

**Recordkeeping Metadata Standard
for the Government of the Hong Kong
Special Administrative Region:**

Implementation Guidelines

Government Records Service

Updated September 2016

Revision History

Change number	Reason for change	Sections affected	Date issued
1	-	-	July 2012
2	Update reference to the latest version of the <i>Recordkeeping Metadata Standard for the Government of the Hong Kong Special Administrative Region, Functional Requirements of an Electronic Recordkeeping System</i> and <i>Government-Wide Content Management/Knowledge Management Metadata Standard</i>	Sections 1.1, 1.5, 1.6, 1.8, 1.9, 1.11, 2.9, 2.11, 2.13 (Tasks 5, 10 and 16), 2.14 , 3.6 (Steps 3, 6 and 12), footnotes 1, 4 and 5 (newly added) and Appendix 1 (paragraphs 6 and 7)	September 2016

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Part 1 Introduction

Purpose

1.1 This document provides guidelines for bureaux and departments (B/Ds) to implement and comply with requirements prescribed in ***Recordkeeping Metadata Standard for the Government of the Hong Kong Special Administrative Region*** (RKMS) (version 1.1)¹ developed by the Government Records Service (GRS). It should be read and used in conjunction with RKMS.

Scope

1.2 This document provides guidelines for B/Ds to -

- (a) implement requirements of RKMS in the context of developing or adopting an electronic recordkeeping system (ERKS)² and evaluate the compliance of an ERKS with RKMS; and
- (b) if required, develop a departmental recordkeeping metadata standard ('departmental standard') on the basis of RKMS.

1.3 Key principles, concepts and requirements of RKMS are not repeated unless necessary. Users are expected to have some understanding of RKMS before they read and use this document.

Audience

1.4 This document is intended for government officers, including Departmental Records Managers, Assistant Departmental Records Managers and IT staff of the Information Technology Management Units in B/Ds who are responsible for -

¹ RKMS was promulgated by GRS in May 2012 and updated in September 2016. The latest version of the RKMS has been uploaded onto Central Cyber Government Office (CCGO) (accessible at <http://grs.host.cngo.hksarg/erm/s04/457.html>).

² An ERKS is an information/computer system with the necessary records management capabilities designed to electronically collect, organise, classify and control the creation, storage, retrieval, distribution, maintenance and use, disposal and preservation of records. It aims to maintain the content, context and structure of records so as to protect the authenticity, integrity, reliability and usability of records over time to serve as reliable evidence of decisions and activities.

- (a) specifying requirements of, selecting and procuring an ERKS solution;
- (b) developing and/or implementing an ERKS solution compliant with the functional requirements of an ERKS and RKMS developed by GRS;
- (c) managing and maintaining an ERKS to ensure the authenticity, integrity, reliability and usability of records managed and stored therein; and
- (d) developing a departmental standard on the basis of RKMS to meet B/D-specific business and/or records management (RM) requirements for recordkeeping metadata.³

Relationship with RKMS and other electronic records management publications

1.5 This document helps B/Ds understand the need to integrate requirements of RKMS with those requirements specified in **Functional Requirements of an Electronic Recordkeeping System** (version 1.2) developed by GRS.⁴ In the context of developing or adopting an ERKS, B/Ds must adopt the requirements of RKMS in conjunction with the set of functional requirements of an ERKS. This is to ensure that creation, capture, use, management and maintenance of recordkeeping metadata are tightly integrated with other essential ERKS functionality to properly manage and store records in an ERKS.

1.6 GRS is working on another standard on bulk import, export and transfer of records from one ERKS to another. The aims are to prescribe requirements, practices and procedures for import, export and transfer of records and other entities (e.g. a folder or a records retention and disposal schedule) with associated recordkeeping metadata and audit trails (if necessary). This standard will supplement requirements on import, export and transfer of recordkeeping metadata as prescribed in RKMS.

³ The terms 'recordkeeping metadata' and 'metadata' are used interchangeably in this document to denote data describing content, context and structure of records and their management through time, e.g. 'Title', 'Recipient name' and 'Date sent'.

⁴ The publication is accessible at CCGO (<http://grs.host.ccgo.hksarg/erm/s04/435.html>).

1.7 In case there are inconsistencies between this document, RKMS and other electronic records management publications, B/Ds should seek advice from GRS.

Related electronic information management standards and guidelines

1.8 The Office of the Government Chief Information Officer (OGCIO) has developed **Government-wide Content Management/Knowledge Management Metadata Standard**⁵ to facilitate B/Ds to develop an integrated electronic information management (EIM)⁶ solution.

1.9 In case B/Ds develop an integrated EIM solution including an ERKS and other EIM modules such as a content management (CM) system, **they should ensure that entities and recordkeeping metadata prescribed in RKMS and additional departmental entities and recordkeeping metadata specified by B/Ds for RM purposes (if any) should be managed by and stored in an ERKS only.**

Assistance and support from GRS

1.10 As far as RKMS and this document are concerned, GRS is responsible for -

- (a) ensuring that RKMS is in line with the Government's RM policy and requirements and the Government's EIM Strategy;
- (b) maintaining the accuracy, consistency and extensibility of RKMS to meet common RM needs of B/Ds;
- (c) reviewing and updating RKMS as and when necessary in conjunction with parties concerned;
- (d) approving proposals made by B/Ds for making revisions and/or enhancements to RKMS to meet government-wide RM needs; and

⁵ **Government-wide Content Management/Knowledge Management Metadata Standard** is available on the Electronic Information Management theme page of OGCIO at CCGO (accessible at <http://itginfo.cgo.hksarg/content/eim/docs/Government-wide%20Content%20Management%20Knowledge%20Management%20Metadata%20Standard.pdf>).

⁶ EIM encompasses three domain areas: RM, content management and knowledge management.

- (e) developing further guidelines and providing RM advisory support and assistance to B/Ds to implement and comply with requirements of RKMS.

Further information

1.11 This document is available on CCGO (accessible at <http://grs.host.cgo.hksarg/erm/s04/457.html>) for reference by B/Ds.

1.12 Enquiries arising from this document should be addressed to Senior Executive Officer (Record Systems Development)2 on 2195 7792.

Part 2 Implementing RKMS in an ERKS

Introduction

2.1 This Part provides guidelines on how to implement and comply with requirements of RKMS in developing or adopting an ERKS.

Main features of RKMS

2.2 To facilitate B/Ds to understand the guidelines set out in **Part 2** and **Part 3**, a gist of main features of RKMS is provided below.

2.3 RKMS has been developed to be independent of ERKS solutions and technical platforms. It applies to -

- (a) all records regardless of format and media, e.g. emails, spreadsheets, photographs, microfilms, maps and audio-visual recordings;⁷
- (b) an ERKS (which is able to manage records and aggregations in a hybrid RM environment under which both electronic and non-electronic records co-exist);
- (c) an information system (including a business system) which integrates with an ERKS so as to enable the latter to capture and import records, aggregations and other entities (if required) with associated metadata created/received by and/or stored in the information system for proper management and storage;
- (d) an information system (including a business system) which exports or transfers records, aggregations and other entities (if required) with associated metadata to an ERKS for proper management and storage; and
- (e) transfer of records with archival value together with aggregations and other entities (if required) from an ERKS of a B/D to the Public Records Office (PRO) of GRS.

⁷ RKMS is not intended to be applied to a paper-based recordkeeping system.

