



<http://www.twforum.org.hk/home.vbhtml>

Hong Kong — Temporary Works forum (HK-TWf)  
香港 — 臨時工程論壇

## Presenters profile

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Iain is a Chartered Construction Manager and a member of the HK Occupational Safety and Health Association.

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## New Construction thinking

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Construction accidents are flatlining

1. Complacency
2. Its just too hard to keep vigilance
3. We do the same thing again and again hoping for a different result.
4. In 2022 we killed 18 people
5. In 2023 we killed 25 people
6. So far in 2024 we have killed 2

# This is not a presentation

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We want need your help

- MIC
- DfMA
- Factory in sky

# Part 1 Building works

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MIC

Factory in Sky

DfMA the Forge

# Modular Integrated Construction MIC

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This is an early  
Type of MIC  
Site office  
accommodation



# BD Material

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This is a  
finished  
construction



# View inside a unit.

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**PRECAST**



**FIT OUT**



**PREFINISHED**



# Rigging MIC Module

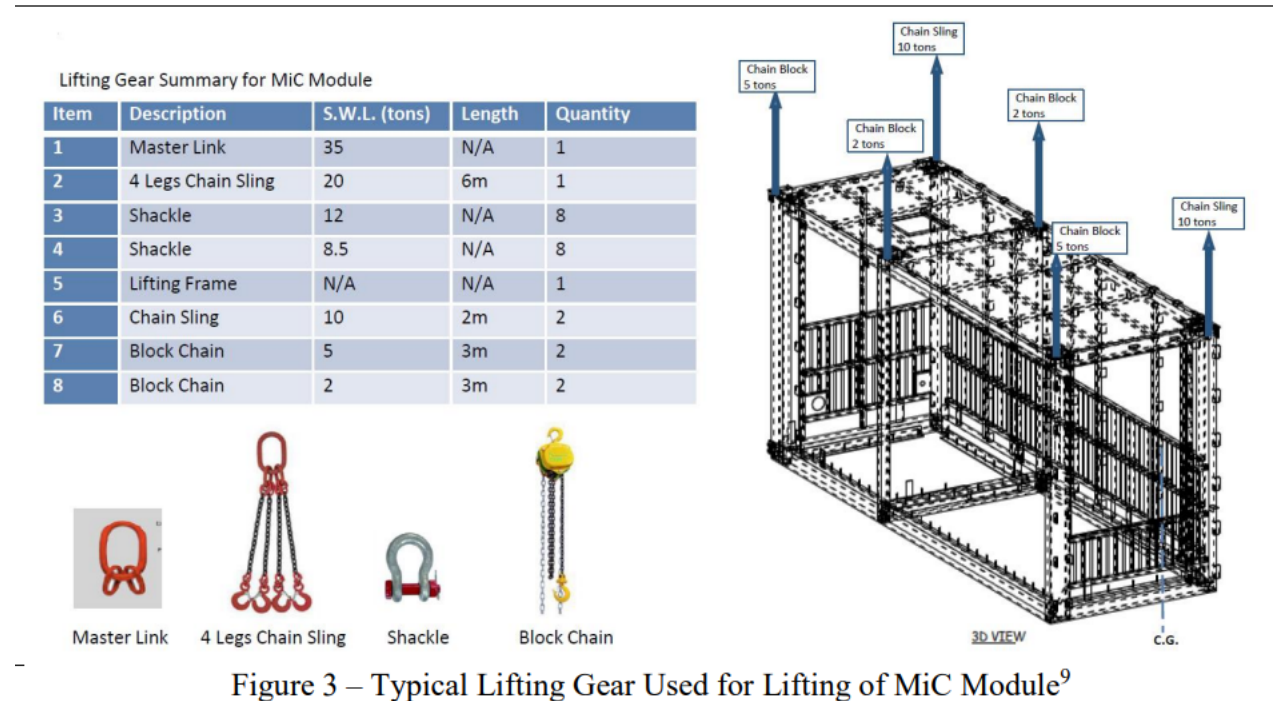


Figure 3 – Typical Lifting Gear Used for Lifting of MiC Module<sup>9</sup>



- Double slab
- Double wall
- WAH

# Advantages

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- Fully furnished module
- Transfer of operations to a factory so increased quality finishes and accuracy
- Less time to erect
- Less skilled labour

## Disadvantages

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- Weight can be 50te
- Limited grid size
- Does not totally eliminate WAH
- Traffic congestion at unloading point

# Factory in the Sky



# Factory in the Sky

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# Advantages

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1. All precast
2. 10 day floor cycle, including wet trades and curtain wall
3. Weather proof
4. MMC

## Disadvantages

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- Difficult to dismantle
- Developer acceptance very difficult
- Expensive 8% of building cost
- Very few S/C with the type of hydraulic experience



