**AUTOMATION OF LIBRARY SERVICES FOR THE NATIONAL LIBRARY OF UGANDA**

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**User Requirements**

**May 2022**

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| **REVISION HISTORY** | | | |
| **DATE** | **VERSION** | **DESCRIPTION** | **AUTHOR(S)** |
| 03rd February 2022 | V1.0 | Initial document | Augustine Ssekyondwa (NITA-U), Sylvia Nakanwagi (NITA-U) |
| 21st April 2022 | V1.1 | Reviewed | Augustine Ssekyondwa (NITA-U), Sylvia Nakanwagi (NITA-U) |
| 05th May 2022 | V1.2 | Reviewed to incorporate feedback from the process owner (NLU) on Legal deposits, and inclusion of ISBN fees. | Augustine Ssekyondwa (NITA-U) |
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# **Introduction**

The National Library of Uganda (NLU) was established by the National Library Act, 2003. The Act mandates the NLU to collect, organize, preserve and disseminate Uganda’s documented heritage. It also empowers the NLU with an oversight role over Local Governments and Communities in the establishment and management of public and community libraries.

The mission of the organization is to collect, preserve and disseminate Uganda’s documented heritage and provide professional leadership in the delivery of library and information services to public and community libraries.

## **1.1 NLU Functions**

The functions of the National Library are-

1. To develop national policies on public libraries;
2. To provide to local governments standards, advice, norms, work manuals and guidelines in respect of public library buildings, staffing, stock and information processing, storage and retrieval;
3. To inspect and ensure that public libraries conform to national policies, guidelines and standards;
4. To provide technical, professional and advisory services in the field of librarianship to Government departments, local governments and the public sector;
5. Carry our research in the field of library and information provision and disseminate results to Government and Public;
6. To design and carry out pilot projects in new areas of library and information provision and disseminate results to local governments and other organisations
7. To carry and co-ordinate staff development programmes for people working in libraries and information services;
8. To support and promote adult literacy and education through identification and stocking post-literacy reading materials;
9. To support the setting up of rural community libraries;
10. To promote the habit and culture of reading through reading campaigns and book exhibitions;
11. To carry out advocacy at the local and international level in matters relating to libraries;
12. To acquire and organize for use, a comprehensive collection of library material published in Uganda, by Ugandans, and on Uganda;
13. To act as a depository for the national and foreign governments’ publications as well as for United Nations and other international organizations for purposes of promoting research and scholarship and for the preservation of published national culture and intellectual output;
14. To compile and publish a national bibliography of books published inUganda as a means of promoting the awareness of the availability of these books and encouraging the sale of these books in the country and abroad;
15. In collaboration with publishers to carry out the cataloguing of books before they are published so as to ease the processing of these books by various libraries;
16. To establish and maintain a national union catalogue of holdings of major libraries in the country and to provide information and referral services, at the national and international level;
17. To allocate international standard book numbers and international standard serial numbers to publishers in Uganda;
18. To act as the agency for national, regional and international information system;
19. To act as the national agency for national, regional and international information system;
20. To create electronic databases in areas of national interest;

# **NLU Services for Automation**

## **Issuance of International Standard Book Numbers (ISBN):**

This is a 13-digit number that uniquely identifies books and book-like products published nationally or internationally. The ISBNs are issued to authors and publishers on request (application).

To obtain an ISBN, the author or publisher currently completes a manual form provided by NLU, and proceeds to make a payment for the service before submitting the form for processing.

## **Legal deposit**

Under the National Library Act, 2003, every publisher of a book or document in Uganda is required to deposit with the National Library; 3 copies of the book or document or 1 copy of the video gram or film or 10 copies in case of a government department. This is aimed at preserving Uganda’s documented heritage.

From the legal deposits, the NLU compiles the National Bibliography of Uganda; which is a record of the collection published in a given year. This helps to raise awareness of the available information materials and promote the sale of these books within and outside Uganda.

**Challenges with the As-Is process for ISBN and Legal deposit services**

1. The process is tedious, time consuming and prone to human errors.
2. The process was largely designed for manual publication thus does not facilitate on-line publishers and authors.

