

A large yellow crane is lifting a white modular building unit into place on a skyscraper under construction. The building is composed of many such units stacked on top of each other. In the background, other tall buildings are visible. The scene is set in an urban environment with trees and construction workers on the ground.

Construction for the Future

Modular Integrated Construction & Advance Technologies

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Housing Supply to be Expedited





**High Accident
Rate in
Construction**



**Aging
Construction
Workers**



**Extensive
Construction
Waste**



Concerns on Construction Quality



Modular Integrated Construction (MiC)

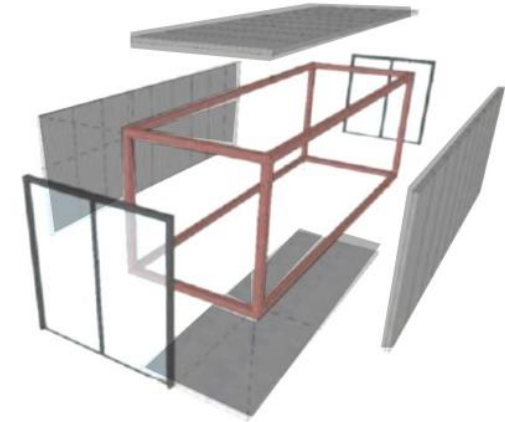
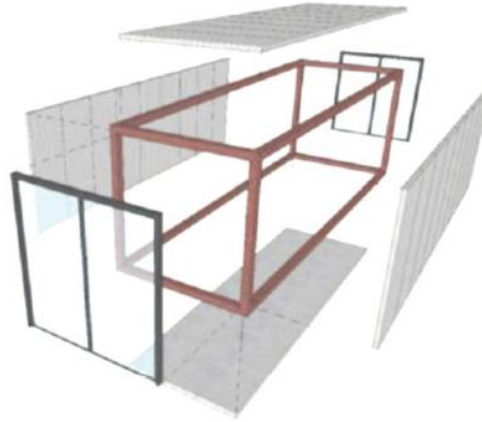
- ✓ 30% Faster in Construction Speed
- ✓ 70 % Reduction in On-site Labour
- ✓ 75 % Reduction in Construction Noise
- ✓ 68% Reduction in Construction Waste



Factory Assembly

- Better Quality Control
- Reduce Construction Waste
- Reduce Local Labors
- Progress Not Affected by Weather
- Improve Efficiency
- Improve Safety

3 Types of MiC



	CONCRETE	STEEL	HYBRID
Structure	All concrete	Steel frame with metal panels	Steel frame with lightweight concrete panels
Weight	20-35 tons	15-20 tons	15-20 tons
Maintenance	Same as traditional	Inspection every 5 years	Inspection every 5 years
Flexibility in Internal Renovation	Same as traditional	Identify pre-determined location for built-in furniture	Same as traditional



The First MiC

Private Residential
Development by
Private Developer
in HK

Tonkin Street
Project

MiC – TYPICAL LAYOUT & FLAT MIX



WHOLE UNIT BY MiC

INCLUDING FOLLOWING FEATURES :

