

## **Legislative Council Panel on Commerce and Industry**

### **Enhancement of the Government back-end computer system for processing cargo manifests**

#### **Purpose**

On 10 March 2003, this Panel considered the captioned proposed project. This paper provides supplementary information in response to some Members' questions.

#### **Benefits to the Government**

2. Some Members questioned what concrete benefits the project would bring to the Government, since a substantial amount of the benefits would be "notional savings". Some Members also queried whether achieving a break-even within five years after the commencement of its operation in 2005-06 was too long.

#### *Realisable savings*

3. The project will integrate discrete computer systems currently operated by different departments and automate work processes. This will result in savings in manpower; savings in the cost of consumables, paper, printing; retirement of some of the existing systems and savings in associated maintenance and operating costs. We have previously estimated that the full-year effect of such savings to be about \$10.7M per year, including the deletion of 29 posts (comprising one Customs Officer, 24 Assistant Clerical Officers and four Clerical Assistants). We have recently conducted a further critical review and identified two more posts (one Assistant Clerical Officer and one Clerical Assistant post) for deletion. This brings the total number of posts to be deleted to 31, and increases the realisable savings to \$11.3M a year, which will be roughly offset by a

Annex

reduction in notional savings from \$12.5M to \$11.8M<sup>1</sup>. A revised cost-benefit analysis for the project is at Annex.

*Notional savings*

4. The project will also bring about an estimated \$11.8M notional savings per year in the form of efficiency gains (i.e. achieving the same output with less resources) and avoidance of cost (i.e. using the same resources instead of additional resources to do more work). The notional savings will be spread among the three departments of Customs and Excise (C&ED), Census and Statistics (C&SD), and Trade and Industry (TID).

5. The notional savings from C&ED (\$9.5M per year) will come from staff in 13 different ranks and grades working in shifts in 12 different formations/divisions/bureaux, such as airport, river trade terminal, container terminal, trade investigation branch, dutiable commodities office etc. It is not practicable to turn such scattered notional savings into realisable ones<sup>2</sup>. The notional savings from C&SD (\$1.6M per year) will come from staff of six different grades and ranks working at three different locations, and those for TID (\$0.7M per year) from staff in five different ranks. The savings to be achieved will enable the concerned departments to cope with the continuing increase in the number of manifests<sup>3</sup> and to undertake more cargo screening and investigations.

*Intangible benefits*

6. The project will also bring about intangible benefits including –
- (a) for C&ED, more effective customs control through improved intelligence and work processes;

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<sup>1</sup> mainly due to a reduction in savings equivalent to 15.12 man-months of Customs Officer and 10.44 man-months of Assistant Clerical Officer.

<sup>2</sup> For example, in the Ship Search and Cargo Division, four teams (with a total of 70 officers) work three shifts at different locations round the clock to verify and screen cargo data, check and examine cargo items at terminals or on board vessels, and prepare reports etc. Though the Division as a whole can achieve an aggregate saving of 26.5 man-months per year, each shift will achieve annual manpower savings of 6 man-months only, insufficient for deleting a post.

<sup>3</sup> The number of manifests has increased from 495 000 in 1996 to 605 000 in 2002.

- (b) for C&SD, more effective trade declaration control through more efficient verification and follow-up actions;
- (c) for TID, more effective trade control through integration of the manifest and licence/notification systems; and
- (d) for all three departments, improved operational efficiency with more efficient information processing, better data sharing, faster communication, process reengineering (including elimination of paper-based transactions), better monitoring of service delivery and better support to decision-making processes.

### *Break-even period*

7. The project will achieve a net real recurrent saving of \$1.1M per year<sup>4</sup> from 2005-06, the first year of operation, and break-even within five years after commencement of operation. This is in line with the timeframes for similar projects aimed at enhancing the operational efficiency of current systems.

### **Benefits to the trading community**

8. Some Members asked for elaboration of the benefits of the project to the trading community.

### *Reduced disruption to legitimate trade*

9. The project will enable C&ED to adopt a more targeted enforcement approach based on intelligence analysis through a more powerful computerised screening system. Enforcement action will be focused on high-risk consignments, resulting in a reduction in the inspection and disruption of legitimate trade, improving the trading community's overall competitiveness in international trade where timely delivery of goods is increasingly important.

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<sup>4</sup> which is the difference between realisable savings and recurrent expenditure.

10. At present, the time required for Customs inspection ranges from 20 minutes to four hours for a 40-foot container. And the average time for Customs inspection is three hours for each river trade vessel, and 30 minutes for each rail cargo wagon.

