

ITEM FOR FINANCE COMMITTEE

CAPITAL WORKS RESERVE FUND

HEAD 710 – COMPUTERISATION

Inland Revenue Department

New Subhead “Implementation of Information Systems Strategy Projects in the Inland Revenue Department”

Members are invited to approve a new commitment of \$118.9 million for implementing three Information Systems Strategy (ISS) Projects under the five-year ISS Plan for 1999-2000 to 2003-04 of the Inland Revenue Department.

PROBLEM

The existing technical infrastructure of the Inland Revenue Department (IRD) cannot cope with changes in the technological environment and IRD's business needs and workload which have emerged since its last five-year ISS Plan completed in 1996-97.

PROPOSAL

2. The Commissioner of Inland Revenue, with the support of the Secretary for the Treasury and the Director of Information Technology Services, proposes to create a new commitment of \$118.9 million to implement the following two infrastructure projects and one application system project under the five-year ISS Plan for 1999-2000 to 2003-04 recommended by the ISS Review of the IRD -

- (a) System Infrastructure Enhancement (SIE) Project;
- (b) Data Management Enhancement (DME) Project; and
- (c) Assess First Audit Later (AFAL) System Phase I Project.

/JUSTIFICATION

JUSTIFICATION**IRD ISS Plan for 1999-2000 to 2003-04**

3. With Members' approval, IRD implemented in full its first five-year ISS Plan from 1992-93 to 1996-97. Following the full implementation of the Plan, the mainframe computer was upgraded to meet the then processing needs of the Department; a composite tax return filing and processing system was introduced; computer-generated documents were provided in both languages; and integrated financial, manpower and activity information were provided to facilitate the Department's business planning and resources allocation. In order to enable the Department to cope with changes in technology, business needs and workload since the completion of the first five-year Plan, IRD conducted a review on the ISS and formulated another five-year ISS Plan covering the period from 1999-2000 to 2003-04. This second five-year ISS Plan comprises two infrastructure projects and ten application system projects as detailed in Enclosure 1. The schedule of implementation is at Enclosure 2.

Encl. 1
Encl. 2

4. The implementation of these 12 projects hinges on the results of the relevant feasibility studies. Feasibility studies on five of the 12 projects have been completed. This paper seeks Members' approval for funding three of these five projects. The other two projects, viz. Electronic Lodgement Services and Interactive Taxpayer Enquiry Service, which are relatively minor, will be separately funded by a block allocation under Capital Works Reserve Fund Head 710 Computerisation Subhead A007GX. Any delay in the implementation of these projects will impact adversely on the subsequent implementation of the remaining application system projects, and hence the overall ISS and business plans of IRD, jeopardise the achievement of enhanced productivity and improved public services, and delay the realisation of the potential benefits.

Infrastructure Projects

5. The existing system and data infrastructure of IRD were installed in 1993 to support the implementation of the last ISS Plan and the associated processing requirements during the period from 1992-93 to 1996-97. To enable IRD to implement its new business initiatives and fulfil its obligations under the Electronic Transactions Ordinance, the existing infrastructure requires major enhancements to cope with the additional processing requirements thus arising. These new business initiatives and obligations include the following -

- (a) providing for electronic lodgement of tax returns and notifications;
- (b) automation of screening of tax returns for assessment;

/(c)

- (c) providing for electronic submission of information;
- (d) automation of software asset management to protect intellectual property and combat piracy through enhanced control over software acquisition and inventory;
- (e) upgrading the current internal mail system to a confidential mail system;
- (f) enhancement of Information Technology (IT) security management to prevent unauthorised access and hacking;
- (g) facilitating tax audit and investigation;
- (h) promoting tax compliance; and
- (i) building a more paperless environment.

6. The SIE Project aims to put in place a capable and reliable network with the necessary hardware and software to cope with IRD's latest IT needs and enable it to implement various application system projects in the ISS in question. It will also lay the requisite foundation for future growth. Specifically, the SIE Project seeks to address the deficiencies of the existing infrastructure through seven component projects, as briefly explained below -

(a) Network Upgrade

The existing network is unable to support the required increase in the number of workstations from the existing 2 000 to the required total of 2 500 workstations, multi-media applications such as Document Management and Workflow Management systems, and increased external communication with other government departments and the public. In addition, the network security and resilience are considered inadequate. This project component seeks to enhance the capability, performance, resilience, security level, and external communications links of the network, so that it can cope with the above increased requirement.

