

**For discussion
on 14 December 2006**

Legislative Council Panel on Financial Affairs

Proposal to replace the existing procurement management system of the Government Logistics Department

PURPOSE

This paper consults Members on the proposal to replace the existing procurement management system of the Government Logistics Department (GLD).

BACKGROUND

2. The Procurement Management System Upgrade (PMSU) is used in the GLD mainly for procurement administration and contract management of major purchases of goods required by the Government. It provides online facilities for users in GLD and other bureaux and departments (B/Ds) to handle procurement activities such as processing and monitoring of tender requests, tender invitations, tender offers, contracts/orders, suppliers enlistment and contractors performance, and procurement information analysis.

3. The PMSU was developed in 1998 and brought into operation in October 1999. To enhance the user-friendliness and expand the reach of PMSU to more users in B/Ds, GLD conducted a system enhancement in December 2003 by introducing a web-interface for PMSU to enable users in B/Ds to gain access to the PMSU applications through the Government's Central Internet Gateway (CIG).

4. The PMSU is currently serving 120 users in GLD and another 1 200 users in B/Ds. In 2005-06, the PMSU processed some 1 300 purchase requests and 1 820 tender offers. The total estimated value of tenders issued through the PMSU in 2005-06 was HK\$6.41 billion. As of 1 November 2006, the PMSU is maintaining some 720 contracts and 6 800 GLD enlisted suppliers.

JUSTIFICATION

Need to Replace the Existing PMSU

5. The PMSU will reach the end of its serviceable life in 2009-10. In 2003, GLD conducted a consultancy study, namely the Integrated Business and Feasibility Study (IBFS), to identify and prioritize the business requirements of its procurement and supplies activities. As part of the IBFS, the serviceability of the PMSU was assessed. The result showed that both the major hardware and software of the PMSU were becoming obsolete. Moreover, there will be no support services provided by the hardware manufacturer and software developer upon the expiry of the current ten-year maintenance agreement in 2009-10. The system can no longer provide reliable service to B/Ds by then. Apart from this, due to the limitation of the hardware and the licence scheme of the software of the existing system, increasing the number of concurrent users is not cost-effective and will adversely affect the service level of the existing system. This limits the expansion of user accounts to enhance the system accessibility by B/Ds. As such, the IBFS recommended implementing a new system to replace the PMSU before the expiry of the current maintenance agreement.

6. Furthermore, as the existing core applications of the PMSU are proprietary software packages, enhancements and integration with new technologies are very difficult and costly. The software developer has also ceased providing enhancements to the software packages. Such limitation makes it difficult to establish interface with other key government computer systems such as the future Government Financial Management Information System (GFMIS) of the Treasury to facilitate payment arrangement.

7. We have considered options other than developing a new replacement system. Reverting to manual mode operation is not practicable. To do so, a large volume of different types of records, such as tender request details, tender offer details, tender and contract history, procurement statistics and suppliers records, etc., that are currently stored and processed in the system electronically would have to be printed out for tender administration and contract management. In addition to the significant amount of space that would be required for storage of hard copies of these data and records, additional manpower will be required for managing / processing these manual data. The processing time will inevitably be lengthened, thereby adversely affecting the efficiency, accuracy and quality of GLD's services.

8. In view of the foregoing, we consider that a new system with enhanced functionalities should be developed to overcome the maintenance problem of the existing PMSU and to provide better on-line procurement services to the system users.

Proposed System

9. GLD therefore launched another feasibility study on the replacement of the existing system in July 2005. The study recommended developing a replacement system using the most up-to-date technology. Based on these recommendations, the Director of Government Logistics, in consultation with the Government Chief Information Officer and with the support of the Secretary for Financial Services and the Treasury, proposes to replace the existing PMSU at an estimated cost of \$37,210,000.

10. In addition to performing the full range of functions of the existing PMSU, the proposed replacement system will also be equipped with new functions to enhance data sharing and user-friendliness. It will allow GLD to introduce new/enhanced services to users and suppliers such as -

- a) Term Contract Depository – it will allow the images and specifications of the items under GLD term contracts to be stored electronically and retrieved conveniently. Users will be able to easily identify the correct items for ordering.
- b) e-Ordering – when users have selected from the Term Contract Depository items to be purchased, the proposed replacement system will allow them to generate and issue purchase orders electronically via email or e-fax.
- c) Improved workflow processes – it will allow users to perform approval processes and confirmation of funding electronically. As soon as the processing of a case is completed by a user, it can be automatically routed by the system electronically to the next concerned officer for further processing.

