

Technical specifications and advice for digitising source records

Purpose

The purpose of this document is to provide Queensland public authorities with the recommended technical specifications to digitise their public records. It is designed to help public authorities ensure that any digitisation activity carried out on a public record produces a digital copy that can serve as an effective digital alternative to the physical source record.

How to use the technical specifications

These technical specifications support an **outcomes-based** approach to digitisation. An outcomes-based approach allows for a more practical way to ensure quality assurance without locking public authorities into technical requirements that may change over time or are too resource intensive or technically difficult to implement. Rather than prescribing specific file formats, resolutions or software, these technical specifications define the minimum outcomes that ensure digitised public records remain legible, usable and accessible for as long as they are required.

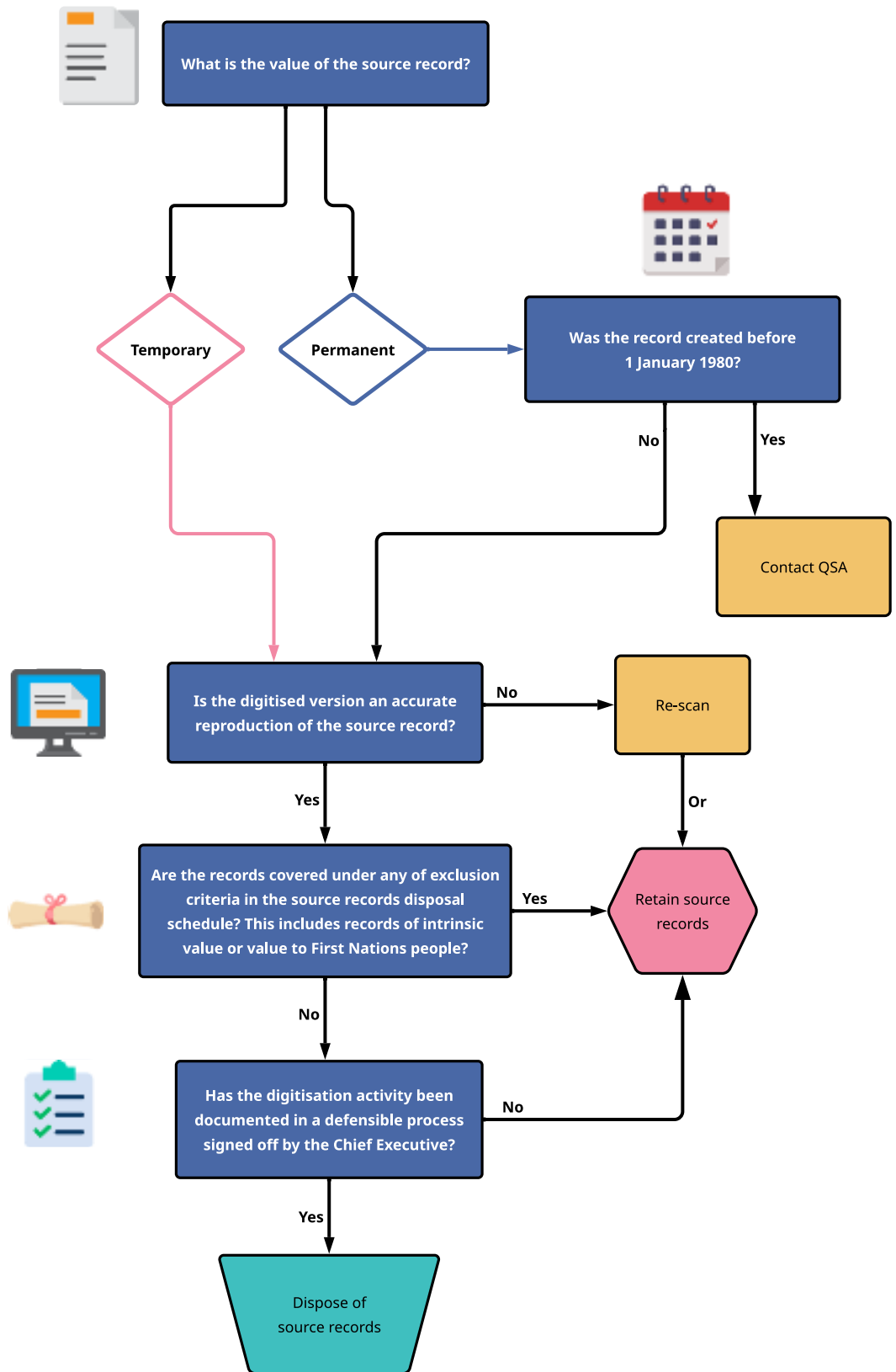
As a general rule, your public authority should aim to use the highest technical specifications that can be realistically supported. For public records being digitised, it is expected that these specifications, or higher, will be applied to ensure business use is maintained and to meet the conditions outlined in both DA 2940 *Temporary source records* and DA 2941 *Permanent source records created on or after January 1980*.