(b) Internet/Intranet

Under the Electronic Transactions Ordinance, IRD is obliged to allow electronic submission of information through the Internet. However, the existing system cannot provide the necessary integration between the Internet and internal e-mail system for this purpose. Besides, the existing e-mail system, which is being phased out, cannot support confidential mail. There is also a need to set up

an Intranet to facilitate internal dissemination and sharing of information. This project component seeks to streamline the processing of electronic information submitted through the Internet, to replace the existing e-mail system with one which can support confidential mail, and to set up an Intranet in IRD.

(c) Infrastructure and Computing Support

IRD's daily operations rely heavily on IT systems. There are, however, insufficient tools to facilitate proactive monitoring of the IT systems. Technical support for desktop computing is also inadequate. This project component seeks to provide integrated tools to strengthen the monitoring of IT systems, to implement a help-desk system providing a single point-of-contact for all IT-related issues and to automate daily system administration functions, including software asset management.

(d) Personal Computer (PC)/Server Upgrade

Most of the PCs are 486-based with only 16 MB memory and Windows 3.1 is still used as the desktop operating system. This inhibits the use of new application software necessary to implement the various application system projects in this ISS and to support IRD to carry out its new initiatives and obligations mentioned in paragraph 5 above. Besides, it is becoming more and more difficult to obtain technical support services for these outdated products. This project component seeks to upgrade the PCs and servers with additional processing power and capability, and to install additional PCs to meet the increasing demand for access to application systems.

(e) Mainframe and Mid-range Upgrade

The Central Processing Unit (CPU), memory and storage spaces of the existing mainframe computer cannot cope with the projected processing requirement by December 2000. This project component seeks to replace the CPU of the mainframe computer and to install additional memory and storage spaces. Besides, it will install new mid-range computers to support the implementation of the AFAL System (see paragraph 8 below).

(f) Enhancement of Output Printing

Output documents produced by IRD such as notices of tax assessments to taxpayers may consist of two or more pages in different formats. However, since the existing printers can only print documents of the same format in one batch, multi-page

/documents

documents have to be printed separately, and collation of different pages of the same document has to be performed manually. This project component seeks to install new printers capable of supporting cut-sheet, form overlay and multi-page document printing. In addition, a new enveloping system with collating, folding and multiple insertions of varying size capabilities will be provided.

(g) Chinese Processing

The existing Chinese processing system implemented in 1993 is different from the standard Chinese character set and common Chinese interface currently used by Government. This project component seeks to enhance the existing Chinese processing system in accordance with the current standards, so as to facilitate data exchange with other government departments and the public.

7. The DME Project, on the other hand, enhances the following aspects of the data infrastructure -

(a) Corporate Data Model

A corporate-wide model of all the IRD's operational data structures on the mainframe, mid-range and PC platforms is not available at present. This hinders the responsiveness of the existing system to management information requests and development needs. This project component seeks to establish a Corporate Data Model for a consolidated view of the IRD's department-wide data structure, in order to facilitate the provision of management information as well as application system development and maintenance.

(b) Database Management System

The existing database management system (DBMS) of the mainframe computer has a number of limitations. Because of its proprietary design, it hinders the use of commercial off-the-shelf packages and its integration with other database systems. In addition, due to the limited number of local installations using this DBMS now, it has become increasingly difficult to recruit individuals with DBMS expertise for system development and maintenance purposes. This project component seeks to establish a new database management system platform which operates in an open system environment, allows the use of flexible and function-rich tools for database design and development as well as handling end-user queries, and facilitates effective interchange with other database systems. This is essential to the implementation of the other ISS application projects.

