For discussion
on 6 February 2007

Legislative Council Panel on Security

Proposed Implementation of an Integrated Licensing, Fire Safety and Prosecution System in the Fire Services Department

PURPOSE

This paper sets out our proposal to replace the current fire protection information system in the Fire Services Department (FSD) by an Integrated Licensing, Fire Safety and Prosecution System (LIFIPS).

BACKGROUND

2. FSD is committed to reducing fire hazards in the community and ensuring the provision of appropriate fire protection measures in buildings / premises according to their intended use(s). In order to meet its operational requirements in performing such duties, FSD has since February 2001 been using an off-the-shelf commercial system that records basic information such as the dates and results of inspections conducted, the follow-up actions taken, and the history of the steps taken in the certification process.

JUSTIFICATION

Room for Further Computerisation

3. In 2005, a consultancy study commissioned by FSD confirmed the feasibility of a LIFIPS that would better support FSD's operational needs. The feasibility study identified the following main areas where a better system would improve on the current information system –

(a) Storage capability

The current off-the-shelf system can only keep basic information such as the dates and results of inspections conducted by various Commands of FSD. It cannot store other types of information that would facilitate FSD's operations, including –

(i) the layout and description of buildings, such as information of occupancy, number of staircases, existence of dangerous goods stores, co-existence of restaurants / clubs with child care centres / schools / residential care homes of elderly, etc.; and

(ii) important documents, such as building plans, fire service installation (FSI) drawings and summonses.

At present, most of the above information, which is crucial for conducting risk assessments of buildings and formulating effective plans for rescue and fire-fighting, is kept separately in paper form.

(b) Information sharing capability

The current information system only allows limited data interface among divisions in a Command, and among Commands. Apart from the brief history of inspections conducted by various Commands, individual divisions in each Command cannot obtain any further information through the system, such as relevant actions taken by other divisions.

(c) Failure to support mobile devices

The current information system only allows very limited interface with mobile devices. As a result, FSD officers have to manually input into personal data assistants (PDAs) reference information (for example, case-related data) before inspections and inspection findings during inspections. After the fieldwork, the findings have to be input manually into the system.

The Proposed LIFIPS

4. The proposed LIFIPS is a customised information management system which will provide a common platform for information sharing among divisions in a Command, and among Commands. It has the following major benefits, as compared with the existing system –

(a) Enhanced information management

The proposed LIFIPS will be able to store and process a much greater variety of information, including those types of information mentioned in paragraph 3(a) above. Moreover, all information relating to the same building / premises will be made accessible to all authorised officers in different divisions and Commands. This will provide an electronic data platform through which FSD officers can better coordinate their law enforcement activities, take more informed decisions in relation to the fire safety matters of each building / premises, and enhance their efficiency in processing licence applications.

(b) More fieldwork support

The proposed LIFIPS will enable inspecting officers to electronically access case-related data and reference information in the field, capture inspection findings and upload inspection results to LIFIPS upon return to office through mobile devices. This can streamline the inspection process and remove the need for repeated data entry.

(c) Facilitating processing of e-submission of forms

The proposed LIFIPS will enable more efficient processing of e-submissions of applications for dangerous goods and timber store licences, and for sale or supply of portable fire equipment (such as fire extinguishers); and submission of maintenance forms of FSIs and ventilating systems. This will make the e-submission channel more cost-effective and convenient for the Department and for the public.

(d) Enhanced contractor performance monitoring

The proposed LIFIPS will store information about contractors of FSIs and ventilating systems, including their registration, renewal and performance records. It will also record any installation defects, number of warnings issued, appeals and prosecutions, etc. in respect of each registered contractor. With the proposed LIFIPS, FSD can better monitor the performance of the contractors.

(e) Effective work management

The proposed LIFIPS will provide a comprehensive database for data collection, analysis and reporting to facilitate the planning and management of the daily operations of FSD. Also, its workflow engine, which includes task scheduling, event notification and event archiving, can help FSD officers to plan and arrange their cases and inspection schedules, and the FSD management to obtain a quick and comprehensive view of staff workload for maximising resource utilisation. The proposed LIFIPS will also keep the status of each case up-to-date, and automatically alert the relevant officers of outstanding and late cases. Furthermore, users will be allowed to define the access privilege and the security of data will be further enhanced.

