ITEM FOR FINANCE COMMITTEE

CAPITAL WORKS RESERVE FUND
HEAD 710 – COMPUTERISATION
Independent Commission Against Corruption
New Subhead "Integration and Application of Information Technology in the New Headquarters Building of the Independent Commission Against Corruption"

> Members are invited to approve a new commitment of $144,587,000 for implementing the Integration and Application of Information Technology in the New Headquarters Building of the Independent Commission Against Corruption.

PROBLEM

The existing information technology (IT) infrastructure of the Independent Commission Against Corruption (ICAC) is fragmented and scattered in three buildings, namely, Murray Road Car Park Building (MRCPB), Fairmont House and the Murray Building. We need to build an integrated IT infrastructure in the new ICAC Headquarters (HQs) building, migrate existing application systems and install new application systems to support the business operation of the ICAC upon its relocation to the new HQs building.

PROPOSAL

2. The Commissioner of ICAC, with the support of the Government Chief Information Officer, proposes to create a new commitment of $144,587,000 to implement the first phase of the IT strategic development plan recommended by the consultant employed by the ICAC as detailed in paragraphs 3 and 4 below.

/JUSTIFICATION .....

JUSTIFICATION

IT Strategic Development Plan

3.   On 13 June 2003, the Finance Committee approved vide FCR(2003-04)19 a project estimate of $731.1 million in money-of-the-day prices for the construction of a purpose-built ICAC HQs building at Java Road, North Point. The project aims to put the Commission under one roof, thus enabling better sharing of facilities and pooling of administrative support including the necessary infrastructural support so as to enhance work efficiency and communication. We need to seek separate funding under Capital Works Reserve Fund Head 710 – Computerisation for the ICAC to implement integration and application of IT in the new HQs building.

Encl. 1

4.   To prepare for the move to the new HQs building scheduled for completion in mid 2007 and to meet its long-term business needs, the ICAC commissioned a consultancy study in April 2004 to map out its IT strategic development plan. The consultant recommended a two-phased IT development plan for the ICAC as set out at Enclosure 1. The first phase of the plan, which is the subject of this funding application, comprises two separate but inter-related projects, namely, the construction of an IT infrastructure and systems migration; and the implementation of applications to improve ICAC's corporate information and resource management. As regards the second phase, it will involve technological upgrading of ICAC's core operational systems which would become obsolete by around 2010. We shall undertake feasibility studies in 2008 to identify the technical options, formulate the implementation plan and determine the costs before seeking further funding for this latter phase.

Establishing New IT Infrastructure and Systems Migration

5.   Not only is the existing IT infrastructure in the ICAC fragmented and scattered, it is also aging and inadequate. Upgrading of existing IT systems has been hindered by the shortage of space and power supply in MRCPB in which the Operations Department is accommodated. We plan to construct in the new HQs building a reliable, secure and scaleable Commission-wide network with the necessary hardware and software capable of meeting the Commission's present and future IT development and business needs. The aim is to lay the requisite foundation for integrating the existing systems and implementing the various new application systems to strengthen ICAC's corporate information and resource management. The new IT infrastructure is estimated to have a lifespan of around ten years.

6.   In the absence of a comprehensive IT strategic development plan, the three departments in the ICAC, namely, Operations Department, Corruption Prevention Department and Community Relations Department, have over the years developed separate administrative systems and applications to meet their own operational requirement. First developed in the early 1990's, and later upgraded in 2000, the Operations Department Information System (OPSIS), containing live investigation data of the ICAC, is connected to the Government Office Automation (GOA) system. To safeguard the security of this confidential operational system, our GOA workstations are restricted to Lotus Notes functions only and are barred from access to other GOA functions like Central Cyber Government Offices and Central Internet Gateway. This has undermined our readiness to follow the various e-Government initiatives, which are developed on the premise that a GOA workstation can have access to all GOA functions. Moreover, with IT developing at an accelerating pace and hacking through Internet becoming a serious threat, there is increasing security concern over the connection of OPSIS with GOA. To address this problem and to further enhance the security of our infrastructure and systems, we will build a separate, secure and closed network for our confidential operational systems, shielding them off completely from external access outside the Operations Department.

7.   Given that our core operational IT systems were developed in 2000, some of the operating systems, security tools and equipment will become either obsolete by 2007 or incompatible with the new IT infrastructure. To ensure minimum interruption to our business operation upon removal to the new building, we plan to upgrade or replace the aging operating systems and equipment to ensure their readiness for use at the new HQs building. We will adopt the "reuse as far as possible" principle and relocate all usable and compatible facilities to the new HQs building for continued use.

