

ITEM FOR FINANCE COMMITTEE

CAPITAL WORKS RESERVE FUND

HEAD 710 – COMPUTERISATION

Inland Revenue Department

New Subhead “Enhancement and Relocation of Information Technology Systems and Facilities of the Inland Revenue Department”

Members are invited to approve the creation of a new commitment of \$742,463,000 for the enhancement and relocation of information technology systems and facilities of the Inland Revenue Department for the new Inland Revenue Tower in the Kai Tak Development Area.

PROBLEM

The Inland Revenue Department (IRD) needs to re-provision its information technology (IT) systems and facilities for the new Inland Revenue Tower (IR Tower) in the Kai Tak Development Area to tie in with office relocation by late 2022/early 2023. IRD will also upgrade its IT infrastructure to enhance processing capacity and strengthen the provision of electronic services (e-services) to the public.

PROPOSAL

2. The Commissioner of Inland Revenue, with the support of the Secretary for Financial Services and the Treasury and the Government Chief Information Officer, proposes to create a new commitment of \$742,463,000 to enhance and relocate the IT systems and facilities of IRD.

/JUSTIFICATION

JUSTIFICATION

Challenges and Limitations

3. The Finance Committee (FC) approved a commitment of \$3.6 billion in April 2018 for the design-and-build project for building the new IR Tower in the Kai Tak Development Area. The office relocation of IRD will take place by late 2022/early 2023. Under the relocation plan, computer rooms for hosting servers and network facilities will be established in the new IR Tower. Besides, more than 40 IT application systems, 3 500 personal computers, 3 200 local printers and 360 network printers have to be relocated and re-provisioned in the new IR Tower. To minimise service interruption to the public during the relocation, these enhancements will be conducted by phases.

4. In addition, IRD commissioned a consultancy study on the Departmental IT Plan (the DITP study) in August 2018 which was completed in June 2019. After reviewing the current state of use of IT in IRD and its business needs, the DITP study sets out the blueprint on IRD's IT strategy in the coming decade. It has identified the following challenges and limitations for modernising the tax administration in Hong Kong –

(a) *International Tax Standard Compliance*

As a member of the Global Forum on Transparency and Exchange of Information for Tax Purposes¹, Hong Kong is committed to implementing the international standards of exchange of information (EoI) in different modes to enhance tax transparency and prevent tax evasion. In the peer reviews on EoI on request conducted in 2018, the Organisation for Economic Co-operation and Development (OECD) recommended that Hong Kong should take measures to ensure that accounting records of all relevant businesses are available. Taking forward the OECD's recommendation will involve the issuance of a large number of profits tax returns² and processing of voluminous accounting and financial data. This has necessitated the full adoption of electronic filing (e-filing) of profits tax returns for businesses. The existing IT infrastructure of IRD cannot support this move given its very limited data uploading capacity.

/(b)

¹ It is a multilateral framework under the auspices of the Organisation for Economic Co-operation and Development and G20.

² To best deploy the limited resources of IRD, Profits Tax Returns are issued every two to three years, instead of annually, to businesses which have suffered losses continuously or did not have profits chargeable to tax in the past.

(b) *Limitations in the eTAX System*

The eTAX System was launched in 2008 for providing e-filing of tax returns for individuals and other e-services such as business registration and e-stamping of instruments for immovable property transactions. Although more e-services have been added to the eTAX System over the years³, it cannot cater for the needs of certain groups of taxpayers, notably tax representatives who handle taxation matters on behalf of their clients. IRD plans to enhance the eTAX System so as to provide more dedicated e-services to different groups of users.

(c) *Limitations in Automation of Processing and Digitalisation*

Operations of IRD are still largely paper-based and involve manual procedures as a large number of taxpayers prefer filing tax returns in paper form. In particular, tremendous manpower resources are required in handling paper copies of financial statements and other related documents for profits tax returns. The existing Workflow Management System (WMS) of IRD does not include features for cross-unit communication and hence creates unnecessary lead time due to the manual transfer of information. It is therefore imperative to upgrade and extend IRD's current IT infrastructure and the provision of e-services in order to facilitate a higher adoption rate of e-filing by taxpayers and to integrate a full-scale WMS.

Besides, all IT systems of IRD are server-based and hence encounter technical constraints in meeting the changing business needs of the department in future. To modernise and further digitalise the tax administration in Hong Kong, it calls for migration to cloud technology to reap the benefits of scalability, efficiency, improved system stability, reliability and security.

Proposed System Development and Modifications

5. The DITP study recommended that IRD should upgrade its front-end gateway to strengthen the e-filing services for (i) profits tax returns of businesses; (ii) tax returns of individuals; and (iii) tax representatives. IRD should also undertake system revamp leveraging on cloud services to facilitate digital transformation in future. IRD therefore proposes to implement the following system development and modifications by phases starting from 2020-21 –

/(a)

³ Such e-services include e-filing of Profits Tax Returns, Employer's Returns of Remuneration and Pension (Employer's Return) and Property Tax Returns, e-registration of stock borrowing and lending agreements, etc.

