Guidelines for Managing Records in a Hybrid Environment

Government Records Service
March 2016 (with minor updates in November 2020)

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Abbreviations

Admin Wing CM	Administration Wing Circular Memorandum
B/D	Bureau and department
CCGO	Central Cyber Government Office
DRM	Departmental Records Manager
EDMS	Electronic document management system
ERKS	Electronic recordkeeping system
GARDS	General Administrative Records Disposal Schedules
GC	General Circular
GRS	Government Records Service
IT	Information technology
ITMU	Information Technology Management Unit
PRO	Public Records Office
RM	Records management
RMM	Records Management Manual
SR	Security Regulations

Section 1
Introduction

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Records in a hybrid environment

1.1   Records[1] are valuable resources of the Government.   They are the basis on which decisions are made, services provided and policies developed and communicated.[2]

1.2   The rapid development of digital information technology and the widespread use of networked computers to conduct business have resulted in exponential growth of records being created digitally.   More and more records relating to decision making and programme delivery are created and kept in electronic forms (e.g. e-mails, spreadsheets, digital images, etc.).

1.3   Nevertheless, non-electronic records are still created and kept in the meantime under various business functions, processes and transactions. Non-electronic records will co-exist with electronic records for some time for various reasons -

   (a)   paper is still the medium of communication and dissemination of information preferred by many users;

   (b)   records such as contracts, deeds, tenders, supplies or accounting records may need to be retained in their original paper format to maintain their authenticity and/or to meet regulatory or legal requirements; and

   (c)   non-electronic records which are inconvenient or difficult to be

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[1] A record is any recorded information in any physical format or media created or received by an organisation during its course of official business and kept as evidence of policies, decisions, procedures, functions, activities and transactions.

[2] Paragraph 2 of General Circular (GC) No. 5/2012.

digitised (e.g. bulky books, oversized maps, audio/video tapes and exhibits, etc.) may have to be kept in their original formats.

1.4   The co-existence of electronic records and non-electronic records creates a hybrid records management (RM) environment.   It is therefore important to maintain the links between related electronic and non-electronic records to ensure that the records kept in the departmental recordkeeping system (e.g. a paper-based recordkeeping system supplemented with the use of removable storage media such as DVDs) are complete and the necessary contextual information is captured to facilitate understanding of both electronic and non-electronic records.

Strategies and framework for managing records in a hybrid environment

1.5   Traditionally, bureaux and departments (B/Ds) adopt a paper-based recordkeeping system to manage their records.   Proper storage, keeping of an accurate inventory, convenient retrieval and effective access control are the primary challenges for managing paper records in B/Ds.

1.6   On the other hand, in a hybrid environment where electronic records have become increasingly prevalent in addition to the use of paper records, managing electronic records brings many new challenges to B/Ds because of -

(a)   the fragility of the media (e.g. magnetic tapes and CD-ROMs) upon which they are recorded.   These media are inherently unstable, requiring specific storage conditions and are highly susceptible to damage in the course of handling and use;

(b)   the dependency on technology to allow access and use.   Unlike paper records which require no further technology or tool to interpret the information thereon, electronic records cannot be read directly without the aid of computer software and hardware to interpret the binary codes used to represent letters, numbers and figures and so on.   The content of electronic records can easily be

lost because they cannot be read or understood due to hardware and software obsolescence;

(c) the ease of manipulation (i.e. updated, deleted, altered intentionally or inadvertently) without being discovered; and

(d) the absence of self-evident and ready contextual information (e.g. who created it, when, to whom was it sent, etc.) to enable the records to be understandable and usable over time.

As such, it is inappropriate and sometimes even impossible to apply the same practices and procedures for managing non-electronic records (primarily paper records) to manage electronic records. For example, the practices to execute destruction of time-expired non-electronic records (e.g. shredding of paper records) and electronic records (e.g. permanent removal of electronic records from a computer server) are different.

1.7 Apart from the RM practices and procedures, the skill sets of RM staff to manage non-electronic records and electronic records are also different. For example, in managing electronic records, RM staff will need to be conversant with the electronic mode of operation and skills for conducting RM processes in an electronic environment (such as duplicating electronic vital records stored in a computer application to DVD for protection and off-site back up in accordance with the B/D's vital records protection programme). B/Ds should provide adequate training to facilitate RM staff to acquire new skills on handling RM tasks, such as performing records retention and disposal of electronic records in an electronic environment.

1.8 In addition, in a hybrid environment, B/Ds should ensure that appropriate linkage is established and maintained between non-electronic records and electronic records created/received under a business function, process or transaction to facilitate RM staff to manage them consistently. For instance, B/Ds should establish appropriate retention and disposal schedule covering both non-electronic and electronic records in the same business process.

1.9   To deal with the above challenges for managing both non-electronic records and electronic records in a hybrid environment in an integrated, consistent and effective manner, there is a need to develop a framework which covers strategies, practices and procedures to ensure that government records, regardless of their forms and media, are managed properly and effectively.

Purpose and scope of this document

1.10   Government RM policy, principles and requirements as well as best RM practices and guidelines are promulgated through GCs, Administration Wing Circular Memoranda (Admin Wing CMs), as well as RM publications and guidelines issued by the Government Records Service (GRS).   Save for specific circumstances (e.g. RM Publication No. 5 is related to microfilming operations), they apply to all records irrespective of their forms and media.

1.11   In order that the relevant policy, principles, requirements, best practices and guidelines in the context of a hybrid environment are set out in a systematic and coordinated manner, this document is drawn up with the aim to -

(a)   prescribe RM principles and best practices in a hybrid environment for RM functions and activities from capture, classification and organisation, search and retrieval, use, retention and disposal, to preservation of records; and

(b)   outline the key considerations and specify practices and procedures for B/Ds to manage records in a hybrid environment throughout the record life cycle.

1.12   This document focuses primarily on a hybrid environment where an electronic recordkeeping system (ERKS)[3] has not been implemented and/or fully operational in a B/D.

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[3] An ERKS is an information/computer system with the necessary RM capabilities designed to electronically collect, organise, classify and control the creation, storage, retrieval, distribution, maintenance and use, disposal and preservation of records.

1.13   An ERKS provides comprehensive RM functionalities to support efficient and effective management of electronic and non-electronic records. While the RM principles set out in this document are also applicable to a hybrid environment where an ERKS has been implemented, for B/Ds where an ERKS has been implemented and fully operational to replace the hitherto paper-based recordkeeping system, they should refer to the guidelines entitled *A Handbook on Records Management Practices and Guidelines for an Electronic Recordkeeping System*[4] which covers RM functions and activities supported by an ERKS.

1.14   In this document, records are categorised into the following types -

(a) **E-mail records** which are electronic mails created or received for official business and kept as evidence of such business.   In a hybrid environment where an ERKS has not been implemented, e-mail records should be "printed-and-filed" for record purposes and managed by departmental paper-based recordkeeping system. As e-mail records are printed and kept in paper-based files similar to other paper records, the management of those e-mail records in paper files will in general be the same as other paper records. The best practices and procedures for management of paper records set out in this document are applicable to those e-mail records kept in paper files unless otherwise specified;

(b) **Paper records**.   In this document, unless otherwise stated, paper records include those e-mail records printed and managed in paper files as mentioned in (a) above;

(c) **Electronic records** (excluding e-mail records which should be managed as explained in (a) above) which are stored either on removable storage media (e.g. DVDs) or non-removable storage media (e.g. computer servers); and

(d) **Other non-electronic records** such as microfilm, tape, etc.

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[4] *A Handbook on Records Management Practices and Guidelines for an Electronic Recordkeeping System* is available on the Central Cyber Government Office (CCGO) (http://grs.host.ccgo.hksarg/erm/s04/4262.html).

Audience

1.15   This document is intended for -

(a) Departmental Records Managers (DRMs) who are responsible for, among others, overseeing the departmental RM programme of B/Ds;

(b) Assistant DRMs, records managers and other RM staff assisting DRMs in planning and executing day-to-day RM functions; and

(c) Heads of Information Technology Management Units (ITMUs) and other information technology (IT) staff of B/Ds who are responsible for planning, developing and administering IT systems which store and manage records, or who are performing IT related activities in respect of electronic records.

Related publications

1.16   As mentioned in paragraph 1.10 above, GCs, Admin Wing CMs and RM publications promulgated by GRS in relation to the management of records are issued for compliance and reference by B/Ds. A list of prevailing publications is available on CCGO at http://grs.host.ccgo.hksarg/cgp_intro.html.

1.17   In respect of those requirements as stipulated in relevant Government Regulations (e.g. Security Regulations (SR)), GCs and Admin Wing CMs, cross-references to the sources of the requirements are highlighted in this document in the footnotes for B/Ds' reference.

1.18   If in doubt, B/Ds should seek advice from GRS.

Updating

1.19   As good RM practices are continually evolving, this document will be updated as and when necessary to keep pace with international RM standards and best practices, and to ensure compliance with the Government's prevailing RM policy and directives.

Further information

1.20   Enquiries arising from this document should be addressed to the following officers in GRS -

(a) Records Management and Administration Office (for general RM matters)
Post title: Senior Executive Officer (Records Management) 1
Telephone no.: 2195 7789
Lotus Notes e-mail: RMAO/GRS/HKSARG

(b) Record Systems Development Office (for electronic records management and ERKS)
Post title: Senior Executive Officer (Record Systems Development) 1
Telephone no.: 2195 7750
Lotus Notes e-mail: RSDO/GRS/HKSARG

(c) Public Records Office (PRO) (for appraisal and transfer of archival records)
Post title: Senior Assistant Archivist (Public Records) 3
Telephone no.: 2195 7774
Lotus Notes e-mail: PRO/GRS/HKSARG

(d) Preservation Service Office (for preservation of records)
Post title: Curator (Preservation Service)
Telephone no.: 2195 7808
Lotus Notes e-mail: PSO/GRS/HKSARG

Section 2
Records Management Framework in a Hybrid Environment

Introduction

2.1   Records are valuable resources of the Government to support evidence-based decision making, meet operational and regulatory requirements and are essential for an open and accountable government.[5] An effective RM framework to manage records throughout the life cycle regardless of their forms is therefore essential to B/Ds for implementing a proper RM programme in their respective organisations.

