

ITEM FOR FINANCE COMMITTEE

**CAPITAL WORKS RESERVE FUND
HEAD 710 - COMPUTERISATION
Customs and Excise Department
New Subhead "Case Processing System"**

Members are invited to approve a new commitment of \$62,825,000 for the development of a computerised Case Processing System in the Customs and Excise Department.

PROBLEM

The Customs and Excise Department (C&ED) needs a computer system to support processing of information and documentation regarding intelligence, investigation, prosecution and disposal of seized items. The current system, which relies on manual efforts, is inefficient and not cost-effective and will not be able to cope with the future workload which is expected to increase in the coming years.

PROPOSAL

2. The Commissioner of Customs and Excise, with the support of the Secretary for Trade and Industry, Secretary for Security and Secretary for the Treasury and on the advice of the Director of Information Technology Services, proposes to create a new commitment of \$62,825,000 to develop and implement a computerised Case Processing System (CAPS) to monitor and enhance the quality, efficiency, effectiveness and security in case processing.

/JUSTIFICATION

JUSTIFICATION

Current Environment and Problems

3. At present, C&ED relies largely on manual efforts to handle a case from the detection of a suspected crime to the final disposal of related seizures. Processing of a case¹ normally comprises four stages, namely, collection and analysis of information, investigation based on intelligence developed, arrest and prosecution of offenders, and disposal of seized items. Processing of information and documentation during these stages often involves repetitive entries of similar data for various purposes and delivery of information and documents from one party to the other.

Intelligence

4. Intelligence is normally developed from complaints or information received from the public or other enforcement agencies. Currently, particulars of the suspects involved and a brief summary of what has occurred are recorded on an Information Report Form (IRF). The IRF is collated and indexed in the Central Intelligence Office (CIO). Copies of the preliminarily processed information are then despatched manually to investigators and their supervisors under confidential cover. This process is labour-intensive and time-consuming.

5. In 1999, the total pieces of information received were 10 267, which represents an increase of about 40% as compared with the previous year. The problem will be amplified when massive information is to be processed. Furthermore, the repetitive entries of information and the duplication of IRF for dispatch at CIO unnecessarily increase the chance of human errors and exposure of sensitive data.

Investigation

6. The case officer in charge will organise investigation upon receiving an IRF. This normally begins with checking and verification of the relevant background information, such as vehicle ownership records, vehicle crossing and land search records, etc. via CIO for analysis and assessment. At present, background information is provided to investigators through manual despatch. This lengthens the time required for checking and analysis and hence unduly affects the efficiency of investigation work.

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¹ A case refers to a criminal matter that is officially investigated by C&ED.

7. As recommended by the Independent Commission Against Corruption (ICAC) in its corruption prevention report on Intelligence Handling Procedures of the Intelligence and Investigation Group of C&ED, our investigators submit bi-monthly reports to CIO for monitoring the investigation progress. The reports are conveyed manually to CIO and the contents are entered into the central database of the Customs Control System (CCS).² Since over 15 000 active investigation files are being monitored manually, the workload involved is immense. There is always a gap between the time when reports are submitted and when updated information are available to the investigators due to the manual processes involved. The speed and quality of investigation work suffer as a result since the progress of an investigation often depends on whether up-to-date information is immediately available to investigators.

Prosecution

8. When it is established that an offence has been committed, the suspects will be prosecuted under the appropriate ordinance. To prepare for court proceedings, documents in a case file are copied to the prosecutor, the officer in charge and the government counsel. The preparation and despatch of the documents to various parties are time-consuming and labour-intensive.

9. In 1999, there were over 12 400 court hearings for cases with arrest and seizure. The figure increased by 10.5% as compared with 1998, which indicates a rising workload for prosecution. Moreover, an average annual increase of high court cases at 28.7% has been observed since 1997, which reflects that cases have become more complicated. The increase in both magnitude and complexity of cases will further exacerbate the problems with the existing manual-based processes.