2.4 RKMS prescribes a total of **16 entities**⁸ and defines a core set of **80 metadata elements**⁹ with permitted **values** and **17 encoding schemes** for the specified entities. Each entity may have different metadata elements.

2.5 RKMS also prescribes four different subsets of metadata elements to meet different business and/or RM purposes. A subset is referred to as an '**Application Profile**' (AP). The four APs¹⁰ specified in RKMS and serving different purposes are explained below -

- (a) **AP1 - ERKS management:** a subset of metadata elements to ensure that records are properly managed and stored throughout their life cycle in an ERKS;
- (b) **AP2 - Export to ERKS:** a subset of metadata elements to be exported or transferred with records, aggregations and other entities (if required) from an information system to an ERKS for the latter to properly manage and store the records;
- (c) **AP3 - Transfer to B/D:** a subset of metadata elements to be exported or transferred with records, aggregations and other entities (if required) from an ERKS, either within a B/D or between B/Ds for purposes such as system upgrade or re-distribution of business among B/Ds; and
- (d) **AP4 - Transfer to GRS:** a subset of metadata elements to be transferred with records, aggregations and other entities (if required) from an ERKS of a B/D to PRO of GRS for permanent retention.

Implementing RKMS in an ERKS

2.6 This document has been drawn up primarily to guide B/Ds to develop ERKS functionality in terms of recordkeeping metadata; and to properly create, capture, use, manage, maintain and store recordkeeping metadata in an ERKS.

⁸ The entities are **Class, Component, Disposal Hold, Event History, Event Trigger, Folder, Group, Mandate, Part, Record, Records Classification Scheme, Retention and Disposal Schedule, Stub, Sub-class, Sub-folder** and **User**. Please see Chapter 3 of RKMS for details of the entities.

⁹ Please see Annex 3 to RKMS for details of a core set of metadata elements.

¹⁰ Please see Chapter 3 of RKMS for details of the four APs.

2.7 For those B/Ds that have an ERKS in place to manage both electronic and non-electronic records, they should read section 6.4 - **Implementing RKMS for an existing ERKS** in Chapter 6 of RKMS and ensure that their existing ERKSs comply with RKMS.

Implementing RKMS to comply with mandatory RM requirements in an ERKS

2.8 General Circular (GC) No. 2/2009 entitled '**Mandatory Records Management Requirements**' prescribes mandatory RM requirements for managing government records. The requirements have a wide coverage, including proper management of e-mail records, records classification, records disposal (including destruction of records subject to prior consent of GRS Director and transfer of records having archival value to GRS), proper custody and storage of records, and protection of vital records.

2.9 To assist B/Ds in complying with the mandatory RM requirements in the electronic environment, **Functional Requirements of an Electronic Recordkeeping System** and RKMS have prescribed essential ERKS functionality and a core set of recordkeeping metadata to be created, captured, used, managed and maintained throughout the life cycle of records to support efficient and effective operation and execution of various RM functions and activities stipulated in GC No. 2/2009.

2.10 **Appendix I** sets out for B/Ds' reference relevant recordkeeping metadata and associated requirements prescribed in RKMS that support B/Ds to implement mandatory RM requirements in an ERKS.

Implementing RKMS in the context of developing or adopting an ERKS

2.11 B/Ds should comply with RKMS in procuring an ERKS solution, or developing or adopting an ERKS. A checklist setting out common major tasks in implementing requirements of RKMS throughout implementation of an ERKS is provided in paragraph 2.13 below for reference by B/Ds.¹¹ B/Ds should always bear in mind that requirements of RKMS should be implemented in conjunction with those requirements prescribed in **Functional Requirements of an Electronic Recordkeeping System**.

¹¹ Development and implementation of an ERKS in B/Ds involves a number of tasks. Only those tasks that are directly relevant to implementation of RKMS in an ERKS have been included in the checklist.

2.12 The checklist is not intended to be exhaustive. B/Ds may include other tasks if deemed necessary to guide implementation of RKMS in their organisations.

2.13 Major tasks in implementing RKMS set out below have been drawn up on the assumption that a B/D procures a commercial off-the-shelf ERKS solution with certain degree of customisation, which is a common approach to developing an ERKS. The sequence of tasks is presented according to a typical project life cycle from project initiation to post-implementation review. B/Ds may consider carrying out these tasks concurrently if deemed desirable.

S/N	Major Task
Stage 1 - Project initiation and planning	
1	<p>Establish a governance structure as recommended in Chapter 7 of RKMS to oversee the implementation of and compliance with RKMS.</p> <div style="border: 1px solid #4a86e8; padding: 5px; margin-top: 10px;"> <p>Note: The project steering committee of ERKS implementation may take up such role. It is recommended that B/Ds should invite representatives of records users to join the governance structure so that their views and feedback will be addressed promptly.</p> </div>
2	<p>Secure funding (e.g. to seek funding from the Administrative Computer Projects Committee of OGCI) to implement an ERKS together with the requirements of RKMS.</p> <div style="border: 1px solid #4a86e8; padding: 5px; margin-top: 10px;"> <p>Note: If required, B/D should work out a cost estimate for developing a departmental standard on the basis of RKMS, e.g. estimated costs for procuring consultancy services to assist in developing the departmental standard.</p> </div>
3	<p>Seek and procure professional assistance and input where appropriate (e.g. procurement of consultancy service to assist in developing a departmental standard).</p>
4	<p>Develop a departmental standard if required on the basis of RKMS.</p>

S/N	Major Task
Stage 1 - Project initiation and planning (continued)	
4	<div style="border: 1px solid #4b4b9b; padding: 10px;"> <p>Notes:</p> <p>(1) In case a B/D develops a departmental standard to address its specific RM and/or business needs, it is recommended that the B/D concerned should complete the development of its departmental standard before carrying out tasks set out in Stage 2 so as to incorporate the requirements of B/D-specific metadata elements, entities and encoding schemes in the requirements specification for procurement of an ERKS solution (please see Task 7 below).</p> <p>(2) Please refer to Chapter 6 of RKMS and Part 3 of this document for details of development of a departmental standard.</p> </div>
5	<p>Define project scope in detail. As far as RKMS is concerned, B/Ds should -</p> <ul style="list-style-type: none"> (a) consider and determine whether metadata and records created and received by and/or stored in an information system (including a business system) should be imported into the ERKS to be developed as records; (b) subject to the decision on (a) above, examine whether system customisation and/or a customised program is required to enable the import of records, aggregations and other entities (if required) with associated metadata from the information system to the ERKS; (c) assess and determine whether there are B/D-specific requirements for recordkeeping metadata, entities and encoding schemes in addition to those specified in RKMS. If so, B/D should follow the practices and procedures set out in Part 3 of this document to develop those requirements;

