

**For discussion
on 10 February 2020**

**Legislative Council Panel on
Information Technology and Broadcasting**

Full Implementation of Electronic Recordkeeping System

Purpose

This paper seeks Members' support for the funding proposal of developing a central Electronic Recordkeeping System ("ERKS") for full implementation in the Government.

Background

2. Adopting electronic record keeping is a global trend. Apart from private organisations, many governments (including Australia, Canada, Korea, New Zealand, Singapore and the United Kingdom) have implemented ERKS to protect their records and support their daily business more effectively through enhancing the operational efficiency and effectiveness of records management.

3. The Government promulgated the Electronic Information Management Strategy and Framework in 2011 which recommended government bureaux/departments ("B/Ds") to adopt ERKS. A total of 11 B/Ds have piloted to develop their departmental ERKS. Among them, five B/Ds (viz. Efficiency Office ("EffO"), Government Records Service ("GRS"), Communications and Creative Industries Branch of the Commerce and Economic Development Bureau, Rating and Valuation Department and Drainage Services Department) are early pilot B/Ds. The Government decided to extend the pilot in October 2014. Three core systems of ERKS were developed as central common service platforms for rollout in six other B/Ds (viz. Office of the Government Chief Information Officer ("OGCIO"), Intellectual Property Department, Administration Wing, Civil Engineering and Development Department, Architectural Services Department and Marine Department) to further test whether the capabilities and performance of the different systems could meet B/Ds' records management requirements.

4. ERKS has multiple records management capabilities (such as creation of filing folders, capturing of records and retention and disposal of records, etc.) to maintain the content, context and structure of records to serve as authentic, complete and reliable evidence and records of business decisions and activities.

5. At present, government records are mostly exchanged and filed in the form of emails or electronic documents. Except for some B/Ds which have participated in the ERKS pilot programme and with the approval of GRS, B/Ds' staff are required to print out emails and electronic documents for filing in paper folders. The Ombudsman conducted a direct investigation on management of public records in 2014. The investigation report stated that the print-and-file approach for emails was unreliable and was prone to omission and loss, and recommended the Government to map out as soon as possible a clear plan for full implementation of ERKS.

6. In 2019, GRS, EffO and OGCIIO jointly conducted a review of the experience and effectiveness of ERKS implementation. The review results showed that the adoption of ERKS could help ensure compliance with the relevant legal and records management requirements and preserve documentary heritage. As the full rollout of ERKS involves stringent requirements on the overall system capabilities and records management, and a new user experience etc., with reference to the previous pilot experiences, we propose to develop a new central ERKS as a "common service platform" for full implementation of ERKS. This will avoid situations in which B/Ds individually procure software systems available in the market and conduct the necessary system integration works. It also ensures system interoperability among B/Ds and enhance information security.

7. The Policy Address Supplement published in October 2019 announced the Government's decision to roll out ERKS to all government B/Ds by 2025 to enhance efficiency in preserving and managing government records.

Proposal

8. We recommend developing a central ERKS on the Government's private cloud platform to support full implementation of ERKS in the remaining 75 B/Ds¹ by end-2025.

¹ Including the three B/Ds which participated in the pilot programme but have not fully implemented ERKS or those which can only handle unclassified information, viz. Architectural Services Department, Rating and Valuation Department and Marine Department.

9. Apart from OGCI0’s technical support, GRS and EffO will provide support to B/Ds as appropriate to facilitate B/Ds’ preparation and implementation work, including review of the filing arrangement and formulation of a new set of records classification scheme before system implementation. OGCI0 will be responsible for the project management of the system development, procurement of the required software and professional services, and providing B/Ds with technical advice. GRS will conduct briefings and trainings for B/Ds on government records management and the procedures for reviewing the records classification scheme. Implementation of ERKS will dramatically change how staff conduct business and EffO will provide assistance to B/Ds on change management.