Disposal of seized items

10. After the conclusion of a case, the seized items involved will be disposed of according to the court's decision. The disposal procedure involves a series of documentation on the case file that requires repetitive data entries made by the prosecutor, the officer-in-charge and the supplies officer. In the process, the case file is passed manually from one officer to another. When data errors are detected, the file will have to be returned to the responsible officer for rectification. The manual processing therefore often hinders prompt disposal of the seized items.

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² CCS is a department-wide computer system which provides and processes data and intelligence for C&ED officers to perform a wide range of customs and excise control duties.

The Need for Change

Encl. 1 11. The current manual-based processing method is inefficient, not cost-effective and unlikely to be able to cope with the increasing workload in case processing, as indicated by the rising figures of information for investigation and court hearings from 1997 to 1999. Relevant figures are charted at Enclosure 1.

Proposed System

12. The prime objective of implementing CAPS is to provide an efficient and effective support system for case processing in C&ED.

13. The proposed CAPS will link up over 500 workstations located at 42 sites. It will provide a centralised database to speed up the data retrieval process, allow sharing of records and generate reports for operational support. It will also provide timely statistics to the management for planning and decision making, and will be able to interface with other C&ED computer systems.

Benefits

Efficiency improvements

14. With the establishment of the system network and central database, CAPS will enable speedy information flow by transferring case documents electronically. It will be accessed spontaneously and simultaneously. The expected efficiency improvement areas are as follows -

- (a) intelligence dissemination will be reduced from four days to within one day;
- (b) compilation of background check results for investigation will be reduced from one week to within one day;
- (c) preparation of reports on progress and result of each court attendance will be shortened by 20 minutes per day per prosecutor;
- (d) research on precedent cases, such as legal advice and court judgement, etc., will be reduced from three hours to several minutes;
- (e) disposal cycle for seized items will be reduced by six days; and
- (f) data accuracy will be improved as CAPS will obviate the need to re-input the same data.

/Enhanced

Enhanced security of intelligence and case information

15. Stringent security features of CAPS will enable the transmission of sensitive intelligence and case information in the network under a secured environment. Access rights will be assigned to authorised officers only. In addition to the adoption of the normal user identification and password checking mechanism, security devices such as smart cards will be employed. Besides, all transactions will be automatically tracked by the system in accordance with the ICAC's requirement.

Enhanced operational capabilities with improved quality work

16. With CAPS, information can be disseminated for investigation in good time. Furthermore, background information and other useful data will be available to investigators immediately. CAPS will therefore enhance the operational capabilities of the C&ED.

17. CAPS will also provide a centralised library for storing reference materials on laws, legal advice, court judgements, departmental orders and procedures, etc. These are essential for frontline officers to improve the quality of their work. For example, officers can instantly find out the proper way to handle the evidence of a computer-related crime at scene by referring to the relevant legal advice in the electronic library.

Effective tool to senior management

18. CAPS will enable timely reports and statistics to be provided for analysis of modus operandi and trends of illegal activities, and for formulating departmental policies and strategies for combating crime.

Cost and Benefit Analysis

19. In addition to the benefits mentioned in paragraphs 14 to 18 above, there will be staff savings through the streamlining of work and elimination of certain manual processes. The CAPS will result in annual gross savings of \$21.6 million within the Government, of which \$4.5 million is realisable savings arising mainly from the deletion of 14 posts (comprising one Statistical Officer II, one Assistant Trade Controls Officer, five Assistant Data Preparation Supervisor and seven contract general clerk), and \$17.1 million is notional savings. The notional savings cannot be realised in financial terms because they comprise a small fraction of each of 1 200 posts deployed in 215 units and divisions. These savings will be redeployed to absorb increase in workload in enforcement

/operations

Encl. 2
Encl. 3

operations and intelligence analysis. Based on the existing estimates of notional and realisable savings, the project will pay back in seven years. Details of the notional and realisable savings are listed at Enclosure 2 and a detailed cost and benefit analysis of the proposed CAPS is at Enclosure 3.

