

ACCESSIBLE
INCLUSIVE
& DESIGN AT
SCOUT

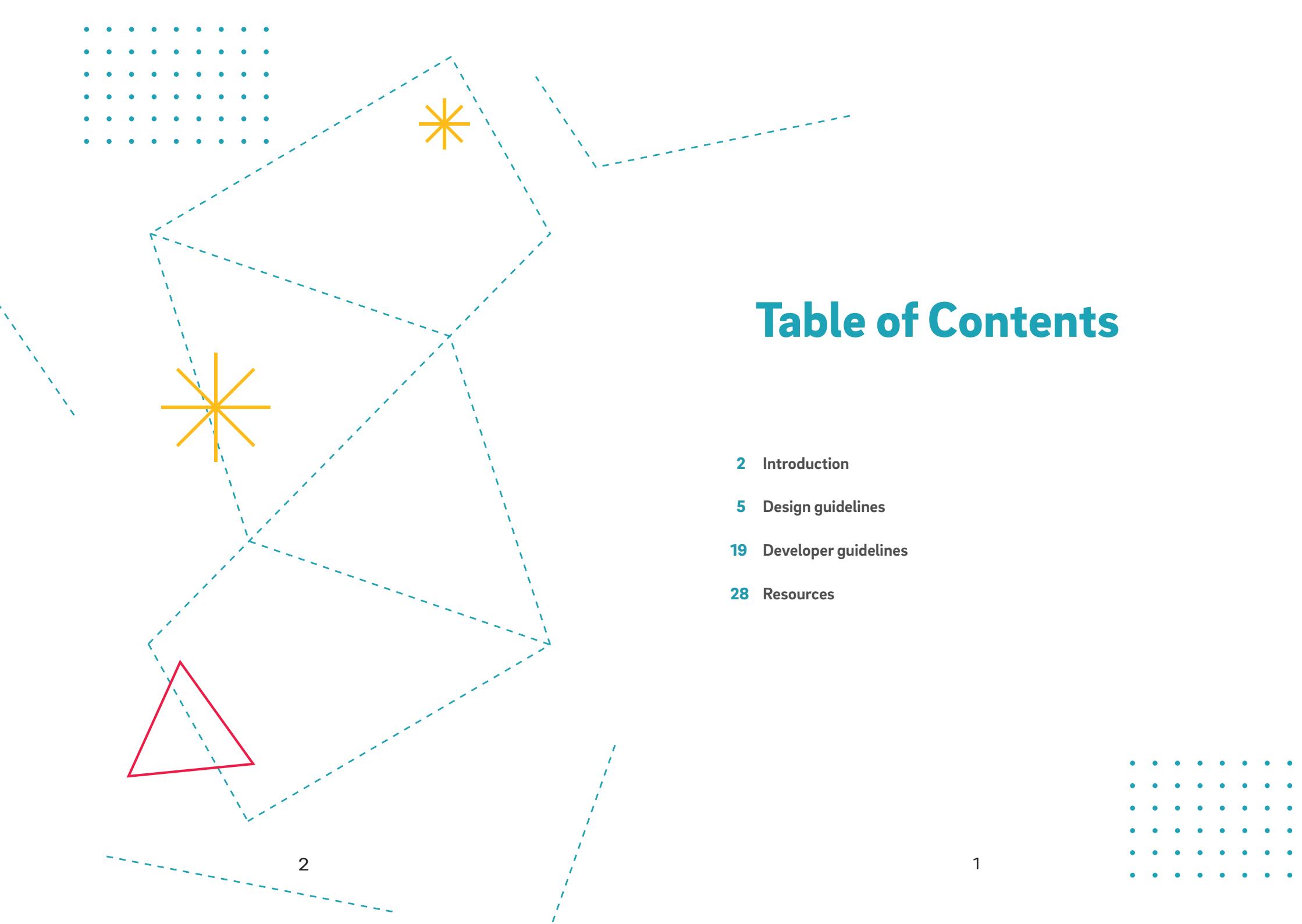


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Introduction



What is accessible design?

Together, accessibility & inclusivity mean ensuring **no user is excluded** from using a product due to variations in need.

Accessibility ensures users with disabilities can use a product, maximizing potential users, and enhances all user experiences. Any target user should be able to accomplish the same tasks regardless of ability, location, etc. though their process for doing so need not be the same as everyone else. **Customizability is key** to accessibility.

