Herefordshire Council

Reference number	
Approved by	
Date approved	
Version	**1.2**
Last revised	**May 2018**
Review date	**May 2021**
Category	**Information Architecture**
Owner	**Information and Records Management**
Target audience	**All Staff**

ORGANISATIONAL INFORMATION MODEL

OWNERSHIP, CORE COMPONENTS AND LIFECYCLE MANAGEMENT

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1 Document Summary

1.1 Overview

An organisational information model has been developed for Herefordshire Council to provide a foundation for organisational data to be described, connected, maintained and consumed in a standardised manner.

This model has been developed in accordance with a number of organisational requirements:

- All organisational data can be described by the model.
- Where possible, data is not duplicated, but held in unique data repositories.
- Metadata specific to a data entity is held against that item, rather than being duplicated across multiple items.
- Relationships between data are clearly indicated by standardised indicators held in metadata against each item. Central to the model is the Local Government Services List (LGSL), an international functional services schema, which all data is categorised by.
- All data has a business owner responsible for its maintenance. Ownership of all data is clearly identified using the LGSL categorisation, rather than organisational structure.
- The model contains a series of metadata "components" that describe lifecycle, security, relationships, ownership and purpose of an item using standardised schema.
- The model is implemented via organisational "middleware", through which all systems communicate. Where possible, systems use the model schemas directly to describe data, removing the need for mapping.

1.2 Document Scope

The purpose of this document is to detail the following elements:

- Organisational Ownership of Information
- Organisational Information Model – Entity Types and Core Metadata Components
- Information Lifecycle Management

This document covers the core OIM only, and does not detail entity- or service-specific metadata elements, assignment of the core OIM to specific entity types, or specific implementation for data repositories. These additional aspects are developed on a per-project basis and are detailed elsewhere.

2 Organisational Ownership of Information

2.1 Overview

A fundamental issue with assignment of responsibility and ownership of information across organisations is that ownership models tend to be based on the organisational structure in its current state.

This means that when areas of an organisation undergo transformation, ownership can become outdated, incorrectly assigned, assigned to multiple owners or in some cases can become detached completely from organisational control.

The organisational information model (OIM) for Herefordshire Council seeks to address this fundamental issue by detaching ownership from organisational structure. Instead, ownership is allocated to functional service delivery, using a nationally controlled core schema of clearly defined public sector functional services.

2.2 Local Government Services List (LGSL)

Functional services are defined by the Local Government Services List, a nationally controlled schema within the ESD Business Model that provides standardised definitions of functional services delivered by UK public sector bodies.

This allows the services that the organisation delivers to be described in a manner not only meaningful internally, but standardised and comparable to other local authorities.

Figure 1: example of an LGSL functional service definition

2.3 Ownership of Information

All organisational information described by the organisational information model is required to carry an LGSL identifier to show the functional service it belongs to, as this allows a "package" of data to be assigned uniquely to each functional service, and forms the heart of the organisational information model.

For this reason, an LGSL identifier is a mandatory requirement for any information resource (with the exception of user), and no resource should exist without one.

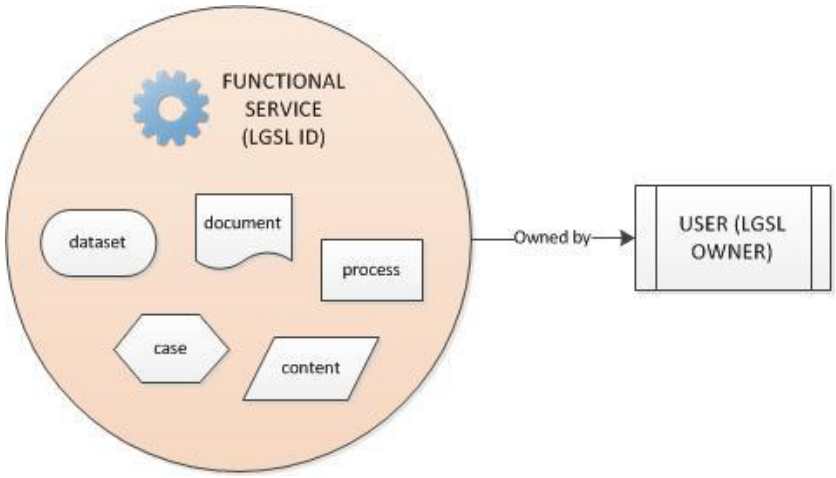

Figure 2: assignment of "package" containing multiple entity resources to a single LGSL owner

2.4 Associating Functional Service Delivery with Organisational Structure

2.4.1 Organisational Service Provision and Allocation

The initial stage is to identify all functional services the organisation is responsible for delivering, from the standardised LGSL list. This creates a "pool" of functional services that completely describe all of the services that are provided by the organisation.

Responsibility for each individual functional service, and the data allocated to it, is then assigned to a unique owner within the organisational structure.

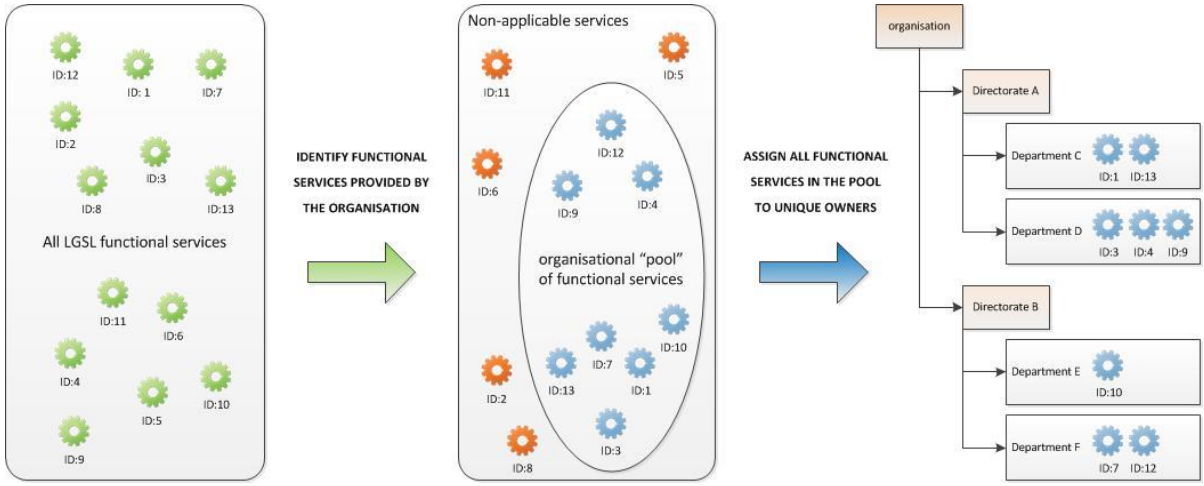

Figure 2: Allocating LGSL services to an organisational pool and structure

2.4.2 Changing Organisational Structure

If the organisational structure changes, the pool of functional services remain the same, but ownership of individual functional services (and all associated data) is reassigned to the new organisational area as one complete package.

This ensures that no matter the changes to the organisation, data is always re-associated correctly with its unique owner within the new structure.

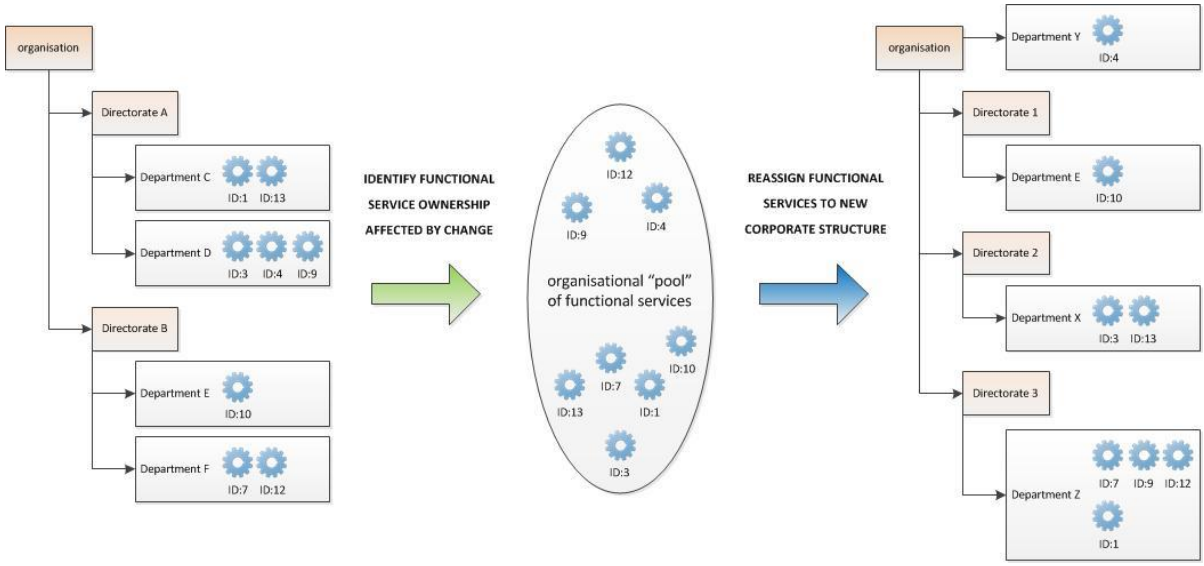

Figure 1: re-assignment of LGSL services to a new organisational structure

If the functional service in question ceases to be delivered by the organisation, then it is removed from the organisational pool and all information associated with it can be identified and disposed of correctly, preventing outdated and unassigned information from persisting.

Likewise, if the delivery of the organisation expands to include a new functional service, then this is added to the organisational pool, and ownership can be assigned and controlled through the same process.

