For Discussion
on 17 March 2009

Legislative Council Panel on Commerce and Industry

Replacement of the Air Cargo Clearance System for
the Customs and Excise Department

PURPOSE

This paper seeks Members' endorsement of a funding proposal from the Customs and Excise Department (C&ED) to replace the Air Cargo Clearance System (ACCS) at the Hong Kong International Airport (HKIA), in the interest of sustaining a speedy and reliable customs clearance service.

BACKGROUND

2.   In 1997, the Finance Committee (FC) of the Legislative Council (LegCo) approved a sum of $127.8 million for C&ED to develop a dedicated computer system for air cargo clearance called the ACCS (ref : FCR(96-97)112).   Being one of C&ED's mission-critical systems, the ACCS provides :

(a)   electronic links between C&ED and individual air cargo operators [1] at HKIA, facilitating (i) the transfer of cargo information and customs clearance instructions, and (ii) the tracking of consignment movements among the air cargo operators;

(b)   an electronic link between the ACCS and other internal systems of C&ED to facilitate the retrieval, correlation, analysis and updating of intelligence; and

(c)   automated matching of cargo particulars against (i) the intelligence in other internal systems of C&ED; and (ii) the lists of prohibited and restricted items, thereby ensuring that such

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[1]   There are at present seven air cargo operators.

items are accompanied by relevant licences.

3.   Cargo operators provide cargo data to the ACCS prior to the arrival of their cargoes at HKIA.   C&ED carries out risk profiling. Where C&ED decides to examine a particular cargo consignment, the cargo operator will be so informed through the ACCS and asked to lay on the cargoes for examination at designated areas.   Other customs clearance instructions are also conveyed to the cargo operators through the ACCS.

4.   The ACCS operates 24 hours a day and is backed by resilience and disaster recovery equipment.   As reported to FC in May 2003 (ref : FCRI(2003-04)4), with the installation of the system, C&ED had been able to (i) provide faster customs clearance, (ii) enhance its handling capacity, (iii) enjoy improved security and accuracy in cargo selection, and (iv) achieve more efficient analysis of data including smuggling trend.

5.   With the growth of cargo throughput at HKIA, the volume of cargoes handled by the ACCS has increased from 6.7 million consignments in 1998 to 22.2 million consignments in 2008.

PROPOSAL

6.   The Commissioner of Customs and Excise, with the support of the Secretary for Commerce and Economic Development and on the advice of the Government Chief Information Officer, proposes to replace the following ageing components of the ACCS :

(a)   the hardware for all servers;

(b)   the associated software, including operating systems and database management systems; and

(c)   network equipment, including routers and firewalls, for connection to the IT systems of the cargo operators.

All other usable and compatible parts of the system (including some software) will continue to be used.

JUSTIFICATION

7.   The ACCS has been running for over ten years.   Its major components, including the servers, the operating systems and database management systems, etc., have become obsolete.   The existing maintenance vendor indicated in June 2006 that the support service for some hardware components might cease from early 2011 due to lack of spare parts.

8.   Earlier in October 2005, C&ED commissioned a consultancy study of the department's overall IT infrastructure and computer systems with a view to formulating a strategic plan to cope with demands from its operational needs and future developments.   In its report dated September 2006, the consultant advised, among other things, that (i) the Department's overall IT infrastructure was inadequate in terms of functionality and capacity; and (ii) the ACCS hardware and most of its software components were inadequate for coping with future demands.

9.   C&ED has since been planning for the upgrading of the Department's overall IT infrastructure, and the replacement of ACCS. In February 2009, the Security Bureau obtained FC's approval of funds for C&ED to develop a new, integrated and centralized IT infrastructure (vide FCR(2008-09)68)).   Having examined how best the Department could leverage on the enhanced security and bandwidth of the new IT infrastructure, C&ED finalizes its proposal to replace the ACCS.

