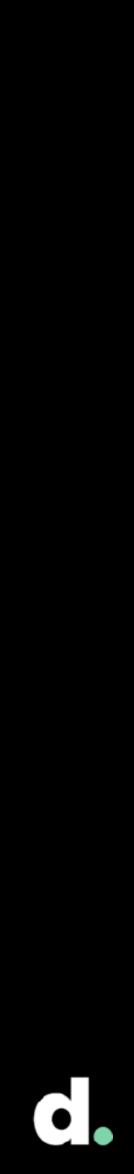
# Elements of web Get into the nitty gritty with Lateral Nord





# **Product design consultant**

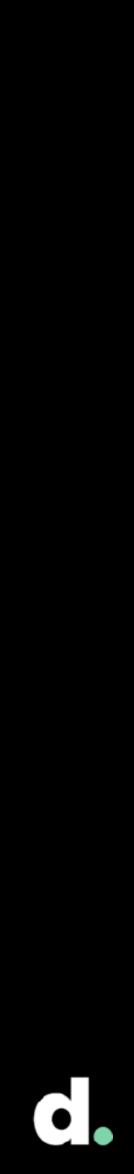






ProductBeat

jerryjappinen@lateralnord.com +358 40 7188776 @jerryjappinen



### First things first





### What is the web?



# The web is an open platform for everyone





# **Open platform**

Everything on the web...

- is open and public (source code and assets)
- can be manipulated by end-users
- can be manipulated by browsers
- can be manipulated by extensions
- can be linked and embedded on other services



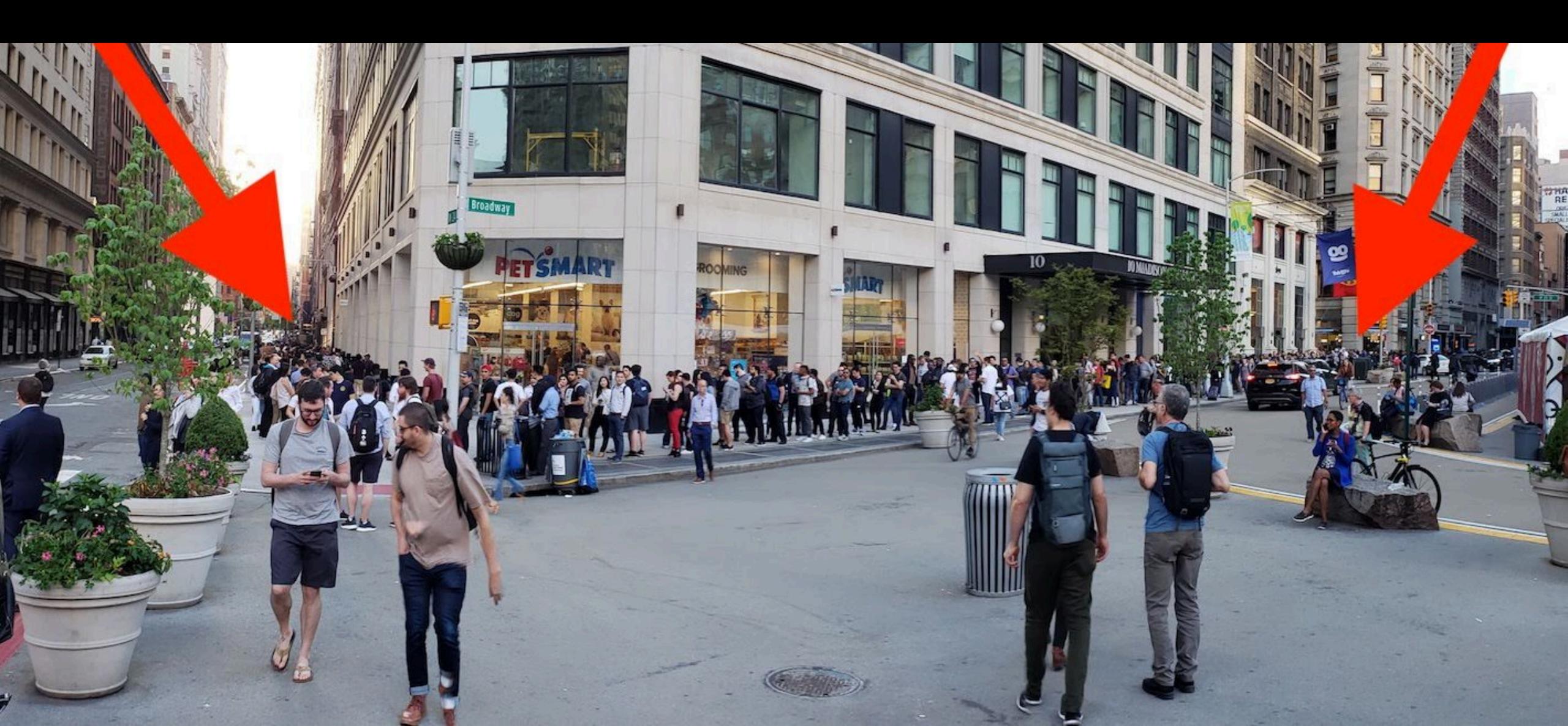
### How designers see the user



### How developers see the user

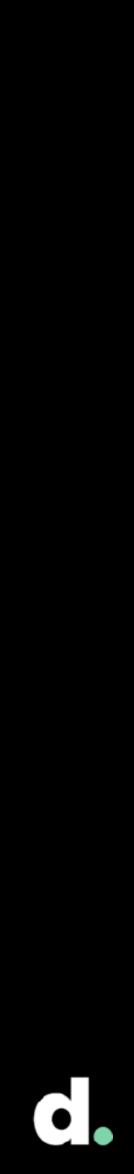


### How users actually are

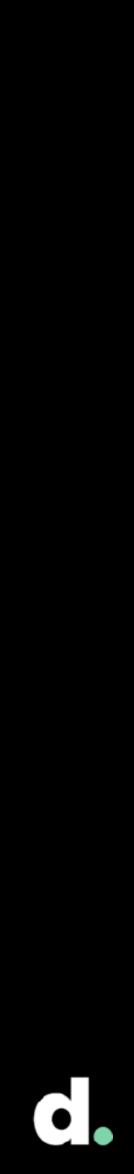




# 1. Device interaction 2. Layout model **3. Visuals** 4. Elements 5. Auditing 6. Technical terminology



# 1. Device interaction 2. Layout model 3. Visuals 4. Elements 5. Auditing 6. Technical terminology



### Devices

- Smart watches • Phones
- Tablets • Smart TVs
- Screen readers Laptops
- Desktops • Outdoor displays

- E-readers
- Printers
- Game consoles
- Smart fridges

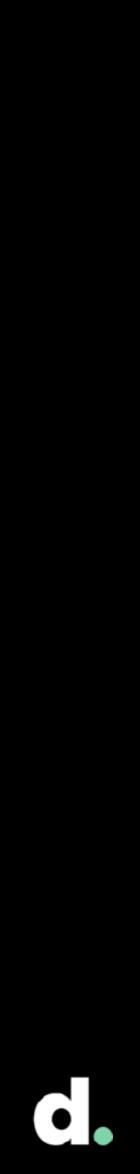


### Screens

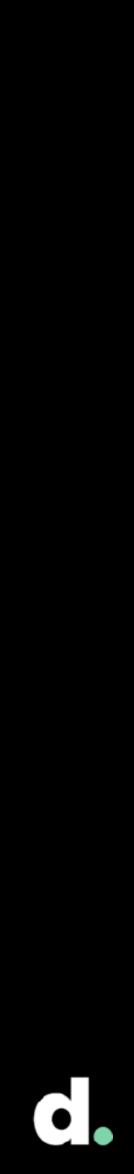
- Matte vs glossy
- High vs low-DPI
- OLED vs LCD
- E-ink
- SDR vs HDR
- Viewing angles
- Color reproduction



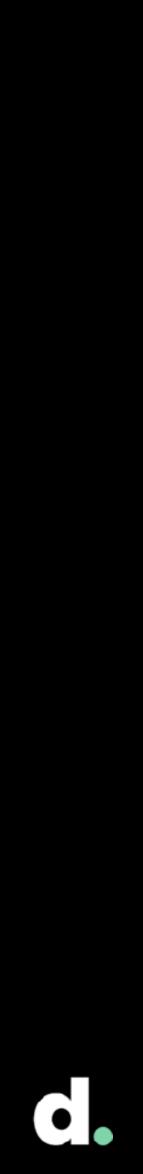




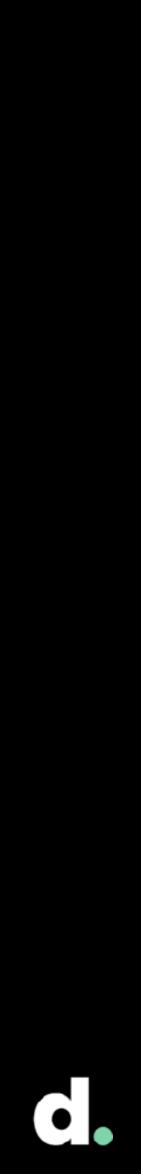








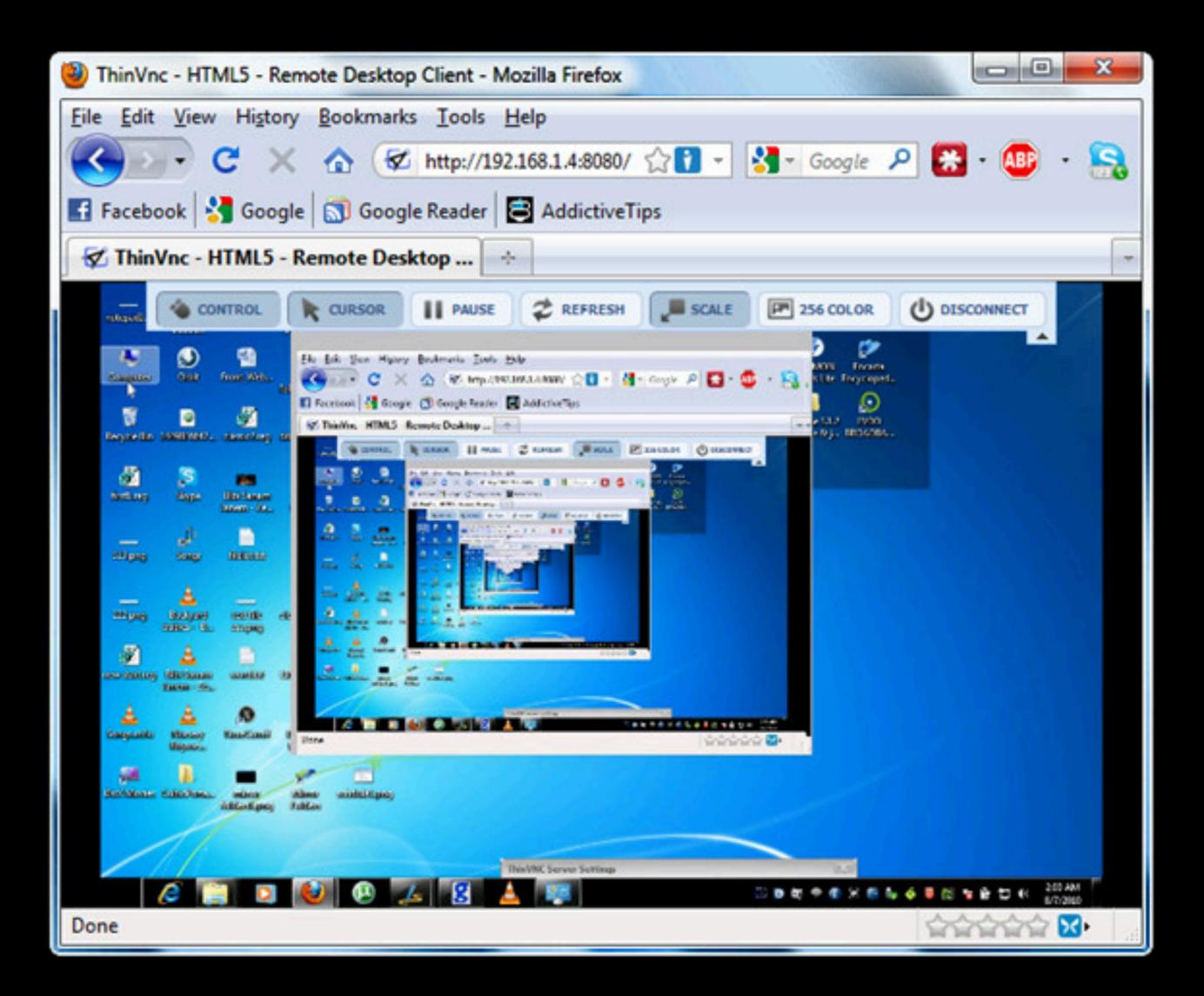




### Browser chrome

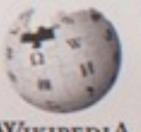
- Pages are (typically) continuous and dynamically sized
- Elements within a page can scroll
- Horizontal vs. vertical
- Free scrolling vs. paginated vs. automatic







### 3:26 1



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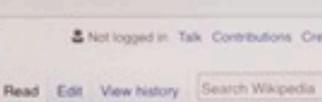
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### en.wikipedia.org



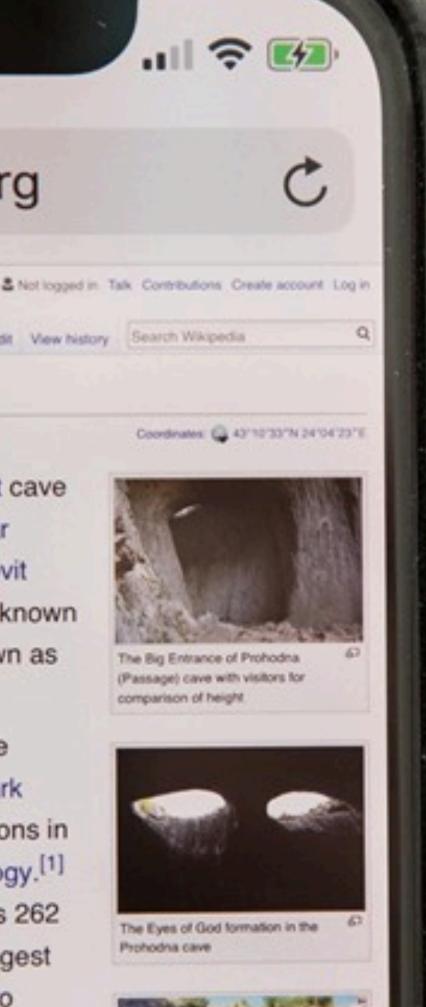
Article Talk

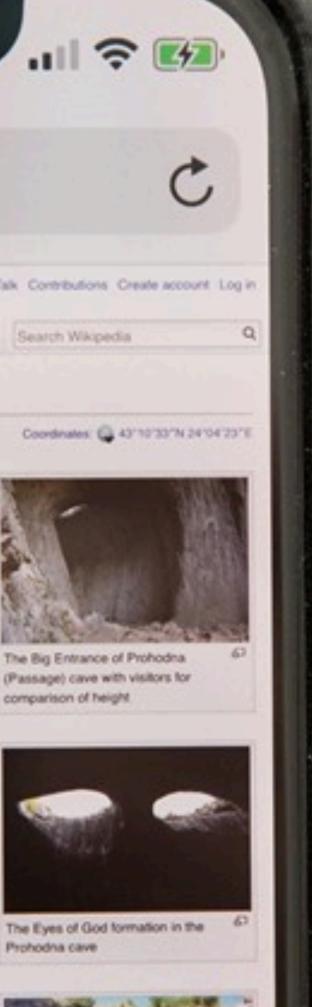
### Prohodna

From Wikipedia, the free encyclopedia

Prohodna (Bulgarian: Проходна) is a karst cave in north central Bulgaria, located in the Iskar Gorge near the village of Karlukovo in Lukovit Municipality, Lovech Province. The cave is known for the two eye-like holes in its ceiling, known as Oknata ( The windows ).