As part of their process, designers often determine a target audience for their client's product or service, and then tailor their designs to meet the target audience's needs. While this strategy is a useful part of the design process, it is important to notice when a target audience doesn't seem to include users with disabilities.

Why is accessible design important at Scout?

Accessibility and inclusivity are important because all people deserve to be able to use the web in a delightful way.

It's also the law. Title III of the Americans with Disabilities Act requires that all public areas (including your website) accommodate people with disabilities.

The Web Content Accessibility Guidelines (WCAG) are a set of guidelines developed to standardize accessibility on the web. There are three tiers to WCAG 2.0 guidelines:

A (minimum) – Bans all elements that would make a site impossible or incredibly difficult to use for some people

AA (acceptable) – The most commonly used compliance level. Following AA guidelines ensures a site is usable by the majority of people with or without disabilities.

AAA (optimal) – Site is accessible and easy to use for the maximum amount of users. It is very difficult to achieve complete AAA compliance, so it is recommended to only aim for it if your target user is part of a specific group that would benefit (for example, if you are designing a website specifically made for the elderly).

Scout aims to achieve WCAG 2.0 AA compliance in all products.

This binder aims to not only explain WCAG compliance but also demonstrate what WCAG compliance might look like for designers and developers at Scout. It was designed with the goal of being built upon and added to as Scout moves forward and our understanding of accessible design deepens.

Accessible design is inclusive. Accessible design is innovative.
Accessible design is good design.



Design Guidelines

6 Color

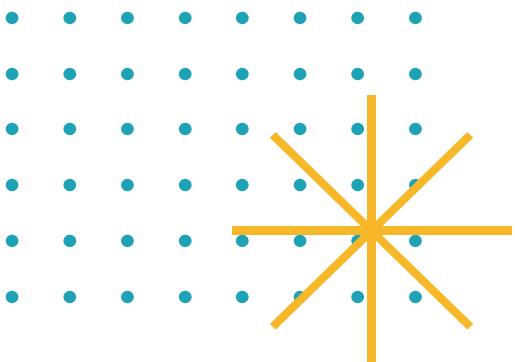
8 Type

10 Content

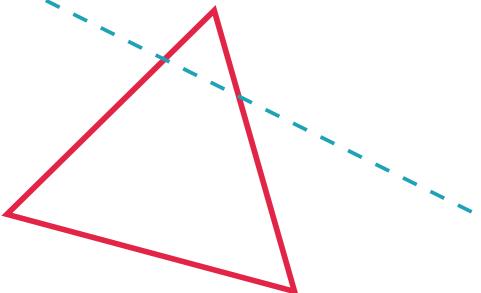
12 Controls

14 Images and other visual elements

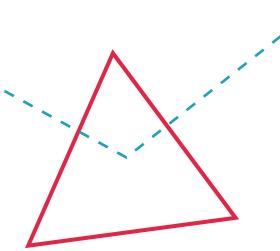
16 Navigation and handoff



4



5



Meet Scout.

19 pt bold text
3.09:1 contrast ratio

Become a member

12 pt regular text
21:1 contrast ratio

Submit

24 pt regular text
3.09:1 contrast ratio



Purely decorative, part of a logo
1.09:1 contrast ratio

Learn More

1.51:1 contrast ratio

1.69:1 contrast ratio

If you can read this, good for you.
But remember that not all your users can.

13 pt regular text
3.09:1 contrast ratio

Color

Accessible use of color means people with low vision, sight conditions, and varying light conditions can use your product.

Regular size text: 4.5:1 contrast

Unless the text is:

1. Part of a logo
2. Purely decorative
3. Part of a disabled or inactive UI element

Large text: 3:1 contrast

How large is large text?

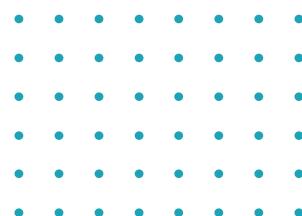
Bold text larger than 18.5px

Any text larger than 24px

Icons: 3:1 contrast

Input element borders: 3:1 contrast

Be careful using red + green, check visibility of design with a color blindness simulator



Call me Ishmael. Some years ago—never mind how long precisely—having little or no money in my purse, and nothing particular to interest me on shore, I thought I would sail about a little and see the watery part of the world. It is a way I have of driving off the spleen and regulating the circulation.