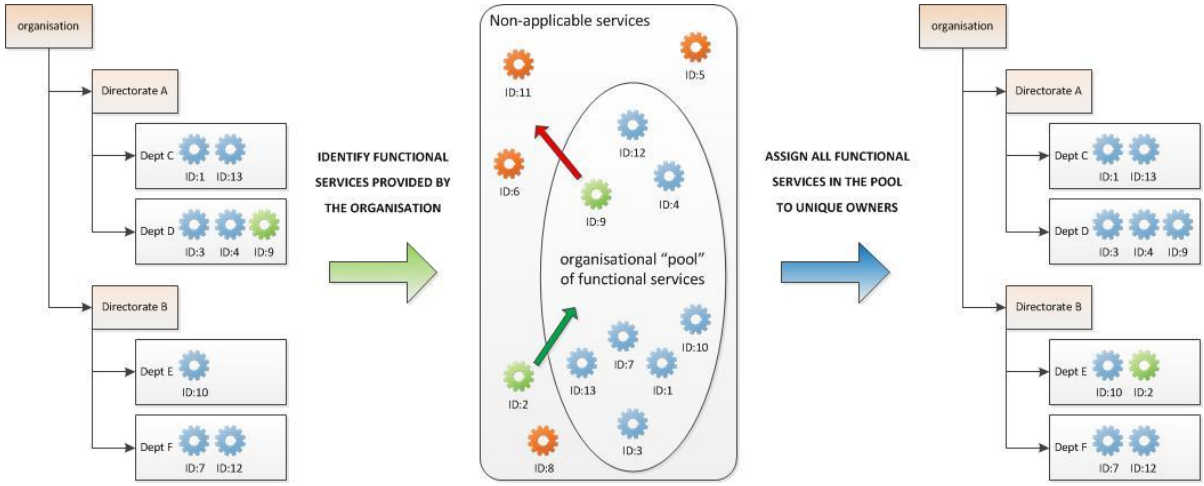

Figure 2: removal and addition of LGSL services to the organisational pool and structure

2.5 Ownership Governance and ESD Toolkit

Given the potentially wide-ranging impacts of change in LGSL ownership on multiple information entity types, and the mandatory requirement for all resources to carry a standardised LGSL identifier, it is key that ownership governance is carried out at an organisational level.

The tool for ownership governance is the ESD Toolkit, to which Herefordshire Council is a subscriber. This provides an easily-managed route to maintaining LGSL association and assignment for the organisation, and it is used as the "master copy" of the organisational ownership of LGSL identifiers. The Information and Records Management are custodians of the Herefordshire LGSL data.

3 Organisational Information Model

3.1 Overview

The Organisational Information Model (OIM) for Herefordshire Council allows description of all organisational information in a consistent and standardised manner, and is divided into two sections:

- Core entity types: allows categorisation of information resources by distinct generic types.
- Core metadata model: provides a core standardised metadata model used for describing the information management lifecycle of organisational resources consistently.

3.2 Entity Types

Resources are split into 7 distinct entity types, each with their own characteristics and usage.

- All resources of each entity type are identified by an LGSL ID, which indicates the ownership of the resource.
- All resources of each entity type use elements from components of the organisational metadata model (section 3.3) where relevant, to describe various aspects of the lifecycle of the resource consistently.
- Additional metadata specific to each entity type can be uniquely held against resources of that type.

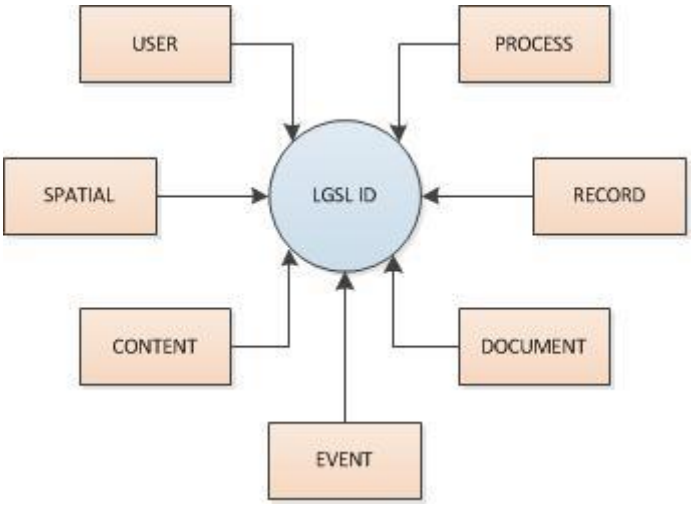

Figure 6: OIM entity types

3.2.1 Content

This entity relates to structured informational content, primarily held in the Content Management System (CMS) for consumption. Examples include web content, knowledge base, FAQs, intranet content. Content-specific metadata is uniquely held against content.

3.2.2 User

This entity relates to users, and user groups, and is primarily held in Active Directory. User roles, LGSL ownership, organisational structure are uniquely held against users.

3.2.3 Record

This entity relates to records or cases held in case management systems. Examples are Civica records (environmental cases), Frameworki (social care cases), and CRM (customer records). A subset of the record entity is the “wrapper”, used to group or reference resources in specific implementations. Case-specific metadata is uniquely held against records.

3.2.4 Document

This entity relates to unstructured content, primarily held as documents in the EDRMS. Document-specific metadata is uniquely held against documents.

Note that there are separate records management definitions for *record* and *document* within the profession and within EDRMS.

3.2.5 Process

This entity relates to processes used to describe a series of steps required for transforming a data input into an output, primarily held in the CRM. Metadata specifically describing the process is uniquely held here.

3.2.6 Spatial

This entity relates to spatial datasets such as in GIS and the features they contain. Spatial-specific metadata is uniquely held against features.

3.2.7 Event

This entity relates to events used to describe actions. These may be held in a number of locations, and are primarily used to construct an audit history of changes to a resource. Event- specific metadata is uniquely held against events (such as create, delete, move).

3.3 Core Metadata Model

This section of the OIM comprises of a series of core metadata components, each describing a complete “package” of metadata elements with a specific purpose.

Elements from these core components are applied consistently to all organisational information resources where relevant, to ensure all data is described using the same metadata elements and with matching definitions according to purpose.

The purposes of the components are to:

- Provide a detailed standardised description of each entity resource
- Provide classification (and therefore ownership) of the resource
- Describe the lifecycle of the resource and its current status within that cycle

3.3.1 Metadata Components

The model consists of the following components:

- Descriptive and Date
- Capture and Technical
- Classification
- Versioning and Relationships

- Security and Redaction
- Accessibility and Licence
- Rights and Data Protection
- Declaration
- Modification and Completion
- Retention and Review
- Disposition
- Preservation and Archiving

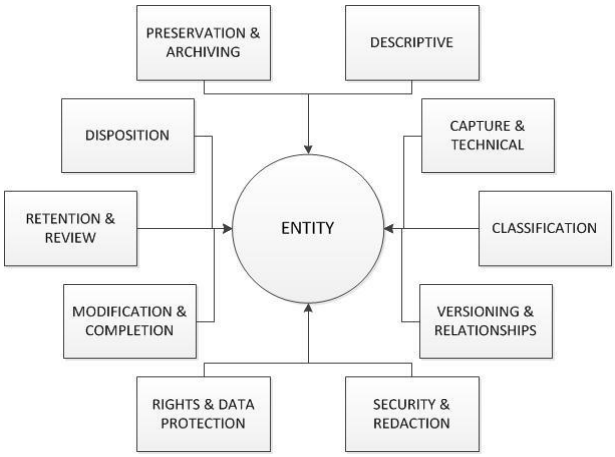

Figure 3: OIM metadata components

Where possible, components make use of elements from established standardised schema, to ensure maximum compatibility both internally and for external use.

This also ensures that, from a future perspective, elements from an outmoded standard schema can easily be mapped to a superseding standard.

Where a standardised schema is not available, a controlled schema curated by the organisation is used, with the intention of being superseded once a standardised schema is available.

Where metadata elements specific to particular functional services are required, it is recommended that industry-standard schemas are employed to describe these.

3.3.2 Included Schemas

The core components currently make use of the following standardised schemas:

3.3.2.1 Dublin Core (DC)

The Dublin Core (DC) metadata standard is an internationally recognised schema for describing common aspects of data. The OIM makes extensive use of both qualified Dublin Core and "classic" Dublin Core standardised as ISO Standard 15836:2009.

Dublin core elements are identified by the prefix "DCTERMS:".

Information on the terms in the Dublin Core schema can be found at http://www.dublincore.org/documents/dcmi-terms .

3.3.2.2 The National Archives (TNA)

The National Archives (TNA) schema is traditionally used to describe records management, but has been employed in part in this model to describe various aspects of information lifecycle management for all entity types. TNA elements are identified by the prefix "TNA.".

Information on the TNA schema can be found at:
http://www.nationalarchives.gov.uk/information-management/default.htm

3.3.2.3 The e-Government Metadata Standard (eGMS)

The eGMS schema describes a standardised element set for use by public sector local authorities. eGMS elements are identified by the prefix “eGMS.”.

Information on the eGMS can be found at:
http://interim.cabinetoffice.gov.uk/govtalk/schemasstandards/metadata/egms_31.aspx

3.3.2.4 ANSI/NISO Z39.87

Elements from the National Information Standards Organization (NISO) - Technical Metadata for Digital Still Images (ANSI/NISO Z39.87) schema are incorporated to describe technical components of the information model for images.

For practical purposes, it is suggested that a subset of the NISO elements can be used to describe a technical “profile” for captured images separately constructed from more detailed elements from the schema.

Elements from ANSI/NISO Z39.87 are identified by the prefix “NISO.”.

Information on ANSI/NISO Z39.87 can be found at:
http://www.niso.org/apps/group_public/project/details.php?project_id=69.

3.3.2.5 PREMIS

Elements from the PREMIS schema are incorporated to describe preservation components of the information model.

Elements from PREMIS are identified by the prefix “PREMIS”.

Information on PREMIS can be found at:

http://www.premis.org/ .

3.3.2.6 Local Government Business Model (LGBM)

The Local Government Business Model (LGBM) is a collection of interlinked schemas for use by public sector bodies. No elements are defined directly by the LGBM, but instead the OIM makes extensive use of the standardised LGBM conceptual identifier lists for resource classification.

Information on the LGBM can be found at: http://standards.esd.org.uk/LGBM.aspx

3.3.2.7 Herefordshire Council and NHS Herefordshire Proprietary Schema (HC)

Where elements are required that cannot be obtained from existing standardised schema, they are included in an organisational schema proprietary to Herefordshire council and NHS Herefordshire. These elements tend to be for internal use only, and are identified by the prefix “HC.”.

