hidde.blog

SHIFTING LEFT

or: making accessibility easier by doing it earlier

Hidde de Vries, Accessible Banking, Amsterdam, 27 March 2025

“ripe bananas” (CC BY 2.0) by dominik18s

“Why isn't accessibility easier?”

—a befriended web developer

WAI-ARIA TECHNIQUES
UNDERSTANDING COGA ACT-RULES
WCAG 2.1 LEVEL A/A/AAA ATAG
AXE LOW VISION ASSISTIVE TECH
ACCESSIBLE VR XAUR UAAG ACT
MATURITY MODEL WEBVTT AGWG
LAWS & POLICIES SEMANTICS
CONFORMANCE EVALUATION EARL
AUTHORING PRACTICES WCAG-EM
ACCESSIBILITY STATEMENTS

“Hard to know *when* it is accessible”

“Find time to fix things after audit results come in”

“Which docs / components can I trust?”

hidde.blog

SHIFTING LEFT

or: making accessibility easier by doing it earlier

Hidde de Vries, Accessible Banking, Amsterdam, 27 March 2025

HI, I'M HIDDE

accessibility / front-end / standards

WCAG / ARIA / EN 301 549

hidde.blog

hidde.blog/slides

WEB ACCESSIBILITY

to ensure people with disabilities
can use our site/app

WEB ACCESSIBILITY

to ensure people with disabilities
can use our service

WEB ACCESSIBILITY

to ensure people with disabilities
can buy our product

WEB ACCESSIBILITY

to ensure people with disabilities can buy our product

- auditory
- physical
- visual
- cognitive
- speech

15-20%

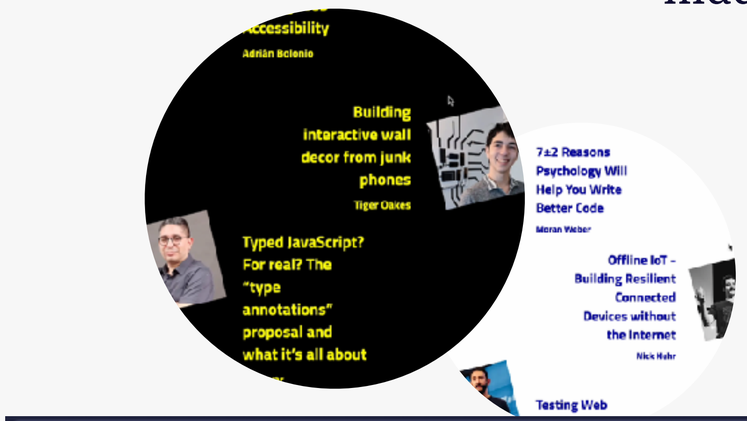
of your (potential) users

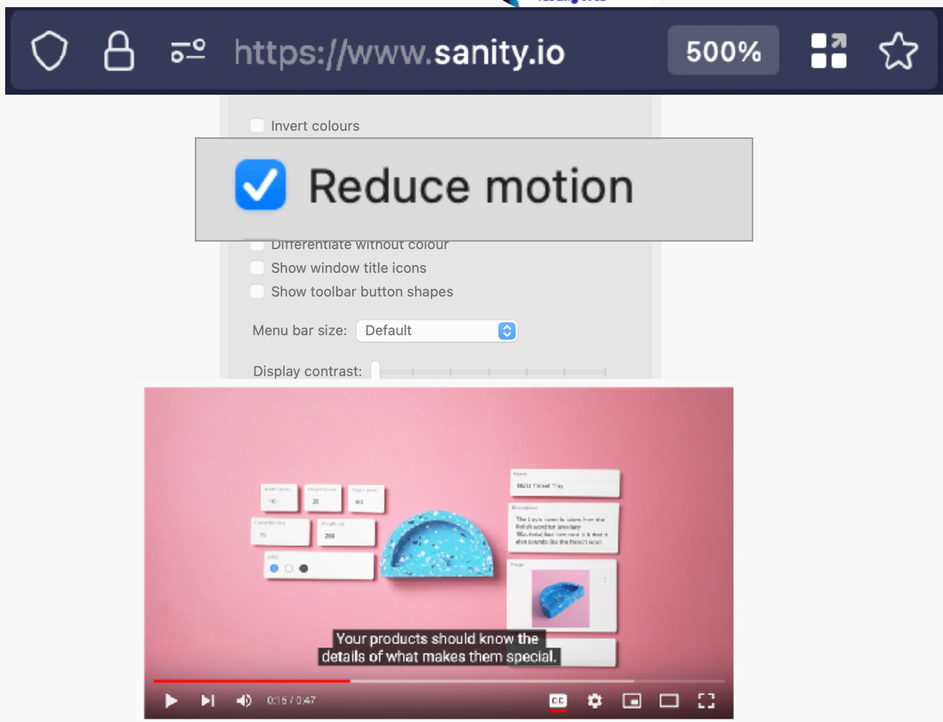
Disability is a spectrum

so is access

PEOPLE WILL

- zoom in
- use high contrast modes
- use a screenreader
- not use a mouse
- use voice recognition
- be unable to turn their device





W3C/WAI, *How People with Disabilities Use the Web* https://www.w3.org/WAI/people-use-web/tools-techniques

“ASSUME LESS”

hidde.blog
My Computer
Network Neighborhood
Recycle Bin
Start
PHILIPS
52 X Atlas
RESET
GOTEK

hidde.blog

“We're 100% accessible”

– *some products*

“THAT'S INACCESSIBLE!”

– *an accessibility specialist*

PEOPLE

use the web in many ways

W3C Recommendation

Web Content Accessibility Guidelines (WCAG) 2.1

W3C Recommendation 05 June 2018

This version:
https://www.w3.org/TR/2018/REC-WCAG21-20180605/

Latest published version:
https://www.w3.org/TR/WCAG21/

Latest editor's draft:
https://w3c.github.io/wcag/21/guidelines/

Implementation report:
https://www.w3.org/WAI/WCAG21/implementation-report/

Previous version:
https://www.w3.org/TR/2018/PR-WCAG21-20180424/

Previous Recommendation:
https://www.w3.org/TR/2008/REC-WCAG20-20081211/

Editors:
Andrew Kirkpatrick (Adobe)

PEOPLE

use the web in many ways

TIMING

matters as websites change

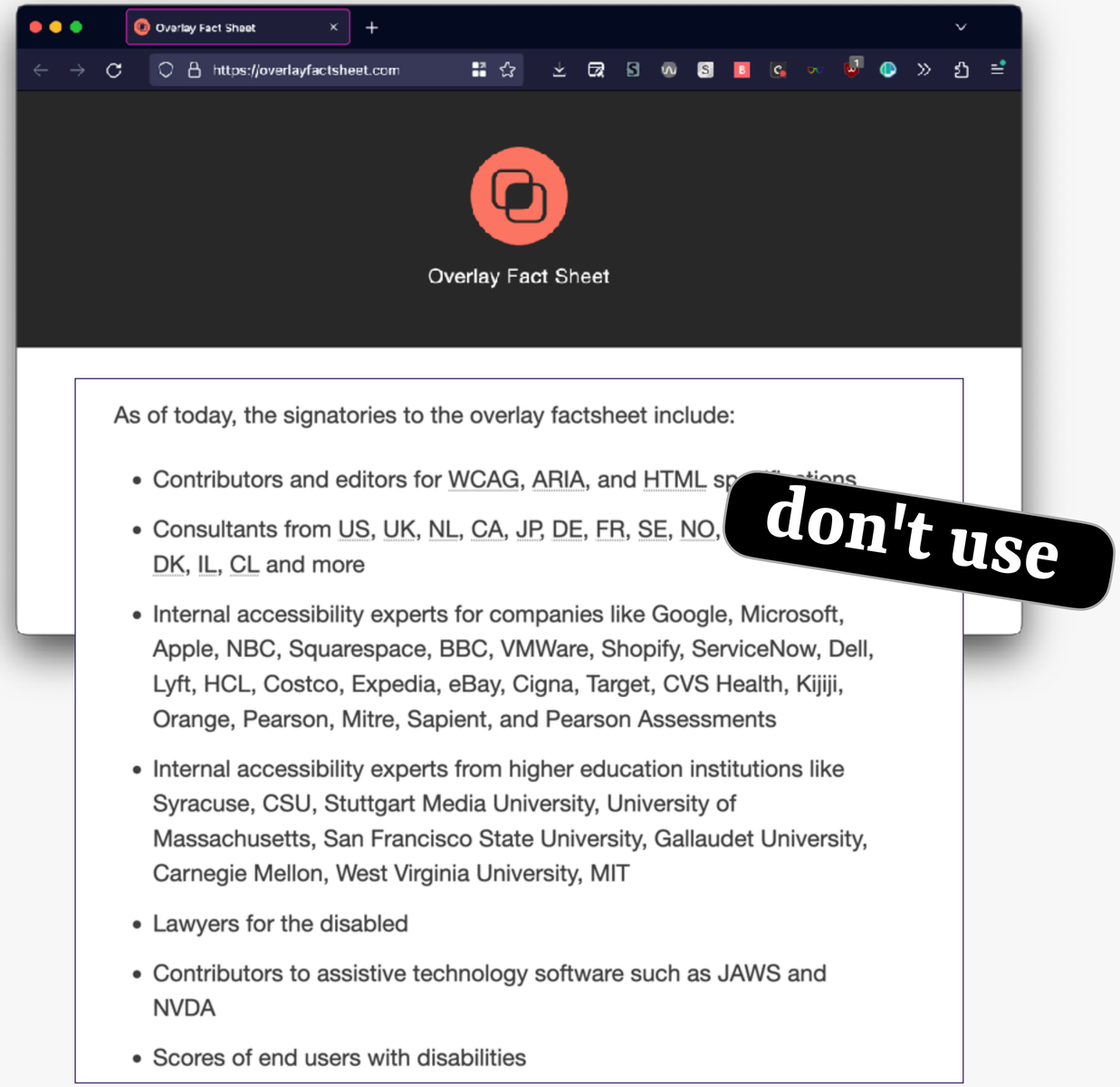
SOMEWHAT SUBJECTIVE

interpretation of
Success Criteria

ACCESSIBILITY IS ITERATIVE

(the work is never done)