Improvement of Corporate Information and Resource Management

8.   To maximise the benefits of the new infrastructure, we will integrate the different information systems developed at various points in time to enhance internal data-sharing capability. We will enhance corporate information by installing new applications including corporate portal, document management and knowledge management systems. We will also automate and streamline some major office manual processes, workflow and procedures by installing new application systems for financial management, procurement and inventory management and facility management. As identified in the consultancy study, the integration and installation of new application systems on information and resource

management will bring about opportunities for business process re-engineering (BPR) which will lead to improvements in operational effectiveness of various aspects of the Commission's work. In particular, with the process of capturing and storing the experience and knowledge database accumulated by officers through the application of document and knowledge management systems, the processing time required by our officers in conducting researches will be greatly reduced. Through automation of the procurement, inventory control, financial management and facility management processes, labour intensive and time-consuming procedures such as initiating and processing procurement requests, tracing inventory, preparing financial reports and booking facilities can be streamlined. The manual effort so relieved would be re-deployed to other processes with more added value.

BENEFITS

Intangible Benefits

9.   The successful implementation of the first phase of the IT strategic development plan will enable the ICAC to achieve the following intangible benefits –

> (a)   *Counter increasingly sophisticated corruption activities*
>
> By enhancing ICAC's IT facilities, investigators will be better equipped to fight against the increasingly sophisticated corruption cases facilitated by advanced IT, thus improving ICAC's overall effectiveness and efficiency in combating corruption.
>
> (b)   *Facilitate system support and future IT development*
>
> The proposed comprehensive, solid, secure and sustainable infrastructure will form the necessary foundation upon which new application modules required to meet ICAC's future operational requirements can be built expeditiously and cost-effectively.
>
> (c)   *Reinforce IT security*
>
> The proposed new IT infrastructure, with enhanced security features, will enable the ICAC to comply readily with the relevant security requirement and to catalyse reliable performance which will in turn promote the ICAC as an accountable and effective organisation contributing to Hong Kong as one of the cleanest cities in the world.

> (d)   *Improve overall operational efficiency by implementation of BPR*
>
> The implementation of BPR will enable the ICAC to eliminate duplication of efforts in maintaining different systems and databases; enhance information and knowledge management; enhance document management by automation; and streamline administrative processes in respect of procurement, inventory control, financial management and facility management.
>
> (e)   *Better service quality to clients and the public*
>
> Enhanced information sharing functions will improve ICAC's effectiveness in responding to requests from other government departments and members of the public. With enhanced security function, the ICAC can facilitate e-means for members of the public to report corruption and providing information through the Internet. Members of the public can also obtain updated corruption-related information and statistics more readily through enhanced contents of ICAC's websites.

Cost Savings

10.   The implementation of the proposed projects will bring about annual savings of $6,778,000 from 2010-11 onwards, comprising –

> (a)   Realisable savings of $4,214,000, which include –
>
> > (i)   Annual saving of $2,477,000, being the maintenance costs for the hardware, software and consumables of the existing infrastructure and systems to be decommissioned as well as the rental for the existing communication lines to be disconnected. The sum will be ploughed back to cover partly the recurrent costs for the new infrastructure and systems.
> >
> > (ii)   Staff cost of $1,639,000 arising from the deletion of two posts of Commission Against Corruption Officer (Middle/Lower) (CACO(M/L)) made possible as a result of reduction in maintenance efforts after the integration and centralisation of systems under one roof. This amount will be ploughed back to offset the cost for two of the four additional posts required for implementing this project.

(iii) Savings of $98,000 arising from the reduced use of paper and the rental currently required for hosting one of our application systems at a private data centre.

(b) Notional savings of $1,571,000, mainly derived from fragmented manual efforts saved after automation of certain manual processes, such as information searching and retrieval.

(c) Cost avoidance of $993,000, representing the cost for two additional posts of Assistant Clerical Officer and other fragmented staff efforts which would otherwise be required to cope with the increasing workload.

Encl. 2   11.   A cost and benefit analysis of the project is set out at Enclosure 2.

FINANCIAL IMPLICATIONS

Non-recurrent Expenditure

12.   We estimate that the project will require a total non-recurrent expenditure of $144,587,000 over a five-year period from 2005-06 to 2009-10, broken down as follows –

	2005-06	2006-07	2007-08	2008-09	2009-10	Total
	$'000	$'000	$'000	$'000	$'000	$'000
(a) Hardware and software	500	25,383	27,054	6,008	2,957	61,902
(b) Implementation services	1,909	19,502	22,684	10,472	5,040	59,607
(c) Site preparation	-	3,602	3,606	16	11	7,235
(d) Communication lines	-	534	535	-	-	1,069
(e) Start-up Consumables	-	799	804	16	11	1,630
(f) Contingency	241	4,982	5,468	1,651	802	13,144
Total	**2,650**	**54,802**	**60,151**	**18,163**	**8,821**	**144,587**

13.   On paragraph 12(a), the estimate of $61,902,000 is for procurement of hardware including servers, routers, core switches and floor switches; associated software for the new network infrastructure as well as security facilities including firewalls, encryption devices and patch/security/anti-virus management tools.