Prohodna is the best known attraction in the Karlukovo Gorge (part of the Geological Park Iskar-Panega), one of the largest karst regions in Bulgaria and a popular location for speleology.<sup>[1]</sup> Formed during the Quaternary, Prohodna is 262 metres (860 ft) long, which makes it the longest cave passage in Bulgaria. The cave has two entrances which lie opposite one another, known respectively as the Small Entrance and the Big Entrance. The former is 35 metres (115 ft) high and the latter reaches 42.5 or 45 metres (139 or 149 ft)[2] in height The cave owes its name, which





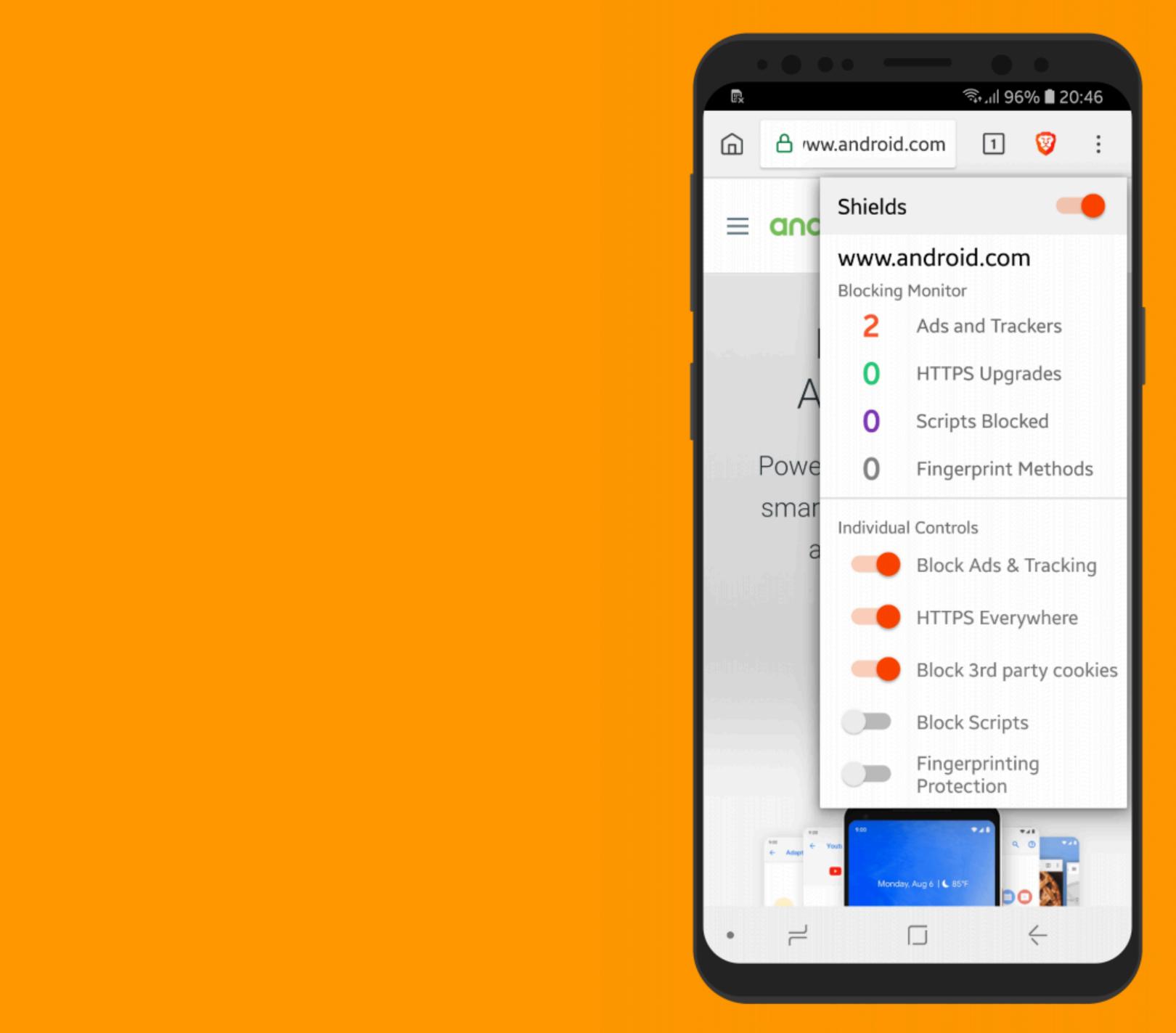


### The Eves of God formation in the

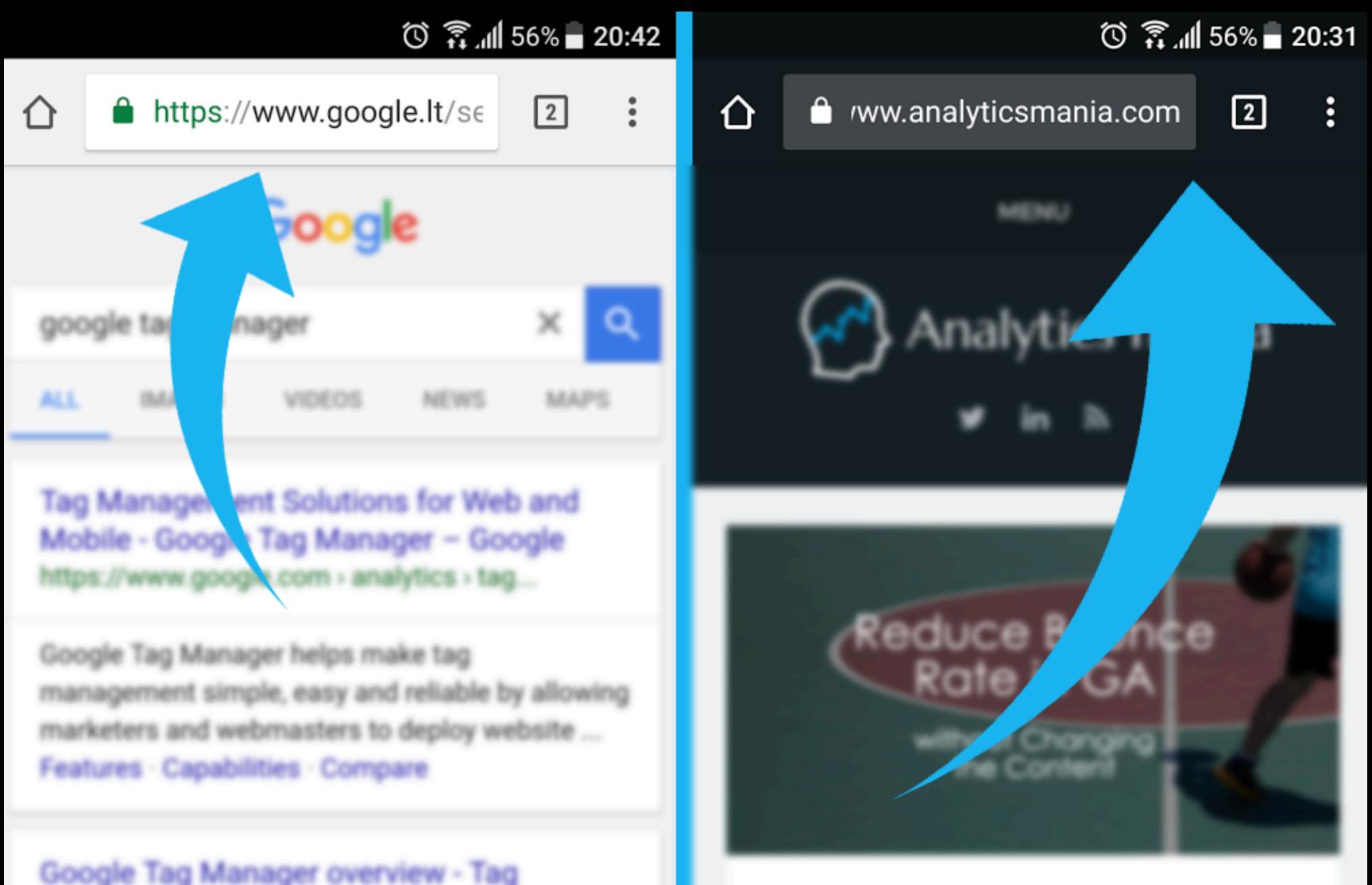
### Request Desktop Site

### Cancel









Google Tag Manager overview - Tag Manager Help - Google Support https://support.google.com + answer

### **REDUCE BOUNCE**



### media query

The release notes mention a new CSS media query for Dark Mode without saying how to use it. We can try to use a unit test from the WebKit repo as sample code instead.

In revision r237156, a test named prefers-color-scheme.html looks promising. It shows that the new prefer-color-scheme media query can either be light or dark.

Let's assume our CSS already looks good in light mode. We can use the media query to add overrides for some rules in Dark Mode:

```
/* The CSS rules we had before. */
body {
    line-spacing: 1.2em;
   color: black;
    background: white;
@media (prefers-color-scheme: dark) {
   /* Overrides for Dark Mode. */
   body {
        color: white;
        background: black;
```

We can even put CSS variables in the media query. Unfortunately, it's a pretty cutting edge feature: as of October 2018, only 91 percent of US web traffic supports it.<sup>1</sup> That's not enough for something as fundamental as setting the colors on a website.

Why don't we use the media query for light mode too? Most browsers don't know about prefers-color-scheme vet If we had enclosed the light mode























(d) (d) (+







macOS Beta 2 TB, 1.66 TB free



macOS Mojave 1.94 TB, 1.63 TB free



# Input devices

- Cursor
- Touch
- Touch pad
- Scroll wheels
- Keyboard
- Game pads

Each have their own best practices and design considerations (hit area size, hover feedback, common errors etc.)



# **Operating systems**

- Dark vs light theme
- Native input elements
- Security controls and limitations
- Platform conventions
- Design and style



### Interaction

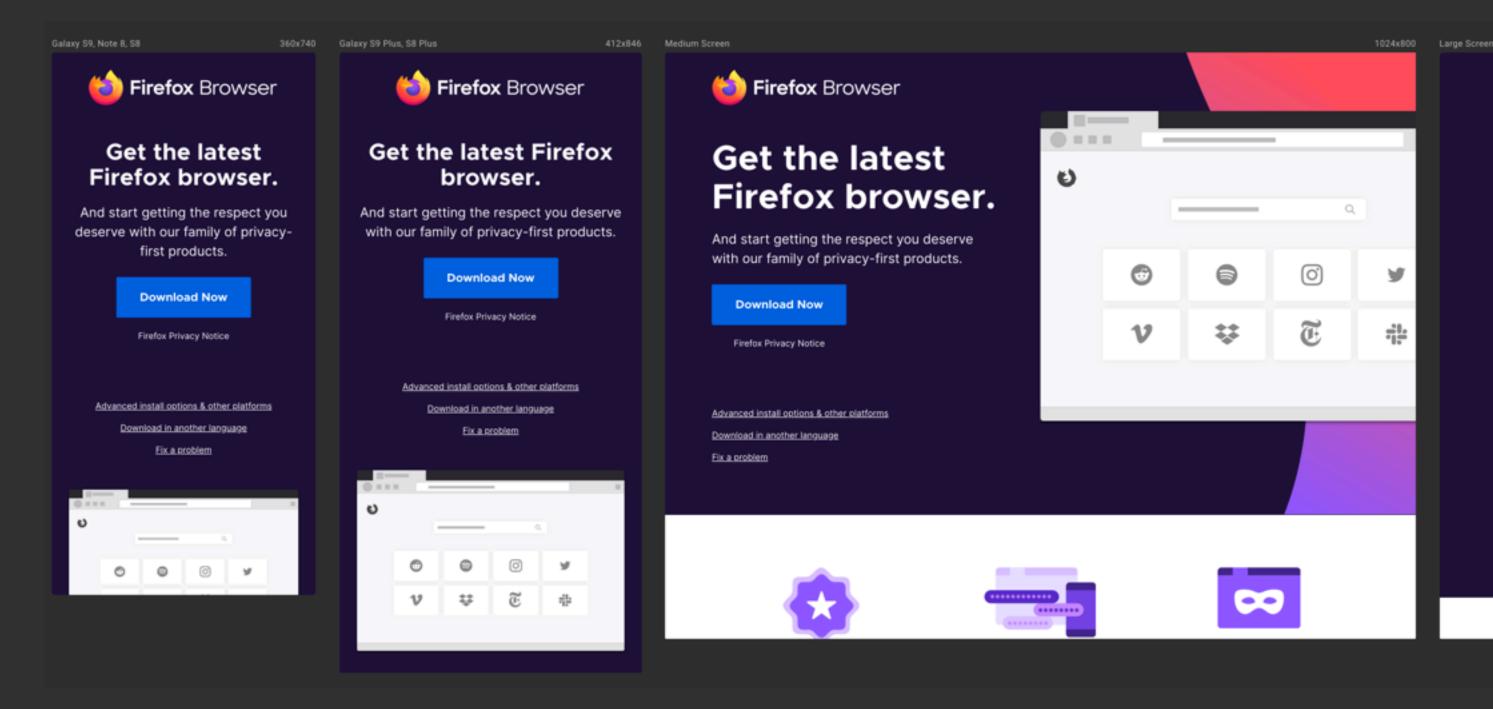
- Pointer movement
- Clicks
- Scrolls
- Touches
- Drags
- Key presses



### Viewport size

- Screen and window sizes vary between devices
- Viewport size on one device varies
- User can change viewport size in one session
- Mobile first?







