

## Airport Authority Hong Kong



### INTRODUCTION OF ORGANISATION

The Airport Authority Hong Kong (AA) is a statutory body wholly owned by the Hong Kong SAR Government. Established in 1995, the AA is responsible for the operation and development of Hong Kong International Airport (HKIA).

Infrastructure underpins the Airport City. In the coming years, the focus of major infrastructure development at HKIA will remain on the construction of the Three-Runway System, targeted for completion and commissioning in 2024. In tandem, a series of expansion projects have been planned and executed in the past few years, including the expansion and refurbishment of Terminal 1, and the building of a new premium logistics centre at the airport's South Cargo Precinct.

The airport business of today – and increasingly so of tomorrow – is about services and innovation, which are largely driven by developments in technology. Under its smart airport strategy, HKIA has been investing in new technologies to enhance services and operational efficiency.

### THREE WINNING FACTS

#### People-Centric

- Under its smart airport strategy, AA has been investing in new technologies to enhance services and operational efficiency.
- **Visions from Senior Management** to digitalise 3RS by **leveraging advanced digital technologies** and **embrace digital practices** for project delivery on time and on budget.
- Promoting and attracting talents from the local industry by sharing and working with the Project collaborators. More than **250 BIM practitioners** worldwide (Australia, HKSAR, Korea, Japan, Netherlands, PRC, Singapore, UK) are working on one 3RS Project.
- BIM educating and training for more than **580 internal employees** on one single project. One of the largest internal training structured within one Organisation.

#### Process Optimisation

- **Formulated AA BIM Specification, BIM Standard** for design, construction, tender and handover to AA's facility management team. Such documents set the goals and formulated strategies in implementing advanced digital technologies to **streamline workflows, application and integrating advanced technologies**. Digital

practices like BIM implementation are planned in all Contract documents, **Contract milestones (milestone-based deliverables), General Material and Workmanship Specification (GMWS), Survey Guidelines** and other documents. Continuous refinement of digitalisation process, AA's Specification and Standards with inputs from Project collaborators. Improvement of such BIM Specification, Standards and strategies by referencing **international and local Standards, Specifications and Technical Circular** in later stage.

- Ability to execute and foster a **culture of innovation, collaboration and partnering**. Promote digital fabrication, DfMA, MiC and machine control.

#### Technology Adoption

- Adopted advanced technologies and integration of systems as one holistic system for integrating isolated solutions like positioning, site surveying/setting out, networking and 3D control systems on construction machines on 3RS. Laser scanning to verify as-built conditions (Field-to-BIM) and machine control for runway construction (BIM-to-Field) are implemented.
- Use of online collaboration platforms, cloud-based solutions, tablet/mobile solutions for sharing of 3D data.
- Data-driven, data progress and monitoring – Use of business intelligence analysis tools to monitor, analyse, and review 3RS status, performance and dashboard reporting.
- Planned ahead and implemented asset management requirements during design and construction phases for BIM data, which will be handed over to asset management team for on-going integration into BIM-GIS/ Digital Twin platform.
- With the aim of developing HKIA into a smart airport, AA has been working closely with its business partners and technology companies to develop and employ innovative solutions to redefine the future travel experience. The Smart Airport – Technovation Conference and Exhibition held in 2018 is an ideal platform for airport community members and industry experts to exchange ideas on the latest trends in innovative technology such as Internet of Things (IoT).



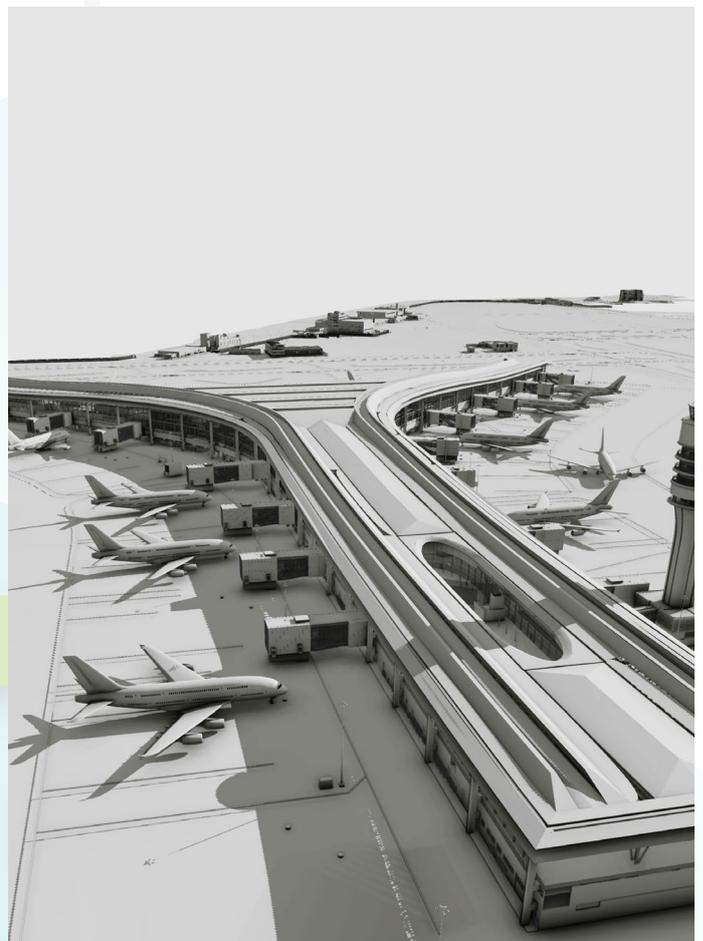
From City Airport to Airport City



Three-Runway System - To strengthen Hong Kong's status as an international aviation hub, and to cater for the city's long-term air traffic demand, Hong Kong International Airport is developing into a three-runway system.



Terminal 2 Expansion Works



Terminal 2 Concourse and Apron Works