



NATIONAL ARCHIVES

NARA Federal Electronic Records Modernization Initiative (FERMI)

Use Cases for Maintenance and Use

March 2021

The Maintenance and Use part of an electronic record's lifecycle refers to the application of records management controls. Records management controls ensures electronic records are accessible for business use until the point of disposition as defined by their application records control schedule.

Below is the list of use cases and associated business scenarios for the maintenance and use of electronic records.

ERM.020 - Electronic Records Maintenance and Use

- ERM.020.L1.01. Determine appropriate access level for electronic records
- ERM.020.L1.02. Manage the metadata of electronic records throughout the lifecycle
- ERM.020.L1.03. Ensure audit trail of electronic records is available to see what changes have been made to the content, metadata, or access level of the social media record and by whom
- ERM.020.L1.04. Place hold on electronic records
- ERM.020.L1.05. Identify electronic records and respond to satisfy an information request
- ERM.020.L1.06. Export electronic records from legacy system
- ERM.020.L2.01. Convert electronic records into acceptable formats to protect from technological obsolescence

CONSIDERATIONS FOR SPECIFIC ELECTRONIC RECORD TYPES

The use cases and workflows are written from a high-level perspective and are intended to cover all electronic records. The base level requirements for all electronic records are the same: records must be brought under records management control and managed. It is an assumption that different types of electronic records will require different approaches to maintenance and use. This is important to remember when using the use cases to demonstrate how vendors and service providers meet the requirements. The steps through the lifecycle can be done automatically, semi-automatically or manually. While NARA would like to see agencies move toward full automation, agencies may not be in the position to do this due to limited resources or other constraints.

For all types of records capture, agencies will need to consider how the electronic records are created, used, and scheduled. The [Business Lifecycle and Business Capabilities](#) document identifies the Records Capture functions to include Access Level Management, Records Maintenance, Litigation Hold, Information Requests, and Records Migration. Together, these activities provide record management controls to ensure the appropriate maintenance and use of Federal electronic records. As explained in the Electronic Records Management Use Cases Overview, agencies may take various approaches to managing their electronic records. They may choose to manage records in the platforms or systems in which they were created or import records into a records management application. No matter the approach taken, agencies should be able to manage the records from creation through disposition.

For all types of records, agencies will have to consider the file formats the records should be in and all necessary metadata. For metadata guidance for permanent electronic records, see [NARA Bulletin 2015-04: Metadata Guidance for the Transfer of Permanent Electronic Records](#).

Ideally, agencies will have a records management working group in place with representatives from records management, social media, public affairs, general counsel, information technology, privacy and information security, and other relevant stakeholder areas. This working group can address a number of

the below considerations when managing electronic records. They can ensure records management has a complete inventory of the platforms used to create records and how they are being used.

Below are the additional considerations for the Maintenance and Use of specific types of records. The considerations are based on how and where they were created. See the Electronic Records Management Use Cases Overview Appendix for definitions of specific record types.

Record Type	Capture Considerations for Record Type
Cloud Services	Agencies should ensure Records Management Language for Contracts is included in contract vehicles.
Structured Data	Structured Data can reside on premise or in the cloud. Agencies should a collective record of database owners for the purpose of consultations during records and data inventories. The inventories assist in identifying new and permanent electronic records, as well as ensure IT Enterprise Architecture accounts for all databases in the event of enterprise upgrades or changes.
Office Management Applications	Office Management Applications include word processing applications such as MS Office and Google Docs. Electronic records may be working copies, transitory copies, or the official records. They may be stored in a variety of recordkeeping locations, however they must be retrievable, accessible at the appropriate user level, and capable of being migrated into successor systems. Agency Records Officers should provide training to and work with records custodians and IT personnel to ensure adequate maintenance and use of electronic records at the end user level.
Digital Media (Photo)	Digital media (photo) records should be brought under records management control so they can be managed for the entire lifecycle. This includes business owners actively working with IT regarding any anticipated or actual obsolesce of digital media format types before record disposition is required.
Digital Media (Audio)	Digital media (audio) records should be brought under records management control so they can be managed for the entire lifecycle. This includes business owners actively working with IT regarding any anticipated or actual obsolesce of digital media format types before record disposition is required.
Digital Media (Video)	Digital media (video) records should be brought under records management control so they can be managed for the entire lifecycle. This includes business owners actively working with IT regarding any anticipated or actual obsolesce of digital media format types before record disposition is required.
Electronic Messages	The maintenance and use of electronic messages will vary based on the type of electronic message, e.g. the steps for text messages may be different than the approach for email. If agencies are using a Capstone approach for electronic messages, they may need to analyze and adjust their records management controls to comply with NARA and agency policies for each of the systems or platforms the records are being used.

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Engineering Drawings	Maintenance and use considerations are directly focused on the digital objects format type. Agencies must ensure permanent record format types meet NARA requirements as outlined in NARA Bulletin 2014-04: Format Guidance for the Transfer of Permanent Electronic Records and NARA Bulletin 2015-04: Metadata Guidance for the Transfer of Permanent Electronic Records .
Shared Drives	Agency Records Officers should make training available to agency employees. Training should include file organization and file procedures that align to the agency records schedule. This may include the use of file plans, file structures, and naming conventions. This organization will work to ensure search and retrievability for business purposes, as well as in the event of information requests or litigation holds.
Social Media	<p>Social media content is dynamic and may be continually updated, which may cause challenges for maintenance.</p> <p>Agencies will need to determine how to handle legacy content based on their approved records schedule.</p> <p>Agencies must also evaluate how to manage electronic messages sent through social media platforms (see NARA Bulletin 2015-02: Guidance on managing social media records).</p> <p>Agency policies and practices need to address how they will handle employee use of social media platforms to send or receive messages in personal accounts in the course of their work.</p>
Websites	<p>Agencies must manage website-related records that result from agency web operations including web content records and website administrative records (see NARA Guidance on Managing Web Records). It is a best practice for website content to remain accessible to the public and for agencies to explain why content is removed. There is an expectation from users that content will be available for the foreseeable future.</p> <p>Agencies should assume content posted on agency website platforms are records. From there, they can move forward with determining the function of web pages and the scheduling and retention process. It is likely the case that not all website records must be kept forever, but it is also likely website platforms do contain permanent records agencies should capture and manage separate from the platform. As it may be difficult to do a web page by web page analysis, agencies should consider a holistic approach to manage websites at a high domain level.</p> <p>Permanent and long-term temporary website records should be managed outside of the live website. Short-term temporary website records may be managed in the platform. Agencies will need to frequently revisit their approaches to managing website records to ensure they are appropriately assessing risk and taking a proactive approach to meeting their requirements for compliance. Policy and schedules should clearly state</p>