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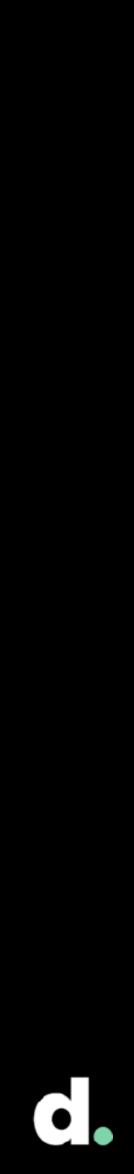
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### Scrolling

- Pages are (typically) continuous and dynamically sized
- Elements within a page can scroll
- Horizontal vs. vertical
- Free scrolling vs. paginated vs. automatic



# 1. Device interaction 2. Layout model 3. Visuals 4. Elements 5. Auditing 6. Technical terminology

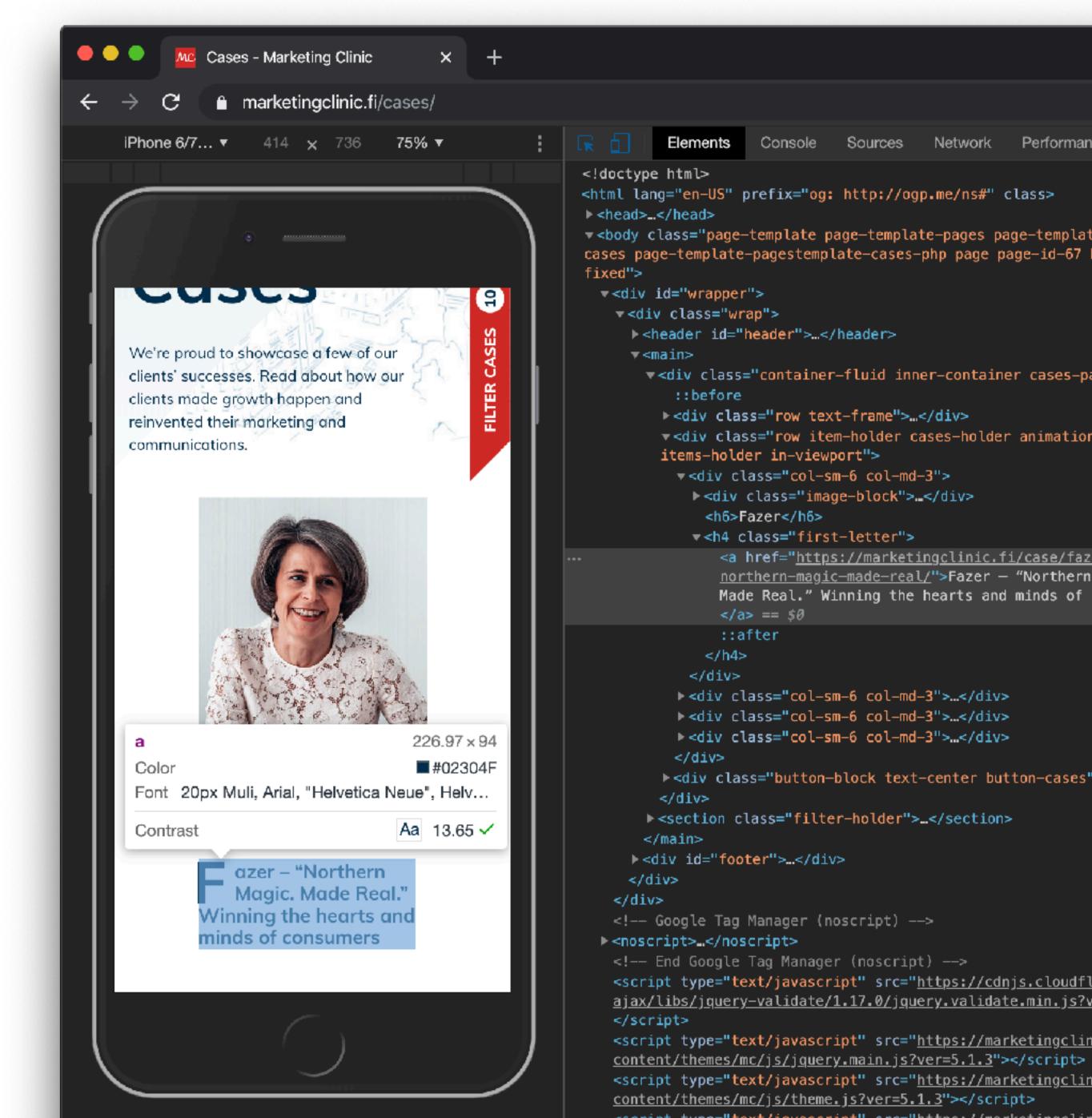


### Quick foreword



# Native vs. non-native rendering





62 ជ Console Sources Network Performance Memory Application Security Audits 🙆 3 | 🚦 🗙 Styles Computed Event Listeners DOM Breakpoints Properties >> Filter :hov .cls + v <body class="page-template page-template-pages page-template-template-</pre> element.style { cases page-template-pagestemplate-cases-php page page-id-67 headerbootstrap-c...=5.1.3:5951 h1 a, h2 a, h3 a, **h4 a,** h5 a, h6 a, .h1 a, .h2 a, .h3 a, .h4 a, .h5 a, .h6 a { color: **#02304f**; bootstrap-c...=5.1.3:6006 a { v<div class="container-fluid inner-container cases-page"> transition: ► color 0.3s; <u>bootstrap-c...r=5.1.3:172</u> a { v<div class="row item-holder cases-holder animation-block js-</pre> color: #d12b27; text-decoration: > none; background-color: Intransparent; A -webkit-text-decoration-skip: objects; style.css?v..=5.1.3:1139 \* { <a href="<u>https://marketingclinic.fi/case/fazer-</u> max-height: 1000000px; <u>northern-magic-made-real/">Fazer - "Northern Magic.</u> Made Real." Winning the hearts and minds of consumers \*, \*:before, \*:after { style.css?v..=5.1.3:1135 box-sizing: inherit; bootstrap-c...er=5.1.3:35 \*, \*::before, \*::after { box-sizing: border-box; a:-webkit-any-link { user agent stylesheet color: -webkit-link; cursor: pointer; ><div class="button-block text-center button-cases">...</div> text-decoration:> underline; Inherited from h4.first-let... @media (max-width: 639.98px) .cases-holder h4 { style.css?v...5.1.3:10600 font-size: 20px; margin: ▶ 0 0 15px; @media (max-width: 767.98px) <script type="text/javascript" src="https://cdnjs.cloudflare.com/</pre> style.css?v...=5.1.3:9358 .cases-holder h4 { ajax/libs/jquery-validate/1.17.0/jquery.validate.min.js?ver=5.1.3"> font-size: 25px; margin: ▶ 0 11px 8px; <script type="text/javascript" src="https://marketingclinic.fi/wp-</pre> @media (max-width: 1023.98px) <script type="text/javascript" src="https://marketingclinic.fi/wp-</pre> .cases-holder h4 { style.css?v...=5.1.3:8530 font-size: 20px; <script type="text/jayascript" src="https://marketipoclipic.fi/wp-</pre>

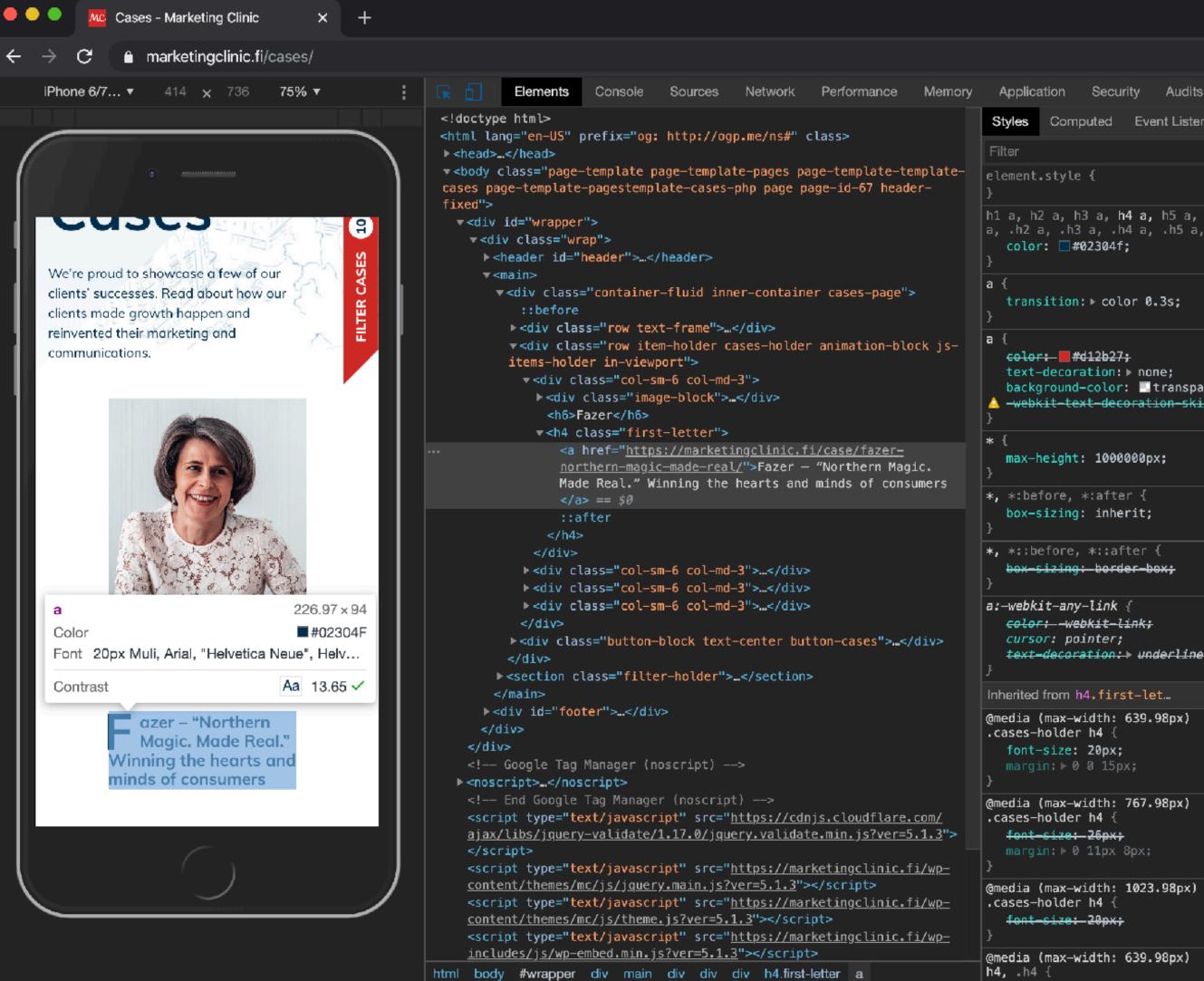


### Native rendering

A browser renders graphics natively

Every object can have properties

Different objects support different properties



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width: <b>767.98px)</b> r h4 { <del>: 26px;</del> 0 11px 8px;
width: 1023.98px) r h4 { <del>: 20px;</del>
width: 639.98px)

transition: ▶ color 0.3s;

h1 a, h2 a, h3 a, **h4 a,** h5 a, h6 a, .h2 a, .h3 a, .h4 a, .h5 a, .

Computed Event Listener

### Non-native

### Every pixel is predefined

No run-time manipulation with user interaction



### Native

Browser has data on individual elements, composing the final rendering

Design can be manipulated and tied to user interaction





# It's a bit similar to bitmap vs. vector



# Think of all the possibilities of this native rendering machine



# What design tools do you use?



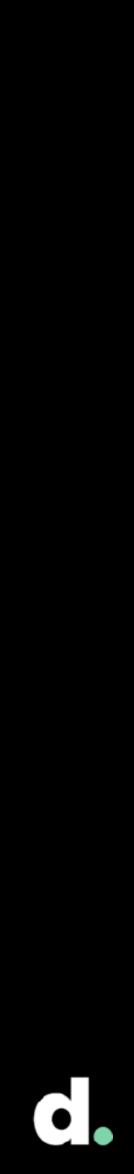
## Try to forget about them!



