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The Art of Accessibility

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The Art of Accessibility

October 16, 2019
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Let's answer these questions:

- What is **accessibility**? Section 508? WCAG?
- What are the differences and similarities between **accessibility** and **usability**?
- What is the business case for **accessible design**?
- How can accessibility lead to **improved usability**?
- What are some **approaches** to implementing accessible content?



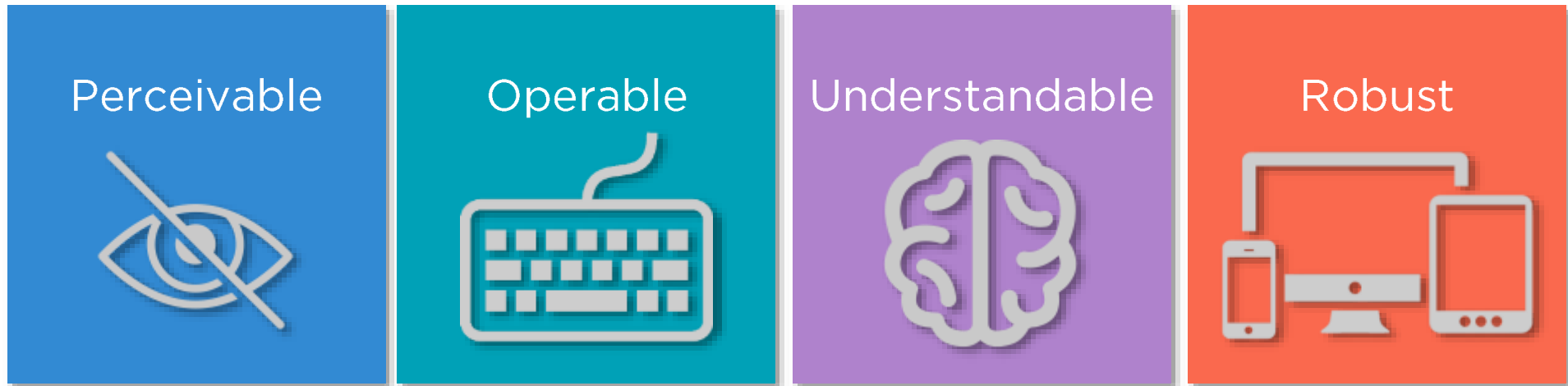
Accessibility: People with disabilities can equally perceive, understand, navigate, and interact with websites and tools. It also means that they can contribute equally without barriers.

- Americans with Disabilities Act
- Sections 504 and 508 of the Rehabilitation Act of 1973
- Web Content Accessibility Guidelines



THE POWER OF THE WEB IS IN ITS UNIVERSALITY.
ACCESS BY EVERYONE REGARDLESS OF DISABILITY IS AN ESSENTIAL ASPECT.
TIM BERNERS-LEE, W3C DIRECTOR AND INVENTOR OF THE WORLD WIDE WEB

WCAG: Web Content Accessibility Guidelines



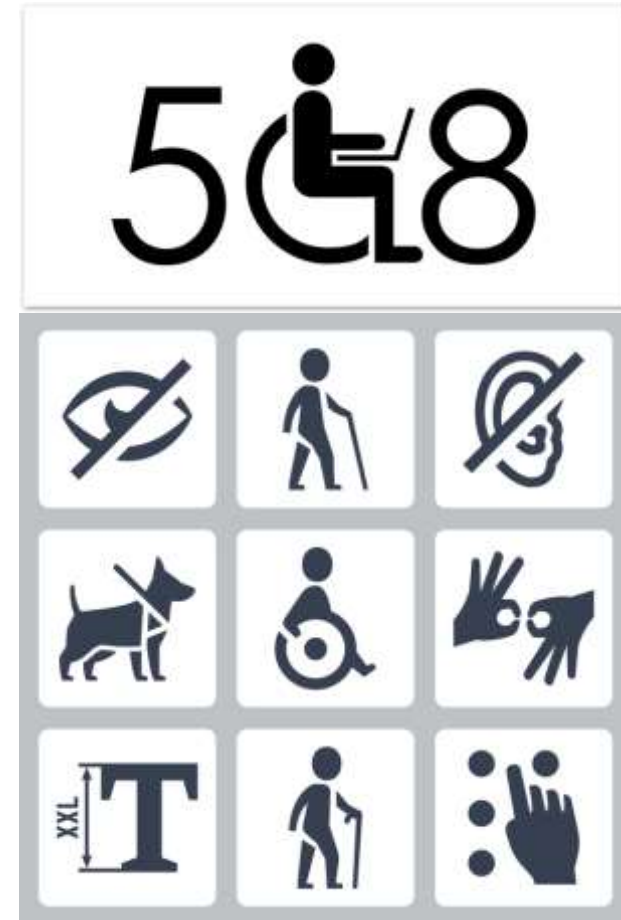
- **Perceivable:** Can content be seen and heard by everyone?
- **Operable:** Can the course be operated without a mouse?
- **Understandable:** Are content and functionality easy to understand?
- **Robust:** Does the course work across browsers and with Assistive Technology?

