

Legislative Council Panel on Development
Paper No. CB(1)909/20-21(06)
Development of Government-Wide Internet-of-Things Network (GWIN)
to Enhance City Management

Regarding the questions about the captioned paper from Hon. Tony TSE Wai-chuen to the Chairman of the Panel on Development dated 26 May 2021, the response from the Administration is as follows:

The expenses on the development of Government Wide Internet of Things (IoT) Network (GWIN) in the past three years

2. In the past three years, the expenses on the development of Government Wide Internet of Things (IoT) Network (GWIN) are mainly for the gateways deployment at Shatin District and Kowloon East. Such expenses are funded by the EMSTF and are listed below.

Expense Item	FY18-19 Expenses (HK\$ in Million)	FY19-20 Expenses (HK\$ in Million)	FY20-21 Expenses (HK\$ in Million)	Total Expenses (HK\$ in Million)
Shatin District	1.0	0.5	-	1.5
Kowloon East	-	1.2	0.8	2.0
Total (by Financial Year)	1.0	1.7	0.8	3.5

Tree monitoring data

3. The tree monitoring pilot scheme is currently in testing stage, thus there are no related data for the time being.

The operation and cost of the Smart Toilet System, and the distribution of the 17 Smart Toilets

4. The Internet-of-Things technology will be applied to the smart toilet system with various non-video based sensing devices deployed in the toilet for various purposes in order to collect real-time data, including people flow, cubicle usage, air quality, consumable usage, operational status of the electromechanical equipment, etc. All data will be stored, handled and analyzed through the GWIN to monitor the usage and the operational condition of the toilet such that the efficiency for management of the toilet, as well as the quality of the service, could be improved.

5. The development cost of a smart toilet system (including the related sensing devices, equipment and the integrated software platform) will vary depending on the area of the toilet, the scale of facilities provided therein, the system requirements, etc. Taking a medium-sized toilet (4 cubicles & 4 urinals for a male toilet and 8 cubicles for a female toilet) as an example, the cost is around HK\$510,000.

6. The 17 public toilets include 10 public toilets managed by the Food and Environmental Hygiene Department and 7 public toilets inside Kowloon Park managed by the Leisure and Cultural Services Department.

FEHD’s Public Toilets
<ul style="list-style-type: none"> (1) Canal Road PT (Wan Chai District) (2) Tsim Sha Tsui Ferry Concourse PT (Yau Tsim District) (3) Tak Wan Park PT (Tsuen Wan District) (4) Tong Shui Road PT (Eastern District) (5) Apliu Street PT (Sham Shui Po District) (6) Chuen Lung Village PT (Tsuen Wan District) (7) Po Lo Che Road PT (Sai Kung District) (8) Ho Sheung Heung Old Village PT (II) (North District) (9) Fuk Hang Tsuen PT (Tuen Mun District) (10) Old Peak Road (Central & Western District)
LCSD’s Public Toilets
<ul style="list-style-type: none"> (1) Kowloon Park (Maze Garden) (2) Kowloon Park (Bird Lake) (3) Kowloon Park Sports Centre (4) Kowloon Park Swimming Pool (5) Kowloon Park (Discovery Playground) (6) Kowloon Park (Piazza) (7) Kowloon Park (Arcade)

The operation and cost of the development of a testing system and smart wearable devices for tracking of hikers

7. The pilot project will include the development of a testing system and smart wearable devices (e.g. wristbands) to study the technical feasibility of using GWIN to improve the location tracking of hikers in remote areas with weak or no mobile network coverage. The wearable device can directly connect either to the GWIN or to the mobile network by pairing with a mobile phone via Bluetooth technology, so as to upload, at regular interval, the user's location data to the central system. If the user is found lost, the historical location records can help the rescue team quickly locate him/her in the search and rescue operation, thereby improving the chance and speed of rescue.

8. The development cost of the pilot project (including the related wearable devices, mobile application and the integrated software platform) is around HK\$1 million. We will provide the system to the Hong Kong Fire Services Department and the Civil Aid Service for trial use at the Plover Cove Reservoir Country Trail in the pilot project. Further deployment will be considered when the application has been proven.

Development Bureau
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