/Application

Application Project: AFAL System Phase I Project

8. This application project seeks to put in place the AFAL System which will replace the existing manual system of screening tax returns for further assessment and selecting cases for audit purposes. With the AFAL System, both the screening of tax returns for simple assessment of Salaries Tax, Property Tax and Profits Tax, as well as the selection of cases for post-assessment Desk Audit can be done automatically according to different pre-set criteria. It will hence constitute a useful means of measuring tax compliance and promoting voluntary compliance. The ultimate objective of the AFAL System is to allow IRD to concentrate its professional efforts mainly on tax audit instead of tax assessment.

9. The System will be implemented in two phases. Phase I will establish the basic functions for tax return screening, automatic tax assessment, tax audits and measurement of tax compliance. It will provide the necessary foundation for Phase II, which IRD plans to introduce three years later. Phase II aims at providing more sophisticated selection methods for field audit, investigation and compliance measurement.

Benefits

10. As explained in the above paragraphs, the successful implementation of the two infrastructure projects will enable the Department to achieve the following benefits -

(a) ***Providing for electronic lodgement of tax returns and notifications and electronic submission of information***

The public will be provided with an additional means of lodging tax returns and notifications at a time and place convenient to them. Much travelling time and costs (as well as postage costs) will be saved for those who choose to lodge tax returns in person or by post at present. Acknowledgement of receipt will be made quicker through electronic means. Insofar as IRD is concerned, handling costs will be reduced. Electronic lodgement is an environmentally-friendly way of submitting information. It can significantly reduce the use of paper. Data accuracy will be enhanced through computer checking. Because data are captured directly, data processing can be done at a faster pace.

(b) ***Automation of screening of tax returns for assessment***

Currently, screening of tax returns is performed manually. On receipt of tax returns, Assistant Taxation Officers (ATOs) have to perform screening to identify simple cases for direct assessment.

/After

After screening, ATOs have to transcribe the data as they appear in the return onto an input form for subsequent data-inputting by data processors. As a result of automation, manpower resources (29 ATOs) currently deployed in the screening and transcription processes can be saved.

(c) ***Automation of software asset management***

This has the obvious advantage of protecting intellectual property and combating piracy through enhanced control over software acquisition and inventory. It can also facilitate the maintenance of an accurate and up-to-date inventory list of software.

(d) ***Upgrading the internal mail system to a confidential mail system***

The upgrading will provide for strong encryption and digital signature features in transmission of confidential information. It will significantly enhance the efficiency of transmitting confidential information, which can be done instantly through electronic means.

(e) ***Enhancing IT security management***

This will prevent unauthorised access and hacking; protect IRD's network from computer virus attack and provide security logging and audit trail.

(f) ***Promoting tax compliance***

A more sophisticated computer system can facilitate the provision of better taxpayer services and education, and improve the effectiveness of IRD's enforcement efforts. These will in turn be conducive to promoting voluntary tax compliance in the longer run; and

(g) ***Building a more paperless environment***

With the extensive use of the electronic medium, IRD's operational efficiency will be improved. As a result, the processing of requests, objections and complaints from taxpayers will be expedited.

11. With the implementation of the AFAL System Phase I Project, both the screening of tax returns for assessment of Salaries Tax, Property Tax and Profits Tax, and the selection of cases for post-assessment Desk Audit can be done automatically according to different pre-set criteria. It will improve the

/effectiveness

effectiveness of field audits as a result of more efficient and more sophisticated methods for case selection. Currently, cases are selected for field audit manually. It will also enable IRD to concentrate its professional manpower resources on tax audit and investigation. By the year 2003-04, an additional field audit team comprising nine Assessor Grade officers can be deployed to tax audit and investigation work. We estimate that the additional team can investigate 100 additional cases on a yearly basis. This will in turn strengthen its enforcement efforts on tax compliance measures and help to promote voluntary compliance. All these improvements will enhance the overall cost-effectiveness of the entire tax assessment and audit system, and ensure a better protection of Government revenue.

Cost Savings

12. The implementation of the two infrastructure projects will bring about notional savings of \$46.7 million. They represent the cost which would otherwise have to be incurred for the sake of overcoming the system deficiencies, handling the increasing workload and meeting the obligations arising from recent Government initiatives, even without the five-year ISS Plan in question.

