

**ITS Asia Pacific Forum 2025**

**ES1: Exploring Current Status and Future Strategies on ITS in Asia Pacific**

# Hong Kong SAR

**Ir Steven Lui**  
President, ITS Hong Kong

**28 May 2025**



# Ir Steven Lui

## MEng(Hons) MHKIE MIET FITSHK ACGI Accredited NEC4:ECC Project Manager

- President of ITS-HK
- Technical Director of AECOM responsible for project management and delivery of ITS / Smart Mobility projects in Hong Kong and Southeast Asia
- More than 21 years of international experience working in both public and private sectors in London, Dubai, Abu Dhabi, Singapore and HK
- Committee Member of IETHK – Railway & Transport Section
- ESS Assessment Panelist for the I&T Fund, HKSAR Government
- Member of the Smart Mobility Technology (C-V2X) Alliance
- Expert Review Panelist of LSCM
- International Committee Member of IBTTA, Think Tank Member of Dashun Foundation and Grand Prize Winner of the HKIE Innovation Awards for Young Members in 2008 – "Automatic Traffic Optimisation System for ITS"



# Factsheet: Seoul vs Hong Kong



Seoul

**605 sq-km**  
Land Area  
**600 sq-km**  
Urban Area

**9.6 M (2023)**  
Population

**5 M (2023)**  
Labour Force

**18% (2023)**  
Population over 65

**21 M (2022)**  
Daily PT Passenger Trips  
**70% (2022)**  
% Daily Passenger Trips on PT

**9 M (2023)**  
Annual International Visitor Arrival  
**420 K (2023)**  
Visitors from Hong Kong

**8,400 km (2023)**  
Road Length  
**+1.7%**  
Growth in past 10 years

**3.2 M (2025)**  
Total Motor Vehicles  
**+5%**  
Growth in past 10 years



Hong Kong



**1,110 sq-km**  
Land Area  
**280 sq-km**  
Built-up Area

**7.5 M (2024)**  
Population  
**70%**  
Within 500m of Rail Station

**3.8 M (2024)**  
Labour Force

**23.3% (2024)**  
Population over 65

**11.5 M (2023)**  
Daily PT Passenger Trips  
**90%**  
% Daily Passenger Trips on PT

**34 M (2023)**  
Annual Visitor Arrival  
**400 K (2023)**  
Visitors from South Korea

**2,200 km (2024)**  
Length of Public Road  
**+5%**  
Growth in past 10 years

**810 K (2025)**  
Total Licensed Motor Vehicles  
**+14%**  
Growth in past 10 years

# Smart Mobility Achievements in Hong Kong



# Smart Mobility Achievements in Hong Kong



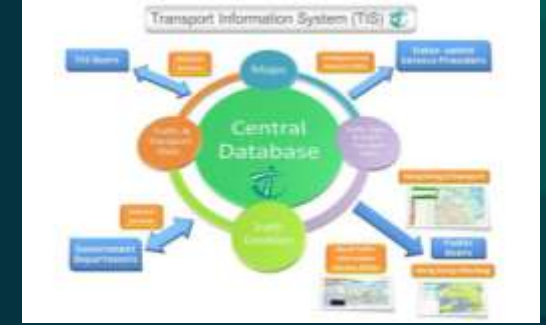
Traffic Control and Surveillance System



Traffic Control Centres



Traffic and Incident Management System



Traffic Information System



Traffic Detectors on Selected Strategic Routes



Toll Rationalisation Study



Area Traffic Control System



Autonomous Shuttles



Free Flow Tolling System (FFTS)  
Proof of Concept (POC) Study



Study on Design and Application of  
In-vehicle Units



Data Acquisition System (DAS) for  
Free Flow Tolling System (FFTS)



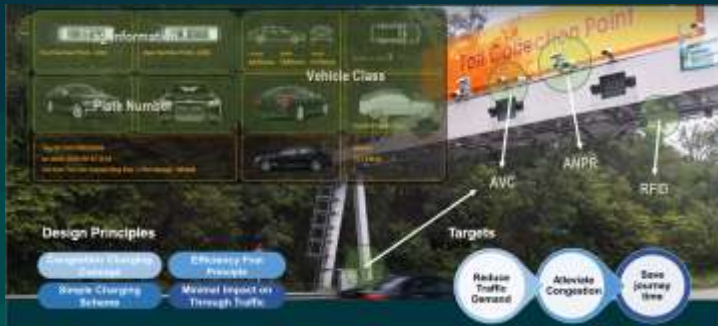
Toll Information Display System (TIDS)



