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IMPROVING THE RESPONSIVE WEB DESIGN PROCESS IN 2016

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@chumillas



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Cristina Chumillas

DESIGNER AND FRONTEND DEVELOPER AT YMBRA

- ckrina
- @chumillas





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**"Mobile to overtake fixed Internet
access by 2014"**

2008 by Mary Meeker



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Modern Design processes



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- ✓ Content-First
- ✓ Mobile-First



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



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

Get into the browser quickly!



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



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



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



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Performance



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Performance = UX

4"

64%
smartphone
users



16%
page weight
2015

PERFORMANCE BUDGET CALCULATOR

Calculate A Performance Budget For Your Site.

I want my site to load in seconds on a connection.



We have to decide the performance budget

2s

Fast 3G
(1.6Mb)

200KB



5KB
HTML

125KB
Images

7KB
CSS

33KB
JS

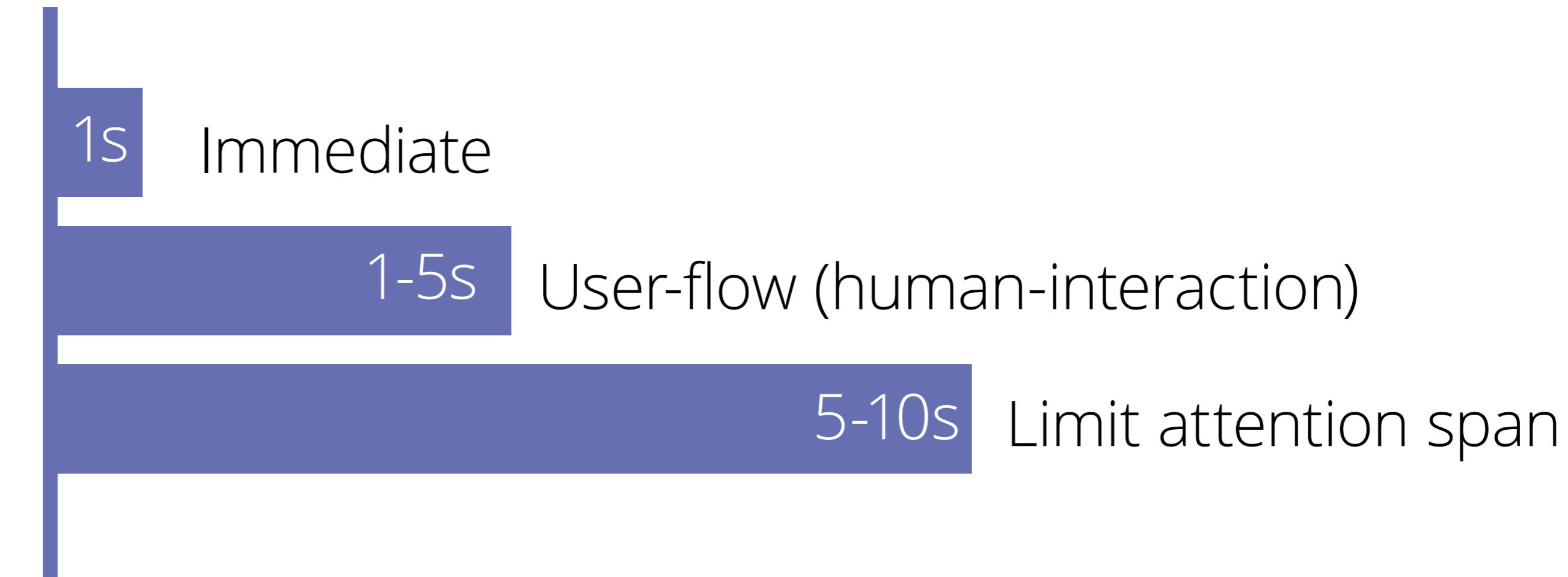
20KB
VIDEO

10KB
Fonts



Performance = UX

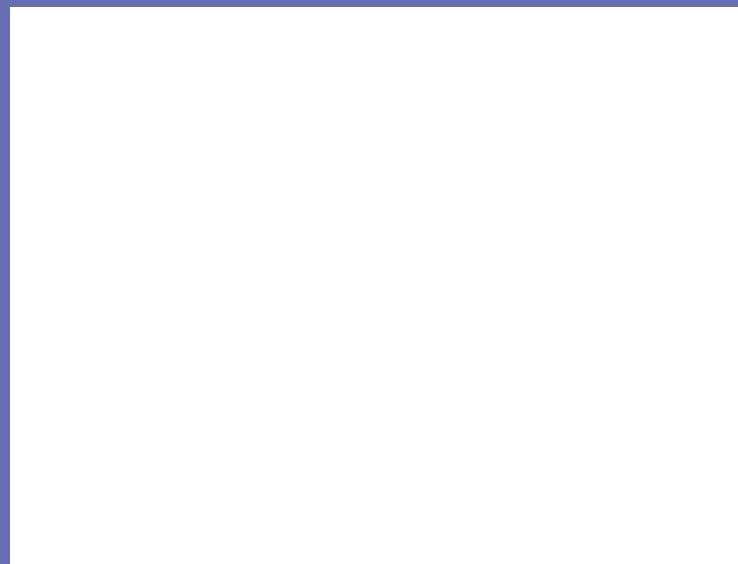
“Perceived performance: your most critical metric”



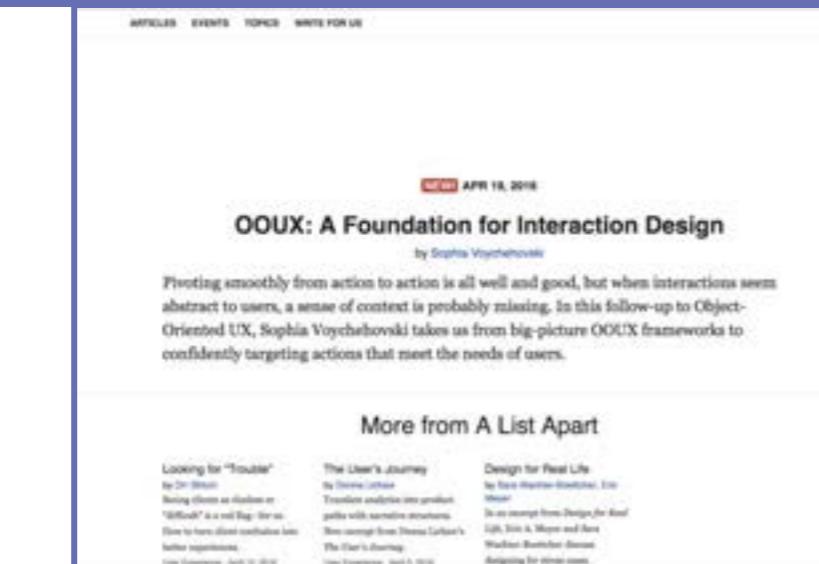


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238ms



300ms



452ms



497ms



651ms



HTML

CSS

jQuery

Modernizr

logo

header image

other images

other JS

footer background



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687ms



OOUX: A Foundation for Interaction Design

by Sophia Voychekovski

Pivoting smoothly from action to action is all well and good, but when interactions seem abstract to users, a sense of context is probably missing. In this follow-up to Object-Oriented UX, Sophia Voychekovski takes us from big-picture OOUX frameworks to confidently targeting actions that meet the needs of users.

825ms



Pivoting smoothly from action to action is all well and good, but when interactions seem abstract to users, a sense of context is probably missing. In this follow-up to Object-Oriented UX, Sophia Voychekovski takes us from big-picture OOUX frameworks to confidently targeting actions that meet the needs of users.

895ms



Pivoting smoothly from action to action is all well and good, but when interactions seem abstract to users, a sense of context is probably missing. In this follow-up to Object-Oriented UX, Sophia Voychekovski takes us from big-picture OOUX frameworks to confidently targeting actions that meet the needs of users.

954ms



OOUX: A Foundation for Interaction Design

by Sophia Voychekovski

Pivoting smoothly from action to action is all well and good, but when interactions seem abstract to users, a sense of context is probably missing. In this follow-up to Object-Oriented UX, Sophia Voychekovski takes us from big-picture OOUX frameworks to confidently targeting actions that meet the needs of users.

