UNIVERSITY OF LOUISIANA
SYSTEM

Accessible Media
(Overview and Best Practices)

Today's Session Overview

- What we mean by **"Media"**

- **ADA and WCAG** guidelines for multimedia

- Four key **Principles**

- **Best practices for:**
  - Color contrast and visual design for readability
  - Images and alt text for visual content
  - Captions, transcripts, and audio descriptions

What we mean by "Media"

While document accessibility ensures text-based content can be understood by assistive technology, media accessibility ensures audio-visual content can also be perceived, heard/seen, and operated in an equivalent way.

Media:

- Is **time-based** and/or **sensory-dependent**

- May have **motion**, so timing matters

- May have **sound**, so text equivalents are required

- May show **visual meaning**, so descriptions may be needed

- May **use controls**, so players must be keyboard-operable

Media Includes:

- **Images**
  - Static images, GIFs, and animated images
  - Images in LMS pages
- **Video lectures, recorded classes, lab demonstration videos, or teaching materials**
  - Screencasts, tutorials, narrated PowerPoints, Panopto, Zoom/Teams recordings
  - Podcasts, audio assignments, interviews
  - Movies, documentaries or YouTube/Vimeo clips
- **Interactive objects**
  - H5P or Storyline interactive objects
  - VR/AR experiences
  - Simulations and multimedia quizzes

If the student must **watch, listen, or control playback**, it is treated as **media** for WCAG and ADA compliance.

Accessibility Standards

ADA Title II: Requires equal access to digital communication

Section 508: Applies to federally funded entities and digital systems

WCAG 2.1 Guidelines: Industry standard for digital accessibility

- **Perceivable –** Information must be presented in ways users can perceive
- **Operable –** Users must be able to navigate and interact with content
- **Understandable –** Information and operation of the document must be clear and predictable
- **Robust –** Content must be compatible with current and future assistive technologies

Perceivable

Everyone can access the information in the media, even if they cannot hear it or see it.

Describe Visuals: Using alternate text for images and audio descriptions for videos

Text to Read: Alt text, captions, and transcripts

Use of Color: Don't rely on color alone to convey meaning

Contrast: Ensure sufficient contrast for images, charts, and visuals

Spacing: Media and images leave enough space on the page for easy recognition

Operable

Users can control the media using different input methods, not just a mouse.

Keyboard Accessible: All media player controls must be keyboard accessible with no keyboard traps

No Autoplay with Audio: Autoplay can interfere with screen readers

Focus Indicators: Users must be able to see where they are on the player when tabbing

Understandable

Users can easily follow the content and know how to interact with the media.

Identifiable: Captions must identify speakers

Synchronized: Captions must be synchronized

Accurate: Captions must be accurate

Logical: Transcripts and visuals must follow logical order

Clear Controls: Media player controls must be clearly labeled (e.g., "Play," not a vague unlabeled icon)

Robust

Assistive technologies can interpret the media consistently.

Compatible: Use machine-readable text for captions and transcripts so they can be detected by screen readers

Standard players and formats: Use standard formats that work with assistive technology

Readable: Avoid text baked into images, as screen readers will not detect them

Color and Contrast in Images

Text on Images

- If you place text on a photo or video, you must ensure the text stands out.
- If text is baked-into the image or video, you will need alt-text or an audio description for this text, as well.

Charts and Graphs

- Never rely on color alone to differentiate data.
- Pair color with patterns, labels, or line styles.
- Ensure each line/bar/segment meets 3:1 contrast against the background.

Icons and Buttons

- Playback buttons, pause icons, or CC toggles must be visible against backgrounds.
- Media players must meet non-text contrast requirements.

Why Color Contrast Matters

Good contrast ensures that:

- People with low vision can read and interpret information
- Users with colorblindness can differentiate elements
- Mobile users in bright lighting can still see the content
- Charts, diagrams, and images remain understandable to everyone

Poor contrast is one of the most common accessibility failures in documents, LMS pages, videos, and lecture slides.

Alternative Text for Images

Alt text: Short, written description that conveys the purpose and meaning of an image to users who cannot see it.

- **Alt text is required for all informative or functional images in accessible media and digital content.**
- A screen reader reads the alt text aloud, allowing users to understand what the image communicates.
- Images that do not communicate meaning can be marked as decorative.

- **This applies to images in**:
  - LMS pages
  - Documents (slides, Word, Excel, .pdfs)
  - Websites
  - Infographics
  - Embedded images in video or media players (when relevant)

Why Alt Text Matters

Alt text ensures that:

- Blind and low-vision users receive the same information as sighted users
- Screen reader users can navigate content efficiently
- Images used in instruction, assessment, or navigation are accessible
- Users with slow internet or blocked images can still understand the content

Without alt text, images become "invisible" to assistive technology.

Captions

Captions: **Synchronized on-screen text** that represents all meaningful audio content in a video.

This includes:

- Spoken dialogue
- Speaker identification (when needed)
- Meaningful sound effects (e.g., *[laughter], [door slams]*)
- Important background audio cues (e.g., *[dramatic music]*)

Captions are designed to be read while the video plays and must be timed to match the audio.

Why Captions Matter

Captions ensure equal access for:

- Deaf and hard-of-hearing users
- English language learners
- Learners in noisy or silent environments
- Anyone who benefits from reading along

When are captions required?

- Captions are not optional for accessible video content.
- Required for all prerecorded video with sound
- Required for live media

Transcripts

Transcript: **Text document that includes all spoken words and meaningful sounds** from audio or video.

- It may also include brief visual descriptions when needed.
- Unlike captions, a transcript is not synchronized with the media.

Why Transcripts Matter

Transcripts provide access for:
- Deaf, hard-of-hearing, and deafblind users
- Screen reader users
- Learners who want to search, highlight, or annotate
- Users with low bandwidth or no audio/video playback
- Students who prefer to read instead of watch

When are transcripts required?
- Pre-recorded audio-only
- Strongly recommended for all video, even though captions cover synchronizing needs

Audio Descriptions

Audio descriptions (sometimes called video descriptions or AD): **Narrated descriptions of key visual information** in a video.

Audio descriptions communicate things like:

- Actions, movements, and gestures
- On-screen text and titles
- Scene changes, settings, and visual context
- Facial expressions or visual tone
- Diagrams, charts, or visual demonstrations

If a sighted viewer needs the visual information to understand the content, an audio description provides that same access non-visually.

Why Audio Descriptions Matter

Without audio descriptions, these learners miss content that sighted viewers take for granted.

Audio descriptions ensure full access for:

- Blind and low-vision learners
- Deafblind users (when paired with transcripts)
- Screen-reader users viewing videos
- Anyone listening without the screen visible

When are audio descriptions required?

- In videos when visuals are essential to meaning

- If visual information is teaching something, showing steps, or conveying data, audio description is required.

Free tools for testing Accessibility

Free Color and Contrast Checkers:

- WebAIM Contrast Checker
- Adobe Color Contrast Tool
- TPGi Colour Contrast Analyzer

Free Accessibility Checkers

- Microsoft Office Accessibility Checkers
  - [WAVE (for online docs and media players)](WAVE)
  - [PDF Accessibility Checker – PAC (Windows only)](PDF Accessibility Checker)
  - LMS accessibility checkers

WCAG 2.1 AA Media Accessibility Checklist

✓ **Color Contrast:** Text meets 4.5:1 (normal) or 3:1 (large) contrast

✓ **Non-Text Contrast:** Icons, controls, and key visuals meet 3:1 contrast

✓ **No Color-Only Meaning:** Charts, diagrams, and states use labels, shapes, or patterns—not just color

✓ **Clear On-Screen Text:** Avoid text baked into images without alternatives

✓ **Alt Text:** Provided for meaningful images, diagrams, and screenshots

✓ **Decorative Images:** Mark with empty alt text (alt="") or ignore in player

✓ **Complex Visuals:** Provide text summaries for charts, graphs, or infographics

✓ **Captions (Prerecorded):** Accurate, synchronized dialogue + meaningful sounds

✓ **Captions (Live):** Real-time captions for livestreamed events

✓ **Transcripts:** Full text alternative for all audio-only content

✓ **Transcript Recommended for Video:** Supports search, study, and deafblind access

✓ **Audio Descriptions:** Narrate essential visual info (actions, text, data, demos) when visuals convey meaning

✓ **Accessible Media Player:** Keyboard operable, labeled controls, visible focus