	<p>how each of the considerations will be addressed. Agencies should consider the following when determining if solutions and services meet their requirements:</p> <ul style="list-style-type: none">● Level at which a website will be managed. For example, how many levels deep or how many webpages within the agency website will need to be captured.● How to manage dynamic content. For example, integrated third-party content on a page.● How to manage legacy websites. Agencies will have to determine how to manage legacy data as far back as the platforms make it available.● How to handle content that resides in third-party platforms, such as embedded social media content.
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USE CASES FOR MAINTENANCE AND USE AND WORKFLOWS

ERM.020 – Use Case for Electronic Records Maintenance & Use

Enabling Function: Electronic Records Maintenance & Use

Note: The ERM functions affect every other Federal Functional Area in that all agency mission support activities create electronic records. The Enabling Functions provide support to other Functional Areas and should be combined into their use cases to reflect where records are created and how they are captured and managed.

Business Scenario(s) Covered

- ERM.020.L1.01. Determine appropriate access level for electronic records
- ERM.020.L1.02. Manage the metadata of an electronic record throughout the lifecycle
- ERM.020.L1.03. Ensure audit trail of an electronic record is available to see what changes have been made to the content, metadata, or access level of the electronic record and by whom
- ERM.020.L1.04. Place hold on electronic records
- ERM.020.L1.05. Lift hold on electronic records identified by scope determination
- ERM.020.L1.06. Identify electronic records and respond to satisfy an information request
- ERM.020.L1.07. Export electronic records from legacy system
- ERM.020.L2.01. Convert electronic records into acceptable formats to protect from technological obsolescence

Business Actor(s)

Agency personnel, Agency Records Management Staff, Business Process Owner, Information Systems Owner

Synopsis

Once the electronic records have been captured or have records management controls applied, the Maintenance & Use phase begins. The first process identifies how to determine the appropriate access level for electronic records. This includes reviewing the content of a record or group of records, identifying agency personnel that need access to the record, choosing the appropriate level of access to records based on the nature of the subject, and assigning access levels to records. The next process checks the audit log of records to see if any changes were made and by whom. This process includes searching for the electronic records, retrieving the audit log, identifying entries in the audit log to investigate, contacting the individual who made those changes, and asking the individual about the circumstances surrounding the changes made to the electronic record.

The next process places holds on electronic records identified by the scope of a litigation hold. This consists of determining the search terms and other parameters to identify the records to place on hold, searching for the records in all agency systems, identifying the records to place on hold, and placing the identified records on hold to satisfy the litigation hold. Agencies also must be able to lift litigation holds from records.

The next process starts when an agency receives an information request. Information requests may include litigation, Freedom of Information Act (FOIA), Congressional, or any other type of requests. The agency determines search terms and other parameters, searches for responsive records, and prepares the responsive records to satisfy the information request.

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The last two processes detail how agencies protect ongoing access to electronic records. The processes outline migrating records from one system to another and preventing software or hardware obsolescence.

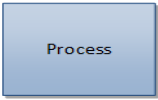

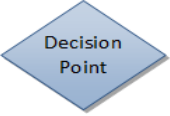

Assumptions and Dependencies

1. All predecessor events required to trigger the Initiating Event have been completed.
2. These events can be automated, semi-automated, or be executed manually.
3. All the inputs listed in each event have been created or are available for use to execute the events.
4. There is a system or repository set up to manage an agency’s electronic records.
5. The preparation of records responsive to information requests is addressed in other processes or workflows.

Initiating Event

Electronic content has been declared as records and captured or placed under records management control.

Visual Workflow Key

Rectangle	Process or activity	Arrows	Flow of activity	Diamond	Decision point, usually indicated by yes/no text	Oval	Start or end of a process
							