## **Access to Library materials/documents (Digital Library)**

This will allow NLU to preserve library materials in digital form as opposed to keeping them in physical copies only. The physical access to library materials (as-is state) is associated with the following challenges:

1. Inefficient and slow (in terms of information retrieval)
2. Not more than one person can access information at the same time.
3. Poor Information storage
4. Excessive physical handling of Information Materials that leads to deterioration
5. Time consuming and needs a lot of storage space.
6. Lack of a disaster preparedness plan. In case of a disaster, everything can be lost.

It is therefore anticipated that the digitization of library materials will result into a number of benefits to the NLU such as;

1. Enabling wider access to information and knowledge by removing the constraints of time and geographical barriers i.e. ability to access a single copy of a document simultaneously from many locations.
2. Digital Preservation i.e. preserve indigenous knowledge - valuable, rare and special collections.
3. Bring together print and electronic resources through a single search function.
4. Enable faster retrieval of information.
5. Support information needs for different users since Library Clientele has interdisciplinary research needs.
6. Ease budgetary constraints associated with the acquisition of storageequipment for print information materials.
7. Enable the Library extend its collections into new media.

# **Proposed process for ISBN Legal deposit services, and Digital Library**

## **Assumptions**

1. The manual application form for ISBN shall be replaced with an on-line application form.
2. There shall be a functionality for tracking processing status of a client’s application.
3. Applicants shall receive feedback at the different stages of processing their applications. The feedback shall take a form of email notifications.
4. Physical copies shall still be submitted as per the legal deposit law
5. For inclusive access to Library content, an online soft copy shall be submitted or uploaded to form part of the digital library;
6. For copyright protection, access to digital copy shall be determined by the Author/publisher i.e full access, abstract view, or access via NLU intranet.
7. System shall be hosted in the National Data Centre and backup services shall be provided as well.

