

ITEM FOR FINANCE COMMITTEE

CAPITAL WORKS RESERVE FUND

HEAD 710 - COMPUTERISATION

Inland Revenue Department

New Subhead “Implementation of the Document Management System Phase I Project in the Inland Revenue Department”

Members are invited to approve a new commitment of \$53 million for implementing the Document Management System Phase I Project in the Inland Revenue Department.

PROBLEM

The existing system for handling tax returns and related documents in the Inland Revenue Department (IRD) cannot cope with IRD’s current and future operational needs.

PROPOSAL

2. The Commissioner of Inland Revenue, with the support of the Secretary for the Treasury and in consultation with the Director of Information Technology Services, proposes to create a new commitment of \$53 million to implement the Document Management System (DMS) Phase I Project under IRD’s second Information Systems Strategy (ISS) Plan.

JUSTIFICATION

DMS Phase I Project

3. IRD currently handles some three million tax returns and nine million related documents in paper form annually. As the same documents have to be processed for different purposes, including tax assessment, tax audit,

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objection processing, tax enquiry and collection, concurrent access to the same document by different officers is frequently required. As a result, a great deal of manual effort is required to handle and track paper documents with a detrimental effect on the efficiency.

4. Furthermore, to provide extra convenience to taxpayers, IRD has started to accept electronic-filing of Individual and Property Tax Returns. To more effectively handle these electronic returns and correspondence at the computer workstations, IRD needs to upgrade its document imaging system.

5. The DMS project seeks to improve the efficiency of IRD. It also aims to enable IRD to cope with new and emerging demand for taxpayers' services in line with technological and business developments. Specifically, the project will put in place a document management system which is capable of converting paper documents into digitised images as well as handling these digitised images, tax returns and other correspondence in electronic format. The project also incorporates a Pilot Workflow Management System (PWMS) Project to enable IRD to gain working experience under the new mode of operation and assess its impact on internal operations before the full implementation of the Workflow Management System (WMS) Project (please see paragraph 7(h) below).

6. The DMS will be implemented in two phases. Phase I will establish the foundation for information sharing and collaboration, and provide document capturing, indexing, storage, retrieval and printing functions for Tax Returns - Individuals, Property Tax Returns, Employer's Returns and back-year assessment folders of Profits Tax files. IRD aims to complete Phase I in 2003-04. Phase II, which IRD plans to introduce in 2005-06, will extend the system to cover other types of paper documents, including other correspondence and computer-generated documents.

Benefits

7. The successful implementation of the DMS Phase I Project will enable IRD to achieve the following benefits -

(a) *Enabling rapid and concurrent retrieval of documents*

It will enable on-line and concurrent access to all documents in electronic form. This will significantly reduce the time and manual effort currently expended on obtaining information mainly from paper documents.

(b)

(b) *Supporting other ISS projects to maximize their benefits*

The DMS Phase I Project is an integral part of the overall IRD ISS Plan. It will support the operations of other ISS projects which include on-line examination of tax returns for assessment and desk audit under the Assess First Audit Later Project, instant access to tax return and correspondence images for enquiry services under the Customer Service Support System Project, and automatic distribution of tasks through routing of document images under the WMS Project. As on-line retrieval of relevant documents is crucial to these other projects, the DMS Phase I Project will enable IRD to reap the full benefits of these ISS projects.

(c) *Providing better enquiry services*

It will enable IRD to provide a more efficient one-stop enquiry service to taxpayers. Many telephone and counter enquiries from taxpayers through the IRD Enquiry Service Centre (ESC) relate to the details of the tax returns. In most cases, these enquiries are now referred to the appropriate assessing sections of IRD where the physical copies of the tax returns are held. The DMS Phase I Project will enable the ESC staff to retrieve images of tax returns directly through their workstations and give immediate replies to taxpayers.

(d) *Providing a single and comprehensive repository for electronic documents and records received from various sources*

Apart from receiving tax returns and correspondence from taxpayers in electronic form, IRD also receives from some 25 000 employers annual returns of employee's emoluments by means of magnetic disks or tapes. Currently, returns and correspondence received from various sources reside in different application systems. IRD staff have to obtain the relevant information through various application systems in performing their day-to-day duties. The DMS Phase I Project is capable of capturing and storing all electronic documents and records submitted through various sources under a single, comprehensive and centrally managed repository. It will facilitate document retrieval and hence shorten case processing time.

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(e) *Enhancing security control over access to documents*

The DMS Phase I Project will provide new security safeguards to prevent unauthorised access to electronic documents and records. It will also provide logging of all retrieval transactions for audit trails.

