
Improving the Responsive Web Design Process in 2016

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**“Mobile to overtake fixed Internet
access by 2014”**

2008 by Mary Meeker

Modern Design processes

- ✓ Content-First
- ✓ Mobile-First Design

Modern Design processes

- ✓ Content-First
- ✓ Mobile-First Design
- ✗ Static compositions

Modern Design processes

- ✓ **Content-First**
- ✓ **Mobile-First Design**
- ✓ **Responsive prototypes**

Get into the browser quickly!

Modern Design processes

- ✓ Content-First
- ✓ Mobile-First Design
- ✓ Responsive prototypes
- ✗ Lorem ipsum

Modern Design processes

- ✓ Content-First
- ✓ Mobile-First Design
- ✓ Responsive prototypes
- ✓ Real content (extreme cases)

Modern Design processes

- ✓ Content-First
- ✓ Mobile-First Design
- ✓ Responsive prototypes
- ✓ Real content (extreme cases)
- ✓ Atomic Design and components

Performance

Performance

Performance = UX



4"

64%
smartphone
users



16%

page weight
2015

2,2Mb
average

Performance

2s

Fast 3G
(1.6Mb)

200KB



5KB
HTML

125KB
Images

7KB
CSS

33KB
JS

20KB
VIDEO

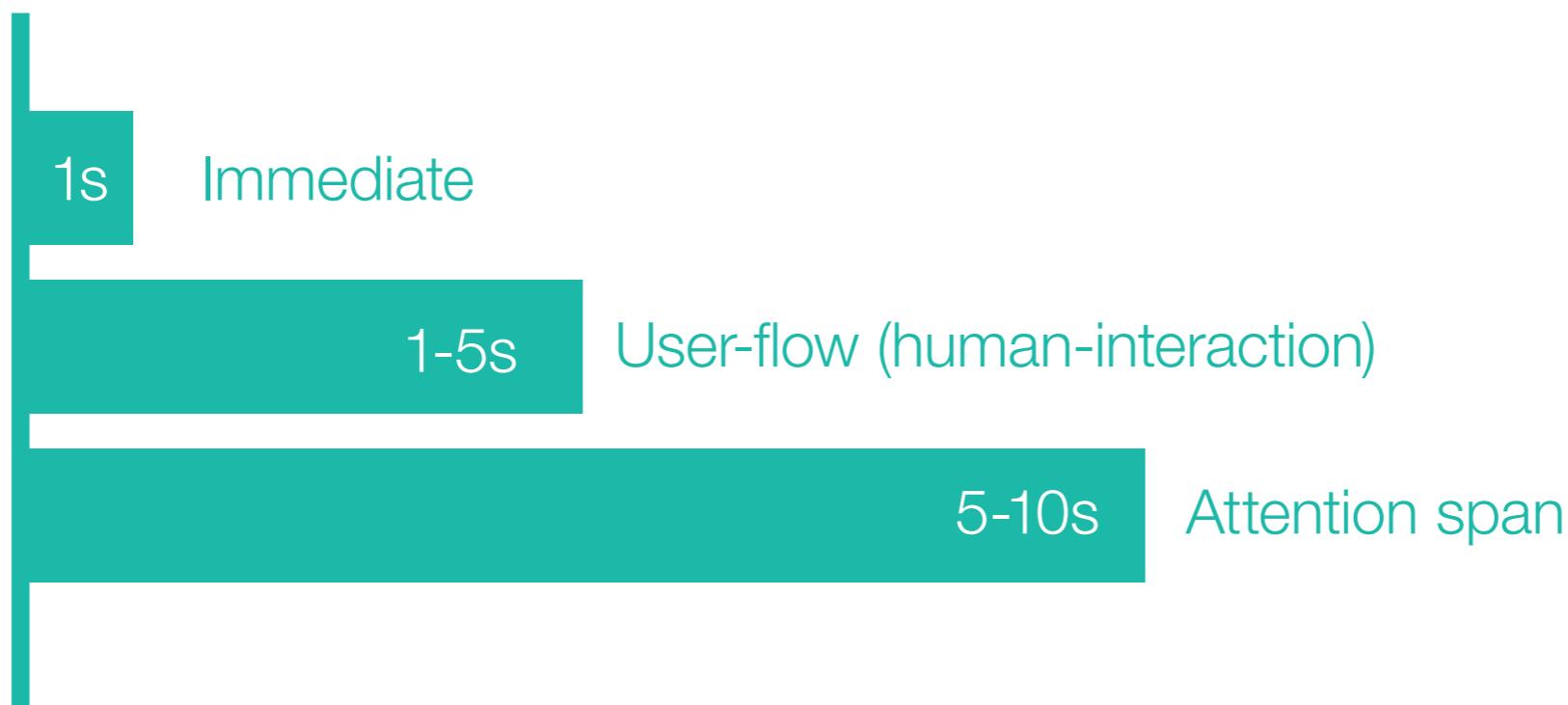
10KB
Fonts

We have to decide the performance budget
<http://www.performancebudget.io>

Performance

Performance = UX

“Perceived performance: your most critical metric”



Performance

238ms

300ms

452ms

497ms

651ms



HTML

CSS

jQuery

Modernizr

logo

header image

other images

other JS

footer background

Performance

687ms



825ms



895ms



954ms



1.25ms



other images

footer background

other JS

fonts

3rd party stuff (Analytics, Ads, etc)

Performance

- ✓ Optimize image files
- ✓ Concatenate text files
- ✓ Minify text files
- ✓ Compress text files
- ✓ Cache everywhere

CSS structuring and optimization

CSS structuring and optimization

CSS Methodologies

CSS Methodologies

- oocss
- BEM
- SMACSS

CSS structuring and optimization

CSS Methodologies

