

Accessible Document Practices in Adobe Acrobat Pro

Version 2.1, Revised June 2025

T.M. Weissenberger, University of Iowa

Adobe Acrobat lets you create documents in Portable Document Format (PDF) from a variety of sources. Acrobat PDFs are easy to distribute and remain faithful to the design and layout of the original.

Here are a few tips and tricks to help you provide more accessible PDF documents for your students and others.

Accessible PDF	2
Start with Accessible Source Documents	4
PDF Accessibility Tasks	5
Acrobat Accessibility Tools.....	6
Converting Image-Only Documents to Text	7
Adding Tags to an Untagged Document.....	8
Fix Reading Order	9
Artifacts	10
Headings	11
Provide Alternative Text for Figures and Other Images.....	12
Document Properties and Metadata	13
Use Guided Actions to Make Accessible PDF.....	14

Accessible PDF

PDF (Portable Document Format) is a popular and commonly-used format for the delivery of visually formatted documents, typically intended for printing.

PDF documents may be created in one of several ways, and may contain text, images, and other kinds of common document objects. Depending on the content and construction of a PDF, it may pose significant accessibility barriers to some users, including users of assistive technology.

Potential PDF Accessibility Barriers

Scanned PDF

A scanned PDF contains no tags, structure, or other information to provide content or context to AT users. The scanned PDF presents a major accessibility barrier, and should not be distributed without significant remediation.

Untagged Text PDF

Untagged text PDFs include content that may be exposed to assistive technology, but that lacks structure, semantics, or order. Untagged PDFs must be tagged and checked for content order before distribution.

PDF with Images

PDFs may contain images that are intended to convey important information to users. These images must be accompanied by a text alternative, so that users are able to determine the purpose or function of the image.

PDF with Tables

PDFs may contain tables that are intended to convey important tabular data to users. If the table does not convey the relationship of header and data cells, or if the table is very complex, users may be unable to determine the context of a given cell or data point.

PDF lacking a Page Title

PDFs should contain a Page Title in the Document Properties, which is exposed to assistive technology when the document is opened. This information assists the user to understand the purpose of the document. If the Page Title is missing, the user may not understand the purpose of the document.

PDF with Forms

PDFs are often used to deliver forms for print or online completion. Form elements must be appropriately labeled to convey their purpose to assistive technology. If form

elements are unlabeled or improperly labeled, users may be unable to determine the purpose of the form elements.

PDF with Embedded Multimedia

Embedded multimedia is likely to lack captions, keyboard operable players, and screen reader support. Multimedia embedded in PDF should be avoided altogether.

Start with Accessible Source Documents

The Portable Document Format is a destination form for documents created in a variety of source applications. In many cases, documents are created in Microsoft Word, PowerPoint, Adobe InDesign, and other authoring applications. These documents may carry accessibility features with them when they are exported to PDF.

Repurposed documents

PDFs come from a variety of sources, and not all will include accessibility features that carry forward after conversion. Also, documents that have been scanned or otherwise converted from one document format to PDF may require more remediation. In some cases, it may be best to return to the source document to add or improve features.

Make Sure PDF is the right format

You want to make sure that PDF is the right format for what you're trying to achieve. PDF forms and other interactive documents may require a higher level of development time and effort. You might consider distributing your document in a different format altogether—common alternatives to PDF include Word and HTML.

PDF Accessibility Tasks

- Create PDFs from accessible source documents
- Run the Acrobat Accessibility Checker or similar assessment tool
- Check to see whether the document is scanned
- Check whether and how the document is tagged
- Check navigation, bookmarks, tab order, page order
- Check and address alternative text
- Check document properties: security, language, title
- Check tables, forms, media and other embedded objects
- Check for unwanted content and create artifacts