3.3.3 Schema Element Cross-Mapping

Where possible, elements that have matching definitions across multiple schemas have been mapped to indicate compatibility. This allows elements to be described against the

resource using one primary schema in a manner that can then be translatable to additional schemas via transformation through middleware.

Where multiple schema instances of an element exist, the primary schema should be chosen in order of preference based on stability, compatibility, and standardisation. The order of preference for currently included schema in the OIM is as follows:

1. Dublin Core
2. eGMS
3. NISO
4. TNA
5. HC (proprietary)

3.3.4 Entity and Service-Specific Schemas

Although this document only lists the core schema to describe generic entity resource lifecycle, the OIM can be expanded to include schemas that describe elements specific to entity types, e.g. FOAF for user entity resources or Gemini for spatial entity resources, or specific to functional service delivery, e.g. PARSOL for planning functional services.

Elements that are common to both the additional schema and the core schema can be mapped for transformation purposes.

4 Information Lifecycle Management

Every resource makes use of components from the core metadata model outlined in section 3.3 to fully describe both the resource itself and its lifecycle. The extent to which elements are used from the model is determined by the resource's entity type. Specific usage of model elements by entity type is detailed separately from this document.

This section details the usage and elements contained in each of the model components individually.

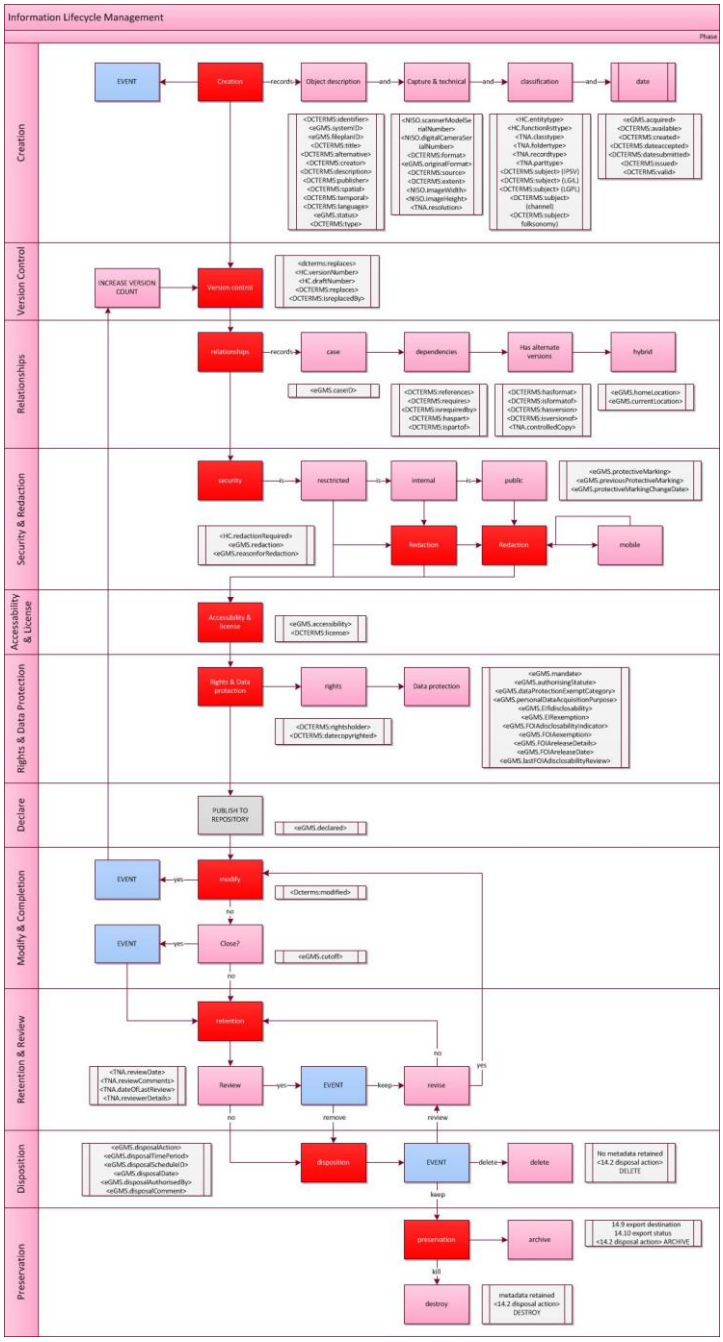

Figure 7: Complete ILM workflow.

4.1 Creation

This stage contains the elements that provide the initial description of the resource upon its creation.

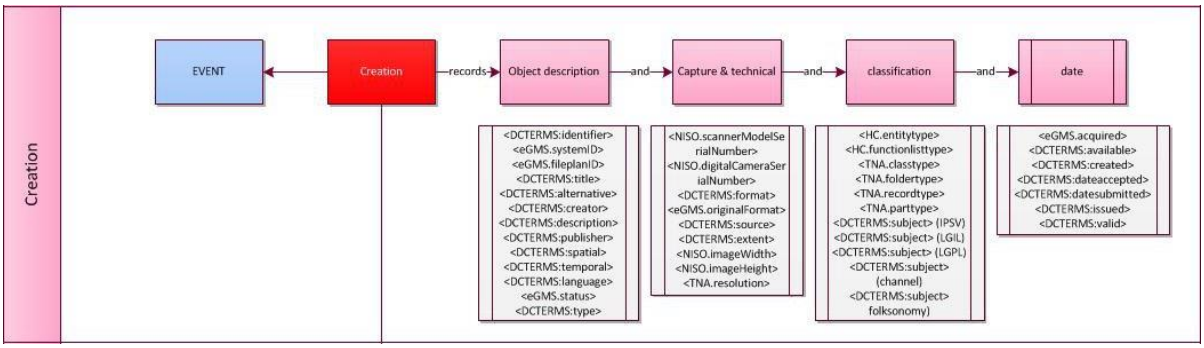

Figure 8: Creation stage

These fall into four broad groups:

- Descriptive
- Date Elements
- Capture andTechnical
- Classification

4.1.1 Descriptive

The descriptive component contains elements that give a baseline profile for the resource, such as the GUID, title, description, and author. Most descriptive elements are mandatory for all resources.

4.1.1.1 Descriptive Elements

The descriptive profile is described using the following elements:

4.1.1.1.1 Identifier

Element	DCTERMS:identifier
Value	GUID/URI
Scheme	DCTERMS.URI
Description	indicates the unique identifier for the resource.
Notes	For resources made available for public consumption, identifiers should be represented as URIs where possible.
DC: Maps to	http://purl.org/dc/terms/identifier
TNA: Maps to	1. IDENTIFIER

4.1.1.1.2 System ID

Element	eGMS.systemID
Value	GUID
Scheme	-
Description	indicates the system identifier for the resource.
Notes	This element is preferred as the same GUID value as for *dcterms:identifier*, but can be expressed as a proprietary system ID where this is not suitable.
DC: Maps to	-
TNA: Maps to	1.1 systemID

4.1.1.1.3 Fileplan ID

Element	eGMS.fileplanID
Value	ID
Scheme	-
Description	indicates the fileplan location for the resource. This element is currently specific to the Document entity in the EDRMS.
Notes	
DC: Maps to	-
TNA: Maps to	1.2 fileplanID

4.1.1.1.4 Title

Element	DCTERMS:title
Value	Text
Scheme	-
Description	Indicates the title of the resource
Notes	User completed field
DC: Maps to	http://purl.org/dc/terms/title
TNA: Maps to	2. TITLE

4.1.1.1.5 Alternative Title

Element	DCTERMS:alternative
Value	Text
Scheme	-
Description	Indicates the alternative title of the resource
Notes	User completed field, that provides a secondary shortened or localised title.
DC: Maps to	http://purl.org/dc/terms/alternative
TNA: Maps to	-

4.1.1.1.6 Creator

Element	DCTERMS:creator
Value	GUID
Scheme	-
Description	Indicates the creator of the resource
Notes	Preference is to use the GUID of the user record.
DC: Maps to	http://purl.org/dc/terms/creator
TNA: Maps to	5. CREATOR

4.1.1.1.7 Description

Element	DCTERMS:description
Value	Text
Scheme	-
Description	Provides a description of the resource
Notes	User completed field
DC: Maps to	http://purl.org/dc/terms/description
TNA: Maps to	4. DESCRIPTION

4.1.1.1.8 Publisher

Element	DCTERMS:publisher
Value	SNAC code/SNAC URI
Scheme	eGMS.ONSSNAC
Description	Publisher of the resource.
Notes	This should be recorded as the organisation as default, using a SNAC

	code or equivalent. For public consumption, the SNAC code should be converted or provided as a URI for public domain resources.
DC: Maps to	http://purl.org/dc/terms/publisher
TNA: Maps to	-

4.1.1.1.9 Coverage: Spatial

Element	DCTERMS:spatial
Value	SNAC ID/URI/spatial
Scheme	eGMS.ONSSNAC DCTERMS.point DCTERMS.box
Description	Indicates the spatial coverage of the resource
Notes	For organisational resources, SNAC codes for county or ward should be used. For public consumption, the SNAC code should be converted or provided as a URI for public domain resources. For resources with a more specific spatial element, the option is available to record more detailed values, although it is worth noting these values may be recorded in other elements that may be more suitable.
DC: Maps to	http://purl.org/dc/terms/spatial
TNA: Maps to	20.1 spatial

4.1.1.1.10 Coverage: Temporal

Element	DCTERMS:temporal
Value	Date/date range
Scheme	DCTERMS.W3CDTF DCTERMS.period
Description	Indicates the temporal coverage of the resource
Notes	This can be obtained from the date declared, or can be altered by user if different, e.g. for backscanned documents.
DC: Maps to	http://purl.org/dc/terms/temporal
TNA: Maps to	20. COVERAGE

4.1.1.1.11 Language

Element	DCTERMS:language
Value	Eng
Scheme	DCTERMS.ISO639-2
Description	Indicates the language of the resource
Notes	This field would be set at “eng” by default, but can be modified for individual resources.
DC: Maps to	http://purl.org/dc/terms/language
TNA: Maps to	11. LANGUAGE

4.1.1.1.12 Status

Element	eGMS.status
Value	Draft/master/redaction/controlledcopy
Scheme	HC.status (proprietary)
Description	The status of the resource
Notes	Status is an element for internal use only, which uses a proprietary organisational schema. It is used primarily for indicating redactions at present, but may have further use in draft control in the Digital Channels project.
DC: Maps to	-

TNA: Maps to	-

4.1.1.1.13 Type

Element	DCTERMS:type
Value	ID
Scheme	DCTERMS.DCMI
Description	Record of the resource type
Notes	This element uses the DCTERMS.DCMI type schema, which contains standardised concepts such as text, image.
DC: Maps to	http://purl.org/dc/terms/type
TNA: Maps to	8. TYPE

4.1.2 Date

The date elements provide an initial temporal profile for the resource. Certain date elements, such as date created, are mandatory for all elements.

