

ADA ACCESSIBILITY DESIGN

Accessibility Design

What it means and why it is necessary

All Documents that go online as PDFs instead of HTML need to be made accessible. This is so that people with visual impairments or disabilities can receive the same visual information as someone who doesn't.

File Info and Document Title

Add document information in **File>File Info>Basic**. This allows screen readers to read the title of the document unopened on or in the desktop. Furthermore, the author, key words, and security may be added here.

The document title is different than the file name, for example, this file's name is NAU Strategic Plan Wallet Card – Accessible.PDF but when the document is opened, the title shows as 2018-2025 NAU Strategic Plan Wallet Card (**Fig. 1**). The reason there needs to be a document title is that it can be descriptive of the content within the document, versus how the file is named. How we name the files that we create has no meaning to people outside marketing, they do not know that we have the date then project number, then the project name, and so if that was how the document is titled, it wouldn't be as informative and concise.

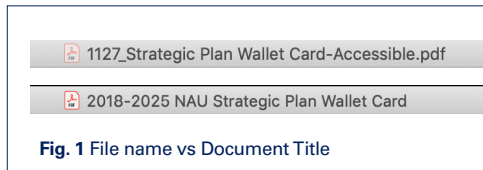


Fig. 1 File name vs Document Title

Figure Alternate Text

Each photograph, image, vector, etc. needs to have alternate text that describes what is in the image. This is so that people with visual impairments or disabilities can know what is in the image without necessarily seeing it. The more concise the alt text is, the better, however, it does need to be meaningful enough to relay the content of the image.

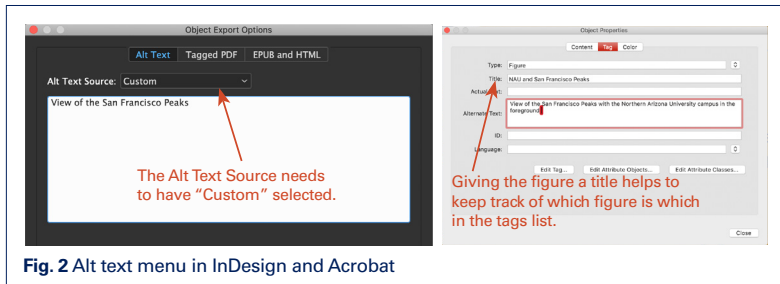


Fig. 2 Alt text menu in InDesign and Acrobat

In InDesign right click the item that needs the alt text and go to **Object Export Options**. Go to the **Alt Text** section and make the source **Custom**. (**Fig. 2**)

To add the alt text in Acrobat, go to the tags panel and select the figure that needs the alt text. Right click and go to properties. At the bottom of the list. Make sure the type of item it is listed as a figure and then add the alt text in the correct box. You can also give the figure a title, which makes it easier to find again in the tags panel.

Artifacted Figures

These are objects that are within the document for visual purposes, but are not necessary for information. This can include colored boxes, lines, overlays, and other decorative items.

In InDesign, go to **Object Export Options** (**Fig. 3**) and select **Tagged PDF**. In the **Apply Tag**: section, change it from **From Structure** to **Artifact**.

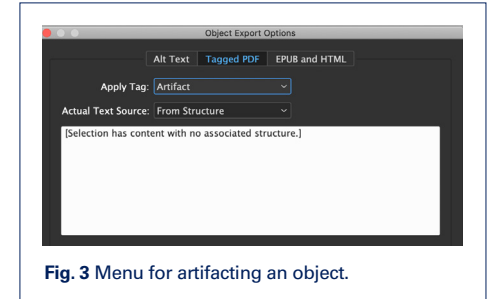


Fig. 3 Menu for artifacting an object.

Color Contrast

An important aspect of color on the Web for both low vision and colorblind users is sufficient contrast between foreground (text or graphics) and the background. Maximum contrast is black versus white. The results of running the NAU palette through a checker is shown in **Fig. 4**.

