

**RFP UJ 02/2025: Digitization,
Archives and Special Collections**

“All visible information in the original must also be visible in the digital image”

1. Definitions

- Compression: methods of encoding data so that fewer bits are required for storage.
- Optical Character Recognition (OCR) scanning service uses leading professional OCR software to identify typed text within digital images and convert it into usable digital text, which can be added to digital archives as metadata and searched against.
- OCR converts images that contain typed, handwritten, or printed text into text that can be read and searched by a computer.
- Digitisation - the process of converting information from a physical format into a digital one.
- DPI - Dots Per Inch. A measure of the resolution of a printed document or digital scan.
- The higher the dot density, the higher the resolution of the print or scan.
- DPI is the measure of the number of dots that can be placed in a line across one inch, or 2.54 centimetres.
- Lossless compression – computing algorithms that allow image data to be compressed for storage, while at the same time ensuring that the exact original data can be reconstructed for use.
- PPI - Pixels Per Inch. A measurement of resolution for computer display.
- Resolution: describes the number of dots per inch and bit resolution for visual scans and sampling rate and bit resolution for audio scans.
- Archives and Special Collections: the original record is referred to as archives record that is to be retained permanently.

2. Quotes Structure

UJ Archives has more than minus / plus 4 million images that forms part of various archival groups,

Items	Cost Per Page / Image including VAT
Text Document normally A4/A3	
Maps / Building Plans A0/A2	
Binded records (book Form) A3	
A0	
A1	
A2	
A3	
A4	
Paper copy A4	
Paper copy A3	

- Documents – quotes per image
- Maps and building – quotes per image
- Books records (Minutes and reports – quotes per image

The service provider is expected to claim according to a number of scanned images per month, until the set budget is exhausted.

3. Preparation and Assessment

- **Material Assessment:**
 - Evaluate the type, condition, and volume of archival materials.
 - Identify fragile or sensitive items requiring special handling.
- **Metadata Creation:**
 - Record essential metadata such as title, creator, date, description, and source.
 - Use standards for metadata consistency.

- **Preservation Plan:**

- Define long-term storage and backup strategies.
- Determine access restrictions or permissions.

4. Scanning and Imaging

- **Hardware:**

- **Flatbed Scanners:** For paper documents, photos, and flat materials.
- **Overhead Scanners:** For bound books and delicate items.
- **Maps scanners :** For bigger size documents like building plans and maps

- **Resolution:**

- Text documents: Minimum 300 dpi; 600 dpi for fine prints or detailed images.
- Photographs: 600–1200 dpi, depending on detail requirements.

- **Colour Settings:**

- Use 24-bit color for color images.
- Use grayscale for black-and-white photographs.

- **File Formats:**

- Master copies: TIFF (uncompressed or compressed).
- Access copies: JPEG, PNG, or PDF.

- **Lighting and Calibration:**

- Ensure even lighting and calibrate equipment to maintain color fidelity.

5. Processing and Quality Control

- **Image Processing:**

- Avoid altering content or historical integrity.

- **File Naming:**

- Use unique, descriptive, and consistent file naming conventions as appeared in a inventory.

- **Quality Control:**

- Check for errors such as misalignment, poor resolution, or file corruption.
- Perform spot-checks across batches.

6. Metadata Standards

- Use structured and interoperable metadata standards:

7. Storage and Access

- **Access Platforms:**
 - Implement searchable databases for user access.
 - Use open formats for maximum compatibility.

8. Compliance and Standards

- Adhere to archival digitization standards like:
 - **Federal Agencies Digital Guidelines Initiative (FADGI).**
 - **ISO 19264-1** for imaging standards

9. Documentation and Training

- Document processes, equipment settings, and decisions.
- Train personnel in handling, scanning, metadata creation, and preservation best practices.

10. Obligations

This Specification sets out the minimum requirements to be met for the digitization of UJ Archives and Special Collections records.

- These requirements must be met unless certain conditions are satisfied for exceptions.
- The authenticity, reliability, integrity and usability of the digitised record must be ensured.
- Digitization is the process of converting any physical or analogue item, such as a paper record, photograph or graphic items, into an electronic representation or image that can be accessed and stored electronically.
- Digitization offers a strategy for long-term preservation of archival records by reducing handling of original hard copy archives, improving access to archives by making digital archives available through databases.

- UJ Archives digitization will be implemented inhouse to ensure that employees impart skills and learn from the best practice.
- The service provider can further advise on best practice on digitization of archival material
- The standard of digitization must follow relevant international Organisation Standards (ISO)
- Quality of digitized material must meet preservation of digitized material standards.

11. Archival Master File Format (digital surrogate)

- Preservation digitisation is not geared for any specific output and should be done in a use-neutral manner using a format that preserves the essential characteristics of the original records and is uncompressed or has lossless compression. The master image files produced should be usable for a wide variety of applications and outputs.

