

A photograph of the InnoCell building, a modern architectural structure with a prominent golden, dome-shaped central section supported by white columns. The building is surrounded by other glass-fronted skyscrapers and a green lawn in the foreground. The sky is clear and blue.

InnoCell : Co-Living Space Embracing MiC

Simon Wong
24 April 2018



What is InnoCell?



1. Affordable Housing

Lack of affordable housing nearby and on campus accommodation esp. for start-up company to stay

Importance of accommodation for tenants / incubatees in attracting & retaining talents

3. Attracting & Retaining Talents

3. Co-living Environment

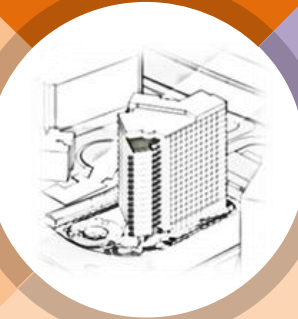
Provide co-living and co-working environment which helps explore and exchange ideas

Offer one-stop accommodation to travelling & residing company

4. one-stop accommodation

1.Design

- Comfort
- Comfort
- Connect
- Contemporary
- Engage
- Humanistic
- Quality Living
- Vibrant
- Wellness



Co-Living
Environment

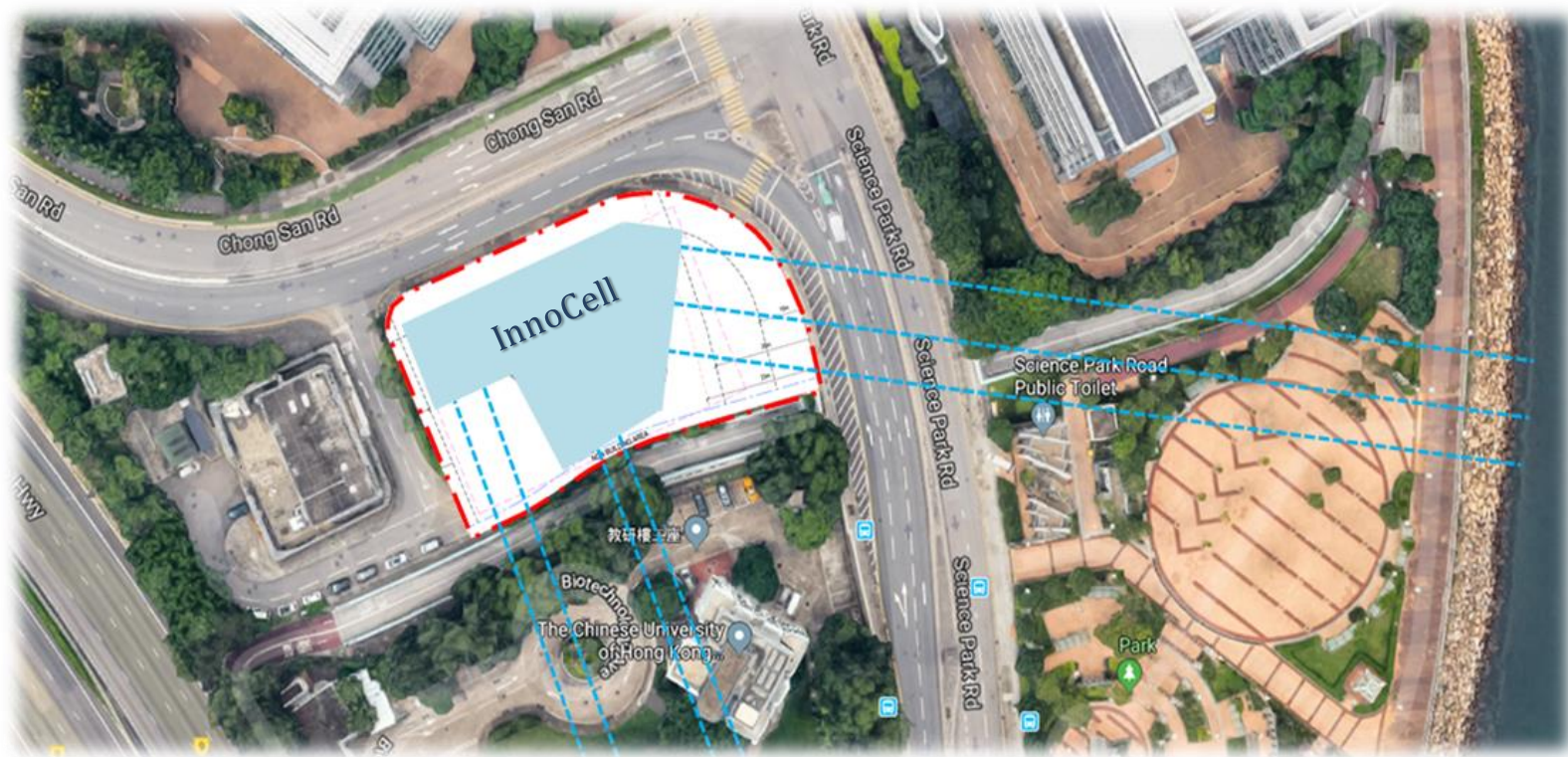
2.Build

- Safety
- Time
- Cost
- Quality
- Sustainability
- Productivity
- Integrity
- Compliance
- Smart



Innovative
Method

Enjoyment of Environment





Parameter & Facilities

TAI PO

LOCATION

2,990 m²

SITE AREA

15,300 m²

GFA

59.2 mPd

HEIGHT

15

STOREY



WIFI



PREMIUM TV



HOUSEKEEPING



LAUNDRY



BICYCLE PARKING



LOUNGE



ROOFTOP
TERRACE



OUTDOOR SPACE



SHARED KITCHEN



COFFEE SHOP



GYM



GAME ROOM



WORKPLACE



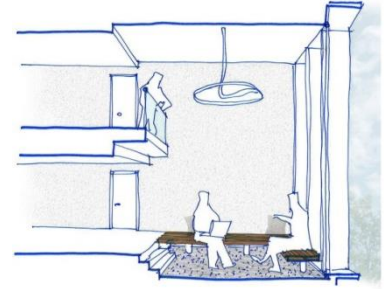
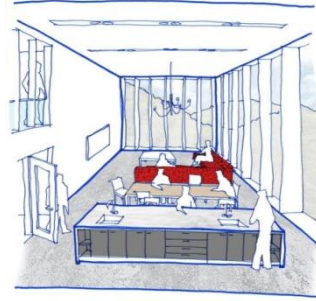
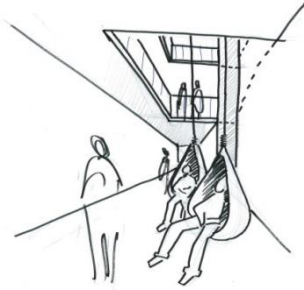
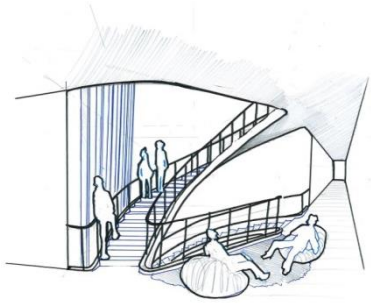
EVENTS

