



In-Person



1-on-1

Online



CHAX Training and Consulting

< Accessibility for All >

Document Accessibility for the Absolute Beginner



CERTIFIED INSTRUCTOR

accessibilityunraveled.com



OUR TESTIMONIAL

What our Attendees Say



Don't take our word for it. Here is what some of our class attendees have said about our training. And yes, they are real. We can supply contact info for any of them if you have doubts.



Barbara Fuentes

UTAH STATE BOARD OF EDUCATION

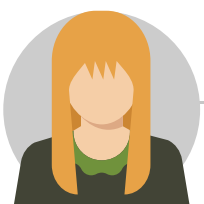
I recently started training to get better familiarized with 508 Accessibility standards and practices. I started off my training with the Chax Training and Consulting folks. IT WAS AMAZING! If you're looking to get started in accessibility design, these are your folks to start with. Thanks Dax Castro, ADS and Chad Chelius, ADS!



Mimi Heft

METROPOLITAN TRANSPORTATION COMMISSION

Chad Chelius, ADS and Dax Castro, ADS are two of the most knowledgeable and engaging experts on accessibility best practices in design. They are aces at conveying a highly complex, daunting set of rules and making them understandable and memorable. Most of what I've learned about ADA-friendly design is thanks to Chad and Dax's workshops.



Sheri Smith

CENTER FOR SCHOOLS AND COMMUNITIES

Thanks so much for the exceptional quality and engaging (and fun!) training. 1,000% recommend Chax Training and can't say enough positive things about Dax and Chad.



Shelley Nichols

CROZETIAN CREATIVE

I took your 3-hour training "Designing with Accessibility in Mind" in January. I really loved it! I was also able to put a few things right into practice with a project. I've also been listening to your podcast, which is great.



Valérie Gariépy

AGENCE SAT

I had such great insights this week when I attended Chax Training and Consulting on how to make accessible pdfs in Indesign. I love those a-Ha moments!



Camile Fink

UNIVERSITY OF CALIFORNIA LOS ANGELES

Highly recommend the alt-text training. I did it a while back when I was trying to understand alt-text, and it was super helpful. I actually have now trained all my authors to write their own alt-text (it's super technical info and just makes more sense to have them draft the alt-text that I then review/edit). I use the handout from this training to review concepts and basics.

Class Agenda

Morning Session (9am to 4pm)

1. Introduction to Document Accessibility (9am to 9:45am)

- **Goal:** Understand the most common barriers, typical workflow and the Acrobat Interface
- **Exercise:** Review two sample document

2. Reading Order & Tagging Basics (9:45am to 10:15am)

- **Key Concepts:** Meaningful sequence, reading order, tag structure.
- **Exercise:** Creating a logical reading order using tags.

3. Headings & Lists (10:15am to 11:00am)

- **Key Concepts:** Proper use of headings (H1 to H6), list structures, and why they matter for assistive technology.
- **Exercise:** Apply Headings and lists to an existing document.

Break (11:00am to 11:15am)

4. Text and Color Accessibility (11:15am to 12pm)

- **Key Concepts:** Color contrast, use of color, and text alternatives.
- **Exercise:** Use a color contrast analyzer on provided examples to ensure they meet accessibility guidelines. Attendees also check alternative text for provided images.

Afternoon Session (1pm to 4pm)

5. Tables & Figures (1pm to 1:45pm)

- **Key Concepts:** Creating accessible tables and images, anchoring figures, alt text.
- **Exercise:** Attendees will work with a simple data table, ensuring it has proper headers and alt text for figures.

6. Hyperlinks, Alt-text & Metadata (1:45pm to 2:30pm)

- **Key Concepts:** Creating accessible links, adding alternate text and document metadata
- **Exercise:** Practice hyperlinking content and reviewing a document's metadata to ensure it is properly filled out.

Break (2:30pm to 2:45pm)

7. Document Review & Testing with NVDA (2:45pm to 3:30pm)

- **Key Concepts:** Walking through a document with a screen reader, understanding how to test.
- **Exercise:** Test a document using NVDA, following simple instructions on navigating by headings, links, and tables.

8. Final Project & Wrap to Up (3:30pm to 4pm)

- **Final Exercise:** Attendees apply all learned concepts to a short document to make it fully accessible, then test it with NVDA.
- **Q&A and wrap-up.**

1.0 Accessibility Barriers in PDFs

We start with a firm foundation of what makes a PDF inaccessible. We will review a PDF using NVDA to understand what the different types of user experience can be. We will discuss the difference between tag-based, content-based, and visual barriers. We will discuss the Top 10 barriers you are likely to encounter while reviewing PDF documents for accessibility.



Accessible documents have three main characteristics:

1. Structure
2. Descriptive Content
3. Access to Information

QUIZ: Example Accessible vs User-focused experience

D. **True or False:** Accessibility compliance and a good user experience in documents are synonymous (the same).

E. **Fill in the Missing Word:** Accessibility compliance ensures a document can be _____ by assistive technologies.

F. **True or False:** A technically compliant document always guarantees a user-friendly experience.

G. **Fill in the Missing Word:** A good user experience involves ensuring documents are _____ and easy to navigate.

H. **True or False:** An accessible document may have properly tagged elements but still lack readability and clarity for all users.

