



# DIGITIZATION'S GUIDE

Go for quality and document your process!

OAC<sup>1</sup>IQ



# DIGITIZATION: GO FOR QUALITY AND DOCUMENT YOUR PROCESS!

(Source: *La numérisation des documents administratifs – Méthodes et recommandations (Digitization of administrative documents – Methods and recommendations)*, revised and corrected version, May 2012, Bibliothèque et Archives nationales du Québec.)

Digitization is an important process if you are looking to manage your records electronically and destroy your paper documents. As an agency executive officer or a broker acting on his own account, you are responsible for establishing and implementing the rules governing this process.

This guide contains clear guidelines to help you establish these rules.

Properly implemented, these guidelines will enable you to:

- ▶ ensure a **high-quality, properly documented transfer process, thereby guaranteeing the integrity of your electronic documents;**
- ▶ produce **documents that will retain their legal value**, in accordance with the requirements of the *Act to establish a legal framework for information technology*.

By following these rules, you will be able to **replace your paper documents with electronic documents while retaining their legal value**. Where necessary, a document that has legal value may be admitted as evidence in court.







# GO FOR QUALITY!



## 1. CHOOSE YOUR EQUIPMENT

The equipment you use to scan your documents must work efficiently and create quality documents. When selecting your equipment:

-  choose quality components (computers with sufficient capacity, high-resolution screens, adequate video card);
-  select a scanner that meets your needs: size of documents to be scanned, type of feed, functionalities (e.g. page counter), technical support available, image mode, optical resolution, etc.;
-  opt for scanning software that meets your needs: user-friendliness, formats available, functionalities, settings, etc.;
-  make sure your various components are compatible with one another.

Note: Don't forget to train users on how to use this equipment!



*Regardless of the equipment you choose, your transfer process must allow you to create quality electronic documents.*

## 2. DETERMINE THE DIGITIZATION PARAMETERS, FORMAT AND STORAGE MEDIUM OF YOUR DOCUMENTS

Before you start scanning your documents, you need to determine the resolution, image mode, format and storage medium to use for your electronic documents in order to ensure their quality is preserved for the long term.

### 2.1. DIGITIZATION PARAMETERS





**Resolution** is calculated in dots per inch (dpi). The higher the resolution, the better quality the image, and the bigger the file. **A 300 dpi resolution is the minimum required** for the majority of documents.

The recommended **image mode** depends on the type of document being scanned:

DOCUMENT TYPE	RECOMMENDED IMAGE MODE
DOCUMENTS WITH A FEW COLOUR ELEMENTS (e.g. letterhead with a colour logo)	8-bit colour
MONOCHROME, TEXT, GRAPHIC OR PHOTOGRAPHIC DOCUMENTS (e.g. documents with handwritten elements)	8-bit greyscale
DOCUMENTS REQUIRING A VERY HIGH-DEFINITION RESULT (e.g. photos with important details)	24-bit colour
DOCUMENTS IN EXCELLENT CONDITION (e.g. printed Word documents, documents that include very clear handwritten elements)	1-bit black and white (acceptable)

Resolution and image mode will need to be adapted based on:

-  the condition of your documents: certain elements can have an impact on the quality of the digitized image (presence of handwritten elements, poor quality photocopies);
-  your storage capacity: a high-resolution colour or greyscale electronic document will be larger than one that was scanned in black and white or at a low resolution.



For example, if your documents are very clear, it is acceptable to scan them in black and white at a lower resolution. However, if the quality of the document is poor, you may have to increase resolution and opt for greyscale scanning. The important thing is to ensure that the document you see on the screen is of the same quality as the original. If your documents are illegible, and therefore unusable for your activities, the objectives of transfer will not be achieved.

The OACIQ recommends a 300 dpi resolution and accepts black and white image mode, as these parameters produce an acceptable level of quality for the majority of documents.

## 2.2. FORMAT OF ELECTRONIC DOCUMENTS

The format chosen (type of file) must allow the quality of your electronic documents to be maintained over the long term. Remember that you must keep your documents for at least six (6) years: it is therefore important to choose a format that will allow for long-term reference and conservation.

The following formats are recommended for the conservation of your documents:

DOCUMENT TYPE	RECOMMENDED FORMAT		
 IMAGES	Uncompressed TIFF	TIFF with LZW compression	Compressed JPEG 2000
 DOCUMENTS	PDF/A-1	XML	Compressed JPEG 2000


Note: Uncompressed formats are recommended for long-term conservation. If you must use compression, only the above formats are acceptable, as they do not cause any loss of data.

### 2.3. STORAGE MEDIUM FOR ELECTRONIC DOCUMENTS



The storage medium used must also allow for the quality of your electronic documents to be maintained over the long term. Remember that you must keep your documents for at least six (6) years: you must therefore choose a medium that is stable, secure and recommended for long-term conservation.

You will also need to implement a procedure to ensure that your documents are properly backed up, so that all your documents may be recovered in case of system failure.



The OACIQ recommends the use of hard disks for storage and magnetic tapes or cartridges for backups, as these media offer adequate stability and security for long-term conservation.



