

# Development of the 3D Digital Map in Hong Kong

Alex Chu and Ko-kwan Fan (Hong Kong SAR, China)

**Key words:** Geoinformation/GI; GSDI; Implementation of plans; Standards; 3D Digital Map; Smart City; CSDI; Common Spatial Data Infrastructure; 3D visualisation map; 3D indoor map; 3D pedestrian network

## SUMMARY

The Smart City Blueprint for Hong Kong released in 2017 sets out the overall framework and strategy for the use of innovation and technology to address urban challenges, enhancing Hong Kong's attractiveness to global businesses and talents; and inspire city innovation and sustainable economic development. The Smart City Blueprint for Hong Kong included the adoption of Building Information Modelling, the development of Common Spatial Data Infrastructure (CSDI) and the development of 3D Digital Map. The Hong Kong SAR Government has allocated HK\$300 million in its 2019-20 budget to expedite the development of CSDI as well as 3D digital map, with a view to facilitating the dissemination, utilisation and innovative application of geospatial data.

The 3D digital map forms a major building block of CSDI, facilitating the sharing and opening of government geospatial data and meeting the needs of digital map applications. To meet the increasing needs of 3D digital map applications and enhance better understanding of multi-level spaces of a modern city like Hong Kong, Lands Department of the Hong Kong SAR Government (LandsD) aims to develop the high-quality 3D digital map for Hong Kong by end 2023.

The 3D digital mapping project comprises the generation of a set of high quality 3D visualisation map showing topographical and exterior features of terrain, buildings and infrastructures over the territory; showing the accessible interior of buildings and structures for 1 250 buildings; and 3D pedestrian network data over the territory. The 3D pedestrian network has been completed and released for public access in December 2020. LandsD has been taking an incremental approach in delivering the project. In 2021, LandsD will develop the 3D visualisation map for Kowloon East area covering 27 sq.km with over 5 900 buildings and 284 km of roads. This stage of the project will also cover 3D indoor map for about 150 buildings. This paper presents the project planning, current progress and the challenges ahead for the development of the 3D digital map in Hong

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