I. **Fill in the Missing Word:** Providing a good user experience involves _____ the user experience and potential barriers.

J. **True or False:** A technically compliant document doesn't require consideration for visual hierarchy and contrast for readability.

K. **Fill in the Missing Word:** To enhance user experience, documents should be _____ to cater to diverse user abilities and limitations.

L. **True or False:** A technically compliant document always implies it's perceivable, operable, understandable, and robust for all users.

M. **Fill in the Missing Word:** A document that focuses only on compliance might lack the essential _____ elements that contribute to a superior user experience.

Notes:

The Most Common Document Accessibility Barriers



- Font:** Font choice can be a significant visual barrier, as well as an interpretive one. Most decorative or script fonts, can be challenging for screen readers to interpret. Unicode fonts are encoded in a way that allows for most, if not all, characters to be interpreted by a screen reader properly. It is commonly accepted that sans-serif fonts are more accessible due to their simplicity and ease of recognition. However studies have shown that proper kerning with serif and san-serif fonts help reading comprehension more. Ensuring adequate font size and avoiding overly stylized text enhances readability and accessibility for all users. Remember that there is no specified font size for accessibility. So consider your audience when choosing minimum sizes. Remember, there is no such thing as a dyslexic font. These are typically gimmicks not backed by any study or proof. Also WCAG SC 1.4.12 Text Spacing does not mean font size and does not apply to PDF documents.
- Language:** The primary barrier related to language involves using overly complex or technical language without providing clear explanations or alternative text. Clarity and simplicity in language support a more inclusive experience, ensuring that all users, regardless of language proficiency or cognitive ability, can comprehend the document's content. WCAG SC 3.1.5 Reading Level (AAA), and SC 3.1.2 Language of Parts
- Colorblindness:** Designing solely based on color distinctions can pose difficulties for colorblind individuals. Relying on color alone to convey information might lead to confusion or exclusion. Adding symbols or patterns alongside colors helps convey information to all users, ensuring inclusivity. WCAG SC 1.4.1 Use of Color
- Color Contrast:** Inadequate contrast between text and background colors can make content illegible for many users, especially those with visual impairments. Ensuring sufficient contrast ratios between text and background colors helps in improving readability and accessibility for everyone. WCAG SC 1.4.3 Contrast (Minimum)
- Color as a Differentiator:** Using color alone to differentiate between elements (such as required vs. optional fields) can exclude users who cannot perceive these color differences. Providing additional indicators, like text labels or symbols, alongside color helps distinguish items for all users. WCAG SC 1.3.1 Info and Relationships and 1.4.1 Use of Color
- Structural Relationships:** Headings, lists, graphics and tables provide key structural landmarks contain important information. Ignoring the logical structure robs AT users of information clearly visible to those with sight. Using properly tagged headings, lists, and nesting of content ensures a clear and logical structure, which is essential for users navigating the document using assistive technologies like screen readers. WCAG SC 1.3.1 Info and Relationships.

Notes:

7. **Text as Images:** Using text embedded within images rather than as actual text can be inaccessible to screen readers, as they cannot interpret text from images. Utilizing actual text and providing alternative descriptions for images ensures that all users can access the information.
WCAG SC 1.1.1 Non-text Content

8. **Formulas:** Complex formulas and equations in a PDF are not readable in the mathematical language required to interpret the correct meaning. Alt-text is always required in all but the most simple formulas for users who rely on screen readers or speech to text devices. Providing clear, concise descriptions or alternative formats for equations aids in comprehension for a broader audience. WCAG SC 1.1.1 Non-text Content

9. **Tables:** Improperly structured or untagged tables can be challenging for screen readers to interpret. Correctly tagging tables and ensuring they have appropriate headers and cell relationships helps users to understand the tabular data effectively. WCAG SC 1.3.1 Info and Relationships and SC 1.3.2 Meaningful Sequence

10. **Images:** Images without alternative text or descriptions can be a significant barrier for users who rely on screen readers or those with visual impairments. Adding descriptive alt text to images is crucial for conveying the content or context to all users. WCAG SC 1.1.1 Non-text Content and 1.3.1 Info and Relationships

11. **Meaningful Sequence:** When the order in which content is read matters, the content must be provided correctly (i.e. Text Columns). Most often we see this with images not placed in the correct reading sequence or sidebar text being read at the end of a document rather than on the page it was intended. WCAG 1.3.2 Meaningful Sequence

Notes:

2.0 Accessible Workflow

When you start makes a difference

It is important to incorporate accessibility considerations at the earliest stage possible. The stage at which we consider accessibility directly impacts how long it will take to make the product accessible, what approach we use to do so, and ultimately how usable and informative the content is. If we start late, our goal of a single, equitable, accessible experience for everyone often fails because “there’s not enough time” or “this has already been approved and we can’t change it.”

When teams start designing with accessibility in mind from the beginning, there are more options to present a single, meaningful user experience. Depending on what stage you begin incorporating accessibility, you can increase or limit your ability to employ accessible design by affecting your timeline or your attachment to current designs.

