

Innovation in Outreach



**Ensuring your outreach materials meet
new ADA accessibility standards**

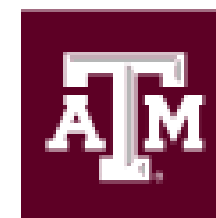
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PDF Accessibility:

Assessment & Remediation

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TEXAS A&M UNIVERSITY
Libraries

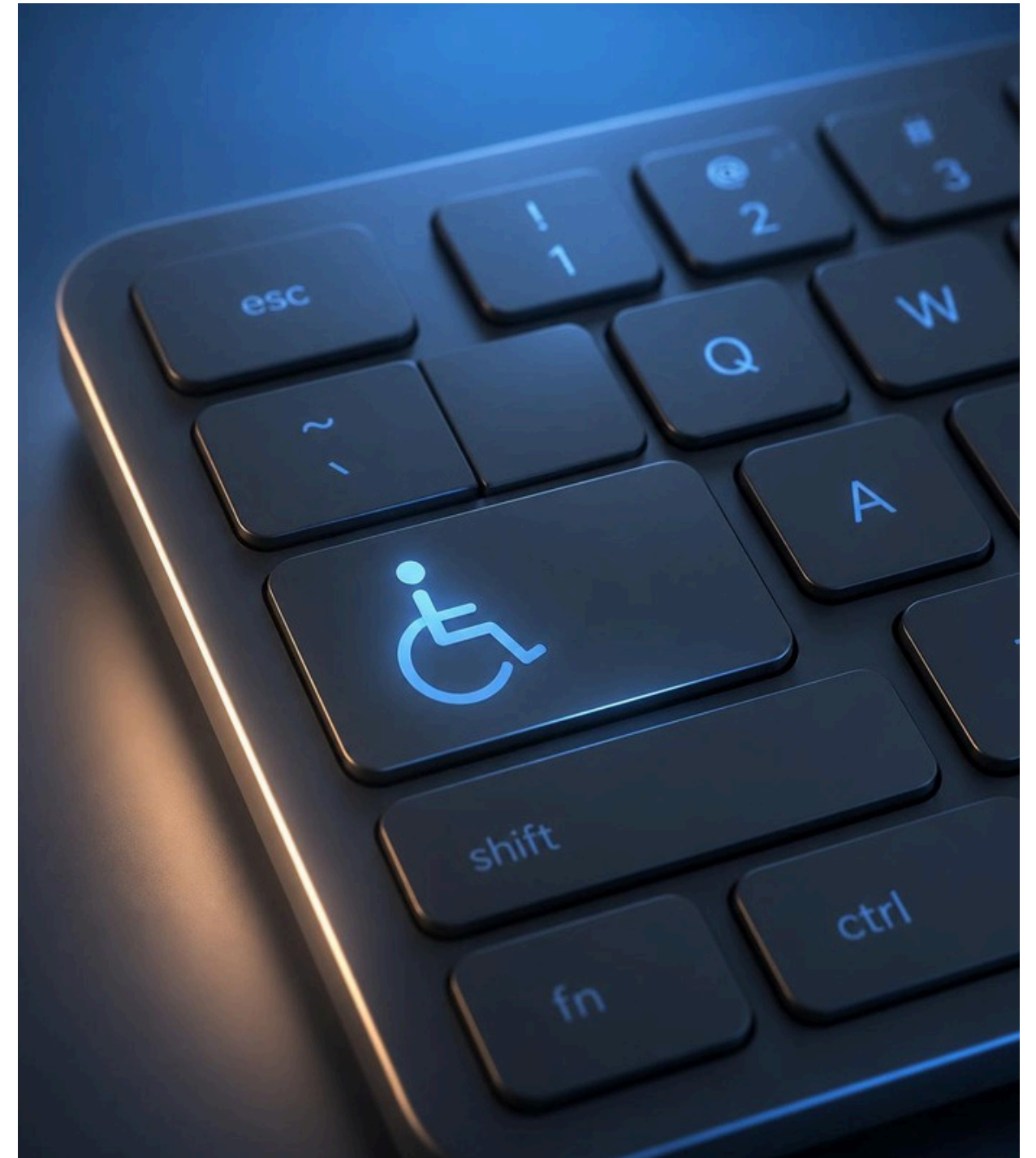
Background

On April 24, 2024, the Department of Justice provided their final ruling on updates to Title II of the Americans with Disabilities Act (ADA).

As part of this ruling, state and local government entities are required to ensure that all web content used to apply to, gain access to, or participate in the entity's programs, services, or activities are compliant with the WCAG 2.1 AA web accessibility guidelines by April 24, 2027.

WCAG - Web Content Accessibility Guidelines.

Developed by the World Wide Web Consortium (W3C), the primary organization for developing international standards for the internet.



Impacts



Instructors: Course materials, ebooks, syllabi, etc.



Libraries: Any digital resources created or hosted by the library, or made available through library contracts or subscriptions



Government: Promotional materials, informational resources, forms, surveys, etc.



Problem

- For decades, one of the most common formats for digital documents has been PDFs.
- PDFs are notoriously not accessible for assistive technology.
- With current technology, PDFs can be formatted to be accessible, but the process can be very time consuming and requires specialized software.
- Compliance can be costly due to internal labor and technology costs, or having to contract with a third-party vendor.



PDF: Portable Document Format

Pros:

- Retains original formatting.
- Universal across devices and operating systems.
- Good for printing.

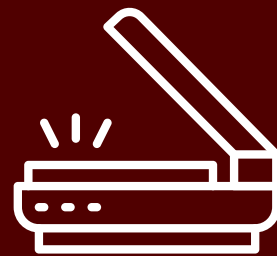
Cons:

- Hard to edit.
- By default, not accessible.
- Large file sizes (essentially images).
- Not mobile friendly.



Types of PDFs

Scanned



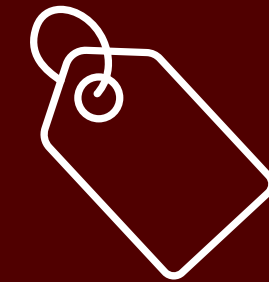
- Documents that are scanned into PDF format are essentially images.
- These are the most difficult to remediate because they require extra steps.
- Scanned historical documents are always in this category.

