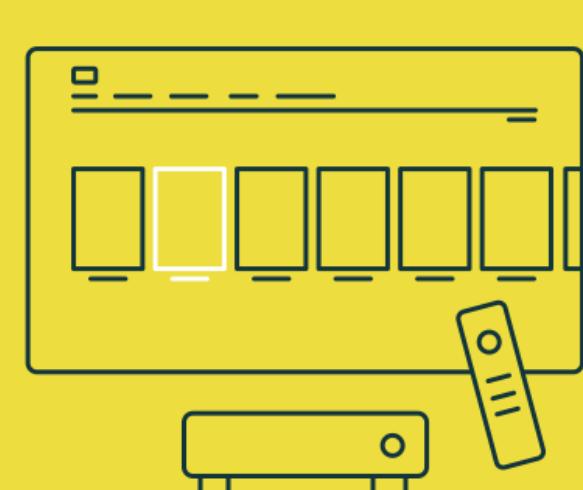


# RENDERING DONE RIGHT

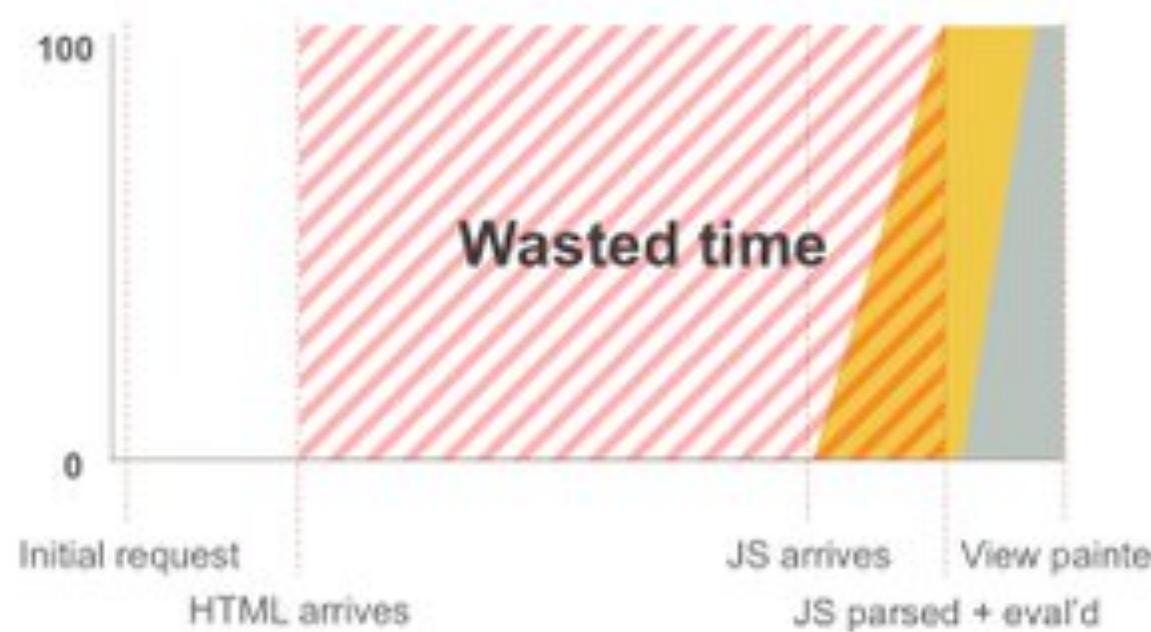
## meetup August 17

**Front-end Forward**

Powered by De Voorhoeve

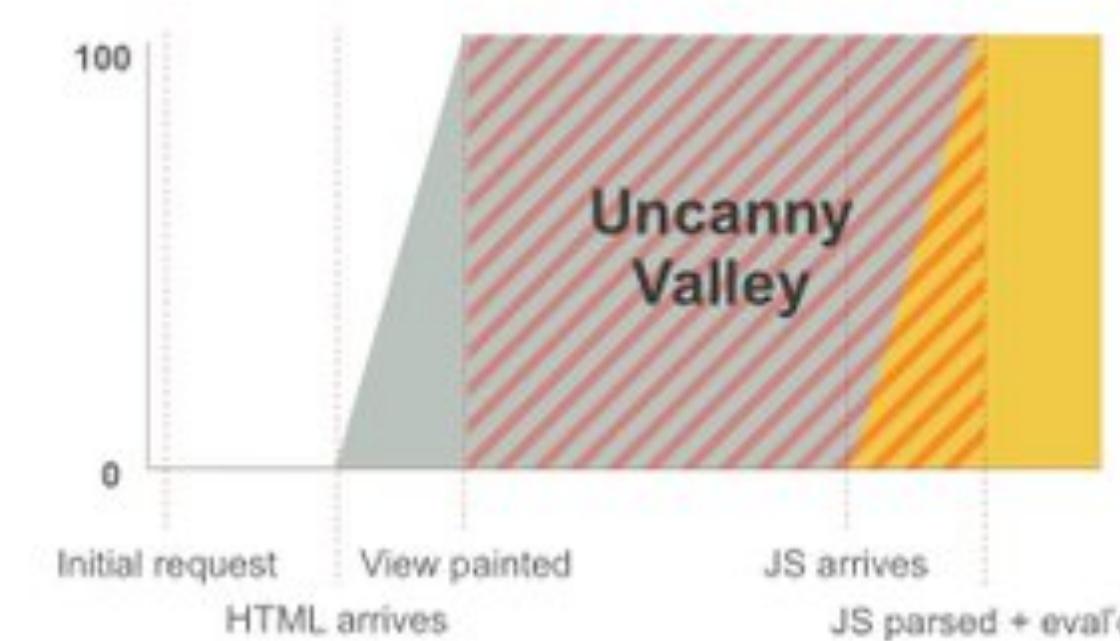


# MEETUP INSPIRATION:



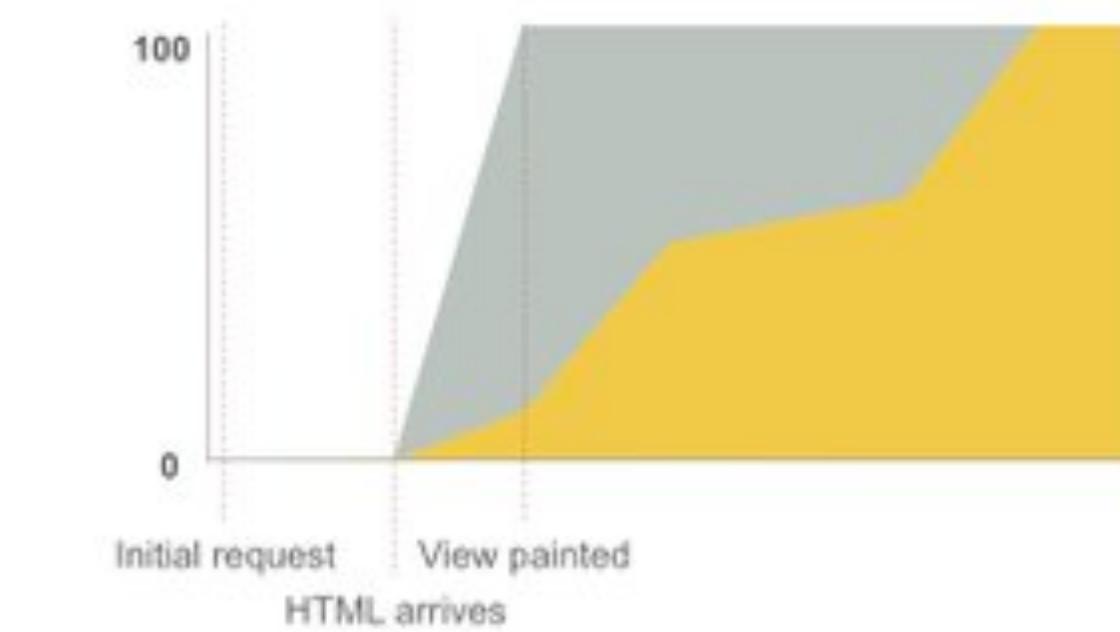
## JS-based Render

In a JavaScript-based render you are reliant on all the script to be downloaded, parsed, and evaluated before you are able to render the page. This ends up with a lot of wasted time from when the HTML arrives to when you give the user something meaningful.



## Server render + “Hydrate” / Fastboot

With server render + “hydration” or “fastboot”, you send a view to the user, but you’re still reliant on the JavaScript before functionality is available. This can result in an “uncanny valley” where the app looks interactive, but isn’t.



## Progressive render + bootstrap

Progressive rendering and bootstrapping means you send a functionally viable (though minimal) view in the HTML, including JavaScript and CSS. As more resources arrive the app progressively “unlocks” features.