Section 508

- Federal law
- Standards that require “information and communication technology” (ICT) to be accessible to employees with disabilities.
- Incorporate WCAG 2.0 A and AA

Functional Performance Criteria

- Blindness or visual impairments.
- Deafness, hearing impairments, or use of assistive hearing devices.
- Difficulty with speech.
- Difficulty with fine motor control.
- Limited reach and strength.





Usability

- **Effectiveness:** Enable accurate and complete task performance.
- **Efficiency:** Resources that people use when reaching that goal are the lowest possible (fewer clicks, less time).
- **Satisfaction:** The emotional part; the user's perceived acceptability.

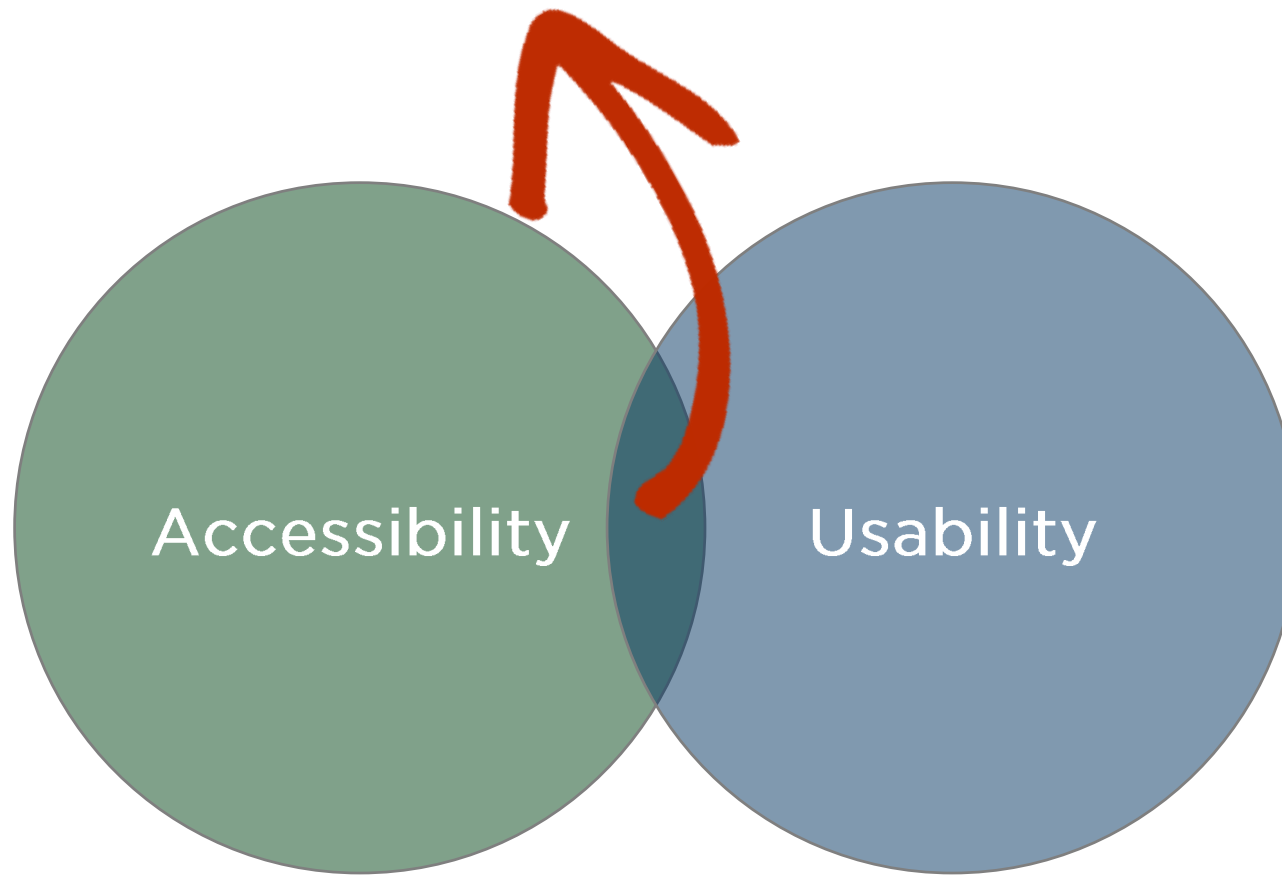
Usability for eLearning:

- The quality of learning
- The quality of teaching
- The quality of the learning environment
- The quality of interaction



Universal Design

The design of products and environments to be usable by all people, to the greatest extent possible, without the need for adaptation or specialized design.





Universal Design for Learning

Affective networks:

THE **WHY** OF LEARNING



How learners get engaged and stay motivated. How they are challenged, excited, or interested. These are affective dimensions.



Stimulate interest and motivation for learning

Recognition networks:

THE **WHAT** OF LEARNING



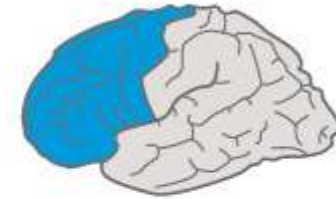
How we gather facts and categorize what we see, hear, and read. Identifying letters, words, or an author's style are recognition tasks.



Present information and content in different ways

Strategic networks:

THE **HOW** OF LEARNING



Planning and performing tasks. How we organize and express our ideas. Writing an essay or solving a math problem are strategic tasks.



Differentiate the ways that students can express what they know

- Section 504 and Section 508 of the Rehabilitation Act of 1973
- The Americans with Disabilities Act of 1990
- ADA Amendments Act of 2008
- State and Local Laws

ADA web accessibility related lawsuits

are on the rise across the U.S., with the biggest bumps in litigation appearing in **New York, California, Florida, Massachusetts, Ohio, Pennsylvania, Texas, and Georgia.**

113%

Rise in web accessibility lawsuits in the state of New York from July 2017 through June 2018

