

Selection for long-term retention will normally occur at acquisition but can be an iterative process occurring at later stages once an item is already in the collections. The term retention and review is used here for this iterative process. The decision process mirrors steps included in the [decision tree](#) in the previous section and the tree can be adapted for this purpose.

Employing evaluation criteria and selection procedures for all potential digital acquisitions ensures that collections development is carefully prioritised and sustainable. The use of such criteria and procedures should minimise the frequency and need for retention and review decisions as acquisitions are carefully evaluated and justified prior to entering the collections. Digital items acquired over time and before institutional policies and procedures were in place will normally require such review. This may be one of the first steps that an institution undertakes in implementing a digital preservation policy: quantifying its current digital holdings and assessing preservation risks (see [Technology Watch](#)).

Archives use the series concept for a body of records that share similar characteristics. Typically, many series are on-going for decades. However, the scope and coverage of a digital series may change over time and certainly technology considerations are likely to change and some attention must be given to a careful evaluation as each accession is transferred to the archives.

Over time the need may also arise to review collections and collections policy to reflect changing needs and circumstances. The necessity of making early decisions on selection for preservation in a digital environment (without the period of hindsight which is often available in analogue environment) may mean that future review may be necessary in the preservation life cycle of electronic resources.

In a digital library environment where collection levels have been employed, digital resources in any collection level category can be subject to periodic review, re-designated from one level to another, withdrawn, or de-accessioned as required to meet changing needs and circumstances. However, for items selected for permanent preservation it is anticipated that review and de-accessioning will occur in rare and strictly controlled circumstances. For other collection levels such as mirrored or licensed resources review criteria may include:

- A sustained fall of usage to below acceptable levels.
- The availability of content elsewhere to a higher degree of quality or at considerably lower

cost.

Content that has been superseded or is no longer sufficiently accurate to justify maintenance in active form. In such cases, the content may be retained together with subsequent editions or withdrawn.

- Expiry or termination of a licence or data exchange agreement and withdrawal/return of a digital resource to the data supplier.
- Cost to sustain the data resource outweighs the value/benefit received.
- Deterioration in the quality service provided by a supplier or deterioration in the accessibility of content due to poor updating of indexing, imaging, or other characteristics internal to the data resource.

Within archives and records management professions the use of retention periods and schedules is well established. Records may be destroyed at the end of their retention period, retained for a further period, or transferred to an institution for long-term preservation.

In any collection environment it is important that written procedures are in place for the process of retention and review. The timescales, circumstances, and authorisation procedures for the review should be clearly stated. Depending on the institution's business environment, its users and depositors may be consulted as part of the process. Any recommendations may then be referred for approval to management and committees as appropriate to the size and significance of the resource.

Where a recommendation is made to de-accession an archived resource there should be procedures to consult with other stakeholders to determine whether transfer to another organisation should occur. In such cases the institution should agree conditions of transfer which include acceptable levels of care for the resource and access to it as appropriate for educational and research users.

Accessioned digital resources that have not been retained after review should retain their entry in any institutional catalogue with comments identifying the process undertaken and any transfer details.

4.2.3 Accessioning

Institutions should develop a range of accessioning procedures which support their preservation policies and objectives. These may include elements from the following list as appropriate to the item being accessioned:

Transfer procedures and guidelines

Most institutions will need to develop procedures and documents to support the smooth transfer of digital resources from suppliers into their collections. [Figure 5](#) below outlines options for transfer and accessioning of file formats and storage media. Decisions on file formats and media (see [Storage and Preservation](#)) will support and be interdependent with this process.

Figure 5

Options for Transfer and Accessioning of File Formats and Storage Media

Options	Issue	Requirements
<div><div>- Policy on storage formats.</div><div>- Technology Watch on developments in storage formats.</div><div>(all options)</div></div>		
Limit range of file formats received		
Limit range of media received (most cost-effective long-term option)		
<div><div>- Simplifies management and reduces overall costs.</div><div>- Depositor may lack resource or expertise to comply.</div><div>- Wide variety of file formats used and proprietary extensions to open standards.</div><div>- Media used for transfer potentially can be used for long-term storage.</div></div>		

- Guidelines on preferred formats.
- Degree of influence over the deposit.
- Outreach and collaboration strategies to achieve desired outcomes.
- Guidelines on preferred transfer media and transfer procedures.

Accept as received but convert to standard file format

Accept as received but convert to standard storage media format

- Simplifies management and reduces longer term costs.
- May not be technically feasible to convert to standard format.
- It will be necessary to check that accidental loss of data has not occurred.

- Copyright permissions or statutory preservation rights.
- Resources and technical expertise at host institution.
- Election of preferred formats.
- Documentation of native formats to allow conversion.
- Integrity checks for conversion process.

Accept and store as received (least cost-effective option long-term, despite lower initial costs)

- Complicates management and increases costs of managing resources over time.
- High risk option, particularly if large numbers of digital resources are being collected.
- A choice of file formats may be available. That deposited may not be the most suitable for preservation.
- Storage media may be of unknown quality and suitability for long-term preservation.
- Formats may be obsolete or not supported within the institution.

- Clearly defined priorities for both short and long-term preservation.
- Ability to address issues such as encryption, proprietary software etc. in received items.
- Ability to ensure future access to information contained in the item.

