



**ANNE BUSSELL**

Nonprofit Branding

Web Design

Social Media

Graphic Design

Photography

[www.altruisticbee.com](http://www.altruisticbee.com)

TOPIC PROJECT A - DISCOVERY STATEMENT AND SURVEY QUESTIONS



## Topic: What is website accessibility?

### BEFORE User Analysis:

#### Sources:

<https://uxdesign.cc/introduction-to-web-accessibility-9ec856ec474c>

<https://www.boia.org/blog/6-unexpected-benefits-of-web-accessibility>

<https://www.uxpin.com/studio/blog/8-website-accessibility-best-practices-to-improve-ux/>

<https://webaim.org/projects/screenreadersurvey7/>

<https://www.adatitleiii.com/>

[https://www.ada.gov/pcatookit/ch5\\_toolkit.pdf](https://www.ada.gov/pcatookit/ch5_toolkit.pdf)

<https://www.section508.gov/blog/benefits-accessible-design>

<https://webfieldmanual.com/design.html>

### Purpose Statement:

I've been reflecting on why website accessibility and usability for disabled people is still an issue after all these years. It is a puzzle to me how it can be that some 15 billion dollars annually is lost to accessible sites when 71% of disabled users click-away from sites with access barriers. Why do businesses continue to let that happen?

This situation exists despite:

- The Americans with Disabilities Act and its predecessor Section 508 of the Rehabilitation Act of 1973 which allow for class action suits and even more loss of revenue than the click-away.
- International standards (WCAG 2.1).
- Expert guidance and discussions throughout the industry.

There are four key inter-related aspects for designing for accessibility:

- Legality
- Enhancing your brand
- Extending your market reach
- Better mark up for SEO

It is important to consider these aspects alongside the technical aspects of creating an accessible website and even the basic understanding of what accessibility is, and who accessibility benefits.

The purpose of this web page is to help Web Designers learn and apply these principals.



# TOPIC PROJECT A - DISCOVERY STATEMENT AND SURVEY QUESTIONS

## User Data Collection:

1: This topic relates to my professional interests. t/f
2: What do you want to know about this topic? open
3: What will make this information meaningful to you? open
4: How do you plan on using this information? open
5: How do you rate your current interest in this information? ( 1 being not interested and 10 being very interested )
6: Rate on a scale of 1 ( least) - 10 (most) "I would like a broad idea of where the topic fits in"
7: Rate on a scale of 1 (least) - 10 (most) I would like an outline of the benefits of this product / idea / technique.
8: Rate on a scale of 1 (least) -10 (most) I would like detailed information on how to use this.
9: Rate on a scale of 1 (least) - 10 (most) I would like to see examples of this.
10: I know someone who is affected by accessibility difficulties and cannot use most websites. t/f
11: Rate on a scale of 1 (least) -10 (most) I understand what it takes to make website accessible.
12: I know what a screen reader is. t/f
13: I would like to experience what it is like to not be able to access a web site through:
14: Are there any specific things not mentioned here that you would like to learn about website accessibility?

# Design 3

## for the Web

### User Characteristics Survey Results Worksheet

15 people took the survey

1	<p>What is your Point of View? you can answer more than one item</p> <ul style="list-style-type: none"> <li>• Web Designer</li> <li>• Web Developer</li> <li>• Visual Designer</li> <li>• Media Developer</li> <li>• Art Director</li> <li>• Motion Designer</li> <li>• Other</li> </ul>	
2	What is your age range?	
3	English is my second language.	
4	What educational background do you think you will need for your desired job?	
5	What are your professional interests?	Get a job as a technical creative.
6	What are your personal goals and interests?	Art director / web design to an business that relates to an interest.  Own business
7	<p>What are your goals for professional learning?</p> <ul style="list-style-type: none"> <li>• broad knowledge of a variety of web-related topics</li> <li>• learn specific technologies</li> <li>• curate information</li> <li>• to be able to use content across media types (print, video, motion graphics, web etc.)</li> <li>• be able to use a new technology</li> <li>• understand user experience</li> </ul>	<p>13 understand user experience 12 broad knowledge variety of web topics 12 use information across media types 10 use a new technology 9 curate information 5 learn specific technologies</p>
8	How to you rate your Web DESIGN skills ? from 1-10 (1 being weak, 10 being strong)	Avg 7.4 range from 4 to 9

# Design 3

## for the Web

### User Characteristics Survey Results Worksheet

9	How do you rate your Web BUILDING skills ? from 1-10 (1 being weak, 10 being strong)	Avg 6.2 range from 4 to 9
10	What are your technical skills / levels with: computers browsers apps languages	High level of technical competency.
11	Select all that apply for your experience with businesses. I have been an employee of a company or several companies. <ul style="list-style-type: none"><li>• I have not worked at a company.</li><li>• I have my own company</li><li>• I have managed other employees at a company that I worked for.</li><li>• I have managed employees at my companies.</li></ul>	
12	What devices do you view the web on?	
13	What frustrates you the most visiting a website for the first time?	Clear headings. <ul style="list-style-type: none"><li>• Bunch of popups or text heavy content</li><li>• Spelling error and small text</li><li>• Slow loading</li><li>• Spelling and navigability</li><li>• Bad organization</li><li>• Broken links and hard to follow navigation / content</li><li>• Can't find what I am looking for immediately</li><li>• No navigation or direction</li><li>•</li></ul>
14	What motivates you to stay on a website that you are visiting?	What is easy navigation? What about a secondary page navigation, like an index? <ul style="list-style-type: none"><li>• Imagery</li><li>• Easy navigation</li><li>• The organization and easy to find what I am looking for.</li><li>• Beautiful graphics, easy to find what I am looking for, easy to use</li><li>• Relevant content, no hoops to get to it</li></ul>