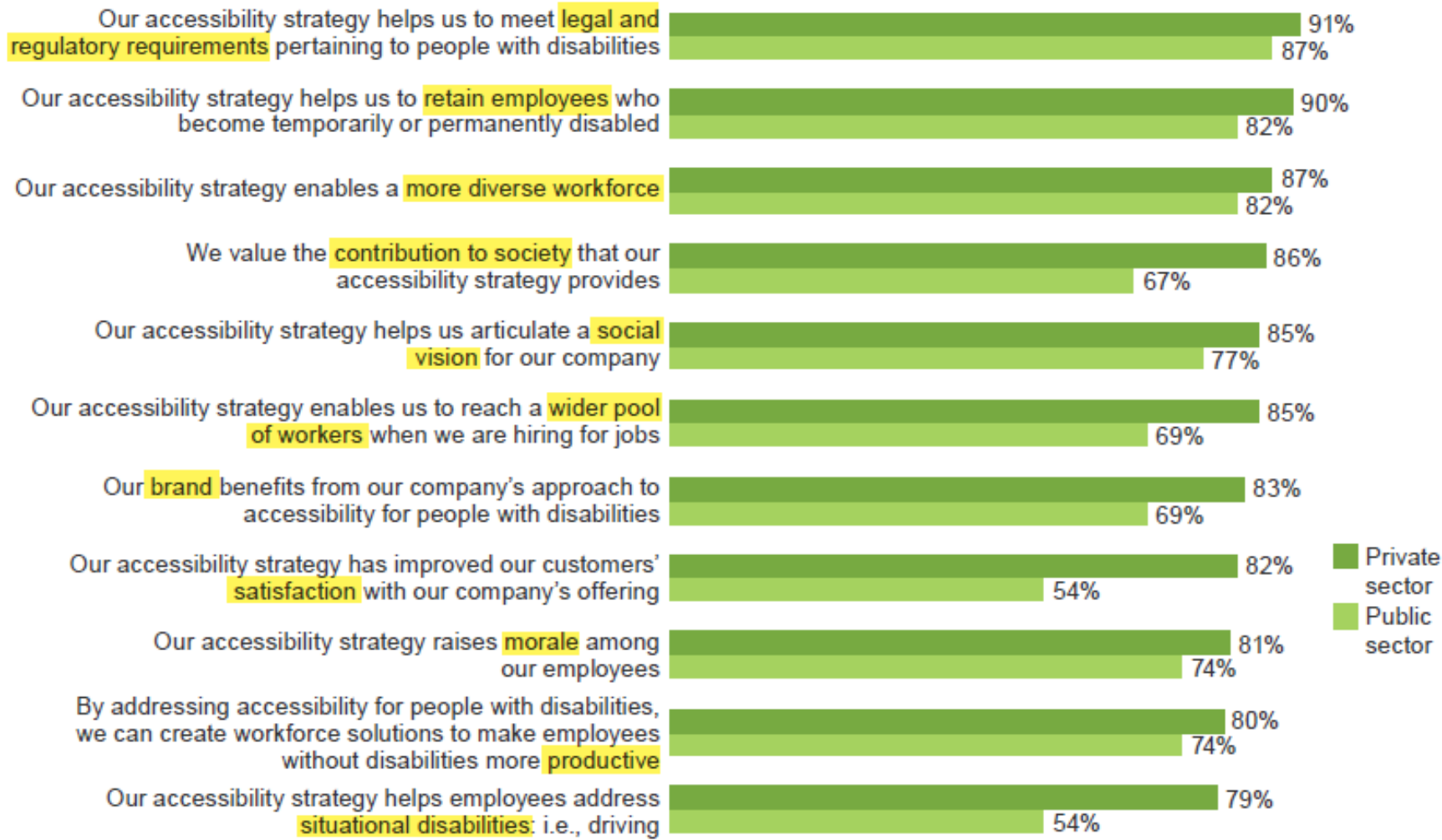
59%

Rise in web accessibility lawsuits in NY, CA, FL, MA, OH, PA, TX, and GA combined from July 2017 through June 2018



Benefits Of Accessible Technologies

“How strongly do you agree or disagree with the following statements?”



Practical Approaches

1. Consistent Navigation	6. Straightforward Language
2. Transcripts & Captions	7. Chunk Content with Markup
3. Keyboard Only Support	8. Descriptive Links
4. Form Labels	9. Focus States
5. Color Contrast	10. Color Isn't Used Alone



1. Consistent Navigation

Course Name > Chapter Name

?

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True False

If I have narration in my e-learning course, then I should use "Auto Start" so that the learner doesn't have to start the audio for each new screen.

True

False

Submit

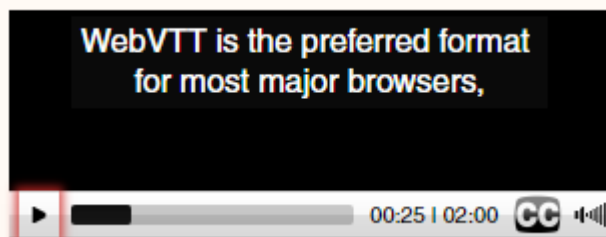
2. Transcripts & Captions

<https://www.w3.org/WAI/highlights/200606wcag2interview.html>

<http://archive.nytimes.com/www.nytimes.com/interactive/2012/01/24/us/politics/state-of-the-union-2012-video-transcript.html#>



One tip: If you need the closed captions to begin right away,



00:00:23.500 --> 00:00:27.100
WebVTT is the preferred format
for most major browsers,

00:00:27.100 --> 00:00:31.200
including browsers for Android
and iOS mobile devices.