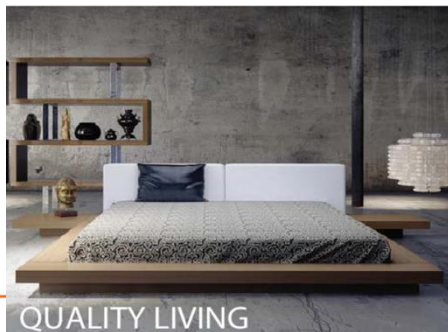


REFRESHMENT

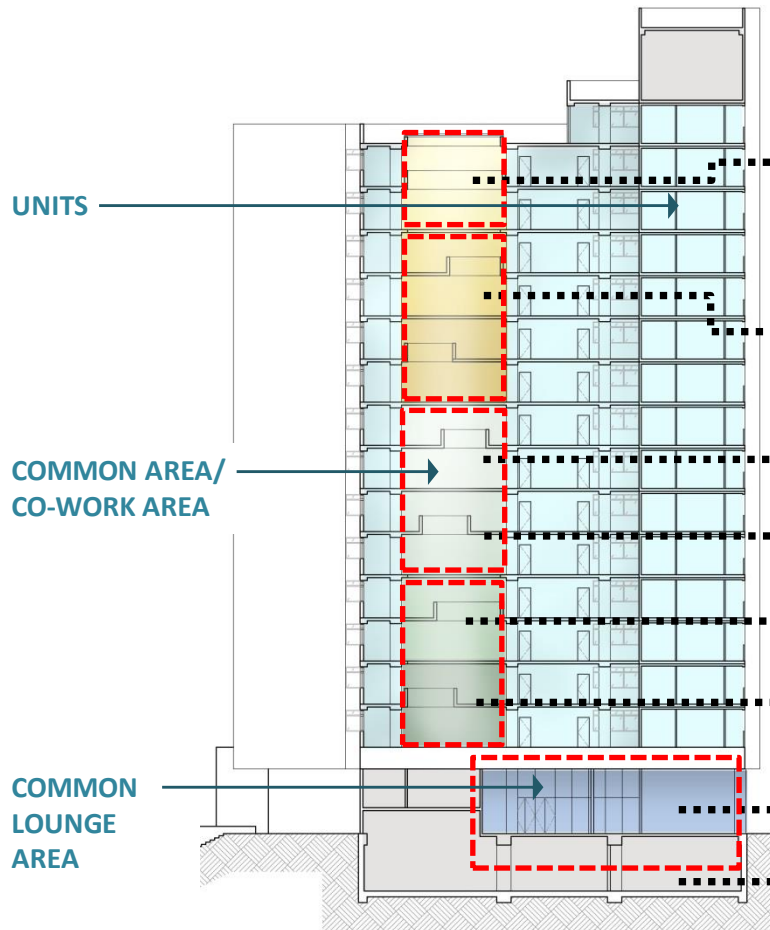


Co-Living Concept





Communal Area



SKYGARDEN



READING LOOP



COMMON DINING & MUSIC STATION

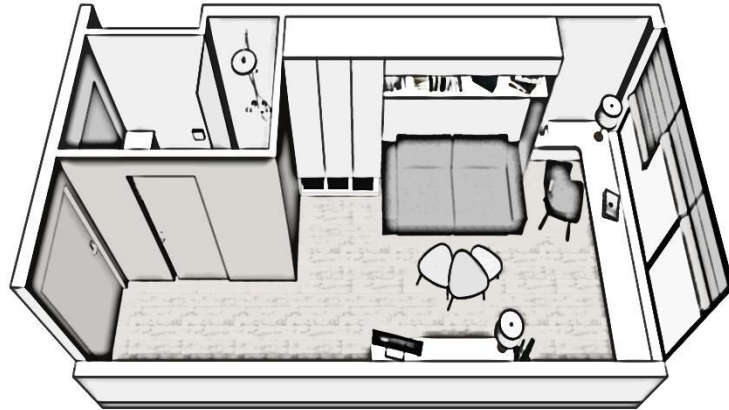


GAME CENTRE & WORKING POD



COMMON LOUNGE SPACE & LAUNDRETTE

Flexible Space + Smart Furniture



Embracing with MiC

Pre-submission Enquiry
& Pre-acceptance Application

Level of Modularisation

Logistic
& Timeline

Structural Analysis
& Connection Details

1. Preliminary Study for Level of Modularisation

01

- Option A

Modularisation: 56% Floor Area Approx.
No. of modules: 24

02

- Option B





Modularisation: 66% Floor Area Approx.
No. of modules: 28

03

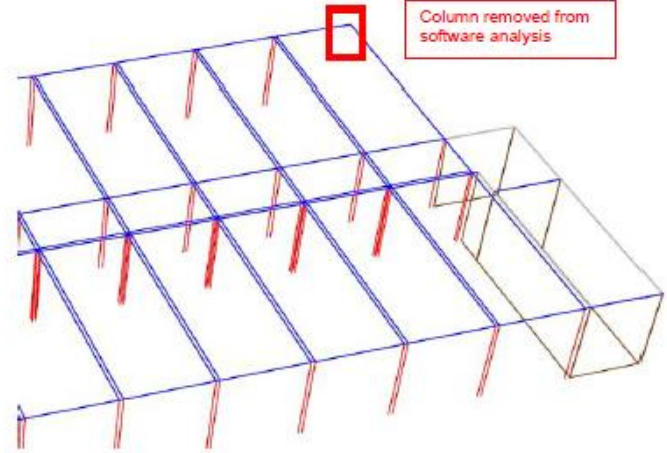
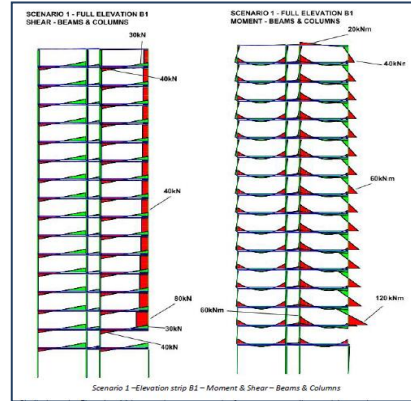