## **User Requirements**

| **Process** | **Sub-Process** | **Inputs** | **Process description** | **Output** | **Business controls/Rules** |
| --- | --- | --- | --- | --- | --- |
| User registration | Account creation | 1. Type of applicant <Provide a drop down with options; “Individual”, “Company”, “Government department”> 2. Name <user enterable> 3. Email address <Being the email address of the applicant; user enterable, alphanumeric> | 1. A person applying for NLU services shall access the NLU services portal and create an account to be able to access the application form. 2. The applicant shall select the appropriate option under “Type of applicant”, provide other details such as “Name” and “email address” and proceed to create an account. | User account created |  |
| Account activation | 1. Username <as indicated in the notification sent to the client for account creation> 2. Password <to be created by the client> | 1. Upon creation of an account, a notification shall be auto-generated and sent onto the email address indicated by the client. The notification shall show the following details; 2. Link for activation of the account 3. Default username 4. To activate the account, the applicant shall open the email notification and invoke/click on the “Link for activation of the account”. 5. When accessing the account for the first time, the applicant shall be prompted to provide their “Username”. 6. As the last step to access the account for the first time, every client shall be required to create a Password to safeguard against unauthorized access to their account. 7. Once the password is accepted by the system, the client shall submit the details and automatically access their account. | User account activated | 1. A user/applicant shall be able to change the “username” when they log into their account. 2. The Password must conform to the following Password Standard; 3. Should at-least havea minimum be of 8 characters. 4. Should at least contain some upper case letter(s), lower case letter(s) and special character(s); 5. Should at least contain some numeric character(s). |
| Application for ISBN or Legal deposit | Completion of application form | 1. Application form 2. Payment of prescribed fees | 1. To access the application form, the client shall log/sign into their account. They shall proceed to complete the application form as prescribed. For avoidance of doubt, the application form shall be web-based. 2. The details of the application form shall include the following sections and data fields respectively;   **Section A:**  **Particulars of the Applicant**-**Individual <to be activated only if the user profile/account is for an individual>**   1. Surname <user enterable> 2. Middle Name <user enterable if any> 3. Given Name <user enterable> 4. Sex <provide a dropdown with options: “Male”, “Female”, “Other, specify”>   **Particulars of Applicant – Organization <to be displayed only if the user account is for an Organization>**   1. Name of organization <auto-populate as per account details> 2. Nature of organization <provide a dropdown with options; “Government”, “Company”, “Non-Government Organisation (NGO)”, “Civil Society Organisation (CSO)”> 3. Type of organization <provide a dropdown with options; “Local”, “Foreign”>   **Section B: Contact details:**   1. Mobile phone Number <user enterable; provide a drop down for phone codes for all countries in the world; the default code should be Uganda’s> 2. Postal code <user enterable, alphanumeric, optional> 3. Fax <user enterable, numeric, optional> 4. Location in Uganda <provide a drill down for location details in the following order; “District”, “County”, “Sub-county”, “Parish”, “village”> 5. Location outside Uganda <user enterable, non-mandatory, applicable to publishers/authors located outside Uganda>   **Section C: Purpose of application**   1. Service applied for < Provide a drop down with options; “International Standard Book Number (ISBN)”, “Legal deposit”> 2. Details of the Service applied for:   ***Part I:* International Standard Book Number (ISBN)**   1. Type of applicant <Provide a dropdown with options; “New”, “Returning” 2. Nature of publication <provide a dropdown with options, “Single”, “Series”> 3. Number of ISBNs needed <user enterable, numeric only> 4. Basic information about the publication <provide the following details> 5. Author’s name 6. Tentative title of publication <user enterable, alpha-numeric, allow the user to “add” another title> 7. Other cover page title <user enterable, alpha-numeric> 8. Edition <user enterable, numeric only> 9. Name of publisher <user enterable, alpha-numeric> 10. Place of publication <user enterable, alpha-numeric> 11. Year of first publication by the author <provide a dropdown with years; starting from 1901> 12. Number of titles planned for the next 5 years <user enterable, numeric only>   ***Part 2:* Legal deposit**   1. Publication Title <user enterable, alpha-numeric> 2. Original title (for translations and adaptation) <user enterable, alpha-numeric> 3. Particulars of the author <user enterable, alpha-numeric; provide for multiple authors with the following details:   i) Given name  ii) First name  iii) Email address   1. Details of the publisher   i) Name of the publisher <user enterable, alpha-numeric>  ii) Physical address <user enterable, alpha-numeric>  iii) Postal address <user enterable, alpha-numeric>   1. Monograph   i) ISBN <user enterable, alpha-numeric, provide for multiple entries>  ii) Date of publication <provide a date selector/calendar tool>   1. Serial   i) ISSN <user enterable, alpha-numeric, optional>  ii) Frequency <user enterable, alpha-numeric>  iii) Date of first issue < provide a date selector/calendar tool>   1. Upload of soft copies:   This will be a provision for upload of a soft copy or copies of the document being submitted for legal deposit | Completed application form | 1. Assessment of fees is ONLY applicable if the applicant selects “International Standard Book Number (ISBN)” in Section C under “Service applied for”. 2. The soft copies(title page, version page/copyright page)to be uploaded for legal deposit shall be in PDF. |
| Submission of the application & assessment of applicable fees | Completed application form | 1. Upon completion of the application, the applicant shall proceed to preview their application to confirm the content provided. 2. Where there is need for correction or adjustment of any of the information provided in the application by the applicant, they shall be able to revisit the respective sections and data fields to make the necessary adjustment(s). 3. If everything is confirmed as accurate by the applicant, the applicant shall be required to check/tick a statement of attestation that the information provided therein is true and authentic. The statement shall be as follow; *“I certify that the information provided in this application is true and authentic. I am aware that failure to provide accurate information may result into delayed processing or rejection of my application or prosecution in Courts of Law or any other punitive measure for giving misleading information”.* 4. The applicant shall then submit the application for further processing. 5. On successful submission of the application, the system shall subject it to logical and duplicity checks to avoid inconsistent or duplicate applications. 6. If the application passes the logical and duplicity checks, the system shall generate an assessment for the prescribed fees; a copy of which shall be sent into the applicant’s email and web-portal account. *This is only applicable to applications for ISBNs.* 7. At this stage, the system shall generate an acknowledgement reference number for the application and relay it to the applicant email and web-portal account. |  |  |
| Payment of applicable fees | Assessment Number | 1. Upon receiving the assessment in their web portal account, the client shall accordingly effect the payment of the applicable fees. 2. The system shall receive a payment notification from the bank involved in the transaction. | 1. Acknowledgement Reference Number 2. Email notification sent to the applicant 3. Assessment sent to the client’s web portal account |  |