1.25ms



OOUX: A Foundation for Interaction Design

by Sophia Voychekovski

Pivoting smoothly from action to action is all well and good, but when interactions seem abstract to users, a sense of context is probably missing. In this follow-up to Object-Oriented UX, Sophia Voychekovski takes us from big-picture OOUX frameworks to confidently targeting actions that meet the needs of users.

FOIT

other images

footer background

other JS

fonts

3rd party stuff (Analytics, Ads, etc)

Esperant alistapart.



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TIPS

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



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CSS structuring and optimization



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CSS Methodologies

- OOCSS
- BEM
- SMACSS



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CSS Methodologies

✓ Reuse CSS



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CSS Methodologies

✓ Reuse CSS

↳ Reduce page size



CSS Methodologies

✓ Reuse CSS

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



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CSS Methodologies

✓ Reuse CSS

✓ Faster CSS rendering

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

✓ `.element-name--last {}`



CSS Methodologies

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



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Living styleguides

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

COLOR PALETTE

●	CANDY APPLE	#e6194b
●	CRIMSON	#c92830
●	COOL BLUE	#074f67
●	DEEP LAKE	#143548
●	GRAVEL	#565656
●	WET CEMENT	#77848b

TYPOGRAPHY

Header 1

Font: Montserrat Bold / Color #4472C4

HEADER 2

Font: Montserrat Bold / Color #A8D5E0

HEADER 3

Font: Montserrat Bold / Color #77848b

HEADER 4

Font: Montserrat Bold / Color #77848b

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 #e6194b / Underline: dotted



Living styleguides

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

"Fifty Shades of Grey in CSS"

by @pistenprinz

Aa #333	Aa #666	Aa #999	Aa #666	Aa #666	Aa #444
Aa 333	Aa #333333	Aa #666666	Aa #666666	Aa #666666	Aa #666666
Aa #009999	Aa #666666	Aa #666666	Aa #000000	Aa #666666	Aa #666666
Aa #004444	Aa #004444	Aa #222222	Aa #004444	Aa #222222	Aa #555555
Aa #444444	Aa #0000cc	Aa inherit	Aa initial	Aa #000000	Aa #777777
Aa #363636	Aa #454545	Aa #505050	Aa black	Aa #444444	Aa #333333
Aa #cccccc	Aa #333333	Aa #d3d3d3	Aa #e6e6e6	Aa #777777	Aa #666666



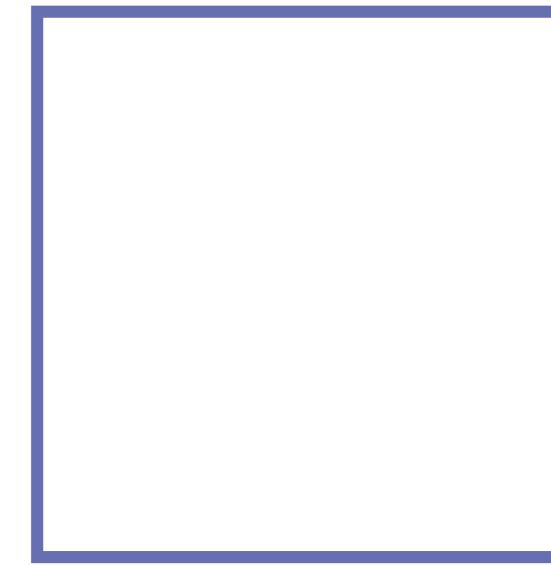
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Fixed-pixel vs relative units



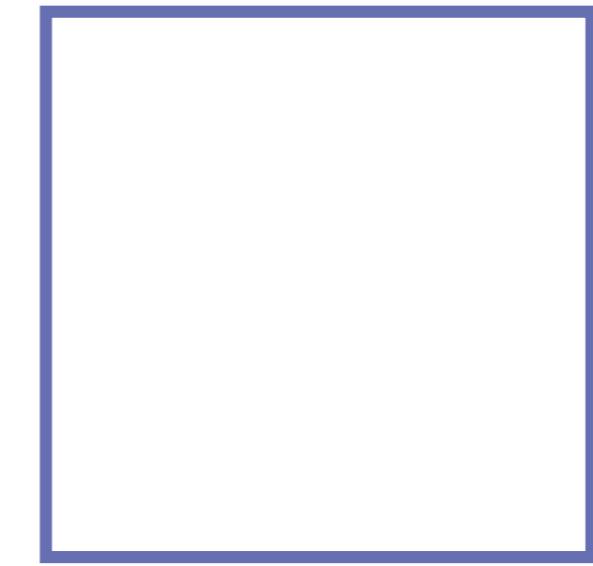
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Layouts benefits from relative units.