✓ Reuse CSS

CSS structuring and optimization

CSS Methodologies

✓ **Reuse CSS**
└→ Reduce page size

CSS structuring and optimization

CSS Methodologies

✓ Reuse CSS

- └→ Reduce page size
- └→ Increase page rendering speed

CSS structuring and optimization

CSS Methodologies

✓ Reuse CSS

✓ Faster CSS rendering

✗ `.box:nth-last-child(-n+1) .title {}`

✓ `.element-name--last {}`

CSS structuring and optimization

CSS Methodologies

- ✓ Reuse CSS
- ✓ Faster CSS rendering
- ✓ Large scale ready
 - Helps you figure out what your design is made of.
 - Helps you getting started in a project.

CSS structuring and optimization

Living Styleguides

Living document of code that details all the elements of your site.

COLOR PALETTE



CANDY APPLE

#e82535



CRIMSON

#c92830



COOL BLUE

#074f67



DEEP LAKE

#143548



GRAVEL

#565656



WET CEMENT

#77848e

TYPOGRAPHY

Header 1

Font: Montserrat Bold / Color #1a264b

HEADER 2

Font: Montserrat Bold / Color #1a354b

HEADER 3

Font: Montserrat Bold / Color #1a7697

HEADER 4

Font: Montserrat Bold / Color #1a7497

Header 5

Font: Montserrat Bold / Color #565656

This is Body copy. Lorem ipsum dolor sit amet, consectetur adipiscing elit. Praesent eu semper ligula, nec fermentum odio. Aenean non blandit neque, ac accumsan nibh. Morbi elementum neque id sodales blandit. Morbi eget turpis in urna sodales pharetra. Aenean quis pulvinar lacus, sed lacinia sem.

Font: Libre Baskerville / Color #565656

[This is an inline link](#)

Font: Libre Baskerville / Color #e82535 / Underline: dotted

CSS structuring and optimization

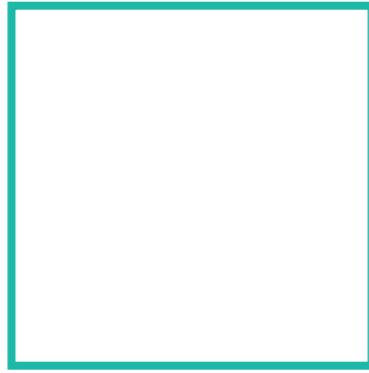
Living Styleguides

- ✓ Faster build times for new sections and pages
- ✓ Standardize the CSS, keeping it small and quick to load
- ✓ Design consistency is easier to maintain

Fixed-pixel vs relative units

Fixed-pixel vs relative units

Layouts benefit from relative units.



