



## **Executing TSH Projects – Project sharing on Nam Cheong Street & other current projects**



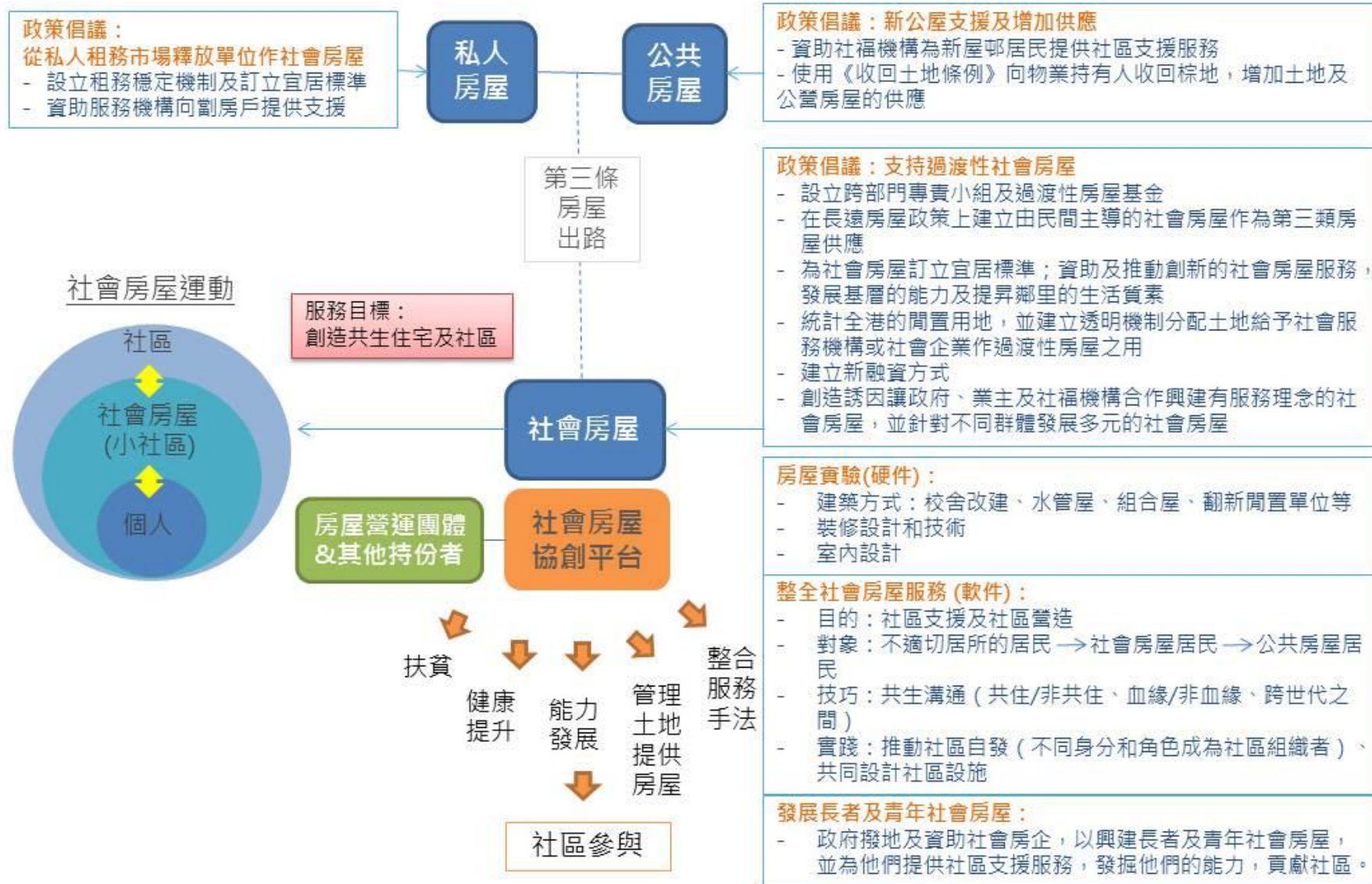




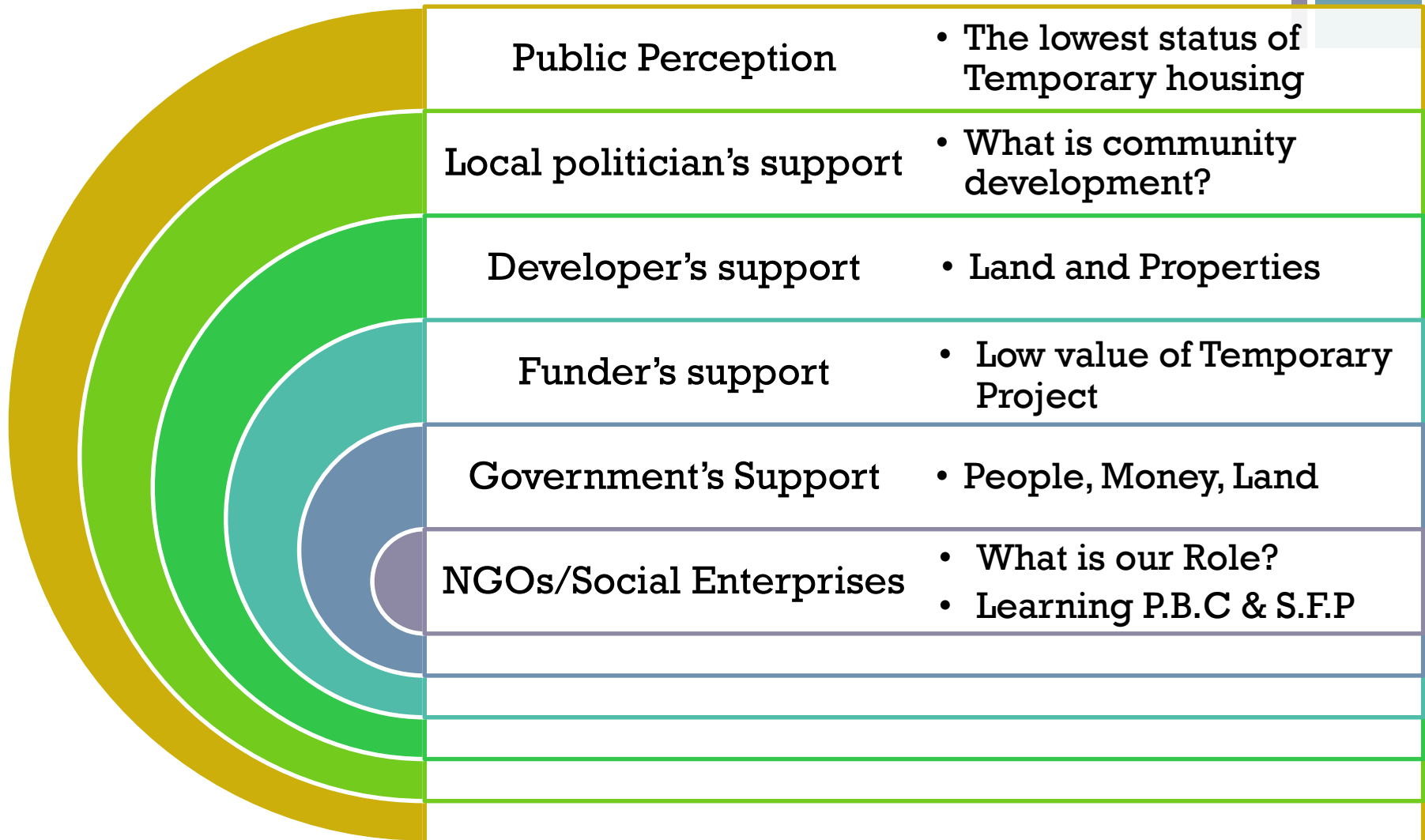
# Reflection: Social Housing Intermediary Framework in HK:

3

## What is social housing? Policy or Gov't Role?



# + Reflection on Modular Social Housing



# +Background of Modular Social Housing Project

- launched by the Hong Kong Council of Social Service in Sep, 2018, with the joint efforts of The Community Care Fund, The Hong Kong Jockey Club Charities Trust, construction companies, and NGOs/social enterprises
- HKCSS plays a role of builder and coordinator.
- The project adopts modular integrated construction, in the most efficient, economical and environmentally friendly way, to build transitional social housing in idle land which available for short-term usage.