BUILT-IN ACCESSIBILITY



OVERLAYS

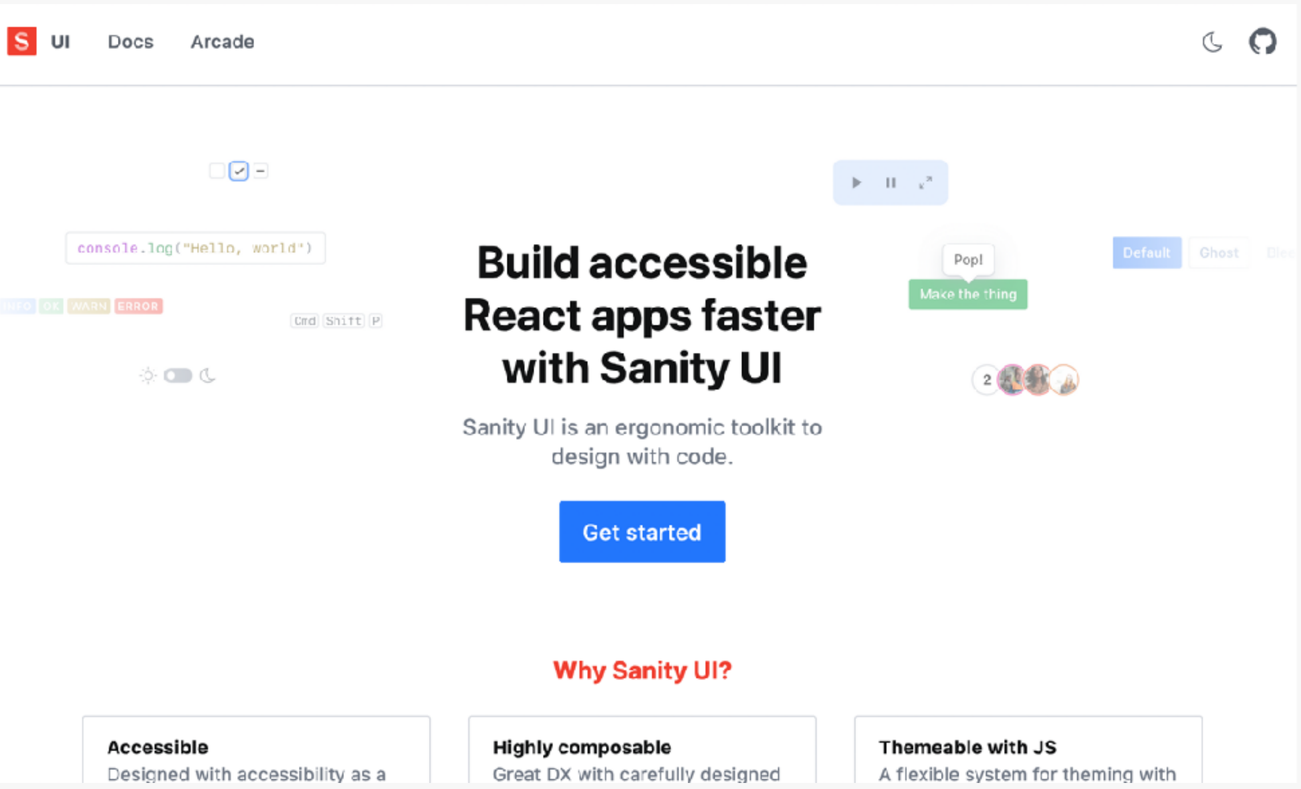
Promise to fix accessibility in content automatically, but “ineffectiveness of overlays is something that has broad agreement among accessibility practitioners”