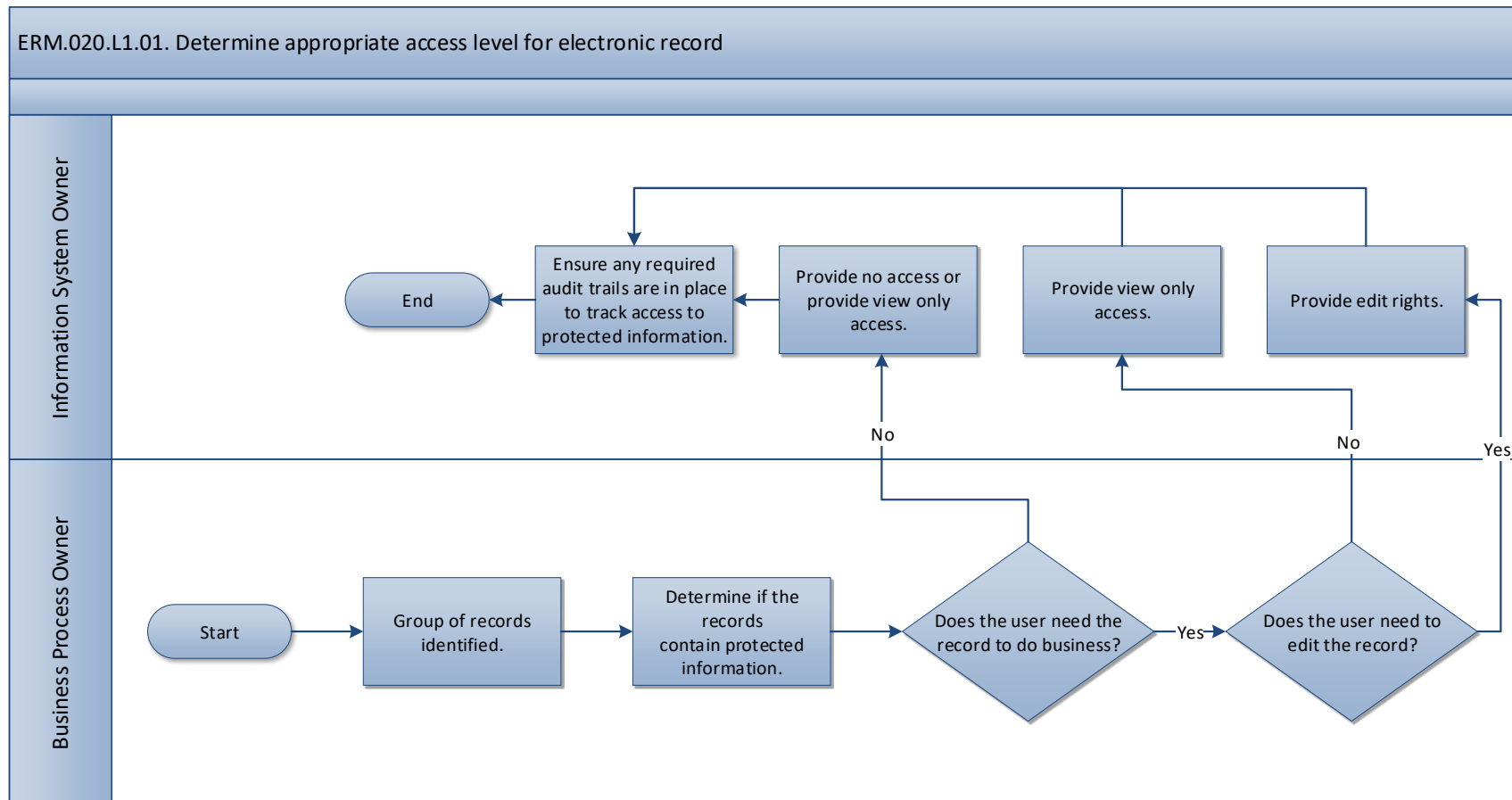
ERM.020 – ELECTRONIC RECORDS MAINTENANCE & USE

Typical Flow of Events

	ERM Event	Input(s)	Output(s) / Outcome(s)
ERM.020.L1.01. Determine appropriate user access level to electronic records			
1	Determine the content of electronic records. (ERM.020.010 – Access Level Management)	<ul style="list-style-type: none"> ● Electronic records ● Computer software 	<ul style="list-style-type: none"> ● Content of electronic records determined
2	Identify agency personnel that need access to electronic records. (ERM.020.010 – Access Level Management)	<ul style="list-style-type: none"> ● Content of electronic records ● List of agency personnel ● List of business functions 	<ul style="list-style-type: none"> ● List of agency personnel is identified
3	Choose the appropriate access level for agency personnel to electronic media records. (ERM.020.010 – Access Level Management)	<ul style="list-style-type: none"> ● Identified agency personnel ● List of access levels 	<ul style="list-style-type: none"> ● Level of access chosen
4	Assign appropriate access level to electronic records. (ERM.020.010 – Access Level Management)	<ul style="list-style-type: none"> ● Agency systems ● Electronic records ● List of agency personnel ● Chosen access level 	<ul style="list-style-type: none"> ● Electronic records have appropriate access level assigned
5	Continually review user access levels to electronic records and alter as appropriate. (ERM.020.010 – Access Level Management)	<ul style="list-style-type: none"> ● Agency systems ● Access list ● List of personnel 	<ul style="list-style-type: none"> ● Identified changes to make to access list ● Access list is altered

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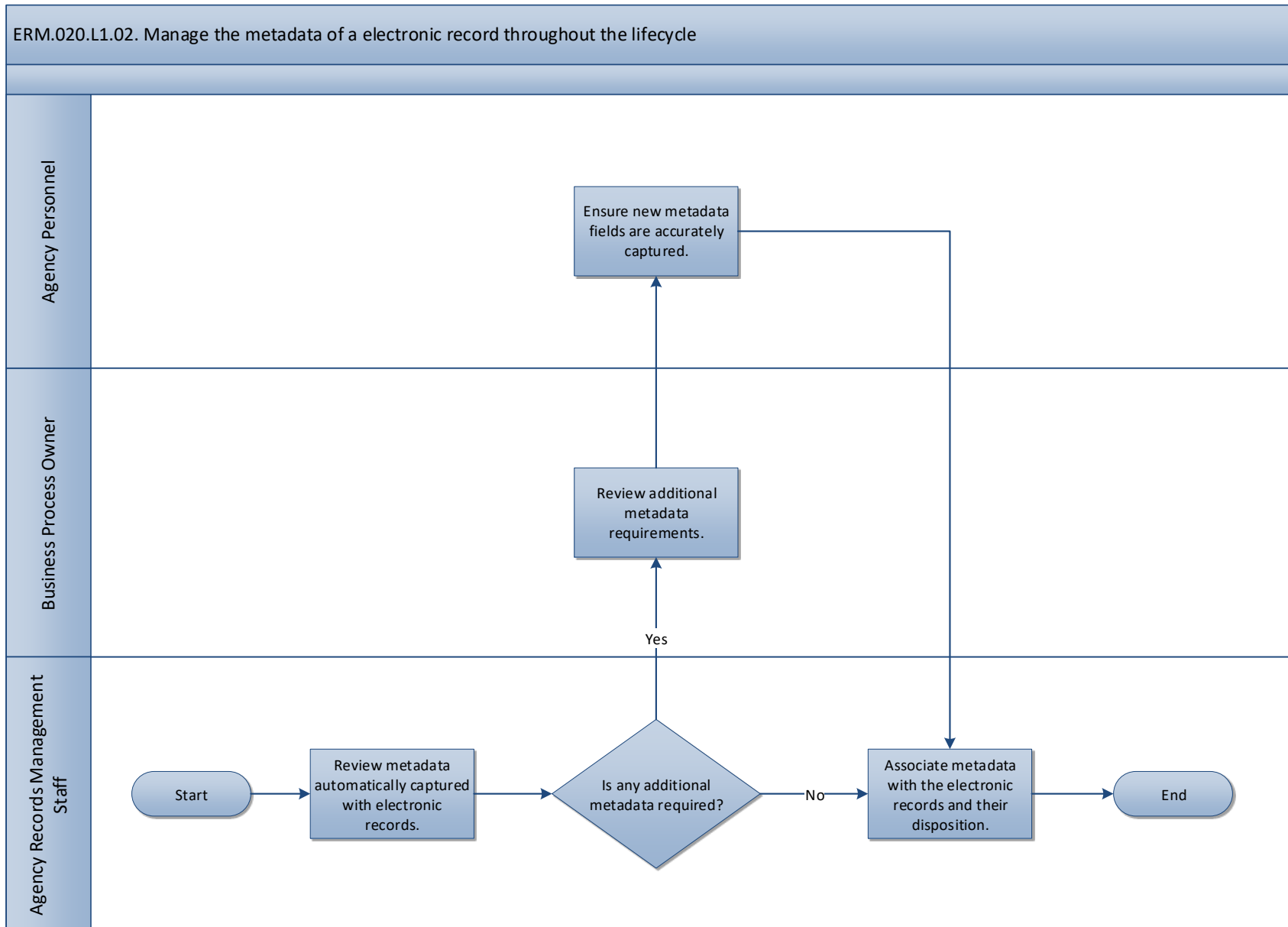
- Changes to electronic records are saved