S/N	Major Task
Stage 1 - Project initiation and planning (continued)	
5	<p data-bbox="347 371 1348 600">(d) assess and determine whether additional ERKS functionality is required to support B/D-specific RM and/or business needs. If so, B/Ds should examine and determine whether recordkeeping metadata should be created or captured for this additional functionality;</p> <p data-bbox="347 622 1348 851">(e) consider and determine whether requirements pertaining to AP3 and AP4 set out in RKMS should be implemented at one go or they should be implemented at a later stage, say when an operational need to export or transfer records with associated metadata arises;</p> <div data-bbox="347 873 1348 1041" style="border: 1px solid #4b4b9b; padding: 5px; margin: 10px 0;"> <p data-bbox="368 896 1327 1025">Note: In any event, B/Ds should ensure that the selected ERKS has the capability of complying with requirements pertaining to AP3 and AP4.</p> </div> <p data-bbox="347 1064 1348 1153">(f) consider and determine the modes of creation, capture and inheritance of metadata values in the ERKS;</p> <div data-bbox="347 1176 1348 1388" style="border: 1px solid #4b4b9b; padding: 5px; margin: 10px 0;"> <p data-bbox="368 1198 1327 1377">Note: B/Ds should specify the modes of creation, capture and inheritance of metadata values as far as practicable so as to assess the degree of system customisation and/or configuration that are required.</p> </div> <p data-bbox="347 1411 1348 1601">(g) consider and determine whether all entities and metadata elements (including those with obligation levels as 'recommended' and 'optional') specified in RKMS should be implemented; and</p> <div data-bbox="347 1624 1348 1792" style="border: 1px solid #4b4b9b; padding: 5px; margin: 10px 0;"> <p data-bbox="368 1646 1327 1769">Note: B/Ds should note that RKMS specifies optional and recommended entities such as 'Sub-folder' entity, recommended practices and metadata of different obligation levels.</p> </div>

S/N	Major Task
Stage 1 - Project initiation and planning (continued)	
5	(h) consider and determine whether recommended practices, e.g. to record audit trail data in event history objects in a system-neutral format, should be implemented. Please refer to section 3.23 in Chapter 3 of RKMS for details of event history objects.
Stage 2 - Procurement of an ERKS solution	
6	Conduct market research to identify suitable ERKS solutions where appropriate and assess whether those ERKS solutions are capable of complying with RKMS, functional requirements of an ERKS developed by GRS and the departmental standard (if it has been developed).
7	Prepare requirements specification and suitably incorporate requirements of RKMS, functional requirements of an ERKS developed by GRS and the departmental standard into the specification. As far as RKMS is concerned, B/Ds should clearly set out requirements for those issues specified from (a) - (h) of Task 5 above.
8	Conduct procurement exercise including evaluation of proposals.
Stage 3 - System design and development	
9	<p>Conduct a mapping of entities, metadata elements and values and encoding schemes readily available in the selected ERKS to those specified in RKMS and the departmental standard as appropriate so as to identify the gaps and differences.</p> <div data-bbox="347 1554 1350 1778" style="border: 1px solid black; padding: 5px;"> <p>Note: Through the mapping exercise, B/Ds will then be able to determine the required system customisation and/or configuration to ensure that the ERKS complies with RKMS and the departmental standard.</p> </div>
10	Perform system design and development of the ERKS including functionality relating to recordkeeping metadata. As far as RKMS is concerned, B/Ds should -

S/N	Major Task
Stage 3 - System design and development (continued)	
10	<p>(a) ensure that recordkeeping metadata are applied to all electronic and non-electronic records to be managed by and stored in the ERKS;</p> <p>(b) ensure that different entities have the correct set of metadata elements specified in RKMS;</p> <p>(c) determine the proper timing under which the value(s) of each metadata element should be created or captured and design the relevant processes to create or capture the values;</p> <p>(d) determine which metadata values are unchangeable or changeable after creation or capture;</p> <div data-bbox="347 898 1348 1115" style="border: 1px solid #4F81BD; padding: 5px; margin: 10px 0;"> <p>Note: The value(s) of a number of metadata elements such as 'System identifier' and 'Date time captured' are defined as unchangeable after creation or capture in Annex 3 to RKMS. Please refer to Annex 3 to RKMS for details.</p> </div> <p>(e) determine who are authorised to make changes to metadata elements and values and under what circumstances such changes are permitted;</p> <p>(f) determine and design the processes to update and revise metadata elements and values;</p> <p>(g) determine and design the modes of creation, capture and inheritance of metadata values and the permitted values for each metadata element;</p> <p>(h) determine and design the ways of inheritance, e.g. retrospective inheritance of metadata values;</p> <p>(i) determine the roles that are authorised to create, capture, use, manage and maintain recordkeeping metadata in the ERKS and ensure that only those authorised roles are able to do so;</p> <p>(j) ensure that the pre-defined relationships among entities such as a folder and its child parts, and among metadata elements and values specified in RKMS are accurately built in the ERKS;</p>

S/N	Major Task
Stage 3 - System design and development (continued)	
10	<p>(k) determine whether those metadata readily available in the selected ERKS should be used. B/Ds should not use those metadata elements that are likely to compromise the purposes of and/or be in conflict with the metadata elements specified in RKMS; and</p> <p>(l) ensure that the definitions, naming and numbering conventions, rules for entities, metadata elements and encoding schemes prescribed in RKMS are adhered to.</p> <div style="border: 1px solid #4F81BD; padding: 10px; margin-top: 10px;"> <p>Notes:</p> <p>(1) In case a B/D develops an integrated EIM solution encompassing CM and/or knowledge management (KM) modules with an ERKS, the B/D concerned should ensure that recordkeeping metadata and entities specified in RKMS and additional departmental recordkeeping metadata and entities specified by the B/D concerned for RM purposes (if any) should be managed by and stored in the ERKS only.</p> <p>(2) In case a B/D implements requirements pertaining to AP2, AP3 or AP4, the B/D concerned should ensure that requirements specified in RKMS, in particular Chapter 3 and Annex 3 therein are complied with.</p> <p>(3) In case a B/D implements Event History entity and event history objects in the ERKS, the B/D concerned should ensure that requirements specified in section 3.23 in Chapter 3 of RKMS are complied with.</p> </div>
11	<p>Develop new RM practices and guidelines to support use and management of the ERKS by records users and RM staff. In terms of recordkeeping metadata, the RM practices and guidelines should -</p> <p>(a) guide users to properly create and capture sufficient, accurate, complete and consistent metadata;</p> <p>(b) prescribe proper practices and procedures for creation, capture, use, management and maintenance of recordkeeping metadata;</p>

S/N	Major Task
Stage 3 - System design and development (continued)	
11	<p>(c) prescribe proper practices and procedures for updating and revising metadata elements and values; and</p> <p>(d) prescribe roles and responsibilities for creation, capture, use, management and maintenance of metadata.</p>
12	<p>Examine and approve system documentation prepared by the contractor.</p> <div style="border: 1px solid #4F81BD; padding: 5px; margin-top: 10px;"> <p>Note: B/Ds should draw up a mapping of entities, metadata elements and values and encoding schemes of their ERKSs (after system customisation and/or configuration) with those specified in RKMS and their departmental standards as appropriate. This documentation helps B/Ds assess whether their ERKSs comply with RKMS and their departmental standards.</p> </div>
13	<p>Develop a business continuity plan and a disaster recovery plan. B/Ds should ensure that restoration of recordkeeping metadata is properly addressed in the disaster recovery plan as they are critical to locating, retrieving and understanding records.</p>
14	<p>Configure system settings of the ERKS, including the construction of a records classification scheme(s), assignment of security and access control, establishment of records retention and disposal schedules and creation of RM roles and user groups, etc. As far as recordkeeping metadata are concerned, B/Ds may need to -</p> <p>(a) set the obligation levels of each metadata element;</p> <p>(b) set the level of the records classification scheme from which the value(s) of a metadata element should be inherited; and</p> <div style="border: 1px solid #4F81BD; padding: 5px; margin-top: 10px;"> <p>Example: B/Ds should set whether child parts of a folder should inherit the value of 'Security classification' from their parent folder.</p> </div>

