

## **ITEM FOR FINANCE COMMITTEE**

**CAPITAL WORKS RESERVE FUND  
HEAD 710 – COMPUTERISATION  
Customs and Excise Department  
New Subhead “Replacement of the Case Processing System”**

Members are invited to approve a new commitment of \$45,720,000 for the replacement of the Case Processing System of the Customs and Excise Department.

### **PROBLEM**

The Customs and Excise Department (C&ED) needs to replace the existing Case Processing System (CAPS) to provide more efficient, reliable and secure case processing service and to meet modern development needs.

### **PROPOSAL**

2. The Commissioner of Customs and Excise, with the support of the Secretary for Security and the Government Chief Information Officer, proposes to create a new commitment of \$45,720,000 to replace the ageing components of the existing CAPS to ensure a more efficient, reliable and secure case processing service that meets modern development needs.

### **JUSTIFICATION**

#### **Need to Replace the Existing CAPS**

3. Launched in December 2001, the CAPS supports the processing of cases<sup>Note</sup>, i.e. handling information relating to arrested persons, seized articles and prosecution matters from case creation to closure, which used to be carried out entirely on a manual basis. It enables C&ED to enhance the efficiency, effectiveness and security in case processing.

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<sup>Note</sup> A case refers to a formal criminal investigation by C&ED.

4. After CAPS has been in use for nearly ten years, the support service for some major hardware components of the CAPS would cease by 2013 due to the lack of spare parts while other software components such as the operating system and database management system will need upgrading. C&ED considers it timely to commence the system replacement in mid 2011 after taking into account the lead time for replacement.

5. The replacement plan also provides an opportunity to enhance the functionalities of the CAPS in order to cope with changing operational needs and future developments. Details are set out in paragraph 6.

### **The Proposed CAPS and its Benefits**

6. The replacement, while retaining the compatible parts of the existing CAPS, will have new servers and associated software to provide the following functional enhancements –

- (a) enhanced automation of case processing by using a single platform to connect with the electronic records in other computer systems of C&ED. This would improve the operational efficiency in document input, information storage, information reporting, investigation processing, case processing, prosecution and seizure management;
- (b) better investigation analysis and case management control by adding computerised analysis tools and latest Document Management System (DMS) technology; and
- (c) improved overall system security by adopting centralised Storage Area Network with encryption capability for proper storage and transmission of all relevant data and supporting documents. Furthermore, digital certificates will be used for user authentication for deposit or retrieval of seized articles in the seizure stores.

7. With the above enhanced functions, the replacement system will bring about benefits in case processing in the following aspects –

- (a) Sustainable system operation

Timely replacement of the system not only ensures the normal uninterrupted operation of CAPS, but will also enable the installation of system components with the latest technology to cope with evolving operational needs.

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(b) Operational efficiency in the management of seized articles

The CAPS will enable C&ED officers to process information of seizure receipts, registers and labels more efficiently via electronic means and avoid possible errors stemming from repetitive manual entries of information. The time and efforts needed to check and correct inconsistencies in paper records of seizure management due to human errors can be minimised. Officers can also input the details of disposal of all seized articles into the system directly and immediately, which in turn will shorten the turnaround time in seizure disposal cycle by at least 4 working days.

(c) Investigation analysis

The introduction of computerised analysis tools into the system will enable officers to analyse information collected during the investigation more systematically (such as identifying correlations among different cases). It will enhance investigative power and better support the decision-making process.

(d) Management control for case processing

Management applications will be provided to keep relevant officers better informed of the overall caseload and case progress under their purview with a view to enhancing their effectiveness in case analysis and planning. Exceptional cases will also be highlighted for management attention and necessary actions.

(e) Minimise deferred payment cases

The CAPS will integrate with another system (namely the Customs Control System) to support e-payment on excessive dutiable commodities carried by arrival passengers at C&ED control points, allowing passengers without sufficient cash or cheques in hand to pay the required duty immediately. It is estimated that about 1 400 deferred payment cases can be avoided a year.

(f) Information sharing

The CAPS will be able to store all case information and send files electronically. Apart from contributing to a paperless working environment and reducing the amount of time required for parallel processing of both paper and electronic files, an efficient and

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immediate sharing of information will allow officers to promptly review investigation findings. We estimate that about 14 000 manual dispatch of files can be obviated with the electronic transmission of files. Besides, as the CAPS will be equipped with extraction, copying and sorting functions, relevant officers will also be able to print documents directly from the system, hence saving time in preparing trial document bundles for court cases. While strengthening information sharing, C&ED will implement stringent security measures, especially during the transmission of sensitive case information.

