

The state of *Web Accessibility* in 2025

Teodora Chiosa

Zbor Hub, Iași, January 2025

Note: a11y = *accessibility* = a + 11 letters + y



Teodora Chiosa

- Frontend Developer (8 years)
- Accessibility Enthusiast (5 years)
- Past: Designer & Business Analyst

What if 

you experienced the web like this?

Using a screen reader via keyboard (TAB key)

```
document  
link button ISTORIC  
ISTORIC button link  
ISTORIC button link  
Bară radio button checked 8 of 12  
clickable 15  
list with 5 items 1 link  
...  
3 link  
link
```

Looking up a list of headings

Filtrare
Candidat
Fişiere

Stumbling upon various elements in the page...

Bară clickable radio button
Cerc clickable radio button
Suprafață
clickable

Do you think item "**clickable**" is important?



România Străinătate

Prezență la vot

Prezență

Statistici

Hartă

Procese-verbale

Rezultate

Hartă

Filtrare

NIVEL: ⓘ

Total

Județ

Secție de votare

Relativ la:

Maxim

100%

Categorie:

Senat

Camera Deputatilor

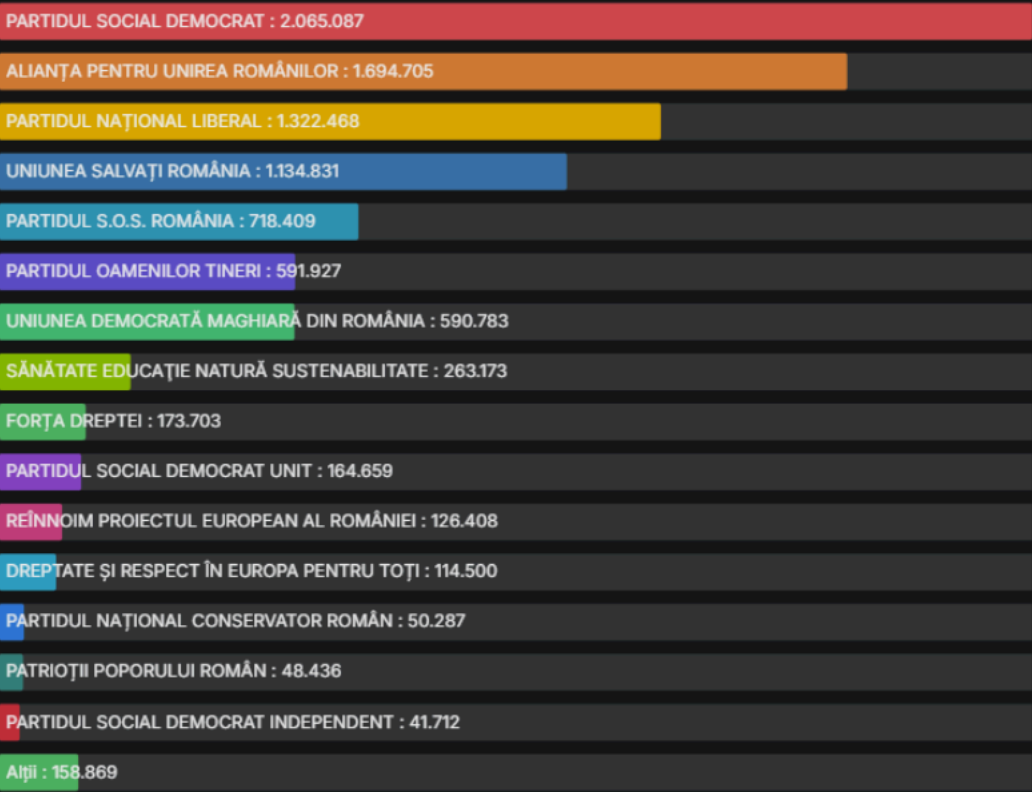
Candidat

REPREZENTARE GRAFICĂ

Bara

Cerc

Suprafata



Proces-verbal

Versiune: #2

Status: Finale

Raport creat la: 07.12.2024 20:19:49

Candidat

Candidat	Voturi	Procent(~)
1. ALIANȚA NAȚIONAL CREȘTINĂ	31.094 -1.663.611	0,34 %
2. ALIANȚA PENTRU UNIREA ROMÂNILOR	1.694.705 +1.684.232	18,30 %
3. ALTERNATIVA PENTRU DEMNITATE NAȚIONALĂ	10.473 +8.726	0,11 %
4. CIPRIAN-GHEORGHE STĂTESCU	1.747 +436	0,02 %
5. CONSTANTIN-MIRCEA STOICA	1.311 +49	0,01 %
6. DANIEL CIOBBANU	1.262 -113.238	0,01 %
7. DREPTATE ȘI RESPECT ÎN EUROPA PENTRU TOȚI	114.500 -59.203	1,24 %
8. FORȚA DREPTEI	173.703 +172.478	1,88 %
9. IOAN-AUREL STANCU	1.225 -182	0,01 %
10. IOAN-MIHAI BĂCANU	1.407 +533	0,02 %
11. IULIAN LUNGU	874 -2.964	0,01 %
12. LIGA ACȚIUNII NAȚIONALE	3.838 +3.513	0,04 %
13. PARTIDUL DREPTĂȚII	325 -38.236	0,00 %

