



Creating Accessible Documents Guide

Last Revised: July 14, 2023

The purpose of this guide is to provide a list of steps for making Microsoft Word® documents and Adobe® PDF files accessible. This guide lists steps for improving document accessibility. Refer to other training resources for more specific details regarding a particular aspect of document accessibility.

Making Word documents and PDFs accessible is important as more individuals are able to access these files using assistive technology. Additionally, document accessibility helps ensure 508 compliance.

How to Use This Guide

This guide features headings that provide information regarding various components of document accessibility. Quickly find the component you want to learn about by navigating to the corresponding heading.

Additional Training Resources

- [How to Make an Accessible Document in Microsoft Word Training Videos](#)
- [Microsoft Word and Best Practices Certification Course](#)

Microsoft Word

File Name and Saving Document

- Give the document a descriptive name that easily identifies it.
- Save your document in .docx (Word Document) format.

Headings and Document Organization

Headings are used to organize a document into different sections. Each section should have a heading that describes it. Headings are organized into different levels.

- Heading 1 (H1): The title of the entire document.
 - A document should only have one H1.
- Heading 2 (H2): The title of each section within a document.
 - Every section within your document should have an H2.
 - You can add subsections within a section, but they will need to be at the next heading level.
- Heading 3 (H3): A subsection within a section.
- Heading 4 (H4): A subsection within a subsection within a section.
- Heading 5 (H5): A subsection within a subsection within a subsection within a section.

- Heading 6 (H6): A subsection within a subsection within a subsection within a subsection within a section.

Adding Headings to a Word Document

- You can add headings into a document either via the ribbon or a key command.
 - Ribbon: Select the text you would like to make into a heading. Then go to the Home tab in the ribbon and find the Styles section. Select the heading level that needs to be applied. A heading will be added to the document.
 - Key Command: You can toggle through heading levels by pressing Alt + Shift + Left or Right Arrow.
 - Pressing Alt + Shift + Left Arrow will apply the previously used heading level beginning with H1.
 - Pressing Alt + Shift + Right Arrow will apply the next heading level beginning with H2 and onwards up to H6.
 - The key commands can be used to add headings before typing text or after text has been written. Select the text and then press the key commands to make a heading.

Creating Lists

Lists are used to organize information. Best practices are below.

- Do not create a list by using symbols found on your keyboard such as hyphens, stars, dashes, etc.
- Use the built-in lists feature in Word to add bulleted, numbered, and multilevel lists.
 - Add lists to a document by going to the Home tab within the ribbon and select the type of list that is needed in the Paragraph section.

Using Columns and Reading Order

Columns can help structure a document. Best practices are below.

- Do not manually create columns with spaces and the Enter key.
- Always use the built-in Columns feature.
 - Access the Columns feature by navigating to the Layout tab of the ribbon.
 - Select Columns within the Page Setup section.
 - Choose the number of columns you'd like to add to the document.
- Using the built-in Columns feature improves the reading order for individuals using assistive technology, such as screen readers, as text will be read in the correct sequence.

Tables

There are three types of tables that can be placed into a document.

- Layout Tables
 - Type of table using cells to lay out and format images and text
 - Does not require row and column headers
 - Can be made accessible in Word
 - Table must be placed in line with text
- Simple Data Tables

- Type of table where row and column headers are necessary to understand information within a cell
 - Requires row and column headers; header row must be labeled
 - Does not have multilevel headings and merged cells
 - Can be made accessible in Word
 - Table must be placed in line with text
- **Complex Data Tables**
 - A type of table that features multilevel headers and merged cells as well as row and column headers
 - Requires row and column headers; header row must be labeled
 - Has multilevel headings and merged cells
 - Cannot be made accessible in Word
 - Should be created another application that supports accessible complex data tables

Best practices for inserting tables are below.

- Only use tables when truly necessary. Other methods of communicating information, such as using a list, may eliminate accessibility challenges.
- Always ensure rows and columns are clearly labeled.
- Do not create or insert multilevel data tables in Word documents.
- Do not insert an image of a table, as it is better to create the table instead.

Insert tables into a Word document by doing the following:

- Navigate to the Insert tab of the ribbon.
- Select Table in the Tables section.
- Select the number of rows and columns the table requires. Remember to consider row and column headers if inserting a simple data table.
- Place the table in line with text to ensure the proper reading order.

Distinct Languages

Any change in language must be noted in a Word document for individuals using assistive technology such as screen readers.

Set distinct languages by following the steps below.

