



# SmashingConf Freiburg 2022

*Day 2, September 6th, 2022*

<https://smashed.by/wurst>

—

Hello friends! :) Howdy!

Let's take notes together.

Please be cool and **friendly**.

Notes from Day 1: <https://smashed.by/kaese>

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### Let's Get To Know Y'All!

Where are you from?

What did you have for breakfast?

### Talks

10:00 — Mystery Speaker on Life Is A Mystery

11:05 — Rémi Parmentier on HTML Email Dark Modes

12:15 — Ben Callahan on You Have a Design System. Now What?

14:40 — Tejas Kumar on Write Better Code

15:50 — Sophie Tahrán on Designing With Words

17:00 — Manuel Matuzović on Lost in Translation

# Let's Get To Know Y'All!

## How did you sleep?

(e.g. Best sleep ever, I dreamt like a smooth SVG animation)

- 

## Why is your best friend so awesome?

(e.g. she always buys me ice-cream, even when it freezes outside)

-

# Talks

## 10:00 — Mystery Speaker on Life Is A Mystery

Harry Roberts @csswizardry

Who do you think it is? What do you think they're talking about?

-----

### Questions:

- Is that a mainly western perspective? Wasn't there a habbit also in ancient times to devour the brain of the enemy to take in their strength and powers?
  - Often we have to **deal with 3rd-parties**. What would you recommend to do to reduce the impact of 3rd-parties?
  - Where do favicons fit in?
  - **Cookie prompts**: should we load them as early as possible to reduce LCP and CLS penalty? Or defer for later and prioritize the loading of critical assets?
  - You are working with plenty of clients from companies and organizations small and large. What are some of the **most common issues** that you keep encountering over and over again?
  - Could you **explain your process** for finding performance bottlenecks?
- / Patterns in WebPageTest

- Are **Core Web Vitals** enough to guarantee very good web performance? What are the targets that you find yourself setting for companies and organizations?
- Do you actually see the **impact of better Core Web Vitals score on SEO**, conversion, abandonment etc.?
- DOC: Content layout shift vs optimized page speed, which is more important to solve?
- VF: A muddled Head can happen over time by attrition — through your work with clients, are there ways to help them keep them well protected over time?
- VF: Have you ever been so shocked by what a client has shown you that your professional face slipped?!
- VF: When investigating perf issues, do you often discover a regular culprit which has become your first thing to look for? (hello old friend)
- VF: I was surprised by the 3rd party script tag placements advice... Tag managers — can they do good jobs or are the usually dangerous?
- VF: ct.css part of your own toolset and workflow
- How do you measure the impact of FCP to customers? How can we track/detect users that would have dropped on a slower page?
- He said CDNs are a thing of the past. But CDNs serve content geographically closer to the consumer of the website – is that no longer relevant?

### **Notes & key takeaways:**

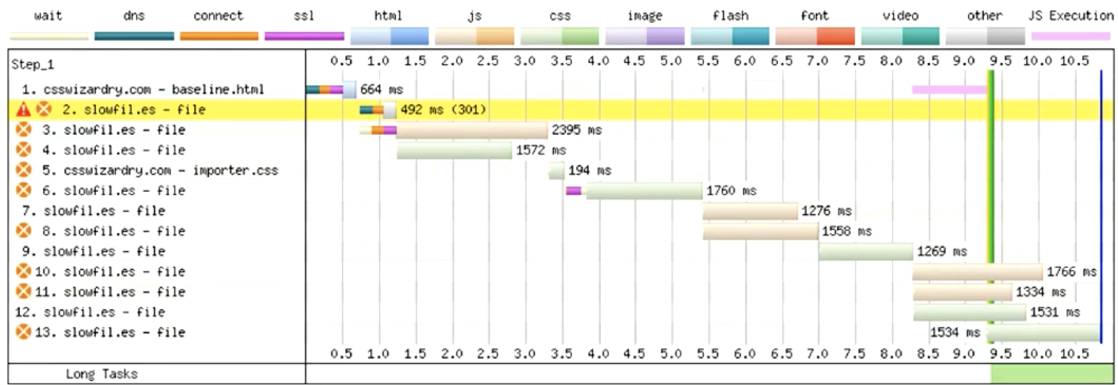
- Importance of brain became clearer in the 17th century, before the heart stood at the center of the universe

- HTML is parsed line-by-line

```
<head>
1. <meta charset|http-equiv|viewport />
2. <title>
3. preconnect
4. <script src="" async></script>
5. CSS that includes @import
6. Synchronous JS
7. Synchronous CSS
8. preload
9. <script src="" defer></script>
10. prefetch / prerender
11. Everything else ('SEO' meta tags, icons, Open Graph, etc.)
</head>
```

Head is the biggest single render-blocking part of your page

<pre>1 &lt;head&gt; 2 &lt;link rel="stylesheet" href="http://slowfil.es/file?type=css&amp;delay=1000&amp;sync-in-head" /&gt; 3 4 &lt;script src="https://slowfil.es/file?type=js&amp;delay=1500&amp;sync-in-head&amp;01"&gt;&lt;/script&gt; 5 6 &lt;link rel="stylesheet" href="importer.css" /&gt; 7 8 &lt;script&gt; 9   var script = document.createElement('script'); 10   script.src = "https://slowfil.es/file?type=js&amp;delay=1000&amp;async-snippet-in-head"; 11   document.head.appendChild(script); 12 &lt;/script&gt; 13 14 &lt;input type="hidden" id="csrf_token" value="ZG1kIHlvdSBmaW5kIG1lPwo=" /&gt; 15 16 &lt;script src="https://slowfil.es/file?type=js&amp;delay=1000&amp;sync-in-head&amp;02"&gt;&lt;/script&gt; 17 18 &lt;style&gt; 19   @import url("https://slowfil.es/file?type=css&amp;delay=1000&amp;imported-from-html"); 20 &lt;/style&gt; 21 22 &lt;meta http-equiv="Content-Security-Policy" content="upgrade-insecure-requests" /&gt; 23 24 &lt;script&gt; 25   // SLOW JS 26   function wait(ms) { 27     var start = Date.now(), 28     now = start; 29     while (now - start &lt; ms) { 30       now = Date.now(); 31     } 32   } 33   wait(1000); 34 &lt;/script&gt; 35 36 &lt;title&gt;Get Your &amp;lt;head&gt; Straight&lt;/title&gt; 37 38 &lt;meta charset="UTF-8" /&gt; 39 &lt;meta name="viewport" content="width=device-width, minimum-scale=1.0" /&gt; 40 41 &lt;/head&gt; 42 &lt;body&gt;</pre>	<p><b>Stylesheets</b></p> <p><b>CSRF Token</b></p> <p><b>Scripts</b></p> <p><b>Async snippets</b></p> <p><b>CSP</b></p> <p><b>@import</b></p> <p><b>Metadata</b></p>
--	--



- 

- Start image of performance. FCP: 9.33s

- “Don’t be so Big-Headed”

- CSS blocks rendering

- **The Optimal Head Order**

- Meta charset (Within first 1024 bytes of the document!)
- Title
- CSS that includes `@import`
  - `@import` is blocked by synchronous JS!
- Synchronous JS
  - CSS blocks execution of JS
- Synchronous CSS
- Everything else

## Remove as Much as Possible

Kill any inefficiencies such as redirects

Move low-priority scripts to the closing body tag

Utilise in-body CSS

Reduce in-head payloads—external or inlined

- 
- 300ms could equal to 8 million pound a year
- Always self-host your static assets
- Get rid of redirects
- Redirect doesn't give a big speed advantage, but should still be done
- Don't point to other domains / There are also lots of risks involved
- Self-Hosting is already improving a lot more
- Invalid head tags can cause problems

## Self-Hosting

Change from Previous

Cumulative Improvement

-0.377

-0.418

- 
- There is a fixed sort of hard coded list of elements ...
- Erroneous request
- Fix Invalid Markup in this case causes the loading to be smaller

## Fix Invalid Markup

Change from Previous

+0.139

Cumulative Improvement

-0.279

- 
- The Optimum Head Tag Order
- 
- The white highlights are synchronous

## The Preload Scanner

Invented in IE8 as the 'Speculative Pre-Parser'

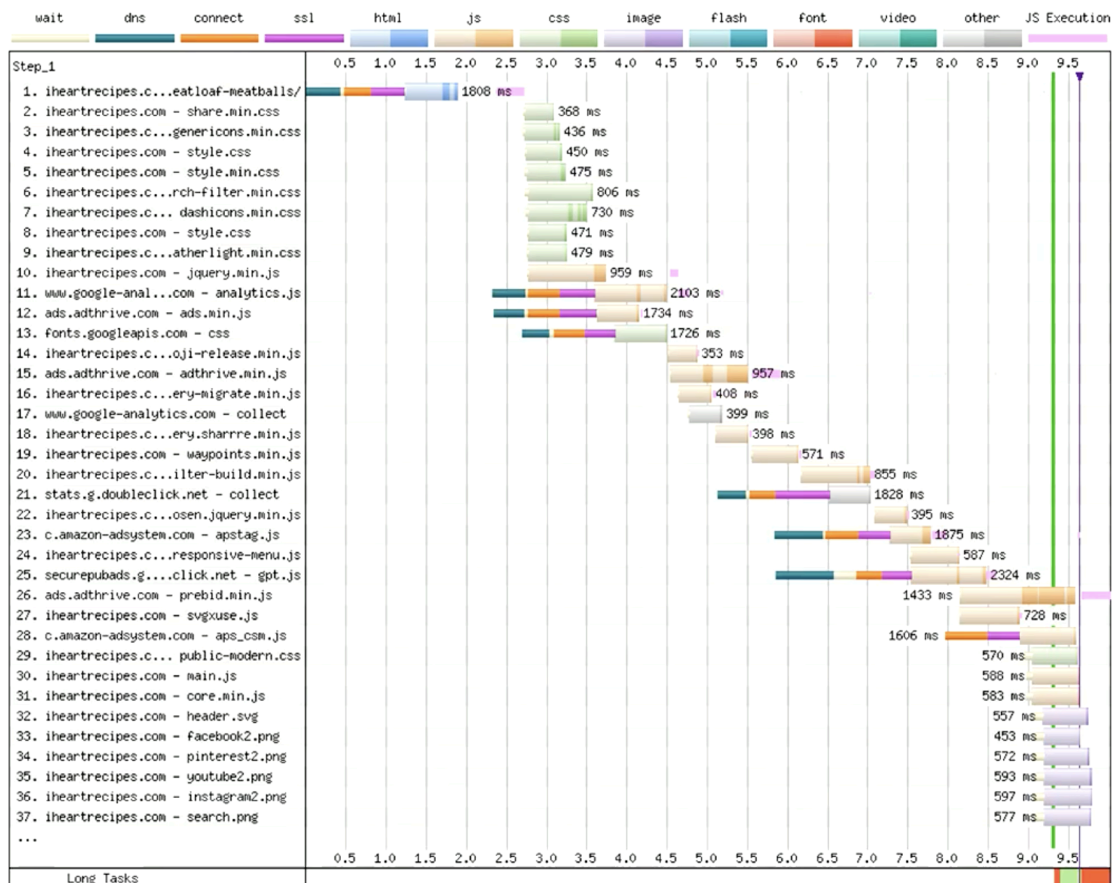
A secondary, inert, download-only parser

Decouples resource discovery/download from runtime executions

Made the web a lot, lot faster

In every single modern browser

-



- Everything before the line happens before the page is drawn, so it is not connected with hosting
- Move CSP Meta improves speed drastically
- Metadata About the Page Goes First
- Don't hide the title
- Title is first impression of page and gives user feedback, if the site has responded
- Avoid putting anything synchronous ahead of your title tag