S/N	Major Task
Stage 3 - System design and development (continued)	
14	(c) set the permitted values and encoding schemes for each metadata element; and assign a unique uniform resource identifier (URI) to the records classification scheme(s) established in the ERKS.
15	<p>Draw up a migration plan where appropriate to facilitate the import of records and other entities (if required) with associated metadata from a designated information system to the ERKS if requirements pertaining to AP2 have been implemented.</p> <div data-bbox="347 792 1353 1205" style="border: 1px solid black; padding: 5px;"> <p>Note: In case a B/D intends to import records with associated recordkeeping metadata from an information system to its ERKS, the B/D concerned should conduct a mapping of metadata elements and values to be imported with those comparable metadata elements and values specified in RKMS and assess whether they are equivalent and consistent. If not, the B/D concerned should not import these recordkeeping metadata into the ERKS.</p> </div>
Stage 4 - System testing	
16	<p>Plan and conduct system testing including User Acceptance Tests.</p> <div data-bbox="347 1375 1353 1688" style="border: 1px solid black; padding: 5px;"> <p>Note: B/Ds should develop comprehensive and typical test cases to evaluate the compliance of their ERKSs with the requirements of <i>Functional Requirements of an Electronic Recordkeeping System</i>, RKMS and their departmental standards as appropriate. Please carry out Task 16 in conjunction with those specified in paragraphs 2.14 to 2.17 of this document.</p> </div>
17	Conduct IT security risk assessment and audit. In this connection, B/Ds should ensure that security and access control to recordkeeping metadata are also duly assessed.

S/N	Major Task
Stage 5 - System rollout and live-run	
18	<p data-bbox="347 371 1348 456">Conduct import of records, aggregations and other entities (if required) with associated metadata into the ERKS if required.</p> <div data-bbox="347 472 1348 958" style="border: 1px solid #0070C0; padding: 10px; background-color: #D9E1F2;"> <p data-bbox="368 501 469 533">Notes:</p> <p data-bbox="368 562 1327 689">(1) B/Ds should consider performing testing before carrying out import of records, aggregations, other entities (if required) and associated metadata into the ERKS.</p> <p data-bbox="368 719 1327 943">(2) B/Ds should, after the completion of the import process, examine as to whether data integrity is maintained (such as whether metadata elements and values are persistently linked to the associated entities and the metadata values are complete).</p> </div>
19	Plan and launch client roll-out of the ERKS.
20	<p data-bbox="347 1077 1348 1205">Provide user training to help RM staff and records users manage and use the ERKS. As far as recordkeeping metadata are concerned, B/Ds should include the following topics in the training -</p> <p data-bbox="347 1234 1348 1541">(a) the purposes and importance of creation, capture, use, management and maintenance of recordkeeping metadata;</p> <p data-bbox="347 1346 1348 1429">(b) the proper practices and procedures for creation, capture, use, management and maintenance of recordkeeping metadata; and</p> <p data-bbox="347 1451 1348 1541">(c) roles and responsibilities for creation, capture, use, management and maintenance of recordkeeping metadata.</p>
21	Provide user support services (e.g. provision of on-site technical support by the contractor and helpdesk services) to assist records users in using the ERKS including creation, capture and use of recordkeeping metadata.
22	Monitor whether permitted values of metadata elements have been properly created and captured in the ERKS.

S/N	Major Task
Stage 6 - Post-implementation review¹²	
23	Conduct a post-implementation review, consolidate findings, and recommend improvements where appropriate. B/Ds should ensure that the post-implementation review includes a review on the implementation of RKMS and identify areas for improvements.

Evaluating compliance with RKMS

2.14 As set out in **Task 16** in paragraph 2.13 above, B/Ds should evaluate whether their ERKSs comply with the requirements prescribed in *Functional Requirements of an Electronic Recordkeeping System* and RKMS as part of the system testing. As far as RKMS is concerned, comprehensive and typical test cases should be developed to test creation, capture, use, management and maintenance of metadata elements and values in accordance with requirements and rules specified in RKMS. B/Ds should also test import, export or transfer of metadata if their ERKSs have implemented requirements pertaining to AP2, AP3 and/or AP4.

2.15 As a guiding principle, B/Ds should develop test cases to critically examine whether their ERKSs are fully capable of -

- (a) creating, capturing, using, managing and maintaining sufficient, accurate, complete and consistent metadata elements and values in compliance with RKMS to ensure the authenticity, integrity, reliability and usability of records throughout their life cycle;
- (b) ensuring that the ERKS functionality fully integrates with the requirements of RKMS to achieve high efficiency and effectiveness in managing records stored therein;

¹² B/Ds may conduct a review after the completion of each phase if a phased roll-out strategy is adopted.

Example: Metadata elements including 'Title', 'Date time captured', 'Creator name', 'Creator organization name', 'System identifier' and 'Security classification' of a record should be created or captured in an ERKS at the time of capturing the record so as to ensure the authenticity, reliability and integrity of the record. If the ERKS allows those metadata to be created or captured at any time after the capture of the record into the system, this will compromise the purposes set out in section 1.2 of RKMS.

- (c) ensuring that the purposes of metadata elements specified in RKMS are properly fulfilled;

Example: The value of the metadata element 'System identifier' should be unique within an ERKS so as to enable identification of an entity uniquely across the ERKS. In case an ERKS assigns the same value of the 'System identifier' to two entities, it means that this ERKS fails to ensure that the purpose of the metadata element 'System identifier' is fulfilled. Rectification should be carried out to redress the problem.

- (d) persistently maintaining the pre-defined relationships including interdependencies among metadata elements and values and their associated entities as specified in RKMS;
- (e) ensuring that metadata values that **are not changeable** such as 'System identifier' prescribed in RKMS remain unchangeable throughout the life cycle of records;
- (f) ensuring that users are allowed to input or select only permitted value(s) for a metadata element; and

Example: Records users are not allowed to provide a value not in date format for metadata elements such as 'Date sent' and 'Date received'.

- (g) importing, exporting or transferring metadata together with their associated entities by using the pre-defined eXtensible Markup Language (XML) schema to fulfill the business and/or RM purposes of AP2, AP3 and AP4.

2.16 B/Ds should also evaluate whether their specific recordkeeping metadata requirements prescribed in their departmental standards are complied with. In particular, B/Ds should examine whether B/D-specific entities, metadata and encoding schemes in addition to those specified in RKMS will compromise the capabilities of their ERKs to achieve purposes set out from (a) - (g) in paragraph 2.15 above. B/Ds should make timely and proper improvements and/or rectify problems having regard to the test results to ensure compliance with RKMS and B/D-specific recordkeeping metadata requirements.

2.17 As a good RM practice, B/Ds should also assess whether proper RM practices and procedures have been developed and/or should be improved to support proper creation, capture, use, management and maintenance of metadata specified in RKMS.

Example: B/Ds should develop practices and procedures for controlling the updating and revision of metadata elements and values so as to ensure the authenticity, integrity, reliability and usability of records throughout their life cycle.

Monitoring on-going compliance with RKMS

2.18 B/Ds should ensure that their ERKs and the associated RM practices and procedures comply with RKMS. In this connection, B/Ds should formulate an effective governance structure, proper practices and procedures to monitor the on-going compliance of RKMS by RM staff, IT staff, records users, etc. and detect any irregularities at the earliest instance. B/Ds should conduct audits at a regular interval, say one to two years to evaluate the compliance of their ERKs with RKMS and identify improvements.