# Let's go through the building blocks



# 1. Device interaction 2. Layout model 3. Visuals 4. Elements 5. Auditing 6. Technical terminology



### The box model

		rder	bor
 	 ing	paddi	
	content		
	content		



### This is a box

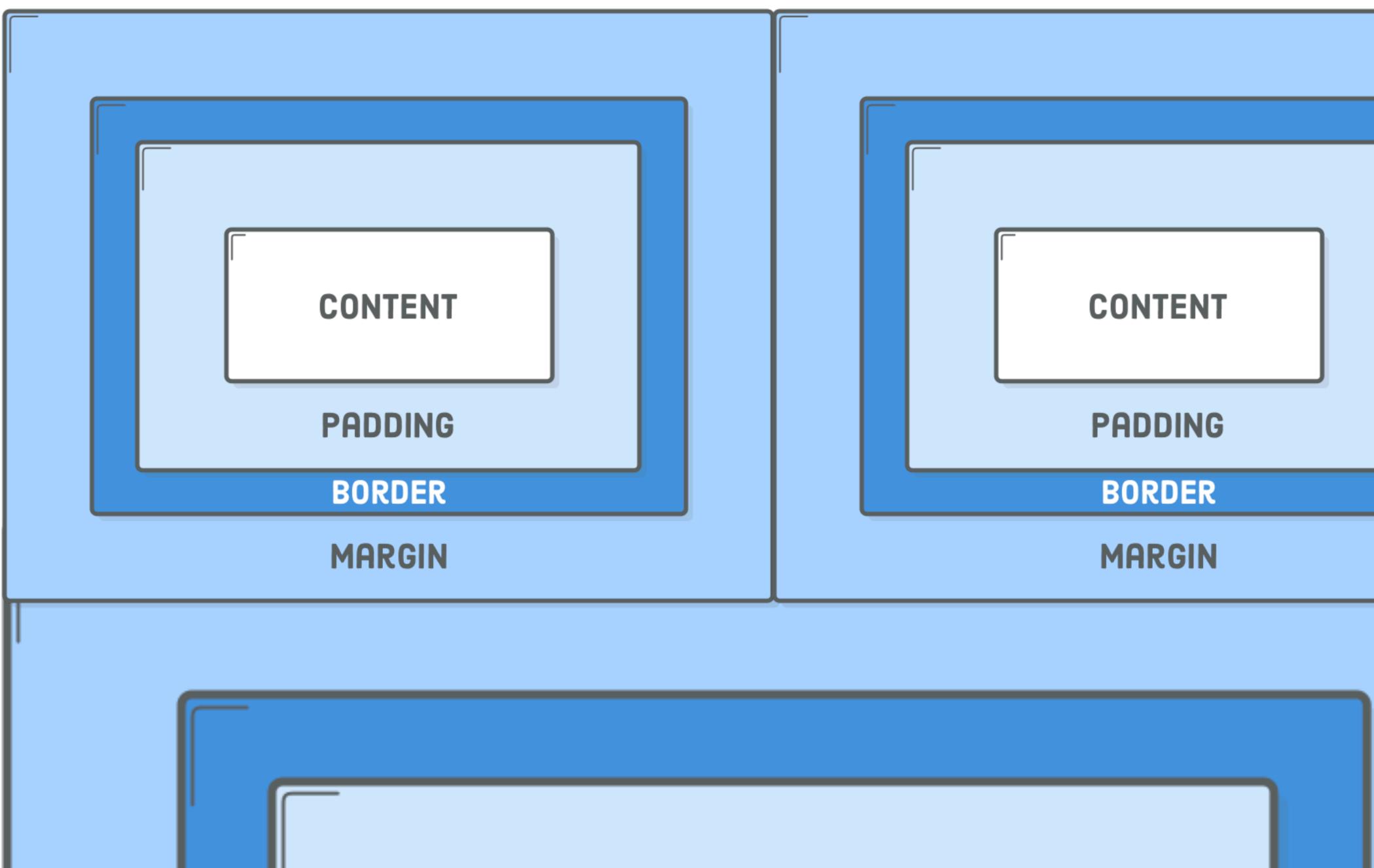
### It has properties

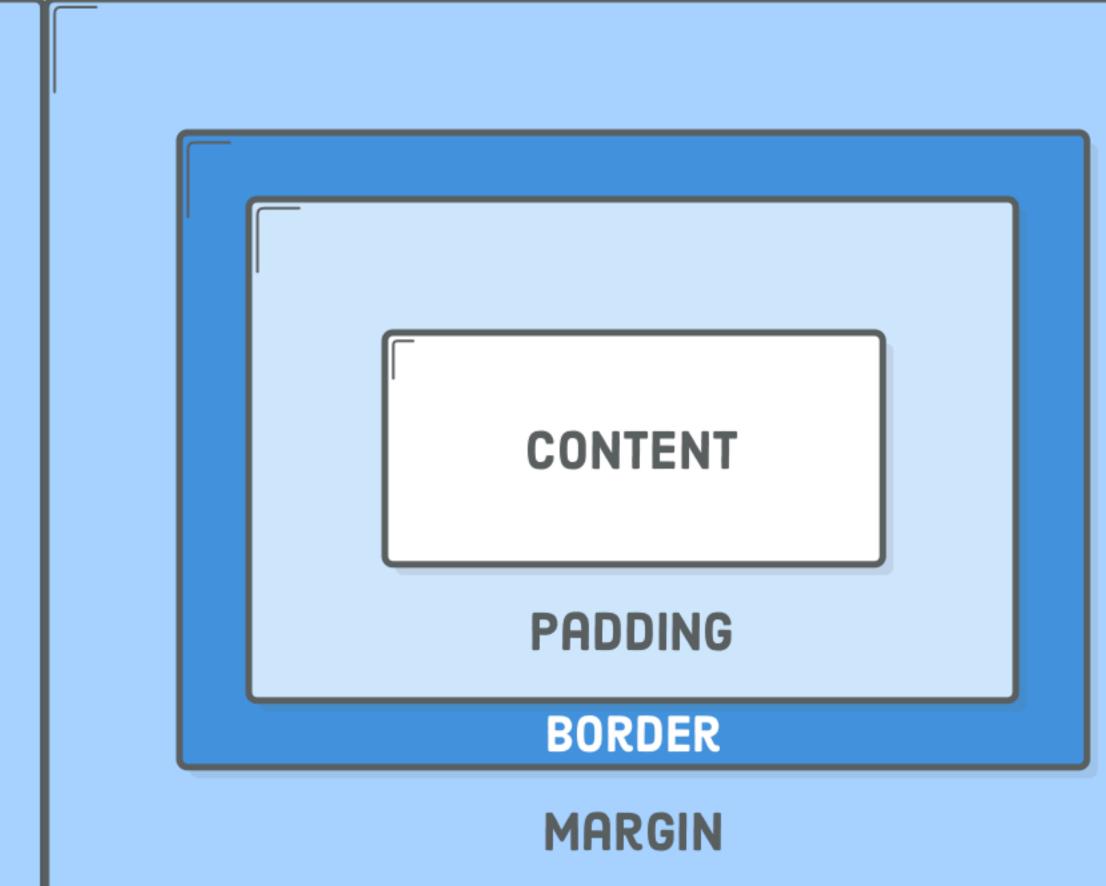
### Properties take up space

framer.com/blog/posts/box-model











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	The SVG 2 Conundrum   CSS-Tricks         https://css-tricks.com > svg-2-conundrum         Nov 11, 2016 - The SVG we know and love today is "SVG 1.1 2nd edition". SVG 2 is in Editor's         Draft status at the W3C, and it's at serious risk of never getting         SVG 2 new features · w3c/svgwg Wiki · GitHub

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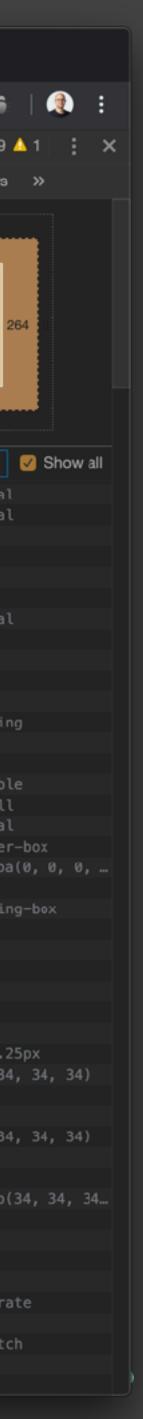


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	SVG 2 new features · w3c/svgwg Wiki · GitHub   https://github.com > svgwg > wiki > SVG-2-new-features •   sVG Working Group specifications. Contribute to w3c/svgwg development by creating an account on GitHub.   People also search for   svg 2 example   d3 text overflow   svg 3   thunderbird svg   svg wrap text   caniuse   People also ask What is SVG used for?  Kow does SVG work?

What can open SVG files?

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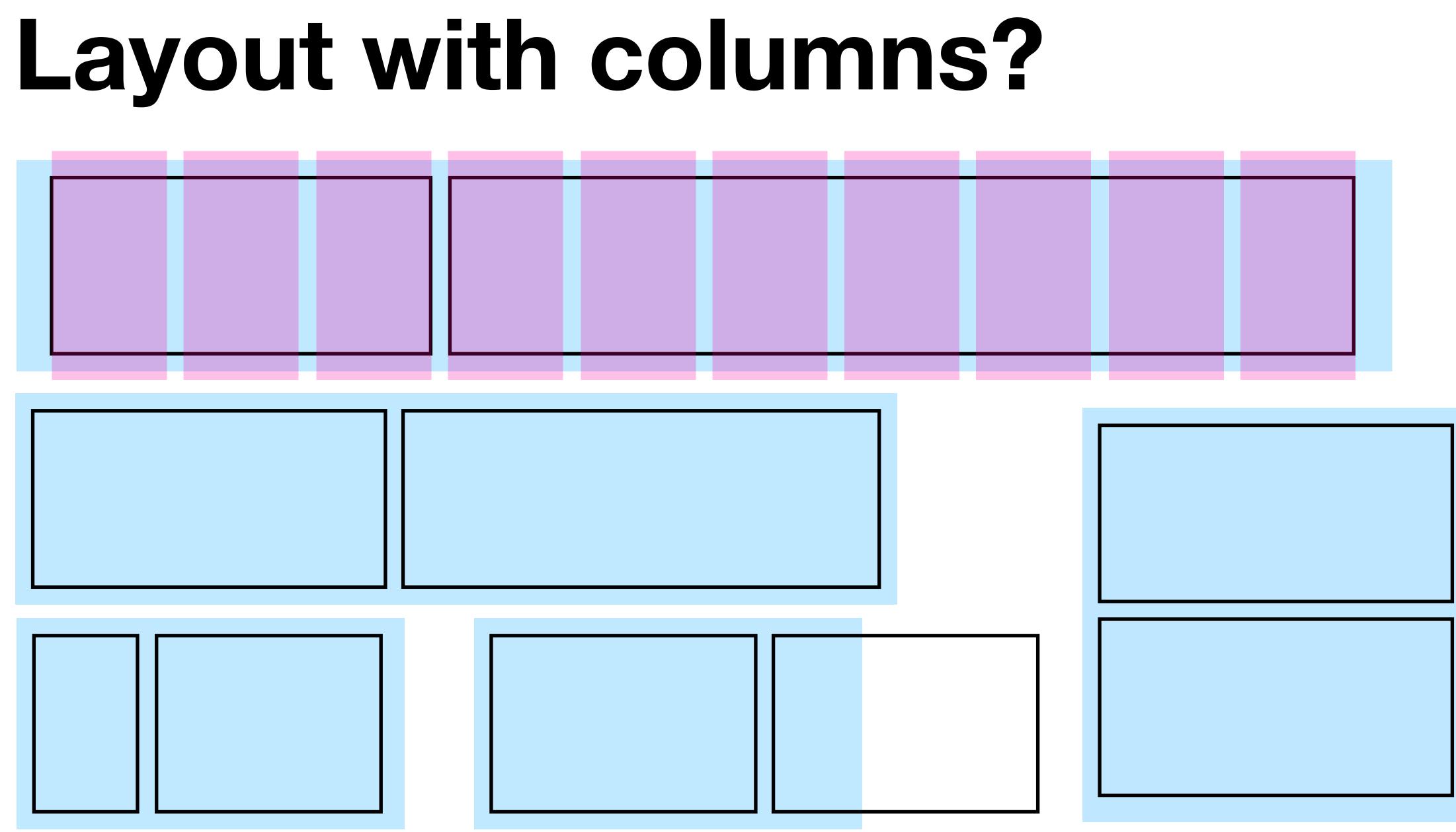


## Layout model

- Inline
- Block
- Flex
- Grid
- Absolute
- Fixed
- Canvas \*
- SVG \*

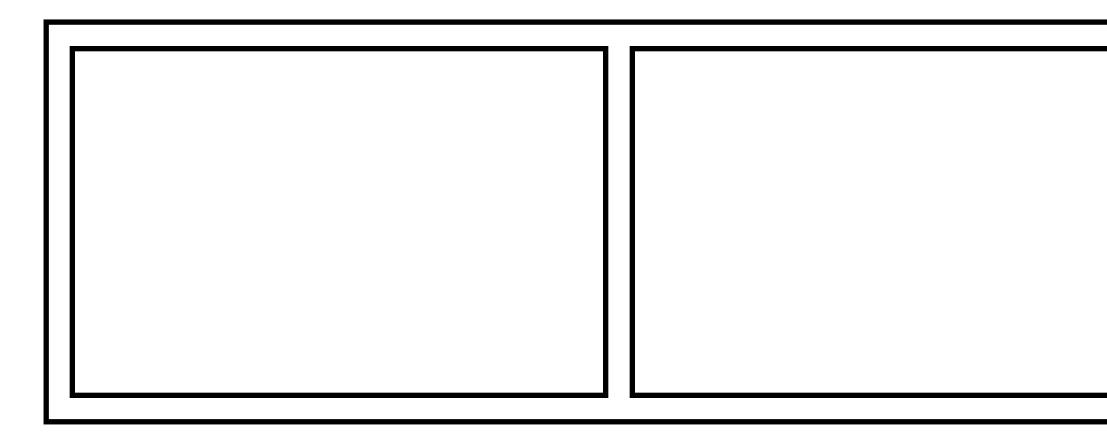
- Usually elements don't "float"
- Columns and grids mean something different from print
- Baseline grids don't exist
- Everything is nested boxes
  - ...except inline elements
  - \* Canvas/SVG





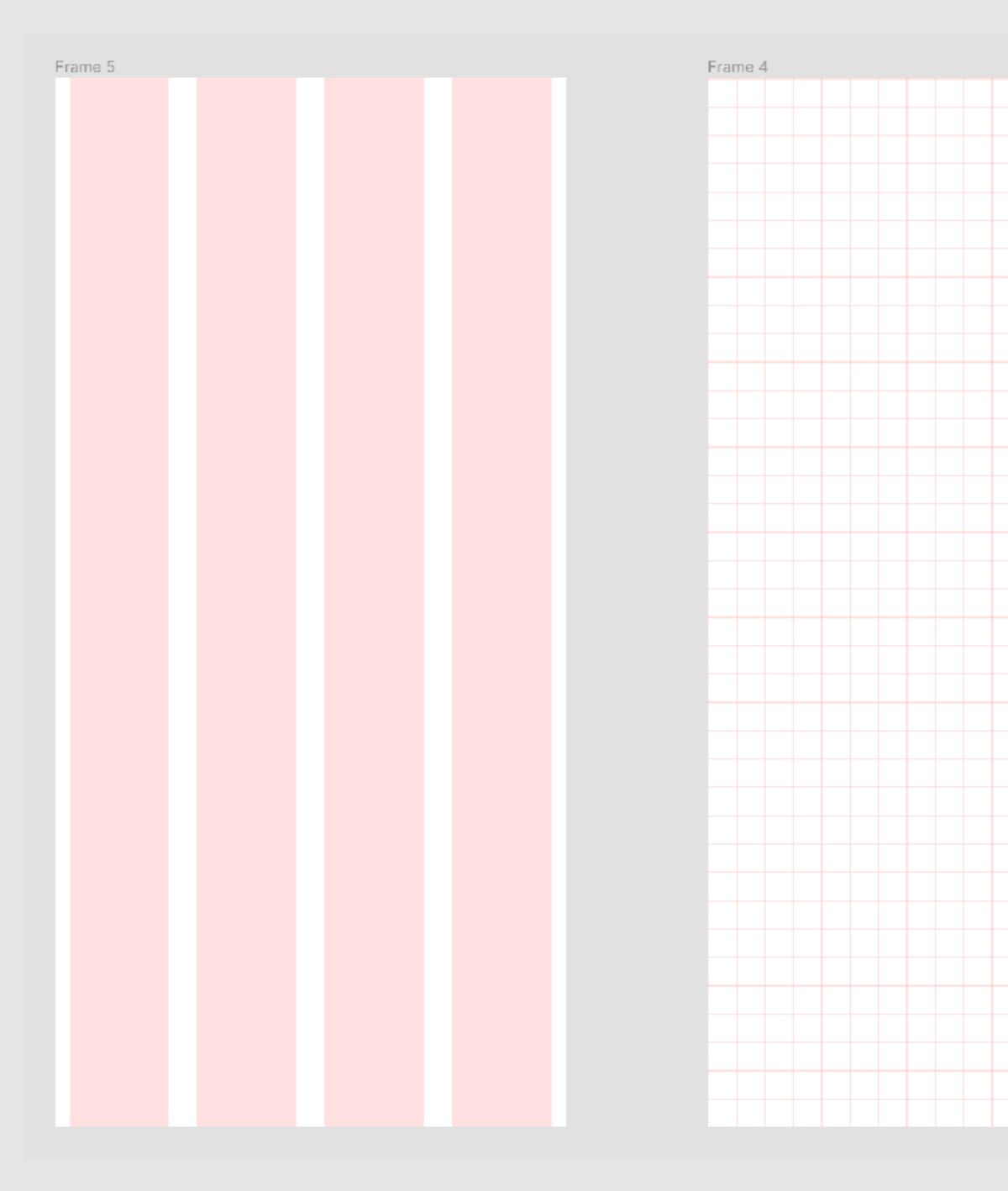


### Layout with columns?



- Traditional (e.g. 12-column) layout grids don't work well in web
- No native column grids, only hacks
- Web layouts are dynamic and responsive  $\bullet$
- Design tool for web: <u>https://webflow.com/</u>  $\bullet$