1. BALCONY
2. CURTAIN WALL
3. UTILITY PLATFORM
4. AC PLATFORM

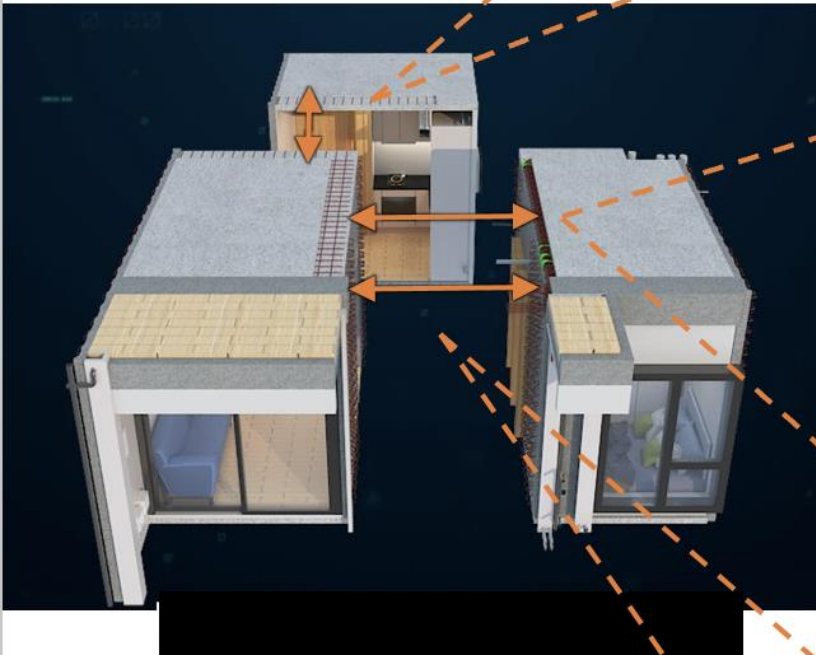
NO SUNKEN SLAB

MiC - MODULE LAYOUT



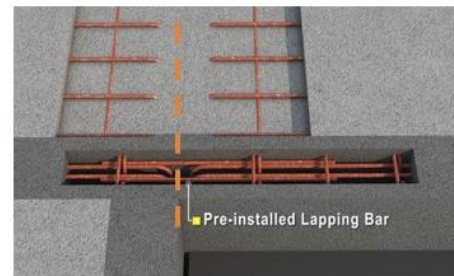
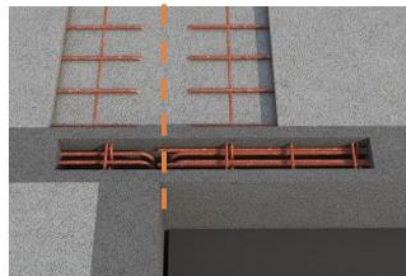
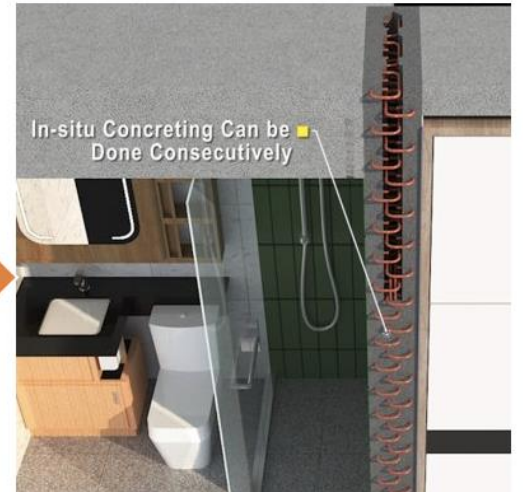
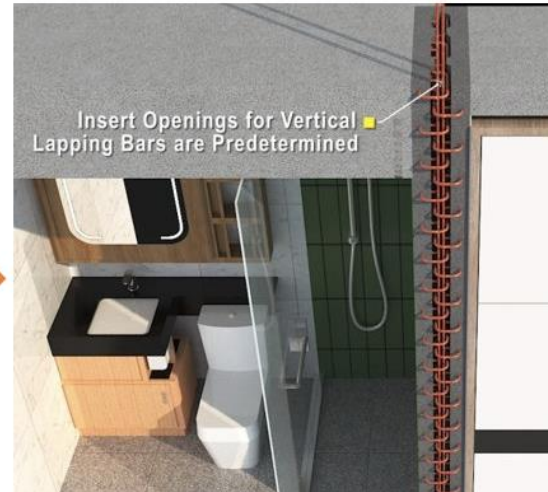
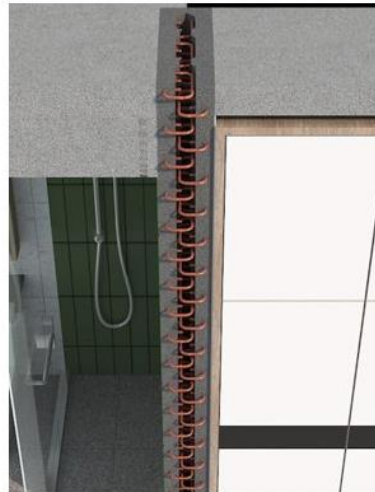
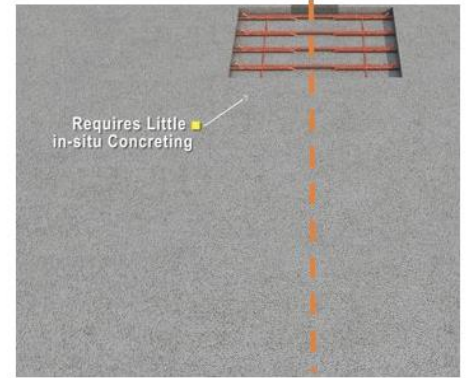
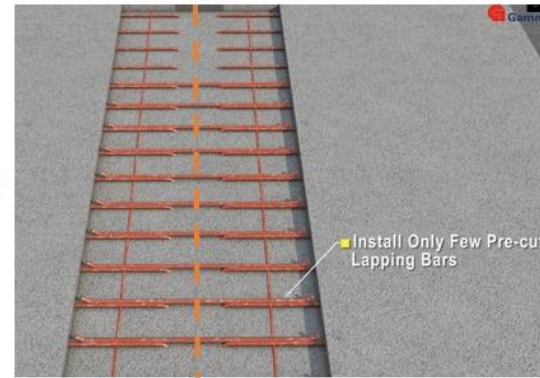
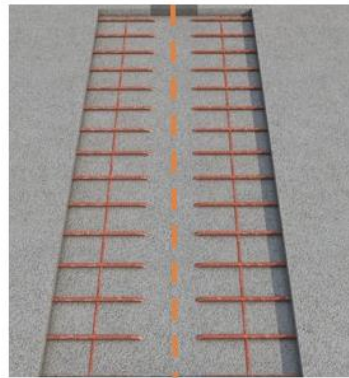
MiC MODULARISATION OF TYPICAL FLOOR