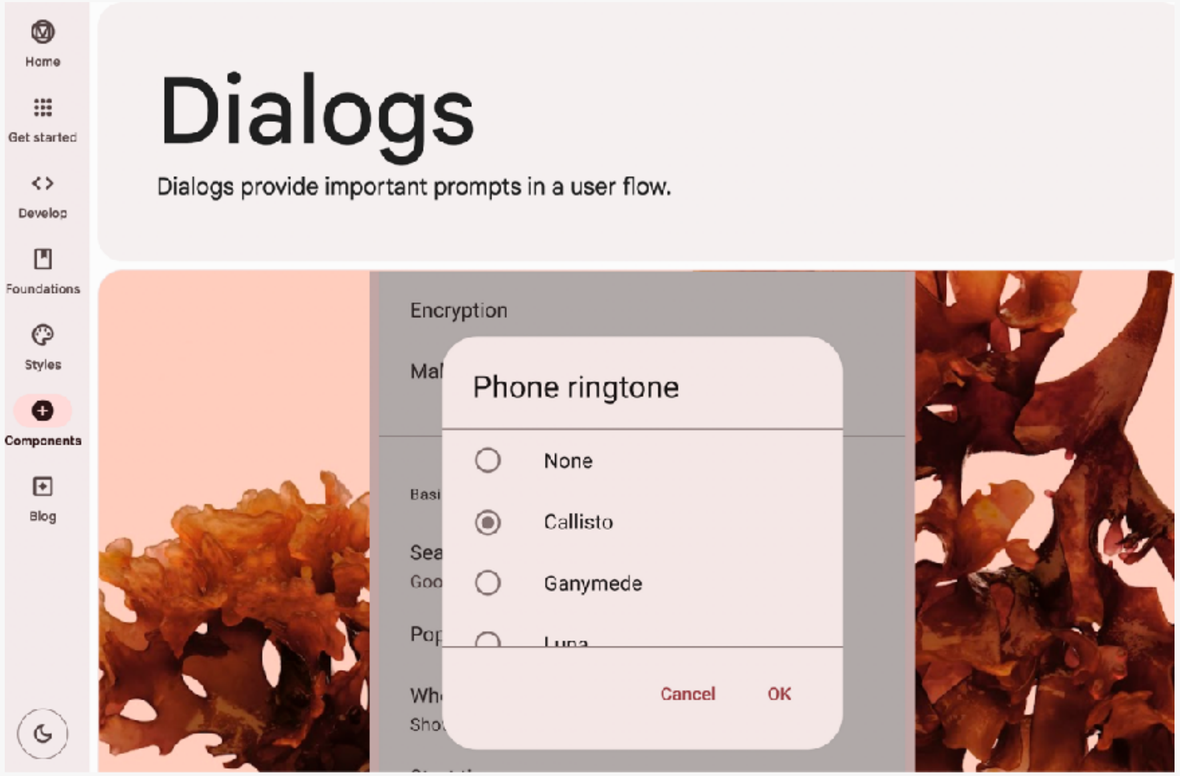
https://overlayfactsheet.com

DESIGN SYSTEMS

With components, we can make accessibility reusable and repeatable

Sanity UI, Material UI



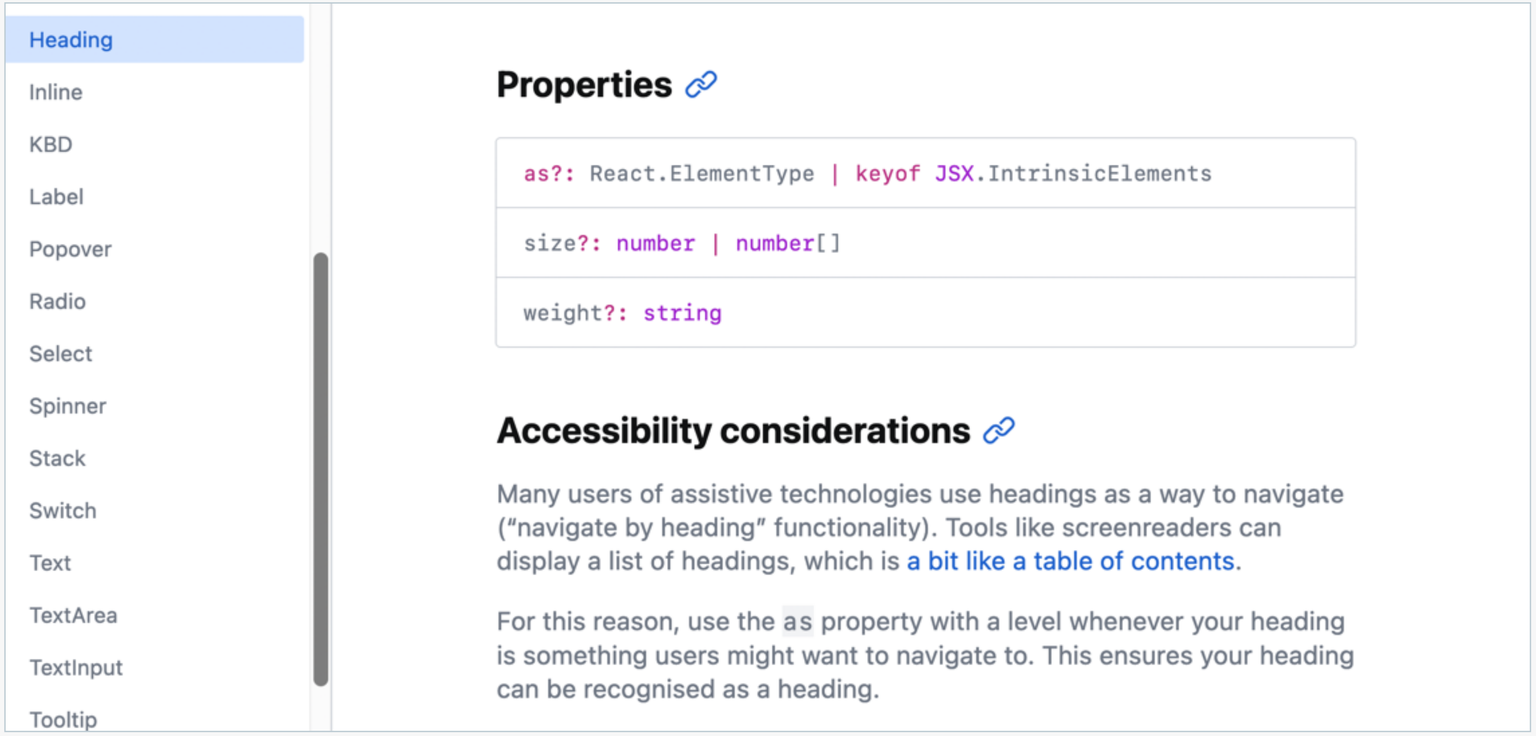


DESIGN SYSTEMS

With components, we can make accessibility reusable and repeatable

DOCUMENT

Do's, don't's, gotchas

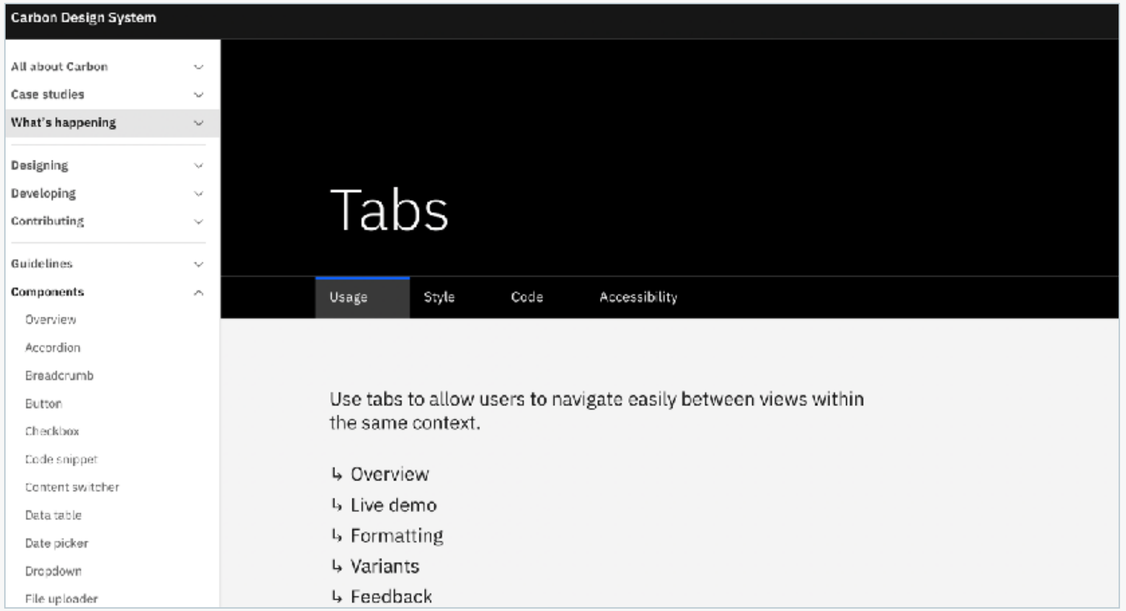


DESIGN SYSTEMS

With components, we can make accessibility reusable and repeatable

COMPLEX COMPONENTS

For reuse in across front-end

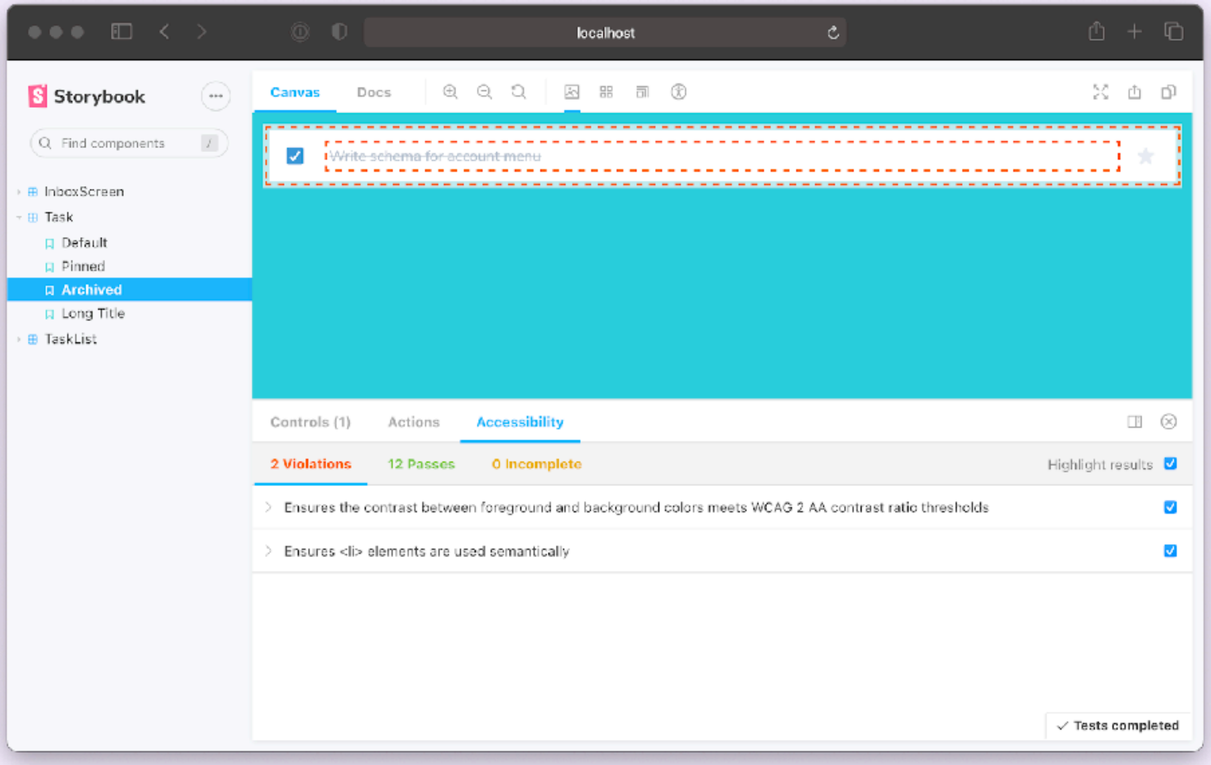


DESIGN SYSTEMS

With components, we can make accessibility reusable and repeatable

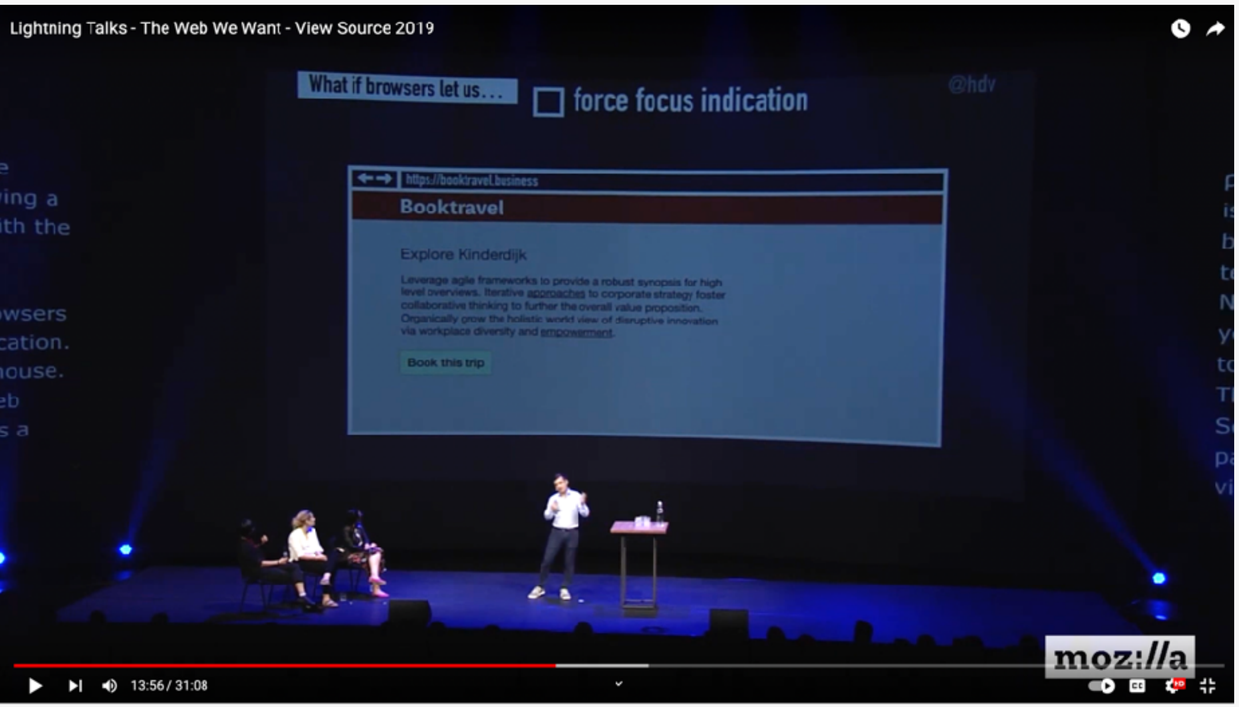
TESTS PER COMPONENT

With tools like Storybook



ACCESSIBILITY IS ITERATIVE

(the work is never done)