8. C&ED will put in place proper safeguards to ensure the operation of the replacement CAPS will continue to have due regard for protecting data privacy and system security.

### **Cost Savings**

9. We estimate that the successful replacement of the CAPS will bring about annual savings starting from 2013-14, increasing gradually to and remaining steady at \$17,248,000 from 2019-20 onwards, comprising the following –

(a) **Realisable savings of \$7,134,000 per annum**

The realisable savings mainly comprise costs avoided for maintaining the existing CAPS. The savings will be used to cover part of the recurrent expenditure of the replacement.

(b) **Notional savings of \$10,114,000 per annum**

The notional savings will be achieved mainly through staff savings as a result of the reduction of manual efforts for conducting investigation analysis, seizure management, and preparing trial document bundles and management reports. The notional savings in manpower will be re-deployed to undertake other duties such as mounting special operations on passenger and cargo clearance, conducting investigation, stepping up risk management and handling prosecution cases.

Encl. 10. A cost and benefit analysis for the CAPS is set out at Enclosure.

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**FINANCIAL IMPLICATIONS****Non-recurrent Expenditure**

11. We estimate that the proposed replacement will incur a non-recurrent capital expenditure of \$45,720,000 over a period of three years from 2011-12 to 2013-14, with breakdown as follows –

	<b>2011-12</b>	<b>2012-13</b>	<b>2013-14</b>	<b>Total</b>
	<b>\$'000</b>	<b>\$'000</b>	<b>\$'000</b>	<b>\$'000</b>
(a) Hardware	150	9,477	1,147	10,774
(b) Software	150	11,075	-	11,225
(c) Implementation services	3,234	10,737	3,983	17,954
(d) Site preparation	-	100	-	100
(e) Communication lines	-	88	60	148
(f) Consumables and miscellaneous	6	412	945	1,363
(g) Contingency	354	3,189	613	4,156
<b>Total</b>	<b>3,894</b>	<b>35,078</b>	<b>6,748</b>	<b>45,720</b>

12. On paragraph 11(a) above, the estimate of \$10,774,000 is for the acquisition of computer hardware, including servers and storage area network.

13. On paragraph 11(b) above, the estimate of \$11,225,000 is for the acquisition of computer software, including operating system software, database management system software, DMS and investigation analysis tools.

14. On paragraph 11(c) above, the estimate of \$17,954,000 is for the engagement of contract staff for project implementation, including system analysis and design, software development, system installation and configuration.

15. On paragraph 11(d) above, the estimate of \$100,000 is for the site preparation works, including installation of network nodes and power points, as well as the associated trunking and cabling works.

16. On paragraph 11(e) above, the estimate of \$148,000 is for the installation of communication lines for system testing and subsequent operation.

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17. On paragraph 11(f) above, the estimate of \$1,363,000 is for the acquisition of start-up consumables and other miscellaneous items, as well as training of C&ED staff.

18. On paragraph 11(g) above, the estimate of \$4,156,000 represents a 10% contingency on the cost items set out in paragraphs 11(a) to 11(f) above.

19. The above costs are estimated on the basis that all existing usable and compatible hardware and software will continue to be used in the replacement CAPS as far as possible.

### **Other Non-recurrent Expenditure**

20. The implementation of the proposal will entail an additional non-recurrent staff cost of \$7,220,000. The cost represents a total of 33.8 man-months of Inspector/Superintendent Grade staff of C&ED and 52 man-months of Analyst/Programmer Grade staff for project planning and coordination, system analysis and development, procurement and user acceptance tests. C&ED will absorb the costs.

### **Recurrent Expenditure**

21. We estimate that the recurrent expenditure arising from the replacement proposal will start to be incurred in 2013-14 when the replacement CAPS commences operation, and steady at \$10,148,000 per annum from 2015-16 onwards. Such requirements will be reflected in the Estimates of the relevant years, with breakdown as follows –

	<b>2013-14</b>	<b>2014-15</b>	<b>2015-16 and onwards</b>
	<b>\$'000</b>	<b>\$'000</b>	<b>\$'000</b>
(a) Hardware maintenance	568	634	1,365
(b) Software maintenance	2,492	2,492	2,492
(c) On-going system support and administration	4,584	5,501	5,501
(d) Communication lines	292	350	350
(e) Consumables and miscellaneous	440	440	440
<b>Total</b>	<b>8,376</b>	<b>9,417</b>	<b>10,148</b>

22. On paragraph 21(a) above, the estimated annual expenditure of \$1,365,000 is for the hardware maintenance services.

23. On paragraph 21(b) above, the estimated annual expenditure of \$2,492,000 is for the maintenance services and licence fees of the computer software.