— — : non-structural wall possible
for future modification

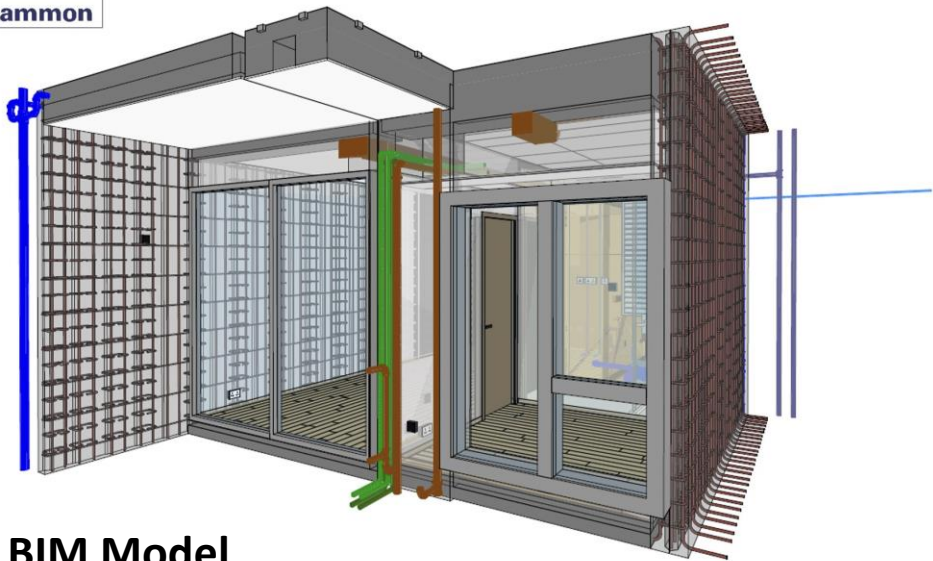


Composite Wall System 245mm thk.

(Maximum modular unit of 39 storey)