✓ **No Autoplay with Sound:** Avoid auto-start; it interferes with screen readers

✓ **Test with Assistive Tech:** Check with keyboard only, captions on/off, and a screen reader

Use of Color

Color blindness

- 1 in 12 men (8%)
- 1 in 200 women (0.5%)

Most common type: red-green

- Can confuse any colors that have red or green in them, so colors such as purple and blue can be difficult to distinguish

Types of Color Blindness

NORMAL VISION

DEUTERANOMALY

PROTANOPIA

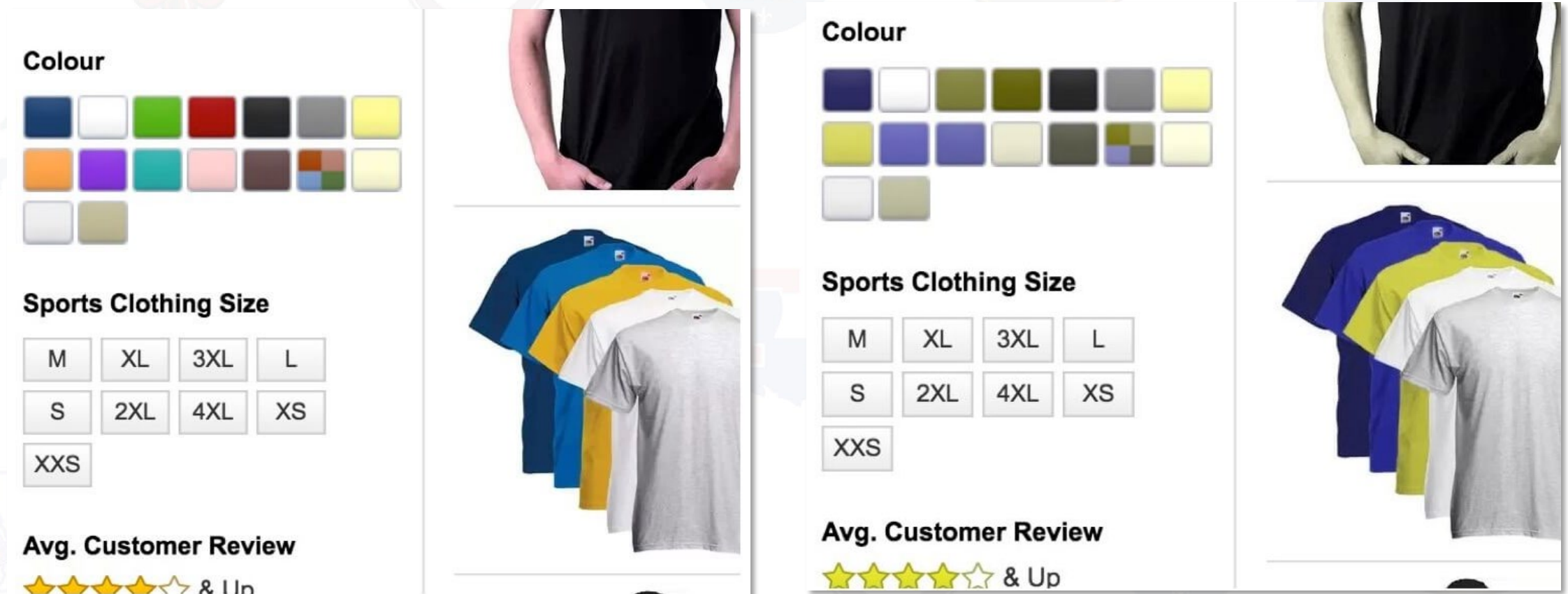TRITANOPIA

NORMAL VISION

DEUTERANOMALY

PROTANOPIA

TRITANOPIA

Types of Color Blindness

An Amazon listing using a filter simulating Protanopia (red-green color blindness)

Color Combinations to Avoid

Avoid high value complimentary colors. (green/red, green/brown, blue/purple, green/yellow, etc)

Green/Red

Green/Brown

Blue/Purple

Green/Yellow

On the right, how those may appear to individuals with color blindness.

Color Contrast Standards

Contrast ratio: measure of difference in brightness

1:1 = same color; 21:1 highest possible

Most text and images: Contrast ratio of 4.5: 1

Large scale (min 18 pt or 14 pt bold) text: Contrast ratio minimum 3:1

Graphs and charts: 3:1

Accessibility checker will flag

Contrast checker:
- WebAIM

WebAim Color Contrast Checker

WCAG: *Minimum 4.5:1 for regular text and 3:1 for large text*

Contrast Checker

Home > Resources > Contrast Checker

Foreground	Background
Hex Value	Hex Value
# 4EA72E	# FFFFFF
Color Picker Alpha	Color Picker
[green] 1	[white]
Lightness	Lightness

Contrast Ratio

3.04:1

permalink

Normal Text

WCAG AA: **Fail**   The five boxing wizards jump quickly.
WCAG AAA: **Fail**

Large Text

WCAG AA: **Pass**   **The five boxing wizards jump quickly.**
WCAG AAA: **Fail**

Graphical Objects and User Interface Components

WCAG AA: **Pass**   ★
                              Text Input

Contrast Examples

TITLE

HEADING 1

HEADING 2

Text

Hyperlinked text

TITLE

HEADING 1

HEADING 2

Text

Hyperlinked text

Graphics with Low Contrast

Content difficult to distinguish from background
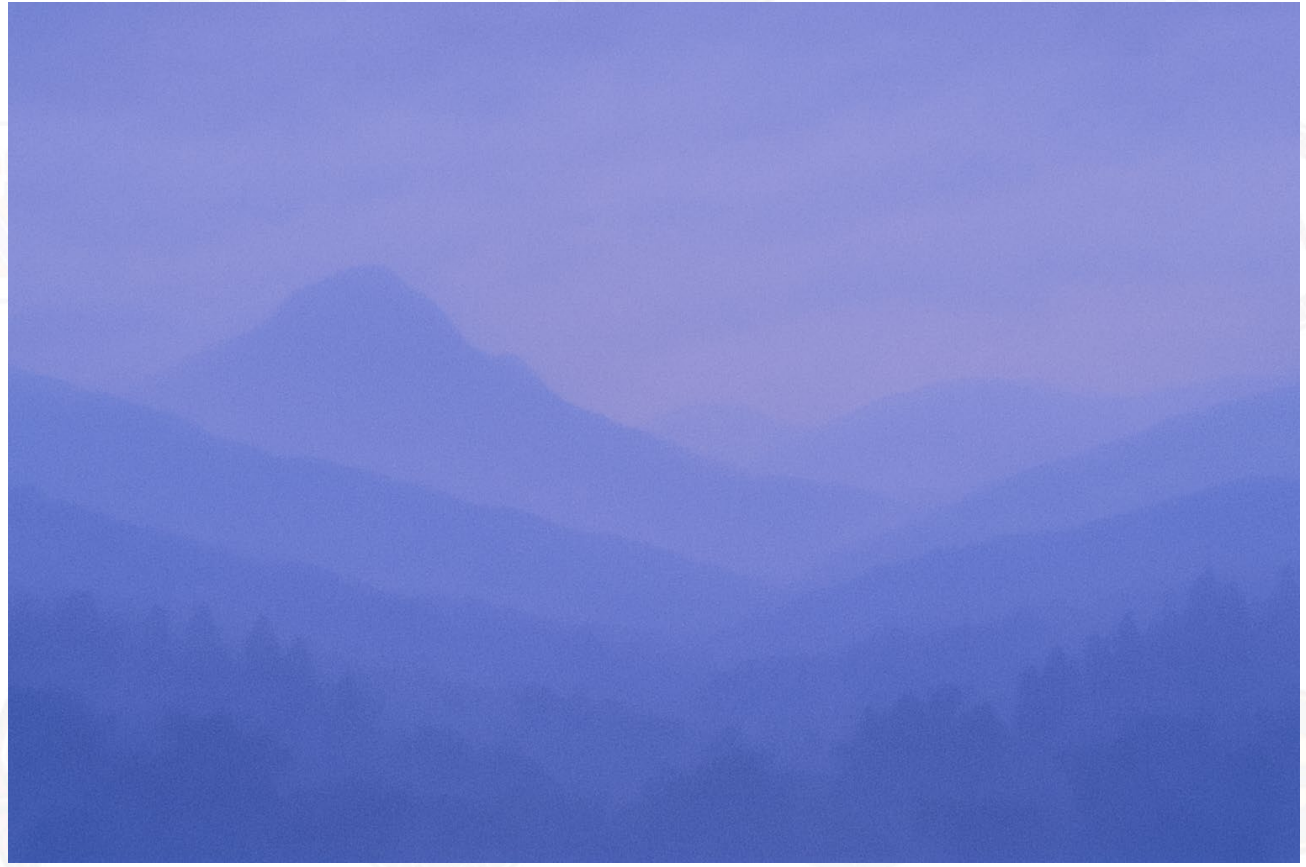
Avoid Busy Backgrounds behind Text

Color Alone to Denote Meaning

Example: Group one in red; group two in green

DON'T:

Emily
Jarrod
Stephanie
Danielle
Brian
Melanie

BETTER:

Group 1
Emily
Stephanie
Brian

Group 2
Jarrod
Danielle
Melanie

Emily (Group 1)
Jarrod (Group 2)
Stephanie (Group 1)
Danielle (Group 2)
Brian (Group 1)
Melanie (Group 2)

Add Descriptions if Using Color

Include a brief description along with color differentiation.