## Rearrange Page Metadata

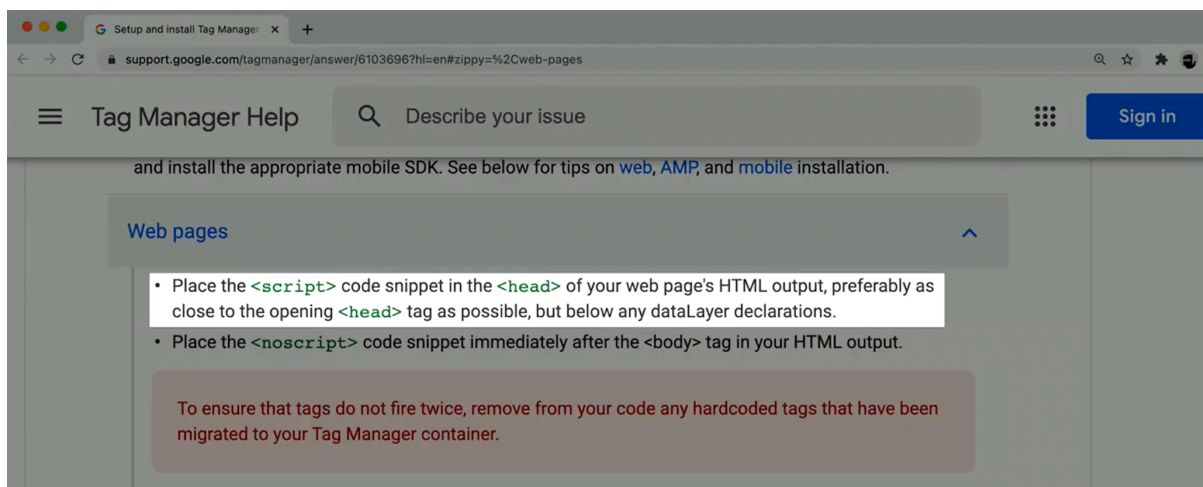
Change from Previous

-0.281

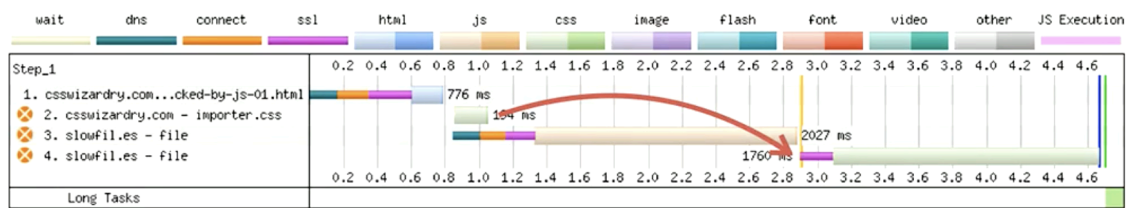
Cumulative Improvement

-4.264

- 
- Synchronous JS before CSS
- CSS blocks the execution of subsequent JS
- Defensive mechanism which in a few minor cases only makes sense
- If a javascript has a css question it need the css to be loaded first, but if it doesn't it's still blocked
- Synchronous Javascript before Synchronous CSS



**But beware. Synchronous JS blocks subsequent @imports†.**



**Start Render: 4.7s**

```

1. <head>
2.   ...
3.   <link rel="stylesheet" href="importer.css" />
4.   <script src="synchronous.js"></script>
5.   ...
6. </head>

```



**Start Render: 2.9s**

- For the chrome team it's a feature ... not a bug
- Reorder CSS and Javascript a big speed improvement
- Import in vanilla css is bad habit anyways ... in preprocessors no problem
- Remove @imports also a speed improvement
- SEO and Social Goes Last

**If Googlebot can't find your meta tags, it can't find your content.**



Barry Pollard  
@tunetheweb

...

Replying to @tunetheweb and @csswizardry

Just did some quick tests by sending a link to myself.  
Many services will request the page and show a  
preview based on metadata:

Twitter - Does a full GET

Slack - Does a Range: bytes=0-32768

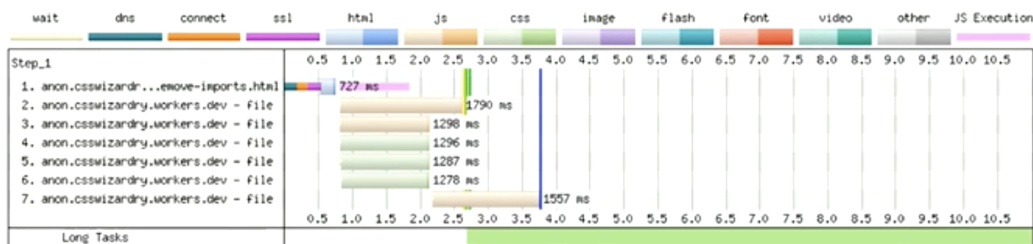
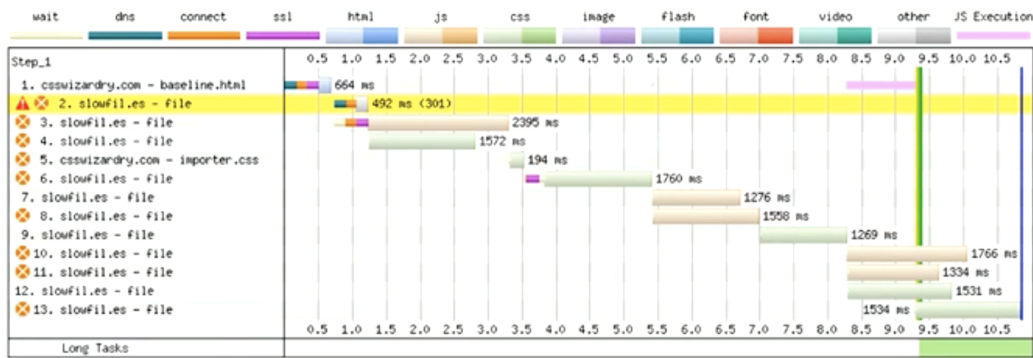
WhatsApp - Does a Range: bytes=0-1024000

iMessage - Does a full GET

4:14 PM · Feb 11, 2021 · Twitter Web App

## FCP 2.669s result

```
3 <head>
1 <meta charset="UTF-8" />
2 <meta name="viewport" content="width=device-width, minimum-scale=1.0" />
3
4 <meta http-equiv="Content-Security-Policy" content="upgrade-insecure-requests" />
5
6 <title>Get Your &lt;head&gt; Straight</title>
7
8 <script>
9   var script = document.createElement('script');
10   script.src = "https://slowfil.es/file?type=js&delay=1000&async-snippet-in-head";
11   document.head.appendChild(script);
12 </script>
13
14 <script>
15   // Slow JS
16   function wait(ms) {
17     var start = Date.now(),
18     now = start;
19     while (now - start < ms) {
20       now = Date.now();
21     }
22   }
23   wait(1000);
24 </script>
25
26 <script src="https://slowfil.es/file?type=js&delay=1500&sync-in-head&01"></script>
27 <script src="https://slowfil.es/file?type=js&delay=1000&sync-in-head&02"></script>
28
29 <link rel="stylesheet" href="https://slowfil.es/file?type=css&delay=1000&sync-in-head" />
30 <link rel="stylesheet" href="https://slowfil.es/file?type=css&delay=1000&imported-from-css" />
31 <link rel="stylesheet" href="https://slowfil.es/file?type=css&delay=1000&imported-from-html" />
32
33 </head>
34 <body>
35
36 <h1>Get Your <code>&lt;head&gt;</code> Straight</h1>
37
38 <form>
39
40   <input type="hidden" id="csrf_token" value="ZG1kIH1vdSBmaW5kIG1lPwo=" />
41
42 </form>
NORMAL +0 ~0 -0 ~/Sites/gyhs/demos/fixed.html
```



- 
- Favicon put at bottom
- (Also always add a default favicon.ico in the root of the site as many things eg search engines will request it without reading the html)
- Cookie Prompts are largely irrelevant ... always use an asynchronous implementation ... if they don't offer it find someone who does

## Links & slides:

- [csswz.it/gyhs-baseline](https://csswz.it/gyhs-baseline)
- <https://csswizardry.com/2019/05/self-host-your-static-assets/>
- <https://csswizardry.com/ct/>



## 11:05 — [Rémi Parmentier](#) on [Shining the Light on HTML Email Dark Modes](#)

Building HTML newsletters doesn't have to be frustrating. Let Rémi be your guiding light in the dark and make you fall in love with newsletters (again). Really? Yes, really!

-----

### Questions:

- How do you sleep at night? / linear-gradient hack
- Arent hacks like this prone to break a lot?
- Is there any progress on modernizing emails? Or are they stuck forever with tables we have to hack around?
- What are some of the **typical misconceptions** that you see people having against HTML Email?
- What's the most impressive implementation that you've seen in HTML Email as of yet?
- Differences between apps and web clients? Outlook vs. Outlook.com, Gmail apps vs. Gmail.com, Yahoo vs. Yahoo Webmail? Plus there are new email services appearing: Proton, for example. How well do they support modern features?
- What's the deal with Outlook and its MS Word rendering engine? I remember a talk you've given exploring the evolution of Outlook over the years, so why hasn't it changed since then?

- What would be the right approach to building HTML Emails these days? Is it still common to write them from scratch, or is it better to rely on templates from Mailchimp, Campaignmonitor etc.?
- Inline styles?
- @font-face? SVG?
- Floats
- Or is it more common to automate it with tools like MJML? Josh Comeau indeed has published a thorough guide on how he uses MJML to build out his emails. What do you think about it? What tools do you use a lot in your development process?
- What are some of the major accessibility constraints that HTML Email as a medium has, and what do you think we should keep in mind to build HTML Email accessibly?
- What's your process for building HTML Emails? Do you start mobile first, or desktop first or Gmail first or — god forbid! — Outlook first?
- How do you test and debug your emails? Is there something like Browserstack for email? Do you still have Lotus Notes installed on your machine?
- For a while, there has been quite a bit of excitement about interactive emails, with AMP for email bringing interactive components like sliders and carousels. What's the state of things there?
- If somebody listening to us now will get excited and inspired to discover the dark and bright sides of HTML Email, where would you recommend them to start? Is there any email newsletter about HTML email?

- Should everybody in the audience switch their careers and move into html email development?
- Should Gmail try to fix their app instead of devs trying to hack the blend mode? What about high contrast mode, does it also require separate solutions for it?
- How quickly do email clients update their approach? Recently I tested Gmail button links in forced dark mode and the white text color was never changed to black, and the background color was only changed if the text color was changed

## Notes & key takeaways:

The screenshot shows the Can I email website interface. At the top, there's a navigation bar with links for Home, Features, News, and a date range (July 22, 2022 - July 2022 updates). A 'Compare email clients' button is also present. Below the navigation bar is a search bar with the text 'Can I email' and a dropdown menu showing 'HTML, CSS, ...'. There's also a settings icon and a question mark icon.

The main content area is divided into three sections:

- Latest features:** A list of recent updates, including CSS block-size & inline-size, CSS tab-size, CSS border-inline & border-block longhand properties, CSS border-inline & border-block individual logical properties, and CSS padding-inline-start & padding-inline-end. A 'View all features' button is at the bottom.
- Latest news:** A list of recent news items, including July 2022 updates, Say hello to the Email Markup Consortium, Testing for Can I email, December 2021 updates, and November 2021 updates. A 'View all news' button is at the bottom.
- Client scores:** A list of email clients and their scores, ranked from highest to lowest. The clients are Apple Mail (macOS), Apple Mail (iOS), Outlook (macOS), Samsung Email (Android), and SFR (Desktop Webmail). A 'View the scoreboard' button is at the bottom.