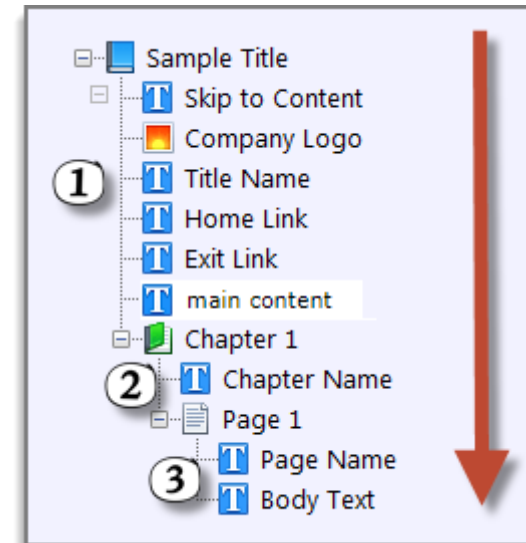
00:00:31.200 --> 00:00:33.900
It also works well with
the HTML5 media player

00:00:33.900 --> 00:00:39.300
introduced in Lectora 16.1
and Lectora Online 3.1.

00:00:39.300 --> 00:00:43.000
The WebVTT and SRT formats
are much simpler to write

00:00:43.000 --> 00:00:46.000
than the XML format we've
always supported.

3. Keyboard Only Support



4. Form Labels

- Check entry fields and drop-downs
- Use in place of placeholder text
- Applies to questions in tests and surveys

Multiple Choice

Which Lectora tool should you use to help determine the accessibility of your e-learning course?

- Translation Tool
- Accessibility Check
- Publish to SCORM
- Error Check

Submit

The screenshot shows a form titled "Enter Your Height" with two input fields: "Feet:" containing the value "5" and "Inches:" containing the value "3". Below the fields are "Submit" and "Reset" buttons. A "Text" tool overlay is visible, showing the "Position & Size" tab. The "Name" field is set to "Feet label" and the "Label for" field is set to "Feet Entry Field".

5. Color Contrast

<https://webaim.org/resources/contrastchecker/>



Here are some examples of text with almost almost exactly 4.5:1 contrast

- Gray (#767676) on white
- Purple (#CC21CC) white
- Blue (#000063) on gray (#808080)
- Red (#E60000) on yellow (#FFFF47)

<https://webaim.org/articles/contrast/>

<https://webcourses.ucf.edu/courses/1246849/pages/techrangers-and-accessibility>

6. Straightforward Language

"TO POSTULATE A CONCEIT MORE IRKSOME THAN BEING ADDRESSED IN SESQUIPEDALIAN SYNTAX IS ADAMANTINE."

"BEING SPOKEN TO IN UNNECESSARILY LONG AND COMPLICATED LANGUAGE IS A PAIN."

- Write in short, clear sentences and paragraphs.
- Avoid using unnecessarily complex words and phrases.
- Consider providing a glossary for terms readers may not know.
- Expand acronyms on first use.
For example, Web Content Accessibility Guidelines (WCAG).
- Use list formatting as appropriate.
- Consider using images, video, audio, and symbols to help clarify meaning.