Starting at the Concept Stage

In addition to obvious considerations like choosing an accessible color palette and choosing colorblind-friendly design colors and layouts, designing an interactive experience for accessibility starts with the most important question of all: **“What do I want the user experience to be?”** The answer to this question affects every aspect of your design and implementation. Without answering this question, most developers find themselves at the end of the project with several accessibility barriers they had not considered.

Listening to the image descriptions should also be part of your accessibility process. Mapping out the user experience will help identify how the information is presented and possible options for the user to interact with it while absorbing meaningful content.

Other considerations should include the following:

1. Is my template setup for accessible heading structure, lists, captions, graphics, etc.
2. Am I using color alone as a way to understand content or interactions?
3. Am I providing text alternatives for image-based data visualizations?
4. Is someone ready to write alt-text descriptions if needed?
5. Does my palette meet minimum contrast requirements?

Considering accessibility in the concept stage allows the most freedom for change and has the least impact on schedule and development.

Notes:

Starting at the Draft Stage

If you are starting to consider accessibility once a draft has already been developed, you still have time to make more accessible design and implementation choices. Color palettes can be reviewed. Text alternatives and presentation methods can be evaluated with assistive technology for barriers and meaningful information. But any changes may be harder to implement at this stage. Those who approve the content may have already formed attachments to the draft colors and methods. The best way to shift sentiment at this stage is to provide solutions when encountering barriers. In my career, I have experienced overwhelmingly negative push back when my evaluations only surfaced accessibility failures without also providing solutions.

Starting at the Final Stage

Even if you are starting at the end, there is still hope for creating an accessible product. With many visualizations, you can slightly darken colors to meet contrast thresholds, adjust alternate descriptions to be more meaningful, and modify tags or tag-only content to present a better user experience for those using assistive technology. But taking these steps is not always easy. Starting accessibility work after the project is fully developed is like baking an apple spice cake for someone who doesn't like apples and asking, "can't you just take them out?"

Chad and Dax's Steps for Remediation

1. Flatten the tags tree (optional)
2. Scan for color contrast issues
3. Quickly scan the tags tree for obvious red flags
4. Go back and fix what I can in the source (if available)
5. Click on the first tag and use mouse only to navigate watching to see each item highlight
6. Accessibility > Set Alt-text (to review)
7. Check Tables (if present)
8. Check non-standard bullets
9. Multi-line Hyperlinks
10. Footnotes/Endnotes
11. Run the Acrobat Checker
12. Fix anything I missed
13. Run PAC 2021

Notes:

3.0 The Acrobat Workspace

Adobe Acrobat has three basic views and four areas to access tools and commands. Understanding what is in each of these areas will help you develop the best workflow for your situation.

The Four Interface Areas

1. The Text Menu

The text menu at the top of the screen allows you to access every tool and command through a series of drop-down menus. Acrobat allows keyboard and mouse-driven access to these commands.

2. The View Tabs

These consist of the **Home**, **Tools** and **Document** tabs. They allow you to switch between interface modes and provide quick access to recent documents, tools and your document(s).

3. The Panes Panel

These are the elements to the extreme left of the screen. You may have more or less tools in this panel. You can add tools by right clicking in the open area under the last tool and selecting the desired tool to add from the pop up list that appears.

The Tools Panel

The Tools Panel (3) is located on the extreme right edge of the Acrobat window and houses all of the common tool shortcuts you will need when editing your PDF documents. You can add to these quick tools by selecting the **Tools Tab** (1) and dragging items (2) into the **Tools Panel** (3). To reorder the quick tools you will need to switch to or be in the **Tools** view by selecting **Tools Tab** (1) to the left of the **Home Tab** first. Click on a tool in the **Tools Panel** to activate it or to access the tool set for that category.

The tools you will use most in accessibility testing and remediation will be:

- Accessibility Tool
- Print Production Tool
- Prepare Forms
- Organize Pages
- Scan & OCR



Notes:

Headings

Key Takeaways:

1. Headings are structural elements that separate content into logical blocks.
2. Many assistive technology users navigate using heads as anchor points to move from section to section.
3. Headings must stay in logical order. H1, H2, H3
4. Contrary to popular belief you CAN have more than one H1 in a document as long as the structure is consistently applied.
5. An organization can choose to assign the Title as the only H1 but it is not a violation to have more than one H1.
6. The Title Tag is not an H1. Currently it is only voiced as a Paragraph in PDF documents by NVDA and JAWS.
7. Like the rungs on a ladder, Heading Levels cannot be skipped. H1 to H3 would create a confusing user experience.
8. More than 3 headings in a row should always be carefully inspected for accuracy when evaluating the accessibility tags. Most likely one or more should just be a <P> Paragraph tag.
9. Meaningful Headings improve the accessibility of a document. “Chapter 1” is not as accessible as “Chapter 1 Introduction.”

