ITEM FOR FINANCE COMMITTEE

CAPITAL WORKS RESERVE FUND
HEAD 710 - COMPUTERISATION
Immigration Department
New Subhead "Implementation of Phase II of the Updated Information
Systems Strategy for the Immigration Department"

> Members are invited to approve a new commitment of $352,753,000 for implementing Phase II of the Updated Information Systems Strategy for the Immigration Department.

PROBLEM

There is a need to automate the immigration clearance process to cope with the significant increase in passenger and vehicular traffic at immigration control points in recent years.

PROPOSAL

2. The Director of Immigration, with the support of the Secretary for Security and the Secretary for Commerce, Industry and Technology, proposes to create a new commitment of $352,753,000 to implement Phase II of the Updated Information Systems Strategy (ISS-2), which comprises the Automated Passenger Clearance (APC) System and the Automated Vehicle Clearance (AVC) System Projects.

/JUSTIFICATION.....

JUSTIFICATION

Progress of ISS-2

3.   In January 2002, the Finance Committee gave funding approval for the implementation of Phase I of the ISS-2 vide FCR(2001-02)54. Since then, projects under Phase I have been progressing smoothly and the major developments are as follows –

(a)   The iPermit System was successfully launched in March 2002. With this internet-based system, the processing of applications for visit permits submitted by residents of Taiwan has been reduced from five working days to only a few minutes.

(b)   The development work of the Information Technology (IT) Infrastructure Upgrade Programme[1] has started in January 2002. This Programme, which is expected to be completed in October 2004, will provide a platform for implementation of various new application systems under the ISS-2.

(c)   The contract for the supply of hardware, software and services for the Immigration Control Automation System (ICAS) Enhancement Programme[2] was awarded in November 2002. Implementation of the enhanced ICAS at the control points is scheduled for completion by June 2004.

Encl. 1   A list of ISS-2 projects and updated implementation plan is set out at Enclosure 1.

Phase II of ISS-2 – APC and AVC

4.   APC and AVC are the two important projects under Phase II of the ISS-2. In the light of the perennial growth in passenger and vehicular traffic at control points, Immigration Department (ImmD) commissioned consultants in February 2002 to study the feasibility of introducing automated immigration clearance processes at immigration control points for both passenger and vehicular

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[1]   IT Infrastructure Upgrade Programme is to upgrade the IT infrastructure of ImmD, which provides the infrastructural communication network and system architecture underpinning all application systems of the Department.

[2]   ICAS Enhancement Programme is to enhance the existing ICAS which supports the immigration clearance services at control points.

traffic by using the smart identity cards to be issued to Hong Kong residents in mid-2003 and the fingerprint recognition technology. The feasibility studies, which were completed in September 2002, concluded that it is technically viable and financially justified to implement the APC and AVC projects. With the implementation of the two projects, the overall passenger and vehicle throughput at control points can be greatly improved.

Automated Passenger Clearance

5.   The passenger volume has increased by 31% from 116 million in 1997-98 to 152 million in 2001-02. In the same period, the number of cross-boundary vehicles has augmented by 20% from 9.6 million to 11.5 million. The perennial growth in the resultant workload has posed great strain on ImmD. We consider that instead of augmenting staff resources to cope with the growth, immigration clearance processes should be revolutionised through the application of advanced technology.

6.   The existing immigration clearance process for passengers necessitates visual inspection of the passenger by an immigration control officer (ICO) at the immigration counter in control points. The concept of APC[3] is to employ smart card and fingerprint recognition technologies for self-service clearance at control points so as to dispense with visual inspection by ICO. The initial thinking is that one ICO may supervise up to five unmanned APC channels. Besides, through redesigning counters, it is expected that every two existing immigration counters can be converted into three APC channels, thus increasing the overall passenger throughput.

7.   Passenger using APC channel will insert his smart identity card into a card reader and place his thumb onto a fingerprint scanner at the APC channel. The APC System will validate the card and verify the fingerprint template captured by the scanner against the fingerprint template stored in the smart identity card. If the two templates are matched and there is no irregularity, the passenger will be allowed to pass through the channel. The ICO overseeing the self-service channel will intervene only when the situations warrant, for example, to provide assistance to passengers or take enforcement actions.

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3   The APC System will serve Hong Kong residents holding Hong Kong smart identity cards except those under 11 years of age whose identity cards do not contain a fingerprint template.

8.   The average processing time under APC is expected to be about 12 seconds, which is roughly the same as that under the existing human inspection clearance system. In the event that passengers using APC channels are required to queue up, a "fast" mode will be triggered whereby the passenger in the head of the queue can insert his smart identity card into a smart card reader installed in front of the APC channel to have his personal information pre-fetched before he enters the APC channel for self-service immigration clearance. This concurrent processing feature of APC will speed up the processing time of subsequent passengers at the APC channels.