7. Chunk Content with Markup

- Use headings correctly (H1, H2, H3)
- Use bulleted and numbered lists correctly
- Use forms to group form objects (labels, radio buttons, etc.)
- Break large blocks of content into smaller pieces
- Break up the page visually using alignment and spacing

WHY CATS ARE BETTER THAN DOGS

- No midnight bathroom trips in snow
- They don't bark at the mailman
- Won't instigate never-ending game of "Fetch"
- Purring is quieter than barking
- Smaller, so less food expenses
- Probably won't chew your shoes

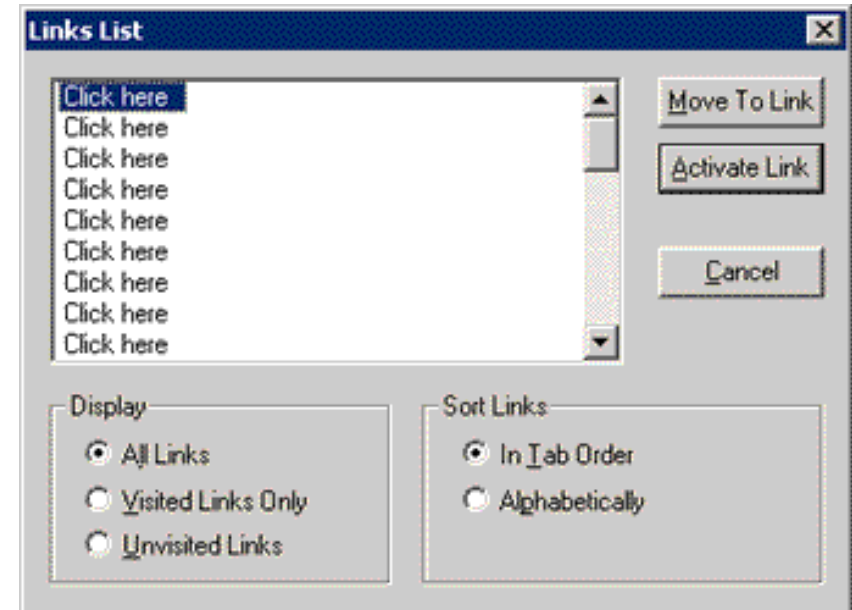
8. Descriptive Links

DON'T

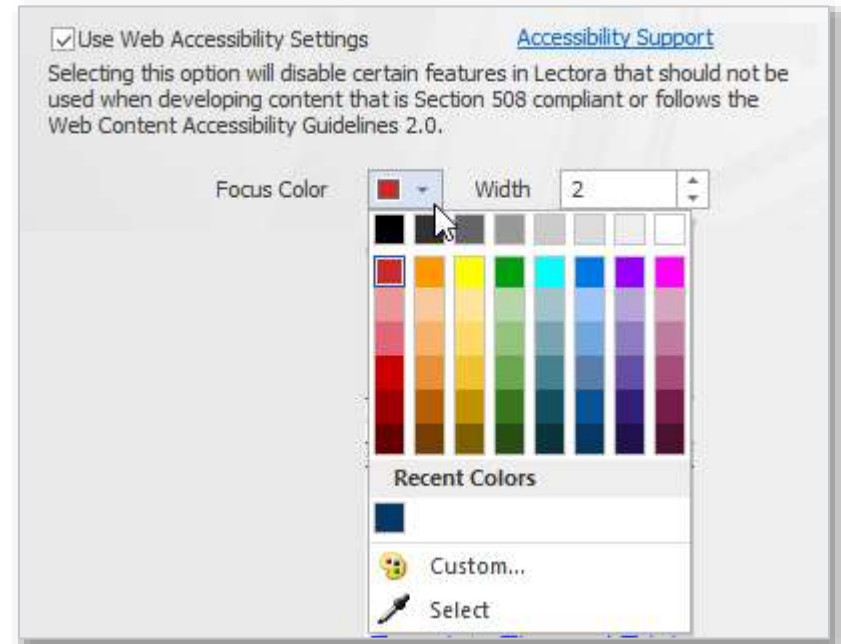
- click here
- here
- more
- read more
- link to [some link destination]
- Info
- <https://www.website.com/docs/1H754h>

DO

- Make link text brief
- Make link text meaningful
- Include the file type (PDF)
- Ensure it makes sense out of context