România

Străinătate

Filtrare

Prezență la vot

Prezență

Statistici

Hartă

Procese-verbale

Rezultate

Hartă

NIVEL: 1

Relativ la:

Categorie:

Total

Județ

Secție de votare

Maxim

100%

Senat

Camera Deputatilor

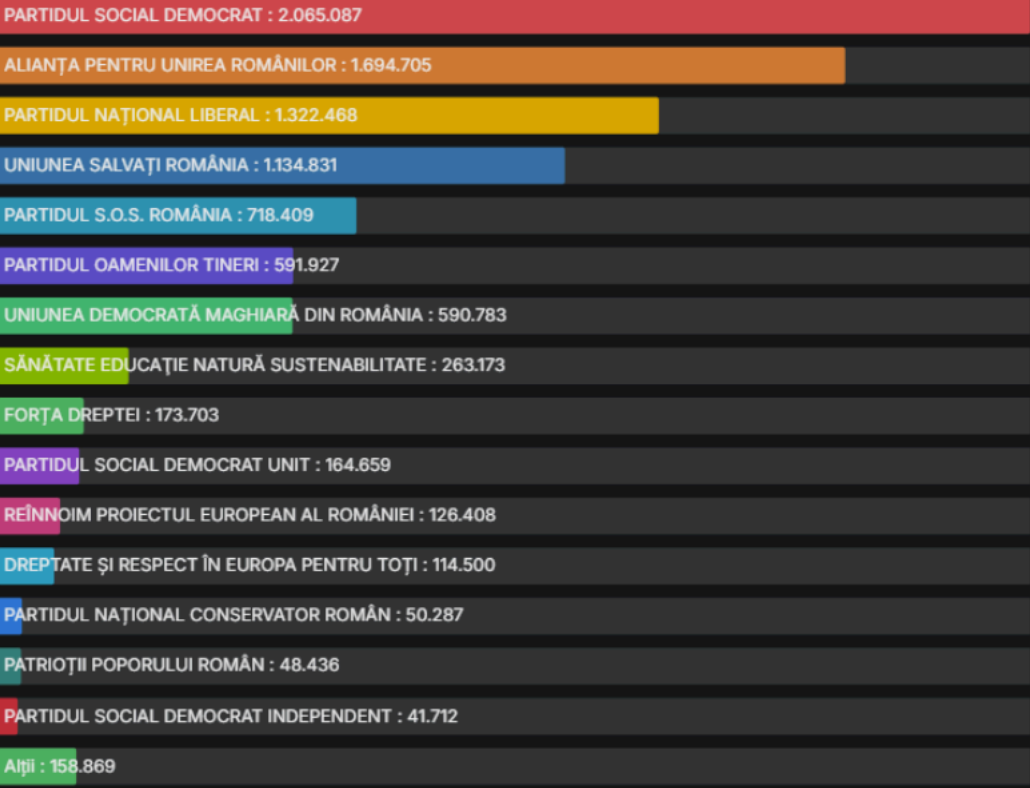
Candidat

REPREZENTARE GRAFICĂ

Bara

Cerc

Suprafata



Proces-verbal

Versiune: #2

Status: Finale

Raport creat la: 07/12/2024 20:18:49

Candidat

Voturi

Procent(%)

1. ALIANȚA NAȚIONALĂ	1.094.863.871	0,34 %
2. ALIANȚA PENTRU UNIREA ROMÂNILOR	1.694.705.144.232	18,30 %
3. ALTERNATIVA PENTRU DEMNITATE NAȚIONALĂ	10.473.8726	0,11 %
4. CIPRIAN-GHEORGHE STĂTESCU	1.747.438	0,02 %
5. CONSTANTIN MIRCEA STOIKA	1.311.148	0,01 %
6. DREPTATE ȘI RESPECT ÎN EUROPA PENTRU TOȚI	1.262.113.238	0,01 %
7. DREPTATE ȘI RESPECT ÎN EUROPA PENTRU TOȚI	114.500.59.203	1,24 %
8. FORȚA DREPTEI	173.703.172.478	1,88 %
9. IOAN-AUREL STANCU	1.225.182	0,01 %
10. IOAN-MIHAI BĂCANU	1.407.1533	0,02 %
11. IULIAN LUNGU	874.2.984	0,01 %
12. LIGA ACȚIUNII NAȚIONALE	3.838.13.513	0,04 %
13. PARTIDUL DREPTĂȚII	325.38.238	0,00 %

Would you be able to...

- check the weather
- shop online
- buy a plane ticket
- check your bank balance
- enjoy watching a movie
- **find any information online without help?**

This experience is a
reality for a person with
visual impairments

“An estimated **1.3 billion** people experience significant disability. This represents **1 in 6** of us.”