Procedures to prepare data and documentation for storage and preservation

Unique numbering

Each data resource accessioned by an institution should be allocated a unique identifier. This number will identify the resource in the Institution's catalogue and be used to locate or identify physical media and documentation. In the event of a resource being de-accessioned for any reason, this unique number should not be re-allocated.

Preferred marking and labelling

At a minimum all physical media and hard copy documentation should be marked with the unique number allocated to the resource, and any additional information required by the institution easily to identify content and formats.

Handling guidelines

Handling guidelines for accessioning staff should be developed reflecting storage and preservation staff advice on best practice for different media (see [Media and Formats](#)).

Validation

Validation checks should be carried out by the institution on the transfer media, content and structure of deposited data resources, and on any accompanying documentation. Validation procedures may be adapted in the light of the volumes of material and resources available in the acquisitions section. It may be possible to automate some of the validation procedures but others can only be undertaken manually. Such checks may include:

- Scanning for computer viruses.
- Checking media and files can be read.
- Checking completeness and accuracy of paper based or digital documentation.
- Checking description and intellectual content of the resource.
- Checking structure and formatting of the resource.
- Procedures for documenting validation checks and any discrepancies encountered.
- Procedures for checking and if possible resolving discrepancies with the supplier.

Re-formatting file formats

Where the file formats used to transfer the resource are unsuitable for long-term preservation, the Institution may re-format the resource onto its preferred file formats. In addition to archive formats, versions in other formats suitable for delivery to users may also be produced from the original (see [Storage and Preservation](#)).

Re-formatting storage media

Where the storage media used to transfer the resource are unsuitable for long-term preservation, the Institution may re-format the resource onto its preferred media (see [Storage](#)

and Preservation

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Copying

Multiple backup copies of an item may be generated during accessioning as part of institutions' storage and preservation policy and to enable disaster recovery procedures (see [Storage and Preservation](#)

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Security

System and physical security policies and procedures should be in place to ensure the care and integrity of items during accessioning. These should be developed from and reflect the institutional policies and procedures on security (see [Storage and Preservation](#)).

4.2.4 Cataloguing and Documentation Procedures

Cataloguing

Each institution normally identifies its own minimum standard of information required for catalogued items in the collection. Each institution can also identify its preferred levels of cataloguing information and documentation for acquisitions and may notify and encourage suppliers or depositors to supply this information through the deposit or acquisition process. Staff review and revise supplied documentation to ensure it conforms to institutional guidelines and they generate catalogue records for deposited data incorporating cataloguing and documentation standards to ensure that information about those items can be made available to users through appropriate catalogues. In many cases the contextual information for resources

will be crucial to their future use and this aspect of documentation should not be overlooked.

The level of cataloguing and documentation accompanying or subsequently added to an item, and any limitations these may impose can be documented for the benefit of future users. Where data resources are managed by third parties but made available via an institution, documentation may be supplied by the third party in an agreed form which conforms to institution guidelines or in the supplier's native format.

Retrospective documentation or catalogue enhancement

Where a need for enhanced access exists, an Institution may undertake to enhance documentation and cataloguing information to a higher standard to meet new requirements. Retrospective documentation or catalogue enhancement should also occur when the validating or audit of the documentation and cataloguing for a resource shows this to be below a minimum acceptable standard.

Edition and version control

Procedures for updating and edition control of any dynamic data resources accessioned (e.g. annual snapshots of databases which are regularly being updated) or for version control of accessioned items where appropriate (e.g. items accessioned in different formats or for which different formats for preservation and access had been generated.)

Cataloguing and documentation standards

Data documentation is essential in order effectively to exchange information and documents between platforms and individuals. At a minimum, it should provide information about an item's provenance and administrative history (including any data processing involved since its creation), contents, structure, and about the terms and conditions attached to its subsequent management and use.

It should be sufficiently detailed to support:

- Resource discovery (e.g. the location of a resource which is at least briefly described along with many other resources).
- Resource evaluation (e.g. the process by which a user determines whether s/he requires access to that resource).
- Resource ordering (e.g. that information which instructs a user about the terms and conditions attached to a resource and the processes or other means by which access to that resource may be acquired).
- Resource use (e.g. that information which may be required by a user in order to access the resource's information content).
- Resource management (e.g. administrative information essential to a resource's management and preservation as part of a broader collection and including information about location, version control, etc).

Processing times

Ideally targets should be set and monitored for the maximum time between acquisition and cataloguing to prevent backlogs of unprocessed and potentially at risk materials developing during the accessioning process.

Summary of recommendations

Transfer procedures

- Provide documentation to guide and support transfer of digital resources from suppliers.
- Decide how your transfer procedures can best be developed to support your storage and preservation policies.

Procedures to prepare data and documentation for storage and preservation

- Unique numbering of each item accessioned.
- Marking and labelling procedures.

- Handling guidelines for different media.
- Validation procedures to check media, content, and structure.
- Re-formatting of file or storage media formats according to agreed guidelines.
- Generating multiple copies of an item as part of an institution's storage and preservation policy.
- System and physical security policy and procedures for items during accessioning.

Procedures for cataloguing and documentation

- A minimum standard of information required for cataloguing.
- Guidelines for retrospective documentation or catalogue enhancement.
- Procedures for updating, and managing versions or editions of an item.
- Procedures to update collection management databases.
- Selection of cataloguing and documentation standard.
- Targets for accessioning tasks and timescales for their completion.