


Web Accessibility

Presented by Wendy Matter





Web accessibility benefits individuals with disabilities, as well as a broader range of users, by **promoting inclusivity, equal access to information and services, and improved user experience for all.**

Agenda

01 Who Benefits From Web Accessibility

02 What Is Web Accessibility

03 How To Test For Accessibility

04 Estimating Effort for Accessibility Compliance

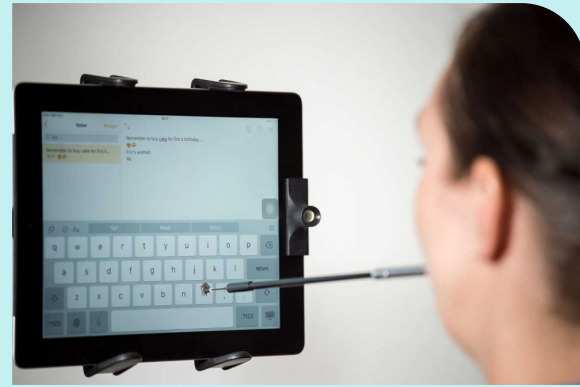
05 Our Responsibility



Who Benefits From Web Accessibility

Who benefits from good Web Accessibility

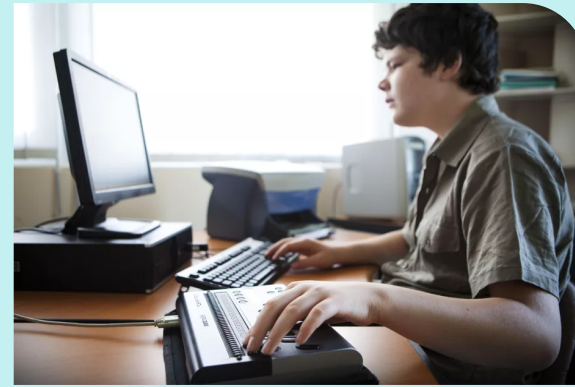
Motor
Disabilities



Hearing
Impaired



Visually
Impaired



Cognitive
Disabilities



Temporary
Disabilities



Aging
Population



Mobile
Users



Approximately, one billion people, or
15% of the world's population,
experience some form of disability.

Benefits of implementing WCAG from the start

- **Wider Audience Reach:** By making digital content accessible, this will open the doors to a broader audience, including people with disabilities. That means more potential customers and a bigger fan base for any products.



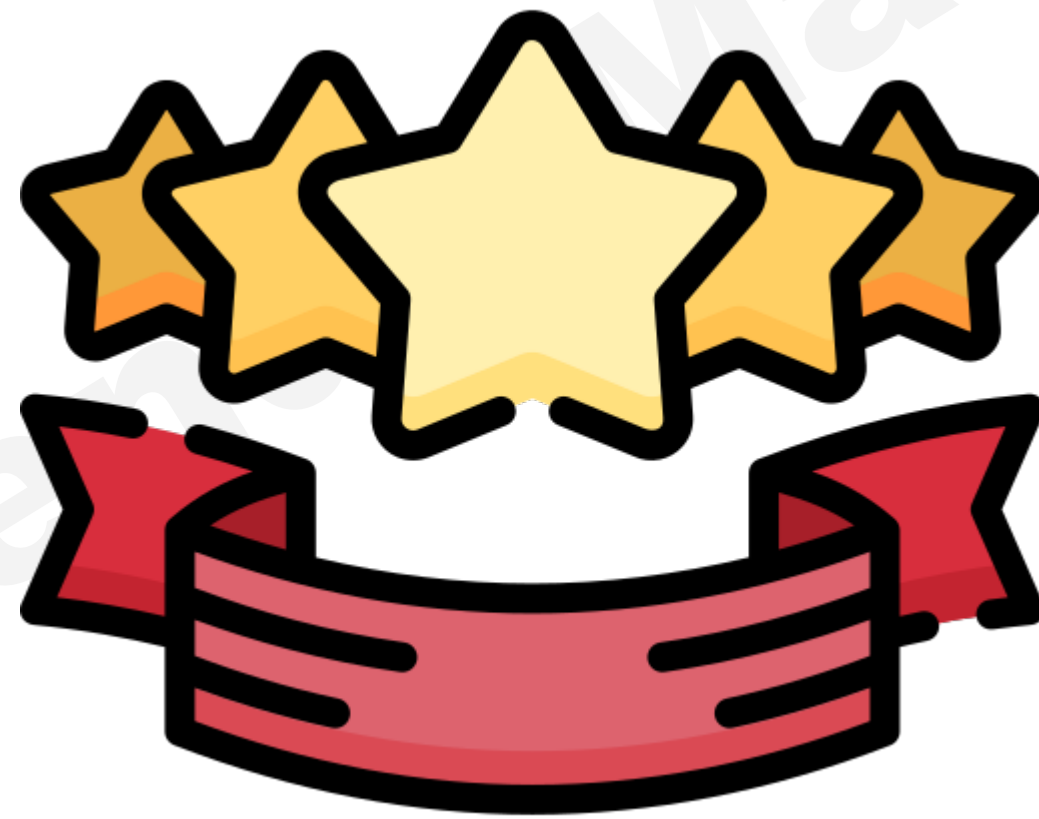
Benefits of implementing WCAG from the start

- **Legal Brownie Points:** Compliance with accessibility standards isn't just a good idea; it's often a legal requirement. Staying on the right side of accessibility laws can save you from headaches and legal issues down the road.



Benefits of implementing WCAG from the start

- **Enhanced Brand Image:** Being proactive about accessibility sends a powerful message about your company's values. It shows you care about inclusivity and equality, earning you major brownie points in the eyes of customers and stakeholders.



Benefits of implementing WCAG from the start

- **Future-Proofing:** Designing with accessibility in mind now saves you from costly retrofits later. It's like investing in a timeless wardrobe – always in style, no matter the trends.



Benefits of implementing WCAG from the start

- **SEO Boost:** Search engines love user-friendly websites. Implementing WCAG principles often aligns with good SEO practices, potentially improving your site's ranking. It's a win-win for accessibility and discoverability.