Born -Digital (Untagged)



- Born-digital PDFs are sourced from digital files. For example, Word or Google Doc.
- Untagged Born-Digital PDFs are usually older PDFs that were created prior to tag functionality and have to structural tag information.

Born -Digital (Tagged)



- Tagged PDFs are newer versions of PDFs that have pulled structural tag information from the source document or someone did the work of tagging the document previously.

Checking for Accessibility

(Without Adobe Acrobat Pro)



Screen Reader:

- The most accurate way to tell if a document is accessible is to test it with assistive technology.
- The NVDA screen reader is free to download and use and is one of the most commonly used screen readers.



Text Highlighting:

- Try using your mouse to highlight text on the document.
- If you are unable to highlight text, the PDF is a scanned, image only PDF and not accessible.



Tabbing:

- Try tabbing through interactive elements on the PDF.
- You should be able to tab through links and form fields in a logical order.
- If you can't, the PDF is not accessible.

Checking for Accessibility

(With Adobe Acrobat Pro)



Accessibility Checker:

- It will provide a report that identifies issues.
- However, you will still need to manually check certain aspects such as color contrast and reading order.



Reading Order (Manual)

- Acrobat Pro has a reading order panel which shows you in what order a screen reader will read content on the page.



Tags (Manual)

- Acrobat Pro has a tag panel where you can identify types of components on the page.
- For example: text, figure, table, list, etc.

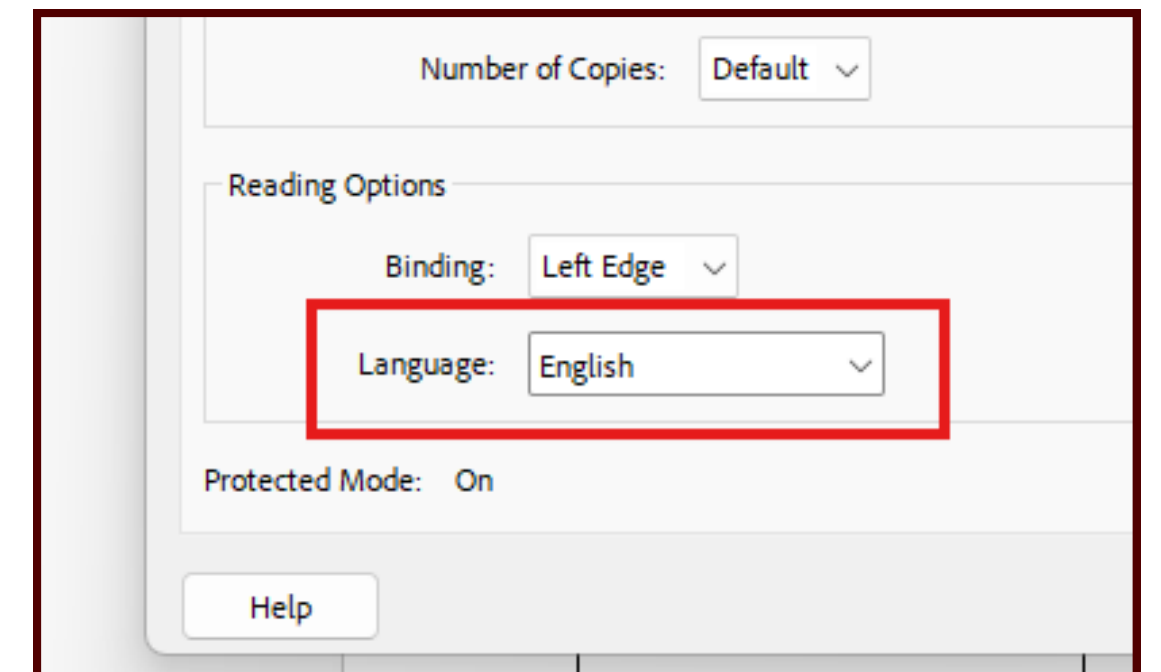
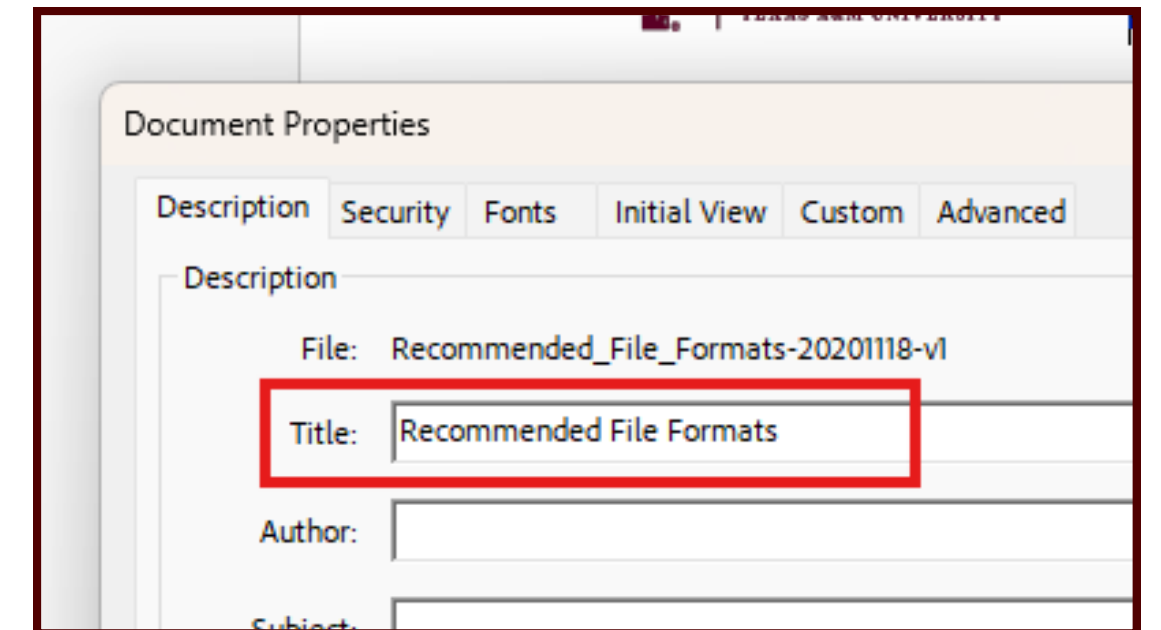
PDF: Accessibility Requirements

Document Title:

- Must be clear and descriptive.
- Shows up in the navigation tab at the top of the browser window.

