From Digitisation to Data Intelligence: the Latest Development of 3D Digital Map in Hong Kong

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SUMMARY

The Hong Kong Special Administrative Region Government mentioned in its past Policy Addresses and the 2022 Hong Kong Innovation and Technology Development Blueprint that the establishment of the Common Spatial Data Infrastructure (CSDI) that provides a visualised urban spatial data infrastructure to support the development of applications in relation to smart city and digital twin city and complements the open data policy implemented by the Innovation, Technology and Industry Bureau is one of the key components in the implementation of the Smart City Blueprint. To expedite the development of digital infrastructure to facilitate the use of geospatial data and its innovative application, the Lands Department (LandsD) has been actively developing a set of high-quality 3D Digital Map covering the whole territory of Hong Kong since 2020.

LandsD's 3D Digital Map consists of three datasets: (1) 3D Visualisation Map with highly photorealistic 3D models covering the whole territory of Hong Kong; 2) 3D Indoor Map; and 3) 3D Pedestrian Network. The above three datasets are all made in open formats and open standards and are available for free download to the public in the form of open data. LandsD has also launched an online application platform, "Open3Dhk" (3d.map.gov.hk), to facilitate widespread public access to 3D map products. This paper will share Hong Kong's experience in developing 3D Digital Map and relevant application cases as one of the core digital infrastructure for Hong Kong's smart city development. The paper will also outline future development directions for 3D Digital Map, including the optimization of existing 3D digital map products (map updates and standards) and the vision of building a comprehensive 3D infrastructure based on 3D Digital Map, integrating the Underground Utility Information System (UUIS) and Government BIM Data Repository (GBDR).

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