4.1.2.1 Date Elements

Date options for the resource are described by the following elements:

4.1.2.1.1 Date Acquired

Element	eGMS.acquired
Value	Date
Scheme	DCTERMS.W3CDTF
Description	Indicates the date the resource was acquired by the organisation
Notes	
Mapped to	

4.1.2.1.2 Date Available

Element	DCTERMS:available
Value	Date
Scheme	DCTERMS.W3CDTF
Description	Indicates the date the resource was made available.
Notes	This element is intended for potential use in Draft control in the Digital Channel project, and as such is only included here for reference.
Mapped to	

4.1.2.1.3 Date Created

Element	DCTERMS:created
Value	Date
Scheme	DCTERMS.W3CDTF
Description	Indicates the date the resource was created
Notes	
Mapped to	

4.1.2.1.4 Date Accepted

Element	DCTERMS:dateaccepted
Value	Date
Scheme	DCTERMS.W3CDTF
Description	Indicates the date the resource was accepted by the organisation
Notes	
Mapped to	

4.1.2.1.5 Date Submitted

Element	DCTERMS:datesubmitted
Value	Date
Scheme	DCTERMS.W3CDTF
Description	Indicates the date the resource was submitted to the organisation
Notes	This field is considered optional, as current data management policy addresses date acquired rather than date submitted as the initial date.
Mapped to	

4.1.2.1.6 Date Issued

Element	DCTERMS:issued
Value	Date
Scheme	DCTERMS.W3CDTF
Description	Indicates the date the resource was formally published
Notes	This can be set upon creation to occur on a specific date after declaration, e.g. a news article with a timed release.
Mapped to	

4.1.2.1.7 Date Valid

Element	DCTERMS:valid
Value	Date
Scheme	DCTERMS.W3CDTF
Description	Indicates the date or date range that the resource is valid for.
Notes	This element can be inferred from a combination of DCTERMS:issued and DCTERMS:cutoff to indicate valid date range of a published resource.
Mapped to	

4.1.3 Capture and Technical

The elements in this group describe the format of the resource itself rather than its content.

In resource capture, particularly scanning and photography, there are potentially a large number of highly detailed technical elements available. To counter this, it is recommended that technical profiles are constructed or obtained for the machines carrying out capture. The resource itself can hold a small set of elements that include those that identify the profile used, rather than all of the elements in their entirety.

Detailed elements for inclusion in a technical profile are not covered in this document, but it is recommended the NISO - Technical Metadata for Digital Still Images (ANSI/NISO Z39.87) schema is considered for potential elements.

The elements required for identifying a technical profile, as well as those that may require additional user input, are detailed in this document.

4.1.3.1 Capture and Technical Elements

The recommended primary elements are as follows:

4.1.3.1.1 Scanner ID

Element	NISO.scannerModelSerialNumber
Value	ID
Scheme	
Description	serial number of the scanner used to create the image
Notes	Used to identify an extended metadata profile for the scanner in

	question, that describes the technical attributes of any resource produced by it.
Mapped to	

4.1.3.1.2 Camera ID

Element	NISO.digitalCameraSerialNumber
Value	ID
Scheme	
Description	serial number of the camera used to create the image
Notes	Used to identify an extended metadata profile for the camera in question, that describes the technical attributes of any resource produced by it.
Mapped to	

4.1.3.1.3 Format

Element	DCTERMS:format
Value	Text
Scheme	DCTERMS.IMT eGMS.PRONOM
Description	Describes the file format of the resource
Notes	
Mapped to	

4.1.3.1.4 Original Format

Element	eGMS.originalFormat
Value	Date
Scheme	eGMS.PRONOM
Description	Original format of the resource.
Notes	This may be captured as a file format, e.g. MSWord2000, or as a physical medium, e.g. paper.
Mapped to	

4.1.3.1.5 Source

Element	DCTERMS:source
Value	ID
Scheme	HC.sourcesystems (proprietary)
Description	Source system the resource originated from
Notes	This use of the dcterms:source element is intended for internal use only, and is a variation on the normal usage. It should record the ID of a source system, e.g. Kofax, Civica, from a proprietary organisational schema.
Mapped to	

4.1.3.1.6 Extent

Element	DCTERMS:extent
Value	Multiple
Scheme	-
Description	Describes the extent of the resource
Notes	This can include filesize, duration of a media file.
Mapped to	

4.1.3.1.7 Image Dimensions

Element	NISOimageWidth

	NISOimageHieght
Value	Numeric (pixels)
Scheme	
Description	specifies the width/hieght of the digital image in pixels
Notes	A pair of elements specific to images, that can be additionally combined to map to “DCTERMS:extent” element
Mapped to	DCTERMS:extent

4.1.3.1.8 Resolution

Element	TNA.resolution
Value	Numeric (dpi)
Scheme	
Description	specifies the resolution of the digital image in pixels
Notes	can be additionally combined to map to “DCTERMS:extent” element
Mapped to	DCTERMS:extent

4.1.4 Classification

Description of classification is essential for all resources, and core to the information model. Classification elements are key for the following areas:

4.1.4.1 Identification of Ownership

The TNA.classType element indicates the LGSL concept that the resource belongs to, and from this the owner responsible for that resource. This element is mandatory for all resources. Ownership in relation to the information model is detailed more fully in section 2.

4.1.4.2 Placement in Data Repositories

TNA.classType, TNA.folderType and TNArecordType allow allocation of resources to the correct areas of the appropriate data repository, by combination of the resource LGSL class, template and resource type.

4.1.4.3 Targeted Resource Consumption

Elements such as HC.entitytype, TNA.classType and TNA.recordType allow for targeted consumption of resources according to their functional, entity and sub-entity classifications.

4.1.4.4 Standardised Classification for Reporting

The multiple DCTERMS:subject elements describe a series of additional standardised schema from the LGBL, including channel, interaction type and functional grouping, that allow detailed analysis of resources using the LGBM framework.

4.1.4.5 Classification Elements

The following elements are used to describe classification:

4.1.4.5.1 Entity Type

Element	HC.entityType
Value	ID (proprietary)
Scheme	HC.entitytypelist
Description	Records the entity type of the resource
Notes	HC.entityType is a proprietary element, using a proprietary organisational schema to record entgity type, e.g. document, content, process.
Mapped to	DCTERMS:type (schema “HC.entitytypelist”)

4.1.4.5.2 Function List Type

Element	HC.functionListType
Value	ID
Scheme	HC.FunctionList ESD.PSFL
Description	Indicates the classification of the resource by function list ID.
Notes	This is a proprietary element. Given the unstable nature of the LGBM Function List schema in its current state, this element makes use of both the PSFL schema and a proprietary organisational schema at present. This element is primarily for use by function-level process resources.
Mapped to	

4.1.4.5.3 Class Type

Element	TNA.classType
Value	ID/URI
Scheme	eGMS.LGSL
Description	Indicates the classification of the resource by LGSL ID.
Notes	This is the core element for classification of the resource. For resources made available for public consumption, it is recommended that this element is transformed into DCTERMS.subject with schema eGMS.LGSL, with values expressed as URIs.
Mapped to	DCTERMS.subject (schema LGSL)

4.1.4.5.4 Folder Type

Element	TNA.folderType
Value	ID
Scheme	HC.templatetypes (proprietary)
Description	Indicates the classification of the resource by template type ID.
Notes	This element is for internal use only, and uses the proprietary HC.templatetypes schema.
Mapped to	

4.1.4.5.5 Record Type

Element	TNA.recordType
Value	ID
Scheme	HC.recordtypelist (proprietary)
Description	Indicates the classification of the resource by record type ID.
Notes	This element is for internal use only, and uses the proprietary HC.recordtypelist schema. This schema can potentially be replaced at a future point by an updated version of the LGBM Document Type list, when a completed version is available.
Mapped to	DCTERMS:type (schema “HC.recordtypelist”)

4.1.4.5.6 Subject

Element	DCTERMS:subject
Value	ID/URI
Scheme	eGMS.LGIL http://www.esd.org.uk/standards/lgil eGMS.LGPL eGMS.LGChL eGMS.IPSV text (folksonomy)

Description	Indicates the classification of the resource by a number of controlled schema.
Notes	A separate DCTERMS:subject element is required for each of the listed schema. Where possible, values for these elements should be provided as URIs to the schema definitions. The purpose of each schema is as follows: • LGIL: classifies the resource by interaction type (e.g. apply, pay, report) • LGPL: classifies the resource by process type (internal use only) • LGChL: classifies the resource by channel type (e.g. web, tel, post) • IPSV: provides controlled keywords mapped to LGSL • Folksonomy: user-entered local keywords to supplement IPSV.
Mapped to	

4.2 Version Control

This stage describes the elements employed for version control of the resource. Version control allows for the version co-ordination of related resources and indication of version for auditing of events, as well as providing the means for identifying relationships between current and previous versions where multiples exist.

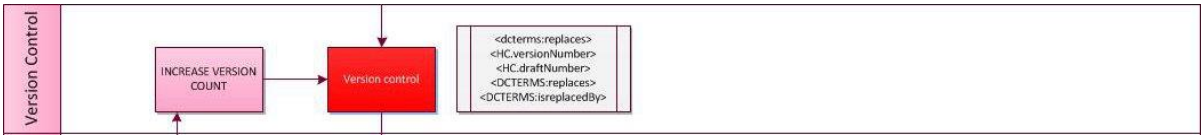

Figure 9: Version Control stage

4.2.1 Standard Version Control

The standard lifecycle applicable to most entity types allows for only the most current version to exist, as change of version does not result in a new resource with a separate GUID.