Part 3 Developing a departmental standard

Introduction

3.1 This Part provides guidelines for B/Ds to develop a departmental standard if required on the basis of RKMS to address their specific RM and/or business needs.

Assessing the need for developing a departmental standard

3.2 As set out in section 6.6 in Chapter 6 of RKMS, B/Ds may develop their departmental standards on the basis of RKMS to address their specific RM and/or business needs in an ERKS. That means B/Ds may extend the requirements of RKMS, e.g. adding additional metadata elements to suit their organisational needs. To facilitate B/Ds to determine as to whether a departmental standard should be developed, it is recommended that B/Ds should examine the following key considerations -

Step	Key consideration
Assess whether there are specific RM and/or business needs	
1	<p>Assess whether the 16 entities and the core set of 80 recordkeeping metadata elements with the associated encoding schemes defined in RKMS are sufficient to meet their specific RM and/or business needs.</p> <div style="border: 1px solid #4a86e8; padding: 5px; margin-top: 10px;"> <p>Note: B/Ds should conduct a gap analysis to identify what additional metadata elements and values, encoding schemes and/or entities are required and why, how and when these additional metadata elements and values, encoding schemes and/or entities should be created, captured, used, managed and maintained in their ERKSs.</p> </div>
2	Assess and determine whether the departmental standard should also be applicable to information systems (including business systems) that manage and store records.

Step	Key consideration
Study resources and implications for developing a departmental standard	
3	Assess the resource implications for developing and maintaining a departmental standard, e.g. procurement of consultancy services to assist in developing the departmental standard.
4	<p>Assess whether requisite RM and IT expertise is available to -</p> <p>(a) develop the departmental standard including both the documentation and an XML schema; and</p> <p>(b) maintain the departmental standard including conducting regular reviews of the departmental standard.</p> <div style="border: 1px solid #4a7ebb; padding: 5px; margin-top: 10px;"> <p>Note: B/Ds are responsible for updating/revising their departmental standards having regard to any changes made to RKMS.</p> </div>
5	Assess whether the anticipated benefits of having a departmental standard to address specific RM and/or business needs outweigh the estimated costs for developing, updating and maintaining it.

Developing a departmental standard

3.3 Upon the assessment of issues set out in paragraph 3.2 above, if it is determined that a departmental standard should be developed on the basis of RKMS, B/Ds must follow the guiding principles, rules and procedures set out in Chapter 6 of RKMS to develop and maintain their departmental standards.

3.4 In developing a departmental standard, it is likely that B/Ds will add requirements on the basis of RKMS to address their specific RM and/or business needs. B/Ds must ensure that the additional requirements are confined to the following permitted scope specified in paragraph 6.6.11 in Chapter 6 of RKMS -

- (a) adding new encoding schemes;
- (b) adding new values for encoding schemes developed by B/Ds;
- (c) adding new properties for encoding schemes developed by B/Ds (this situation would be rare);

- (d) adding new metadata elements;
- (e) adding new properties for metadata elements developed by B/Ds (this situation would be rare);
- (f) adding new entities (this situation would be rare); and
- (g) making changes to, or deletion of, any of the above (B/Ds must not change or delete any part of RKMS save those they have added by customisation).

3.5 B/Ds must not revise or delete any entities, metadata elements and encoding schemes defined in RKMS. In case of doubt, advice should be sought from GRS before finalisation of the departmental standard.

3.6 To guide B/Ds to add encoding schemes, values for encoding schemes and metadata elements specified in (a) , (b) and (d) in paragraph 3.4 above, which are likely to occur in the context of developing a departmental standard on the basis of RKMS, the following table sets out the major tasks and associated steps for reference by B/Ds. **It should be read in conjunction with Chapter 6 of RKMS.** A flowchart of the major tasks is set out at **Appendix II** for reference.

Step	Major task
Task 1: Consolidate requirements of the departmental standard	
1	Consolidate the proposed requirements of the departmental standard based on the findings of the gap analysis set out in Step 1 in paragraph 3.2 above and seek comments from records users.
Task 2: Assess the impacts and estimate resource requirements [Note: Steps 2 - 8 may be carried out concurrently with Steps 9 -14.]	
2	Examine whether the proposed requirements of the departmental standard fall within the scope of permitted changes set out in paragraph 3.4 above. B/Ds should not implement the proposed requirements if they fall beyond the scope of the permitted changes.
3	Examine whether the proposed additional metadata elements and values and/or encoding schemes -

Step	Major task
Task 2: Assess the impacts and estimate resource requirements (continued)	
3	<p>(a) will compromise the purposes of or be in conflict with the metadata elements, encoding schemes and entities specified in RKMS;</p> <p>(b) will jeopardise the authenticity, integrity, reliability and usability of records;</p> <p>(c) comply with relevant legal and regulatory requirements, government regulations and standards; and</p> <p>(d) comply with the Government’s RM policy and requirements and best RM principles.</p> <p>B/Ds should not implement the proposed requirements if they impact on any one of the above.</p> <div data-bbox="347 954 1358 1173" style="border: 1px solid blue; padding: 5px;"> <p>Note: In case a B/D adds additional entities, new properties to a metadata element and new properties to an encoding scheme developed by itself, the B/D concerned should also examine the issues listed above.</p> </div>
4	<p>Examine whether the proposed additional metadata elements and values and/or encoding schemes may have any government-wide implications. If so, B/Ds should submit a request with full justifications to GRS for consideration. If in doubt, B/Ds should seek advice from GRS.</p> <div data-bbox="347 1458 1358 1693" style="border: 1px solid green; padding: 5px;"> <p>Example: If a B/D wishes to add a new metadata element to describe the post titles of all heads of B/Ds, such metadata element may carry government-wide implications.</p> </div> <p>Upon receipt of the request, GRS will examine whether the proposed change should be incorporated in RKMS as appropriate.</p>

Step	Major task
Task 2: Assess the impacts and estimate resource requirements (continued)	
4	<p>Note: In case a B/D wishes to add a new entity, a new property to a metadata element or a new property to an encoding scheme developed by itself and considers that such additions may carry government-wide implications, the B/D should also submit the request with full justifications to GRS for consideration.</p>
5	<p>Examine whether the proposed requirements of the departmental standard are feasible and appropriate.</p> <p>Example: B/Ds should consider whether the use of an encoding scheme is feasible for a new metadata element with reference to paragraphs 6.6.45 to 6.6.57 in Chapter 6 of RKMS.</p>
6	<p>Assess the following impacts of the proposed requirements of the departmental standard if an ERKS has already been in use or is being developed -</p> <p>(a) whether any corresponding changes must be made to existing encoding schemes, metadata elements and entities specified in RKMS and those used in the ERKS;</p> <p>Notes:</p> <p>(1) Entities, metadata elements and encoding schemes are closely inter-related. Values of metadata elements in some case are dependent. Therefore, B/Ds should examine the impacts of the proposed requirements thoroughly before implementing such requirements in their ERKSs.</p> <p>(2) B/Ds must not make any changes to existing encoding schemes, metadata elements and values and entities specified in RKMS.</p>