*Faster Customs clearance*

11. The project will improve access to cargo data as front-line staff at locations without Customs back-up office can retrieve information conveniently by using mobile devices. This will facilitate cargo clearance and shorten cargo inspection time (e.g. by one-third for river trade vessels) at these locations.

*More timely reminders to traders to lodge trade declarations*

12. Under the Import and Export Ordinance, traders are required to lodge trade declarations within 14 days after importing or exporting a consignment. A penalty is imposed for failure to do so and/or submission of incorrect value of the consignment. The fine is imposed on a sliding scale (i.e. the longer the period of non-lodgement, the heavier the penalty). The project will reduce the processing time for trade declarations from 2.6 months to less than one month. C&SD will be able to issue reminders or requests for clarification to traders earlier, thereby helping them to reduce their liability to penalties, and to avoid the inconvenience brought to traders for searching old records.

*More timely processing of manifests and licences*

13. The project, which integrates the manifest and licence/notification systems, will enable faster and more accurate checking of manifests against licences and notifications. Carriers will be notified much earlier of any discrepancies identified so that they can rectify the manifest information or obtain clarification from traders (where necessary) earlier. This will reduce the inconvenience, time and effort to retrieve old records to many carriers.

*Tailor-made user guides*

14. The project includes the function to capture the error patterns of individual traders in submitting trade declarations. This enables departments concerned to issue tailor-made user guides to help individual traders improve the quality of the data submitted by them, to the mutual benefit of the traders and the departments concerned.

*Additional communication means*

15. The project will provide additional communication means and internet facilities (such as electronic fax and email), between the Government and the trading community. Traders/carriers will be able to conveniently make use of these various facilities for making appointments for cargo examination, replying to demand and query messages, and receiving departmental notices and user guides, etc. This will save time and money for the trading community.

**Wider considerations**

16. The project is a crucial element in the Government's overall strategy to improve cargo clearance processing.

*Reaping the full benefits of the electronic manifest system*

17. Electronic submission of manifests for cargoes carried by air, rail, ocean and river trade vessels (EMAN) commenced operation on 11 April 2003. The EMAN system now supports electronic submission of manifests by carriers through a service provider to a gateway system on the Government side. The gateway infrastructure supports some basic validation functions and data sharing among departments. The benefits achievable are limited. The proposed project will realise the full potential and benefits of the EMAN system and some 15 other systems, by integrating them and reengineering work processes to achieve better data sharing, matching, screening and profiling.

18. Deferring the project would result in the need to continue to adopt inefficient work procedures. For instance, the departments

concerned would have to print the electronic manifests into hardcopies for manual matching and screening at the backend. About 10 million pages of A3- and A4-size paper (costing \$800,000) would have to be printed per year. This would be at odds with the international trend<sup>5</sup>, and would be time-consuming, wasteful of storage space and environmentally unfriendly.

*Platform for further development of inter-modal transshipment clearance*

19. The project will provide a platform for the further development of facilitation measures relating to customs clearance of inter-modal cargo. The database it will create can easily be extended through its scalable design to support road mode manifest or other e-trade initiatives involving 12 departments<sup>6</sup>.

*Competitiveness of Hong Kong as logistics hub*

20. The global trend is to computerise document processing. Singapore has already fully automated its manifest processing and Mainland China is moving in this direction. The proposed project is instrumental to Hong Kong's continued development as an international trading centre and logistics hub and maintaining our competitiveness<sup>7</sup>.

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<sup>5</sup> Asia-Pacific Economic Cooperation (APEC) decided in 1998 that member economies should endeavour to reduce or eliminate the requirement for paper documents needed for customs and other cross-border trade administration and other documents and messages relevant to international sea, air and land transport; and aim to achieve "paperless trading" (for trade in goods) where possible, by 2005 for developed and 2010 for developing economies.

<sup>6</sup> A consultancy study on an Integrated Government e-trade System recommends that manifest data captured by EMAN system be accessed/shared by other departments for licensing control. Currently 12 departments are issuing trade documents which have to be submitted/verified in the context of cargo manifest. These departments include C&ED, C&SD, TID, Agriculture, Fisheries and Conservation Department, Department of Health, Food and Environmental Hygiene Department, Office of the Telecommunications Authority, Civil Engineering Department, Environmental Protection Department, Marine Department, Hong Kong Police Force, and Immigration Department.