(f) *Building a more “paperless” environment and enabling process re-engineering*

With the extensive use of retrieving and viewing facilities provided by the DMS Phase I Project, IRD’s daily operations can be designed to work on electronic documents instead of paper documents. It will bring about a more “paperless” and environmentally-friendly working environment. It will also enable IRD to review and re-design its business processes to ensure a more effective use of resources and higher operational efficiency.

(g) *Reducing accommodation space for storage of paper documents*

The conversion of paper documents into digitised images will enable IRD to shorten the retention period of paper documents. The DMS Phase I Project will therefore reduce the accommodation space needed for storage of paper documents.

(h) *Providing hands-on experience for assessing the suitability of implementing a full-scale WMS*

IRD intends to implement a full-scale WMS in 2006 to automate the distribution of tasks in the department. The implementation of the DMS and WMS projects will bring about a fundamental change in the operational mode in IRD, mainly through switching from working on paper documents to working on electronic documents on a computer screen. The PWMS project incorporated in the DMS Phase I Project will enable IRD to make an early assessment of the impact of electronic routing of document images on IRD’s mode of operation and on the suitability of pursuing further automation under WMS.

Cost Savings

8. Upon the successful implementation of the DMS Phase I Project in 2003-04, IRD will achieve real savings of \$13.5 million a year. These savings will arise from the expected reduction in IRD’s staffing requirements as a result of the elimination of the need for locating, retrieving and microfilming paper returns

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and their enclosures, as well as the reduction in the maintenance cost and consumables for the existing document imaging system. We estimate that a total of 30 posts of Assistant Taxation Officer and 15 posts of Clerical Assistant can be deleted from IRD's establishment by the end of 2003-04. The officers will be redeployed to meet other staffing needs within the Government.

9. The implementation of the project will also bring about non-recurrent notional savings of \$4.0 million in 2003-04 and recurrent notional savings of \$0.5 million in 2003-04 rising to \$0.8 million from 2005-06 onwards. The non-recurrent notional savings represent the replacement cost of an existing aged document imaging system which IRD will otherwise need to incur. The recurrent notional savings represent the saving in staff effort arising from the improvement in operational efficiency and the saving in space as a result of a shorter retention period of paper documents.

10. A detailed breakdown of the notional and realisable savings is at
Encl. 1 Enclosure 1.

Cost and Benefit Analysis

11. A detailed cost and benefit analysis for the implementation of the
Encl. 2 project is at Enclosure 2.

Long-term Increase in Revenue

12. In the long term, we expect that with the full implementation of both the DMS and the Assess First Audit Later System Projects, 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 field audit team. Based on current indications, one additional team may generate additional revenue (in terms of back tax recovered and penalties) of \$85 million each year from 2006-07 onwards.

FINANCIAL IMPLICATIONS

Non-recurrent Cost

13. Based on the result of the feasibility study, we estimate that the DMS Phase I Project will require total non-recurrent expenditure (excluding non-recurrent staff cost) of \$53 million for two years in 2002-03 and 2003-04. The breakdown is as follows -

/Non

| | 2002-03 \$'000 | 2003-04 \$'000 | Total \$'000 |
|---|-------------------|-------------------|-----------------|
| Non-recurrent expenditure (excluding non-recurrent staff cost) | | | |
| (a) Hardware and software | 30,670 | – | 30,670 |
| (b) Site preparation | 571 | – | 571 |
| (c) Implementation services | 12,942 | 3,236 | 16,178 |
| (d) Contract staff services | 2,303 | 281 | 2,584 |
| (e) Training | 160 | – | 160 |
| (f) Consumables | 345 | – | 345 |
| (g) Contingency | <u>2,350</u> | <u>176</u> | <u>2,526</u> |
| Total | <u>49,341</u> | <u>3,693</u> | <u>53,034</u> |

14. As regards paragraph 13(a) above, the expenditure of \$30.7 million is for the acquisition of hardware, software and network equipment including file servers, scanners, workstations, and access licences.

15. As regards paragraph 13(b) above, the expenditure of \$571,000 is for site preparation including the installation of power points, trunking and cabling work.

16. As regards paragraph 13(c) above, the expenditure of \$16.2 million is for the hiring of an external service provider for implementing the project, including all software customisations, project management, requirement studies, systems analysis and system design.

17. As regards paragraph 13(d) above, the expenditure of \$2.6 million is for the acquisition of contract services for implementing all corresponding changes to existing IRD applications and for other activities including acquisition, co-ordination and monitoring of the project during the development stage. In view of the importance of the project, IRD may need to engage contract staff funded from this commitment for other assignments so as to release some in-house staff for implementing the project.

18. As regards paragraph 13(e) above, the expenditure of \$160,000 is for training IRD staff in administration and use of the new systems.

19. As regards paragraph 13(f) above, the expenditure of \$345,000 is for the acquisition of start-up consumables such as printer toners, back-up tapes and stationery.