12. Preparing Physical Files for Scanning

- Remove the following materials: file clips, staples, plastic sleeves, clips, metal clips and rubber bands.
- Replace them with the stainless-steel paper clips placed around paper strips on the document or replace them with the archival tape if the file is too thick for a clip.
- Remove file dividers such as plastic or cardboard section dividers. If the section divider contains relevant information, make a photocopy and place on file.
- Remove coloured tags and post-it notes from files. If the post-it note contains relevant information, make a photocopy and place on file to be scanned.
- Make notes of all copied records to highlights that the original is available.
- Remove envelopes from file and place the content/s of the envelope on file.

13. Standards

- Digitization of archival material should be in line with International Organisation for Standards.

- Metamorfoze: ISO 19264-1, FADGI, is recommended for the scanning of archival material but not limited
- Photography- Archiving systems – imaging systems quality analysis: ISO 19264-1:2021
- Photography- Archiving systems – Part 1: Best practices for digital image capture of cultural heritage material: ISO/TR 19263-1:2017
- Information and documentation: Implementation guidelines for digitization of records: ISO/TR 13028:2010

14. Requirements for the digitization of archival material at Archives and Special Collection Unit,

- Digitization should take place in house that means the service provider should have all the digitization equipment delivered at UJ Archives and Special Collections Unit.
- In-house reduce the risk of loss of records, provide less movement of records that reduce risk of transporting records.
- In-house digitization affords the staff an opportunity to acquire digitization skills and prepare them for continuity.
- Less risk of damage to records as they remain on-site.
- Archives and Special Collections staff shall have a complete control over the digitization process working together with the service provider.
- In-house allows archives staff to focus on project management and/or quality checking of digitised images.
- Archival material shall remain authentic and should not be tempered by the use of scissors, Pritt, glue or any other material with a potential to damage records
- Digitizers shall have observed the following responsibilities,
 - Preparer's: To prepare records before digitization
 - Digital personnel: responsible for the scanning of records
 - Quality controller's: Checking and evaluation of records before the records are declared fit for digitisation.
 - Refiling: Packing scanned records back to original boxes following original order.

15. Tools required for digitization include:

- Digital scanners
- Imaging and scanning software
- Human resource to digitize records
- Integration to archives platform (Figshare)
- Accessibility to world wide web (www or online)
- Storage system like external hard drives (not limited)
- Equipment shall meet all the requirement for digitization and in line with the specification

16. Conditions of digital capture must be,

- Authentic - The product of routine, documented, authorized copying and registration processes.
- Optical Character Recognition (OCR) must be used when scanning records
- Complete Accurate - legible reproduction of the original that contains all intellectual and physical components of the original without alterations to content.
- Accessible - Available searchable and readable to all those with a right to access it, for as long as it is required. In order to achieve the qualities of authenticity, completeness and accessibility

17. Preservation quality digital imaging for long-term

- For archival preservation, standard PDF (Portable Document Format) file format for black & white textual documents with 1-bit-depth bi-tonal black & white mode, and a minimum resolution of 300 ppi (pixels-per-inch).
- Documents with extensive graphics and photography will require TIFF (Tagged Image Format) with a minimum bit-depth 8-bit greyscale or 24-bit colour.
- JPEG is an adequate file format for information sharing and web use.
- The preservation digital surrogate will:
 - capture a complete, accurate archival record of analogue collection items
 - Preserved and accessible for the foreseeable future

- Enable the re-use of the digitised content to meet known, unknown and likely current and future access requirements
- enable the creation of derivative files to meet access requirements and minimise the physical wear and tear caused by handling fragile collection items

18. Calibration and choice of equipment

- Service provider shall ensure that settings on equipment are correct and will produce files that meet the minimum technical specifications in this document. The choice of equipment for scanning (digitizing) will depend on the sort of material that is being digitized.
- Records larger than A3 cannot fit easily onto a standard flatbed scanner. This may include document types such as maps, charts, architectural and engineering drawings.
- Relevant scanner shall be organised to scan larger size records and all relevant standards shall be followed.
- Many of these (Maps, drawings) formats contain fine details. Where there is very fine detail, a higher scanning resolution of 600 ppi may be required to produce a more legible image.

19. Text documents

Digitization of text documents must be done to a level that ensures not only that the text remains legible, but that any additional markings on the document are also reproduced and retain their meaning. Text document

- Up to A0 - scan to original size, Minimum 300 dpi, Minimum 8-bit colour, Minimum 1 bit, Minimum 8 bit greyscale, PNG, Tiff, JPEG, JPEG2000, PDF/A with embedded text or PNG, JPEG or JPEG2000 (for multipage documents), A4 size

20. Maps and Building plans

Digitization of maps and plans must be done to a level that ensures all elements in the map or plan are clearly discernible when shown on screen at 1:1 scale, and that all types of crosshatching or other markings are distinguishable from one another.

- Up to A0 - scan to original size, Minimum 300 ppi, Maps and plans with fine lines and detail will require high resolution, Minimum 16-bit colour, Minimum 8-bit greyscale, PNG, JPEG, JPEG2000, SVG, Tiff, PDF/A with embedded text or PNG, JPEG or JPEG2000 (for multipage documents)

21. Photographs

Digitization of photographs must be done to a level that ensures that all elements in the photograph are able to be clearly discerned when shown on screen at 1:1 scale.