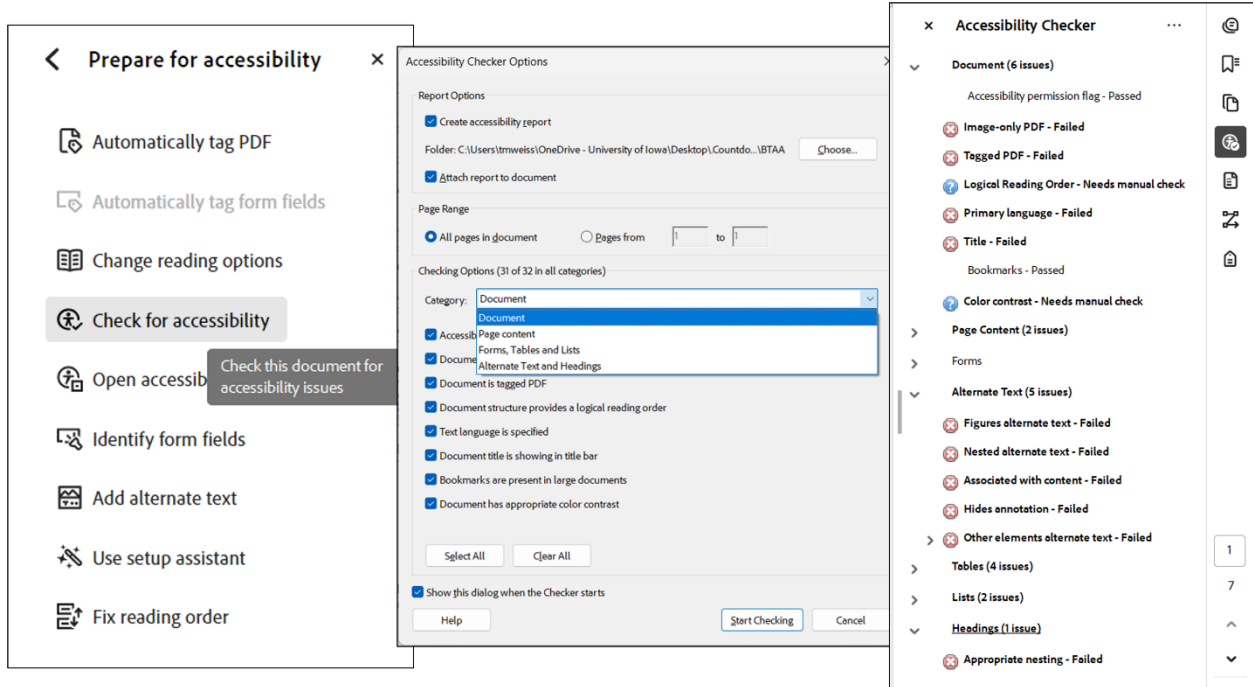
Key PDF Accessibility Factors

- Machine-readable text: NOT image-only
- Logical reading order
- Semantic and structural tags, including artifacts
- Navigability: appropriately nested headings, bookmarks
- Keyboard operable: no mouse required
- ALT text for images
- Sufficient color contrast
- Document properties and security

Acrobat Accessibility Tools

Acrobat Accessibility Checker

Acrobat's accessibility checker checks up to 32 accessibility factors in your document. You can select options in four categories and view the resulting report.



Converting Image-Only Documents to Text

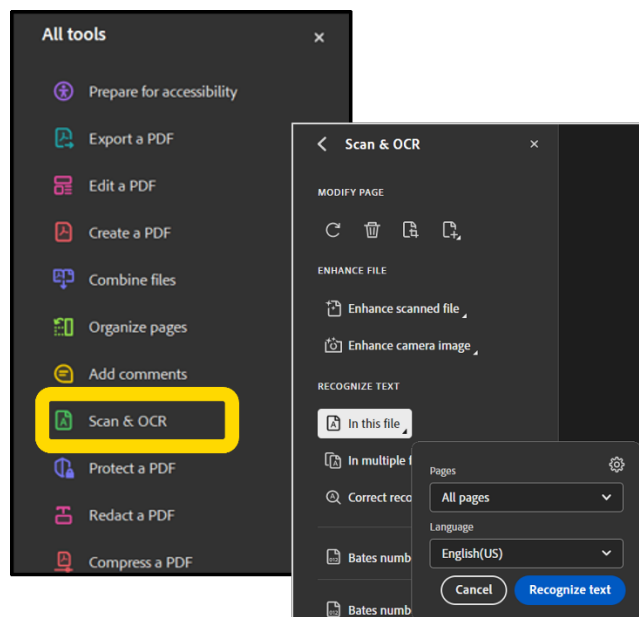
Documents that have been scanned to PDF, printed to PDF, or generated through some third-party PDF makers may render as image-only files. These documents have no machine readable text, but only a flat representation of the text and other content from the original document. These documents are not searchable, they cannot be edited, the text cannot be extracted for citations or other purposes, and they cannot be read by assistive technology such as screen readers.

To make such documents more usable, you can perform Optical Character Recognition (OCR) on your document. In this tutorial, we will use the Scan & OCR toolset, found in All Tools.