[World Health Organization - Disability](#)

Types of disabilities



A woman with short brown hair and bangs, wearing a green top and a lanyard, is speaking on a video screen. The screen is part of a laptop, and the background is slightly blurred, showing what appears to be a modern office or conference room setting.

the treatment. If you're in a higher risk
category where the risk of recurrence is higher,

What would you like me to say

19th Century Architecture













Types of disabilities



Visual



Auditory



Physical/Motor



Multiple



Cognitive/Neurological - Invisible

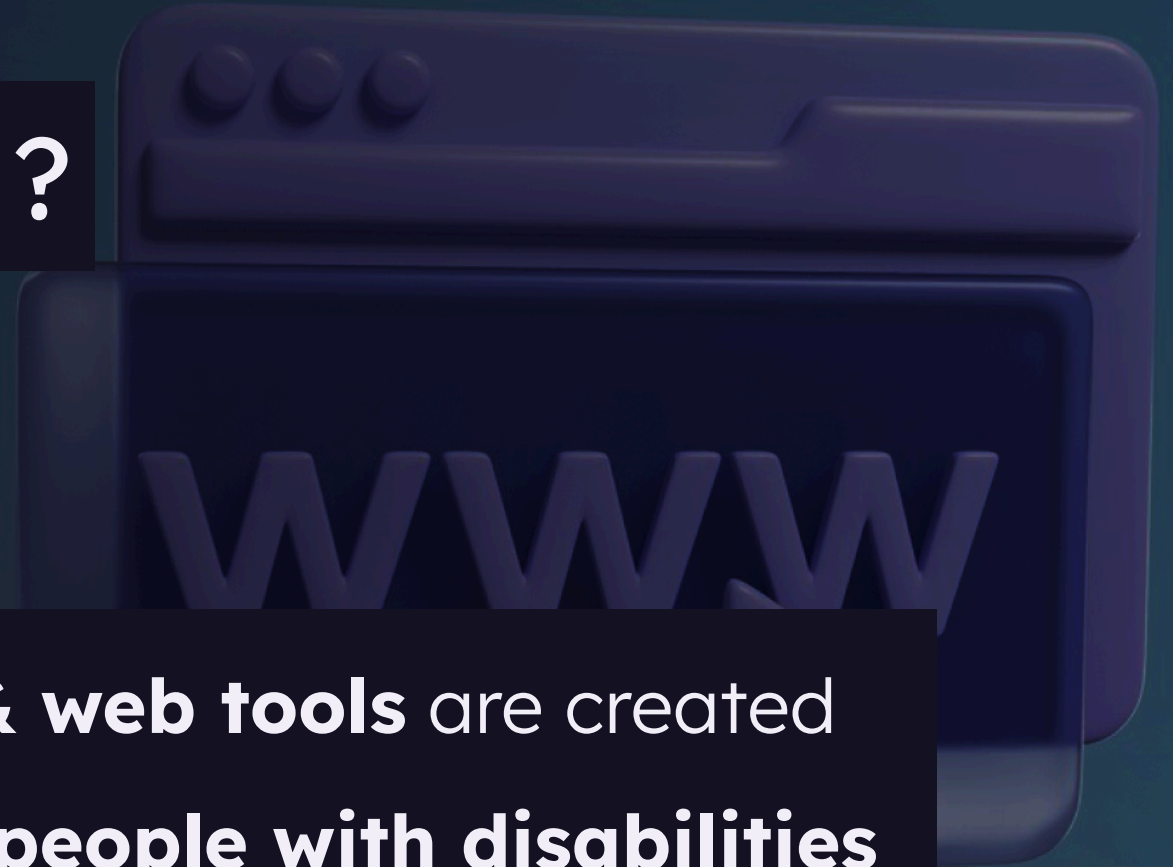
e.g. ADHD, dyslexia, dyspraxia, autism, learning disabilities

What is
Web Accessibility ?



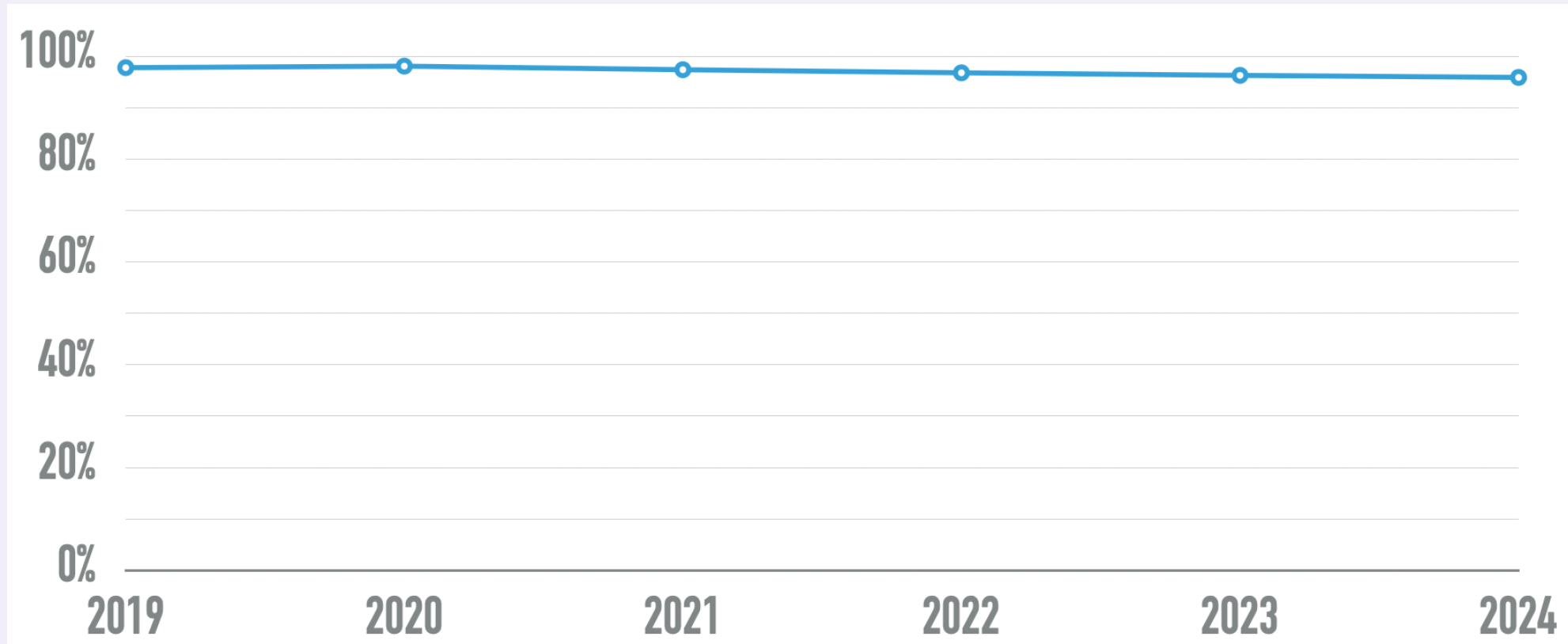
What is *Web Accessibility* ?