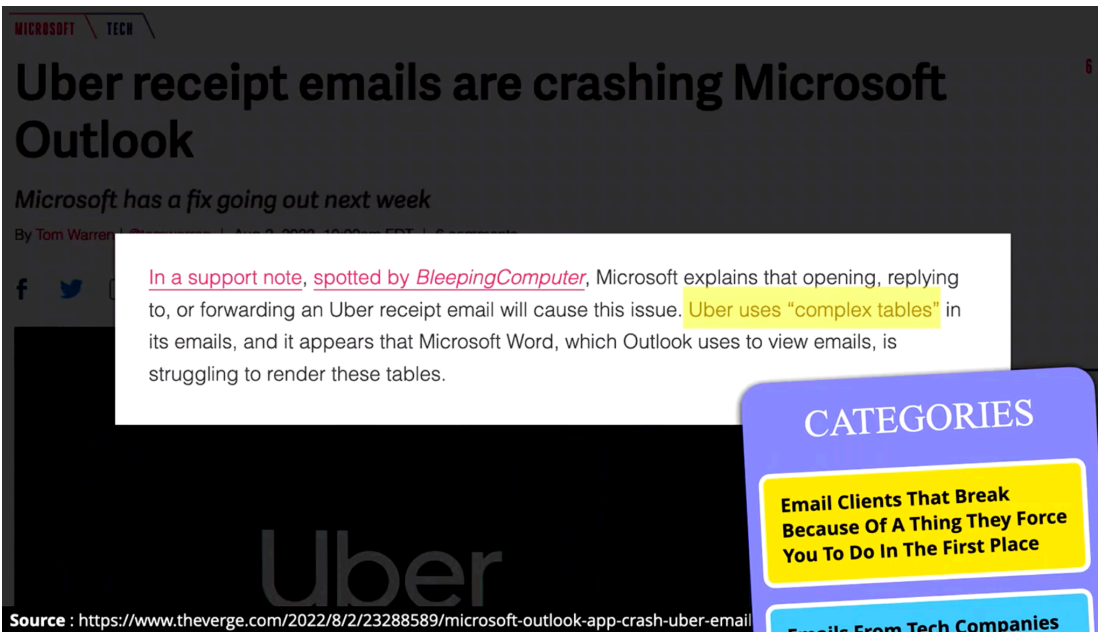
At the bottom of the page, there's a footer section with 'Can I email...' information, site links, and a legend.

**Can I email...**  
 Launched and maintained by @HTeuMeuLeu and the team at Tilt Studio.  
 Based on the original caniuse.com by @Fyrd and designed by @Lencso.  
 Also based on the original name and idea by @M\_J\_Robbins and the team at Rebel.  
 Support data contributions by the wonderful email geeks community on GitHub.

**Site links**  
[Home](#)  
[Feature index](#)  
[Compare email clients](#)  
[Email Client Support Scoreboard](#)  
[Data available in JSON](#)  
[Can I email on GitHub](#)

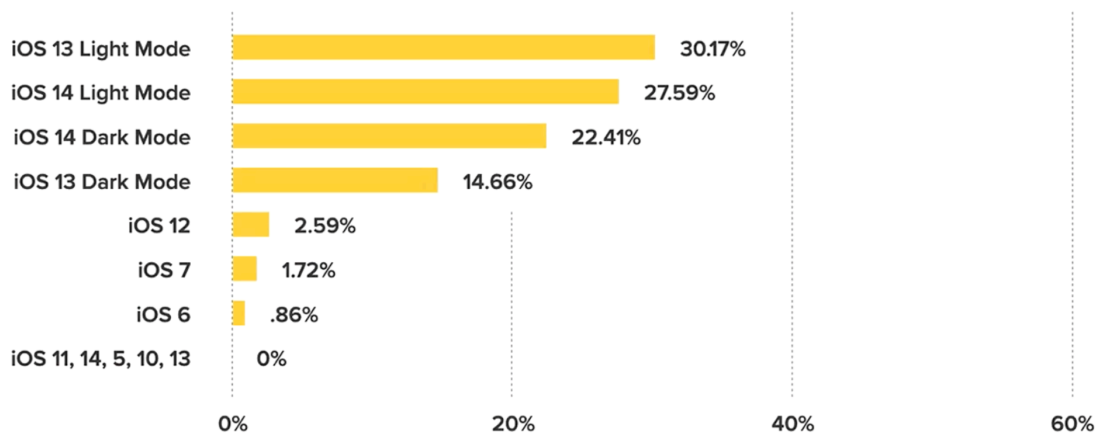
**Legend**  
 ■ = Supported  
 ■ = Not supported  
 ■ = Partial support  
 ■ = Mixed support  
 ■ = Support unknown

- 
- Uber “complex tables” crashed outlook

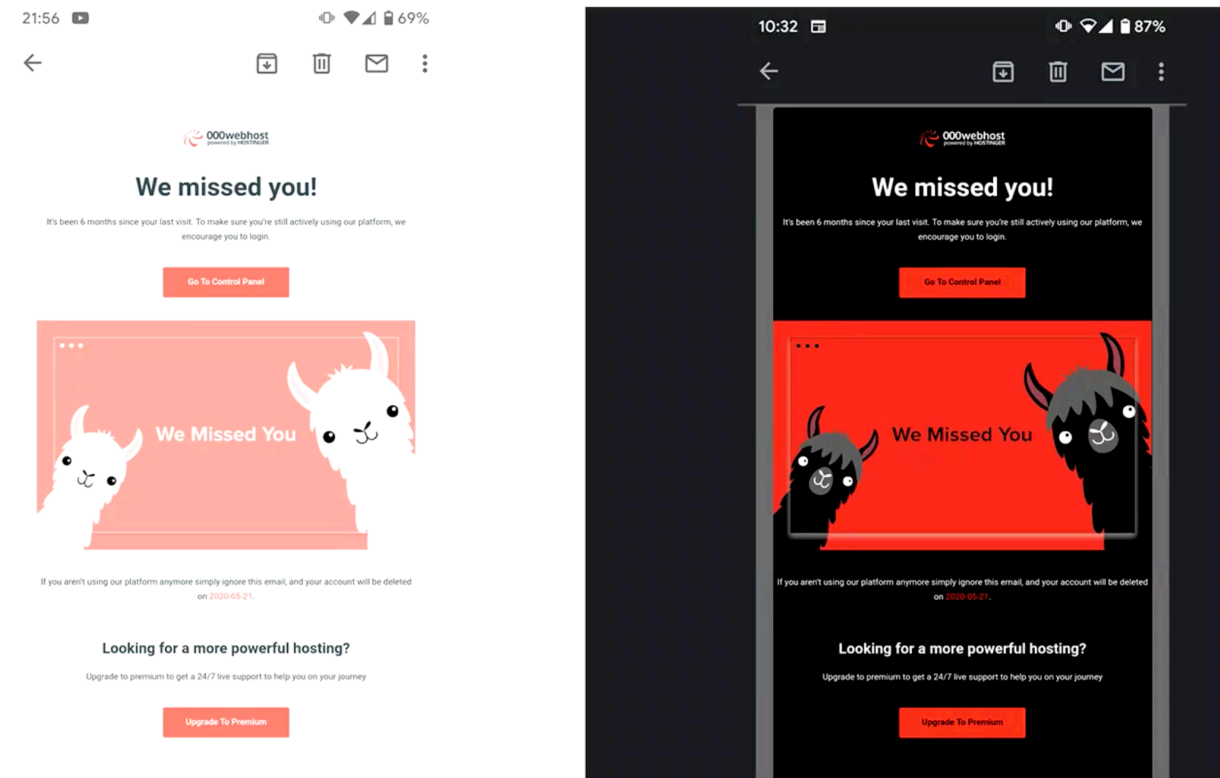


## Of those using Apple iPhone, 36% are using Dark Mode.

Dark Mode trends as detected by Litmus Analytics, September 14 – October 15, 2020



Forced Darkmode can result in this:



**Do not fight dark mode.**  
**Embrace it.**

## Dark Mode for Email Simulator

Check how your email looks like in Dark Mode.

Want to preview emails in your inbox in Dark Mode?

Use the [Email Source Converter](#) to convert the source and paste the HTML below.

[Learn more about this tool.](#)

### Proof email campaigns faster with ProofJump

From simple MailChimp campaigns to emails with dynamic content in Salesforce Marketing Cloud - ProofJump is the quickest way to complete your QA and approvals.

See How

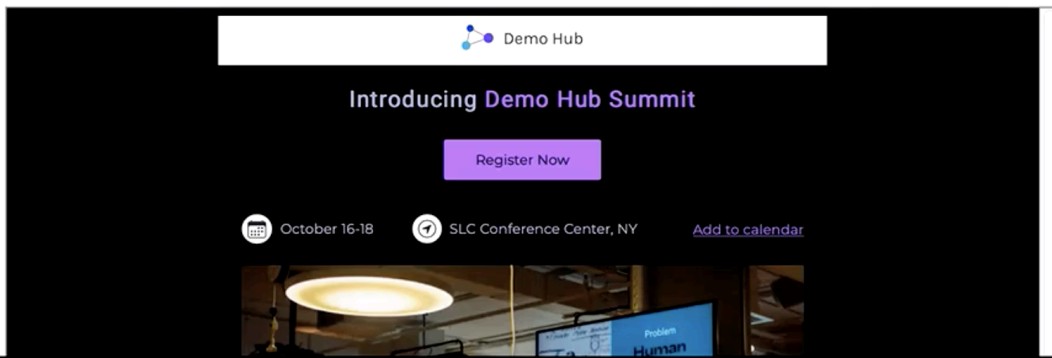
Turn off dark mode 

View in Full Screen

Use email example

Render

Email HTML



## Tip #2

# Use transparent images.

small@putsmail.litmus.com  
12/13/2018, 3:27 PM



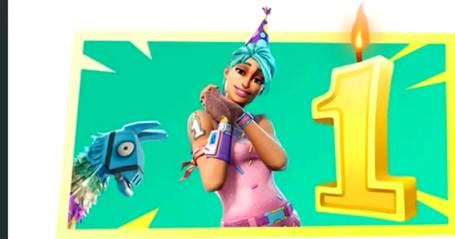
**BUY NOW!**



## PLAYGROUND RETURNS

Playground mode is back and better than before! Explore new team select options, building edit options, and more.

putsmail@putsmail.litmus.com  
Thu 12/13/2018, 3:27 PM



**BUY NOW!**



## PLAYGROUND RETURNS

Playground mode is back and better than before! Explore new team select options, building edit options, and more.



[Unsubscribe](#) | [View online](#) | [Privacy policy](#) | [Refer a friend](#)

\*Click the link above for 15% off. Discount is automatically applied at checkout. Ends 11:59 PM, June 13, 2017.

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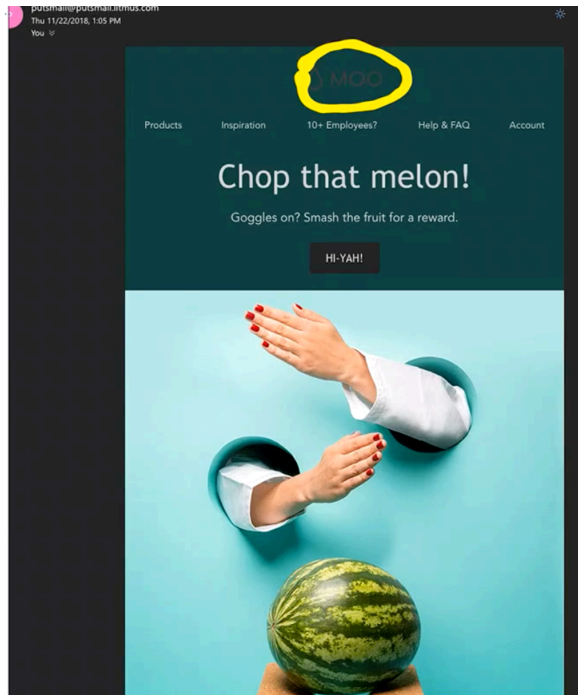
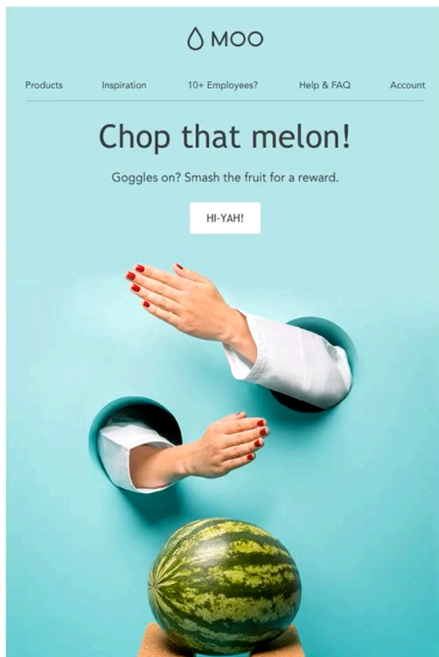


[Unsubscribe](#) | [View online](#) | [Privacy policy](#) | [Refer a friend](#)

\*Click the link above for 15% off. Discount is automatically applied at checkout. Ends 11:59 PM, June 13, 2017.