Scan & OCR

The Scan & OCR tool lets you select a text output option, along with a few other features. Scan & OCR is located in All Tools (new Acrobat). To use the Enhance Scans/Recognize Text tool:

1. Open the Scan & OCR toolset
2. Apply any settings, including pages, language, output, and resolution
3. Press OK to run the OCR process



Note: performing OCR is not sufficient to claim accessibility, but it's a good and necessary start. In addition, the quality of text from this process may vary widely, depending on the quality of the original document. Be prepared to work with other aspects of the document, including tags and reading order.

Adding Tags to an Untagged Document

Tags add structure and semantic meaning to elements in your PDF. Examples of tags include headings, paragraph markers, figure and image designations, lists, tables, and artifacts. Tags communicate the role of an element to assistive technology, enabling users to more easily determine what an element does, what it means, and how it might relate to the rest of your document.

First, you need to determine whether your document is already tagged. This information is found in the Tags panel.

Check Tags

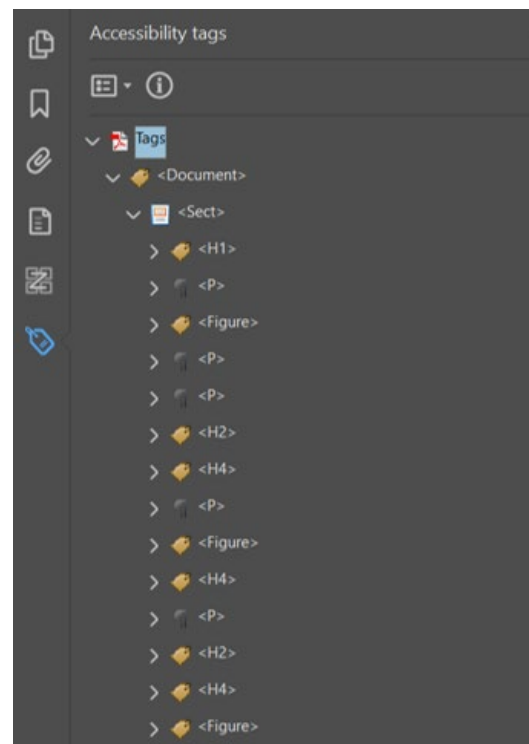
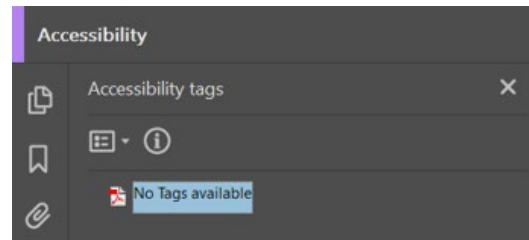
If the document is not tagged, you can add tags.

- Select the “VIEW” menu
- Select “Show/Hide”
- Select “Navigation Panes”, and then “Tags”

If the “Tags” pane reads “No Tags Available”:

- Right click on the “No Tags” icon;
- select “Autotag Document”

This method places tags in your document, but you still may need to check your tags manually to make sure your document is properly structured.

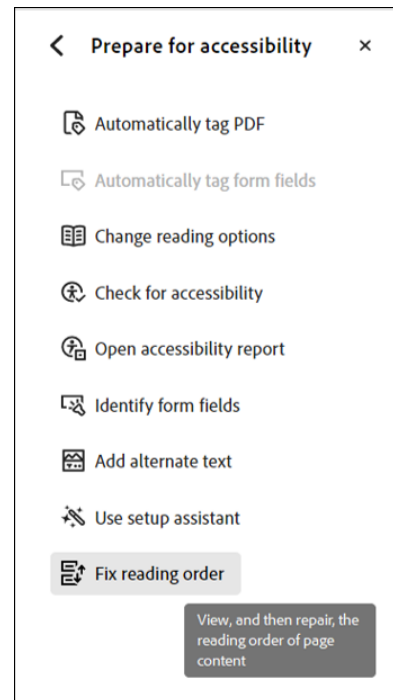


Fix Reading Order

After your document is text-based and tagged, you still may need to adjust headings and reading order to ensure that the document is well-structured and machine-readable. You can use the “Fix Reading Order” tool to move through your document and correct any issues with headings and reading order.