Users' Support

10.   The proposal has the support of the Air Cargo Customer Liaison Group which includes cargo operators, representatives from airlines, express couriers and forwarding companies.   They welcome the fact that the proposal would not involve any changes to the business workflow, in particular the demands placed on their IT systems.

Anticipated Benefits

11.   The proposal in this paper is expected to bring the following benefits :

    (a) in replacing the ageing equipment, we will bring in components bearing the latest technology.   It would give C&ED added

room to handle future growth in air cargo traffic; and

    (b)   it would enhance interfacing with another IT system of C&ED being developed for commissioning in early 2010, namely the Road Cargo System (ROCARS)[2]. That in turn would help facilitate the passage of transshipment cargoes which involve inter-modal transfer from land to air (and vice versa).

12.   In short, the proposal helps sustain a speedy clearance service at HKIA for air cargoes, which would contribute towards upholding Hong Kong's position as a regional aviation and trading hub.

Implementation Plan

13.   C&ED plans to develop the replacement system from July 2009 to December 2010[3]. This ties in with the timetable for the development of the Department's future enhanced overall IT infrastructure.

IMPLICATIONS

Financial Implications

<u>Non-recurrent Expenditure</u>

14.   It is estimated that the proposal will require a non-recurrent provision of $46.0 million. Of this, $27.8 million is for procurement of hardware and software, $12.6 million for software development services, and $1.4 million for site preparation, communication lines and consumables. The remaining $4.2 million is for contingency purposes. A detailed breakdown is at **Annex A**.

15.   In addition, in-house staff costs at $3.3 million will be incurred for overseeing procurement, system development and implementation. C&ED will absorb the costs from within its existing resources.

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[2] ROCARS provides the electronic infrastructure for facilitating customs clearance of road cargoes as well as the movement of transshipment cargoes that involve inter-modal transfer (e.g. from land to air).

[3] C&ED plans to complete system design and development by August 2010, user acceptance test by November 2010 and system roll-out by December 2010.

Recurrent Expenditure

16.   It is estimated that the entire proposal will necessitate an annual full-year recurrent provision of $12.7 million in 2011-12.   This includes $12.0 million for the maintenance of computer hardware and software, on-going system support services, rental of communication links and procurement of consumables; and $0.7 million in-house staff costs for on-going project management.   A detailed breakdown is at **Annex B**. C&ED will absorb this recurrent expenditure from within its existing resources.

17.   The proposed replacement of the ACCS is expected to bring realizable saving of $3.2 million per annum, being the difference in the costs for maintenance and technical support services between the existing system (at $15.2 million) and the proposed one (at $12.0 million).   The saving arises as the maintenance and support services for the ACCS and the Department's overall IT infrastructure can be shared.

ADVICE SOUGHT

18.   Subject to Members' views, we intend to put the funding proposal to the FC in May/June 2009 for approval.

Commerce and Economic Development Bureau
Customs and Excise Department
March 2009

**Estimated Non-recurrent Expenditure for the
Replacement of the Air Cargo Clearance System**

		$ million		
		2009-10	**2010-11**	**Total**
(a)	Hardware	6.1	13.6	19.7
(b)	Software	1.8	6.3	8.1
(c)	Software development services	6.5	6.1	12.6
(d)	Site preparation	0.2	0	0.2
(e)	Communication links	0	0.5	0.5
(f)	Consumables and miscellaneous	0.1	0.6	0.7
(g)	10% Contingency	1.5	2.7	4.2
	Total	**16.2**	**29.8**	**46.0**

**Estimated Recurrent Expenditure for the
Replacement of the Air Cargo Clearance System**

		$ million
(a)	*Cost for maintaining the replaced ACCS system*	
	1. Hardware maintenance	3.7
	2. Software maintenance	1.9
	3. On-going system support services	4.1
	4. Rental of communication lines	1.1
	5. Consumables	1.2
	Sub-total of (a)	*12.0*
(b)	*Staff Cost*	*0.7*
	Total ((a)+(b))	**12.7**