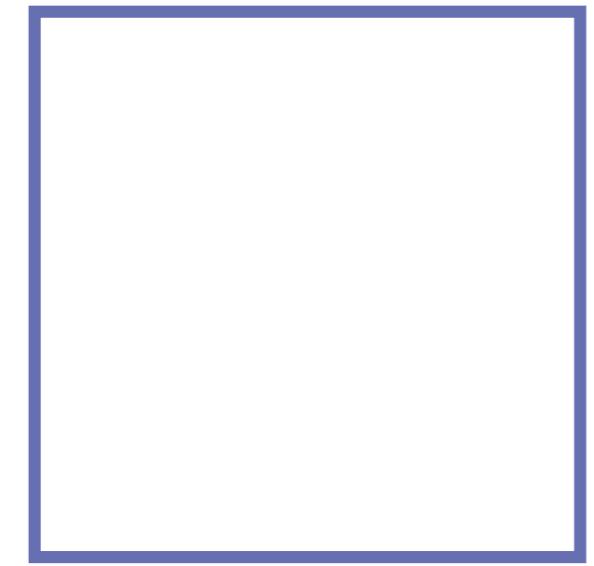
16px

=



1em

=

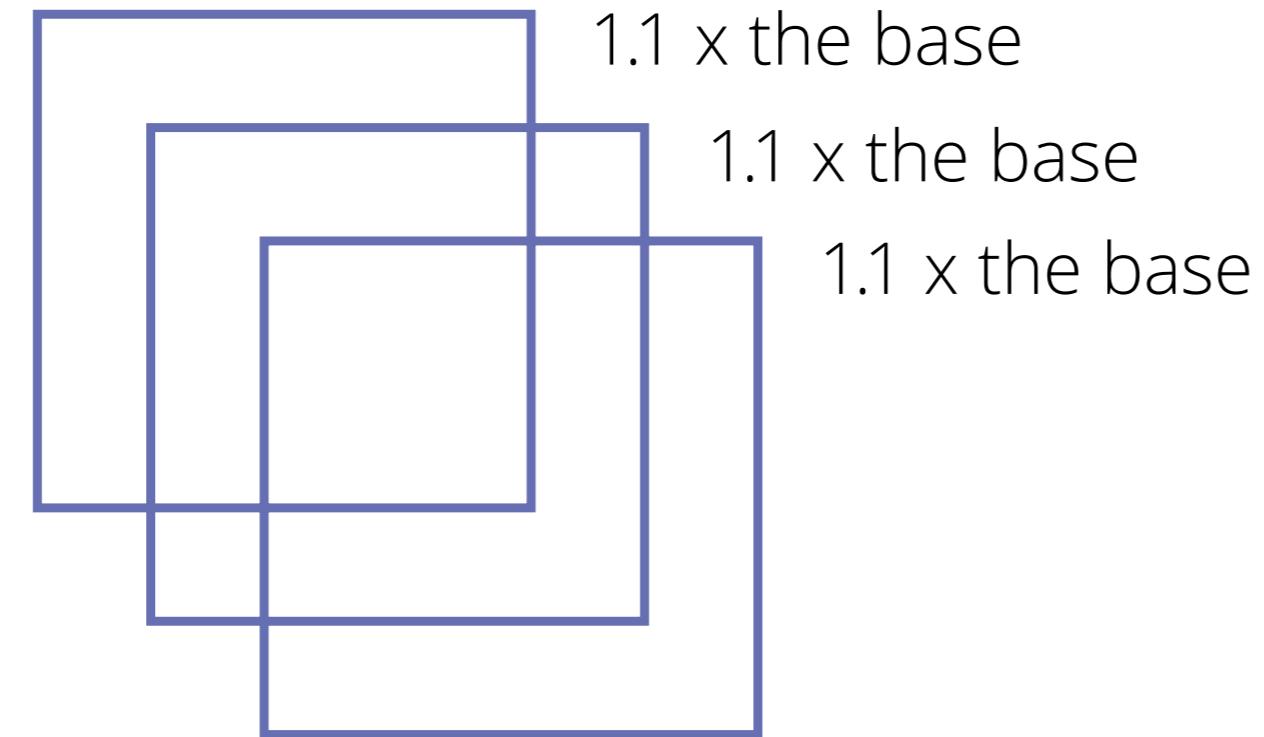


1rem

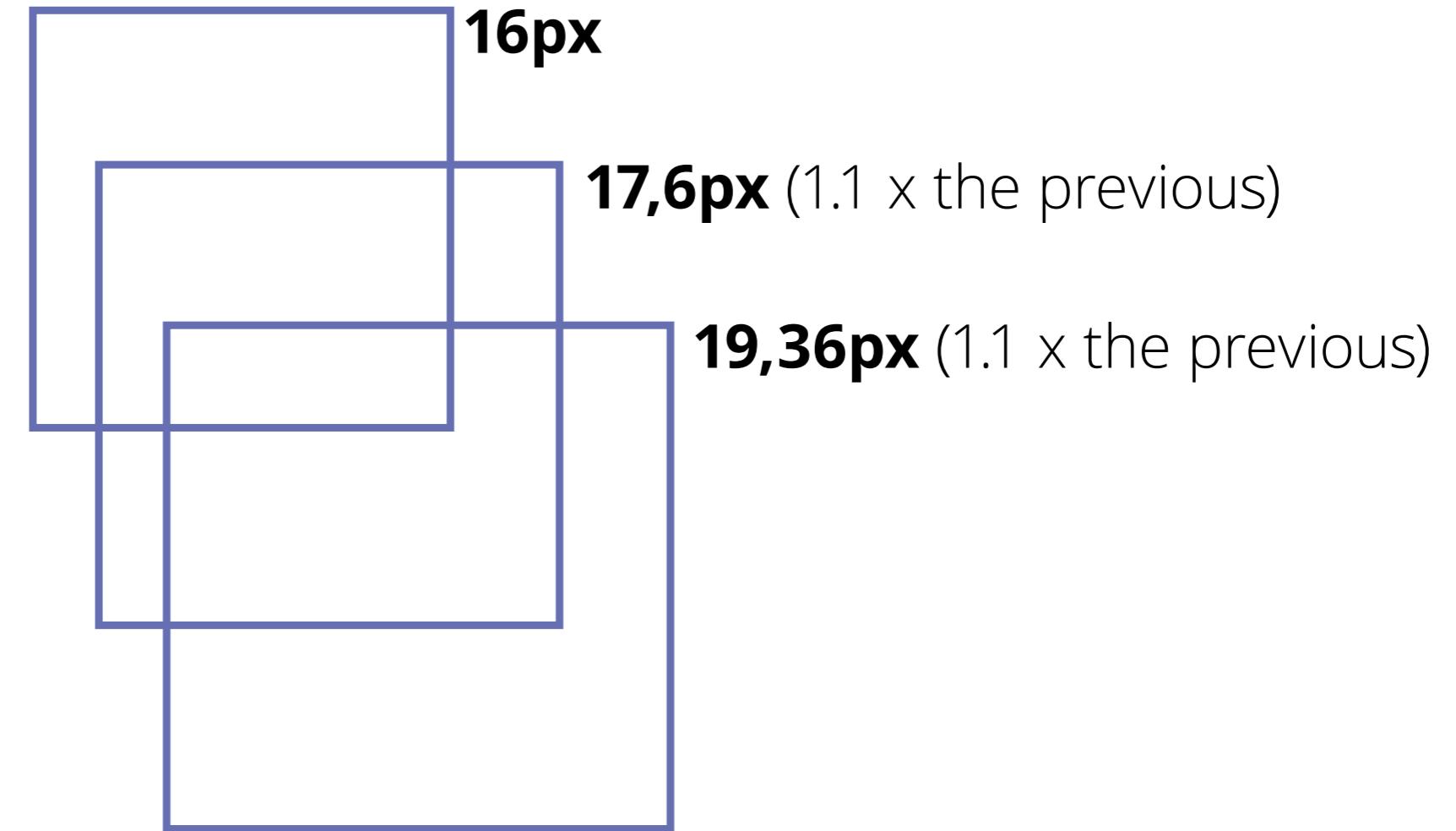


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rem



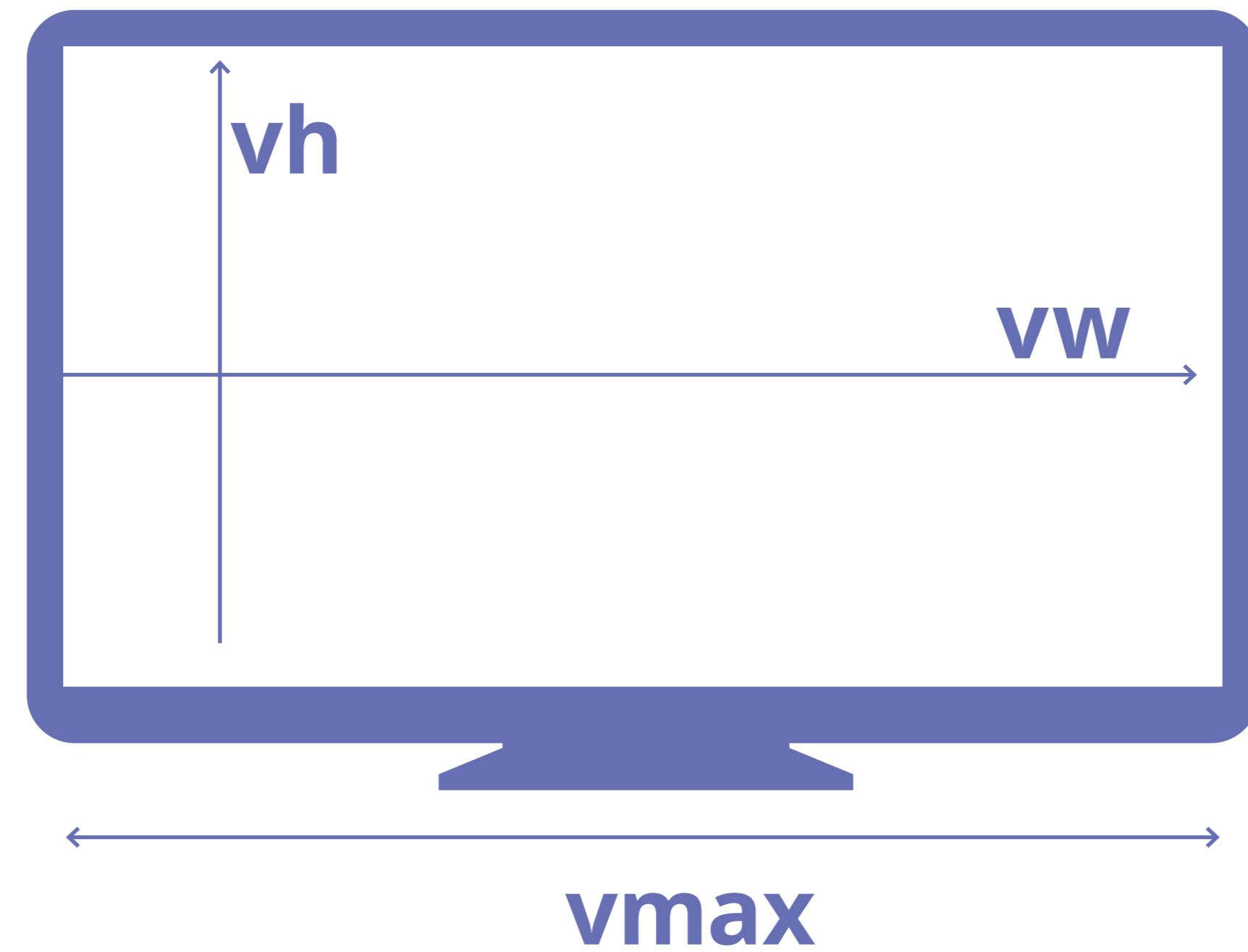
em





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Viewport Sized Units

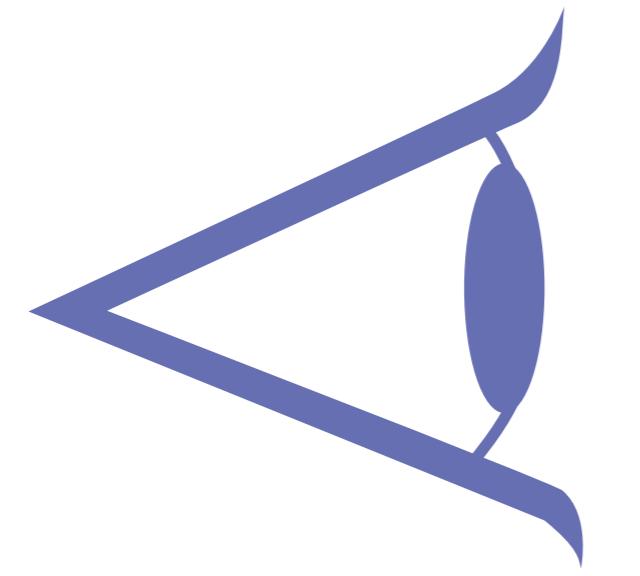






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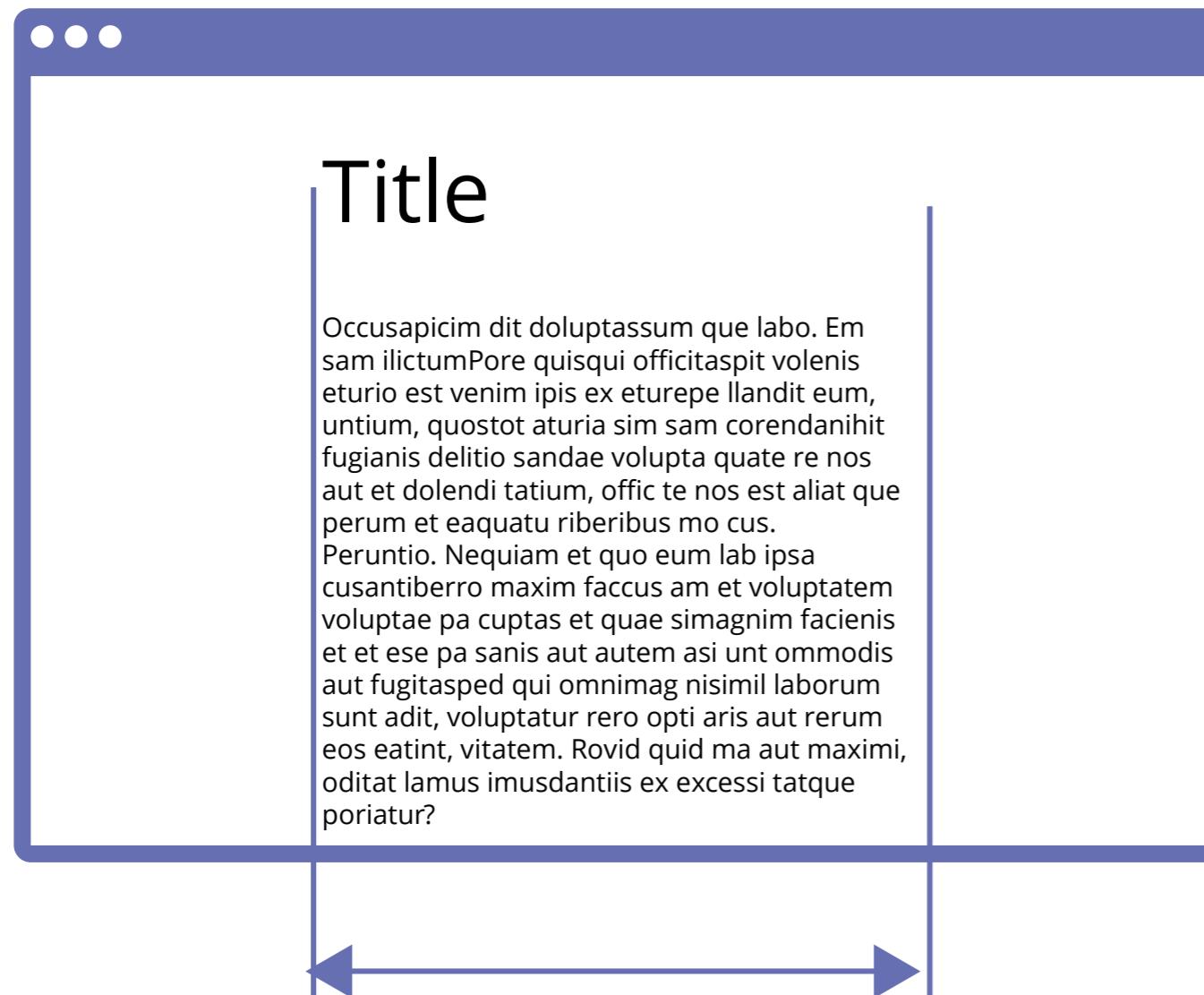
Responsive Typography



Decide on user's distance from the screen



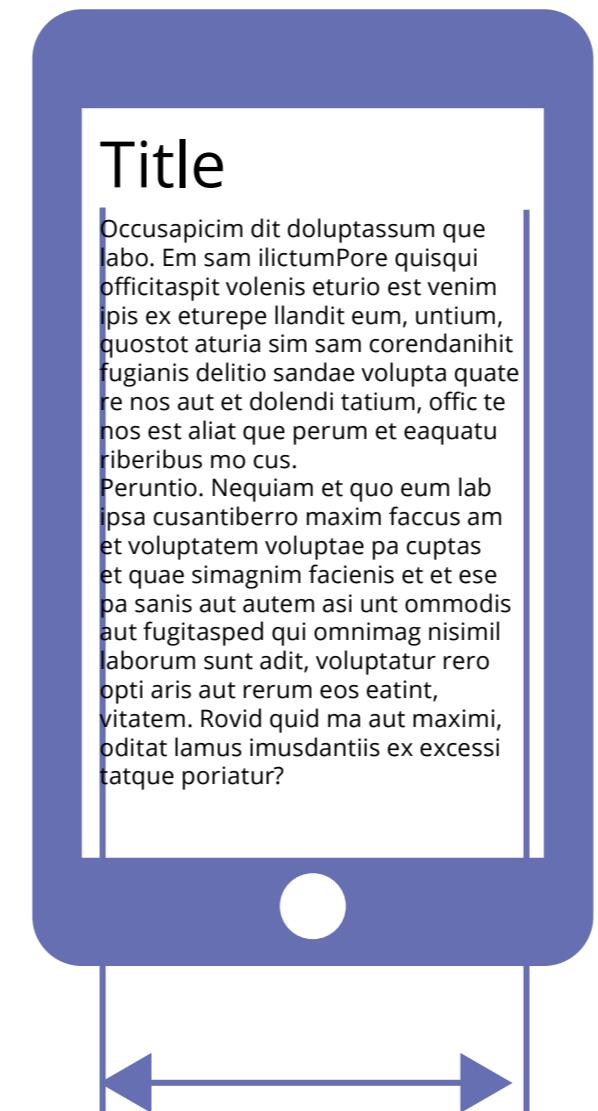
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Title

Occusapicim dit doluptassum que labo. Em sam ilictumPore quisqui officitaspit volenis eturio est venim ipis ex eturepe llandit eum, untium, quostot aturia sim sam corendanithit fugianis delitio sandae volupta quate re nos aut et dolendi tatiuum, offic te nos est aliat que perum et eaquatu riberibus mo cus. Peruntio. Nequiam et quo eum lab ipsa cusantiberro maxim foccus am et voluptatem voluptae pa cuptas et quae simagnim facienis et et ese pa sanis aut autem asi unt ommidis aut fugitasperd qui omnimag nisimil laborum sunt adit, voluptatur rero opti aris aut rerum eos eatint, vitatem. Rovid quid ma aut maximi, oditat lamus imusdantiis ex excessi tatque poriatur?