14.   On paragraph 12(b), the estimate of $59,607,000 is for acquisition of services from external service providers and contract IT professional staff to oversee and implement the project. Main activities include project management, system design and configuration, system delivery and migration, system testing and provision of technical support.

15.   On paragraph 12(c), the estimate of $7,235,000 is for site preparation, including the installation of emergency power supply and necessary server room facilities.

16.   On paragraph 12(d), the estimate of $1,069,000 is for installation of communication lines connecting the various ICAC offices as well as linking the ICAC with other government departments like the Office of the Government Chief Information Officer.

17.   On paragraph 12(e), the estimate of $1,630,000 is for procurement of start-up consumables, including backup tape cartridges for all servers.

18.   On paragraph 12(f), the estimate of $13,144,000 represents an approximately 10% contingency on the cost items set out in paragraphs 12(a) to (e).

Other Non-recurrent Expenditure

19.   The implementation of the project will also entail an additional non-recurrent staff cost of $16,994,000, broken down as follows –

	2005-06	2006-07	2007-08	2008-09	2009-10	Total
	$'000	$'000	$'000	$'000	$'000	$'000
Staff cost	1,782	6,244	7,195	1,202	571	16,994
Total	**1,782**	**6,244**	**7,195**	**1,202**	**571**	**16,994**

20.		The staff cost estimated above represents 197 man-months of Commission Against Corruption Officer grade staff efforts and 20 man-months of General Grades staff efforts. These staff efforts will be spent on implementing the project, involving activities relating to system analysis and development, site preparation, migration and system acceptance. The ICAC will absorb the non-recurrent staffing requirement from within its own resources.

Recurrent Expenditure

21.		We estimate that the total recurrent expenditure arising from the project is $15,883,000 per annum from 2010-11 onwards, as set out below –

		2010-11 and onwards
		$'000
(a)	Hardware and software maintenance	6,526
(b)	Systems support and maintenance services	2,069
(c)	Communication lines rental	1,483
(d)	Consumables	325
	Sub-total	**10,403**
(e)	Staff cost	5,480
	Total	**15,883**

22.		On paragraph 21(a), the estimated annual expenditure of $6,526,000 is for hardware and software maintenance as well as software licence fees to support the new IT infrastructure, secure and closed network and application systems.

23.		On paragraph 21(b), the estimated annual expenditure of $2,069,000 is for on-going system support and maintenance services for the new IT infrastructure and application systems, including programme upgrade, installation of patches, bug fixing and minor enhancement, provided by external service providers.

24.	On paragraph 21(c), the estimated annual expenditure of $1,483,000 is for rental of new communication and data lines.

25.	On paragraph 21(d), the estimated annual expenditure of $325,000 is for procurement of consumables such as backup tapes and toner cartridges.

26.	On paragraph 21(e), the estimated annual expenditure of $5,480,000 represents the staff cost for four posts of CACO(M/L) and eight fragmented posts of various ranks required to provide additional support and maintenance services for the new IT infrastructure and application systems.

27.	Of the estimated total recurrent expenditure of $15,883,000, $4,214,000 (including $2,575,000 general departmental expenses and $1,639,000 staff cost) will be offset by the realisable savings mentioned in paragraph 10 (a) above.	Besides, the ICAC will further absorb the remaining staff cost of $3,841,000 (being the cost of $5,480,000 referred to paragraph 26 after netting off saving of $1,639,000 aforementioned) and $2,510,000, being part of the recurrent expenditure.	The net additional recurrent expenditure for the project is estimated to be $5,318,000.

28.	The above estimates have already included the estimated non-recurrent and recurrent costs of $1,648,000 and $183,000 respectively for the installation and operation of a disaster recovery centre.

IMPLEMENTATION PLAN

29.	The proposed implementation plan is as follows –

Activity	Timing
Tendering for Project Management Office	July 2005
Tendering for implementation services	February 2006
Drawing up detailed migration schedule and IT infrastructure implementation plan	September to December 2006
Procurement of hardware and software	September 2006
Off-site testing	January to May 2007
On-site installation and testing	May to October 2007
Systems migration	May 2007 to January 2008
Implement applications arising from BPR	February 2008 to November 2009

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30.   In carrying out the migration plan, the ICAC will ensure that all data stored in existing computer systems will be removed by means of de-magnetisation and the hard disks physically destroyed before they are disposed of. We will ensure that these physically destroyed hard disks and other unserviceable microcomputers and accessories like printers, monitors, routers and modems will be disposed of in accordance with the relevant government procedures.