FINANCIAL IMPLICATIONS

Non-recurrent Cost

20. The estimated non-recurrent cost of the proposed system is \$63.9 million. This comprises \$62.8 million for the purchase of computer hardware, software, site preparation, implementation services, etc., for which we are seeking Members' approval of a new commitment, and \$1.1 million for in-house staff cost to be absorbed by C&ED and Information Technology Services Department (ITSD). Details of the non-recurrent costs are as follows -

	2000-01	2001-02	2002-03	Total
	\$'000	\$'000	\$'000	\$'000
Non-recurrent expenditure				
(a) Hardware	2,187	16,748	-	18,935
(b) Software	825	8,125	-	8,950
(c) Implementation services	7,302	8,159	-	15,461
(d) Site preparation	4,462	4,462	2,231	11,155
(e) Miscellaneous	300	2,313	-	2,613
(f) Contingency	-	1,713	3,998	5,711
Sub-total	15,076	41,520	6,229	62,825
Staff costs				
(g) C&ED	309	464	-	773
(h) ITSD	113	169	-	282
Sub-total	422	633	-	1,055
Total	15,498	42,153	6,229	63,880

21. As regards paragraph 20(a) above, the expenditure of \$18.9 million is for the acquisition of workstations, servers, printers, scanners, communication and network equipment.

22. As regards paragraph 20(b) above, the expenditure of \$9 million is for the acquisition of system software, network management software, PC software, etc.

23. As regards paragraph 20(c) above, the expenditure of \$15.5 million is for the acquisition of professional services for technical consultancy and support services, and for hiring of contract staff for system implementation, user co-ordination and project monitoring. Flexible deployment of in-house staff and contract staff will be adopted to facilitate smooth implementation of the project.

24. As regards paragraph 20(d) above, the expenditure of \$11.2 million is for site preparation work such as installation of conduits and power sockets, and cabling work at the offices of C&ED.

25. As regards paragraph 20(e) above, the expenditure of \$2.6 million is for initial staff training relating to system operation, installation of data lines and purchase of consumables for use during system development and start-up.

26. As regards paragraph 20(f) above, the expenditure of \$5.7 million represents a 10% contingency in respect of the items in paragraphs 20(a) to (e).

27. As regards paragraphs 20(g) and (h), non-recurrent staff cost of \$1.1 million will be required to provide general support and co-ordination in project planning, and advisory service in project management. It comprises \$773,000 for nine man-months of Inspector and 4.5 man-months of Trade Controls Officer, and \$282,000 for two man-months of Senior Systems Manager. These staff requirements will be met by internal redeployment within C&ED and ITSD.

Recurrent Cost

28. The estimated annual recurrent cost is \$2.9 million for the first year and \$10.1 million from the second year onwards. The breakdown is as follows -

/Recurrent

	2001-02 \$'000	2002-03 onwards \$'000
Recurrent expenditure		
(a) Hardware	195	1,154
(b) Software	80	766
(c) System maintenance	1,846	5,536
(d) Miscellaneous	807	2,642
	_____	_____
Total	2,928	10,098
	_____	_____

29. As regards paragraph 28(a) above, the expenditure of \$1.2 million is for the maintenance of computer hardware.

30. As regards paragraph 28(b) above, the expenditure of \$766,000 is for the maintenance of software.

31. As regards paragraph 28(c) above, the expenditure of \$5.5 million is for the maintenance of the system. Of this amount, \$3.4 million is for engaging contract staff in ITSD to provide on-going system support and maintenance including system management, network and workstation support, and provision of helpdesk services. The remaining \$2.1 million is for engaging contract staff in C&ED for day-to-day system operations, user support, research on system enhancements, and in-house end-user training.

32. As regards paragraph 28(d) above, the expenditure of \$2.6 million is for providing on-going external training to C&ED staff, data lines rental, purchase of consumables and miscellaneous expenses.

33. Subject to Members' approval of this item, we will include the provision for the purposes set out in paragraphs 28(a) to (d) in future Estimates.