Automated Vehicle Clearance

9.   To facilitate the clearance of cross-boundary vehicle drivers, ImmD proposes to implement AVC in the existing three vehicular control points, that is, Lok Ma Chau, Man Kam To and Sha Tau Kok Control Points. Similar to that of APC System, the concept of AVC is to allow drivers to use their smart identity cards and fingerprint for self-service immigration clearance. It is envisaged that one ICO may supervise up to six unmanned AVC kiosks.

10.   The average processing time under AVC is expected to be about 11 seconds, which is, slightly faster than that of the existing human inspection clearance system which takes about 15 seconds. The average clearance time can be further reduced to 5 seconds if the driver carries an electronic tag to be issued by ImmD. When a transponder system installed in front of the immigration kiosk receives the signal from the electronic tag, the AVC System will transmit the data required for self-service immigration clearance from the database to the workstation in the kiosk concerned. This will save the driver's effort and time to insert his smart identity card into the card reader and remove the card from it before placing his thumb onto a fingerprint scanner installed at the kiosk.

Benefits

11.   The successful implementation of the APC and AVC Systems will enable ImmD to achieve the following benefits –

    (a)   Significantly increase the throughput at control points

          The Systems can raise the overall throughput at control points. They will facilitate passenger and vehicular movements in and out of Hong Kong.

(b)   **Better service to the travelling public**

Through the Systems, passengers' and drivers' waiting time at control point for immigration clearance can be reduced.

(c)   **Improving security and effectiveness of immigration clearance**

Through the application of smart identity card and biometrics recognition technologies, immigration clearance will become even more accurate and secure. Besides, since APC and AVC Systems will enable ImmD to overcome the 'one-officer-one-counter/kiosk' constraint, the Department can flexibly redeploy its resources to other areas of more pressing needs.

(d)   **Promoting tourism and trade**

The AVC System will facilitate cargo flow across the boundary which helps contribute to the development of Hong Kong into a service hub and logistic centre. It is our aim to encourage Hong Kong residents to use the APC channels as far as possible so that we can redeploy more manpower to the visitors counters, this will cast a positive effect on tourism and facilitate business in Hong Kong. Furthermore, the deployment of advanced technologies at control points may enhance the image of Hong Kong as a world-class city, adding to the attractions for tourists.

Cost savings

12.   The implementation of the APC and AVC Systems will bring about annual recurrent savings of $140,490,000 from 2007-08 onwards, comprising –

(a)   **Realisable savings** of $93,378,000 – This represents annual staff savings of 207 posts of Senior Immigration Assistant, and 10 posts of Immigration Officer. The staff savings which will be realised progressively from 2004-05 and onwards can be redeployed to meet other operational needs such as manning the new control points at Shenzhen Western Corridor and Lok Ma Chau Spur Line scheduled for operation in 2005-06 and 2006-07 respectively; and

(b)   **Cost avoidance** of $47,112,000 – Upon full implementation of APC System in 2006-07, the number of clearance channels will be augmented (since two conventional counters will be converted into three unmanned APC channels), resulting in productivity enhancement and increasing throughput at control points. Hence, it is estimated that the implementation of APC System will avoid the creation of 115 posts of Senior Immigration Assistant at an annual staff cost of $47,112,000 as from 2007-08, which will otherwise be required for maintaining the same level of processing capability.

13.   Furthermore, upon implementation of the APC and AVC Systems, a total of 163 sets of equipment at the cost of $5,908,000 installed under the enhanced ICAS at existing control points (including optical character recognition readers, workstations and Liquid Crystal Display (LCD) monitors) can be re-deployed. These equipment may be installed at the traditional counters of the new control points serving passengers who are not covered by the automated clearance systems (including visitors and Hong Kong residents under 11 years of age). We set out at Enclosure 2 a detailed breakdown of the savings and cost avoidance.

Encl. 2

Cost and benefit analysis

14.   A cost and benefit analysis of the implementation of the APC and AVC Systems is at Enclosure 3. We expect to be able to achieve break-even in 2010-11, i.e. four years after full implementation.

Encl. 3

FINANCIAL IMPLICATIONS

Non-recurrent expenditure

15.   We estimate that the implementation of Phase II of the ISS-2, comprising the APC System and AVC System, will require a total non-recurrent expenditure of $352,753,000 over a five-year period from 2002-03 to 2006-07, broken down as follows –

/(a) .....