# Design 3

## for the Web

### User Characteristics Survey Results Worksheet

		<ul style="list-style-type: none"><li>• Makes sense and works smoothly</li><li>• Navigation</li><li>• Different and not the typical scroll page</li><li>• Fun photos and great content</li><li>• Visually appealing content</li><li>• Don't have to guess where the information is that I am looking for</li><li>• Cleanliness. Easy to read. Item I am looking for is easy to find.</li><li>• Content that I need / want.</li><li>• Good design / cool style / cool effects</li><li>• Interesting content / videos</li><li>•</li></ul>
15	What social media platform(s) do you use the most?	
16	What are your information seeking habits?	<ul style="list-style-type: none"><li>• Shows me the information I am looking for quickly after going to the source</li><li>• Ask a more in-depth question</li><li>• People I know and trust on social media</li><li>• Real news</li><li>• Ask an expert</li></ul>
17	I can understand a news article better by: <ul style="list-style-type: none"><li>• Reading about it in the newspaper.</li><li>• Reading about it online.</li><li>• listening to it on the radio</li><li>• watching it on the internet.</li></ul>	9 Read about it online 5 Watching I on the internet 1 Listen on the radio
18	Have you ever taught something to someone else? What method did you use? <ul style="list-style-type: none"><li>• one-on-one</li><li>• group instruction</li><li>• informal talk</li><li>• mal presentation</li><li>• classroom</li><li>• other</li><li>• I have never taught anything to someone else.</li></ul>	

# Design 3

## for the Web

### User Characteristics Survey Results Worksheet

19	<p>How do you like to learn formally?</p> <ul style="list-style-type: none"><li>• Written material</li><li>• Lecture</li><li>• Discussion</li><li>• Practice Exercises</li><li>• Individual Project</li><li>• Group Project</li><li>• Tutoring</li><li>• Teaching someone else</li><li>• Other</li></ul>	<p>What is the equivalent of each of these on a website?</p> <p>15 Practice Exercise 12 Individual Project 9 Discussion 6 Tutoring 5 Written material 3 Lectures Other: Trial and error with a little guidance</p>
20	<p>What is your approach to learning something on your own?</p>	<ul style="list-style-type: none"><li>• Go over many times</li><li>• Mental helpers to remember</li><li>• Tutorials</li><li>• Research / try</li><li>• Repetition</li><li>• Find a model and try to copy it</li><li>• Watch tutorial or read</li><li>• Know the right questions to ask then research then trial and error</li><li>• Articles and videos and ask someone who is educated on it</li><li>• Panic, motivate my self, reward of learning something new</li><li>• Tutorial videos</li><li>• Look for credible sources, learn by doing, patience and practice</li><li>• I need to see someone who knows what they're doing do it first.</li><li>• Breaking it down into little pieces</li><li>• Seek out first person sources</li></ul>
21	<p>Seven Learning Styles. Which ones do you prefer? You can select as many that apply.</p> <ul style="list-style-type: none"><li>• <b>Visual</b> (spatial): You prefer using pictures, images, and spatial understanding</li><li>• <b>Aural</b> (auditory-musical): You prefer using sound and music.</li><li>• <b>Verbal</b> (linguistic): You prefer using words, both in speech and writing.</li><li>• <b>Physical</b> (kinesthetic): You prefer using your body, hands and sense of touch.</li><li>• <b>Logical</b> (mathematical): You prefer using logic, reasoning and systems.</li></ul>	<p>14 Visual 5 Solitary</p>

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## for the Web

### User Characteristics Survey Results Worksheet

	<ul style="list-style-type: none"><li>• <b>Social</b> (interpersonal): You prefer to learn in groups or with other people.</li><li>• <b>Solitary</b> (intrapersonal): You prefer to work alone and use self-study.</li></ul>	
22	What will cause you frustration when learning something new?	<ul style="list-style-type: none"><li>• Language I have never heard before and don't understand</li><li>• Not enough information to be clear</li><li>• No resources when encounter difficulty</li><li>• Need to ask questions</li><li>• Not understanding it immediately</li><li>• It I can't understand the concept quickly</li><li>• Words are not simple and are too technical to understand</li><li>• Too time consuming for the amount of time that I have</li><li>• Confusing information. Example is not clear.</li><li>• Have to start over because it isn't clicking</li><li>• Not getting multiple ways to learn it</li><li>• No information on how to fix it if it goes wrong – how to troubleshoot</li><li>• Not understanding the question</li><li>• Hate going in blind – there are no examples or resource to inform</li><li>• Hard to find what I need on a website due to poor navigation</li></ul>
23	What is your personal style?	Clean, easy to read, color pops.
24	Are you a reasonably patient person?	
25	How often do you recommend products or companies to other people?	6 Rare 5 Occasional 4 Often



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## for the Web

### User Characteristics Survey Results Worksheet

26	<p>Select which item most closely matches how you prefer to learn something?</p> <ul style="list-style-type: none"><li>• Learns by seeing or watching demonstrations</li><li>• Learns through verbal instructions from self or others.</li><li>• Learns by doing and direct involvement.</li></ul>	9 Doing and direct involvement 5 Seeing or watching demonstrations 1 Verbal instructions
27	<p>You want to learn a new program, skill or game on a computer. You would:</p> <ul style="list-style-type: none"><li>• explore using the controls or keyboard.</li><li>• read the written instructions that came with the program.</li><li>• follow the diagrams in the book that came with it.</li><li>• Talk with people who know about the program.</li></ul>	6 Talk with people who know the program 5 Explore the controls 4 Read written instructions 0 Follow the diagram
28	<p>Select which item most closely matches how you solve problems?</p> <ul style="list-style-type: none"><li>• Deliberate; plans in advance; organizes thoughts by writing them; lists problems.</li><li>• Talks problems out; tries solutions verbally or sub-vocally; talks self through problems.</li><li>• Attacks problem physically; impulsive; often selects solution involving greatest activity.</li></ul>	9 Talk / try solutions 4 Deliberate, organize, lists 2 Attack physically solution has activity
29	<p>I like websites that have:</p> <ul style="list-style-type: none"><li>• audio channels where I can hear music, radio programs or interviews.</li><li>• interesting written descriptions lists and explanations.</li><li>• things I can click on, shift or try.</li><li>• interesting design and visual features.</li></ul>	10 interesting design and visual features 2 thing I can click on, shift or try 2 interesting written descriptions, lists and explanations 1 audio channels to hear music /programs