# Objectives

- using a modular integrated construction (MIC) to build transitional and affordable social housing for those who wait for the public rental housing at least 3 years and live in an indecent rental subdivided units
- advocate and promote modular social housing as an integrated community-based solution to the livelihood problems of the grassroots
- Support and empower residents to develop their living strategy, social capital and community in order to build up their resilience and social network

# Modular Social Housing Construction

- Adoption of MiC can effectively reduce construction lead time, lower the demand for on-site labour, increase the quality control, etc.
- non-profit organizations can make use of **short-lease land sites** to build temporary building at lesser cost and at faster pace for the provision of diverse services
- Hong Kong Buildings Department (BD) issued a related practice note and established a pre-acceptance mechanism to facilitate the implementation of MiC projects

# + Nam Cheong Street Project Design

- Location: 202-220 Nam Cheong Street, Sham Shui Po
- Site Area: 972 square meter
- Building: Single 4-storey building block
- Units: 89 household units for nearly 160 beneficiaries
- Unit Area: from 130 sq.f to 293 sq. f for 1 to 3 persons-household
- Tenancy period: 2 years
- Expected tenant move in : Q3 2020

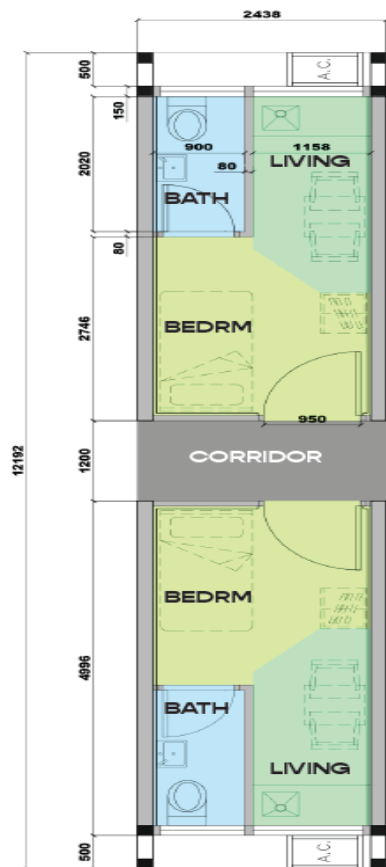




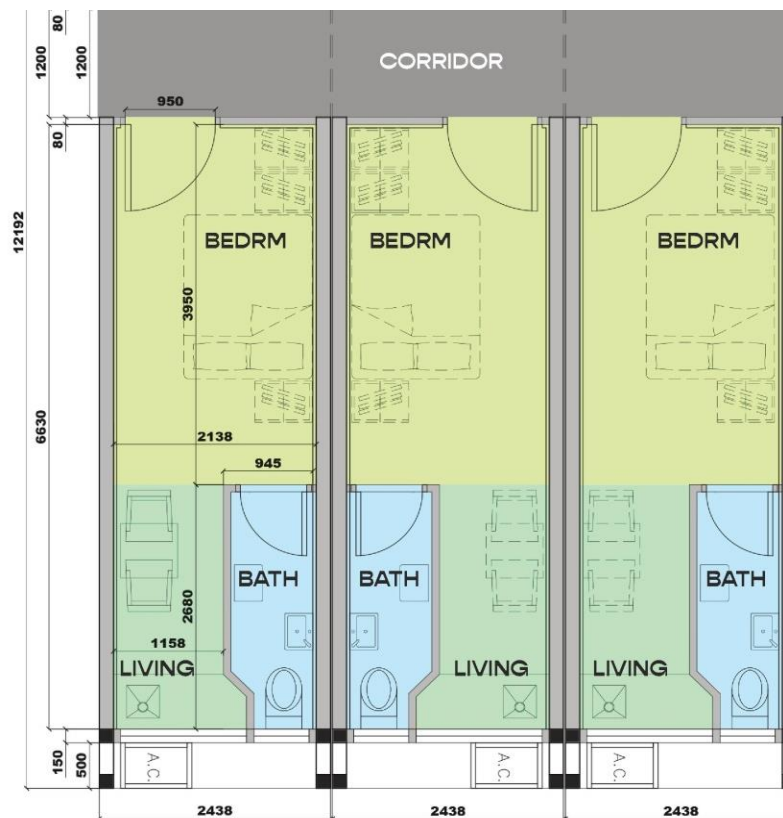


# Nam Cheong Street Project Design

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1-PERSONS UNITS  
SCALE: 1:50

