

United States Government Printing Office

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**Automated Tool for Disposition of
Materials in FDLs
Concept of Operations**

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1. Scope

This Concept of Operations (ConOps) describes the current and desired characteristics for the United States Government Printing Office (GPO) Automated Tool for Disposition of Materials in FDLs.

1.1 Identification

The newly proposed Automated Tool for Disposition of Materials in FDLs consists of functionality required to manage key information used by the depository libraries for disposition of materials. This includes bibliographic information on materials a given library has identified as missing or needing replacement in their collections (Needs), as well as bibliographic information on materials identified for withdrawal from their collections (Offers). This will include a mechanism for libraries to communicate among themselves to facilitate the process.

1.2 Document Overview

This ConOps serves as a means to communicate concepts and characteristics to users, developers, and stakeholders. The ideas expressed herein were developed by reviewing documents and gathering comments regarding Disposition of Materials current and future operations.

IEEE Standard 1362-1998, *Guide for Information Technology-System Definition-Concept of Operations Document*, was used to guide the development of this ConOps and was adapted as appropriate.

This document contains the following sections:

Section	Purpose
Section 2: Current System	To describe the current Disposition of Materials system.
Section 3: Justification for and Nature of Changes	To explain the motivation for a new system.
Section 4: Proposed System	To describe, at a high level, the features of the proposed Automated Tool for Disposition of Materials in FDLs.
Section 5: Operational Scenarios	To illustrate step-by-step scenarios of how the proposed system should operate.
Section 6: Summary of Impacts	To explain the impacts of the proposed system on the users, developers, and maintenance organizations.
Section 7: Analysis of the Proposed System	To summarize improvements, disadvantages and limitations, and alternatives and tradeoffs.

1.3 System Overview

The Automated Tool for Disposition of Materials in FDLs will comprise the technology and business practices necessary to enable regional depository libraries to manage the disposition process in their states, as well as streamlining the disposition process for regional and selective depositories alike.

This proposed automated tool will allow FDLs to notify other libraries of materials they are discarding from their collections and offering to other libraries (i.e., “Offers”). When a publication is offered, the tool will provide the first options to request the publication to libraries in that region, starting with the regional depository serving the Region, followed by other selective depositories in the region. Once the regional and the selective depositories in the region have had an opportunity to request the publication, the publication will be offered to libraries outside the region.

In a similar fashion, the automated tool will allow FDLs to notify other libraries of materials that they have identified as missing or needing replacement in their collections (i.e., “Needs”). The Needs portion of the tool will allow libraries to indicate whether the material sought is needed to replace materials lost in a natural disaster such as a fire or flood, or whether the material is needed for a digitization project.

The system will utilize MARC records to populate a template of bibliographic information on the publication that is needed or offered. This information will include SuDoc classification number, title, and publication date, as well as other information as needed. The template will also include blank fields for libraries to provide additional information specific to the material sought or offered, such as fields for local call numbers or notes on the condition of the copy.

The system will have a matching function to enable matching of needs entries to offers entries, and vice versa. Priority will be given to matching Needs of regionals with Offers of selectives in the same region. A matching matrix with other priorities for matching will need to be determined during system development. When a match is found, the system will notify the appropriate libraries of the match.

Library Services and Content Management (LSCM) hopes to take advantage of all technology that can be integrated in order to decrease manual operations. The goal is to provide FDLs with an automated tool that will enable them to streamline their disposition processes.

1.4 Glossary and Acronyms

1.4.1 Glossary

Item Number	A sequential number used in selecting to receive publications classified under one or more associated SuDocs Class Stems.
List of Classes	The official listing of SuDocs item classifications available for selection by depository libraries participating in the FDLP. This list is arranged according to the SuDocs classification numbering system and is designed to group together publications by government author. Currently, the <i>List of Classes</i> is published semi-annually in paper and sent to each depository library.