- Select the text that is in another language.
- Navigate to the Review tab of the ribbon.
- Select Language.
- Select Set Proofing Language.
- Select the language that the selected text is written in and press OK to set a distinct language.
- The above steps should be followed each time a distinct language is used in a Word document.
- There is no need to set distinct languages for proper names, technical terms, or foreign terminology that are commonly used in English.

Links

Links should feature descriptive text to reduce ambiguity for screen reader users. Best practices for inserting links into a Word document are below.

- Type out descriptive text that identifies the link instead of pasting the link address into a document.
- Select the descriptive text that identifies the link.
- Either press Control + K or right click and select Link.
- Paste the link into the edit field labeled Address and press Enter.
- Do not paste a link without descriptive text, as assistive technology may not provide context on where the link takes a user.

Headers, Footers, and Watermarks

Assistive technology, such as screen readers, do not automatically read information in headers, footers, and watermarks. Information in headers, footers, and watermarks should be duplicated near the start of the corresponding content area. Only vital information needs to be reproduced. Only use headers, footers, and watermarks if necessary and try to not place vital information in these locations.

Images and Objects

Images and objects are not made accessible by default. Steps to make images and objects accessible are below.

- Ensure all images and objects are positioned in line with text to align elements in the proper reading order.
- Add descriptive text to images and objects for screen reader users. There are three methods for adding descriptive text.
 - Alternative Text: A one-to-two sentence description of the important elements of the image, including the function and purpose. Alt text descriptions should be no more than 250 words.
 - Captions: Text near the image or object that describes its important aspects including the function and purpose.
 - Information in Surrounding Text or Appendix: Text describing an image or object's function and purpose.
- How to Add Alt Text
 - Right click on the image that needs alt text.
 - Select View Alt Text.
 - Write the alt text in the dialogue box that appears.
- How to Write Alt Text
 - Alt Text should only be one to two sentences and no more 250 words.
 - It should only describe the key functions and purpose.
 - It should include all text displayed in the image and object.
 - It should include “ ” for decorative images and objects.
 - Write the characters “(spacebar)”

Textboxes

All textboxes must be placed in line with text, as screen readers can only read text within a textbox when aligned this way. Select the textbox to view alignment options and then select the in line with text option.

Color and Sensory Characteristics in Word

Color and sensory characteristics must be considered when making a Word document accessible.

- Sensory characteristics include size, shape, and position. These sensory characteristics alone do not make a document accessible, as individuals with visual disabilities may not have access to this content.
- If color is used to designate meaning (e.g., red means stop), add text explaining the meaning of color.
- Ensure color has high contrast.
- Text and backgrounds must also have high contrast.
 - Consider using a dark background with light text or a light background with dark text.

Embedded Files

Embedded files must be made accessible to allow equal access to content for all users.

- Audio-only files must include an accurate and complete transcript.
 - A transcript is the complete text of what was said in the audio file.
- Video-only files must include an accurate and complete text description.
 - A text description is a text version of what is being shown in the video.
- Multimedia files containing audio and video and must be accompanied by synchronized captions and audio description.
 - Captions: Time synchronized text of what is said and descriptions for sound in multimedia files.
 - Audio Description: Time synchronized descriptions of what is being shown in a multimedia file.

Accessibility Checker

Use the built-in Accessibility Checker to review the document for any accessibility-related errors.

- Access the Accessibility Checker by navigating to the Review tab of the ribbon.
- Click on Check Accessibility in the Accessibility section.
- Clicking on the arrow next to the Check Accessibility option will open a dropdown menu with additional options.

Note that the Accessibility Checker may not notice all inaccessible aspects within a Word document, meaning that the author must also manually check the document to confirm it is free of inaccessible content.

PDFs

Please review the items above regarding Microsoft Word prior to reading this section for PDF accessibility.

Additional Training and Resources

- [PDF Accessibility Checklist](#)
- [PDF Accessibility Training Videos](#)

Converting Documents to PDFs

There are two ways to convert files to PDF format.

- Convert scanned and non-scanned documents to PDF format using Adobe Acrobat DC.
- Use the Adobe Acrobat plug-in in Microsoft Word to convert documents to PDF format.

Converting non-Word Files to PDF

Follow the steps below to convert documents that are not Microsoft Word files to PDF format.

- Open Adobe Acrobat DC.
- Navigate to File then select Create.
- Then select PDF from File.
- Select the non-Word document that needs to be converted to PDF format once the file selection dialogue box appears.
- Select Open, and the document will now appear in Adobe Acrobat DC.
- Review the accessibility of the PDF file with
 - Adobe's Full Accessibility Checker Tool
 - Content, tags, order panes

Converting Word Documents to PDF

Follow the steps below to convert Microsoft Word documents to PDF format.