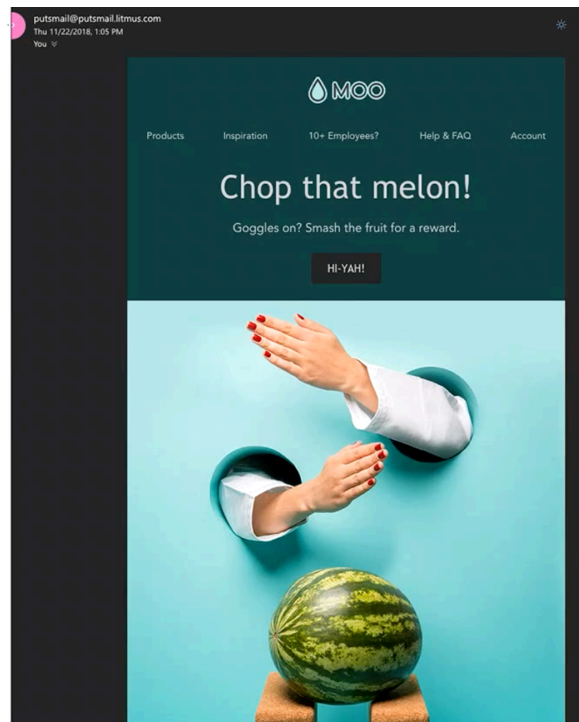
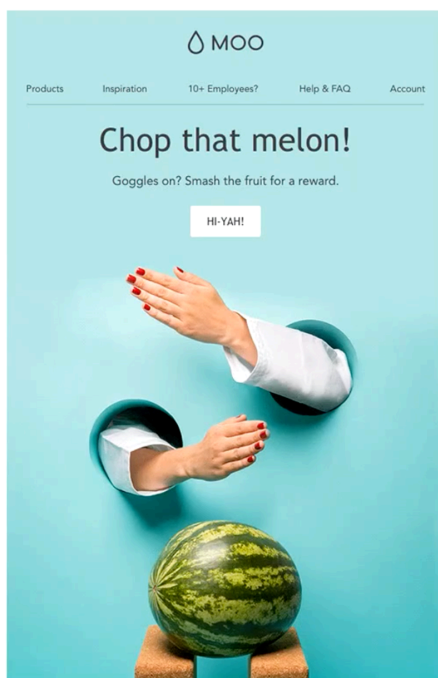
© MOO Inc. 14 Blackstone Valley Place, Lincoln, RI 02865, USA

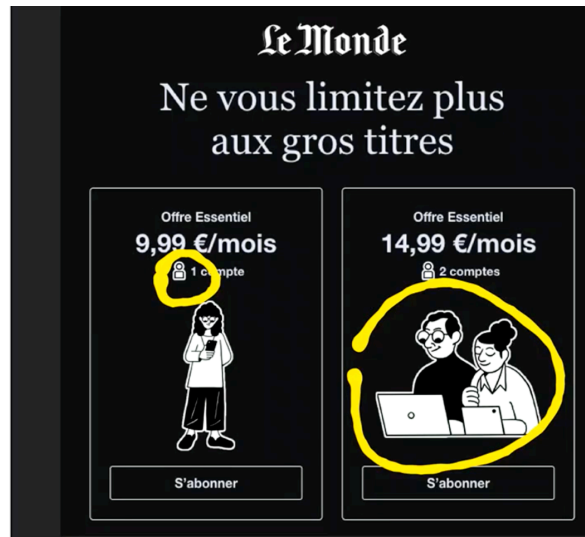
putsmail@putsmail.litmus.com  
12/22/2018, 1:05 PM



- 
- An Outline can be very helpful to ensure icons / text / graphics can still be read in a forced dark mode

mail.litmus.com  
1:05 PM





- Use the dark mode media query

```
@media (prefers-color-scheme: dark) {
  .files {
    color: white;
    background: black;
  }
}
```

- Browser emulation includes a sort-of forced mode in chrome

```
<picture>
  <source srcset="logo-dark.png"
           media="(prefers-color-scheme:dark)" />
  
</picture>
```

Required in Apple Mail 12 :

```
<meta name="supported-color-schemes"
      value="light dark" />
```

Required in Apple Mail 13 and above :

```
<style>
:root {
  color-scheme: light dark;
}
</style>
```

## @media (prefers-color-scheme) CSS

Estimated Support: **27.27%** supported

Apple Mail	Gmail	Outlook	Yahoo! Mail	AOL	Samsung Email
macOS ✓	Desktop Webmail ✗	Windows ✗	Desktop Webmail ✗	Desktop Webmail ✗	Android ✗
iOS ✓	iOS ✗	macOS ✓	iOS ✗	iOS ✗	
	Android ✗	Outlook.com ✓	Android ✗	Android ✗	
	Mobile Webmail ✗	iOS ✓			
		Android ✗			

Data from [caniemail.com](https://caniemail.com) | Last tested on 2019-09-26

[Alternate layout](#)

[Enable accessible colors](#)

## Tip #4

# Use custom styles for Outlook.com.

```
<style>
  .files {
    ...
  }
</style>
<div style="background:#fff; color:#000;">
  <div class="files">
    ...
  </div>
</div>
```

Outlook.com in dark mode

```
<style>
  .x_files {
    ...
  }
</style>
<div style="background:#333; color:#ddd;"
  data-ogsb="#fff" data-ogsc="#000">
  <div class="x_files">
    ...
  </div>
</div>
```

Ogsb: Original style background / ogsc: original style color

Step 1 : exclude Outlook.com from media query styles

```
@media (prefers-color-scheme: dark) {  
  .files:not([class^="x_"]) {  
    color: white;  
    background: black;  
  }  
}
```

•

Step 2 : duplicate styles only for Outlook.com

```
[data-ogsb] .files {  
  color:white;  
  background:black;  
}
```

•

**Tip #5**

**Fix Gmail with  
blend modes.**

•

• Gmail will alter a dark e-mail also and invert it to a light e-mail

[TEST SEND] - Christie, what kind of money do you need? ☆

 Inbox



Start with a question, end with the solution

Christie, do you pay off your credit cards every month?

If you answered "Yes"...

[Get A Rewards Card](#)

You may qualify for a [rewards credit card](#). For

[TEST SEND] - Christie, what kind of money do you need? ☆

 Inbox



Start with a question, end with the solution

Christie, do you pay off your credit cards every month?

If you answered "Yes"...

[Get A Rewards Card](#)

You may qualify for a [rewards credit card](#). For

Orange F 14:40 66 %



Nest

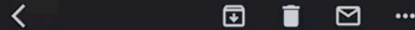
Save on the year's biggest deals.

[See all offers](#)

Save £20 on Nest Mini.<sup>1</sup>

£29 ~~£49~~

Orange F 14:40 66 %



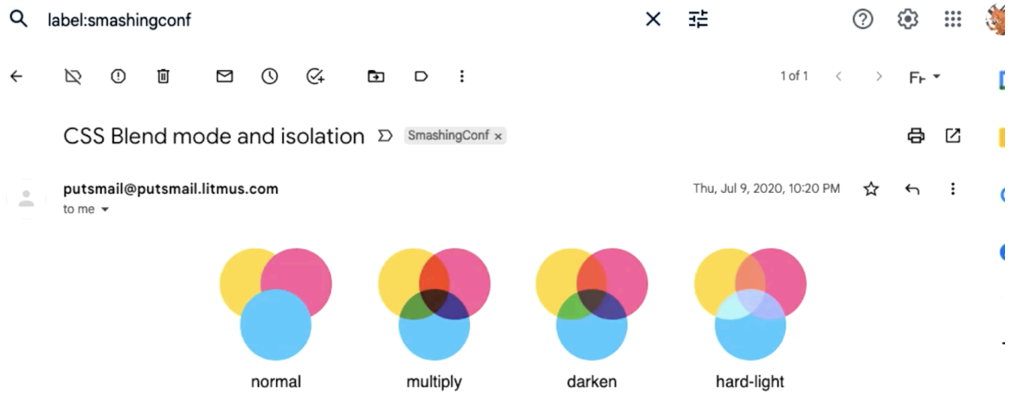
Save on the year's biggest deals.

CATEGORIES

Email Clients That Break Because Of A Thing They Force You To Do In The First Place

Emails From Tech Companies That Look Worse In That Same Company Email Client

: <https://www.hteumeuleu.com/2021/fixing-gmail-dark-mode-css-blend-modes/>



## Blend Modes in CSS

Using Blend Modes in CSS, you can achieve advanced effects in emails. This is now supported in Gmail with new update. It also works in Apple Mail, Thunderbird, AOL, Orange.

### Further reads:

- [mix-blend-mode](#) on MDN
- [Compositing And Blending In CSS](#) by Sara Soueidan

neuleu.fr/wp-content/uploads/2016/10/blend-modes.html

Gmail in light mode

Get A Rewards Card

Gmail in dark mode

Get A Rewards Card

```
<div style="color:#fff; background:#4d86eb;">
  Get A Reward Cards
</div>
```

💡 Add a linear-gradient to maintain a background color in Gmail

```
<div style="color:#fff; background:#4d86eb;
  background-image: linear-gradient(#4d86eb,#4d86eb);">
  Get A Reward Cards
</div>
```

Gmail in dark mode

```
<div style="color:#000; background:#007740;  
  background-image:linear-gradient(#4d86eb,#4d86eb);">  
  Get A Reward Cards  
</div>
```

Gmail in light mode

Get A Rewards Card

Gmail in dark mode

Get A Rewards Card

```
<div style="color:#fff; background:#4d86eb;  
  background-image:linear-gradient(#4d86eb,#4d86eb);">  
  <div class="background:#000; mix-blend-mode:screen;">  
    <div class="background:#000; mix-blend-mode:difference;">  
      Get A Reward Cards  
    </div>  
  </div>  
</div>
```

Gmail in light mode

Get A Rewards Card

Gmail in dark mode

Get A Rewards Card

## **mix-blend-mode: difference**

“subtracts the darker of the two constituent colors from the lighter color.”

$$B(C_b, C_s) = |C_b - C_s|$$

- 
- This results in no difference in light mode but alters the darkmode

## **mix-blend-mode: screen**

“multiplies the complements of the backdrop and source color values, then complements the result”

$$B(C_b, C_s) = 1 - [(1 - C_b) * (1 - C_s)]$$

- 
- Now it only needs to be assured these rules will only be applied to gmail,

[About](#)[Blog](#)[Work With Me](#)

April 09, 2021

## Fixing Gmail's dark mode issues with CSS Blend Modes

Since its debut in October 2019, Gmail's dark mode has been causing [a lot of headaches](#). It has improved and standardized over time, but there are still glaring differences between Gmail's dark mode in iOS versus Android.

One of the most inconvenient problems in iOS in particular is that Gmail insists on changing any light text color to a dark text color. So an already dark email with white text on a black background will turn black on white. Not only does that seem counter-efficient, but it also creates real accessibility and readability issues.

Take [this email from Nest](#) for example.



euleu.com/2021/fixing-gmail-dark-mode-css-blend-modes/

### Bonus Tip

## The gradient trick for Outlook.

(On Windows.)