24. On paragraph 21(c) above, the estimated annual expenditure of \$5,501,000 is for the hiring of contract staff to provide on-going system support and administration.

25. On paragraph 21(d) above, the estimated annual expenditure of \$350,000 is for the rental of data communication lines.

26. On paragraph 21(e) above, the estimated annual expenditure of \$440,000 is for the acquisition of consumables (such as backup tapes) and other miscellaneous items.

27. Taking into account the annual realisable savings of \$7,134,000 mentioned in paragraph 9(a) above, the proposal will require a net increase in recurrent expenditure of \$3,014,000 per annum from 2015-16 onwards. C&ED will absorb this additional recurrent expenditure from within its existing resources.

## IMPLEMENTATION PLAN

28. We plan to commence the replacement of CAPS in May 2011, with a view to rolling out the system in June 2013, according to the following schedule –

	<b>Activity</b>	<b>Target schedule</b>
(a)	Project initiation	May 2011
(b)	System analysis and design	June to September 2011
(c)	Procurement	October 2011 to September 2012
(d)	System development	October 2011 to January 2013
(e)	User acceptance test	January to April 2013
(f)	User training	April to May 2013
(g)	Preproduction set up and data migration	May to June 2013
(h)	System roll-out	June 2013

**PUBLIC CONSULTATION**

29. We consulted the Legislative Council Panel on Security on the proposal on 4 January 2011. At the meeting, a Member suggested that C&ED should seek advice from other law enforcement agencies with similar case processing systems on experience that might be useful for C&ED. In this regard, C&ED, in consultation with the Office of the Government Chief Information Officer, will make reference to the operational experiences of similar systems of other law enforcement agencies in designing the new system. Members supported the proposal and raised no objection for the proposal to be submitted to the Finance Committee (FC) for funding approval.

**BACKGROUND**

30. On 23 June 2000, FC approved a commitment of \$62,825,000 for C&ED to develop the CAPS (FCR(2000-01)38). The main functions supported by CAPS include information reporting, investigation processing, case processing, prosecution, and management of seized articles.

31. At present, CAPS supports about 900 workstations of C&ED and 1 700 users, including operational officers, investigators, members of the prosecution offices and management, etc. In 2010, CAPS processed a total of 14 334 active investigation files and handled a total of 24 124 cases, involving 10 325 arrested persons and about \$1,190,000,000 worth of seized articles.

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Security Bureau  
April 2011



## Cost and Benefit Analysis for the Replacement of the CAPS

	Cash flow (\$ '000)										
	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	Total
<b>Cost</b>											
Non-recurrent											
- Expenditure	3,894	35,078	6,748	-	-	-	-	-	-	-	45,720
- Staff cost	3,055	3,333	832	-	-	-	-	-	-	-	7,220
Sub-total	6,949	38,411	7,580	-	-	-	-	-	-	-	52,940
Recurrent											
- Expenditure	-	-	8,376	9,417	10,148	10,148	10,148	10,148	10,148	10,148	78,681
Sub-total	-	-	8,376	9,417	10,148	10,148	10,148	10,148	10,148	10,148	78,681
<b>Total cost</b>	<b>6,949</b>	<b>38,411</b>	<b>15,956</b>	<b>9,417</b>	<b>10,148</b>	<b>10,148</b>	<b>10,148</b>	<b>10,148</b>	<b>10,148</b>	<b>10,148</b>	<b>131,621</b>
<b>Savings</b>											
Recurrent											
- Realisable savings	-	-	6,256	7,134	7,134	7,134	7,134	7,134	7,134	7,134	56,194
- Notional savings	-	-	7,808	9,494	9,618	9,742	9,866	9,990	10,114	10,114	76,746
<b>Total savings</b>	<b>-</b>	<b>-</b>	<b>14,064</b>	<b>16,628</b>	<b>16,752</b>	<b>16,876</b>	<b>17,000</b>	<b>17,124</b>	<b>17,248</b>	<b>17,248</b>	<b>132,940</b>
<b>Net savings</b>	<b>(6,949)</b>	<b>(38,411)</b>	<b>(1,892)</b>	<b>7,211</b>	<b>6,604</b>	<b>6,728</b>	<b>6,852</b>	<b>6,976</b>	<b>7,100</b>	<b>7,100</b>	<b>1,319</b>
<b>Net cumulative savings</b>	<b>(6,949)</b>	<b>(45,360)</b>	<b>(47,252)</b>	<b>(40,041)</b>	<b>(33,437)</b>	<b>(26,709)</b>	<b>(19,857)</b>	<b>(12,881)</b>	<b>(5,781)</b>	<b>1,319</b>	<b>-</b>