*Regardless of the parameters, format and storage medium you choose, your transfer process must allow you to create and conserve quality electronic documents.*

## 3. DRAFT A DIGITIZATION PROCEDURE




To properly oversee and document your transfer process (see also the section entitled *Document your process*) below, you will need to draft a digitization procedure. This will help you ensure that your documents are properly and consistently scanned. This written procedure must include the following elements.

### 3.1. DOCUMENT SCANNING METHOD

#### ➤ When should documents be scanned?

Your procedure should indicate whether documents are scanned as soon as they are created or received, or on a daily or weekly basis.



The OACIQ recommends that documents be systematically scanned as soon as they are created or received, as this allows you to have a complete record in real time and to avoid the destruction of unscanned documents. Note that the broker must always send to his agency, without delay, all the information required for the keeping of records and registers.

#### ➤ Who does the scanning?

Your procedure must specify which individuals are authorized to scan documents (e.g. the broker in charge of the file if the transfer process is decentralized, or an assistant if scanning is centralized at the agency, etc.).

➤ How are documents scanned?

**Materials preparation**

Your procedure must explain how documents are to be prepared for scanning, in order to avoid equipment break-downs or poor quality results (e.g. unfolding, removing staples, placing documents in order, etc.).

**Digitization parameters**


Your procedure must indicate whether digitization parameters must be selected, and if so, which ones to use for which types of documents (e.g. forms in black and white at 300 dpi, colour photos at 300 dpi, etc.). See section 2 above for details.

**Equipment use**

Your procedure must include a step-by-step digitization procedure as well as what to do in case of problem (e.g. place documents face down on the scanner; if the document is too light, adjust contrast, etc.).

**Document organization**

Your procedure must specify whether documents should be scanned separately or in bulk, and indicate how documents should be organized (e.g. separating forms and annexes, grouping photos together, etc.).


 The OACIQ recommends that documents be scanned separately to facilitate reference and retrieval.

3.2. QUALITY CONTROL METHOD

➤ Who is responsible for quality control?

Your procedure should identify the individual(s) responsible for quality control (e.g. each person controls the documents he/she has scanned; one person controls all scanned documents; a combination of both methods, etc.).

**PLEASE NOTE!** IF THE BROKER IS NOT REQUIRED TO SEND PAPER DOCUMENTS TO THE AGENCY, IT IS IMPERATIVE THAT HE PERFORM HIS OWN QUALITY CONTROL OF THE TRANSFER PROCESS, IDEALLY BEFORE THE DOCUMENTS ARE ENTERED IN THE ELECTRONIC DOCUMENT MANAGEMENT (EDM) SYSTEM.


 The OACIQ recommends that, regardless of the quality control method chosen, the person scanning documents always perform a minimum quality control.

➤ What elements must be controlled?

Your procedure must define the elements to be verified when performing quality control, such as consistency with the paper document (number of pages, orientation), image quality (presence of lines, darkness), etc.

➤ How many documents should be verified?

Your procedure must specify what documents should be verified when performing quality control (e.g. all documents; 1 out of 5 documents; 1 complete file out of every 10; all documents during the training period, etc.).

 The OACIQ recommends that the person scanning documents perform a minimum quality control on all documents, whereas the agency should perform a final quality control on a sampling of documents of its choosing (e.g. 1 out of every 10 documents).



➤ When should quality control be performed?

Your procedure must specify how often quality control is to be performed (e.g. daily, weekly, monthly, etc.).

### 3.3. SOURCE DOCUMENT MANAGEMENT (paper documents that have been scanned)

➤ Where are source documents kept?

Your procedure must indicate what measures are taken to ensure confidentiality and privacy protection until the documents are destroyed (e.g. documents kept in a secure location at the agency or in brokers' locked filing cabinets, etc.).

➤ When should source documents be destroyed?

Your procedure must specify the period during which paper documents will be retained based on quality control, system stability and backup frequency (e.g. paper documents are destroyed two (2) months after scanning, since backups are done daily and quality control is done monthly).

**PLEASE NOTE!** SOURCE DOCUMENTS CANNOT BE DESTROYED UNTIL QUALITY CONTROL HAS BEEN PERFORMED AND A BACKUP HAS BEEN DONE.

➤ How will source documents be destroyed?

Your procedure must specify the method used to dispose of paper documents while making sure that privacy is protected (e.g. shredding for transaction documents; recycling for detailed description sheets, etc.).

Note: The above procedure must be kept for the same period as the digitized documents.

For help with developing your digitization procedure, see the checklist at the end of this guide.






*Regardless of the methods used, your transfer process must allow you to create quality electronic documents.*

# DOCUMENT YOUR PROCESS!








## 1. DOCUMENT CONTENT

In order to create digitized documents that have the same value as their paper equivalents and to be able to destroy your source documents, you must document what constitutes the *transfer process*. This documentation allows you to ensure the legal value of your scanned documents, in accordance with the *Act to establish a legal framework for information technology*.





In concrete terms, it means keeping all the information you can allowing you to:

-  explain the paper-to-electronic transfer process;
-  prove that the electronic document is consistent with the source document and has not been altered in any way;
-  demonstrate that the integrity of the document was preserved throughout the process.