Step	Major task
Task 2: Assess the impacts and estimate resource requirements (continued)	
6	<p>(b) whether there would be any negative impacts, e.g. causing misunderstanding of the value of a metadata element, on existing values of metadata elements stored in the ERKS;</p> <p>(c) whether changes should be made to system configuration of the ERKS;</p> <div data-bbox="347 622 1358 846" style="border: 1px solid black; padding: 5px;"> <p>Note: B/Ds should ensure that their ERKSs comply with the mandatory functional requirements prescribed in <i>Functional Requirements of an Electronic Recordkeeping System</i> developed by GRS.</p> </div> <p>(d) whether any corresponding changes should be made to other departmental RM processes, procedures and guidelines underpinning the operation of the ERKS;</p> <p>(e) whether substantial customisation of the ERKS will be required to build in B/D-specific metadata elements/values, encoding schemes and entities based on the departmental standard; and</p> <p>(f) whether there are any implications for import, export or transfer of records and other entities with their metadata values.</p> <div data-bbox="347 1285 1358 1653" style="border: 1px solid black; padding: 5px;"> <p>Note: B/Ds should assess whether it is likely to require substantial system customisation or development of a customised program to convert metadata elements in B/D-specific format into RKMS-compliant format for export or transfer of records and other entities with their associated metadata to other B/Ds or to PRO of GRS, and vice versa for import of records and other entities with their associated metadata from other B/Ds.</p> </div>
7	<p>Consider the resources implications for implementing requirements of the proposed departmental standard -</p> <p>(a) resources and expertise required for implementing the departmental standard in an existing ERKS or an ERKS to be developed;</p>

Step	Major task
Task 2: Assess the impacts and estimate resource requirements (continued)	
7	<p>(b) expertise required for maintaining the departmental standard including the customised XML schema; and</p> <p>(c) provision of necessary training to records users, RM staff and IT staff.</p>
Task 3: Determine whether the proposed requirements should be implemented	
8	<p>Review and determine whether all proposed requirements should be taken forward in the departmental standard based on the assessments of issues set out from Steps 2 to 7 above.</p> <div data-bbox="347 875 1356 1238" style="border: 1px solid black; padding: 5px;"> <p>Note: This task will be conducted throughout the development of the departmental standard but it is presented here before the development of relevant documentation of the departmental standard so as to enhance the awareness of its importance. B/Ds should determine whether all proposed requirements should be incorporated in the departmental standard at the earliest instance to avoid subsequent abortive work.</p> </div>
Task 4: Draw up the relevant documentation of the departmental standard	
9	<p>Follow Step 10 for adding new encoding schemes, Step 11 for adding new values for B/D-specific encoding schemes, and Step 12 for adding new metadata elements. Then go to Step 13.</p>
10	<p><u>Adding a new encoding scheme</u></p> <div data-bbox="347 1581 1356 1697" style="border: 1px solid black; padding: 5px;"> <p>Note: B/Ds may add a new encoding scheme which does not have an equivalent one defined in RKMS.</p> </div> <div data-bbox="347 1720 1356 2018" style="border: 1px solid black; padding: 5px;"> <p>Example: B/Ds may add an encoding scheme to specify values for the metadata element 'Location - home' defined in RKMS. As no equivalent encoding scheme has been defined in RKMS, B/Ds should take this as a new encoding scheme.</p> </div>

Step	Major task
Task 4: Draw up the relevant documentation of the departmental standard (continued)	
10	<p>Define the properties of a new encoding scheme in accordance with Table 7 in Chapter 4 of RKMS. In this connection, B/Ds should -</p> <p>(a) assign a unique URI as the Element ID of the new encoding scheme in accordance with the specified format of URI set out in Chapter 4 of RKMS and maintain the URI counter according to the rules set out in Chapter 6 of RKMS;</p> <p>(b) assign a simple name and an XML name to the new encoding scheme in accordance with the naming conventions set out in Chapter 4 of RKMS;</p> <div data-bbox="347 875 1358 1128" style="border: 1px solid black; padding: 5px;"> <p>Note: The proposed simple name and XML name of the new encoding scheme should be different from the simple names and XML names of encoding schemes defined in RKMS/departmental standard.</p> </div> <p>(c) set out clearly the definition of the new encoding scheme;</p> <div data-bbox="347 1205 1358 1402" style="border: 1px solid black; padding: 5px;"> <p>Note: The definition of the new encoding scheme must not overlap with the existing encoding schemes defined in RKMS/departmental standard.</p> </div> <p>(d) determine the owner of the encoding scheme;</p> <p>(e) assign the format of the encoding scheme;</p> <div data-bbox="347 1541 1358 1910" style="border: 1px solid black; padding: 5px;"> <p>Note: It is recommended that B/Ds should make reference to international standards as far as practicable to define the syntax of values for a metadata element. For example, the date and time related elements defined in RKMS are expressed in a format that complies with ISO 8601: Data elements and interchange formats - Information interchange - Representation of dates and times and W3C XML Schema Part 2: datatypes Second Edition.</p> </div>

Step	Major task
Task 4: Draw up the relevant documentation of the departmental standard (continued)	
10	<p>(f) determine the form of the encoding scheme (such as a simple list or a hierarchical encoding scheme) according to the rule set out in paragraph 6.6.49 in Chapter 6 of RKMS;</p> <div data-bbox="347 562 1358 703" style="border: 1px solid black; padding: 5px;"> <p>Note: B/Ds should assess the impacts of the form of the new encoding scheme on the functionality of their ERKs.</p> </div> <p>(g) determine which metadata element to which the new encoding scheme should be applied and record the title of the new encoding scheme in the element property 'Values' of the relevant metadata element;</p> <div data-bbox="336 913 1353 1816" style="border: 1px solid black; border-radius: 15px; padding: 10px;"> <p>Example: If a B/D applies a new encoding scheme such as 'Home location encoding scheme' to the metadata element 'Location - home' defined in RKMS, the permitted values of the metadata element 'Location - home' will then be governed by this B/D-specific 'Home location encoding scheme'. For this metadata element 'Location - home' with a B/D-specific encoding scheme applied, the B/D concerned should -</p> <ol style="list-style-type: none"> (1) assign a unique B/D-specific URI as the Element ID of the metadata element 'Location - home' in accordance with the specified format of URI set out in Chapter 4 of RKMS, and maintain the URI counter according to the rules set out in Chapter 6 of RKMS; and (2) record 'Home location encoding scheme' in the element property 'Values' of the metadata element 'Location - home'. </div> <p>(h) assign permitted values for the encoding scheme where applicable; and</p>

Step	Major task
Task 4: Draw up the relevant documentation of the departmental standard (continued)	
10	<p data-bbox="368 434 469 465">Notes:</p> <p data-bbox="368 501 1331 645">(1) B/Ds should determine whether the permitted values should be a set of constrained values i.e. a controlled vocabulary list, or predefined syntax for values of the metadata element.</p> <p data-bbox="368 680 1331 878">(2) B/Ds should leave the property ‘Values’ blank if only the syntax for values is defined. See examples ‘Event date time encoding scheme’ and ‘Event time encoding scheme’ defined in RKMS.</p> <p data-bbox="368 913 1331 1281">(3) B/Ds should consider whether controlled vocabularies developed by external bodies could be used in developing a set of constrained values. For example, ‘Government B/D encoding scheme’ defined in RKMS uses the ‘HKSARG Department Code’ developed and maintained by OGCIO to ensure interoperability of metadata among B/Ds and among different IT systems.</p> <p data-bbox="368 1317 1187 1348">(4) See Step 11 for assigning values to encoding scheme.</p> <p data-bbox="347 1397 1353 1473">(i) provide information to the properties ‘Example’ and ‘Comment’ for the new encoding scheme where appropriate.</p>
11	<p data-bbox="352 1518 1235 1550"><u>Adding new values for encoding schemes developed by B/Ds</u></p> <p data-bbox="347 1581 1356 1657">B/Ds may add new values for encoding schemes developed by themselves. In this connection, B/Ds should -</p> <p data-bbox="347 1688 1353 1774">(a) define values in accordance with the principles set out from paragraphs 6.6.50 to 6.6.57 in Chapter 6 of RKMS; and</p> <p data-bbox="368 1814 1331 1899">Note: B/Ds should ensure that the values of the B/D-specific encoding schemes are mutually exclusive.</p>