		Background Color										
		281	3514	436	116	158	356	173	7467	299	300	White
Text Color	281		X	X	X	X		O	X	X		X
	3514	X					O				O	
	436	X									O	
	116	X					O	O			O	
	158	X										
	356		O		O							X
	173	O			O							X
	7467	X										
	299	X										
	300		O	O	O							X
	White	X					X	X			X	

X indicates that it is approved for both small (minimum 12px, 9pt) and large text (e.g. zoomed to 200%)
 O indicates that the color combination is only approved for large text.

Fig. 4 Table showing the color combinations of the NAU color palette if and how they are approved for accessibility or not.

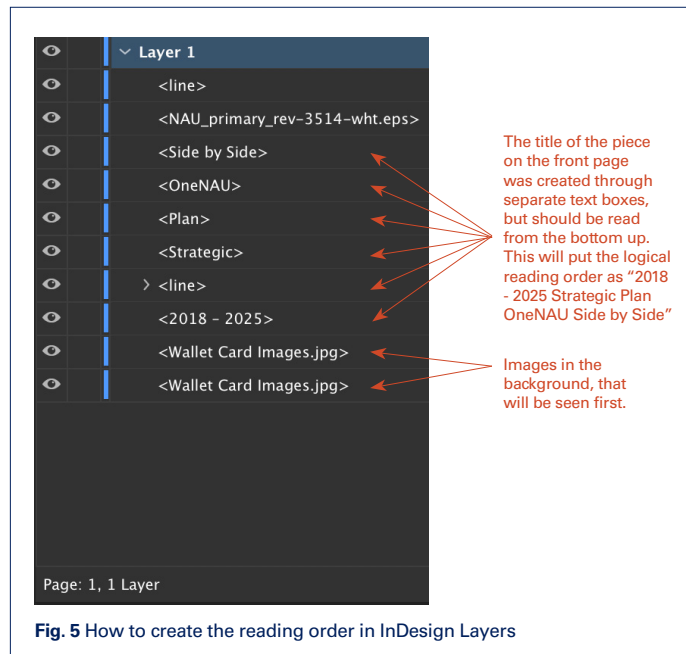
Anchored Images

Use the **Anchors to Images** tool to allow screen readers to read images in flow of text. This feature allows a screen reader to read the alt text description of the picture at the appropriate location in the associated content. Be sure to place this **Anchor** after or before a complete sentence.

Logical Reading Order

When a PDF is exported from InDesign and reading order is not taken into consideration, there is a chance that how someone reads the page with an assistive device is not in the order that is intended. **Tags** are often used to navigate a PDF and they need to parallel the reading order.

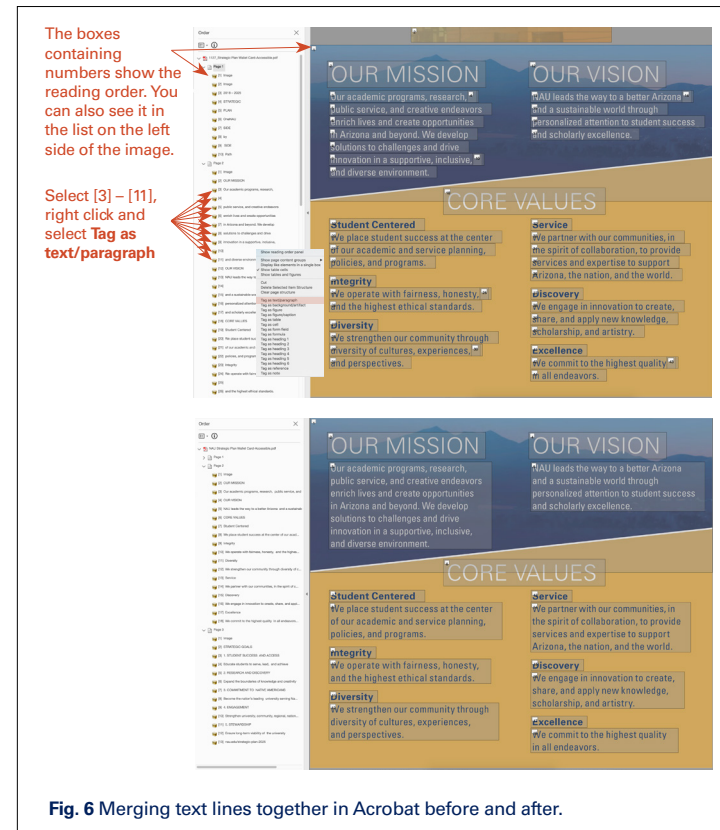
In InDesign, using fewer text boxes, and threading them together helps with the flow of the reading order, however, if the document has not been designed this way, the reading order can be checked and changed in the layers panel. As a note, it is easier to create a logical reading order if all text is in one layer. The reading order goes from the bottom up; the items that need to be “read” first should be at the bottom of the list in order for the correct reading order when exported. (**Fig. 5**)



