

ITEM FOR FINANCE COMMITTEE

CAPITAL WORKS RESERVE FUND

HEAD 710 – COMPUTERISATION

Government Secretariat : Commerce and Economic Development Bureau

New Subhead “Implementation of Phase 2 of the Trade Single Window System”

Members are invited to approve a new commitment of \$133,770,000 for setting up the information technology system required for the implementation of Phase 2 of the Trade Single Window System.

PROBLEM

The Government is taking forward the development of the Trade Single Window (TSW) in three phases to provide a one-stop platform for lodging various types of Business-to-Government trade documents for trade declaration and customs clearance purposes. Following the launch of Phase 1 of the TSW since December 2018, we need to develop and put in place the necessary information technology (IT) system for the Phase 2 development to provide service to cover more types of trade documents.

PROPOSAL

2. The Secretary for Commerce and Economic Development, with the support of the Government Chief Information Officer, proposes to create a new commitment of \$133,770,000 for setting up the IT system required for implementing Phase 2 of the TSW.

/JUSTIFICATION

JUSTIFICATION

Phased Implementation of TSW

3. The TSW aims to provide a one-stop platform for lodging all the 50-plus Business-to-Government trade declaration and customs clearance documents. As we reported to the Legislative Council (LegCo) Panel on Commerce and Industry on 17 December 2019, the TSW is being implemented in three phases –

- (a) Phase 1 (launched since 2018) – covering 13¹ types of trade documents (mainly for specific controlled products), the applications of which could be made through the TSW on a voluntary basis. Since the launch of Phase 1 in phases from December 2018², all the trade documents under Phase 1 are now available on the platform. A full list is at Enclosure 1;
- (b) Phase 2 (scheduled to be launched in 2023 the earliest) – covering another 28 types of trade documents (on top of those documents under Phase 1) for specific controlled products, the applications of which could be made through the TSW on a voluntary basis; and
- (c) Phase 3 – covering Import and Export Declarations, Advance Cargo Information and Cargo Reports (which are required or proposed to be required for all cargoes) for different transport modes. We are liaising with the trade and conducting technical feasibility studies to map out the implementation plan.

Encl. 1

Benefits of the TSW

4. In taking forward the TSW, we have been working closely with over ten other Government agencies, including the Customs and Excise Department (C&ED), being the TSW Operator and a key frontline law enforcement agency for import and export control, and maintaining on-going engagement with relevant stakeholders in the trade, with a view to enabling the TSW to deliver the following benefits –

/(a)

¹ With the commencement of the Conservation of Antarctic Marine Living Resources Ordinance (Cap. 635) on 1 July 2020, TSW Phase 1 has been extended to cover the import/export/re-export licence of toothfish, a new licensing regime for regulating toothfish movement, in addition to the 13 types of trade documents in our original plan.

² As at 31 May 2020, there are around 440 registered TSW users (including individual and company users). Some 1 700 applications have been received and around 2 600 permits/licences have been successfully issued since the launch of Phase 1. In May 2020, about 60% of the permits/licences were issued through the TSW platform.

- (a) **Enhancing operational efficiency of the trade** – upon full implementation of the TSW, the trading community can lodge import and export trade documents electronically round the clock through a centralised platform, and will no longer need to approach different Government agencies individually. Data can be reused more conveniently, thus minimising data input efforts and errors. The trade can also check the status of their applications and the submitted information through the centralised TSW anytime.

Since the launch of Phase 1, the TSW users generally consider TSW to be a useful way to lodge trade documents that could save cost and time, particularly for small and medium enterprises, whose cost for submitting applications and collecting approved trade documents in paper form would be relatively more onerous as compared with the larger firms;

- (b) **Enhancing operational efficiency of the Government** – the TSW will support the work of the participating government agencies (PGAs) in receiving and processing applications as well as issuing licences/permits electronically. This will enhance the operational efficiency and productivity of PGAs by reducing manual work, streamlining business processes, and facilitating development of cross-departmental online services, e.g. a single application for licences/permits from two or more PGAs; and
- (c) **Enhancing cargo clearance efficiency** – upon full implementation of the TSW, cargo hold-ups during clearance (because of insufficient cargo information) is expected to be minimised, thus bringing about smoother cargo clearance and enhanced overall cargo flow. If the existing submission requirements of pre-shipment and post-shipment cargo information could be streamlined or rationalised, it would also further save time and cost of the trade.

