Bright Lights, Future City

Can a lamppost transform Hong Kong?

The government here certainly hopes so. In December it released the long-awaited Smart City Blueprint outlining the innovation and technology goals and strategy for a happier, healthier and more competitive Hong Kong.

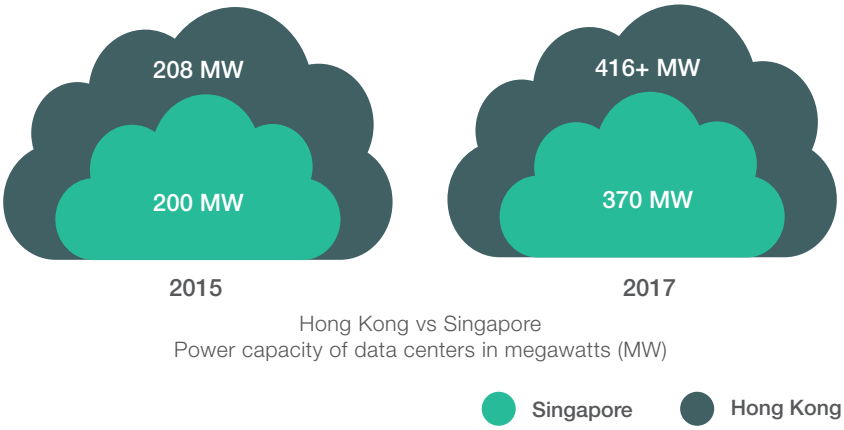
Speaking to a packed house in PwC's Wanchai Experience Center, Government Chief Information Officer Allen Yeung was keen to emphasize that what fuels the beating heart of any successful "smart city" is data – specifically in Hong Kong's case, the data that's running through submarine cables like blood through veins.

"Smart" Hong Kong, Yeung told his audience, has three layers:

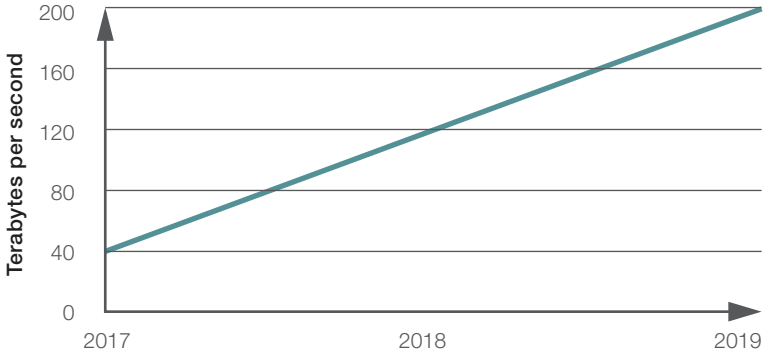
"The first is its global interconnectivity, which puts it at the center of many important connection points. Eleven to 12 undersea cables are currently being built, and data throughput has already doubled this year. Hong Kong currently hosts 40 terabytes per second in terms of throughput, but when Google and Facebook's cables go live, this will triple… Another cable planned to go live in 2019 will put it at over 200 terabytes per second.

AmCham hosted an early-morning discussion session with Government Chief Information Officer Allen Yeung at PwC's brand-new Experience Center in Wanchai on January 12. Leonie Valentine, Managing Director of Sales and Operations at Google Hong Kong moderated the lively session, with PwC's head of Emerging Technologies and New Services Scott Likens.