## Free Flow Tolling System (FFTS) Proof of Concept (POC)



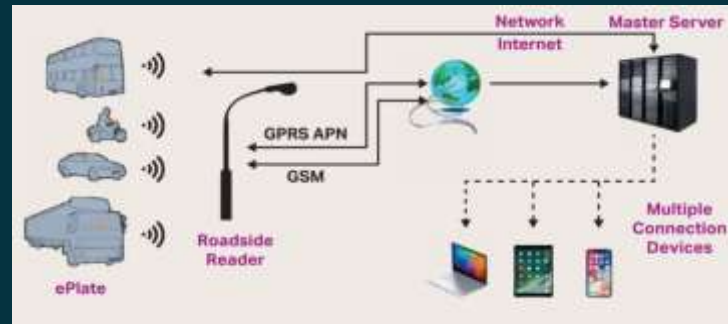
## Proof of Concept Study on Free Flow Tolling System



## In-vehicle Units (IVU) – RFID



## Study on Design and Application of In-vehicle Units



## FFTS Data Acquisition System (DAS)



Source: Transport Department

**Technical supports to tender submissions and project implementation for FFTS contracts (BES, DAS and TSP)**



Source: Transport Department

# Leading to further Smart Mobility Achievements for Hong Kong

HKeToll



Source: TD

Toll Information Display System (TIDS)



Toll Rationalization Study of Three Road Harbour Crossings and Three Land Tunnels between Kowloon and Shatin