- (a) to develop a Business Tax Portal to facilitate submission of tax returns by businesses together with accounting and financial data;
- (b) to replace the eTAX System with an Individual Tax Portal with enhanced functionalities for individual taxpayers (details in paragraph 7 below);
- (c) to develop a Tax Representative Portal to enable tax representatives conducting e-transactions on behalf of their clients, both individuals and businesses;
- (d) to leverage cloud services to accommodate all of IRD's systems after office relocation; and
- (e) to extend the application of workflow technology for improving IRD's internal communication and work efficiency.

6. In addition to the above system development and modifications, IRD will need to relocate and re-provision IT infrastructure and facilities to the new IR Tower.

Benefits

7. The above proposal will bring about the following benefits to IRD and its stakeholders –

(a) *Better User Experience*

Existing e-services will be improved, for example, more streamlined e-filing processes for individual taxpayers with a user-friendly design; large capacity for uploading supporting documents for businesses and employers; and faster data transactions and processing. The development of the three interconnected portals will make use of common modules and fully support the use of mobile devices with user-friendly design and login mechanism for users. With the introduction of a Tax Representative Portal, tax representatives will also be able to file returns on behalf of their clients efficiently by way of e-filing. These enhanced features will provide wider e-services with better user experience, thereby encouraging different types of taxpayers in adopting e-filing.

/(b)

(b) *Compliance with OECD's Standard*

The enhanced data processing capacity of the new portals will enable IRD to collect and process large volume of financial and accounting data, thereby facilitating the automatic processing of tax assessments with greater work efficiency as well as meeting the OECD's standard in processing the EoI requests.

(c) *Improved Scalability and Agility of IT Systems*

By adopting the Government Cloud Infrastructure Services (GCIS) provided by the Office of the Government Chief Information Officer (OGCIO), IRD can reap the benefits of Cloud computing, particularly when handling large volume of accounting, financial and tax data in the course of digital transformation. Besides, the use of GCIS will enable IRD to continue to provide e-services in case of disaster recovery, minimising disruption to public services.

(d) *Better Alignment with Government Initiative*

The Government has formulated a Smart City Blueprint for Hong Kong with a vision to building Hong Kong into a world class smart city. The "iAM Smart" platform is one of the initiatives to be launched by the OGCIO in the fourth quarter of 2020 which will provide a one-stop personalised digital government services, enabling users to conduct online government and commercial transactions with a single digital identity and authentication for the new tax portals. These upgraded functionalities will also greatly improve the attractiveness and user-friendliness of IRD's e-services.

(e) *Better Use of Departmental Resources and More Environment-friendly*

With the adoption of the GCIS, manpower demand for monitoring system performance will gradually diminish. With improved e-filing of tax returns by businesses, employers and individuals as well as wider use of automatic processing of tax assessments, IRD can save or redeploy staff resources in processing tax returns. Moreover, paper consumption will be significantly reduced, making the overall tax administration more environment-friendly.

(f) *Better Internal Communication and Greater Work Efficiency*

With the existing WMS being extended to cover more automatic workflow processes across different units in IRD, the internal communication amongst business units will be improved and lead

/time

time within business processes due to the manual transfer of information will be reduced. IRD will also consider implementing big data analytics and other innovative technologies such as robotic automation and machine learning to improve work efficiency; and conduct health check to ensure proper use of public funds on this vital IT project.

FINANCIAL IMPLICATIONS

Non-recurrent Expenditure

8. The proposal would involve an estimated non-recurrent expenditure of \$742,463,000 over a six-year period from 2020-21 to 2025-26, with breakdown as follows –

	2020-21 \$'000	2021-22 \$'000	2022-23 \$'000	2023-24 \$'000	2024-25 \$'000	2025-26 \$'000	Total \$'000
(a) Hardware	8,758	17,518	107,052	26,278	1,218	17,929	178,753
(b) Software	10,783	21,567	49,768	32,351	1,078	6,915	122,462
(c) Communication network	-	-	432	-	-	-	432
(d) Cloud services	-	3,628	3,628	15,546	15,546	-	38,348
(e) Implementation services	9,020	599	80,740	2,011	11,770	70,971	175,111
(f) Contract staff	5,508	25,158	45,816	26,901	22,696	22,696	148,775
(g) Site preparation	-	-	11,085	-	-	-	11,085
(h) Contingency	3,407	6,847	29,852	10,309	5,231	11,851	67,497
Total	37,476	75,317	328,373	113,396	57,539	130,362	742,463

Note –

- Paragraph 8(a) is for acquiring computer hardware, including cloud equipment, servers, switches, storage devices, security appliance, network equipment, system backup equipment, desktop computers and high-speed scanners.