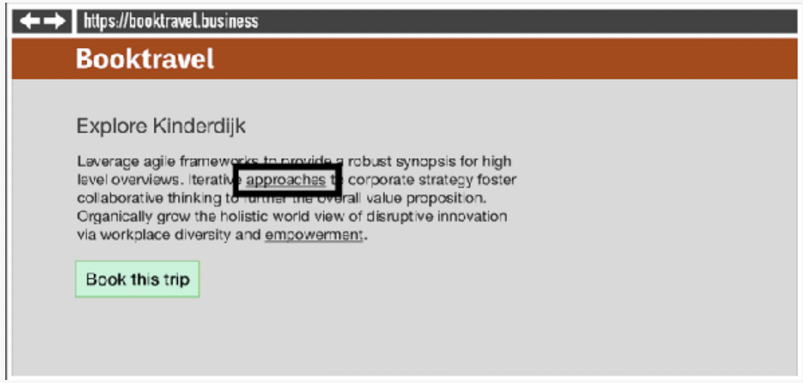
BROWSERS

Could fix a small subset of accessibility issues in content automatically for end users

https://talks.hiddedevries.nl/KKW74X/could-browsers-fix-more-accessibility-problems-automatically

Untruncate text

Force colour contrast



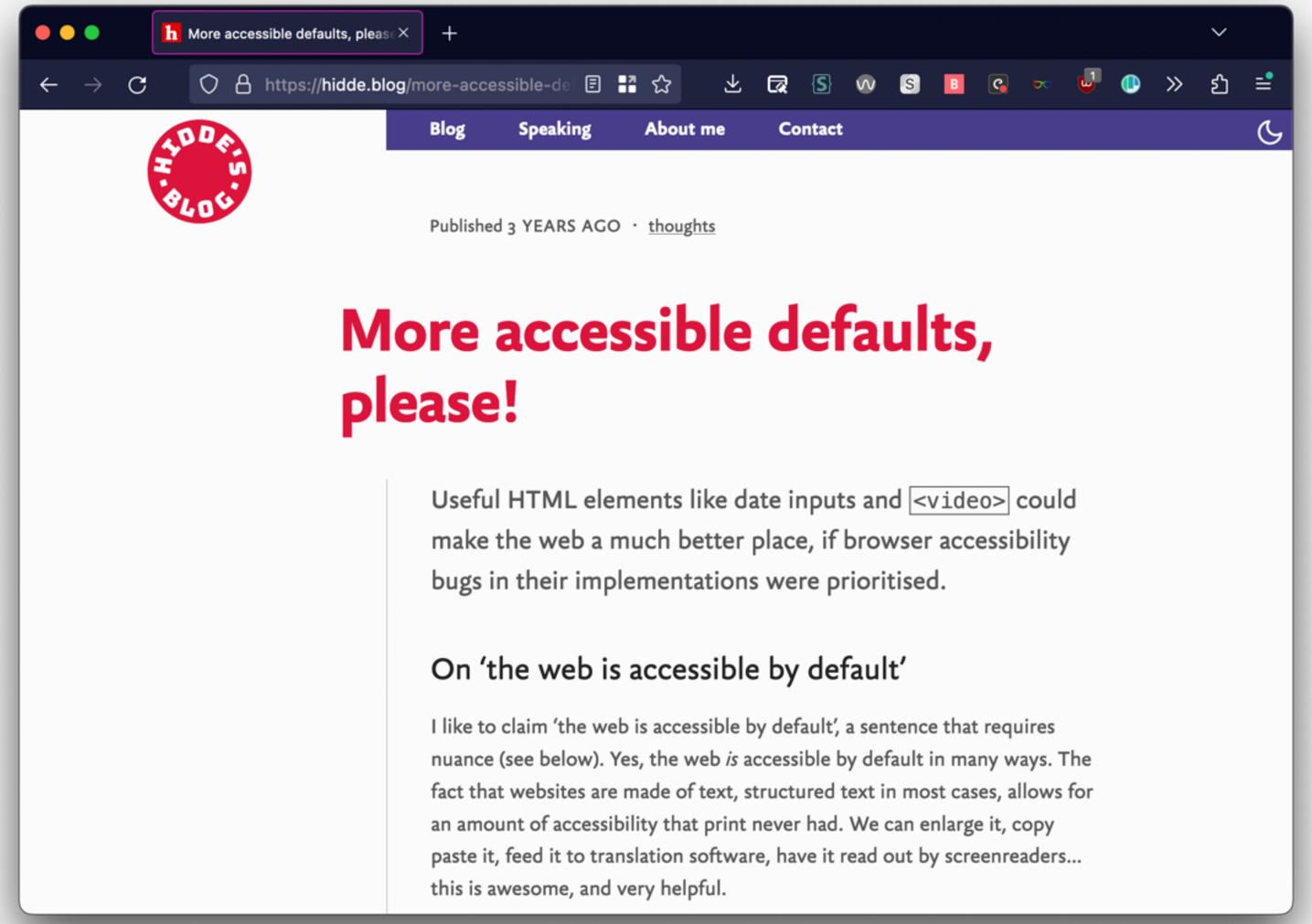
Force focus indication

Suppress autoplay of gifs and videos

https://talks.hiddedevries.nl/KKW74X/could-browsers-fix-more-accessibility-problems-automatically