In Acrobat, go to the Order panel to manually check that the order is correct. If it isn't, select the item in the panel and move it to the proper position.

In the top of **Fig. 6**, we see that in the small squares the reading order, the blue background image is read first, followed by Our Mission and its text, then Our Vision and its text, and so on. On the left is the order panel where each item can be rearranged to make sure that it is within the correct reading order.

Acrobat has a habit of separating each line as a different item. While this is technically correct for a logical reading order, simplifying the document into fewer tags is better. To merge them together into a paragraph or section, select the objects you want to merge in the order list, right click and select the tag that the items should be.



Paragraph Styles/Character Styles

A paragraph style includes both character and paragraph formatting attributes and can be applied to a paragraph or range of paragraphs. A character style is a collection of character formatting attributes that can be applied to text in a single step. Paragraph styles can be added to existing text and character styles can be added in addition to a paragraph style such as bold or italic text, hyperlink, and/or character color.

Tags

Everything in a document needs a tag so that a reader and assistive devices know what is a header versus a figure versus a paragraph, etc.

In InDesign, tags can be assigned in each paragraph style under **Paragraph Style Options>Export Tagging (Fig.7)**. The tags that should be used are the same as with coding, H1 for a title or level one header, H2 for a sub header, P for paragraph, etc.

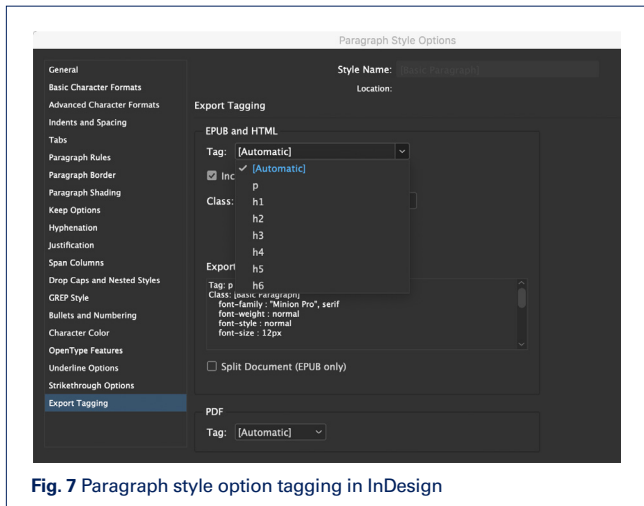


Fig. 7 Paragraph style option tagging in InDesign

Using styles will also help with the reading order and will be less work in Acrobat. Not only will they help with pretagging text, but they will also eliminate the step shown in Fig. 6 of needing to merge together the different lines of text.

Lists

Do not convert bulleted or numbered lists to text in InDesign. Be sure to create a Paragraph Style for bulleted and/or numbered lists. Items that are bulleted or numbered will automatically export to Acrobat as a list with list items. If there are any errors, they can be edited in the tags panel in Acrobat.