16 pt text, 22pt leading

~45 characters per line

Left-aligned, ragged right

Whenever I find myself growing grim about the mouth; whenever it is a damp, drizzly November in my soul; whenever I find myself involuntarily pausing before coffin warehouses, and bringing up the rear of every funeral I meet; and especially whenever my hypos get such an upper hand of me, that it requires a strong moral principle to prevent me from deliberately stepping into the street, and methodically knocking people's hats off—then, I account it high time to get to sea as soon as I can. This is my substitute for pistol and ball.

7 pt text, 7pt leading

Note: 7pt text appears bigger in print than on web

~100 characters per line

Right-aligned, ragged left

With a philosophical flourish Cato throws himself upon his sword; I quietly take to the ship. There is nothing surprising in this. If they but knew it, almost all men in their degree, some time or other, cherish very nearly the same feelings towards the ocean with me.

8 pt text, 10pt leading

~85 characters per line

Justified alignment

Type

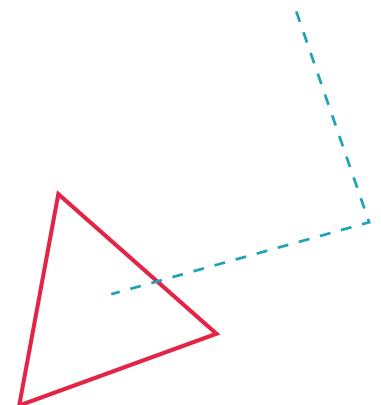
Text that is not too small helps everybody read your content better, especially those with low vision. Left-alignment, medium line length, adequate white space around blocks of text and between words, and easy-to-read typefaces also help people consume text without getting overwhelmed and reduce eye strain.

Body text: at least 12pt / 16px

Minimum for any text: 9pt / 12px

Line length: between 45-75 characters [recommended]

Text is left-aligned, ragged right, not justified



Exposing inaccessible websites

Following the passing of the deadline last week, the U.K. based pan-disability charity Scope wasted little time publishing somewhat [deflating and disappointing research](#) confirming that nine out of ten websites of the U.K.'s largest local authorities still contain a multitude of accessibility errors.

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Underlining "deflating and disappointing research would make it easier for users, especially those with color blindness, to recognize it as a link

Content

Multiple ways of communication help users with different abilities + learning styles to understand meaning.

Use a combination of positioning, color, and descriptive text to identify content, elements, links, communicate instructions, etc.

Types of content:

1. *Links: don't distinguish by color only, try adding an underline + increasing text weight as well*
2. *Graphs: use a combination of color + pattern to distinguish sections of a chart*
3. *Images: there is no need to avoid images just because visually impaired users will require alt text, they can help break up a page making it more easy to digest + understand for everybody, especially those with cognitive challenges*

Language is easy to understand

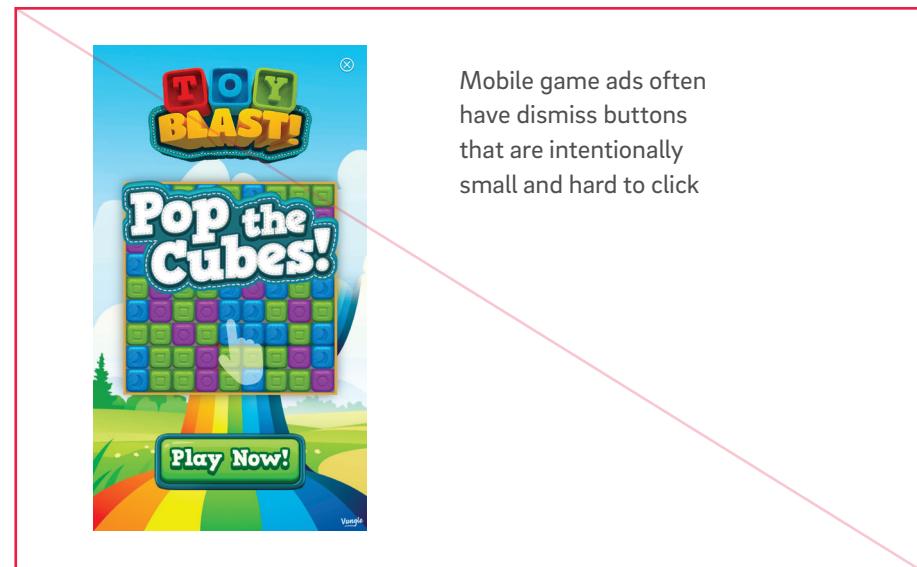
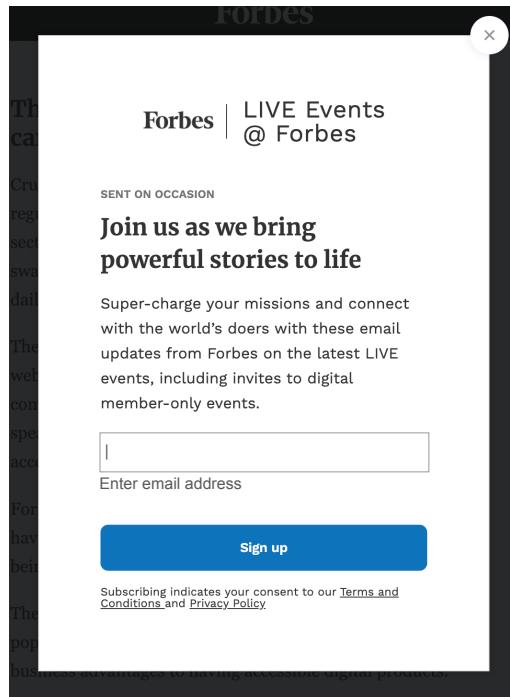
Tips:

1. *Use "to" instead of a dash when indicating a range (1 to 3, not 1-3)*
2. *Use full words rather than abbreviations*
3. *Extend an acronym at least once per page (Northeastern University (NU))*
4. *Capitalize each word of a hashtag #AccessibilityAndInclusivity*

This popup is easy to dismiss, with an 80x80 px target.

The form label is outside of the form.

All buttons and form labels are descriptive, and all links are underlined.



Controls

Target size ensures that people can tap on the right thing. Descriptive forms and buttons help those with screen readers know what to do with them and what will happen when they interact. Properly labeled forms also make autofill work better, making filling out forms easier for all of us!

Target size is at least 44x44px

Unless:

1. Equivalent control or link that is 44x44 is elsewhere on the page
2. Target is inline in text
3. It is essential to info being conveyed that it is not at least 44x44

Form label + hint are placed outside the form & remain visible while form is in use, hints specify format of entry if applicable

Buttons have labels that indicate what they do & are unique (i.e. 10 "edit" buttons on one page is not descriptive)

I've got a question for you:

Hi. I've got a question for you: how many people here would say they can draw? (Laughter) I think we've got about one or two percent of the hands going up, and it's interesting, isn't it? It's a little bit like people think of spelling or singing. They think, "You can either do it, or you can't." But I think you can. Because when people say they can't draw, I think it's more to do with beliefs rather than talent and ability. So I think when you say you can't draw, that's just an illusion, and today I'd like to prove that to you. When I say "draw", I'm not saying we're all going to draw like Michelangelo. We are not going to be painting the Sistine Chapel's ceiling. But would you be happy if, by the end of this session, you could draw pictures a little bit like this? (Audience murmuring) Oh, yes! (Laughter) Or even a little bit like this? (Laughter) Actually, there are only two things you need to do to be able to achieve this. One is have an open mind. Are you up for that? (Audience) Yes! And

TEDxHull • February 2015 | 37M views Like (1.1M) Share Add

Why people believe they can't draw

Most people think they can't draw, but communications expert Graham Shaw isn't buying it. In this fun, instructional talk, he demonstrates how a few adjustments to your drawing technique (and your attitude) can leave you with an effective new presentation tool as well as an outlet for your creativity.

Design, Creativity, Art, Communication, Personal Growth, Potential, Public Speaking

Images + other visual elements

Visual elements can be great within your design to explain content, add visual interest, etc. but alternatives must be provided in case the user can't access the visual information for any reason such as poor connection or low vision.

Transcripts

03:39 Down! You come down!

03:50 Down for good!

03:57 Forgive this early intrusion.

03:59 How are you?

04:01 I am a great admirer of yours. Honored to meet you.

04:05 May I?

04:07 Can I use your typewriter, sir?

04:10 Your arm, please. Relax it.

04:15 - Your age? - 43.

04:21 So, what are you cooking up?