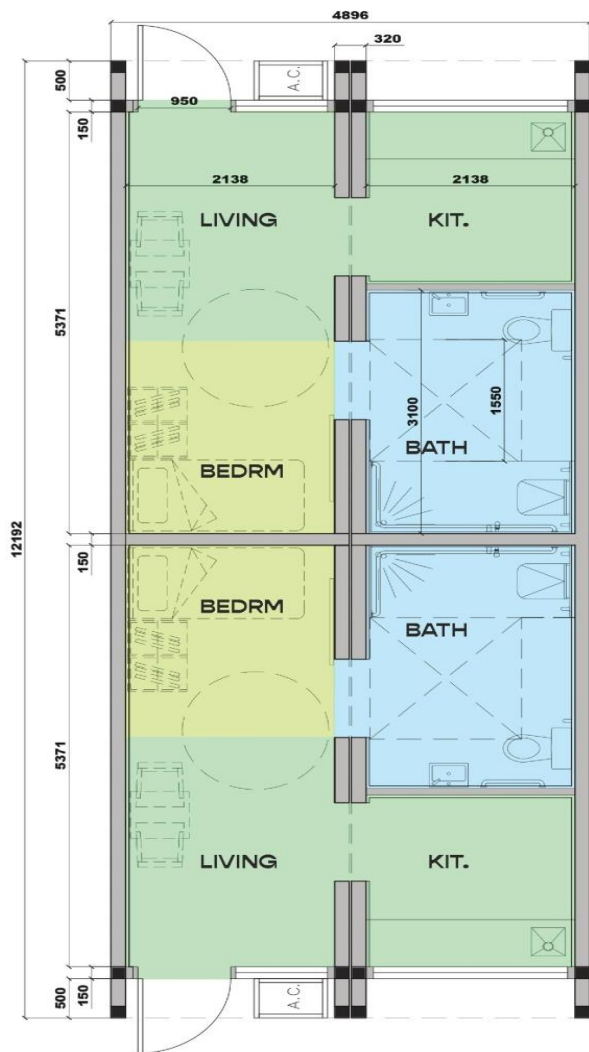


2-PERSONS UNITS  
SCALE: 1:50

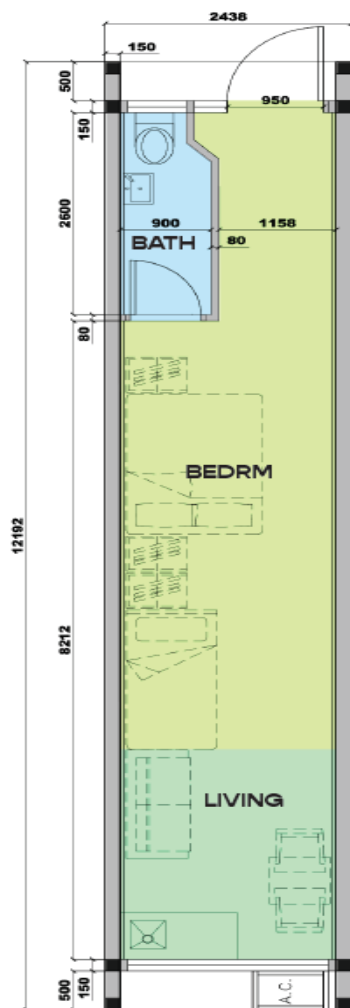


# Nam Cheong Street Project Design

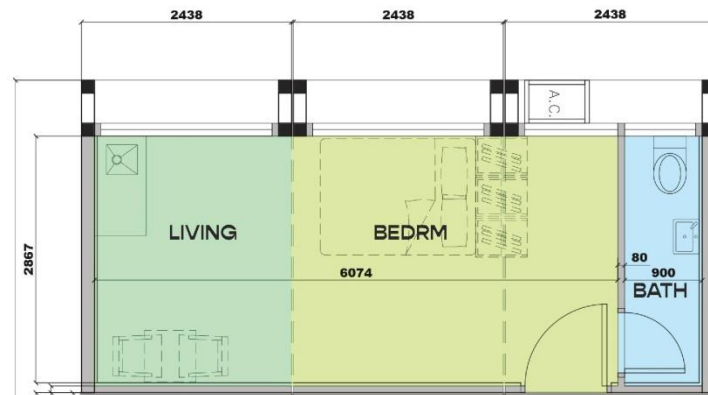
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**ACCESSIBLE UNITS**  
SCALE: 1:50



**3-PERSONS UNITS**  
SCALE: 1:50





# Nam Cheong Street Project Design



# + Nam Cheong Street Project Learnings and Difficulties

- As a pilot project, it takes certain of time for processing the statutory submission and approval----standard issue
- Dilemma in balancing the needs from community, the general layout design, the cost for construction and sustainability of the project -----Unit Cost Issue
- Difficulties in choosing design and build or traditional tendering approach for construction----construction approach issue
- Smooth payment arrangement could avoid construction delay due to cash flow issue----pururing and construction



# + Process of building modular social housing

## ■ Concept Design

- General Layout Plan
- Flat Mix
- Finishes Provision

## ■ Tendering

- Appointment of Contractor
- Uncertainty: who join? How much they offer?

## ■ Construction

- Procedures: P
- Contract Management: e.g. duration of construction, payment method, EOT



# + Process of building modular social housing – Concept Design

## ■ General Layout Plan

- size of the unit: per capita floor area of accommodation should fulfill requirement of public housing, which is not less than 75 square feet
- Provision of management office, common area/functional room, any facilities
- Unit layout design : Use single module or combine modules to design a unit