- Do not use the Save As feature to convert documents to PDF format, as some accessibility elements may not transfer during the conversion process.
- Follow all steps mentioned above in the Microsoft Word section to ensure document accessibility.
- Select the Acrobat tab in the ribbon.
 - Ensure that the Acrobat plug-in has been installed in order to access this menu.
 - Use the instructions for non-Word documents if the Acrobat plug-in cannot be installed.
- Navigate to Preferences.
- Ensure the following checkboxes are selected.
 - View Adobe PDF Result
 - Prompt for Adobe PDF file name
 - Convert Document Information
 - Create Bookmarks
 - Add Links
 - Enable Accessibility and Reflow with tagged Adobe PDF

- Set PDF A Compliance to None
- Select Advanced Settings.
 - Change Compatibility to Acrobat 8.0 (PDF 1.7)
 - This setting is important as it should ensure that the latest accessibility features are applied to the document once converted.
- Select OK to save conversion settings. These settings will not change unless altered by a user.
- Select Create PDF within the Acrobat tab of the ribbon.
- Name the file once the dialogue box appears and click Save.
- The converted PDF file will open in Adobe Acrobat DC.

Converting Scanned Documents to PDF

All accessible PDFs must contain renderable text, enabling assistive technology to access the document. Scanned documents may not always contain renderable text. Use the Content Pane to evaluate whether a scanned document contains renderable text by completing the following steps.

- Navigate to View.
- Hover over Show/Hide.
- Hover over Navigation Panes.
- Select Content.
- Expand the Content Tree by pressing Shift + 8.
- Examine the text that appears on the left and evaluating whether it matches the text in the Physical View of the PDF.
- The PDF will not have renderable text if information regarding images and figures are the only items present in the Content Pane.

Optical Character Recognition (OCR) will be necessary if renderable text is not present in the PDF. OCR requires a high-quality scanned document for optimal results.

Access the built-in OCR tool by completing the following steps.

- Navigate to Tools.
- Select Enhance Scans.
- Select Recognize Text, and then select In This File.
- Select Settings within the Recognized Text toolbar.
- Identify all pages that require OCR.
- Set the document's language to the appropriate option.
- Set Output to Searchable Images.
- Set Downsample.
 - Use 300 dpi for grayscale.
 - Use 600 dpi for color.
- Select OK.
- Select Recognize Text.

OCR may not render text correctly. Evaluate the quality of the OCR and make corrections as needed by completing the following steps.

- Select Correct Recognized Text from the Recognize Text toolbar.
- Only select Accept if the recognized text was correctly identified.
- Type the correction in the Recognized As edit field.
- Follow this sequence for the entirety of the PDF.

Evaluate the quality of the OCR by exporting the PDF to Microsoft Word. Compare the two files and ensure they match.

Minor edits can be made in Acrobat. Major edits should be made in Microsoft Word.

View the steps below to make the OCR version of the PDF accessible.

Testing PDFs for Accessibility

View the PDF document properties including the following:

- Descriptive file name
- Contain PDF tags
- Ability to copy content from the PDF
- Specified language

View document properties by navigating to File and then selecting Properties. Navigate to Description.

- Add or confirm a descriptive file name in the Title edit field.
- Navigate to the Initial View tab and look for Show and select Document Title
 - The above setting must be configured to ensure accessibility.
- Navigate to the Description section and ensure that Tagged PDF is set to Yes.
 - The above setting is essential for PDF accessibility.
- Navigate to the Security tab and ensure that Content Copying for Accessibility is set to Allowed.
- Navigate to Advanced and ensure that the correct language is set for the PDF file under Language.
 - A PDF with multiple languages requires that a tag be used to indicate a language change.

The Physical View elements include headings, lists, tables, figures, and form fields. Follow the steps below to access the Physical View in a PDF.

- Navigate to View.
- Navigate to Show/Hide.
- Navigate to Navigation Panes.
- Select Content, and a dialogue box will appear on the left side of the screen.
- Expand the content tree by pressing Shift + 8, which will reveal all of the document's contents.
 - OCR will be needed if a scanned document is being examined for accessibility.

Tags Structure Tree and Reading Order

The PDF's Tag Structure Tree must also be examined for accessibility, which provides information related to headers, paragraphs, lists, data, tables, figures, and form fields. The various document elements must correspond with the appropriate tag. All document elements must be tagged to ensure accessibility for assistive technology.