BACKGROUND INFORMATION

31.   We circulated a paper to the Legislative Council Panel on Security on 13 June 2005 and briefed Members on the funding proposal. Members noted the paper and had no objection to our proposal.

Independent Commission Against Corruption
June 2005

IT Strategic Development Plan

Phase	Project No.	Name of Project & Description	Implementation	Status
Phase 1 (2005-09)	1	**Infrastructure Upgrade and System Migration** ➢ To build a comprehensive, solid, secure and sustainable IT infrastructure ➢ To migrate existing systems and applications with necessary technological upgrade and integration ➢ To implement database encryption for confidential systems ➢ To develop a Corporate Portal which provides a personalised environment where information can be aggregated from disparate sources and obtained through a single point access ➢ To enhance ICAC's websites	2005-08	Feasibility study was completed in March 2005. Implementation is subject to funding approval from the Finance Committee.
	2	**Corporate Information and Resource Management System** ➢ To implement a Knowledge Management System to provide a robust IT repository for storing knowledge in a systematic and easily retrievable manner ➢ To implement a Document Management System to transform paper documents into electronic format to enhance storage and facilitate sharing and retrieval ➢ To implement a Financial Management System to enhance the efficiency in maintaining and analysing financial data ➢ To implement a Procurement and Inventory System to streamline and automate the procurement process and inventory control ➢ To implement a Facility Management System to streamline the process of facilities booking	2008-09	Feasibility study was completed in March 2005. Implementation is subject to funding approval from the Finance Committee

Phase	Project No.	Name of Project & Description	Implementation	Status
Phase 2 (2008-12)	1	**Technology upgrading of existing core systems** ➢ To conduct a feasibility study on ICAC's business needs and technical options available for upgrading the following core systems. - Operations Department Information System, the existing functions of which include complaint logging, case management, investigation-related forms generation, intelligence analysis, operations control, Detention Centre administration, prosecution preparation and reporting - Corruption Prevention Department Assignment Management Information System, which is a web-based application that helps management and officers to keep track of the progress and performance of assignment studies and consultation activities. It also functions as an electronic library that stores assignment and consultation reports - Community Relations Department Management Information System, which is a web-based application for managing client information, liaison activities and projects; generating project and activity forecasts and generating bulk mails. It effectively assists the ICAC in the conduct of community education work ➢ To upgrade the above core systems to meet the latest business needs of the ICAC	2008-12	Feasibility study will be conducted in 2008. Implementation is subject to availability of funds.

Cost and Benefit Analysis for the Implementation of the Integration and Application of Information Technology in the New ICAC Headquarters Building

	Cash flow ($'000)										
	2005-06	**2006-07**	**2007-08**	**2008-09**	**2009-10**	**2010-11**	**2011-12**	**2012-13**	**2013-14**	**2014-15**	**Total**
Cost											
Non-recurrent											
Expenditure	2,650	54,802	60,151	18,163	8,821	-	-	-	-	-	144,587
Staff cost	1,782	6,244	7,195	1,202	571	-	-	-	-	-	16,994
Total non-recurrent	4,432	61,046	67,346	19,365	9,392	-	-	-	-	-	161,581
Recurrent											
Expenditure	-	-	1,092	7,710	8,729	10,403	10,403	10,403	10,403	10,403	69,546
Staff cost	-	-	-	2,970	3,807	5,480	5,480	5,480	5,480	5,480	34,177
Total recurrent	-	-	1,092	10,680	12,536	15,883	15,883	15,883	15,883	15,883	103,723
Total cost	**4,432**	**61,046**	**68,438**	**30,045**	**21,928**	**15,883**	**15,883**	**15,883**	**15,883**	**15,883**	**265,304**
Savings											
Realisable savings	-	-	-	3,333	3,627	4,214	4,214	4,214	4,214	4,214	28,030
Notional savings	-	-	-	-	527	1,571	1,571	1,571	1,571	1,571	8,382
Cost avoidance	-	-	-	-	331	993	993	993	993	993	5,296
Total savings	**-**	**-**	**-**	**3,333**	**4,485**	**6,778**	**6,778**	**6,778**	**6,778**	**6,778**	**41,708**
Net shortfall	**4,432**	**61,046**	**68,438**	**26,712**	**17,443**	**9,105**	**9,105**	**9,105**	**9,105**	**9,105**	**223,596**
Net cumulative shortfall	**4,432**	**65,478**	**133,916**	**160,628**	**178,071**	**187,176**	**196,281**	**205,386**	**214,491**	**223,596**	