# SCHEDULE

18:00 Doors open, food & drinks

19:00 Introduction

19:15 Enhance your HTML

*by Jasper Moelker*

20:00 Break

20:30 Isomorphic React: Getting it right

*by Gert Hengeveld*

21:15 More drinks

# ENHANCE YOUR HTML

## rendering done right



@jbmoelker

# OUR OBJECTIVE



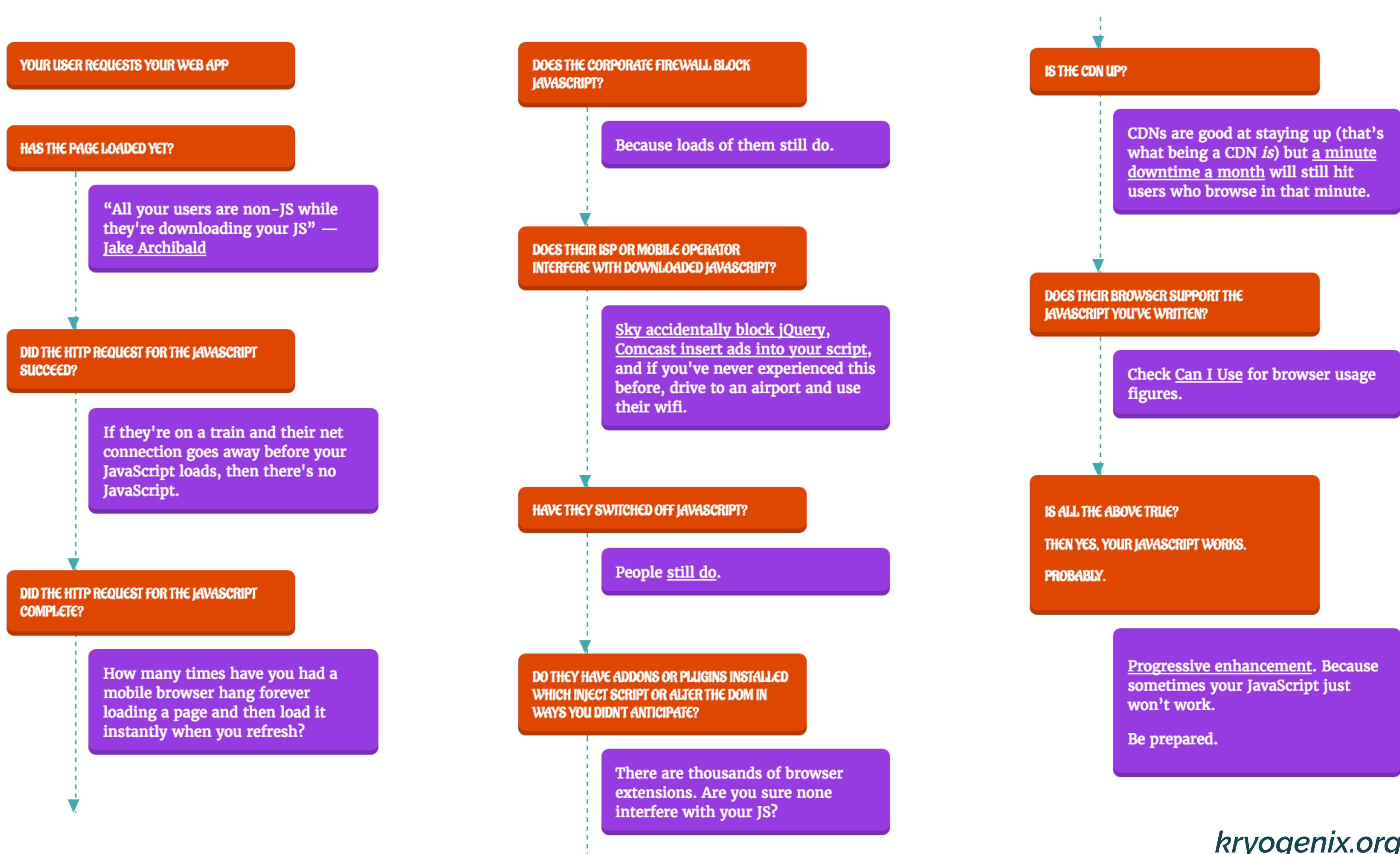
Always **render**

- 1) a **functional** page
- 2) as **fast** as possible

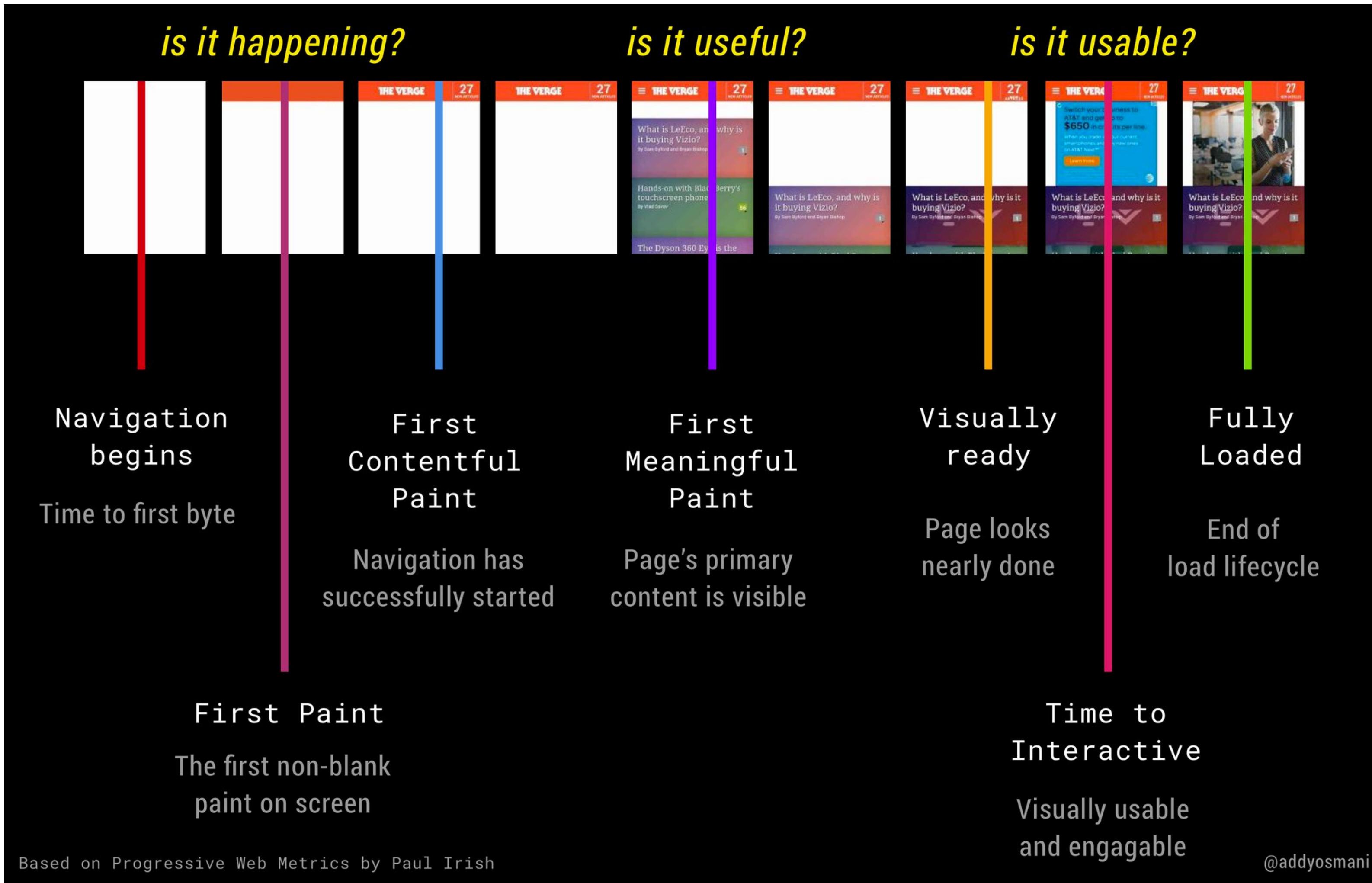
# RENDERING ISSUES?