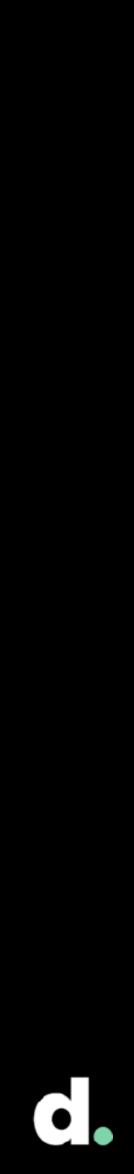


# Consider square grids for design





# 1. Device interaction 2. Layout model **3. Visuals** 4. Elements 5. Auditing 6. Technical terminology



## **Element properties**

- Dimensions
- Position
- Background color
- Background image
- Font family
- Border
- Transformation

https://www.quackit.com/css/properties/

- Layout
- Overflow and scrolling
- Opacity
- Text indentation
- Shadows
- Border radius
- •

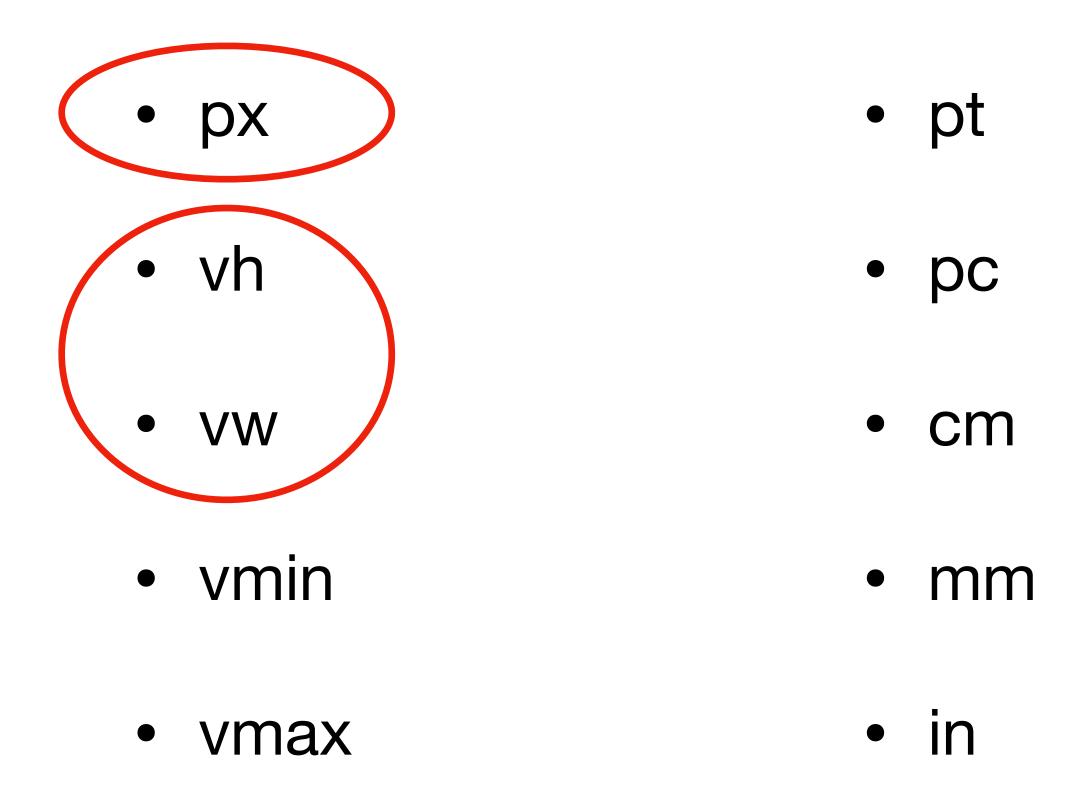


### Colors

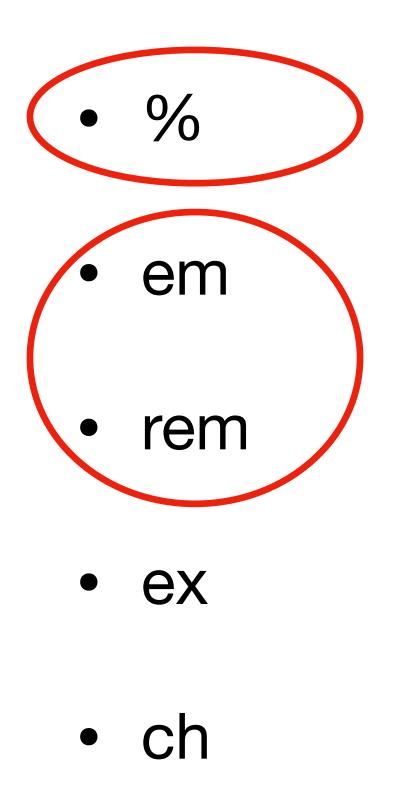
- Hex
- RGB(A)
- HSL(A)
- Keywords
- Run-time variable support
- Gradients



### Units



https://webdesign.tutsplus.com/articles/7-css-units-you-might-not-know-about--cms-22573

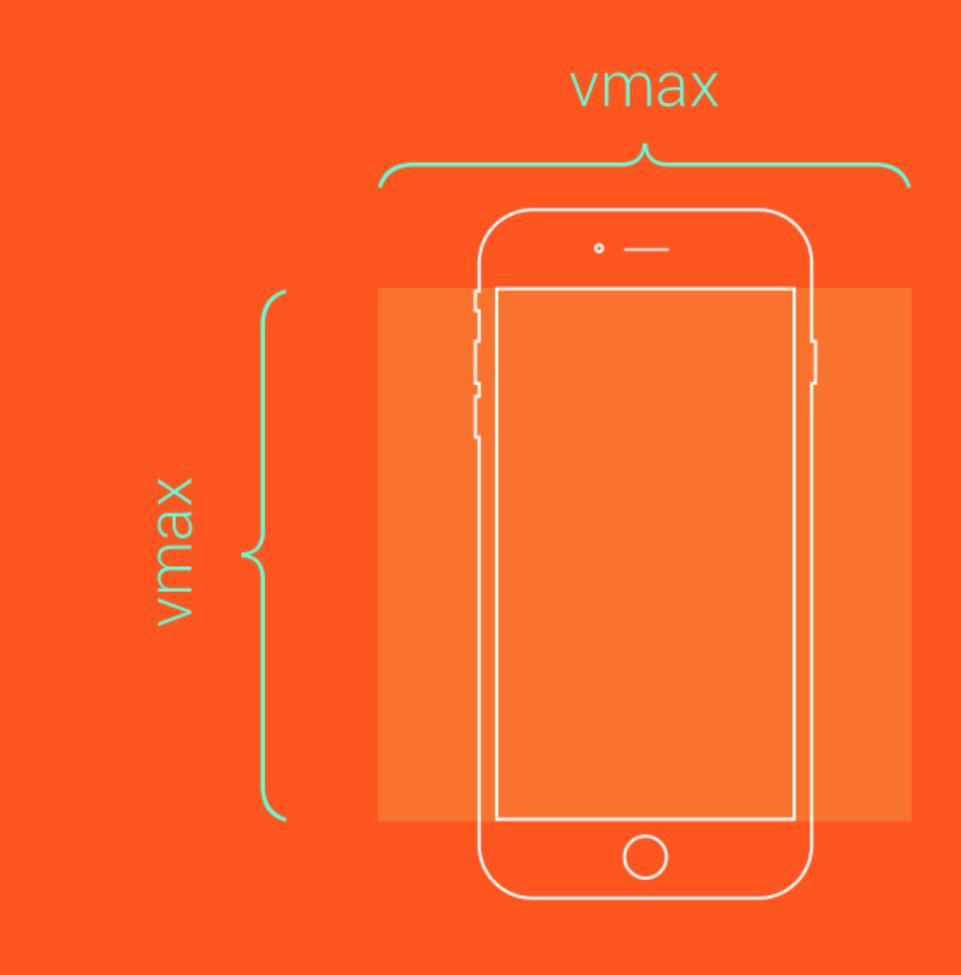


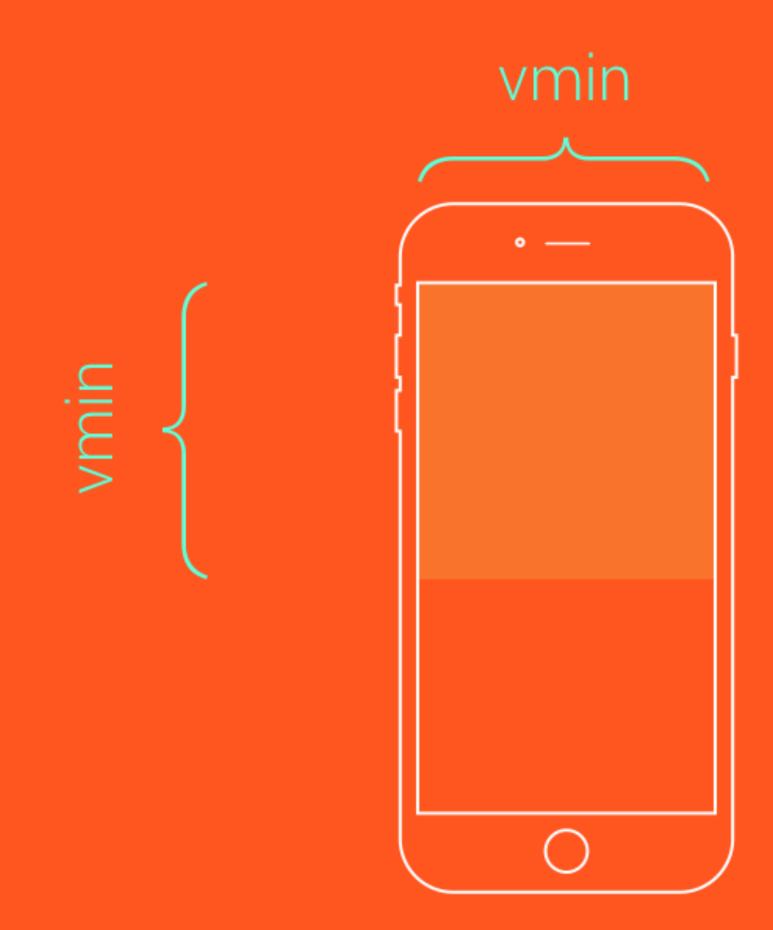


### Font sizing

- Points or pixels are fixed units
- em and rem are context-sensitive and can be scaled
- vw and vh are dependent on viewport size













### **DESIGN IN MOTION FESTIVAL**

### https://demofestival.com/

80 Screens – 24 Hours

### **Amsterdam Central Station**

2

7th of November 2019



# Typography

- Text flow can't be totally manually controlled
- Ahead of mobile platforms
- Some great typographic controls, better than you think
  - Super/subscript
  - Text directions
  - See <u>ruby annotations</u>



# Font sizing

- You can use any unit to define font sizes
- Why is a piece of text the size it is?
- Is it relative to...
  - screen size?
  - parent element's font size?
  - our place in the universe?



## Variable fonts

- New!
- Completely dynamic font properties
- Can be smoothly adjusted run-time
  - $\rightarrow$  animation
  - $\rightarrow$  interaction
- https://v-fonts.com/



# Moving image

- Native animations
- Native transitions
- Native & streaming video

- JavaScript-powered anything
- WebGL
- <u>https://easings.net/en</u>









## Bitmaps

- Multiple bitmap formats supported
- Can be adjusted with filters (blur, greyscale...)
- Can be cropped and resized in client
- Servers can most things clients can't (reduce file size, apply more filters...)
- Can be analyzed with code
  - Find dominant colors, faces etc.

















- "Native" vector format
- SVG is XML is HTML
- Supports text
- Supports CSS and JavaScript and animations
- Many libraries build on top of SVG
- Flexible, highly optimised





### Rendering of elements can be changed with filters

- Blur
- Hue
- Saturation
- Color inversion
- Contrast
- Brightness





A frame within a page that can be used for "raw" drawing and rendering

Elements can be manipulated with code

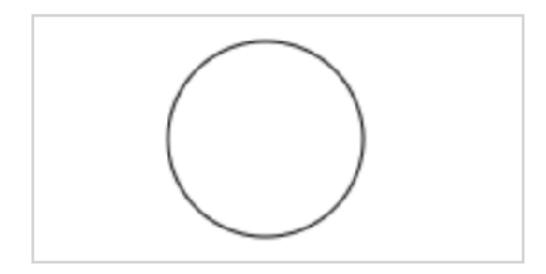
Supports 2D and real 3D

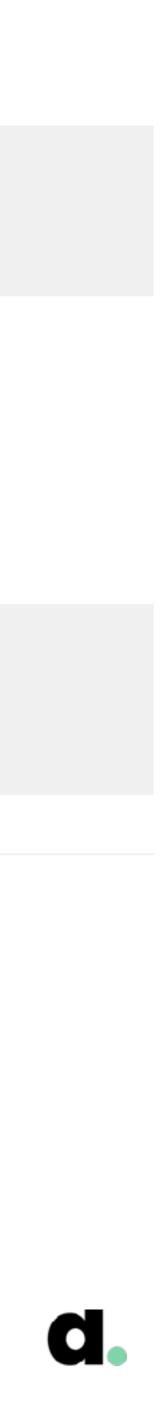
### Example

```
var c = document.getElementById("myCanvas");
var ctx = c.getContext("2d");
ctx.moveTo(0, 0);
ctx.lineTo(200, 100);
ctx.stroke();
```