Offering Library	Depository library that is discarding depository resources from their collections and are making those materials available to other depository libraries for their collections
Requesting Library	Depository library that is seeking certain depository resources to add to their collection
SuDocs Class Stem	Combining the designations for authors and those for the series published by the authors' results in the class stems for the various series of publications issued by the U.S. Government. It consists of letter author symbols for the parent issuing body, numbers indicating subordinate offices followed by a period, and numbers designating category classes, series, or serial title followed by a colon
SuDocs Classification System	A system designed to group together publications by the same government author. Within an agency or department, publications are grouped according to the subordinate organization. The purpose of this system is to uniquely identify, logically relate, and physically arrange each publication so that all publications of a single agency or department may be found together.
Real-time	Transaction-based synchronous communication between systems.
Tangible Publications	Books, maps, serials, videos, and CD-ROMs distributed through the FDLP that are not in electronic form.
Vendor	Contracted companies that provide services for LSCM; also referred to as contractors. LSCM typically uses vendors to convert publications from its original form into microfiche.

1.4.2 Acronyms

ConOps	Concept of Operations
COOP	Continuity of Operations Plan
EA	Enterprise Architecture
FDLP	Federal Depository Library Program
GPO	U.S. Government Printing Office
ILS	Integrated Library System
IT	Information Technology
LSCM	Library Services and Content Management
OCIO	Office of the Chief Information Officer
PM	Project Manager

1.5 Resources

To complete the requirements for this ConOps, documents were reviewed, interviews conducted, and standards consulted.

1.5.1 Websites

Needs & Offers on the FDLP Desktop

<http://www.fdlp.gov/collections/collection-maintenance/144-needs-and-offers-nao>

Federal Depository Library Handbook

<http://www.fdlp.gov/administration/handbook>

Disposal Guidelines of Regional Depository Libraries

<http://community.fdlp.gov/weblinks/depository-resources/regionals/disposals.html>

FDLP Community Discussion Forum

<http://community.fdlp.gov/forum/forum?f=56>

Disposition of Depository Materials Project Web Page

<http://www.fdlp.gov/home/about/668-dispositionofdepositorymaterials>

State Plans for Federal depository libraries

<http://community.fdlp.gov/weblinks/depository-resources/regionals/general.html>

1.5.2 Documents

44 *United States Code* §§1901-1916, Depository Library Program

1.5.3 Brainstorming/Feedback

Presentations about this project were conducted and attendees were given the opportunity to ask questions and offer suggestions for system features:

Etkin, Cynthia and Lisa Russell, “Discards, Needs, & Offers – Oh My! What’s One to Do?” at Federal Depository Library Conference, October 19, 2009. Arlington VA.

{slides: http://www.fdlp.gov/home/repository/doc_download/1072-the-future-opportunities-of-disposal-and-discard-in-the-depository-program] [transcripts: http://www.fdlp.gov/component/docman/doc_download/1107-transcripts-from-the-fall-2009-dlc-meeting]

Etkin, Cynthia and Lisa Russell, “Discards, Needs & Offers – Oh My! What’s One to Do?” OPAL session, December 14, 2009. [streaming audio with slides: <http://www.opal-online.org/GPO20091214/>]

A forum was created on the FDLP Community site for discussion of the requirements for an automated tool: <http://community.fdlp.gov/forum/forum?f=56>

1.5.4 Standards

IEEE, *IEEE Guide for Information Technology – System Definition – Concept of Operations (ConOps) Document (IEEE Std 1362-1998)*, December 31, 1998.

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2. Current System

The GPO created and maintains a Web site where all depository libraries may submit and have posted their already-generated needs or offers lists or alternatively provide a URL that will link to their lists posted locally.

2.1 Background, Objectives, and Scope

2.1.1 Background

Retention guidelines vary by the type of depository library. Federal libraries that are designated depositories have different retention guidelines. These are prescribed in Title 44. 44 USC §1912 gives regional depository libraries the authority to assist selectives with the disposal of unwanted publications, but §1912 offers no procedures. Over time regional depository libraries have developed different retention guidelines and discard procedures for the selective depository libraries they serve.

