The Surbana Jurong Campus not only raises the bar for environmental sustainability, but is also one of the first non-residential buildings of this scale in Singapore to fully leverage integrated digital delivery throughout its development. PHOTOS: SAFDIE SURBANA JURONG, TED CHEN

Pushing for sustainable design

Surbana Jurong's new global headquarters, Surbana Jurong Campus, raises the bar for environmental sustainability

BY RACHEL TAN

Come 2021, urban and infrastructure consultant Surbana Jurong Group will be unveiling its new global headquarters at Jurong Innovation District. The Surbana Jurong Campus, announced earlier this year, is poised to become one of the most iconic and innovative buildings in the western part of Singapore.

It is designed by world-renowned architect Moshe Safdie, the man behind Jewel Changi Airport, in partnership with Surbana Jurong. The campus will be brought to life entirely by Surbana Jurong's multi-disciplinary team of technical experts who will take it from the planning, financing and design stages, through to delivery and management.

Owing to the development's focus on integrating with the environment, Surbana Jurong Campus has been nominated for the Building and Construction Authority's (BCA) first Green Mark Award for Super-Low Energy Buildings.

Sustainability and digital innovation

Beyond being a comprehensive internal project, the campus will also push the envelope of environmental sustainability in several ways.

Energy efficiency will be achieved through the adoption of sustainable technologies such as solar photovoltaic technology that converts light into electricity, smart lighting control, an underfloor air-distribution system, and predictive smart building control. Rain gardens and sloped vegetated shallow ditches known as bioswales, which remove debris from surface run-off water, will help to enhance the efficiency of water usage.

The campus is also one of the pioneers in utilising integrated digital delivery throughout its development for non-residential buildings of this scale in Singapore. This includes the use of end-to-end Building Information Modelling, design-optimisation computational methods, immersive virtual reality systems and drones for visualisation. Methodologies such as Design for Manufacturing and Assembly (DfMA) will also be adopted in the construction process.

Award-winning philosophy

As one of the largest Asia-based urban and infrastructure consulting firms and a thought leader in the built environment and infrastructure industry, Surbana Jurong has consistently been recognised for its commitment to excellence.

This year, Surbana Jurong and its member company, KTP Consultants, have both been accorded the Built Environment Leadership GoldPLUS Award. Thirty-five of the Group's projects have also won BCA awards this year, including Nanyang Technological University's latest learning hub, The Arc, New Futura and Ang Mo Kio Polyclinic. These awards span Green Mark accolades, as well as nods in the fields of construction excellence, construction productivity, design and engineering safety and universal design. The integrated approach which Surbana Jurong brings to all its projects ensures that they are seamlessly planned and executed to meet the needs of clients.

Says Mr Wong Heang Fine (above), group chief executive officer of Surbana Jurong: "Surbana Jurong approaches all our projects with the same philosophy — that what we plan, design and engineer must be sustainable and people-centric."

He adds: "We view technology as an enabler of change and are committed to invest in digital innovations to transform the built environment. The Surbana Jurong Campus will further push the boundaries of innovation and sustainable design.

"With our extensive experience working on green buildings such as NUS School of Design & Environment (SDE) 4, BCA SkyLab and JTC CleanTech One, we hope to inspire future high-performance buildings and create more sustainable development designs around the world."