HTML

Could offer more accessibility-by-default components



```
// features that make a11y possible,
// e.g. support for alt text
<img src="" alt="" />
```

```
// features that make a11y possible,
// e.g. support for captions
<video>
  <track>…</track>
</video>
```

```
// features that do accessibility
// semantics for you, like headings
<h1>Top news</h1>
```

```
// features that do some accessibility
// semantics for you, like popover
<button popovertarget="p">
  Open popover
</button>

<div popover id="p">
  I am popover content
</div>
```

```
// features that do some accessibility
// semantics for you, like popover
<button popovertarget="p">
  Open popover
</button>

<div popover id="p">
  I am popover content
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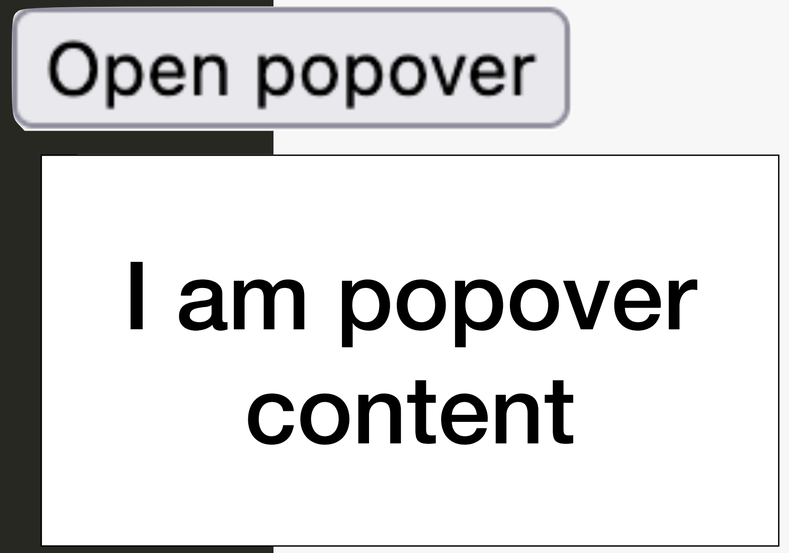
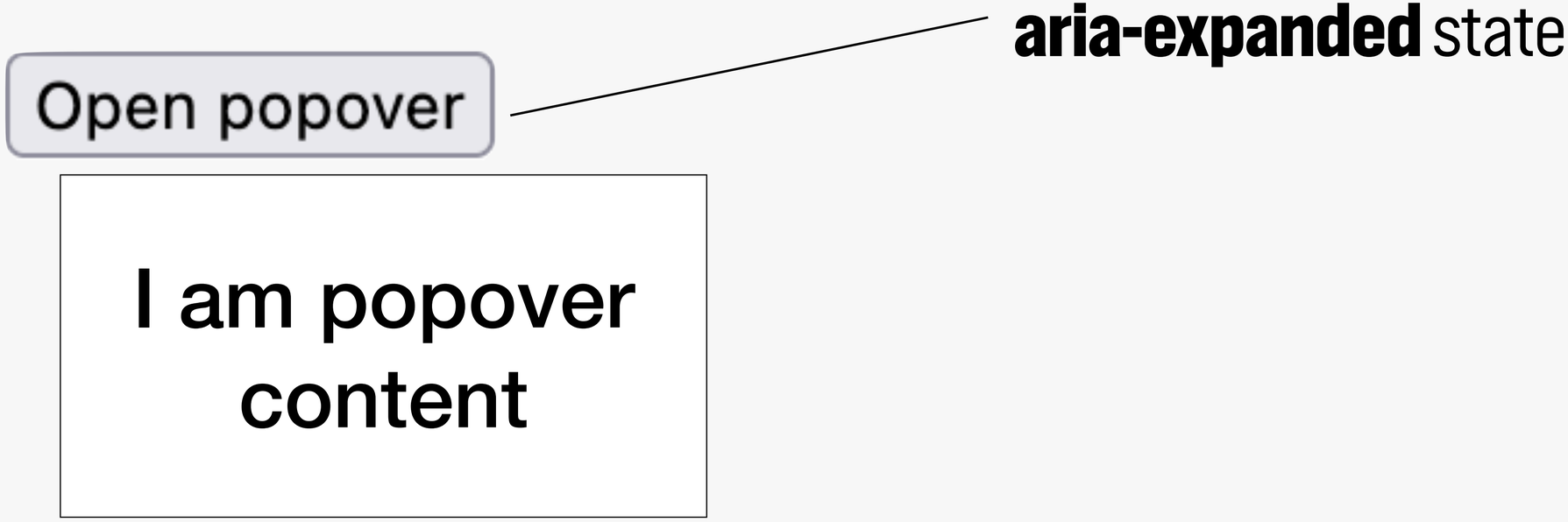
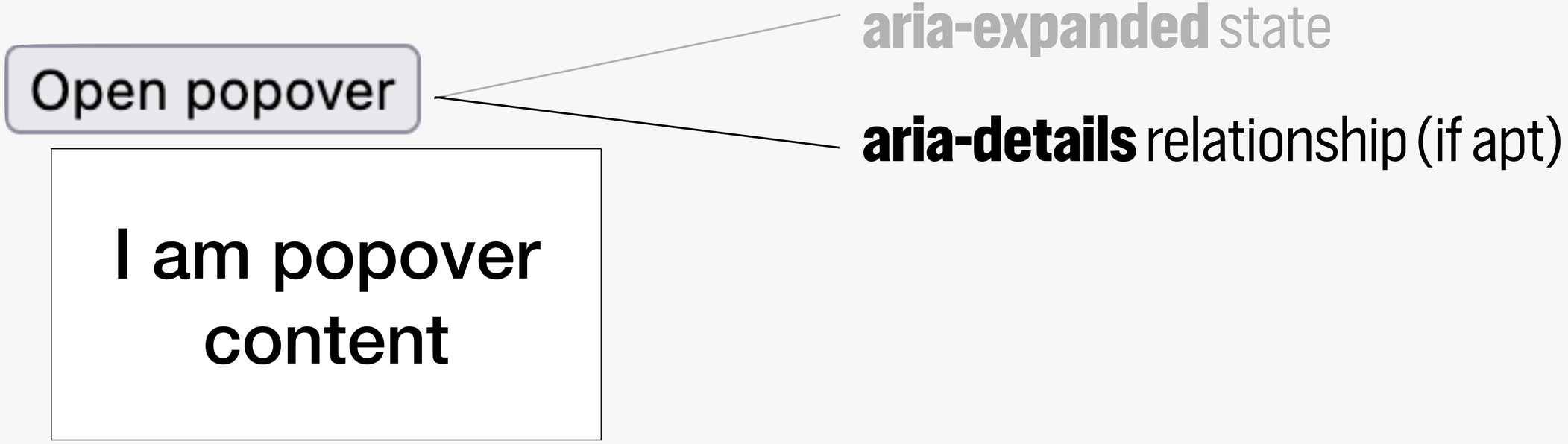
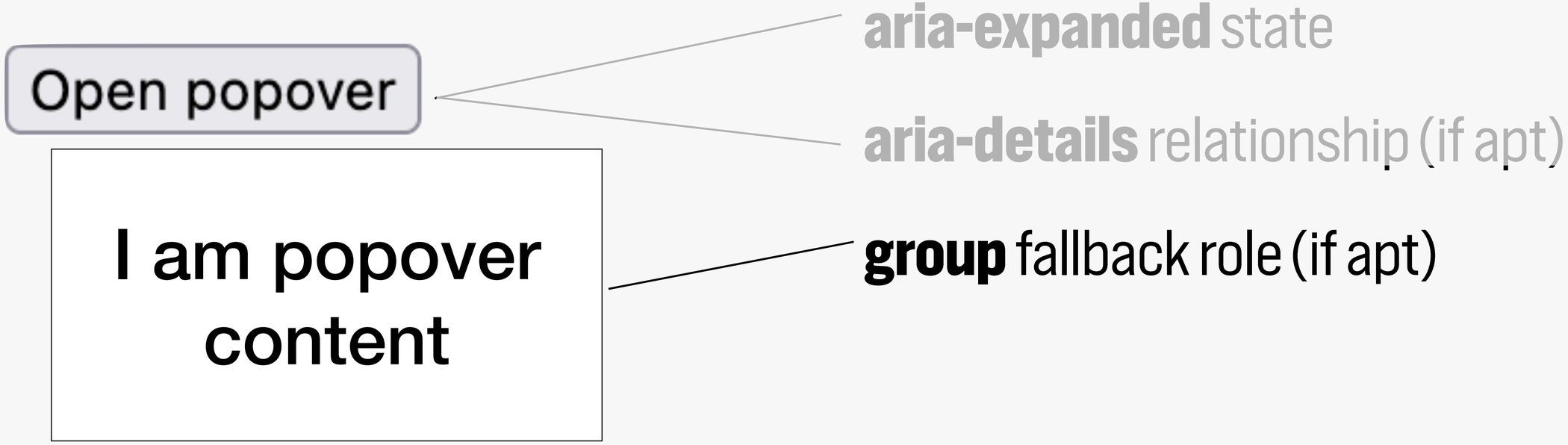




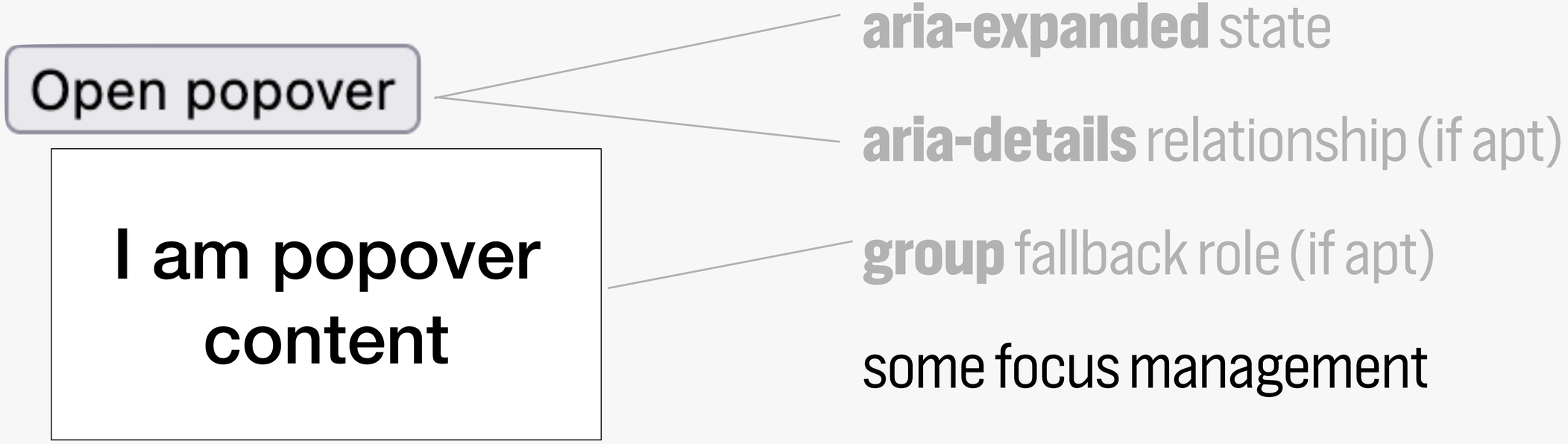
hidde.blog/popover-accessibility



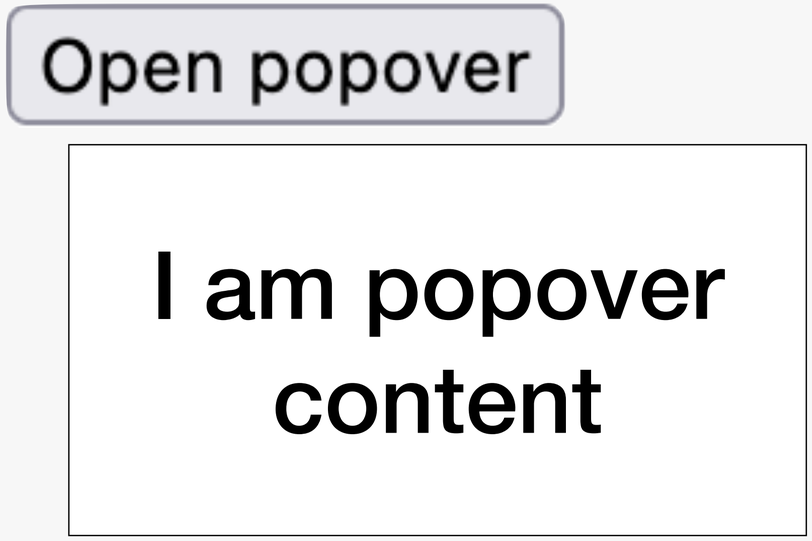
hidde.blog/popover-accessibility



hidde.blog/popover-accessibility



hidde.blog/popover-accessibility



NOT BUILT-IN:

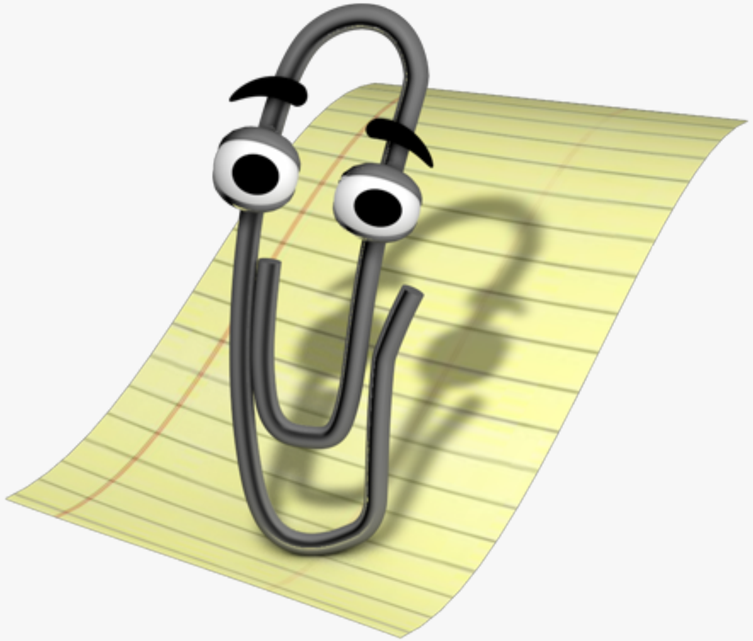
colour contrast
zoom support

etc etc

hidde.blog/popover-accessibility

CMS

Could help with accessibility
in the authoring process



Video: Tyler Frisbee (youtube.com/watch?v=3G_uCbKoG5A)

@NathanWhite22 7 jaar geleden

This thing scared the crap out of me when I was little. I was just trying to play solitaire, and because I was young I took a long time to find a move, and then this thing pops up!

Assessing CMS accessibility

WCAG

For web content

ATAG

For tools that make web content

Assessing CMS accessibility

WCAG

For web content

ATAG

For tools that make web content

ATAG

PART A: EDITING EXPERIENCE

PART B: OUTPUT