The background is a solid orange color. In the top-left corner, there are three vertical bars of varying heights, each composed of four overlapping rounded rectangular segments. In the bottom-right corner, there are four vertical bars of varying heights, each composed of four overlapping rounded rectangular segments.

What is Web Accessibility

Who Manages the Standard & Guidelines?

World Wide Web Consortium (W3C)

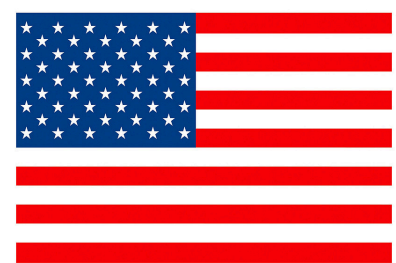
The World Wide Web Consortium (W3C) created the Web Content Accessibility Guidelines (WCAG 2.1) as a **single standard for international web content accessibility**.



Web Accessibility Initiative (WAI)

The WAI is **an initiative by the World Wide Web Consortium (W3C)** that works to develop guidelines and resources for web accessibility.

Their most well-known set of guidelines is the **Web Content Accessibility Guidelines (WCAG)**, which provides a comprehensive framework for making web content accessible.



Section 508

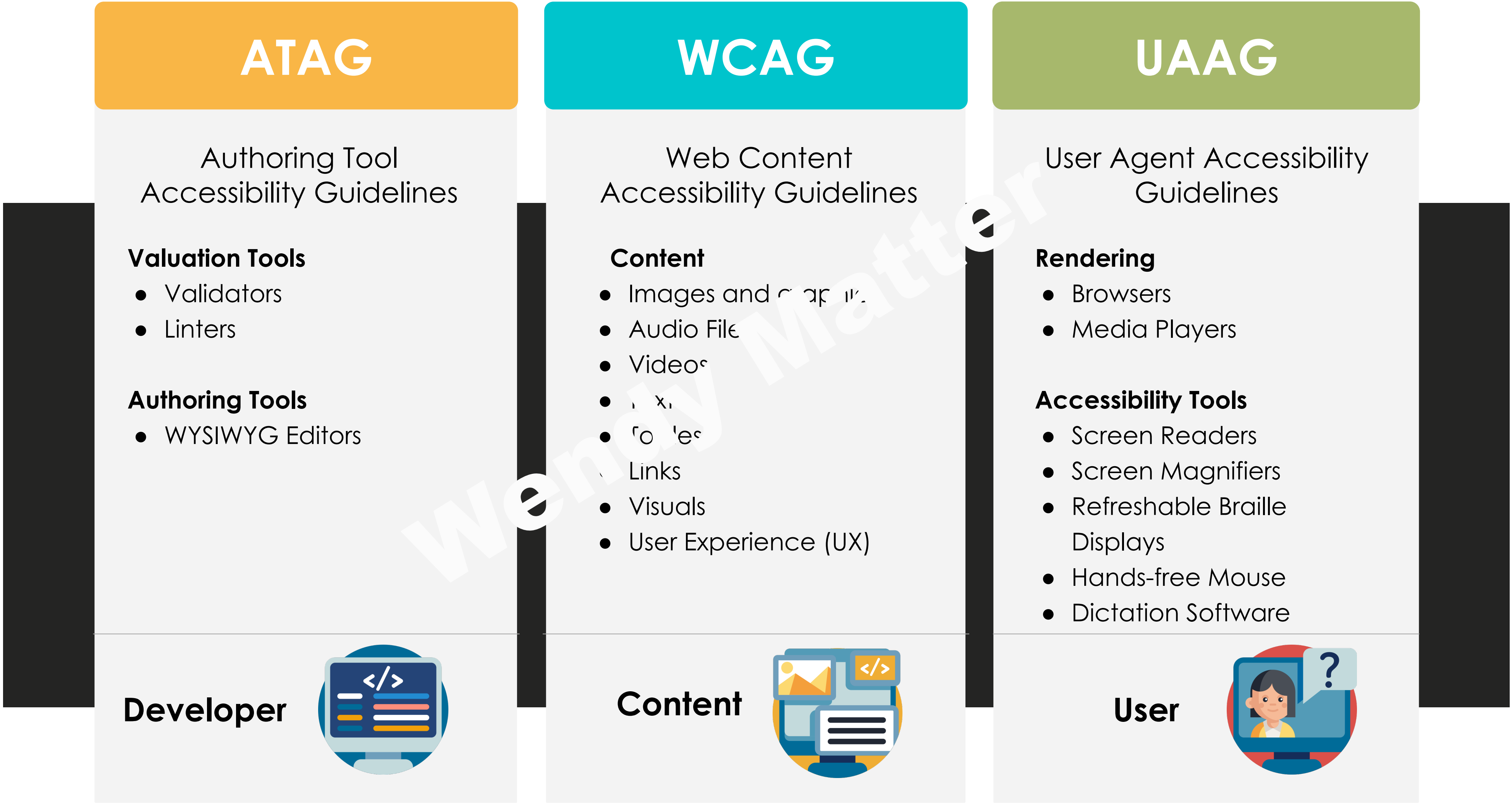
Section 508 of the Rehabilitation Act **requires the U.S. federal government to take accessibility into account when procuring information technologies**: websites, telephones, copiers, computers, and other technologies, including both hardware and software.

European Accessibility Act (EAA)



The EAA is a European Union directive that aims to **harmonize accessibility requirements** for certain products and services across EU member states. It covers a **wide range of sectors**, including websites, mobile applications, ticketing machines, and more.