RM framework

2.2   It is the government policy that each B/D should establish a comprehensive RM programme for proper management of records.[6]   An effective RM programme will enable B/Ds to -

   (a)   make and keep complete and accurate records;

   (b)   minimise the costs of managing records;

   (c)   provide quality services to users;

   (d)   provide necessary security for government information;

   (e)   facilitate public access to records and information that encourages better understanding of government policies and operations; and

   (f)   identify, preserve and provide access to archives that have

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[5] Paragraph 2 of GC No. 2/2009.
[6] Paragraph 3 of GC No. 5/2012.

enduring or permanent value for research, educational, cultural and other related purposes.

Departmental RM policy and programme

2.3   To ensure compliance with the Government's RM policy, which requires the establishment of a comprehensive RM programme for effective and efficient management of government records as well as for identification and preservation of archival records, it is incumbent upon B/Ds to develop and establish departmental RM policy in their organisations taking their unique business and RM needs into account.[7]   B/Ds should formulate a clear policy direction and demonstrate support for, and commitment to, the management of government records through the issue and maintenance of their departmental RM policy.

2.4   B/Ds should ensure that their departmental RM policy and RM programmes cover both electronic and non-electronic records throughout the whole life cycle of records to ensure their authenticity, integrity, reliability and usability.

2.5   With a clear departmental RM policy in place guiding the strategic direction, B/Ds should implement the policy through a comprehensive and effective RM programme together with proper RM processes, practices and procedures, so as to ensure compliance with legal and regulatory requirements, government regulations and directives, and departmental policy.   In gist, a departmental RM programme should cover essential RM functions, including but not limited to the following -

(a)   specifying the recordkeeping system(s) and technologies to be used for the capture, management and storage of records;

(b)   setting out essential RM functions supported by proper RM processes, practices and procedures;

(c)   defining clearly RM roles and responsibilities; and

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[7] Paragraph 3 of Admin Wing CM No. 5/2012.

(d) monitoring the effectiveness and efficiency of RM functions, processes, practices and procedures on an on-going basis.

RM processes, practices and procedures

2.6 RM processes, practices and procedures should be formulated to support the implementation of departmental RM policy and programme. RM practices and procedures set out the proper ways, authorities and the responsible party(ies) performing RM functions and processes with a view to demonstrating the accountability of a departmental RM programme and specifying the expected behaviour required of staff members on RM. The relationships among the departmental RM policy, programme, functions, processes, practices and procedures are depicted in Diagram 1 and Diagram 2 below.

Diagram 1: Relationships among RM policy, programme, functions, processes, practices and procedures
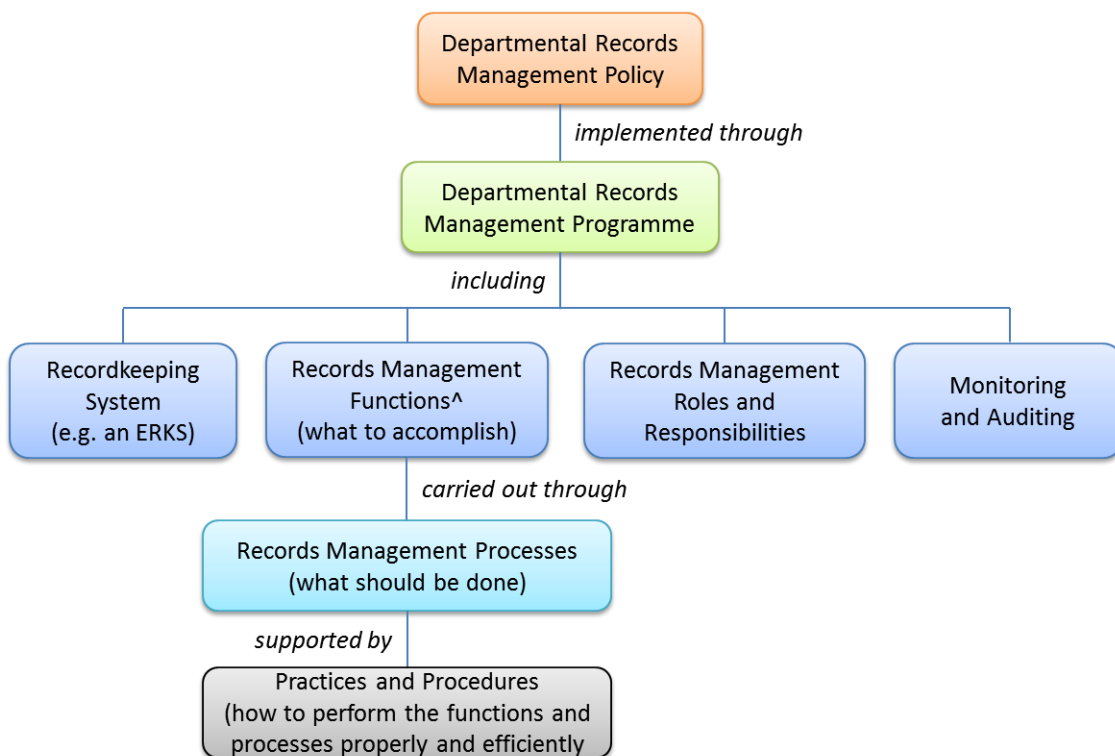
^Examples include records creation and capture, records classification and records retention and disposal scheduling

Diagram 2: An example of an RM function with associated process

Records Retention and Disposal	Records management function

Disposal of administrative records	Records management processes

Disposal of administrative records

1. Match files to proper subject group(s) in GARDS*

2. Identify and determine retention periods and disposal actions

3. Determine if records in files should be disposed of

4. Seek internal endorsement of records disposal

5. Seek GRS' approval for records disposal

6. Implement records disposal

7. Document disposal records

Relevant practices and detailed procedures to dispose of administrative records are set out in Chapter 3 of GRS Publication No. 1 "A Practical Guide to Records Scheduling And Disposal" [#]

*GRS Publication No. 4 "General Administrative Records Disposal Schedules [GARDS]" is available at http://grs.host.ccgo.hksarg/file/2.4.4_P4(Oct_2013).pdf

[#] GRS Publication No. 1 "A Practical Guide to Records Scheduling And Disposal" is available at http://grs.host.ccgo.hksarg/file/2.4.1_P1.pdf

Recordkeeping systems

2.7   A recordkeeping system is a tool to manage records.   A recordkeeping system is a manual or automated information system in which records are collected, organised and categorised to facilitate their retrieval, distribution, use, disposal or preservation.[8]

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[8] Appendix B to Records Management Manual (RMM).

2.8   When designing and implementing a recordkeeping system, a B/D should ensure that the recordkeeping system could meet the Government's RM requirements and the B/D's RM policy and requirements.

2.9   All records regardless of their forms should be captured into designated departmental recordkeeping systems.   Unless a B/D has implemented a recordkeeping system such as an ERKS which is capable of managing both electronic and non-electronic records throughout their life cycle, B/Ds should implement different recordkeeping systems as appropriate to properly manage records of different forms.   For example, paper records should be managed by departmental paper-based recordkeeping systems administered by confidential registries, general registries, etc., while electronic records may be stored and managed on removable storage media such as DVDs.   In the meantime and unless otherwise agreed by GRS, e-mail correspondence should be "printed-and-filed" for record purposes [9] and managed by departmental paper-based recordkeeping system similar to other paper records.

2.10   Please refer to Section 4 on Records Creation and Capture regarding the recordkeeping system where government records should be captured and kept.


[9] Paragraph 7 of GC No. 2/2009.

Implement an ERKS to manage both electronic and non-electronic records

An ERKS is an information/computer system with the necessary RM capabilities designed to electronically collect, organise, classify and control the creation, storage, retrieval, distribution, maintenance and use, disposal and preservation of records.   It provides comprehensive RM functionalities to support efficient and effective management of electronic and non-electronic records. In the era of e-government, it is expected that more and more electronic records will be created and received in business operations.   B/Ds should consider and plan for implementation of an ERKS in their organisations so as to reap the benefits of technology to manage both electronic and non-electronic records effectively and efficiently by one single recordkeeping system.

RM functions and processes

2.11   The purpose of a recordkeeping system is to manage records throughout their life cycle.   A record has a life cycle that begins from record creation or receipt, through its useful life to final disposal (e.g. destruction or permanent retention as archival record).   All electronic and non-electronic records need to be actively managed according to established practices and procedures to retain their authenticity, reliability, integrity and usability.   RM processes involved in a record's life cycle is depicted in Diagram 3.