- d) Online functions for suppliers – it will allow the enlisted suppliers to view their own information registered with GLD and to update / maintain such information like their telephone numbers and addresses, etc. after office removal.
- e) Interface with other government systems – the development of the system based on government standards will facilitate interface and data sharing with other government systems. For instance, it will be able to interface with the GFMIS of the Treasury. After B/Ds have confirmed the funding for the purchase of the items under GLD contracts and approved the purchase orders, the proposed replacement system will generate and send a purchase order information file to the GFMIS. The GFMIS would then automatically create a commitment record and return a notification to the B/Ds via the proposed replacement system.

Anticipated Benefits

11. The proposed replacement system will enable GLD to continue to provide reliable procurement-related services to B/Ds. With the introduction of new/enhanced services, it will also enable GLD to achieve the following benefits:

- a) **Extended coverage of users**
The user population will be expanded from the existing 1 400 users to 3 000 users. At the same time, the number of concurrent users can be increased by more than 100% from 120 to 250. Its scope will cover users in the sub-units of B/Ds responsible for handling procurement-related activities, such as confirming funding availability, placing purchasing orders, and receiving and responding to call returns. Apart from this, based on the experience with a major user department, it is estimated that the time for preparing a purchase order will be reduced by around 15%.
- b) **Accessibility by suppliers**
The proposed system will provide round-the-clock accessibility for the suppliers to submit application for supplier enlistment. If they are already enlisted suppliers, they can use their passwords to view their information registered with GLD and update it online through the

Internet. This will improve the accuracy of supplier information.

c) **Better monitoring and control**

The replacement system will enable faster data retrieval and compilation of management information conducive to facilitating management decision-making and strategic planning.

d) **More streamlined and paperless workflow**

B/Ds can generate digitally-signed purchase orders that can be transmitted in an electronic format. Moreover, they can produce reports on their purchases in the system. This will reduce paper-based reports, printing costs, as well as the efforts required to produce, circulate, store and retrieve manual reports. This will also promote the concept of green and environmental-friendly office.

e) **Better scalability and extendibility**

The replacement system will leverage on the latest technology so that it is easily adaptable to meet new demands due to change in business needs in future. Through adherence to government standards, the interface and exchange of procurement-related information with other government information technology systems will be greatly facilitated.

12. We estimate that the replacement system will bring about annual savings of \$5,816,000 from 2010-11 onward, comprising -

a) **Realizable savings of \$3,229,000 per annum.** These are the recurrent system maintenance costs of the existing PMSU and its web-interface, communication network rental fees, as well as data security protection recurrent costs. The savings will be ploughed back to cover part of the recurrent costs of the proposed replacement system.

b) **Notional savings of \$2,587,000 per annum.** After the implementation of the replacement system, notional savings in staff cost of GLD as well as B/Ds will be achieved through increased operational efficiency, resulting from enhancement of the following processes/activities -

- (i) creation and placing of purchase orders: the replacement system will provide functions of a Term Contract Depository which will make it more efficient for the B/Ds to prepare a purchase order by selecting required items from the GLD arranged term contracts. In addition, it will allow direct generation of electronic purchase orders using the e-Order function of the replacement system, resulting in less manual effort required.
- (ii) consolidation of call returns: the replacement system will provide functions to allow B/D users (down to sub-unit level) to return required data, e.g. forecast requirements via their headquarters offices to GLD. This will facilitate B/D users as well as GLD users to consolidate data from different returns more easily and efficiently.
- (iii) suppliers information management: the replacement system will notify the suppliers regularly to update their information, e.g. change of address, at any time via a proposed web system. This new function would save the manual effort required in supplier information management.
- (iv) enhancement of existing functions: many existing functions will be enhanced so as to make them more user-friendly. For example, the default cases will be logged into the replacement system so that their status and relevant records can be retrieved through the new system. Therefore, less effort will be required to search and locate a case file. More pre-defined reports will be created in the replacement system so that less effort will be required to compile statistical reports. Apart from this, users can navigate amongst the required modules and records easily through hyperlinks.