60 rem
40-80 characters



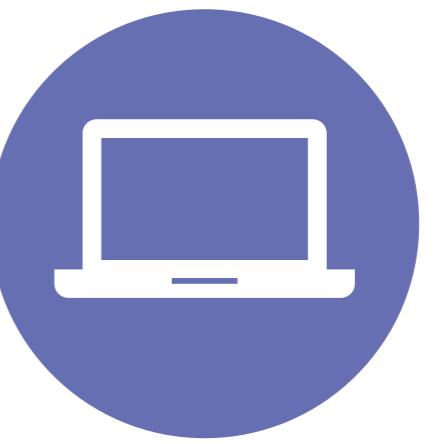
Title

Occusapicim dit doluptassum que labo. Em sam ilictumPore quisqui officitaspit volenis eturio est venim ipis ex eturepe llandit eum, untium, quostot aturia sim sam corendanithit fugianis delitio sandae volupta quate re nos aut et dolendi tatiuum, offic te nos est aliat que perum et eaquatu riberibus mo cus. Peruntio. Nequiam et quo eum lab ipsa cusantiberro maxim foccus am et voluptatem voluptae pa cuptas et quae simagnim facienis et et ese pa sanis aut autem asi unt ommidis aut fugitasperd qui omnimag nisimil laborum sunt adit, voluptatur rero opti aris aut rerum eos eatint, vitatem. Rovid quid ma aut maximi, oditat lamus imusdantiis ex excessi tatque poriatur?

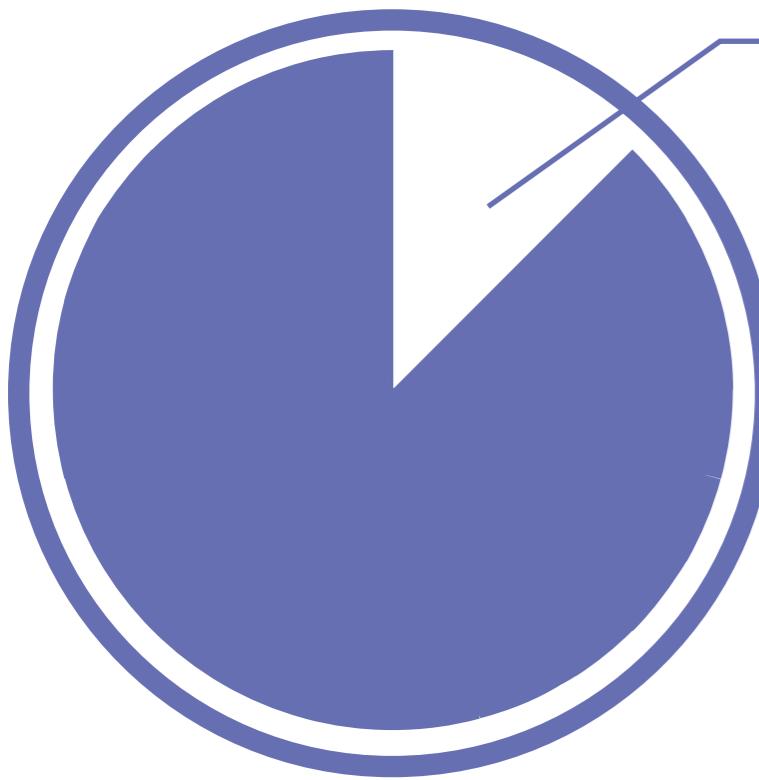
22 rem
40-60 characters



14px



16px



Open Sans Regular

38KB **TTF** TrueType font

20KB **EOT** Embedded Open Type

119KB **SVG** Scalable Vector Graphics font

23KB **WOFF/WOFF2** Web Open Font Format



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WEB FONT FORMATS

	EOT	OTF/TTF	WOFF	WOFF2	SVG
IE 8-11	x				
IE 9-11	x	x	x		
Edge		x	x		
Firefox		x	x	x	
Chrome		x	x	x	
Safari		x	x		x
Opera		x	x	x	
iOS		x	x		x
Android		x	x		



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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”

Browsers 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.



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@font-face

Fonts.com

Google fonts

Typekit

PROS:

- Powered by CSS, no JS
- Accessible
- No external plugins

CONS:

- Too big fonts
- No common format
- Limited to open source fonts



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@font-face

Fonts.com

Google fonts

Typekit

PROS:

- Large selection
- Exclusive fonts
- Language support

CONS:

- Monthly fees
- Limited to their library



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@font-face

Fonts.com

Google fonts

Typekit

PROS:

- Powered by CSS, no JS
- Accessible
- Cached & fast
- Easy implementation

CONS:

- Limited choice
- Not exclusive design



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@font-face

Fonts.com

Google fonts

Typekit

PROS:

- Largest fonts library
- Accessible
- Cached & fast
- Easy implementation

CONS:

- Premium service



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TIPS

✓ Readability

Correct font size depending on container



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TIPS

- ✓ **Readability**

Correct font size depending on container

- ✓ **Use less fonts**

Do you need them?



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TIPS

- ✓ **Readability**

Correct font size depending on container

- ✓ **Use less fonts**

Do you need them?

- ✓ **Use modern font formats**

Reduce the page weight



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Images



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JPG

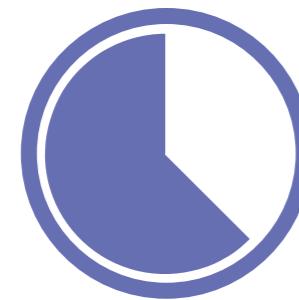


PNG 8-bit

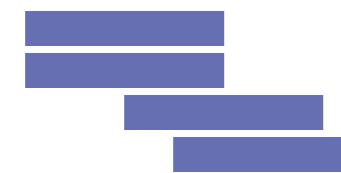


PNG 24-bit

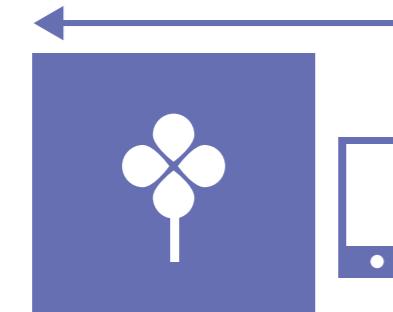
FACTS



61% website bytes



Browsers request images **asynchronously**



Images too **big** for the device



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



Scaled images (just changing resolutions)

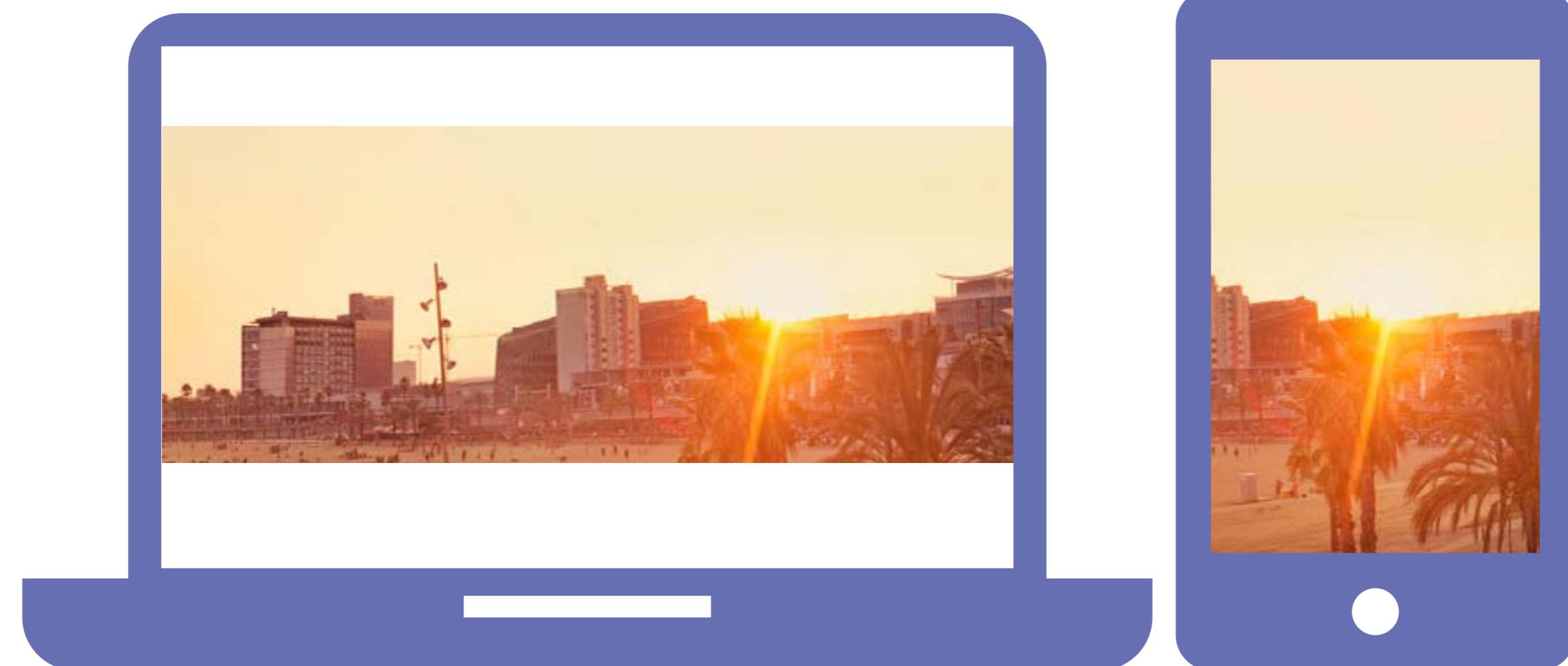
```

```



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Adapted images (changing images)





Adapted images (changing 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 in D8

Picture in D7

- ✓ **In core** (disabled by default)
- ✓ **1.5x, 2x, ...** (high resolution)
- ✓ **Lazy load in D7**, contrib in D8

Fatal site error

48.local/admin/modules

modules manage themes users

Content Structure Appearance Extend Configuration People Reports Tasks

Extend

List Update Uninstall

Home > Administration

⚠ There was a problem checking available updates for Drupal. See the available updates page for more information and to install your missing updates.

