

COMPANY

Henderson Development Agency Limited

PROJECT

BIM... from Virtuality to Augmented Reality

LOCATION

80 Queen's Road Central, Hong Kong

TYPE

Commercial Development

SCHEDULED TIME OF COMPLETION

2017

Creating a Jewel-like Art Showcase



HENDERSON DEVELOPMENT AGENCY LIMITED

BIM PARTNERS INVOLVED

Laprairie Ltd.

CL3 Architects Ltd.

le, Siu & Chung Architects Ltd.

P&T (M&E) Ltd.

Stephen Cheng Consulting Engineers Ltd.

WT Partnership (HK) Ltd.

isBIM Ltd.

Project Manager:

Henderson Real Estate Agency Limited

Sustainability Consultant:

Arup

The Project

Henderson Development Agency Limited developed an urban redevelopment project at 80 Queen's Road Central in Hong Kong's Central Business District - which will involve commercial uses comprising retail, restaurants, and art galleries. The key aim is to create a new and convenient gathering point for art galleries and fine-dining facilities.

The Challenges

The site is at a premier location, with a high land value. Hence, major challenges stemmed from a need to ensure effective design process management, budget and time planning and control. The project team also aimed for environmental friendliness, by optimising indoor environmental quality, and minimising material use, operational energy and water consumptions. Another challenge was to ensure the building would suit art galleries, with connectivity to nearby cultural heritage and art venues.

The Solution

BIM was deployed in multiple ways. Visualisations were created for design options, and facilitated decision making together with spatial planning. BIM use was extended to 4D by adding the time dimension by simulating construction sequences and monitoring progress.

A 4D-BIM model was issued to the main contract tenderers at the tender stage, and this virtual construction tool was found to be helpful in achieving a highly cost-effective construction budget.

Building services routing was optimised. A simplified version of the BIM model and its embedded information would be embedded in the facility management system for future tenant and building users.

The Benefits

In addition to boosting efficiency and reducing costs, such as through minimising clashes and easing construction, the BIM deployment delivered benefits specific to this project. One aim of the design team was to make the building appear like a gleaming white jewel box. Glass fritted patterns were built into the BIM model, so the visual effects could be assessed using 3D visualisations. These included views from within the building looking out, to check the windows would seem transparent; and from outside at street level, with the designers verifying the building would indeed look dynamic and vibrant. BIM is also playing major roles in optimising the art show rooms, such as through spatial planning. The project team has created a BIM-enabled art exhibition virtual tour, facilitating the Augmented Reality opportunity.

Better with BIM

The BIM model is being used in ways that should attract potential customers to art exhibitions, such as through developing virtual tours featuring artworks with Augmented Reality and QR codes, and visualisations for leaflets and brochures. This is a novel integration of the engineering-oriented BIM platform with the art and culture business. To foster use of BIM, Henderson offered BIM training to its own project staff, consultant team members, main contractor and sub-contractors, and ultimately the facility management staff.



Image courtesy of Henderson Development Agency Limited



Image courtesy of Henderson Development Agency Limited

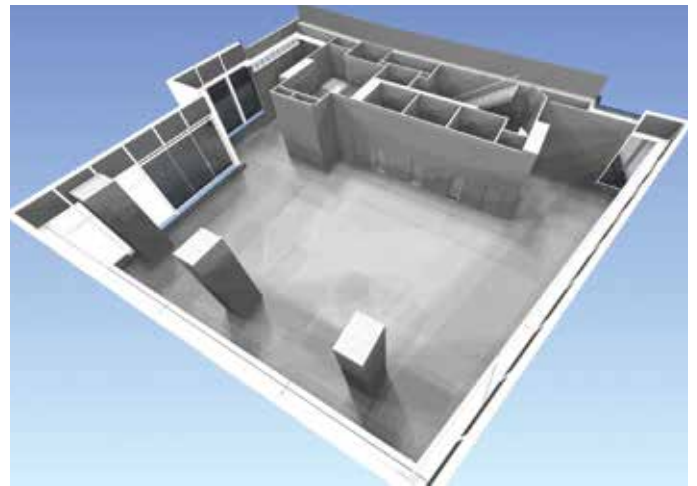


Image courtesy of Henderson Development Agency Limited

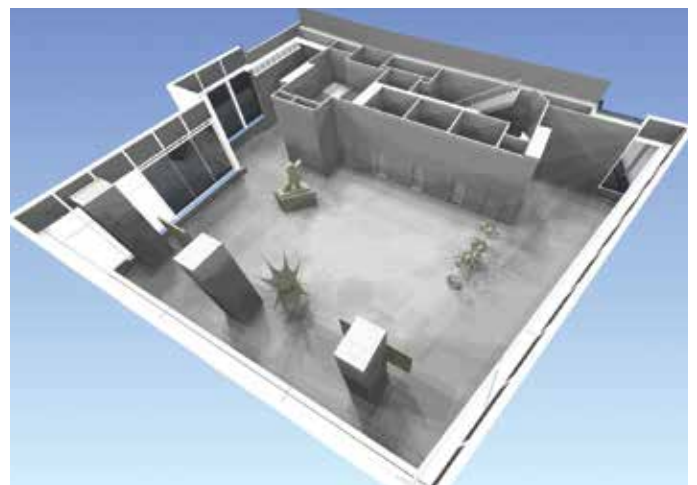


Image courtesy of Henderson Development Agency Limited