Try it Yourself >>

### Draw a Circle







### Web elements are 2D

- With stacking order (z-index)
- With transformations
- With perspective

### Better 3D support can be achieved with

- JavaScript libraries
- SVG
- WebGL and shaders

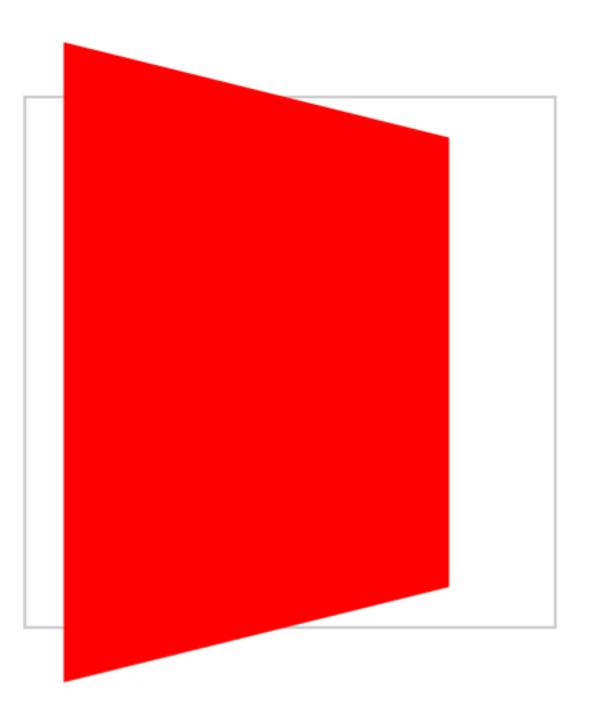


🔎 🔍 🌀 svg 2 -	- Google Search × +
← → C	oogle.com/search?q=svg+2&oq=svg+2&aqs=chrome69i57j0l6j69i60.783j0j1&sourceid=chrome&ie=UTF-8 🏠 🗗 🔹 🖨 🧍 🍭 🗄
Google	svg 2
	Images       Videos       Images       Images
	About 5 970 000 000 results (0,45 seconds)
	SVG 2 support in Mozilla - SVG: Scalable Vector Graphics   MDN         https://developer.mozilla.org > en-US > docs > Web > SVG_2_support_in         Mar 23, 2019 - SVG 2 is the next major version of the SVG standard, which is a complete rework of the SVG 1.2 draft.         Basic Data Types and
	The SVG 2 Conundrum   CSS-Tricks         https://css-tricks.com > svg-2-conundrum         Nov 11, 2016 - The SVG we know and love today is "SVG 1.1 2nd edition". SVG 2 is in Editor's         Draft status at the W3C, and it's at serious risk of never getting         SVG 2 new features · w3c/svgwg Wiki · GitHub

Vector Graphics   MDN	
SVG_2_support_in	
standard, which is a complete rework	
oordinate Systems	
late Recommendation of SVG 2. This	
.1 2nd edition". SVG 2 is in Editor's	
ing	
itHub	



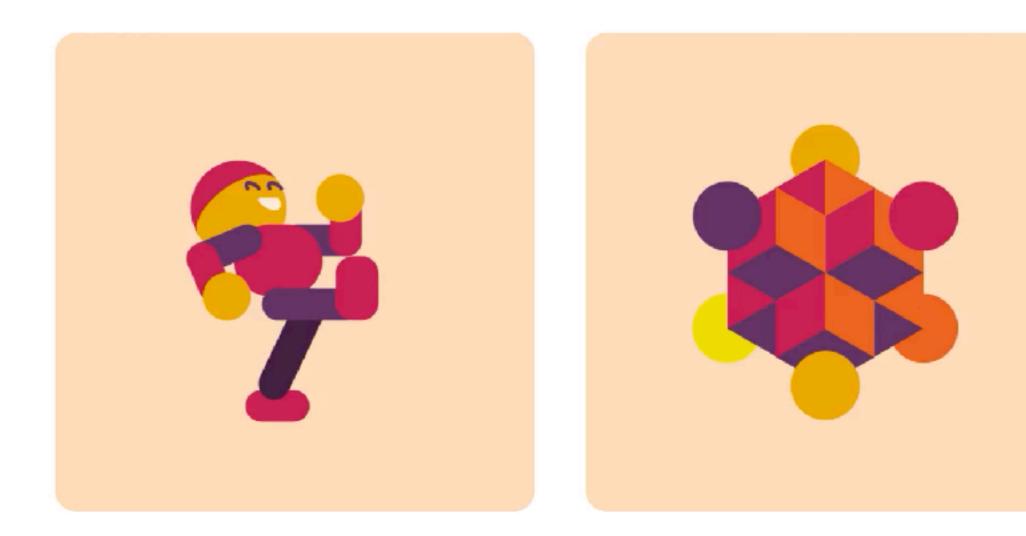




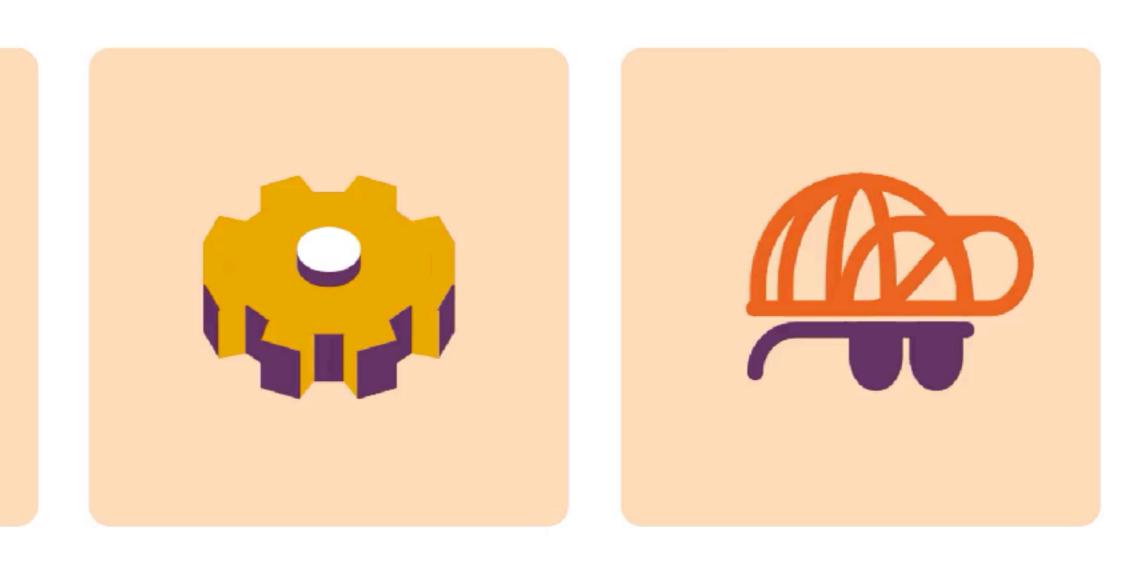
https://blog.logrocket.com/the-noobs-guide-to-3d-transforms-with-css-7370aafd9edf/

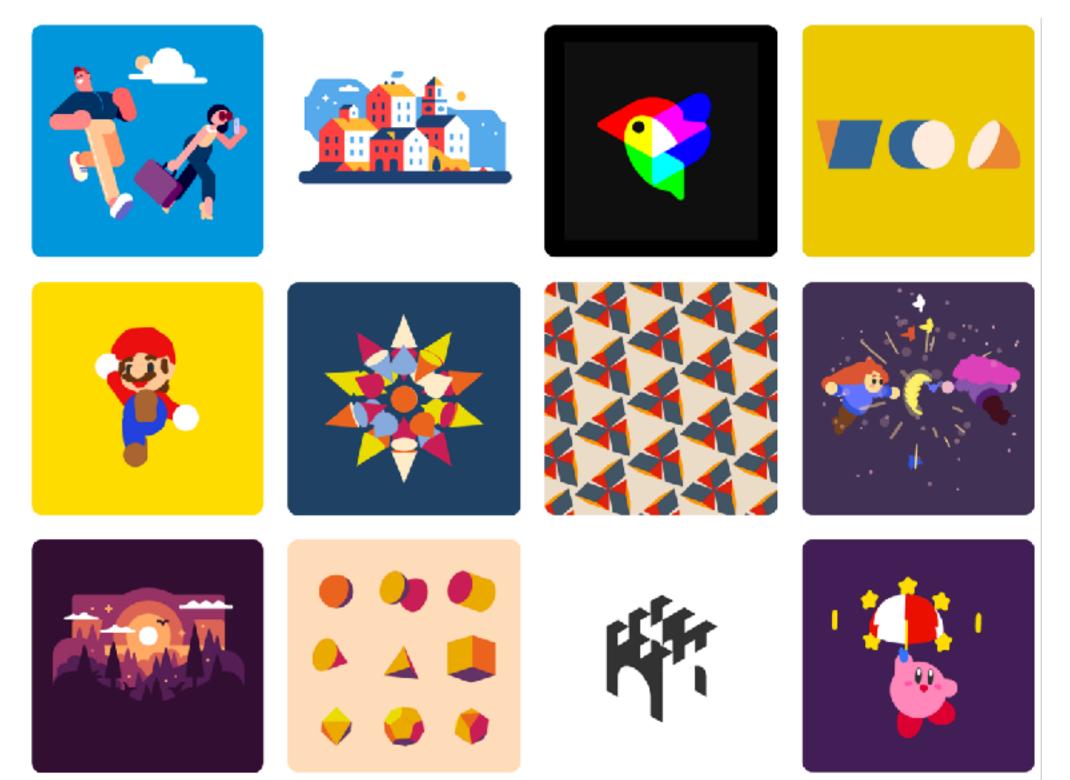
/\* perspective function in transform property \*/
transform: perspective(400px) rotateY(45deg);





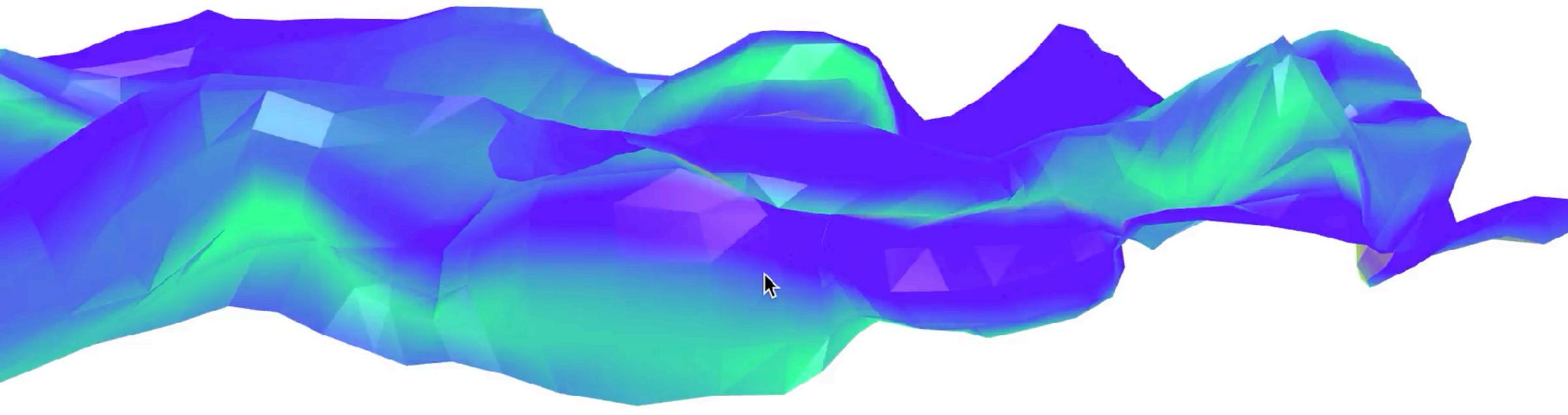
https://zzz.dog/







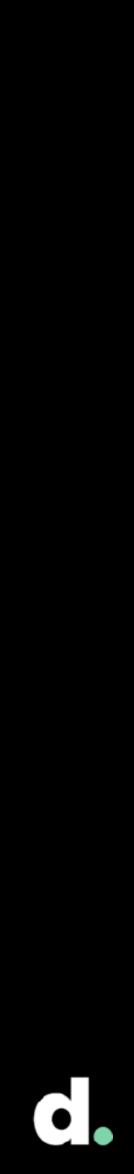








# 1. Device interaction 2. Layout model 3. Visuals 4. Eements 5. Auditing 6. Technical terminology



### **Context matters**

- Web sites
- Emails
- Banners
- Rich app components
- Screen readers
- RSS and web readers