Development of Phase 2

5. With the successful launch and smooth operation of Phase 1, it is timely for the Government to proceed with Phase 2 so as to enable the TSW platform to cover more types of trade documents and to provide more elaborate functions, for the benefit of the trading community. To implement Phase 2, we would need to develop and put in place the necessary IT system with the key features set out in paragraphs 6 to 7 below.

/Scope

Scope and Functionality

Encl. 2

6. Phase 2 will extend the coverage of the TSW platform to another 28 types of trade documents (see Enclosure 2), enabling the trade to submit applications for the concerned licences/permits electronically on a voluntary basis. The transaction volume for these trade documents was around 1.8 million in 2019, about 120 times the volume for the trade documents covered under Phase 1 in the same year.

7. Apart from expanding the scope of trade documents, Phase 2 will also provide more elaborate functions. Building on the basic functions provided in Phase 1 (e.g. user registration, submission of licence/permit applications, online payment, and issue of licence/permit), Phase 2 will provide the following enhanced functions –

- (a) User account administration – more advanced management functions will be put in place to allow company users to manage the accounts of their staff, e.g. to view applications of their staff, transfer applications to other staff, etc.;
- (b) Support interface with iAM Smart³ – with the expected launch of iAM Smart in 2020, TSW users who are individuals holding iAM Smart may log into TSW services with iAM Smart and perform digital signing where necessary;
- (c) Support interfaces with PGAs' IT systems – some PGAs have existing systems or plan to develop new systems to handle submissions of trade documents and/or other regulatory matters. Phase 2 will interface with these systems to provide smooth and seamless services to the users, e.g. to provide single sign-on service to the TSW and PGAs' systems, and efficient flow of information among systems;
- (d) System capacity – Phase 2 will enhance the capacity of the IT system to cater for the increase in transaction volume as well as the processing workload for system interface and integration with PGAs' systems;
- (e) Service availability – Phase 2 will adopt the Government Cloud Infrastructure Services, which supports higher system availability to make the TSW service more accessible to the users;

/(f)

³ iAM Smart is formerly known as Electronic Identity.

- (f) Usage status of trade documents – where a trade document covers multiple consignments (which may be shipped separately), Phase 2 will facilitate both TSW users and PGAs in keeping track of whether the trade document has been used for all the consignments covered; and
- (g) Mass submission – Phase 2 will provide functions for traders to conveniently upload a large amount of submissions of trade documents to save time and better meet the business needs.

Phase 2 Service as a Voluntary e-Option

8. When the TSW initiative was first proposed in 2016, our plan was to mandate the use of the TSW for the submission of trade documents for specific trades or controlled products under Phase 2. Upon further engagement with the trade, there were concerns that the mandatory approach upfront would cause disruption to the trade and would not be possible unless a massive and time-consuming exercise would be launched to amend a wide range of legislation.

9. With the experience of Phase 1 and further engagement with the trade, it is clear that the trade's preference is for the TSW to provide an e-option whilst retaining the conventional means of application through service counters. Indeed, the readiness for a switch over to the e-option indeed varies from sectors to sectors. In view of the trade's feedback, we therefore propose to implement Phase 2, as with Phase 1, as a voluntary e-option. This would give the trade a choice and encourage gradual adoption. Our approach is in line with the use of single windows in some other places, for example in the Mainland, Japan and Korea, which is also voluntary. While taking a voluntary e-option approach for Phase 2, we are confident that given time and the extension of the TSW to cover more documents, the trade would eventually switch to the new platform in order to reap the benefits. We would continue our engagement with the trade in this regard.

Support Services Provided for the Trade under Phase 2

10. C&ED established the Office of TSW Operation (OSWO) in June 2018 to tie in with the launch of Phase 1. It is responsible for the processing of user registration for the TSW, system administration and other supporting services such as service counters, customer support, outreach and training, etc. Apart from OSWO's services, the "1823" hotline provides 24/7 enquiry and support services to TSW users. Both the OSWO and "1823" hotline will extend their services to cover Phase 2 upon its implementation.