Diagram 3: RM processes and life cycle of record
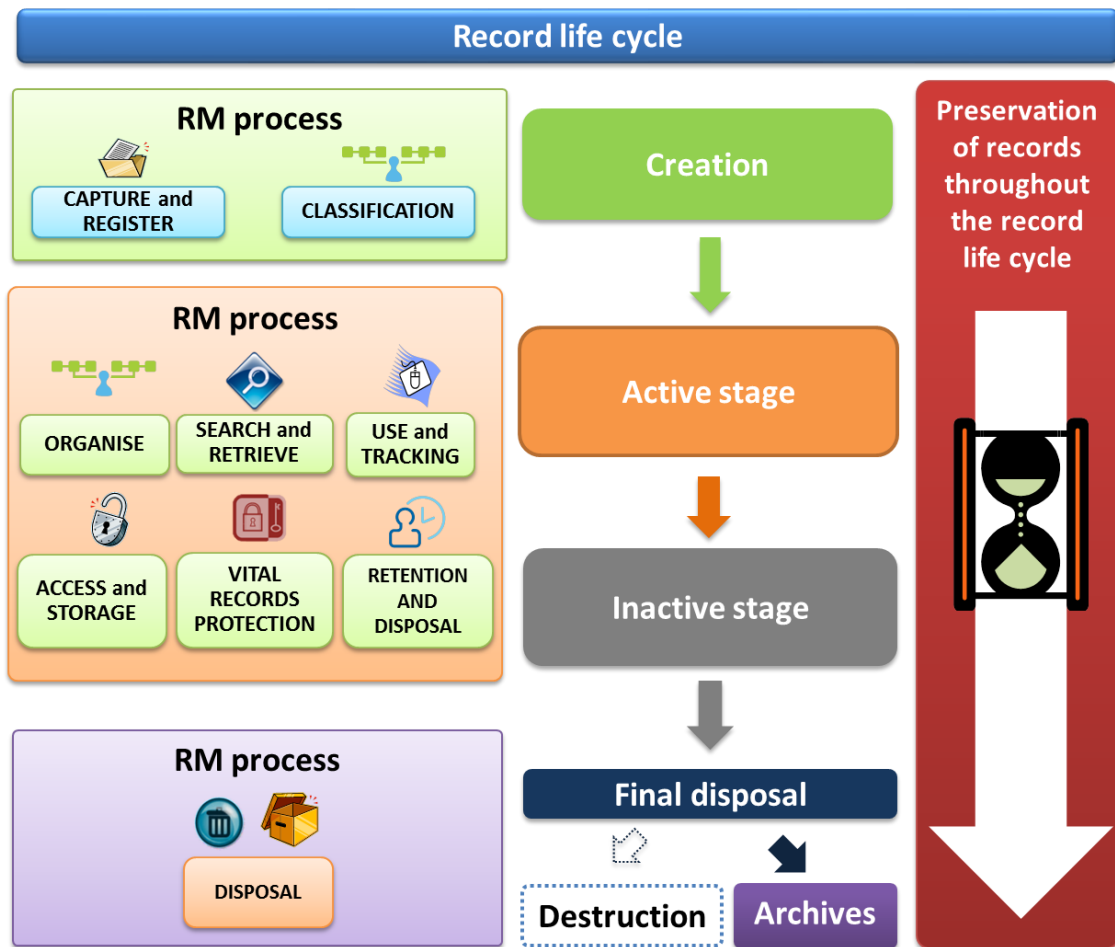
2.12   In terms of RM processes, key RM principles that B/Ds should take into account in managing records in a hybrid environment include -

(a)   keeping of complete, accurate and updated records inventory of records *(see Section 3 for more details)*;

(b)   creation of adequate but not excessive records to meet business, operational and evidence purposes *(see Section 4 for more details)*;

(c)   determination of the official records if multiple forms of the same records are managed and kept *(see Section 4 for more details)*;

(d)   timely capture and registration of records into proper recordkeeping system and linking the records to other related records through records classification and/or contextual

information *(see Section 4 for more details)*;

(e) effective organisation and classification of records *(see Section 5 for more details)*;

(f) proper custody and storage of records and effective planning and timely preservation of records with archival value over time *(see Section 7 for more details)*;

(g) proper and consistent security, access control and use of multiple forms of records under the same business function, process or transaction *(see Section 8 for more details)*;

(h) integrated and consistent records retention and timely disposal of time-expired records *(see Section 9 for more details)*;

(i) identification and transfer of records with archival value to GRS *(see Section 9 for more details)*; and

(j) proper protection of vital records in multiple forms *(see Section 10 for more details)*.

2.13   Owing to the inherent difference in managing paper records and electronic records, RM procedures for records of different forms are different from one another.   For instance, the procedures for searching, retrieving, storing and disposing of electronic records are different from those for paper records.   B/Ds should ensure that appropriate RM practices and procedures are developed to support RM processes for managing and using records of different forms.

2.14   For the same form of records, B/Ds are advised to adopt standardised and consistent RM practices and procedures.   Standardised RM practices and procedures shorten RM staff's time in adapting to different procedures and minimise errors in following different procedures of the same RM processes, and hence facilitate RM staff to conduct RM processes more effectively and efficiently.   B/Ds are advised to adopt standardised and consistent RM practices and procedures to manage electronic records throughout the B/D.   Similarly, standardised and consistent RM practices and procedures should be adopted to manage non-

electronic records.

RM roles and responsibilities

2.15   Defining and assigning RM roles and responsibilities and promulgating them within a B/D are crucial to good RM and to meeting the needs of internal and external stakeholders.   B/Ds should ensure that -

(a)   a directorate officer is appointed to oversee RM in the B/D to ensure that there is adequate attention from the senior management;

(b)   an officer not lower than the rank of Senior Executive Officer or equivalent is designated to take up the responsibilities of the DRM;

(c)   RM roles and responsibilities are clearly defined;

(d)   RM roles and responsibilities are assigned to staff of appropriate level and skills and in compliance with Government's RM requirements (e.g. disposal process is properly supervised by an officer not lower than the rank of Executive Officer II or equivalent as stipulated in GC No. 2/2009 entitled "Mandatory Records Management Requirements");

(e)   RM roles and responsibilities are made known and promulgated to all staff members; and

(f)   the job descriptions of the staff concerned reflect their specific RM responsibilities for accountability and to facilitate evaluation.

2.16   Responsibilities for DRM and RM staff should include, among others -

(a)   development, management and review of departmental RM policy, programme, practices and procedures;

(b)   provision of RM advice within a B/D;

(c)   development and provision of RM training for staff;

(d)   design and implementation of recordkeeping system(s);

(e)   monitoring and maintaining compliance with Government and departmental RM policy, programme, practices and procedures;

(f)   creation, capture, management and storage of records;

(g)   development, management and maintenance of records classification scheme(s);

(h)   establishment and review of records retention and disposal schedules; and

(i)   orderly and timely implementation of disposal of time-expired records according to approved records retention and disposal schedules.

2.17   For records which are managed under different recordkeeping systems, the roles and responsibilities of RM staff and records users will also be different.   In a paper-based recordkeeping system, recordkeeping is primarily the duty of registry staff who are responsible for receiving and classifying records into the relevant files, retrieving and delivering the records/files to the records users and maintaining the custody of the paper files.   For electronic records which are stored and managed on removable storage media such as DVDs or non-removable storage media such as computer servers, records users may capture records into and search/retrieve records from those media directly subject to the established security and access control.   As such, the RM responsibilities would be different under different recordkeeping systems and for different forms of records.

2.18   Furthermore, personnel taking up RM responsibilities would also be different under different recordkeeping systems.   In a paper-based recordkeeping system, IT staff normally would not be assigned with RM responsibilities.   Unlike a paper-based recordkeeping system, staff from ITMUs of B/Ds should be involved in the management of electronic records such as preservation of electronic records, backup of vital records or destruction/transfer of electronic records.   Under a hybrid environment, B/Ds should ensure that the roles and responsibilities under different recordkeeping systems and/or different forms of records are defined clearly as appropriate.

Monitoring and auditing

2.19　　B/Ds should undertake compliance monitoring and internal audits regularly to ensure that Government RM policy and requirements and departmental RM policy, programme, practices and procedures are adhered to.

2.20　　B/Ds should also identify non-conformities and take proper actions to redress and correct non-conformance timely.　For instance, B/Ds should introduce measures to prohibit malpractices such as the use of shared drive facilities[10] to manage and store records.　Please see Section 11 on Monitoring and Review for more details.

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[10] A shared drive facility refers to a networked computer storage system connected to the local area network of a B/D, which makes available its selected folder(s) (usually mapped as a logical drive letter or a name, such as P: in Windows) to facilitate identification by a given program or software system.　Computer files can be saved to or accessed from the shared drive facility by two or more officers (say, within the same section) via their desktop or notebook computers, as easy as saving or accessing files stored in their local drives.　Examples of a shared drive facility include the following: a Windows server with its storage shared, a network attached storage appliance, a Linux server running SAMBA service, etc.

Head Start to Manage Records in a Hybrid Environment - Drawing up an Accurate Records Inventory

Introduction

3.1   A complete and accurate records inventory is the foundation of an effective and efficient RM programme.   An RM programme cannot be improved without an understanding of the organisation's existing records and the recordkeeping systems used to control and manage them.   An accurate records inventory allows a B/D to understand what records are created/collected in the organisation.   By analysing the information collected from the records inventory, B/Ds can review their RM policy and programme and identify areas for further improvement.   Drawing up an accurate records inventory is the first step to effective and efficient management of records in a hybrid environment.

Drawing up an accurate records inventory

3.2   Records inventory is a detailed listing that may include the types, locations, dates, volume, classification schemes, equipment and usage of an organisation's records.[11]   A complete and accurate records inventory is prerequisite for good RM because it facilitates efficient control and retrieval of records and provides basic information to support RM activities.

3.3   B/Ds should maintain an accurate records inventory.   A records inventory on files should at least include the following information -

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[11] Appendix B to RMM.

(a) File title;

(b) File reference number;

(c) Date opened and date closed; and

(d) Storage location (e.g. room/floor).[12]

3.4   To plan for effective management of different forms of records under a hybrid environment, B/Ds should collect more information such as the forms of records and access control to multiple forms of records when drawing up the records inventory.   B/Ds may consider whether a single inventory list or separate lists for electronic and non-electronic records are more appropriate.   For instance, if records of different forms are maintained in different record series, different lists may be adopted.   If multiple forms of records are created under same records series, a single inventory list is recommended.   The following information may be collected -

(a) The form of records created/collected under a business function, process and transaction (e.g. paper records, other non-electronic records such as microfilms, electronic records, etc.).

(b) The quantity of records of different forms (e.g. number of files or quantity in linear metre (for paper records), number of relevant containers or objects (for other non-electronic records), amount of disk space occupied in gigabyte (for electronic records), etc.).

(c) The security classification of records.

(d) The media (e.g. optical discs or microfilms) and recordkeeping systems in which different forms of records under a business function, process and transaction are maintained.