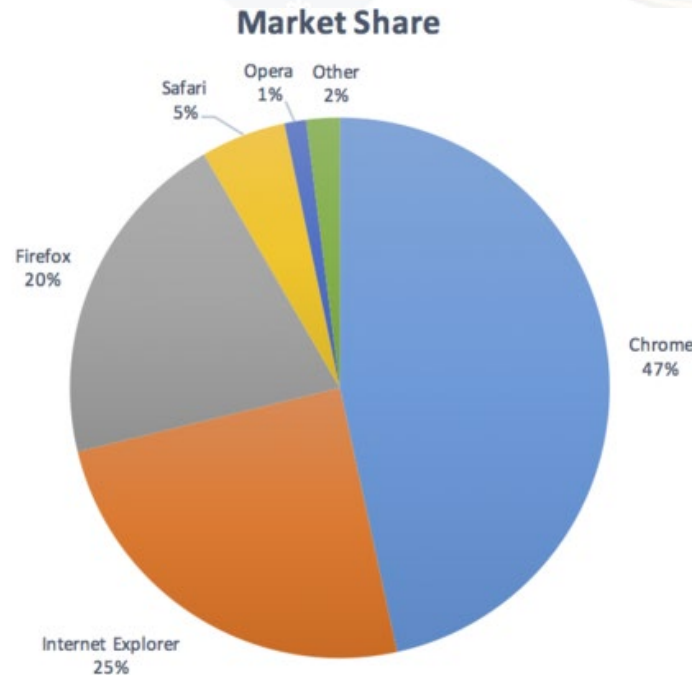|	
You have added the item to your basket	You have added the item to your basket
Unable to add the item to your basket	Unable to add the item to your basket
Succes: You have added the item to your basket	Succes: You have added the item to your basket
Error: Unable to add the item to your basket	Error: Unable to add the item to your basket
✓ You have added the item to your basket	✓ You have added the item to your basket
! Unable to add the item to your basket	! Unable to add the item to your basket

Contrast (Chart)

Make sure colors within a graphic have adequate contrast.

Example of contrast too low; difficult to see edges
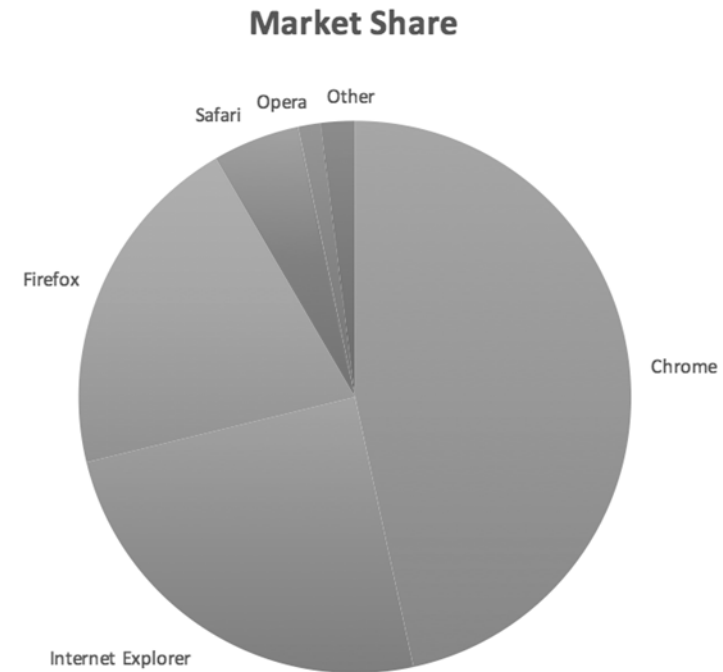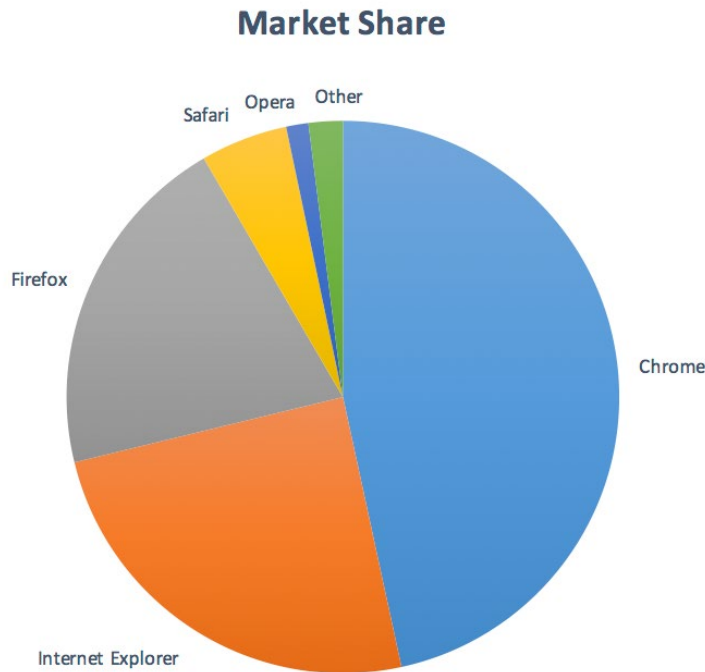
Contrast (Chart) Add Labels
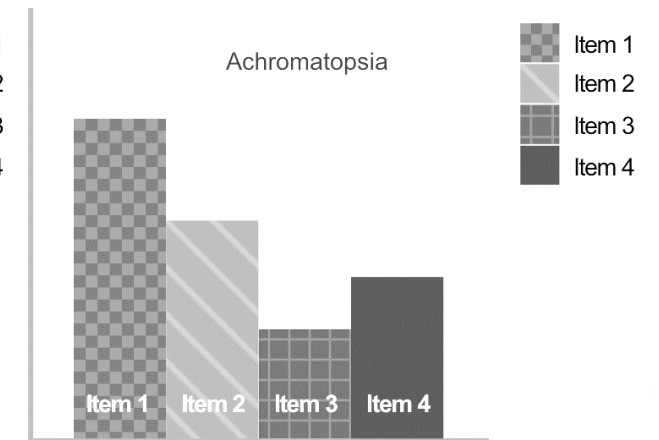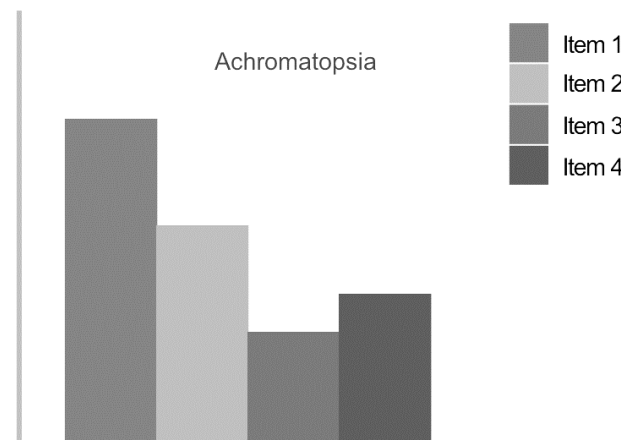
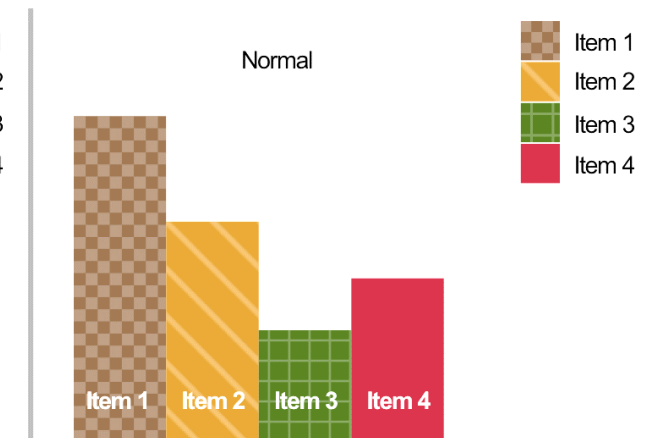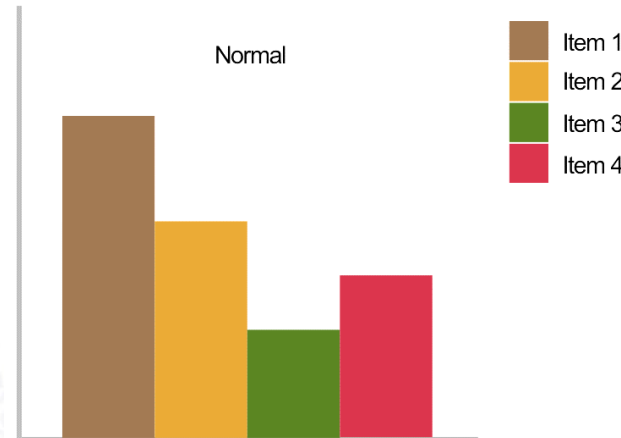Add callouts or labels to the chart.