/Cost

Cost Savings

11. It is estimated that the implementation of Phase 2 will bring about a maximum notional staff savings of \$7,793,000 per annum among PGAs when all trade documents covered are submitted via the TSW. The notional staff savings will be achieved by streamlining the manual processes related to the applications of the licences/permits concerned.

12. In addition, we anticipate that there will be a maximum recurrent notional savings of about \$45,220,000 per annum for external traders as and when the trade documents covered are all submitted via the TSW. Such annual notional savings mainly arise from –

- (a) electronic submission of applications and collection of licence/permit (i.e. obviating the need for arranging physical submission or collection);
- (b) data re-use (i.e. obviating the need for an applicant to input the same data for each and every applications);
- (c) one-stop identity verification of licence/permit applications; and
- (d) centralised enquiry services on licence/permit applications.

13. A cost and benefit analysis for the implementation of Phase 2 is set out at Enclosure 3.

Encl. 3

FINANCIAL IMPLICATIONS**Non-recurrent Expenditure**

14. It is estimated that the implementation of Phase 2 will incur a one-off total expenditure of \$133,770,000 from 2020-21 to 2023-24. The indicative cost breakdown and estimated cash flow requirements by financial years are as follows –

/2020-21

	2020-21	2021-22	2022-23	2023-24	Total
	\$'000	\$'000	\$'000	\$'000	\$'000
(a) Hardware	2,218	3,993	2,404	-	8,615
(b) Hosting services	-	645	3,016	7,781	11,442
(c) Software	2,202	2,601	960	-	5,763
(d) Communication network	1,142	800	800	200	2,942
(e) Implementation services	-	38,767	20,870	20,377	80,014
(f) Contract staff	1,144	5,204	6,024	5,204	17,576
(g) Miscellaneous	388	260	250	150	1,048
(h) Contingency	355	2,613	1,716	1,686	6,370
Total	7,449	54,883	36,040	35,398	133,770

15. On paragraph 14(a) above, the estimated expenditure of \$8,615,000 is for the acquisition of computer hardware, such as servers, workstations, storage devices, network equipment and backup equipment, etc.

16. On paragraph 14(b) above, the estimated expenditure of \$11,442,000 is for the cloud hosting service.

17. On paragraph 14(c) above, the estimated expenditure of \$5,763,000 is for the acquisition of computer software, including software for operating system, database management and application development, etc.

18. On paragraph 14(d) above, the estimated expenditure of \$2,942,000 is for the installation of the communication network.

19. On paragraph 14(e) above, the estimated expenditure of \$80,014,000 is for the acquisition of IT service from external service providers to implement the project including project management, system analysis and design, program development, data conversion, independent system testing, user acceptance test support, user training and system administration, etc. It also covers Security Risk Assessment and Audit, as well as Privacy Impact Assessment.

20. On paragraph 14(f) above, the estimated expenditure of \$17,576,000 is for the engagement of contract staff for the preparation of service contracts, procurement, project monitoring, infrastructure setup and system testing, etc.

21. On paragraph 14(g) above, the estimated expenditure of \$1,048,000 is for the site preparation works, training of IT project team on the software development/system monitoring tools, and the acquisition of consumables etc.

22. On paragraph 14(h) above, the estimated expenditure of \$6,370,000 represents a 5% contingency on the cost items set out in paragraph 14(a) to (g) above.

Other Non-recurrent Expenditure

23. Development of the IT system for implementation of Phase 2 requires a project team for project management, procurement of hardware, software and services, coordination with PGAs on user acceptance testing and implementation support, etc. This entails a non-recurrent staff cost of \$37,511,000 from 2019-20 to 2023-24.

24. PGAs will entail a non-recurrent staff cost of \$15,949,000 from 2020-21 to 2023-24 to take forward corresponding implementation tasks for Phase 2, including preparation of user requirements, conducting user acceptance tests and attending user training, etc. PGAs will absorb the requirements from within their existing resources.

Recurrent Expenditure

25. Phase 2 will entail an indicative annual recurrent expenditure of \$4,608,000 in 2023-24, increasing to \$18,952,000 from 2024-25 onwards. Such requirements will be absorbed from within existing resources, and necessary provisions will be reflected in the Estimates of the relevant years, with breakdown as follows –

/2023-24

	2023-24	2024-25
	\$'000	onwards
		\$'000
(a) Hardware and software maintenance	1,857	8,867
(b) Communication network	849	849
(c) System maintenance	-	7,334
(d) Contract staff	1,791	1,791
(e) Consumables	111	111
Total	4,608	18,952

26. On paragraph 25(a) above, the estimated expenditure of \$8,867,000 is for the provision of hardware and software maintenance for local servers and workstations as well as cloud hosting service.