04:23 Another film without hope?

04:25 - First time taking the cure? - Yes.

Down! You come down!

TEDx and Kanopy include not only subtitles on their videos but also transcripts

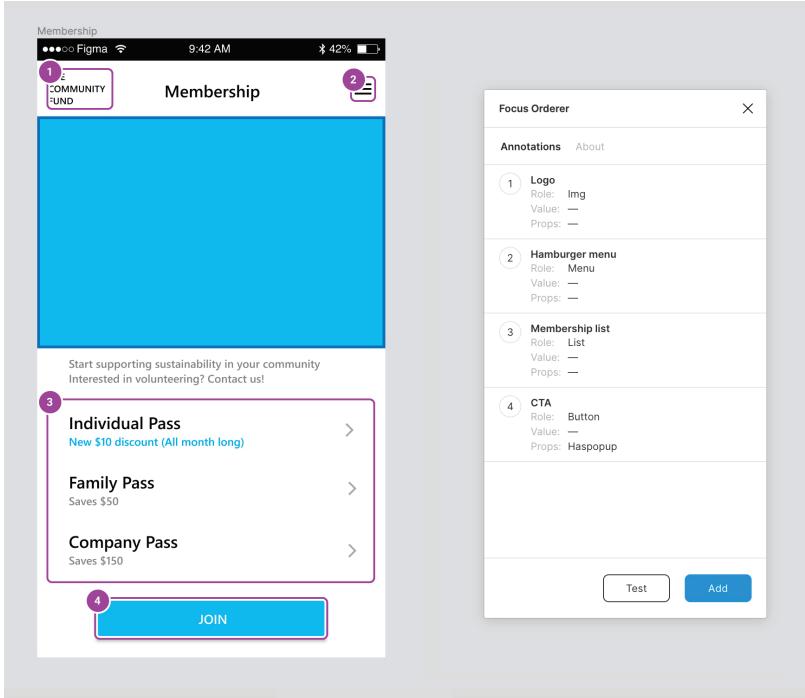
Provide alt-text for images

Flashing elements flash at less than 3Hz

Moving elements can be paused, stopped, or hidden by the user, if the elements:

- (a) last longer than 5 seconds
- (b) start automatically
- (c) are found alongside other content

Videos have subtitles + video sound can be toggled on or off



A Figma plugin created by Microsoft Design allows designers to indicate focus orders

Navigation + handoff

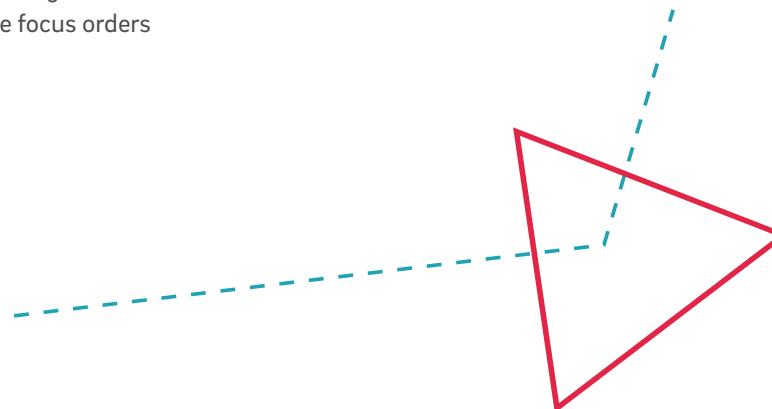
Concise navigation allows those using screen readers to navigate the site easily. Proper structuring of headers in code (H1-H6) and visually (with different text styles) allows users with screen readers or low vision to jump to the right content.