This means that only the element HC.versionNumber is essential for most resources, to record a change in version number upon a modification event. This value is employed in version control of the resource during the later modification stage, to ensure later versions retain the same identifier.

The use of elements in standard version control for declared resources is outlined in figure 10:

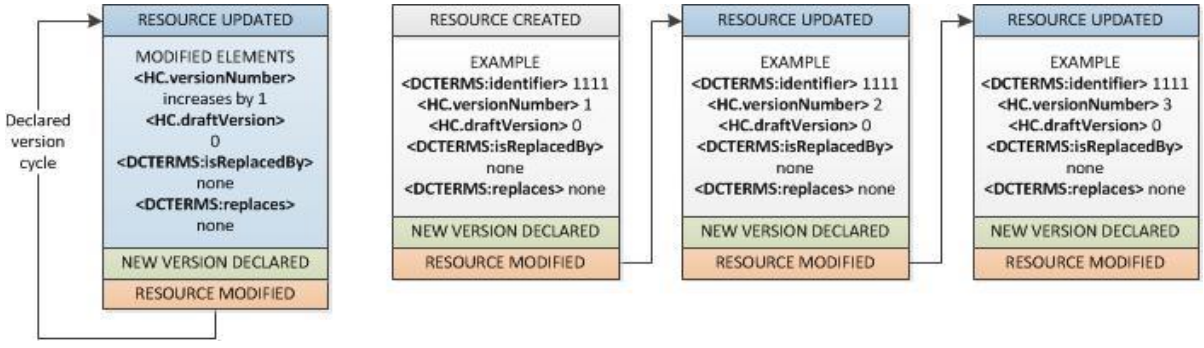

Figure 10: standard version control

Each resource is allocated an initial HC.versionNumber value of 1 upon creation.

For completeness, declared single versions can hold a value of “0” for HC.draftNumber.

Changes to version number are covered in greater detail in the modification stage (section 4.8.1).

4.2.2 Multiple Version Control

The exception to standard version control is when a situation arises where:

a) Simultaneous instances of multiple versions of the same resource are required.
b) Both draft and declared versions of a resource are required.

An example of this is the Document entity, where a new document record is created in the EDRMS for each published version, with a new unique identifier.

Multiple version control employs all four version control elements. The use of elements in multiple version control for declared resources is outlined in figure 11:

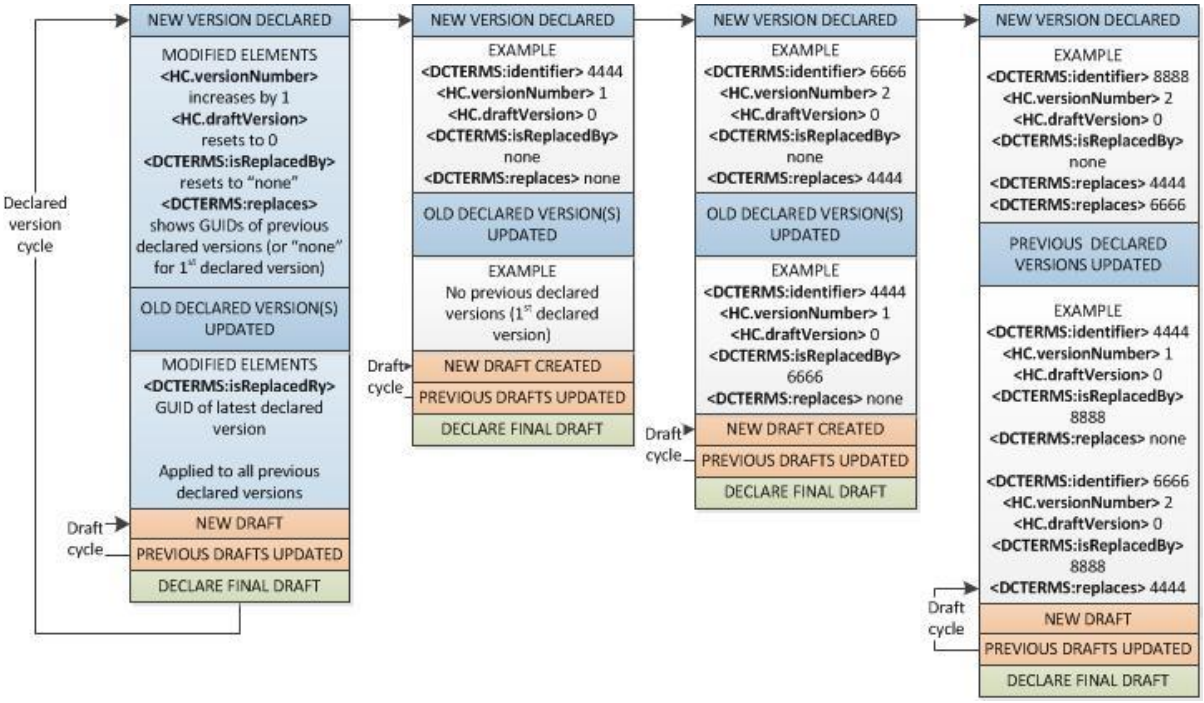

Figure 11: Multiple version control

This document only outlines the standard lifecycle for declared (published) resources, where a resource only has the latest version available. Version control of draft and multiple resources is scheduled for detailing as part of the Digital Channels project.

However, at this stage inclusion of all four elements should be considered a requirement where multiple version control may occur.

4.2.3 Version Control Elements

The following elements are used to describe version control:

4.2.3.1 Version Number

Element	HC.versionNumber
Value	Numeric (default=1 for a newly created resource)
Scheme	-
Description	Indicates the current declared version number.
Notes	The version number is a proprietary element that increases numerically from 1, with each declaration of a new version of the resource. This is mandatory for all resources.
Mapped to	-

4.2.3.2 Draft Number

Element	HC.draftNumber
Value	Numeric (default=0 for a declared resource)
Scheme	-
Description	Indicates the current draft number.
Notes	The version number is a proprietary element that increases numerically from 1, with each creation of a new draft version of the resource. This is currently applicable to entity typesthat require draft versions, eg. the Document entity type.
Mapped to	-

4.2.3.3 Replaces

Element	DCTERMS:replaces
Value	GUID or URI
Scheme	-
Description	Indicates a previous draft or declared version that the current resource replaces.
Notes	This is currently only applicable to entity types that require multiple simultaneous versions with differing GUIDs, eg. the Document entity type. This element can be used multiple times for multiple previous versions.
Mapped to	-

4.2.3.4 Replaced by

Element	DCTERMS:isreplacedBy
Value	GUID or URI
Scheme	-
Description	Indicates a current draft or declared version that replaces the current resource.
Notes	This is currently only applicable to entity types that require multiple simultaneous versions with differing GUIDs, eg. the Document entity type. This element value should always indicate the most recent version only.
Mapped to	-

4.3 Relationship Management

This stage allows description and maintenance of the relationship of the resource to other resources.

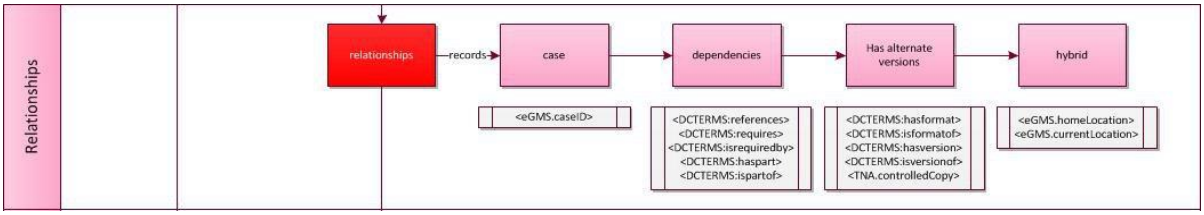

Figure 12: Relationships stage

4.3.1 Relationship Types

The model addresses 7 unique types of relationship:

- A resource is related to a case
- A resource has a unique parent or child resource
- A resource has a related technical format or entity type
- A resource references another resource
- A resource requires another resource
- A resource has an additional non-sequential content version for alternative use
- A resource has a controlled copy of itself

Examples of use of some of these relationship types included are illustrated in figure 13:

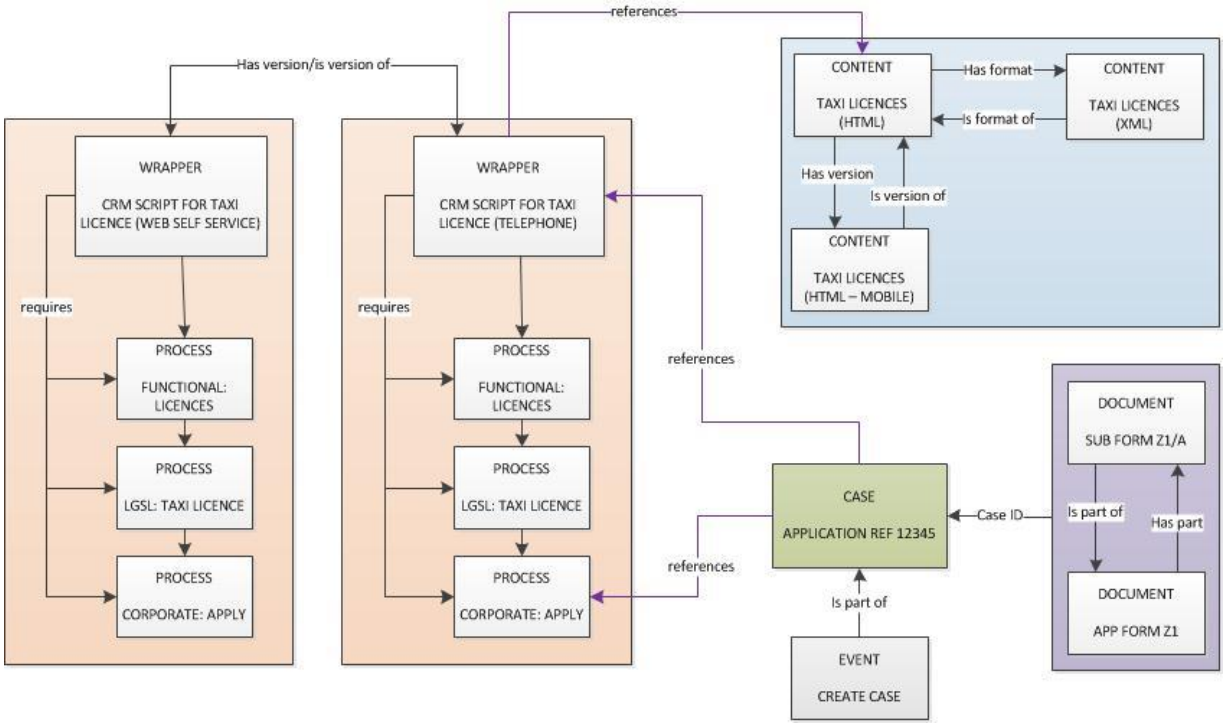

Figure 13: Examples of relationship type usage

4.3.1.1 Relationship Type Elements

The elements to describe the different relationship types are as follows:

4.3.1.1.1 Related to a case

Element	eGMS.caseID
Value	GUID of case
Scheme	-

Description	Indicates resource is generated by a case
Notes	Examples: A series of documents generated by an application case would reference the case ID. Display of a case causes display of all additional resources with matching case ID
Mapped to	

4.3.1.1.2 Has unique parent or child resource

Elements	DCTERMS:haspart (parent) DCTERMS:ispartof (child)
Value	GUID /URI of matching parent or child
Scheme	-
Description	Indicates resource has unique parent or child resource
Notes	Examples: An appendix of a document would be a unique child object to a document parent. Disposal of a document requires disposal of all resources with matching child ID.
Mapped to	

4.3.1.1.3 Related technical format or entity type

Elements	DCTERMS:hasformat (primary format) DCTERMS:isformatof (additional format)
Value	GUID /URI of related resource
Scheme	-
Description	Indicates resource has an alternative technical format or entity type
Notes	Examples: An HTML content resource has a related XML format of the same content. A web page indicates a human readable and machine readable format to an app.
Mapped to	

4.3.1.1.4 References another resource

Elements	DCTERMS:references
Value	GUID /URI of related resource
Scheme	-
Description	Indicates resource references, but has no dependency on, another resource
Notes	Examples: A CRM wrapper resource references an non-essential content resource in the CMS. Use of a referenced resource can be audited, but disposal will not affect it.
Mapped to	

4.3.1.1.5 Requires another resource

Elements	DCTERMS:requires (dependent) DCTERMS:isrequiredby (dependency)
Value	GUID /URI of related resource
Scheme	-
Description	Resource requires or is required by another resource to support its function, delivery or coherence of content
Notes	Examples: A CRM wrapper resource non-exclusively requires a series of process resources essential to its function. A means to identify all wrappers that would be affected by modification of a single corporate process.
Mapped to	

4.3.1.1.6 Has additional version for alternative use

Elements	DCTERMS:hasversion (primary version)

	DCTERMS:isversionof (alternative version)
Value	GUID /URI of related resource
Scheme	-
Description	A resource has an existing related version for an alternative purpose
Notes	Examples: A content resource has an alternatively worded version for mobile display. A means to identify alternative versions requiring update when a primary version is modified.
Mapped to	

4.3.1.1.7 Has a Controlled copy

Elements	TNA.controlledCopy
Value	GUID /URI of controlled copy/copies
Scheme	-
Description	A resource has existing controlled copies of itself.
Notes	A controlled copy is a "shadow" version of the original resource – it may have differing metadata, but ownership, modification and lifecycle is controlled from the master copy of the resource. An example may be a content resource reused in more than one LGSL – a number of controlled copies may have differing LGSL IDs for consumption purposes, but are under the ownership of the LGSL ID of the master resource, and directly reflect any changes to the master resource. Controlled copies are identified by a value of "controlledcopy" in the element "DCTERMS:status"
Mapped to	

4.3.2 Physical Location

For hybrid resources, the physical location elements are used to describe the resource's relationship with its physical counterpart. Hybrid resources are currently only applicable to the Document entity type.

4.3.2.1 Physical Location Elements

The following elements are used to describe physical location:

4.3.2.1.1 Home Location

Element	eGMS.homeLocation
Value	Text
Scheme	-
Description	Indicates the permanent location of a physical resource
Notes	
Mapped to	

4.3.2.1.2 Current Location

Element	eGMS.currentLocation
Value	Text
Scheme	-
Description	Indicates the current temporary location of a physical resource
Notes	This may be used if a physical resource has been checked out by a user or loaned.
Mapped to	

4.4 Security and Redaction

This stage sets the security level of the resource, and allows description and maintenance of any required redactions of the resource.

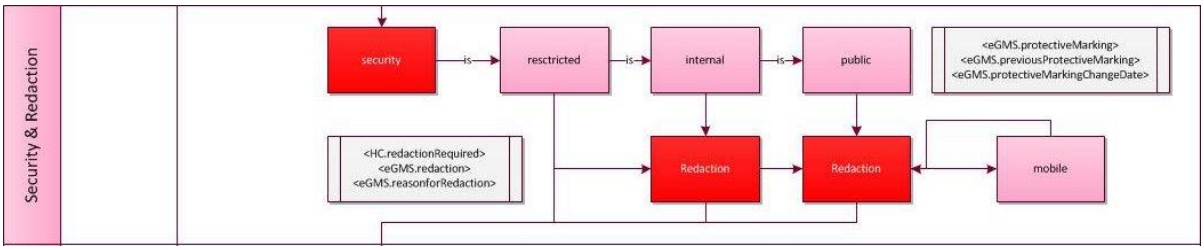

Figure 14: security and Redaction stage

4.4.1 Security

Four levels of protective marking are used for all resources to indicate level of access:

- Level 1: Not Protectively Marked – for public use
- Level 2: Protect – for use restricted to a defined set of users
- Level 3: Restricted – a higher level of confidentiality for use to restricted to a defined set of users
- Level 4: Internal – for internal use

Unless specified, the default level for any resource on point of creation is level 2. Depending on requirements, an alternative security level can be applied either directly by inheritance from the resource's location in the appropriate data repository, or by the user through the corresponding user creation interface.

4.4.1.1 Security Elements

Description of security is controlled using three elements:

4.4.1.1.1 Protective Marking

Element	eGMS.protectiveMarking
Value	1/2/3
Scheme	-
Description	Indicates the minimum security level required to access the resource
Notes	
Mapped to	DCTERMS:rights

4.4.1.1.2 Previous Protective Marking

Element	eGMS.previousProtectiveMarking
Value	1/2/3
Scheme	-
Description	Indicates the superceded security level required to access the resource
Notes	
Mapped to	

4.4.1.1.3 Protective Marking Change Date

Element	eGMS.protectiveMarkingChangeDate
Value	Date
Scheme	DCTERMS.W3CDTF

Description	Indicates the date the security level of the resource was last changed
Notes	
Mapped to	

4.4.2 Redaction

Upon setting a security level during creation or modification, the next stage requires the user to indicate any redacted versions that are also required for differing levels of access.

4.4.3 Determining Security And Redaction

A resource with a related redacted resource should have the following element values as a minimum:

<eGMS.protectiveMarking> 1/2/3
<DCTERMS:status> master
<HC.redactionrequired> yes
<eGMS.redaction> GUID/URI of related redacted resource

A resource with no related redacted resources should have the following element values:

<eGMS.protectiveMarking> 1/2/3
<DCTERMS:status> redaction
<eGMS.reasonforRedaction> user entered text

A combination of the security level element and the redaction elements should indicate the correct usage of a resource.

Figure 15 outlines the process to determine security and redaction for a resource, and indicates the required values for the master and redaction resources that are generated:

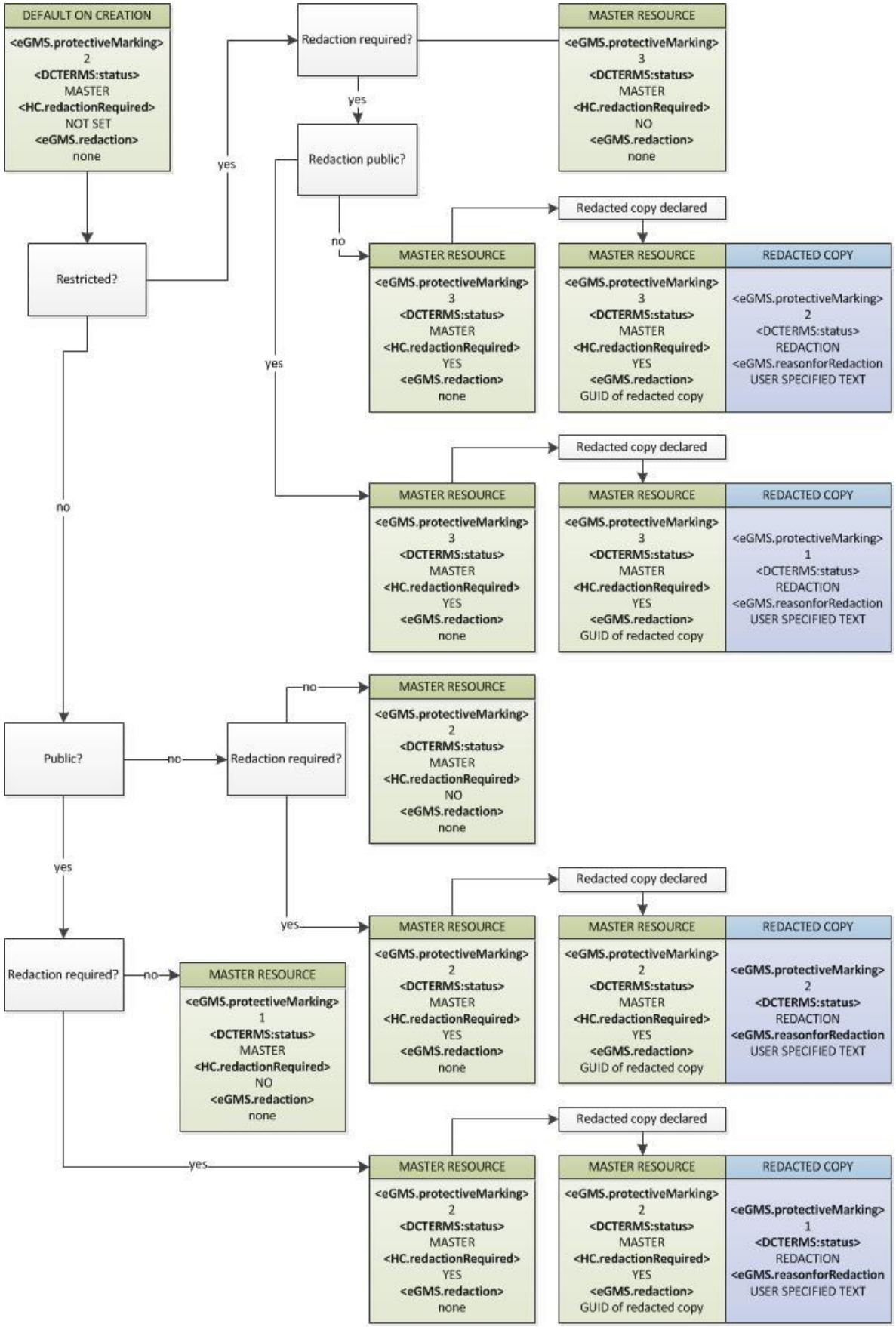

Figure 15: security and redaction workflow

4.4.4 Redaction through Suppression of Metadata

Certain entity resources may not require the creation of a separate redacted version, but instead may control redaction through suppression of metadata elements, resulting in presentation of a metadata subset to a lower security level.

This is applicable in particular to structured resources that are described completely by metadata elements. However, in cases where metadata may contain values such as user entered text (that in itself may require checking for redaction), the redaction approach described above can be implemented to ensure manual redaction occurs.

4.4.4.1 Redaction Elements

Description of redaction is controlled using the following elements:

4.4.4.1.1 Redaction Required

Element	HC.redactionRequired
Value	Yes/No
Scheme	-
Description	Indicates whether the resource has been flagged for redaction
Notes	
Mapped to	

4.4.4.1.2 Redaction Identifier

Element	eGMS.redacted
Value	Yes/No
Scheme	-
Description	Indicates whether the resource has been redacted.
Notes	This field is only completed in the parent resource to indicate redacted resources. Multiple redactions can be indicated by use of multiple occurrences of <eGMS.redacted> elements.
Mapped to	

4.4.4.1.3 Reason for Redaction

Element	eGMS.reasonforRedaction
Value	Text
Scheme	-
Description	Records a text comment indicating reason for redaction
Notes	User completed field. This field is only required in the redacted resource to indicate reason for that specific redaction.
Mapped to	

4.5 Accessibility And Licence

This stage allows indication of accessibility compliance of the resource, and any appropriate licences for controlling its reuse.

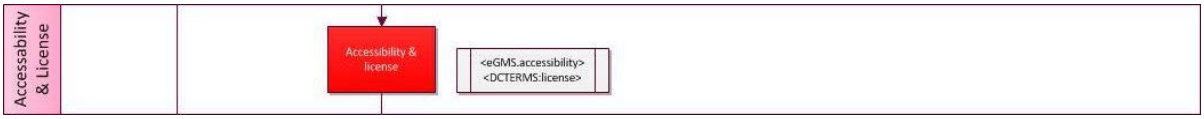

Figure 16: Accessibility and Licence stage

4.5.1 Accessibility and Licence Elements

The following elements are used:

4.5.1.1 Accessibility

Element	eGMS.accessibility
Value	“Double-A”
Scheme	eGMS.WCAG10/eGMS.WCAG20
Description	Indicates that resource conforms to WCAG accessibility standards
Notes	Where this element is applicable to an entity type, all resources of that type should be marked with the approriate accessibility compliance value. The default value is “double-A”.
Mapped to	Dcterms:conformsto

4.5.1.2 Licence

Element	DCTERMS:licence
Value	Text
Scheme	-
Description	Indicates the licence applied to the resource where relevant.
Notes	An example of DCTERMS:licence usage is indicating an open dataset that can be reused under the Open Governmnet Licence.
Mapped to	

4.6 Rights and Data Protection

This stage allows description of rights and data protection elements of the resource.

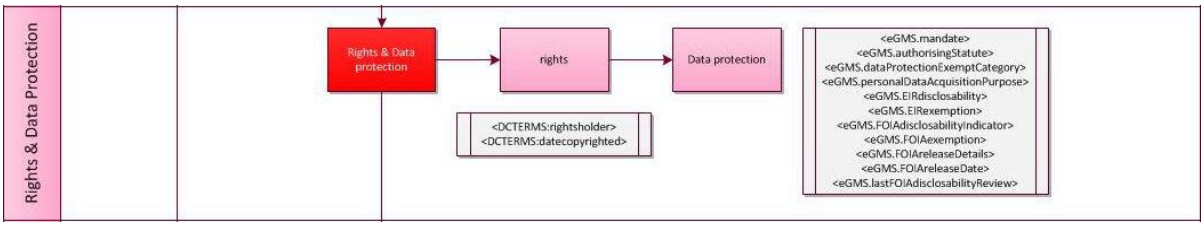

Figure 17: Rights and Data Protection stage

4.6.1 Rights Elements

Copyright of the resource is described by the following elements:

4.6.1.1 Copyright

Element	DCTERMS:copyright
Value	Text
Scheme	
Description	records the specifics of the resource copyright
Notes	
Mapped to	

4.6.1.2 Date Copyrighted

Element	DCTERMS:datecopyrighted
Value	Date
Scheme	DCTERMS.W3CDTF
Description	records the date of copyright of the resource.
Notes	
Mapped to	

4.6.2 Data Protection Elements

Full requirements for elements of the model to be employed for data protection are still to be determined by the organisation. However, a number of nationally standardised elements have been included in the model for future use:

4.6.2.1 Mandate

Element	eGMS.mandate
Value	Text
Scheme	-
Description	records the legislative or other mandate under which the resource was produced.
Notes	
Mapped to	

4.6.2.2 Authorising Statute

Element	eGMS.authorisingStatute
Value	Text
Scheme	-
Description	records the Act of Parliament or other legislation authorising the capture of information or development of the resource.
Notes	
Mapped to	

4.6.2.3 Data Protection Exempt Category

Element	eGMS.dataProtectionExemptCategory
Value	Text
Scheme	-
Description	One or more exemption clauses as defined in the DPA Part 4, which applies to this resource.
Notes	
Mapped to	

4.6.2.4 Personal Data Acquisition Purpose

Element	eGMS.personalDataAcquisitionPurpose
Value	Text
Scheme	-
Description	Reason for the collection and storage of personal data.
Notes	
Mapped to	

4.6.2.5 EIR Disclosability

Element	eGMS.EIRdisclosability
Value	y/n
Scheme	-
Description	Whether the resource can be disclosed (‘Y’ or ‘N’) in indicator accordance with EIR.
Notes	
Mapped to	

4.6.2.6 EIR Exemption

Element	eGMS.EIRexemption
Value	y/n
Scheme	-

Description	Whether there are exemptions to access to the resource ('Y' or 'N') in accordance with EIR.
Notes	
Mapped to	

4.6.2.7 FOIA Disclosability Indicator

Element	eGMS.FOIAdisclosabilityIndicator
Value	y/n
Scheme	-
Description	Whether the resource can be disclosed ('Y' or 'N') in accordance with FOIA.
Notes	
Mapped to	

4.6.2.8 FOIA Exemption

Element	eGMS.FOIAexemption
Value	y/n
Scheme	-
Description	Whether there are exemptions to access to the resource ('Y' or 'N') in accordance with FOIA.
Notes	
Mapped to	

4.6.2.9 FOIA Release Details

Element	eGMS.FOIAreleaseDetails
Value	Text
Scheme	-
Description	The details of the past or future release of the resource to public view either by general publication or by release in response to an individual request.
Notes	
Mapped to	

4.6.2.10 FOIA Release Date

Element	eGMS.FOIAreleaseDate
Value	DCTERMS:W3CDTF
Scheme	-
Description	The date of past or future release.
Notes	
Mapped to	

4.6.2.11 Last FOIA Disclosability Review

Element	eGMS. lastFOIAdisclosabilityReview
Value	DCTERMS:W3CDTF
Scheme	-
Description	The date of the previous formal decision regarding the disclosability of a resource.
Notes	
Mapped to	

4.7 Declare

Upon completion of the preceding stages, the resource can be declared in the appropriate data repository, and becomes available for consumption.

Figure 18: Declare stage

4.7.1 Declare Elements

Declaration is recorded using the following element:

4.7.1.1 Date Declared

Element	eGMS.declared
Value	Date
Scheme	DCTERMS.W3CDTF
Description	records the date of declaration of the resource.
Notes	
Mapped to	

4.8 Modification and Completion

This stage allows modification and completion of a resource.

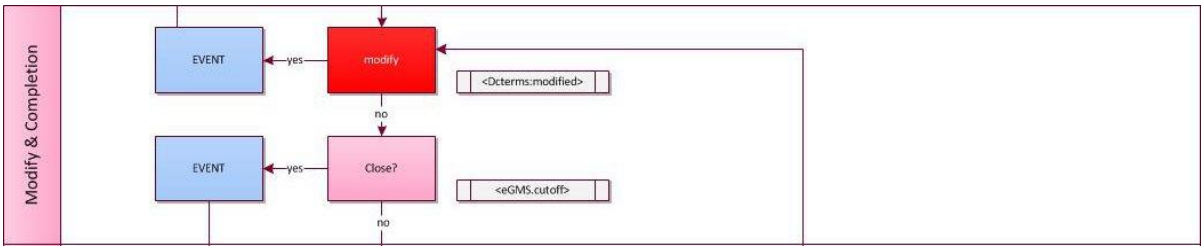

Figure 19: Modification and Completion stage

4.8.1 Modification

Modification triggers the following steps:

1. An event resource is created recording the modification event and the current value of the version control element *HC.versionnumber.*
2. The lifecycle returns to stage 2, and the value of *HC.versionnumber* is increased by 1.
3. Stages 2-5 are repeated where necessary, to allow any related resources to be audited and updated to ensure they match the modified resource as part of the modification process.