13. Upon successful implementation of the two infrastructure projects and the AFAL System Phase I Project, realisable savings of \$8.8 million a year will be achieved. These savings will come from the anticipated staff reduction in IRD as a result of the automation in tax return screening and assessment processes. We estimate that a total of 29 posts of ATO, one post of Assistant Clerical Officer and one post of Clerical Assistant can be deleted from IRD's establishment.

Encl. 3 14. A detailed breakdown of the notional and realisable savings is at Enclosure 3.

Cost and Benefit Analysis

Encl. 4 15. A detailed cost and benefit analysis for the implementation of the three projects covered by this item is at Enclosure 4. Taking the whole ISS Plan into account, the total implementation cost is estimated to be about \$245 million, which is made up of \$218 million in non-recurrent expenditure and \$27 million in non-recurrent staff cost. The Plan will be implemented by phases over the five-year period from 1999-2000 to 2003-04. A detailed cost and benefits for the implementation of the Plan is at Enclosure 5. The entire ISS will break even in 2014-15.

Encl. 5

Increase in Revenue

16. In addition to the above benefits, we expect that the implementation of the two infrastructure projects and the AFAL System project will bring about an increase in tax revenue as a result of a more efficient selection of cases for and more intensive professional efforts on field audit and investigation. IRD estimates that there will be an increase equivalent to about 1% of the 1999-2000 actual revenue from field audit cases in the initial years after the rollout of Phase I of the AFAL System, which can be translated into an estimated benefit of \$10 million annually. In the longer term, with the full implementation of both the AFAL System Phase I and the Document Management System (one of the application system projects under the ISS Plan to be developed by phases in 2001-02 and 2002-03), the consequential business process re-engineering within IRD, and the improvement in taxpayer education, IRD will be able to redeploy its staff to form an additional team for field audit. Based on current indications, one additional team may generate additional revenue (in terms of back tax recovered and penalties) of \$85 million each year. We estimate that 50% of this additional revenue, or \$42.5 million, is attributable to the three ISS projects under consideration. This potential increase in revenue is expected to be achieved in year 2003-04 and onwards.

FINANCIAL IMPLICATIONS

Non-recurrent Cost

17. Based on the result of the technical and feasibility studies, we estimated that the proposed projects will require total non-recurrent expenditure (excluding non-recurrent staff cost) of \$118.9 million over three years from 2000-01 to 2002-03. The breakdown is as follows -

	2000-01 \$'000	2001-02 \$'000	2002-03 \$'000	Total \$'000
Non-recurrent expenditure (excluding non-recurrent staff cost)				
(a) Hardware and software	64,950	12,533	858	78,341
(b) Site preparation	2,706	–	–	2,706
(c) Implementation services	14,625	3,473	–	18,098
(d) Contract staff services	6,518	3,943	818	11,279
(e) Training	2,098	29	30	2,157
(f) Consumables and miscellaneous	684	–	–	684
(g) Contingency	4,580	999	85	5,664
Total	96,161	20,977	1,791	118,929

18. As regards paragraph 17(a) above, the expenditure of \$78.3 million is for the acquisition of hardware, software and network equipment including upgrading the existing mainframe computer system, additional mid-range computers for the ISS application system projects, upgrading the file servers and workstations, and enhancement to the backbone of the network.

19. As regards paragraph 17(b) above, the expenditure of \$2.7 million is for site preparation including the installation of data ports and power points, trunking and cabling work, and improvement to the computer equipment room.

20. As regards paragraph 17(c) above, the expenditure of \$18.1 million is for the acquisition of implementation services from external service providers for implementing the majority of components of the infrastructure projects, and providing technical consultancy for the AFAL System Phase I Project.

21. As regards paragraph 17(d) above, the expenditure of \$11.3 million is for the acquisition of contract services for implementing some components of the infrastructure projects and for system analysis, design, development, testing and implementation of the AFAL System Phase I Project. In view of the importance of the projects, Information Technology Services Department (ITSD) may need to engage contract staff funded from this commitment for other assignments so as to release some in-house staff for implementing the three ISS projects under consideration.

22. As regards paragraph 17(e) above, the expenditure of \$2.2 million is for training of ITSD and IRD staff in administering, maintaining and using the new systems.

23. As regards paragraph 17(f) above, the expenditure of \$684,000 is for the acquisition of start-up consumables such as printer toners, back-up tapes, stationery, installation of data lines and some relocation activities.