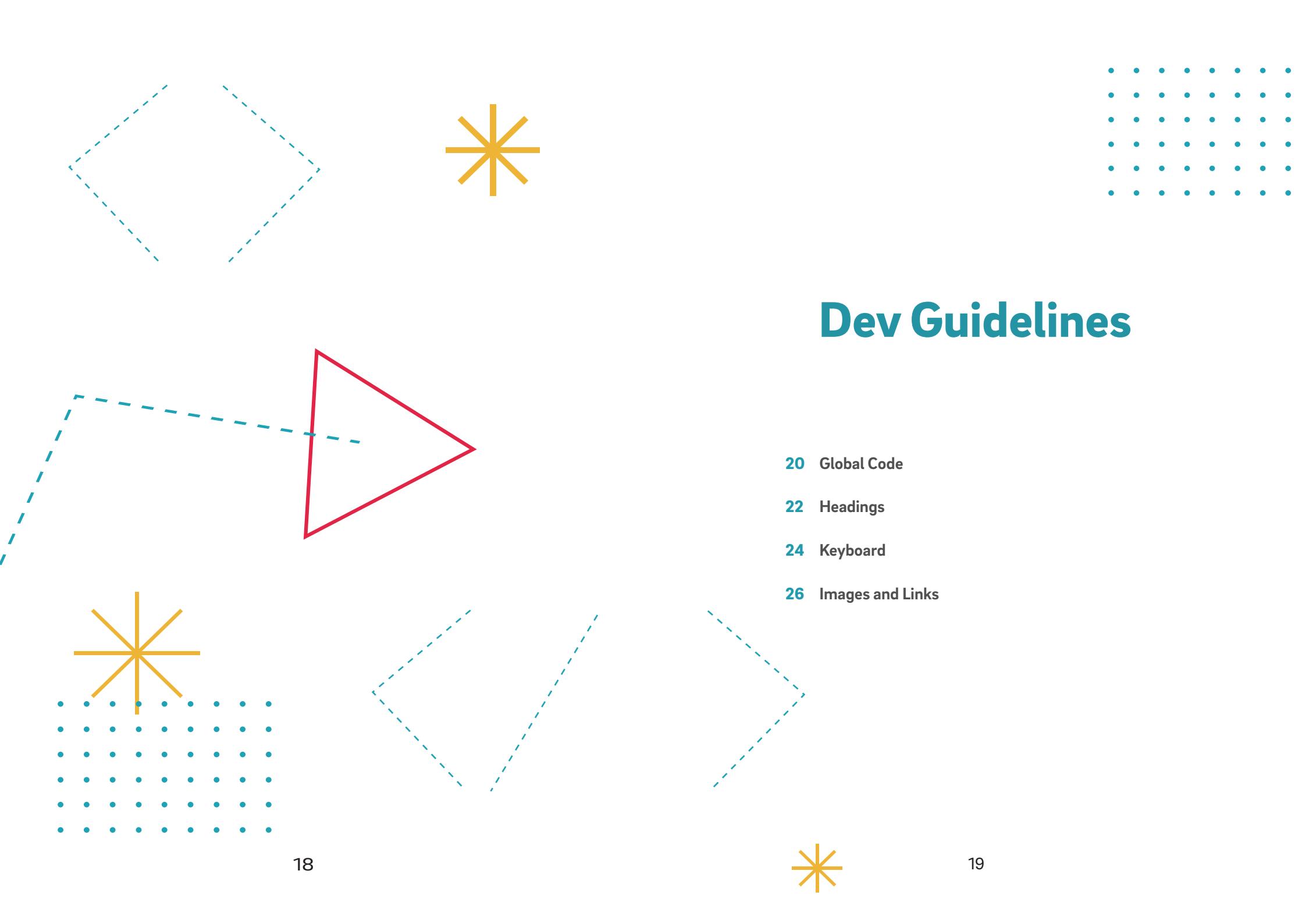
Alert dev of read order of page if different from visual order

Alert dev of focus order of interactive page elements if different from visual order

Clear + concise navigation links

Indicate heading ranking for dev (H1-H6)





Dev Guidelines

20 Global Code

22 Headings

24 Keyboard

26 Images and Links



<!-- Example of a lang attribute in action. This code specifies that the site is in Arabic, with the text reading right to left, so that the browser can easily translate the site for English-speaking users-->

```
<html lang="ar" dir="rtl">
<head>
```



Global Code

Writing your site's global code in an accessible way allows the user to customize their web experience to fit their needs. The user's browser should be able to translate your website into another language and/or increase the size of your site's text.