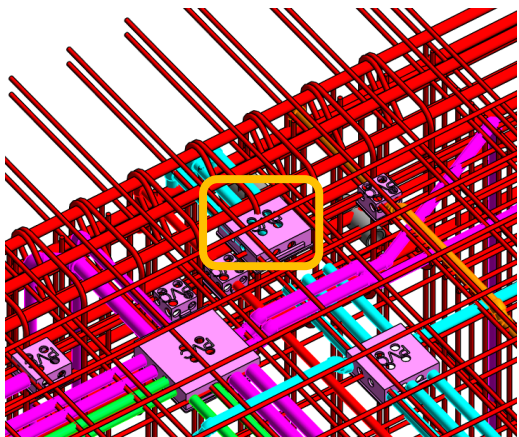


Quality Control of MiC



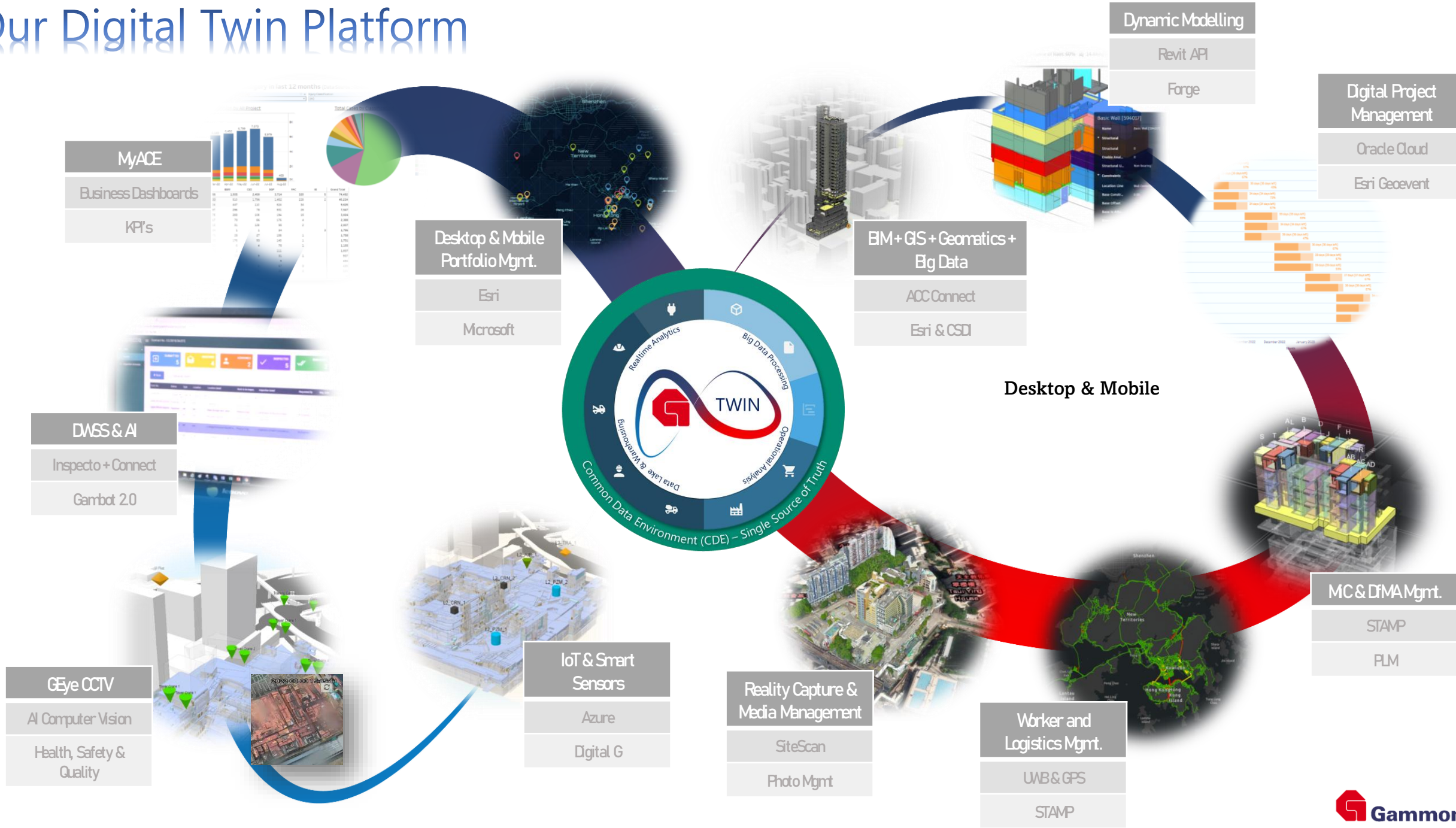
FULL BIM Model

Steel Mould Fabrication with controlled tolerance



**BIM Clash Analysis for
Rebar and MEP Cast In Item**

Our Digital Twin Platform

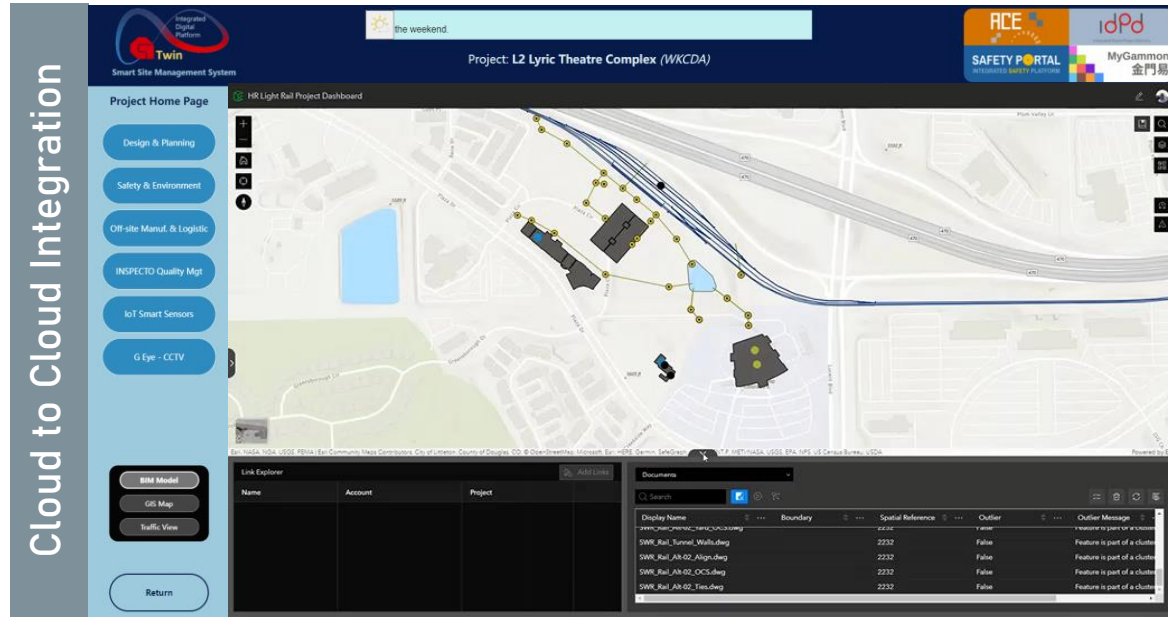


G-Twin Digital Twin Platform

A Smart Site Management System

BIM360 / ACC
CLOUD-TO-CLOUD

Cloud to Cloud Integration



GIS Data Visualization