Digitising public records

Digitisation is the process of converting documents, images or audiovisual materials into a digital format. This involves capturing or scanning the physical record to create a digital copy that can be accessed, managed and preserved digitally. It is a key strategy for preserving the content and context of public records, enabling public authorities to meet their legislative obligations under the *Public Records Act 2023*. It also supports improved access to information, facilitates business processes and ensures the longevity of records of enduring value.

Digitising source records workflow

This workflow shows the decisions and considerations involved in determining whether a source record is to be disposed or retained.



What is the value of the record?

Under the *Source Records Retention and Disposal Schedule*, certain public records can be destroyed after digitisation, provided that your public authority has developed, documented and implemented a defensible process for any digitisation and conversion activities. This process must include appropriate quality assurance checks. Records of higher value or with longer retention periods require more rigorous technical specifications and quality assurance before disposal.

Temporary value public records

When planning a project to digitise and dispose records of temporary value under a current retention and disposal schedule, your public authority should decide the required level of quality for digitised records sufficient to support your business needs.

For records of low value, minimum quality standards will suffice. For temporary value records that must be retained for the medium to long-term, it is important to ensure they are digitised and maintained at a quality that meets or exceeds the minimum outcome for digitised records. This includes capturing all necessary details to ensure the records remain legible, authentic and accessible for the entire retention period.

Permanent value public records – Created on or after 1 January 1980

If your public authority is digitising permanent records created on or after 1 January 1980 and plans to dispose of the source records after digitisation, higher levels of quality assurance are required as well as detailed documentation during digitisation and disposal. Permanent value records serve as critical evidence of significant decisions, events, or rights and entitlements and their enduring value means they must remain accurate, authentic, and accessible indefinitely. Any loss, alteration, or misrepresentation of these records could compromise their evidentiary value, historical integrity, or legal standing. A rigorous and well-documented process ensures their preservation and safeguards their reliability for future generations.

Permanent value public records - Created before 1 January 1980

Records created before 1 January 1980 may have significant historical, cultural, or intrinsic value due to their age, format, or unique characteristics.

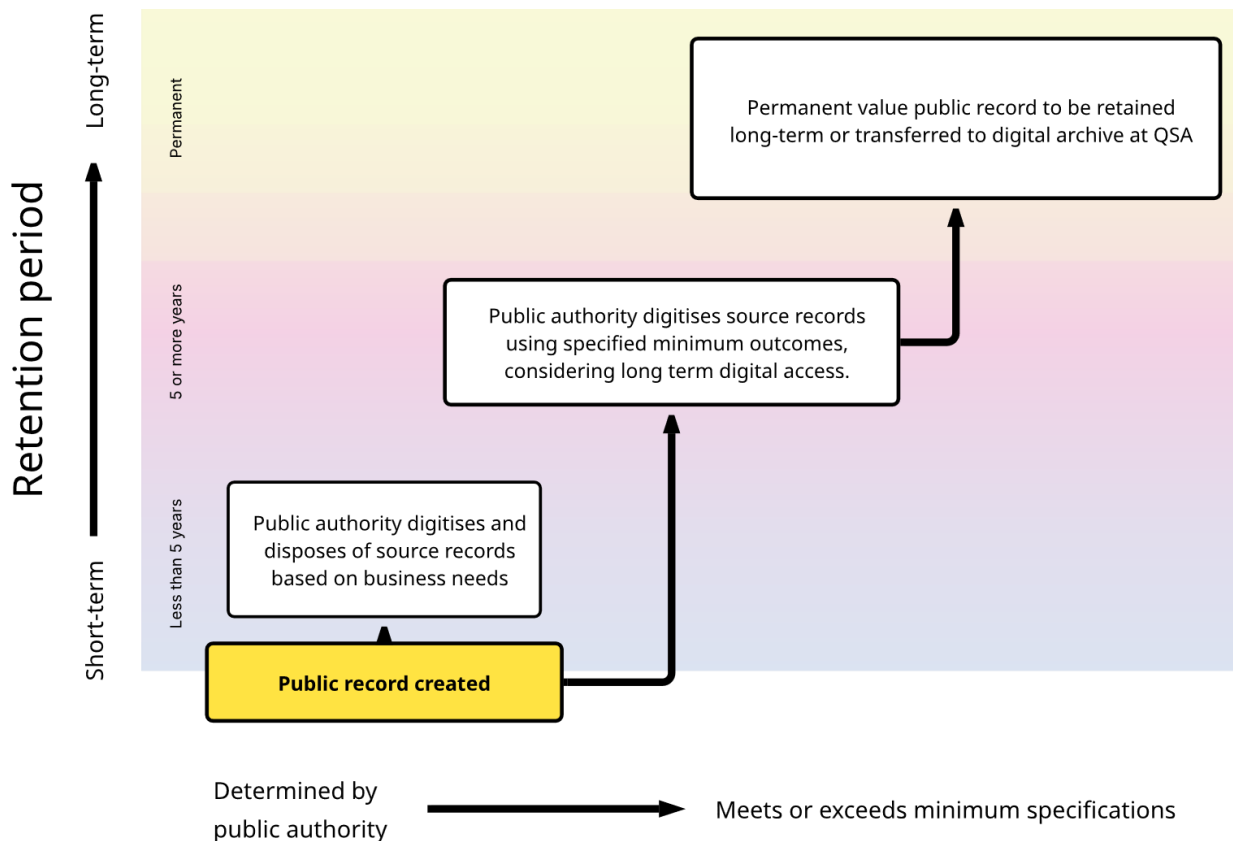
These records require special consideration before digitisation and are generally not eligible for disposal. If your public authority seeks to digitise permanent records created before 1 January 1980 and dispose of the source records, contact QSA for advice.