```
ead>
eta charset="UTF-8"/>
itle>Content management system - Wikipedia</title>
cript>document.documentElement.className="client-js";RLCONF={"wgBreakFrames":!1,"wgS
ikipedia articles with GND identifiers","Content management systems","Information sy
xt.globalCssJs.user.styles":"ready","site.styles":"ready","noscript":"ready","user.s
mw.bootstrap.autostart","ext.popups","ext.visualEditor.desktopArticleTarget.init","e
cript>(RLQ=window.RLQ||[]).push(function(){mw.loader.implement("user.tokens@tffin",f
;});</script>
ink rel="stylesheet" href="/w/load.php?lang=en&amp;modules=ext.cite.styles%7Cext.uls
cript async="" src="/w/load.php?lang=en&amp;modules=startup&amp;only=scripts&amp;raw
eta name="ResourceLoaderDynamicStyles" content=""/>
ink rel="stylesheet" href="/w/load.php?lang=en&amp;modules=site.styles&amp;only=styl
eta name="generator" content="MediaWiki 1.35.0-wmf.18"/>
eta name="referrer" content="origin"/>
eta name="referrer" content="origin-when-crossorigin"/>
eta name="referrer" content="origin-when-cross-origin"/>
ink rel="alternate" href="android-app://org.wikipedia/http/en.m.wikipedia.org/wiki/C
ink rel="alternate" type="application/x-wiki" title="Edit this page" href="/w/index.
ink rel="edit" title="Edit this page" href="/w/index.php?title=Content_management_sy
ink rel="apple-touch-icon" href="/static/apple-touch/wikipedia.png"/>
ink rel="shortcut icon" href="/static/favicon/wikipedia.ico"/>
ink rel="search" type="application/opensearchdescription+xml" href="/w/opensearch_d
ink rel="EditURI" type="application/rsd+xml" href="//en.wikipedia.org/w/api.php?act
ink rel="license" href="//creativecommons.org/licenses/by-sa/3.0/"/>
ink rel="canonical" href="https://en.wikipedia.org/wiki/Content_management_system"/
ink rel="dns-prefetch" href="//login.wikimedia.org"/>
ink rel="dns-prefetch" href="//meta.wikimedia.org" />
--[if lt IE 9]><script src="/w/resources/lib/html5shiv/html5shiv.js"></script><![en
/head>
ody class="mediawiki ltr sitedir-ltr mw-hide-empty-elt ns-0 ns-subject mw-editable
iv id="mw-page-base" class="noprint"></div>
iv id="mw-head-base" class="noprint"></div>
iv id="content" class="mw-body" role="main">
  <a id="top"></a>
  <div id="siteNotice" class="mw-body-content"><!-- CentralNotice --></div>
  <div class="mw-indicators mw-body-content">
/div>

  <h1 id="firstHeading" class="firstHeading" lang="en">Content management system</h
```

Photo left: Austin Public Library (Flickr), photo right: source of Wikipedia page for “Content Management System”

ATAG

PART A: EDITING EXPERIENCE

PART B: OUTPUT

```
ead>
eta charset="UTF-8"/>
itle>Content management system - Wikipedia</title>
cript>document.documentElement.className="client-js";RLCONF={"wgBreakFrames":!1,"wgS
ikipedia articles with GND identifiers","Content management systems","Information sy
xt.globalCssJs.user.styles":"ready","site.styles":"ready","noscript":"ready","user.s
mv.bootstrap.autostart","ext.popups","ext.visualEditor.desktopArticleTarget.init","e
cript>(RLQ=window.RLQ||[]).push(function(){mw.loader.implement("user.tokens@tffin",f
;});</script>
ink rel="stylesheet" href="/w/load.php?lang=en&amp;modules=ext.cite.styles%7Cext.uls
cript async="" src="/w/load.php?lang=en&amp;modules=startup&amp;only=scripts&amp;raw
eta name="ResourceLoaderDynamicStyles" content=""/>
ink rel="stylesheet" href="/w/load.php?lang=en&amp;modules=site.styles&amp;only=styl
eta name="generator" content="MediaWiki 1.35.0-wmf.18"/>
eta name="referrer" content="origin"/>
eta name="referrer" content="origin-when-crossorigin"/>
eta name="referrer" content="origin-when-cross-origin"/>
ink rel="alternate" href="android-app://org.wikipedia/http/en.m.wikipedia.org/wiki/
ink rel="alternate" type="application/x-wiki" title="Edit this page" href="/w/index.
ink rel="edit" title="Edit this page" href="/w/index.php?title=Content_management_sy
ink rel="apple-touch-icon" href="/static/apple-touch/wikipedia.png"/>
ink rel="shortcut icon" href="/static/favicon/wikipedia.ico"/>
ink rel="search" type="application/opensearchdescription+xml" href="/w/opensearch_d
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ink rel="canonical" href="https://en.wikipedia.org/wiki/Content_management_system"/
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!--[if lt IE 9]><script src="/w/resources/lib/html5shiv/html5shiv.js"></script><![en
/head>
body class="mediawiki ltr sitedir-ltr mw-hide-empty-elt ns-0 ns-subject mw-editable
iv id="mw-page-base" class="noprint"></div>
iv id="mw-head-base" class="noprint"></div>
iv id="content" class="mw-body" role="main">
  <a id="top"></a>
  <div id="siteNotice" class="mw-body-content"><!-- CentralNotice --></div>
  <div class="mw-indicators mw-body-content">
/div>