24. As regards paragraph 17(g) above, the expenditure of \$5.7 million represents a 5% contingency on the cost items set out in paragraphs 17(a) to (f).

25. Apart from the above non-recurrent expenditure, additional non-recurrent staff cost amounting to \$6 million for 130 man-months on system development, testing and implementation will also be required. These requirements will be absorbed by internal redeployment within IRD, and no additional funding is required.

/Recurrent

Recurrent Cost

26. Based on the results of the technical and feasibility studies, the annual recurrent cost is estimated as follows -

	2000-01	2001-02	2002-03	2003-04
	\$'000	\$'000	\$'000	onwards
				\$'000
Recurrent expenditure				
(a) Hardware and software maintenance	(1,351)	3,514	6,153	6,153
(b) Contract staff services	–	5,144	5,681	5,810
(c) Consumables and miscellaneous	–	494	1,055	1,055
Sub-total	(1,351)	9,152	12,889	13,018
Recurrent staff cost				
(d) IRD	1,407	2,095	2,095	2,095
(e) ITSD	–	310	351	413
Sub-total	1,407	2,405	2,446	2,508
Total	56	11,557	15,335	15,526

27. As regards paragraph 26(a) above, the annual expenditure of \$6.2 million is for hardware and system maintenance, and software licence fees.

28. As regards paragraph 26(b) above, the annual expenditure of \$5.8 million is for acquisition of contract services for the on-going support and maintenance of the system infrastructure, AFAL System Phase I, IT Help Desk and End-user Computing.

29. As regards paragraph 26(c) above, the annual expenditure of \$1.1 million is for the rental of data lines and purchase of consumables such as tapes and printer toners.

30. As regards paragraph 26(d) above, the expenditure of \$2.1 million represents the annual staff cost of one Senior Systems Manager for on-going system infrastructure maintenance and support (\$1,688,000) and one Computer Operator I for on-going system operations effort (\$407,000).

31. As regards paragraph 26(e) above, the expenditure of \$413,000 represents the annual staff cost for eight man-months of Analyst/Programmer for on-going support effort for AFAL System Phase I.

Encl. 6 32. A breakdown of non-recurrent and recurrent costs on a project basis is at Enclosure 6.

33. Subject to Members' approval of this item, IRD and ITSD will include the provision for the purposes of paragraphs 26(a) to (c), as offset by the realisable savings and benefits mentioned in paragraphs 13 and 15 in future Estimates. As for the recurrent staff costs, ITSD and IRD will absorb the requirements from within their existing resources.

34. Having regard to the magnitude and complexity of these three ISS projects as well as the tight implementation schedule, IRD and ITSD consider it imperative to strengthen both their professional and management support at the directorate level during their initial years of implementation. The specific proposals for creation of posts will be separately submitted to the Establishment Subcommittee of the Finance Committee for consideration in due course.

Implementation Plan

35. The proposed implementation plan of the three projects is as follows -

Activities	Target completion dates		
	<i>SIE Project</i>	<i>DME Project</i>	<i>AFAL System Phase I Project</i>
Tendering/Service acquisition	October 2000	September 2000	September 2000
Site preparation	August 2000	—	—
Hardware/Software procurement	October 2000 to July 2002 (by phases)	September 2000	—
System set-up/Development	March 2001 to October 2002 (by phases)	June 2001	May 2001 to November 2002 (by phases)
Implementation	March 2001 to October 2002 (by phases)	June 2001	May 2001 to November 2002 (by phases)

BACKGROUND INFORMATION

36. In January 1993, the Finance Committee approved a commitment of \$175.4 million under Head 710 for the implementation of the ISS in IRD over a five-year period from 1992-93 to 1996-97. The nine projects proposed under the ISS Plan were implemented by phases commencing in March 1993 and successfully completed in January 1997 within budget and meeting the targeted objectives. As a result of ensuing changes in the technological environment, business needs, workload and other operational requirements, an ISS Review for IRD, undertaken with the assistance of consultants, commenced in July 1998 and was concluded in March 1999. It redefined the ISS of IRD and formulated a new five-year ISS Plan covering 1999-2000 to 2003-04, with a view to enabling IRD to accomplish its business objectives through the effective use of IT.

