Note:

The **Full Check** tool is renamed to **Accessibility Check** in Acrobat (May 2020 release)

Workflow for creating accessible PDFs

Broadly, the process of creating accessible PDFs includes the following stages:

1. Consider accessibility before you convert a document to PDF.
2. Add fillable form fields and descriptions, and set the tab order.
3. Add other accessibility features to the PDF.
4. Tag the PDF.
5. Evaluate the PDF and repair tagging problems.

These stages are presented in an order that suits most scenarios. However, you can perform tasks in a different order or iterate between some of the stages. In all cases, identify the purpose of the document and then determine the appropriate workflow. For more information about creating accessible PDFs, see a Guide to creating accessible electronic documents.

Consider accessibility before converting document to PDF

Whenever possible, think about accessibility when you create the source files in an authoring application, such as a word-processing or page-layout application.

Typical tasks in the authoring application include adding alternate text to graphics, optimizing tables, and applying paragraph styles or other document-structure features that can be converted to tags. For more information, see Creating a tagged PDF from an authoring application.

Add fillable form fields and description, set the tab order

If your PDF includes form fields, select **All tools** > **Prepare for accessibility** > **Autottag form fields** to detect form fields and make them interactive (fillable).

Use the Forms tools to create fillable form fields, such as buttons, checkboxes, pop-up menus, and text boxes. When you create a field, type a description in the Tooltip box in the Properties dialog box. Screen readers read this text aloud to the user. For more information, view Create form fields.

Note:

You can also use the Reading Order tool in Acrobat Pro to add descriptions to form fields.

For information on setting the tab order to use document structure, see Set form field navigation.

Add more accessibility features to the PDF

In **Acrobat Pro**, this stage includes setting the document language, making sure that security settings don't interfere with screen readers, creating accessible links, and adding bookmarks. For more information, see Set the document language, Prevent security settings from interfering with screen readers, Add accessible links, and About bookmarks.

In **Acrobat Standard**, this stage includes setting the document language, making sure that security settings don't interfere with screen readers, and adding bookmarks. For more information, see Set the document language, Prevent security settings from interfering with screen readers, and About bookmarks.

Tag the PDF

Improve the accessibility of PDFs by adding tags in Acrobat. If a PDF doesn't contain tags, Acrobat attempts to tag it automatically when users read or reflow it, and the results may be disappointing. With a tagged PDF, the logical structure tree sends the contents to a screen reader or other assistive software or hardware in an appropriate order.

Tag a document when converting it to PDF from an authoring application for best results. Examples of these applications include Adobe FrameMaker®, Adobe InDesign®, **Microsoft Word**, or **OpenOffice Writer**. If you don't have access to an authoring application that can generate a tagged PDF, you can tag a PDF any time by using Acrobat.

Tagging during conversion to PDF requires an authoring application that supports tagging in PDF. Tagging during conversion enables the authoring application to draw from the source document's paragraph styles or other structural information to produce a logical structure tree. The logical structure tree reflects an accurate reading order and appropriate levels of tags. This tagging can more readily interpret the structure of complex layouts, such as embedded sidebars, closely spaced columns, irregular text alignment, and tables. Tagging during conversion can also properly tag the links, cross-references, bookmarks, and alternate text (when available) in the file.

To tag a PDF in Acrobat, choose **All tools** > **Prepare for accessibility** > **Autotag document**. This command works on any untagged PDF, such as one created with **Adobe PDF** Printer. Acrobat analyzes the content of the PDF to interpret the individual page elements, their hierarchical structure, and the intended reading order of each page. Then, it builds a tag tree that reflects that information. It also creates tags for any links, cross-references, and bookmarks you added to the document in Acrobat.

The **Autotag Document** command adequately tags most standard layouts. However, it cannot always correctly interpret complex page elements' structure and reading order. These elements include closely spaced columns, irregular text alignment, non-fillable form fields,

and tables that don't have borders. Tagging these pages using the **Autotag Document** command can result in improperly combined elements or out-of-sequence tags. These issues cause reading order problems in the PDF.

Note:

You can use cloud-based auto-tagging to create accurate and detailed tags. For more information, see Enhance document accessibility with cloud-based auto-tagging.