/Paragraph

- Paragraph 8(b) is for acquiring computer software, including cloud software, operating systems, database management system, application server software, virtualisation software, desktop management software, enterprise printing software, document management software and system monitoring framework software.
- Paragraph 8(c) is for installing of the communication lines for the computer network.
- Paragraph 8(d) is for implementing services of Cloud platform installation and configuration under GCIS.
- Paragraph 8(e) is for hiring of services from external service providers to implement the project, including system analysis and design, technical consultancy, system development, installation, configuration and nursing.
- Paragraph 8(f) is for engaging contract staff to supplement in-house project management team to provide support in project planning, monitoring and conducting system acceptance tests.
- Paragraph 8(g) is for site preparation works in IRD computer rooms and IRD offices, including installation of new uninterruptible power supply and power points, network nodes, as well as the associated trunking and cabling works.
- Paragraph 8(h) represents a 10% contingency on the cost items set out in paragraph 8(a) to (g) above.

Other Non-recurrent Expenditure

9. The implementation of the proposed project will entail non-recurrent staff cost of \$244,309,000 from 2020-21 to 2025-26 for tendering, system analysis and design, managing the project and conducting acceptance tests. IRD will absorb the requirement.

Recurrent Expenditure

10. We estimate that the recurrent expenditure arising from the proposed project will be \$52,683,000 per annum from 2026-27 onwards, as follows –

	2026-27 and onwards
	\$'000
(a) Hardware and software maintenance	43,218
(b) Communication network	432
(c) Cloud services	9,033
Total	52,683

/Savings

Savings and cost avoidance

11. The implementation of the proposed project will enable IRD to save substantial expenditure for maintaining the existing IT infrastructure and ensuring continued smooth operation of the IT systems. The savings include the avoidance of a non-recurrent cost of \$46,050,000 that will otherwise be required for the upgrading of existing hardware and software. If the IT infrastructure is not enhanced and migrated to Cloud platform during the relocation of IRD's offices, IRD will not be able to modernise its tax administration and cope with increasing and changing service demands. Besides, if those outdated hardware and software are not upgraded/replaced upon office relocation, IRD's day-to-day operations in tax administration and revenue collection will be seriously jeopardised.

12. The implementation of the proposed project will bring about annual savings⁴ of \$87,372,000 from 2029-30 onwards, comprising –

(a) *Realisable savings of \$53,513,000*

The staff cost savings will be \$31,915,000 as 85 posts⁵ that can be made redundant. The savings of maintenance cost for the existing systems and equipment, paper and printing, and transportation will be \$21,598,000.

(b) *Notional savings of \$3,711,000*

These represent fragmented staff cost savings from productivity gain as a result of more efficient operations as well as reduced demand for IT support and maintenance from the new systems. They cannot be realised by deletion of posts given that they spread over various application systems but will be deployed to cover other minor enhancements that may arise in future.

(c) *Cost avoidance of \$30,148,000*

Without the implementation of the business tax portal and tax representative portal, IRD would need additional manpower and operational costs to process the increased Profits Tax Returns.

Encl. 1 13. A cost and benefit analysis for the proposed project is at Enclosure 1.

/IMPLEMENTATION

⁴ The projected recurrent savings, including realisable savings and cost avoidance, are made on the basis of high e-filing adoption rates of Profits Tax Returns, individuals' tax returns and Employers' Returns.

⁵ Comprising 35 Assistant Taxation Officers, 16 Data Processors, one Typist and 33 Clerical Assistants.

IMPLEMENTATION PLAN

Encl. 2 14. IRD plans to implement the proposed project in phases starting from June 2020 and expects full implementation by June 2025. A detailed implementation plan is at Enclosure 2.

PUBLIC CONSULTATION

15. We consulted the Legislative Council Panel on Financial Affairs on the proposal on 2 December 2019. Members were generally supportive of the proposal and raised no objection to submitting it to FC for funding approval.

BACKGROUND

16. FC approved in April 2018 a commitment of \$3.6 billion for the design-and-build project for building the new IR Tower in the Kai Tak Development Area; and construction works of the IR Tower is underway. IRD has to re-provision IT systems and facilities in the new IR Tower to tie in with the office relocation by late 2022/early 2023.

17. In order to keep pace with the latest IT development and to support the changing business requirements of the department, IRD completed the DITP study in June 2019. The DITP study sets out the blueprint on IRD's IT strategy in the coming decade and recommends that IRD should upgrade its IT infrastructure to enhance processing capacity and strengthen the provision of e-services to the public.