Fragile records

If records to be digitised are in a fragile condition, specialist equipment and techniques may be required to protect the record and to allow for complete and accurate reproduction of the record. If a public record is fragile and digitisation may cause further damage or harm, please contact QSA before undertaking a digitisation project.

Quality assurance for digitised records

This figure demonstrates the relationship between length of retention period and minimum level of quality assurance required for digitising public records.

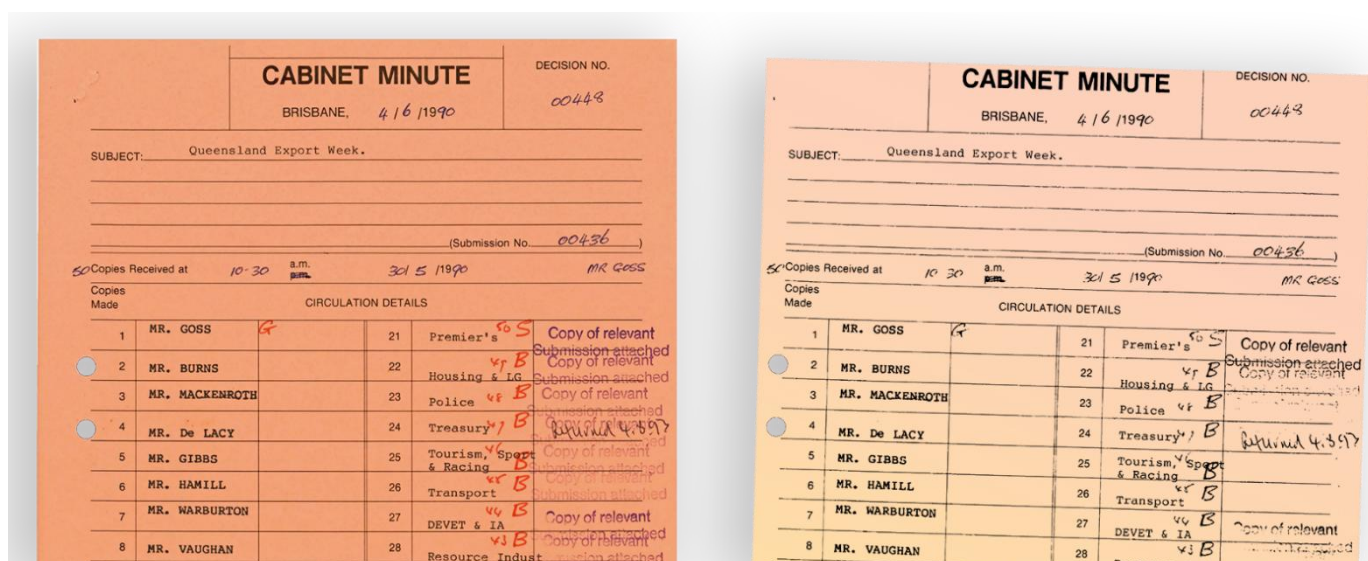


Quality assurance based on business need

Minimum outcomes for digitised records

Under *Source Records Retention and Disposal Schedule* a converted record must be an accurate, legible and authentic reproduction in its entirety. Examples of what an accurate digitised record looks like may include:

- digitised information that is legible and accurately represents the content of the original record
- annotations, attachments and enclosures being captured
- pages being un-cropped and correctly aligned
- colour present in the source record is accurately reproduced in the digitised version
- optimisation being limited to improving the legibility or quality of otherwise indistinct or faded elements in the source record
- captured metadata that supports ongoing access to records and allows for digital preservation
- retention of any original metadata, such as title or date, to ensure continued access to the digitised record and that it accurately reflects the source.



