

ITEM FOR FINANCE COMMITTEE

CAPITAL WORKS RESERVE FUND

HEAD 710 – COMPUTERISATION

Office of the Government Chief Information Officer

New Subhead “Upgrading ‘iAM Smart’ to Realise ‘Single Portal for Online Government Services’”

Members are invited to approve the creation of a new commitment of \$193,376,000 under Capital Works Reserve Fund Head 710 – Computerisation for the upgrade of the “iAM Smart” platform.

PROBLEM

The Chief Executive announced in his 2022 Policy Address the initiative to expedite the building of a smart government, including turning all government services online in two years (i.e. by 2024) and providing one-stop digital services by fully adopting “iAM Smart” within three years (i.e. by 2025), so as to realise the goal of “single portal for online government services”. Moreover, key performance indicators for the promotion of “iAM Smart” are also set out in the 2022 Policy Address, aiming to increase the annual usage (total transactions) of “iAM Smart” from 5 million times in 2021 to 17.5 million times in 2025.

PROPOSAL

2. The Government Chief Information Officer, with the support of the Secretary for Innovation, Technology and Industry, proposes the creation of a new commitment of \$193,376,000 for the comprehensive upgrade of the “iAM Smart” platform.

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JUSTIFICATION

3. Currently, the system design of “iAM Smart” focuses on the provision of a digital identity authentication function for online services. To achieve the goals set out in the Policy Address, the Office of the Government Chief Information Officer (OGCIO) has to upgrade the “iAM Smart” platform comprehensively in every aspect, from system infrastructure, functionalities, integration with systems of government bureaux and departments (B/Ds), to mobile app design and functions, etc. In addition, OGCIO also has to enhance the capacity, performance and security of “iAM Smart” in response to the anticipated increase of service demand. OGCIO expects the upgrade of the “iAM Smart” platform will be completed in phases from 2024 to 2025.

Upgrade System Design and Functions

4. We will upgrade the design and functions of the “iAM Smart” mobile app, enabling citizens to gain access to a series of information related to daily lives without the need to register for an “iAM Smart” user account. Such information includes travelling information (including the latest weather and traffic condition), food safety and hygiene information, government announcements, policies and measures in relation to people’s livelihoods and commonly-used service catalogues.

Organise Service Categorisation and Streamline Workflow

5. We will set up dedicated pages to bring together a series of commonly-used government service applications, enquiries and information for providing more unified services and allowing citizens to search and gain access to the required government services more conveniently. We plan to organise service categorisation from a citizen-centric perspective, based on specific themes closely related to daily lives (e.g. education, transport, tourism and immigration) and the needs among different age groups (e.g. the youth and the elderly), in order to allow citizens to search and gain access to the required services more easily.

6. In addition, we propose to provide a “one-tap login” function, allowing citizens to access some commonly-used government services with their “iAM Smart” accounts directly, instead of just logging into the portals provided by the B/Ds, so as to facilitate their browsing of personal account information or submission of information instantly through “e-ME”. Citizens will be able to opt for a one-off authorisation through “iAM Smart” to retrieve their personal data collected by different B/Ds for performing automatic form-filling by means of “e-ME” functions when submitting applications for other government services,

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so as to obviate the need to input or submit the same information repeatedly. Through the “Consented Data Exchange Gateway” (CDEG), citizens can also browse their personal information recorded at different government service platforms via the “iAM Smart” mobile app in a convenient and effective manner.

Optional Additional Identity Authentication Service

7. We will provide an additional facial recognition authentication function which users may opt to use according to their needs. With user’s consent, the facial template of the user which has been matched successfully with the record in the Immigration Department will be stored by “iAM Smart” for enabling the verification with the selfie taken by a mobile phone before conducting critical online transactions so as to further strengthen user identity authentication.

Optimise Registration Services

8. Apart from the existing 40 self-registration kiosks set up across the territory and nearly 120 registration counters located at post offices, about 60 additional self-registration kiosks will be set up to further facilitate citizens to register for “iAM Smart”. In order to further expand the user-base across different sectors, we will target citizens of different age groups when promoting and publicising “iAM Smart”. In addition, we will collaborate with district bodies and organisations to strengthen the promotion of “iAM Smart” at the district level, including reaching out to the community with district bodies to address the needs of different social groups to promote “iAM Smart” and assist them in account registration.

9. We also plan to simplify the self-registration process. Currently, citizens are required to scan the Hong Kong Identity Card (HKID Card) from three different angles to verify its authenticity for “iAM Smart” account registration via the mobile app. Without compromising the accuracy of identity verification, we plan to reduce the requirements of taking multiple photos of the HKID Card as far as possible.