		2002-03 $'000	2003-04 $'000	2004-05 $'000	2005-06 $'000	2006-07 $'000	Total $'000
(a)	Hardware and software	-	-	102,867	79,615	22,458	204,940
(b)	Implementation and contract staff services	18	13,489	30,291	30,211	5,982	79,991
(c)	Site preparation	-	3,056	12,261	9,523	3,282	28,122
(d)	Consumables and miscellaneous	-	2,530	3,038	1,419	643	7,630
(e)	Contingency	2	1,908	14,846	12,077	3,237	32,070
	Total	**20**	**20,983**	**163,303**	**132,845**	**35,602**	**352,753**

16.   As regards paragraph 15(a), the expenditure of $204,940,000 is for the acquisition of hardware, software and network equipment including APC auto-gate hardware, load-balancer, mid-range computer systems, security related components, AVC kiosk equipment such as vehicle height detection sensors, transponder sensors, intrusion detection cameras, Light Emitting Diode display boards, inspection panels with smart card reader, fingerprint scanner and speakerphone.

17.   As regards paragraph 15(b), the expenditure of $79,991,000 is mainly for the acquisition of service from external service providers and contract staff to implement the two projects. Main activities include system analysis and design, program   development   and   system   acceptance/system   integration/user acceptance/load tests as well as provision of technical consultancy.

18.   As regards paragraph 15(c), the expenditure of $28,122,000 is for site preparation including installation of APC channels, AVC equipment at each kiosk, data ports and power points, as well as trunking and cabling work at control points.

19.   As regards paragraph 15(d), the expenditure of $7,630,000 is for the launching of promotion and publicity campaign, the acquisition of start-up consumables and installation of data lines.

20.   As regards paragraph 15(e), the expenditure of $32,070,000 represents a 10% contingency on the cost items set out in paragraphs 15(a) to (d).

Other non-recurrent expenditure

21.   In addition, the APC System and AVC System will entail an additional non-recurrent expenditure of $72,573,000 in respect of the accommodation costs and in-house staff costs for both system development and implementation. The cost breakdown is as follows –

		2002-03 $'000	2003-04 $'000	2004-05 $'000	2005-06 $'000	2006-07 $'000	Total $'000
(a)	Staff cost	2,523	16,311	25,515	15,165	7,513	67,027
(b)	Accommodation	118	1,124	2,057	1,425	822	5,546
	Total	**2,641**	**17,435**	**27,572**	**16,590**	**8,335**	**72,573**

22.   As regards paragraph 21(a), the expenditure of $67,027,000 represents the staff cost of immigration service grade and IT professional grade staff for setting up project teams to develop and implement the two projects. It comprises 644 man-months of immigration service grade staff (involving 30 non-directorate posts) and 212.5 man-months of IT professional grade staff (involving one Chief System Manager (D1) and 5 non-directorate posts). We set out at Enclosure 4 details of the non-recurrent staffing requirements. The project teams will be responsible for the system analysis and design, development, site preparation, installation support, performing system/user acceptance/load tests, devising new procedures, preparing documentation, arranging and conducting training and implementing the two projects. ImmD will absorb the non-recurrent staffing requirements in 2002-03, being 16 man-months of immigration service grade staff and 11 man-months of IT professional grade staff (at a total staff cost of $2,523,000) by internal redeployment.

Encl. 4

23. As regards paragraph 21(b), the expenditure of $5,546,000 is for payment of rent to accommodate the project teams for system development, testing and training of staff. ImmD will absorb the requirements in 2002-03 (an amount of $118,000) within its own resources.

Recurrent expenditure

24. We estimate that additional recurrent expenditure arising from the two projects is $46,194,000 per annum, as set out below –

		2004-05 $'000	2005-06 $'000	2006-07 $'000	2007-08 $'000	2008-09 $'000	2009-10 $'000	2010-11 $'000	2011-12 and onwards $'000
(a)	Hardware and software maintenance	-	18,095	26,663	31,104	31,235	31,374	30,376	29,845
(b)	Maintenance and contract staff services	-	1,925	5,323	10,510	10,510	10,510	10,510	10,510
(c)	Consumables and miscellaneous	-	325	1,137	1,137	1,137	1,137	1,137	1,137
(d)	Communication lines	230	366	366	366	366	366	366	366
	Sub-total	230	20,711	33,489	43,117	43,248	43,387	42,389	41,858
(e)	Staff cost	-	1,715	2,390	4,034	4,034	4,034	4,034	4,034
(f)	Accommodation	-	104	219	302	302	302	302	302
	Sub-total	-	1,819	2,609	4,336	4,336	4,336	4,336	4,336
	Total	230	22,530	36,098	47,453	47,584	47,723	46,725	46,194

25.   As regards paragraph 24(a), the annual expenditure of $29,845,000 is required for hardware and system software maintenance, as well as software license fees to support the APC and AVC Systems.

26.   As regards paragraph 24(b), the annual expenditure of $10,510,000 is required mainly for the maintenance service for the application software of APC System and AVC System provided by the external service providers and contract staff.

27.   As regards paragraph 24(c), the annual expenditure of $1,137,000 is required for purchase of consumables such as backup tapes and printer toner.