## Bryden Wood, the Forge DfMA

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- [Platform Office design prototype with Landsec, Easi Space and Innovate UK \(youtube.com\)](#)
- [The Forge | Projects | Bryden Wood](#)

# Advantages

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- No WAH
- Platform approach same as car industry
- No heavy plant
- LW cranes only

## Disadvantages

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- Got to change procurement type. Most building clients do not even use NEC4
- Got to engage architects with no HK experience
- Got to use DfMA approach for all services including E&M and ABWF

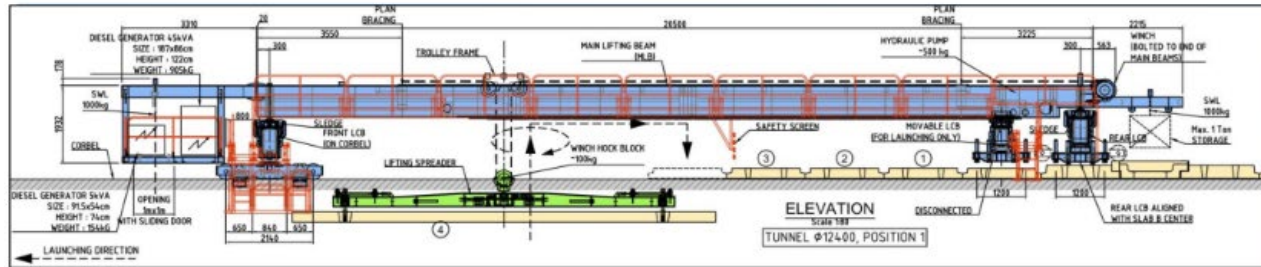
## Part 2 Civil Engineering

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VSL elimination of risk through technology

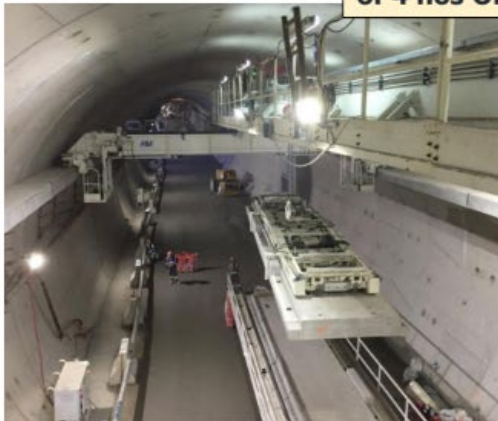
# OHVD by VSL Risk Elimination

## OHVD Slab Installation by Launching Gantry

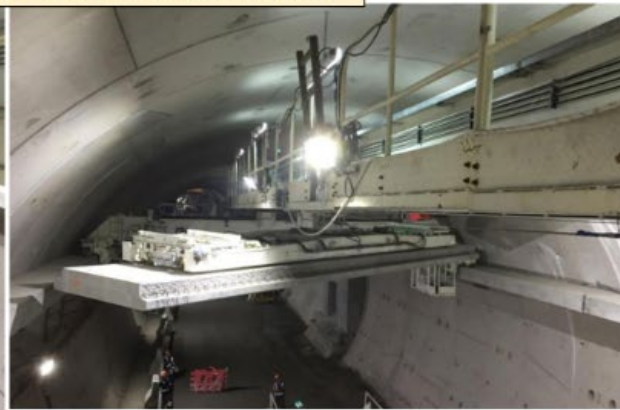


Self launching Gantry: Installation of 4 nos OHVD Slab in one position

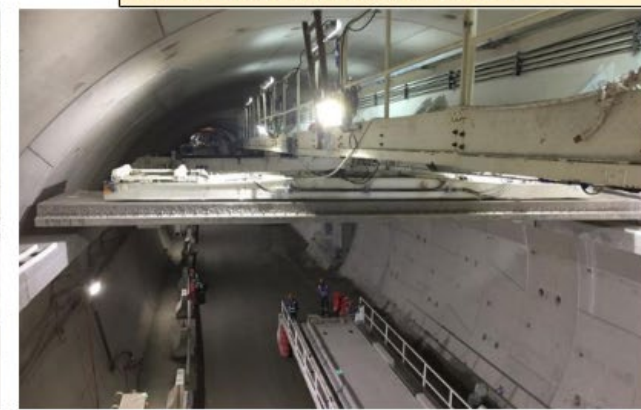
Cross beams telescopically extendable for different Tunnel diameter



OHVD slab lifting off from trailer



PLC controlled rotation and placement of OHVD slab onto corbel



# Erection of PC planks, not human intervention



**OHVD slab supported by 4 hammerhead support points  
(90 degrees rotatable)**



**Lifting Spreader Beam after release of hammerhead support points**

# Advantages

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- All precast
- No WAH
- Access open for traffic
- No falsework

## End of presentation

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- Discussion on all aspects of change
- Email: [safetyseminar@cic.hk](mailto:safetyseminar@cic.hk)