16px



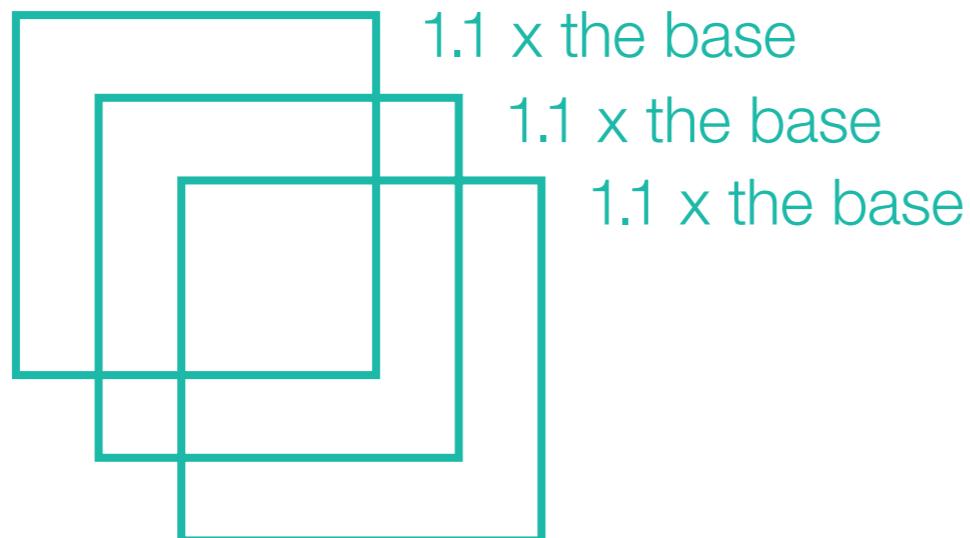
1em



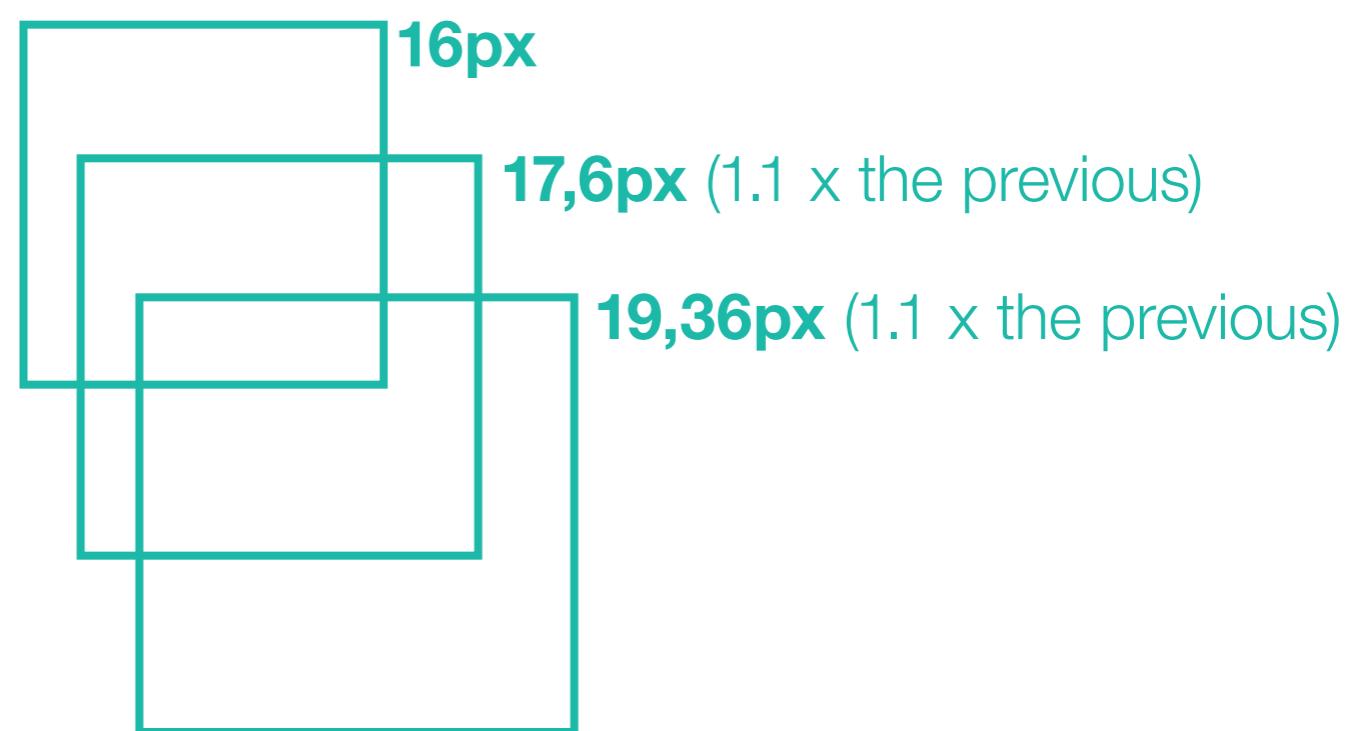
1rem

Fixed-pixel vs relative units

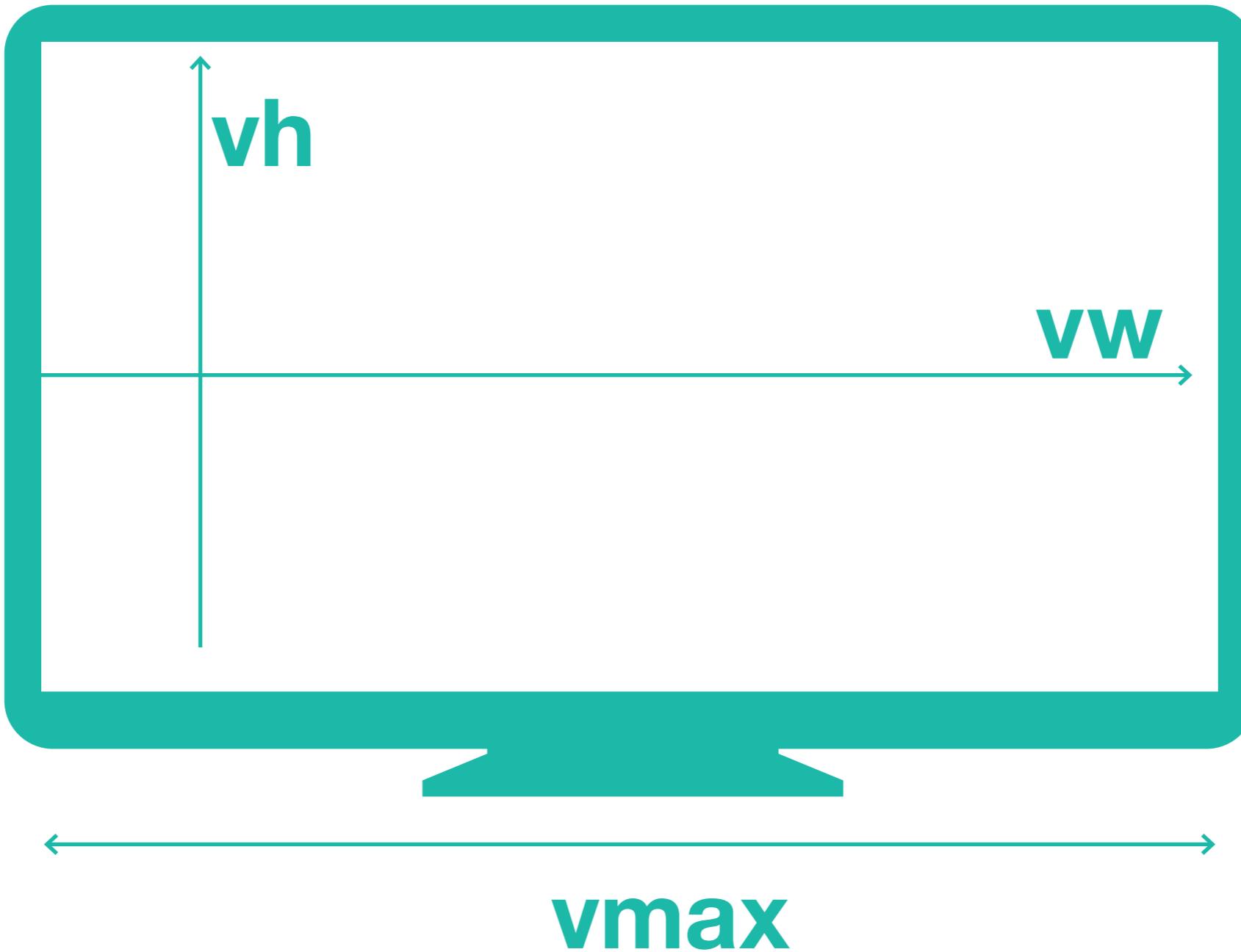
rem



em



Viewport Sized Units





Drupal SUMMER BARCELONA

2016

EL PROPER GRAN ESDEVENIMENT DRUPAL A BARCELONA
8-10 JULIOL

DESCOVRIR MÉS



Drupal SUMMER BARCELONA

2016

EL PROPER GRAN ESDEVENIMENT DRUPAL A BARCELONA
8-10 JULIOL

DESCOVRIR MÉS

MacBook Air

Responsive Typography

Responsive Typography



User's distance from the screen

Responsive Typography



14px



16px

22-60 rem

40-80 characters

Responsive Typography



Open Sans Regular

38KB **ttf**

18KB **woff2**

Responsive Typography

FOUT, FOIT

FOUT

“Flash of Unstyled Text”

Browsers used to display a fallback font in the font stack until the custom one loaded.

FOIT

“Flash of Invisible Text”