37. We consulted the Legislative Council's Financial Affairs Panel on this proposal on 15 June 2000. Members were in support of the proposal.

Finance Bureau
June 2000

Second Five-Year ISS Plan (1999-2000 to 2003-04)

<i>Programme Area</i>	<i>Project Title</i>	<i>Major Component</i>	<i>Starting Year (Technical/ Feasibility Study)</i>	<i>Completion Year (Implementation)</i>
Infrastructure	System Infrastructure Enhancement	Network Upgrade; Intranet; Network and Systems Management; PC/Server Upgrade; Infrastructure and End-user Computing Support; Mainframe and Mid-range Upgrade; Output Printing; Chinese Processing	1999	2001 and 2002 (Phase implementation)
	Data Management Enhancement	Corporate Data Model; New Database Management System	1999	2001
Process Management and Strategic Planning Support	Document Management System	Document Management, Imaging, and Data Capture	2000	2002 and 2003 (Phase implementation)
	Workflow Management System	Workflow Management System	2002	2004
	Strategic Planning Support System	Executive Decision Support	2001	2002
Assessment Processing	AFAL System	Return Screening, Case Selection for Audit, Measurement of Tax Compliance	1999	2002 and 2004 (Phase implementation)
Public Services	Customer Service Support System	Customer Service Support and Call Centre	2000	2002
	Electronic Lodgement Services	Electronic Lodgement of Tax Returns, Applications and Notifications	1999	2001 and 2002 (Phase implementation)
	Business Registration Processing	Business Registration and Extracts Processing	2000	2000 and 2001 (Phase implementation)
	Interactive Taxpayer Enquiry Service	24-hour Taxpayer Enquiry Service	1999	2001
	Property Stamping	Stamping of Property Transfer Documents	2001	2002 and 2004 (Phase implementation)
Operations Improvement	Application System Enhancement	Cash Receipting System Enhancement, Mainframe Application Enhancement	1999	2000

Implementation Plan of ISS Projects

Programme/Project	1999-2000	2000-01	2001-02	2002-03	2003-04
Infrastructure Projects					
System Infrastructure Enhancement	TS	Impl			
Data Management Enhancement	TS	Impl			
Application Projects					
<i>Process Management and Strategic Planning</i>					
Document Management System		FS	SA&I-1	SA&I-2	
Workflow Management System				FS	SA&I
Strategic Planning Support System			FS	SA&I	
<i>Assessment Processing</i>					
AFAL System	BPR FS-1	SA&I-1		FS-2	SA&I-2
<i>Public Services</i>					
Electronic Lodgement Services		SA&I-1	SA&I-2		
Interactive Taxpayer Enquiry Service	FS	SA&I-1			
Customer Service Support System		FS	SA&I		
Business Registration Processing		SA&I-1	SA&I-2		
Property Stamping				SA&I-1 BPR FS	SA&I-2
<i>Operation Improvement</i>					
Applicaton System Enhancements		SA&I			

Legend :

- BPR - Business Process Re-engineering
- FS - Feasibility Study
- Impl - Implementation
- SA&I - System Analysis and Implementation
- TS - Technical Study

Breakdown of Cost Savings

I. Notional Savings (avoidance of cost)

	<i>2000-01</i>	<i>2001-02</i>
	<i>(\$'000)</i>	<i>(\$'000)</i>
<u>Infrastructure Projects</u>		
1. Replacement of obsolete hardware and software in the network and PC platform	–	31,824
2. PC software asset management	–	869
3. Office Automation facility upgrade and confidential mail	–	2,837
4. Upgrade of mainframe computer	9,431	–
5. Upgrade of mid-range computer	–	217
6. Replacement of aged host printer	–	1,400
7. Site preparation work for equipment room	–	110
<u>AFAL System Phase I Project</u>		
Nil	–	–
Total	9,431	37,257