27. On paragraph 25(b) above, the estimated expenditure of \$849,000 is for the rental of communication data lines and maintenance of network equipment.

28. On paragraph 25(c) above, the estimated expenditure of \$7,334,000 is for the acquisition of IT services for on-going system maintenance including application support for system operation, minor enhancement, infrastructure support on database administration, network and system performance tuning and monitoring.

29. On paragraph 25(d) above, the estimated expenditure of \$1,791,000 is for the engagement of contract staff for monitoring out-sourced contractors and performing on-going system administration work.

30. On paragraph 25(e) above, the estimated expenditure of \$111,000 is for the acquisition of consumables such as backup tapes and printer toners.

31. To undertake the system administration work, C&ED plans to allocate a total of 86 man-months of customs officers and IT staff to provide system support and administration, entailing a recurrent staff cost of \$6,607,000 per annum. Such requirements will be reviewed nearer the time when the system is commissioned.

/IMPLEMENTATION

IMPLEMENTATION PLAN

32. Subject to timely funding approval, we plan to implement Phase 2 according to the following schedule –

Activity	Target Completion Date
(a) Preparation of tender documents	August 2020
(b) Invitation of tenders	September 2020
(c) Assessment of tender and award of implementation service contract	December 2020
(d) System analysis and design	November 2021
(e) System development	June 2022
(f) User acceptance testing	December 2022
(g) System live run (by batch)	From March 2023 onward

PUBLIC CONSULTATION

33. We consulted the LegCo Panel on Commerce and Industry on 17 December 2019 on the above funding proposal for the IT system required for implementation of Phase 2. The Panel supported the submission of the proposal to the Finance Committee for funding approval.

BACKGROUND

34. One key competitive edge of Hong Kong in merchandise trade lies with our renowned customs clearance efficiency. According to the Global Competitiveness Report released by the World Economic Forum in October 2019, Hong Kong is ranked the 9th worldwide for “border clearance efficiency” (in the context of trade openness). Over the years, the Government has put in place various measures to enhance customs clearance efficiency and expedite cargo flow while maintaining effective controls. These measures⁴ are well received by the trade.

/35.

⁴ For example, the Single E-Lock Scheme and the Hong Kong Authorized Economic Operator Programme. We briefed the LegCo Panel on Commerce and Industry on these two measures at its meeting held on 25 June 2019.

35. The Government announced in February 2016 that it would establish a TSW for one-stop lodging with the Government of all the 50-plus Business-to-Government trade documents for trade declaration and customs clearance purposes. TSW is being implemented in three phases, with Phase 1 launched since December 2018.

Commerce and Economic Development Bureau
July 2020

**Trade Single Window (TSW)
Trade Documents under Phase 1**

Government Agency	Types of Trade Document
Agriculture, Fisheries and Conservation Department	1. Import/Export Licence for Pesticides 2. Import/export/re-export Licence of Toothfish ¹
Customs and Excise Department	3. Authorization to Import/Export Controlled Chemicals 4. Certification of Non-U.S. Frozen Chicken Products Transhipped to the Mainland through Hong Kong 5. Licence for Optical Disc Mastering and Replication Equipment 6. Permit to Remove Controlled Chemicals in Transshipment 7. Transshipment Notification for Optical Disc Mastering and Replication Equipment 8. Certificate of Non-manipulation under Free Trade Agreement Transshipment Facilitation Scheme
Civil Engineering and Development Department	9. Hong Kong Natural Sand Final User Certificate 10. Sand Removal Permit
Environmental Protection Department	11. Licence for Ozone Depleting Substances ² 12. Licence for Scheduled Chemicals
Office of the Communications Authority	13. Import and Export Permit for Radiocommunications Transmitting Apparatus 14. Transshipment Notification for Radiocommunications Transmitting Apparatus

¹ With the commencement of the Conservation of Antarctic Marine Living Resources Ordinance (Cap. 635) on 1 July 2020, TSW Phase 1 has been extended to cover the import/export/re-export licence of toothfish, a new licensing regime for regulating toothfish movement, in addition to the 13 types of trade documents in our original plan.