- Adding callouts with labels and percentages makes this chart more understandable
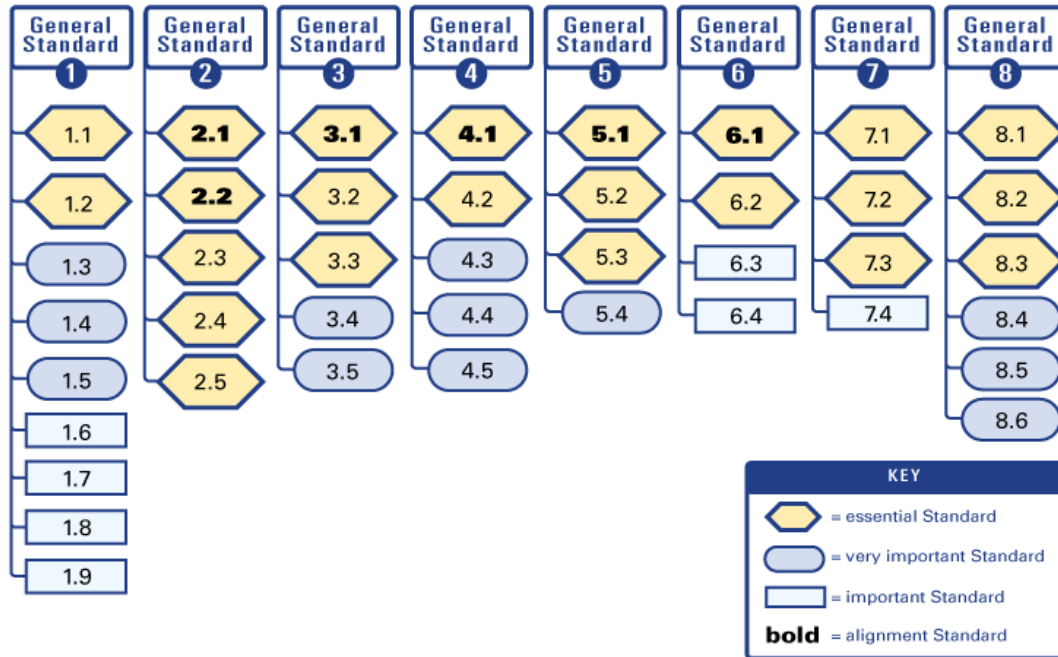- On the right- Adding more contrast between the sections can also help show the differences.

Market Share

Opera 1%, Other 2%, Safari 5%, Firefox 20%, Chrome 47%, Internet Explorer 25%

Market Share

Safari, Opera, Other, Firefox, Chrome, Internet Explorer
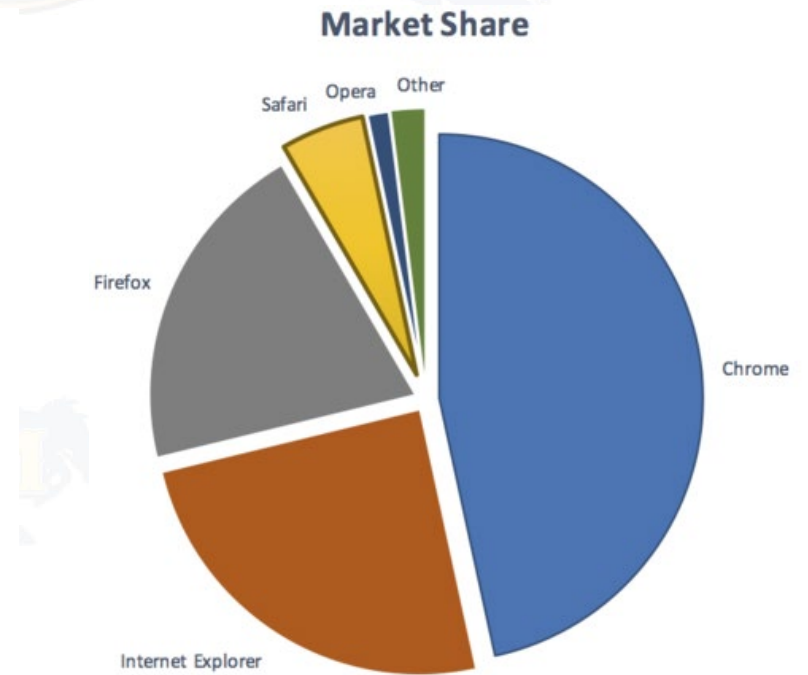
Graphs

Label items

Use shapes and patterns
when possible

Example
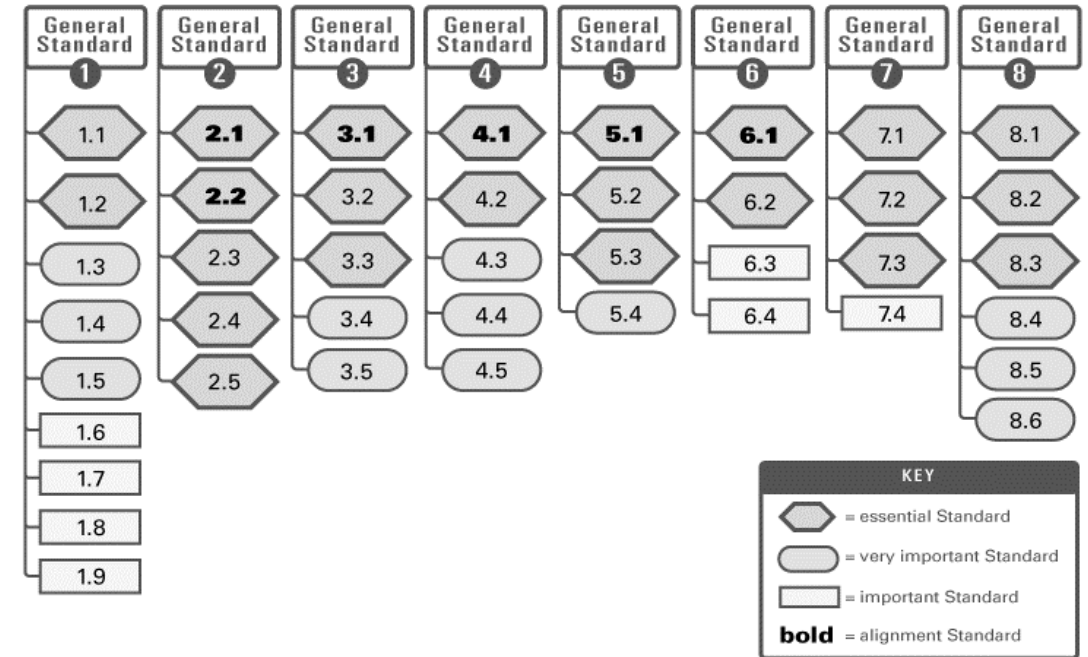
Color & Design Rules Resources

Tools to help you design with colorblindness in mind:

- [A great explanation of color font ratios](#).
- [WebAim's color contrast checker](#): provide two colors to see if they pass accessibility guidelines.
- [Color Oracle](#): a color blindness simulator for Windows, Mac and Linux, showing you what people with common color vision impairments will see.

