



CONSTRUCTION INDUSTRY COUNCIL
建造業議會

ESG Academy Webinar

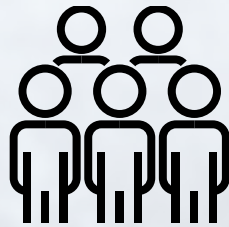
Reducing carbon emissions
across building life cycle

Alex HO – Assistant Director,
Industry Development, CIC
17 November 2022



OUR VISION

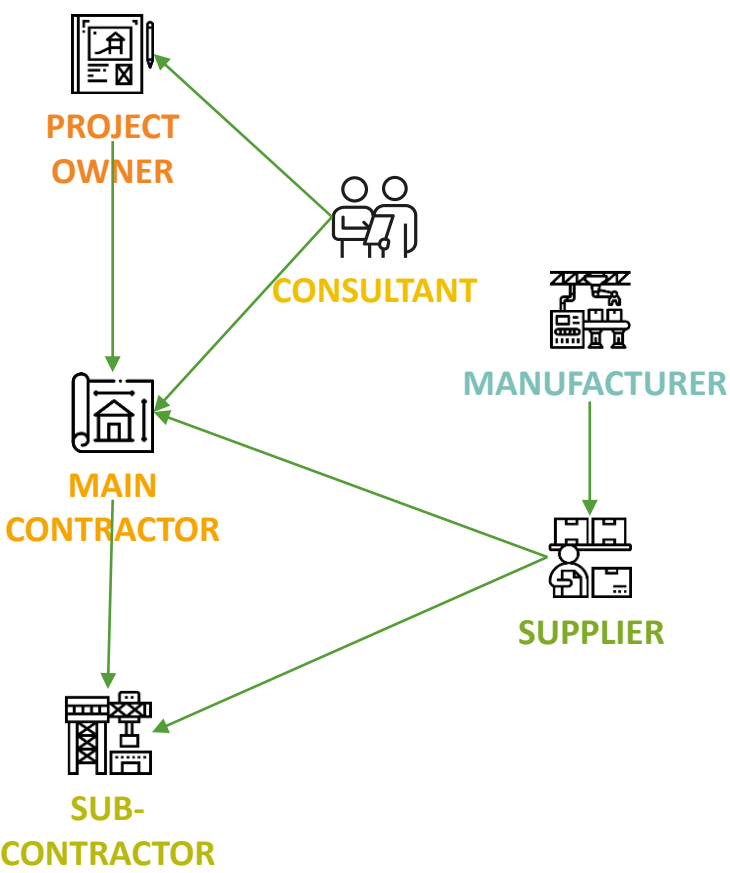
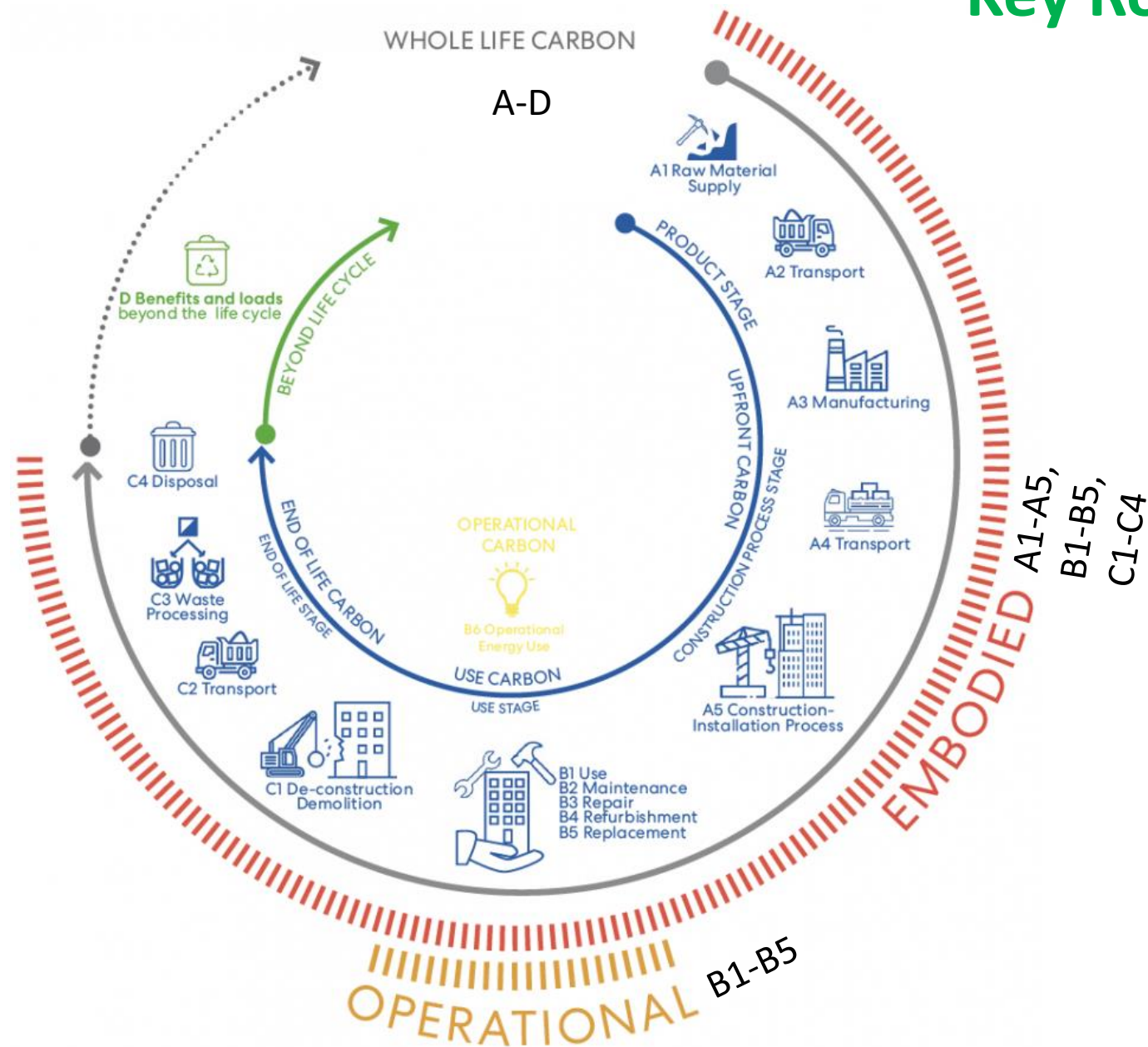
- To drive for unity and excellence of the construction industry of Hong Kong.