Financial Implications

Non-recurrent Expenditure

10. The implementation of a central ERKS will incur an estimated non-recurrent cost of \$1,233.728 million, broken down as follows –

| | Estimated expenditure (in \$million) |
|---------------------------|---|
| (a) Hardware | 27.180 |
| (b) Software | 350.900 |
| (c) Cloud Service | 83.107 |
| (d) System Implementation | 447.154 |
| (e) Contract Staff | 147.830 |
| (f) Training | 65.400 |
| (g) Contingency (10%) | 112.157 |
| Total: | <u>1,233.728</u> |

11. The estimated \$27.180 million under item (a) is for procurement of computer hardware, including scanners and workstations for digitising paper records and capturing them into ERKS.

12. The estimated \$350.900 million under item (b) is for procurement of computer and user software, including electronic recordkeeping software package and related software such as operating system, database software, rendition software and optical character recognition software.

13. The estimated \$83.107 million under item (c) is for the Government's private cloud service required during system development and installation.

14. The estimated \$447.154 million under item (d) is for engagement of service providers for conducting system analysis and design, development, testing, installation and rollout to B/Ds. The cost item also covers services for security risk assessments and audits in various implementation stages.

15. The estimated \$147.830 million under item (e) is for hiring contract information technology staff with relevant skills and experience to assist in system design, development, testing and rollout.

16. The estimated \$65.400 million under item (f) is for training of B/Ds' users.

Recurrent Expenditure

17. The new system is estimated to incur an annual recurrent cost of \$270 million upon its complete rollout in 2025-26, broken down as follows -

| | Estimated expenditure (in \$million) |
|---------------------------------------|---|
| (a) Hardware and Software Maintenance | 75.62 |
| (b) Cloud Service | 192.20 |
| (c) System Maintenance | 2.18 |
| Total: | <u>270.00</u> |

18. The above recurrent cost will cover the work of OGCI0 to manage, operate, maintain and support the central ERKS and to support B/Ds' daily use of the system.

Anticipated Benefits

19. With ERKS, staff can directly capture emails or electronic documents into ERKS in a consistent and controlled way for future retrieval. As compared with a paper-based system, ERKS can better support B/Ds' daily business by enhancing operational efficiency in records management. Records captured into ERKS cannot be capriciously modified or deleted and can only be disposed of or transferred to GRS for permanent preservation by records management staff with proper authority upon the end of the records' life cycle.

A central ERKS can therefore provide better security control and audit trail which can help reduce the risk of inadvertent loss or unauthorised destruction of records. Moreover, it can enable easier records sharing where different staff members can read the same file at the same time that is more efficient than the past practice of circulating paper files one by one. It can also greatly reduce the space requirements for storage of paper records.

Savings

20. Adoption of ERKS can achieve the following savings -
- (a) notional manpower savings achieved in B/Ds through efficiency gains in records management activities (viz. creation of filing folders, capturing of records, and search and retrieval of records), which is estimated to be about \$225.808 million per year. However, since B/Ds’ records management duties are shared by individual teams and officers, and most supporting staff only conduct records management on a part-time basis, the staff savings from B/Ds are fragmented;
 - (b) savings in papers and printer cartridges from ceasing the print-and-file practice, which is estimated to be about \$9 million per year; and
 - (c) avoidance of cost arising from the reduced need for additional storage space for paper records in the future, which is estimated to be about \$29 million per year.

Implementation Schedule

21. The estimated schedule for the rollout of the new central ERKS is as follows -

| | <u>Estimated Date</u> |
|---|------------------------------|
| Seeking funding approval from the Finance Committee (“FC”) of the Legislative Council | 2020 |
| Tendering | 2020 |
| Development of ERKS | 2021 |
| Installation of the system in 75 B/Ds in phases | 2021 to 2025 |

Advice Sought

22. Subject to Members' support for the proposal to fully implement ERKS in the Government, we will seek funding approval from FC according to the timetable in paragraph 21.

**Innovation and Technology Bureau
Office of the Government Chief Information Officer
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