(e) The storage location of the records (e.g. file storage room (for paper files), computer server room (for electronic records stored in computer servers), etc.) and tools used to store the records (e.g. file cabinet (for paper records and electronic records on removable

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[12] Paragraph 6 of GC No. 2/2009.

storage media), computer system (for electronic records online), optical/magnetic discs (for electronic records offline), etc.).

(f) For electronic records, the format of records and the applications used to create/annotate, retrieve and view the electronic records.

(g) The existing access control to multiple forms of records under the same business function, process and transaction.

(h) The retention and disposal schedules of the records.

(i) The responsible officers for managing the records.

3.5 B/Ds may conduct a records survey to obtain the above information for drawing up an accurate records inventory of all their records regardless of the forms or media. B/Ds may also collect the information by making reference to other available information such as the existing records inventory and business rules for records creation and collection.

Identifying improvement opportunities

3.6 Upon collection of the required information, B/Ds should draw up an accurate records inventory and analyse the information collected to identify areas for improvement in management of records in a hybrid environment.

3.7 In the context of management of records of different forms, B/Ds should assess the following aspects in analysing the records inventory -

(a) Have sufficient records been collected and captured according to the established business rules for records creation and collection *(see Section 4 for more details)*?

(b) Have records been captured into the departmental recordkeeping system(s)? Are different forms of records captured into an appropriate recordkeeping system? For instance, are paper records captured into the departmental paper-based recordkeeping system, while electronic records properly stored and managed on appropriate removable storage media (irrespective of whether the

removable storage media are kept together with the paper files or separately) *(see paragraphs 5.9 for more details)*?　Should a new recordkeeping system such as an ERKS be adopted *(see Sections 4 and 5 for more details)*?

(c)　Are there large quantities of duplicate records stored in different forms?　For example, when the same enquiry is received through e-mail, by fax and mail, will duplicate records be captured?　Is it possible to minimise duplication *(see Section 4 for more details)*?

(d)　Are there different forms of records under the same business function, process and transactions?　Are there too many different forms being kept *(see Section 4 for more details)*?

(e)　Are records, irrespective of their forms, captured and organised according to the departmental records classification scheme *(see Section 5 for more details)*?

(f)　If different forms of records are created/collected under the same business function, process or transactions, will records of different forms be organised in different manner?　For instance, are paper records organised in case files while microfilm records organised in chronological order or by subject?　If this is the case, will users easily search and retrieve those records organised under different manner *(see Section 5 for more details)*?

(g)　Is the existing contextual information sufficient to link together different forms of records under the same business function, process or transaction?　If not, what additional contextual information should be collected and maintained *(see Section 5 for more details)*?

(h)　Is the storage environment for different forms of records appropriate for storing such records?　Are records of different forms protected from unauthorised access, use, disclosure, removal, deterioration, loss or destruction?　Are electronic records stored in obsolete media (e.g. floppy diskettes) or media requiring regular refreshment *(see Sections 7 and 8 for more details)*?

(i) Are the electronic records properly preserved such that the records can be accessed only by authorised users when required during the record life cycle?   Are electronic records saved in obsolete file format and therefore required to be migrated to other file format *(see Sections 7 and 8 for more details)*?

(j) Has access control to multiple forms of records under the same business function, process and transaction been established?   Is the access control generally consistent for records of different forms?   Does the access control comply with the relevant requirements such as the SR (for all record forms) and the requirements and guidelines on IT security (for electronic records) *(see Section 8 for more details)*?

(k) What are the methods to track movement of different forms of records?   Are these methods effective *(see Section 8 for more details)*?

(l) Are all records of different forms covered by approved records retention and disposal schedules?   Are the records retention and disposal schedules for records of different forms under the same business function, process and transaction consistent?   If not, are there good justifications to have different retention periods and/or disposal actions for records of different forms under the same business function, process and transaction *(see Section 9 for more details)*?

(m) Are all parties (e.g. records users, registry staff or IT staff) aware of their roles and responsibilities in capturing and/or managing records *(see Section 2 for more details)*?

3.8   Through analysing the records inventory, B/Ds can review whether the existing RM programme is effective and efficient in managing records of different forms in a hybrid environment and identify areas for further improvement.   RM processes may need to be reviewed or enhanced and RM practices and procedures may need to be developed or updated as appropriate with a view to improving the departmental RM programme.

3.9　　　B/Ds are reminded that the records inventory should be updated regularly to cater for changes.

Section 4
Records Creation and Capture

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Introduction

4.1   All records, regardless of format and technological environment in which they are collected, created or generated, should be captured into and maintained in an identifiable and proper recordkeeping system.   The purpose of capturing a record into a recordkeeping system is to establish a relationship between the record, the creator and the business context that originated it, and to link it to other records.

Principles on creation and collection of records

4.2   Records should be created and collected to -

  (a)   meet operational, policy, legal and financial purposes; and

  (b)   document accurately and adequately government functions, policies, procedures, decisions and transactions to serve as reliable evidence.

4.3   The creation/collection of records should be adequate but not excessive.[13]

4.4   To facilitate access, use and preservation, records should be created or kept in the most suitable medium and format.[14]   In particular, records which are known to have permanent value should be created in a format that will permit such records to be transferred to and preserved by

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[13] Paragraphs 2 and 3 of Admin Wing CM No. 4/2012.
[14] Paragraph 7 of Admin Wing CM No. 4/2012.

PRO of GRS.[15]   B/Ds should contact PRO for details for transfer of records with archival value if necessary.

Business rules for records creation and collection

4.5   As a systematic approach to records creation/collection, B/Ds should develop business rules to document decisions as to what records are to be created and kept by B/Ds.   These business rules, which incorporate records creation/collection as part of business routines and hence minimise the risk of inadequate creation/collection of records, should be established, documented and promulgated in a way that can be used by staff in their daily work.[16]   The business rules should give clear instructions to staff on the following aspects -

(a)   what records to be created or collected;

(b)   who to create or collect records;

(c)   when to create or collect records; and

(d)   where to keep records.

4.6   B/Ds should make reference to the procedures and samples in the *Guidelines on Creation and Collection of Records*[17]   to establish their own business rules.

Capture the appropriate form of record

4.7   As mentioned in paragraph 4.4 above, records should be created or kept in the most suitable medium and format.   In the context of a hybrid environment, B/Ds may create and receive records in different forms or on different media.   Examples may include a set of meeting minutes issued both by e-mail and in hard copies, and the annual report of an organisation received in paper form as well as on a DVD.   In such case, B/Ds should

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[15] Paragraph 318 of RMM.

[16] Paragraph 4 of Admin Wing CM No. 4/2012.

[17] *Guidelines on Creation and Collection of Records* is attached to Admin Wing CM No. 4/2012 and is available on the CCGO (http://grs.host.ccgo.hksarg/file/2.3.3_gccr.pdf).

determine whether both forms of records or only one single form of records should be kept having regard to the principles set out in paragraphs 4.2 and 4.3 above. In a nutshell, records should be collected and created to meet operational, policy, legal and financial purposes and the creation/collection of records should be adequate but not excessive.

4.8 In the case where multiple forms of records are captured and kept, B/Ds should determine which form(s) of records should be considered as the official records. B/Ds may also consider maintaining a single form of records for a business function where both paper and electronic forms of records are created/received if appropriate. Please see paragraph 4.18 below on conversion of records of mixed forms.

E-mail records

4.9 Nowadays, it is commonplace that B/Ds conduct business through e-mails. E-mails created or received in the course of official business should be kept as records to serve as evidence of such business. E-mail records include, for example, internal and external communication relating to the functions and activities of the B/D, information pertinent to the decision making process, formulation of policies and procedures and transaction of business.[18]

"Print-and-file" requirement of e-mail records

4.10 Before implementation of an ERKS and unless otherwise agreed by GRS, e-mail correspondence should be "printed-and-filed" for record purposes. To ensure the record copy of an e-mail record is captured in the recordkeeping system, subject officers of B/Ds should arrange to print an e-mail record directly from the e-mail software for filing in an appropriate paper-based file similar to other records.[19] As e-mail records are printed and kept in paper-based files, the subsequent management of those e-mail records will in general be the same as other paper records.

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[18] Paragraph 7 of GC No. 2/2009.
[19] Paragraph 7 of GC No. 2/2009.

4.11   B/Ds may refer to the *Guideline on the Management of Electronic Mail*[20] for guidance on identification, creation, filing and management of e-mail records.

E-mail archiving solutions

4.12   Unlike the archiving functions provided in the e-mail systems for users to keep handy copies of e-mails in their desktop computers for future reference or re-use, e-mail archiving solutions are tools designed to store e-mails moved from the mailboxes of different users in an organisation to a central storage system so that they can be accessed at a later date should the need arise.   E-mail archiving solutions may offer the advantages of improved disaster recovery and business recovery, reduced storage requirements (by eliminating duplicate e-mails and attachments), and reduced loads on servers, etc.   These solutions are usually handled by designated officer(s) in an organisation (e.g. System Administrator) instead of individual users.

4.13   In general, e-mail archiving solutions **do not** possess comprehensive RM functionality to classify and manage e-mail records properly including establishing appropriate retention and disposal schedules for the e-mail records according to the subject contents of the e-mails. Moreover, e-mails stored in e-mail archiving solutions are separated from other related records of the same subject stored in other systems such as a paper-based recordkeeping system.   It is therefore difficult for records users to understand the contextual information of those e-mail records that have been stored in such solutions.   In addition, other users cannot gain access to those records stored in such solution due to access control reasons. **Therefore, B/Ds should not adopt any e-mail archiving solutions for RM purpose to manage and store e-mail records.**

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[20]   *Guideline on the Management of Electronic Mail* is available on the CCGO (http://grs.host.ccgo.hksarg/erm/s04/442.html).