OUR MISSION

- To strengthen the **sustainability** of the construction industry in Hong Kong by providing a communications platform, striving for continuous improvement, increasing awareness of health and safety, as well as improving skills development.

Key Roles of Construction Supply Chain



Sustainable Construction Video



CIC's Sustainable Initiatives

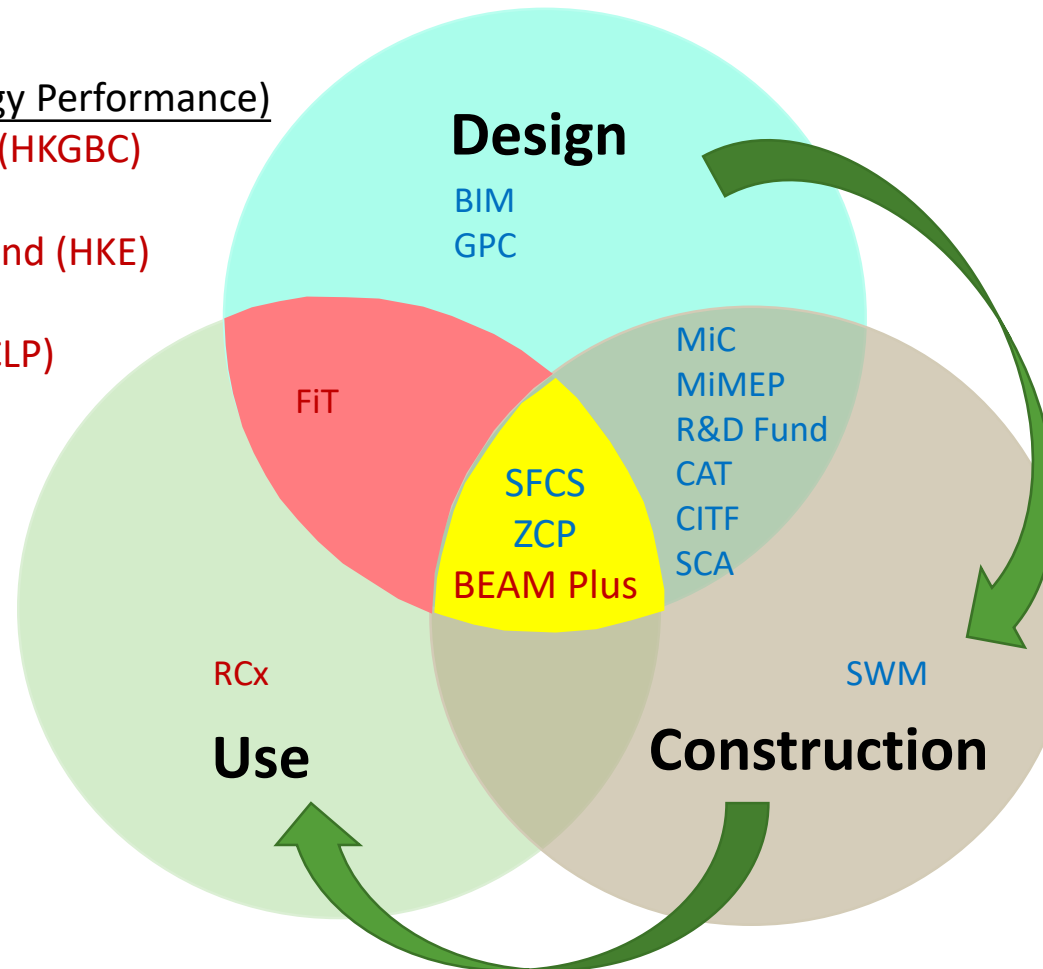


Decarbonisation Initiatives Throughout Construction Life Cycle

Other Initiatives

B1-B5 Building in Use (Energy Performance)

- Retro-fitting Guidebook (HKGBC) (Retro-commissioning)
- Smart Power Building Fund (HKE)
- Eco Building Fund (CLP)
- FiT (Feed-in Tariff from CLP)



CIC Initiatives

Building Methodology and Material Design

- MiC (Modular Integrated Construction)
- MiMEP
- BIM (Building Information Modelling)
- CAT (Carbon Assessment Tool)
- GPC (Green Product Certification)
- R&D Fund (Research and Development Fund)
- CITF (Construction Innovation and Technology Fund)

Site Impact

- SWM (Smart Waste Management)
- MiC (Building Information Modelling)
- MiMEP
- CAT (Carbon Assessment Tool)
- R&D Fund (Research and Development Fund)
- CITF (Construction Innovation and Technology Fund)