Headings Exercise

Correct the Heading sequence below:

H1, H3, H2, H3, H4, H1, H2, H1, H2, H2, H4, H3, H3, H1, H1, H3, H3

4.0 Understanding Tag & Table Structure

Container Elements

Document <Document>
Part <Part>
Article <Art>
Section <Sect>
Division <Div>

Heading Elements

Heading<H> (NOT USED)
Heading Level 1 <H1>
Heading Level 2 <H2>
Heading Level 3 <H3>
Heading Level 4 <H4>
Heading Level 5 <H5>
Heading Level 6 <H6>

Paragraph Elements

Paragraph <P>

Inline-Level Elements

Quote <Quote>
Span
Figure <Figure>
Form <Form>
Formula <Formula>
Link <Link>
Note <Note>
Reference <Reference>

Special Text Elements

Block Quote <BlockQuote>
Caption <Caption>
Index <Index>Table of Contents <TOC>
Table of Contents Item <TOCI>

Table Elements

Table <Table>
Table Header <Thead>
Table Body <TBody>
Table Footer <TFoot>
Table Row <TR>
Table Data Cell <TD>
Table Header Cell <TH>

Label and List Elements

List <L>
List Item
Label <Lbl>
List Item Body <Lbody>

Notes:

5.0 Common Pitfalls and Remediation Strategies

Pitfall #1: Missing or Inaccurate Headings:

Implement Consistent and Descriptive Headings. Headings are essential for document structure. Missing or improperly sequenced headings can confuse users relying on assistive technologies. It is common for people to assign headings just because the text is larger and bolder than other text on the page. Be sure the text is an actual heading for subtext below it. If it is simply a byline or other decriptive, it may not be a heading.

Solution: Validate a clear and accurate headings structure that organizes content consistently and effectively.

Quiz: Heading

True or False: There can only be one H1 in your document.

True or False: Headings must follow a structured order from H1 to H6 to ensure proper accessibility and document structure.

Fill in the Blank: Heading tags are _____ - _____, meaning 'h1' is different from 'H1'.

True or False: Consistency in heading structure is not crucial for an accessible document.

Fill in the Blank: Headings serve as _____ within a document, aiding users in navigating and understanding cont

True or False: Headings should be generic and brief, avoiding descriptive titles for accessibility purposes.

True or False: It is okay to skipping heading levels (e.g., going from H2 to H4 without an H3) if the document doesn't have that level tagged.

True or False: 'H' used as a heading structure should be used for the Title of a document.

Fill in the Blank: I can pull up a list of all headings in a document using the _____ _____.

Pro Tip: You can use Actual Text if you need to have headings beyond "Heading Level 6." It is not typical, but can be possible for technical documents that use numbered heading structures. PDF/UA allows for infinte heading levels but screen readers do not natively interpret beyond H6.

Notes:

Lists

Key Takeaways:

1. Lists provide a structured way to group related items, making them easier to follow for all users.
2. Avoid using list tags for non-list items; this can create confusion for assistive technologies.
3. Avoid lists that are more than 3 levels deep. Consider using additional headings.
4. A list of one item is like calling a single sock a pair of socks.
5. The basic List structure is an L (List) tag with LI (List Item) tags for each individual item. However, a fully structured list is a better user experience across all platforms (NVDA, JAWS, other screen readers)
6. Use simple, short, and meaningful items within lists to improve understanding.
7. A paragraph between list items will typically break the list into 2 separate lists.
8. In MS Word, the hollow circle bullet o is just the letter o. So avoid using it in your documents.
9. Numbered lists should be used for sequential steps and bulleted lists are better for non-ordered items.
10. Not all bullets sound the same. [Visit to the Chax website to download the list of bullets](#)
Google search: **Chax Bullet JAWS**

Document Accessibility for the Absolute Beginner

Tags to know

Tag	Definition
L	List
LI	List Item
Lbl	Label (bullet or number or icon)
Lbody	List Content (Text, figure, etc.)

EXAMPLE:

Write the name to the right of each of the elements in the list below:

<L>

<Lbl>

<Lbody>

<Lbl>

<Lbody>

<L>

Tables

Key Takeaways:

1. Tables should only be used for presenting data, not for layout or formatting purposes.
2. Never include the Title as the first row in your table.
3. Provide descriptive table headers (TH) for each column and/or row.
4. Blank Column headers (except the A1 cell) are not allowed unless the table only contains row headers.
5. Assistive technology uses the Scope attributes (row or column) to define relationships in table headers.
6. Ensure table cells do not split across multiple pages to avoid breaking the context.
7. When tables span multiple pages, repeat the column headers visually but hide the repeating headers from the screen reader user.
8. Use simple, single-row headers whenever possible for better accessibility.
9. Avoid merged cells that span the entire width of your table. They do not read correctly and will disrupt the reading order and cause confusion.
10. Blank cells should not be filled with extra content. Keep it to a single character like zero or a dash.
11. Use table summaries for confusing tables that may not be easily interpreted by the readers.
12. Consider simplifying complex tables by breaking them into smaller tables for clarity.