Download additional contributed modules to extend your site's functionality.

Regularly review and install available updates to maintain a secure and current site. Always run the update script each time a module is updated.

+ Install new module

Filter by name or description

Type a part of the module name or description

View core

Actions • Perform tasks on specific events triggered within the system.

Activity Tracker • Enables tracking of user context for users.



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Crop API

- **Image widget crop**
- **Focal point**





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Crop API

- Image widget crop
- Focal point

Drupal™

blog_drupal-8-lessons.jpg (1.78 MB) Remove

▼ CROP IMAGE (CROPPING APPLIED)

Crop 16:9
Cropping applied

Reset crop

This Field is configured to display an 16:9 small image on fullContent.



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Crop API

- Image widget crop
- Focal point



Set the focal point



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What else?



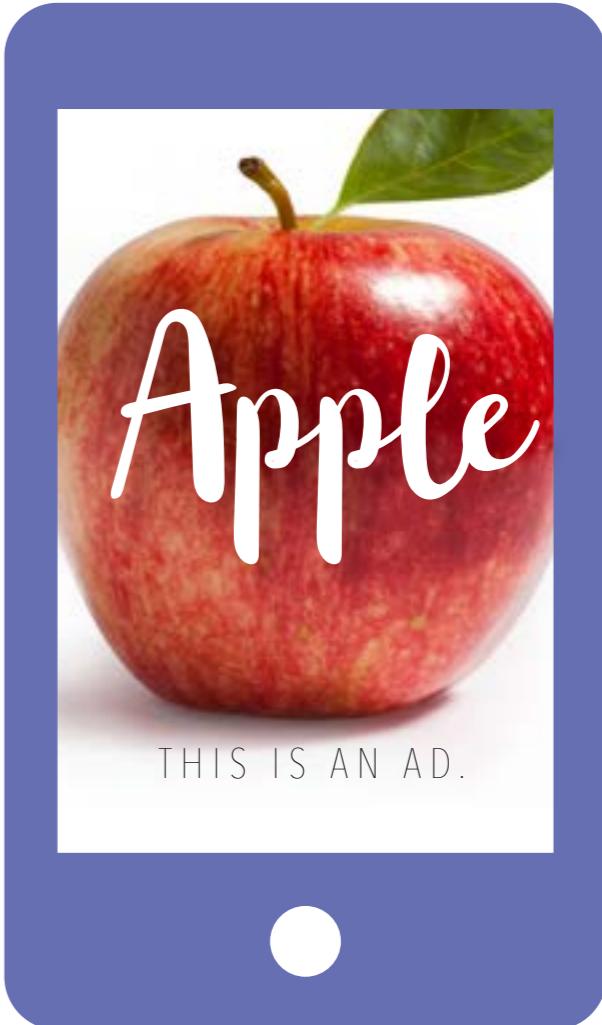
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What else?

Designer's creativity.



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- ✓ Create one field for each image
- ✓ Create the image styles
- ✓ Prepare each picture/image URLs in a variable
- ✓ Print it in a custom template



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
- ✓ ...



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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**