As a minimum, your documentation must include **all** the elements below:

-  a description and the technical specifications of the scanner and scanning software used;
-  the digitization parameters;
-  the format of the source document and that of the electronic document;
-  the storage medium used for electronic documents;
-  a description of your digitization procedure;
-  a description of your quality control method;
-  a description of your source document management method.

Ideally, your documentation should also include information on **all** transfer operations, including:

-  the creator of the digitized document;
-  the date and time of scanning;
-  the scanning equipment used;
-  the digitization parameters applied.

Note: The above documentation must be kept for the same period as the digitized documents.

For help with your documentation procedure, see the checklist at the end of this guide.





*Your transfer process must be well documented to allow you to create documents that can replace the original.*

## 2. TYPE OF DOCUMENTATION

Your documentation can take different forms. It can even be a combination of several types of documents and information collected and kept in different locations. However, it should include all the elements outlined in the previous section.

For an agency:

- The digitization procedure, describing the digitization parameters and steps, stored on your server.
- The technical documentation on the equipment and software used, explaining equipment operation and the processes used, kept in hard-copy form in an administrative record.
- The information automatically recorded by the scanning software, transferred and conserved as metadata with the documents in the EDM system.

For a broker acting on his own account:

- The digitization procedure, with a summary description of the various steps.
- The information included in the metadata of files created during the transfer process (e.g. date and time the electronic document was created).



*Regardless of the documentation method selected, it must include all the elements needed to ensure that your electronic documents have the same value as your paper documents.*

## CONCLUSION

An important component of electronic document management, digitization must allow you to create electronic documents that can replace your paper documents. To do so, you must implement rules allowing you to create quality electronic documents while making sure your transfer process is properly documented.

This is because even if you create quality documents, if your transfer process is not documented, **you will not be able to destroy your paper documents.**

Conversely, if you document your transfer process but you create poor-quality electronic documents, **you will not be able to destroy your paper documents.**



*Regardless of the procedure you choose, your transfer process must allow you to create quality electronic documents and be documented.*

*WHEN DIGITIZING: GO FOR QUALITY AND DOCUMENT YOUR PROCESS!*

Useful reference in synbad.com:

[Electronic document management \(EDM\) of agencies and brokers acting on their own account](#) (art. 206968).

See also:

The [Act to establish a legal framework for information technology](#), CQLR c C-1.1.




[La numérisation des documents administratifs - Méthodes et recommandations](#), June 2019, Bibliothèque et Archives nationales du Québec.

**If you have any questions**, please contact the OACIQ Inspection Department 450-462-9800 or 1-800-440-7170, ext. 8476.

## DIGITIZATION PROCEDURE – CHECKLIST

A digitization procedure allows you to monitor your scanning operations and to meet some of the requirements of the Act to establish a legal framework for information technology in terms of documenting your transfer process.


The following checklist contains the minimum information that must be included in your procedure. Note that the procedure may be adjusted based on your needs and include more elements.

SCANNING METHOD	
Does my procedure indicate how often documents must be scanned?	
Does my procedure identify the person or category of persons responsible for scanning documents?	
Does my procedure include instructions on the material preparation of documents prior to scanning?	
Does my procedure indicate the minimum digitization parameters which must be applied?	
Does my procedure provide instructions on how to use the scanning equipment?	
Does my procedure explain how documents should be organized when scanning?	
CONTRÔLE DE QUALITÉ	
Does my procedure identify the person responsible for quality control?	
Does my procedure specify the elements to verify when performing quality control?	
Does my procedure indicate the number of documents to be verified when performing quality control?	
Does my procedure specify how often quality control should be performed?	
SOURCE DOCUMENT MANAGEMENT	
Does my procedure indicate where paper documents must be kept prior to their destruction?	
Does my procedure indicate the period during which paper documents must be kept?	
Does my procedure specify the method to be used to destroy paper documents?	

## TRANSFER PROCESS DOCUMENTATION – CHECKLIST

The *Act to establish a legal framework for information technology* states that in order to produce electronic documents that are equivalent to paper documents, the transfer process must be documented.

The following checklist contains the information elements you must keep to ensure that your transfer process is properly documented.

ELEMENTS YOU MUST KEEP	
Am I keeping a document or information that provides a description and the technical specifications of the scanner(s) used in the transfer process?	
Am I keeping a document or information that provides a description and the technical specifications of the software used in the transfer process?	
Are the digitization parameters applied when scanning documents collected in a document, a file or in the documents' metadata?	
Is the format of the source document indicated in a document that I am keeping?	
Is the format of the electronic document indicated in a document that I am keeping?	
Is the electronic document storage medium specified in a document that I am keeping?	
Am I keeping a document that explains my current backup procedure?	
Am I keeping a document that describes the digitization procedure applied by users?	
Am I keeping a document that indicates the method used to control quality of the electronic documents following the transfer process?	
Am I keeping a document specifying how source documents are managed?	
Am I keeping a document or information that describes the digitization procedure: creator, date and time, equipment used, parameters applied?	