Hyperlinks

Hyperlinks need to be written out as the full link as well as made a live link that will go to the page or email when clicked. (Fig. 8)

Go to our [marketing website](#) for more information.
Go to nau.edu/marketing for more information.

Fig. 8 The link is incorrect on the top line because it is not written out, the bottom is correct so that someone can see what the address is of the site they need to visit. Note that the top line has the default style of hyperlinks created by InDesign. It can be changed in the paragraph or character styles of the document, as shown in the second line.

Go to **Window>Interactive>Hyperlinks** to open the panel in InDesign. Select and copy the text that is the link and then copy the address into the URL: box. To change it from being a URL into an email link in the panel, select the link, right click, and go to Link To: and choose **Email**. Add alt-text in the Accessibility tab in the **Edit Hyperlink (Fig. 9)** panel.

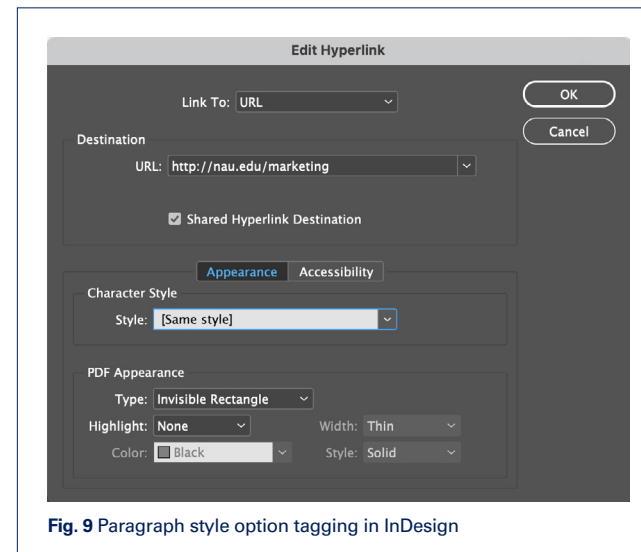


Fig. 9 Paragraph style option tagging in InDesign

InDesign automatically defaults the links to be underlined and have a blue color swatch if text styles have not been applied. Choose the hyperlink style that you set up previously in character styles.

Tables

Accessible tables are simple, rather than complex, have an identified header row, and include a table summary, either as a caption or as alt text. The table needs to contain information that should be within a table, versus using one for layout purposes. The data table cannot have any spanned or merged row or column cells because it is difficult for screen readers to navigate (Fig. 10). These techniques help screen reader users read the information contained in the table.

Layout Table

10 points The paper meets the page length requirement and is formatted correctly.	20 points Topic fits the scope of the project, makes a clear argument.	20 points Project includes in-depth discussion and elaboration in all sections.	5 points No spelling and/or grammar mistakes.	10 points Cites all information from out of class discussion sources. APA citation style is used in both text and bibliography.	= A paper
8.5 points The paper meets the length requirement but has inconsistent citation formatting.	17 points The paper is focused but does not make a clear argument.	17 points Project includes in-depth discussion and elaboration in most sections.	4.25 points Minimal spelling and/or grammar mistakes.	8.5 points Cites most information obtained from other sources.	= B paper
7.5 points The paper is up to 1 page too short or too long or is incorrectly formatted.	15 points Topic is either too broad or too narrow.	15 points Project has omissions of content or content runs-on excessively. Paper relies heavily on quotations for content.	3.75 points Several spelling and grammar mistakes.	7.5 points Cites some information from other sources. Citation style is either inconsistent or incorrect.	= C paper
6.5 points The paper is more than 1 page longer or shorter than assigned.	13 points Paper does not stay on topic.	13 points Project has cursory discussion in all the sections of the paper or brief discussions in only a few sections.	3.25 points Many spelling and grammar mistakes that make the paper hard to understand.	6.5 points Does not cite sources.	= D paper

Correct Data Table

Table 1. Grading rubric for writing assignments. Lists categories, evaluation criteria, and point values for each criterion.