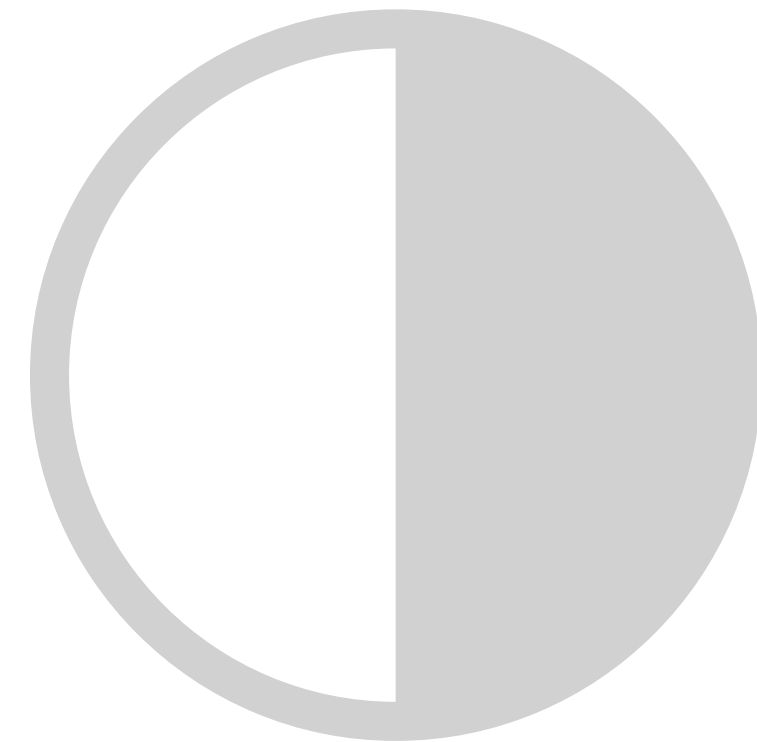
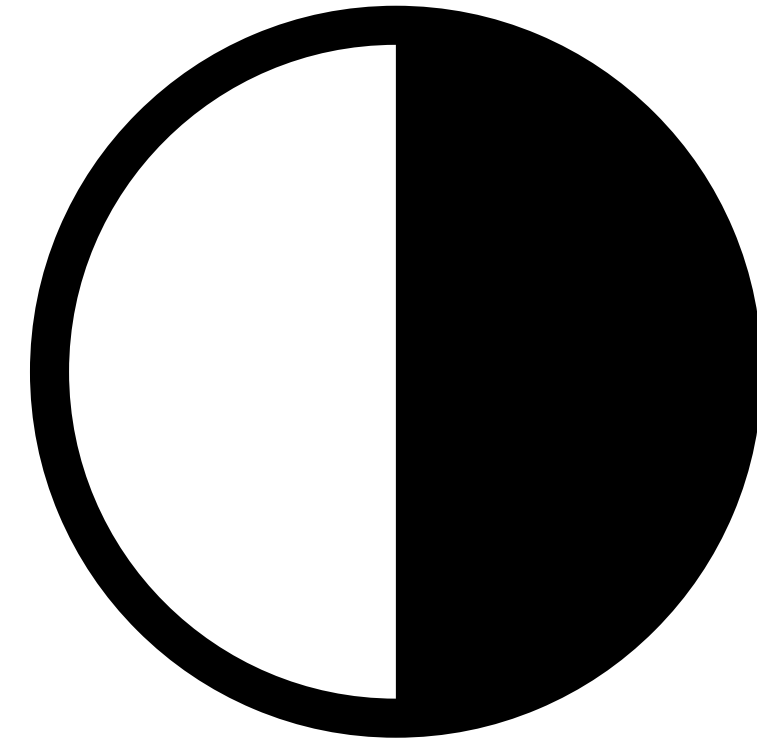
Document Language:

- Tells the screen reader what language the document is in.
- It helps the screen readers pronounce words correctly.