FINANCIAL IMPLICATIONS

Non-recurrent Expenditure

13. We estimate that the implementation of the proposed replacement system will require a total non-recurrent expenditure of \$37,210,000 over a period of three years from 2007-08 to 2009-10, broken down as follows-

	2007-08	2008-09	2009-10	Total
	\$'000	\$'000	\$'000	\$'000
(a) Hardware	110	590	5,270	5,970
(b) Software	40	370	4,140	4,550
(c) Communication services	-	-	40	40
(d) Implementation services	-	9,000	11,000	20,000
(e) Contract staff	100	1,770	1,150	3,020
(f) Site preparation	-	-	10	10
(g) Training	-	-	100	100
(h) Consumables	-	10	130	140
(i) Contingency	<u>30</u>	<u>1,170</u>	<u>2,180</u>	<u>3,380</u>
Total:	280	12,910	24,020	37,210

14. On paragraph 13(a), the estimate of \$5,970,000 is for the acquisition of hardware and network equipment including web servers, application servers, database servers, development workstations, system printers, firewall and security devices, switches and routers, and other computing peripherals.

15. On paragraph 13(b), the estimate of \$4,550,000 is for the acquisition of software including system software to drive and support the hardware, intrusion detection software, end user computing tools and development tools.

16. On paragraph 13(c), the estimate of \$40,000 is the rental charge for additional network bandwidth from Government Backbone Network (GNET) / CIG to GLD and rental charge for fax lines during system testing.

17. On paragraph 13(d), the estimate of \$20,000,000 is the service charge for the implementation contractor to develop and implement the proposed replacement system and the necessary

infrastructure. Major activities include system analysis and design, data analysis and modelling, application development and deployment, database conversion and migration, system integration and testing.

18. On paragraph 13(e), the estimate of \$3,020,000 is for the hiring of contract staff for providing technical advice, monitoring the system implementation and roll-out, and performing the data conversion.

19. On paragraph 13(f), the estimate of \$10,000 is for the alteration works at existing sites, including installation of additional conduit facilities, network nodes and power points for computer equipment.

20. On paragraph 13(g), the estimate of \$100,000 is for the provision of user training on end user computer tools and e-training development kits.

21. On paragraph 13(h), the estimate of \$140,000 is for the acquisition of computer consumables such as storage media and toner cartridges to be used during implementation for data conversion and testing.

22. The project also entails non-recurrent staff costs of \$5,900,000 which will be absorbed by GLD through internal redeployment for managing the project.

Recurrent Expenditure

23. We estimate that the recurrent expenditure for supporting the proposed replacement system is \$5,006,000 per annum as from 2010-11, which will be absorbed by GLD from within its existing resources. A breakdown is provided below -

	2009-10	2010-11 and onwards
	\$'000	\$'000
(a) Hardware maintenance	238	1,099
(b) Software maintenance	37	676
(c) Communication services	95	162
(d) System maintenance	-	2,792
(e) Consumables	46	79
(f) Server hosting service	116	198
Total:	532	5,006

24. On paragraph 23(a), the estimate of \$1,099,000 is for the provision of hardware and network maintenance and network monitoring services.

25. On paragraph 23(b), the estimate of \$676,000 is for the acquisition of software licence and subscription fees.

26. On paragraph 23(c), the estimate of \$162,000 is the rental charge for additional network bandwidth from GNET / CIG to GLD and the rental charge for fax lines.

27. On paragraph 23(d), the estimate of \$2,792,000 is for the acquisition of on-going support services from external service providers to maintain the replacement system and related infrastructure. Major services include bug fixing, minor enhancement, launching of security patches, updating of configuration files, and system monitoring and tuning.

28. On paragraph 23(e), the recurrent estimate of \$79,000 is for the acquisition of computer consumables such as storage media and toner cartridges for on-going system operation after implementation.

29. On paragraph 23(f), the estimate of \$198,000 is for the acquisition of hosting services at the Office of the Government Chief Information Officer.

30. The project also entails recurrent staff costs of \$1,720,000 per annum for providing on-going system administration services to the replacement system. The costs will be absorbed by GLD by redeploying the existing staff efforts required by the PMSU to the replacement system. There will be no additional recurrent staff cost incurred for the replacement system.

IMPLEMENTATION PLAN

31. We plan to implement the replacement system according to the following timetable -

Activity	Target completion date
(a) Tender preparation and invitation	April 2007
(b) Tender evaluation, negotiation and award of contract	December 2007
(c) System analysis and design	June 2008
(d) Program development, data conversion and tests	March 2009
(e) System acceptance test and training	July 2009
(f) System roll-out	August 2009

WAY FORWARD

32. Subject to Members' views, we plan to seek funding approval from the Finance Committee on 12 January 2007.

Financial Services and the Treasury Bureau
December 2006