Above we can see a comparison between a well-digitised record (left) and a poorly digitised record (right). The poorly digitised record demonstrates several issues that compromise its quality and usability. The page has been cropped too tightly, resulting in the loss of important information near the edges, and it is also misaligned, making it more difficult to read. Additionally, the contrast settings make the stamped areas and handwriting appear faint, reducing legibility and potentially affecting the authenticity of the record. The source record's colour and red text is also not faithfully reproduced. This highlights the importance of adhering to best practices for digitisation to ensure that digital copies are accurate and legible representations of the source record.

Additional points to consider when digitising are:

- Digitised records need to be retained for the minimum retention period approved in a current disposal authorisation issued by the Queensland State Archivist. It is essential that the digital records remain accessible, authentic, and secure for the duration of their retention period.
- Permanent value digital public records can be transferred to the Digital Archive at Queensland State Archives for ongoing preservation. This ensures that records of permanent value are safeguarded and remain accessible for future generations in accordance with the *Public Records Act 2023*.
- When digitising high-value records, aim to use the highest settings available on your equipment. Consider if all features and information present in the original source are adequately captured in the digitised version.
- Compression can reduce file size, but excessive compression may result in the permanent loss of information. Consider what information could be affected and whether compression may prevent the digitised record from being an accurate reproduction of the source. Lossless compression is recommended.
- Ensure that the equipment used for digitisation is fit for purpose, taking into account the value of the records and their required retention period.

Recommended minimum specifications

If a digitised record is intended to replace the physical source record, there are minimum recommended specifications that public authorities can use to ensure the digitised copies are accurate and complete.

The specifications in the table below are recommended as a baseline only and should be combined with specific requirements as needed by your public authority:

Source record type	Resolution	Bit depth
Text only, black and white	300 PPI*	24-bit true colour
Documents with watermarks, grey shading, grey graphics	600 PPI	24-bit true colour
Documents with discrete colour used in text or diagrams	600 PPI	24-bit true colour
Black and white photographs and negatives	600 PPI or sufficient to provide more than 3,000 pixels across long dimension	24-bit true colour
Colour photographs, negatives and transparencies	600 PPI or sufficient to provide more than 3,000 pixels across long dimension	24-bit true colour
Audio Visual materials, cassettes, tapes, microfilm or anything else	Please seek advice from your records manager or QSA	

*PPI = pixels per inch

Colour capture is recommended for all digitisation as it ensures tonal and contextual information present in the original record is preserved. Where digitisation quality is poor, disposal of the source records is not permitted. Quality issues may include, but are not limited to:

- information from the original source record not being fully captured, for example where content at the top, bottom or edges of a page is omitted
- low resolution or fidelity that makes the record illegible or difficult to read or view
- pages being missed or out of order
- insufficient metadata being captured, attached or associated with the digitised records, making individual records difficult to identify or retrieve.

Recommended file formats

The file format selected for a digitised file affects how it is preserved, managed and accessed over time. When digitising physical public records, it is recommended that your public authority select file formats that support ongoing usability, accessibility and long-term management.

Widely supported file formats, such as PDF, JPG and TIFF, are generally better suited to continued accessibility and preservation.

QSA doesn't prescribe specific file formats, as suitability may change over time in response to technological developments and industry practice. When selecting file formats, your public authority should consider:

- how widely supported or adopted the format is, including whether it relies on proprietary software
- the ability of the format to store or support metadata
- how compatible the format is with text recognition software (OCR).

Further information about recommended file formats is available in the [File formats for long-term digital public records](#) guidance on Forgov.

Quality assurance

Quality assurance is the process of verifying that digitised records meet required quality standards, and any issues are identified and corrected. It is recommended that quality assurance steps are built into any workflows for both in-house and outsourced digitisation activities.

Quality assurance is a critical part of the digitisation process, especially when determining if your public authority can dispose of the source records afterwards. Remember, under the *Source Records Retention and Disposal Schedule*, if quality assurance checks identify problems that cannot be resolved through re-scanning or correction, the source record must be retained.