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Typical Flow of Events			
	ERM Event	Input(s)	Output(s) / Outcome(s)
ERM.020.L1.02. Manage the metadata of an electronic record throughout the lifecycle			
6	Ensure initial attribution of metadata at creation or capture of a record (ERM.020.030 – Records Maintenance)	<ul style="list-style-type: none"> • Agency systems • Electronic record 	<ul style="list-style-type: none"> • Capture metadata
7	Ensure metadata accumulates over time and is managed appropriately (ERM.020.030 – Records Maintenance)	<ul style="list-style-type: none"> • Agency systems • Metadata 	<ul style="list-style-type: none"> • Metadata documenting provenance captured in agency systems
8	Ensure metadata aligns with the metadata schema in place for the records (ERM.020.030 – Records Maintenance)	<ul style="list-style-type: none"> • Metadata • Metadata schema 	<ul style="list-style-type: none"> • Metadata captured in agency systems

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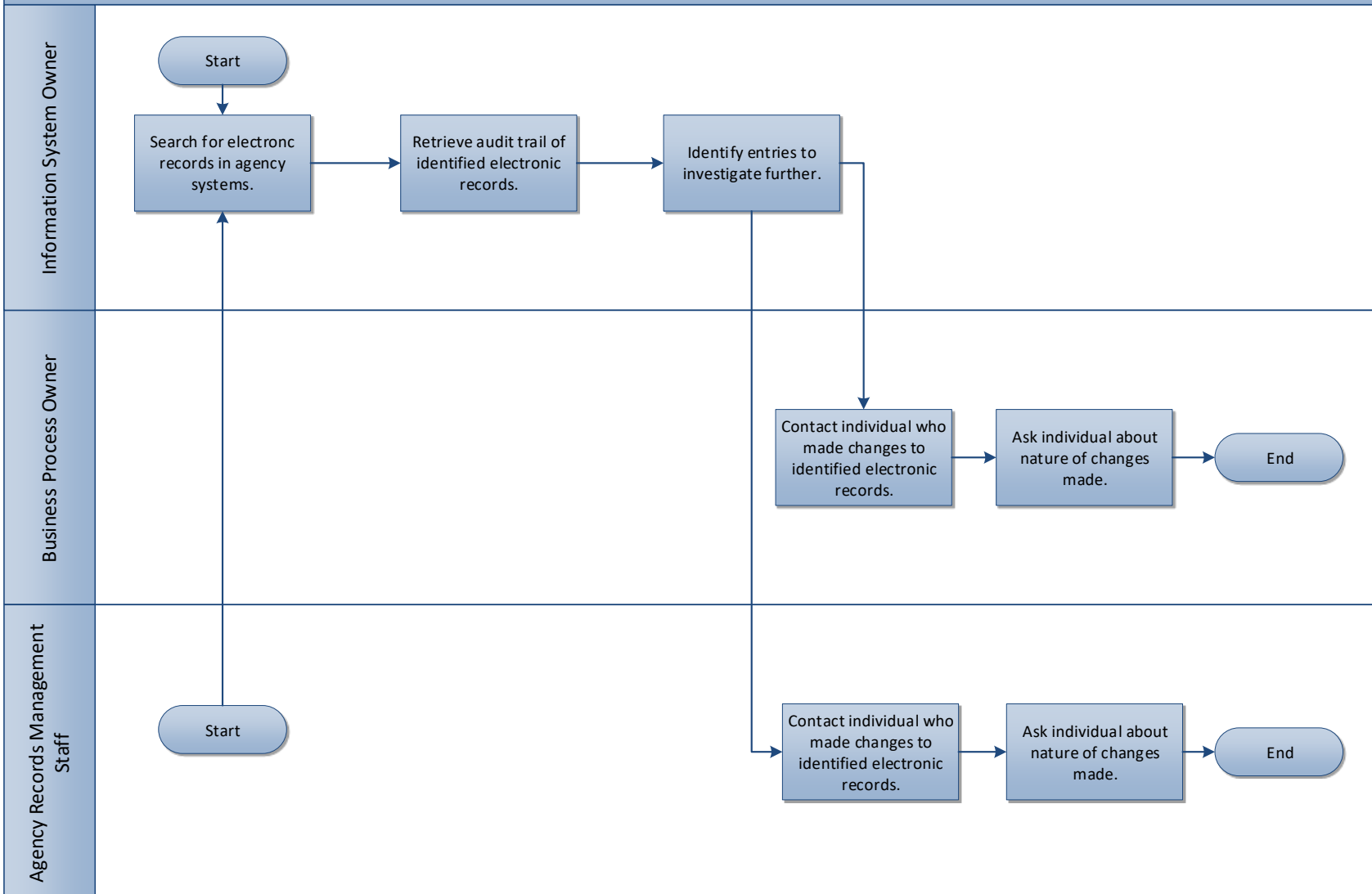