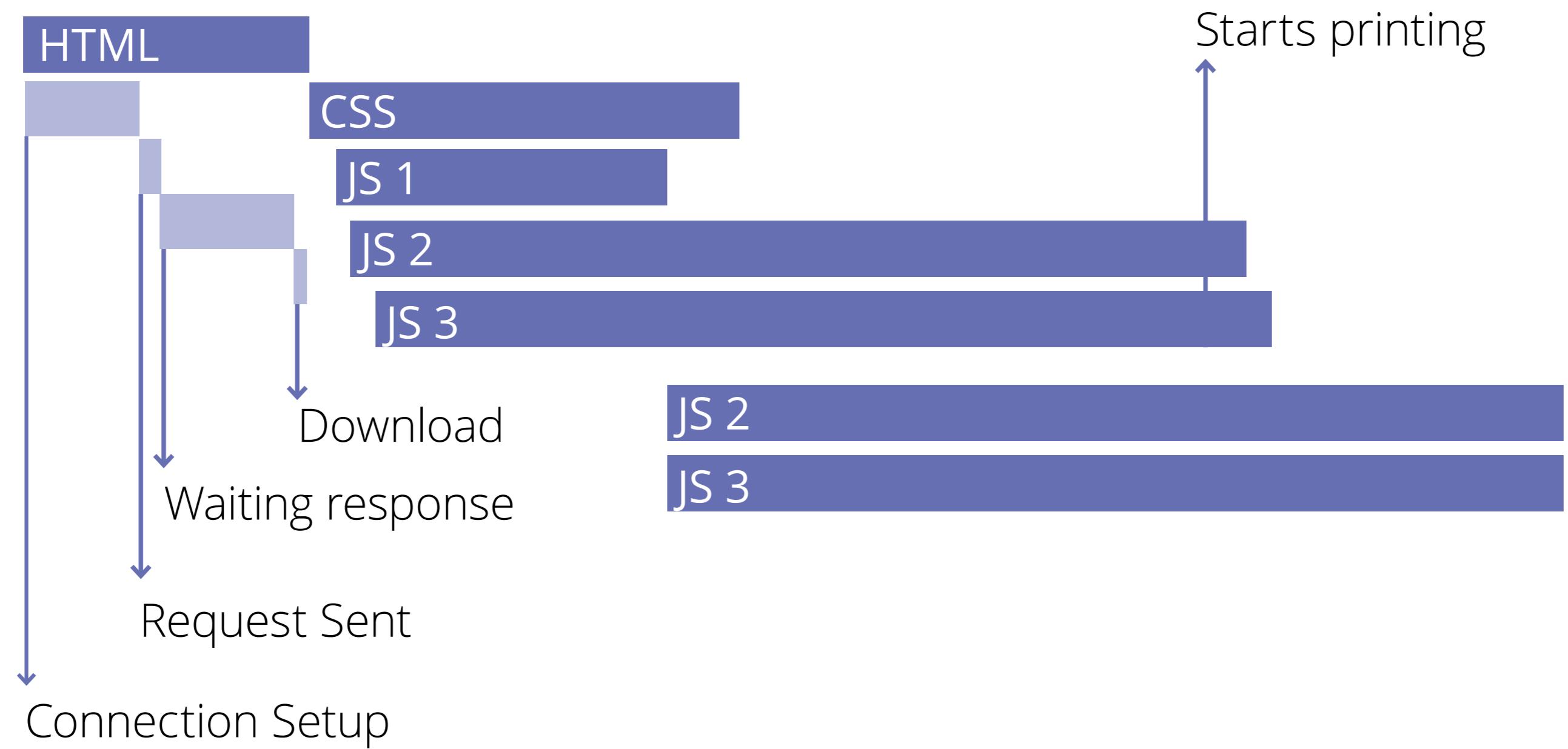
✓ **Manipulatable with CSS & JS ***



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Asynchronous loading

Default behavior





Default behavior

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



Async

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

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

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
- 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/defer></script>
    <script>
      // JavaScript source code goes here.
    </script>
  </head>
  <body>
    <!-- Page content -->
    <script src="javascript.js"></script>
  </body>
</html>
```



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Proxy-based browsers



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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.**



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TIPS

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



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✓ Progressive enhancement

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

Enhanced version advanced browser software or greater bandwidth



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Beyond the Mouse

TOUCH & KEYBOARD EVENTS

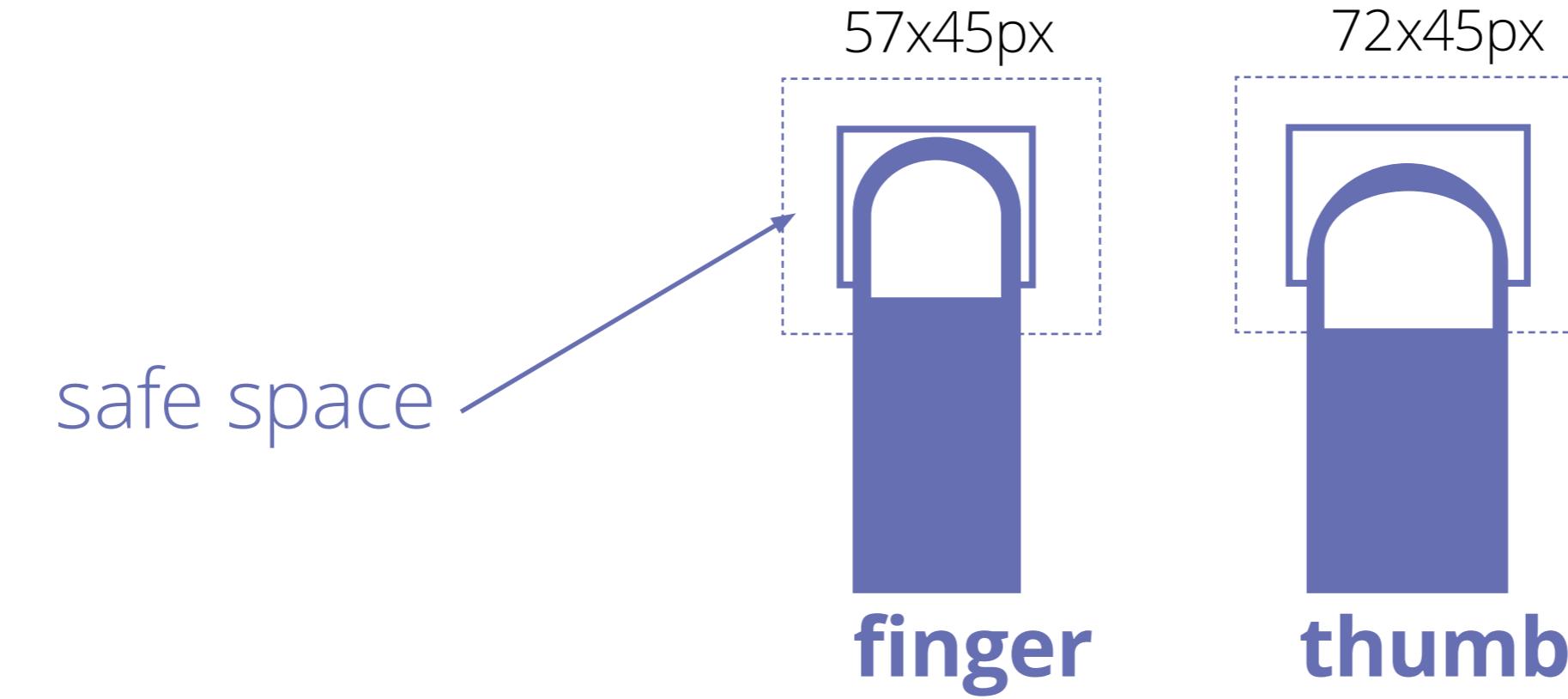


✓ Save hover for shortcuts

- 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.

✓ Save hover for shortcuts

✓ Keep in touch





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



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RWD patterns



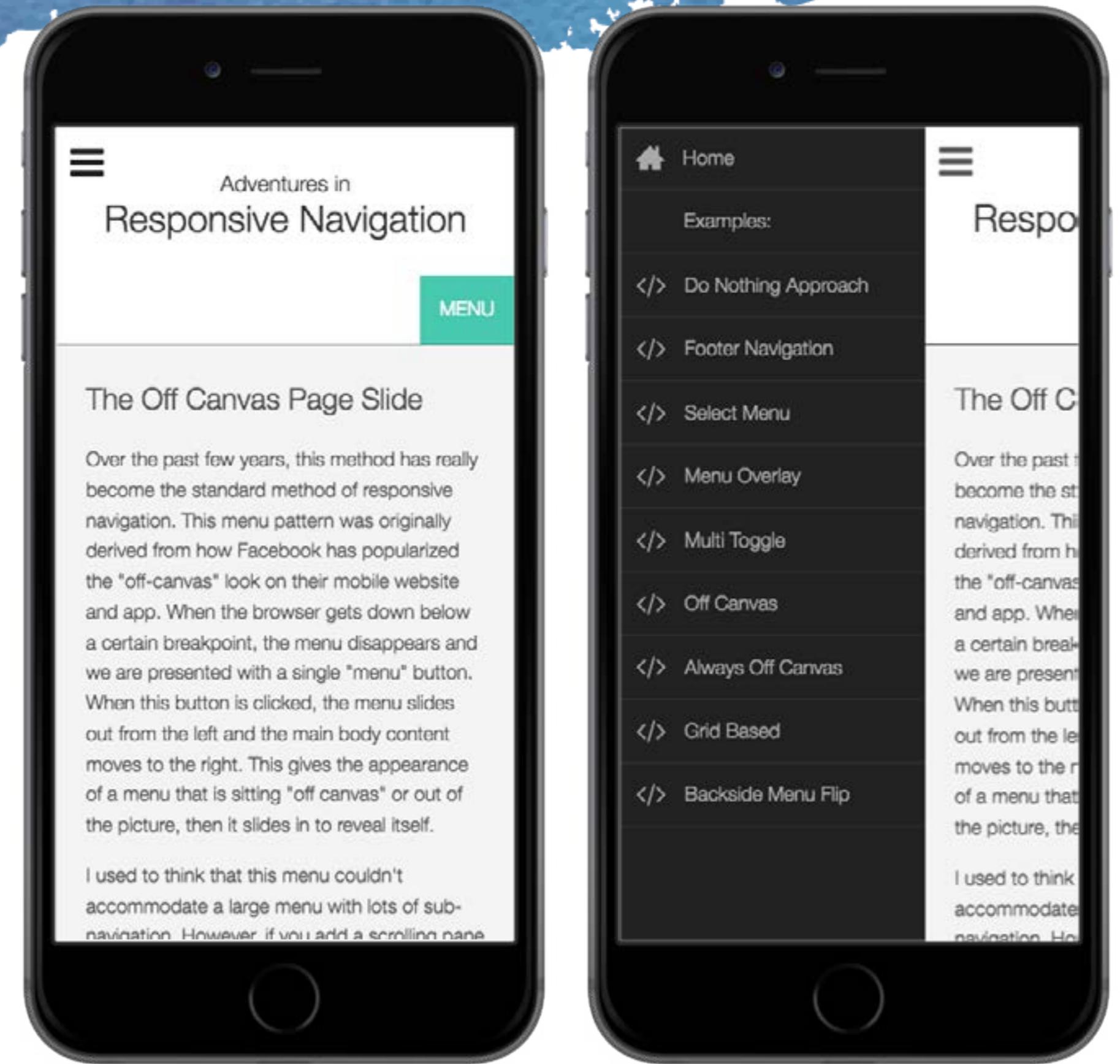
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→ **Design patterns**
are **recurring solutions**
that solve **common** design problems.



✓ Navigation patterns

- Menus
- Tabs
- Jumping in hierarchy
 - breadcrumbs