# EVERYONE HAS JS, RIGHT?

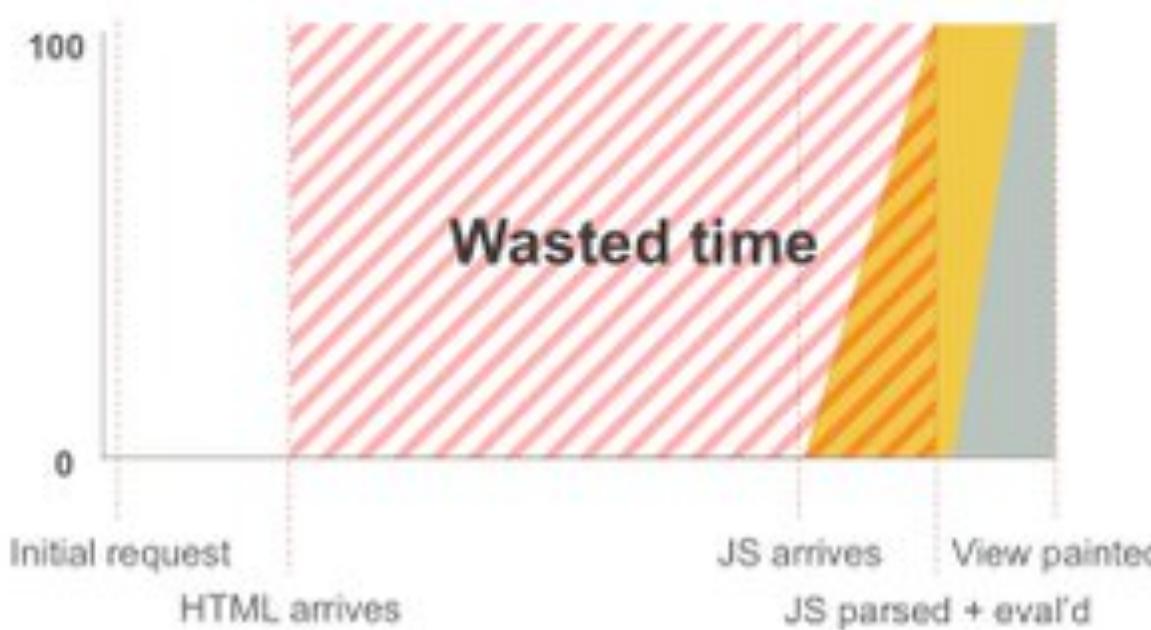


# RENDERING MOMENTS



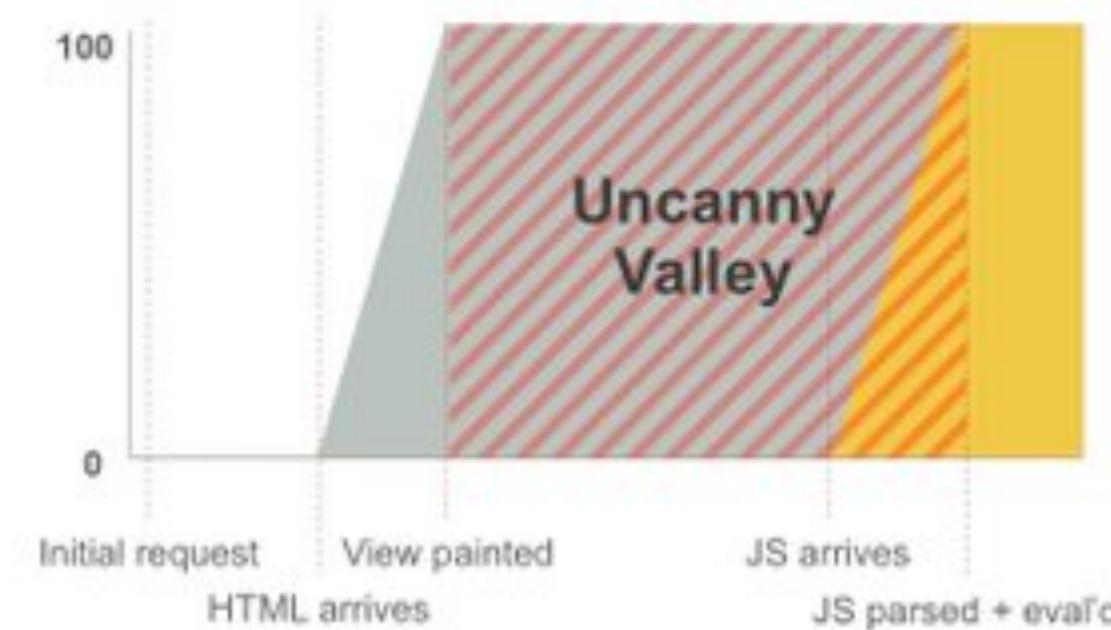
[@addyosmani, Aug 2, 2016](#)

# PROGRESSIVE RENDERING



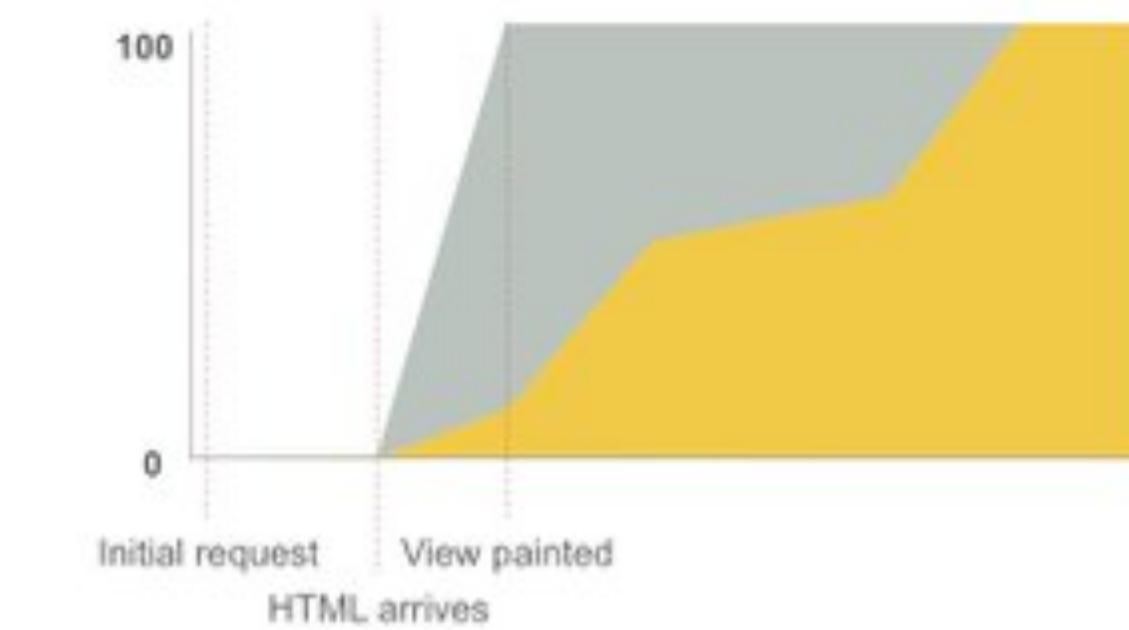
## JS-based Render

In a JavaScript-based render you are reliant on all the script to be downloaded, parsed, and evaluated before you are able to render the page. This ends up with a lot of wasted time from when the HTML arrives to when you give the user something meaningful.



## Server render + “Hydrate” / Fastboot

With server render + “hydration” or “fastboot”, you send a view to the user, but you’re still reliant on the JavaScript before functionality is available. This can result in an “uncanny valley” where the app looks interactive, but isn’t.



## Progressive render + bootstrap

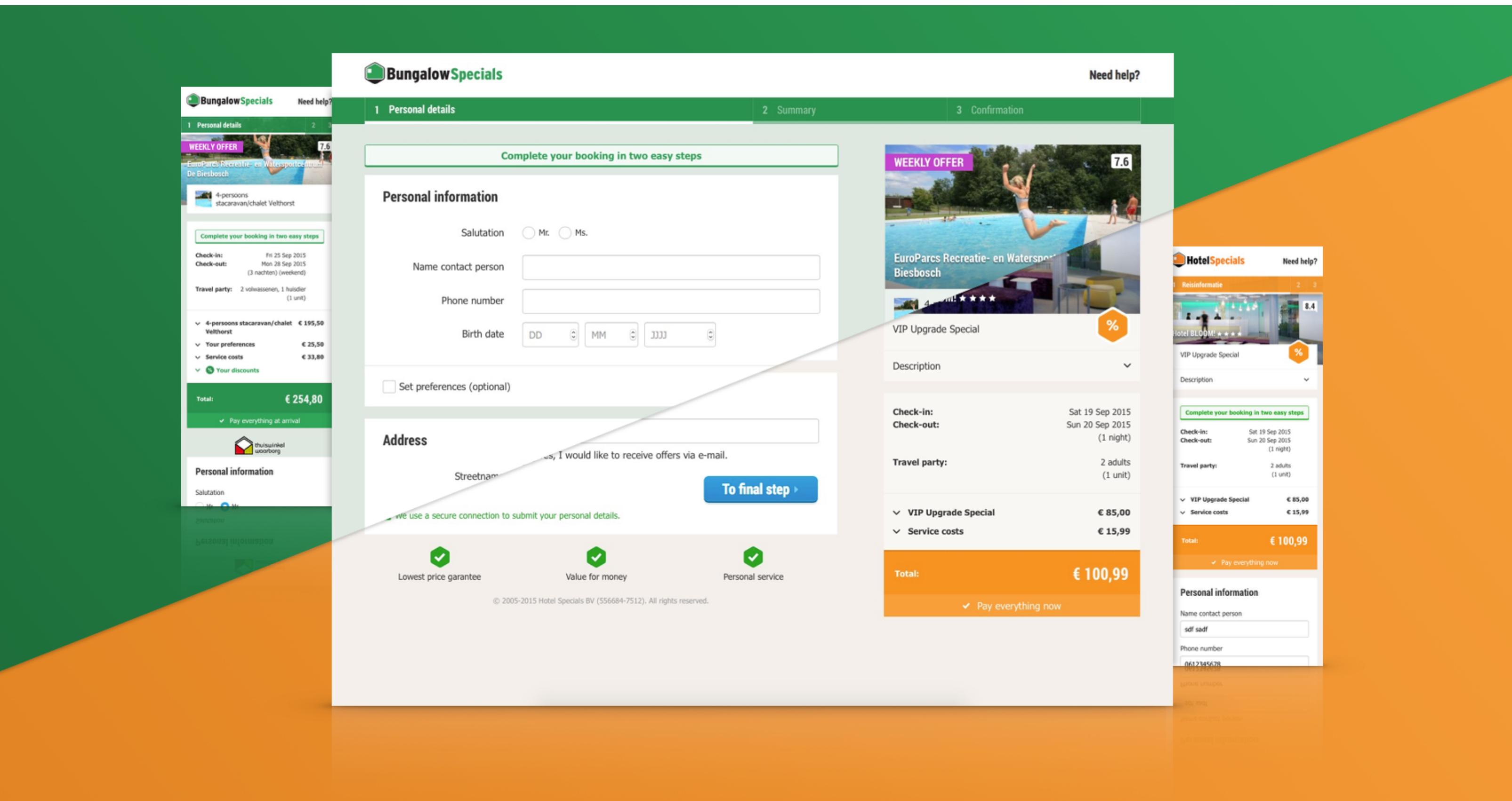
Progressive rendering and bootstrapping means you send a functionally viable (though minimal) view in the HTML, including JavaScript and CSS. As more resources arrive the app progressively “unlocks” features.

# OUR APPROACH



- Start with HTML
- Enhance responsibly
- Optimise rendering

# EXAMPLE:



# HotelSpecials

# EXAMPLE:



eBay's 2dehands.be

# EXAMPLE:



Een huis dat alles heeft, zelfs terrasjes om de hoek

Koop   Huur   Nieuwbouw   Recreatie   Europa

Spaarndammerstraat, Amsterdam   + 0 km ▾   van € 0   ▾   tot Geen maximum ▾   Zoek

Laatste zoekopdracht: Spaarndammerstraat, Amsterdam >



Een huis dat alles heeft, zelfs terrasjes om de hoek

Koop   Huur   Meer ▾

Spaarndammerstraat, Amsterdam   + 0 km ▾

van € 0   ▾

tot Geen maximum   ▾

Zoek

funda.nl

# START WITH HTML



W3SCHOOL

# BUILT-IN SEMANTICS

**<article>** <h1> ... </h1> <p> ...

<bnav> <ol> <li> ...