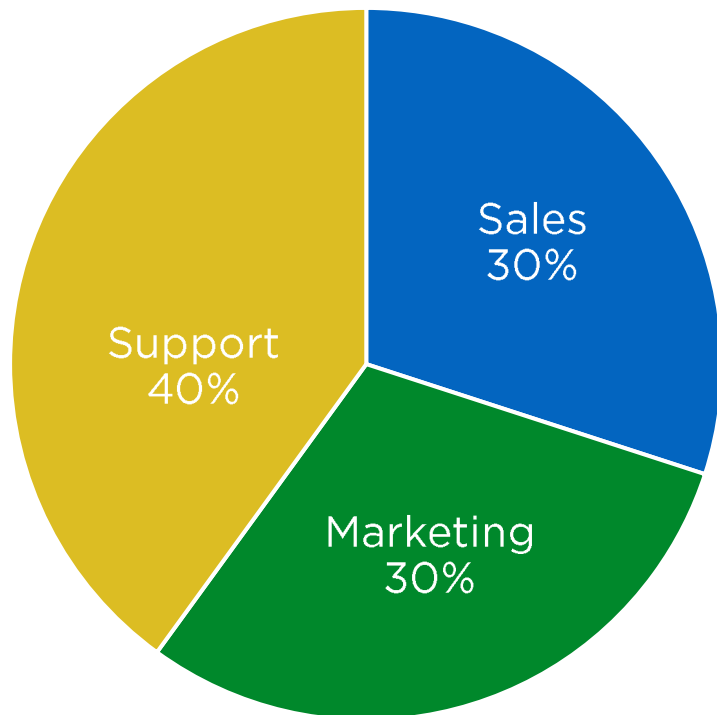
9. Focus States



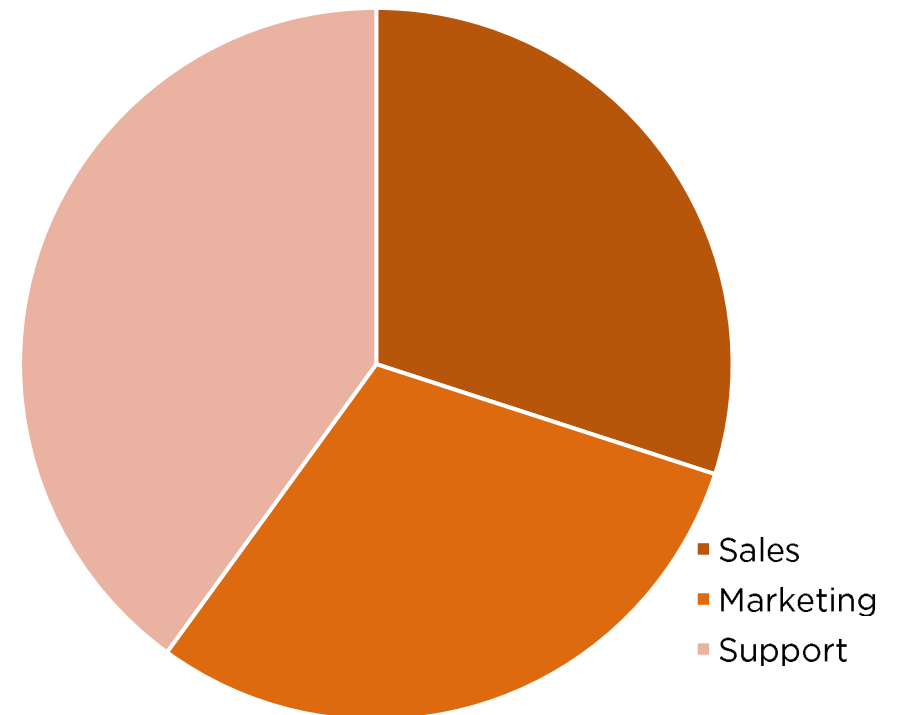
10. Color Isn't Used Alone



Completion by Department



Completion by Department



Resources

- Section 508
section508.gov
- Web Accessibility Initiative (WAI)
www.w3.org/WAI
- Web Content Accessibility Guidelines (WCAG)
www.w3.org/WAI/standards-guidelines/wcag
- Usability.gov
www.usability.gov
- Center for Applied Special Technology (CAST)
www.cast.org
- Web Accessibility In Mind (WebAIM)
webaim.org