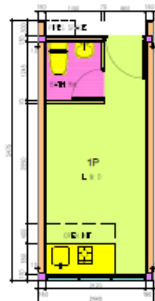
# + Process of building modular social housing – Concept Design

## ■ Flat mix

- Decide no. of units for 1P households, 2P households, 3P households, 4P households, accessible units and other types of unit. Based on the PRH waiting list and needs of community

## ■ Finishes Provision: (public housing standard?)

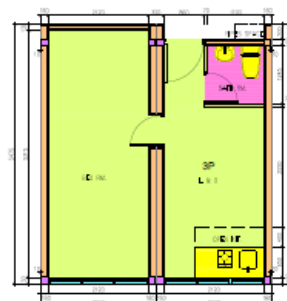
- E.g washroom and bathroom with water heater, open or enclosed kitchen, air-conditioner, exhaust fan, (shelf) and etc.



MODULAR HOUSE SIZE  
FOR BLOCK 'A' & 'B'  
(1P) 1:50



MODULAR HOUSE SIZE  
FOR BLOCK 'A' & 'B'  
(2P) 1:50



MODULAR HOUSE SIZE  
FOR BLOCK 'A' & 'B'  
(3P) 1:50



MODULAR HOUSE SIZE  
FOR BLOCK 'A' & 'B'  
(ACCESSIBLE UNIT) 1:50

# + Process of building modular social housing – Tendering

## Appointment of Contractor

- Modular Social Housing adopted MiC as the main construction method
  - NGOS should appoint approved RGBC as the main contractor for the whole construction, while the contractor should partner with a pre-approved MiC Suppliers.
- NGO could set a list of criteria for pre-selection of contractors and decide the scope of service to be required for the whole construction
  - Construction scope (pre-construction feasibility study, foundation, installation, application for OP, etc), finishes requirement, tender and contract terms, etc.
- Mostly adopting "Design and Build" Tendering approach (why?)
  - The appointed main contractor will be responsible for design and build the whole construction with occupation permit obtained