What Is Alt Text?

- Alt text is a written substitute for meaningful image content.
- Read aloud by screen readers for blind/low-vision users
- Required by WCAG 1.1.1 Non-Text Content
- Goal: provide the same meaning, not the same visual detail

When Do You Use Alt Text?

- Use alt text when an image:
  - Conveys information (charts, diagrams, screenshots, labels)
  - Supports instruction or is referenced in the content
  - Identifies a person, place, or object
  - Functions as a link or button
   - Example: alt="Download syllabus"

If you remove the image, does the user lose meaning? If yes, alt text is required.

How to Write Good Alt Text

- Be concise and specific (aim for ≤ 125 characters or one/two sentences.)
- Focus on purpose, not appearance
- Don't start with "Image of…" or "Picture of…"
- Describe meaning, not style

Alt Text – Chart Example

- The image of a blue bar chart with three tall bars.

Enrollment Growth (2021–2023)
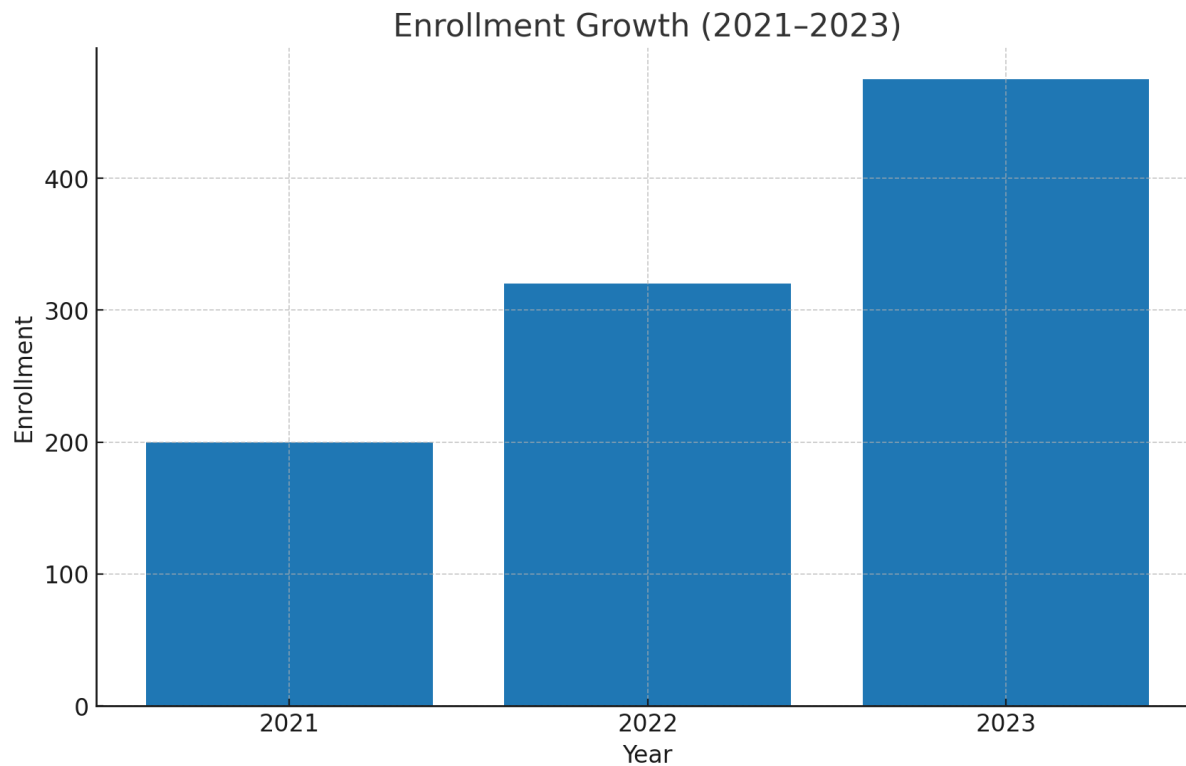
Alt Text – Chart Example

- ~~The image of a blue bar chart with three tall bars.~~
- Bar chart showing enrollment rising from 200 to 475 from 2021 to 2023.

Enrollment Growth (2021–2023)

Alt Text – Image Example

- A lake with mountains and trees
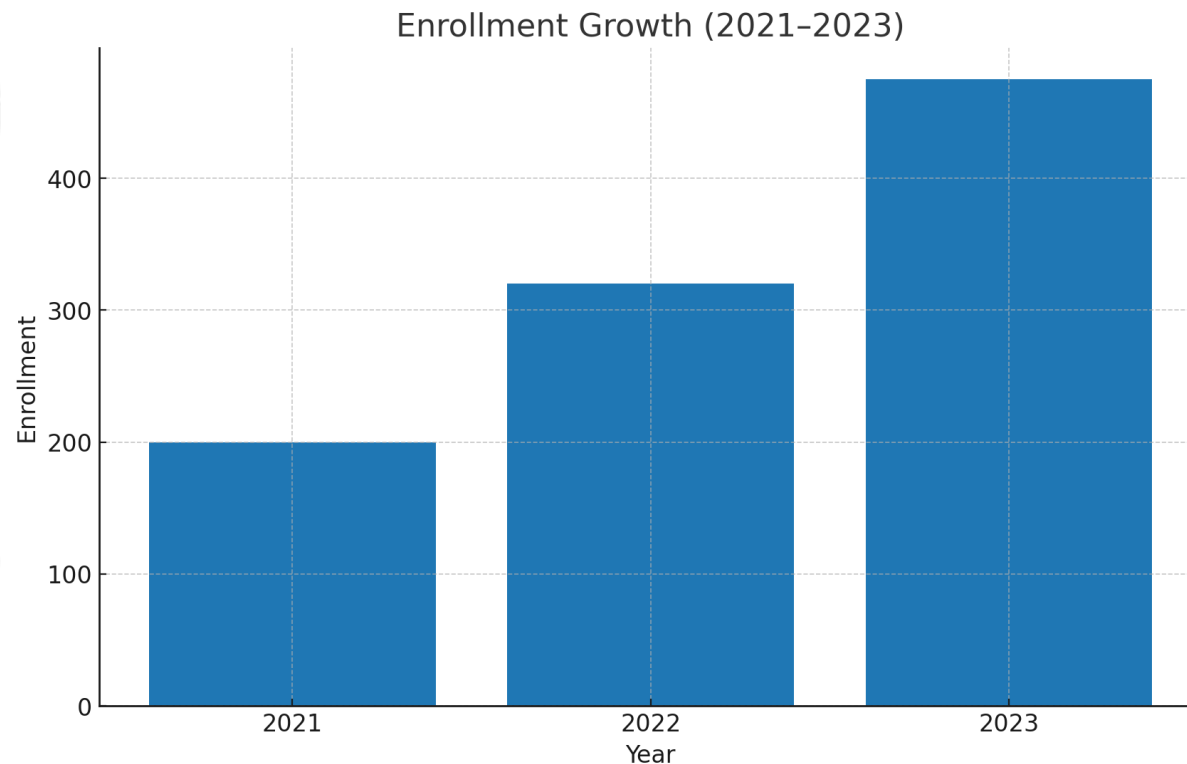
Alt Text – Image Example

- ~~A lake with mountains and trees~~
- Snowy mountains glow at sunrise above a still lake and dark evergreens as pink clouds drift across a clear, peaceful sky.

When Alt Text Isn't Enough (Long Descriptions)

- For complex visuals (e.g., infographics, maps, detailed charts):
  - Give a short alt text and long description elsewhere
  - Long descriptions can go:
    - In surrounding text
    - In a figure caption
    - On a separate linked page/accordion

Rule:

- Alt text = summary of meaning

- Long description = details and data

Context Matters

Alt text should answer "What does a sighted user gain from **this image right here** that a non-sighted user also needs?"