This is particularly important for related *dcterms:hasformat* resources, where the content of both should match. An example of this could be ensuring that a process in the CRM matches the content of its alternative Visio format stored in the EDRMS. This can be managed through version control, by ensuring that both resources have matching *HC.versionnumber* values.

Modification does not apply to Document entities, which cannot be modified.

4.8.1.1 Modification Elements

Modification of a resource after declaration is recorded using the following element:

4.8.1.1.1 Date Modified

Element	DCTERMS:modified
Value	Date
Scheme	DCTERMS.W3CDTF
Description	records the date of modification of the resource.
Notes	
Mapped to	

4.8.2 Completion

Certain resources require description of a period for which they are active, examples being a consultation start and end date, or the creation of a service request ticket and its resolution.

4.8.2.1 Completion Elements

The end point of this period is described by the following element:

4.8.2.1.1 Date Cut Off

Element	eGMS.cutoff
Value	Date
Scheme	DCTERMS.W3CDTF
Description	records the date of completion of the resource.
Notes	
Mapped to	

This value can be predetermined during creation of the resource, or determined by an action after declaration, e.g. completion of a ticket.

These elements are intended for internal use, but combination of the elements *DCTERMS:issued* and *DCTERMS:cutoff* can provide the element indicating range of validity of the resource, *DCTERMS:valid,* for external use (section 4.1.2.1.7).

4.9 Retention and Review

This stage manages the review of the resource.

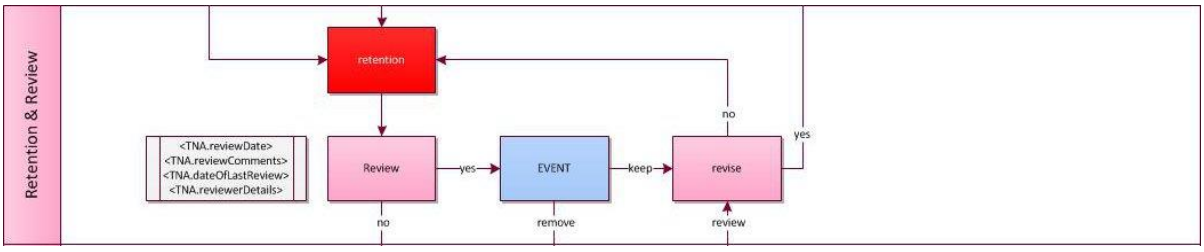

Figure 20: Retention and Review stage

The review date is generally pretermined using a period set by a review schedule for a particular resource type, in accordance with the organisational data management strategy.

The review date is calculated from the date indicated by one of elements *eGMS:declared, DCTERMS:modified* or *eGMS:cutoff*, using the value that is most recent. This ensures that the review period is reset by alteration of the resource.

When the value held by *eGMS.reviewdate* is reached, the following steps occur:

1. An event resource is created recording details of the reviewed resource and reviewer.

2. One of two options are chosen for the resource:

    a. Retain: the resource is modified (returning to stage 4.8.1) or retained, and the review period recorded by *eGMS.reviewdate* is reset.

    b. Dispose: the resource undergoes the disposal stage (section 4.11).

3. The date of last review is updated, and review comments and reviewer details are recorded.

4.10 Retention and Review Elements

Retention and review are described by the following elements:

4.10.1 Review Date

Element	TNA.reviewDate
Value	Date
Scheme	DCTERMS.W3CDTF
Description	indicates the date the resource is subject to review.
Notes	
Mapped to	

4.10.2 Review Comments

Element	TNA.reviewComments
Value	Text
Scheme	-
Description	User completed element recording user comments following review of the resource.
Notes	
Mapped to	

4.10.3 Date of Last Review

Element	TNA.dateOfLastReview
Value	Date
Scheme	DCTERMS:W3CDTF
Description	Records the date the resource was last reviewed.
Notes	
Mapped to	

4.10.4 Reviewer Details

Element	TNA.reviewerDetails
Value	GUID of user record
Scheme	-
Description	Records the user identifier of the reviewer of the resource.
Notes	
Mapped to	

4.11 Disposition

This stage manages the disposal of the resource.

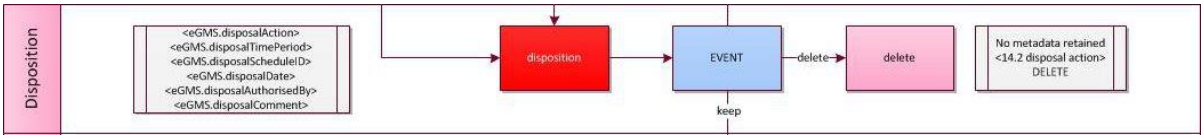

Figure 22: Disposition stage

The disposal date is generally pretermined using a period set by a disposal schedule for a particular resource type, in accordance with the organisational data management strategy.

The disposal date is calculated from the date indicated by one of elements *dcterms:declared, dcterms:modified* or *dcterms:cutoff*, using the value that is most recent. This ensures that the disposal period is reset by alteration of the resource.

The disposal schedule is unaffected by the review schedule. If the review schedule expires without management, then the disposal schedule will occur as normal, allowing it to act as a failsafe for resources that lose ownership or fail to be managed.

When the value held by *eGMS.disposaldate* is reached, the following steps occur:

1. An event resource is created recording details of the resource and reviewer.
2. One of four options are chosen for the resource:
    a. Review: the resource is modified (returning to stage 4.8.1) or retained (returning to stage 4.9), and the review period recorded by *eGMS.reviewdate* is reset. The disposal date remains unchanged in this instance, and the review date takes precedence. A value of “review” is recorded by the resource element *eGMS.disposalaction.*
    b. Archive: the resource undergoes the preservation stage (section 4.13). A value of “archive” is recorded by the resource element *eGMS.disposalaction.*
    c. Destroy: the resource undergoes the preservation stage (section 4.13). A value of “destroy” is recorded by the resource element *eGMS.disposalaction.*
    d. Delete: The resource is marked for deletion, according to organisational data management policy. A value of “delete” is recorded by the resource element *eGMS.disposalaction.*
3. Disposal comments and reviewer details are recorded .

4.12 Disposition Elements

Disposition is described by the following elements:

4.12.1 Disposal Action

Element	eGMS.disposalAction
Value	review/export/destroy/delete
Scheme	eGMS.NationalArchivesDisposal
Description	records the disposal action taken for the resource.
Notes	
Mapped to	

4.12.2 Disposal Time Period

Element	eGMS.disposalTimePeriod
Value	DCTERMS.W3CDTF
Scheme	-
Description	Records the disposal retention period set by the disposal schedule.
Notes	
Mapped to	

4.12.3 Disposal Schedule ID

Element	eGMS.disposalScheduleID
Value	ID
Scheme	-
Description	records the disposal schedule used to determine the disposal of the resource, set by the organisation.
Notes	
Mapped to	

4.12.4 Disposal Date

Element	eGMS.disposalDate
Value	DCTERMS.W3CDTF
Scheme	-
Description	records the due/effective date for disposal action
Notes	
Mapped to	

4.12.5 Disposal Authorised By

Element	eGMS.disposalAuthorisedBy
Value	GUID
Scheme	-
Description	records the ID of the user actioning the disposal
Notes	Preference is unique user ID from Active Directory user record
Mapped to	

4.12.6 Disposal Comment

Element	eGMS.disposalComment
Value	Text
Scheme	-
Description	records user comments relating to disposal of the resource.
Notes	User completed field
Mapped to	

4.13 Preservation

Full requirements for elements of the model to be retained for preservation and archiving are still to be determined by the organisation.

However, two standardised elements are included in this model for consideration, to allow description of export of a resource for archiving.

Further elements to describe preservation may be added upon detailing of the organisational preservation requirements.

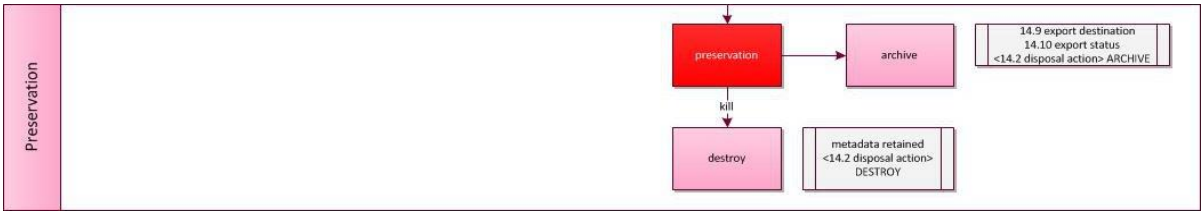

Figure 23: Preservation stage

4.14 Preservation Elements

Preservation is described by the following elements:

4.14.1 Export Destination

Element	eGMS.disposalExportDestination
Value	text
Scheme	-
Description	records the export destination for the resource.
Notes	
Mapped to	

4.14.2 Export Action

Element	eGMS.disposalExport
Value	Pending/complete/failed
Scheme	-
Description	Records information about the progress of the export
Notes	The value set for this element may be expanded upon review of preservation requirements.
Mapped to	

Document Classification

Author Name and Role	Rob Guthrie (Information Architect)
Date Created	29/07/11
Date Issued	12/01/12
Description	Organisational Information Model
File Name	Organisational_Information_Model
Format	Microsoft Word / 2003
FOI/EIR Disclosure	Yes
Geographic Coverage	Herefordshire
Group Access	Public
Language	eng
Master Location	<Intranet Info Library>
Publisher	Herefordshire Council
Rights Copyright	Copyright of Herefordshire Council
Security Classification	Public
Status	Released
Subject	Organisational Information Model
Title	Organisational Information Model
Type	Policy

Version Log

Version	*Status*	*Date*	*Description of Change*	*Pages affected*
0.1	Draft	29/07/11	Document created	all
0.2	Draft	22/08/11	Update	all
1.0	Released	12/01/2012	Update	all
1.1	Draft	15/05/2015	Update	all
1.2	Draft	05/2018	Update	all