5. The proposal to replace the current fire protection information system by LIFIPS has the support of the Office of the Government Chief Information Officer.

FINANCIAL IMPLICATIONS

Non-recurrent Expenditure

6. We estimate that implementation of the proposed LIFIPS will incur a non-recurrent expenditure of $32.726 million over a three-year period from 2007-08 to 2009-10 for the acquisition of computer hardware, software and related services. A breakdown is at **Annex A**. In addition, the implementation of the project will entail an additional non-recurrent staff cost of $0.624 million, involving a total of 12 man-months of a Senior Station

Officer / Station Officer and a Principal Fireman, for managing the project. FSD will absorb the requirement through internal redeployment.

Recurrent Expenditure

7. We estimate that the annual recurrent cost for the implementation of the proposed LIFPIS is $2.236 million in a full year from 2009-10 onwards. A breakdown is at **Annex B**. This recurrent cost will be offset by the savings mentioned in paragraph 8 below.

Cost Savings

8. We estimate that the implementation of LIFIPS will bring about an annual savings of $9.363 million from 2009-10 onwards, comprising -

(a) a realisable savings of $2.613 million per annum, being the recurrent maintenance cost of the current fire protection information system and the rental fees of its data lines. The savings will be used to cover the recurrent cost of the proposed LIFIPS; and

(b) a notional savings of $6.750 million per annum, achieved through improvements on case registration and assignment, scheduling, monitoring, information sharing, updating / maintenance of case history and reference, and compilation of operational and management reports. The notional savings will be re-deployed to provide better and more efficient fire protection services to the public.

9. After netting off the realisable savings of $2.613 million, FSD will achieve a net savings of recurrent expenditure of about $0.377 million.

IMPLEMENTATION PLAN

10. We plan to seek funding approval from the Finance Committee in April 2007. Subject to funding approval, we plan to have LIFIPS fully implemented by 2009. Details of the implementation plan are as follows –

	Activity	Target Completion Date
(a)	Tender preparation, evaluation and award of contract	December 2007
(b)	Project initiation, system analysis and design	June 2008
(c)	Site preparation, procurement of hardware / software and installation	August 2008
(d)	System development including programming and unit testing, data conversion/migration	February 2009
(e)	System integration test, user acceptance test, backup / restore, load test, reliability test, disaster recovery rehearsal, training, documentation and final data conversion / migration	April 2009
(f)	System commissioning	April 2009
(g)	System nursing and review	October 2009

OTHER ALTERNATIVES CONSIDERED

11. Apart from replacing the current fire protection information system with a new system, FSD has also considered the feasibility of upgrading the current information system to better meet FSD's operational needs. However, as advised by the consultant of the feasibility study, since the current system is an off-the-shelf package, such upgrading would involve major customisation of the software and would therefore not be cost-effective. Also, the rapid change of computer technology makes it extremely difficult to upgrade the system software while using the existing system hardware configuration.

Security Bureau
30 January 2007

Annex A

Non-Recurrent Expenditure for
Implementation of Integrated Licensing,
Fire Safety and Prosecution System

Items	2007-08 ($M)	2008-09 ($M)	2009-10 ($M)	Total ($M)
Hardware	-	4.416	-	4.416
Software	-	3.353	-	3.353
Implementation Services	-	8.331	3.571	11.902
Contract Staff	0.700	2.056	0.189	2.945
Site Preparation	-	0.230	-	0.230
Training	-	0.105	-	0.105
Consumables	-	1.043	-	1.043
Document Scanning Services	-	5.757	-	5.757
Sub-total :	0.700	25.291	3.760	29.751
Contingency	0.070	2.529	0.376	2.975
Total :	**0.770**	**27.820**	**4.136**	**32.726**

Annex B

Recurrent Expenditure for
Implementation of Integrated Licensing,
Fire Safety and Prosecution System

Items	Recurrent Expenditure ($M)
Hardware & Software Maintenance	0.556
System Maintenance	0.998
Contract Staff	0.497
Consumables	0.185
Total :	**2.236**