Web Accessibility Guidelines (WCAG)



Different levels of compliance

LEVEL

A

Minimum

- Text Alternatives
- Time-Based Media
- Adaptable Content
- Distinguishable Content
- Keyboard Accessible
- Enough Time
- Seizures and Physical Reactions

LEVEL

AA

Preferred

- Contrast (Minimum)
- Audio Control
- Keyboard Navigation (No Traps)
- Language of Page
- Focus Visible
- Headings and Labels
- Consistent Navigation

LEVEL

AAA

Specialized

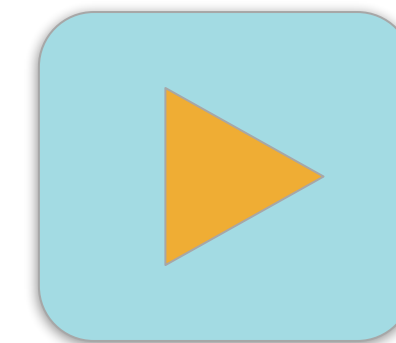
- Contrast (Enhanced)
- Images of Text (No Exception)
- Resize Text
- Motion Sensitivity
- Language of Parts
- Consistent Identification

What is ARIA

ARIA - Accessible Rich Internet Applications

ARIA is a set of attributes that define ways to make **web content and web applications** (especially those developed with JavaScript) **more accessible** to people with disabilities. There are more than 13 attributes to aid in assisting a user.

```
<button aria-label="Play video">  
  <i class="fas fa-play"></i>  
</button>
```



This is an example of the code behind this button so a Reader will clearly state what this button does.

Learn more...

Here is a video of a user navigating a web page while using a screen reader.

<https://www.youtube.com/watch?v=dEbl5jvLKGQ>



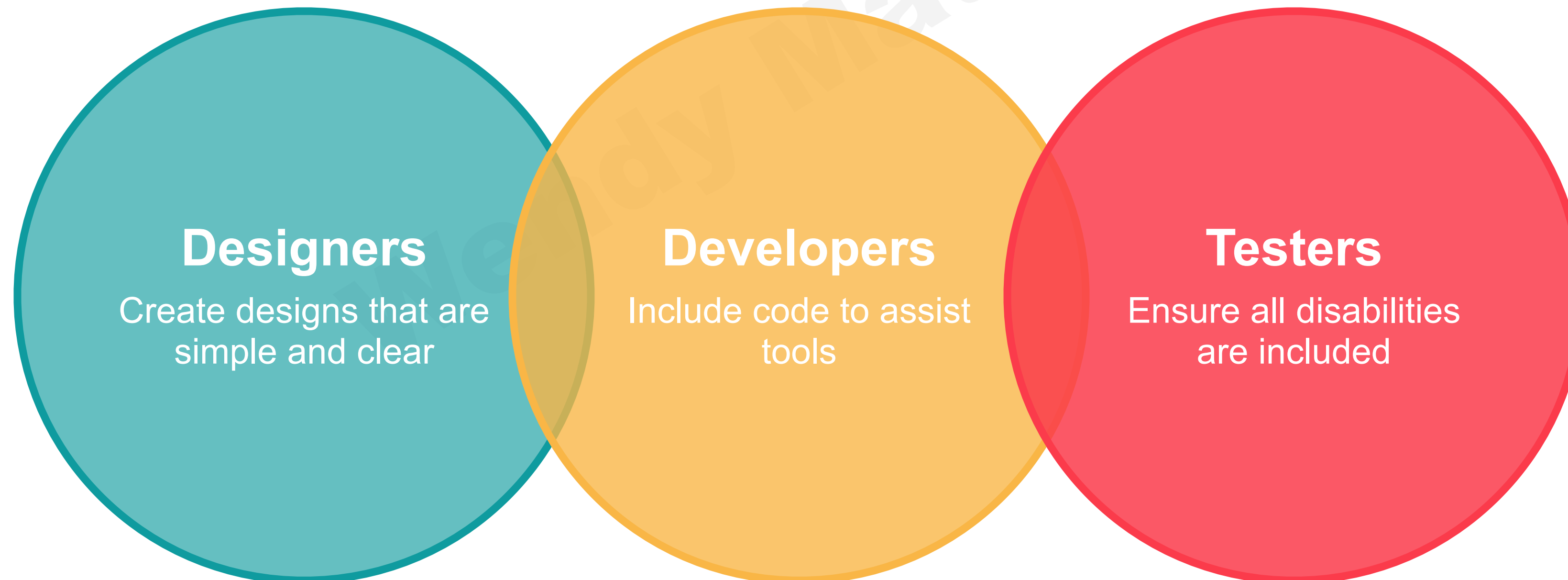


How to Make an Accessible Product?



Who needs to follow these guidelines?

Web Content Accessibility Guidelines (WCAG)
specifies three levels of accessibility:

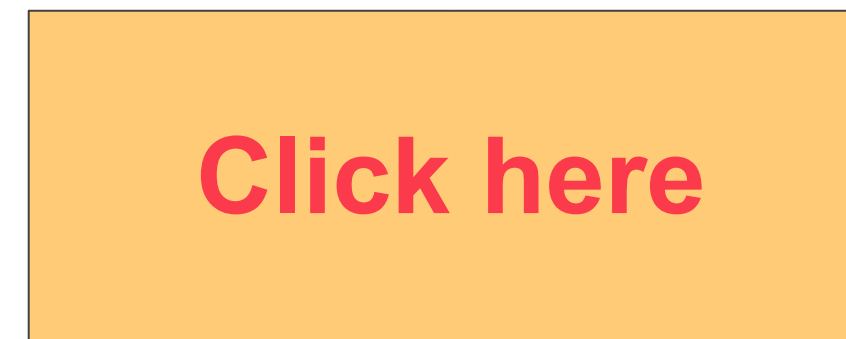


What are Designers Responsible to Include?