Strengthen Technical Support for the Industries

10. We will set up a one-stop integrated service portal to centrally process all applications and enquiries from different industry sectors of the “iAM Smart” Sandbox Programme, thereby assisting online service providers in implementing their services in a more effective manner. Through this cross-sectorial portal, online service providers in Hong Kong as well as the Greater Bay Area (GBA) can readily obtain technical support, technical documents, training materials and the latest information related to “iAM Smart”, which will help the industries expedite the development process of adopting “iAM Smart” in their services.

/Strengthen

Strengthen the Capacity, Performance and Security of “iAM Smart”

11. As a critical personal digital identity infrastructure, “iAM Smart” has to keep abreast of the times through enhancing the overall system performance and security, so as to defend against new cyber threats such as phishing, deepfake technology and mobile device vulnerability intrusion. We will introduce log analytics and monitoring technologies enabled by artificial intelligence to assist in the daily operation management of the “iAM Smart” platform. Abnormality detection and system management will be conducted in a highly automated and efficient manner to proactively identify actual or potential system issues and to facilitate prompt and proper actions. At the same time, system capacity will be expanded to cope with the increasing service demand.

Expected Benefits

12. By upgrading the “iAM Smart” platform, we will adopt a more systematic organisation and categorisation approach to integrate the existing e-government services which are more commonly used and simplify the access procedures, so as to provide one-stop e-government services to enhance user experience and achieve the goal of “single portal for online government services”.

13. After optimising the “iAM Smart” registration process and increasing the number of self-registration kiosks, citizens will be able to register for “iAM Smart” with their mobile phones or by visiting the self-registration kiosks in different districts more conveniently. The upgraded “iAM Smart” mobile app will provide incentives to attract more citizens to download and familiarise themselves with the use of the “iAM Smart” mobile app, and then register for an “iAM Smart” user account so as to enjoy a wider array of online services conveniently. The organised service categorisation will allow citizens to search and gain access to the required services more easily.

14. The new “one-tap login” and additional identity authentication functions will allow citizens to directly access some commonly-used government services with an “iAM Smart” user account as well as conducting online services which require more stringent identity authentication. At the same time, these functions will bring about new opportunities for service providers.

15. After obtaining the one-off authorisation from citizens through “iAM Smart”, government departments will be able to perform data exchange with CDEG, so that citizens will not need to input or submit the same information repeatedly to gain access to government online services via “iAM Smart”. Besides, citizens may also browse their relevant personal information stored at different government service platforms more conveniently.

16. The upgraded “iAM Smart” will also strengthen the support to the industries. Online service providers in Hong Kong and the GBA can readily obtain technical support and the latest information related to “iAM Smart”, which will facilitate different industries to develop more convenient and innovative applications. They may also be able to develop services that are convenient and beneficial to the public, thus promoting the development of digital economy.

FINANCIAL IMPLICATIONS

Non-recurrent Expenditure

17. We estimate that the implementation of the proposal above will incur a non-recurrent expenditure of \$193,376,000 from 2023-24 to 2026-27. The indicative cost breakdown and estimated cash flow requirements by financial year are as follows –

| | 2023-24 | 2024-25 | 2025-26 | 2026-27 | Total |
|--|----------------|----------------|----------------|----------------|----------------|
| | \$'000 | \$'000 | \$'000 | \$'000 | \$'000 |
| (a) Hardware | 416 | 5,312 | 2,400 | - | 8,128 |
| (b) Software | 21 | 667 | 7,000 | - | 7,688 |
| (c) System Implementation Services | 37,364 | 43,804 | 37,192 | 10,800 | 129,160 |
| (d) Contract Staff | 9,488 | 9,832 | 6,853 | 2,548 | 28,721 |
| (e) Site Preparation | - | 1,050 | 1,050 | - | 2,100 |
| Sub-total | 47,289 | 60,665 | 54,495 | 13,348 | 175,797 |
| (f) Contingency | - | - | - | 17,579 | 17,579 |
| Total | 47,289 | 60,665 | 54,495 | 30,927 | 193,376 |

18. On paragraph 17(a) above, the estimate of \$8,128,000 is for the procurement of computer hardware, including hardware security modules, self-registration kiosks, mobile devices and computers required for testing new systems and functions.

19. On paragraph 17(b) above, the estimate of \$7,688,000 is for the procurement of computer software, including log analytics software, mobile device management software, client software for hardware security modules and platform service software for supporting online service providers.