# Design 3

## for the Web

### User Characteristics Survey Results Worksheet

30	<p>Other than price, what would most influence your decision to buy a new non-fiction book?</p> <ul style="list-style-type: none"><li>• The way it looks is appealing.</li><li>• Quickly reading parts of it.</li><li>• A friend talks about it and recommends it.</li><li>• It has real-life stories, experiences and examples,</li></ul>	<p>5 Quickly read a part of it 4 A friend recommends 4 It has real life stories and examples 2 The way it looks is appealing</p>
31	<p>You are going to choose food at a restaurant or cafe. You would:</p> <ul style="list-style-type: none"><li>• Choose from the descriptions in the menu.</li><li>• Listen to the waiter or ask friends to recommend choices.</li><li>• Look at what others are eating or look at pictures of each dish.</li><li>• Choose something that you have had there before.</li></ul>	<p>12 Choose from descriptions 2 Look at what others are eating 1 Listen to the waiter</p>
32	<p>You are about to purchase a digital camera or mobile phone. Other than price, what would most influence your decision?</p> <ul style="list-style-type: none"><li>• Reading the details or checking its features online.</li><li>• It is a modern design and looks good.</li><li>• The salesperson telling me about its features.</li><li>• Trying or testing it.</li></ul>	<p>10 Read the details / check online 4 Try or test</p>
33	<p>Select which item most closely matches how you respond to periods of inactivity?</p> <ul style="list-style-type: none"><li>• Stare or doodle; find something to do.</li><li>• Hum, talk to myself, or talk to others.</li><li>• Fidget or find reasons to move.</li></ul>	<p>10 stare/doodle; find something to do 5 fidget or find reasons to move</p>
34	<p>I think the best way to remember something is to picture it in my mind,</p>	<p>12 true 3 false</p>
35	<p>I tend to solve problems through a more trial-and-error approach, rather than from a step-by-step method.</p>	<p>9 true 6 false</p>

# Design 3

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## for the Web

### User Characteristics Survey Results Worksheet

36	I enjoy working with my hands or making things.	14 true 1 false
37	I require explanations of diagrams, graphs, or visual directions,	10 true 5 false
38	I like to write things down or take notes for review later.	12 true 3 false
39	How well do you deal with change?	
40	What is your Super Power?	
41	What would you like to add about yourself and how you interact with information?	Only learn when I am interested. Try things and teach myself.
42	How do you adapt to something new?	Learning the whole idea/ message of the subject practice until I understand immerse in the topic

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15	Q16	Q17	Q18	Q19	Q20	Q21	Q22	Q23	Q24	Q25	Q26	Q27	Q28	Q29	Q30	Q31	Q32	Q33	Q34	Q35	Q36	Q37	Q38	Q39	Q40	Q41	Q42	Q43	Q44	Q45	Q46	Q47	Q48	Q49	Q50	Q51	Q52	Q53	Q54	Q55	Q56	Q57	Q58	Q59	Q60	Q61	Q62	Q63	Q64	Q65	Q66	Q67	Q68	Q69	Q70	Q71	Q72	Q73	Q74	Q75	Q76	Q77	Q78	Q79	Q80	Q81	Q82	Q83	Q84	Q85	Q86	Q87	Q88	Q89	Q90	Q91	Q92	Q93	Q94	Q95	Q96	Q97	Q98	Q99	Q100
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100

7943560: This topic relates to my professional interests.	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
7943561: What do you want to know about this topic?	What do I have to give up in my website design to have accessibility?	Website Accessibility?	How can I provide equal access and equal opportunity to people with disabilities through print, audio and visuals?	More details about what the standards are	How to achieve it.	What are the best ways to make web pages accessible.	Ways to make my website designs more accessible
7943562: What will make this information meaningful to you?	I know why it is important. b How hard is it?	Everything	Learning how to make my website accessible to everyone at all costs. What kinds of barriers am I up against?	If it's easy to learn and understand	I dont know	Good information and solutions. Examples.	It's important to me that anyone and everyone can use my websites
7943563: How do you plan on using this information?	To see what I can add that is organic to my process and has an impact before I am required to do it.	For doing my assignment	To promote and provide equal access and equal opportunity to all users.--f	Future Projects	personal use	Will help me with designing and developing web pages in the future.	When designing I'd like to implement these things
7943564: How do you rate your current interest in this information? ( 1 being not interested --f and 10 being very interested )	6	10	7	6	5	9	10
7943565: Rate on a scale of 1 ( least ) - 10 ( most ) "I would like--fa broad idea of where the topic fits in"	5	10	10	6	6	7	10
7943566: Rate on a scale of 1 ( least ) - 10 ( most ) I would like an outline of the benefits of this product / idea / technique.	5	7	10	7	7	10	10
7943567: Rate on a scale of 1 ( least ) --f-10 ( most ) I would like detailed information on how to use this.	1	5	8	7	6	10	10
7943568: Rate on a scale of 1 ( least ) - 10 ( most ) I would like to see examples of this.	8	10	8	8	6	10	10
8037720: I know someone who is affected by accessibility difficulties and cannot use most websites.	FALSE	FALSE	TRUE	FALSE	TRUE	TRUE	FALSE
8037718: Rate on a scale of 1 ( least ) --f-10 ( most ) I understand what it takes to make website accessible.--f	3	5	8	6	4	8	8
8037719: I know what a screen reader is.	TRUE	TRUE	FALSE	FALSE	TRUE	TRUE	TRUE
8037722: I would like to experience what it is like to not be able to access a web site through:	Interactive experience	Written examples	Written examples	Infographics	Interactive experience	Interactive experience	Interactive experience
7943569: Are there any specific things not mentioned here that you would like to learn about website accessibility?	How does it affect a business website when it is not accessible to share with clients who don't want to spend the money on it.	nothing	Tips?	Not that I can think of	No		How to implement more of it in my current design, how to make interactive experiences more accessible, accessibility on mobile sites as well
8037725: You just got a new job and the company works with the government who requires the website to be accessible.--f Where do you start?	Research	With Content	Choose a content management system that supports accessibility.	Finding out the website specifics for a government site.	I dont know	Make sure the layout of the website and the design is easy to understand.	I'm not completely sure, but I'd start with looking to see if the ADA has guidelines for creating--f accessible websites