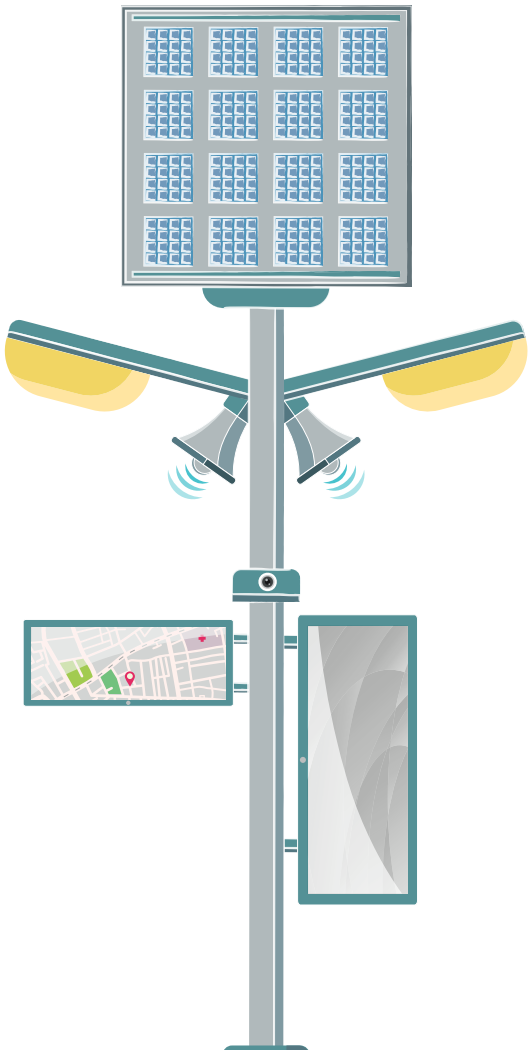
At Full Capacity: The Data Center



Global interconnectivity: submarine cables



The Application: Multifunctional "Smart" Lamp posts



Wi-Fi, mobile

App-based wireless control

Environmental sensing
(air quality, noise)

Digital street sign

Water level / Flood monitoring

Smart lighting
- LED
- Photocell control
- 0-100% dimming
- On-demand lighting

Image sensing
- Proximity
- Pedestrian counter
- Parking monitoring
- Public security

Digital Signage
- Way finding
- Traffic direction
- Civic info
- Revenue potential

Push-to-talk system
('blue-light' services)

eVehicle / eBike charging

Source: European Innovation Partnership on Smart Cities and Communities (EIP-SCC)

“Along with the public and private sector, a simple project like this would all of a sudden engage 10 different civil departments.”

“This is actually more activity than Hong Kong alone can consume. The city is a regional hub through which data can go in and out within a short period of time. This is very important for the financial sector, as the short latency time translates into a lot of money.

“The second layer is the data center. The data will arrive, but you need enough capacity to store it. We are pleased to see two new data centers being built this year, which will double Hong Kong’s capacity.

“But the third and final layer is the most important. It is how we apply the data to managing the city.”

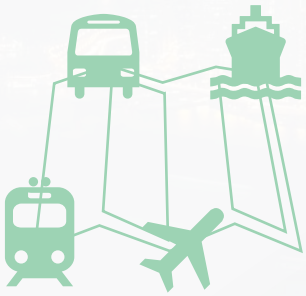
Enter the multifunctional “smart” lamppost. In addition to keeping our streets lit at night, this humble device will soon be collecting real-time data about Hong Kong’s weather, pollution, traffic flow and security footage; data the government hopes will transform the way we manage our city by enabling us to react and respond much faster to issues as they arise.

This basic application of smart technology may be a small step forward, but to pull it off will require a fundamental shift in Hong Kong – both in practices and in mindset.

“Along with the public and private sector, a simple project like this would all of a sudden engage 10 different civil departments – e.g. the Environment Bureau, the Tourism Board, the Transport Department, etc. – to work together towards a common goal,” says Yeung.

Smart government, Yeung said, is a relatively new concept for Hong Kong – cue gentle laughter from the audience – but it’s clear that it’s just what the city needs to smarten up.

City of



Mobility

- Intelligent transport system and traffic management
- Develop more pedestrian and bicycle-friendly routes
- Smart airport

Living

- Wi-fi connected city
- Wide availability of digital payment options
- Technology-enabled healthcare and elderly support

Environment

- Green and energy efficient buildings
- Sustainable waste management
- Pollution monitoring

Smarts

What will it take to build Hong Kong into a worldclass smart city? The Blueprint lays out instructions in six key areas: Mobility, Living, Environment, People, Government and Economy

People

- Encourage education in STEM subjects
- Promote an innovative and entrepreneurial culture

Government

- Provide open access to public data
- Fund smart city infrastructure
- Support adoption of technology

Economy

- Promote a sharing economy
- Leverage innovation and technology to strengthen Hong Kong's current economic pillars (finance & tourism)
- Develop new economic pillars

Source: HKSAR Government Smart City Blueprint