**<form>** <fieldset> <legend> ...

~~<div><span>~~

# BUILT-IN FUNCTIONALITY

`<a href="...">`

`<form action="..." method="...">`

`<input name="..." value="..." required>`

`<button>`

# BUILT-IN STATE

<form> values

:focus

:target

:disabled

# HTML ALWAYS RENDERS

**fault tolerant:**

```
<p><h1> ... </h1> ... </p>
```

**future proof:**

```
<input type="creditcard">, <my-tag>
```

# HTML WORKS ANYWHERE

The screenshot shows a terminal window titled '1. lynx' displaying a website. The page content includes:

- A header section with a logo and navigation links.
- A 'Site menu' section listing:
  - \* Werk
  - \* Blog
  - \* Team
  - \* Contact
- A language selection section with:
  - \* nl
  - \* en
- A 'Modulair design illustratie' section featuring a blue button labeled 'Wij zijn De Voorhoede'.
- A statement: 'We bouwen front-end oplossingen waarmee je jaren vooruit kunt'.
- A 'scroll verder' section with:
  - \* 100% web
    - We bouwen websites, mobiele apps en user interfaces voor ieder apparaat en platform.
  - \* Robuust
    - We bouwen schaalbare en onderhoudbare front-end oplossingen, die je naadloos kunt integreren met je back-end systemen.
  - \* Gespecialiseerd
    - Voorhoede developers zijn experts in webtechnologie - JavaScript, HTML, CSS. Met onze uniforme werkwijze zorgen we voor continuïteit.
- A footer statement: 'We geloven in universele oplossingen die door iedereen te gebruiken zijn. Dit bereiken we door webtoepassingen te maken die altijd en overal werken op elk apparaat.'

[voorhoede.nl](http://voorhoede.nl) in Lynx browser

whatever language or  
(JS) framework you use

**start by serving HTML**

Always **render**

- a **functional** page
- as **fast** as possible

# OPTIMISE HTML DELIVERY

**reduce server response time:**

cache compiled HTML, stream HTML

**reduce network latency:**

minify HTML, client-side caching?

# STREAMING HTML RESPONSE

```
// Express .write forces `Transfer-Encoding: chunked`  
app.get('/test', function(req, res){  
  res.write('<html><head>');  
  // res.write(... css and js tags)  
  res.write('<body>');  
  // fetch data and write main body of page  
  // with more res.write('..') calls  
  res.end('</body></html>');  
});
```

[streaming chunked HTML on strongloop.com](#)

# MORE STREAMING

- 2016 - the year of the streams
- streaming template literals
- DustJS stream
- VueJS 2.0 server renderer
- Talisman: streaming templates for NodeJS
- and more

# USING MUST-REVALIDATE

first visit:

- status: 200
- size: **4 688 bytes**

Name	Headers	Preview	Response	Timing
a11y-viewer.netlify.com	<b>▼ General</b> Request URL: https://a11y-viewer.netlify.com/ Request Method: GET Status Code: <span style="color: green;">200</span> Remote Address: 54.93.54.1:443			
www.voorhoeede.nl				
?fmt=1&num=1&cv=8&frm=2				

repeat visit:

- status: 304
- size: **47 bytes**

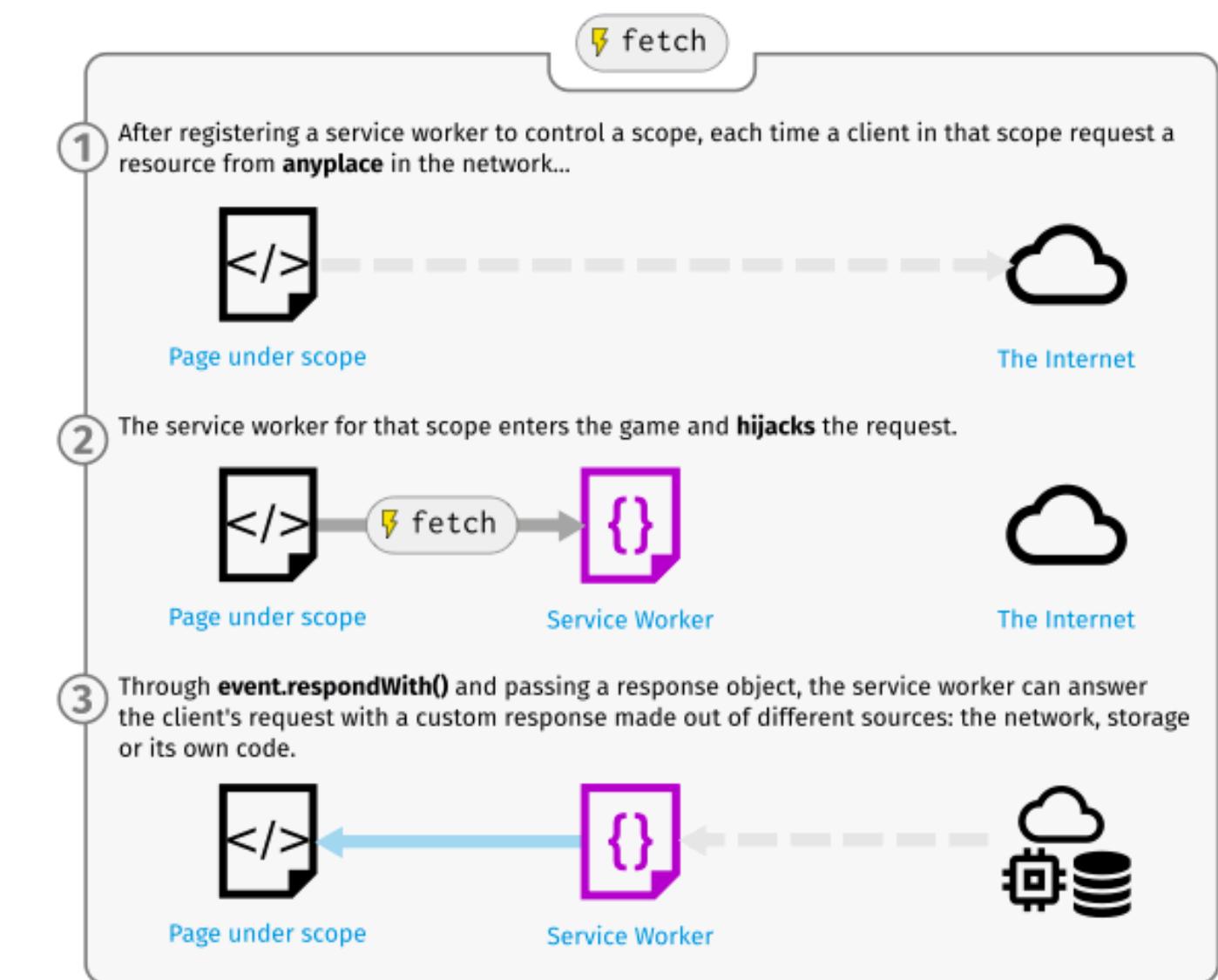
Name	Headers	Preview	Response	Timing
a11y-viewer.netlify.com	<b>▼ General</b> Request URL: https://a11y-viewer.netlify.com/ Request Method: GET Status Code: <span style="color: green;">304</span> Remote Address: 54.93.54.1:443			
www.voorhoeede.nl				
?fmt=1&num=1&cv=8&frm=2				

*example on netlify.com*

*see also [caching best practices on jakearchibald.com](#)*

# CACHE HTML WITH SERVICE WORKER

```
// in service-worker.js:  
const HTML_MAPPING = {  
  "/en/blog/": "dec8843f54",  
  ...  
}
```



*image from mozilla.org*

Screenshot of the Firefox Developer Tools Application tab, showing Cache Storage:

#	Request	Response
0	https://test.voorhoede-ocelot.voorhoede.nl/en/blog/	OK

The sidebar shows a list of cached items, with one item highlighted in blue:

- ocelot-core-bf01722d22 - https://test.voorhoede-ocelot.voorhoede.nl
- ocelot-core-ea1e844e83 - https://test.voorhoede-ocelot.voorhoede.nl
- ocelot-core-693044a142 - https://test.voorhoede-ocelot.voorhoede.nl
- ocelot-html-dec8843f54 - https://test.voorhoede-ocelot.voorhoede.nl**
- ocelot-html-c6f62cbb27 - https://test.voorhoede-ocelot.voorhoede.nl
- ocelot-html-310fb8e83d - https://test.voorhoede-ocelot.voorhoede.nl
- ocelot-html-b59041ec5b - https://test.voorhoede-ocelot.voorhoede.nl

Always **render**

- a **functional** page
- as **fast** as possible

so we're done, right?

sadly,  
our users and clients  
expect more...

# ENHANCE RESPONSIBLY



**ENHANCE WITH**

custom **styling**

custom **behaviour**

custom **fonts**

custom styling

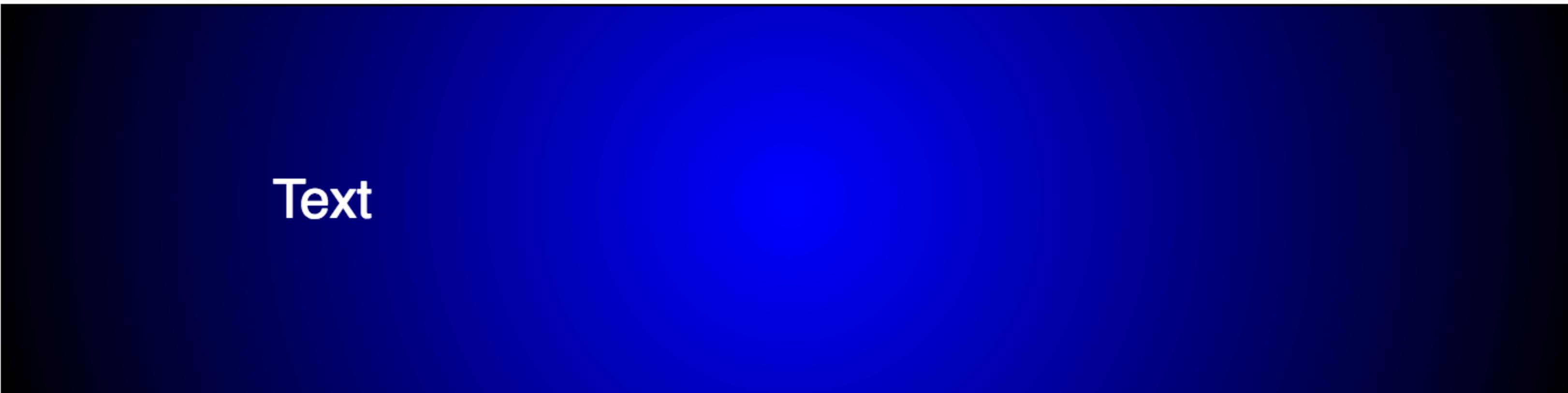
# CUSTOM STYLING

```
<div class="broken"> Text </div>
```

```
.broken {  
    background: radial-gradient(circle, blue, black);  
    color: white;  
    border: 1px solid black;  
}
```