28.   As regards paragraph 24(d), the annual expenditure of $366,000 is required for rental of data lines.

29.   As regards paragraph 24(e), the annual expenditure of $ 4,034,000 is required for immigration service grade and IT professional grade staff for providing additional on-going support and maintenance of the APC and AVC
Encl. 5   Systems. Details of the recurrent staffing requirements are set out at Enclosure 5.

30.   As regards paragraph 24(f), the annual expenditure of $302,000 is required for providing accommodation for additional staff.

IMPLEMENTATION PLAN

31.   The proposed implementation plan for APC Project is as follows –

/Activity .....

Activity	Timing
Tendering	February 2003 to October 2003
System design and development	November 2003 to July 2004
User acceptance test	June 2004 to October 2004
User training	July 2004 to June 2005
Site preparation	August 2004 to June 2006
Roll-out to control points	November 2004 to June 2006

32.   The proposed implementation plan for AVC Project is as follows –

Activity	Timing
Tendering	February 2003 to October 2003
System design and development	November 2003 to July 2004
User acceptance test	June 2004 to October 2004
Site preparation	June 2004 to September 2004
User training	July 2004 to October 2004
Roll-out to vehicular control points	November 2004 to December 2004

/BACKGROUND .....

BACKGROUND INFORMATION

33.   As recommended by the ISS consultant, ISS-2 should be initiated according to a structured programme comprising five phases: Phase 0 to start in 1999-2000, Phase I in 2000-01, Phase II in 2001-02, Phase III in 2002-03 and Phase IV in 2003-04. The following is an outline of the major projects in each phase, with elaboration on their inter-dependence –

Phase 0   -   Due to the urgent need to replace the aging system that supports the issue of identity (ID) cards, the HKSAR ID Card Project started in 1999-2000 even before the conclusion of the ISS-2 consultancy study. The smart ID card to be introduced in mid-2003 will provide an infrastructure for launching the APC and AVC under Phase II of ISS-2.

Phase I   -   This phase consists of mainly the IT Infrastructure Upgrade and ICAS Enhancement Programmes, two time- and mission-critical programmes which will affect ImmD's ability to continue to use IT to provide services to the public. These two programmes will upgrade the technology platform for the introduction of APC and AVC. The Electronic Visit Permit Application System (Pilot) (or known as the iPermit System) is also included in this phase. This project was rolled out in March 2002.

Phase II -   APC and AVC, which will employ smart card and biometrics recognition technologies, are the two major projects in this phase. The implementation of these two projects is conditional upon the introduction of smart ID card and launch of the IT Infrastructure Upgrade and ICAS Enhancement.

Phase III - This phase mainly comprises the enhancement of Processing Automation System (PAS) and the Electronic Records Programme. The enhancement of PAS, which supports the handling of applications, will improve the services to applicants of visas, entry permits, extension of stay, travel documents as well as registration for births, deaths and marriages. The Electronic Records Programme, which comprises four projects, namely, File Conversion, Imaging, Workflow and Document Management, will, among other things, digitise ImmD records currently in microfilm and paper form to improve the record keeping systems, to save manpower and space, to improve office efficiency and enhance productivity.

Phase IV - This phase will cover the Data Warehousing Project which will provide quality management information to aid decision making as well as planning and allocation of resources. In addition, the building of an Intranet in the Department will be carried out to leverage the improved management information made available by Data Warehousing, and to take advantage of the enhanced technology environment brought about by projects of the previous phases to introduce Business Information, Personnel Support and Chinese Language Support Systems. The feasibility of implementing Advance Passenger Processing will also be examined in this phase.

ImmD will regularly review and update the ISS-2, including the roll-out programme, in light of factors such as advancement of technologies and the changing demand of the community.

34.   We consulted the Legislative Council Panel on Security on the proposal including financial implications on 5 December 2002. Members supported the proposal and some urged that the implementation of the two projects be speeded up. We explained that as these are complex projects deploying advanced technology, it would need at least 22 months to go through the project development cycle which included tendering, system development and design, site preparation, testing, training, etc. The implementation plan had also taken account of the implementation dates of the upgraded information technology infrastructure (October 2004) and enhanced ICAS (June 2004) of ImmD, with which AVC and APC will interface, as well as of the programme of the region-wide identity card replacement exercise which will start in mid-2003 and last for four years. Some Members had also suggested ImmD to maximise the number of APC channels in light of actual experience and carefully consider their design and layout to guard against slip-throughs.