Modular Integrated Construction

「組裝合成」建築法



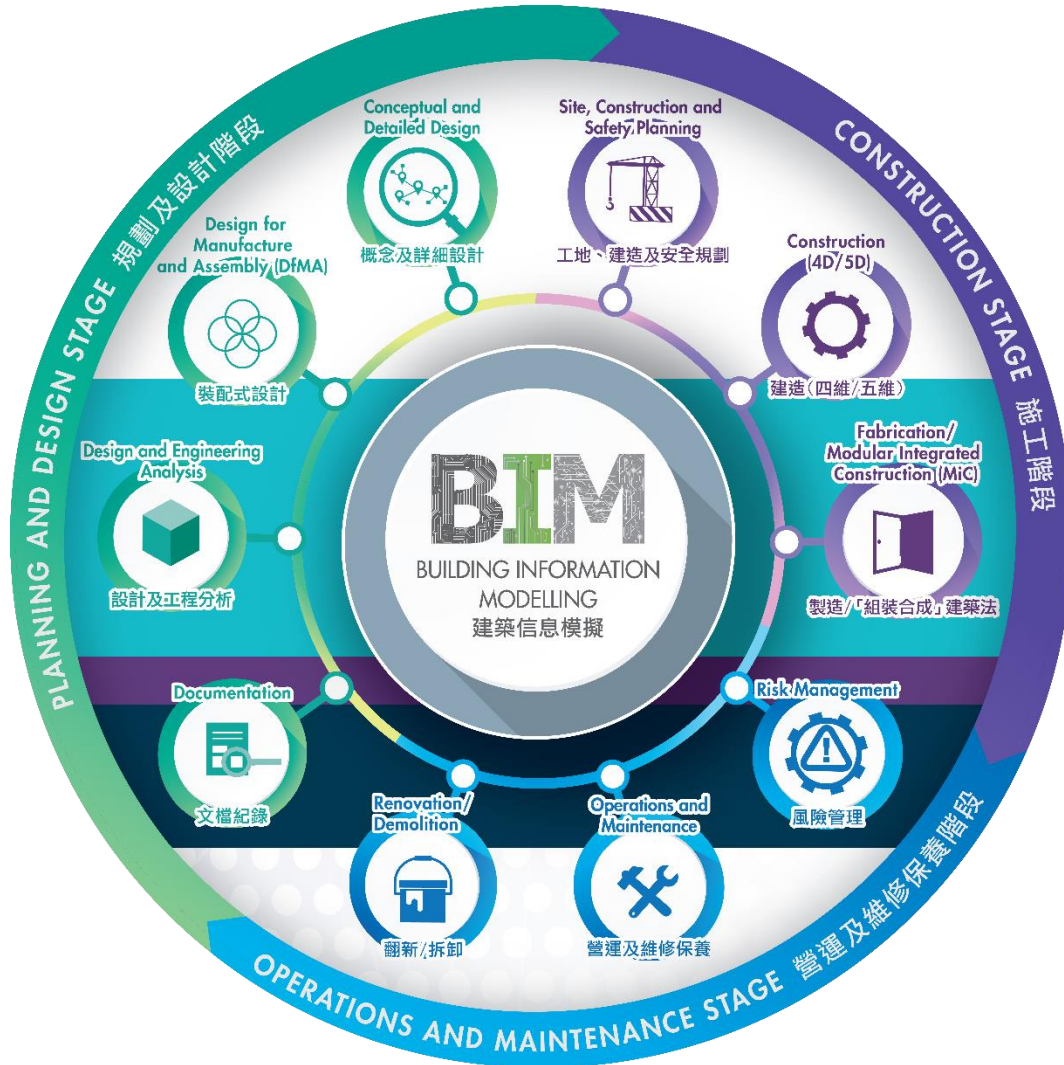
<https://shroffed.com/2022/10/20/policy-address-2022-four-issues-that-concern-you-the-most/>



Modular Integrated Construction



BIM & Construction Digitalisation



BIM is a 'Vehicle'
for both MiC & prefabrication



Case Study Video: MiC & BIM application on InnoCell Project



Application of MiC & BIM – InnoCell at Hong Kong Science Park

- 17-storey hostel
 - Provides over 500 bedspaces
 - 418 Steel MiC Modules
 - Construction Cycle of Typical MiC Floor: 3 Days
 - Completed in Oct 2020
- Advance completion by 5 months in an 18-month contract, i.e. **28%** faster
 - Reduce construction waste by **20%**
 - Reduce non-inert waste by **80%**
 - **50%** reduction of total construction vehicle count
 - Zero work injury and zero accident
 - Better air quality level (**50%** reduction of the level of particulate matter (PM))



Main Contractor:
Hip Hing Engineering Company Limited

MiC Supplier:
Guangdong CIMC Building Construction
Company Limited (CIMC)

CIC Green Product Certification (GPC)

- Officially launched in November 2019
- Evaluate environmental aspects

28+

Material Types

800+

Certified
Products

6

Credits attained under
BEAM Plus New
Building 2.0



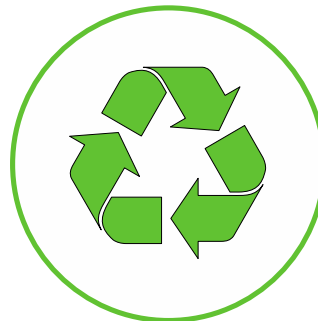
Carbon
Footprint



Energy And Water
Efficiency



Toxicity



Recyclability



Resource
Consumption



CIC GREEN
PRODUCT CERTIFICATION

A primary and
comprehensive building and
construction materials /
products certification
scheme in HK