G Eye - CCTV



Dashboards



Project Home Page

Design & Planning

Safety & Environment

Off-site Manuf. & Logistic

Quality & Resource Mgt

IoT Smart Sensors

G Eye - CCTV

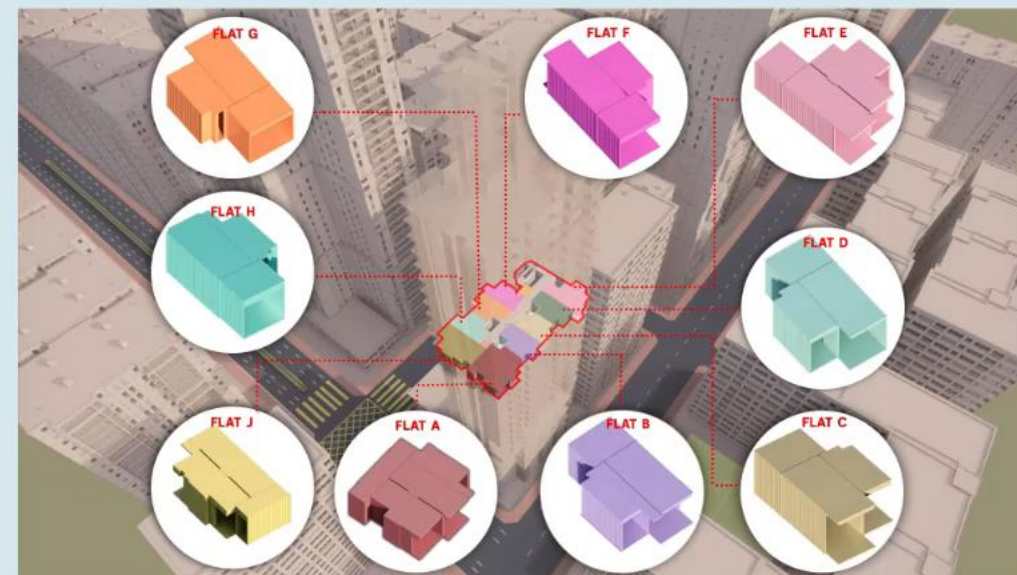
BIM Model

GIS Map

Traffic View

4D BIM

Return



Return

Work Sequence



MIC MODULE INSTALLATION CYCLE

**BETTER
QUALITY CONTROL**



LESS DEFECT



**SUSTAINABLE
CONSTRUCTION &
ECO-FRIENDLY**



**BETTER TIME
CONTROL OF UNIT
HANDOVER**