Making sure that **websites & web tools** are created so that they can be used by **people with disabilities**



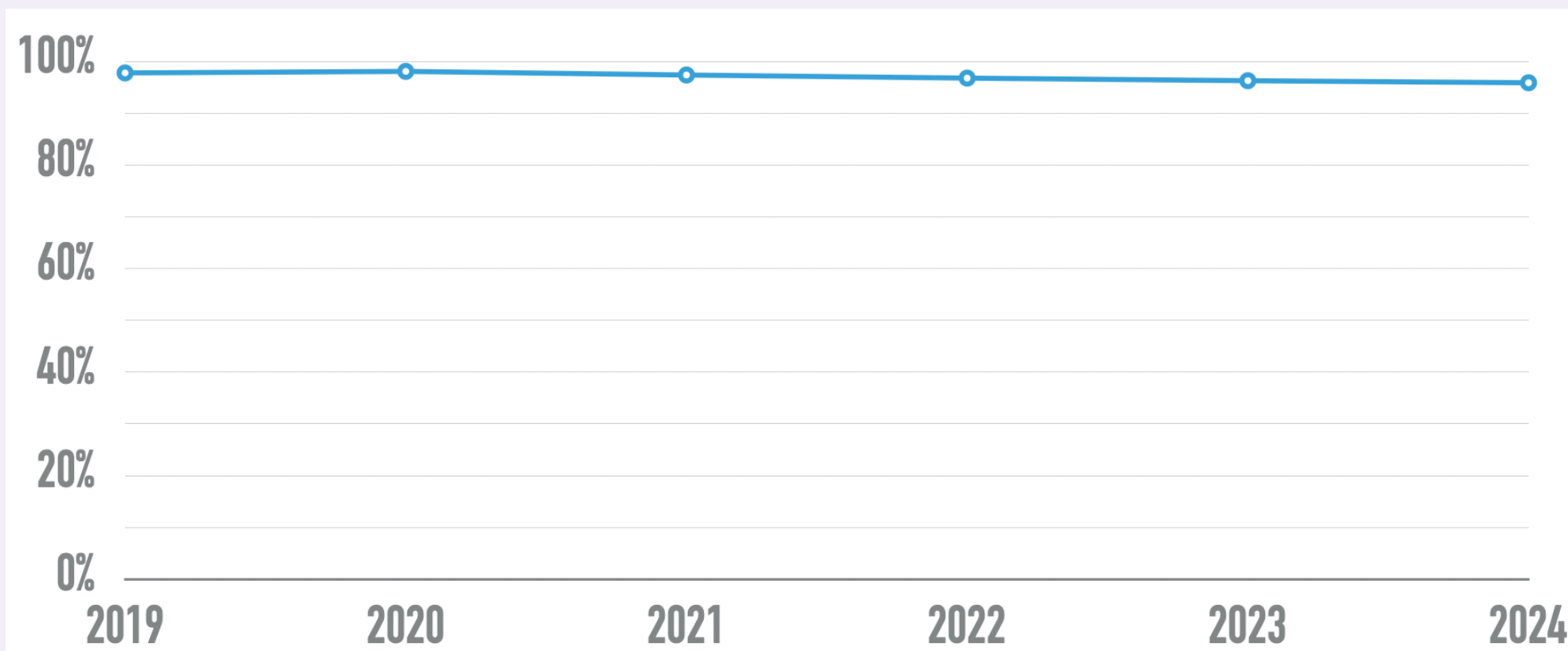
Most of the web is
broken!