Possible grade	Length	Topic	Argument	Mechanics	Citations
A	The paper meets the page length requirement and is formatted correctly. 10 points	Topic fits the scope of the project, makes a clear argument. 20 points	Project includes in-depth discussion and elaboration in all sections. 20 points	No spelling and/or grammar mistakes. 5 points	Cites all information from out of class discussion sources. APA citation style is used in both text and bibliography. 10 points
B	The paper meets the length requirement but has inconsistent citation formatting. 8.5 points	The paper is focused but does not make a clear argument. 17 points	Project includes in-depth discussion and elaboration in most sections. 17 points	Minimal spelling and/or grammar mistakes. 4.25 points	Cites most information obtained from other sources. 8.5 points
C	The paper is up to 1 page too short or too long or is incorrectly formatted. 7.5 points	Topic is either too broad or too narrow. 15 points	Project has omissions of content or content runs-on excessively. Paper relies heavily on quotations for content. 15 points	Several spelling and grammar mistakes. 3.75 points	Cites some information from other sources. Citation style is either inconsistent or incorrect. 7.5 points
D	The paper is more than 1 page longer or shorter than assigned. 6.5 points	Paper does not stay on topic. 13 points	Project has cursory discussion in all the sections of the paper or brief discussions in only a few sections. 13 points	Many spelling and grammar mistakes that make the paper hard to understand. 3.25 points	Does not cite sources. 6.5 points

Fig. 10 Layout table versus data table. Note that in the layout table the last column is merged into one cell, where as in the correct data table, that column has separate cells that correlate with the row information.

Export

When exporting the PDF from InDesign, make sure that the document exports as an Interactive PDF. (Fig. 11)

In the Export to Interactive PDF panel, **General>Options** verify that **Create Tagged PDF** and **Use Structure for Tab Order** is checked. Double-check that the Compression is JPEG quality: Maximum and the resolution is 300 ppi. Also, in Advanced you will see if the file info has been updated for the document title.

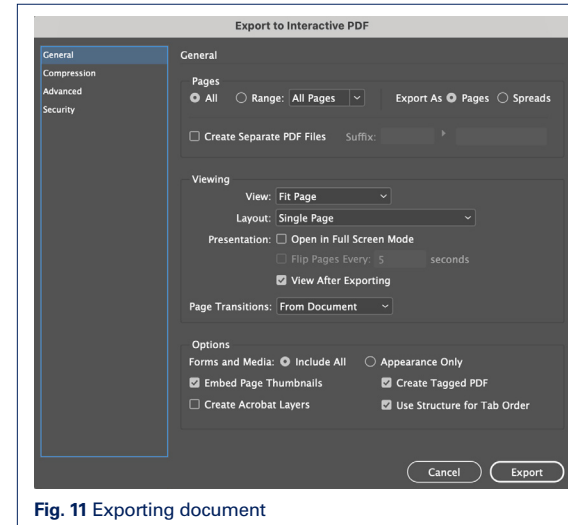


Fig. 11 Exporting document

File Naming

For files that are being created or converted for ADA compliance, please label the end of the file name with “_ADA Review” and put it in a separate file folder within the project on the server entitled “Accessible files.” Once the PDF file has been confirmed as compliant, label the end of the file name “_ADA Final” before you post it to Workfront. Please remember to add a red dot to the final INDD and PDF files on the server.