They started to detect if text was set in a custom font that hasn't loaded yet, and made it invisible until the font did load

Responsive Typography

✓ Readability

Correct font size depending on container

Responsive Typography

✓ **Readability**

Correct font size depending on container

✓ **Use less fonts**

Do you need them?

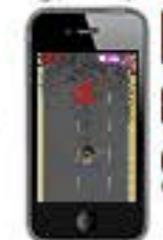


LINGSCARS.COM

UK CONTRACT HIRE CARS FROM LING VALENTINE

Version 238.20160215

You can trust me! ... In 2014 I rented over £75 million of cars (at RRP)!



THE BEST FAQs JUST CLICK IN THE WORLD!

CAR LEASING - CONTRACT HIRE - CHEAP LEASE CARS

Home

Cars
and
Vans

How It
Works

Price
Lists

SME!
WAH!
About
Ling
1500+Letters
Customers

Fun
Stuff

Quote/
Order

Business Customer Pricing

Personal Customer Pricing

The Best FAQs in the World!

NEW
SEXY
christine
full rep



@LINGSCARS
Follow Me

LING'S LIVE TWITTER FEED

- simonscarfe: @LINGSCARS Hey Ling, can I push a commit to your codebase? I wanna ensure my CV is never read by such sanctimonious blowhards
- Markylon: @LINGSCARS @onion21 @Rhyss @RossDargan @JamieFDHurst hahahahahahaha
- Jorge_orwell: @LINGSCARS @onion21 @Rhyss @RossDargan is he a cleaner?



LIVE WEB
CAM



Close (X)

LIVE
CHAT!



LIVE



Intro Film News Blog Office TV Contact Moan Links Play Quiz Privacy Policy Google Visitors

"JUST CLICK!"



THE BEST...

...IN THE WORLD!



You can't find a car?



Apply for a CAR QUOTE



AS SEEN ON
TV
BBC TWO



Richard Farleigh - "I wanted to invest; I was amazed by Ling's complete lack of nerves, and also by her business acumen."



Duncan Bannatyne - "I wanted to invest... but ye turrn'd me dooon!"



Deborah Meaden "Harrumph! I'm out!"

MEET MY STAFF

VIZ

Ling is OFFICIAL VIZ ethnic business advisor!



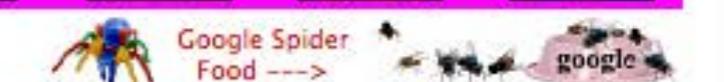
PLAY STUPID
CRASH GAME!