2.1.1.1 Current Practice

What follows is a high level description of current disposition of materials practices and it is recognized that there are local variations to this process. Most regional depositories require every selective depository to list each document they are discarding and include, but not limited to, SuDoc number, title, and date. Many regionals use the calendar to limit the size and range of SuDoc stems per month. In conjunction with State Plans, some regionals have implemented weeding schedules and only evaluate certain categories of documents during specific months. Many regionals receive the lists electronically as well. Regionals often cull any documents missing from their own permanent collection in order to create a comprehensive one. After regional library review, the lists are distributed to other libraries in the state and the materials can also be offered to depositories using the National Needs and Offers Service maintained by GPO.

At present there is no one system that provides for the creation and dissemination of disposition lists for all the Federal Depository Library Program member libraries.

2.1.2 Objectives

The objectives of the current system are to

- Assist depository libraries in meeting their legal obligation to share, with other depository libraries, the materials they wish to discard
- Provide a centralized Web site where depository library staff can go to offer other depositories publications and request receipt of materials they need

2.1.3 Scope

The scope of the current system is to allow the posting and browsing of needs and offers lists (or to link to a remote site with lists) for depository and non-depository materials to be discarded from or needed by Federal depository libraries.

2.2 Description of the Systems in Use

The major components and systems that are used in the current disposition process include the following:

- Static Web page with manual uploading and removal of needs and offers lists
- Ability to browse lists; there is no search capability
- RSS feed to notify users of new posts to the site
- Low-tech, high maintenance

2.3 Operational Policies and Constraints

The FDLP has several operational policies that influence the current system operations. These policies include

- Use of the National Needs & Offers is encouraged, but use by depositories is voluntary
- Procedures originate in the states or regions, which provides inconsistent data elements on the lists

2.4 Modes of Operation

The current system has two modes: operational and non-operational.

2.5 User Classes

A user can be defined as anyone who will interact with the system. The major user classes identified for the system include:

- **Libraries.** Libraries are the primary customers of the FDLP. The primary function of libraries is to “offer” to other depository libraries the materials they wish to discard from their collections and to inform libraries of materials they “need” for their collection.
- **Regional Depositories.** Regional depositories have agreed to receive all publications made available to depositories and to retain those items in perpetuity (with some exceptions). U.S. Senators may designate libraries in their states as regional depositories. Each state may have two regional depositories, designated by their U.S. Senators. Regional depositories are located at flagship, publicly supported universities, as well as at public and state libraries. In addition to selection and retention requirements, regional depositories serve as liaisons between the selective libraries in the state (or region) and provide consultation, coordinate planning, review publication disposal lists, and offer other services to selective depositories in their

- regions. The statutory authorization for regional depositories is found in U.S. Code, Title 44, Chapter 19.
- **Selective Depositories.** Selective depositories have the option of tailoring the collection to fit the needs of the community including the library's primary users, as well as the general public. Selected material must be retained for at least five years or substituted with on-line equivalents. Two selective depositories may be designated within each congressional district, although at any given time there may be more than two in some districts due to redistricting. In addition, each U.S. Senator can designate two depositories in his or her state providing there is an opening in that Senator's class. The number of selective depositories in a congressional district can also be augmented by designations for certain types of libraries allowed by special provisions in Title 44.
 - **GPO LSCM Staff.** Authorized GPO staff conduct maintenance activities of uploading, removing, and archiving files; and maintaining the Web site.

2.6 Support Environment

The National Needs & Offers Web site is supported by GPO LSCM Web Content Management while the servers are maintained by GPO IT.

3. Justification and Nature of Changes

The disposition and Needs & Offers processes need to be automated and a bibliographic utility should be the core of the system. This will streamline the process for depository libraries and GPO as well as provide some relief to an administrative burden of depositories.