Financial Services and the Treasury Bureau
May 2020

**Cost and Benefit Analysis for the Enhancement and Relocation of Information Technology Systems and Facilities of
Inland Revenue Department**

	Cash Flow (\$'000)										
	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	Total
1. Non-recurrent											
- Expenditure	37,476	75,317	328,373	113,396	57,539	130,362	-	-	-	-	742,463
- Staff Cost	43,771	47,922	60,298	46,479	41,731	4,108	-	-	-	-	244,309
Total Non-Recurrent Cost	81,247	123,239	388,671	159,875	99,270	134,470	-	-	-	-	986,772
2. Recurrent											
- Expenditure	-	-	-	-	-	-	52,683	52,683	52,683	52,683	210,732
Total Recurrent Cost	-	-	-	-	-	-	52,683	52,683	52,683	52,683	210,732
Total Non-Recurrent and Recurrent Cost (A)	81,247	123,239	388,671	159,875	99,270	134,470	52,683	52,683	52,683	52,683	1,197,504
3. Savings											
- Realisable Savings ^{Note 1}	-	-	-	6,535	6,535	26,660	28,144	29,629	31,115	53,513	182,131
- Notional Savings ^{Note 2}	-	-	-	-	-	2,037	2,395	2,640	3,031	3,711	13,814
- Cost Avoidance ^{Note 3}	-	-	-	-	-	72,916	27,576	28,355	29,211	30,148	188,206
Total Savings (B)	-	-	-	6,535	6,535	101,613	58,115	60,624	63,357	87,372	384,151
Net Savings (C) = (B) – (A)	(81,247)	(123,239)	(388,671)	(153,340)	(92,735)	(32,857)	5,432	7,941	10,674	34,689	(813,353)
Net Cumulative Savings	(81,247)	(204,486)	(593,157)	(746,497)	(839,232)	(872,089)	(866,657)	(858,716)	(848,042)	(813,353)	

Notes –

1. This represents the savings of staff cost, the maintenance cost for the existing systems and equipment, paper and printing, and transportation.
2. Notional savings will be achieved by more efficient operations and reduced demand for IT support and maintenance from the new systems.
3. This represents the additional manpower and operational costs to process the increased Profits Tax Returns, if without the implementation of the business tax portal and tax representative portal.

**Implementation Plan for
Enhancement and Relocation of Information Technology Systems and
Facilities of Inland Revenue Department**

	Activity	Target Completion Date
I.	Develop Business Tax Portal	
	Phase 1 (Enhance Financial Data Collection)	
(a)	Procurement	August 2020
(b)	System analysis and design	October 2020
(c)	System development	December 2020
(d)	User acceptance	February 2021
(e)	System live-run	March 2021
(f)	System nursing	June 2021
	Phase 2 (Develop Business Tax Portal)	
(a)	Procurement	March 2023
(b)	System analysis and design	June 2023
(c)	System development	June 2024
(d)	User acceptance	February 2025
(e)	System live-run	March 2025
(f)	System nursing	June 2025
II.	Replace eTAX System with Enhanced Individual Tax Portal	
	Phase 1 (Enhance Functionalities of eTAX)	
(a)	Procurement	August 2020
(b)	System analysis and design	December 2020
(c)	System development	October 2021
(d)	User acceptance	December 2021
(e)	Data conversion	February 2022
(f)	System live-run	March 2022
(g)	System nursing	June 2022

/Phase 2

Activity		Target Completion Date
Phase 2 (Develop Individual Tax Portal)		
(a)	Procurement	March 2024
(b)	System analysis and design	June 2024
(c)	System development	October 2024
(d)	User acceptance	December 2024
(e)	Data conversion	February 2025
(f)	System live-run	March 2025
(g)	System nursing	June 2025
 III. Develop Tax Representative Portal		
(a)	Procurement	March 2023
(b)	System analysis and design	June 2023
(c)	System development	June 2024
(d)	User acceptance	February 2025
(e)	System live-run	March 2025
(f)	System nursing	June 2025
 IV. Leverage Cloud services		
(a)	Procurement	March 2021
(b)	System analysis and design	June 2021
(c)	System development	March 2022
(d)	System installation	December 2022
(e)	User acceptance	December 2022
(f)	Data conversion	March 2023
(g)	System live-run	June 2023
(h)	System nursing	September 2023
 V. Extend workflow technology		
(a)	System analysis and design	March 2023
(b)	System development	March 2024
(c)	User acceptance	December 2024
(d)	System live-run	March 2025
(e)	System nursing	June 2025

/VI.

	Activity	Target Completion Date
VI.	IT Systems and Facilities Relocation	
(a)	Procurement	June 2022
(b)	Site Preparation	March 2023
(c)	IT Facilities Relocation	April 2023
(d)	IT Systems Relocation	June 2023
(e)	System live-run	June 2023