  <h1 id="firstHeading" class="firstHeading" lang="en">Content management system</h
```

Photo left: Austin Public Library (Flickr), photo right: source of Wikipedia page for “Content Management System”

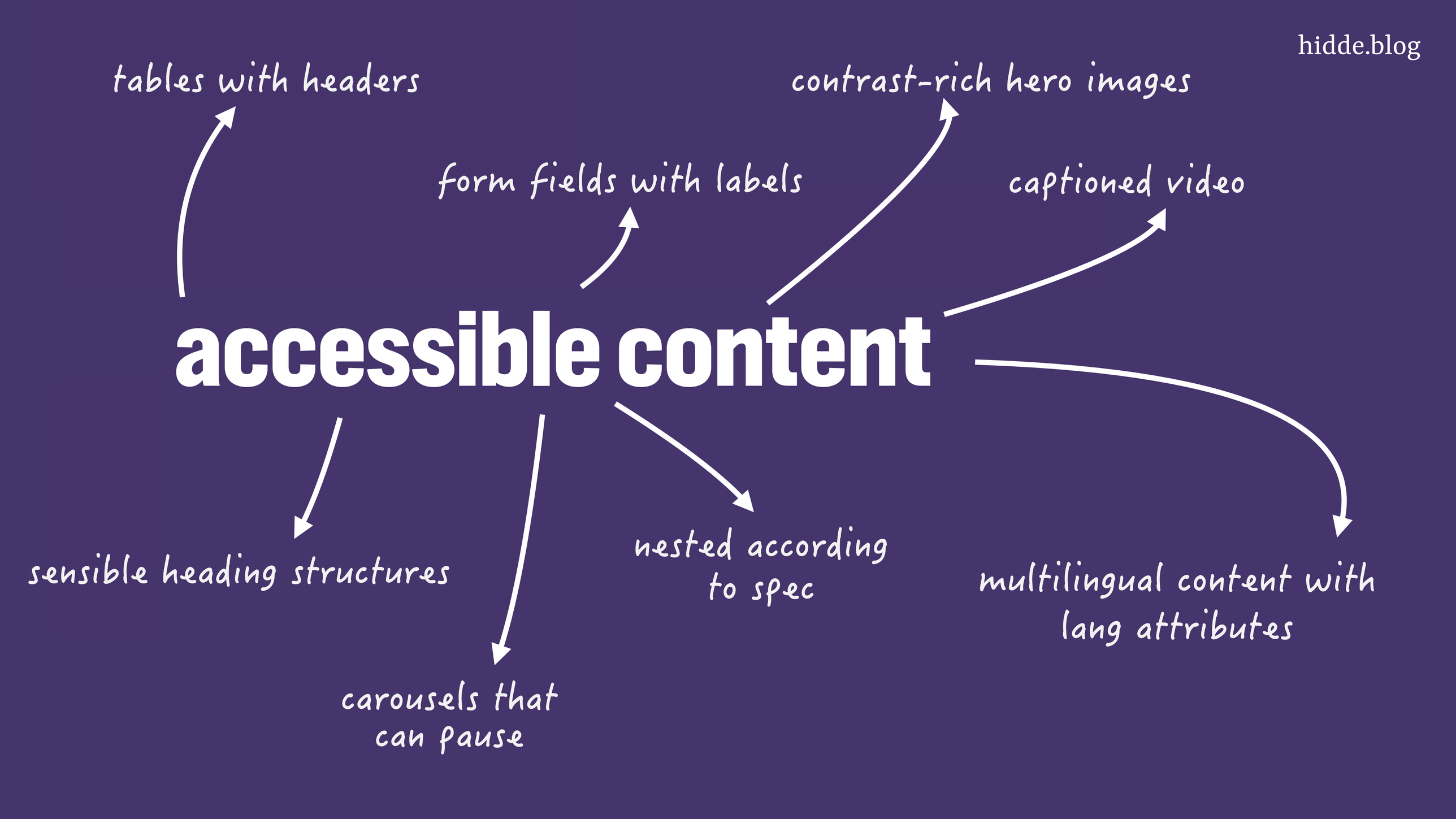
YOUR CMS IS AN ACCESSIBILITY ASSISTANT

(of the useful kind)

PART B OF ATAG

“Support the production of accessible content”

hidde.blog


tables with headers
contrast-rich hero images
form fields with labels
captioned video
accessible content
sensible heading structures
carousels that can pause
nested according to spec
multilingual content with lang attributes

hidde.blog

avoid inaccessible content

tables with no headers

nameless form field

heros with illegible text

no captions on videos

headings for the wrong reasons

carousels with no pause button

non-standard nesting

multilingual content without lang attributes

Checks in Jooa11y, for Joomla (based on Sa11y)

Jooa11y - the Joomla Accessibility Checker

Home How To Examples Tests

Errors

A typical page with accessibility or usability errors.

The sample text below is from Wikipedia: Bear.

Learn more about Bears on Wikipedia ›

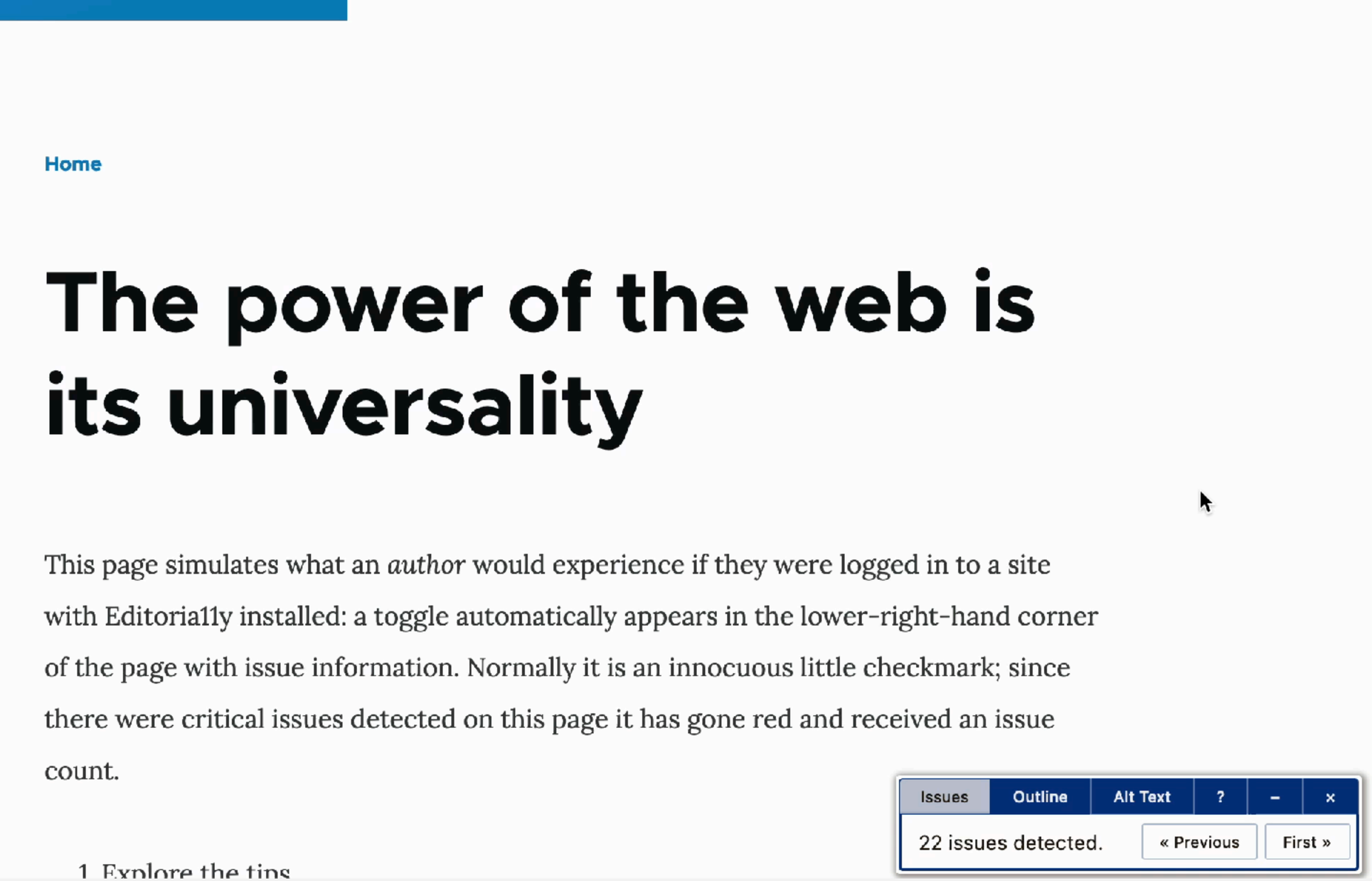
Bears are carnivoran mammals of the family Ursidae. They are classified as caniforms, or doglike carnivorans. Although only eight species of bears are extant, they are widespread, appearing in a wide variety of habitats throughout the Northern Hemisphere and partially in the Southern Hemisphere. Bears are found on the continents of North America, South America, Europe, and Asia. Common characteristics of modern bears include large bodies with stocky legs, long snouts, small rounded ears, shaggy hair, plantigrade paws with five nonretractile claws, and short tails.

While the polar bear is mostly carnivorous, and the giant panda feeds almost entirely on bamboo, the remaining six species are omnivorous with varied diets. With the exception of courting individuals and mothers with their young, bears are typically solitary animals - learn more. They may be diurnal or nocturnal and have an excellent sense of smell. Despite their heavy build and awkward gait, they are adept runners, climbers, and swimmers.

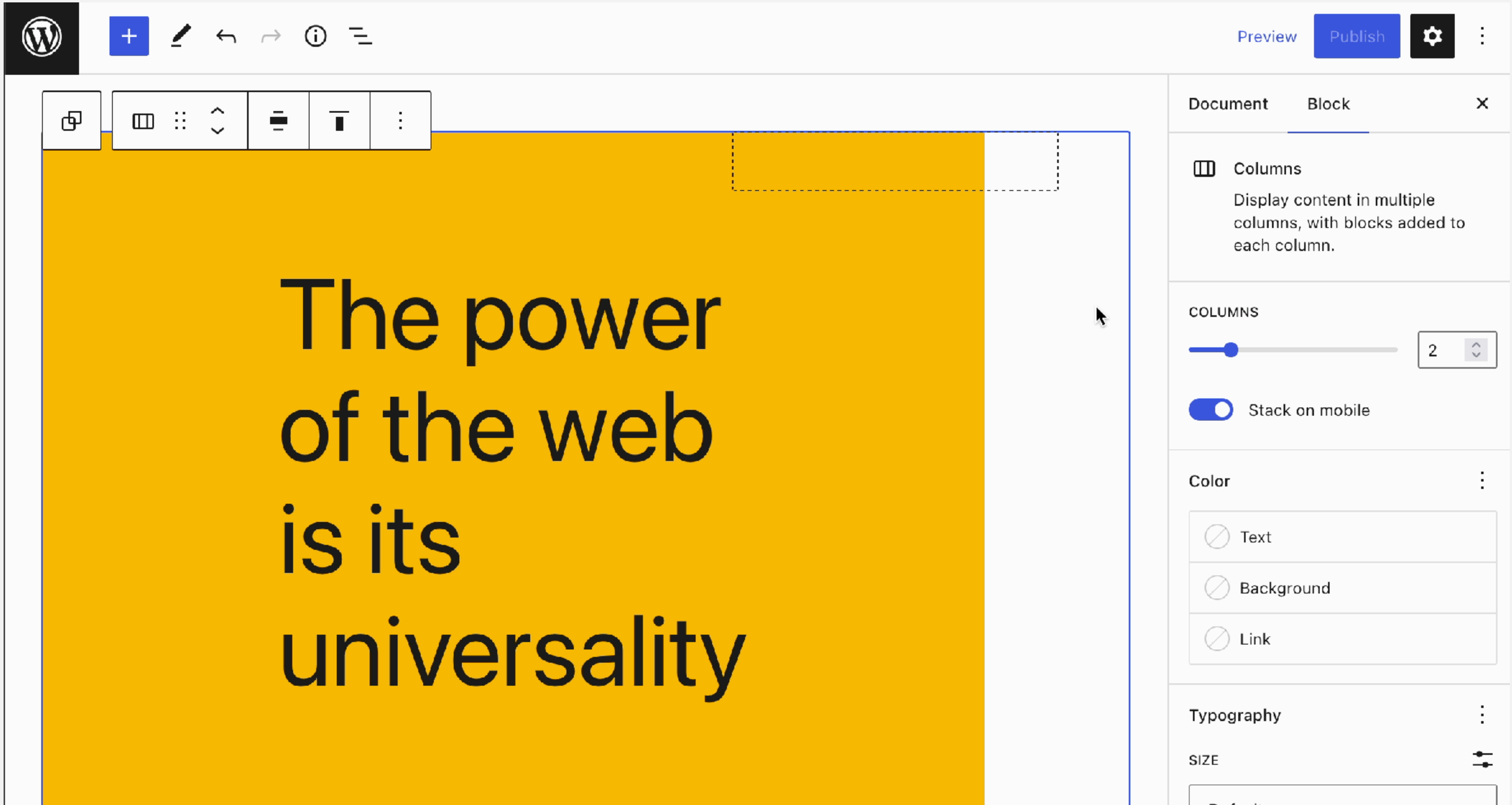
Etymology

The English word "bear" comes from Old English bera and belongs to a family of names for the bear in Germanic languages, such as Swedish björn, also used as a first name. This form is conventionally said to be related to a Proto-Indo-European word for "brown", so that "bear" would mean "th brown one".[1][2] However, Ringe notes that while this etymology is semantically plausible, a word meaning "brown" of this form cannot be found in

5

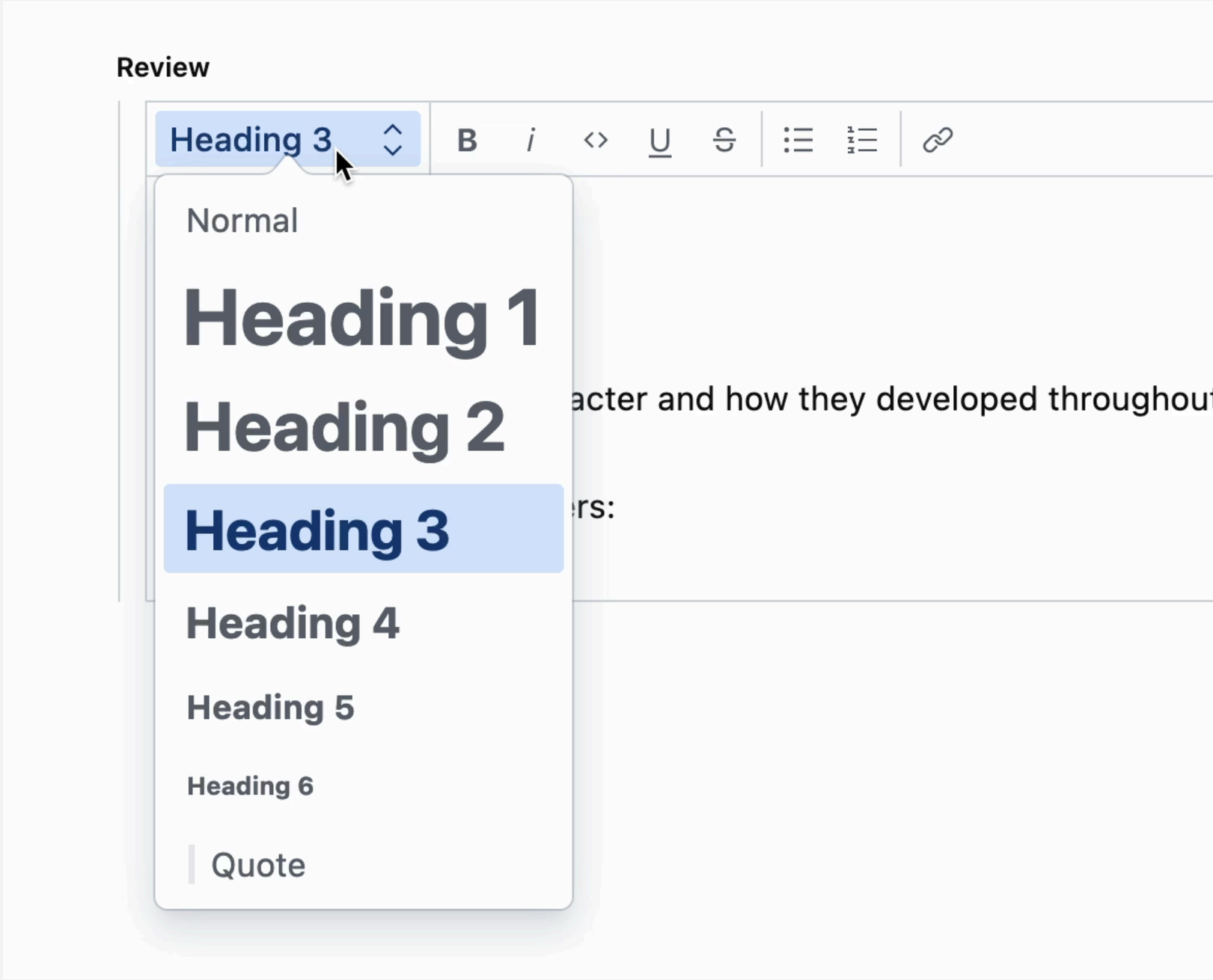


Checks in Editoria11y v2, for Drupal (Based on Sa11y)


Preview
Publish
Document
Block
Columns
Display content in multiple columns, with blocks added to each column.
COLUMNS
2
Stack on mobile
Color
Text
Background
Link
Typography
SIZE
The power of the web is its universality

WYSIWYM

What you see
is what you mean



WYSIWYM

Validations in JavaScript