Where digitisation is outsourced, it is important that your public authority ensures that quality assurance requirements are included in contracts or service level agreements with third-party providers. Responsibility for ensuring quality of digitised public records and authorising the disposal of source records **remains** with your public authority, not the contractor.

When to retain source records

Disposal authorisations issued by the Queensland State Archivist exclude certain source records from disposal. Please check the *Source Records Retention and Disposal Schedule* for exclusion criteria. **If in doubt, contact QSA.**

Source records must be retained where:

- records have already been transferred to the Queensland State Archives collection and are on loan to the public authority
- records are subject to a protection notice or other legislation or government policy that requires the retention of the source record
- records contain unique properties, evidence or information in their original format that cannot be reproduced in another format
- records are considered to have significant cultural, historical, aesthetic or intrinsic value in their original format, which would be lost if the records were digitised or converted to another format
- records are, in their original format, of significance to the identity of First Nations peoples and communities.

Further information about records with archival, enduring and intrinsic value is available in the [General Retention and Disposal Schedule \(GRDS\)](#) and the [Source Records Retention and Disposal Schedule](#).

For advice on records of significance to First Nations peoples or communities, please contact the First Nations Strategy team at QSA.

Email: firstnationsstrategy@archives.qld.gov.au

Document the process

Document what is necessary to show that your public authority's decisions related to a digitisation project were considered and authorised. This documentation provides evidence of a defensible process. Not all projects will require the same amount of documentation, for instance where scanning forms part of the business use of records, but it is good practice to document certain stages of all digitisation work that takes place. This documentation could make up part of the quality assurance checks above.

Download a Defensible Process template [here](#).

Examples of documentation can include, but are not limited to:

- internal policies and procedures
- confirmation that all quality assurance checks have been completed and verified
- evidence documenting that disposal of the source records is endorsed and signed off by the Chief Executive or authorised delegate
- evidence that appropriate storage for the digitised records is in place
- contracts and agreements with third party providers.

Outsourcing digitisation

Your public authority may consider outsourcing the digitisation of certain record types, particularly if specialist equipment or skills are needed. Outsourcing digitisation activities has benefits and [risks](#), so a considered approach weighing up all options is recommended.

Consider what types of records can be digitised by a service provider, including the privacy and security of information required while records are in their custody. Confidentiality agreements may be required to protect the contents of the records.

Your public authority **remains legally responsible** for the records while they are in the service provider's custody, and for ensuring the provider complies with all requirements specified in the contract or agreement. General requirements for managing and caring for public records, especially for those that are fragile must be included.

As with any inhouse digitisation project, those completed by third party providers must be approved by your public authority's Chief Executive or authorised delegate.

Disposal

Disposal of source records must be undertaken in accordance with an applicable disposal authorisation and section 23 of the *Public Records Act 2023*. All disposal decisions must be appropriately authorised and documented.

Case studies

Case study 1

A hospital board holds a large volume of recent annual reports and corporate files that are no longer required for active business use and are accessed only for reference purposes. Due to the scale of the records and limited in-house resourcing and equipment, a decision is made to outsource digitisation. It is anticipated that the source records will be disposed of after digitisation, as they meet the requirements of the relevant disposal authorisation. A digitisation company is engaged under a service level agreement.

Before the quality assurance checks specified in the service level agreement are undertaken, an incident at the digitisation provider's site results in the original paper records being shredded. Subsequent review of the digitised files identifies significant quality issues, including illegible pages due to faint print, missing attachments and double-sided pages where only one side has been digitised. As a result, the hospital board is left with incomplete and unusable digitised records and no original source material available for re-scanning.

While the destruction of the source records was unintended, this outcome may have been avoided if appropriate safeguards had been in place. This example highlights the importance of retaining source records until quality assurance checks are completed, clearly defining responsibilities in service level agreements, and integrating quality assurance into the digitisation workflow to identify issues earlier in the process.

Case study 2

A local council creates its committee minutes digitally but prints them to obtain wet signatures. Once signed, the paper minutes are scanned and saved into the council's EDRMS alongside the original unsigned digital versions.

Scanning is carried out in-house using the council's photocopy/scanning equipment, with settings configured to the highest resolution available. The minutes are saved in PDF format, and scanning is undertaken at 600PPI in 24-bit true colour using pre-set machine settings.

Quality assurance is built into the process, with rigorous checking and physical spot checks conducted against the paper originals to confirm that the digitised copies are complete and accurate. Once the process has been reviewed and approved by the council's Chief Executive, the paper source records are eligible for disposal.

Contact

For further assistance, please contact the Digital Archive team at Queensland State Archives

Email: digitalarchive@archives.qld.gov.au

Address: 435 Compton Road, Runcorn QLD 4113