- Scan to original size, Minimum 600 ppi, Minimum 16-bit colour, Minimum 16 bit greyscale, PNG, JPEG, JPEG2000, Tiff, PDF/A with embedded text or PNG, JPEG or JPEG2000 (for multipage documents)

22. Capturing Digitised Records into a Record-Keeping System

- Electronic records must correlate with their physical counterparts in structure, description.
- The intellectual arrangement and context of digitised records must be maintained.

23. Quality Checking and Control

- Quality control measures for checking digital images should be applied throughout the process. preferably by an
- Staff member will be assigned to chart any errors. This includes checking individual files for any errors in arrangement, imaging or classification.

24. Site Operations

- Consultation of Archives Manager for any other enquiries concerning digitization
- Weekly meeting to identify challenges and progress
- Weekly submission of statistics for filing
- Monthly reports which include statistics and narrative report.
- Statistics shall be consolidated quarterly and be calculated in conjunction with the lump sum budget to monitor performance.

- The performance will be calculated based on 25% of the budget eg If the contract is one year, 25% and above should be achieved per quarter.
- Poor performance may result to the termination of a contract
- Storage of scanned documents before uploaded to digital platform (External hard drives or any system)
- All the equipment shall be delivered, and it should be compatible with all sorts of records due for scanning (A4, A3, A2 and other records with different sizes.
- Ensuring that the project is implemented within the stipulated timeframe.
- Working space will be provided, Chairs and Tables
- Access to electricity, kitchens and bathrooms
- Service Provider will not have access to Wi-Fi or university network points,
- Service provider can provide internet for all project activities
- Access to the university will be facilitated which includes parking.
- Archives operate from 8:00 to 16:00 from Monday to Friday
- The University will provide standard furniture already available, any extra needs meant for extra comfort shall be provided by the service provider.
- Portable flatbed photocopying machine shall be provided by service provider
- Scanned records and originals are asset of the university, a service provider has no right to keep or duplicate copies after the finalisation of the project.

25. Outcome

- All physical records to be scanned and kept in a digital format
- Back up storage for all scanned records
- Easy retrieval of records through OCR.
- Integration of scanned records to an acceptable archive's digital platform.
- Records to be accessible online through digital platform.
- Publishing of metadata online and reserve the right of access to scanned files.
- Access to scanned file will be on request through following UJ Archives Policies.

26. Damages and Liabilities

- Any damage caused by personnel in the process of scanning shall be a liability of a service provider
- Misfiled records identified shall be corrected by the service provider within a period of six months after the contract.
- The university can hold the service provider reliable through legal processes

Evaluation

This tender will be evaluated in three stages.

Stage 1 – Tender Administrative Compliance

Stage 2 – Technical / Functionality Evaluation

Stage 3 – Financial and B-BBEE Evaluation

Stage 2: Technical Evaluation

Stage 2: Technical / Functionality Criteria Requirements		Reference point in proposal document	Maximum points obtainable
1	Meet specifications and requirements (Make reference to the information provided in your proposal) <ul style="list-style-type: none"> • Delivery of scanning equipment to UJ Archives and Special Collections = 4 points • Performing digitization of records in-house = 4 points • Knowledge of handling archival material = 4 points • Complying scanners complying with at least ISO 2017 digital standards (scanner data sheet must be included) = 2 points • Digitization of records following all relevant standard 		40

	<p>and quality output = 2 points</p> <ul style="list-style-type: none"> • Formatting scanned records into at least into three formats or more PDF, Jpeg, Tiff. = 4 points • Providing backup system for digitized records (external hard drives, etc) = 4 points • Create a master copy with high technical standard = 4 points • Provide quality control of digitized material = 4 points • Impart digitization skills to archives staff = 4 points • Mitigation of digitization faults = 4 points 		
2	<p>Detailed Project Plan and Methodology</p> <ul style="list-style-type: none"> • Digitization of records = 5 Points • Updated and current technology of digitization systems = 5 Points • Records compatibility to any system = 5 Points • Preparation of records for scanning = 2 points • Long term conservation of records = 3 Points • Accessibility of digitized records = 5 Points 		25
3	<p>Internal Technical Resources</p> <ul style="list-style-type: none"> • The company must have a minimum of 5 years relevant experience = 5 Points • Human resource (a minimum of 6 staff members – 3 of the staff members to have at least 3 to 5 years relevant experience) = 5 Points • Technology, relevant machinery (proposed machinery and equipment to be utilized for the project) = 5 Points • On site digitization = 5 Points 		20
4	<p>References with contact names and numbers not older than five years</p> <ul style="list-style-type: none"> • 3 contactable references of similar deployments = 15 		15

	<p>points.</p> <ul style="list-style-type: none"> • 2 contactable references with contacts of similar deployments = 10 points • 1 contactable reference with contacts of similar deployments = 5 points 		
Total Points awarded			100

A minimum of 70 points is required by any tenderer before further evaluation. All tenderers who achieve 70 points or more will be evaluated equally in terms of Stage 3.

Bidders who achieve a minimum of 70 points will be invited to present their proposals to the UJ bid evaluation committee.

Stage 3 - Financial and B-BBEE

- Price (80 points)
- B-BBEE (20 points)