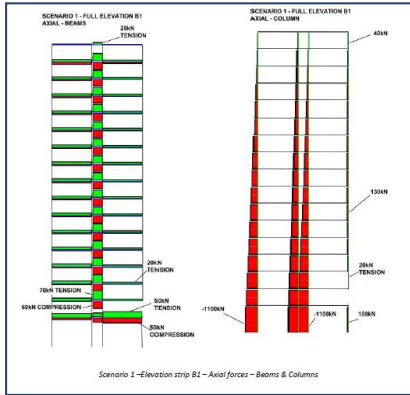
- Option C

Modularisation: 75% Floor Area Approx.
No. of modules: 28

LEGEND

	modules within 3300mm wide
	MiC Construction
	In-situ Construction
	In-situ Steel Construction

3. Preliminary Structural Analysis



Scenario 1 - A Corner Column Removed from Analysis Model

4. Pre-submission Enquiry

Buildings Department

- Exemption of double wall from GFA
- Provision of 80mm seal trap
- Prevention of Disproportionate Collapse

Fire Services Department

- Classification of building types
- Pre-inspection of sprinkler protection at factory

District Planning Office

- Layout change due to MiC for Class A amendment

Transport Department

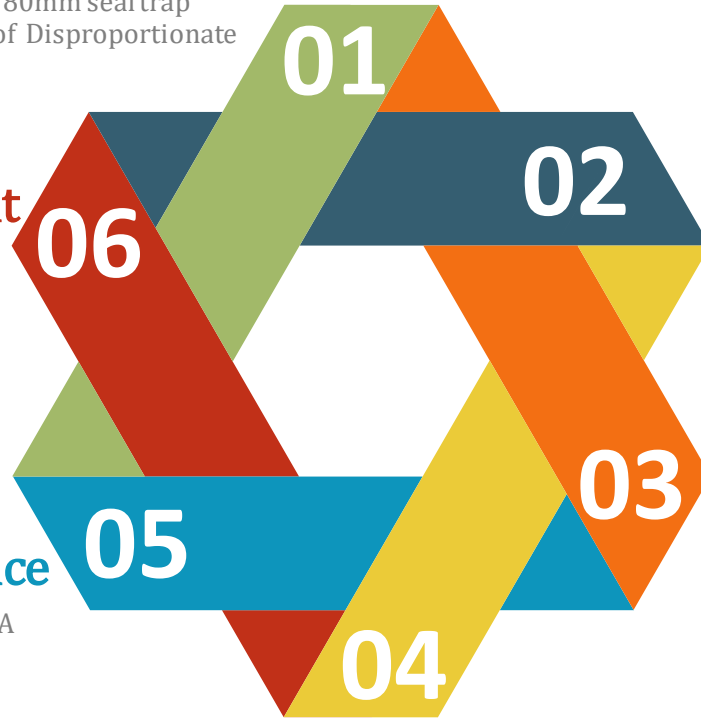
- Day time delivery for MiC with 3.1m wide