Step	Major task
Task 4: Draw up the relevant documentation of the departmental standard (continued)	
11	<p>(b) assess the impacts on existing values of metadata elements stored in the ERKS (if it has been in use) prior to introducing new permitted values.</p> <p>Example: B/Ds should assess whether the new and existing values are mutually exclusive.</p>
12	<p>Adding new metadata elements</p> <p>Note: B/Ds may add a new metadata element which does not have an equivalent one defined in RKMS.</p> <p>Example: A B/D proposes to add a metadata element ‘District offices’ to describe the locations of their offices on Hong Kong Island, Kowloon and the New Territories. This is a new metadata element.</p> <p>Define the properties of a new metadata element in accordance with Table 6 in Chapter 4 of RKMS. In this connection, B/Ds should -</p> <p>(a) assign a unique URI as the Element ID of the metadata element in accordance with the specified format of URI set out in Chapter 4 of RKMS, and maintain the URI counter according to the rules set out in Chapter 6 of RKMS;</p> <p>(b) assign a simple name and an XML name in accordance with the naming conventions set out in Chapter 4 of RKMS;</p> <p>Note: The proposed simple name and XML name of the new metadata element should be different from the simple names and XML names of metadata elements defined in RKMS/departmental standard.</p> <p>(c) set out clearly the definition and purpose of the new metadata element;</p>

Step	Major task
Task 4: Draw up the relevant documentation of the departmental standard (continued)	
12	<div data-bbox="347 412 1353 770" style="border: 1px solid #0070c0; padding: 5px;"> <p>Note: The definition of the new metadata element must not overlap with existing metadata elements defined in RKMS/departmental standard. B/Ds should also review the definitions of existing metadata elements to assess and determine whether corresponding changes are required to ensure that all metadata elements in their departmental standards are mutually exclusive in definition.</p> </div> <p data-bbox="347 792 1353 882">(d) determine which entity(ies) the new metadata element should be applied to;</p> <div data-bbox="347 904 1353 1451" style="border: 1px solid #0070c0; padding: 5px;"> <p>Note: If a B/D adds a new metadata element, e.g. ‘Language’, to an entity, e.g. Record entity, defined in RKMS, the Record entity in the B/D concerned would possess a B/D-specific subset of metadata elements. To uniquely identify the Record entity in the B/D (which is different from the Record entity defined in RKMS in terms of the subset of metadata elements that the entity possesses), the B/D concerned should assign a unique B/D-specific URI as the Element ID of the Record entity in the B/D in accordance with the specified format of URI set out in Chapter 4 of RKMS, and maintain the URI counter according to the rules set out in Chapter 6 of RKMS.</p> </div> <p data-bbox="347 1473 1353 1608">(e) assign values of the metadata element which should either be a format of values, e.g. ‘string’, or permitted value(s) with reference to an encoding scheme as appropriate;</p> <div data-bbox="347 1630 1353 1908" style="border: 1px solid #0070c0; padding: 5px;"> <p>Notes:</p> <p>(1) See paragraphs 6.6.45 to 6.6.57 in Chapter 6 of RKMS for guidelines to determine whether an encoding scheme should be developed for controlling the syntax or values of a new metadata element.</p> </div>

Step	Major task
Task 4: Draw up the relevant documentation of the departmental standard (continued)	
12	<p data-bbox="368 427 469 465"><u>Notes:</u></p> <p data-bbox="368 490 1334 1149">(2) If multiple encoding schemes are applied to a new metadata element or an encoding scheme is applied to a new metadata element to govern permitted values under certain circumstances but not all, B/Ds should set the property 'Values' of the metadata element as 'string' and provide the name(s) of the encoding scheme(s) in the property 'Comments' of the metadata element. B/Ds should leave the property 'Applicability' of the encoding scheme blank. See the metadata element 'Creator organization name' defined in RKMS as an example. Its value is governed by the 'Government B/D encoding scheme' when the creator organisation is a B/D. Records users are allowed to provide a free text value when the creator organisation is a non-government organisation.</p> <p data-bbox="347 1189 1356 1272">(f) assign a default value as appropriate for the metadata value under AP1 (i.e. use of ERKS);</p> <p data-bbox="347 1301 1356 1429">(g) consider and determine the mode(s) of creation, capture or inheritance of the value(s) of the metadata element and the sources of the values for AP1;</p> <p data-bbox="368 1473 469 1512"><u>Notes:</u></p> <p data-bbox="368 1536 1334 1619">(1) System generation, automatic capture or inheritance of metadata values are preferred modes.</p> <p data-bbox="368 1644 1334 1771">(2) B/Ds should consider whether automatic capture of metadata values can be achieved through use of forms, templates, or integration of RM processes with business processes.</p> <p data-bbox="368 1796 1334 1977">(3) B/Ds should consider whether system configuration and/or customisation are required to facilitate system generation, automatic capture or inheritance of metadata values in their ERKSs.</p>

Step	Major task
Task 4: Draw up the relevant documentation of the departmental standard (continued)	
12	<p>(h) assign the obligation level of the metadata for AP1 in accordance with the permitted levels of obligation set out in Chapter 4 of RKMS;</p> <p>(i) assign the occurrence of metadata values for AP1;</p> <div data-bbox="347 622 1358 891" style="border: 1px solid black; padding: 5px;"> <p>Note: B/Ds should ensure consistency between the obligation level of a metadata element and its occurrence. For instance, if the obligation level of a metadata element in AP1 is ‘mandatory’, the occurrence in AP1 could not be ‘None’, ‘None or one’ or ‘None, one or many’.</p> </div> <p>(j) assign the obligation level and occurrence of the metadata values for AP2 and/or AP3 if considered necessary;</p> <div data-bbox="347 1021 1358 1240" style="border: 1px solid black; padding: 5px;"> <p>Note: B/Ds may assign the obligation level and occurrence of the metadata values for AP3 for the purpose of exporting or transferring records with associated recordkeeping metadata between ERKs within their organisations.</p> </div> <p>(k) provide information to the property ‘Use conditions’ for the new metadata element;</p> <div data-bbox="347 1370 1358 1671" style="border: 1px solid black; padding: 5px;"> <p>Note: If the obligation level of a metadata element is ‘conditional mandatory’, a B/D must set out the conditions and rules in the property ‘Use conditions’ of the metadata element to govern under what circumstances a value(s) must be provided to the metadata element.</p> </div> <p>(l) provide information to the property ‘Comments’ for the new metadata element where appropriate;</p>