CHEAP
INSURANCE



Google Spider
Food --->



Responsive Typography

- ✓ **Readability**

Correct font size depending on container

- ✓ **Use less fonts**

Do you need them?

- ✓ **Use modern font formats**

Reduce the page weight

Images

Images



JPG



PNG 8-bit



PNG 24-bit

Images



61%
website bytes

Browsers request images
asynchronously

Images too big for the device

Responsive images

- The aim is to deliver the **highest quality image supported** and nothing more.

Responsive images

Scaled images

```

```

Responsive images

Adapted images

```
<picture title="Image title">  
  <source  
    srcset="image-big.jpg 1x, image-big2x.jpg 2x"  
    media="(min-width: 0px) and (max-width: 29.99em)">  
  
  <source  
    srcset="image-big.jpg 1x, image-big2x.jpg 2x"  
    media="(min-width: 30em)">  
  
  <img srcset="image-big.jpg 180w">  
</picture>
```

Responsive images

Adapted images



Responsive images

Non Drupal solutions

- ✓ **Scaling based on the targeted end result**
ReSrc, thumbr.io, responsive.io
- ✓ **Scaling based on url.**
Cloudinary
- ✓ **Scaling based on media-queries.**
Picturefill
- ✓ ...

SVGs

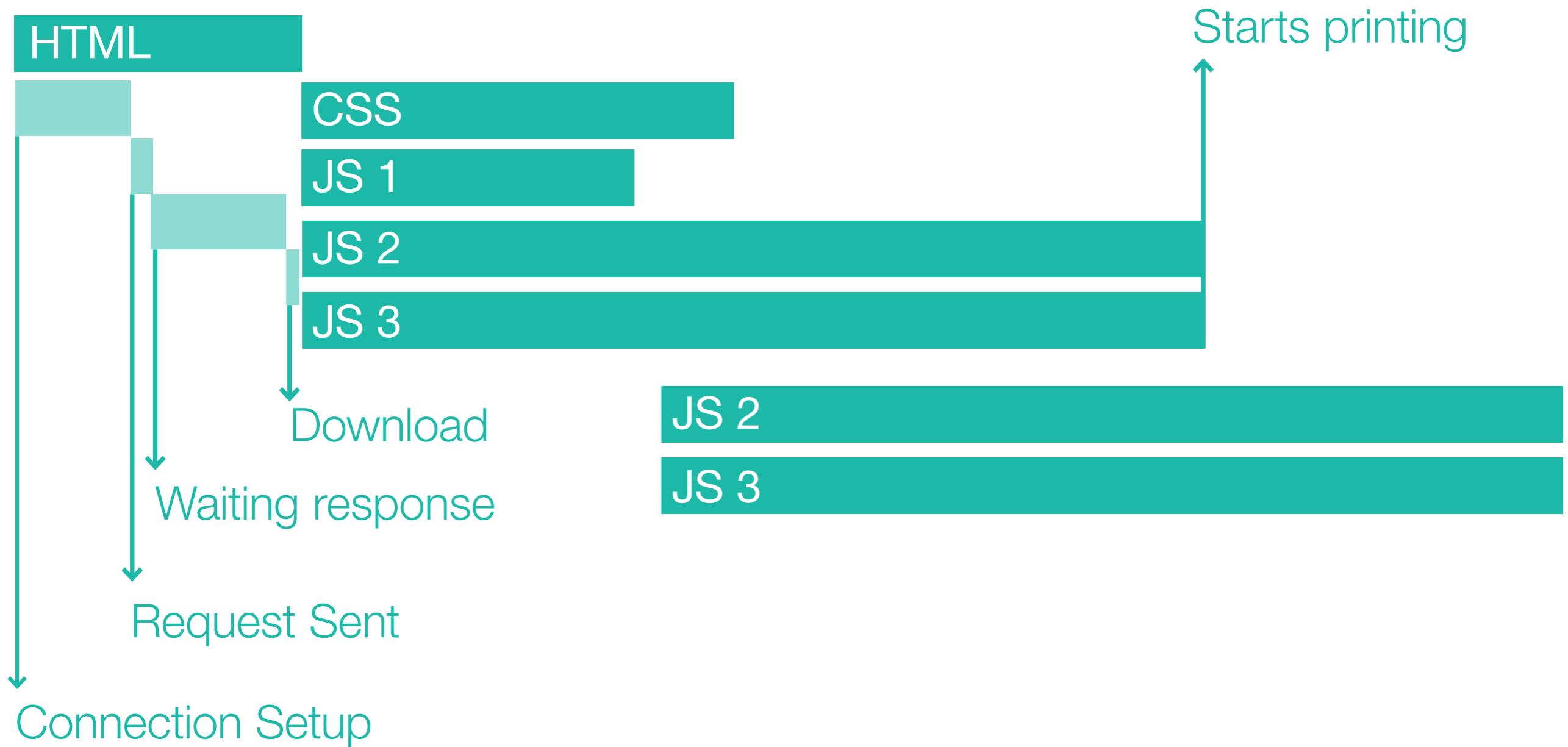
Scalable Vector Graphics

- ✓ **Scaling based on the targeted end result**
- ✓ **Scales to any size without losing clarity**
- ✓ **Looks great on retina displays**
- ✓ **Design control like interactivity and filters**
- ✓ **Future-proof**
- ✓ **Easy to make and edit**
- ✓ **Highly compressible**
- ✓ **Manipulatable with CSS & JS ***

Asynchronous loading

Asynchronous loading

Default behavior



Asynchronous loading

Default behavior

```
<html>
  <head>
    <link rel="stylesheet" href="styles.css"/>
    <script src="javascript.js"></script>
  </head>
  <body>
    <div>Page content</div>
  </body>
</html>
```

Asynchronous loading

Async

```
<html>
  <head>
    <link rel="stylesheet" href="styles.css"/>
    <script src="javascript.js" async></script>
  </head>
  <body>
    <div>Page content</div>
  </body>
</html>
```

Asynchronous loading