Document Accessibility for the Absolute Beginner

Tags to know

Tag	Definition
<Table>	The entire table structure
<TR>	Table Row
<TH>	Table Header. Typically includes a Scope property
<TD>	Table Data cells
<THead>	Table Header section applied to the header row(s) at the top of the table.
<TBody>	Table Body section, used to group the main content rows within a table.
<TFoot>	Table Footer section, used to group repeating footer rows at the bottom of a table. Not common.
<Caption>	Used to provide a caption or title for the table, giving context for its content. Cannot be placed inside a table structure. (E.g. Table 2.1 Sales Summary)
*Scope	Used to specify the scope of header cells, either for the row or column. Helps with screen reader navigation.
*Column	Scope property assigned to a TH to define a vertical group of cells in a table.
*Row	Scope property assigned to a TH that defines a horizontal group of cells in a table.
*Table Summary	Not a tag. But a description set in the PDF using the Read Order tool.

Note: *Vocabulary

Document Accessibility for the Absolute Beginner



Basic Table Exercise:

Assign the first column and first rows as headers.

All other cells are data cells. Write in each label. (TH, TD)

Intermediate Table Exercise:

Cells with bold borders are designated as Header Cells. All other cells are data cells.

Label the **Scope** each header cell appropriately. (Column or Row)

Tag Structure you should know:

Typical TOC

```

<TOC>
  <TOCI>
    <P>
      <Reference> *** you will hear Link ***
      <Link> *** you will hear Link ***
      LinkOBJR
  
```

Example of Multi-level TOC

```

<TOC>
  <TOCI>
    <TOCI>
      <TOC>
        <TOCI>
  
```

Typical List

```

<L>
  <LI>
    <Lbl> *** Not required***
    <LBody> *** Not required***
  
```

Nested List

```

<L>
  <LI>
    <Lbl>
    <LBody>
      <L>
        <LI>
          <Lbl>
          <LBody>
        
```

Table Structure

```

<Table>
  <Caption> *** can be used in Lists, Tables, Figures ***
  <THead>
    <TR>
      <TD>
      <TD>
  <TBody> *** THead / TBody must be used together ***
    <TR>
      <TD>
      <TD>
  
```

Notes:

Hyperlinks

Key Takeaways:

1. Use descriptive link text that explains the destination or purpose, avoiding “click here.”
2. Hyperlinks should be underlined or dotted to be visually distinguishable from regular text.
3. Check all hyperlinks to ensure they lead to functional and appropriate destinations.
4. Avoid using long URLs as link text; screen readers may read them character by character.
5. Include screen reader-friendly instructions for links that download large blocks of content. (eg. 2024 Earnings report PDF – 14MB)
6. Ensure that link text is unique and avoids duplication within the document.
7. Hyperlinks should be placed in logical, easily accessible locations for users.
8. For the most accessible user experience, include a brief description of the content found at the link destination.

Hyperlink Examples:

Directions: Underline the phrase that would be an accessible hyperlink.

1. Click here to download the complete PDF guide on digital accessibility.
2. Watch our latest training video on creating accessible documents to learn more.
3. For more information, visit the official website of the Web Content Accessibility Guidelines.
4. You can find the full user manual for our software by following this link. (32MB PDF)
5. Access the resource library to download templates and checklists for your projects.

Alternate Descriptions

Key Takeaways:

9. **Be Concise:** Alt-text should be brief and descriptive, usually no longer than 3 sentences that focus on the essential information.
10. **Focus on Purpose:** Describe the primary purpose of the image. For example, if an image is decorative, alt-text might not be needed or could be marked as decorative.
11. **Avoid Redundancy:** Don't use phrases like "Image of..." or "Picture of..." as this is implied by the use of alt-text.
12. **Set the Stage:** Do use bar chart, line graph, plot map, area map, infographic, flowchart. Describe the X and/or Y axis if relevant.
13. **Tailor Alt-Text for Informational Content:** For charts, graphs, and diagrams, include essential information such as trends, data points, or key takeaways. If there is numeric data in image, include it in your alt-text.
14. **Include Contextual Information:** If the image adds specific meaning within the document's context, mention that information in the alt-text.
15. **Avoid Overly Complex Details:** Stick to relevant details, and avoid trying to capture every element, especially for simple images.
16. **Highlight Key Elements:** Describe notable colors, numbers, or actions only if they add to the understanding of the content.
17. **Avoid Unnecessary Descriptors:** Skip visual details that do not affect the image's meaning or purpose, like irrelevant background objects.
18. **Consider Audience Knowledge:** Write alt-text based on what the audience needs to understand the image, balancing simplicity with necessary detail.
19. **Test Alt-Text with Screen Readers:** Whenever possible, test alt-text by listening to it read aloud. This can help ensure it sounds natural and is easy to understand.