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ERM.020 – ELECTRONIC RECORDS MAINTENANCE & USE			
Typical Flow of Events			
	ERM Event	Input(s)	Output(s) / Outcome(s)
ERM.020.L1.03. Ensure audit trail of an electronic record is available to see what changes have been made to the content, metadata, or access level of an electronic record and by whom			
9	Search for electronic media records in agency systems. (ERM.020.030 – Records Maintenance)	<ul style="list-style-type: none"> • Agency systems 	<ul style="list-style-type: none"> • Identified electronic records
10	Retrieve audit trail of identified electronic records. (ERM.020.030 – Records Maintenance)	<ul style="list-style-type: none"> • Agency systems • Identified electronic records 	<ul style="list-style-type: none"> • Audit trail of electronic records
11	Identify entries in audit trail to investigate further. (ERM.020.030 – Records Maintenance)	<ul style="list-style-type: none"> • Agency systems • Audit trail of electronic records 	<ul style="list-style-type: none"> • Entries in audit trail
12	Contact individual who made changes to the identified electronic records. (ERM.020.030 – Records Maintenance)	Individual who altered electronic records	<ul style="list-style-type: none"> • Reason for altering electronic records

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ERM.020.L1.03. Ensure audit trail of a electronic record is available to see what changes have been made to the content, metadata, or access level of a electronic record and by whom