95.9% of top 1 million home pages had accessibility errors in 2024* - [WebAIM](#)



**95.9% of top 1 million home pages
had accessibility errors in 2024* - [WebAIM](#)**

*** detected by automated tools**

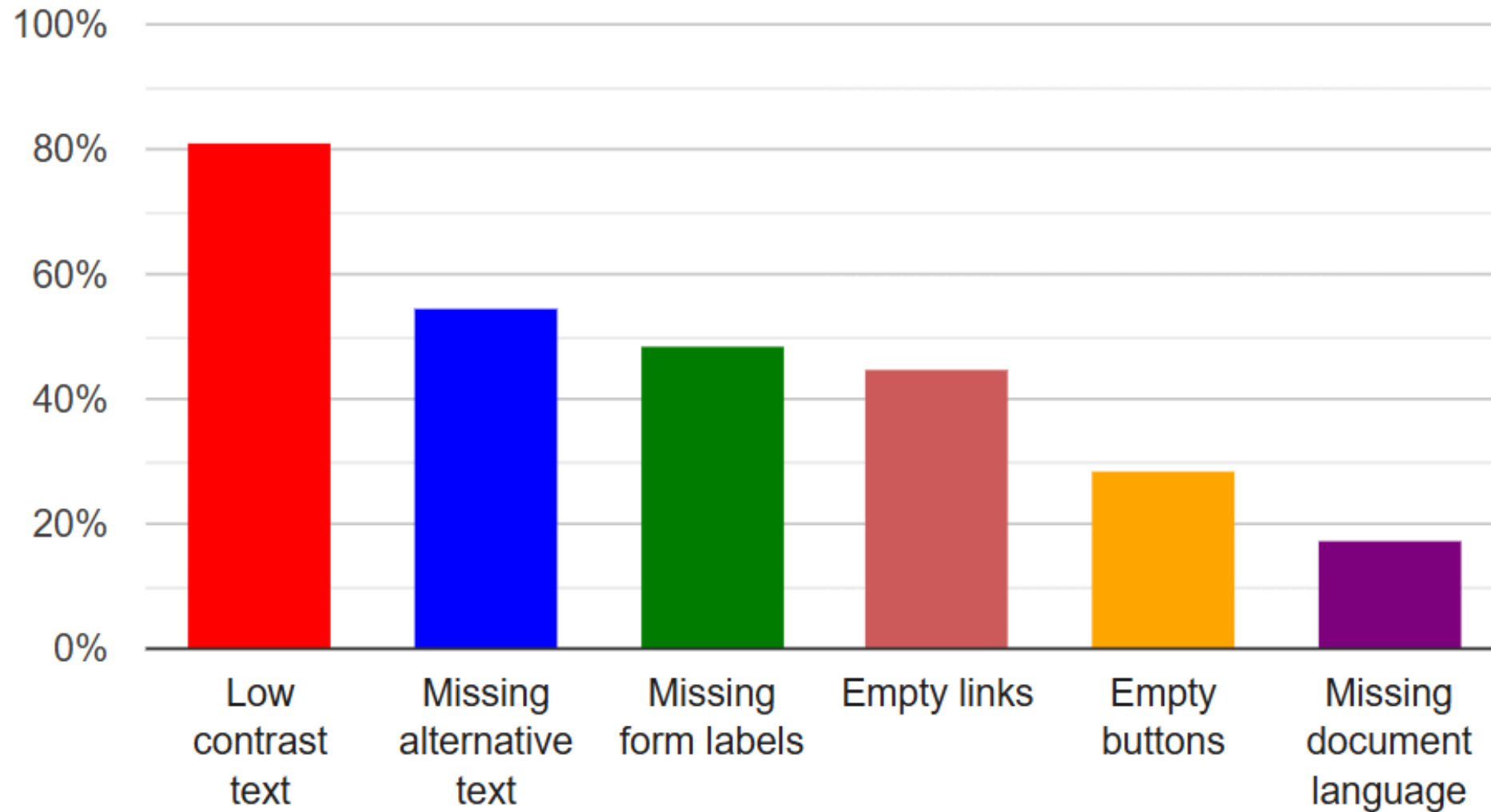


At best, an automated accessibility tool can detect **40%** of the issues.

[Study by GOV.uk](#)

Most common a11y failures in 2024 - [WebAIM](#)

(bar chart view)



Most common a11y failures in 2024 - [WebAIM](#)

(table view)

Failure Type	% of home pages
● Low contrast text	81.0%
● Missing alternative text for images	54.5%
● Missing form input labels	48.6%
● Empty links	44.6%
● Empty buttons	28.2%
● Missing document language	17.1%

These most common errors have
been the same for the last **5 years...**

How to make the web
more accessible?



Involve, not only the entire *team*,
but the entire *organization*

Web accessibility as a solo effort is doomed to fail.



Shift left

From:

Requirements → Design → Development → Testing → a11y

To:

Accessibility standards applied for all stages of software development

a11y Requirements → a11y Design → a11y Development → a11y Testing



Prepare a *business case*
and present it to the higher ups

"We don't have disabled clients"

- Invisible disabilities exist
- How could they use your product if it's not accessible in the first place?
- You're losing new clients to competition

"We don't have the budget"

- We can start small and inexpensive
- We should build *new* projects with accessibility from the get-go

"It's only for a minority of my clients"

- People develop disabilities as they get older (e.g. glaucoma, Parkinson's)
- Accessibility improves the experience for *everyone*!
- **Temporary & situational** disabilities exist

	Permanent	Temporary	Situational
Touch	 One arm	 Arm injury	 New parent
See	 Blind	 Cataract	 Distracted driver
Hear	 Deaf	 Ear infection	 Bartender

Accessibility improves the experience for *everyone*

[Microsoft Inclusive Design](#)

"It's not a priority"