Paper records

Capture paper records as the appropriate form of record

4.14   In a hybrid environment, B/Ds create and receive records in multiple forms and media and therefore need to determine the appropriate form(s) of record to be captured.   In a conventional paper-based office where operations are conducted on paper, paper will naturally be the most suitable medium for keeping records.   For example, if a meeting agenda is created using Microsoft Word and it is sent to the participants of the meeting in paper copies (by mail or through a fax machine), the paper form rather than the electronic form (in Microsoft Word format), which merely functions as a tool to create the paper copies, should be considered as the official record.   If the agenda in the afore-mentioned example is sent to the participants as an attachment through e-mail, both the e-mail body and the agenda (as an attachment) should be printed out for filing to maintain the contextual information of the e-mail so as to ensure the integrity of the record.

4.15   B/Ds may refer to GRS' RM Publication No. 2 - ***Managing Active Records: File Management*** for the principles, standards and procedures in the management of active records kept in a paper-based recordkeeping system.

Electronic records

Keeping records in departmental recordkeeping systems

4.16   Effective RM provides for records to be available for future use by those who need to access and use them.   The business rules for records creation and collection should therefore set out clearly that records must be kept in designated departmental recordkeeping systems.

4.17   In a hybrid environment, the business rules should, in particular, set out the departmental recordkeeping system(s) and the location in which

a record should be kept.   B/Ds should not allow their staff to keep records in personal systems, such as the subject officer's desktop computer, shared drive facilities, mailboxes in an e-mail system, etc. [21] instead of the departmental recordkeeping system.   B/Ds should check, from time to time, whether their staff have properly followed the business rules to create/collect records, and in particular, whether records are kept in designated departmental recordkeeping systems instead of personal systems or unauthorised devices or digital storage medium.   As long as the records have been properly kept in the departmental recordkeeping system, B/Ds may allow their staff to keep copies of records (e.g. in desktop computers or shared drive facilities) for reference purpose or sharing with colleagues, subject to the compliance with relevant legislations, policies or directives (e.g. requirements on storage of classified information).   As copies of records generated for convenience or reference purposes are non-records, these will not be discussed in detail in this document.

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[21] Records stored in file systems, such as local hard disks or shared drive facility, which have no formal controls in place, are at risk of alteration or deletion, which poses a greater challenge for managing electronic records.   Shared drive facilities, content management systems or knowledge systems which fail to provide comprehensive RM functionalities must not be used to manage government records.   As long as the records have been properly kept in the departmental recordkeeping system, B/Ds may allow their staff to keep copies of records in such facilities for reference purpose or sharing with colleagues, subject to the compliance with relevant legislations, policies or directives.

Electronic document management systems

Some B/Ds adopt an electronic document management system (EDMS) [22] for collaboration or sharing of documents and information. An EDMS allows documents to be modified, to exist in several versions and to be deleted by their owners. Documents stored in an EDMS may not be accepted as evidence of the business of government. Therefore, the functionality of an EDMS is to manage documents rather than records that have evidential value. An EDMS does not incorporate recordkeeping functionality and is not designed for recordkeeping purposes. B/Ds **must not** use an EDMS to store and manage records in lieu of an ERKS.

Records series of mixed forms

Maintaining single form of records in the same business function

4.18   There are cases where both paper and electronic forms of records are created/received under the same business function, process or transaction and nearly all of the records are created/received in electronic forms but a few processes involve the creation/receipt of records in paper form (e.g. a letter in paper form received from an external organisation). Under the circumstances, B/Ds may consider whether the paper records can be digitised into an electronic form (e.g. by scanning) [23] for integrated management with the electronic records created/received under the same

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[22] An EDMS is a computer-based application dealing with the management of documents throughout the document life cycle. The major functions of a typical EDMS include indexing, version control, storage and retrieval of electronic documents. It is an automated system used to support the creation, use and maintenance of electronically created documents for easy search and retrieval, integrate with office software packages and messaging systems, enable collaborative work, and provide access and version control over documents.

[23] B/Ds should take into account whether there are any overriding considerations (e.g. copyright issues) that the paper record is not suitable for digitisation.

business function, process or transaction.[24]   This would facilitate search and retrieval of records by users as well as the management and preservation of the records by RM staff.

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[24] B/Ds should note that the original paper record is still a government record after digitisation and is subject to the mandatory RM requirements stipulated in the relevant GCs or Admin Wing CMs. For example, GRS Director's prior agreement must be obtained before the paper record can be destroyed.

Section 5
Classification and Organisation of Records

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Introduction

5.1   Records classification is a systematic identification and arrangement of records into categories according to logically structured conventions, methods, and procedural rules represented in a classification system.

5.2   A records classification scheme (also known as file plan) is a plan or list in which records of an organisation are categorised according to its business functions and/or contents of the records and a coding system expressed in symbols (i.e. alphabetical, numerical, alphanumerical, or decimal, etc.) that correspond to aggregations of records and are affixed to the records so categorised.

5.3   An effective records classification scheme is conducive to effective RM.   It facilitates understanding, retrieval and use of records and provides an appropriate basis for RM activities such as security classification, access control, retention and disposal of records and protection of vital records.

5.4   Irrespective of the forms of records, B/Ds should adopt the standard classification scheme for all their administrative records.   For programme records, B/Ds should develop their own classification scheme with reference to the procedures set out in GRS' RM Publication No. 3 - *Subject Filing*.[25]

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[25] Paragraphs 10 and 11 of GC No. 2/2009.   GRS' RM Publication No. 3 - *Subject Filing* is

Regular review of records classification schemes

5.5 A records classification scheme is subject to changes to meet changing business and RM needs. To ensure that each scheme remains effective to cope with changes over time and to identify scope for improvement, the DRM is required to review the records classification schemes every two to three years, having regard to the principles set out in Appendix II to GC No. 2/2009.

5.6 In reviewing the records classification scheme(s) of a B/D, issues in relation to managing records in a hybrid environment are set out in the ensuing paragraphs.

Linking paper records to electronic records

5.7 An effective records classification scheme should be, among others, complete and comprehensive and should support business, operational and RM requirements of a B/D. It should link records to their business context and other related records to provide a continuous history of an activity, a transaction, a case, etc.

5.8 B/Ds should ensure that their records classification schemes should be complete and cover all programme records, regardless of the form and media of the records, their storage locations, and their retention and disposal requirements.

5.9 Records stored in different media are often kept in separate locations and environments (please refer to Section 7 on Storage and Preservation of Records). However, related records of different forms and media should be properly linked together. For example, electronic records on removable storage media such as DVDs should be linked with those related paper records kept in paper files through the use of the records classification scheme even though they are stored physically in different locations. If the electronic records stored on removable storage media such

available on the CCGO (http://grs.host.ccgo.hksarg/file/2.4.3_P3.pdf).

as DVDs only need to be retained for a short period of time, say two to three years before destruction, and the need for preservation of these electronic records is relatively low, B/Ds may consider filing the DVDs amidst the related paper records instead of storing the DVDs physically in different locations taking into account their operational, RM and preservation needs[26]. Please refer to Section 7 on Storage and Preservation of Records for more details regarding preservation of electronic records.

5.10   There are in general two approaches to link electronic records with the related paper records as set out in the ensuing paragraphs *(see paragraphs 5.11 to 5.17 below)*.   B/Ds should note that regardless of the approach adopted, the linkage between electronic records and the related paper records should be made such that it is easy to understand and use to facilitate effective and efficient retrieval of records.

Adopting different records series for paper and electronic records

5.11   B/Ds may adopt different records series for different media of records.   In other words, B/Ds may have a records series for paper-based records and another records series for electronic records stored on removable storage media.

5.12   This approach is particularly effective when records of some subjects are predominantly in paper form while those of other subjects are predominantly electronic.   For example, a B/D may receive and process nominations to its training courses predominantly in an electronic system whereas the feedback from trainees is handled in paper files.   In such case, the B/D may have a records series for its training nominations and another series for its course feedback.

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[26] For electronic records which should be retained for a longer-term or with archival values for long-term preservation, B/Ds should conduct regular surveillance of technological changes to ensure the accessibility and usability of the electronic records over time and should migrate electronic records in obsolete file formats to another format or to refresh storage media as appropriate.   To facilitate the review of software obsolescence, B/Ds may consider storing the DVDs and the paper records in separate locations for the purpose of proper preservation of electronic records.   Please refer to Section 7 on Storage and Preservation of Records for more details regarding preservation of electronic records.

5.13   There are other considerations leading to adopting different records series for different media of records.   One consideration is the retention and disposal requirements of records of different media.   Please see Section 9 on Records Retention and Disposal.

Adopting same records series for paper and electronic records

5.14   B/Ds may also adopt same records series for records of different forms.   In such way, the same groupings and terminology are used for both paper and electronic records to facilitate retrieval.

5.15   This approach is more suitable when paper and electronic records co-exist for various subjects and records of a one form (usually electronic) are significantly fewer than the other (e.g. in an organisation where records are all printed out for filing except those non-printable audio and video materials are stored on DVDs).

5.16   Cross references to the electronic records should be clearly indicated in the paper records (e.g. on the file cover or on the minute sheet) and vice versa to facilitate retrieval.

5.17   For example, for a letter enclosed with a DVD where the DVD is separately stored with other optical media (e.g. in a separate rack), cross references to the DVD (including information such as its name, serial number, storage location, etc.) should be clearly marked on the file cover and/or minute sheet of the paper file.   Cross reference of the letter in the paper file (including information such as its file reference and enclosure number, etc.) should also be marked on the DVD.   This will facilitate the retrieval of the DVD when accessing the letter on the paper file, and vice versa.

Linking paper records to other non-electronic records

5.18   Similar to electronic records, some non-electronic records other than those paper records in paper files are kept in different locations and

environment, due to the size of the records (e.g. oversized maps and plans) or the media where the records are recorded (e.g. microfilm).   The same considerations described in paragraphs 5.7 to 5.17 above are also applicable and proper linkage should be made to those non-electronic records to facilitate their retrieval.

