



Legislative Council Panel on Economic Development

Update on the Smart Airport Development at Hong Kong International Airport

Airport Authority Hong Kong

24 June 2019

Vision

- **Develop HKIA into a “Smart Airport”**
- **Make effective and innovative use of technology to deliver a unique passenger experience, and to further enhance operational efficiency of HKIA**



5 Key Strategies

- Building and enabling a **smart infrastructure**
- Enhancing efficiency with **robotics and automation**
- **Self-services** and smoother passenger journey
- Connecting passengers with **personalized and intelligent touch**
- Gaining insight for optimising airport operations via **data analytics**



Smart Infrastructure



Next Generation of Connectivity Infrastructure

High Speed Wi-Fi



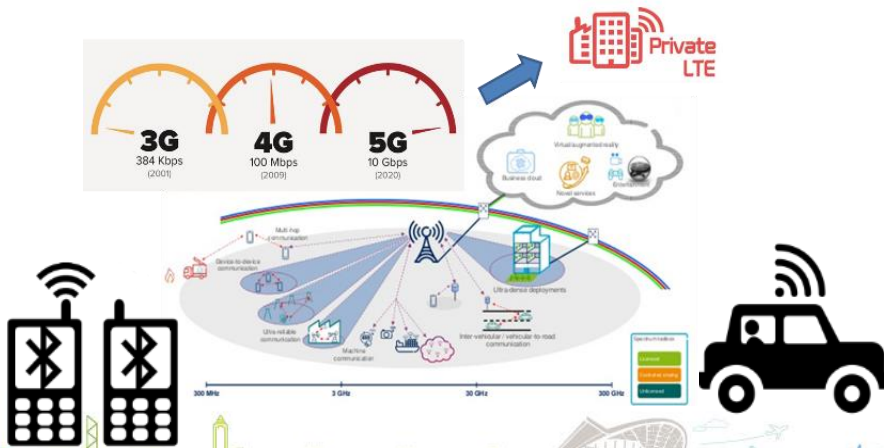
Internet-of-Things Network

connect massive devices and facilities effectively

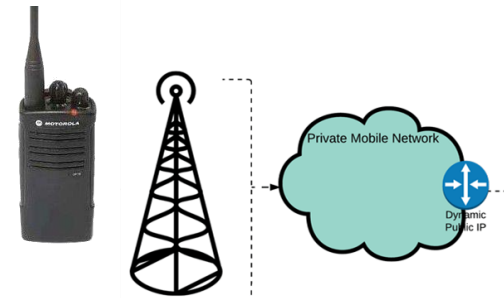


Kuva 1. Internet of Things. Lähde: Huffington Post

5G Network Preliminary Studies



Private Mobile Network for HKIA's operation



Enhancing Efficiency with Robotics and Automation



Robotics and Automation in Terminal Operations

Indoor Patrol Robot



Fun Reaction between IPR and passengers

Automated Guided Vehicle



Trolley Management System



Robotics and Automation in Airfield Operations

RFID luggage handling



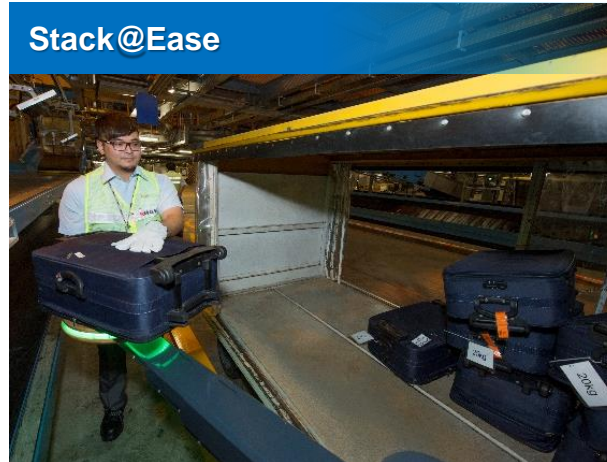
Driverless Electric Tractor



Foreign Object Debris Detection System



Stack@Ease



Automatic Runway Lights Inspection

Patented



Self-services and Smoother Journey



Shaping Future Travel Experience

Smart Mobile Check-in Kiosk

Patented



Movable



Travel Document Check



Self Service and Full Service



A total of

120 kiosks

Self Bag Drop

Patented



Installed at

120 counters



Average

60 seconds

E-Security Gate



A total of

48 e-Gates



Average

18 seconds



Self-services and Smoother Passenger Journey

Checked once



Check-in



Self-Bag Drop



Immigration



Self-Boarding Gate

Enrollment

Validation

Enrollment & Validation

Validation

*Enrollment & Validation
(collaboration with other airport)*

Validation



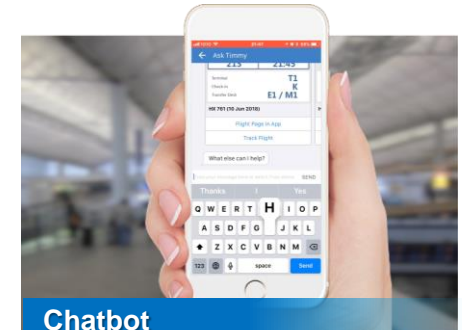
Personalized and Intelligent Touch



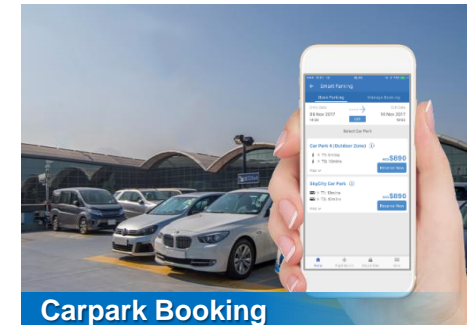
Personalized Services throughout the Journey at HKIA