20. On paragraph 17(c) above, the estimate of \$129,160,000 is for the acquisition of services from service providers to carry out system analysis and design, development, testing, installation and support services. The cost also includes the acquisition of consultancy services in collaboration with the Efficiency Office to organise user experience and interface design workshops as well as for the integration of B/Ds' online services, etc. In addition, the cost includes the conduct of security risk assessments and audits at different stages of system implementation.

21. On paragraph 17(d) above, the estimate of \$28,721,000 is for hiring contract IT staff who have the relevant technical skills and experience to assist in project implementation.

22. On paragraph 17(e) above, the estimate of \$2,100,000 is for site preparation, including the installation work at the self-registration kiosk sites and the procurement of site-specific facilities.

23. On paragraph 17(f) above, the estimate of \$17,579,000 represents a 10% contingency on the items set out in paragraph 17 (a) to (e) above.

24. We obtained the funding approval from the Finance Committee (FC) for the non-recurrent expenditure incurred from implementing the eID (now named as "iAM Smart") system in 2018^{Note}, which was mainly used for the procurement of software and hardware, system development and implementation services, etc. The funding request in this proposal will be mainly used for optimising the overall design and upgrading the functions of the existing "iAM Smart" platform. The expenditure of this project is mainly on the "System Implementation Services" item mentioned in paragraph 20 above, which includes the collection and analysis of user experience, a comprehensive enhancement on interface design and the streamlining of operation procedures, as well as the support for B/Ds on developing more services that are convenient and beneficial to the public, so as to respond to citizens' aspirations.

/Other

^{Note} The non-recurrent expenditure for the implementation of the eID system in 2018 was \$112,000,000, including hardware (\$19,100,000), software (\$30,600,000), system implementation services (\$34,000,000), contract staff (\$16,600,000), site preparation (\$500,000) and a contingency sum (\$11,200,000).

Other Non-recurrent Expenditure

25. During project implementation, OGCIO will create six time-limited civil service posts responsible for upgrading “iAM Smart” and coordinating with B/Ds on the integration work, etc. The non-recurrent expenditure involved is around \$17,706,000 from 2023-24 to 2025-26, which will be included in the estimates of OGCIO in the relevant financial years.

Recurrent Expenditure

26. We estimate that the additional recurrent expenditure incurred from this project will be about \$19,376,000 per annum from 2026-27 onwards for OGCIO to operate, maintain and support the additional infrastructure and services arising from the upgrading of the “iAM Smart” platform. Relevant provisions will be included in the estimates of OGCIO in the relevant financial years to meet the requirement.

27. Regarding stakeholders’ concern on whether the Government will impose charges on commercial organisations for their adoption of “iAM Smart”, we will review the operation of the “iAM Smart” platform at a suitable juncture, including the usage, the number of commercial organisations and their online services adopting “iAM Smart” and the operating expenditure of the platform, and whether charging a fee will affect the extensive adoption of “iAM Smart” in the commercial sector, before arriving at a decision on the relevant arrangement.

IMPLEMENTATION PLAN

28. Subject to funding approval of the FC, we plan to implement the “iAM Smart” upgrading project according to the following schedule –

| | Target Implementation Schedule |
|--|---|
| (a) Conducting the tendering exercise | 3rd Quarter of 2023 |
| (b) Upgrading of the “iAM Smart” system design and functions | end 2024 |
| (c) Other enhancements (e.g. optimising the registration procedures; setting up additional self-registration kiosks; strengthening the capacity, performance and security of the system; and strengthening technical support for the industries) | end 2025 |

29. We will provide support to B/Ds, including providing technical standards and guidelines and strengthening the collaboration with and technical support for B/Ds, to drive their full adoption of “iAM Smart” and ensure that their current online services can be enhanced and integrated into the upgraded “iAM Smart” platform in a timely manner. We expect that the enhanced government online services will be rolled out in phases from 2024 onwards, and the goal of “single portal for online government services” will be realised in 2025.

PUBLIC CONSULTATION

30. We briefed the Legislative Council Panel on Information Technology and Broadcasting on the above proposal on 20 March 2023. Members supported the submission of the proposal to the FC for funding approval.

BACKGROUND

31. “iAM Smart” provides Hong Kong residents with a single digital identity, allowing members of the public to login to various government and commercial online services with a reliable identity verification function, conduct online transactions and perform digital signing with legal backing in a simple and secure manner. Since the launch of the “iAM Smart” platform in December 2020, over 270 online services provided by the Government as well as public and private organisations have adopted “iAM Smart”. Over 1.9 million Hong Kong residents have registered for “iAM Smart”, with over 36 million accesses to different online services through “iAM Smart”.

Innovation, Technology and Industry Bureau
Office of the Government Chief Information Officer
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