About watermarks and screen readers

You can add a watermark to a tagged PDF without adding it to the tag tree. Not having a watermark appear in the tag tree is helpful for people who are using screen readers, because they won't hear the watermark read as a document content.

The best way to add a watermark that doesn't interfere with screen readers is to insert an untagged PDF of the watermark into a tagged PDF.

Repair PDF tagging issues (Acrobat Pro)

Once you have a tagged PDF, evaluate the document for reading order problems, tagging, and accessibility errors, and then repair them as needed.

Irrespective of the method used to tag the PDF, use Acrobat to touch up the tagging and reading order for complex page layouts or unusual page elements. For example, the **Autotag Document** command can't always distinguish between instructive figures and decorative page elements such as borders, lines, or background elements. It may incorrectly tag all of these elements as figures. Similarly, this command may erroneously tag graphical characters within the text, such as drop caps, as figures instead of including them in the tag that represents the text block. Such errors can clutter the tag tree and complicate the reading order that assistive technology relies on.

If you tag a document from within Acrobat, the application generates an error report after it completes the tagging process. Use this report as a guide to repairing tagging problems. You can identify other tagging, reading order, and accessibility problems for any PDF by using the **Full Check/Accessibility Check** tool or the **Reading Order** tool. For more information, view Check accessibility with Full Check/Accessibility Check and Check and correct reading order.

Create a tagged PDF from a web page

A PDF that you create from a web page is only as accessible as the HTML source that it is based on. For example, if the web page relies on tables for its layout design, the HTML code

for the table may not flow in the same logical reading order as a tagged PDF would require, even though the HTML code is sufficiently structured to display all the elements correctly in a browser.

Depending on the complexity of the web page, you can do extensive repairs in **Acrobat Pro** by using the **Reading Order** tool or editing the tag tree in Acrobat.

To produce the most accessible PDFs from web pages that you create, first establish a logical reading order in their HTML code. For best results, employ the **Web Content Accessibility Guidelines** that are published by the **World Wide Web Consortium** (W3C). For more information, see the guidelines on the W3C website.

1. Do one of the following:

    - In Acrobat, choose the hamburger **Menu** (Windows) or the **File** menu (macOS) > **Create** > **PDF From Web Page**, enter the web page address, and then select **Settings**.

2. In the General tab, select **Create PDF** Tags, and then select OK.
3. Specify any other options as appropriate, and then select Create.

Creating a tagged PDF from the authoring tool

Usually, you create tagged PDFs from within an authoring application, such as Adobe FrameMaker®, Adobe InDesign, or Microsoft Word. This way, tags are added more effectively than in Acrobat.

PDFMaker provides conversion settings that let you create tagged PDFs in Microsoft Excel, PowerPoint, and Word.

For more information about creating accessible PDFs, see www.adobe.com/accessibility.

For more information, see the documentation for your authoring application.

About tags in combined PDFs

You can combine multiple files from different applications in one operation to create a single PDF. For example, you can combine word-processing files with slide presentations,

spreadsheets, and web pages. Select the hamburger **Menu** (Windows) or the **File** menu (macOS) > **Create** > **Combine files into a single PDF**.

During conversion, Acrobat opens each authoring application, creates a tagged PDF, and assembles these PDFs into a single tagged PDF.

The conversion process doesn't always correctly interpret the document structure for the combined PDF because the files being assembled often use different formats. Use Acrobat Pro to create an accessible PDF from multiple documents.

When you combine multiple PDFs into one tagged PDF, it's a good idea to retag the combined document. Combining tagged and untagged PDFs results in a partially tagged PDF that isn't accessible to people with disabilities. Some users, such as those using screen readers, are unaware of the pages that don't have tags. If you start with a mix of tagged and untagged PDFs, tag the untagged files before proceeding. If the PDFs are untagged, add tags to the combined PDF after inserting, replacing, and deleting pages.

When you insert, replace, or delete pages, Acrobat accepts existing tags into the tag tree of the consolidated PDF in the following manner:

- When you insert pages into a PDF, Acrobat adds the tags (if any) for the new pages to the end of the tag tree. This order occurs even if you insert the new pages at the beginning or the middle of the document.
- When you replace pages in a PDF, Acrobat adds the tags (if any) from the incoming pages to the end of the tag tree. This order occurs even if you replace pages at the beginning or the middle of the document. Acrobat retains the tags (if any) for the replaced pages.
- When you delete pages from a PDF, Acrobat retains the tags (if any) of the deleted pages.