3.1 Justification for Changes

Repeatedly the disposition of materials and Needs & Offers processes are identified by depository coordinators, library directors, selectives, and regionals as cumbersome, labor-intensive, and time consuming. It also compounds the space problems of many depository libraries as it is increasingly more difficult to find storage for documents to be discarded until the lengthy procedure is completed, which is often months. Technology will allow streamlined processes, consistency with records, and depository staff will have some relief from a resource-intensive, burdensome, process that is required by law.

3.2 Description of Desired Changes

The proposed Automated Tool for Disposition of Materials in FDLs incorporates technology advances and ideas necessary for operations. The proposed tool provides the following:

- Introduce an automation into the disposition of materials and the Needs & Offers processes
- Integrate the use of a bibliographic utility
- Provide robust search, retrieval, and sort capabilities
- Develop a centralized processing system for Needs & Offers and discards that can be used by all depository libraries
- Add functionality that will allow identification of fugitive publications that GPO can bring under bibliographic control and acquire for the FDLP

3.3 The Priorities among Changes

Priorities, by category, for implementing the desired changes will be determined during the requirements gathering process; therefore, they are not available at this time. However, they are expected to include:

- Centralized automated process
- Incorporation of a bibliographic utility

4. Proposed System

The Automated Tool for Disposition of Materials in FDLs is illustrated below in terms of background, objectives, and scope; operational policies or constraints; description of the proposed system; modes of operation; user classes and other involved personnel; and the support environment.

4.1 Background, Objectives, and Scope

4.1.1 Background

The proposed Automated Tool for Disposition of Materials in FDLs was developed after a review of concerns expressed by the depository community through various data gathering and strategic planning discussions. Additionally, regional discard procedures and GPO policy documents were reviewed for potential requirements for the automated tool.

4.1.2 Objectives

- To provide a tool that will handle the workflow of the disposition process
- To make the disposition process less burdensome on depository libraries
- To streamline the disposition process

4.1.3 Scope

The scope of the proposed system is discussed below.

- **Offers Management.** The bibliographic control of materials that each FDL is offering to other libraries after choosing to discard those materials from their own collections. This will include a mechanism for adding new Offers, as well as a mechanism for removing Offers that have been claimed by another library or discarded after an appropriate period of time.
- **Needs Management.** The bibliographic control of materials that each FDL has identified as a Need for their own collections. This will include a mechanism for adding new Needs, as well as a mechanism for removing Needs that have been fulfilled. Three types of Needs have been identified.
 - **Need.** Material that a FDL has identified as desired for their collection. This may be a replacement for material that is missing or damaged, or it may be material that is needed for the collection for other reasons.
 - **Natural Disaster Need.** Material that a FDL has identified as needing replacement due to a natural disaster such as a fire or flood.
 - **Digitization Need.** Material that a FDL has identified as needed for a digitization project.
- **Workflow Management.** Automated rules to manage the disposition process. This will include rules that govern the sequence of options to claim an Offer (i.e., the regional has first option, other selectives in the region have second option, other libraries have third

option), as well as rules to match new Offers to existing Needs (and vice versa). Other workflow rules may be developed as necessary.

- **Interlibrary Communication.** Mechanisms to provide communication among participating libraries. This could include notification that new Offers are available for review and or notification when a Need or an Offer has been matched with another library. This should include options for libraries to set frequencies for receiving the notifications.

4.2 Operational Policies and Constraints

4.2.1 Operational Policies

The FDLP has several operational policies that influence current disposition processes. These policies are both documented and undocumented.

4.2.1.1 Documented Operational Policies

The following documented operational policies influence the disposition process:

- 44 *United States Code* §1912.
- 1995 Memorandum to Regional Libraries.
- Regional discard procedures for each region.

4.2.1.2 Undocumented Operational Policies

The following undocumented operational policies influence the disposition process:

- Five states do not have written guidelines for disposition.
- Some states may have additional unwritten policies.