- ✓ Color Contrast
- ✓ Typography
- ✓ Images and Icons
- ✓ Keyboard Navigation
- ✓ Focus Visibility
- ✓ Form Input Labels
- ✓ Multimedia
- ✓ Readability and Structure
- ✓ Responsive Design
- ✓ Testing and Validation



Typography - check font size and legible font choice



Color Contrast - use tools to check for acceptable color pairs



Focus Visibility - add a bright border for easy focus



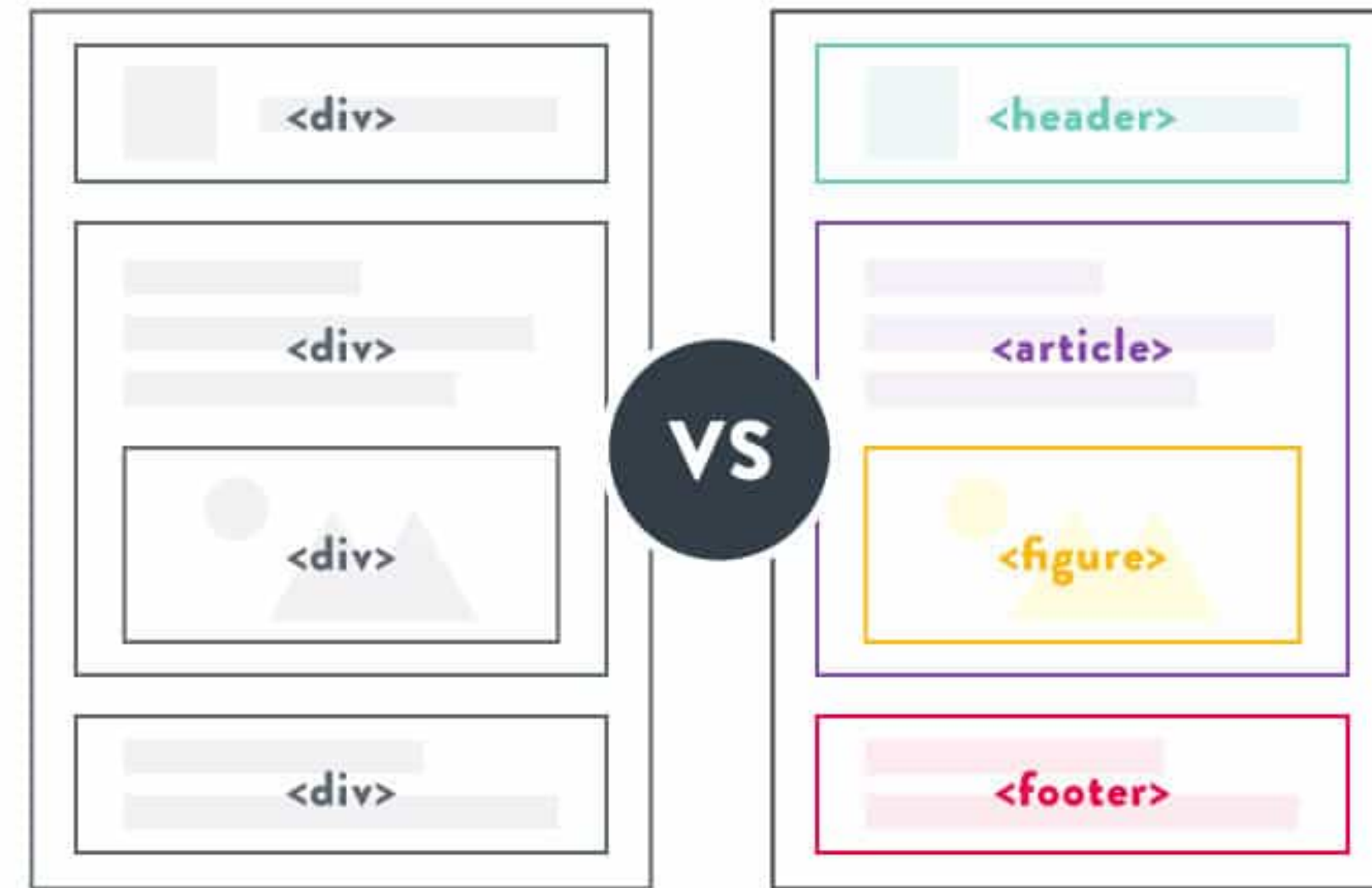
Descriptive Labeling - use labels that describe the object



Now you have an accessible button

What are Developers Responsible to Include?

- ✓ Semantic HTML
- ✓ Alternative Text
- ✓ Keyboard Accessibility
- ✓ ARIA Roles and Attributes
- ✓ Form Accessibility
- ✓ Color Contrast
- ✓ Focus Visibility
- ✓ Responsive and Mobile Accessibility
- ✓ Simplify and label tables properly



AMBIGUOUS SECTIONS
NO HIERARCHY
(a.k.a. "div soup")

CLEAR SECTIONS
LOGICAL HIERARCHY
(a.k.a. semantic HTML)



Testing is Part of the Process



Iterative Testing will Save Time & Money

Incremental Remediation

- Issues are addressed at a smaller scale
- Overall effort is reduced
- Avoids massive backlog

Early Issue Identification

- Potential issues are found and resolved sooner
- Prevent accumulation of problems

Continuous Feedback and Improvement

- Everyone learns from each testing cycle
- Avoids repeated mistakes
- Incrementally validate client needs

Reduced Rework and Late-stage Fixes

- Less chance of major rework and extensive fixes
- Changes at the end of a project is far more costly and time consuming

Increased Developer Familiarity

- Learns with each testing cycle
- Reduces the occurrence of common issues

Improved User Experience

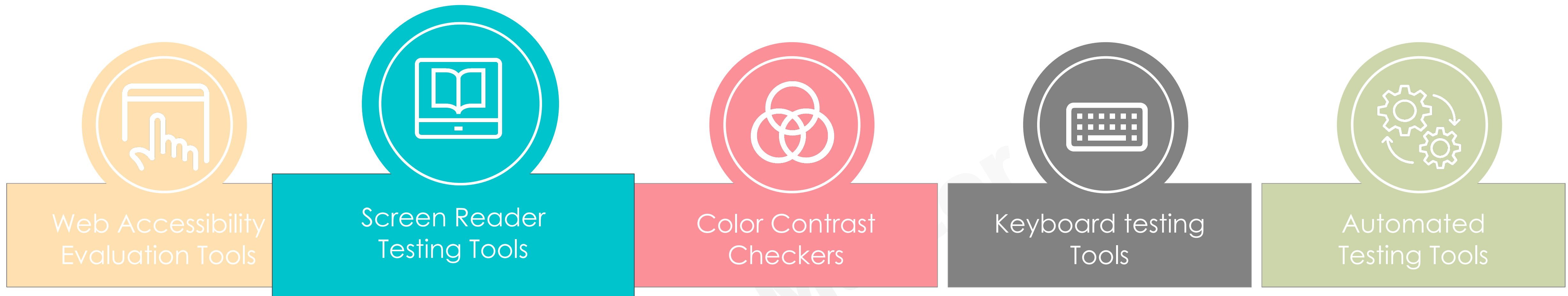
- Ensures improvements are made consistently
- Continuing to test leads to an easier to use website/app

