

# Staying ahead

CCDC implements advanced technological solutions to improve productivity



Having an IDD committee to promote digital connection with internal stakeholders and external partners in one platform will help the organisation to be future-ready, says Mr Li. PHOTO: CCDC

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This has been a good year for China Construction (South Pacific) Development Company (CCDC).

It bagged five Building and Construction Authority (BCA) Construction Excellence Awards, two Construction Excellence Awards (Merit), one BCA Green and Gracious Builder Award – Star, and one BCA Quality Excellence Award – Quality Champion. CCDC has received the last award for five consecutive years.

The advanced solutions the organisation has implemented include, but are not limited to:

- Building Information Modelling and Virtual Design Construction (BIM-VDC) to guarantee accuracy in all technical aspects in terms of design and engineering details;
- Integrated Digital Delivery (IDD) tools to oversee the implementation, such as automated robotic survey equipment (LN-100 3D); and
- Mobile Applications for Quality Assurance Quality Control.

CCDC also uses camera-enabled drones to monitor on-site progress, collect data and identify potential safety problems, so its teams can plan for rectification works and repairs. With the implementation of IDD tools, the organisation is moving into a digital transformation.

It is also working closely with service providers to enhance the existing technologies for continuous improvement.

A CCDC spokesman says: "The Government will push for more technology evolution and transformation in the local construction sec-



tor, and the organisation foresees more public-private partnership in infrastructure projects.

"There will also be a significant impact when Singapore plays a critical role in the China-led Belt and Road Initiative by providing the banking and legal support for projects."

Automation and increased computerisation will boost productivity by replacing manual tracking methods with more digital ones.

He says: "With the LN 100 automatic surveying equipment, surveyors can set out complicated design profiles without manual measurement. This will enable the surveyor to verify the accuracy in smart devices easily."

- CCDC has adopted these in all its worksites:
- Biometric face recognition at entrance gates to control workers' access and monitor their movements;
  - Closed-circuit television (CCTV) at tower cranes and gates to monitor site safety, security and work progress;
  - Remote viewing of CCTV footage using

smartphones for real-time site updates;

- Automatic truck washing bays that use recycled rain water; and
- Solar street lights and solar mosquito repellents.

CCDC's vice-chairman Li Xiao Qian says: "We have set up an Integrated Digital Delivery (IDD) committee to promote digital connection with internal stakeholders and external partners in one platform. This will equip the organisation to be future-ready."

"The future of the construction industry will be marked by the Government's initiatives to promote greater productivity."

"CCDC is expecting to witness advances in creating a central digital repository of construction industry information, development of mobile apps for construction sites, more uses for virtual and augmented reality on construction sites, usage of automation and robotics in design and construction, and innovation in BIM processes."

CCDC won a construction excellence award for its private residential development Hilsta.

PHOTO: BCA