes like classroom (2/F), **movable partition walls** will be installed.

For public programmes like cafeteria and playground (1/F), only **balustrades** will be installed to separate the two functions physically for safety issue.



Proposed programme (2/F)



Proposed programme (1/F)

LEGEND

- Storage
- Kitchen
- Cafeteria
- Indoor Playground
- Classroom
- Nursery
- Napping Room
- Washroom
- Staffroom
- Principal's Room
- Circulation

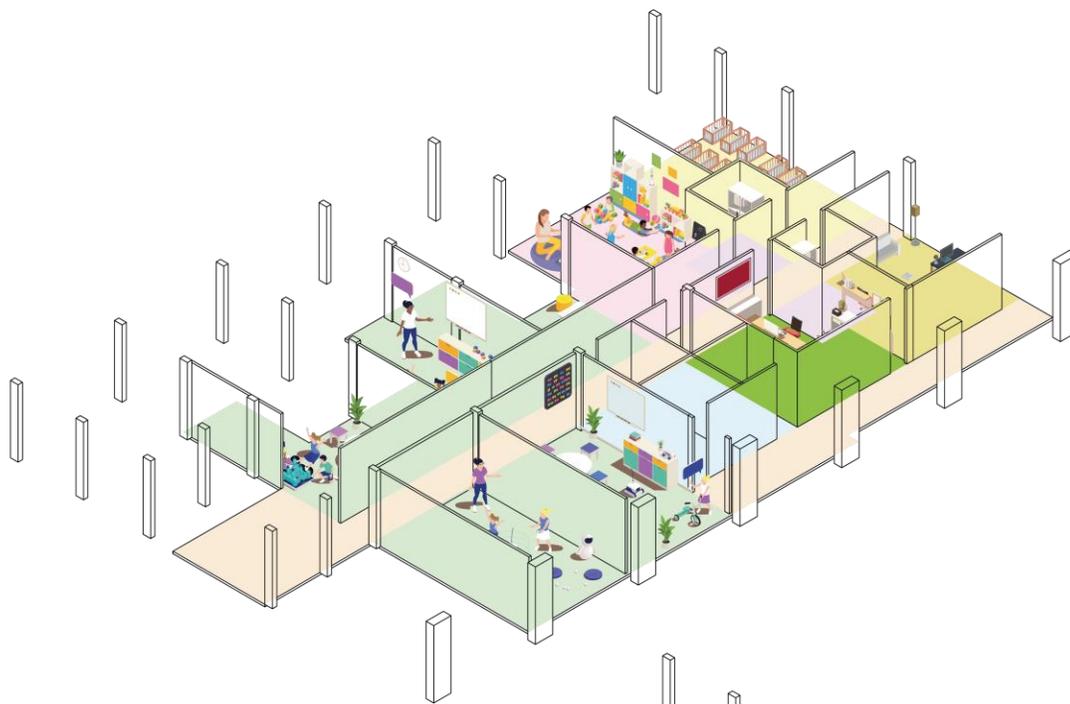
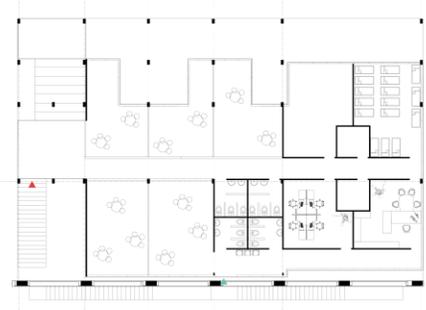
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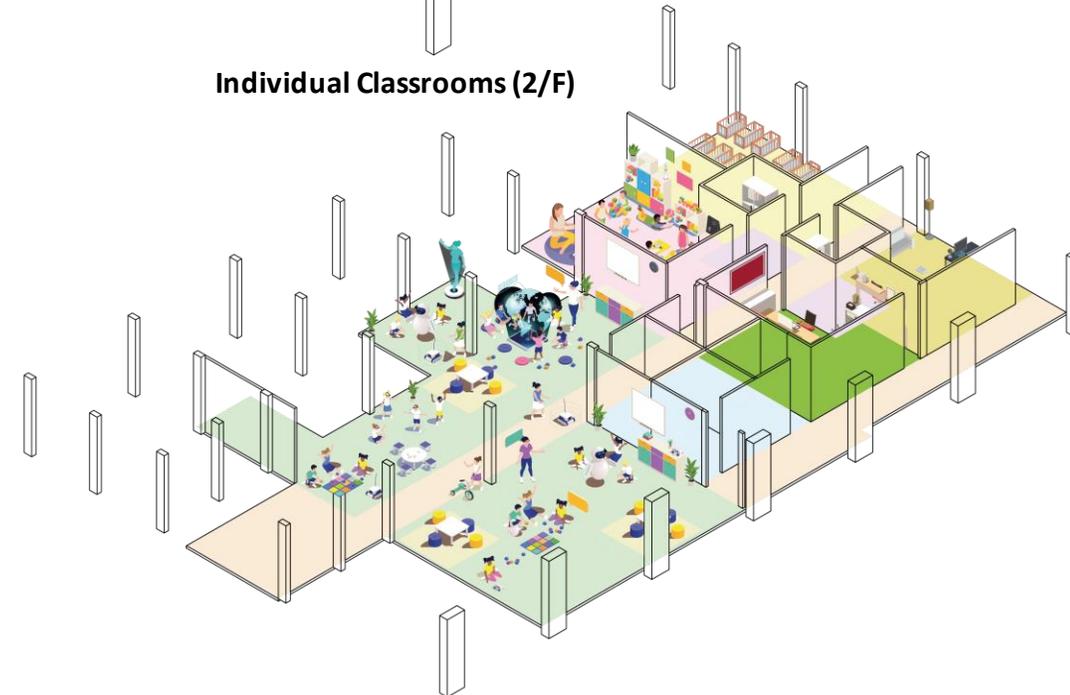
4. Convertible Classrooms

As suggested, movable partition walls are installed in the semi-public programme- classrooms. Users can adjust the degree of openness according to their needs.

Certain degree of privacy and flexibility is provided to the learning spaces.



Individual Classrooms (2/F)



Combined Classroom (2/F)

Reflection

Open Building

Open building is all about ***flexibility, adaptability and sustainability***. In traditional schools, no matter how public or private the programmes are, they are all bounded by same kind of physical barrier-walls. Walls are the physical barrier that we barely demolish. The layout hence remains the same over the years. The concept of open building provides capacity where users can change the layout according to the everchanging needs and technical requirements. ***The minimal the infill, the higher degree of flexibility provided.*** It helps provide dual sides of stability- the community interests and the individual preferences. Open building also acknowledges the idea that the ***built environment is under rapid transformation and the consequence of a constant design process, supported by multiple participants.***

Cherry Wong

Reflection

The Course

The course is well structured for me to understand various aspects of an open building, from the levels of open building to how an open building should be designed. The assignments are well outlined for us so that we can understand the idea more clearly when we participate in practical designing, i.e.the design of structure, façade and infill.

Each stage of design reinforces the idea of open building- flexibility, adaptability and sustainability. The design of structure enables us to think about the order of space and the relationship between the public and the inhabitants. Second stage of façade design questions the relationship between the communal space and the individual units within the building. Last stage of infill design again challenges the relationship between level of infill and degree of privacy.

In short, the concept of open building has provided us with certain degree of flexibility in designing since we are not bounded by physical limitations.

Cherry Wong