# Design 3

## for the Web

### Content Summary

topic	
Data Type	Content Result
User characteristics influence	1.
Data Type	Content Result
User needs & goals influence	1.
Website Statements	
website goals	
website message	
Tone	

# Design 3

## for the Web

<b>From the User Characteristics Survey determine:</b>	
<b>User Characteristics (behaviors)</b>	<b>Design Approach</b>
<b>Big Picture</b> Adults require the big picture view of what they're learning. They need to know how the small parts fit into the larger landscape.	Paragraph explaining the big view and how it will be broken down (headings , index)
Present information in multiple ways	
Like to curate information Need to find more details	
<b>User Characteristics (motivation)</b>	<b>Design Approach</b>
Frustrated if can't find information	Good headings, introduction, index
Adult learner – What's in it for me?	Benefit contact block
Being engaged	Big idea first. Good presentation of info

<b>From your Topic Survey determine:</b>	
<b>Outcomes the User Wants</b>	<b>Design Approach</b>

# Design 3

## for the Web

### NOTES

Point of view	Web designers, media designer
Professional interests	Creative arts with a technical application
Personal interests	Everyone wants to get a job in the web field, further education in applied design
Professional learning	Create content across all skill sets Curate information
Web Design	7.4/10
Web Building	6.4/10
Business Experience	
What frustrates you	Pop ups, slow performance, spelling errors, not being able to read small text, navigation, can't find things
solutions	[good headings sub-navigation good introduction index]
What makes you stay	Visually appealing, Easy to find content, Relevant, easy to read
Information seeking	Research on the internet, ask an expert,
How do you like to learn formally	Lowest answer was lecture highest is practice middle discussion
What is your approach to learning OYO	Repetition. Trust the sources.target the right information Tutorials, read - chunk it. Look for an expert. Make it digestible
Learning style	Visual {do you have an infographic} Logical {statistics, charts} Solitary [.map]
Learning frustration	Shallow, no resources, ask questions [faqs] no examples, glossary of terms
Style	Clean open clear headings
Recommendations	Rarely or often
Learning style	1 direct involvement 2 watching seeing
New program/game	Talk with someone who knew it Play with the controls themselves



# Design 3

## for the Web

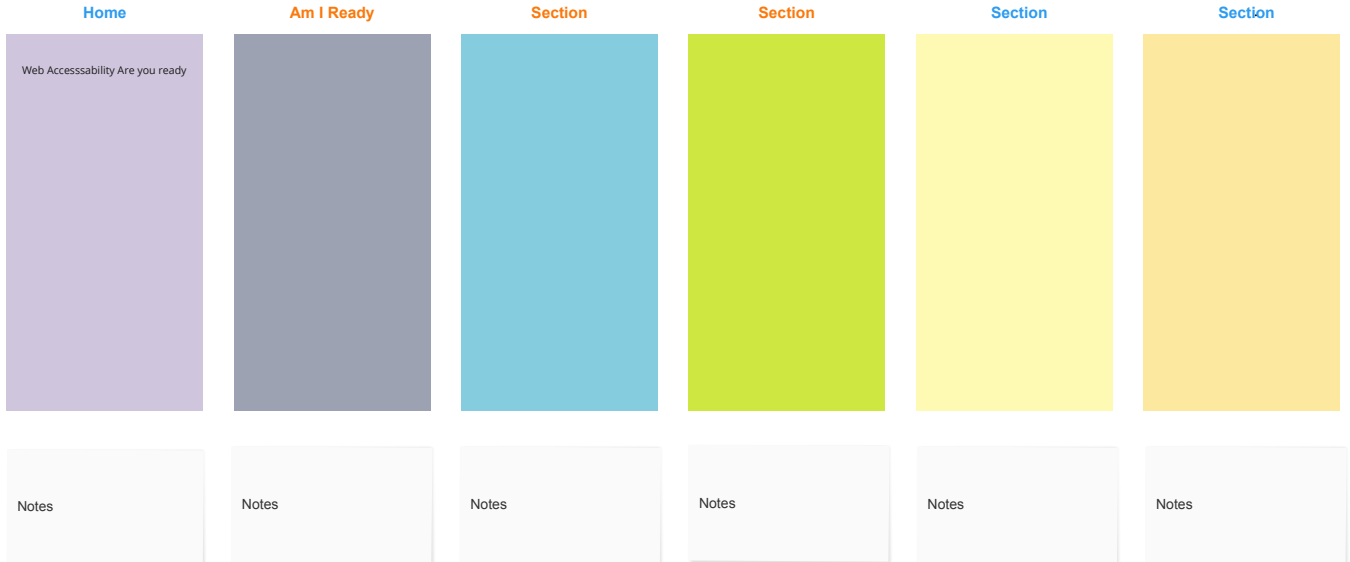
Solve problems	By talking them out [see it broken down in processor steps]
I like websites that have	Interesting design and content
Buy a book	Quickly read a part of it [engage me]
Restaurant	Choose from a menu read it
Purch a new camera	Read about and test it themselves
Makers	True
Explain diagrams	True
Helps engage	Big idea first. Good presentation of info

# Organizing Principle: Around User

These are the sections on the webpage  
main idea (h2) to the details (h3 and h4)