Color Contrast

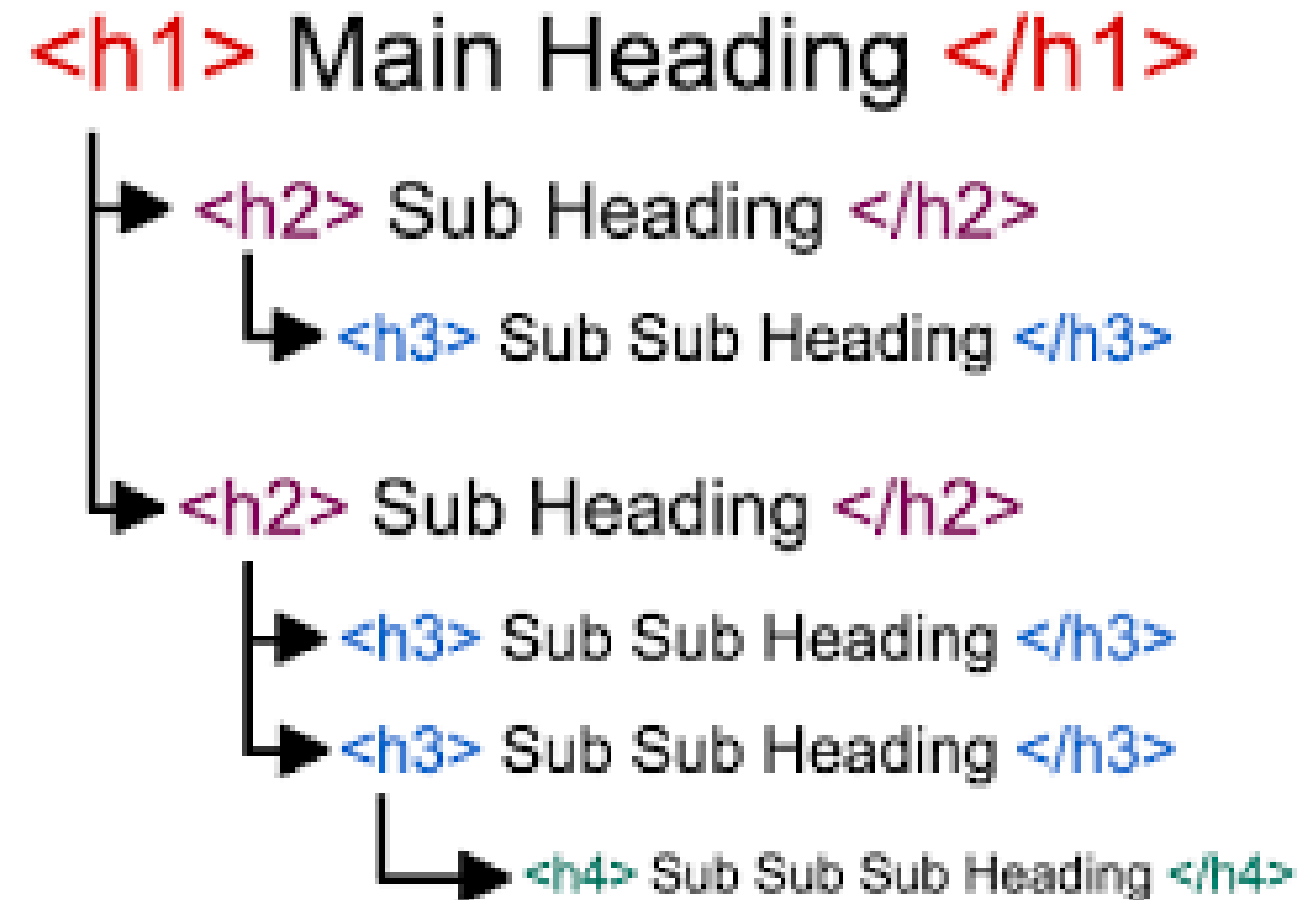
- Color must have a high enough contrast between text and background to be easily visible.
- Minimum of 4.5:1 contrast ratio for regular text.
- Can be different for large text.
- Use a tool like the WebAIM contrast checker or WAVE tool.
- Text over images is rarely compliant.



[Contrast Checker](#)

Heading Structure

- Headings must go in logical nested order.
- H1 is the biggest heading, H2 is the next biggest, etc.
- There should only be one H1 tag per document (the page title usually).
- Don't skip heading levels.



Links

- Use link text instead of raw URLs.
- Links must have descriptive link text.
- Don't use "click here" or "see more".
- The link text must make it clear where the link goes.
- Screen reader users frequently navigate by tabbing through links.
- Links must be properly embedded with the correct tags.

Rangelands Gateway

not

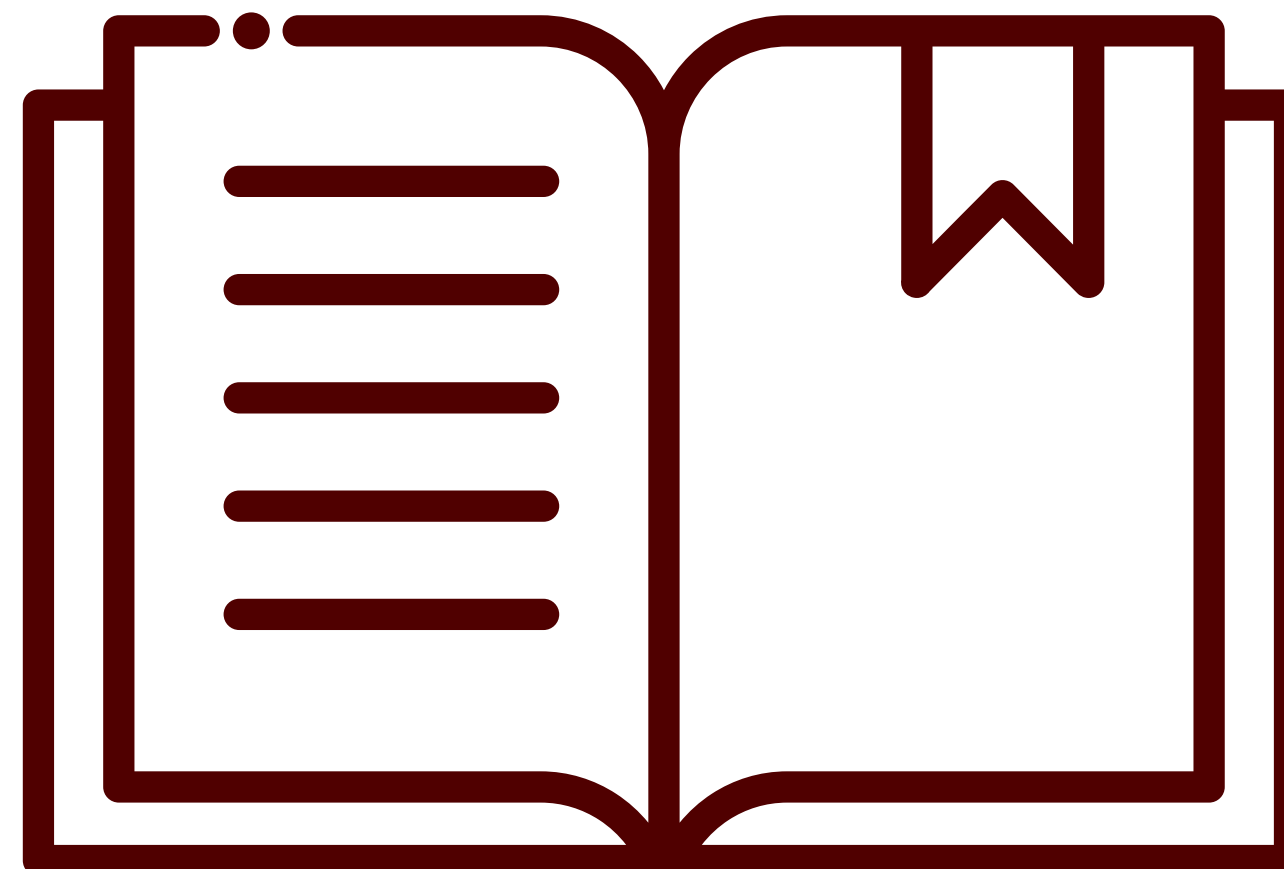
<https://rangelandsgateway.org/>

Alternative Text

- Alt text provides screen reader users a text description of images/graphics visible on the page.
 - Needs to provide an equivalent experience.
 - Should be short but still descriptive.
 - If there is text within the image or graphic, that text needs to also be available for screen reader users, either in the alt text or in the surrounding body text.
 - Information or concepts displayed in charts or diagrams need to be explained within the surrounding body text, not the alt text.
-

Bookmarks

- For long documents.
- Helps screen reader users skip to different sections in the document.
- If the document has a table of contents, it also needs book marks.