WHC



CHT



EHC

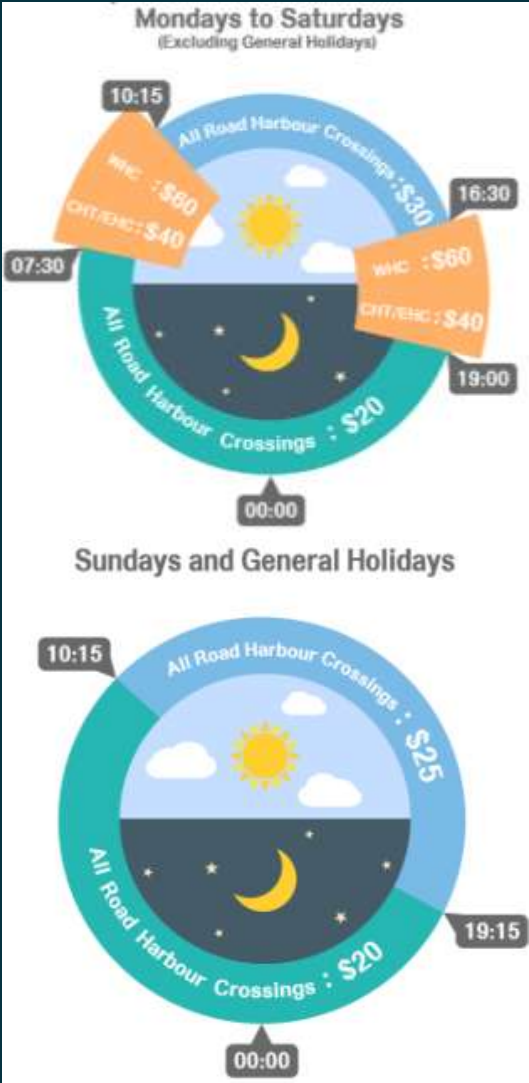


TLT



# Rationalisation of Three Road Harbour Crossings

Time-varying Toll

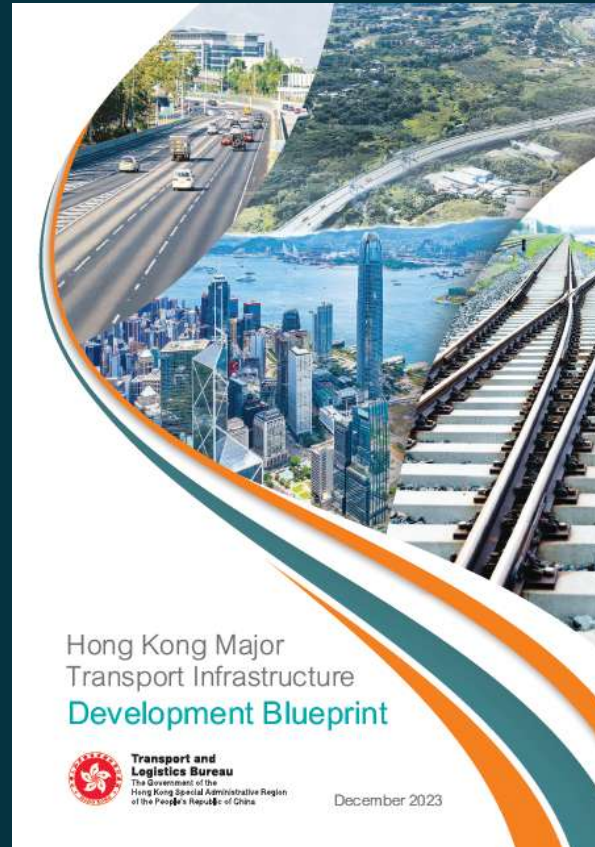




# Policies & Studies



**Conceptual Spatial Framework  
for Hong Kong 2030+**



**Railways & Major Roads  
beyond 2030**

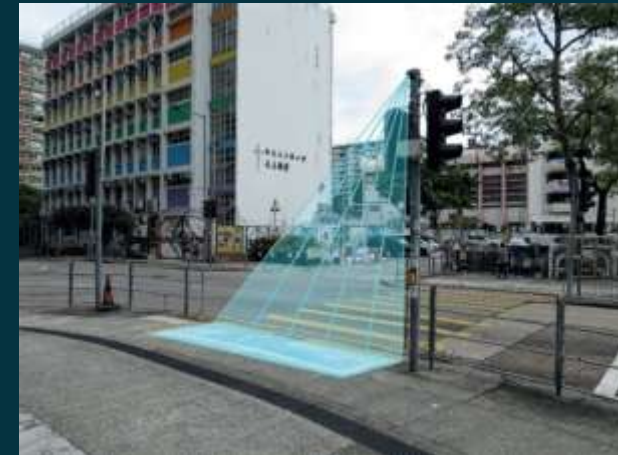


**Long-term  
Traffic & Transport Strategies**

# Smart Mobility Initiatives in Hong Kong



# Junctions – Real-time Adaptive Traffic Signal System (RTATSS)



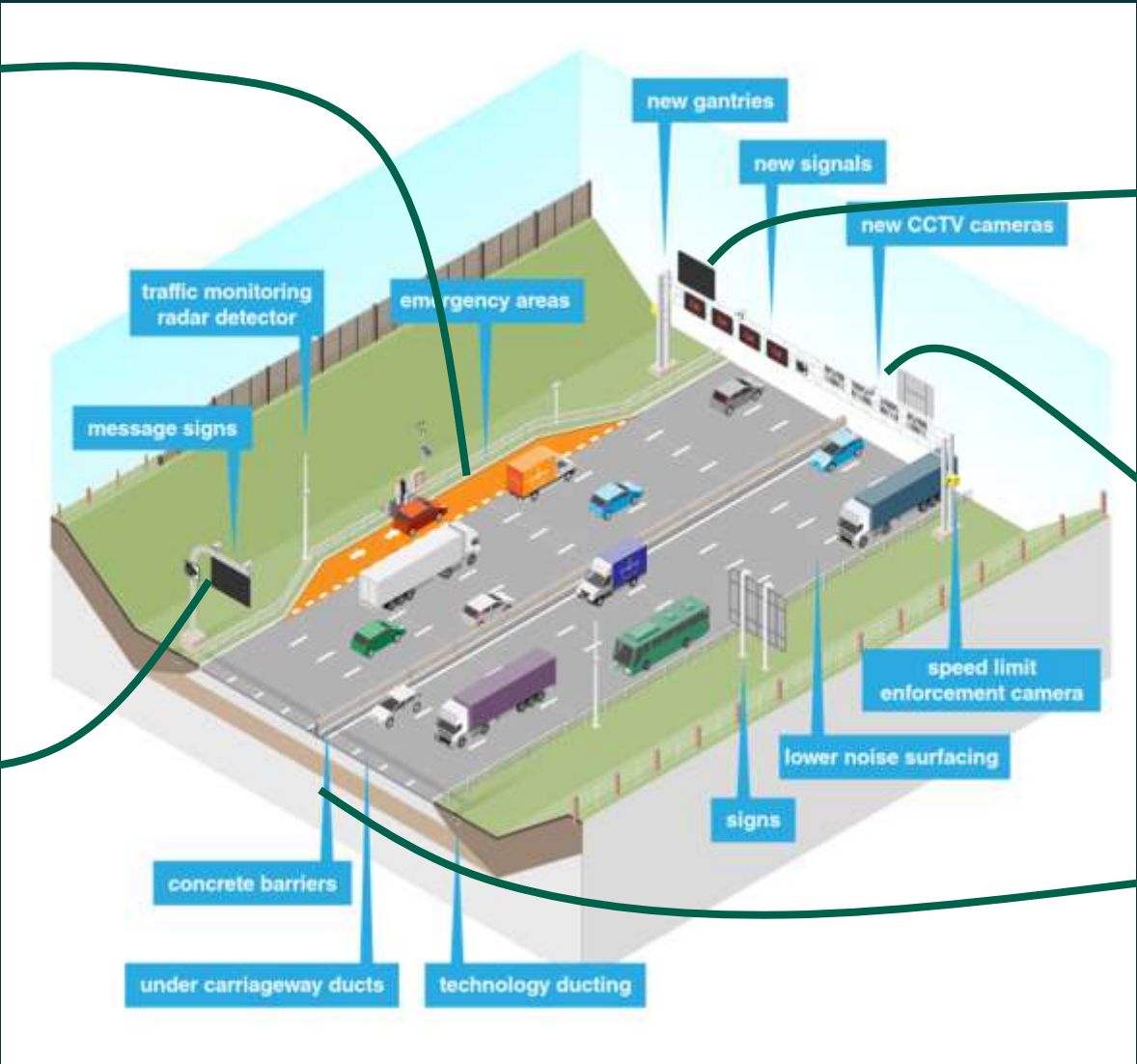
Source: Transport Department

# Highways – Smart Motorways

Emergency Area



Message Signs (Dynamic Rerouting/Queue Warning)



Variable Speed Limit & Temporary Use/Closure of Lane/Shoulder



CCTV Cameras



Motorway Incident Detection & Automatic Signaling Sensors



# Airport City Link – Autonomous Transportation System



Source: Islands District Council

# Smart and Green Mass Transit Systems in New Development Areas



Sky Shuttle



Source: BYD

Autonomous Rail Rapid Transit (ART)