Use "lang" attribute in the <html> tag to indicate page language

Sections in a language other than the set language of the page have a separate "lang" attribute

No <meta> element contains "user-scalable=no"

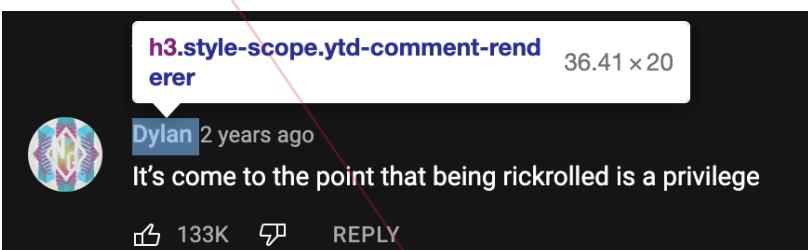
Text size is in percentage, ems, or rems, NOT pts or px

ARIA landmark elements signify content regions



<!-- Example of a site that uses rem and em to specific font size and line height in CSS so that the browser can increase the text size for visually impaired users-->

```
.css-vip0cf {
  font-family: nyt-cheltenham, georgia, 'times new roman', serif;
  font-size: 1.75rem;
  line-height: 1.15em;
}
```



```
<!--An example of overusing the same heading level: YouTube video titles and comment usernames have the same heading level, so a user using a screen reader is forced to read every YouTube comment before they can select a new video -- >
```

```
<h3 class="style-scope ytd-compact-radio-renderer">
  <span id="video-title" class="style-scope ytd-compact-radio-renderer"> title="Mix - Rick Astley - Never Gonna Give You Up (Official Music Video)"</span>
</h3>

<h3 class="style-scope ytd-comment-renderer">
  <span class="style-scope ytd-comment-renderer"> Dylan </span>
</h3>
```

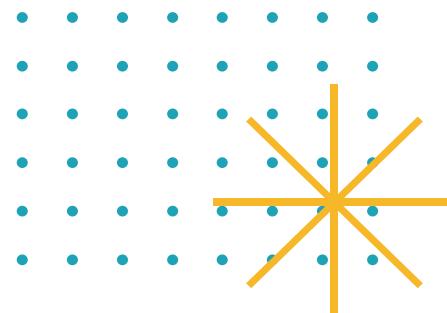
Headings

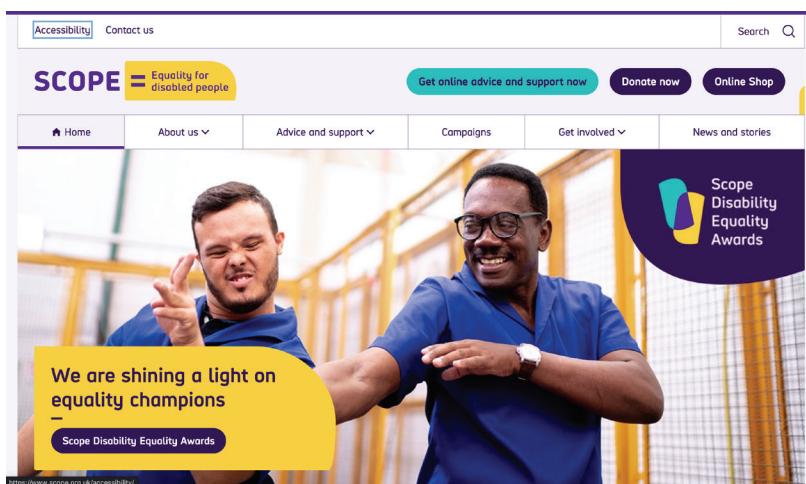
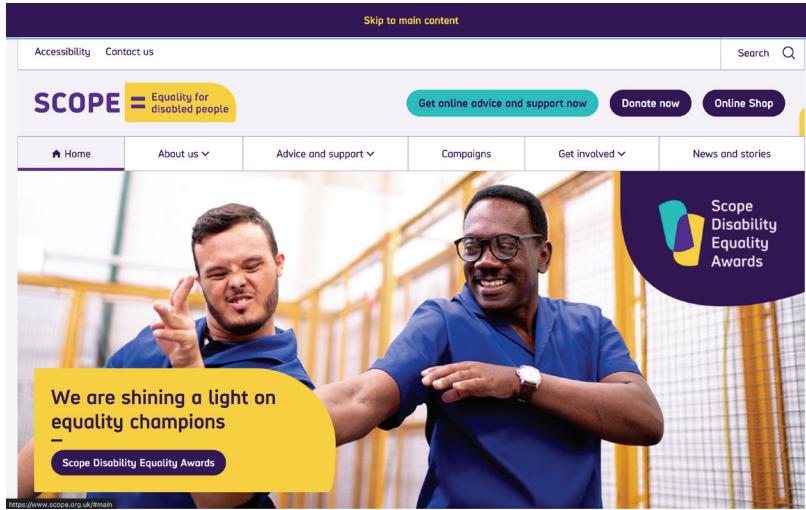
Concise navigation allows those using screen readers to navigate the site easily. Proper structuring of headers in code (H1-H6) allows users with screen readers or low vision to jump to the right content.