Document Accessibility for the Absolute Beginner

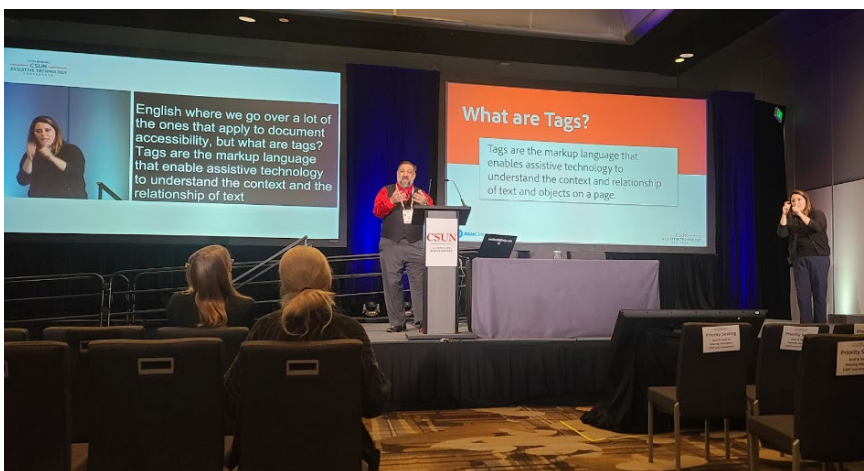
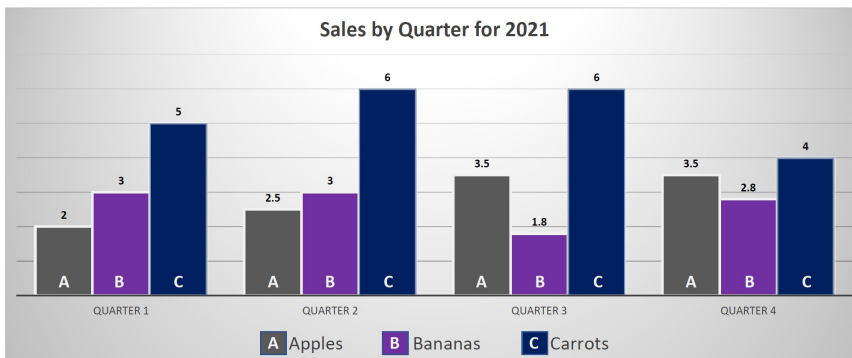
Alt-text Exercise:

Alt-text for Charts and Graphs

1. What is it?
2. What do the legends say?
3. What is the key metric?
4. Are there any overlays or callouts?
5. Do I need an alternate format?

Alt-text for Images

1. Is it meaningful (if not mark as decorative)
2. What is most meaningful?
3. What is the key information?
4. Keep it brief and about the image.



Color Contrast

Key Takeaways:

1. Ensure text has a minimum contrast ratio of 4.5:1 against its background to meet WCAG AA standards for regular text. (text that is up to 17pt regular or 13pt + Bold)
2. For large text (18pt regular or bold +14pt and larger), the contrast ratio can be 3:1.
3. Avoid relying on color alone to convey information; use text labels, shapes or patterns.
4. Tools like the Colour Contrast Analyzer can verify if color contrasts meet accessibility requirements. ([TPGI Colour Contrast Analyzer](#) or [WebAIM Color Contrast Checker](#))
5. Higher contrast benefits not only people with low vision but also those viewing in bright light.
6. Avoid color combinations that are problematic for color-blind users. (e.g., red-green, green-orange, grey-pink).
7. Start with an accessible color palette for your documents.
8. Set color contrast in styles to ensure consistency throughout the document.
9. Ensure that hyperlinks are visually distinguishable by more than color alone, such as a solid or dashed underline.
10. Use the most contrasting color schemes for essential content, like headings and action points.

Document Metadata

Key Takeaways:

1. Document metadata provides essential information like title, author, and keywords.
2. Metadata should be filled out correctly to help users identify and navigate documents.
3. Use a clear, descriptive document title that accurately reflects its content.
4. Ensure the author field lists the organization rather than author.
5. Add relevant keywords to improve the document's searchability and accessibility.
6. Metadata should include the language of the document to support multilingual users.
7. Update metadata if the document is revised or modified significantly.
8. Ensure the document title in metadata matches the document's title page for consistency.
9. Check metadata fields in the document properties to ensure they're complete and accurate.

6. Can I support the infographic with body text?

Supplementing the infographic with descriptive and concise body text is beneficial for accessibility. This helps provide context, explanations, and descriptions of visual elements that might not be apparent to all users. It is also helpful for screen reader users who rely on textual content.

7. Can I test the user experience?

Testing the user experience of the infographic with individuals with diverse abilities is a vital step in ensuring its accessibility. Conducting usability tests with users who have disabilities can reveal any potential barriers or challenges they may encounter. This feedback allows designers to make necessary improvements and create a more inclusive and accessible infographic.

By asking these questions and taking the answers into account during the design process, designers can create infographics that are not only visually appealing but also accessible and inclusive to all users.

Notes:

12 Ways to make graphics more accessible

1. **Break large graphics into smaller pieces**
2. **Consider the logical reading order**
3. **Use colors with at least a 3 to 1 contrast for meaningful graphic items. I recommend 4.5 to 1 when possible**
4. **Your text should follow WCAG guidelines of 3 to 1 for large text and 4.5 to 1 for regular text**
5. **Consider adding labels when possible**
6. **Add patterns sparingly**
7. **Use shapes as alternative differentiators**
8. **Vary your line styles to add clarity**
9. **Keep text as live text and set a logical reading order if appropriate**
10. **Consider long descriptions in an appendix**
11. **Legends are okay, but integrated labels reduce cognitive loads for neurodiverse audiences.**
12. **Test your infographs with NVDA or JAWS**

Writing effective alt-text does not have to be difficult. As remediators and content creators there will be times when you might not be the best person to write the description for the chart, graph, image or infographic. Getting feedback or context from the subject matter expert is always best. But, when you don't have that option how do you go about answering the question "What should I write?" Use these tips to help you form meaningful descriptions that will provide text alternatives for your content.