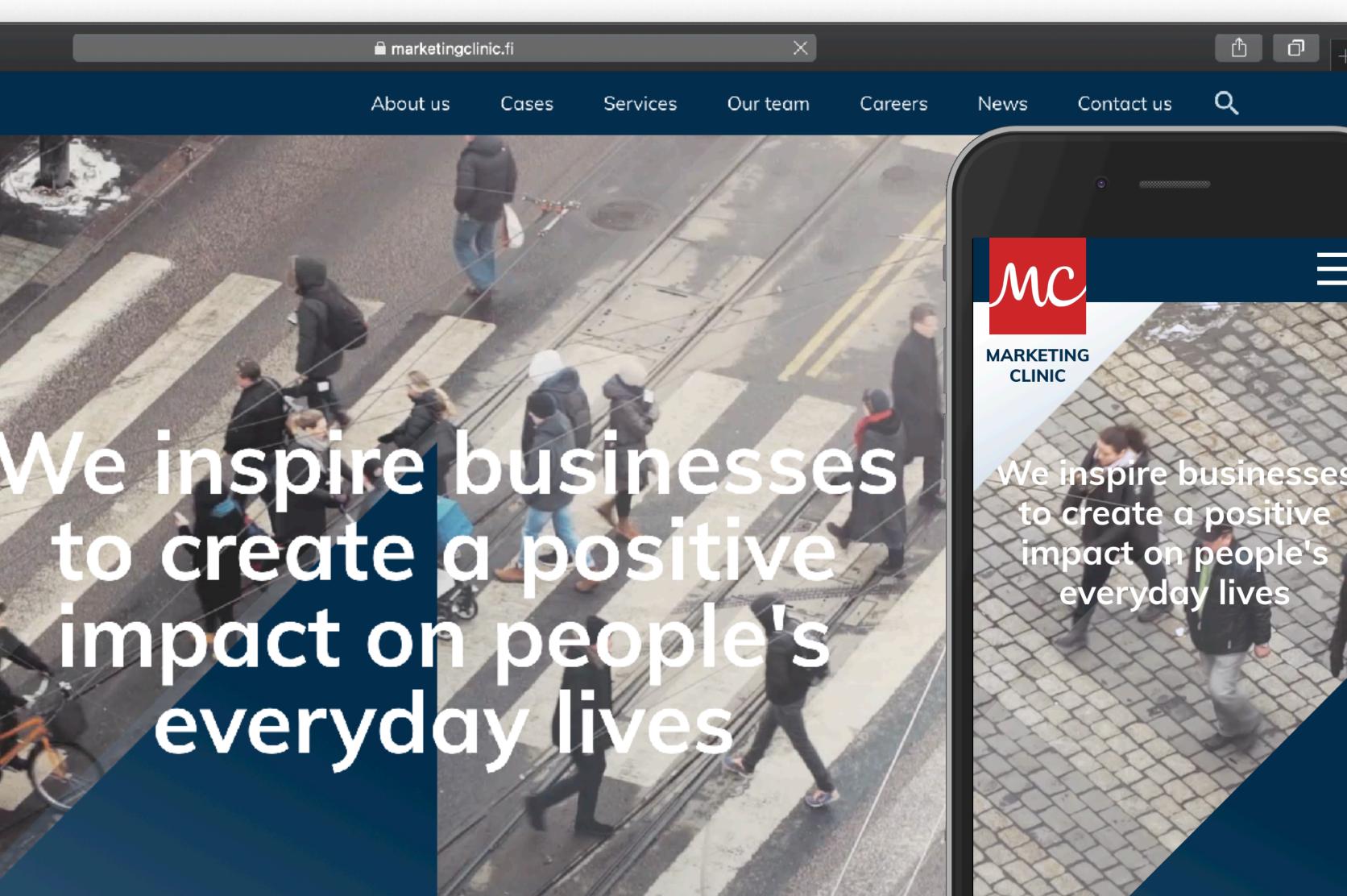


### Web site

MC

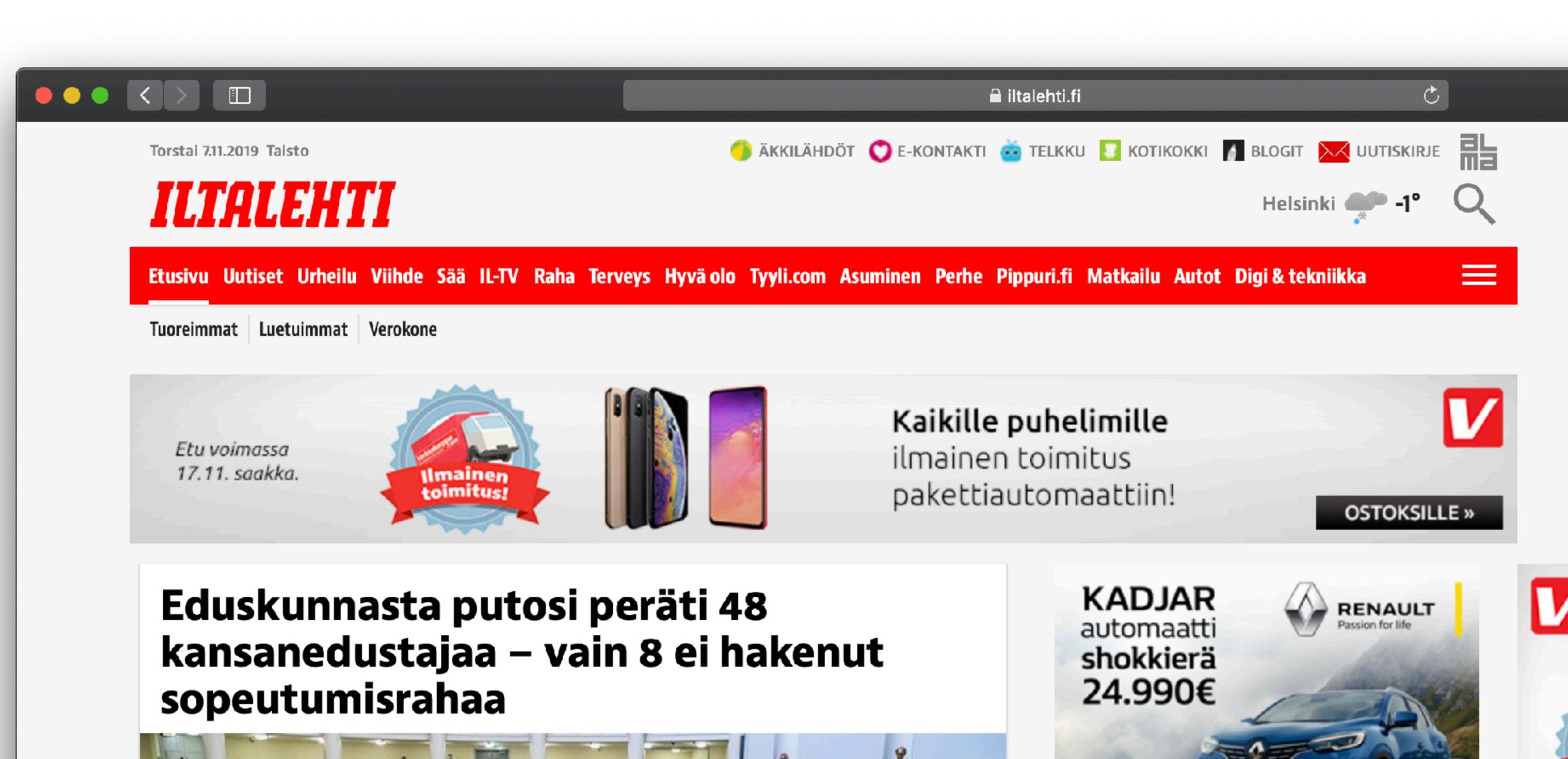
MARKETING

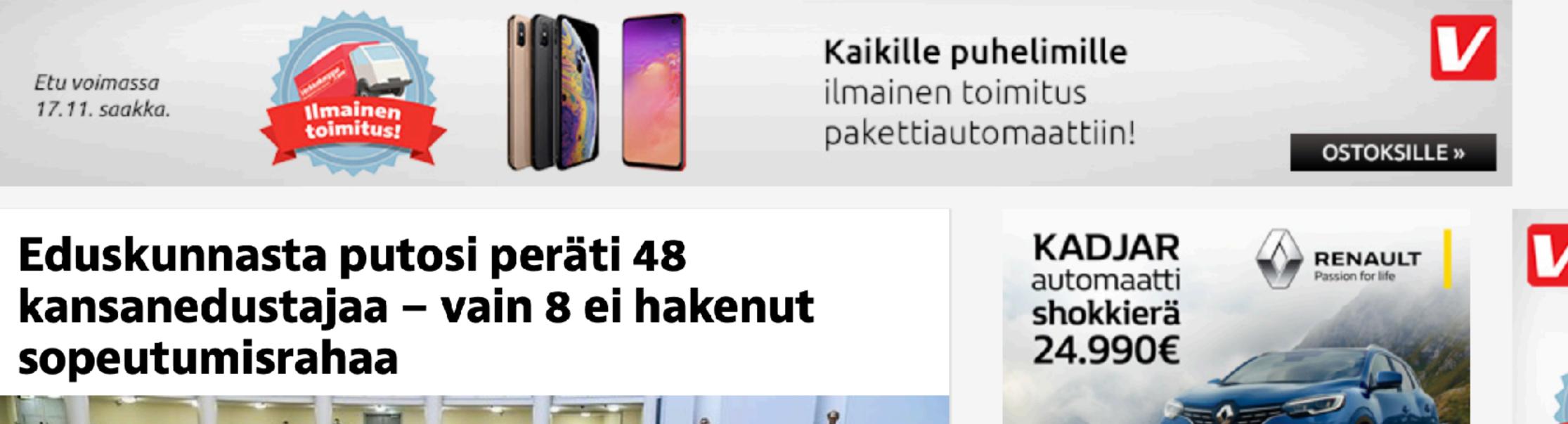
CLINIC





### **Banners and embeds**

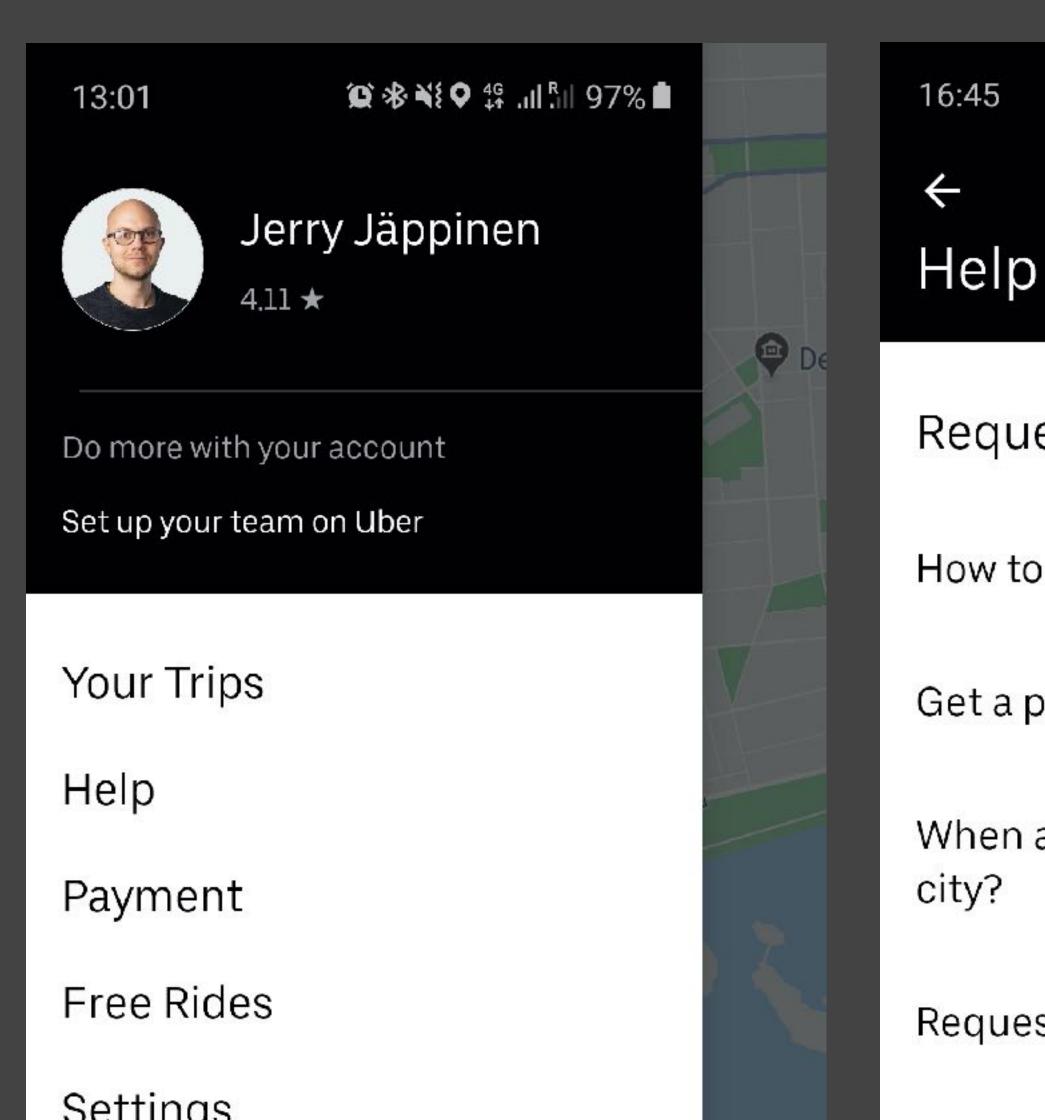




### E-readers



## Rich app components



**₩ ₩ ♥** 🖘 ...| <sup>R</sup>ill 84% 🖬

Requesting a ride

How to request a ride

Get a price estimate for your trip

When and where is Uber available in my

Requesting more than one vehicle

16:45	5 🛤	(0) NE Q	<sup>®</sup> , "   ""	84% 🗎
$\leftarrow$	Help			

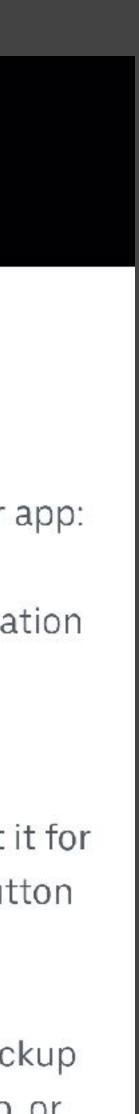
### How to request a ride

Here's how to request a ride in the Uber app:

1. Open your app and enter your destination in the "Where to?" field

2. Swipe up to see all vehicle options available in your area. Tap one to select it for your ride, then tap "Choose Uber X" (button will be your vehicle selection)

3. You may be asked to confirm your pickup location. If so, move the pin on the map, or



### Read mode

### • • • < > 🗊

### A new team for a new commercial reality – MC Impact 21.05.2019

This, in turn, requires breaking barriers between organizational silos, creating innovative ideas and harnessing the opportunities of new technologies. At Marketing Clinic, we decided to meet these customer needs by advancing our internal integration and forming a completely new team.

At MC Impact, we help our customers create meaningful and measurable connections with their own customers - not contribute to unnecessary noise, but help them create real impact. Our diverse team consists of marketing, communications and technology experts and video and visual designers. We focus on combining data-driven marketing and a deep, strategic understanding of digital channels with creative concepting and content production. Together with our other business unit, MC Strategy, we can help our customers connect their strategic goals to real market impact and communicate the value they offer to customers effectively.

For our customers, our new team means that a tightly knit group of talents can

marketingclinic.fi

### AА

### punainenristi.fi/nuoret/kotim Intervisied of DMA Palaste Plinit a coastot REDNET **Punainen Risti** Tule mukaan Hae tukea ja apua Tutustu Punaiseen Ristiin Nuorille llet tässä: Eusivus Nuorilles Nuorien kotimaan toimint Kolimaan toiminta Nuorten kotimaan toiminta Kansainvälinen nuorisotniminta

13:23

Kuvaaja: Johanneo Wiehn

Auttamisesta tulee hyvä mieli. Nuori voi osallistua Punaisen Ristin kotimaan toimintaan Reddie Kids - kerholaisena tai kerhon ohjaajana, nuorisoryhmissä tai nuorten leireillä. Vapaaehtoisena voi toimia säännöllisesti tai hetken kerrallaan monissa muissakin Punaisen Ristin toimintamuodoissa.

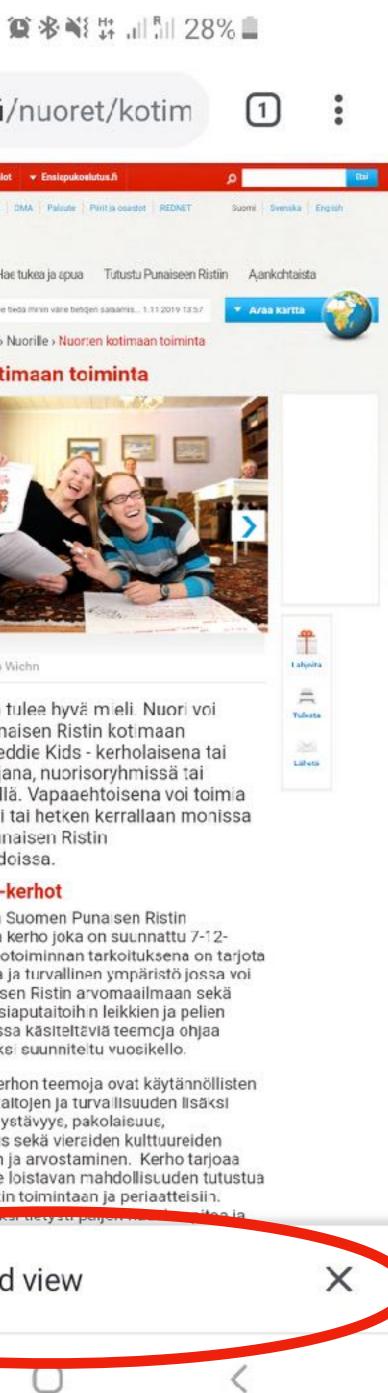
### **Reddie Kids -kerhot**

Reddie Kids on Suomen Puna sen Ristin varhaisnuorten kerho joka on suunnattu 7-12vuctiaille. Kerhotoiminnan tarkoituksena on tarjota nuorille hauska ja turvallinen ympäristö jossa voi tutustua Punaisen Ristin arvomaailmaan sekä esimerkiksi ensiaputaitoihin leikkien ja pelien avulla. Kerhoissa käsiteltäviä teemoja ohjaa yleensä valmiksi suunniteltu vuosikello.