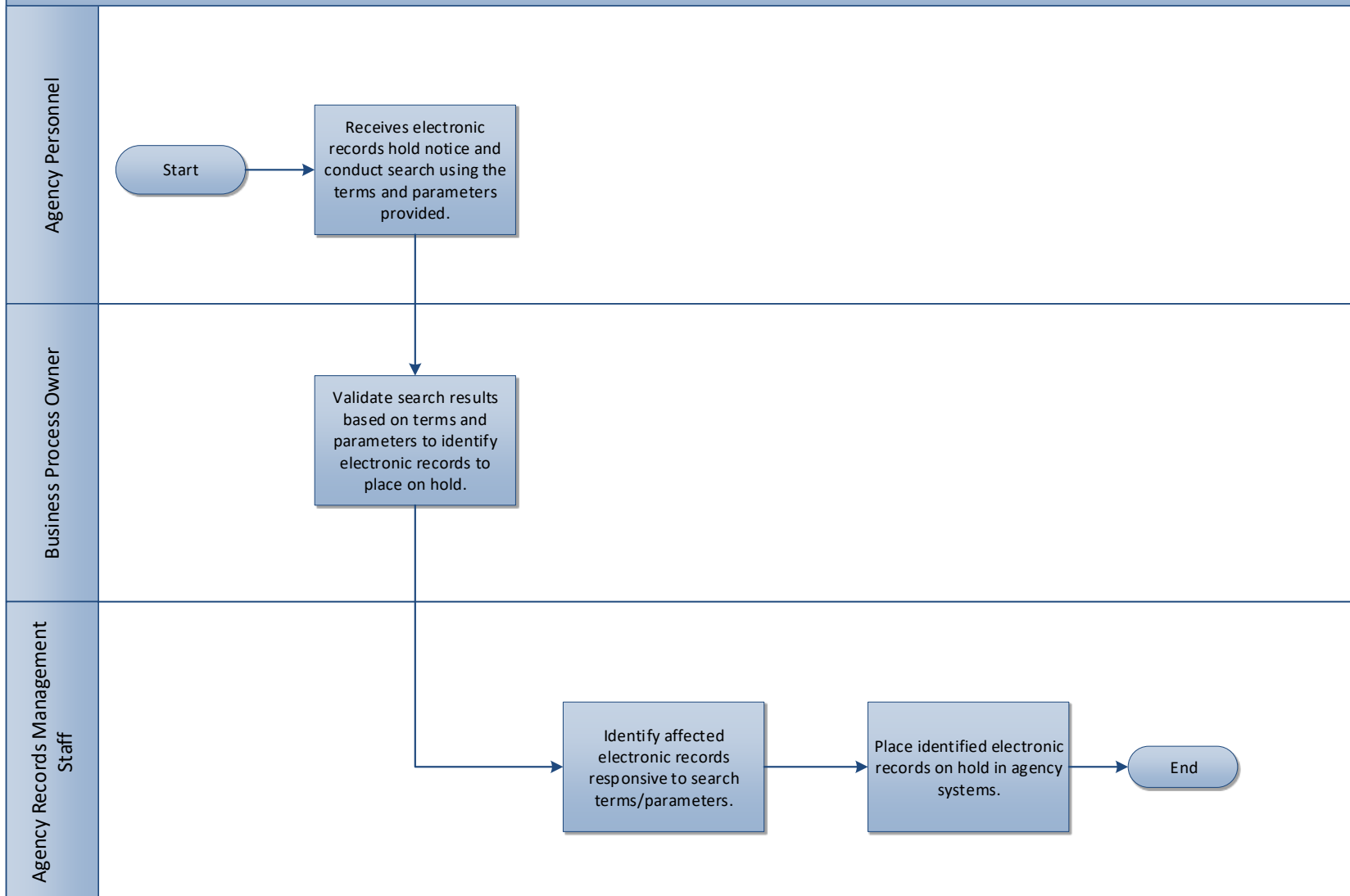


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ERM.020 – ELECTRONIC RECORDS MAINTENANCE & USE			
Typical Flow of Events			
	ERM Event	Input(s)	Output(s) / Outcome(s)
ERM.020.L1.04. Place hold on electronic records identified by scope determination			
13	Validate search terms and parameters for identifying electronic records to place on hold. (ERM.020.030 – Litigation Hold)	<ul style="list-style-type: none"> • Litigation hold scope (dates, custodians, and subject/keywords) 	<ul style="list-style-type: none"> • Identified search terms and parameters
14	Search for electronic records in agency systems responsive to the litigation hold. (ERM.020.030 – Litigation Hold)	<ul style="list-style-type: none"> • Search terms and parameters • Agency systems 	<ul style="list-style-type: none"> • List of electronic records from executed search
15	Identify electronic records that meet scope of litigation hold. (ERM.020.030 – Litigation Hold)	<ul style="list-style-type: none"> • Search terms and parameters • Agency systems 	<ul style="list-style-type: none"> • Electronic records are identified to put on hold
16	Place identified electronic records on hold in agency systems. (ERM.020.030 – Litigation Hold)	<ul style="list-style-type: none"> • Identified electronic records • Agency systems 	<ul style="list-style-type: none"> • Identified electronic records are placed on hold

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ERM.020.L1.04. Place hold on electronic records identified by scope determination

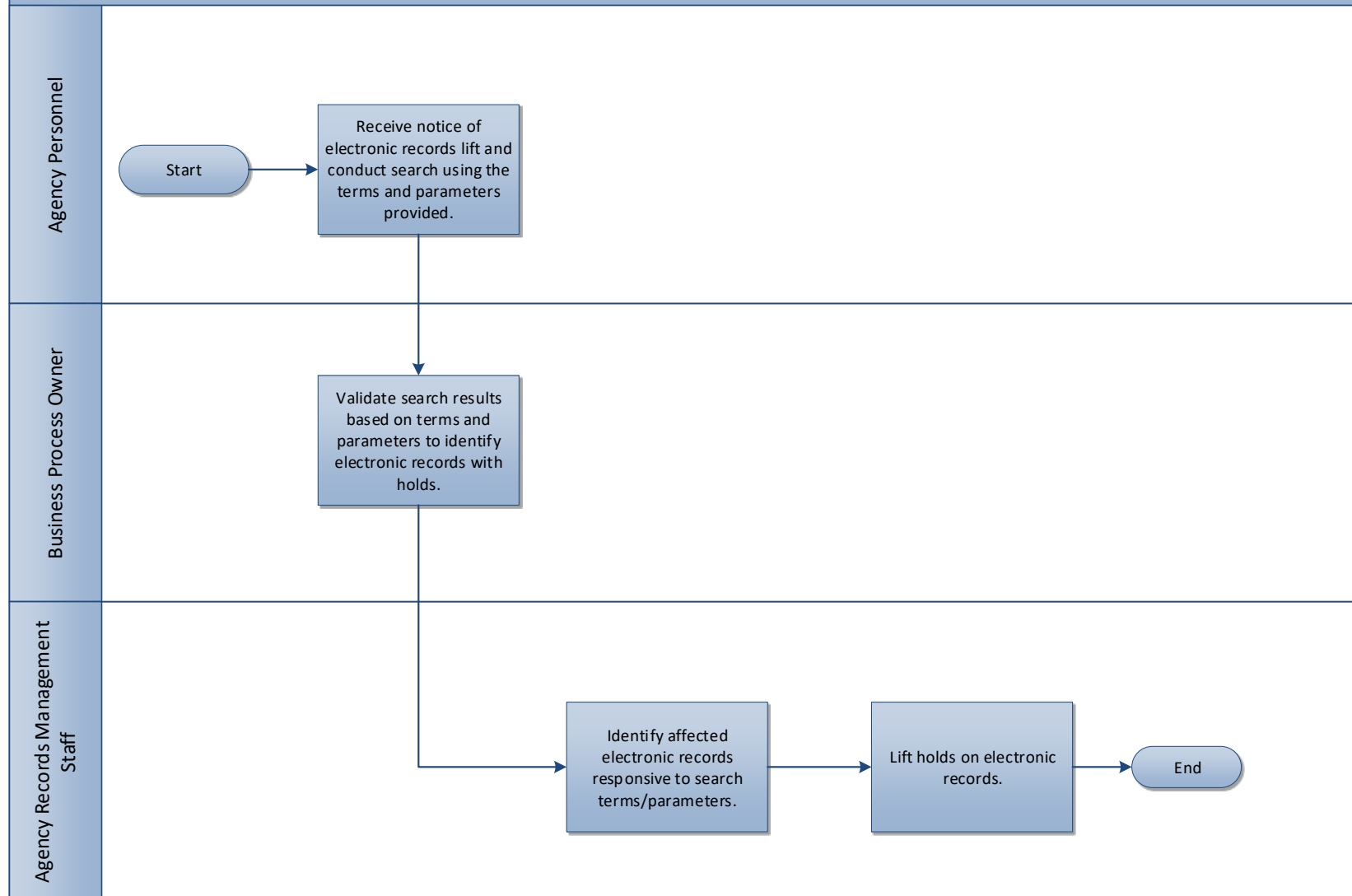


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ERM.020 – ELECTRONIC RECORDS MAINTENANCE & USE			
Typical Flow of Events			
	ERM Event	Input(s)	Output(s) / Outcome(s)
ERM.020.L1.05. Lift hold on electronic records identified by scope determination			
17	Receive notification of litigation hold lift. (ERM.020.030 – Litigation Hold)	<ul style="list-style-type: none"> • Notice of litigation hold lift 	<ul style="list-style-type: none"> • Records to have hold lifted
18	Search for identified records placed on hold. (ERM.020.030 – Litigation Hold)	<ul style="list-style-type: none"> • Search terms and parameters • Agency systems 	<ul style="list-style-type: none"> • Records with litigation hold
19	Lift the hold on identified records in agency systems (ERM.020.030 – Litigation Hold)	<ul style="list-style-type: none"> • Identified litigation hold records • Agency systems 	<ul style="list-style-type: none"> • Identified records have hold lifted