Step	Major task
Task 4: Draw up the relevant documentation of the departmental standard (continued)	
12	<p>(m) determine whether there is interdependency between the new metadata element and other metadata elements and define the relationship in the property 'Comments'; and</p> <p>(n) add the new metadata element and its occurrence under AP1 in the table of the entity to which the metadata element is to be applied (Annex 2 to RKMS).</p>
13	<p>Develop the XML schema for the departmental standard on the basis of the XML schema provided in RKMS.</p> <div data-bbox="347 846 1356 1066" style="border: 1px solid black; padding: 5px;"> <p>Note: B/Ds should maintain the consistency and integrity of the XML schema with related files such as XSLT and CSS files and other documentation of the departmental standard. See Chapter 5 and Chapter 6 of RKMS for more details.</p> </div>
14	<p>Finalise documentation for the departmental standard.</p> <div data-bbox="347 1167 1356 1610" style="border: 1px solid black; padding: 5px;"> <p>Notes:</p> <p>(1) B/Ds should maintain the consistency and integrity of their departmental standards. See Chapter 6 of RKMS for more details.</p> <p>(2) B/Ds should clearly document the differences between their departmental standards and RKMS to facilitate future updating or revision of their departmental standards having regard to changes made to RKMS by GRS.</p> </div>
Task 5: Approve and publish the departmental standard	
15	Seek proper endorsement of the departmental standard.
16	Assign a version number for the departmental standard.
17	Publish the departmental standard.

Step	Major task
Task 6: Implement requirements of the departmental standard in the ERKS	
18	Follow Tasks 9 - 22 of Part 2 above to implement requirements of the departmental standard in conjunction with those specified in RKMS in the ERKS.
Task 7: Provide training to staff members	
19	<p>Arrange training for records users, RM staff and other officers as appropriate to ensure that they fully understand and comply with the departmental standard.</p> <div data-bbox="347 763 1353 891" style="border: 1px solid black; padding: 5px;"> <p>Note: B/Ds may consider conducting the training in conjunction with Task 20 of Part 2.</p> </div>

Governance of a departmental standard

3.7 B/Ds are responsible for managing, maintaining, reviewing and updating their departmental standards. B/Ds should ensure that their departmental standards are consistent with RKMS and are in line with the Government's RM policy and requirements.

Appendix I

Use of RKMS to implement mandatory records management requirements specified in General Circular No. 2/2009

Introduction

The mandatory RM requirements promulgated vide General Circular (GC) No. 2/2009 entitled '**Mandatory Records Management Requirements**' have a wide coverage of RM functions and activities common to B/Ds. This appendix illustrates how RKMS assists B/Ds in complying with mandatory RM requirements prescribed in the said GC in an ERKS.

Maintaining an accurate records inventory

2. GC No. 2/2009 stipulates that B/Ds should, among others, maintain an accurate records inventory of files (i.e. folders) including their titles, file reference numbers, dates of opening and closure and storage locations. B/Ds should maintain an accurate records inventory of electronic and non-electronic records managed by and stored in an ERKS.

3. Accordingly, RKMS has defined relevant metadata elements including 'Title', 'Classification code', 'Date opened', 'Date closed' and 'Location - home' to support B/Ds to document essential information about folders in the form of recordkeeping metadata and generate an accurate records inventory as and when required in an efficient and effective manner.

Records classification

4. Records should be organised systematically in a records classification scheme as required in GC No. 2/2009. B/Ds should adopt the standard classification scheme for administrative records promulgated by GRS and develop their own records classification scheme(s) for programme records.

5. RKMS has incorporated such requirements to support B/Ds to organise and manage records in a hierarchical records classification scheme(s) in an ERKS by -

- (a) defining entities of a records classification scheme (i.e. **Records Classification Scheme, Class, Sub-class, Folder, Sub-folder, Part** and **Record**) and specifying their relationships in the entity-relationship model and XML schema to facilitate B/Ds to develop a hierarchical records classification scheme(s) in an ERKS;
- (b) specifying metadata elements including 'Classification code' and 'Classification path' to describe the position of an aggregation such as a folder or a part in a records classification scheme; and
- (c) supporting RM staff/system administrators to assign security and access control to aggregations and records through inheritance of metadata.

Example: A part of an electronic folder may inherit the value 'RESTRICTED' from the metadata element 'Security classification' of its parent folder.

Records retention and disposal

6. In accordance with GC No. 2/2009, B/Ds should establish proper records retention and disposal schedules for programme records and arrange timely disposal of time-expired administrative and programme records. RKMS facilitates B/Ds' compliance with the mandatory RM requirements by -

- (a) specifying relevant entities, namely **Retention and Disposal Schedule, Disposal Hold, Event Trigger** and **Mandate**; and metadata elements such as 'Retention period' and 'Disposal action' to support RM staff to establish retention and disposal schedules in an ERKS to meet B/Ds' RM and/or business needs;
- (b) specifying metadata element 'Relation - GRS disposal schedule identifier' to document the authority of retention and disposal schedules; and
- (c) supporting RM staff to apply a records retention and disposal schedule to multiple folders through inheritance of metadata of 'Relation-entity' from their parent sub-class.

7. B/Ds should dispose of records in a timely manner and transfer records with archival value to PRO of GRS according to the approved records retention and disposal schedules. By implementing the requirements of RKMS and proper configuration of an ERKS, the ERKS is able to support records managers and other RM staff to take the following actions to retain and dispose of records in an auditable and systematic manner -

- (a) taking appropriate disposal actions upon the expiry of approved retention periods of folders;
- (b) documenting retention periods and disposal actions of folders;
- (c) identifying non-electronic records in hybrid folders due for disposal;
- (d) transferring records with archival value and their associated metadata to PRO of GRS in accordance with requirements pertaining to AP4 of RKMS;
- (e) documenting disposal actions of folders in event history objects in addition to recording such actions in audit trails of the ERKS; and
- (f) generating reports for folders due for disposal so that prompt actions can be taken to arrange for their disposal.

Proper custody and storage of records

8. B/Ds should put in place appropriate arrangements to ensure safe custody of records in accordance with paragraphs 21 to 23 of GC No. 2/2009. Records should be stored in such a manner so as to facilitate users' access and protect them from unauthorised access, use, disclosure, removal, deterioration, loss or destruction.

9. RKMS defines metadata elements including 'Security classification' (of records) and 'Security clearance' (of a user) to support assignment of security and access control to aggregations and records through inheritance of metadata for proper custody of records.

10. For B/Ds that have stored inactive physical parts (of files) in the Records Centres operated by GRS, RKMS specifies metadata elements 'GRS box item number', 'GRS box number' and 'GRS deposit identifier' to document

essential information about those parts to support B/Ds' retrieval of physical parts from the Records Centres of GRS.

Protecting vital records

11. GC No. 2/2009 stipulates that B/Ds should draw up an action plan to establish a vital records protection programme to properly protect vital records.¹³ To support B/Ds to protect vital records, RKMS has defined the metadata element 'Vital record status' to help B/Ds identify vital records stored in their ERKs for implementing proper protection.

¹³ Vital records are those records containing information essential to the continued and effective operation of an organisation during and after an emergency or disaster.

Major tasks in developing a departmental recordkeeping metadata standard

The following flowchart summarises the major high-level tasks in developing a departmental standard by B/Ds to meet their specific RM and/or business needs. Please refer to paragraph 3.6 of **Part 3** for details.