II. Realisable Savings (resulted from deletion of posts from 2002-03 onwards)

<i>Type of post</i>	<i>No. of post</i>	<i>Annual staff cost</i> \$	<i>Annual savings</i> \$
Infrastructure Projects -			
Assistant Clerical Officer	1	329,088	329,088
Clerical Assistant	1	223,332	223,332
AFAL System Phase I Project -			
Assistant Taxation Officer	29	284,172	8,240,988
Total	31		8,793,408

**Cost and Benefit Analysis of
Implementation of the Infrastructure Projects and AFAL System Phase I Project
(at 2000-01 price level)**

	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06
	(\$'000)	(\$'000)	(\$'000)	(\$'000)	(\$'000)	(\$'000)
Costs						
Non-recurrent						
- expenditure	96,161	20,977	1,791	-	-	-
- staff cost	3,140	2,306	651	-	-	-
Sub-total	99,301	23,283	2,442	-	-	-
Recurrent						
- expenditure	(1,351)	9,152	12,889	13,018	13,018	13,018
- staff cost	1,407	2,405	2,446	2,508	2,508	2,508
Sub-total	56	11,557	15,335	15,526	15,526	15,526
Total costs	99,357	34,840	17,777	15,526	15,526	15,526
Benefits						
- realisable savings	-	-	8,793	8,793	8,793	8,793
- notional savings	9,431	37,257	-	-	-	-
Total benefits	9,431	37,257	8,793	8,793	8,793	8,793
Net benefits	(89,926)	2,417	(8,984)	(6,733)	(6,733)	(6,733)
Cumulative net benefits	(89,926)	(87,509)	(96,493)	(103,226)	(109,959)	(116,692)

Notes - Costs and benefits are based on the technical/feasibility study reports.

**Cost and Benefit Analysis of
Implementation of the Five-year ISS Plan**

	1999-2000	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
	(\$'000)	(\$'000)	(\$'000)	(\$'000)	(\$'000)	(\$'000)	(\$'000)	(\$'000)	(\$'000)	(\$'000)	(\$'000)	(\$'000)	(\$'000)	(\$'000)	(\$'000)	(\$'000)
Costs																
Non-recurrent																
- expenditure	3,184	104,766	72,483	14,071	23,502	-	-	-	-	-	-	-	-	-	-	-
- staff cost	356	4,314	8,165	6,527	7,304	-	-	-	-	-	-	-	-	-	-	-
Sub-total	3,540	109,080	80,648	20,598	30,806	-	-	-	-	-	-	-	-	-	-	-
Recurrent																
- expenditure	-	(1,351)	9,333	15,237	19,662	22,804	22,804	22,804	22,804	22,804	22,804	22,804	22,804	22,804	22,804	22,804
- staff cost	-	1,407	2,405	2,851	3,054	3,580	3,580	3,580	3,580	3,580	3,580	3,580	3,580	3,580	3,580	3,580
Sub-total	-	56	11,738	18,088	22,716	26,384	26,384	26,384	26,384	26,384	26,384	26,384	26,384	26,384	26,384	26,384
Total costs	3,540	109,136	92,386	38,686	53,522	26,384	26,384	26,384	26,384	26,384	26,384	26,384	26,384	26,384	26,384	26,384
Benefits																
- realisable savings	-	1,800	2,100	21,695	30,740	40,966	40,966	40,966	40,966	40,966	40,966	40,966	40,966	40,966	40,966	40,966
- notional savings	-	10,831	38,657	2,224	7,801	2,864	2,864	2,864	2,864	2,864	2,864	2,864	2,864	2,864	2,864	2,864
Total benefits	-	12,631	40,757	23,919	38,541	43,830	43,830	43,830	43,830	43,830	43,830	43,830	43,830	43,830	43,830	43,830
Net benefits	(3,540)	(96,505)	(51,629)	(14,767)	(14,981)	17,446	17,446	17,446	17,446	17,446	17,446	17,446	17,446	17,446	17,446	17,446
Cumulative net benefits	(3,540)	(100,045)	(151,674)	(166,441)	(181,422)	(163,976)	(146,530)	(129,084)	(111,638)	(94,192)	(76,746)	(59,300)	(41,854)	(24,408)	(6,962)	10,484

Notes Costs and benefits for the Infrastructure Projects, AFAL System Phase I Project, Interactive Taxpayer Enquiry Service, Electronic Lodgement Services and Application System Enhancement are based on the technical/feasibility study reports. As regards other projects for which feasibility studies have not yet been conducted, the figures are based on the ISS Review Report.