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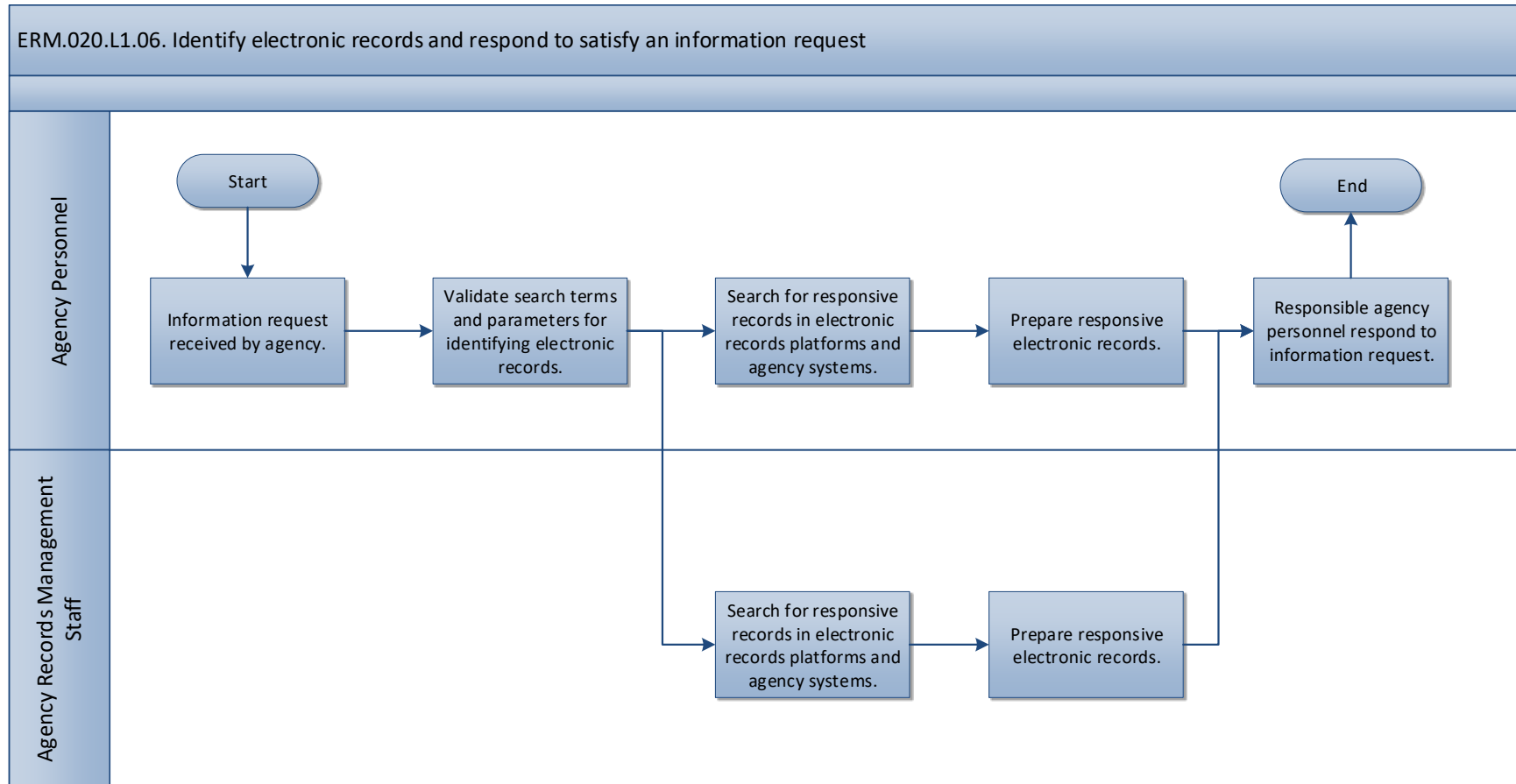
ERM.020.L1.05. Lift hold on electronic records identified by scope determination



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ERM.020 – ELECTRONIC RECORDS MAINTENANCE & USE			
Typical Flow of Events			
	ERM Event	Input(s)	Output(s) / Outcome(s)
ERM.020.L1.06. Identify electronic records and respond to satisfy an information request			
17	Review information request. (ERM.020.040 - Information Request)	<ul style="list-style-type: none"> • Information request 	<ul style="list-style-type: none"> • Appropriate staff identified
18	Validate search terms and parameters for identifying electronic records and search for responsive records. (ERM.020.040 - Information Request)	<ul style="list-style-type: none"> • Search terms and parameters 	<ul style="list-style-type: none"> • Identified responsive records
19	Prepare responsive records (e.g. export, review, and redact). (ERM.020.040 - Information Request)	<ul style="list-style-type: none"> • Identified responsive records 	<ul style="list-style-type: none"> • Responsive records prepared
20	Agency responds to information request. (ERM.020.040 - Information Request)	<ul style="list-style-type: none"> • Redacted (if applicable) results of search 	<ul style="list-style-type: none"> • Contact initial requestor