Don't start with "Image of..."

Unless otherwise stated, it is assumed that alt-text is describing a photo. It is not necessary for alt-text to include phrases such as "This is an image that shows..." It is sufficient to use wording such as "Bar chart shows..." or "Aerial map showing..." "Photo of" is assumed and should not be used in the description. Alt text should simply describe the meaningful elements of the photo.

Be brief but meaningful

Although alt text should be brief, if your graphic displays numbers or a trend or quantitative information, your alt-text should as well. "Bar chart showing sales for 2022" is not enough. Alt text should convey in words the same information that is communicated by the image. There is a reason that bar chart was placed in the document. "Bar chart showing a steady increase in sales from 2011 to 2021 ending with a high of \$1.3 million."

Skip figure numbers or titles as alt text.

The screen reader will read the figure number and title before it announces an image so the information would be redundant. If, however, the figure number and title is embedded (such as on a map), then include the number and title in the alt text (because the screen reader does not read every word on an image). Continue by adding alt text to describe the meaning of the image.

Avoid color-based alt-text descriptions

"The red sign on the right of the photo indicates..." or "the yellow and orange bars indicate..." An example of a better alternative for alt text could be, "Overhead freeway signage with flashing lights indicates that lane changes are ahead."

Be quantitative when it matters

For bar charts, the appropriate alt text could be: "Bar chart shows traffic significantly increases on Thursdays and Fridays between 5:00 p.m. and 6:00 p.m."

Keep punctuation simple

When writing alt text, use correct punctuation (so the screen reader knows when to pause). Commas are short pauses and periods are long pauses. Avoid excessive punctuation or line formatting.

Avoid acronyms, links, and excessive symbols

Alt-text should not include URLs, excessive symbols, bulleted entries, or other non-text elements. Each screen reader may interpret these items differently. Some may ignore them and others are simply not accessible, as in the case of hyperlinks.

5 Questions for effective Alt-text

- 1 If this image weren't here would the reader miss out on important information? If the image is purely decorative marking them as artifacts in your source file will cut down on extra steps later for accessibility.
- 2 What type of object is it? Declare non-photo figure types. Aerial, heat map, county map, state map, regional map, bar chart, line graph, pie chart, Organizational chart, Infographic. If it is a photo do not begin the text with "Photo of..."
- 3 What is the scope? The next thing you describe is the limits of the object. If it is a bar/pie chart or line graph, what are the date ranges, values, etc.
- 4 What are the key elements? Usually, the legend will give you this type of information. Look there to get direction on what meaningful elements should be discussed.
- 5 What are the key data points or main takeaways? In the case of charts and graphs, what are the key data points? What is the overall trend? What information is most important to know (the takeaway). Remember, if the chart/graph contains quantitative info, the alt-text should contain at least one datapoint or trend.

10 Things you can do to improve accessibility without being an expert!

training@accessibilityunraveled.com

[Youtube](#) & [Facebook](#): PDF Accessibility

We hear it all the time. Accessibility is too hard! You have to be an expert! The truth is there are lots of things you can do to improve the accessibility of your document and digital content. Accessibility starts with small steps. Use these 10 simple actions to improve your content. You might be surprised at how easy it can be.

1 Title your Documents

Choose a meaningful title that identifies the document or its content.

2 Describe your images

It is pretty easy to right click on an image and enter a descriptive sentence or two. Answer the questions "What is important in this image? What do they need to know?"

3 Use Headings

Headings are anchors or outline levels for content that people using assistive technology use to navigate by. Keep your headings logical and in order. Heading Level 1, Heading Level 2, etc. Headings make your document more readable for everyone.

4 Avoid excessive bullet levels

Every list level change is announced by a screen reader. Imagine having to keep track of where you are when you hear "List Level 1, List Level 2, List Level 3, List Level 2, List Level 3, List Level 4, List Level 3."

5 Use descriptive links

Use meaningful link text instead of "Click Here" or long URLs. "Download the Checklist" is far more accessible than download http://www.accessibilityunraveled.com/content/PDFs/Checklists/MSWord_071222.PDF

6 Avoid images of text

Images may make our text look fancy with drop shadows and bevels or highlights but screen readers cannot detect the text inside a jpg or png. If you forget to add descriptive text sometimes title.jpg is all the user gets for a description.

7 Keep tables simple

This is a much deeper subject but at its core, keep your tables simple. Heading rows at the top or in the first column instead of using them to visually separate rows of content will make your table much more accessible without any heavy accessibility work in the PDF.

8 Avoid faded color schemes

People with low vision are a substantial portion of those with disabilities. Use darker colors for headings and meaningful content. Avoid pastels, faded colors, oranges or yellows for headings as they can be hard to see.

