

JTC leverages innovation to manage its developments and facilities optimally, says Mr Heah.

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Innovate for SUCCESS

JTC gets it right to be at the peak of its field

JACKIE LOH

JTC has been an industry leader for half a century — and has ticked all the right boxes for developing industrial infrastructure in Singapore.

This year, JTC's performance in the Building and Construction Authority (BCA) Awards can be traced to the adoption of productive construction technologies and innovative sustainable design and operations for over 940 ha of space. With such a portfolio, JTC can influence the built environment players in adopting sustainable practices and focus on innovation to increase productivity.

To survive today, companies must constantly upgrade and use the best technology possible. JTC is committed to innovation in sustainability and productivity.

Mr Heah Soon Poh, assistant chief executive officer (Engineering and Operations), talks about innovation in the local construction sector.

How has JTC leveraged innovation to improve construction productivity?

We have been adopting innovative solutions in our developments, such as Mass Engineered Timber (MET), Prefabricated Prefinished Volumetric Construction, advanced pre-cast, and modular mechanical, electrical and plumbing systems.

For example, we adopted MET such as Cross-Laminated Timber and Glue Laminated Systems, as well as Structural Steel in the construction of Blocks 75, 77 and 81 of JTC LaunchPad @ one-north (BCA Construction Productivity Award Platinum).

Adopting these new products and systems enabled for easier installation, shorter construction time and increased safety for workers.

What strategies does JTC employ to consider sustainability in building construction?

We look at sustainability throughout the building life cycle, from planning and design, to construction, operations and rejuvenation. This involved the use of passive design in our ready-built factories and energy-efficient equipment.

For example, we adopted passive design principles in the development of the JTC LaunchPad @ Jurong Innovation District (BCA Green Mark Platinum). The development is seamlessly connected to Jurong Eco-Garden and adopts natural ventilation principles, which allows increased airflow and helps to keep the area cool. The building is also solar panel ready for improved energy efficiency.

It is equally important to consider the impact of our construction methodologies. We always seek to balance the needs of stakeholders, environmental sustainability and productivity, to achieve a win-win situation for all.

What plans does JTC have for the future as a leader in innovation and to influence the local construction sector for continuous improvement?

JTC has the scale to generate demand for building and infrastructure construction projects. We will continue to work with relevant agencies and industry players to pioneer the use of new technologies, materials and processes to achieve greater productivity and site safety. Through these, we hope to positively influence and transform industry practice.

Moving forward, one of our key focus points is to leverage innovation to manage our development workflow and facilities management optimally. We recognise that the only way to keep moving forward is to digitalise, capture, and analyse the data to project future requirements. This allows us to better predict the evolving needs of our customers.

We have introduced J-Ops, our Facilities Management (FM) command centre, with centralised smart FM systems — building systems optimisation, estate monitoring and workflow automation. J-Ops enables JTC to remotely monitor and manage FM operations for the majority of our estates and buildings across the island. The monitoring and analysis of events enable J-Ops to anticipate problematic areas far in advance.

For the development workflow, we have adopted Building Information Modelling (BIM) and Virtual Design and Construction (VDC) for all our developments with a target to scale towards Integrated Digital Delivery (IDD) for our future projects.