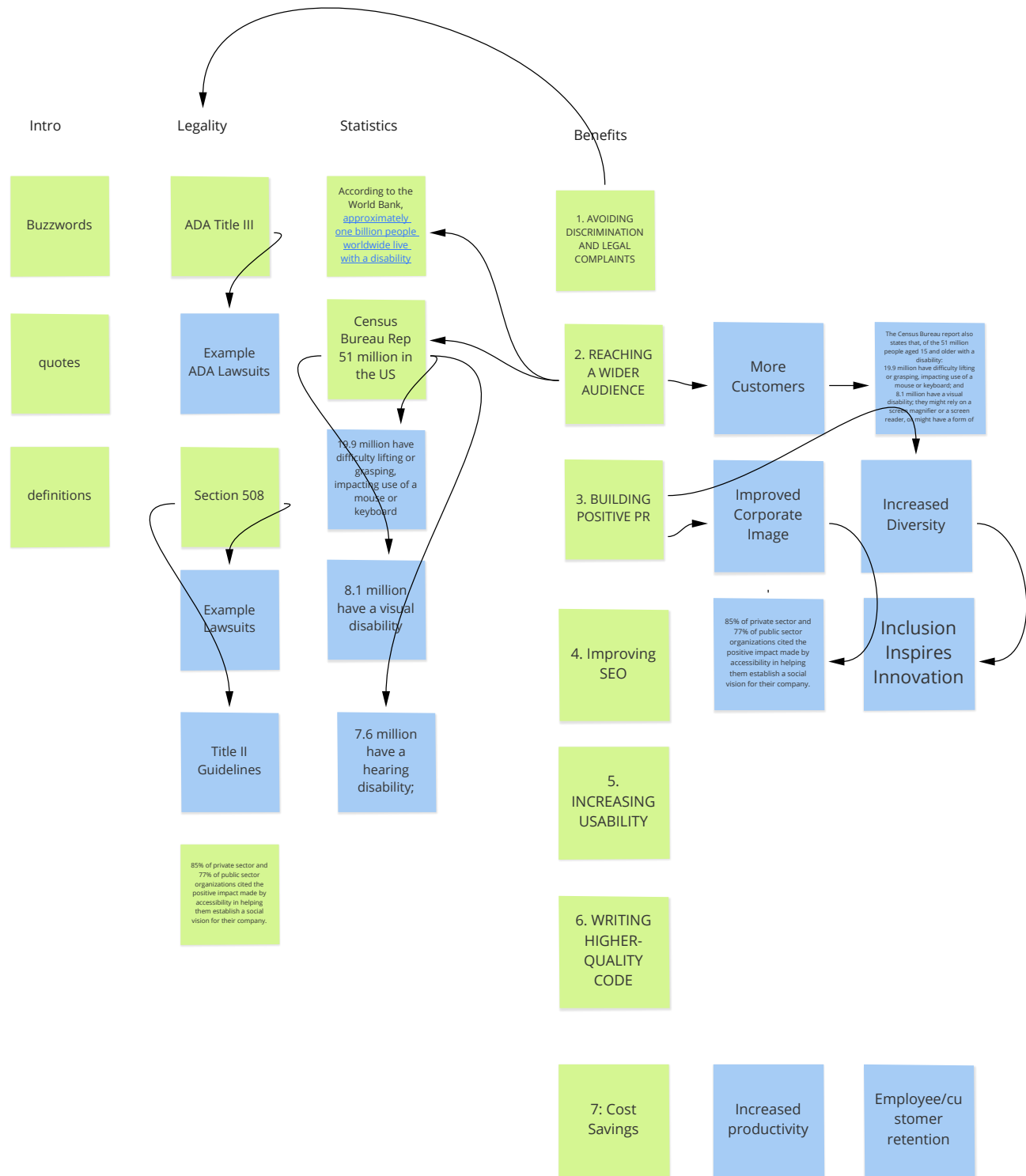
 = user based

 = general website items

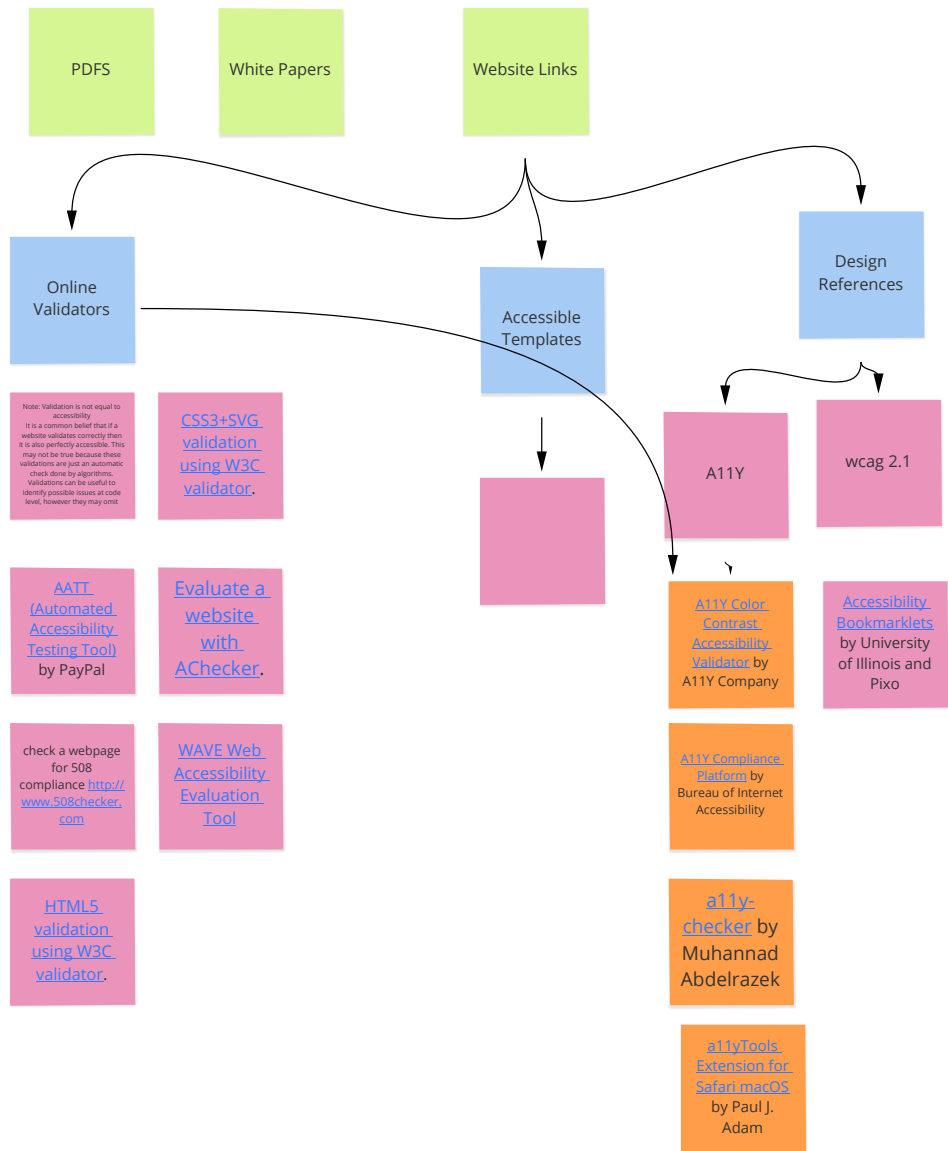


assets

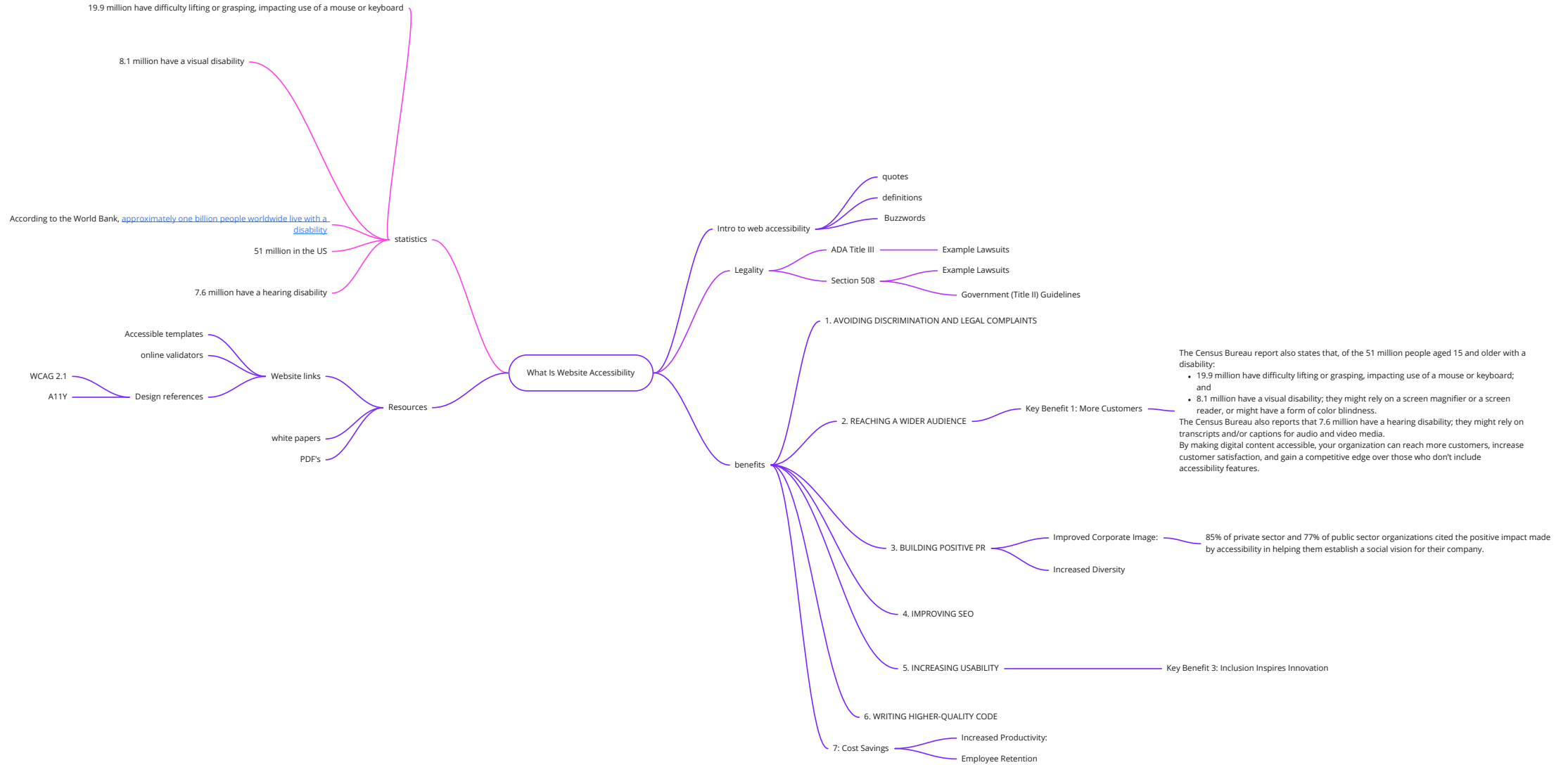
# Ideas and Supporting Details



# Resources



Good for determining the information units ( cards);



The Census Bureau report also states that, of the 51 million people aged 15 and older with a disability:

- 19.9 million have difficulty lifting or grasping, impacting use of a mouse or keyboard; and
- 8.1 million have a visual disability; they might rely on a screen magnifier or a screen reader, or might have a form of color blindness.

The Census Bureau also reports that 7.6 million have a hearing disability; they might rely on transcripts and/or captions for audio and video media. By making digital content accessible, your organization can reach more customers, increase customer satisfaction, and gain a competitive edge over those who don't include accessibility features.

<h1>  
Web Accessibility  
Get Ready!

<h2>  
Why does A11y  
make me a good  
designer?



<h3>  
Ready for a  
government site

<h3>  
justify to  
clients fact  
list

<h3>  
A unique  
marketable skill1

<h1>  
Are you ready?



<h3>  
quiz

<h3>  
Statistics

<h2>  
Misconceptions  
Little known

<h2>  
The structure of  
A11y

<h4>  
get sued

<h4>  
store  
lose \$

<h4>  
lose  
visitors

<h3>  
definitions

<h3>  
buzzwords

<h1>  
What A11Y  
resources will  
help me?