Terminal Signage Translation



Chatbot



Carpark Booking

Personalized Baggage Arrival Notice

Launched since Nov 2017



The **first** airport in the world introducing this service

Business Style



Leisure Style

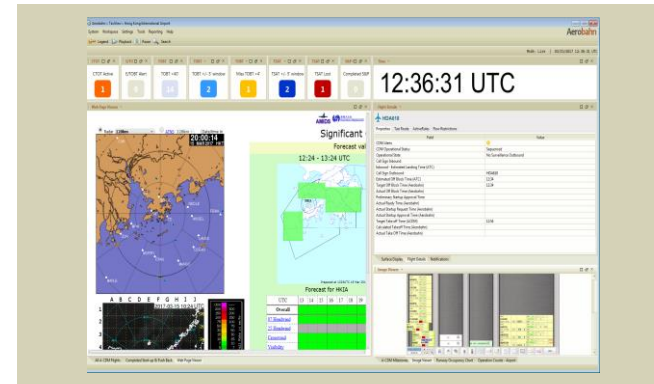
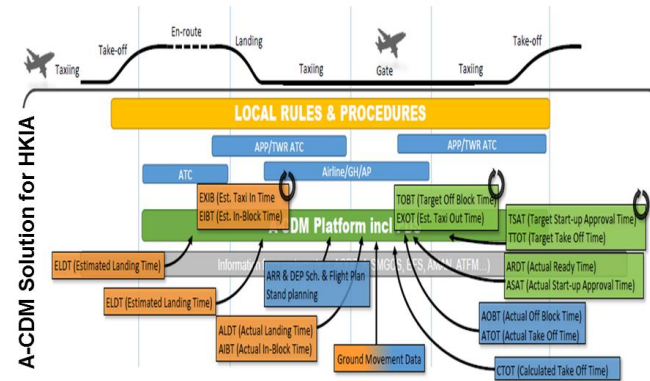


Optimizing Operations via **Data Analytics**



Airport Capacity Enhancement and Service Bottleneck Prediction

Airport Collaborative Decision Making (A-CDM)



Data Analytics – Other Applications for Predictive Measures

Airfield Vehicles & Equipment Tracking



Predictive Maintenance for Baggage System



Recent Recognitions

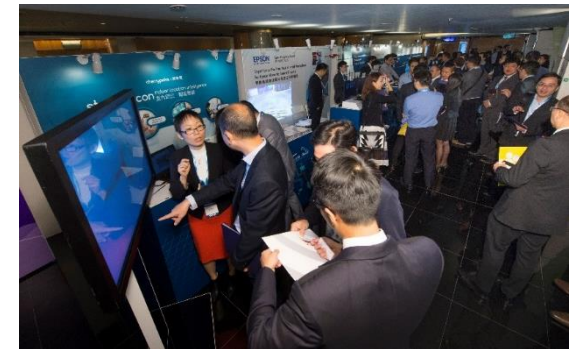


Way Forward

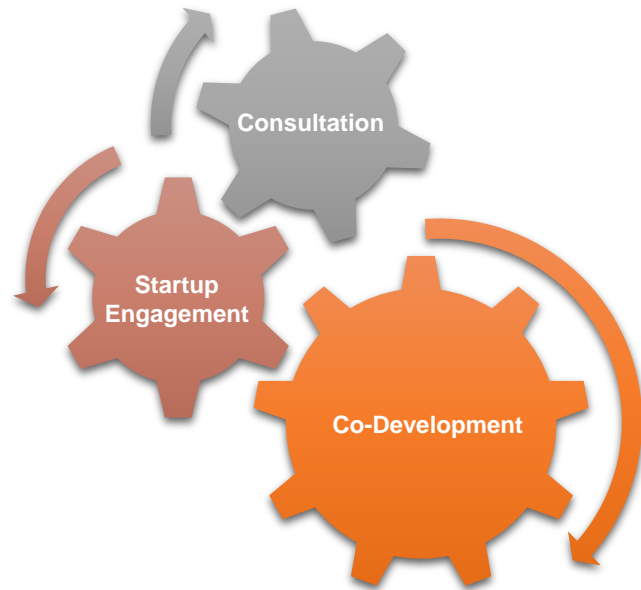


Collaboration with the Airport Community and Business Partners

- **Airport Technology Advisory Council** (since 2015)
- **HKIA Technovation Conference & Exhibition** (since 2015)
 - A platform for airport community members and industry experts to exchange ideas on the latest trends in innovative technology
 - More than 1000 delegates and over 45 exhibitors in 2018
 - The Smart Airport Technovation Awards has been held to stimulate innovation since 2018
- **Technovation Fund** (since 2015)



Collaboration with the Local Research Community



Collaboration with International Aviation Organizations

- AAHK will continue to work closely with international aviation organizations (e.g. IATA and ACI) to lead the technology development and drive new standards for the industry



2019 ACI Asia-Pacific / World Annual General Assembly, Conference and Exhibition
2-4 April 2019
Hong Kong



IATA Baggage Working Group Meeting
17-19 January 2019
Hong Kong

- **Upcoming Event**
 - 15th ACI World Airport IT Standing Committee Meeting
 - 4-6 December 2019, Hong Kong

Thank You