Water Services Department

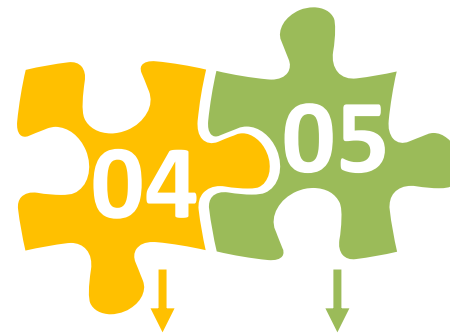
- Pre-inspection of plumbing installations at factory
- Timely approval and endorsement for works commencement

Customs & Excise Department

- Checkpoints at Lok Ma Chau, Shenzhen Bay, HK-ZH-Macao bridge for MiC with 3.1m wide



5. Pre-acceptance Application to BD



Pre-acceptance Application Checklist for SAC
(P/AF 2017-03)

This application checklist aims to assist AP and BSI in the essential information which should be contained in the plans and supporting documents accompanied with the application. The checklist should be followed by filling the forms relevant to the application and any other information requested for the SAC system should be listed out in Section 10.

The AP will conduct regular review on the application checklist in the light of experience gained in processing different SAC systems. Feedback from the building industry on the use of various SAC systems and technological development in the relevant fields.

Essential information to be provided in the supporting document accompanied in this form:

Section	Essential Information
1 General	<ul style="list-style-type: none"> General notes on compliance with applicable regulations Codes of practice, design manual, guidelines General building plan (plan) and all floor, section and all elevations to scale not less than 1:500 with full dimensions Structural plan to scale not less than 1:500 showing the layout and dimensions of all structural elements, including walls, structural connections and location of movement joints Structural height and area of building Structural map of every member of the system Table indicating the required and provided member properties Structural details, if applicable, for the gables, bays, beams, A/C profiles, connections, wall, connections External wall connections including, but not limited, representative connections of corner, end, semi rigid, rigid, semi-rigid, moment-resisting, welded, bolted, and other joints Structural details to show the method of sealing of joints or expansion or restraint and between members/structure All relevant DDM level and dimensions, if any
2 Fire Safety	<ul style="list-style-type: none"> Detailed drawings to illustrate compliance of the CAG of Division 1 for fire safety in building (B/C Code) in terms of fire resistance of the building components and elements of access for firefighting and rescue. For example: fire escape route, required and provided fire and smoke seals of wall doors and wall windows Fire door drawings and level dimensions of wall windows

DESIGN RELATED

DESIGN RELATED

Section	Essential Information
3 Lighting and Ventilation	<ul style="list-style-type: none"> Calculation of area of sun shading provision of essential lighting Area calculations for proposed proposed window including area of glass specifically Provision of natural light and ventilation for rooms containing solar hot-bath
4 Drainage	<ul style="list-style-type: none"> Detailed drawings to illustrate compliance of Building (Standard of Surface Finishes, Plumbing, Drainage, Work and Access Regulation, for example: floor drainage, including pipe, internal drainage, heads, drainage access and materials of wall and roof pipes, and their connection details to vertical ducts

DESIGN RELATED

Section	Essential Information
5 Structure	<ul style="list-style-type: none"> Structural cross section and design loads Vertical and lateral load transfer mechanism Structural stability Concrete protection Access provision Location of structural elements Structural connections between modular units and between modular units and cast-in-place structural elements Design details of: <ul style="list-style-type: none"> Design for temporary tower lifting, storage, installation, etc. including the design of lifting beams, if any Design of "one" end of structure to facilitate fire, etc. Columns, Cast in Place for Internal Concrete Connections and Cast in Place for Structural Use of Steel and in "T" shapes, where applicable Typical construction and connection materials, durability and airtightness requirements