It's a similar approach like blend modes, but with gradients

# How To Fix Outlook Dark Mode Problems (Email Design)



Nicole Merlin Aug 29, 2021 (Updated Dec 7, 2021) |



Read Time: 16 mins |



English ▾

- 
- There will be a new Outlook Version which will offer better styling options
- These hacks are working for the given state, but are prone to break in future ... which is not much of an issue as e-mails aren't for longevity in first place
- When replying or forwarding an e-mail ... most e-mail clients remove any styling ...

## Links & slides:

**RÉMI PARMENTIER**

@HTeuMeuLeu

- <https://www.hteumeuleu.com/blog/>
- <https://www.caniemail.com/>
- There is also parcel.io for email testing



## 12:15 — [Ben Callahan](#) on [You Have a Design System. Now What?](#)

Design systems have vast scopes and complexities—and no two are the same. That's why establishing a collective vocabulary around design systems is key to unifying a team that can develop and mature a design system for long-term success. In this talk, Ben will present a perspective on how to gain real value from your design system based on years of research and experience. He'll offer a way to create a shared understanding inside your organization leading to a healthy systematic design practice.

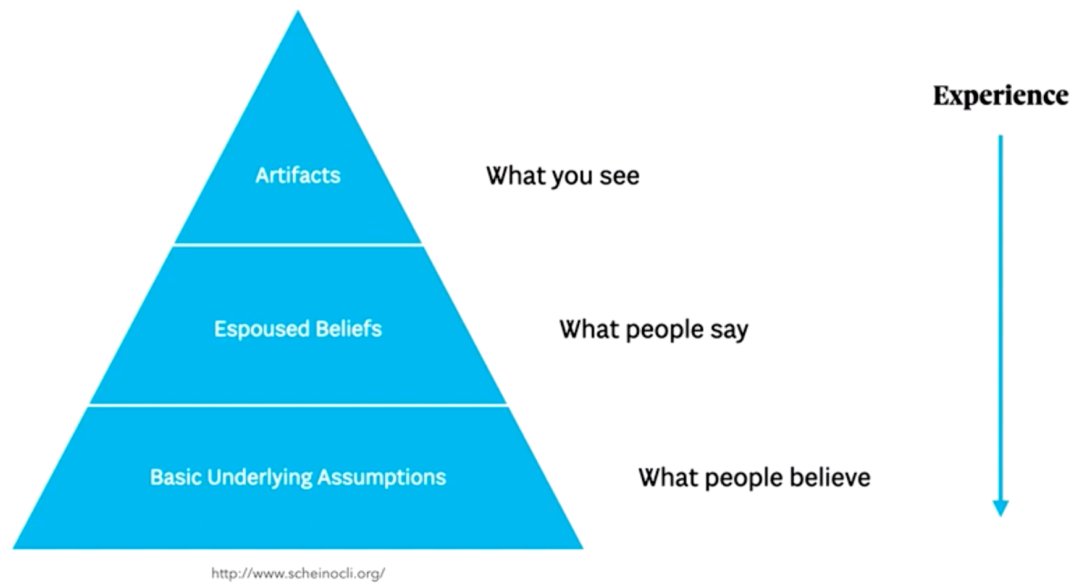
### Questions:

- Most recently, just a few weeks ago, you and your wonderful team at Sparkbox have released Design Systems Survey 2022. What were some of the most surprising findings that you've discovered during your research?
- Design systems! So we've been working with design systems for quite some time now, and it seems like many teams already have one. It might be up-to-date, or not, but design systems definitely aren't a new kid around the block. Recently you've been speaking about the Maturity Model for Design Systems — could you elaborate it a bit? What would make a design system mature?
- What are some of the **important ingredients of successful design systems**? And what are some of the warning signs that a design system isn't really working?

- Perhaps we could focus more on the collaboration between designers and developers. For a **design system to succeed, how should the workflow** be designed?
- Often we still have to prove the effectiveness of a design system with some design KPIs. How do you define and measure them over time to prove that a design system is working well?
- Could you explain a little bit about how you are working with clients at Sparkbox, especially when you kick-off a new design system project?
- There are rumours that you might be writing a book about design systems. What's all about?
- **Control + Collaborative?** Can a system with a collaborative culture blend in a healthy way with an organization that is a control culture?
- How do you use your values to assess if you even can work with a culture (during a sales process, or as you prospect for adoption)? How/when do you decline to engage?
- We face the same issues in data, which we call “Data Governance”

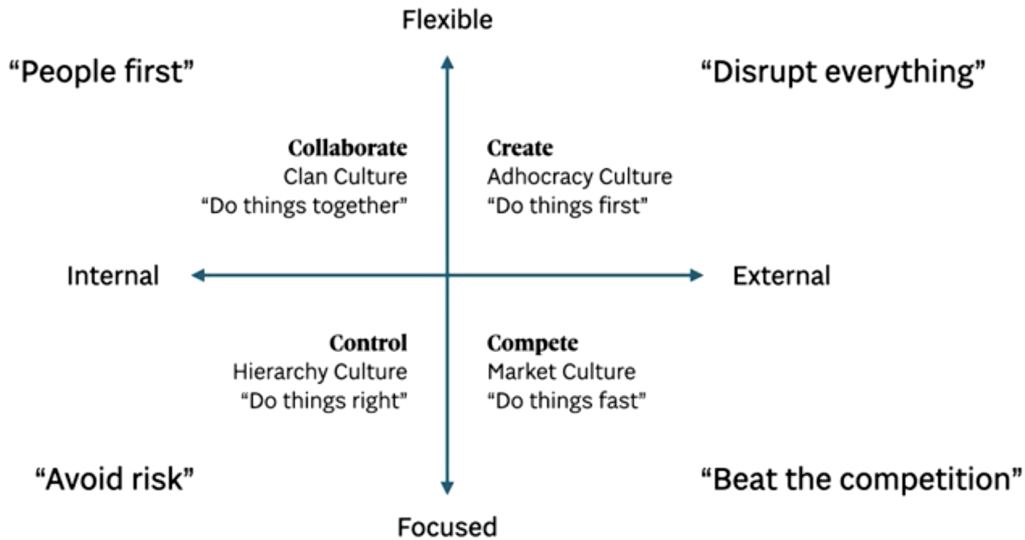
**Notes & key takeaways:**

**Organizational Culture** is  
made up of three layers



- 
- Cameron and Robert Quinn in 1999:
- Internal vs. External decisions ... external decisions deriving from the environment
- Adhocracy opposite of bureaucracy “anything goes”
- Compete: Fast and short term

There are four primary types of **Organizational Culture** in the competing values framework



[https://www.thercfgroup.com/files/resources/an\\_introduction\\_to\\_the\\_competing\\_values\\_framework.pdf](https://www.thercfgroup.com/files/resources/an_introduction_to_the_competing_values_framework.pdf)

- 
- Ben polled the audience on the 4 primary types of cultures they think their CEO would espouse, results were fairly balanced
- Ben polled the audience on the 4 primary types of cultures they think their design team would emulate, results were a lot more focused on collaborative or controlling
- A company has the main culture but a bunch of subcultures as well
- Design System Teams tend to fall on the left side of the diagram

!KBOX

Design system subcultures are most often  
**Collaborative or Controlling**

**Collaborate**  
Clan Culture  
"Do things together"

"I believe the scope of my work cannot be  
accomplished in any way other than to partner  
with teams who have caught the vision"

**Control**  
Hierarchy Culture  
"Do things right"

"My subscribers haven't created consistency, so  
I'm here to make sure they do going forward"

## Healthy Characteristics

**Collaborate**  
Clan Culture  
"Do things together"

Prioritization primarily based on subscriber needs  
Adoption primarily driven by relationship  
Intentionally flexible (extension of the system is encouraged)  
The system adapts to the needs of the subscribers

**Control**  
Hierarchy Culture  
"Do things right"

Prioritization primarily based on organization needs  
Adoption primarily driven by incentive  
Necessarily restrictive ("use what we have" is the general attitude)  
Subscribers adapt to the approach of the system

## Unhealthy Characteristics

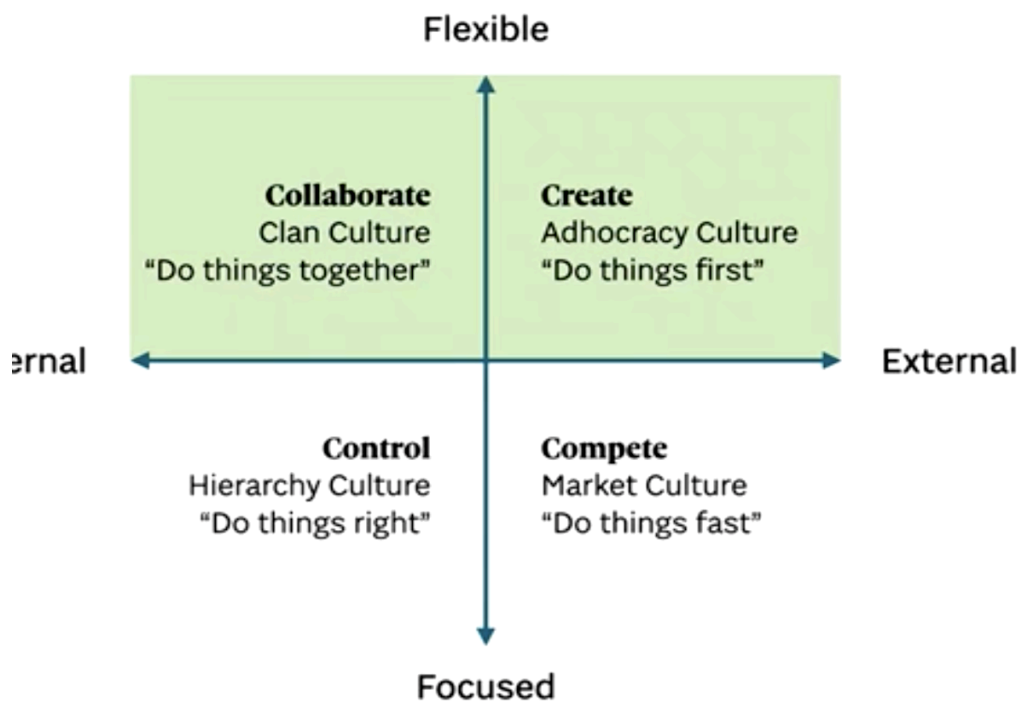
### **Collaborate** Clan Culture "Do things together"

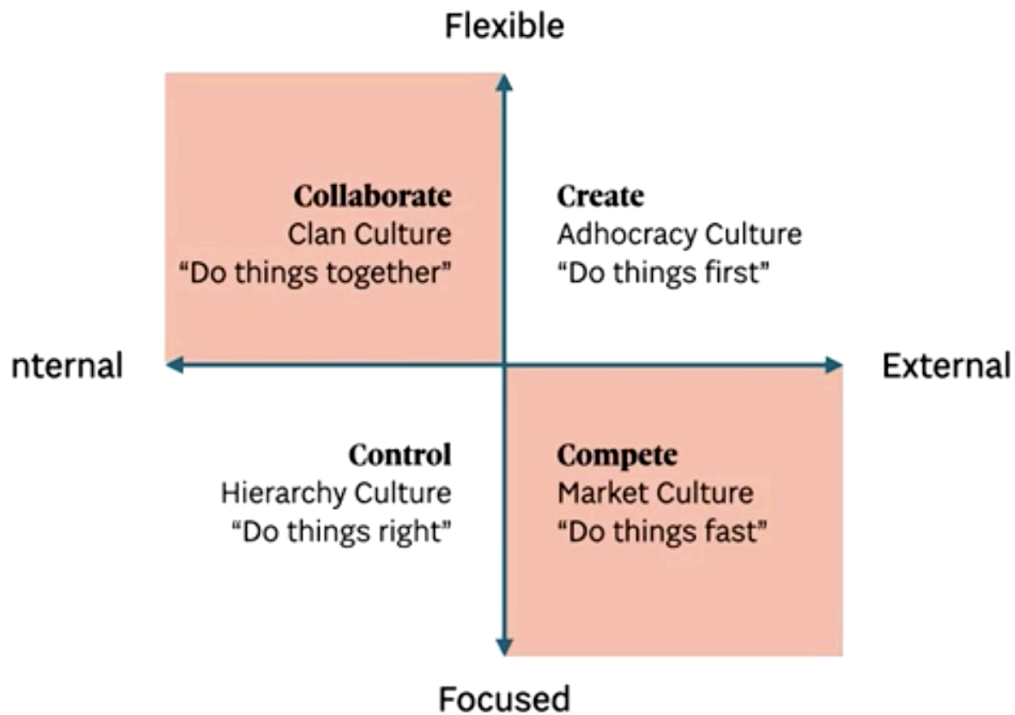
Tries to serve everyone perfectly, serving nobody well  
Overwhelmed with input, resulting in slow execution  
Extension is abused  
Hand-holding support for adoption