20. As regards paragraph 13(g) above, the expenditure of \$2.5 million represents a 5% contingency on the cost items set out in paragraphs 13(a) to (f).

21. Apart from the above non-recurrent expenditure, IRD will redeploy existing staff to co-ordinate service acquisition and monitor system development, testing and implementation. The non-recurrent staff cost, which will be absorbed by IRD, amounts to \$1.6 million for 37 man-months.

Recurrent Cost

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

| | 2003-04 onwards \$'000 |
|---------------------------------------|---------------------------------------|
| Recurrent expenditure | |
| (a) Hardware and software maintenance | 5,416 |
| (b) Contract staff services | 562 |
| (c) Consumables | 382 |
| Sub-total | <u>6,360</u> |
| Recurrent staff cost | |
| (d) IRD | — |
| Total | <u>6,360</u> |

23. As regards paragraph 22(a) above, the annual expenditure of \$5.4 million is for hardware and software maintenance, and software licence fees.

24. As regards paragraph 22(b) above, the annual expenditure of \$562,000 is for the acquisition of contract services for liaising with the external service provider, monitoring and administering the maintenance of the system.

25. As regards paragraph 22(c) above, the annual expenditure of \$382,000 is for the purchase of consumables such as optical disks, tapes and printer toners.

26. Subject to Members' approval of this item, IRD will include the provisions required for the DMS Phase I Project, as offset by the realisable savings mentioned in paragraph 8, in future Estimates.

/Implementation

Implementation Plan

27. The proposed implementation plan of the project is as follows -

| Activities | Target completion dates |
|-------------------------------|--------------------------------|
| Tendering/Service Acquisition | March 2002 |
| Procurement and Installation | November 2002 |
| System Set-up/Development | January 2003 |
| Pre-production Run | March 2003 |
| Implementation | April 2003 |

IRD intends to start preparatory work on tendering/service acquisition later this year.

BACKGROUND INFORMATION

28. IRD completed and met the objectives of its first ISS Plan in January 1997. 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, started in July 1998 and was concluded in March 1999. It redefined the ISS of IRD and formulated the second ISS Plan, which comprises two infrastructure projects and ten application systems projects as detailed in Enclosure 3. The latest progress of these 12 projects is at Enclosure 4.

29. On 23 June 2000, the Finance Committee approved vide FCR(2000-01)36 a new commitment of \$118.9 million for implementing three projects under the second ISS Plan. Four other projects which are relatively minor in nature (each costing less than \$10 million) have been separately funded by a block allocation under Capital Works Reserve Fund Head 710 Computerisation Subhead A007GX. DMS Project is one of the remaining five projects.

30. We consulted the Financial Affairs Panel of the Legislative Council on the second ISS plan on 15 June 2000. Members were generally supportive of the proposals.

Breakdown of Cost Savings

I. Notional Savings

| | <i>2003-04</i> | <i>2004-05</i> | <i>2005-06</i> |
|--|----------------|----------------|----------------|
| | <i>\$'000</i> | <i>\$'000</i> | <i>onwards</i> |
| <u>Non-recurrent</u> | | | |
| Replacement costs of aged Document Imaging System | 3,994 | – | – |
| <u>Recurrent</u> | | | |
| 1. Accommodation costs in retaining old paper documents | 305 | 439 | 574 |
| 2. Staff cost in approving authorization forms for retrieval of physical documents | 230 | 230 | 230 |
| Total | 4,529 | 669 | 804 |

II. Realisable Savings (from 2003-04 onwards)

| | | | |
|---|----------------------------|--------------------|--------------------------------|
| 1. Deletion of posts | | | |
| | <i>Type of Post</i> | <i>No. of Post</i> | <i>Annual Staff Cost</i> \$ |
| | | | <i>Annual Savings</i> \$ |
| | Assistant Taxation Officer | 30 | 293,976 |
| | Clerical Assistant | 15 | 232,272 |
| | Sub-total | 45 | 12,303,360 |
| 2. Reduction in maintenance cost for existing Document Imaging System | | | 937,000 |
| 3. Reduction in consumables of existing Document Imaging System | | | 291,000 |
| Total | | | 13,531,360 |