Tag Structure

- Tags can be pulled over from Word or other software, but the tags are not always correct.
- Tags must be manually reviewed for the correct tags and tag structure.
- For short or simple documents, it is sometimes easiest to clear the structure and start from scratch within Acrobat Pro.
- Must always have a <document> tag at the top of the tag tree.

Common Tags:

- <document> Document root tag
- <H1> Heading tag
- <P> Paragraph tag
- <L> List tag
- <Table> Table tag
- <TOC> Table of Contents tag
- <Link> Link tag
- <Form> Form tag
- <Figure> Figure/Image tag
- <Artifact> Decorative content

List Structure

Easiest to format in Word first to pull over correct tag structure.

Tag	Description
<L>	List element is any sequence of items of similar meaning or other relevance; immediate child elements should be list item elements.
	List item element is any one member of a list; may have a label element (optional) and a list body element as a child.
<Lbl>	Label element is a bullet, name, or number that identifies and distinguishes an element from others in the same list.
<Lbody>	List item body element is the descriptive content of a list item.

- <L> (List element)
 - **Food** (List item element)
 - <LBody> (List item body)
 - **Apples**
 - <LBody> (List item body)
 - **Oranges**
 - **Toiletries** (List item element)
 - <LBody> (List item body)
 - **Shampoo**

Table Structure

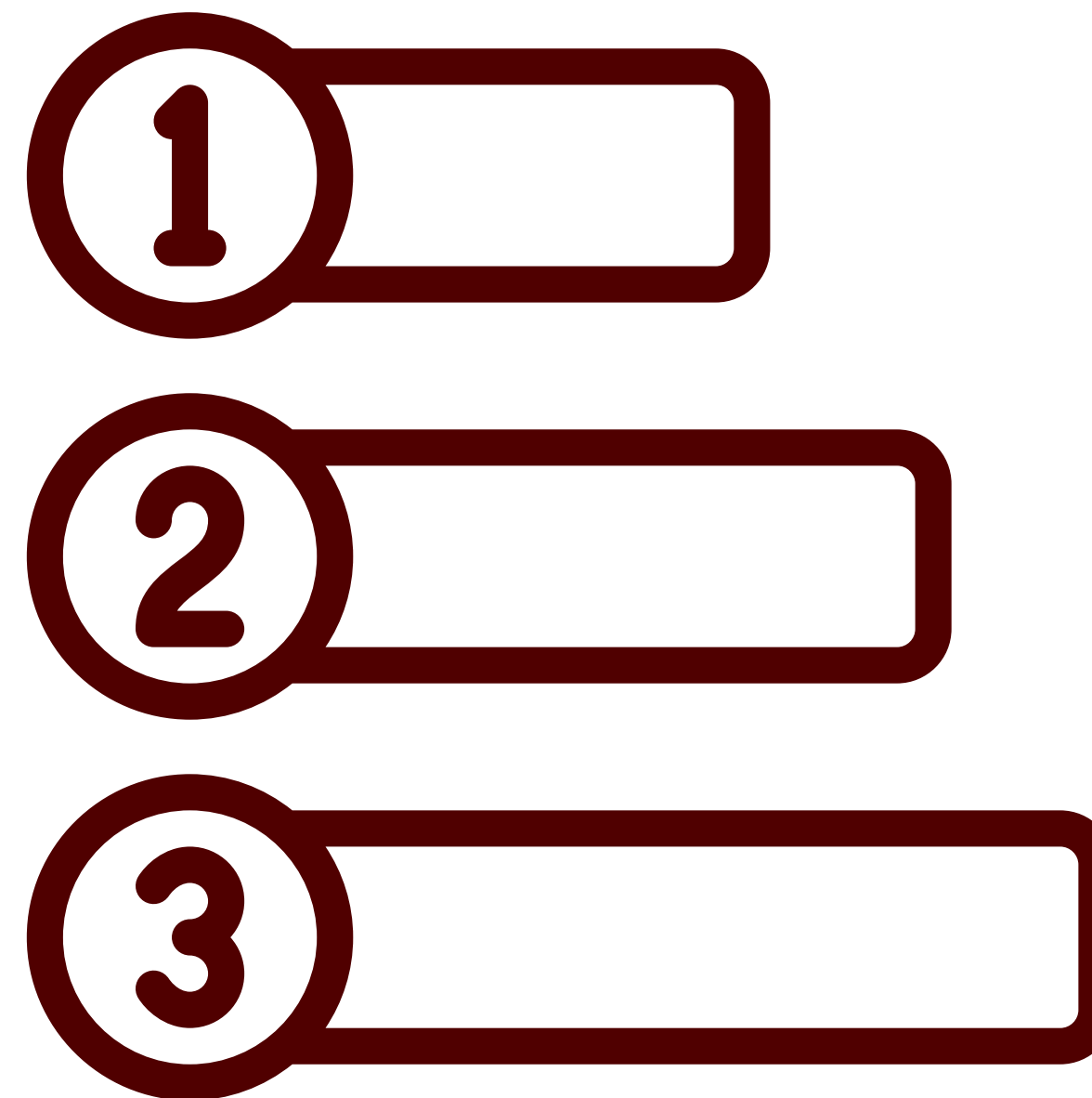
Easiest to format in Word first to pull over correct tag structure.