Pages whose tags are out of order in the logical structure tree can cause problems for screen readers. Screen readers read tags in sequence down the tree, and possibly don't reach the tags for an inserted page until the end of the tree. To fix this problem, use Acrobat Pro to rearrange the tag tree. Place large groups of tags in the same reading order as the pages. To avoid this step, plan on inserting pages to the end of a PDF, building the document from front to back in sequence. For example, if you create a title page PDF separately from the content, add the content PDF to the title page PDF, even though the content document is larger. This approach places the tags for the content after the tags for the title page. It's unnecessary to rearrange the tags later in Acrobat Pro.

The tags from a deleted or replaced page don't connect to any content in the document. Essentially, they are large pieces of empty tag tree sections. These redundant tags increase the file size of the document, slow down screen readers, and can cause screen readers to give confusing results. For best results, make tagging the last step in the conversion process. Use Acrobat Pro to delete the tags of deleted pages from the tag tree.

For more information, view Create merged PDFs.

About tools for creating accessible PDF forms

Adobe offers several tools for the creation of accessible PDF forms:

Acrobat Pro, Acrobat Standard

Use one of these applications to open untagged or tagged PDF forms (except PDF forms created by Adobe Designer) to add fillable form fields, such as text boxes, checkboxes, and buttons. Then, use the application's other tools to make the form accessible. Add descriptions to form fields, tag untagged forms, set the tab order, manipulate tags, and perform the other PDF accessibility tasks.

Authoring applications

Most authoring applications you can use to design forms don't retain their fillable form fields when converting the files to PDF. Use the forms tools in Acrobat Pro to add fillable form fields. Moreover, if you tag the form during conversion to PDF, the authoring application can generate inappropriate tags for the text labels of the form fields. For example, the text labels for all the fields can run together into a single line in a complex form. Screen readers can't interpret these fields as individual labels. Such reading order problems can require time-consuming work in Acrobat Pro to split the labels apart. In this case, producing an untagged PDF form from the authoring application is sometimes the better course. You can then use the Forms tools in Acrobat Pro to add fillable form fields before you tag the entire document. Some forms are straightforward enough to produce a tagged PDF from the authoring application. Then, perform a light touch-up in Acrobat Pro after you add the fillable form fields.

Workflow for creating accessible PDF forms

Using Acrobat, you can open untagged and tagged PDF forms, add fillable form fields, add field descriptions and alternate text, set the tab order, and tag the forms (if they aren't already tagged). You can also edit the tags of any tagged PDF form by using the **Reading Order** tool or the tag tree.

Design the form for accessibility.

Forms tend to have relatively complex layouts compared to documents that have a simple, single-column structure. The success that an application has in analyzing and tagging a form

depends largely on the original formatting and layout of a document, and the types of fields that it uses.

When you design a form, include headings, instructions, and fields in which users are to enter data. At a minimum, give each field a label. Also add special instructions for fields that need them. Use graphics tools to draw lines and boxes. Don't use characters, such as underscores and vertical bars, because these text characters can confuse screen readers.

Adding descriptions to form fields enables screen readers to identify the fields to users. Users hear the description read aloud when they tab to the field. Write descriptions that are terse but complete. For example, the description "First name" is appropriate for a first-name field. Don't use instructions (such as "Enter first name") as a description.

Set and test the tab order of a form.

The tab order for form fields enables people with disabilities to use a keyboard to move from field to field in a logical order. In PDF forms, set the tab order to Use Document Structure. You can test the tab order of a form by using the following keyboard commands:

- **`Tab`** to move focus to the next field
- **`Shift`**+**`Tab`** to move focus to the previous field
- **`Spacebar`** to select options
- Arrow keys to select options or list items

Tag the PDF form and correct tagging issues.

If the PDF form is already tagged, use the **Reading Order** tool in Acrobat to tag each form field. This tool also enables you to fix any reading order problems of the text labels for the form fields. For example, you may need to split merged lines of fields into individual fields.