### **Control** Hierarchy Culture "Do things right"

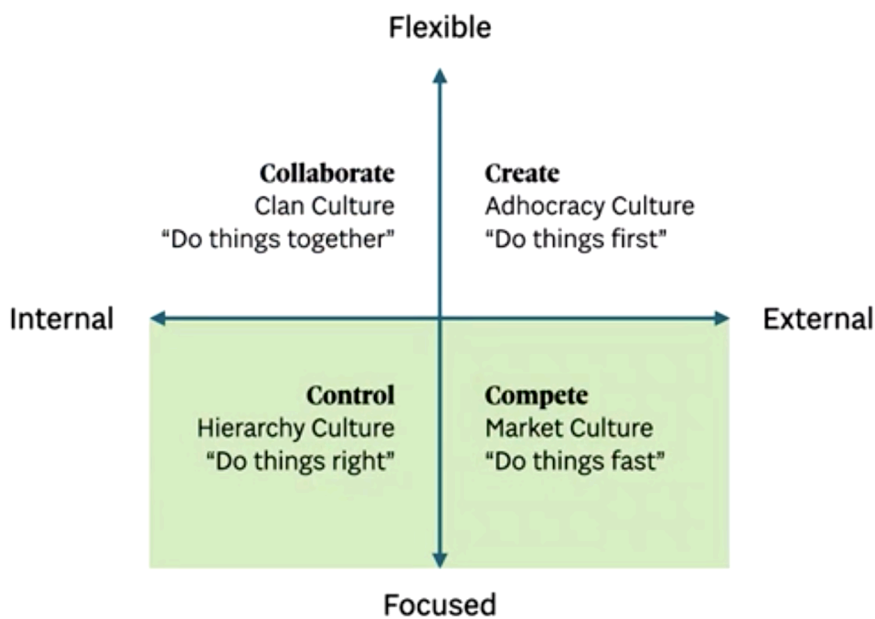
Without input from subscribers, serves nobody well  
Disregard for input, resulting in need to rework  
Extension is prohibited  
No support for adoption

- 
- Diagonal Cultures are regarded incompatible in the competing values framework. In the same row it's functional





•



•

- Understand cultures and subcultures in your company
- Can the design system culture change the culture of the organization – it would be nice. But it's really hard

- Culture is created from the bottom up even though it is experienced top down

SPARKBOX



- 
- Your design system won't make your products more consistent
- People will make what they WANT to make
- The only sustainable way is to get to the change what your subscribers want to do
- Every team has its own subculture
- You have to understand what is important to them
- You have to recognise these forces are at play
- If you don't demonstrate collaboration early in the development of the design system it is difficult to implement later
- People should be encouraged to contribute

**Links & slides:**

-



Feel like you could maybe write better code, but are not sure where to start? Or just lack inspiration? In his talk, Tejas will definitely inspire you to write better code with his unbridled enthusiasm and fantastic examples.

### Questions:

- With virtual scrolling, how would a user copy all the data from the table?
- How can you not have a single typo in your code as you were typing live?!
- Where do you see JavaScript ecosystem evolving? Next.js has been widely adopted, Jamstack has created this whole new industry around itself?
- The landscape is quite complex: headless, Jamstack, Edge functions, [segmented rendering](#), technical stack — how do you navigate there?
- How do you write better code, what about maintainable code? Is the only answer to it: Documentation?
- Web Components: where are we there?
- What are you most excited about? Any particular issues you'd love to solve for good?
- 
- How do screenreaders (and other accessibility software and machines) handle virtual scrolling?
- What is wrong with Pagination?

- What if the lines doesn't have all the same height ?
- How would you factor in dynamic fetching of the data, so the data doesn't have to be loaded in to memory all at once?
- You travel a lot, how do you make sure you're productive and keep healthy, what are your tricks?

### **Notes & key takeaways:**

- Virtual Scrolling is an illusion of an indefinite number of items when really there are only like for instance ten
- Scrollbar behaviour with virtual scrolling behaves off ... scrollbar jumps ... scrollbar changes sizes ...
- Windowing is the technique used in the presentation to create virtual scrolling
- First: Limit the amount of elements
- The height of a page has a technical limit ... which creates a limit to the described technique
- Takeaways:
  - a. Be curious as to how things work
  - b. Consider building to understand, rather than buying in

### **Links & slides:**

-

## 15:50 — [Sophie Tahran](#) on [Designing with Words](#)

You've done the research. Presented prototypes. Triple checked your color contrast. Everything's coming together, until someone tries to create an account using the new site. "LOG IN ERROR! Operation Failed," the field shouts, with no hint of a potential solution.

UX writing communicates what visuals cannot, adding clarity, credibility, and consistency. In this talk, we'll discuss ways to think strategically about the words in your designs, from onboarding flows to field labels. You'll learn what makes great writing great—and ultimately, how to design words that create a seamless experience.

### Questions:

- What typeface did you use in your title slides? – it's gorgeous.
- Has content design usurped **information architecture's** taxonomy, navigation, and other facets (this process used to be, in part, the domain of an information architect)? If so, what's the boundary between today's product designers and content designers?
- What's the boundary between a content designer's content and "consumed content" (such as an article's title, thumbnail, body, and supporting imagery)?
- Where do you research that your user for example use the word "Tee"? Do you have tips where to get this info from?
- Do you have any tips on how to approach legal and or compliance requirements where long copy are usually needed? #sadfaceemoji

- Tooling?
- What workflow for multi-languages platforms if we don't want all the version -1 to be just "translations" of a "main" language (where each language is supposed to be as important as the other ?)
- **UX writing** seems to be becoming a discipline of its own. Yet not every organization can afford such a position. Very often in companies everybody does a bit of UX writing: developers, marketing, designers and content managers. So how would you organize the UX writing in such a setting?
- DOC: Who wins in navigation, UX copy or SEO copy? Newspaper example: Local News (UX copy) vs <city name> News (SEO copy)
- DOC: How important is a copywriting background to UX Writing. Could a designer find a path to becoming a UX Writer?
- Brands differ (Lyft/Uber). How do you **balance being too witty/smart and being clear**.
- Good copy is also about **consistency**: how do you ensure a consistent voice and tone among a diverse team?
- Q: what is the proper punctuation between "I am very good at parties" and "obviously"?
- How do you translate words across culture? Some words may be offensive when translated etc.

● "Designing the language at the time of designing the layout and structure is valuable and revealing"... so likely important to collab with UX designers....

DOC: How do you collaborate/communicate with UX Designers, and does your work ever conflict (e.g. copy is too long)? Can you talk a bit about how you work with UX Designers at the New Yorker?

- Doesn't giving a hint in a form if a username is incorrect pose a security issue and makes it easier to hack an account?
- For Vitaly Q: Why should you never date an apostrophe?
- A: They're too possessive

- CLOSING: We might not all have access to this as a dedicated discipline. Who on our teams without a DX writer can try to embody some of this? And **What resources** — books, articles etc. — would you recommend for people interested in mastering copywriting / UX writing?
- [Vitaly's notes]
- Last break before the last talk
- If you don't need your badge, please hand it over at the registration desk, so we can reuse it next year!
- **Count the cats!**
- What's the **Mystery** — will be resolved after the last session
- Last chance to visit **Smashing Stand** with some books and things

### Notes & key takeaways:

- UX Writing term shifts to the term Content Design
- The practice of designing useful content that guides users through digital experiences
- It's action orientated

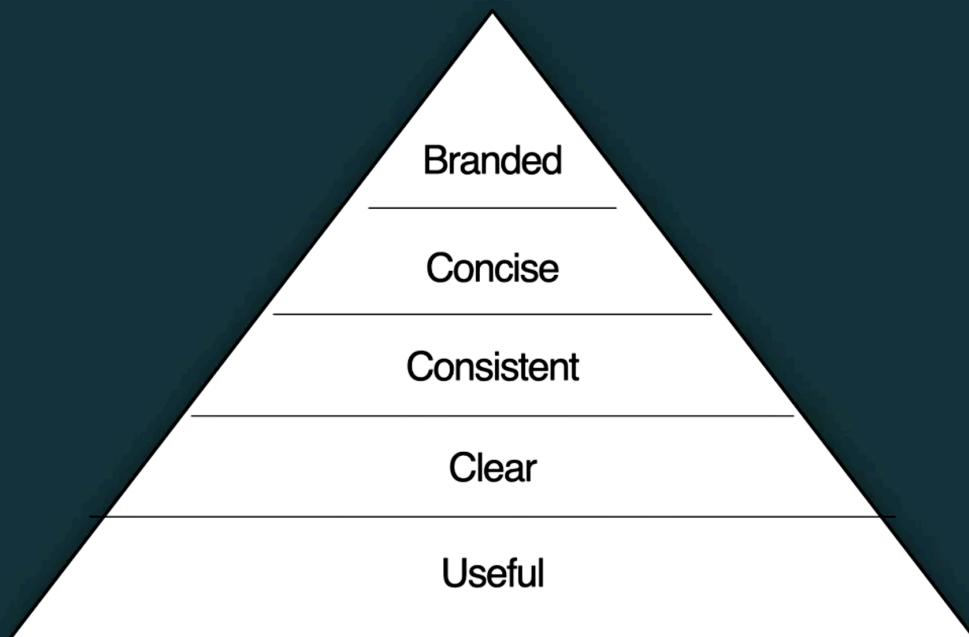
A design discipline that helps the product and its user communicate with one another.

-

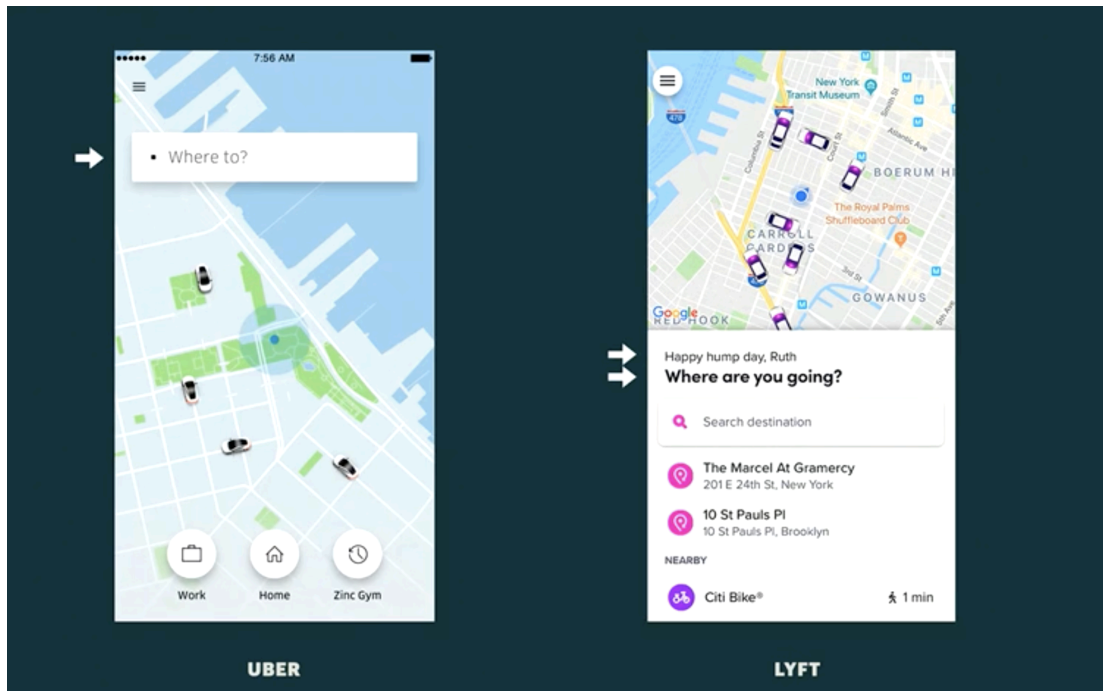
# Product design through more of a written lens than a visual one.