Tag	Description
<Table>	Table element is a two-dimensional arrangement of data or text cells that contains table row elements as child elements and may have a caption element as its first or last child element.
<TR>	Table row element is one row of headings or data in a table; may contain table header cell elements and table data cell elements.
<TH>	Table header cell element is a table cell that contains header text or data describing one or more rows or columns of a table.
<TD>	Table data cell element is a table cell that contains non-header data.

- Table (3 cells by 3 cells, not including the table headers)
 - Table Row (TR)
 - Table Header (TH)
 - Table Header (TH)
 - Table Header (TH)
 - Table Row (TR)
 - Table Data (TD)
 - Table Data (TD)
 - Table Data (TD)
 - Table Row (TR)
 - Table Data (TD)
 - Table Data (TD)
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 - Table Row (TR)
 - Table Data (TD)
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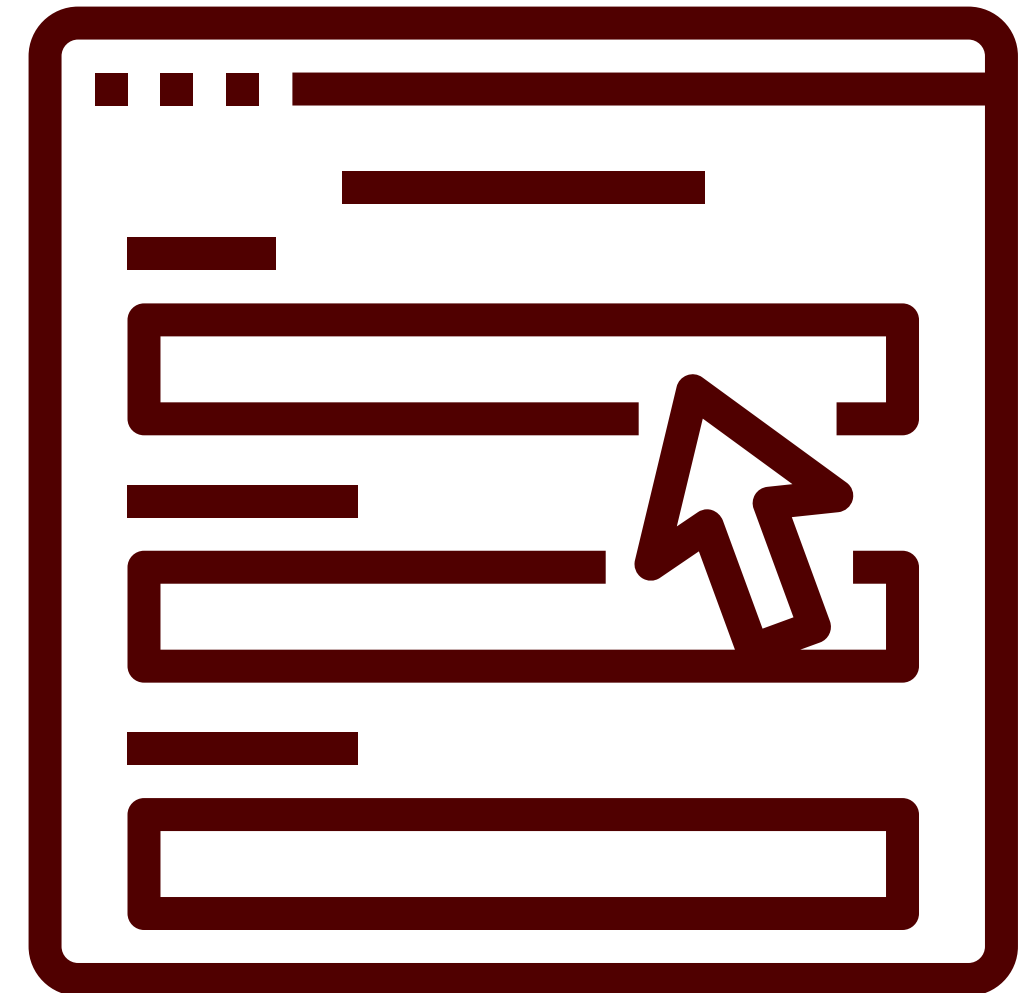
Reading Order

- The reading order of the document refers to the order in which a screen reader will read the content in the document.
- This order is often incorrect, but can be edited.
- The reading order must be accurate and provide an equivalent experience.
- Must be manually reviewed.



Forms

- Remediating forms is much more complicated. I highly recommend just re-creating the form as an editable PDF form.