Some tools for testing 508 compliance



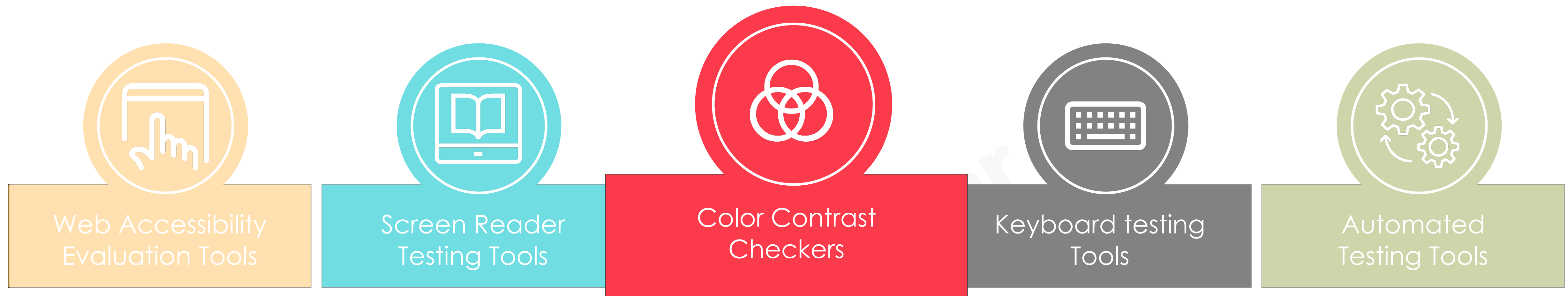
- **WAVE (Web Accessibility Evaluation Tool):** A free browser extension and web-based tool that **identifies accessibility issues** on web pages and provides detailed **guidance for resolving** them.
- **axe (aXe):** A **comprehensive** accessibility testing tool available as a browser extension, CLI (Command Line Interface), or integrated into development workflows. It offers **automated and manual testing features**.
- **AChecker:** A web accessibility evaluation tool that **scans web pages** and reports accessibility **violations**, providing **guidance** for remediation. It supports various accessibility standards, including Section 508.

Some tools for testing 508 compliance



- **NVDA (NonVisual Desktop Access):** A free and open-source screen reader for Windows that allows testing **how websites or applications are read** by visually impaired users.
- **VoiceOver:** A screen reader built into Apple devices (Mac, iPhone, iPad) that enables testing for accessibility **on the Apple ecosystem.**

Some tools for testing 508 compliance



- **WebAIM Color Contrast Checker:** A tool that checks the color contrast ratio between foreground and background colors to ensure they meet WCAG (Web Content Accessibility Guidelines) standards.
- **Contrast Checker by TPGi:** Another color contrast checker that helps identify if text and background color combinations meet accessibility guidelines.
- **Stark Accessibility Checker:** A Chrome plugin that does contrast checking and vision simulators for free. The Pro version has several other that would round out a robust testing tool set at a minimal cost.

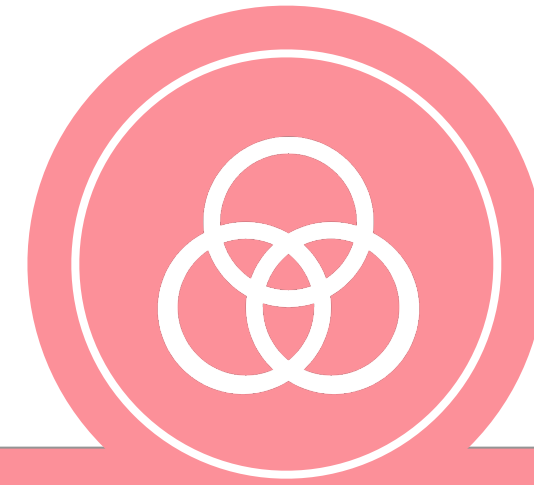
Some tools for testing 508 compliance



Web Accessibility
Evaluation Tools



Screen Reader
Testing Tools



Color Contrast
Checkers



Keyboard testing
Tools



Automated
Testing Tools

- **Keyboard Event Inspector:** A browser-based tool that **provides real-time feedback** on keyboard events, helping developers ensure that **all interactive elements** can be accessed and operated using a keyboard alone.
- **Manual:** Disconnect your mouse and run a full regression test.

Some tools for testing 508 compliance



- **Pa11y:** An automated accessibility testing tool that can be used as a command-line tool or integrated into CI/CD pipelines to **catch accessibility issues during development.**
- **Accessibility Insights:** A **suite of tools and extensions** for testing web accessibility, including automated checks, manual testing, and code reviews.