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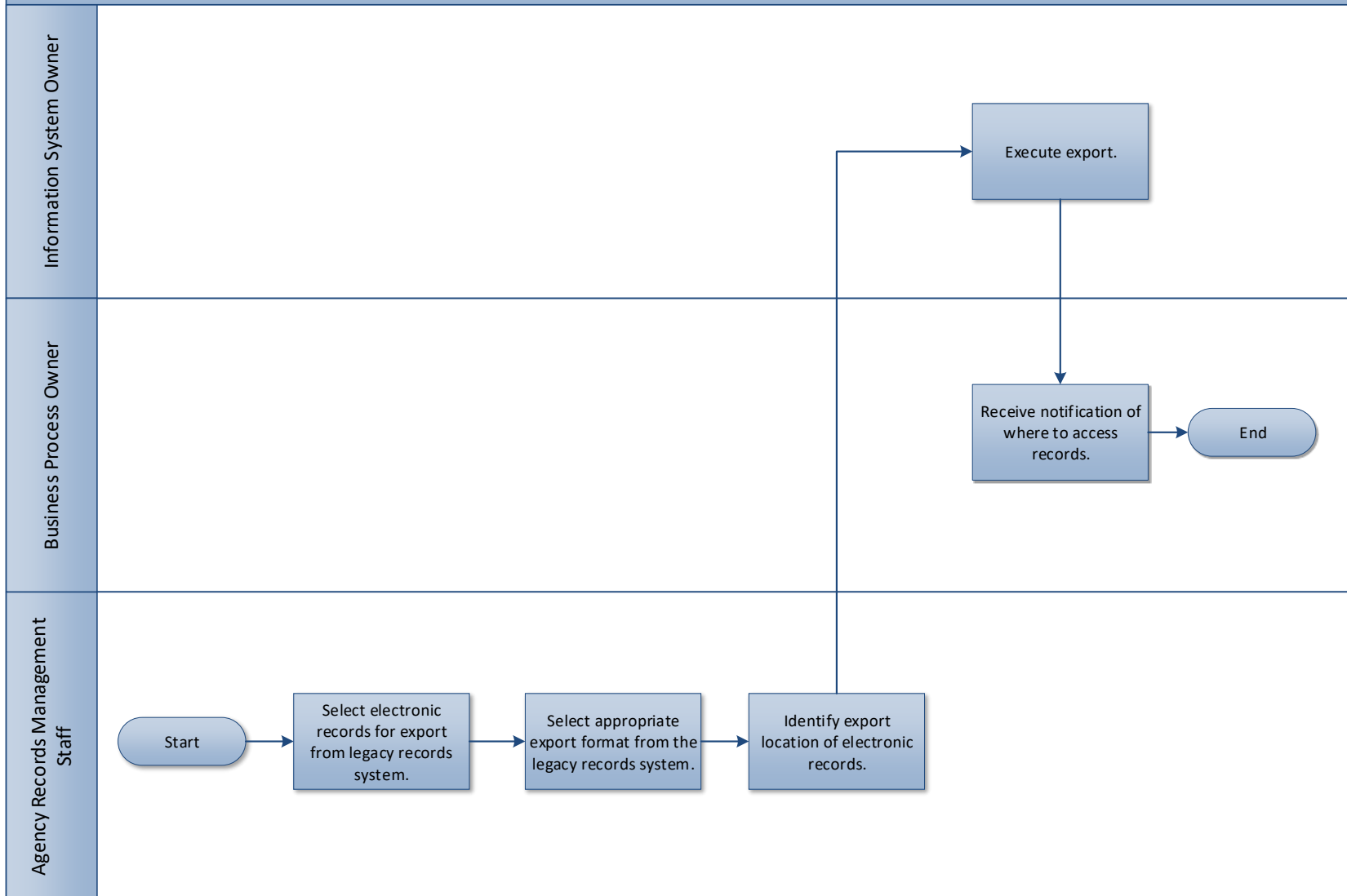


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ERM.020 – ELECTRONIC RECORDS MAINTENANCE & USE			
Typical Flow of Events			
	ERM Event	Input(s)	Output(s) / Outcome(s)
ERM.020.L1.07. Export electronic records from legacy system for migration			
21	Select electronic records with associated metadata for export from legacy records system. (ERM.020.040 - Information Request)	<ul style="list-style-type: none"> ● Legacy system ● Identified records for export ● Associated metadata 	<ul style="list-style-type: none"> ● Record objects selected for export
22	Select appropriate export format from the legacy records system. (ERM.020.040 - Information Request)	<ul style="list-style-type: none"> ● Legacy system ● Format export options ● Record objects selected for export 	<ul style="list-style-type: none"> ● Export format selected
23	Identify export location of electronic records. (ERM.020.040 - Information Request)	<ul style="list-style-type: none"> ● Legacy system ● Possible export locations 	<ul style="list-style-type: none"> ● Export location identified
24	Export executed. (ERM.020.040 - Information Request)	<ul style="list-style-type: none"> ● Legacy system ● Selected export format ● Identified export location 	<ul style="list-style-type: none"> ● Record export complete
25	Perform technical analysis to ensure all electronic records, including associated metadata, was exported successfully	<ul style="list-style-type: none"> ● Exported records and associated metadata 	<ul style="list-style-type: none"> ● Report of technical analysis

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ERM.020.L1.07. Export electronic records from legacy system for migration



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Typical Flow of Events			
	ERM Event	Input(s)	Output(s) / Outcome(s)
ERM.020.L2.01. Convert electronic records into acceptable formats to protect from technological obsolescence			
1	Assess the formats of electronic records for risks of technological obsolescence. (ERM.020.040 - Information Request)	<ul style="list-style-type: none"> • Legacy system • Approved records schedule 	<ul style="list-style-type: none"> • Identified records at risk needed for continued business • List of formats at risk of technological obsolescence
2	Convert electronic records into acceptable formats until their authorized disposition date. (ERM.020.040 - Information Request)	<ul style="list-style-type: none"> • Identified records needed for continued business • Acceptable formats • Agency systems 	<ul style="list-style-type: none"> • Records converted to acceptable formats
3	Perform technical analysis to ensure all information, including associated metadata, was migrated or converted correctly. (ERM.020.040 - Information Request)	<ul style="list-style-type: none"> • Converted records and associated metadata 	<ul style="list-style-type: none"> • Report of technical analysis

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ERM.020.L2.01. Convert electronic records into acceptable formats to protect from technological obsolescence