Search and Retrieval of Records

Introduction

6.1	Searching and retrieving records are the day-to-day operations of records users as well as RM staff. Although the way of conducting a search may vary due to different forms of records, there are best practices in general to facilitate the retrieval of records from the perspective of both the records users and the RM staff.

6.2	Owing to the inherent difference in managing paper files from managing electronic records, the capability of the recordkeeping system to support a records user to conduct a search and conducting it in an automatic manner in particular, is inevitably different. An analogy is between using a paper dictionary where one needs to flip over the pages to find the exact entry of a word and using an electronic dictionary where one just types in (or read aloud) a word and clicks search.

Paper records

Searching paper records

6.3	We will start by looking at how a search is conducted for a paper file. Apart from flipping through the records classification scheme, there are in fact other tools to assist the search.

6.4	Besides the records classification scheme, a records classification system comprises and is supported by finding aids and tools (e.g. scope notes, file index and cross-referencing rules, thesaurus/controlled vocabulary) and file manual. These finding aids and tools not only

enhance the accuracy of filing records and the maintenance of the records classification scheme by RM staff, they also facilitate the speedy retrieval of records by records users.   B/Ds should therefore maintain appropriate and up-to-date documentation of these finding aids and tools for use of all parties concerned.   B/Ds may, subject to the SR and IT security policy and related guidelines, distribute soft copies of these finding aids and tools to records users or post them to their intranet to facilitate search of records in paper files.

> **Searching individual records in a paper file**
>
> Even with the measures above, it is impossible to search for an individual record (or enclosure) in a paper file in an automated manner.   In the case where officers frequently search for individual records in a paper file, B/Ds should actively consider the need to accelerate implementation of an ERKS in their organisations. Records users can search and narrow down the search results, using different search tools provided by the ERKS, by the titles, keywords in the record content, and metadata (e.g. creator organisation) for the records they need.   By adopting an ERKS, B/Ds may also scan paper records to be stored in the system so that searching of their contents can be made easier.

Retrieving paper records

6.5   The following are some good practices for reference by B/Ds to facilitate the retrieval of paper records -

(a)   Active records, in particular those which are frequently retrieved, should be kept as near to the users as possible.   Inactive records, on the other hand, may be kept in off-site locations.   Please see Section 7 for more details on storage of records.

(b) The names and contact details of RM staff, and the division of duties among them to manage different series of records should be made known to records users.   This would facilitate records users to approach the appropriate RM staff to retrieve the records they need.

(c) Records storage equipment should be labelled accurately and conspicuously to facilitate retrieval of records.

Electronic records

Searching electronic records

6.6   It might seem intuitive to search for an electronic record using its title (i.e. usually the filename of the computer file) where a search function is available in the computer application or system.   However, there are times where the search term does not exactly match the record title, leading to the record in mind not appearing in the search result.   For instance, the acronym of a company name is used in the record title and content while its full name is used as the search key, or the title of the record does not reflect its actual contents.   As such, it will be more effective for a search to be conducted if the contextual information is also included in the record (i.e. the computer file) in terms of metadata (or properties in some computer applications or systems).   These metadata may include the creator name and/or creator organisation of the record, date sent and/or date received, and other keywords (e.g. full names and acronyms of organisations/committees or commonly-used terms in the B/D such as DCC (standing for Departmental Consultative Committee), AW (standing for allocation warrant), PDPO (standing for Personal Data (Privacy) Ordinance), etc.) which facilitate the search and retrieval of the records.

6.7   As mentioned in Section 5, records are linked to their business context and other related records by means of an effective records classification scheme.   When conducting a search for an electronic record, the search result will also indicate the classification of the record through which users can in turn retrieve other related records under the same

business activity or transaction.

Retrieving electronic records

6.8   The following are some good practices for reference by B/Ds to facilitate the retrieval of electronic records -

(a) Similar to paper records, active electronic records, in particular those which are frequently retrieved, should be kept online (for computer systems or servers) or as near to the users as possible (for removable storage media such as a DVD).

(b) The names and contact details of RM staff, and the division of duties among them to maintain different electronic records should be made known to records users.   For example, the computer applications and systems in which the records are stored as well as the mode of access (e.g. through departmental portal) should be made known to records users.

(c) In case both paper and electronic records exist for some parts (or subjects) of the records classification scheme, B/Ds may consider designating the same RM staff to manage both paper and electronic records of the same parts (or subjects).   This would facilitate the cross references of the paper records to the electronic records and vice versa.

(d) Records storage equipment should be labelled accurately and conspicuously to facilitate retrieval of electronic records stored on removable storage media such as DVDs.

Section 7
Storage and Preservation of Records

Introduction

7.1   Records should be stored in such a manner so as to facilitate user access and ensure that they are protected from unauthorised access, use, disclosure, removal, deterioration, loss or destruction.[27]

Proper custody and storage of records

7.2   Records should be kept in a suitable medium, system and environment that are compatible with the form and characteristics of the records, their retrieval requirements and preservation needs.

7.3   In particular, records (including paper records, electronic records and other non-electronic records) should be stored and protected in ways that reflect their security classification.   B/Ds should adhere to the SR in handling of classified records.

7.4   In case of any loss or unauthorised destruction of records, the incident should be immediately reported to the DRM.   The DRM should conduct investigation into the incident, take appropriate action, and report his/her findings to GRS in accordance with paragraph 22 of GC No. 2/2009 entitled "Mandatory Records Management Requirements".

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[27] Paragraph 23 of GC No. 2/2009.

Paper records

Storage of paper records

7.5   Paper records should be stored in a clean and dry environment (e.g. not near unblocked window, under/near water/sewage pipe, water drain, manhole, water permeable wall or ceiling, water tank), and in proper facilities (e.g. filing cabinets and filing racks) instead of being stacked on the floor.   Some general guidelines on records storage environment are available from paragraphs 510 to 523 of RMM.   B/D should arrange inspection to records storage areas regularly and also after events such as adverse weather conditions, typhoons or rainstorm to ensure proper storage of records.

7.6   B/Ds should in particular note that paper deteriorates rapidly in an environment of high temperature and humidity.   In addition, mould growth on paper can be a health hazard to staff.

7.7   For paper records which have long-term (e.g. 30 years or over) or permanent value, they should be stored in a clean environment with round-the-clock control of temperature at 20°C +/− 2°C and relative humidity at 50% +/− 5% to ensure their preservation over time.

Storage of inactive paper records

7.8   Utilising off-site storage for inactive paper records can save costs and enhance retrieval efficiency.

7.9   GRS operates records centres in Tuen Mun which provide centralised intermediate storage services for B/Ds to store their inactive records.   B/Ds may consider making use of the records centres for those records not requiring frequent retrieval.   Details on the services provided by the records centres are available in Chapter 5 of GRS' RM Publication No. 1 - *A Practical Guide to Records Scheduling and Disposal*[28].

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[28] GRS' RM Publication No. 1 - *A Practical Guide to Records Scheduling and Disposal* is available

7.10   Where appropriate, B/Ds may also store their inactive paper records in B/Ds' off-site locations.   B/Ds should ensure that they develop proper practices and procedures when relocating inactive records to off-site locations to avoid loss of records.   Please see paragraph 7.11 below on bulk relocation of records.

Bulk relocation of paper records

7.11   To minimise the risk of losing records during office relocation or moving inactive records to off-site storage, appropriate arrangements should be made to ensure that the relocation process is properly supervised and conducted.   B/Ds should refer to the ***Guidelines on Bulk Relocation of Government Records***[29]   for more details.

Electronic records

Storage of electronic records

7.12   For electronic records, the storage media (e.g. optical disc and tape), storage system and storage environment should be carefully selected based on business and RM considerations.   Security (both physical and logical) in respect of the storage and handling of classified records should meet the requirements set out in the SR and Baseline IT Security Policy (S17), IT Security Guidelines and other relevant guidelines.   Proper documentation should be maintained to demonstrate that sufficient security arrangements are in place to ensure the records have not been tampered with.

7.13   B/Ds should formulate their strategies, practices and procedures relating to the backup, restoration and migration of electronic records.

7.14   In respect of the technical and security aspects of storing electronic records, advice from the departmental IT security officers is necessary.

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on the CCGO (http://grs.host.ccgo.hksarg/file/2.4.1_P1.pdf).

[29]   ***Guidelines on Bulk Relocation of Government Records*** is available on the CCGO (http://grs.host.ccgo.hksarg/file/Guidelines_on_Bulk_Relocation_of_Records.pdf).

7.15　　Electronic records are created in a wide variety of formats: audio and video recordings, database, e-mails, images, multi-media presentations, spreadsheets, word-processed documents, etc.　　Despite the intrinsic advantages of electronic records in transmission and access, B/Ds should be aware that electronic records are technology dependent as specific hardware and software are required to ensure that they are accessible, retrievable and understandable by the users.

7.16　　As such, electronic records require proactive actions to manage and preserve to ensure their authenticity, integrity, reliability and usability for as long as they are required to meet legal and regulatory requirements, business and operational needs and evidence purpose.

7.17　　In view of the foregoing, B/Ds should adopt good practices and measures to preserve electronic records, including -

(a)　conduct regular surveillance of technological changes;

(b)　take timely actions to migrate electronic records, associated recordkeeping metadata, audit trails and other data;

(c)　plan for and implement migration of electronic records in obsolete file formats to another format or to a newer version of the same format as appropriate;

(d)　schedule and conduct integrity checking of electronic records stored in storage media on a regular basis to ensure that there is no data corruption; and

(e)　back up electronic records as a routine of system management and keep an inventory of removable storage media in which electronic records are stored.

7.18　　The publication ***A Handbook on Preservation of Electronic Records***[30] sets out good practices for preserving electronic records (e.g. tips

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[30]　***A Handbook on Preservation of Electronic Records*** is available on the CCGO

for addressing media durability and proper handling of storage media). It also provides guidelines for B/Ds to establish and implement a departmental preservation programme which should include practices and procedures to refresh storage media and migrate electronic records from the existing ageing IT systems to upgraded systems. B/Ds may refer to the handbook for more information on preservation of electronic records.