Async

- ✓ While the JavaScript file is loading, parsing the HTML document can continue
- ✓ JS execution no longer has to wait for CSS
- i* You can't guarantee the order of JS execution
- i* The script shouldn't use `document.write()`
The document parser doesn't pause while the script is loading, the browser has no idea where any content added by `document.write()` should go.
- ✓ Doesn't block the `DOMContentLoaded` event

Asynchronous loading

Defer

```
<script src="javascript.js" defer></script>
```

- ✓ Deferred scripts are executed only after the HTML page has been parsed
- ✓ Deferred scripts will execute in the order they appear in the document ou can't guarantee the order of JS execution
- i* It has the potential to interfere with the rendering of the page
- i* async has priority

Asynchronous loading

```
<html>
  <head>
    <link rel="stylesheet" href="styles.css"/>
    <script src="javascript.js"></script>
    <script src="javascript.js" async></script>
    <script>
      /* JavaScript source code goes here... */
    </script>
  </head>
  <body>
    <div>Page content</div>
    <script src="javascript.js"></script>
  </body>
</html>
```

Proxy-based browsers

Proxy-based browsers

250
million

Opera Mini users

India, Indonesia, Nigeria, Bangladesh
and South Africa

**Reduce bandwidth usage by
compressing resources
on a proxy server
before sending it to the client browser.**

Proxy-based browsers

- ✓ Use SVG rather than icon fonts
- ✓ Style your HTML with CSS
- ✓ Test your site without JavaScript
- ✓ Make your site performant
- ✓ Test in Opera Mini

Proxy-based browsers

Accessibility

✓ Progressive enhancement

Basic content and functionality of a web page to any browser or Internet connection

Enhanced version advanced browser software or greater bandwidth

Beyond the Mouse

Touch and keyboard events

Beyond the mouse

✓ Save hover for shortcuts

- Be accessible in browsers where a mouse pointer may not exist.
- Don't assume touch will be used, but design as if it will be.