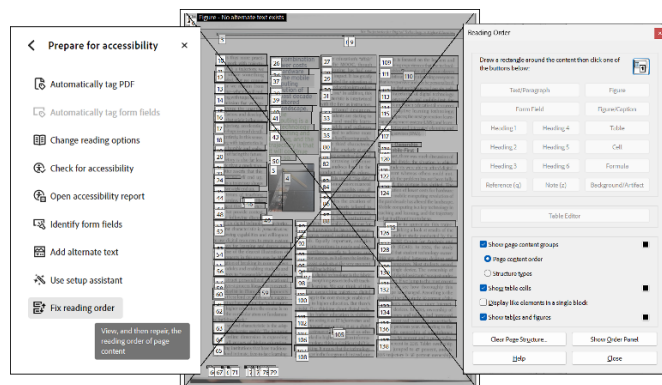
The accompanying screen shots illustrate what a document might look like after OCR and tagging. Note that the page order runs across columns, into sidebars, and splits unpredictably in ways that obscure the text order and readability of the content. “Fix Reading Order” lets you manually correct reading order issues by selecting and retagging blocks of content.

The Fix Reading Order tool is located in the Accessibility tools pane.



Use the “Fix Reading Order” tool

- Select “Fix Reading Order” from the “Prepare for Accessibility” tool set
- To view your document’s reading order, select the “Show Order Panel” button
- You can also right click on an order number and select a tag from the context menu



Change Heading Level

Automatic tagging may produce an incorrect heading structure. You can change the heading level of any element from the “Fix Reading Order” tool

- Select the element you want to update
- Select the desired heading level from the “Fix Reading Order” panel
- Confirm the new heading level in the Tag Tree

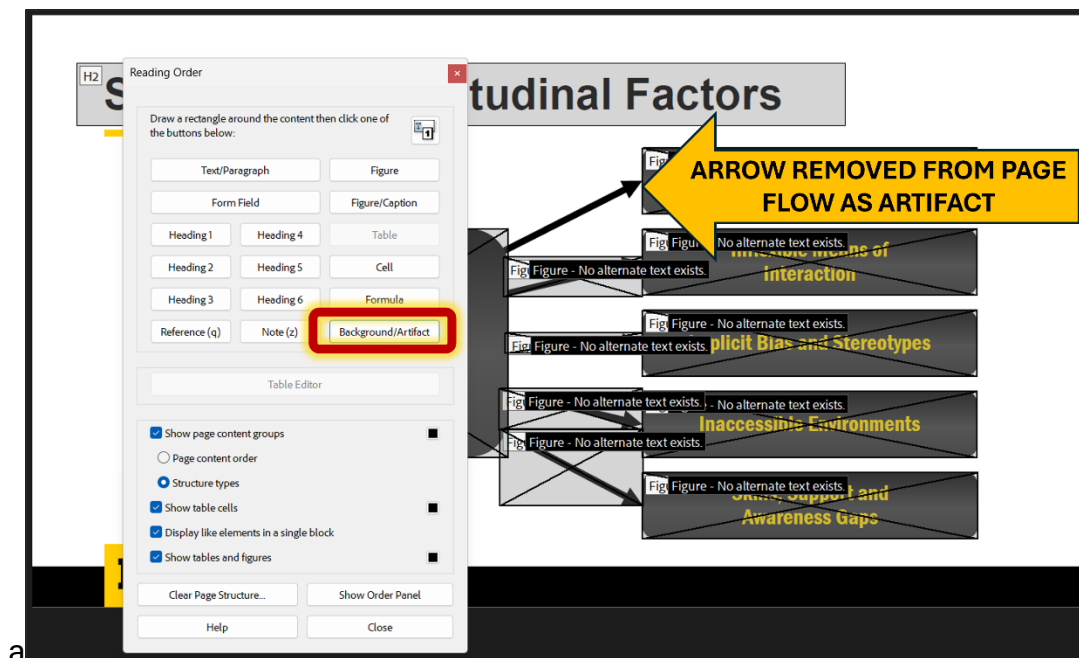
Artifacts

For elements that you want to exclude from the reading order, select “Background” to create an Artifact. Artifacts are elements that are removed from a document’s content order and placed in the background, where they are not exposed to assistive technologies. Artifacts are particularly useful in the remediation process, as you can use them to hide indicia like page numbers, gutter shadows, decorative images, and other superfluous remnants of the original document.

Assign an element as an Artifact

- Open “Fix Reading Order”
- Select the element you wish to artifact
- In the “Fix Reading Order” pane, select Background/Artifact

In this image, an arrow in a diagram is cast as an artifact because it doesn’t provide content to the user.