- It's **illegal** and you will likely be sued
 - **EU Public sector law** - government services
 - [Directive 2016/2102](#) → [EN 301 549](#) → WCAG (Web Content Accessibility Guidelines) 2.1 AA
 - **Effective September 2020**
 - **EU Private sector law** - operating systems, e-commerce, phones, ATMs, banking services etc.
 - [Directive 2019/882](#)
 - **Effective June 2025**

WCAG Principles:

- **P**erceivable
- **O**perable
- **U**nderstandable
- **R**obust

"I can buy a product to fix it"

- "One click solutions" / A11y overlays are a **scam**
 - Only fix **some** issues related to color contrast, font-size, mouse interaction
 - A11y experts are trying to warn businesses against using overlays - overlayfactsheet.com
 - ["AccessiBe" sued in January 2025 for misleading advertising](#)



Bryce D

IMAGE CREDITS: BRYCE DURBIN / TECHCRUNCH

STARTUPS



FTC orders AI accessibility startup accessiBe to pay \$1M for misleading advertising

Kyle Wiggers 10:46 AM PST · January 3, 2025



The U.S. Federal Trade Commission has fined [accessiBe](#), a startup that claims to make websites more compatible with the screen readers blind people rely on to access the internet, for false advertising and compensating reviewers without disclosing that it sponsored the reviews.

In a proposed order, the FTC would [require](#) accessiBe to pay \$1 million that may be used to refund the company's customers, and prohibit accessiBe from overstating the capabilities of its tools. The order would also mandate that accessiBe "clearly and conspicuously" highlight connections to

"AI is gonna fix it"

- AI can help describe images, but can only guess the context
- AI is biased, trained on inaccessible code
 - [Ned Block - How to show ChatGPT is dumb](#)



Here is the image of an analog clock showing the time 8:30. Let me know if you'd like any adjustments!

generate an image of 2 clocks showing 8:30



Message ChatGPT



give me the code for an accessible button



Here's an example of an accessible button in HTML with a focus on meeting accessibility standards, including ARIA roles and best practices:

html

Copy Edit

```
<button type="button"
        aria-label="Submit Form"
        class="accessible-button">
  Submit
</button>
```

Explanation:

1. `<button>` element:
 - The `<button>` tag is inherently keyboard and screen-reader accessible.
 - It's better than `<div>` or `<span>` for buttons because it includes native accessibility features.
2. `aria-label` :
 - Use `aria-label` to provide an accessible name when the button's visible text might not fully convey its purpose (e.g., an icon  ly button).
 - Avoid `aria-label` if the button already has sufficient visible text.

S



Would you like me to add any additional features or make any modifications to the component?

📌 Claude does not have the ability to run the code it generates yet.

T give me the code for an accessible button, I didn't ask anything about react

Here's the HTML and CSS for an accessible button:

html Copy

```
<button
  type="button"
  aria-label="Description of what the button does"
  class="button"
  disabled="false">
  Button Text
</button>
```

css Copy

```
.button {
  /* Base styles */
  padding: 8px 16px;
  border-radius: 4px;
  font-size: 16px;
  font-weight: 500;
  background-color: #2563eb;
  color: white;
```

Reply to Claude...



An accessible button:

```
<button> Send </button>
```

More details:

[HTML Hell post by Léonie Watson](#)



Talk to your *team*

"It's a pain to design/implement"

- Start learning *yesterday*
- Ask for training, knowledge sharing
- Ask for professional trainings and guidance



Learn best practices

1. Use enough
color contrast

Styles: OFF ☐ ON ☒

Details



Summary

Details

Reference

Order

Structure

Contrast

☒ 22 Contrast Errors

22 X Very low contrast

☐ 1 Alerts☐ 7 Features☐ 18 Structural Elements☐ 8 ARIA

Very low contrast (2.84:1)

Very low contrast between text and background colors.

[REFERENCE](#)[CODE](#)

Chart.js

Simple yet flexible JavaScript charting library for the modern web

Get
Started

Samples



Ecosystem

GitHub

New in 4.0

Colors plugin

[Default palette](#) of Chart.js brand colors is available as a built-in time-saving zero-configuration plugin.

- Recommended: Above **4.5 : 1** (Lower than: **21 : 1**)
- Contrast checking tools:
 - [Figma Contrast plugin](#)
 - [WebAIM - Contrast Checker](#)
 - [WebAIM - Link Contrast Checker](#)

- **APCA** (Accessibility Perception Contrast Algorithm)
 - Part of WCAG **3** - still in **draft**
 - Follow the standard in the guidelines/law
 - **Don't use officially, yet!**
 - If used, also check the contrast according to WCAG 2.1

2. Add *alt text*

Speaking of text...