Implementation Plan

34. Subject to Members' approval, the implementation plan will be as follows -

/(a)

Activity	Expected completion date
(a) System analysis and design	February 2001
(b) Site preparation and procurement	July 2001
(c) Development and implementation of CAPS	December 2001
(d) System operation	December 2001

OTHER PROPOSALS CONSIDERED

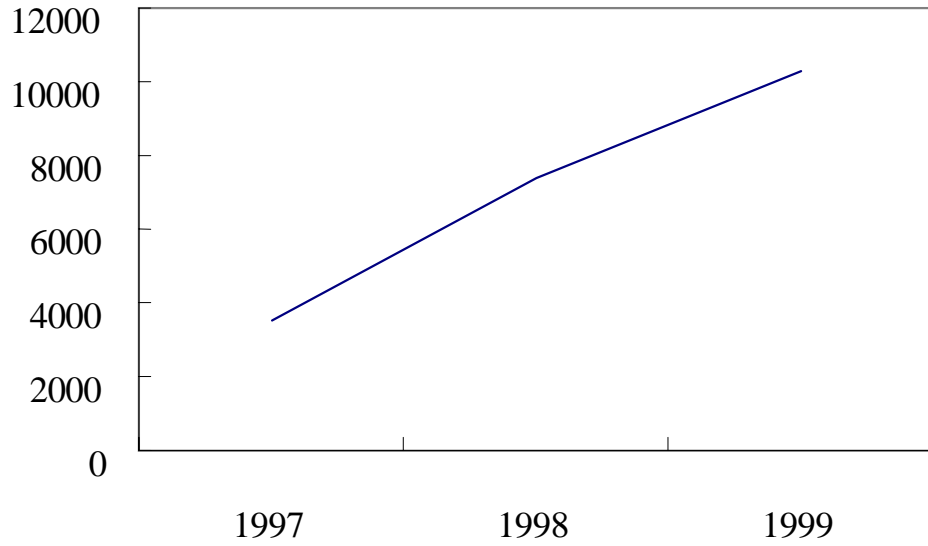
35. We have considered other alternatives to achieve increased efficiency and effectiveness of the workflow in case processing and concluded that the present proposal is the most cost-effective option.

BACKGROUND INFORMATION

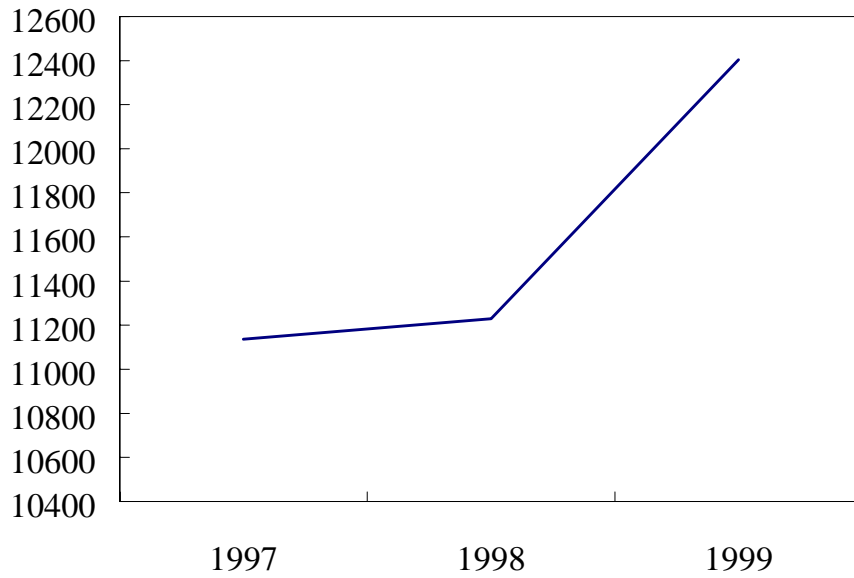
36. We consulted the Trade and Industry Panel of the Legislative Council on the proposed system on 8 June 2000. The Panel supported the proposal.