4.2.2 Operational Constraints

The following operational constraints influence the current disposition process:

- Each region has the flexibility to establish its own procedures, so there will be differences among regions in how discards are processed. System rules will need to be devised that will accommodate these differences.
- The new tool will need to accommodate MARC records in order to ensure consistency of bibliographic information on materials offered.
- Some libraries use locally established call numbers for some publications. The bibliographic information provided will need to include the official SuDoc classification number as well as the local call number in order to allow the offering library and the reviewing library to uniquely identify the publication in a manner consistent with their own practices. This will help the offering library to match the publication to the request, while allowing the reviewing library to more clearly identify whether the publication is duplicated in their collection.

- The tool should be designed and implemented in accordance with the strategic technology and architecture decisions of the GPO EA.
- The tool should be designed and implemented in accordance with the GPO Information Assurance Security Policy.

4.3 Description of the Proposed System

The context diagram for the proposed system is depicted in Figure 4-1. The following subsections provide an overview of the system operations.

Automated Tool for Disposition of Materials in FDLs

Draft Proposed Workflow Diagram

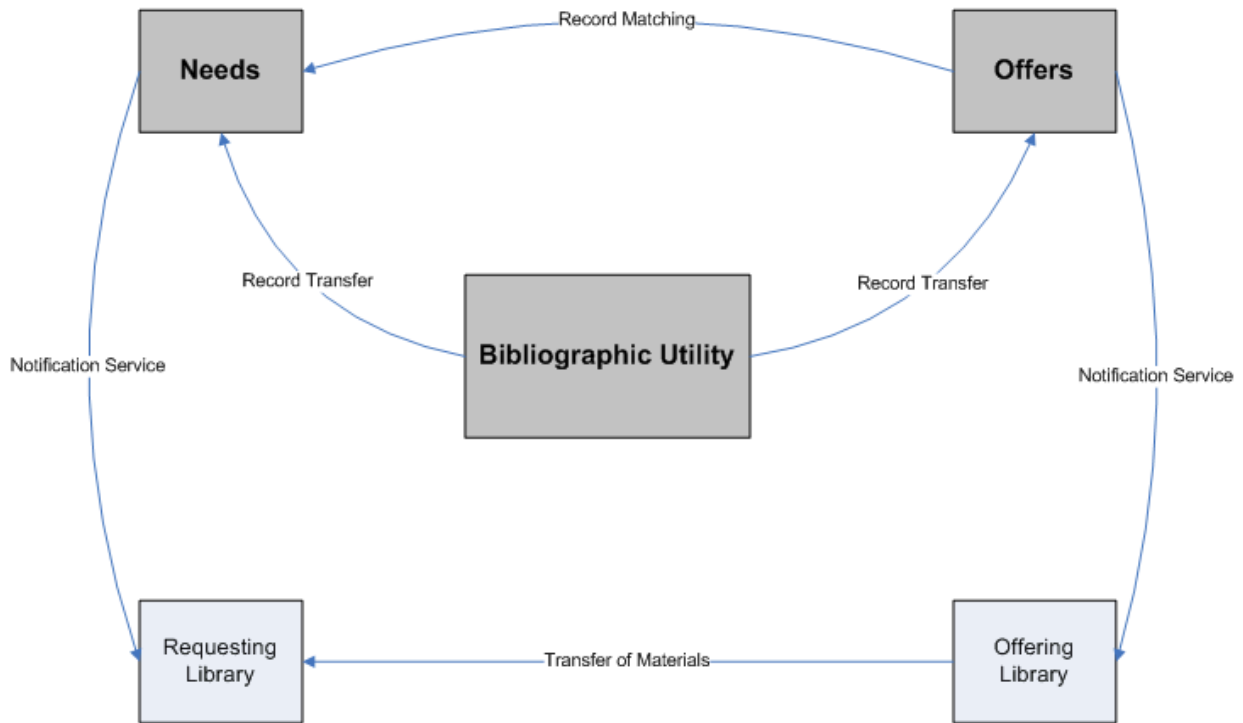


Figure 4-1. Proposed Automated Tool for Disposition of Materials in FDLs

4.3.1 Offers

When an offering library identifies materials to be withdrawn from their collection, the library will use the Automated Tool for Disposition of Materials to search the bibliographic utility for a MARC record that matches the material being withdrawn. That MARC record will be added to the Offers portion of the tool as material being offered by that library. The offering library will annotate the record with local call numbers, notes on condition of the material, and other information as necessary. The record will include the date it was entered as an Offer, and that

date will be used to calculate the time period for the regional to request or pass on the material. Once the regional for that region has requested or passed on the material, the material will be offered to other selectives in the region for a certain period of time. After other selectives in the Region have had the option to request or pass on the material, the material will be offered to other libraries for a certain period. If no library requests the material at the end of this period, the offering library may dispose of the material.

