INDUSTRIALISED CONSTRUCTION:
The Rebound from COVID-19

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Industrialised Construction: systematic control of the total supply chain from design, fabrication, and manufacture, to installation and management

This white paper will establish a global framework for the use of industrialised construction as the way for the construction industry to rebound from the COVID-19 pandemic and seize this opportunity to transform. The framework identifies recommendations that must be implemented by policymakers and private clients.

The Authors appreciate the input from these people and organisations:













This white paper includes four sections that pursue opportunities to rebound from COVID-19

How do we target and use the economic stimulus post-COVID-19 to transform the industry?

Transformation

Driven Transformation

Business as Usual

Market Driven
Policy Driven

economic model

Unearthing a new supply chain which is industrialised and mobilises modern methods of construction?

Envelope

Super Structure

Super Structure

Fit out

Envelope

Super Structure

MEP

Congruity
Self optimisation
based on data

Industrialised construction
leads to better Building Performance

- What does a high-performance
Built-Environment look like?

DECARBONISATION
Social
Expectation
Behaviour
Shift

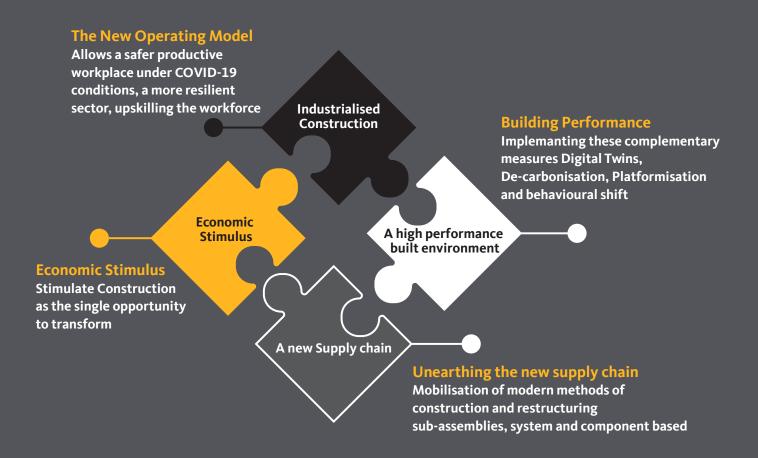
Less resource intensive to build
More Efficient with Space
Evidence based optimisation

DIGITAL
TWINNING
Intelligent
Built Assets
Servitisation
of Space

Outcome
based
procurement

INDUSTRIALISATION
Modern Methods of
Construction (MMC)
Predictable
performance

Opportunities to Rebound Beyond COVID-19



Our recommendations - in summary

- 1. A guaranteed spending commitment and pipeline to catalyse investment.
- 2. Stimulate adoption through a plan for regional hubs, creating enterprise zones aligned to areas where a qualified workforce is available due to plant closures.
- 3. An approach to intellectual property that drives both the standardisation of interfaces and continuous improvements.
- 4. Rethink the "stages process" to improve outcomes throughout the design and construction process.
- 5. Reset the measures of success and establish a new industry Global Scorecard.
- 6. Governments must define industrialised construction contractually.
- 7. The government must procure industrial construction by directing 50% of their new funding towards "industrially constructed" assets.
- 8. Governments should instigate a new round of investment incentives.
- 9. Government must provide matched funding to support technology investment.
- 10. Governments must invite investment proposals for better COVID-19 resilience.
- 11. Promote activities that reduce the input costs of production through advances in technology.
- 12. Support the upskilling of the supply chain by equipping them with new "industrialised construction" capabilities.
- 13. Engage the owner to ensure they are committed and invested in the new supply chain.
- 14. The prime contractor to become an "assembler", orchestrating and mobilising an industrialised supply chain; taking on the role of setting up the digital platform.
- 15. From design to realisation, activities must be redesigned so that the supply chain re-focuses on delivering performance and outcomes, rather than an "object".
- 16. Consider capital and investment zones to encourage the wave of mergers and acquisitions that is required to re-structure from trade thinking to system thinking.
- 17. Digital Twin: All buildings must have a Digital Twin, with mutualised data for the public good.
- 18. Material Circularity: All building materials must be inventoried in a Material Register for future reuse, including product stewardship programs.
- 19. In-use, actual building performance, must be reported and meet net-zero for all new buildings by 2025.
- 20. From 2030, the net growth of built space must be reduced to match the increase in population only.
- 21. From 2050, all new buildings must be 75% constructed using previous construction material through material circularity