<h2>

<h2>

<h3>  
Site Testing  
Tools

<h1>  
How does A11y  
affect my design?



<h2>  
Bad Example

<h3>  
Good Example

<h3>





## How Much Do You Actually Know About Web Accessibility?

Thanks for taking the quiz! Below are the correct answers to the questions from the quiz.

Quiz Answers are Highlighted in Yellow and followed by a (+10)

- 1) **Which web accessibility feature for web browsing BEST helps users with low vision?**
  - a) Dictation software
  - b) Magnifier/Zoom (+10)**
  - c) Screen reader
  - d) Braille display
- 2) **Which of the following components do screen readers find most helpful in navigating through a web page?**
  - a) Tables
  - b) Links
  - c) Headings
  - d) All of the above (+10)**
- 3) **What makes a website's navigation accessible?**
  - a) Clear and consistent navigation allow users to move through the content efficiently
  - b) Tab order should be consistent and predictable
  - c) Keyboards can be used for all navigation and interactions
  - d) All the above (+10)**
- 4) **What are the four words that make up the POUR acronym for WCAG?**
  - a) Predictable, Operable, Understandable, Repeatable
  - b) Principle, Objective, Understandable, Robust
  - c) Perceivable, Operated, Understandable, Regressive
  - d) Perceivable, Operable, Understandable, Robust (+10)**
- 5) **Select the TRUE statement about web accessibility.**
  - a) You're not required to fix issues that are cost prohibitive
  - b) Accessible design interferes with design and layout
  - c) Many accessibility fixes are simple and don't require a developer (+10)**
  - d) You don't have to worry about web accessibility until you get a compliant
- 6) **All of these WCAG success criteria fall under the principle "Understandable", EXCEPT?**
  - a) Make text readable and understandable
  - b) Make all functionality available from a keyboard (+10)**
  - c) Help users avoid and correct mistakes
  - d) Make content appear and function in predictable ways
- 7) **What are the risks of an inaccessible website?**
  - a) Loss of revenue
  - b) Litigations and brand reputation
  - c) Talent acquisition difficulties
  - d) All the above (+10)**
- 8) **What check must be done manually when assessing a website's accessibility?**
  - a) Content and tabbing is logically sequenced (+10)**
  - b) Headings are being used
  - c) Every image must have an alt attribute
  - d) Tables have assigned header rows
- 9) **Diane works on a desktop and her mobile device. She finds that her user experience with these two devices on the same site are very different. What would improve Diane's experience on multiple devices?**
  - a) Minimize items on the screen and eliminate interactivity
  - b) Recommend users only use a specific screen size
  - c) Make sites compatible on multiple platforms without losing functionality (+10)**
  - d) All the above
- 10) **True or False: Documents are accessible if you use the authoring program's accessibility checker.**
  - a) True
  - b) False (+10)**

# THE MOST COMMON WEB ACCESSIBILITY ISSUES TO AVOID



# THE MOST COMMON WEB ACCESSIBILITY ISSUES TO AVOID

## INTRODUCTION

Web accessibility lets people with cognitive difficulties, vision impairment, or those who are deaf or hard of hearing gain access to online content such as webpages, electronic documents, and multimedia. Part of this accessibility includes content designed to work specifically with assistive devices such as screen readers, alternative keyboards, or joysticks that are used by people with a range of impairments.

ADA-compliant websites are coded in a way that allow vision-impaired people, for instance, to order groceries or access their banking information online using screen readers. Another example of web accessibility is creating sites that allow people with epilepsy to safely navigate webpages without increased seizure risk. The goal is to create digital spaces that can be as easily navigated by everyone as physical public spaces.

## WHAT IS REQUIRED?

The DOJ took the position that it was logical to bring websites under the same regulation as physical, brick-and-mortar stores since both offer essential services. In 2018, a set of new federal accessibility guidelines will come into effect that detail the web accessibility features with which companies must comply. Prior to 2018, though, companies best practices are to comply with existing standards, the Web Content Accessibility Guidelines (WCAG) 2.0 standard.

## What Are The Rules?

The goal of the WCAG is to provide a common standard for web accessibility and to give companies a clear methodology to improve the digital accessibility of their websites and services. WCAG 2.0 applies to a wide range of existing and future web technologies, and its implementation can also be easily evaluated by human testers and a range of automated tools.

While best practice guidelines for writing code have existed for many years, the DOJ's position on ADA compliance makes it now very much a legal matter. Companies that don't comply with the web accessibility guidelines risk legal action brought by members of the public or associations that protect human rights. Companies both small and large have faced litigation related to substandard accessibility of online services. It is definitely in a company's best interest to take steps to avoid or remedy web accessibility problems.

*“Right out of the gate, I would want to know if you have done anything to ensure ADA accessibility on your website. More specifically, I would want to know how bad the problem is, and how easy it is to fix. A web accessibility audit report is a crucial document that can be used to identify low hanging fruit for a quick fix. Similarly, it can be used as a tool to uncover major accessibility problems that require intensive remediation efforts.” Web Accessibility and the Law Interview: Christian Antkowiak, a shareholder at Buchanan Ingersoll Rooney*

## ACCESSIBILITY ISSUES TO BE AWARE OF

### Start

Good news: Coding an ADA-compliant website is achievable with minimal expense and minimal impact on usability or design if some basic guidelines and strategies are followed. The following list details the best ways to avoid the seven most common web accessibility issues.

### Navigation

This is probably the most important accessibility issue and applies to any website. Whether people have a disability or not, if a site has not been properly designed to allow for simple navigation, some of the website's information will be difficult to access.

#### There are two main elements that relate to navigation:

- **Tab-through order.** For people with disabilities, it's extremely important that sites can be navigated using only a keyboard. This often means that the “tab” key is used to move through different sections within a webpage. Accessible websites should be structured so that pressing “tab” logically moves the user from the address bar to menus, across form fields and links, and to any other content areas in a clear and easy-to-follow manner. This let users who rely on keyboard navigation to move through a page in an intuitive way even if they can't see the screen.
- **Landmarks.** Just as physical landmarks help people navigate in real space, landmarks in a website help users navigate a page. These digital landmarks are special labels included in the site code that provide navigation indicators. Landmarks will, for example, allow screen readers to identify and communicate with the page's navigation menu so that users can access that menu quickly without having to listen to all the text on a page.