Source: CRRC

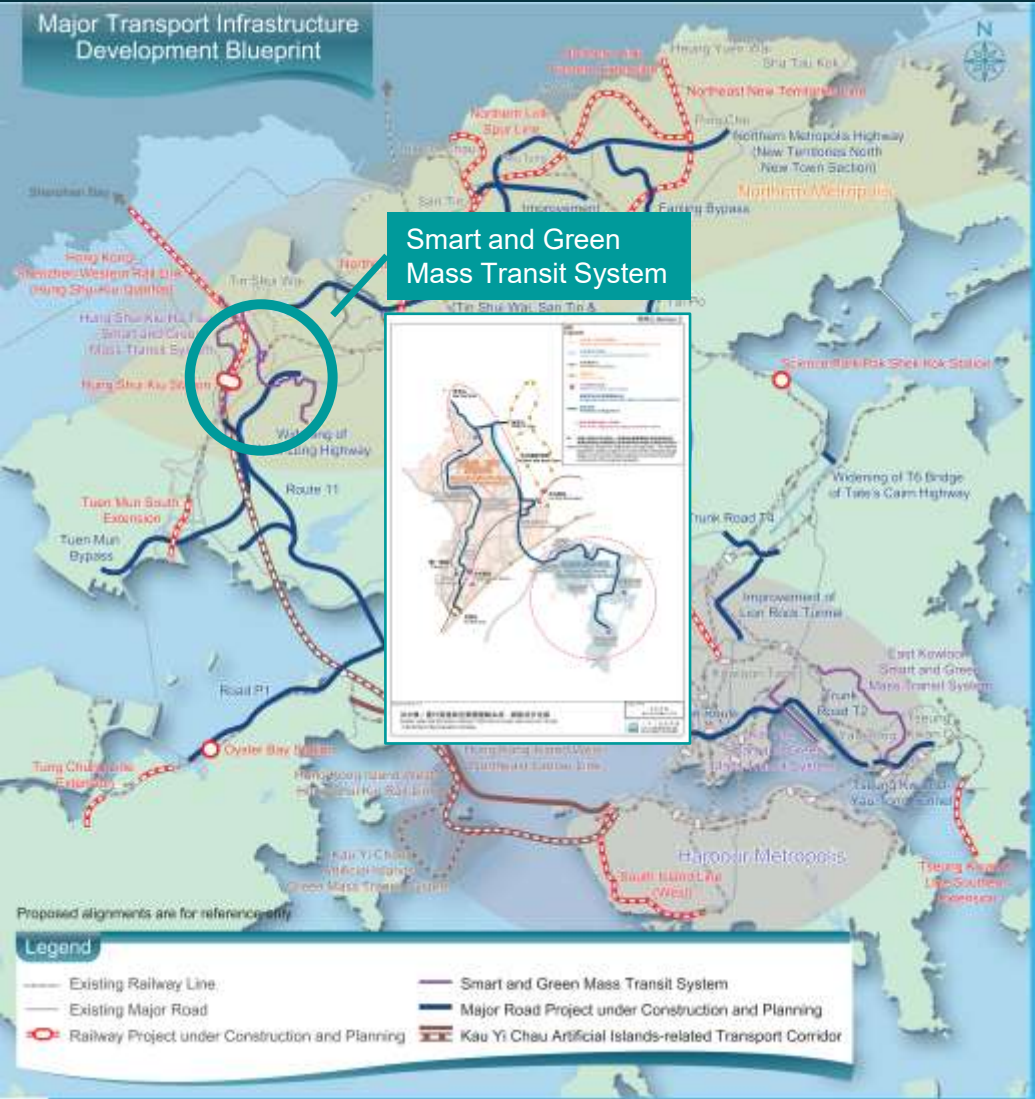
Bus Rapid Transit (BRT)



Source: TransLink



# Smart and Green Mass Transit Systems in New Development Areas



Autonomous Rail Rapid Transit (ART)



# Hong Kong AV Trial in Fairview Park, Yuen Long

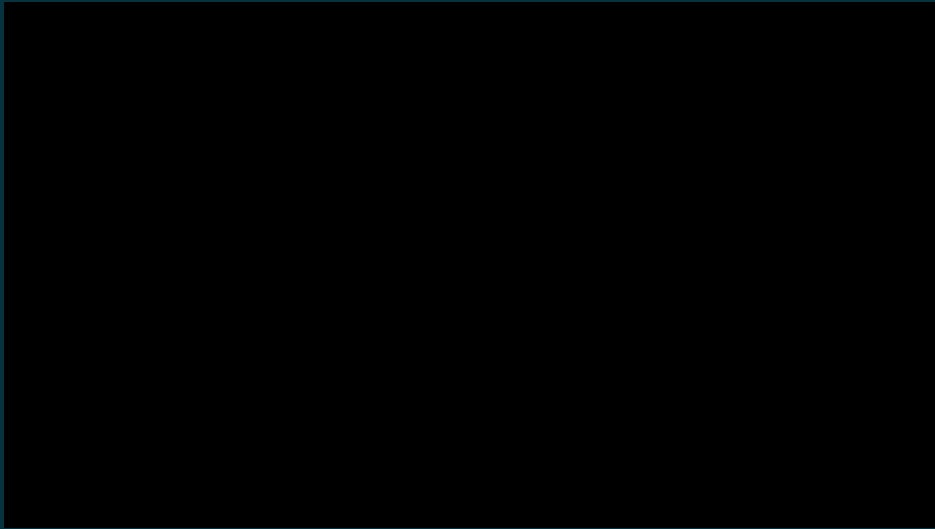


Source: news.gov.hk, South China Morning Post



# Advanced Air Mobility (AAM) in Hong Kong

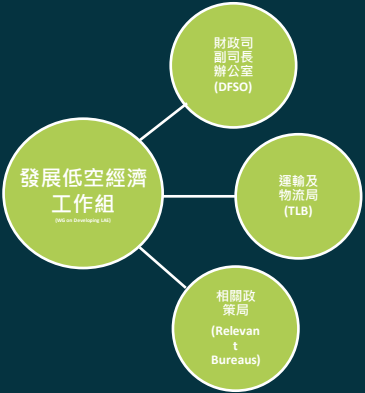
# Visits to eVTOL Manufacturers in Mainland China