```
function noFakeLists(options = {}) {
  return function (blocks) {
    const regex = options.regex || /^\s*[-*+—–]/
    const fakeListBlocks =
      (blocks || [])
        .filter(
          block =>
            block._type === 'block' &&
            block.children.some(
              blockPart =>
                blockPart._type === 'span' &&
                regex.test(blockPart.text)
            )
        )
        .map((block, index) => [{ _key: block._key }]
              || [index]) || []

    return (
      fakeListBlocks.length === 0 || {
        message:
          options.message ||
          'This looks like a list, but it is
           plain text. Use the bulleted list option.',
        paths: fakeListBlocks,
      }
    )
```

Hidde's validation playground

Search

Desk

0

Content

Books

Norwegian wood

Norwegian wood

Current version

Book title

Norwegian wood

Review

Normal

It was a fantastic book!

Details

Really liked the main character and how they developed throughout the book.

I also liked these characters:

- Alice
- Bob

https://github.com/hidde/porta11y

Jun 15

53s

Publish

More validations while you create content

- Do headings have hierarchy?
- Are links empty?
- Does link that only contains image have non-empty alternative?

…

“Why isn't accessibility easier?”

–a befriended web developer

- Built-in to shift left
- It's iterative
- Use your design system and CMSes

hidde.blog

“ripe bananas” (CC BY 2.0) by dominik18s

THANK YOU!

Slides + links are live on
hidde.blog/slides

Contact/resources

talks.hiddedevries.nl
@hdv@front-end.social
hidde@hiddedevries.nl

Typefaces

Bungee by David Jonathan Ross (DJR)
Rasa by Anna Giedryś, David Březina (Rosetta)

Q&A

ABN·AMRO

10-minute break

ABN·AMRO