Each page has only one H1 element

No heading levels are skipped

Avoid overusing the same heading level





<!-- Scope's home page (scope.org.uk) is entirely keyboard navigable using the TAB key, and a banner option to 'skip to main content' appears before the first menu items reach the focus state-- >

`Skip to main content`

Keyboard

While most users navigate a website with a mouse or trackpad, blind or visually-impaired users or users with impaired motor skills may navigate a site with keyboard functions instead, and it is vital that your site's code supports these keyboard functions.

Site is keyboard navigable

Focus order follows design specs or visual order of page, then returns to address bar

All interactive elements have focus states

Keyboard focus moves to modal when opened

Keyboard focus does not leave modal until it is dismissed

Keyboard can be used to dismiss modal

Focusing on an element with a hover state with the keyboard reveals the hover state



Two members of Scout's management team give a presentation about the organization with a slide that says Welcome to Meet Scout.

Images and Links

Properly identifying images and links in the code allows screen readers to describe images to the user, and notify them when they are about to leave the web page. Alt text is also helpful to the user when an image fails to load.

```
<!--Example of well-written alt text. Notice that sprinkles image has a null alt value, so that screen readers will ignore it-->
```

```

```

```

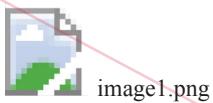
```

 elements have alt attributes

Alt text should be:

1. Descriptive
2. Written in complete sentences
3. Include any text in the image
4. Have a null ("") value if the image is decorative

Identify links that open in a new tab or window



```
<!--Without alt text, screen readers read the title of the images-->
```

```


```

Resources

Autocomplete widgets

These JavaScript widgets produce HTML with ARIA autocomplete attributes

Awesomplete: is dependency-free

jQuery UI autocomplete: requires jQuery

Select2: also requires jQuery

Browser accessibility checkers

Helpful but won't catch every issue, manual checks are very important

Accessibility Insights: Chrome plugin that checks 50 accessibility requirements & gives insight into keyboard navigation of any website

WAVE: put any URL into site to receive a very easy to read & comprehensive accessibility audit

Exclusion calculator: estimates proportion of population that would not be able to use a product, based on British census but still interesting

pa11y: command-line interface which catches accessibility issues in web pages

Color contrast tools

Stark: contrast checker for Figma & Chrome

WebAIM color contrast checker: compare HEX colors to determine if they meet WCAG AA and AAA contrast requirements

Snook's color contrast analyzer: RGB sliders that allows you to check contrast between two colors

Color Safe: put in your desired background color to generate a palette of text colors that meet contrast requirements. this is GREAT for finding text colors that work with a brand's color palette

EqualWeb website add on

EqualWeb provides code to add this little guy to your site which allows users to customize to their needs, has free & paid versions

Color impairment simulators

Color Oracle: desktop app to simulate color impairment on your entire screen

Stark: can simulate color impairment in Figma & Chrome

colourblind: GitHub bookmark that filters page according to diff types of color blindness

postcss-colorblind: CSS build tool on GitHub that modifies colors in CSS according to diff types of colorblindness

Personas

Pre-made personas with different levels of assistive requirements + comfort with technology that can be used if they fit the target audience

Inclusive Design Toolkit by the University of Cambridge includes Digital Personas

About accessibility

<in> accessibility: an interactive website mockup that lets users experience the accessibility issues that can be invisible to those without disabilities. Use the toggle at the top right to see the same site accessibly vs. inaccessibly and read more about the guidelines. Created by Scout member Holly Lovejoy!

Humane By Design: "A resource that provides guidance for designing ethically humane digital products through patterns focused on user well-being."

UX for the Next Billion Users: articles by Google on accessibility, inclusivity, and human centered design

The Digital Accessibility Handbook: easy-to-follow accessibility guide that thoroughly explains "why"

A11y Project Dev Checklist: comprehensive checklist for developing for accessibility, with thorough explanations

Links to all of these resources can be found on Scout's Notion page.