Trade and Industry Bureau
June 2000

Total Number of Information for Investigation



**Total Number of Court Hearings
(For Cases with Arrests and Seizures)**



I. Notional Savings

	Savings (Man Month)	Monthly Staff Cost (HK\$)	Annual Savings (HK\$)
Notional Savings on Reduction of Manpower from Customs and Excise (C&E) Service			
Assistant Superintendent	14.64	112,889	1,652,695
Senior Inspector	42.79	96,976	4,149,603
Inspector	74.13	60,996	4,521,633
Senior Customs Officer	1.62	40,663	65,874
Customs Officer	5.45	24,478	133,405
<i>Sub-total</i>	<i>138.63</i>		<i>10,523,210</i>
Notional Savings on Reduction of Manpower from Trade Controls Branch (TCB)			
Principal Trade Controls Officer	0.38	119,314	45,339
Chief Trade Controls Officer	2.10	86,435	181,514
Senior Trade Controls Officer	13.63	70,469	960,492
Trade Controls Officer	40.69	49,947	2,032,343
Assistant Trade Controls Officer	41.80	26,933	1,125,799
<i>Sub-total</i>	<i>98.60</i>		<i>4,345,487</i>
Cost Avoidance			
Inspector	36.00	60,996	2,195,856
<i>Sub-total</i>	<i>36.00</i>		<i>2,195,856</i>

Summary of Notional Savings:

	(HK\$)
Notional Savings from C&E Service	10,523,210
Notional Savings from TCB	4,345,487
Cost Avoidance	2,195,856
Total Notional Benefits of C&ED	17,064,553

Note: The above notional savings are not realisable because they are fragmented in different offices.

II. Realisable Savings

(resulted from deletion of post from 2001-2002 onwards)

	No. of Post	Annual Staff Cost (HK\$)	Annual Savings (HK\$)
Cost Savings on Reduction of Manpower			
1. Statistics Office			
Statistical Officer II	1	355,944	355,944
2. Prosecution Group			
Contract General Clerk	2	96,000	192,000
3. Supplies Section			
Contract General Clerk	5	96,000	480,000
4. Trade Control Branch			
Assistant Trade Controls Officer	1	323,196	323,196
Assistant Data Preparation Supervisor	5	309,996	1,549,980
<i>Sub-total</i>	14		2,901,120

Summary of Realisable Savings:

	(HK\$)
Cost Savings on Reduction of Manpower	2,901,120
Cost Savings on recurrent cost of CCS Communication Lines ¹	1,100,000
Cost Savings on the Replacement of BCSS ²	6,600
Cost Savings on the Replacement of OCS ³	22,132
Cost Savings of Operator Overtime	500,000
Total Realisable Savings of C&ED	4,529,852

Summary of Total Savings:

Description	Annual Savings (HK\$)
Notional Savings	17,064,553
Realisable Savings	4,529,852
Total Savings	21,594,405

¹ CAPS will cater for the need of the Customs Control System (CCS) by providing the communication lines required for its operations.

² CAPS will replace the existing Bilingual Charge Sheet System (BCSS) to provide functions for supporting the preparation of prosecution documents.

³ CAPS will replace the existing Operation Controls System (OCS) to provide functions for monitoring electronic file movements.

Enclosure 3 to FCR(2000-01)38

**Cost and Benefit Analysis of
the proposed Case Processing System
(at 1999-2000 price level)**

	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08
	(\$'000)	(\$'000)	(\$'000)	(\$'000)	(\$'000)	(\$'000)	(\$'000)	(\$'000)
Costs								
Non-recurrent								
- expenditure	15,076	41,520	6,229	-	-	-	-	-
- staff cost	422	633	-	-	-	-	-	-
Sub-total	15,498	42,153	6,229	-	-	-	-	-
Recurrent								
- expenditure	-	2,928	10,098	10,098	10,098	10,098	10,098	10,098
Sub-total	-	2,928	10,098	10,098	10,098	10,098	10,098	10,098
Total costs	15,498	45,081	16,327	10,098	10,098	10,098	10,098	10,098
Benefits								
- realisable savings	-	1,133 (January to March 2002)	4,530	4,530	4,530	4,530	4,530	4,530
- notional savings	-	4,267 (January to March 2002)	17,065	17,065	17,065	17,065	17,065	17,065
Total benefits	-	5,400	21,595	21,595	21,595	21,595	21,595	21,595
Net benefits	(15,498)	(39,681)	5,268	11,497	11,497	11,497	11,497	11,497
Cumulative benefits	(15,498)	(55,179)	(49,911)	(38,414)	(26,917)	(15,420)	(3,923)	7,574