Breakdown of Non-recurrent and Recurrent Costs on Project Basis

I. SIE Project

	2000-01	2001-02	2002-03	Total
Non-recurrent Cost	\$'000	\$'000	\$'000	\$'000
<u>Non-recurrent expenditure</u>				
Hardware and software	55,664	12,533	858	69,055
Site preparation	2,706	–	–	2,706
Implementation services	10,683	2,754	–	13,437
Contract staff services	2,701	1,327	–	4,028
Training	1,009	–	–	1,009
Consumables and miscellaneous	534	–	–	534
Contingency (5%)	3,665	831	43	4,539
Sub-total	76,962	17,445	901	95,308
<u>Non-recurrent staff cost</u>				
IRD	1,282	354	–	1,636
Total non-recurrent cost	78,244	17,799	901	96,944
Recurrent Cost	2000-01	2001-02	2002-03	
Recurrent expenditure	\$'000	\$'000	onwards	\$'000
<u>Recurrent expenditure</u>				
Hardware and software maintenance	(1,351)	1,885	4,158	
Contract staff services	–	3,381	3,833	
Consumables and miscellaneous	–	494	1,055	
Sub-total	(1,351)	5,760	9,046	
<u>Recurrent staff cost</u>				
IRD	844	1,532	1,532	
ITSD	–	–	–	
Sub-total	844	1,532	1,532	
Total recurrent cost	(507)	7,292	10,578	

Breakdown of Non-recurrent and Recurrent Costs on Project Basis

II. DME Project

	<u>2000-01</u> <u>\$'000</u>	<u>2001-02</u> <u>\$'000</u>	<u>Total</u> <u>\$'000</u>
Non-recurrent Cost			
<u>Non-recurrent expenditure</u>			
Hardware and software	4,830	–	4,830
Implementation services	3,750	–	3,750
Contract staff services	2,149	102	2,251
Training	1,089	–	1,089
Contingency (5%)	591	5	596
Sub-total	12,409	107	12,516
 <u>Non-recurrent staff cost</u>			
IRD	557	–	557
Total non-recurrent cost	12,966	107	13,073
 Recurrent Cost			
<u>Recurrent expenditure</u>			
Hardware and software maintenance	–	1,030	
Contract staff services	–	1,119	
Sub-total	–	2,149	
 <u>Recurrent staff cost</u>			
IRD	563	563	
ITSD	–	–	
Sub-total	563	563	
Total recurrent cost	563	2,712	

Breakdown of Non-recurrent and Recurrent Costs on Project Basis

III. AFAL System Phase I Project

Non-recurrent Cost	2000-01 \$'000	2001-02 \$'000	2002-03 \$'000	Total \$'000
<u>Non-recurrent expenditure</u>				
Hardware and software	4,456	–	–	4,456
Implementation services	192	719	–	911
Contract staff services	1,668	2,514	818	5,000
Training	–	29	30	59
Consumables and miscellaneous	150	–	–	150
Contingency (5%)	324	163	42	529
Sub-total	<u>6,790</u>	<u>3,425</u>	<u>890</u>	<u>11,105</u>
<u>Non-recurrent staff cost</u>				
IRD	1,301	1,952	651	3,904
Total non-recurrent cost	<u>8,091</u>	<u>5,377</u>	<u>1,541</u>	<u>15,009</u>
2003-04 onwards				
Recurrent Cost	2000-01 \$'000	2001-02 \$'000	2002-03 \$'000	\$'000
<u>Recurrent expenditure</u>				
Hardware and software maintenance	–	599	965	965
Contract staff services	–	644	729	858
Sub-total	<u>–</u>	<u>1,243</u>	<u>1,694</u>	<u>1,823</u>
<u>Recurrent staff cost</u>				
IRD	–	–	–	–
ITSD	–	310	351	413
Sub-total	<u>–</u>	<u>310</u>	<u>351</u>	<u>413</u>
Total recurrent cost	<u>–</u>	<u>1,553</u>	<u>2,045</u>	<u>2,236</u>