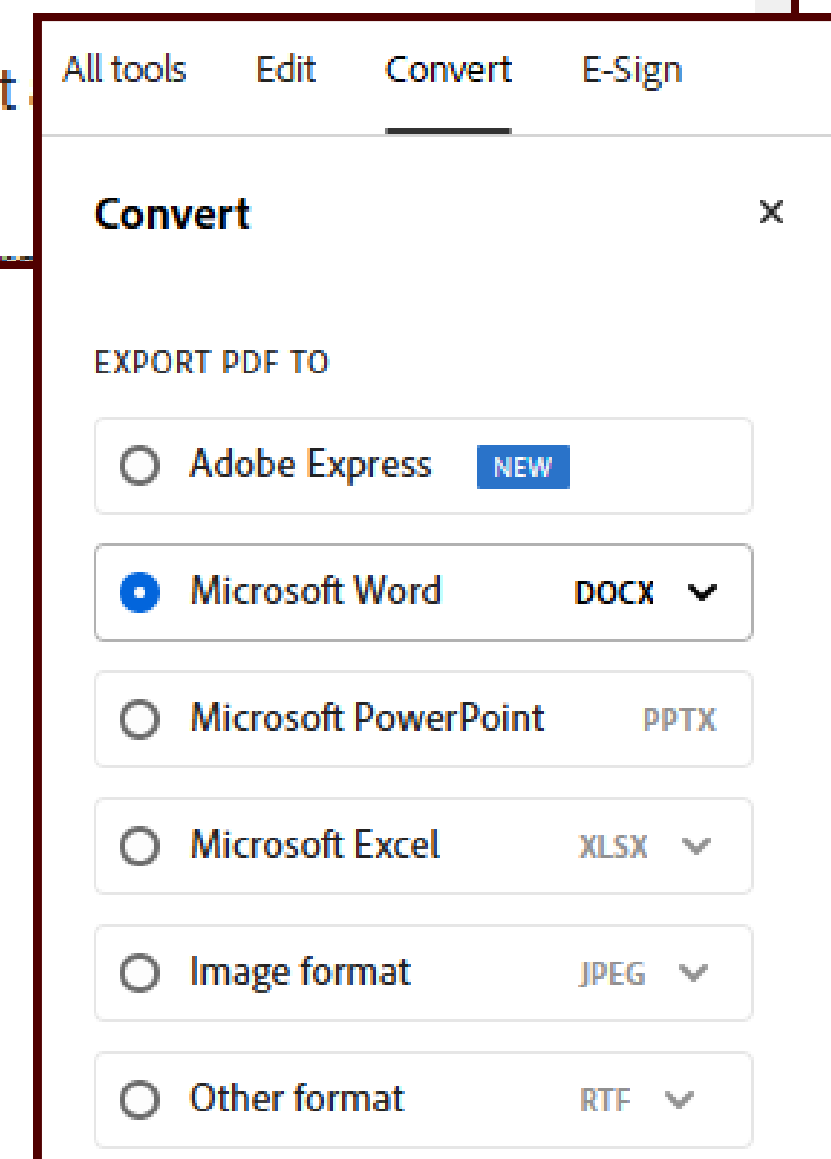
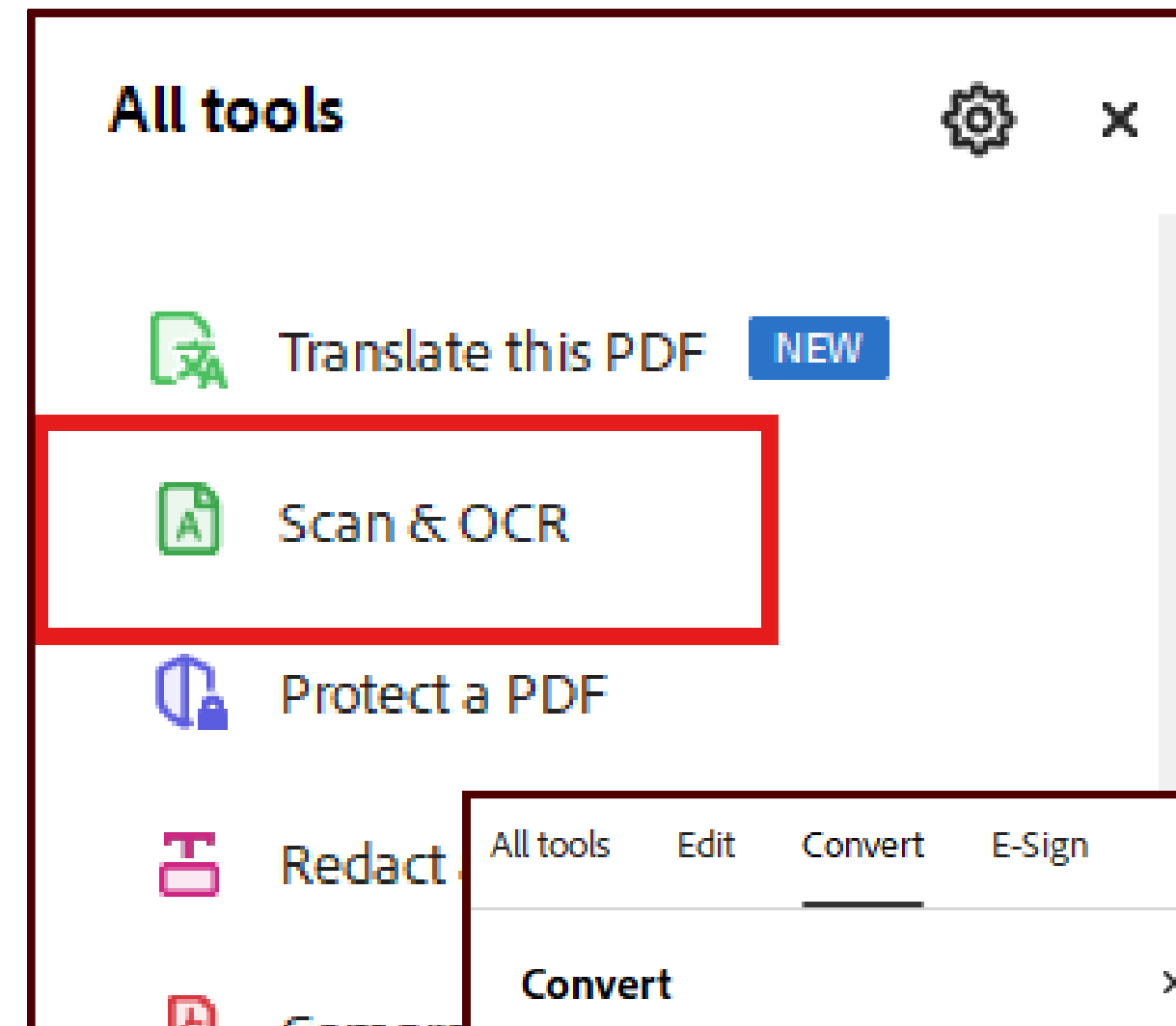


Before Remediation!

Does this need to be a PDF?