Iterative Testing Team

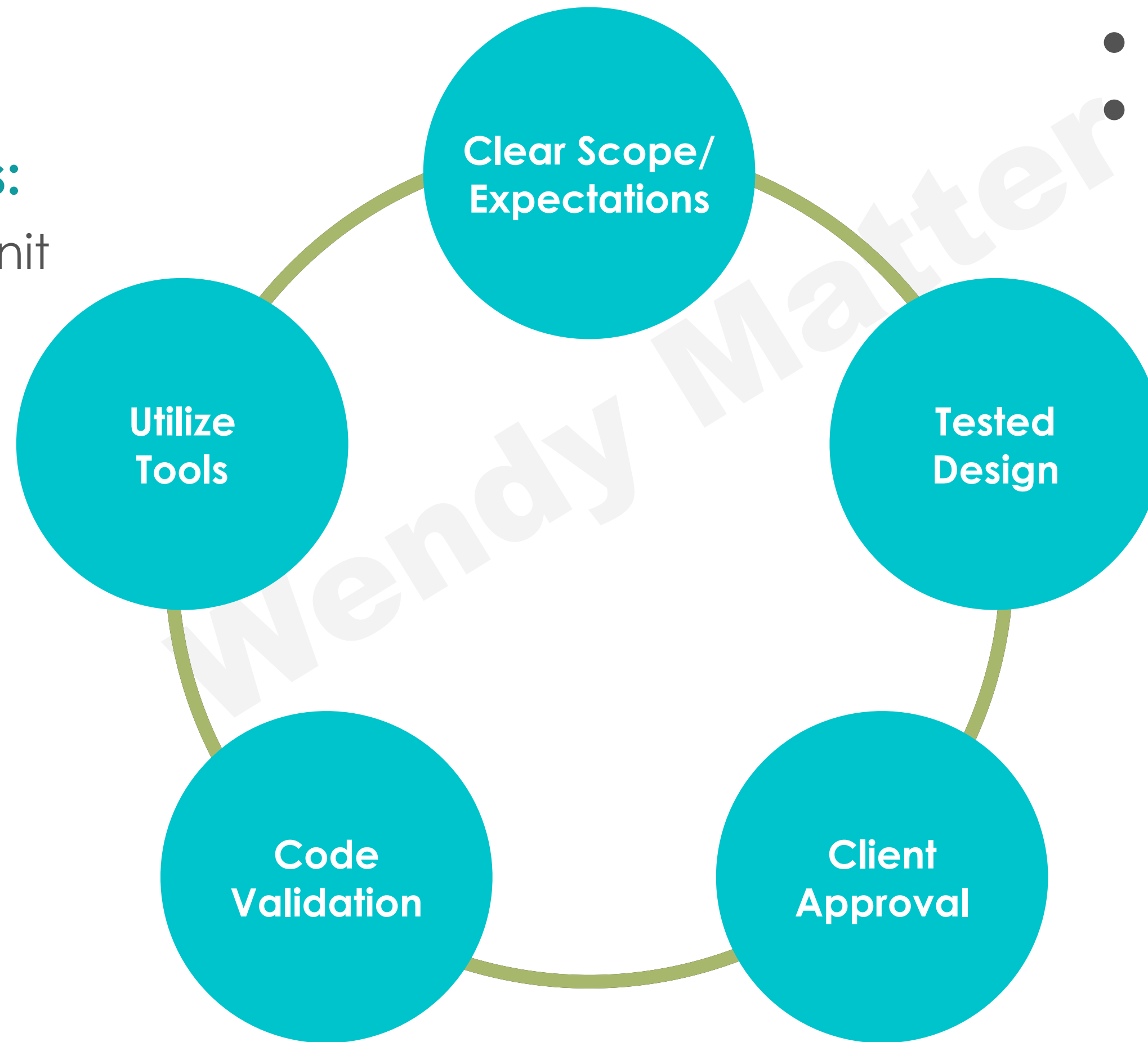
Having everyone clear on the goals from the beginning is important

First steps:

- Define scope
- Agree on the tools for validation
- Continue to review the plans
- Determine what scope should go into the appropriate User Stories

As coding finishing stories:

- Dev does specific 508 unit test from the stories
- Designer/PO/Client validate the



Before coding begin:

- Create style guide that meets 508 compliance and the clients needs
- Provide alt text for every image in the design
- PO to provide alt text for catalog item images and request images, as needed

Estimating Effort for Accessibility Compliance

Start before development begins

Define scope

- Testing definition
- Understanding exceptions
- When will they test?
- Iterative validation

Client

Give guidance

- Create an accessible design
- Include alternate text
- Iterative validation

Designer

Label and Test

- Follow coding rules
- Include all alternate text
- Validate and test continuously