Security Bureau
January 2003

List of projects and macro implementation plan of the Updated Information Systems Strategy for the Immigration Department

Phase	Project No.	Name of Project & Description	Implementation	Status
Phase 0 (1999-2000)	1	**HKSAR ID Card** [D] To develop and implement the necessary infrastructure and application system for issuing new ID cards to the public.	May 2003	Feasibility study (FS) was completed in June 2000. With the funding approval obtained from the Finance Committee in March 2001 and May 2002, development work is in active progress.
Phase I (2000-01)	2	**Business Process Re-engineering** [E] To streamline and centralise work processes with the aim of significantly improving productivity, and bringing the greatest benefit from new and improved information systems.	Throughout the implementation of the updated ISS	Business process re-engineering (BPR) studies were conducted in 2000 on applications for extension of stay and visas; validation of right of abode claim; management of births, deaths and marriage records. Recommendations of the studies become useful input to the FS on the Enhancement of Processing Automation System (PAS) being conducted. BPR was conducted from June to September 2002 on keeping of microfilm and paper records. As a result, the overall efficiency has been increased and a saving of 17 posts was realised. Studies on other areas will be mounted to identify the business process re-engineering opportunities prior to implementation of the related information systems.

Notes :
D denotes that the project is one of the 12 delivery projects.
E denotes that the project is one of the 18 enabling projects.

Phase I (2000-01)	3 (Part I)	**Electronic Visit Permit Application System (Pilot)**[D] To introduce a new computer system (called iPermit System) for handling applications and issue visit permits to Taiwan visitors through electronic means. (The experience gleaned from this pilot scheme will be useful for subsequent implementation of Part II of the scheme to cover other categories of visitors.)	April 2002	The iPermit System was successfully rolled out on 18 March 2002.
	4	**Infrastructure Upgrade Programme** **Mainframe Investment**[E] To upgrade the processing and storage capacity of the mainframe to meet the needs of the updated ISS applications.	)) Stage 1 -) building an) Administrative) Network by) August 2003)	))))))))
	5	**Midrange Investment**[E] To upgrade the server computers (which link the mainframe computer in the headquarters and the personal computers in outstations) to the current technology platform and to enhance processing power and storage capacity.	) Stage 2 -) extending) upgraded) Infrastructure) to control) points by	)))))Funding approval from the Finance)Committee was obtained on 11 January 2002.)Development work is in active progress.
	6	**Desktop Investment**[E] To provide suitable modern personal computers on the desktop for immigration officers handling various applications in the headquarters and to the officers manning the clearance counters and kiosks at immigration control points to facilitate their daily work.	) February 2004)) Stage 3 -) extending) upgraded	)The Programme will be completed in)October 2004.)))))
	7	**Communications Network Investment**[E] To upgrade the communication network (a core IT infrastructure component shared by all ImmD applications now serving the immigration headquarters, 30 branch offices and 10 control points) to support the updated ISS applications and new offices and control points.	) Infrastructure) to travel) documents) issuing) offices by) October 2004	))))))

Notes :
D denotes that the project is one of the 12 delivery projects.
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Phase I (2000-01)	8	**Immigration Control Automation System (ICAS) Enhancement Programme** **ICAS Enhancement** [D] To enhance the existing system to address the aging and obsolescence problems and system limitation; and to raise the technology platform to support and interface with other initiatives of the updated ISS to improve the efficiency and effectiveness of operation of the immigration control points. **Improvement on Information Security** [D] The opportunity will also be taken to improve data security of ICAS.	)))) April 2004))))))))	)))Funding approval from the Finance)Committee was obtained on 11 January)2002. Development work is in active)progress. The Programme will be rolled out)in April 2004 and completed in June 2004.))))
	9			
	10	**Information Systems (IS) Branch Organisation Restructuring** [E] To restructure IS Branch (comprising 351 staff as at 1 August 2002) and strengthen it with IT professional staff to prepare for the implementation of the updated ISS.	Throughout the implementation of the updated ISS	With effect from 1 April 2001, the IS Branch of ImmD has been reorganised to integrate 48 IT professional grade staff (from ITSD) for enhanced coordination and effective implementation of the updated ISS. As an on-going exercise, divisions of IS Branch are being reorganised to achieve efficiency and save resources, and to enable the Branch to implement the updated ISS in a proactive and creative way.

Notes :
D denotes that the project is one of the 12 delivery projects.
E denotes that the project is one of the 18 enabling projects.

Phase II (2001-02)	11	**Automated Passenger Clearance** [D] To enable the clearance of passengers securely using smart card and biometrics technologies without the aid of an Immigration Officer with a view to speeding up passenger flow and optimising staff usage.	2004-05	FS was completed in September 2002. Implementation of the project is subject to funding approval from the Finance Committee.
	12	**Automated Vehicle Clearance** [D] To automate vehicle clearance at land crossing points through the establishment of self-service kiosks using vehicle identification and biometrics technologies with a view to raising the overall vehicle throughput and reducing traffic congestion.	2004-05	FS was completed in September 2002. Implementation of the project is subject to funding approval from the Finance Committee.

