

## COMPANY

**Hong Kong Housing Authority**

## PROJECT

**BIM Culture – A new Paradigm Towards Partnering for Change**

## LOCATION

**Hong Kong**

## TYPE

**Public Housing Development**

# BIM Culture Boosts Working Harmony

“BIM has gradually grown from a new technology unfamiliar to most of Housing Authority staff, to an essential part of their work.”

## BIM PARTNERS INVOLVED

**Tung Tau Cottage Area East Project**  
**Able Engineering Company Ltd.**  
**The Hong Kong Polytechnic University**  
**Forida Ltd.**

**Anderson Road Sites A & B Project**

**Chau Ku & Leung Architects & Engineers Ltd.**  
**AECOM Asia Co Ltd.**  
**C S Toh & Sons & Associates Ltd.**  
**Yau Lee Construction Ltd.**

**Sheung Shui Area 36 West Project**

**Yau Lee Construction Co Ltd.**  
**Meinhardt (M&E) Ltd.**  
**Summit Technology HK Ltd.**



Image courtesy of Hong Kong Housing Authority

BIM has gradually grown from a new technology unfamiliar to most of Housing Authority staff, to an essential part of their work.

While the Hong Kong Housing Authority has successfully deployed and even pioneered BIM in several projects, the BIM culture developed in the organisation may be even more important than the technical achievements.

BIM was first introduced to the Housing Authority in 2006 and has since been put on trial in some public housing projects to predict the long term performance of the building, enhance design quality, site safety, improve construction coordination among concerned parties and reduce abortive works and waste.

## Comprehensive infrastructure for BIM

The Housing Authority is unusual in Hong Kong for having a strong BIM strategy, with management ensuring all the necessary infrastructure is in place. This includes a BIM Project Steering Committee for strategic

planning, a BIM Working Group focusing on specific implementation and technical details, and a BIM Service Team that supports project teams and nurtures in-house BIM experts. A BIM Centre features meeting and training rooms, where people working on projects can learn about applying BIM to their projects.

The Housing Authority has developed its own BIM standards, guidelines and manuals, together with in-house libraries. BIM training courses cover staff at all levels and disciplines, and around 80% of Housing Authority staff – approximately 1,300 persons – have received BIM training. There’s a range of BIM related software, and staff participate in BIM conferences and seminars.

Given this strong foundation, all new development projects in the Housing Authority will adopt BIM. Indeed, BIM is already ingrained in various stages of projects, ranging from feasibility studies, through the scheme design stage, as a value management and design optimisation tool, and during construction.

## All the way with BIM

The Housing Authority's Feasibility Study Team finds BIM indispensable for potential site assessment and feasibility studies, as well as for visual impact analysis. BIM is especially useful at the scheme design stage, especially for projects with complex site conditions and topography with significant level changes.

The Housing Authority has also used BIM as a Value Management, Design Visualization and Optimisation tool, helping project teams to choose the most efficient design option; and as an innovative and creative presentation tool.

BIM is utilised for detailed design and for drawing production. The Housing Authority became one of Hong Kong's first practitioners to use BIM at construction, and has explored creative applications such as Construction Site Safety Planning and Cash Flow Simulation.

Post construction, the Housing Authority is also employing BIM in several pilot projects on Facility Management.

## BIMplementation rooms and harmonious environments

Recent Housing Authority projects involving successful use of BIM include the Tung Tau Cottage Area East in north Kowloon. This was a pilot project for BIM, which was employed from feasibility studies to the post-completion stage, delivering benefits such as improved efficiency and reduced abortive works, with perhaps eight days less reworking required than if traditional culture of work had been used.

Just northeast of Kowloon, Anderson Road Sites A & B is a public rental housing development with nine tower blocks. Here, the project team devised "BIMplementation" Room Concept, in which all stakeholders gathered to use BIM as a platform for collaboration, streamlining decision processes and workflows.

A BIMplementation Room was also adopted for a project at Sheung Shui 36 West, which was completed in January this year. Two notable benefits of using BIM were that there were less than 10 confirmed verbal instructions - far less than the average of 610 in other Housing Authority projects, and the project was completed five days ahead of the contract completion date. However, the benefits of BIM culture were reflected in people's behaviour, which led to higher productivity with a happier and

more harmonious working environment and relations between disciplines, contractors and sub-contractors.

Though the Housing Authority has come a long way with BIM, it still has to keep pushing so it will gain a momentum of its own, and keep rolling by itself. This will require infiltration to all stakeholders, along with sharing experiences with BIM users within Hong Kong and internationally.

The Housing Authority's BIM team members are ambitious, wanting to explore every BIM application. There are hopes that the wider BIM community in Hong Kong can collaborate, including to establish standards that can ensure BIM develops swiftly here, delivering long-term benefits for the construction industry.





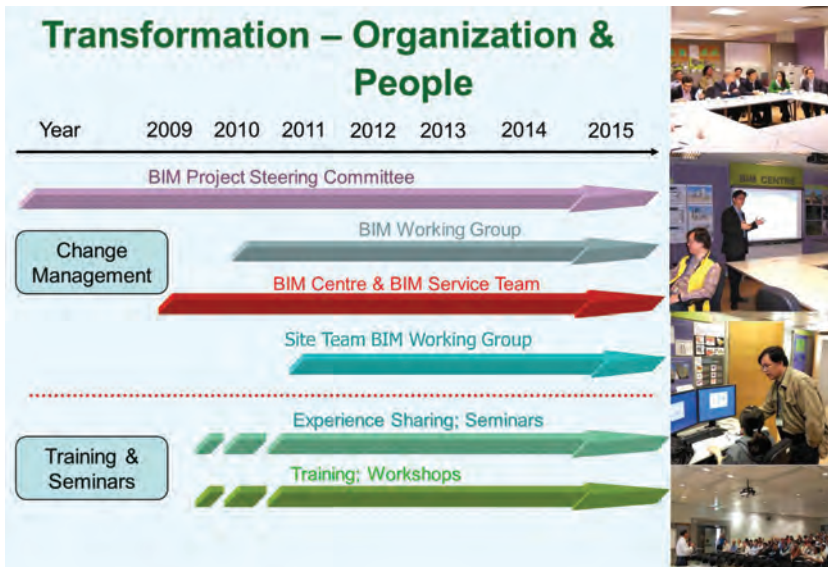


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## About Hong Kong Housing Authority

The Hong Kong Housing Authority (HA) is a statutory body established in April 1973 under the Housing Ordinance.

The HA develops and implements a public housing programme which seeks to achieve the Government's policy objective of meeting the housing needs of people who cannot afford private rental housing. Approximately 30% of the Hong Kong population is now living in public rental housing units.