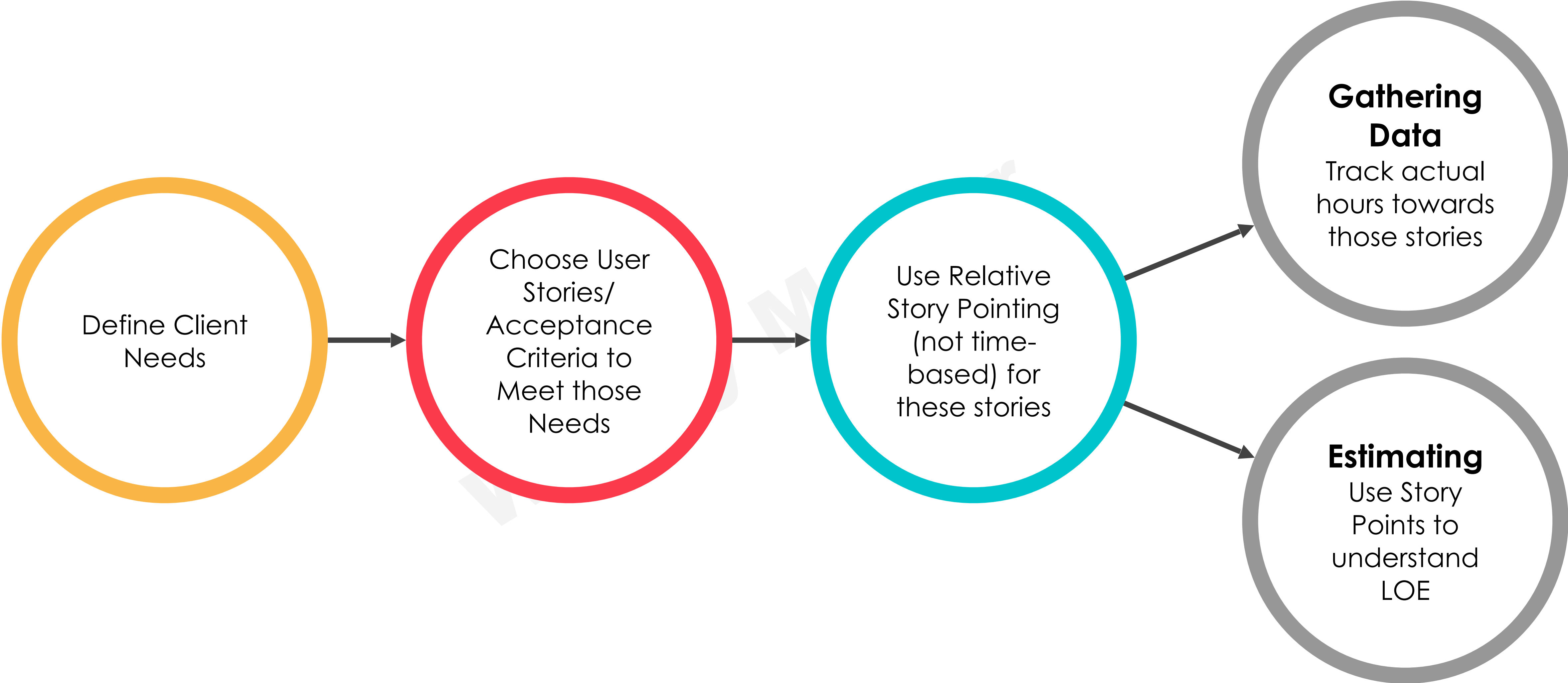
Developer

Validate

- Define testings tool
- Write test scripts
- Iterative testing

Tester

Areas to track velocity to create Level AA



Questions for Estimating

- Number of Pages in site
- Complexity of navigation
- Complexity of the mega menu
- Number of buttons for navigation
- Total number of fields on each page
- Number of images



Our Responsibility

The Americans with Disabilities Act (ADA)

The ADA is a broad civil rights law that prohibits discrimination against people with disabilities. Many of the web accessibility lawsuits in the United States invoke the ADA as the basis for the **legal complaint**, because of the language about public accommodation.

The ADA applies to:

- Private entities that own, operate, lease, or lease to places of public accommodation.
- Federal and state government entities.

The Americans with Disabilities Act (ADA)

Title I

Employment

The DOJ investigates complaints of discrimination, initiates legal actions against employers, and seeks remedies for individuals who have experienced disability-based employment discrimination.

Title II

Public Services

This prohibits discrimination against individuals with disabilities in state and local government services and programs.

Title III

Public Accommodations

The DOJ investigate complaints and initiate legal actions against private entities, such as businesses, restaurants, hotels, and other places of public accommodation, to address accessibility violations.

21st Century Communications and Video Accessibility Act (CVAA)

The CVAA requires "advanced communications services and products" to be accessible to people with disabilities, including **video communications, text messaging, web browsers on mobile devices**, and other **similar technologies**.

Perhaps of greater significance to web developers, all video programs presented with captions on television must be presented with **closed-captions on the internet**.

The CVAA applies to:

All entities already covered by FCC regulations (namely: telecommunication hardware and software providers and television broadcasters and television hardware/software providers)

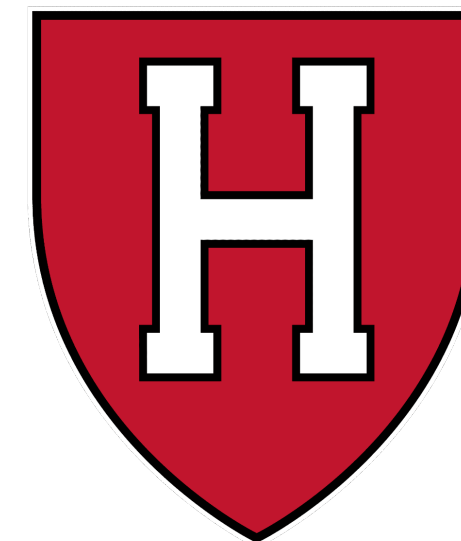
Consequences of Non-Compliance

Here are some of the organizations the DOJ took action against:

- Target
- Netflix
- Winn-Dixie
- Peapod Online Grocery
- Harvard and MIT
- and many more...



Winn-Dixie



Peapod[®]

ADA Lawsuits are up **300% since 2019** and are expected to continue to increase

Target - 2006

Target agreed to pay **\$6 million** in compensation to blind individuals affected by the website's inaccessibility.

The lawsuit filed by the **National Federation of the Blind (NFB)** against Target Corporation resulted in a settlement agreement in 2008. Under the settlement, Target agreed to take several actions to improve the accessibility of its website, including implementing accessibility features, conducting accessibility testing, and training its staff.



Netflix - 2012



The settlement involved periodic reporting and monitoring of Netflix's progress in meeting captioning requirements. Compensation was not released.

The class-action lawsuit brought by the **National Association of the Deaf (NAD)** against Netflix ended in a settlement agreement in 2012. As part of the settlement, Netflix committed to providing closed captioning for its streaming video content, aiming to achieve 100% captioning coverage. Netflix implemented various measures to enhance accessibility, including captioning new content and working on captioning for older content.

Winn-Dixie



The case centered around the accessibility of Winn-Dixie's website to individuals with visual impairments

The court issued an injunction requiring Winn-Dixie to make its website accessible to individuals with disabilities.

Landmark Ruling: The Winn-Dixie case resulted in a significant ruling by the U.S. District Court, explicitly stating that a website operated by a brick-and-mortar business qualifies as a place of public accommodation under the ADA. This ruling helped solidify the understanding that websites connected to physical establishments should be accessible to individuals with disabilities.

Peapod Online Grocery - 2012



This case marked one of the first federal court decisions recognizing websites as places of public accommodation under the ADA.

The case centered around the accessibility of Winn-Dixie's website to individuals with visual impairments and alleged violations of the Americans with Disabilities Act (ADA).

The court issued an injunction requiring Winn-Dixie to make its website accessible to individuals with disabilities.

Harvard, MIT, Berkeley and many others

As online education has become available, many universities struggled to make them accessible.