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		Capability Improvement Programme
		     IS Process Improvement [E]
		 A comprehensive project to define the new processes for the restructured organisation to employ, and to train and support staff in their use. To equip the IS Branch with new and improved processes based on good IT industry practices, so that it can extend its management capability.
		
		     IS Performance & Quality Measuring [E]
		 To establish a culture of regular measurement and target setting, and to use this as the means of driving quality improvement with a view to improving the effectiveness of the IS Branch. Specifically, the IS Branch will conduct monthly performance review of how well information systems are doing in relation to agreed performance measurements and to publish regular performance reports. This Branch will also establish a system defect reduction plan for its units.
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				)To tie-in with project no. 10 (IS Branch
				)organisation restructuring), these initiatives
				)will be pursued throughout the
				)implementation of the updated ISS.
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Notes :

D denotes that the project is one of the 12 delivery projects.

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Phase II (2001-02)	15	**IS Strategy Project Office** [E] To set up a Project Office to conduct periodic reviews of the overall strategy, to adjust the implementation plan, and to obtain funding for successive Phases.	)))))	)))))
	16	**Change Management** [E] To define the formal ImmD approach to proactively managing change throughout the organisation and to underpin the process re-engineering activity required to deliver the benefits of technology to the business.	Throughout the implementation of the updated ISS	This initiative will be pursued in correspondence with the business process re-engineering opportunities throughout the implementation of the updated ISS.
	17	**Communication** [E] To communicate to the staff within ImmD to keep them informed of the progress of the implementation of the updated ISS and of the potential effects on business and people. The aim of this programme is to educate and inform all interested parties on a 'no surprises' basis to facilitate smooth implementation of the updated ISS.	Throughout the implementation of the updated ISS	The communication has started and the effort will be sustained throughout the implementation of the updated ISS.

Phase III (2002-03)	18	**Processing Automation System (PAS) Enhancement Programme**
		  PAS Enhancement [D]
		  To enhance the system to meet the current business requirements and address current deficiencies of the PAS and to raise its technology platform to support the introduction of imaging for more efficient handling of applications for visas, entry permits and extension of stay.
			))))))))))) 2005-06))	))))))))FS is being conducted and will be completed)by June 2003. Implementation of the)project is subject to availability of funds.

	19	**Integration of Supplementary Labour Scheme Information Management System (SIMS) into PAS** [D] The SIMS will be integrated with PAS to enable more effective maintenance of information on quotas of the importation of labour schemes.	)))))	))))

Notes :

D denotes that the project is one of the 12 delivery projects.

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Phase III (2002-03)	20	**Electronic Records Programme** **File Conversion** [E] A programme of work to progressively convert a colossal volume of essential non-electronic records into electronic machine-readable format to support and enable business process re-engineering activities and implementation of new systems. The records include visa, travel document and civil registration applications.		
	21	**Imaging** [E] To exploit imaging technology and to implement imaging solutions in line with business requirements, namely, to make more information available to greater number of staff at faster speed and to achieve savings in staff and accommodation.	2005-06	)))))))FS will be conducted in February 2003.)Implementation of the project is subject to)availability of funds.)))).
	22	**Workflow** [E] To employ workflow tools and techniques to automate some business processes, in particular, those repetitive administrative procedures, with a view to improving the office efficiency.		
	23	**Document Management** [E] To define and implement documentation management standards and practices in ImmD and to centralise document management under a single management responsibility with a view to improving information management and to enhance productivity.		
Phase IV (2003-04)	24	**Data Warehousing (Management Information System)** [D] To provide user-friendly access to information held in ImmD databases and to make it readily available to ImmD management to aid their decision making, and to assist in the acquisition and deployment of resources more intelligently.	2006-07	FS will be conducted in December 2003. Implementation of the project is subject to availability of funds.

Notes :

D denotes that the project is one of the 12 delivery projects.

E denotes that the project is one of the 18 enabling projects.

Phase IV (2003-04)	25	**Intranet Implementation** [D] To install an intranet with increasing range of facilities and information for more speedy and effective communication among some 3,000 ImmD staff. The project will improve staff productivity and morale.	2006-07	Implementation of the project is subject to availability of funds.
	26	**Electronic Service Delivery Support** [D] An ongoing programme to offer a wider range of information and services to the public via the Government Electronic Service Delivery (ESD) infrastructure.	2006-07	Implementation of the project is subject to availability of funds.
	3 (Part II)	**Electronic Visa/Permit & Advance Passenger Processing [Full Version]** [D] To provide alternative means for travellers to Hong Kong to apply for and be issued with permits or visas which may be electronic or in hard copy to be delivered by new and more efficient methods. To utilise data captured at airline check-in to allow pre-checking of passengers and to facilitate passenger processing.	2006-07	Implementation of the project is subject to availability of funds.
	27	**Business Information** [E] To provide secure electronic access to essential documents required by ImmD officers in their day-to-day duties, and to the public via ESD.	2006-07	Implementation of the project is subject to availability of funds.
	28	**Chinese Language Support** [D] To introduce Chinese language facilities into ImmD information systems wherever feasible and affordable.	2006-07	FS will be conducted in April 2004. Implementation of the project is subject to availability of funds.