4.3.2 Needs

When a requesting library identifies desired material, the library will use the tool to locate a MARC record that matches the material being sought. The MARC record will be added to the Needs portion of the tool as material needed by that library. The requesting library may note whether the material is sought to replace material lost or damaged in a natural disaster or whether the material is sought for a digitization project. Other libraries may search the Needs portion of the tool for materials sought to rebuild collections impacted by natural disasters or for materials sought for digitization projects.

4.3.3 Workflow

The tool will utilize automated rules to ensure that materials are offered in the appropriate sequence. The tool will also include rules that will match Needs and Offers of the same materials.

4.3.4 Communications

The tool will utilize notifications to alert FDLs when there are new Offers available for review. The tool will also provide notifications when a match is found between a Need and an Offer.

4.3.5 Fulfillment

External to the functions of the tool, the requesting library and the offering library will arrange for transfer of the materials.

4.3.6 Interfaces

- **Integrated Library System.** The database that includes the bibliographic information for all tangible and electronic government publications.

4.4 Modes of Operation

Modes of Operation cannot be fully determined until the system requirements for the Automated Tool for Disposition of Materials in FDLs have been established.

4.5 User Classes and Other Involved Personnel

A user can be defined as anyone who will interact with the system. The major user classes identified for the system include:

- **Libraries.** Libraries are the primary customers of the FDLP. The primary function of libraries will be to provide contact and item selection, as well as view shipment status information.
 - **Regional Depositories.** Regional depositories have agreed to receive all publications made available to depositories and to retain those items in perpetuity (with some exceptions). U.S. Senators may designate libraries in their states as regional depositories. Each state may have two regional depositories, designated by their U.S. Senators. Regional depositories are located at flagship, publicly supported universities, as well as at public and state libraries. In addition to selection and retention requirements, regional depositories serve as liaisons between the selective libraries in the state (or region) and provide consultation, coordinate planning, review publication disposal lists, and offer other services to selective depositories in their regions. The statutory authorization for regional depositories is found in U.S. Code, Title 44, Chapter 19.
 - **Selective Depositories.** Selective depositories have the option of tailoring the collection to fit the needs of the community including the library's primary users, as well as the general public. Selected material must be retained for at least five years or substituted with on-line equivalents. Two selective depositories may be designated within each congressional district, although at any given time there may be more than two in some districts due to redistricting. In addition, each U.S. Senator can designate two depositories in his or her state providing there is an opening in that Senator's class. The number of selective depositories in a congressional district can also be augmented by designations for certain types of libraries allowed by special provisions in Title 44.
 - **Libraries that Serve as Regional Depositories.** In states where there is not an officially designated regional depository, specified selective depository libraries serve as the regional depository for the sole purpose of receiving materials deemed important enough to be located in all states. For example, the bound Congressional Record through the 104th Congress has been distributed to all regional depositories and libraries that serve as regional depositories for those states without a regional depository.
- **Partners.** Partnerships with Federal depository libraries and other Federal agencies have been established to increase access to electronic Federal information since 1997. With an increasing amount of Federal information available electronically, partnerships ensure permanent public access to electronic content and provide services to assist depositories in providing access to electronic material and in managing their depository collections. There are content partners that assist with providing permanent public access to electronic U.S. Government information. Service partners assist GPO to provide enhanced services to the Federal depository libraries. Hybrid partners provide both content and service functions.
- **GPO LSCM Staff.** Authorized GPO staff will provide maintenance activities.