# AAM and Low-altitude Economy (LAE) in Hong Kong

Chief Executive's 2024 Policy Address



Pilot Projects

Amending Legislation & Regulation

Construction of Relevant Infrastructure

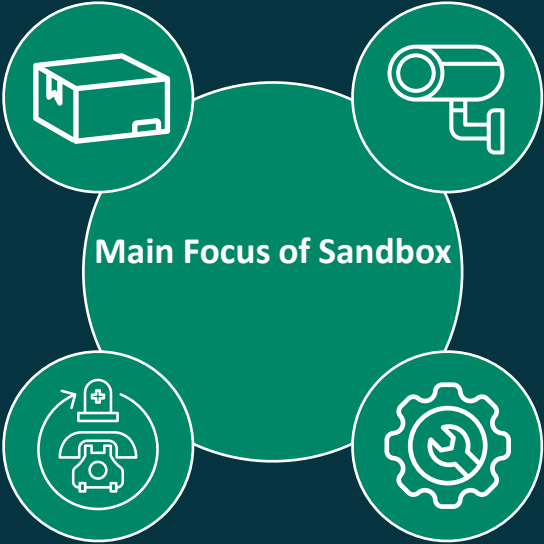
Interface with the Mainland

LAE Regulatory Sandbox Launched in March 20th



Cargo Delivery

Surveillance



Legislation Amendments for Sandbox & LAE Activities

- Facilitate UAV operations weighing **between 25kg & 150kg**
- Facilitate **trials of non-conventional aircraft** (e.g. eVTOL)

Emergency Response & Relief

Safety & Maintenance

# Low-altitude Economy Applications

Air Taxi / Ride-sharing



Source: Autoflight

Commercial Delivery



Source: Meituan

Aerial Tourism



Source: EHang

Fire-fighting



Source: EHang

Emergency Medical Service



Source: Vertical

Search & Rescue



Source: BETA / Bristow



# AAM in Mainland China and Hong Kong – Recent Developments

## EHang EH-216S 億航智能 EH-216S

World's First  
**Type Certificate,**  
**Production Certificate**  
& **Airworthiness**  
**Certificate**

Commercial Flight  
**Demonstrations**  
and **Deliveries**

Partnership with KC  
Smart Mobility (冠忠智  
慧出行) for **Hong**  
**Kong** and Macau on  
19 July 2024

MoU with **Cyberport**  
for Hong Kong LAE  
on 9 Dec 2024



TC

PC

AC



## AutoFlight PROSPERITY I / CarryAll V2000CG 峰飛航空 盛世龍 / 凱瑞鷗

Obtained **Type**  
**Certificate** for its  
Cargo-variant

Demonstrated first **air**  
**taxi trial** between two  
GBA cities on 27 Feb  
2024

First to trial at  
**Shanghai Pudong**  
**Airport** on 13 May  
2024

CarryAll V2000CG  
for **Production**  
**Certificate** on 26 Jan  
2025



# Latest Developments in Shenzhen

## Construction Plan for Shenzhen Low-Altitude Facilities

### Low-altitude Infrastructure Network



Source: Shenzhen Municipal Transportation Bureau



>1,200 by the end of 2026

### Low-altitude Airspace Collaborative Management



Source: Wenweipo, IDEA 研究院

World's First Intelligent Integrated Low-altitude System –  
“The Low-altitude Brain”

### Low-altitude Operation Management Service System



Source: Shenzhen Special Zone Daily

Shenzhen **Low-Altitude Operations HQ** within the Shenzhen airport area



# Thank you!



Ir Steven Lui  
[Steven.Lui@aeacom.com](mailto:Steven.Lui@aeacom.com)

**AECOM** Delivering a  
better world