 - fat footer
 - ...
- Content
 - Carousel
 - Tag cloud
 - Pagination
 - ...





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✓ Navigation patterns

✓ Forms

- Password Strength Meter
- WYSIWYG
- Input Feedback
- Captcha
- Calendar Picker
- Inplace Editor
- Drag and drop
- Good Defaults
- ...

Password *

 ·····

>Password strength: Weak

Confirm password *

 ·····

Passwords match: yes

Recommendations to make your password stronger:

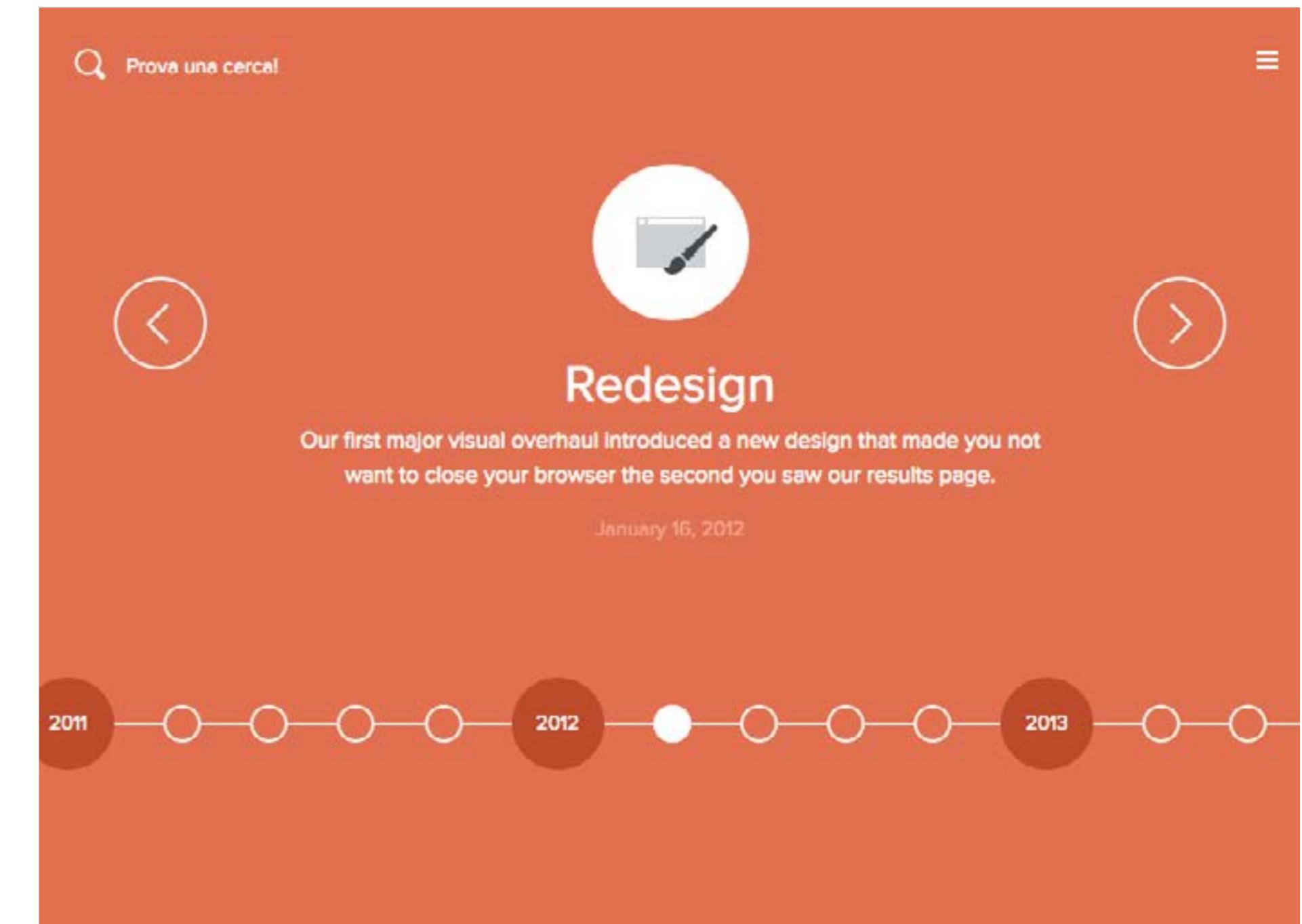
- Make it at least 12 characters
- Add uppercase letters
- Add numbers
- Add punctuation
- Make it different from your username



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- ✓ Navigation patterns
- ✓ Forms
- ✓ Dealing with data

- Tables
- Formatting data (FAQs, Dashboard,...)
- Images (Slideshow, Gallery, Zoom...)
- Search (autocomplete, search filters)

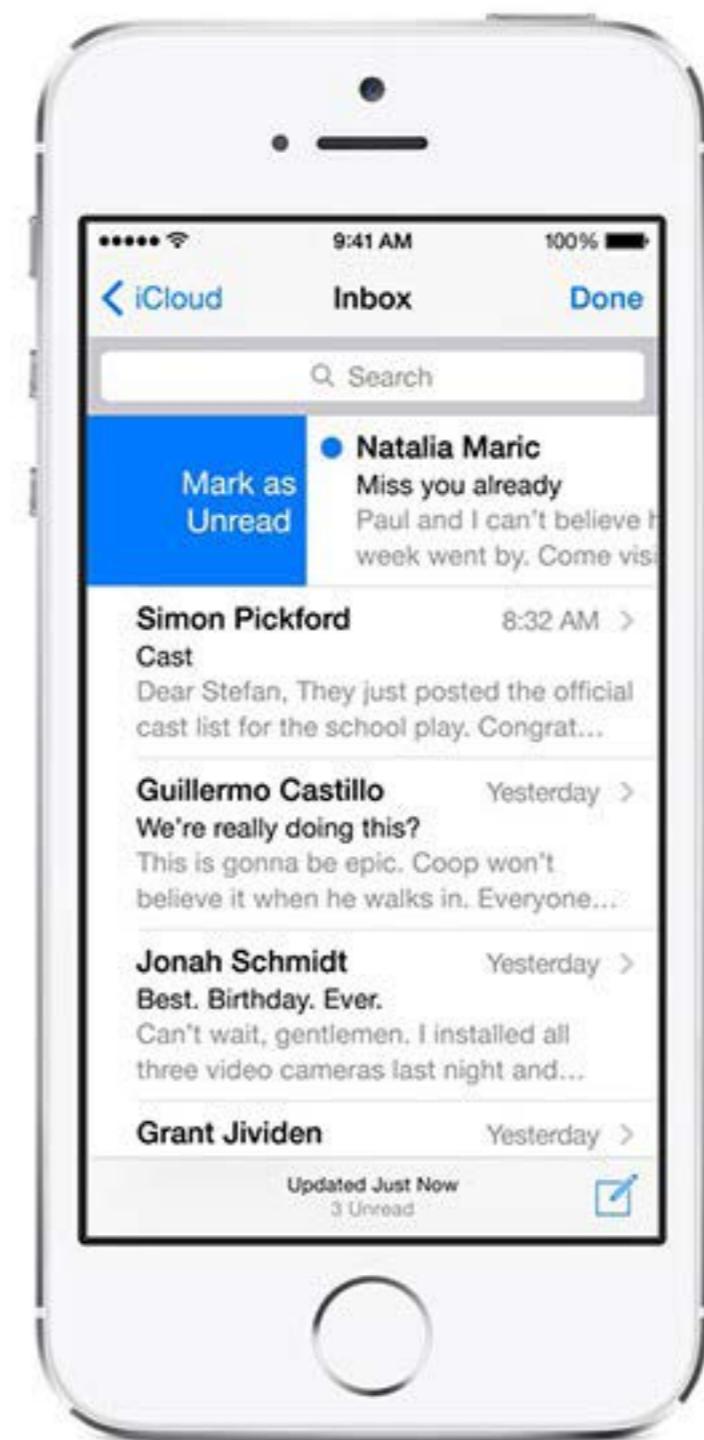


duckduckgo.com/about



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- ✓ Navigation patterns
- ✓ Forms
- ✓ Dealing with data
- ✓ Shopping
- ✓ Progressive Disclosure
- ✓ Onboarding
- ✓ Social, Grids, ...





Conclusions



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- ✓ **Keep adapting your workflow**
- ✓ **Keep in weight**
- ✓ **Take the most of new technologies**
- ✓ **Keep the user in mind**
- ✓ **Be prepared for the uncertain**



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✓ Keep evolving.



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Thank you!



@chumillas



JOIN US FOR CONTRIBUTION SPRINTS

First Time Sprinter Workshop - 9:00-12:00 - Room Wicklow 2A

Mentored Core Sprint - 9:00-18:00 - Wicklow Hall 2B

General Sprints - 9:00 - 18:00 - Wicklow Hall 2A



26-27 May 2017
Athens, Greece

#FUAthens





WHAT DID YOU THINK?

Evaluate this session

events.drupal.org/dublin2016/schedule

THANK YOU!