4.6 Support Environment

The proposed system will be supported by GPO IT Infrastructure, EA, and Information Security Policies. LSCM and the OCIO will agree to the support and maintenance levels required and will need to address equipment needs and storage requirements upon design completion.

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5. Operational Scenarios

The *Automated Tool for Disposition of Materials in FDLs Requirements Document* will present operational scenarios in Section 2.8. The scenarios will convey what is required of the tool. Each scenario will illustrate a single example of how users may interact with the tool. The scenarios included will be descriptive only. They will not be intended to represent all possible user scenarios and will not convey a fixed series that would be found in an actual implementation.

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6. Summary of Impacts

The Automated Tool for Disposition of Materials in FDLs will have impacts on regional depositories, selective depositories, and GPO. The subsections below identify potential impacts that should be considered as the GPO continues to plan for the tool development.

6.1 Operational Impacts

Operational impacts cannot be fully assessed until analysis for the Automated Tool for Disposition of Materials in FDLs has been completed and design has begun. The items below, therefore, are suggested areas for consideration.

- **Operations Center.** GPO IT will have to consider the impact, location, and support required for the new tool, possibly including support availability, budget, equipment, and software.
- **Operational Procedures.** Operational procedures must be developed for users; these procedures will ensure that transition to new procedures utilizing the tool will only minimally impact daily operations in FDLs. Operational impact and draft procedures should be developed during user interface walk-through sessions. Walk-through sessions provide helpful information on tool use and interface design and are conducive to securing user approval. Additionally, users can be trained prior to system turnover.
- **Data Retention.** The need for data retention is impacted by regional disposition procedures, as well as Title 44 requirements and other Depository regulations.
- **Recovery Operations.** GPO IT and LSCM should discuss the need for recovery operations. This should include a Continuity of Operations Plan (COOP) and a Disaster Recovery Plan. The FDLP may need to develop requirements to deal with emergency and disaster operations, data replication and recovery, and system replication.
- **Operational Budget.** LSCM will have to consider the operational budget needed for system support and potential system modifications.
- **Operational Risks.** LSCM must identify the risks to daily operations when transitioning to the new tool.

6.2 Organizational Impacts

Organizational impacts cannot be fully assessed until the Automated Tool for Disposition of Materials in FDLs completes analysis and begins design. The items below, therefore, are suggested areas for consideration.

- **Joint Committee on Printing.** The Joint Committee on Printing, created by the act of August 3, 1846 (9 Stat. 114; 44 U.S.C. 101), is the oldest joint committee of the Congress. Composed of five Representatives and five Senators, the panel oversees the operation of the GPO, whose support is essential to the legislative process of the Congress. The GPO also serves by law as the principal printing organization for Federal agencies, so the Joint Committee generally oversees compliance by Federal agencies with laws, rules, and regulations designed to minimize printing costs to the American people.

Given the Joint Committee's responsibility, LSCM will have to obtain approval of all changes prior to establishing the proposed tool.

- **GPO Staff and FDLP Libraries.** The impact on current users and the need for user acceptance is critical to the success of the FDLP modernization effort. It is essential to retrain and educate users on the proposed system. The process of educating users should include traditional training sessions, as well as hands-on opportunities for the entire user community to become familiar with the operational environment prior to mandatory transition. To ensure that the proposed tool is accepted by the user community, LSCM should consider conducting several iterations of user studies or walkthroughs to allow the users the opportunity to interact with the system and to provide feedback on system features. The feedback obtained should be analyzed and considered for future modifications.
- **Project Management.** Both LSCM and OCIO should consider the staffing changes needed for design, implementation, and operation of the proposed system. LSCM should appoint a Project Manager (PM) who focuses on functional (operational) features, and OCIO should appoint a PM who focuses on technical execution. The functional PM will be responsible for coordinating user involvement, interfacing with stakeholders, and representing the business interests of LSCM. The technical PM will be responsible for managing the technical team and interfacing with OCIO to ensure that the product adheres to the policy and procedures of governing bodies. The two PMs should work together to ensure that both business and technical goals are met.