Text is great because it can be:

- ☒ selected
- ☒ copied
- ☒ resized
- ☒ translated
- ☒ converted to speech (screen reader)
- ☒ converted to braille



Cafe.Bar.Hotel



ALPEN HOTEL

RESTAURANT

Cafe Bar Hotel in legal dispute with Alpine Hotel



- "Context matters" - [Writing Good Alt Text - Chrome for Developers](#)
- "Imagine that you're reading the web page aloud over the phone to someone" - [W3C - Images - Tips & Tricks](#)
- Add **intentionally empty alt text** for decorative images (`alt=""`)

3. *Label* buttons, links & form input labels

Buttons & links

✓ Whenever possible, do this:



⚠ Not this:



Buttons & links



```
<button>Bookmark</button>
```



```
<a href="github.com">Github</a>
```

Buttons & links

⚠ But if you must omit the text, pick **one**:

1. visually hidden/screen reader only text inside the button/link `<span class="sr-only">Bookmark</span>`

2. `aria-labelledby`

```
<button aria-labelledby="my-id"></button>
```

3. `aria-label` `<a aria-label="Bookmark" href="..."></a>`

4. communicate **function** through alt text on icon image
🔍 = "search", not "magnifying glass"

Form input labels

✓ Whenever possible, do this:

Input Label

Placeholder text...

⚠ Not this:

Name

(no label, placeholder disappears on click, low color contrast)

Form input labels

✓ Label element linked to input by unique ID:

```
<label for="my-input">Name</label>
```

```
<input id="my-input">
```


Form input labels

 But if you must omit the label, pick **one**:

1. label element linked to input by unique ID + visually hidden label

```
<label for="my-input" class="sr-only">Name</label>  
<input id="my-input">
```

2. aria-labelledby

```
<input aria-labelledby="my-id">
```

3. aria-label

```
<input aria-label="Name">
```

4. Define page *language*



1. So that **translation services** can work properly



2. So that **screen readers** can speak in the right language with the right pronunciation rules

5. Decouple *design* from *semantics*

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Go anywhere with Uber

● Pickup location

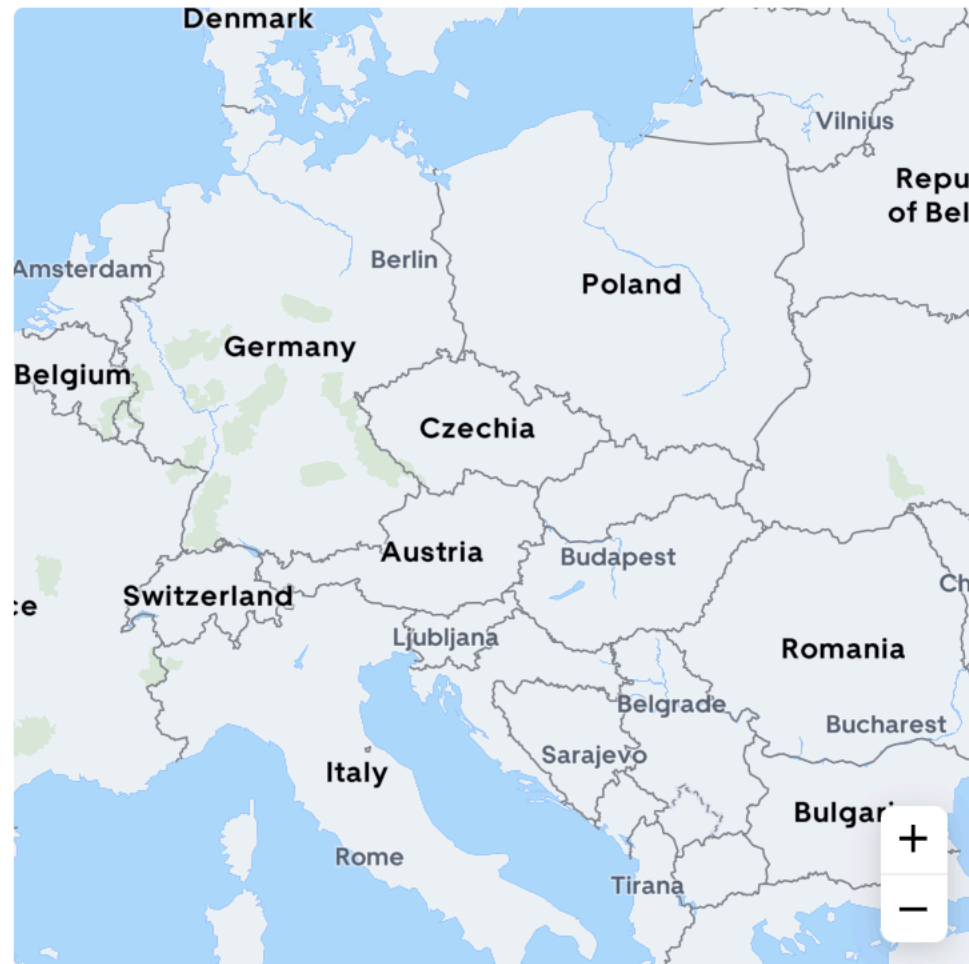


■ Dropoff location

📅 Today

🕒 Now ▾

See prices



Suggestions



Sign in to drive & deliver →

Sign in to ride →

**Sign in to order delivery
with Uber Eats** →

**Sign in to your Uber for
Business account** →

Looks like a button = <button> ?

Not always!

Could be a link.