Questions that shape how you write alt text contextually:
- Why is the image here?
- What information does it add?
- What should the viewer learn or notice from it?

If the **purpose changes**, the **alt text must change too**, even if the image stays the same.

Context Matters – Example

Biology Lesson

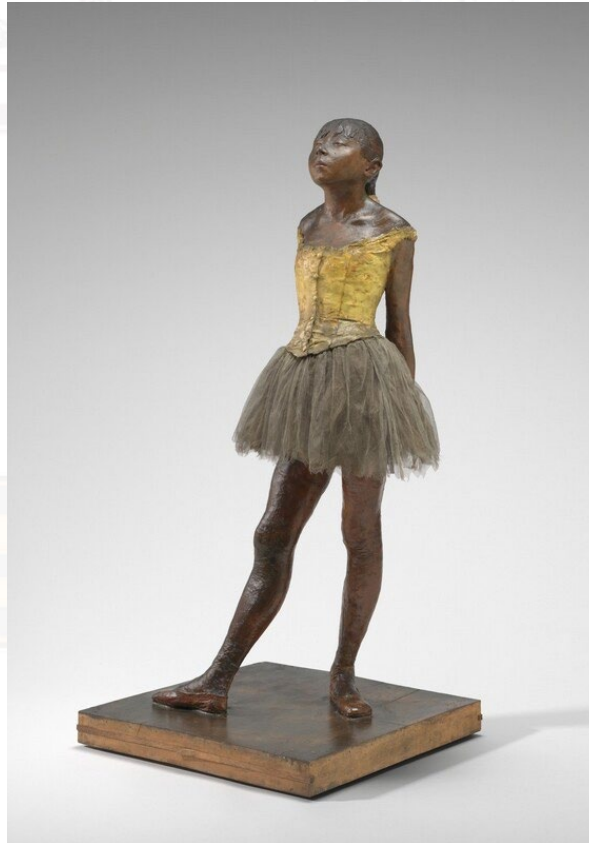- A Brown Pelican perched on a piling, showing its long bill.

Marketing Poster

- A pelican perched on a piling at sunset along the calm, Louisiana coast.

Context Matters – Example

Dance Textbook

- Degas' 1881 sculpture *Little Dancer Aged Fourteen*
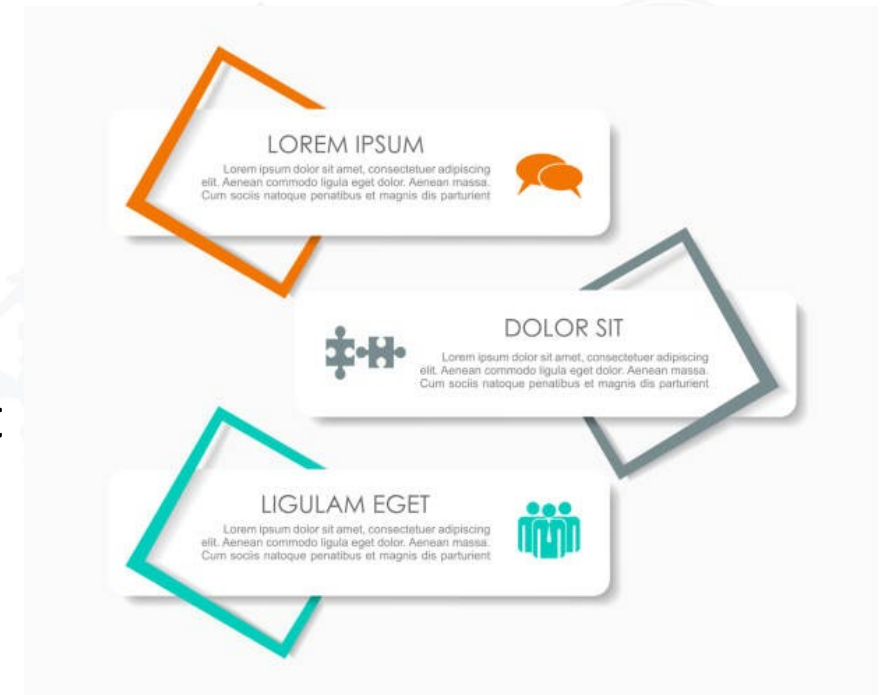

Art History Quiz

- A bronze statue of a girl in a tutu, hands behind her back, face upturned.

Decorative Images

- Decorative images add visual interest but **do not convey meaning**.
- Decorative images use empty alt text (alt=""). Many programs achieve this by allowing you to "mark as decorative."
  - Examples
    - Background images or textures
    - Stock photos used only for "mood"
    - Clip art or icons used only for decoration
    - Campus/scenery photos not discussed in content
    - Logos used only for branding
    - Divider images or decorative bullets

LOREM IPSUM
Lorem ipsum dolor sit amet, consectetuer adipiscing elit. Aenean commodo ligula eget dolor. Aenean massa. Cum sociis natoque penatibus et magnis dis parturient

DOLOR SIT
Lorem ipsum dolor sit amet, consectetuer adipiscing elit. Aenean commodo ligula eget dolor. Aenean massa. Cum sociis natoque penatibus et magnis dis parturient

LIGULAM EGET
Lorem ipsum dolor sit amet, consectetuer adipiscing elit. Aenean commodo ligula eget dolor. Aenean massa. Cum sociis natoque penatibus et magnis dis parturient

Special Cases

- **Icons**: describe function
  - (e.g., "More information")

- **Screenshots**: Explain what matters, not every pixel

- **Logos**: Identify organization or logo
  - (e.g., "University of New Orleans logo")

- **Text in images**: Repeat the visible text in the alt text
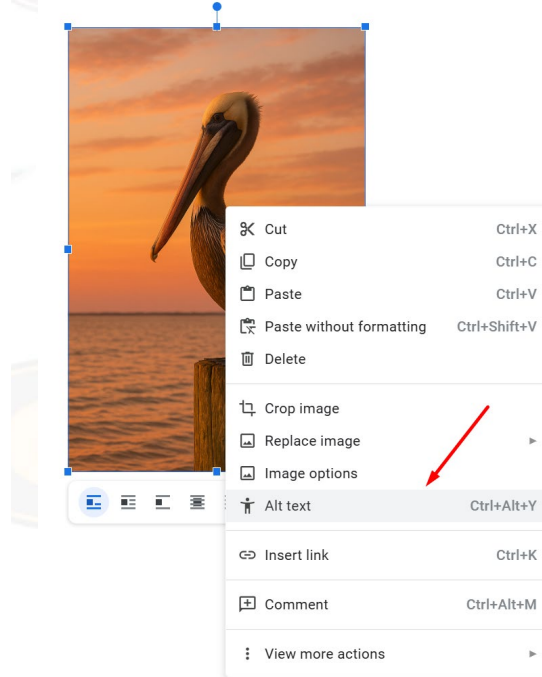
Automated Alt Text

- Many platforms (Microsoft, Google) can use AI to guess a short description for an image.

- It's a starting point, not a finish line. **Always check auto-generated alt-text!**

- When auto-alt sometimes gets it right:
  - Simple, literal photos used for light illustration.
  - Non-critical visuals where a small error won't affect learning.
  - Decorative images you'll immediately mark as decorative.

- When auto-alt is not enough:
  - Instructional images tied to outcomes ("identify beam stress points").
  - Charts/graphs/infographics (require a main takeaway + often a long description or data summary).
  - Screenshots with text/UI (repeat the key text/action; don't describe pixels).
  - Functional icons/links (must describe action: e.g., "Download syllabus").