# BROKEN CUSTOM STYLING

radial background only, result in modern browsers:



radial background only, result in legacy browsers:



[code on jsbin.com](#)

Always **render**

- a **functional** page
- as **fast** as possible

# CHECK FEATURE SUPPORT

## CSS Gradients - CR

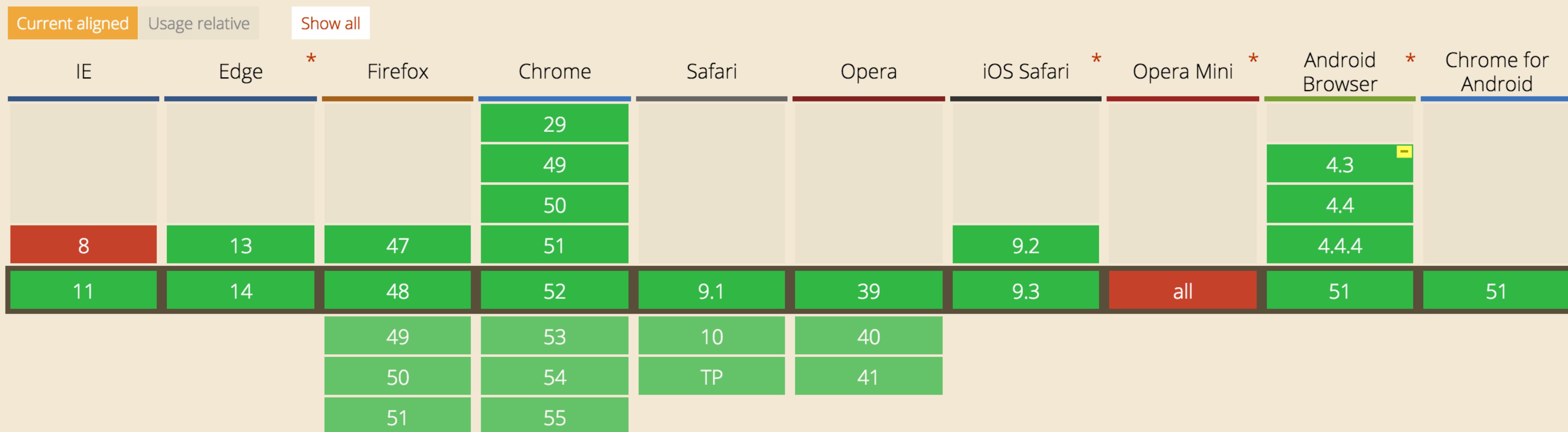
Global

91.44% + 0.18% = 91.62%

unprefixed:

82.87%

Method of defining a linear or radial color gradient as a CSS image.



[css gradients on caniuse.com](https://caniuse.com)

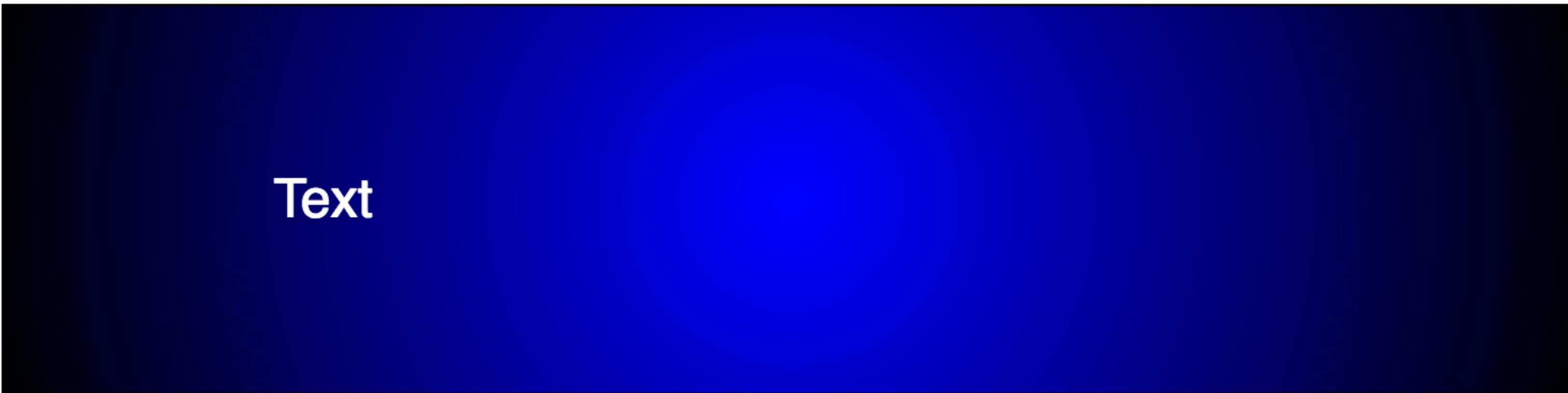
# ENHANCED CUSTOM STYLING

```
<div class="enhanced"> Text </div>
```

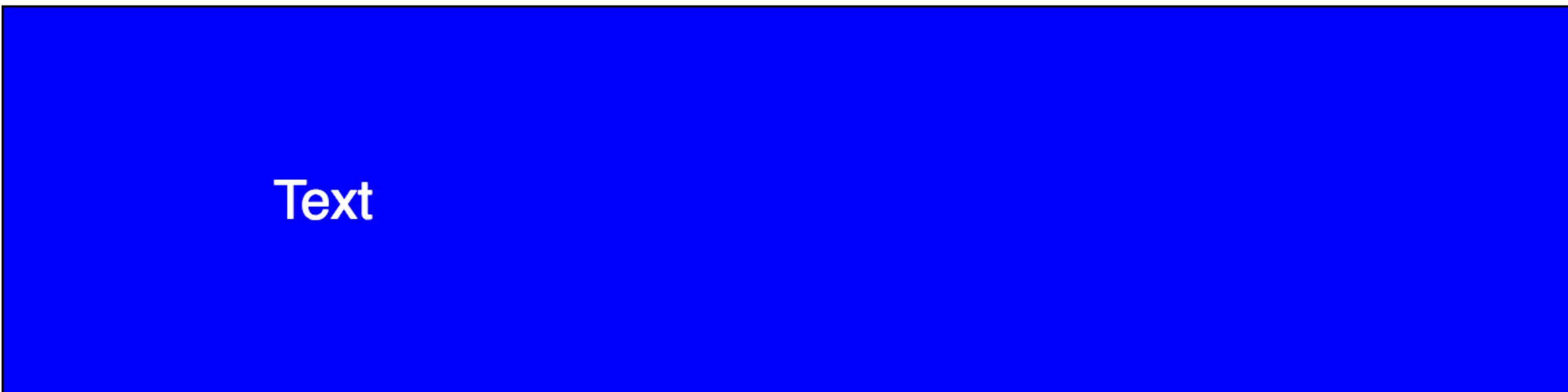
```
.enhanced {  
    background: blue;  
    background: radial-gradient(circle, blue, black);  
    color: white;  
    border: 1px solid black;  
}
```

# ENHANCED CUSTOM STYLING

enhanced solid to radial background, result in modern browsers:



enhanced solid to radial background, result in legacy browsers:



[code on jsbin.com](#)

# OR TEST CSS FEATURES

**with @supports / `CSS.supports()`:**

```
@supports (transition: 1s) { ... }
```

**using other JS techniques:**

```
if('transition' in document.body.style) { ... }
```

*[feature detection resources](#)*

Always **render**

- a **functional** page
- as **fast** as possible

custom behaviour

# SEARCH ON FUNDA

The screenshot shows the Funda.nl website interface. At the top, there's a search bar with the URL "www.funda.nl/koop/amsterdam/" and a magnifying glass icon. Below the search bar is a yellow header with the Funda logo, "Inloggen", and "Registreren". The main search results are displayed for "Amsterdam" with a radius of "+ 0 km". A search button with a magnifying glass icon is on the right.

**3.353 resultaten**

in koopwoningen

Bewaar zoekopdracht

Prijs

van € 0

tot Geen maximum

Buurt

Amstel III/Bullewijk, Apollobuurt, Banne B...

Soort aanbod

Woonhuis 628

Appartement 2.541

+ Alle soorten aanbod

Aantal kamers

1 kamer 109

2+ kamers 3.059

3+ kamers 2.474

4+ kamers 1.364

5+ kamers 657

0 filters [Verwijder filters](#)

Sorteer op: Relevantie ↓

Lijst

Kaart



C. van Eesterenlaan 362  
Amsterdam, € 439.000 k.k.  
Uitgelicht door RET Makelaars



Fokke Simonszstraat 46 A  
Amsterdam, € 240.000 k.k.  
Uitgelicht door Amsterdam @ Home Ma...