**Cost and Benefit Analysis of
Implementation of the Document Management System Phase I Project
(at 2001-02 price level)**

| | 2001-02 | 2002-03 | 2003-04 | 2004-05 | 2005-06 | 2006-07 | 2007-08 | 2008-09 | 2009-10 |
|--------------------------------|--------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|----------------|---------------|
| | (\$'000) | (\$'000) | (\$'000) | (\$'000) | (\$'000) | (\$'000) | (\$'000) | (\$'000) | (\$'000) |
| Costs | | | | | | | | | |
| Non-Recurrent | | | | | | | | | |
| - expenditure | - | 49,341 | 3,693 | - | - | - | - | - | - |
| - staff cost | 495 | 845 | 252 | - | - | - | - | - | - |
| Sub-total | 495 | 50,186 | 3,945 | - | - | - | - | - | - |
| Recurrent | | | | | | | | | |
| - expenditure | - | - | 6,360 | 6,360 | 6,360 | 6,360 | 6,360 | 6,360 | 6,360 |
| - staff cost | - | - | - | - | - | - | - | - | - |
| Sub-total | - | - | 6,360 | 6,360 | 6,360 | 6,360 | 6,360 | 6,360 | 6,360 |
| Total costs | 495 | 50,186 | 10,305 | 6,360 | 6,360 | 6,360 | 6,360 | 6,360 | 6,360 |
| Benefits | | | | | | | | | |
| - realisable savings | - | - | 13,531 | 13,531 | 13,531 | 13,531 | 13,531 | 13,531 | 13,531 |
| - notional savings | - | - | 4,529 | 669 | 804 | 804 | 804 | 804 | 804 |
| Total benefits | - | - | 18,060 | 14,200 | 14,335 | 14,335 | 14,335 | 14,335 | 14,335 |
| Net benefits | (495) | (50,186) | 7,755 | 7,840 | 7,975 | 7,975 | 7,975 | 7,975 | 7,975 |
| Cumulative net benefits | (495) | (50,681) | (42,926) | (35,086) | (27,111) | (19,136) | (11,161) | (3,186) | 4,789 |

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

Second ISS Plan

| <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 & Systems Management; PC/Server Upgrade; Infrastructure & End-user Computing Support; Mainframe & 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 | 2003 and 2006 (Phase implementation) |
| | Workflow Management System | Workflow Management System | 2003 | 2006 |
| | Strategic Planning Support System | Executive Decision support | 2001 | 2002 |
| Assessment Processing | Assess First Audit Later 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 & Call Centre | 2003 | 2006 |
| | Electronic Lodgement Services | Electronic Lodgement of Tax returns, Applications and Notifications | 1999 | 2000 and 2002 (Phase implementation) |
| | Business Registration Processing | Business Registration and Extracts Processing | 1999 | 2000 and 2001 (Phase implementation) |
| | Interactive Taxpayer Enquiry Service | 24-hour Taxpayer Enquiry Service | 1999 | 2000 and 2002 (Phase implementation) |
| | 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 |

Present Status of the 12 ISS Projects under 2nd ISS Plan

| Project Title | Present Status |
|-------------------------------------|---|
| • System Infrastructure Enhancement | – Development work on various components is progressing on schedule. The project is scheduled for implementation by phases between March 2001 and October 2002. |
| • Data Management Enhancement | – Installation of a Corporate Data Model and a new database management system on mid-range computer platform is underway. The project will be completed in June 2001 as planned. |
| • Document Management System | – Feasibility Study (FS) for Phase I completed in March 2001. FC's approval for Phase I implementation is being sought. FS for Phase II will commence in April 2003. |
| • Workflow Management System | – FS will commence in April 2003. Implementation will depend on FS's findings. A pilot system would be incorporated in the Document Management System Phase I Project. |
| • Strategic Planning Support System | – FS commenced in May 2001. Implementation will depend on FS's findings. |
| • Assess First Audit Later System | – System development for Phase I Project is in progress. Functions will be implemented by stages from May 2001 onwards. FS for Phase II will start in September 2002. |
| • Customer Service Support System | – FS will commence in April 2003. Implementation will depend on FS's findings. |
| • Electronic Lodgement Services | – On-line services for electronic lodgement of Tax Return – Individuals, Property Tax Return and notification of change of postal address under the Electronic Service Delivery Scheme were launched to the public in December 2000. Development work for the lodgement of return through telephone is in progress. |
| • Business Registration Processing | – Applications for Business Registration for Sole Proprietors and for Copy of Extracts of the Business Register under the Electronic Service Delivery Scheme were launched to the public in December 2000. System development for a new Electronic Service Delivery application for amendment of business particulars is in progress. |

Present status of the 12 ISS Projects under 2nd ISS Plan

| <u>Project Title</u> | <u>Present Status</u> |
|--|--|
| • Interactive Taxpayer Enquiry Service | – The enquiry services provided under the Electronic Service Delivery Scheme was launched to the public in December 2000. Development work for the service via telephone is in progress. |
| • Property Stamping | – System development for Phase I will commence in December 2001 with target completion date in July 2002. FS for Phase II will commence in late 2002. Implementation will depend on FS's findings. |
| • Application System Enhancements | – Completed in October 2000. |