FABRICATION RELATED

Section	Essential Information
6 Quality Assurance	<ul style="list-style-type: none"> Confirmation on ISO 9001 quality assurance in prefabrication factory Quality assurance scheme of the prefabrication factory accompanied with a statement signed by the AP and BSI to confirm that the scheme has adequate procedures in ensuring the quality of production complying with the provisions of the Building Ordinance. The scheme should cover those items as listed in paragraph 3 of Appendix B of P/AF 2017-03
7 Fabrication, Transportation & Installation	<ul style="list-style-type: none"> Description of the construction steps with practical illustration including the fabrication, logistic, assembly and installation aspects of SAC system in BSI (to be supplemented by Building Information Modelling files in digital format as specified in P/AF 2017-03) Manufacturing process in prefabrication factory Method of lifting in the prefabrication factory Means of transportation with location stated Method of protecting designs to the modular units during storage, transportation and installation Complete step-by-step practical safe work procedure and sequence illustration of the entire process of the cyclic lifting, movement and installation of the SAC Fabrication and installation tolerances
8 Maintenance	<ul style="list-style-type: none"> Provision of pipe duct pipe wall (PNAP APPV) Access points for inspection of drains to be located by water table Accessible access at strategic locations for the repair/replacement/reworking of the critical structural members and modular units connections, e.g. joint fillers, supporting, strengthening structural connections, e.g. bolts' work, interlocking, etc. if any "Design for Safety" considerations on access for future maintenance and minor repair of external fixtures, A/C units or chiller, etc. of PNAP APPV User manual with safety notices and instructions for alterations, lifting and installation of addition fittings etc.

FABRICATION RELATED

* Delete as appropriate (12/2017)

Design related + Fabrication related

TD Requirement for Wide Load Delivery

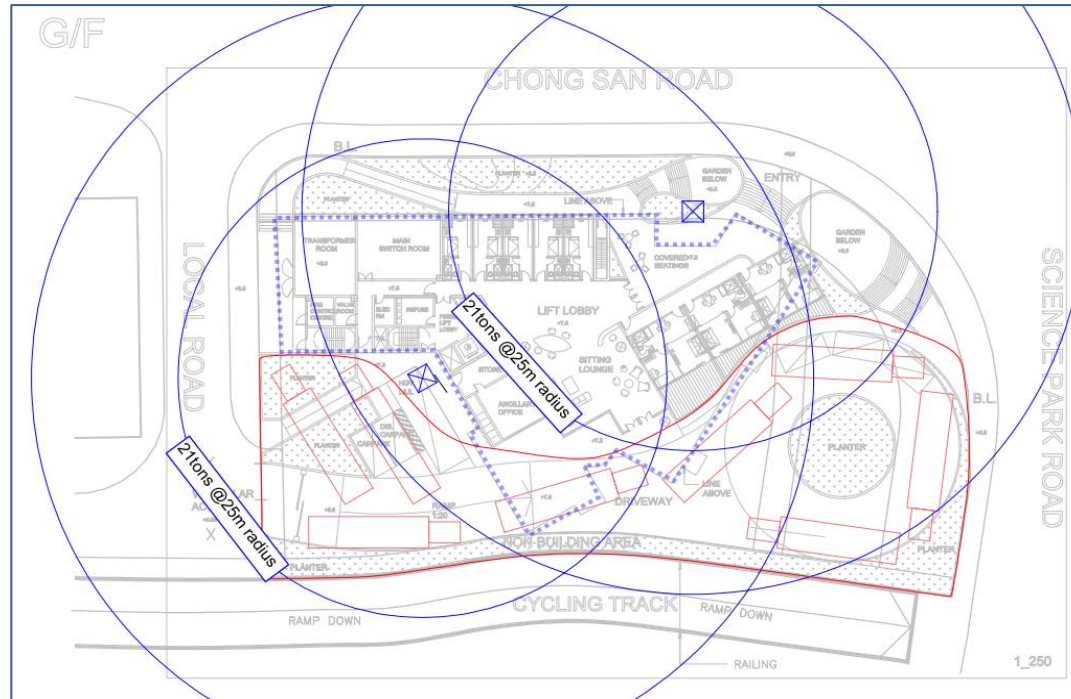
Modular Unit size for Innocell

Permitted delivery time

3.05m < width < 3.3m

Permission from 10:00pm to 06:00am
(With Wide Load Permit)

7. Study of Site Logistic and Storage



- Assume 10 nos. of modular per day (1 modular every hour)
- 2 nos. Heavy Duty Tower Crane (21 tons capacity @ 25m)

8. Estimated Programme



Conventional



MiC

Challenges and Opportunities for MiC



Logistic vs Construction Time



New Skillset for Local Contractors



Forward Procurement & Frozen Design in Early Stage



Experienced Vendors



Uncertainty in Cost



- **Empowering Innovation**
- **Delivering Success**