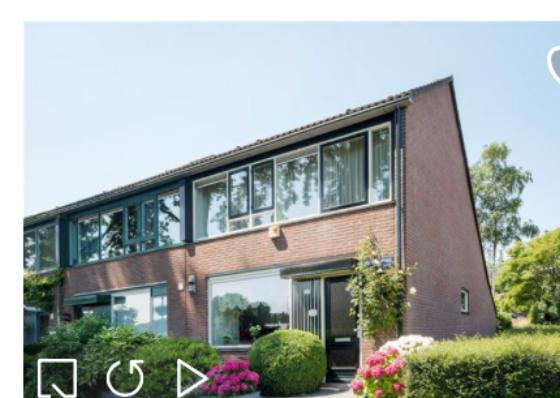
Sloterweg 1137  
Amsterdam, € 729.500 k.k.  
Uitgelicht door Makelaarsland



Durgerdammerdijk 127  
1026 CG Amsterdam

€ 350.000 k.k.  
60 m<sup>2</sup> / 164 m<sup>2</sup> • 4 kamers

Hoekstra en van Eck Amsterdam Noord



Voordewind 14  
1034 KT Amsterdam

€ 325.000 k.k.  
108 m<sup>2</sup> / 136 m<sup>2</sup> • 4 kamers

Hoekstra en van Eck Amsterdam Noord



Buiksloterdijk 270  
1056 ZG Amsterdam

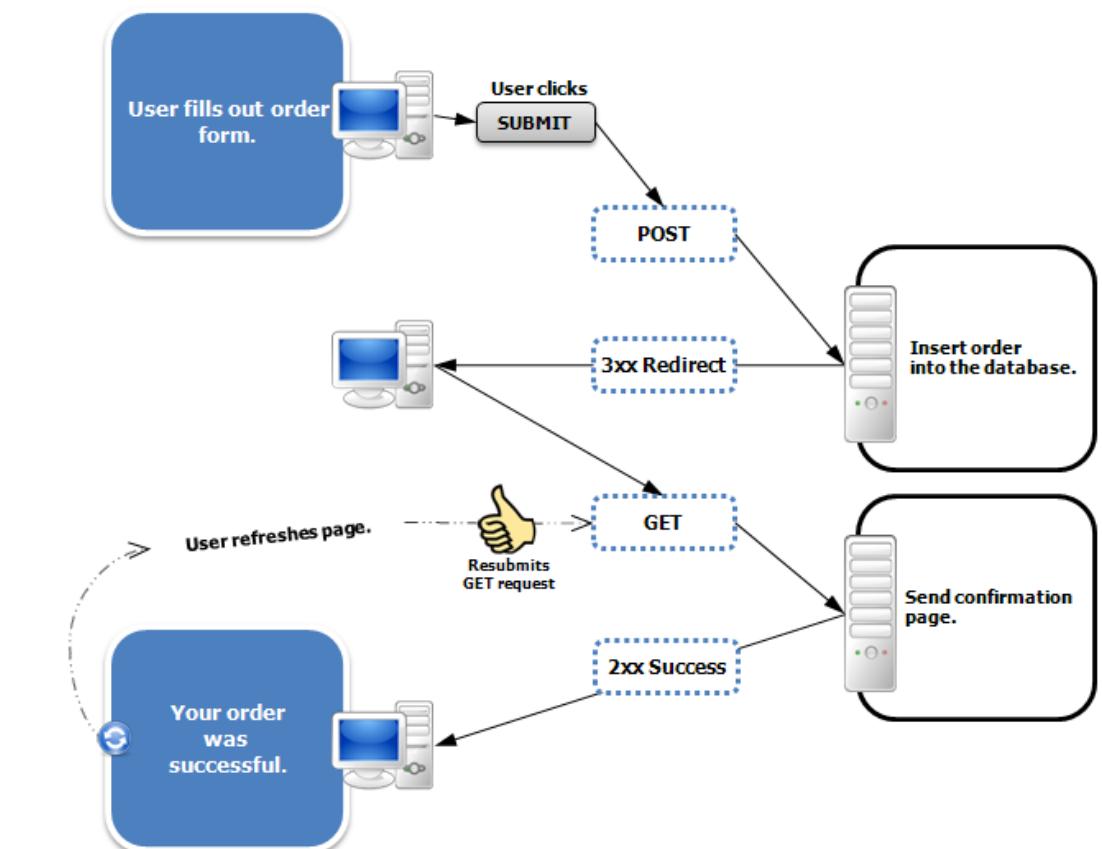
[search on funda.nl](#)

# BASIC SEARCH FORM

```
<form method="POST" action="/koop/amsterdam/">
<fieldset>
  <legend>Prijs</legend>
  <label for="min">van</label>
  <select id="min" name="min"> ... [options] ... </select>
  <label for="max">tot</label>
  <select id="max" name="max"> ... [options] ... </select>
</fieldset>
<button type="submit">Ga</button>
```

# BASIC BEHAVIOUR

- user opens [funda.nl/koop/amsterdam/](#)
- browser renders static search form
- user sets min & max price
- user clicks submit button
- browser POSTs form
- server filters results based on input
- server redirects to GET url:  
[funda.nl/koop/amsterdam/250000-350000/](#)
- user can browse response



[post/redirect/get on wikipedia.org](#)

# NEW RESULTS

The screenshot shows a web browser displaying the funda.nl website. The search parameters are set to 'Amsterdam' with a radius of '+ 0 km'. The results are filtered by price between €250,000 and €350,000. There are 800 results for 'koopwoningen' (for sale houses). The results are sorted by relevance. The first three results are shown:

- Haarlemmerstraat 141, Amsterdam**, €279.000 k.k. (Uitgelicht door All in Housing)
- Van Ostadestraat 88 -1, Amsterdam**, €285.000 k.k. (Uitgelicht door Vrijehuizenmarkt Amste...)
- Assumburg 64, Amsterdam**, €265.000 k.k. (Uitgelicht door B.V. Deltam Makelaardij ...)

**800 resultaten**

in koopwoningen

Bewaar zoekopdracht

Prijs

van € 250.000

tot € 350.000

Buurt

Amstel III/Bullewijk, Apollobuurt, Banne B...

Soort aanbod

Woonhuis

141

Appartement

654

+ Alle soorten aanbod

Aantal kamers

1 kamer

26

2+ kamers

769

3+ kamers

624

4+ kamers

248

5+ kamers

91

1 filter [Verwijder filters](#)

€ 250.000 - € 350.000

Sorteer op: Relevantie ↓

Inloggen

Registreren

Lijst

Kaart



Haarlemmerstraat 141  
Amsterdam, € 279.000 k.k.

Uitgelicht door All in Housing



Van Ostadestraat 88 -1  
Amsterdam, € 285.000 k.k.

Uitgelicht door Vrijehuizenmarkt Amste...



Assumburg 64  
Amsterdam, € 265.000 k.k.

Uitgelicht door B.V. Deltam Makelaardij ...



Durgerdammerdijk 127

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Hoekstra en van Eck Amsterdam Noord



Voordewind 14

1034 KT Amsterdam

€ 325.000 k.k.

108 m<sup>2</sup> / 136 m<sup>2</sup> • 4 kamers

Hoekstra en van Eck Amsterdam Noord

[search on funda.nl](#)

# CUSTOM BEHAVIOUR

- user sets min & max price
- JS: show “loading indicator”
- JS: serialise form
- JS: post form with XHR
- JS: receive new data
- JS: update search results
- JS: update URL
- JS: hide “loading indicator”

result: parity

# TEST IF BROWSER IS CAPABLE

```
var CAPABLE_BROWSER = (  
  'pushState' in history &&  
  'XMLHttpRequest' in window &&  
  `addEventListener` in window  
);  
  
if (CAPABLE_BROWSER ) {  
  // start enhancing  
}
```

*[feature detection resources](#)*

# ENHANCE FORM

```
<form method="POST" action="..." data-search>
```

```
var form = document.querySelector('[data-search]');
```

```
form.addEventListener('change', asyncSubmit);
```

```
form.addEventListener('submit', function(e){
```

```
    e.preventDefault();
```

```
    asyncSubmit();
```

```
});
```

# ASYNC SUBMIT FORM

```
function asyncSubmit() {  
    var formData = serialiseForm(form);  
    postAsync(form.action, formData)  
        .then(function(response) {  
            updateUrl(response.url, formData);  
            updateResults(response.resultsHtml);  
        })  
        .catch(function(err) { form.submit(); })  
}
```

# UPDATE URL

```
function updateUrl(url, formData) {  
  history.pushState(clone(formData), window.title, url);  
}  
  
// use cloned form data to restore page on "back"  
window.addEventListener('popstate', function(event) {  
  if (event.state) { restorePage(event.state); }  
});
```

# UPDATE RESULTS (HTML)

```
<div data-results>  
  <!-- list of search results -->  
</div>
```

```
var results = document.querySelector('b>[data-results]');  
  
function updateResults(resultsHtml) {  
  results.innerHTML = resultsHtml;  
}
```

customise everything

# MORE RESOURCES

📄 README.md

## Progressive Enhancement resources

A comprehensive collection of resources on Progressive Enhancement. From concept and strategies to feature detection and testing methods. Complete with a list of (code) examples.

### Table of Contents

- [The concept](#)
- [Strategies](#)
- [Feature detection](#)
- [Support tables](#)
- [Testing methods](#)
- [Examples](#)
- [Related articles](#)

### The concept

Progressive enhancement means gradually improving the user experience after verifying the target environment (e.g. browser) is capable of it. Start with content and ensure you maintain functionality & accessibility.

- [Progressive Enhancement: It's about the content:](#) sharing content is the core of the web. Progressive Enhancement ensures access to content.
- [The Role of Enhancement in Web Design:](#) from the concept of enhancement to the criteria and rules for enriching the user interface.
- [Understanding Progressive Enhancement:](#) apply technologies in an intelligent way, layer-upon-layer, to craft an

*[jbmoelker/progressive-enhancement-resources](#)*

so now are we done?