Storage of inactive electronic records

7.19 Similar to paper records, inactive electronic records may also be stored offline and/or off-site to reduce storage costs. B/Ds should develop their practices and procedures for moving inactive electronic records to offline and/or off-site media to avoid loss or accidental destruction of records. If B/Ds intend to relocate their inactive electronic records to the records centres for intermediate storage, please contact GRS for advice.

Bulk relocation of electronic records

7.20 Similar to bulk relocation of paper records, B/Ds should make appropriate arrangements for bulk relocation of electronic records stored on removable storage media (e.g. CD/DVD, magnetic tape, etc.) to ensure that the relocation process is properly supervised and conducted. ***Guidelines on Bulk Relocation of Government Records*** should be referred to for the details.

7.21 For bulk relocation of electronic records stored on non-removable storage media such as computer systems or servers, B/Ds should approach their ITMUs for technical advice as appropriate.

Other non-electronic records

Storage of other non-electronic records

7.22 Apart from the general advice on storage environment set out in

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(http://grs.host.ccgo.hksarg/erm/s04/461.html).

paragraph 7.5 above, B/Ds should note that the temperature and relative humidity of the storage environment should be carefully controlled for other non-electronic records having long-term (e.g. 30 years or over) or permanent value.   For example, microfilm records should be stored in an 24-hour air-conditioned and dust free environment with stable and controlled temperature at 14°C +/− 2°C and relative humidity at 40% +/− 5%, while audio-visual records in an environment of temperature ranged between 4°C and 16°C and relative humidity not higher than 40% with minimum fluctuations.[31]   B/Ds may seek the advice on storage and preservation of records of specific forms from the Preservation Service Office of GRS if necessary.

Storage of other inactive non-electronic records

7.23   Similarly, B/Ds may consider storing their other inactive non-electronic records in off-site locations to save costs and enhance retrieval efficiency.   Proper practices and procedures should be developed and adhered to when relocating inactive records to off-site locations to avoid loss of records.

Bulk relocation of other non-electronic records

7.24   Similar to bulk relocation of paper records and electronic records, B/Ds should make appropriate arrangements for bulk relocation of other non-electronic records to minimise the risk of losing records during office relocation or moving inactive records to off-site storage.   Appropriate arrangements should be made in accordance with the ***Guidelines on Bulk Relocation of Government Records*** to ensure that the relocation process is properly supervised and conducted.

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[31] Paragraph 522 of RMM.

Introduction

8.1   Records should be classified according to their level of sensitivity at a particular time in accordance with the SR.   Timely access to records should be provided to authorised users for conducting business.

Access control and security

8.2   Irrespective of forms of records, access control and security should be established and implemented in the recordkeeping systems of B/Ds to protect the security and integrity of records stored therein.   It should ensure that records and the associated metadata and audit trails are -

(a)   protected from tampering, unauthorised alteration and erasure;

(b)   protected according to the relevant security classifications as stipulated in the SR; and

(c)   accessible by authorised users only.

8.3   B/Ds should comply with the relevant requirements stipulated in the SR and IT security policy and guidelines.   Although the implementation method of access control and security may differ for different forms of records, B/Ds are reminded in particular of the following -

(a)   To provide sensitive information with adequate protection, records are to be classified according to their level of security at a particular time.

(b)   The security classification should be applied according to the

information contained in the records, instead of their forms. For example, a paper record and an electronic record containing the same piece of information should not be applied with different security classifications. Similarly, B/Ds should also ensure that the access rights of classified records are granted to users in a consistent manner regardless of their forms.

(c) The security classification of a record should be clearly marked and displayed.

8.4 Regarding the security of electronic records, B/Ds should make reference to the IT Security theme page on ITG InfoStation for more details of requirements and guidelines on IT security (http://itginfo.ccgo.hksarg/content/itsecure/default.shtml).

Paper records

Managing access control and security of paper records

8.5 Due to the importance of access control and security, B/Ds should establish a mechanism to monitor and review such control. For example, random checks can be conducted regularly by the DRM and the departmental security officer to ensure records users and RM staff have adhered to the security requirements to create, manage and store classified records.

8.6 B/Ds should also keep in view any changing situations and regularly review and update the access control and security accordingly. For example, the access control and security will need to be updated as a result of changes of responsibilities of users due to change of duties, changes to the records classification scheme (e.g. after a major reorganisation of a B/D), or changes of security classification of records.

8.7 All the relevant activities should be properly documented in order to demonstrate that sufficient control is in place to ensure the overall security and integrity of the recordkeeping systems.

8.8   The DRM in each B/D should review the classified records in his/her custody at least once every five years to downgrade suitable items. He/she should adhere to the SR and coordinate his/her review with agencies that bear a direct relation or have a direct interest in the subjects or contents of the records to be reviewed.[32]

Tracking of paper records

8.9   In a recordkeeping system, tracking of the movement and use of records is required to -

(a)   identify outstanding action required;

(b)   enable retrieval of records;

(c)   prevent loss or missing of records;

(d)   monitor usage for recordkeeping system maintenance and security (e.g. growth of records, disposal of records); and

(e)   identify the operational origin of individual records where the recordkeeping systems have been amalgamated or migrated.

8.10   B/Ds should decide the type of information that needs to be maintained to facilitate tracking of records, and to adopt means to track the whereabouts and movement of records.

8.11   In general, B/Ds should have adopted the Bar-coding File Management System, file movement cards, or other measures to track the whereabouts and movement of paper files.

8.12   B/Ds are reminded that the tracking of records not only applies to paper files, but also to paper records stored in different locations such as oversized maps and bulky books and other non-electronic records.   B/Ds should also implement effective means (e.g. a manual register or an electronic library management system) to facilitate tracking of paper records other than paper files.

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[32] Paragraph 443 of RMM.

Electronic records

Managing access control and security of electronic records

8.13　　Similar to paper records, B/Ds should establish a mechanism to manage access control and security of electronic records.　　Paragraphs 8.5 to 8.8 above on managing access control and security of paper records are also applicable to electronic records.

8.14　　For electronic records stored on non-removable storage media such as computer servers, security and access arrangements could usually be implemented in a structured way, for example by granting the access rights for users to access different system functions.

Tracking of electronic records

8.15　　Movement and use of electronic records should also be tracked. Paragraphs 8.9 and 8.10 above are relevant.

8.16　　For electronic records on removable storage media such as DVDs, B/Ds should also implement effective means (e.g. a manual register or an electronic library management system) to facilitate tracking of these electronic records.

8.17　　For electronic records stored on non-removable storage media, audit trails should be maintained to properly document RM activities and events.

Records Retention and Disposal

Introduction

9.1 Records accumulate and grow in the course of business. If records are not properly and systematically disposed of, useful and unwanted records will mix together making records retrieval difficult and time-consuming and hence adversely affecting operational efficiency. In this regard, scheduling and disposal of records should be well planned and implemented in a systematic, orderly and auditable manner.

Records scheduling

9.2 B/Ds should arrange retention and disposal of records in accordance with requirements specified in GRS' RM Publication No. 4 - *General Administrative Records Disposal Schedules* (GARDS) [33] for administrative records and the records retention and disposal schedules established for programme records. [34] This applies to all government records regardless of their form or media. In other words, in respect of programme records of a B/D, the disposal schedules established should cover not only paper files, but also electronic records and other non-electronic records.

9.3 Therefore, when establishing draft disposal schedules for new series of programme records or reviewing existing disposal schedules which have been approved by GRS, B/Ds should in particular, in the context of managing records in a hybrid environment, ensure all records (including

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[33] GRS' RM Publication No. 4 - GARDS is available on the CCGO (http://grs.host.ccgo.hksarg/file/2.4.4_P4(Oct_2013).pdf).

[34] Paragraph 14 of GC No. 2/2009.

electronic records and other non-electronic records) are covered.   B/Ds may refer to the ***Guideline cum Checklist for Review of Records Retention and Disposal Schedules***[35] for conducting a review of disposal schedules.

Consistent approach on records scheduling

9.4   Despite the varying intrinsic nature of different forms of records, B/Ds should consider whether records of different forms created under a particular business function, process or transaction should be governed by a uniform records retention and disposal schedule for the sake of consistency and management efficiency.   A consistent records retention and disposal arrangement, coupled with consistent records classification, access control and security, etc., will reduce the duplication of maintenance efforts for different forms of records.

9.5   B/Ds should also consider other legal, regulatory or operational requirements (including the Personal Data (Privacy) Ordinance, Cap. 486) on the retention and disposal arrangements of different forms of records.

Records scheduling due to record forms

9.6   There are, however, cases where B/Ds may need to establish different disposal actions for the same category of records which are created or received in different forms.   An example is that a B/D receives application forms in both paper and electronic formats, and it will microfilm the paper-based application forms after, say, two years upon completion of action and destroy the original paper records, whereas the application forms received in electronic format are managed and kept in a computer system for a definite period of time before disposal.

9.7   In such cases, B/Ds may develop different disposal classes for different forms of records when drawing up a draft records retention and

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[35] ***Guideline cum Checklist for Review of Records Retention and Disposal Schedules*** is available on the CCGO (http://grs.host.ccgo.hksarg/file/Guideline_cum_Checklist_for_Review_of_RMO2_(Ver.2015_03).doc).

disposal schedule or revising an approved schedule. Please refer to Chapter 4 of GRS' RM Publication No. 1 - *A Practical Guide to Records Scheduling and Disposal*[36] for more guidelines on drawing up disposal schedules for programme records.