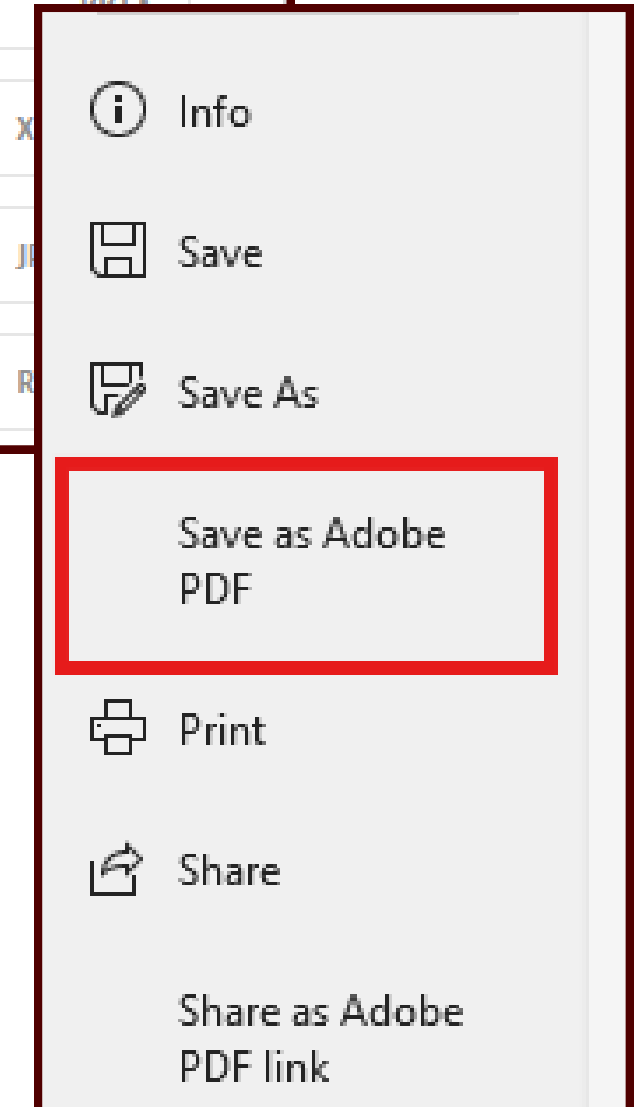
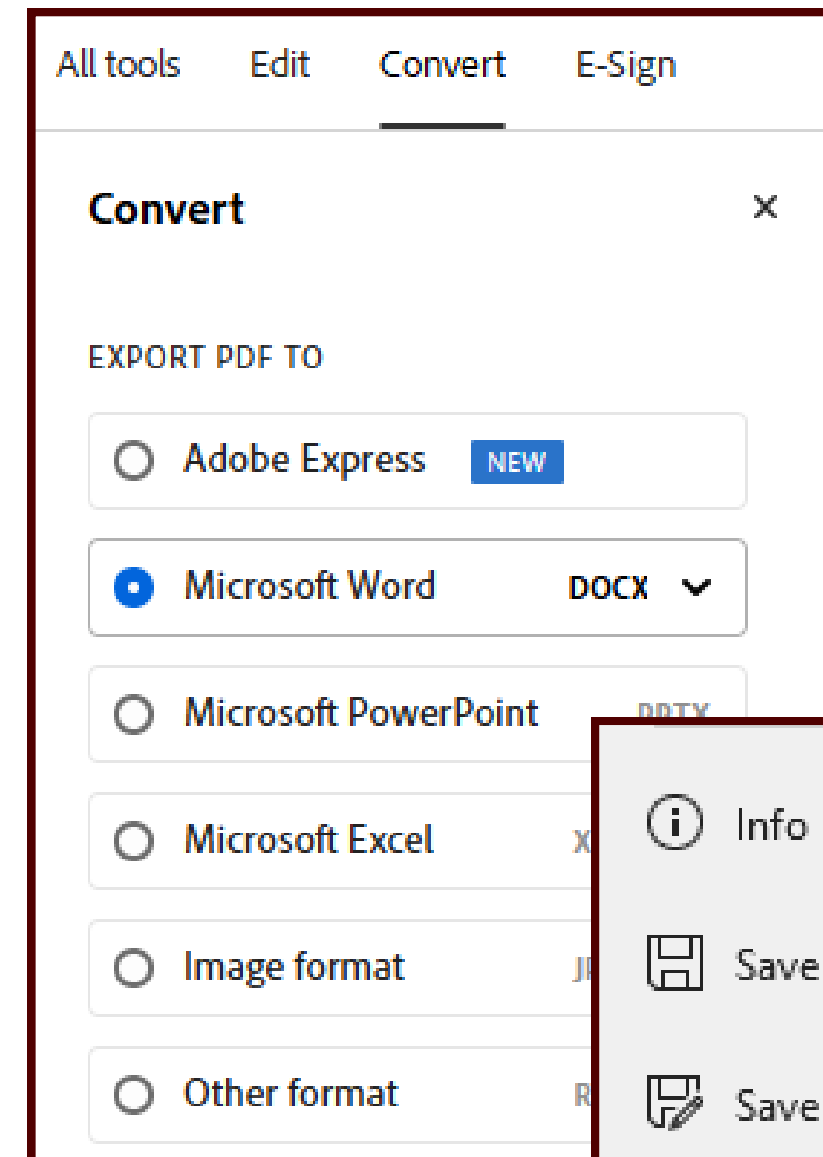
Remediation: Scanned PDFs

- Because scanned PDFs are essentially just images, there is no character recognition. You first have to Scan & OCR the document.
- OCR - Optical Character Recognition.
- Acrobat Pro will scan the PDF and identify text. The clearer the text, the better the result. However, it is rarely perfect and will almost always need cleaned up.
- Convert the OCR'ed document to Word and edit the text there. Then resave it as a PDF.



Remediation: Born-Digital

- **If your accessibility check identified issues, the easiest way to fix them is to edit the source document.**
- **If you don't have the source document, you can convert it to Word and edit it there, or you can edit it directly in Acrobat (Depending on the type of change needed).**
- **Word also has a built in accessibility checker. Most issues can be fixed much easier in Word. If you correctly format the document in Word, it helps pull over the correct tags.**
- **Once you've finished updating the document, resave it as a PDF.**





Demo

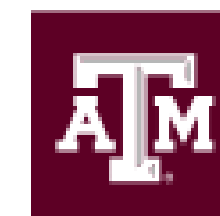


Tools:

- [WebAIM Color Contrast Checker](#)
- [NVDA Screen Reader](#)

Resources:

- [Create Accessible PDFs \(Section508.gov\)](#)
- [Introduction to PDF Accessibility: Lists and Tables](#)





Thank You

Questions?

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Innovation in Outreach

Tools and technologies to engage your audience



Access webinars, quick guides & more resources

rangelandsgateway.org/technology



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