Design for Accessibility Checklist

FILE INFO

- File > file info
 - » Document Title (mandatory)
 - » Author (Northern Arizona University)
 - » Keywords (use your best judgement and make sure they correlate with the piece)

CREATE ALT-TEXT AND ARTIFACT FIGURES

- Simple yet meaningful description of images
- Logos/photos/graphs
 - » Multiple transparency layers over photo: export as jpg and re-import
 - » Right-click (or CNTRL click) > object export options > Alt text > “custom” (in dropdown menu) > add alt text
- Artifact design elements
 - » This includes color boxes, decorative icons, individual transparencies, lines, etc.
- Right-click (or CNTRL click) > object export options > tagged PDF > apply tag > choose “artifact”

COLOR

- Change text to make sure color combinations/size are accessible
- Use **Adobe Color Accessibility Tools** (color.adobe.com/create/color-contrast-analyzer) or download the **TPGi Colour Contrast Analyser** (tpgi.com/color-contrast-checker) to check color contrast

ANCHOR IMAGE TO TEXT

- If you want the image to read first, anchor it to the beginning of the caption text. If you want it to read after, anchor it to the end of the text.

READING ORDER IN LAYERS

- Layer the correct reading order from the bottom to the top in the Layers panel
 - » You can combine the layers for this step if it is easier for you
 - » Re-order inside the layers panel

THREAD THE TEXT OR COMBINE TEXT BOXES

- The fewer dislocated text you have the better

CREATE ORDER WITH ARTICLES

- Windows > articles
 - » Click and drag each element of the reading order from top to bottom (opposite from the layers reading order) into the articles panel
 - » Give “new articles” logical names (ex: “Header” can include articles in order for logo, header image and H1 text)
 - » To include an article while exporting, in the Articles panel, select the article, and then select **Use for Tagging Order in Tagged PDF**.

PARAGRAPH/CHARACTER STYLES

- Window > styles > paragraph styles
 - » New paragraph style options
 - * Style name
 - * Set “basic character formats”
 - * Character color, etc.
- Create a paragraph style for lists

CREATE HYPERLINKS

- Window > Interactive > hyperlinks
- New hyperlink panel > add URL > designate as URL or email address > link to Paragraph style (or character style if necessary) > add alt-text in Accessibility tab
 - » Logo
 - » URLs
 - » Emails and phone numbers

TABLES

- Format it as a data table only
- Setting up table styles can save time later
 - » Simple is better, try to avoid graphic elements
 - » Do not merge cells
 - » Make sure you set up the headers as a separate table style from the cells (this helps later with reading order)

EXPORT PDF

- Interactive
 - » Tagged PDF
 - » Structure from tag order

Design for Accessibility Checklist (cont.)

OPEN IN ADOBE ACROBAT

ACCESSIBILITY TOOLS

- Tools > accessibility
- View > show/hide > navigation panel > show “order” and “tags” and “articles” as needed

READING ORDER

- Double check
 - » Re-order as necessary in PDF or INDD file
 - » NOTE: every time you re-order and make changes in the INDD files, you will have to re-export and remake any PDF changes that you had made previously. It is best to make PDF changes at the very end and make as many changes as in INDD as possible.

CONTENT

- Delete empty containers

TAGS

In Acrobat go to the Tags panel to clean up the tags and properly nest them (Fig. 11). The tags should be nested as tags>Document>Art>Sect. Each page should be a different <Sect> and contain all the objects on that page, in the correct reading order. Acrobat contains each text item within a <p> tag, which is unnecessary unless it is a paragraph.

- Delete empty tags
- Alt text/figure check

ACCESSIBILITY FULL CHECK

- Mark things fixed, check again, or double check in InDesign. Acrobat provides helpful information if there is that may seem unfamiliar.
- Ask questions if needed
- Do this and re-export as needed until complete

YOU'RE DONE!