The biggest issues focus on videos and course materials unavailable to the hearing and visually impaired. These universities agreed to make their online content accessible and many provided compensation to the plaintiffs.

Additional cases

Other Real World Examples of Lawsuits:

- San Francisco's LightHouse for the Blind and Visually Impaired filed a lawsuit against payroll processing and HR company, **ADP for a lack of accessibility** in its website and mobile app.
- Bag'n Baggage paid \$4,000 in damages to a plaintiff who **wasn't able to shop independently** on the company's website. The business, which violated the Unruh Civil Rights Act, also had to remove the web barriers.
- In 2018 a woman who is blind sued the Whisper Restaurant and Lounge in Los Angeles because she **couldn't read the menu or make a reservation online.**
- In 2017 an **ADA lawsuit** was filed against **Blue Apron**. This lawsuit helped clarify the importance of website accessibility in ADA Title III, making clear that even companies that have no physical premises can be sued for ADA violation if their website is not accessible.
- **Nike** came under fire in 2017 because both websites it operates – Nike.com and Converse.com – were **inaccessible to visually impaired users**, a very common violation of Title III website accessibility guidelines.
- The restaurant chain **Five Guys** was sued under ADA over barrier for blind and visually impaired users **inability to order food** on their website independently.
- In **2019 Dominoes** was sued under ADA Title III under the grounds that someone **using a screen reader could not order food** from the website or app.

Consequences of Non-Compliance

Consequences of Lawsuits:

Typical steps you can expect during the lawsuit process:

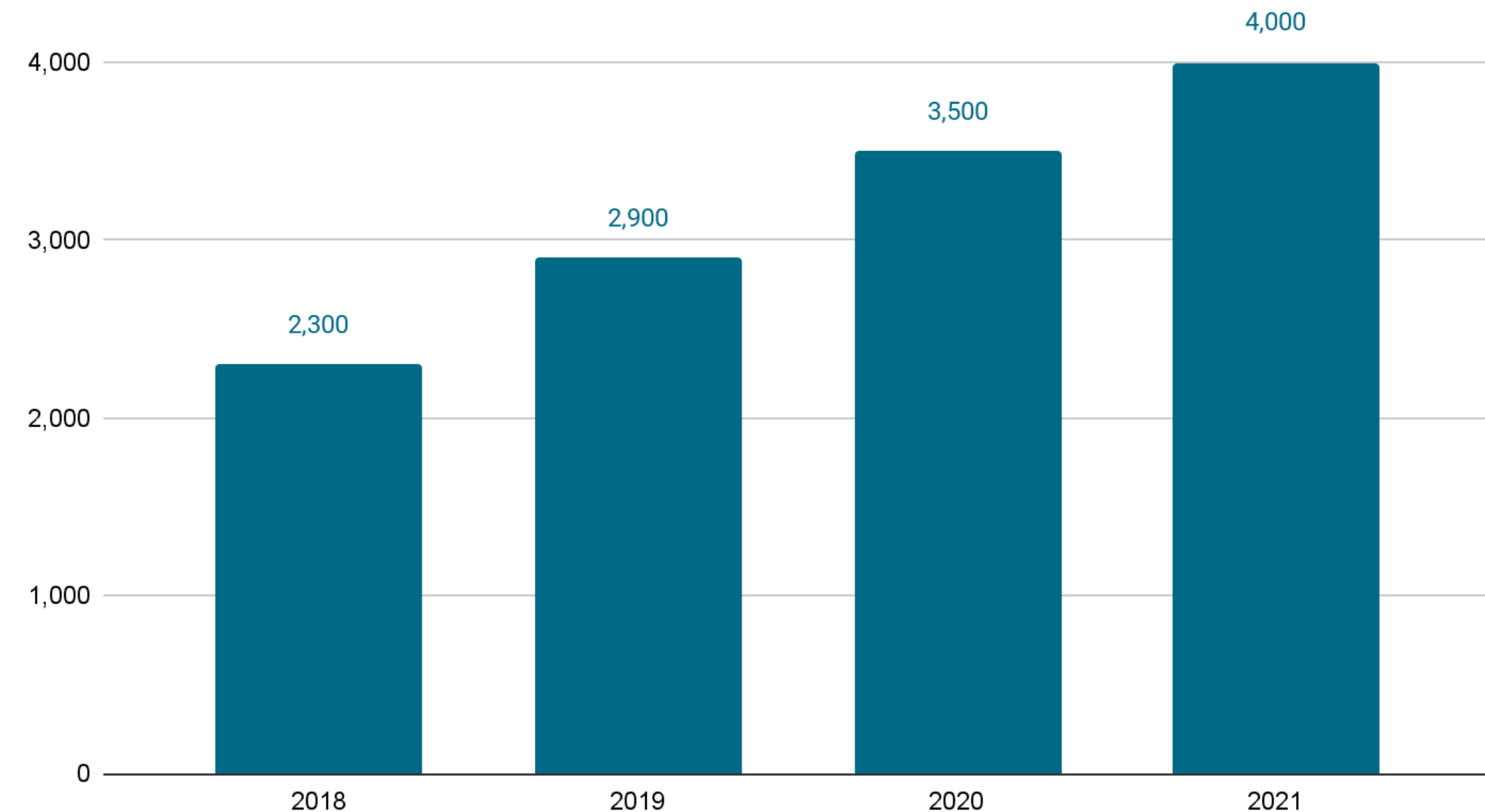
1. Notified that a lawsuit has been filed against you, and what damages the person is seeking.
2. Find representation, particularly someone who specializes in internet accessibility law.
3. Prepare your case and go to trial.
4. Ruling... Even if the case is ruled in your favor the plaintiff can still appeal to higher courts. Also, recovering lawyer fees can be a lengthy and tricky process.

No matter the ruling you can still expect to pay.

Lawyers fees + Work Missed + Finding Witnesses + Court Fees and Fines = \$\$\$

Average cost of a lawsuit for a company \$350,000

Digital Accessibility Lawsuits Filed Each Year



[*Lawsuits over digital accessibility on the rise - WSJ](#)

Thank you!