9 Avoid red and green indicators

As many as 1 in 8 males are Colorblind. Avoid using red or green as differentiators. Example: "Items in red are required." If you have to use them consider adding a symbol or other method to help differentiate them.

10 Use simple language

Use plain language when possible. It will improve the reading rate for everyone. In item 9 we used "differentiate." We could have used "tell them apart" to be more accessible!



For more tips and accessibility chat listen to our podcast on all major streaming platforms: A11y Podcast

Accessible Podcast Transcripts at chaxchat.com

Upcoming Additional Training

training@accessibilityunraveled.com | Youtube & Facebook: PDF Accessibility
Join our live accessibility training classes: 3-hour Certified Instructor-led training via Zoom most Thursdays each month! **AHG attendees can save \$100**
Use Promo Code AHG2024

1. Designing with Accessibility In Mind

Together we identify the most common content-related accessibility barriers and overcome them with design decisions that free your creativity.

Date: Thursday, November 21st

Time: 11am to 2pm Eastern

Instructor: Dax Castro

2. Document Testing with NVDA

Assistive technology may feel daunting. Document testing with a screen reader is the ultimate way to ensure accessibility. We empower you with an evaluation checklist and various shortcuts.

Date: Thursday, December 5th

Time: 11am to 2pm Eastern

Instructor: Chad Chelius

3. Accessible Table Basics

Tables are a great way to organize and present data. We cover the basics of how to build compliant tables, manage table structures, and resolve irregular accessibility checker errors.

Date: Thursday, December 19th

Time: 11am to 2pm Eastern

Instructor: Dax Castro

4. InDesign Accessibility Best Practices

InDesign Best Practices

Learn time-saving secrets that bring InDesign's accessibility features to the forefront. As a bonus receive Chax's custom InDesign plugins and checklists! Designed for all levels of InDesign users.

Date: Thursday, January 2nd

Time: 11am to 2pm Eastern

Instructor: Chad Chelius

5. Document Testing with Adobe Acrobat.

Are you responsible for creating or reviewing PDFs? Designed for all skill levels, we help you identify and fix the most common accessibility issues using a range of techniques.

Date: Thursday, January 16th

Time: 11am to 2pm Eastern

Instructor: Dax Castro



Need to train your team?

Let's chat and talk about your options, specific needs and get you a quote. It's more affordable than you think. Call 916-856-9347 and talk to Dax about scheduling options.

Additional Topics:

Accessible Color Basics

In this course you will learn the principles of accessible color combinations and how to use more than color alone to communicate complex information.

Accessibility for MS Word

This session empowers you with knowledge and tools to create accessible Word documents from the start.

Accessible Table Basics / Advanced Table Remediation

If you struggle with irregular table errors when trying to pass your accessibility checker, this course is for you.

Writing Effective Alt-text

There is nothing more nuanced than writing alternate Descriptions. How much detail to you give? What is meaningful? How do I know what to Artifact?

Accessible Infographics

Learn how to create more robust infographics. Topics include color contrast, meaningful alt-text and how to present complex infographics effectively.

Accessible PDF Forms

We clear away the confusion and give you step-by-step instructions for handling forms.

Designing with Accessibility in Mind

This class focuses on identifying the barriers and overcoming them with accessible design decisions that free your creativity rather than restrict it because the "content needs to be accessible."

Document Testing with a Screen Reader

The ultimate way to ensure usability is to test your document for barriers with a screen reader. Attendees leave the class with screen reader shortcuts and a checklist for evaluating a document.

Stop struggling to understand how to make your documents accessible...



Accessibility Classes

- Microsoft Word & PPT
- Adobe Acrobat
- Adobe InDesign
- Captions for Video
- Accessible Social Media
- Designing with Accessibility in Mind
- Document Testing with NVDA/JAWS

Available Manuals & Handouts:

- MS Word Accessibility Checklist
- MS PowerPoint Accessibility Checklist
- Using the MS Accessibility Checker
- Adobe InDesign Accessibility Checklist
- Adobe InDesign Accessibility Basics Manual
- Adobe Acrobat Accessibility Checklist
- Adobe Acrobat Accessibility Basics Manual
- Accessible Forms Manual

Services

- Accessibility Consulting
- PDF Remediation
- Workflow Evaluation
- One-on-one training
- On-demand support hours
- Project-based training



I took your 3-hour training 'Designing with Accessibility in Mind' in January. I really loved it! I was also able to put a few things right into practice with a project. I've also been listening to your podcast, which is great.

- Shelley Nichols

3-hour live, online training classes available every month at www.accessibilityUnraveled.com

Don't miss our accessibility podcast at ChaxChat.com

- Listen on Spotify
- Listen on Google Podcasts
- Listen on Apple Podcasts
- LISTEN ON iHeartRADIO

We also provide expert accessibility strategy sessions and workflow analysis for starting an accessibility program within your organization.

We unravel Accessibility for you!

Accessibility Training and Consulting
Dax Castro, ADS | Chad Chelius, ADS
training@accessibilityUnraveled.com



CERTIFIED INSTRUCTOR
PDF ACCESSIBILITY TRAINER

916-856-9347