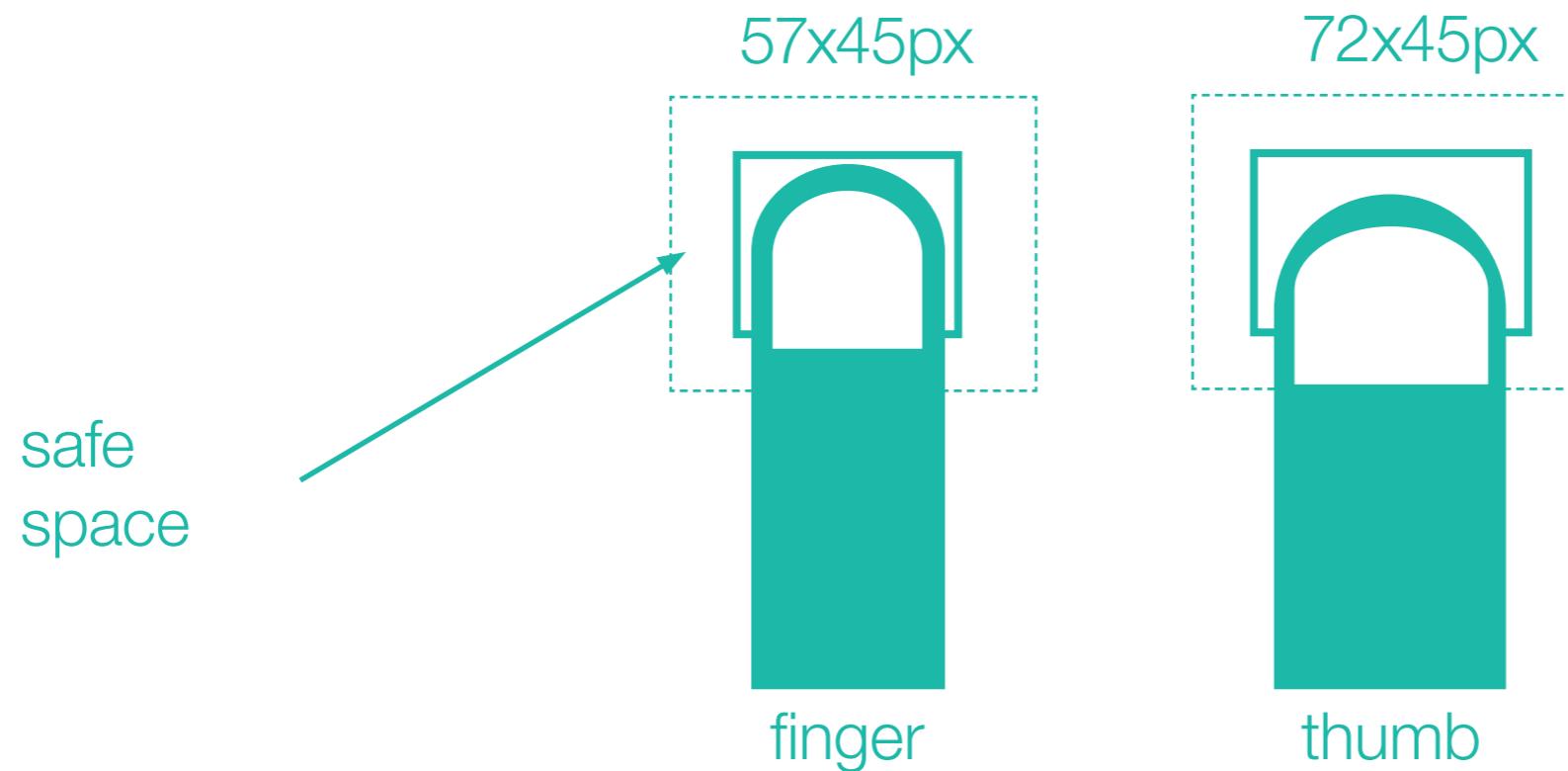
✓ Keep in touch

✓ Gestures: don't override them

Beyond the mouse

✓ Save hover for shortcuts

✓ Keep in touch



Beyond the mouse

- ✓ Save hover for shortcuts
- ✓ Keep in touch
- ✓ Gestures: don't override them

RWD patterns and Progressively Disclosure

RWD Patterns

- ✓ Navigation patterns
- ✓ UI patterns
- ✓ Grid patterns



Thank you!



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