Content Designer	Technical Writer	Copywriter
Product Design	Engineering	Marketing
Figma	Docs	Docs
Designs	Explains	Announces

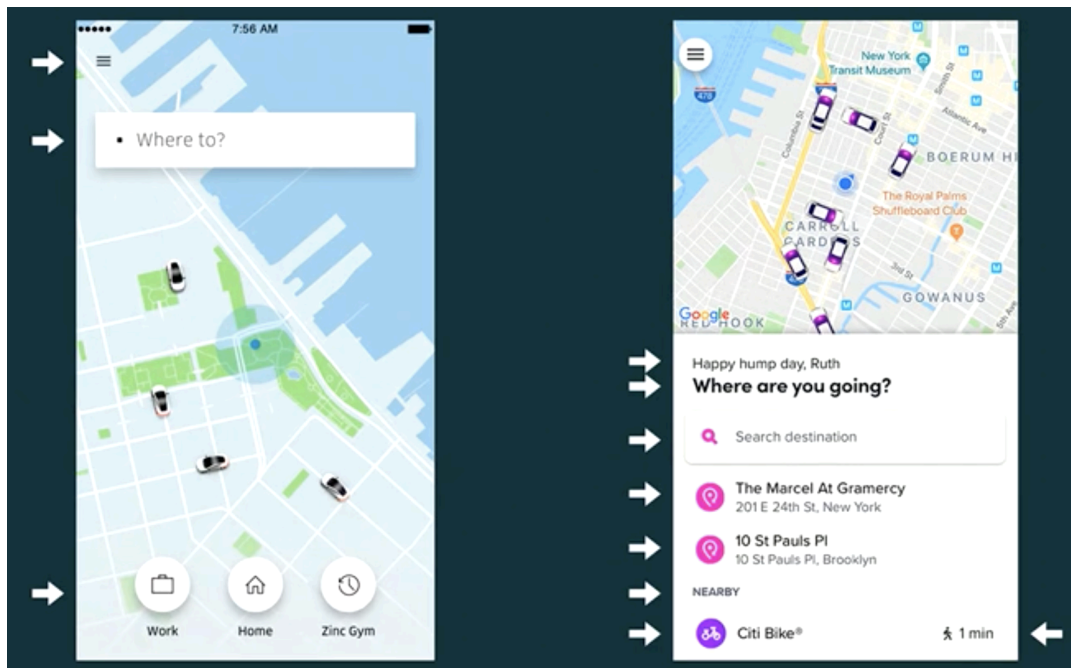
CONTENT DESIGN?

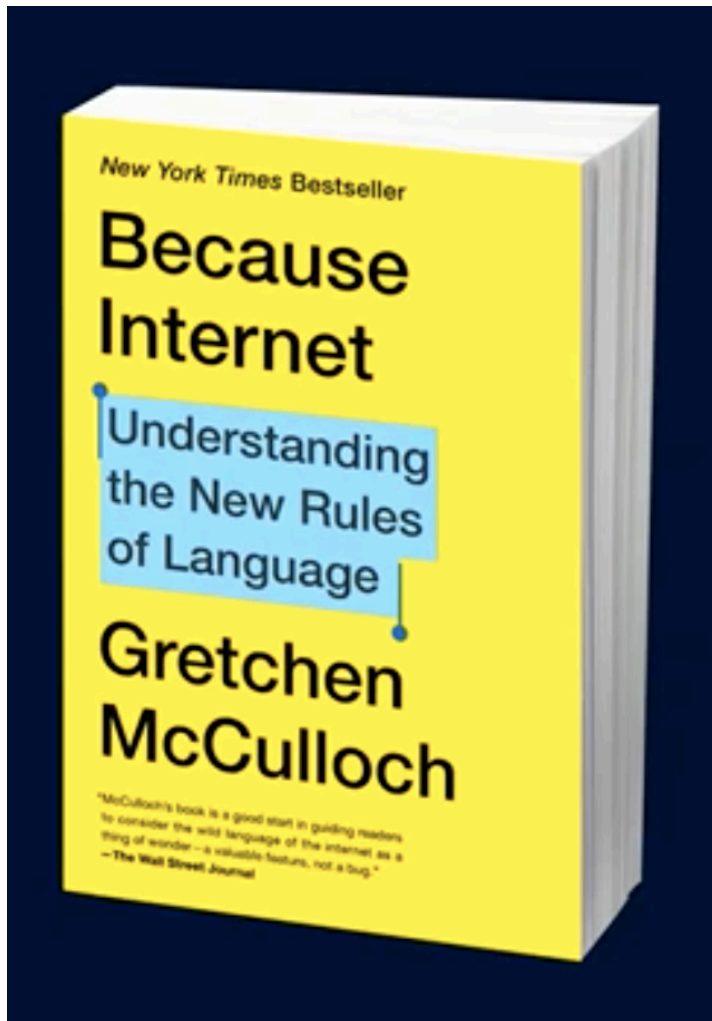


- UX copy needs to be useful - it should be as efficient as possible and as clear as possible. Repetition is good in case of content copy. Branded moments are the memorable moments, which are unique



- 
- Copy creates a completely different character
- Uber is more international and thus is more technical and reduced





#### WHY THIS MATTERS

Better products  
Better user experiences  
Better brands



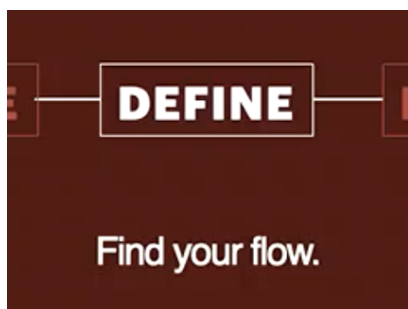
- In practice the wording is questioned very late in the process



- Advised process includes the wording choices right from the start



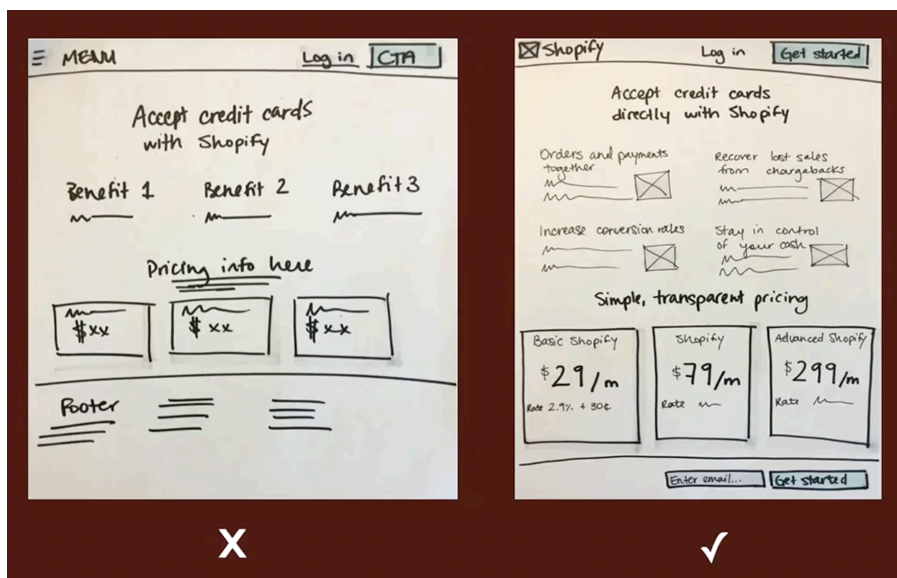
- Looking at support tickets is a helpful way to get an idea of what type of words users are using
- What words do you already use across the product



- What could be communicated visually instead through words because it is faster



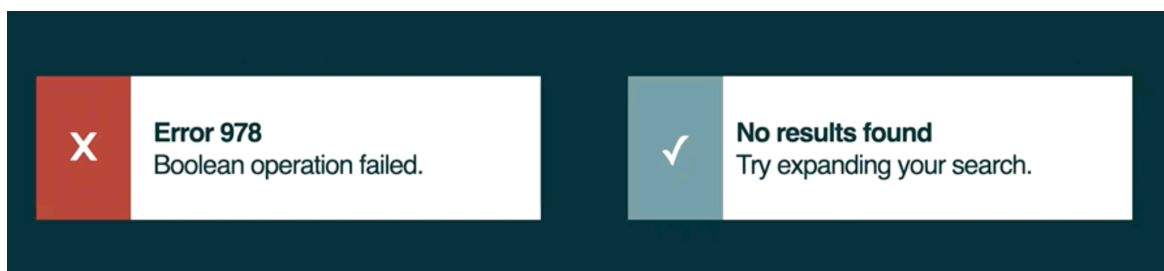
- 
- You should never wireframe with filler text



- 
- Lo-fi copy helps identifying required needs much earlier on
- It helps identifying the required scope in the further design process



- 
- The actual word part comes now
- Translate errors in common jargon // use language anybody can understand // it doesn't mean dumbing down, it means making them accessible which is fairly difficult



- 
- Don't assign blame / be supportive / specify what went wrong / provide further help with links



- 
- Use active language instead of passive language

Your email address will need to be added to create an account.

Add your email address to create an account.

- 

- Use & ! ; – sparingly

This is sentence case	This is Title Case
Best for long phrases	Best for short phrases
Easier to implement	Stands out in context
More approachable	More gravitas

- 

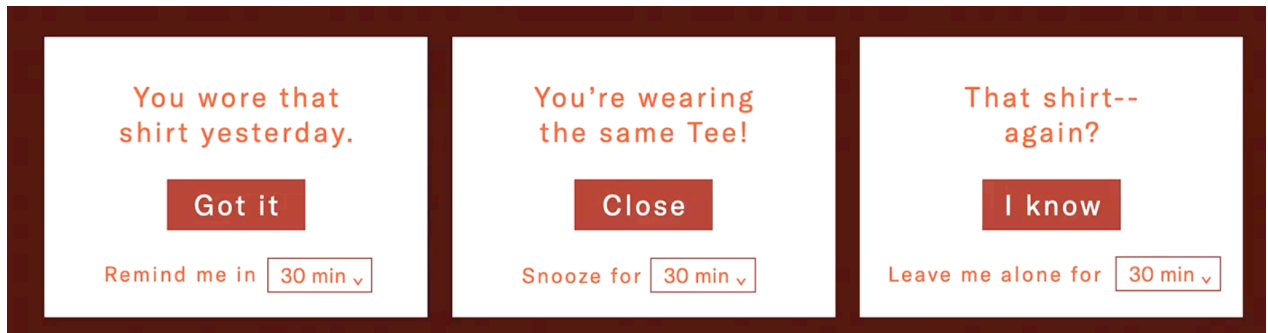
- Avoid arbitrary Capitalization // it can be distracting // it has to be clear when it should get its own identity » for branded words for instance

Your copy should be ...

- free of jargon
- actionable
- capitalized intentionally
- punctuated simply
- helpful, especially in error states

- 

- Wording can receive a final polishing in the end



- 
- Final step is the test
- How do you test copy? It depends on the copy at hand
- Highlight words that don't work for them

Highlight helpful words in green,  
confusing words in yellow,  
and useless words in red.