Additional Resources

How to Style Text Quickly with Shortcuts in InDesign (youtu.be/m7DBqE66C0Q)

InDesign How-To: Set Alt vs. Actual Text for Accessibility (youtu.be/Ca2PvPvsAic)

InDesign How-To: Use the Articles Panel for Accessibility (youtu.be/yI2NJomPXBQ)

Contrast Grid: Test Foreground and Background Color Combos for Color Contrast Compliance (contrast-grid.eightshapes.com)

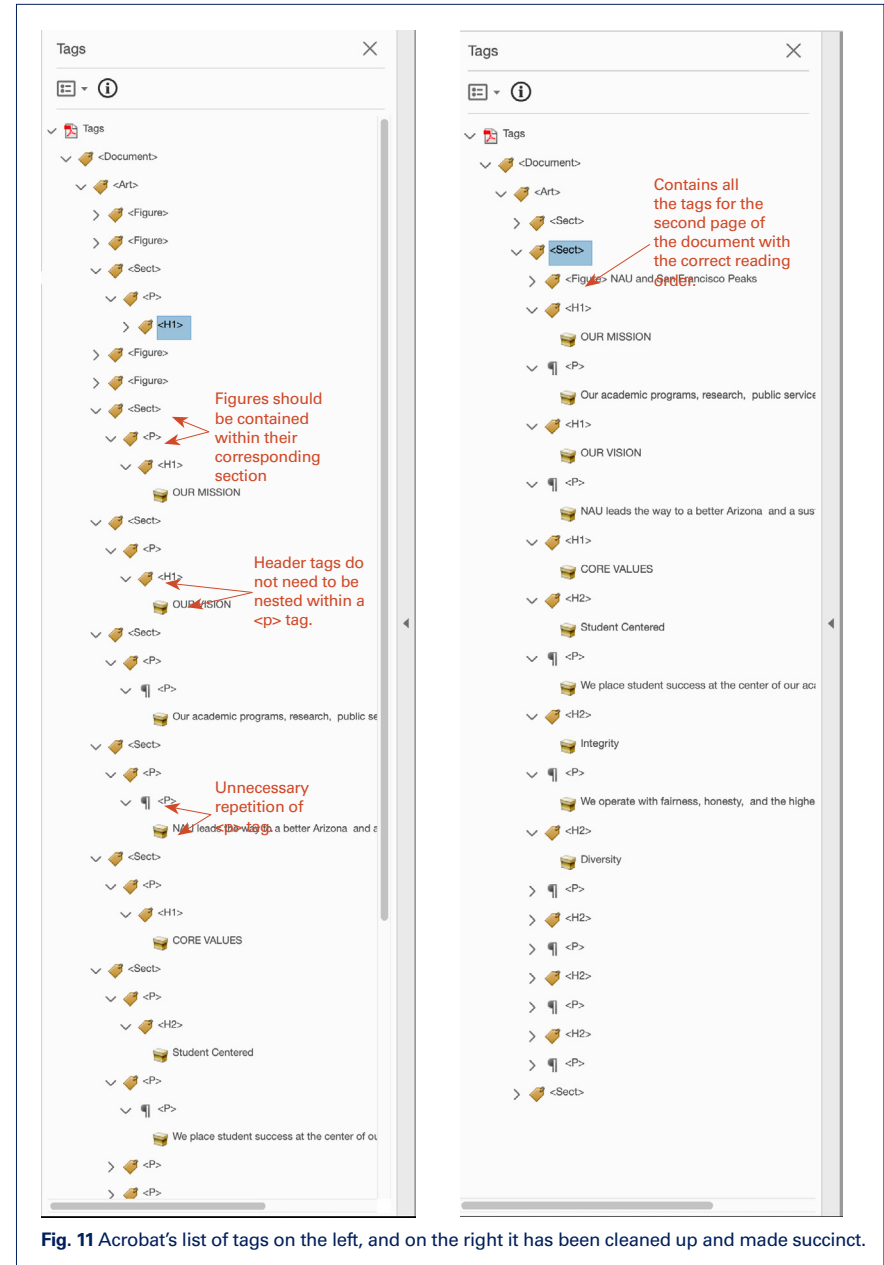


Fig. 11 Acrobat’s list of tags on the left, and on the right it has been cleaned up and made succinct.