How Do I Add Alt Text

Click or right click/ctrl click/cmd click on images in nearly any software to find the alt text option!
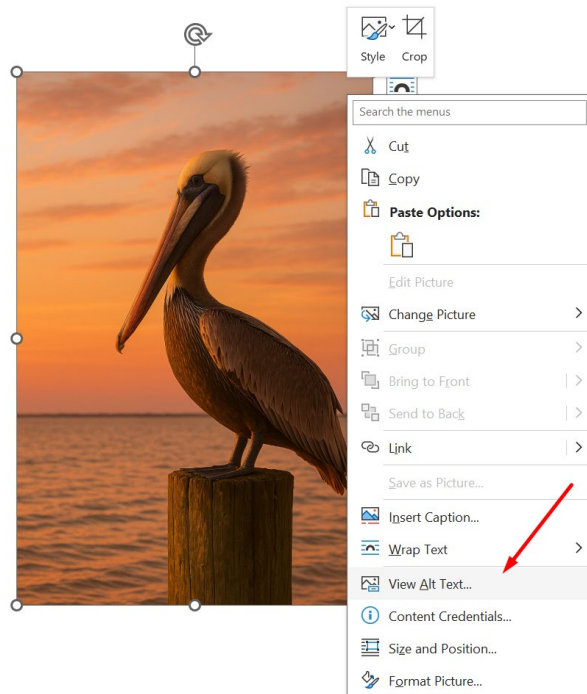
Right-click image in Word   Right-click image in Google Docs   Click image ("Image options") in Canvas
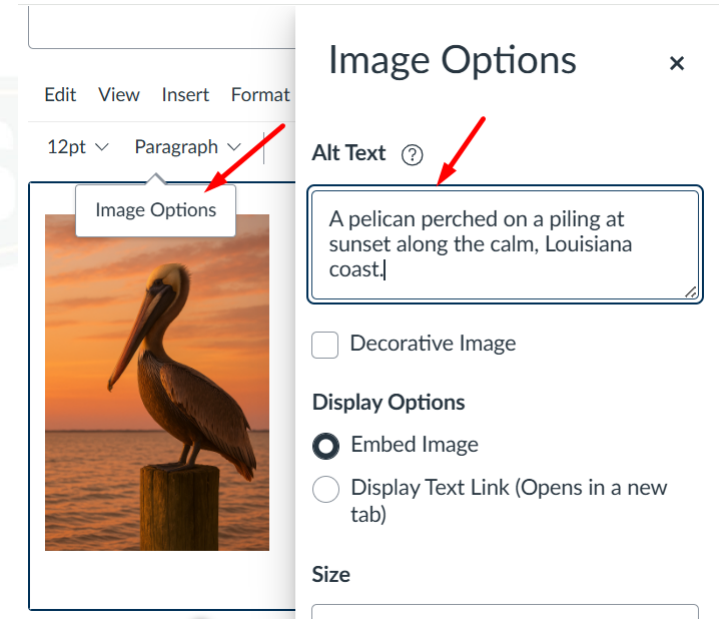
Key Takeaways

- If it has meaning, describe it.
- If it's decorative, hide it.
- Context matters.
- Keep alt text short and purpose-focused.
- Use long descriptions for complex images.

Captions
(Overview and Best Practices)

What Are Captions?

- On-screen, synchronized text of speech and meaningful sounds

- Enables real-time comprehension while watching

- Includes:
  - Dialogue
  - Speaker identification (when unclear)
  - Meaningful sound effects ([*laughter*], [*door slams*])
  - Required for both pre-recorded and live videos.
    - Required even if you did not create the video.

Key Idea: Captions = equivalent viewing experience

What Are Transcripts?

- Text alternative for media content
- Contains all spoken words and sound cues
- Not synchronized; can be read independently
- Required for pre-recorded audio-only or video-only
- Supports:
  - Screen readers
  - Deafblind access
  - Low bandwidth situations
  - Study, search, and note-taking

Key Idea: Transcripts = flexible, study-friendly access

Captions vs. Transcripts

Feature	Captions	Transcript
Format	On-screen text	Stand-alone text
Sync w/ Audio	✅	❌
Best For	Watching	Reviewing

Rule of Thumb:

- Captions = during playback for video with synced audio
- Transcripts = before/after playback or during playback with audio that does not have video

When To Use Captions vs. Transcripts

Media Type	Captions	Transcript
Audio-only (podcast)	❌	✅
Video with speech	✅	Recommended
Video-only (silent)	❌	✅
Live stream	✅ (live captions)	Post-transcript recommended
Instructional video	✅	Recommended

Auto-Captioning & Auto-Transcripts

- Auto tools (YouTube, Panopto, Zoom, Teams, Google, etc.)
  - Pros:
    - Fast first draft
    - Increases baseline accessibility
  - Limitations:
    - Inaccurate with:
      - Accents
      - Names/technical terms
      - Multiple speakers
    - Missing or incorrect punctuation
    - Often fails to identify speakers
    - Does NOT meet WCAG unless edited for accuracy

Auto-captions are a starting point. They must be edited for compliance.

Expectations

- **Captions and transcripts should be:**
  - Accurate
  - Synchronized (Captions)
  - Complete
  - Speaker-clear
  - Include meaningful sounds
- **Accuracy Checklist:**
  - Names
  - Homophones
  - Technical terms
  - Speaker labels
  - Punctuation and capitalization

Best Practices

- **Captions**
  - Break into short readable chunks
  - Use sentence case, not ALL CAPS
  - Minimum 1 second per caption, max 2 lines
  - Include sound cues only when meaningful

- **Transcripts**
  - Match spoken order
  - Include sound cues only when meaningful
  - Technical terms
  - Identify speakers when helpful
  - Add visual descriptions for video-only action or scenes

Tools for Captioning & Transcription

- **YouTube Studio** ([upload caption](#)s; [automated captions](#); [edit captions](#))
- **Google Drive** ([upload caption](#)s; [automated captions](#); [edit captions](#))
- **Zoom** ([live auto-captioning](#); [recorded captions and transcripts](#); [edit transcript/captions](#))
- **Teams/Clipchamp** ([live auto-captioning](#); [recorded captions and transcripts](#); [editing](#))
- **Panopto** (if licensed – [upload captions](#); [automated captions](#); [edit captions](#))
- **Yuja** (if licensed – [upload captions](#); [automated captions](#); [edit captions](#))
- **Canvas Rich Content Editor** ([upload captions](#))
- **Moodle** ([upload captions](#) – directions may vary depending on Moodle version)
- **Otter.ai** ([create transcripts and caption files](#))
- **Turboscribe.ai** ([create transcripts and caption files](#); [edit transcripts and caption files](#))

Key Takeaways

- **Captions** = *required for video even if you did not create the video*
- **Transcripts** = *required for audio-only even if you did not create the audio*
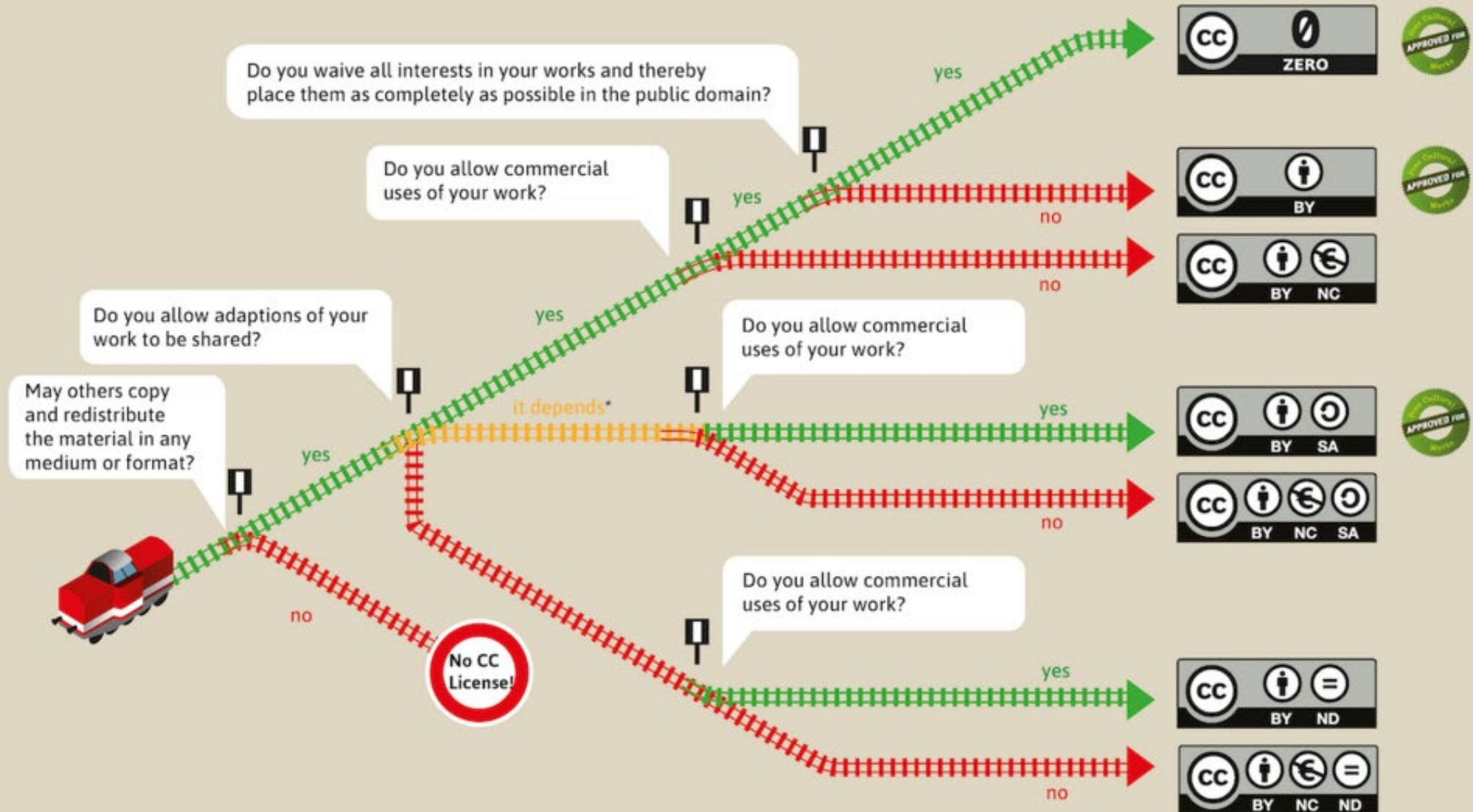- **Auto-captions/auto-transcripts** = *edit before publishing*