Button <button>	Link <a>
Triggers an action (Add to cart, Edit, Close, Submit)	Navigates to a new page / a section on the current page
Special states: disabled	Special states: link and visited
-	URL in the bottom-left corner of the browser window
Cursor: default	Cursor: pointer

And for the love of God, **don't nest buttons and links!**

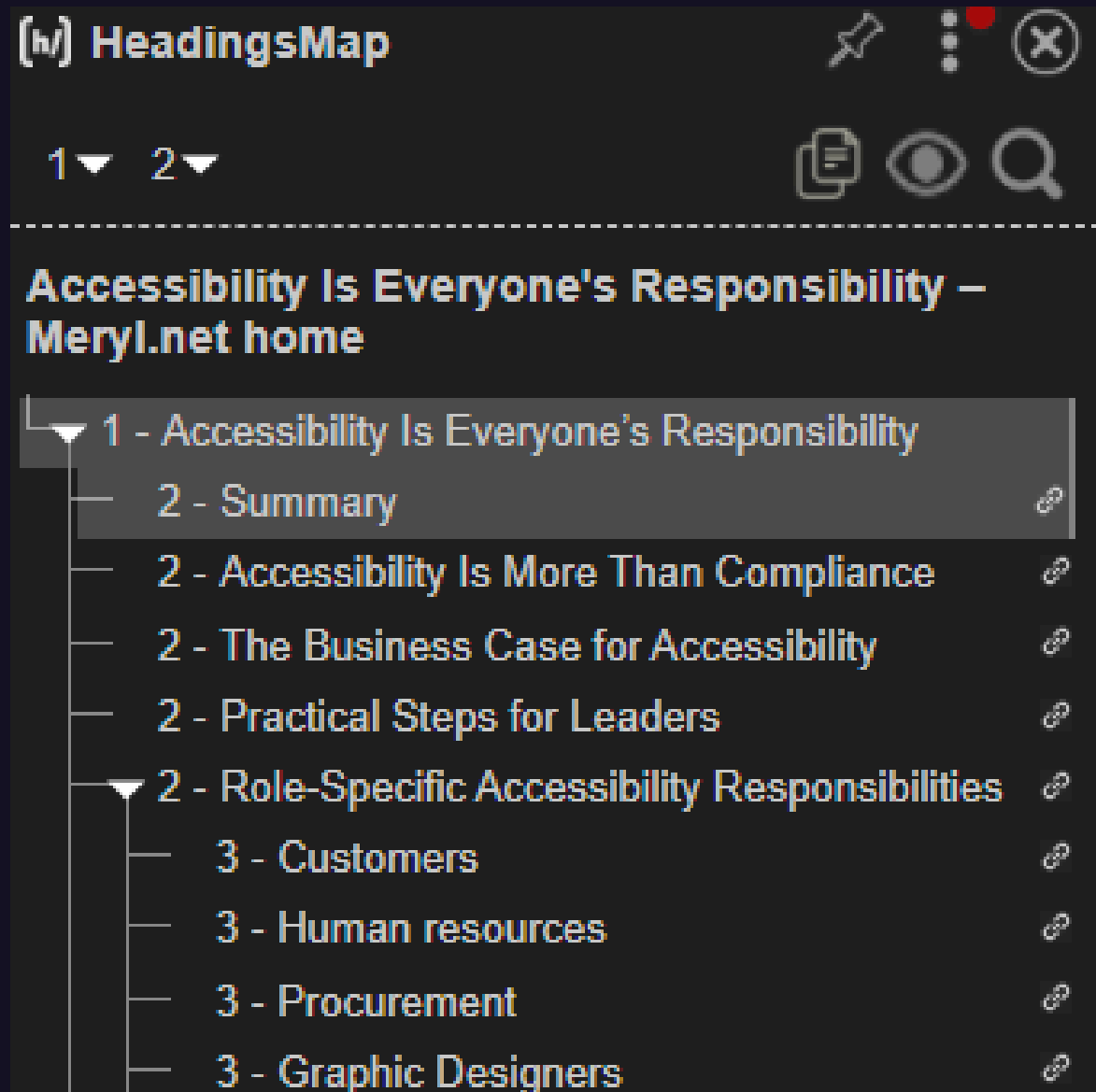
✗ Don't do this:

```
<a href="/sign-in"> <button>Sign In</button> </a>
```

Don't use headings to change font size!

Scale Category	Typeface	Weight	Size	Case	Letter spacing
H1	Roboto	Light	96	Sentence	-1.5
H2	Roboto	Light	60	Sentence	-0.5
H3	Roboto	Regular	48	Sentence	0
H4	Roboto	Regular	34	Sentence	0.25
H5	Roboto	Regular	24	Sentence	0
H6	Roboto	Medium	20	Sentence	0.15

Headings are *structural* elements!



- No need to style heading elements directly
- Create *utility classes* to style headings
 - title-1
 - ...
 - title-6

Conclusion



- [Meryl Evans](#)



Start ASAP



Learn, practice, fail fast



Progress over perfection



Shift left



Work together!



Challenge the company mindset



Legal risk starting June



(Free) Resources

- [The A11y Project Checklist](#)
- [WebAIM Checklist](#)
- [HeadingsMap](#) (headings viewer extension)
- [Axe Dev Tools](#) (a11y checker browser extension)
- [WAVE](#) (a11y checker browser extension)
- [NVDA](#) (screen reader)
- [Microsoft Voice Access](#) (voice access tool)
- [Accessibility essentials every front-end developer should know](#)



Image credits

- [W3 - Screenshots from perspective videos](#)
- [FreePik - WWW graphic](#)
- [Unsplash - Braille display](#)

Slides: dub.sh/a11y2025



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Made with ❤️ in Marp for VS Code