| Processing of the application | 1. Submitted application form 2. Payment status of application fees | 1. Upon submission of the application by the applicant, it will be sent as a “task” to the verification authority. 2. For avoidance of doubt, the verification task shall show the following details; 3. Application details as submitted by the client 4. Payment status for application fees <non-editable>. This is only applicable to applications for ISBNs. 5. Verification Authority’s remarks <user enterable> 6. Decision of the verification authority <provide a dropdown with options; “Recommended for approval”, “Recommended for rejection”, “Deferred”> 7. The verification authority shall verify the client’s application for authenticity of the information provided. 8. If the verification authority finds the client’s application eligible for the ISBN or satisfying requirements for legal deposit as per the set criteria, he/she shall recommend approval of the application. 9. On the other hand, if the client does not meet the criteria, the Verification authority shall recommend for rejection of the application with reason(s).   **Approval of application:**   1. Upon submission of the verification task, the system shall generate an approval task for the “approving authority”. 2. The approval task shall show the following details; 3. Application details as submitted by the client <non-editable> 4. Payment status for application fees <non-editable>. This is only applicable to applications for ISBNs. 5. Verification Authority’s remarks <non-editable> 6. Decision of the verification authority <non-editable> 7. Remarks by the Approving authority <user enterable> 8. Decision of the approving authority <provide a dropdown with options; “Approved”, “Rejected”, “Deferred”> 9. The approving authority shall review the application and the accompanying details. 10. If he/she finds them satisfactory, they shall approve the client’s application. 11. If the approving authority needs clarification or more information from the verification authority, he/she shall send a back task (defer the application) with comment(s). The verification authority shall make the necessary adjustments and resubmit the task to the approving authority. 12. The system shall generate a report for applications that have been approved for ISBN(s). This will be used when generating ISBNs on a separate system (already in place). 13. Similarly, the system shall generate a report for approved Legal deposits applications. This will be used for enforcing compliance. | 1. Approval/Rejection notification sent to the applicant 2. ISBN generated | 1. All system users designated to verify applications shall be properly mapped onto the “verification authority” role within the system. 2. All system users designated to approve applications shall be properly mapped onto the “approving authority” role within the system. |
| Digital Library | Referencing, Scanning and Retrieval of documents | 1. Physical document 2. Scanned document 3. Document Reference Number (DRN) | As part of the proposed system, there shall be a specific module for managing digitized documents. The documents will take any of the following two forms;   1. Scanned and uploaded documents whose physical copies are kept at the library 2. Soft copies whose physical documents may not be available at the physical library.   Category (a) will consist of documents such as aging/old publications (newspapers, brochures, and other historical documents). These will be scanned and uploaded onto the system. However, the physical copies will be kept in the physical library.  On the other hand, category (b) will take care of Legal deposits submitted electronically by authors or publishers; particularly Government establishments and other publishers whose publications/documents have no restrictions on access by the general public. The physical copies of such documents may not be available at the physical library.  The process for managing digital library shall be as follows:   1. Scanned and uploaded documents with physical copies at the library. 2. The document shall be scanned and uploaded onto the system. At successful upload, the system shall auto generate a Reference Number to uniquely identify the document on the system. 3. The system shall generate a report for all reference numbers and their corresponding documents. This will help in the referencing and/or retrieval of the respective digital documents. 4. The Reference Number shall be printed and stuck onto the physical document before the scanning authority submits the task on the system. 5. The physical document shall then be stored in the physical library as per current implementation. 6. Soft copies whose physical documents may not be available at the physical library: 7. A similar window shall be provided under “submission of legal documents” in which an author or publisher shall upload a soft copy of the document onto the system. 8. At successful upload, a Reference number shall be auto generated by the system to uniquely identify the document. 9. A system acknowledgement with the “Document Reference Number” shall be auto-generated and sent into the web-portal account and email address of the respective author/publisher. 10. The system report for Document Reference Numbers shall automatically be updated. |  | For purposes of uniformity, all documents shall be scanned and uploaded in PDF.  [Some Legal Deposit](https://www.bl.uk/legal-deposit) content shall only be available to [Readers](https://www.bl.uk/help/how-to-get-a-reader-pass) using the Library's PCs in our Reading Rooms; if required by content owner. |
|  | Retrieval/Search for digital documents | 1. Document Reference Number (DRN) 2. Document title 3. Storage date | 1. To search or retrieve a digital document on the system, the user shall provide any of the following: 2. Document Reference Number (DRN) 3. Document title 4. Storage date 5. Subject/Topic/Keyword 6. Name of author 7. ISBN 8. ISSN 9. Library location   Alternatively, a user shall browse for document by:   1. Collection 2. Discipline 3. Author 4. The system shall locate the document being searched for or retrieved and display it for the user in a non-editable/read only version. | Document displayed in a read-only version |  |
|  | Document purging/Destruction/archival | 1. Document Reference Number (DRN) 2. Date of Storage | 1. Documents shall be destroyed/archived after a defined period of time i.e. when they are no longer required for use. 2. The period for which specific documents shall be retained before purging/archival, shall be configurable in the system. 3. The system shall create a task for the “Purging authority” with documents that are due for purging/archival based on the configured Retention period.   The task shall display the following details;   1. Document Reference Number (DRN) 2. Document title 3. Name of Author 4. Name of Publisher 5. Date of storage 6. Category of data 7. The “Purging Authority” shall select the Documents to be purged at a particular time from the list and submit the system task. 8. The System shall accordingly update the status of documents selected as “Purged”. 9. Once the document is purged, it won’t be available in the ordinary search/retrieval. 10. Every purged document shall be automatically updated on the “Purged Documents report”.   **Other Requirements (general) for the Digital Library:**   1. It should provide for multi-lingual access to the digital documents. However, the default language shall be English. 2. Must enable on-line chatting for clients as a way of seeking assistance or providing feedback to NLU. 3. Shall be branded in NLU colours i.e Black, Yellow, Red, White. 4. Shall embed Social Networking tools such as Facebook, Twitter, LinkedIn using the official accounts of NLU. 5. Shall integrate Library Discovery Tools such as EBSCO, ExLibris Primo, OCLC or ExLibris Summon. | 1. Document status changed to “purged”. 2. Purged documents report updated | The purging/archival list shall only consist of documents whose retention period has expired. |