6.3 Impacts during Development

Development impacts cannot be fully assessed until analysis for the Automated Tool for Disposition of Materials in FDLs has been completed and design has begun. The items below, therefore, are suggested areas for consideration.

- **Coordination and Status Meetings.** As the development of the proposed tool progresses, there will be a need for both the technical staff and the business staff to hold meetings to coordinate efforts or convey status. Among other subjects, these meetings should cover acquisition, planning, design, development, and testing activities.
- **User Studies or Walkthroughs.** As the new system is developed, the technical staff and usability experts should conduct user sessions to obtain feedback on interface design and user interaction. Multiple iterations should be conducted and included as part of the development schedule. An assessment of input and implementation of findings should conclude each session. Successive sessions should be used to validate implementation.
- **Acceptance.** Throughout the development phase, LSCM and the OCIO must coordinate their efforts regarding system acceptance. This coordination should take place through the functional and technical PMs. The two organizations should work together to address and mitigate potential discrepancies and gaps between the business need and technical implementation.
- **Training.** LSCM and OCIO must coordinate on training and education. This coordination should take place through the functional and technical PMs. The two organizations, in coordination with training facilitators, should outline the necessary

documents and tools needed to familiarize the workforce with the functionality of the new system.

- **Post-Deployment Technical Support.** Once the new tool is deployed, technical support should be incorporated into the schedule. Retaining technical staff after deployment will allow operational staff the opportunity to query technical staff about capability and functionality.

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7. Analysis of the Proposed System

The following subsections discuss improvements arising from limitations and alternatives to the proposed Automated Tool for Disposition of Materials in FDLs.

7.1 Summary of Improvements

Currently, the proposed tool will automate and streamline disposition processes. The full extent of these capabilities will not be known until the completion of the design phase. Anticipated new capabilities, enhanced capabilities, and performance improvements are discussed below.

7.1.1 New Capabilities

- **ILS Interface.** The proposed tool will have an interface to the ILS, providing near real-time data sharing.
- **Notifications.** The proposed tool will provide notifications to alert FDLs when new Offers are available for review, when the system has located a match for Needs and Offers, and when other libraries have requested their Offers.
- **Matching.** The proposed tool will provide matching when an offering library lists the same material as a requesting library. This monitoring will assist in efficient transfer of materials between offering libraries and requesting libraries.

7.1.2 Performance Improvements

- **Automation.** The current system relies on manual processes. The tool will provide automation to help streamline procedures.

7.2 Disadvantages and Limitations

There are no documented disadvantages or limitations.

7.3 Alternatives and Tradeoffs

7.3.1 System Solutions

The following subsections describe alternative approaches to the proposed Automated Tool for Disposition of Materials in FDLs.

7.3.1.1 Commercial Off-the-Shelf Product

LSCM could acquire a COTS solution without any customization. This alternative would provide LSCM with generic survey (retail), inventory, and warehouse management but might lack many of the custom features important to LSCM for successful system modernization, such as item selection management, vendor management, and ILS interface.

7.3.1.2 Customized Commercial Off-the-Shelf Product

LSCM could acquire a COTS solution and subsequently customize it. This alternative would provide LSCM with generic survey (retail), inventory, and warehouse management but would require additional funding to implement custom features important to the FDLP. This alternative would also require management of requirements, design, implementation, risks, testing, and acceptance. When implementing custom COTS development, it is important to include development staff intimately familiar with the product, as well as product system engineering subject matter experts. Although both are costly, they provide valuable product knowledge that may ultimately reduce overall time and cost.

7.3.1.3 Custom Developed System

LSCM could implement a custom survey, inventory, and warehouse management solution. This might involve the acquisition of a contractor or consulting company that specializes in application development. This alternative would provide the required functionality but would necessitate careful management of requirements, design, implementation, risks, testing, and acceptance. This alternative would require additional application development and, possibly, an acquisition when the system needed to be modified.