# + Process of building modular social housing – Construction

## Key Concerns

- Same with general housing project, module units must comply with Buildings Ordinance and other statutory requirements from different departments so as to obtain permanent occupation permit for moving in
- Basic construction works including module units production, site formation and foundation works, building services installation works and other substructure and relevant site works
- The modular housing must be able to dismantle, relocate and re-install
- The construction period varies depends on the site location, site area and site condition. From MSH project experience, it takes around 1 year construction period for about 1500 sqm site in urban area.

# + Process of building modular social housing – Construction

## General Construction Procedures

- Project Design
  - Preparing the design at early stage and estimating the construction programme
- Statutory Approval of Building and other related plans
  - Complying with the requirements as stipulated in the PNAP ADV-36
  - Complying with the Buildings Ordinance and other statutory requirements



# + Process of building modular social housing – Construction

- Modules production and Site Formation
  - Producing **mock-up** of module unit for inspection before mass production
  - Concurrently carrying out module production and on-site construction activities, such as foundation works and other site works
- Modules Transportation
  - Planning logistic and transportation arrangement of module units in compliance with Road Traffic Regulation



# + Process of building modular social housing – Construction

- On-Site Installation/Assembly and other substructure works
  - Using crane for staking of modules
  - Conducting module to module connection and other site works such as E&M services





# + Process of building modular social housing – Construction

## ■ Contract Management

- Contractor has to submit the master programme and detailed working schedule for construction management and monitoring
- Set up regular design and project meetings to confirm the design of the construction and ensure the construction progress is on schedule; Take remedial measures if problems were found, e.g. sprinkler, drainage.....
- Contractor has to submit the construction materials to be used for approval

# + Process of building modular social housing – Construction

## ■ Contract Management

- Module units mainly produce in mainland factory. NGOs and consultants have to visit the factory and inspect the mock up for confirmation of the MiC units design and quality.
- When most of the construction were completed, consultant would inspect the completion works and list out the defects for contractor to follow up
- Require the contractor to provide the user manual, maintenance, dismantlement and re-installation manual

# + Tips on construction implementation and management

## ■ Manpower

- When applying TSH funding, NGO must reserve certain amount for manpower and administrative cost
- Architectural and associated consultants were agents of the NGO (employer) to conduct the cost estimation, preliminary design, tendering and monitoring of the construction, NGO must keep close communication with them to manage to project progress
- Contractor must submit the assigned construction team, design team and responsible contract person for proving the professionalism and manpower resources for the construction

# + Tips on construction implementation and management

## ■ Cost

- Funding ceiling was set as 550,000 per unit including the whole construction works, NGO must assess the site condition and estimate the required provisions to ensure the applied funding is enough
- Concept design and cost estimation will affect the project progress, NGO must reserve certain resources for the preparation works
- Tender for main contractor must list out all the scope of service and the quality requirement, in order to avoid variation order and over budget
- Regular construction progress meetings must be held to closely monitor the construction progress and minimize extra cost due to progress delay

# + Tips on construction implementation and management

## ■ Time and Progress

- Master programme is for the general timeline of the construction, the contractor must submit the detailed site working schedule such as module installation timeline for reporting the actual site progress
- Construction progress may vary due to different factors, remedial measures should be taken at soonest to avoid extra cost and time





# + Tips on construction implementation and management

## ■ Quality

- NGO and consultant would have to inspect all the steps from statutory submission, finishes schedules, mock up sample, construction machines, construction progress and completion
- Mock up inspection is a critical path for demonstration and confirmation of the quality of module units. NGO must spell out all the comments for revision before approval for mass production.
- Defect liability period should be listed in the construction contract. The contractor would be responsible for fixing the defects within the agreed period

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