# RENDER BLOCKING BY DESIGN

```
<link rel="stylesheet" href="...">  
<script src="..."></script>  
 @font-face { ... }
```

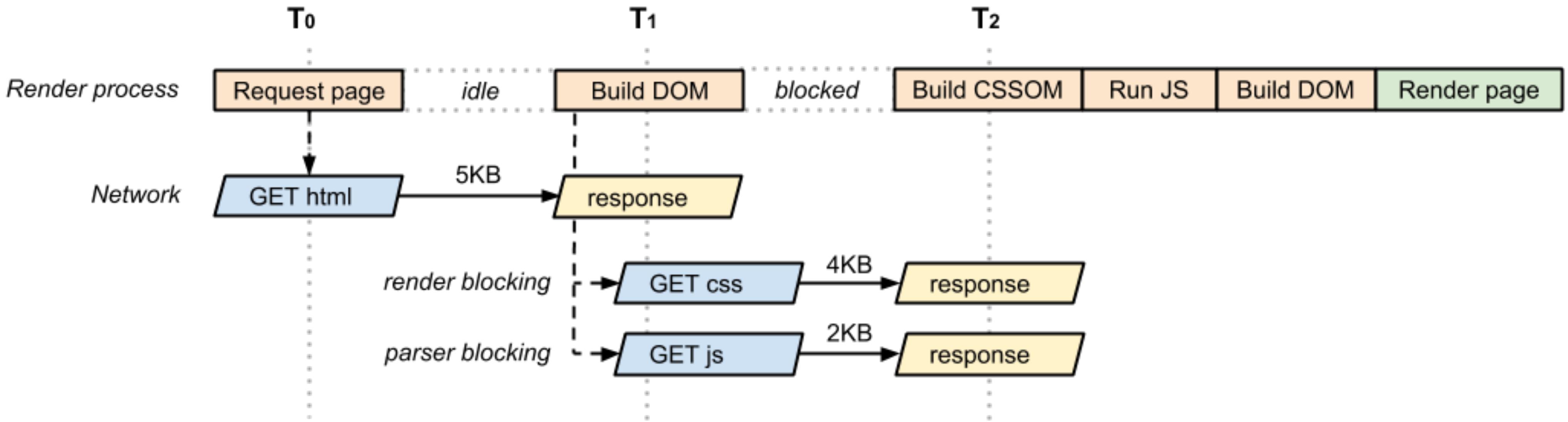
Always **render**

- a **functional** page
- as **fast** as possible

# OPTIMISE RENDERING



# CRITICAL RENDERING PATH



[critical rendering path on developers.google.com](https://developers.google.com/web/fundamentals/performance/critical-rendering-path/)

# SERVER & NETWORK

**minify** CSS, JS, fonts

**revision** files (e.g. index-f3c2b4.css)

**cache** (Cache-Control: max-age=31536000)

**compress** (Accept-Encoding: gzip, ...)

optimised server response

# BLOCKING SCRIPT LOADING

```
<head>  
  <!-- Loading early means blocking page: -->  
  <script src="index-6a14b2.js"></script>  
</head>
```

```
<body>  
  <!-- Loading late means wasting time: -->  
  <script src="index-6a14b2.js"></script>  
</body>
```

# OPTIMISE SCRIPT LOADING

```
<head>  
  <!-- Load early, execute after DOM ready -->  
  <script src="index-6a14b2.js" defer></script>  
</head>
```

```
if ('addEventListener' in window) { // "cut the mustard"  
  document.write(  
    `<script src="index-6a14b2.js" defer><\script>`);  
}
```

optimised script loading

# BLOCKING FONT LOADING

```
@font-face {  
    font-family: 'Noto';  
    src: url('noto.woff2') format('woff2'),  
         url('noto.woff') format('woff');  
}
```

```
html {  
    font-family: Noto, Georgia, serif;  
}
```

# START WITH SYSTEM FONT

```
html {  
  font-family: Georgia, serif;  
}
```

```
html .fonts-loaded {  
  font-family: Noto, Georgia, serif;  
}
```

# ENHANCE AFTER ASYNC LOADING

```
// (include FontFaceObserver here)  
var font = new FontFaceObserver('Noto');  
var html = document.documentElement;  
  
// load font async, then enhance HTML:  
font.load().then(function () {  
    html.className += ' fonts-loaded';  
});
```

# CONDITIONAL FONT LOADER

```
<html><head><script>  
/* inline font loader script */  
font.load().then(function () {  
    html.className += ' fonts-loaded';  
    setCookie('fonts-loaded');  
});
```

On server, if 'fonts-loaded' cookie:

```
<html class="fonts-loaded">
```

Name	Value	Domain	Path	Expires / Max-Age
fonts-loaded	true	www.voorhoede.nl	/	2016-10-21T13:01:32.000Z
full-css-loaded	/assets/css/main-0d82fe89fd.css	www.voorhoede.nl	/	2016-10-21T13:01:32.000Z

*custom fonts on voorhoede.nl*

optimised font loading

# BLOCKING STYLE LOADING

```
<head>
  <!-- Loading early means blocking page: -->
  <link rel="stylesheet" href="index-f3c2b4.css">
</head>

<body>
  <!-- Loading late means flash of unstyled content: -->
  <link rel="stylesheet" href="index-f3c2b4.css">
</body>
```

# LOAD STYLES ASYNC

```
<script>  
// (include loadCSS here)  
var stylesheet = loadCSS('index-f3c2b4.css');  
</script>
```

```
<noscript>  
  <link rel="stylesheet" href="od82f.css">  
</noscript>
```

# CONDITIONAL STYLE LOADER

```
<html><head><script>  
// (include loadCSS & onloadCSS here)  
var stylesheet = loadCSS('index-f3c2b4.css');  
onloadCSS(stylesheet, function() {  
    setCookie('css-loaded', 'f3c2b4');  
});
```

On server, if 'fonts-loaded' cookie:

```
<link rel="stylesheet" href="0d82f.css">
```

Console	Sources	Network	Timeline	Profiles	Resources	Security	Audits	PageSpeed
Name	Value	Domain	Path	Expires / Max-Age				
fonts-loaded	true	www.voorhoede.nl	/	2016-10-21T13:01:32.000Z				
full-css-loaded	/assets/css/main-0d82fe89fd.css	www.voorhoede.nl	/	2016-10-21T13:01:32.000Z				

[cookies on voorhoede.nl](#)

# GENERATE CRITICAL CSS



Critical

```
<html><head>  
<script>/ * async style loader * </script>  
<style>/ * inlined critical css * </style>
```

# APPLY CRITICAL CSS

The image shows two side-by-side screenshots of the De Voorhoede website. Both screenshots have a yellow header bar at the top containing the logo, navigation links (WERK, BLOG, TEAM, CONTACT, NL | EN), and a smartphone icon.

**Left Screenshot:** The main content area has a white background. It features a large smartphone icon in the center. Below it, the text "Wij zijn DE VOORHOEDE" is in bold, followed by "We bouwen front-end oplossingen waarmee je jaren vooruit kunt". A dark blue circular button with a white downward arrow is centered below the text. Below this is a table with three rows:

100% web	We bouwen websites, mobiele apps en user interfaces voor ieder apparaat en platform.
Robuust	We bouwen schaalbare en onderhoudbare front-end oplossingen, die je naadloos kunt integreren met je back-end systemen.
Gespecialiseerd	Voorhoede developers zijn experts in webtechnologie - JavaScript, HTML, CSS. Met onze uniforme werkwijze zorgen we voor continuïteit.

A red horizontal bar with the text "We geloven in universele oplossingen die door iedereen te gebruiken zijn. Dit bereiken we door webtoepassingen te maken die altijd en overal werken op elk apparaat." is located at the bottom of the left section. Below this is a heading "Dit kunnen we voor je doen" followed by two icons: a smartphone and a flowchart, each with a caption: "Snelle en responsive websites" and "Complexe webapplicaties".

**Right Screenshot:** The main content area has a white background. It features a large smartphone icon in the center. Below it, the text "Wij zijn DE VOORHOEDE" is in bold, followed by "We bouwen front-end oplossingen waarmee je jaren vooruit kunt". A dark blue circular button with a white downward arrow is centered below the text. Below this is a table with three rows, identical to the one on the left:

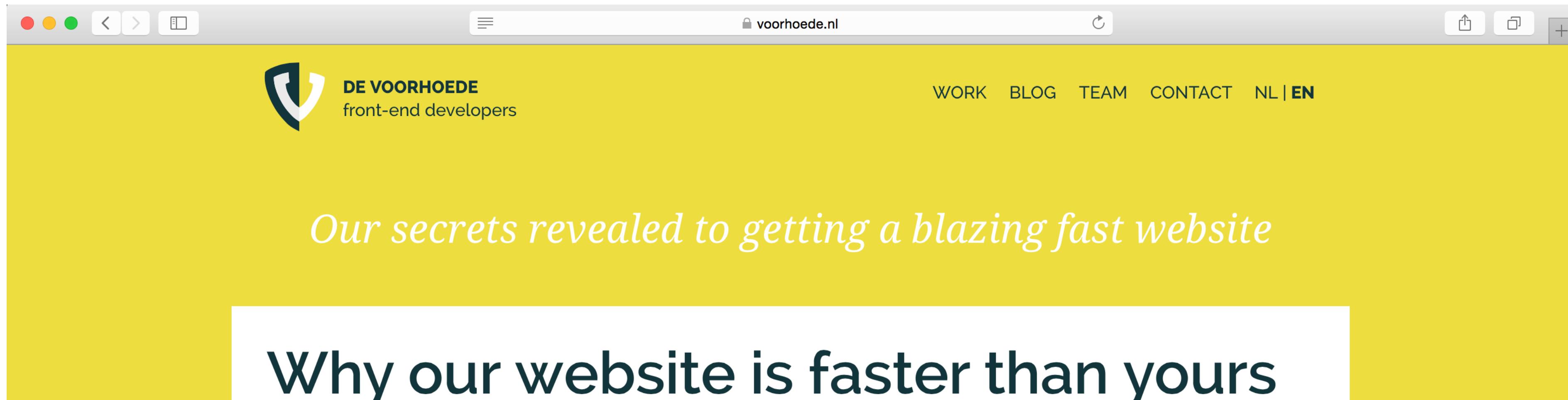
100% web	We bouwen websites, mobiele apps en user interfaces voor ieder apparaat en platform.
Robuust	We bouwen schaalbare en onderhoudbare front-end oplossingen, die je naadloos kunt integreren met je back-end systemen.
Gespecialiseerd	Voorhoede developers zijn experts in webtechnologie - JavaScript, HTML, CSS. Met onze uniforme werkwijze zorgen we voor continuïteit.