Access the Tags Structure Tree by following these steps.

- Navigate to View.
- Navigate to Show/Hide.
- Navigate to Navigation Panes.
- Navigate to Tags.
- Expand the Tags Structure Tree by pressing Shift + 8.

Ensure that all document elements correspond with the proper tag in the Physical View.

To examine the type of tag being used, do the following.

- Right click on the Tag.
- Select Properties.
- The tag type will be displayed in the Type combo box.
- Click on the tag type to change the tag if necessary.

Review the PDF's reading order for accessibility by returning to the Tags Structure Tree and ensuring document elements are placed in a logical reading order. Ensure that document elements are positioned in the way they should be read. Doing so may require the creator of the document to arrange the visual layout.

The Logical Tab Order must also be examined if links and form fields, including text boxes and button controls, are found within the PDF. The Tab Order can be evaluated by pressing the Tab key, which will navigate the user through the various links and form field elements. Ensure that the screen focus navigates in the logical reading order.

Alt Text

All images and figures must contain alt text. Evaluate whether images and figures contain alt text by doing the following.

- Navigate to Tools.
- Navigate to Accessibility.
- Navigate to Reading Order.
- Check Show Tables and Figures.
- Evaluate the alt text placed on images and figures.
- Add alt text to images and figures by right clicking on images and figures marked as Figure.
 - Select Edit Alternative Text.
 - Type alt text and selecting OK.

Data Tables

Ensure that all tables within the PDF meet the following requirements.

- All tables must have a table tag.
- All Row and Column header cells must be tagged as TH (Table Header).
- Complex Data Tables must contain the proper scope and span.
 - Scope informs users which cells are row and column headers.
 - Span informs users of the number of rows and columns of data cells.
- Do not use images to represent data tables.

Simple Data Tables

Make Simple Data Tables accessible by doing the following.

- Navigate to a simple data table and open the Tags Structure Tree.
- Click on the Selection Tool.
- Select (highlight) the first data cell within the table.
- Select Options in the Tags Structure Tree.
- Select Find Tag from Selection.
- Expand table tags and tag all table elements appropriately.
 - Table header tags must be used for row and column headers.
 - Table data tags must be used for all cells that are not row and column headers.

Complex Data Tables

Follow all steps above in the Simple Data Tables section in addition to the items listed below.

- Evaluate the scope and span by opening the Reading Order Pane.
- Select Options.
- Select Show Reading Order Panel.
- Select the Reading Order number associated with the complex data table.
- Select Table Editor.
- Right click on each row and column header cell.
- Select Table Cell Properties.
- Confirm that Scope is set to Row Header or Column Header.
- Columns that also represent a row header require both of the above options to be selected.
- Select (highlight) all data cells that expand across multiple rows and columns.
- Right click on the cell.
- Select Table Cell Properties.
- Confirm that Span correctly identifies the number of rows, columns, and cell spans.

Form Field Elements

All form field elements must contain a tooltip and need to appear in the logical Tab Order. You can find and navigate to form field elements to by pressing Tab.

Form field elements include the following:

- Edit fields
- Radio buttons
- Checkboxes
- Combo boxes

Review the tooltip for each Form Field element by hovering over each element. Ensure that the name of the proper element is displayed and that the proper Tab and Reading orders are followed.

Links

Links are made accessible within a PDF by ensuring they are uniquely identified with descriptive text instead of URLs and that they follow the logical Tab Order. Navigate to each link by pressing Tab, and evaluate them for accessibility.

Images that appear as links must include alt text that state the purpose of the link.

Color and Sensory Characteristics in PDFs

Color and sensory characteristics must be considered to make a PDF accessible.

- Sensory characteristics include size, shape, and position. These sensory characteristics alone do not make a PDF accessible, as individuals with visual disabilities may not have access to this content.
- If color is used to designate meaning (e.g., red means stop), add text explaining the meaning of color.
- Ensure color has high contrast.
- Text and backgrounds must also have high contrast.
 - Consider using a dark background with light text or a light background with dark text.

Accessibility Full Check Tool

Run Acrobat's Accessibility Full Check Tool to find errors. To access this feature, do the following.

- Navigate to Tools.
- Navigate to Accessibility.
- Select Full Check.
- Select the Select All button, ensuring the PDF will be checked for all aspects of accessibility.

The Accessibility Full Check Tool may not provide information regarding all errors. Manual accessibility checks may need to be conducted to ensure full accessibility.