<http://cicgpc.hkgbc.org.hk/>



CIC Carbon Assessment Tool (CAT)

- Launched in 2019
- **1st online free** carbon assessment tool for HK construction industry
- Evaluate **carbon emission from A1–A5** in building life cycle
- Generate carbon emission report on **design** and **construction phase** of building projects
- Projects database for future **benchmarking**

800+

Construction
Materials

50+

Supporting
Organisations

2

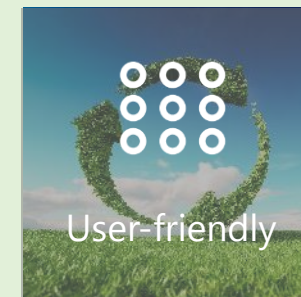
Credits attained
under BEAM Plus
New Building



<https://cat.cic.hk/>



CIC Carbon Assessment Tool
建造業議會碳評估工具



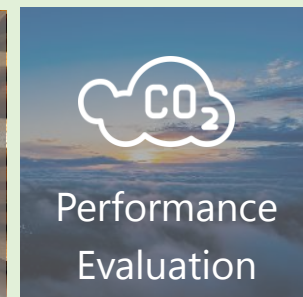
User-friendly



Planning, design
and construction



Measure
Materials &
site impact



Performance
Evaluation

The Online Tool facilitates the
construction industry to
contribute to the **carbon**
reduction goal.



CIC Sustainable Finance Certification Scheme (SFCS)



CIC Sustainable Finance Certification Scheme
建造業議會可持續金融認證計劃



Verification
Against
**International
Principles**



**Industry
Specific**
Design for
construction projects
and industry players



**Wide Scheme
Coverage**
for common financial
products adopted in the
industry



Recognition
A recognised
external reviewer of
HKMA Green and
Sustainable Finance
Grant Scheme

4 Financial Products:

- **Green Loans,**
- **other Green Facilities,**
- **Sustainability-linked Loans,**
- **other Sustainability-linked Facilities**



<https://sfcs.cic.hk/>

Financial
Institution(s)

Applicant(s)

CIC SFCS

29+
Assessors

20+
Certificates
issued

80+
Supporting
Organisations





CIC SUSTAINABLE CONSTRUCTION AWARD 建造業議會可持續建築大獎



SCA 2023 Application
Opens in Jan 2023
Stay Tuned!

- CIC Sustainable Construction Award held in 2018 and 2020
- The Award recognises sustainability best practices among organisations and practitioners, in particular the young generation of the construction industry.



700+
Applications

300+
Construction Projects

2000+
Attendees

90million +
Newspaper and Social Media Coverage

CIC Zero Carbon Park (ZCP)



建造業零碳天地

CIC iHub Guided Tours

- ◆ To provide an opportunity for the students and practitioners to gain an insight into the world of **BIM-enabled modern construction practices** and **innovative technologies** through educational tours.

- ◆ Introduction to BIM and Digitalisation
- ◆ Embodied Carbon and CIC Carbon Assessment Tool (CAT)
- ◆ Introduction to MiC/DfMA
- ◆ Digital Technologies for Construction Safety



Date: Mondays to Saturdays
(except public holidays)

Time: Half Day (2hr15mins) / Full Day

Location: 8 Sheung Yuet Road, Kowloon Bay, Kowloon

**TO KNOW
MORE**

了解更多



 **6156 0414** (WhatsApp)

 **ihub@cic.hk**



**Sustainable
Exhibition of CIC-ZCP**



BIM Space



MiC Resources Ctr



CITAC

CONSTRUCTION INNOVATION 建造創新博覽會 EXPO 2022

13-17
DEC 2022

香港會議展覽中心
Hong Kong Convention
and Exhibition Centre

立即登記 **免費** 參觀展覽
Register for **Free** Exhibition Now!



主辦機構
Organisers



發展局
Development Bureau





Thank you