A teal-colored overlay with the quote "We geloven in universele oplossingen die door iedereen te gebruiken zijn. Dit bereiken we door webtoepassingen te maken die altijd en overal werken op elk apparaat." is overlaid on the right section. At the bottom of the right section is a dark teal bar with the heading "Dit kunnen we voor je doen" and a small icon.

[Critical CSS on voorhoede.nl](http://Critical CSS on voorhoede.nl)

optimised style loading

# MORE OPTIMISATIONS



The screenshot shows a web browser window with the URL 'voorhoede.nl' in the address bar. The page has a yellow header section containing the logo 'DE VOORHOEDE front-end developers' and a navigation menu with links to 'WORK', 'BLOG', 'TEAM', 'CONTACT', and language options 'NL | EN'. Below the header, a large white rectangular area contains the text 'Our secrets revealed to getting a blazing fast website' and the title 'Why our website is faster than yours'.



by Declan  
July 26, 2016

## Table of contents

[Design for performance](#)

[Content first](#)

[Take control](#)

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We recently updated our site. Yes, it has a complete design overhaul, but as real software developers we focused a lot on the technical bits and pieces as well. Our goal was to take control, focus on performance, be flexible for the future and make it fun to write content for the site. Here's how we made our website faster than yours (Yup, sorry!)

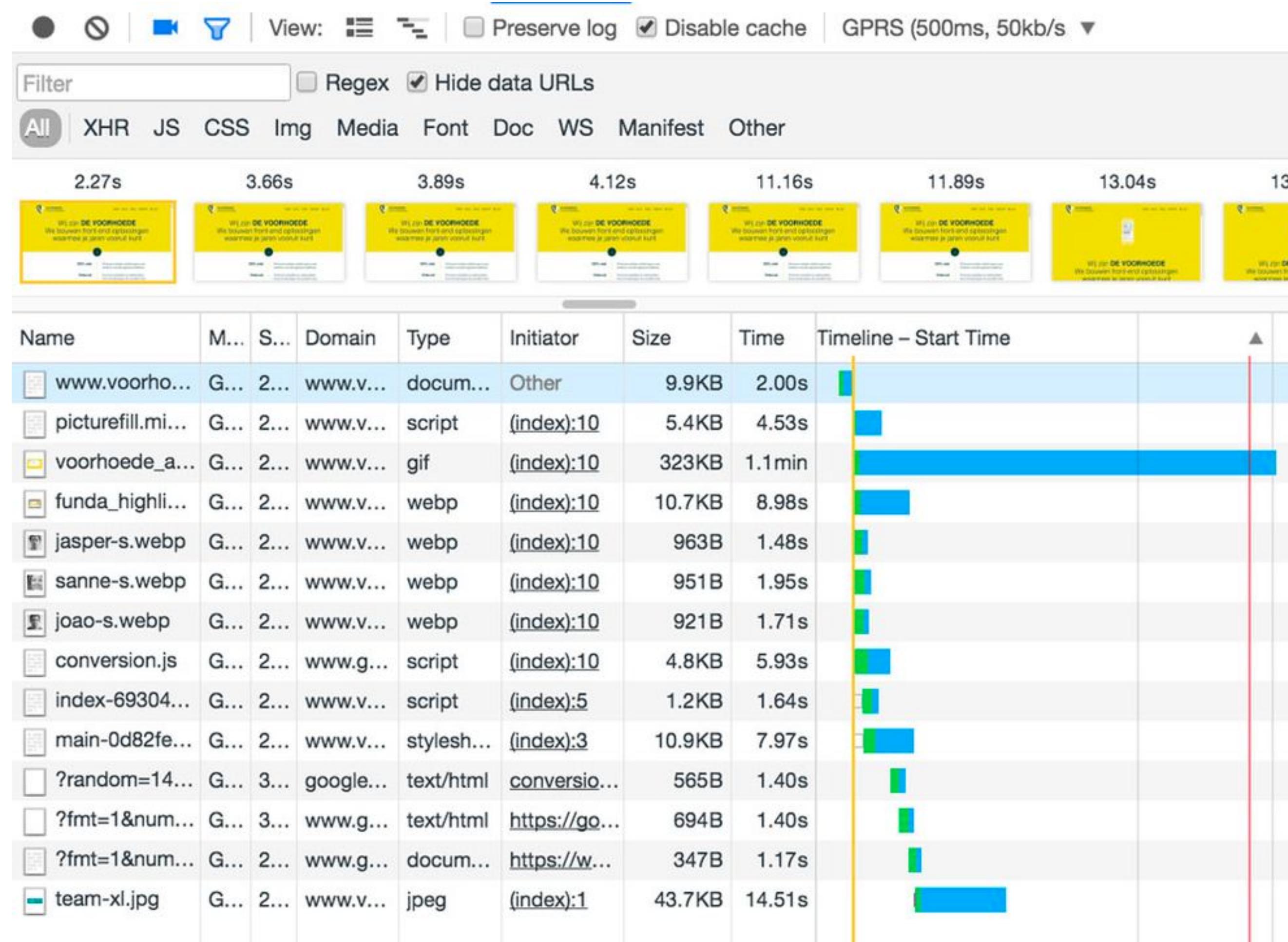
## Design for performance

In our projects we have daily discussions with designers and product owners about balancing aesthetics and performance. For our own site, this was easy. Simply said: we believe that a good user experience starts with delivering content as fast as possible. That means **performance > aesthetics**.

Good content, layout, images, and interactivity are essential for engaging your audience, but each of these elements have impact on page load time and the end-user experience. In every step we looked at how we could get a nice user experience and design while having minimum impact on

[post on voorhoede.nl](#)

# THE RESULT



[result on voorhoede.nl](http://result.on/voorhoede.nl)

# THE RESULT

PageSpeed Insights [G+](#)

<https://www.voorhoede.nl/> [ANALYZE](#)

Mobile  Desktop

**100 / 100 Speed**

**Congratulations! No issues found.**

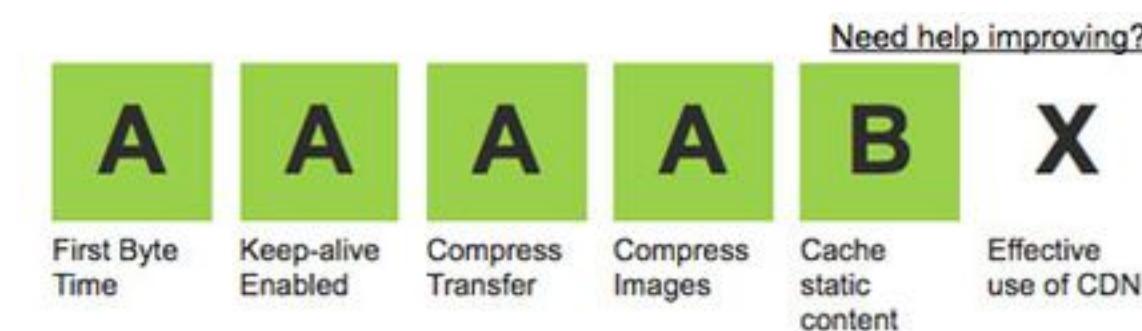
Avoid landing page redirects  
Your page has no redirects. Learn more about [avoiding landing page redirects](#).

Eliminate render-blocking JavaScript and CSS in above-the-fold content  
You have no render-blocking resources. Learn more about [removing render-blocking resources](#).



## Web Page Performance Test for <https://www.voorhoede.nl>

From: Amsterdam, NL - IISpeed - Chrome - Cable  
7/13/2016, 6:02:33 PM



[Summary](#) [Details](#) [Performance Review](#) [Content Breakdown](#) [Domains](#) [Screen Shot](#)

Tester: VPS16230-93.191.133.233 [Raw page data](#) - [Raw object data](#)  
[Re-run the test](#) [Export HTTP Archive \(.har\)](#) [View Test Log](#)

	Load Time	First Byte	Start Render	Speed Index	DOM Elements	Document Complete			Fully Loaded			
						Time	Requests	Bytes In	Time	Requests	Bytes In	Cost
First View	1.452s	0.279s	0.609s	693	197	1.452s	21	592 KB	1.503s	22	597 KB	\$---
Repeat View	1.028s	0.186s	0.609s	733	191	1.028s	4	38 KB	1.028s	4	38 KB	

[result on voorhoede.nl](http://voorhoede.nl)

Always **render**

- a **functional** page
- as **fast** as possible

# ROADMAP

Service Worker

HTTP/2

Streams

CDN

Front-end servers

Reverse proxies

...

# SPEED UP EVERYTHING

📄 README.md

## Fastatic

Speed up your static site with one command: `fastatic`

Static site generators are [the next big thing](#). Fastatic takes the output of *any static site generator* ([Jekyll](#), [Hugo](#) and [many others](#)) and optimises it. The result: faster static sites.

Fastatic minifies your HTML, CSS, JS, JSON, XML and images. [See issues for more planned improvements.](#)

## Example: React

Running Fastatic on the [React's static site files](#) results in a faster site:

Filetype	Original size	Optimized size	Saving
<code>**/*.css</code>	29.51 KB	22.57 KB	6.94 KB (24%)
<code>**/*.html</code>	8.77 MB	7.47 MB	1.30 MB (15%)
<code>**/*.{gif,jpg,jpeg,png,svg}</code>	14.83 MB	13.44 MB	1.39 MB (9%)
<code>**/*.js</code>	2.06 MB	1.36 MB	714.22 KB (34%)
<code>**/*.xml</code>	197.68 KB	197.30 KB	381 B (0%)
Total	25.94 MB	22.54 MB	3.39 MB (13%)

[voorhoeede/fastatic](#)

questions?

@jbmoelker



# DE VOORHOEDE

front-end developers