Notes :
D denotes that the project is one of the 12 delivery projects.
E denotes that the project is one of the 18 enabling projects.

Phase IV (2003-04)	29	**Personnel Support** [E] To provide systems, tools and facilities to support the ongoing training of ImmD personnel in both IT and business matters through the personnel training system and to provide a personnel information system in order to manage career progression and handle duty rostering for about 4,000 service staff.	2006-07	FS will be conducted in April 2004. Implementation of the project is subject to availability of funds.
	30	**Additional Long Range Strategic Studies** [E] To explore in detail other possible strategic opportunities identified in the ISS Review with a view to bringing about cost saving and cost avoidance.	2006-07	ImmD will conduct these long range studies after implementing the time- and mission-critical initiatives under the updated ISS.

Notes :
D denotes that the project is one of the 12 delivery projects.
E denotes that the project is one of the 18 enabling projects.

Savings Arising from the Implementation of Phase II of
the Updated Information Systems Strategy for the Immigration Department

Savings	$'000								
	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	Total
(A) Realisable staff savings									
APC System	-	16,728	67,153	73,561	73,561	73,561	73,561	73,561	451,686
AVC System	345	19,817	19,817	19,817	19,817	19,817	19,817	19,817	139,064
Total realisable savings	345	36,545	86,970	93,378	93,378	93,378	93,378	93,378	590,750
(B) Cost avoidance	-	-	-	47,112	47,112	47,112	47,112	47,112	235,560
(C) Saving of equipment	1,305	2,211	2,392	-	-	-	-	-	5,908
Total savings	**1,650**	**38,756**	**89,362**	**140,490**	**140,490**	**140,490**	**140,490**	**140,490**	**832,218**

Cost and Benefit Analysis of the Implementation of Phase II of
the Updated Information Systems Strategy for the Immigration Department

	Cashflow ($'000)										
	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	Total
Cost											
Non-recurrent											
Expenditure	20	20,983	163,303	132,845	35,602	-	-	-	-	-	352,753
Staff cost	2,523	16,311	25,515	15,165	7,513	-	-	-	-	-	67,027
Accommodation	118	1,124	2,057	1,425	822	-	-	-	-	-	5,546
Sub-total	2,661	38,418	190,875	149,435	43,937	-	-	-	-	-	425,326
Recurrent											
Expenditure	-	-	230	20,711	33,489	43,117	43,248	43,387	42,389	41,858	268,429
Staff cost	-	-	-	1,715	2,390	4,034	4,034	4,034	4,034	4,034	24,275
Accommodation	-	-	-	104	219	302	302	302	302	302	1,833
Sub-total	-	-	230	22,530	36,098	47,453	47,584	47,723	46,725	46,194	294,537
Total Cost	2,661	38,418	191,105	171,965	80,035	47,453	47,584	47,723	46,725	46,194	719,863
Savings											
Realisable savings	-	-	345	36,545	86,970	93,378	93,378	93,378	93,378	93,378	590,750
Cost avoidance	-	-	-	-	-	47,112	47,112	47,112	47,112	47,112	235,560
Equipment	-	-	1,305	2,211	2,392	-	-	-	-	-	5,908
Total savings	-	-	1,650	38,756	89,362	140,490	140,490	140,490	140,490	140,490	832,218
Net savings	-2,661	-38,418	-189,455	-133,209	9,327	93,037	92,906	92,767	93,765	94,296	112,355
Net cumulative savings	-2,661	-41,079	-230,534	-363,743	-354,416	-261,379	-168,473	-75,706	18,059	112,355	

Estimated Staffing Requirement for Implementation of
Phase II of the Updated Information Systems Strategy for the Immigration Department

Non-recurrent Staffing Requirement

Rank	Annual Staff Cost $	2002-03					2003-04				
		Total No. of Staff	Man-month			Staff Cost $	Total No. of Staff	Man-month			Staff Cost $
			APC	AVC	Total			APC	AVC	Total	
Assistant Principal Immigration Officer	1,368,600	1	2	0	2	228,100	1	12	0	12	1,368,600
Chief Immigration Officer	1,200,900	1	2	0	2	200,150	1	12	0	12	1,200,900
Senior Immigration Officer	1,058,736	3	4	2	6	529,368	5	25	13	38	3,352,664
Immigration Officer	857,688	3	4	2	6	428,844	7	27	13	40	2,858,960
Chief Immigration Assistant	538,692	0	0	0	0	0	3	2	1	3	134,673
Immigration Assistant	265,656	0	0	0	0	0	10	8	2	10	221,380
Chief Systems Manager *	2,133,408	1	0.5	0.5	1	177,784	1	4	4	8	1,422,272
Senior Systems Manager	1,730,916	1	1	1	2	288,486	1	6	6	12	1,730,916
Systems Manager	1,241,592	2	2	2	4	413,864	2	12	12	24	2,483,184
Analyst/Programmer I	768,684	2	2	2	4	256,228	2	12	12	24	1,537,368
Total		14	17.5	9.5	27	# 2,522,824	33	120	63	183	16,310,917