- 



- 

- Legal copy is problematic / Best advice is to get a good relationship with your legal advisor / you can then better understand their reasoning and framework and are able to propose alternatives

- When it comes to translation try to give as much context and intent of the copy as possible

- What do you expect to happen / what do you expect the button to do // open question helps to get an unbiased suggestion of the user, how to name or word elements

- What is the difference between product designers and content designers / information architecture team // content designer a lot more consumer focused // middleground between the two roles is tough
- The work usually falls to the designer who writes well ... refuse to put lorem ipsum etc. into your designs it forces people to think about language

### **Links & slides:**

- Because Internet: Understanding the New Rules of Language // Gretchen McCulloch

## 17:00 — [Manuel Matuzović](#) on [Lost in Translation](#)

A frontend developer's job is to look at a design, interpret it, and translate it to HTML and CSS. Unfortunately, information often gets lost in translation because we rely too much on visual aspects of a design, rather than its semantic meaning.

In his talk, Manuel Matuzović uncovers the invisible patterns we should recognise in a design, and how they affect accessibility.

---

### Questions:

- No question but just thank you for describing every picture in your talk!
- Should Buttons have cursor: pointer or not?
- What's your process for accessibility testing? What browser extensions are you using?
- How do you actually start building things? What is your maybe mindset in that framework of getting accessible results? Maybe you could describe it a little bit.
- **Where do we actually stand in terms of accessibility today?** It's very hard for me, personally, for example, to imagine a new project being released without even considering accessibility.
- So, who is **hearing this VoiceOver** for the very first time? And these are usually designers or developers coming to those workshops. And very often, you would see a vast majority of people hearing things for the very

first time. So, maybe you could also share a bit of light in how do you actually test accessibility?

- Container queries and cascade layers, :has selector —how does it change the way we write CSS?
- Should we ever use native date pickers and dialogs?
- Accessible maps
- Focus management
- Do you use a particular methodology when writing CSS today (BEM/BEMIT/CSS-in-JS? :D)
- Pains with <select>, checkbox and date picker. Native <dialog>, <popup>, <search>, <tablist> with tabs, <breadcrumb>  
(<https://open-ui.org/>) / cross-browser + standardizing <select>  
(<https://www.smashingmagazine.com/2020/11/standardizing-select-native-html-form-controls/>)
- [Open UI](#) is an initiative under the [Web Incubator Community Group](#), that is undertaking the task of documenting control components across design systems and analyzing design system terminology to find patterns and similarities that will help set the path for standards and native support in the browser. This work is being driven by browser vendors, framework authors, design system maintainers and is open to participation by anyone interested in this space.
- How do you estimate the time you need to get work done?
- Any new tools you discovered recently?
- What's on your dream wishlist?
- Did you spot any 🦄 🦄 🦄 in town?
- What about using a checkbox for the expand toggle?

- How to hide content with sr only?
- (How) does adding many ARIA attributes and SR-only elements impact performance?
- Do you still recommend adding a "jump to" navigation at the begin of the document or are the landmarks itself sufficient?
- For language switchers, do you stick with the same language or use the language of the item to switch to?

[Vitaly's notes]

- **Storyblok winners:**
  - **Mathias Ober** with 25988
  - And raffle is **Celestine Auburger** ;)
  - **Frontend meetup** we are organizing tomorrow at 6:30 at Virtual Identity office. More info at Fronend Meetup Freiburg at [meetup.com](https://www.meetup.com) - free pizza and beer included ;)
- **Cat count:** Christian Beer / 12597 (very specific!)
- We have counted 16,329

### Notes & key takeaways:

- Most [a11y] issues are caused by bad html
- Scary aspects are never mentioned
- Why are we so bad at writing html?

```

<main>
  <section id="main-content">
    <header id="main-header">
      <section class="container-fluid">
        <section class="row">
          <article class="content col-sm-12">
            <section class="content-inner">
              <div class="content__body">
                <article class="slider">
                  <section class="slide"> ... </section>
                </article>
              </div>
            </section>
          </article>
        </section>
      </section>
    </header>
  </section>
</main>

```

Source: <https://www.htmhell.dev/10-section-is-no-replacement-for-div>

- 
- Semantics are important ... there are 115 elements. We don't know HTML as well as we think we do.
- Designers know too little about HTML
- Some people just don't care about accessibility and their users
- We put too much trust and hope in ARIA



*If you can use a native HTML element or attribute with the semantics and behavior you require already built in, instead of re-purposing an element and adding an ARIA role, state or property to make it accessible, then do so.*

*Use native HTML if possible.  
No ARIA is better than bad ARIA.*

## Most common issues

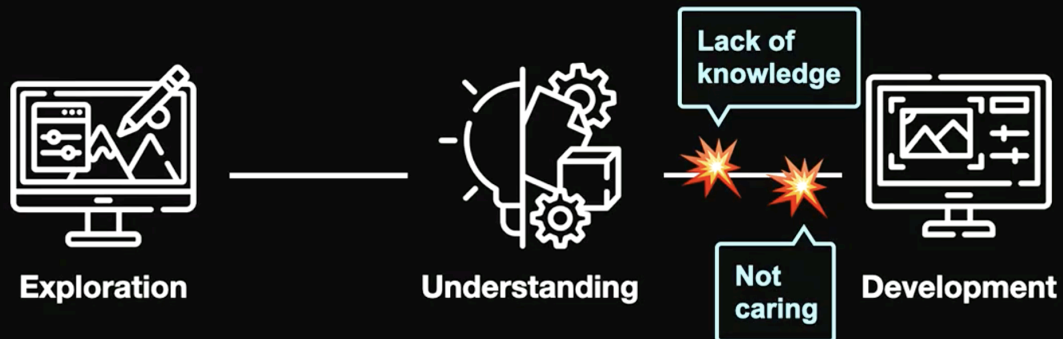
WCAG Failure Type	% of home pages in 2022	% of home pages in 2021	% of home pages in 2020	% of home pages in 2019
Low contrast text	83.9%	86.4%	86.3%	85.3%
Missing alternative text for images	55.4%	60.6%	66.0%	68.0%
Empty links	50.1%	51.3%	59.9%	58.1%
Missing form input labels	46.1%	54.4%	53.8%	52.8%
Empty buttons	27.2%	26.9%	28.7%	25.0%
Missing document language	22.3%	28.9%	28.0%	33.1%

## Most common issues

- Low contrast text
- Missing alternative text for images
- Empty links
- Missing form input labels
- Empty buttons
- Missing document language

- 
- We're wrongfully downplaying the complexity of html due to the simplicity of its syntax
- There is more to html than tags and attributes
- Accessibility issues don't just come from what's visible in a design but from what's not visible
- Design to Code Translation has three phases: 1. Exploration. Get an idea and feel for the design. 2. Understanding. 3. Development: Turn what see and what you think into code

## Design to Code Translation



## Our decisions have consequences

- Basic understanding
- Information
- Orientation
- Overview
- Navigation



```
<button aria-expanded="false">
  <span class="sr-only">Change theme</span>
  <svg aria-hidden="true">
    <path d="" />
  </svg>
</button>
```




```
<button aria-expanded="false" aria-controls="theme-panel">
  <span class="sr-only">Change theme</span>
  <svg aria-hidden="true">
    <path d="" />
  </svg>
</button>
```

## The Perfect Button

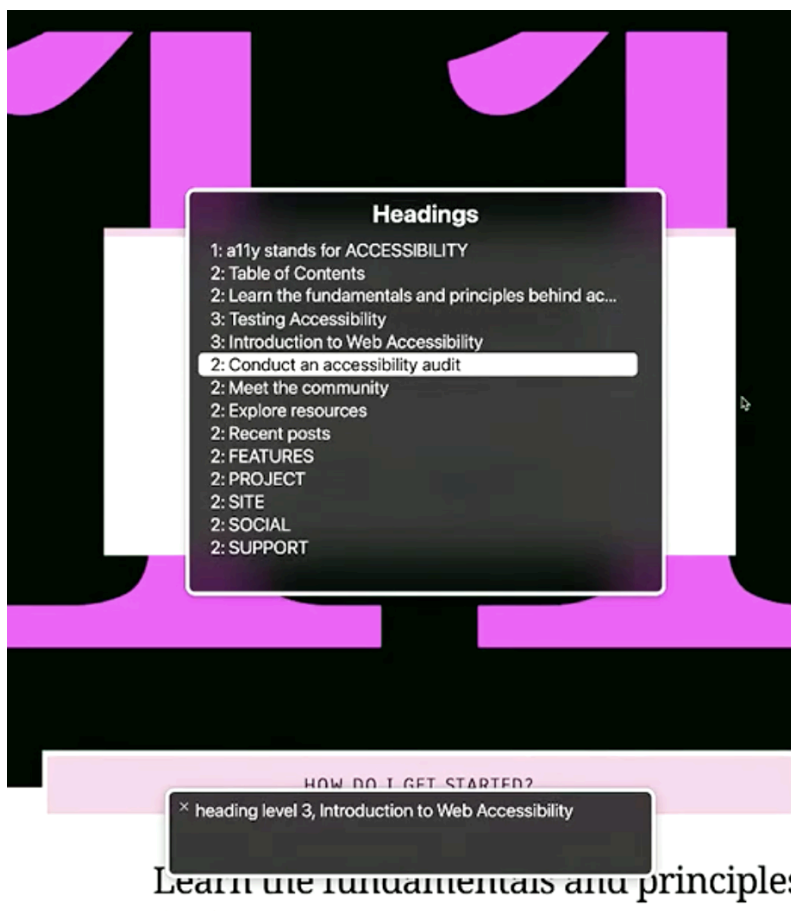
- Focusable, interactive element (<button>)
- Accessible name (a label)
- Correct role (button)
- Communicate state ([aria-expanded])
- Communicate relationship ([aria-controls])

- It's very difficult to create a “Close”-Button



```
<button aria-expanded="true" aria-controls="theme-panel">
  <span class="sr-only">Close</span>
  <span aria-hidden="true">
    x
  </span>
</button>
```

- A good heading structure helps the user to understand what's on the page and get a feeling for the structure



- Learn the fundamentals and principles
- A sound document outline

## A Sound Document Outline

- Meaningful labels
- Clean hierarchy (Avoid skipping levels)
- Enough but not too many headings

- 
- Landmark navigation a helpful structure to navigate quickly
- Section element is technically a nicer div

```
<section aria-label="Quick summary" class="article__summary">
  <span id="article__start" class="summary__heading" aria-hidden="true">
    Quick summary ↗
  </span>
  Overcorrecting for one form of disability may...
</section>
```

- 
- Keep the landmark list short, otherwise it is not helpful
- Avoid putting anything synchronous ahead of your title tag
- The language attribute is incredibly powerful
- Screen readers will use the language information as a info how to pronounce the website

## The lang Attribute

- Screen readers
- Hyphenation
- Quotation marks
- Spell checking
- The default font selection for CJK languages

- 
- Developers prioritize HTML!
- Use a validator
- Live by progressive enhancement
- Learn who your users are and how they are using the web
- Stop belittling HTML
- Rewrite your curriculums / teach HTML properly
- Authors write and speak more about HTML
- Use accessible HTML in your demos
- Learn how to test your sites with automatic testing tools

## ***96.8% of home pages had detected WCAG 2 failures!***

- 
- Lighthouse ➤ generate reports
- 

### **Links & slides:**

- <https://alistapart.com/article/my-accessibility-journey-what-ive-learned-so-far/>
  - <https://www.buttoncheatsheet.com/>
  - <https://www.htmhell.dev/>
  - <https://codepen.io/plfstr/full/zYqQeRw>
  - <https://webaim.org/projects/million/>
  - <https://hidde.blog/common-a11y-issues/>
  - <https://christianheilmann.com/2022/04/12/one-million-broken-web-sites-and-a-way-to-prevent-that/>
  - <https://www.a11yproject.com/>
  - <https://www.smashingmagazine.com/2021/06/css-javascript-requirements-accessible-components/>
-

Notes from Day 1: [\*https://smashed.by/kaese\*](https://smashed.by/kaese)