Goal: **Equal access to content**, not just "text on screen"

"Choo-Choo-Choose Your License!"

*it depends = yes, as long as others share alike (meaning: They use the same license as you.)

WCAG 2.1 SC 1.2.5 (Level AA)

Audio description is provided for all **prerecorded video** content in **synchronized media**.

Goal: Videos can be played with audio descriptions.

What to do: Provide a synchronized spoken description of the visual content in videos.

Why it's important: People who cannot see or understand the visual content can hear about it while playing videos.

*Descriptive transcripts are not sufficient to meet this requirement.

Does Your Video Require Audio Descriptions?

➤ **Ask Yourself:**

If I couldn't see the screen, what would I miss?

➤ **Ask Someone Else:**

Listen to it without watching the video. What did they miss?

To Audio Describe or Not to Audio Describe?

➤Visuals that <u>Require</u> Audio Descriptions:

    Charts, **Graphs**, **Diagrams**, **Demonstrations**, **Text**, **Actions** and **Gestures**

➤Visuals that <u>Do Not Require</u> Audio Descriptions:

    Decorative or **Repetitive Images**

Solutions for Pre-Recorded Media

Option 1: Add an **Extended Audio Description**

- Extended audio description uses a secondary audio track to play verbal descriptions of visual content

- Requires a tool such as Panopto, Kaltura, or Yuja Lumina to add and play back the extended audio description

- Generate the audio description manually or with AI

- Audio description plays during natural or artificial pauses in the video

- The description is read aloud, typically by a synthetic voice

- Audio descriptions can be enabled or disabled (like closed captions)

- Paid services exist to add extended audio descriptions
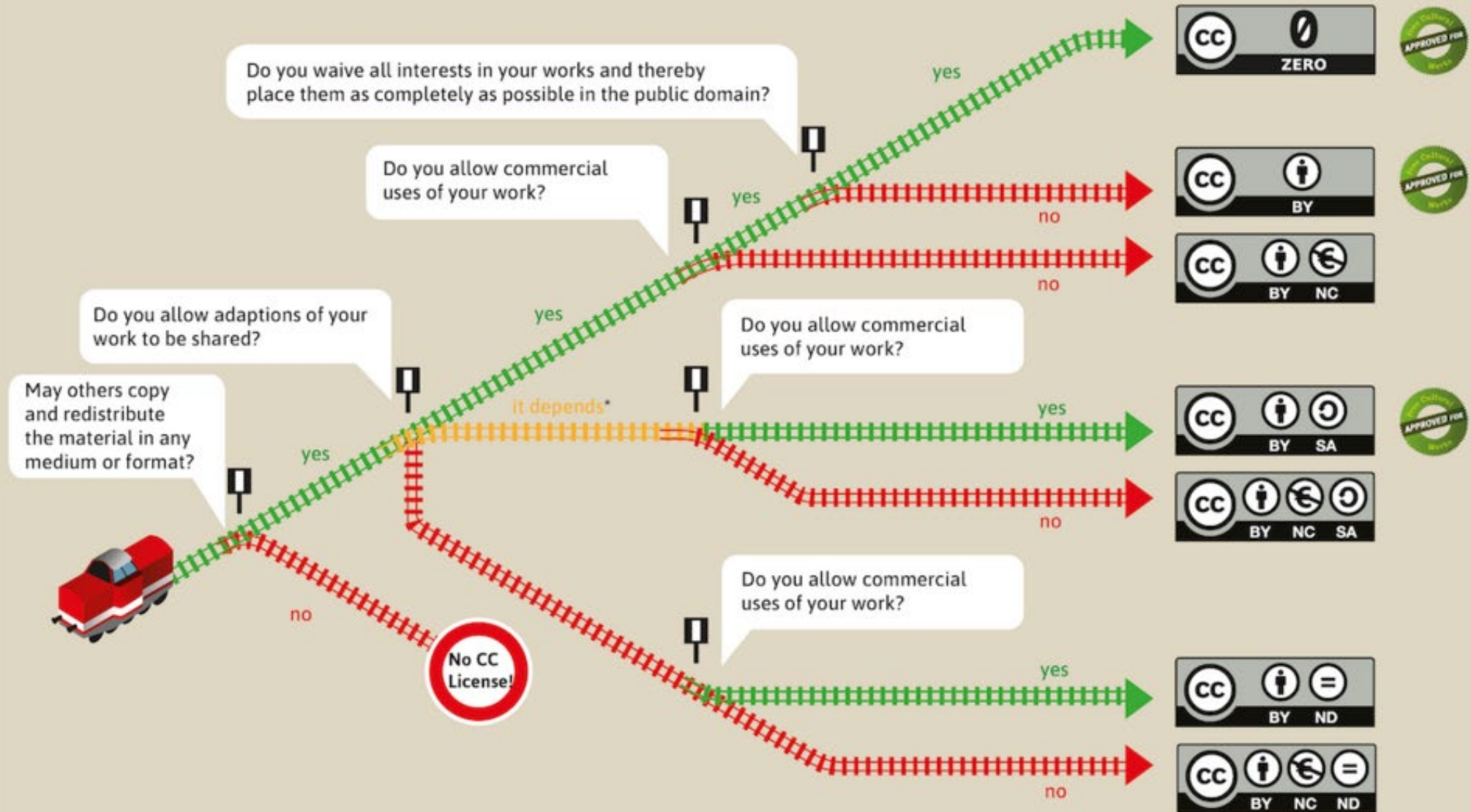
Solutions for Pre-Recorded Media

Option 2: Add a **Natural Audio Description**

- Natural audio description occurs when the main audio track includes descriptions of visual content

- Rewrite the narrative script to include descriptions of visual content and re-record the video using the new script

- OR edit the existing audio track to splice in audio descriptions using free video editors

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Solutions for Pre-Recorded Media

Option 3: **Replace the Video with Other Accessible Media**

- Narrated PowerPoint (requires steps similar to Option 2)

- Images with Alt Text

- Screen-readable Documents (Word, PDF, etc.)

Recording Accessible Videos the First Time

- Storyboard visuals and identify where audio descriptions are needed

- Integrate descriptions naturally into your narration

- Avoid phrases like "as you can see here"

- Pause briefly to give listeners time to absorb visuals

- Test your video by playing it without watching the screen to test comprehension and confirm all essential visuals are conveyed audibly

Audio Description Resources

WCAG Accessibility Principles

WCAG 2.1 1.2.3 (Level A): Audio Description or Descriptive Transcript

WCAG 2.1 1.2.5 (Level AA): Audio Description (natural description)

WCAG 2.1 1.2.7 (Level AAA): Extended Audio Description (paused description)

Standard Audio Description vs. Extended Audio Description

Panopto - How To Add Audio Descriptions

Sample Video with Audio Description

ADA Resources

Accessibility Checker

WebAIM Color Contrast Checker

Free AI Image Alt Text Generator

Office of Technology Service Guide to Accessible Web Services

Pelican: Louisiana's Design System

Questions?

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