Non-recurrent Staffing Requirement

Rank	Annual Staff Cost $	2004-05					2005-06				
		Total No. of Staff	Man-month			Staff Cost $	Total No. of Staff	Man-month			Staff Cost $
			APC	AVC	Total			APC	AVC	Total	
Assistant Principal Immigration Officer	1,368,600	1	12	0	12	1,368,600	1	8	0	8	912,400
Chief Immigration Officer	1,200,900	1	12	0	12	1,200,900	1	12	0	12	1,200,900
Senior Immigration Officer	1,058,736	6	36	31	67	5,911,276	5	28	3	31	2,735,068
Immigration Officer	857,688	9	60	38	98	7,004,452	7	52	3	55	3,931,070
Chief Immigration Assistant	538,692	3	24	12	36	1,616,076	3	16	2	18	808,038
Immigration Assistant	265,656	10	48	8	56	1,239,728	2	24	0	24	531,312
Chief Systems Manager *	2,133,408	1	4	4	8	1,422,272	1	4	3	7	1,244,488
Senior Systems Manager	1,730,916	1	6	6	12	1,730,916	1	6	1.5	7.5	1,081,823
Systems Manager	1,241,592	2	12	12	24	2,483,184	2	12	5	17	1,758,922
Analyst/Programmer I	768,684	2	12	12	24	1,537,368	2	12	3	15	960,855
Total		36	226	123	349	25,514,772	25	174	20.5	194.5	15,164,876

Non-recurrent Staffing Requirement

Rank	Annual Staff Cost $	2006-07				
		Total No. of Staff	Man-month			Staff Cost $
			APC	AVC	Total	
Assistant Principal Immigration Officer	1,368,600	0	0	0	0	0
Chief Immigration Officer	1,200,900	1	12	0	12	1,200,900
Senior Immigration Officer	1,058,736	1	12	0	12	1,058,736
Immigration Officer	857,688	3	36	0	36	2,573,064
Chief Immigration Assistant	538,692	0	0	0	0	0
Immigration Assistant	265,656	2	24	0	24	531,312
Chief Systems Manager *	2,133,408	1	2	2	4	711,136
Senior Systems Manager	1,730,916	1	3	0	3	432,729
Systems Manager	1,241,592	2	6	0	6	620,796
Analyst/Programmer I	768,684	2	6	0	6	384,342
Total		13	101	2	103	7,513,015

* The existing supernumerary post of Chief Systems Manager (D1) (CSM) created for the HKSAR Identity Card Project will absorb the non-recurrent staffing requirement at the CSM rank up to 31 October 2003 when the post will lapse. ImmD will review the continued need for a CSM post to oversee the implementation of APC and AVC projects, IT Infrastructure Upgrade Programme and Immigration Control Automation System (ICAS) Enhancement Programme, to take forward other ISS-2 projects and to take charge of all the IT operations & maintenance support of the existing systems in the Department as from November 2003.

\# ImmD will absorb by internal redeployment the non-recurrent staffing requirements in 2002-03.

Estimated Staffing Requirement for Implementation of
Phase II of the Updated Information Systems Strategy for the Immigration Department

Recurrent Staffing Requirement

Rank	Annual Staff Cost $	2005-06					2006-07					2007-08 and onwards				
		Total No. of Staff	Man-month			Staff Cost $	Total No. of Staff	Man-month			Staff Cost $	Total No. of Staff	Man-month			Staff Cost $
			APC	AVC	Total			APC	AVC	Total			APC	AVC	Total	
Immigration Officer	857,688	#	0	24	24	1,715,376	1	0	12	12	857,688	2	12	12	24	1,715,376
Chief Immigration Assistant	538,692	0	0	0	0	0	2	18	0	18	808,038	2	24	0	24	1,077,384
Systems Manager	1,241,592	0	0	0	0	0	#	2	5	7	724,262	1	7	5	12	1,241,592
Total		0	0	24	24	1,715,376	3	20	17	37	2,389,988	5	43	17	60	4,034,352

\# The recurrent staffing requirement for the rank will be absorbed by the non-recurrent staffing provided for the project.
Consequently, no additional posts will need to be created in the respective financial years.