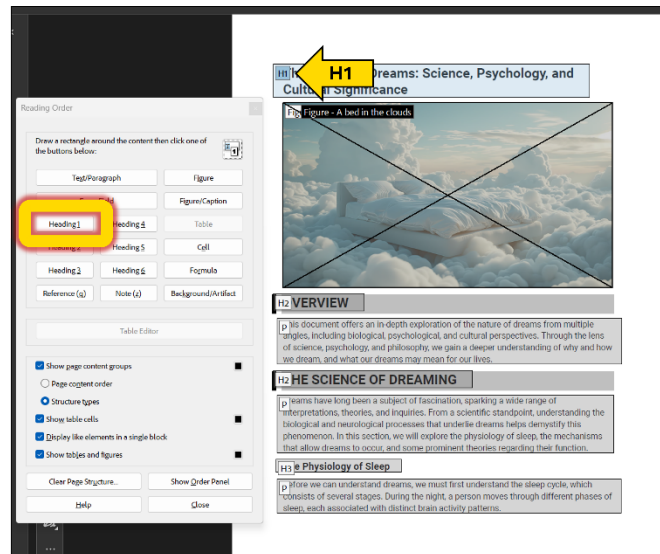
Headings

One benefit of a well-structured document is that readers can quickly locate specific information by scanning the document's topic headings. Users of assistive technology are beneficiaries of well-defined document outlines, as are people who prefer to scan a table of contents or landmark list to quickly find the content they want.

Your bookmark structure is directly influenced by the markup choices you make when you add headings using the Touch Up Reading Order tool.

Set a Heading with Fix Reading Order

- Open Fix Reading Order
- Under Show Page Content Groups, select Structure Types
- Select the element you want to make a heading
- Select the in Fix Reading Order, select the heading level you want to apply.



Generate Bookmarks from a selection

To generate a bookmark from a selection:

- Open the Bookmarks navigation pane
- Select (highlight) the text you want the bookmark to point to
- Select the Add Bookmark tool in the navigation pane (Ctrl+B)
- Enter the name of the Bookmark
- Repeat the process until you have created the bookmarks you want

Generate Bookmarks from Structure

If your document structure is consistent and robust, you may want to create a group of bookmarks all at once. To generate bookmarks from structural elements:

- Open the Bookmarks navigation pane
- In the "Options" menu, select "New Bookmarks from Structure"
- Select the element from which you want to create bookmarks
- Label your Bookmark set as desired

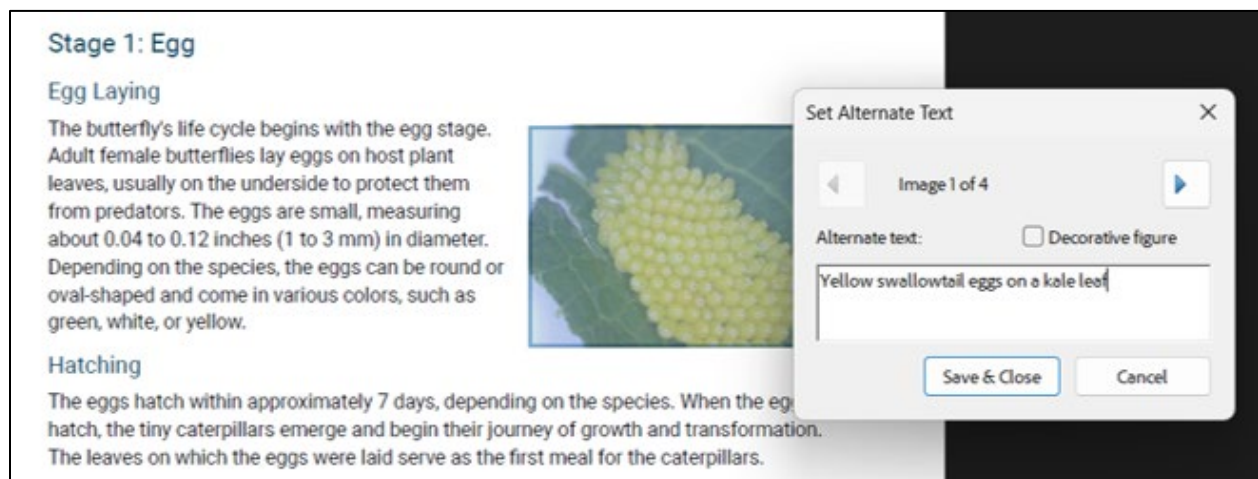
Provide Alternative Text for Figures and Other Images

As with other document formats, PDF permits the use of alternative text (ALT text) with embedded images and figures. Photographs, illustrations, charts and graphs, logos, and diagrams are a few examples of embedded images that rely on ALT text to convey their meaning to assistive technology.