<sup>7</sup> The Kyoto Convention issued by the World Customs Organisation (WCO) is a blueprint for customs procedures and practices of the 21st century. It stipulates that Customs need to recognize the fact that between one third and one half of all international trade today is made up of intra-company transactions, in which materials, components, and partly processed and/or finished products, are being moved across national frontiers within an integrated commercial management system in increasingly diminishing timeframes. It is already being seen that carriers in all traffic modes are using information and communication technologies to maximise the efficiency of their shipments. If Customs do not wish to be paralyzed by the resulting increase in traffic and paperwork, they must adopt electronic commerce systems (including EDI) to handle these changes efficiently and effectively.

## **Implementation**

21. Some Members considered that the 25-month implementation period was too long and suggested, for example, shortening the tendering period.

22. We have reviewed critically and consider a 17-month period is required for system implementation, given the scale and complexity of the project.

23. The eight-month tendering period preceding system implementation comprises a two-month period for drawing up the tender specifications and for commissioning the project team, some 40 days for tenderers to prepare their submissions in accordance with the minimum period stipulated in the World Trade Organisation Agreement on Government Procurement, and around four and a half months for evaluation of tenders and contract negotiation. However, we will expedite wherever possible, and endeavour to complete the project within 24 months.

## **Way forward**

24. Subject to the support of this Panel, we intend to submit the proposed project for consideration by the Finance Committee on 13 June 2003.

**Cost-Benefit Analysis for the  
Enhancement of the EMAN System  
(at 2002-2003 price level)**

|                                  | 2003-<br>2004  | 2004-<br>2005   | 2005-<br>2006   | 2006-<br>2007   | 2007-<br>2008   | 2008-<br>2009   | 2009-20<br>10 | 2010-<br>2011 |
|----------------------------------|----------------|-----------------|-----------------|-----------------|-----------------|-----------------|---------------|---------------|
|                                  | (\$'000)       | (\$'000)        | (\$'000)        | (\$'000)        | (\$'000)        | (\$'000)        | (\$'000)      | (\$'000)      |
| <b><u>Cost</u></b>               |                |                 |                 |                 |                 |                 |               |               |
| <b>Non-recurrent</b>             |                |                 |                 |                 |                 |                 |               |               |
| - expenditure                    | 6,735          | 48,654          | 7,558           | -               | -               | -               | -             | -             |
| - staff cost                     | -              | -               | -               | -               | -               | -               | -             | -             |
| Sub-total                        | 6,735          | 48,654          | 7,558           | -               | -               | -               | -             | -             |
| <b>Recurrent</b>                 |                |                 |                 |                 |                 |                 |               |               |
| - expenditure                    | -              | -               | 8,310           | 10,192          | 10,192          | 10,192          | 10,192        | 10,192        |
| - staff cost <sup>(note)</sup>   | -              | -               | -               | -               | -               | -               | -             | -             |
| Sub-total                        | -              | -               | 8,310           | 10,192          | 10,192          | 10,192          | 10,192        | 10,192        |
| <b>Total cost</b>                | <b>6,735</b>   | <b>48,654</b>   | <b>15,868</b>   | <b>10,192</b>   | <b>10,192</b>   | <b>10,192</b>   | <b>10,192</b> | <b>10,192</b> |
| <b><u>Benefit</u></b>            |                |                 |                 |                 |                 |                 |               |               |
| - realisable saving              | -              | -               | 9,437           | 11,324          | 11,324          | 11,324          | 11,324        | 11,324        |
| - notional saving                | -              | -               | 9,638           | 11,566          | 11,793          | 11,793          | 11,793        | 11,793        |
| - revenue                        | -              | -               | 658             | 790             | 790             | 790             | 790           | 790           |
| <b>Total benefit</b>             | <b>-</b>       | <b>-</b>        | <b>19,733</b>   | <b>23,680</b>   | <b>23,907</b>   | <b>23,907</b>   | <b>23,907</b> | <b>23,907</b> |
| <b><u>Net benefit</u></b>        | <b>(6,735)</b> | <b>(48,654)</b> | <b>3,865</b>    | <b>13,488</b>   | <b>13,715</b>   | <b>13,715</b>   | <b>13,715</b> | <b>13,715</b> |
| <b><u>Cumulative benefit</u></b> | <b>(6,735)</b> | <b>(55,389)</b> | <b>(51,524)</b> | <b>(38,036)</b> | <b>(24,321)</b> | <b>(10,606)</b> | <b>3,109</b>  | <b>16,824</b> |

Note: The recurrent staff cost (which stands at \$1,196,000 in 2005-06, and \$1,239,000 in 2006-07 and annually thereafter) will be absorbed by departments from within their resources. The project will achieve break-even in 2010-11 instead of 2009-10 if these costs, which do not incur any additional resources, are to be included in the above calculations.