## **Process flow chart**

### **Application Process for ISBN and/or Legal deposit**



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### **Process for Managing Digital Library – Upload of digital document(s)**



# **Reports and Dashboards**

The system shall generate the following reports for the NLU users:

1. ISBN applications report.

This will show details of all applications received in the system for ISBN as a service. The report shall indicate the status of the respective applications e.g. at verification, at approval, approved, rejected and issued ISBNs.

1. Legal deposit applications report.

This will show details of applications received in the system for Legal deposit as a service. The report will indicate the status of the respective applications such as, at verification, at approval, approved, and rejected.

1. Documents available Report

This report will show all the documents available in the digital library. It will display details such as, Document Reference Number, document title, author’s name, publisher’s name, date of storage etc.

1. Purged documents Report

This will show all documents purged from the system. It will display details such as Document Reference Number (DRN), document title, author’s name, date of storage, date purged etc.

1. Content view Report

This will show the details of viewed content by users. It will display details such as; Account name, time of viewing, content viewed, time spent in viewing, location of viewer, number of downloads for particular content, downloaded by, time of download etc.

1. Dashboard for content download

This will show details of users downloading content off the system. Such content will include; who is downloading what and from where. Location will be indicated in form of countries.

# **User Mapping**

**Table 2: Mapping of users to system roles**

|  |  |  |  |
| --- | --- | --- | --- |
| User | System Roles | | |
|  | **Logical and duplicity checks** | **Verification Authority** | **Approving Authority** |
| System (auto) | **x** |  |  |
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# **Applicable Fees for ISBNS**

|  |  |
| --- | --- |
| Quantity | Price (UGX) |
| One Title | 30,000 |
| Five Titles | 100,000 (Save 50,000) |
| Ten Titles | 150,000 (Save 150,000) |

# **USER REQUIREMENTS SIGNOFF:**

The business processes/user requirements have been reviewed and approved for automation of the specified services for the National Library of Uganda (NLU).

**Approved by:**

1. Head of user department (Technical services) – NLU

……………………………<name> …………………………<signature> ………………………<date>

2. Head of user department (Information and Referral Service) – NLU

……………………………<name> …………………………<signature> ………………………<date>

3. Head of Information Technology – NLU

……………………………. <name> ………… ………………. <signature> ………………………<date>