² The Trade and Industry Department is also involved in the processing and issue of this licence.

Trade Single Window
Additional Types of Trade Documents under Phase 2

Government Agency	Types of Trade Document
Agriculture, Fisheries and Conservation Department	<ol style="list-style-type: none"> 1. Licence to Export/Re-export Endangered Species 2. Licence to Import/Introduce from the Sea for Endangered Species 3. Permit for Import of Mammals from the Mainland and Animal Products 4. Plant Import Licence 5. Re-export Certificate for Species of non-Convention on International Trade in Endangered Species of Wild Fauna and Flora or not yet Controlled under the Protection of Endangered Species of Animals and Plants Ordinance (Cap. 586) 6. Special Permit for Import of Animals and Birds from Overseas 7. Special Permit for Import of Dogs and Cats from Overseas 8. Special Permit for Import of Food/Pet Reptiles
Customs and Excise Department	<ol style="list-style-type: none"> 9. Currency and Bearer Negotiable Instruments Declaration Form 10. Import and Export Statement for Dutiable Commodities
Department of Health	<ol style="list-style-type: none"> 11. Diversion Licence for Dangerous Drugs 12. Import Licence for Radioactive Substances and Irradiating Apparatus 13. Import/Export Licence and Certificate for Dangerous Drugs

/Department

Government Agency	Types of Trade Document
Department of Health (Cont'd)	14. Import/Export Licence for Pharmaceutical Products and Medicines
	15. Import/Export Licence of Chinese Herbal Medicines
	16. Import/Export Licence of Proprietary Chinese Medicines
	17. Import Permit for Biological Materials 18. Removal Licence for Dangerous Drugs
Food and Environmental Hygiene Department	19. Health Certificate for Food of Animal Origin 20. Import Licence for Frozen/Chilled Meat or Poultry 21. Permission for Import of Eggs 22. Permission for Import of Frozen Confections 23. Permission for Import of Game, Meat and Poultry 24. Permission for Import of Milk, Cream and Milk Beverage 25. Permission for Import Meat or Poultry (Applicable to import for re-export to the Mainland/Macau)
Trade and Industry Department	26. Import/Export Licence for Rice 27. Kimberley Process Certificate 28. Strategic Commodities Licence

**Cost and Benefit Analysis for
the Implementation of Phase 2 of the Trade Single Window**

		Cash Flow (\$'000)										
		2019-20	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	Total
1	Non-Recurrent											
	Expenditure	-	7,449	54,883	36,040	35,398	-	-	-	-	-	133,770
	Staff Cost	7,502	11,382	9,270	12,626	12,680	-	-	-	-	-	53,460
	Total Non-Recurrent Cost	7,502	18,831	64,153	48,666	48,078	-	-	-	-	-	187,230
2	Recurrent											
	Expenditure	-	-	-	-	4,608	18,952	18,952	18,952	18,952	18,952	99,368
	Staff Cost	-	-	-	-	6,607	6,607	6,607	6,607	6,607	6,607	39,642
	Total Recurrent Cost	-	-	-	-	11,215	25,559	25,559	25,559	25,559	25,559	139,010
	Total Non-Recurrent and Recurrent Cost (A)	7,502	18,831	64,153	48,666	59,293	25,559	25,559	25,559	25,559	25,559	326,240
	Savings											
3	Notional Savings ^{Note}	-	-	-	-	26,155	53,013	53,013	53,013	53,013	53,013	291,220
	Total Savings (B)	-	-	-	-	26,155	53,013	53,013	53,013	53,013	53,013	291,220
	Net Savings (C) = (B) - (A)	(7,502)	(18,831)	(64,153)	(48,666)	(33,138)	27,454	27,454	27,454	27,454	27,454	(35,020)
	Net Cumulative Savings	(7,502)	(26,333)	(90,486)	(139,152)	(172,290)	(144,836)	(117,382)	(89,928)	(62,474)	(35,020)	

Note –

Notional savings for the Government and the trade will be achieved by streamlining the manual processes related to the applications of the licences/permits concerned.