To edit or add ALT text in Acrobat, you need to select the image (or figure) for which you want to provide the text.

Add ALT text to images in your document

- Open Prepare for Accessibility toolset
- Select the “Add Alternate Text” tool
- Cycle through the Add Alternate Text tool adding ALT text as needed



Document Properties and Metadata

PDF documents include several properties that can help users remain oriented as they open and move through them.

Title: The Title property is announced to the user when the document is opened. A relevant and meaningful Title property lets the user know which document has been opened. The Title property is exposed to the user when the Show option reads “Document Title” in the Initial View tab.

Language: Defining the human language of a document lets screen readers provide correct pronunciation and inflection when rendering human languages. This property is especially important for documents that use multiple languages. The language property can be set in multiple places in Acrobat, including the Advanced tab in Document Properties.

Document Properties

Description Security Fonts Initial View Custom Advanced

Description

Title: The Nature of Dreams: Science, Psychology, and Cultural Significance

Author: Weissenderger, T M

Subject:

Keywords:

Created: 4/27/2025 1:31:44 PM

Modified: 4/27/2025 1:40:20 PM

Application: Acrobat PDFMaker 25 for Word

Additional Metadata...

Advanced

PDF Producer: Adobe PDF Library 25.1.234

PDF Version: 1.6 (Acrobat 7.x)

Location: C:\TMW-CDrive\2025\summercamp\DASC25-PDF\WORKING - PDF REMEDIATION\

File Size: 390.62 KB (399,998 Bytes)

Page Size: 8.50 x 11.00 in

Number of Pages: 7

Tagged PDF: Yes

Fast Web View: No

Help OK Cancel

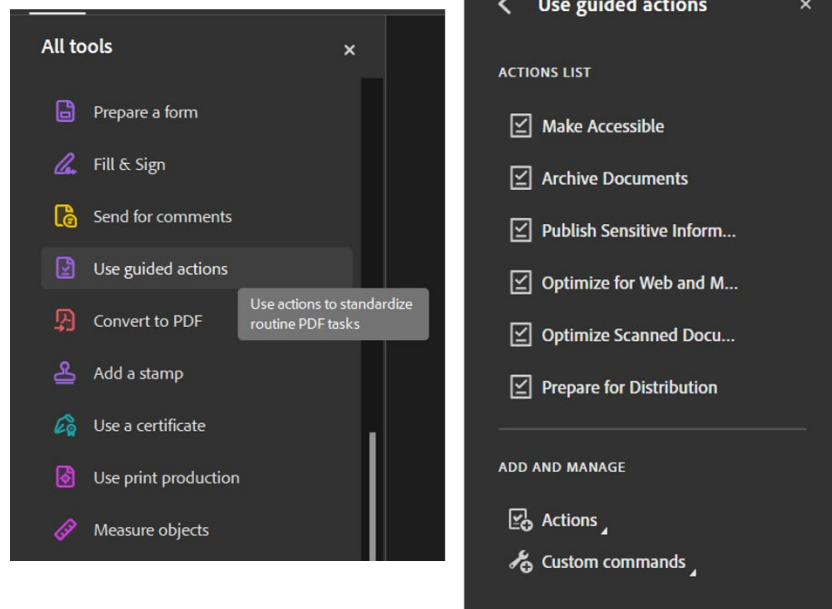
Use Guided Actions to Make Accessible PDF

The Make Accessible tool is one of the Guided Action toolsets available in Acrobat. The “Make Accessible” guides you through a series of actions that can mitigate the barriers found in some PDF documents, including many that are addressed elsewhere in this tutorial. This is a good place to start remediating an existing PDF, but you will probably still need to modify some tags manually to normalize the structure of your document.

“Make Accessible” provides an automated means of adding tags and other accessibility features to your document. As with individual steps, you should review each step to make sure it meets the needs of your document and your users. Note also that “Make Accessible” will overwrite any accessibility features you may have previously included in your document.

To run the “Make Accessible” tool

- From “All Tools”, select “Guided Actions”
- In Guided Actions, select “Make Accessible”
- Follow each step in the “Make Accessible” process
- Check your document for accessibility issues and correct as needed.



IOWA



<https://itaccessibility.uiowa.edu>

Developed by T. Matthew Weissenberger, University of Iowa

**Please direct comments and questions to
itaccessibility@uiowa.edu**