Records disposal

9.8   Approved records retention and disposal schedules will not serve their intended purposes if they are not executed. Accordingly, it is necessary to arrange prompt disposal of time-expired records. As a mandatory requirement, B/Ds should dispose of time-expired records at least once every two years for all their administrative records, which are covered by the GARDS, and for all their programme records with approved disposal schedules.[37]

9.9   Records retention and disposal requirements should be applied to records on a group basis so that they could be handled in the same manner and at the same time. It is a serious maladministration or even a breach of the law if a record that ought to have been kept has been destroyed or a record that should have been destroyed was kept in error. B/Ds should ensure that all records (regardless of their forms or media) are managed in a consistent manner, and arrange disposal of records of different forms and media in one go, as far as practicable.

9.10   In addition, B/Ds should also specify clearly the roles and responsibilities of the parties concerned for the disposal of hybrid records. For example, the destruction of electronic records may need the technical support from the ITMU after the B/D has sought the agreement of the GRS Director.

9.11   To minimise the risk of inadvertent unauthorised destruction of records during the disposal process, B/Ds should designate an officer not

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[36] GRS' RM Publication No. 1 - *A Practical Guide to Records Scheduling and Disposal* is available on the CCGO (http://grs.host.ccgo.hksarg/file/2.4.1_P1.pdf).
[37] Paragraph 17 of GC No. 2/2009.

below the rank of Executive Officer II or equivalent to ensure that the disposal process is properly supervised.[38]

Prior consent before destruction of records

9.12   Regardless of the forms or media of the records, B/Ds must obtain the prior agreement of the GRS Director before they destroy any government records.[39]

Final disposal of records

9.13   B/Ds should adopt suitable methods for the final disposal of records which are compatible with the forms and media of records, and the sensitivity and security classification of their contents.   For example, B/Ds should adhere to SR on destruction of classified information.

9.14   In particular, for the destruction of time-expired electronic records, B/Ds should ensure that the concerned records, associated metadata and backups are irrecoverable.

Transfer of records with archival value

9.15   Some records contain information having archival value (as appraised by PRO and indicated in the approved records retention and disposal schedules) or potential archival value (for appraisal by PRO as indicated in the approved records retention and disposal schedules) which forms part of the memory of the community.   Regardless of the forms and media of such records, B/Ds should transfer these records to PRO according to the respective disposal schedules [40] and with any supporting documentation, indices or other relevant information as required by PRO.

9.16   All government records reaching 30 years old, no matter they are

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[38] Paragraph 19 of GC No. 2/2009.
[39] Paragraph 18 of GC No. 2/2009.
[40] Paragraph 16 of GC No. 2/2009.

in electronic or non-electronic form, should be appraised by PRO to determine whether or not they possess archival value for permanent preservation.[41]

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[41] Paragraph 637 of RMM.

Section 10
Vital Records Protection

Introduction

10.1   Vital records are those records containing information essential to the continued and effective operation of an organisation during and after an emergency or disaster.   B/Ds should identify and protect their vital records to ensure uninterrupted operation of major business functions.

10.2   B/Ds should refer to GRS' RM Publication No. 6 - *Manual on Vital Records Protection* [42] for detailed guidelines and procedures for establishing a vital records protection programme.

Identifying vital records

10.3   Identification of vital records requires a comprehensive review on records kept by a B/D so as to determine what records warrant protection under the programme.   B/Ds should conduct a risk analysis to assess the potential risks (e.g. fire that may cause loss or serious damage to the records).

10.4   RM staff should not classify records as vital records simply for fear of potential loss/damage to those records.   Neither should they determine records as non-vital simply because those records do not require additional protection.   For example, electronic records created in a computer application or system where the records are already protected by existing arrangements for backup and disaster recovery can still be identified as vital records having regard to the B/D's unique functions and

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[42] GRS' RM Publication No. 6 - *Manual on Vital Records Protection* is available on the CCGO (http://grs.host.ccgo.hksarg/file/2.4.6_P6(Sep_2012).pdf).

responsibilities, even though no additional protection is considered necessary.

Vital records and record forms

10.5   Whether records should be selected as vital records does not necessarily relate to their attributes such as the physical form or medium, stage in their life cycle or security classification.   In fact, it is not uncommon that vital records exist in multiple forms or media (e.g. paper documents, photographic materials, or computer files on magnetic/optical media).

10.6   When selecting vital records where the required information exists in more than one record form/source, B/Ds should take into consideration when, where and how the vital records would be retrieved and used in the event of an emergency or a disaster.   Since vital records in different forms may require different equipment, devices, tools and software to retrieve and access, B/Ds should consider the availability of these equipment and facilities (e.g. computer and application software) during and after an emergency or a disaster.

Selecting protection methods

10.7   There are various methods to protect vital records.   The common methods include duplication, dispersal, on-site protection and off-site storage.   Please refer to Chapter V of GRS' RM Publication No. 6 - *Manual on Vital Records Protection* for more details.

10.8   The protection methods should be selected having regard to the business needs (e.g. records of rescue plans may need to be kept on site to facilitate timely retrieval during and after an emergency or a disaster), cost implications as well as expertise and skills required of the B/D concerned.

Protection methods and record forms

10.9   As mentioned above, copies of vital records may exist in any forms or media, such as paper, electronic and microform.   The methods selected and hence the practices and procedures for protection of vital records will depend on the forms of the vital records and the retrieval requirements of those records during and after an emergency or a disaster, among other factors.

10.10   Duplicating records in the same medium (e.g. paper to paper) often provides the most economical and least complicated method of protecting vital information.

10.11   Nevertheless, B/Ds may also consider whether a conversion of the forms and/or media of the records would be necessary for protection of the vital records, having regard to the retrieval need of the vital records during and after an emergency or a disaster.

10.12   For example, B/Ds may consider whether there is a need of selecting one single form of records (which can be easily retrieved and accessed during and after an emergency or a disaster) as vital records to minimise efforts required.   If deemed desirable, B/Ds may convert multiple forms of vital records into one single form for easy and speedy retrieval.

Section 11
Monitoring and Review

Introduction

11.1   Records are valuable resources of the Government.   They are the basis on which decisions are made, services provided and policies developed and communicated.   Proper management of records is therefore crucial to support evidence-based decision making, to meet operational and regulatory requirements and to enhance corporate governance.

11.2   Implementing a proper RM programme in their respective organisations and monitoring its effectiveness is primarily the responsibility of respective B/Ds.

Departmental RM policies

11.3   B/Ds should promulgate their departmental RM policy to all staff, including staff responsible for RM and those who need to access and use records in their daily work.   This is to clearly inform staff of its contents and implications and, most importantly, to make staff aware of their RM responsibilities as defined within the policy.[43]

11.4   B/Ds should monitor their staff's compliance with the departmental RM policy through the departmental RM reviews.   To cope with changing circumstances, B/Ds should review the policy at least once every two years.[44]

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[43] Paragraph 8 of Admin Wing CM No. 5/2012.
[44] Paragraph 10 of Admin Wing CM No. 5/2012.

Self-assessment RM review by B/Ds

11.5 B/Ds should review their RM practices regularly to ensure that their RM processes and controls are being implemented according to the departmental RM policy. This is to ensure that the RM programme is functioning effectively.

11.6 Through such self-assessment, B/Ds will be able to assess their compliance with the mandatory RM requirements and adoption of good practices as promulgated in the related GCs, Admin Wing CMs and RM publications. In addition, B/Ds will be ready to provide evidence to demonstrate that records stored and managed in their recordkeeping systems are authentic, reliable and complete.

11.7 The monitoring should cover the following areas -

   (a) compliance with the established Government's and departmental RM policy, practices and guidelines;

   (b) compliance with the established Government's and departmental IT security policy, practices and guidelines;

   (c) proper functioning of the recordkeeping systems and regular maintenance as scheduled; and

   (d) any irregularities and malpractices (e.g. loss of records and unauthorised destruction of records).

11.8 Details for the framework for reviewing RM practices in B/Ds are set out in GC No. 5/2012 entitled "Records Management Reviews".

Review in the context of a hybrid environment

11.9 With the widespread use of networked computers in the work environment of B/Ds, it is expected that the quantity of electronic records created and received in business operations will increase while that of non-electronic records will gradually decrease. This will result in changes in the relationship between different forms of records in a hybrid environment.

As such, it is important to review regularly the alignment of different forms of records.

11.10   In particular, B/Ds should focus on the following aspects -

(a)   whether the departmental RM policy and practices still meet the RM and business needs in a hybrid environment;

(b)   whether the existing records classification schemes need any improvements or refinements due to changing business needs;

(c)   whether the records inventory (including the storage location) is accurate and up-to-date to reflect the position of both non-electronic and electronic records under the B/Ds' custody;

(d)   whether the forms of records captured and received require any changes for the sake of improving the business rules on creation and collection of records to meet the RM and business needs in managing those records;

(e)   whether the roles and responsibilities of records users and RM staff as well as the RM processes and procedures have been properly documented and communicated to them, and whether those RM processes and procedures are properly adhered to by records users and RM staff;

(f)   whether appropriate training and guidance have been provided to records users and RM staff having regard to the operational needs of the B/Ds in the hybrid environment;

(g)   whether the design of the recordkeeping systems, the choice of equipment and the use of resources and space are efficient and cost-effective; and whether the use of technology can be introduced to improve operation of the organisations and help achieve the departmental RM policy;

(h)   whether the access control and security of the B/Ds' recordkeeping systems meet the Government and departmental security requirements; and

(i)   whether B/Ds has considered to adopt an ERKS; and whether the B/Ds are capable and ready to accelerate the implementation plan so as to reap the benefits of managing records in a hybrid environment effectively and efficiently with the support of an ERKS.

11.11   GRS' RM Publication No. 7 - ***Checklist for Proper Records Management Practices***[45] also provides a useful framework and essential tips for B/Ds to assess the status of their RM programme.   It should be adopted for use whenever applicable.

11.12   It is incumbent upon individual B/Ds to conduct regular review to ensure that the areas of concern as set out in paragraph 11.10 above are properly addressed in a timely manner.

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[45] GRS' RM Publication No. 7 - ***Checklist for Proper Records Management Practices*** is available on the CCGO (http://grs.host.ccgo.hksarg/file/2.4.7_P7.pdf).