## SITE STRUCTURE

Properly structured websites use levels of text that have been logically named to show the relationships between different areas of content. For web users without vision impairment, people can understand site structure and a page's content naturally and quickly by scanning for titles or headings. For people who cannot rely on vision-dependent cues, pages should be structured to provide similar key information to screen readers. This can be achieved by making sure each page is structured to include:

- **Unique titles.** All pages should be given a logical and unique title so that no two pages share the same title. The page title should appear within the browser above the web address bar.
- **Headings.** Headings should logically progress so that sections containing content are formatted using heading style designations such as "Heading 1", "Heading 2", and so on instead of relying on variations in the visual text such as font or font size changes.
- **Lists.** Any bulleted or numbered list should be identified as such rather than by using indents or symbols to indicate it. Besides helping users identify information as belonging to a specific list, following this practice helps communicate the number of items in the list.

## TEXT

More than 7 million American adults have some form of vision impairment, representing roughly 2% of the population. This includes a wide range of vision problems including nearsightedness, color blindness, or complete loss of vision. Developing web pages that allow for flexibility in the way text is displayed provides users with a wide range of simple options that can significantly improve how easy it is to read a site's text. Text options should include:

- **Size.** Users should be able to easily increase or decrease text size. Text should also be able to be effectively displayed across a range of device types including desktop, mobile, and tablet.
- **Contrast.** Proper color contrast between text and backgrounds reduces challenges created by color blindness or other vision impairment conditions. WCAG 2.0 has clear guidelines on contrast levels for a range of text sizes.
- **Color.** Colors should not be used to convey meaning. If developers wish to use colors to communicate something meaningful, alternative options should also be provided to communicate the meaning. This applies to features such as highlighted text.

## IMAGES

Using images rather than text to convey meaning or to navigate webpages prevents people from being able to properly access information. Some of the key issues related to imagery include:

- **Images instead of text.** Important information displayed as an image should be avoided. Examples of this are a "home" button that's an image of a house. Sometimes text is displayed as an image. Unfortunately, screen readers treat an image showing text as if it were a photo or a logo. This, in turn, prevents users from being able to properly navigate or understand key elements of the page.
- **Text for images.** Adding text descriptions to images allows vision-impaired users to understand what is being displayed. This can be important for graphics such as flowcharts, schematics, maps, graphs, or menu buttons. A lack of additional text to support images was one of the key factors cited in the landmark accessibility class action lawsuit that was successfully brought against the retailer Target.
- **Color.** Color shouldn't be used to convey important information. For instance, consider a map that uses color-coded location markers to display a green start line or a red finish line. To assist people with color blindness or other vision impairment to understand maps or location-based information, supporting text should be included.

## HYPERLINKS

Hyperlinks are one of the main features of websites, allowing people to easily navigate to other pages to seek out additional details of related information. There are, however, important differences in the way that sighted people and vision-impaired people navigate and access hyperlinks on a page.

- **Clarity.** While people without impairment can scan pages to find links to useful information from within the context of the text surrounding those links, people relying on assistive devices such as screen readers often access hyperlinks as part of a list that has no additional context. For this reason, sites shouldn't name links using terms such as "read more." That gives no context for people who access links from a list.
- **Readability.** Hyperlink addresses can sometimes be made up of long strings of letters, numbers, and symbols. Listening to links like these read out loud is arduous. Hyperlinks should use common terms and language instead of just stating the web address.
- **Distinctiveness.** Clearly identify links. This means they should either be underlined or in italics instead of relying on color to distinguish them from standard text.

## MULTIMEDIA

There are many ways in which the accessibility of multimedia content can be improved. In this area, software and machine-learning technologies are rapidly improving to provide efficient and automatic services such as auto captioning.

- **Video.** For people in the deaf community or for those hard of hearing, captioning and transcripts can provide synchronized text when viewing a video or a transcript text file that can be read separately. Modern software has allowed the captioning process to be done automatically as well as being able to identify other non-verbal information by identifying when music or laughter occurs on screen.
- **Audio.** Text versions of any audio files should be made available.
- **Animations.** Some people with cognitive disabilities find animations or other on- screen movement to be excessively istracting. This being the case, all site animations should include an option to disable or pause them.

## FORMS

Since online documentation or forms feature prominently on many government as well as nongovernment websites, it's important that they be properly designed. Inaccessible forms was one of the elements specifically mentioned in the 2015 class action accessibility complaint filed against the shoe manufacturer Reebok. These factors need to be considered in all form designs:

- **Navigation.** The user should be able to logically tab through each of the fields in the document.
- **Instruction and labeling.** Instructions related to form fields are typically locked to prevent editing of non-field content. Unfortunately, that makes the instructions related to those form fields unreadable to a screen reader. All form fields, checkboxes, or dropdown menus should be clearly labeled and capable of being read by screen readers.
- **Time-outs.** Many online forms incorporate a time-out feature for security purposes. Unfortunately, this can leave users navigating by keyboard or those using screen readers insufficient time to complete the form — even if they complete it in one continuous session. Form pages should be designed to allow the user to extend the time to complete a form when necessary.

## BRINGING IT ALL TOGETHER

It is simple to avoid web accessibility issues by having a strong familiarity with the WCAG 2.0 standard and by following practices and checklists that address the most common accessibility issues. Another key point to remember is that accessibility is better addressed in the earliest stages of design and development rather than being dealt with as an afterthought so that code needs to be retroactively changed.

It is also important to remember that once a website or app has been released — even if it has been carefully designed and accessibility testing has checked for ADA compliance — that ongoing maintenance is still required. Ongoing maintenance will ensure that accessibility issues don't crop up from site updates or changes in the way that people access the web via new types of assistive devices. Every organization should have a person with a clearly defined role assigned to routinely check for accessibility issues and to quickly address them if they arise.