

## DEPARTMENT OF CIVIL ENGINEERING

## DISTINGUISHED PUBLIC LECTURE

# Digital Transformation of Construction and Infrastructure – the story so far....

Professor Tim Broyd FREng CEng FICE FRSA Professor of Built Environment Foresight, University College London Past President, ICE

Date: January 15, 2025 (Wednesday)

Time: 3:00 p.m. - 4:30 p.m.

Venue: Lecture Theatre 9, Library Extension, HKU

#### **Abstract**

Professor Tim Broyd has played a central role in the development and deployment of BIM and related techniques for the digital transformation of the construction industry for the past 25 years. In this lecture he will note that this started with seeking better forms of information management for projects before techniques were encouraged and later mandated by the British Government as a way of increasing productivity in the industry. He will demonstrate the use of BIM, alongside other industry innovations, on the significant Crossrail rail project in and under central London. He will then comment on recent research on the application of Blockchain and also the areas of Automated Code Compliance and how trust in the use of BIM might be strengthened. Finally he will comment on methods currently in use in the UK to develop and deploy factory manufacture and onsite assembly of buildings.

# **About the Speaker**

Tim is Professor of Built Environment Foresight at University College London as well as an Honorary Professor of Civil Engineering at the same university. He is the founding Director of UCL's Institute for Digital Innovation in the Built Environment. He moved to UCL in 2012 following a career in industry, and has substantial experience as corporate director of technology, innovation, knowledge management and sustainability for globally operating engineering design consultancies. Within his current role he works with leading individuals in industry, government and academia to understand and prepare for the challenges and opportunities that lie ahead.

Tim is a leading advocate for Digital Transformation and Digital Twins and has provided advice in this area to the development teams of a number of large infrastructure projects. In 2005 Tim launched Buildoffsite, an industry-wide network to develop technologies and market uptake of offsite construction technologies and techniques.

Tim is a past President of the Institution of Civil Engineers. He is a Fellow of the Royal Academy of Engineers, the Institution of Civil Engineers and the Royal Society for Arts, Manufactures and Commerce. He is also a Distinguished Visiting Professor at the Universities of Chongqing and Tsinghua.