Reddie Kids -kerhon teemoja ovat käytännöllisten perus ens aputaltojen ja turva lisuuden lisäksi muun muassa ystävyys, pakolaisuus, suvaitsevaisuus sekä vieraiden kulttuureiden ymmärtäminen ja arvostaminen. Kerho tarjoaa varhaisnuorelle loistavan mahdollisuuden tutustua Punaiseen Ristin toimintaan ja periaatteisiin.

Show simplified view

E



# Loading times

- A web page is a collection of files
- Each file must be delivered from server to browser
- Sometimes loading some or all assets fail
- Consider loading times in design decisions
- Design solutions can hide loading times or make them more tolerable  $\bullet$
- Loading times impact conversion €€€



### Offline

- Network conditions are never stable
- Assets can be cached or explicitly stored for offline use
- Does the design rely on constant connectivity?
- What use cases work without a connection?
- Is initial loading fast enough for an unstable connection?

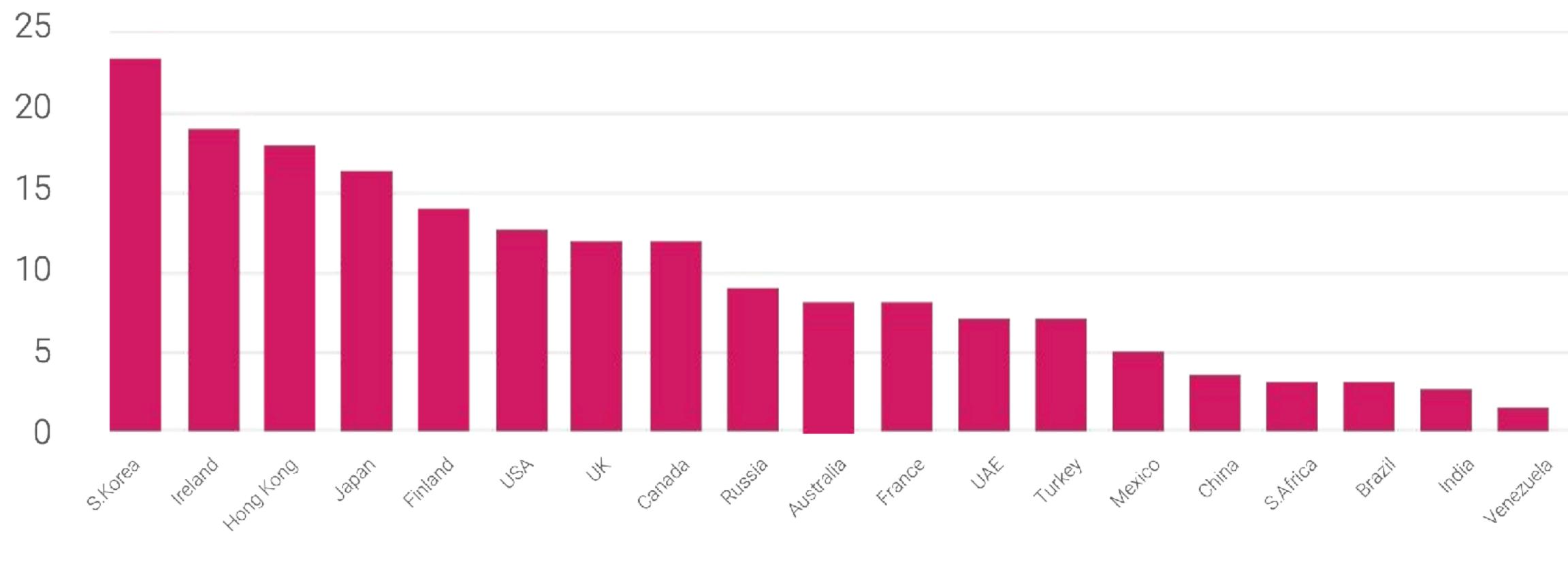


### Localisation

- Can't directly control date and time formatting
- Not all fonts support all languages
- OS language
- Text direction varies with language
- Input devices are different across countries
- User expectations and capabilities



### **Technology ·** Speed, data plans & coverage



Internet speed by country (mps)

Source

### Text · Language

For english readers Japanese websites appear to be more busy

Asian typography does seem denser than Latin scripts. There is no spacing between words.

Logographic characters convey more meaning almost each character is a word

Layout style represent billboard culture with its tendency to place a maximum amount of content within a minimum space

Urban density in Asian cities is high. It finds its reflection in UI design

Q 神奈川県Fujisawa shi

### シティサイクリストのためのショッ

・ギア、修理、仲間。なんでもそろう、サイクリストのオアシ

エキスパートのガイドブック キュレーターはKenta Kobayashiさん (Owner, tempra cycle)

Kentaさんについ Kentaさんは、テンプラグラフィックというシ ョップを立ち上げ、グラフィックデザイナーと 7 してキャリアをスタート。ここではバイクの組 み立てもカスタムデザインも手掛けていました が、もっと真剣に自転車に打ち込みたいという 思いから、テンプラサイクルを立ち上げまし た。

マイお気にいりスポット



Blue Lug Hatagaya 🖨 東京の店舗

これぞ日本の良きバイクショップの代表格。初 心者向け、エキスパート向けのギアが何でもそ ろう。ショップのスタッフも常連さんも通う近 所のカフェへ出掛けてみよう。



MacBook Pro

### **Text** • Length in different languages

- Press home to open English
- Πατήστε το σπίτι για να ανοίξει Greek
- يضغط لفتح Arabic
- Açmak için ana düğmeye basın Turkish
- 按下按钮 Chinese

31

9

18

28

4

## Sitemaps and navigation

- Usability
  - Overall scope of the site
  - Navigation interactions
  - Current location within site
- Sitemap for search engines and other external services
- Structured data  $\bullet$
- Layout structure within a page



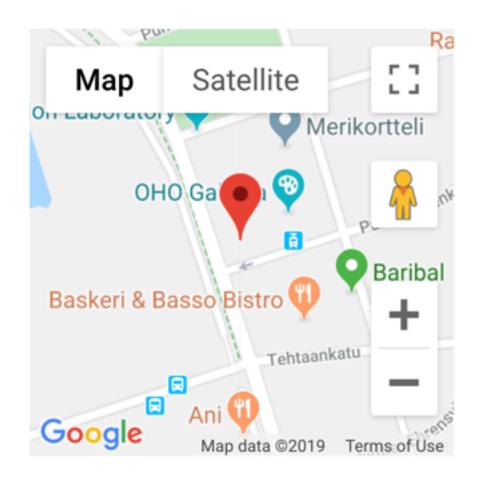
### **Embedded documents**



### Finland

Marketing Clinic Finland Oy Pursimiehenkatu 31 B 303 00150 Helsinki FINLAND

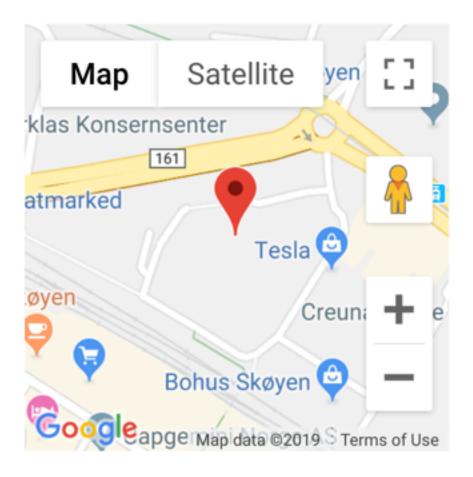
See our people »



### Norway

Marketing Clinic Norway As Drammensveien 161 0277 Oslo NORWAY

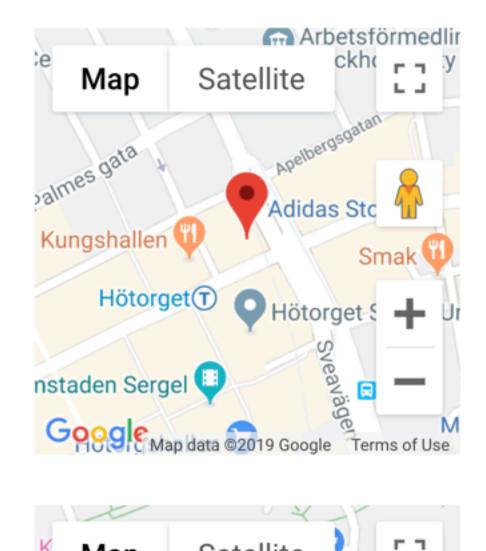
See our people »





Marketing Clinic Sweden AB Sveavägen 17, 13th floor 111 57 STOCKHOLM SWEDEN

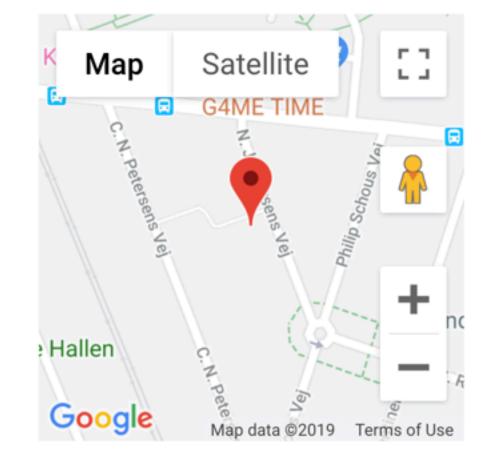




### Denmark

Marketing Clinic Denmark A/S N. Jespersens Vej 13 DK-2000 Fredriksberg DENMARK

### See our people »







## **Embedded documents**

- A web page is called a document
- A document can link to other documents
- A document can embed another document

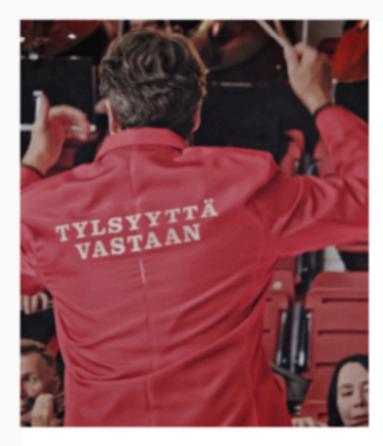
- Mobile apps with web views
- HTML banners
- Streaming video players
- Contact forms
- Maps
- Social plugins



hasan & partners

our work about us contact news

We are 28 years old Always curious Never satisfied 100% independent



Sinebrychoff Red Classics



@hasanpartners on Instagram: "Thank you. Good night!" #grandone #lastnight

Campaign

🗵 Instagram



-



### hasan & partners

### We are

28 years old Always curious Never satisfied 100% independent



Sinebrychoff Red Classics

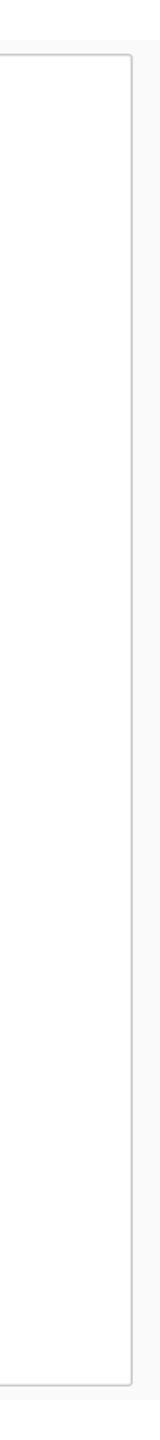


@hasanpartners on Instagram: "Thank you. Good night!" #grandone #lastnight

Campaign

🔞 Instagram





## **Rich components**

- Web is almost on par with mobile apps
  - Barring specialised use cases (machine learning, camera, connectivity)
- Web experiences are not static
- A web page is not just a "canvas for painting"
  - Live components with life cycle, behavior, interaction
- Traditionally relied on native form elements
- Now completely custom-build components are commonplace



## Dynamic content

- Most web services are maintained for a long time
- CMSs manage updates and translations
- Designers usually work with draft content
- Content will be changed and added after release
- Designers set the rules and framing for dynamic content
- Structured content vs. layout management



team - Marketing Clinic	×	+								
etingclinic.fi/our-team/										
				About us	Cases	Services	Our team	Careers	News	

Clinic



rvonen rategist

072 7888



Strategy



Alexandra Pimenoff Senior Associate, Strategy

### +358405489877

Impact

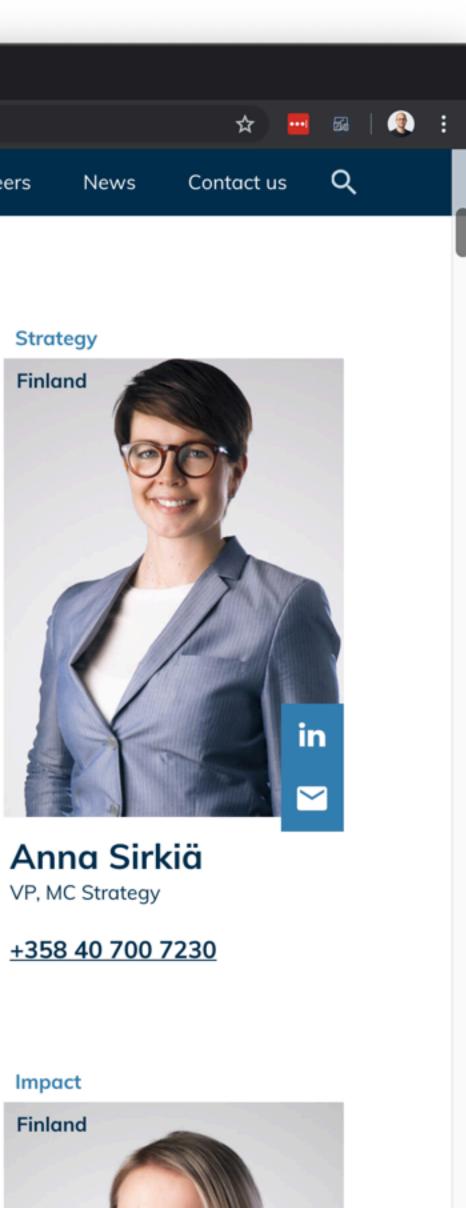
Sweden

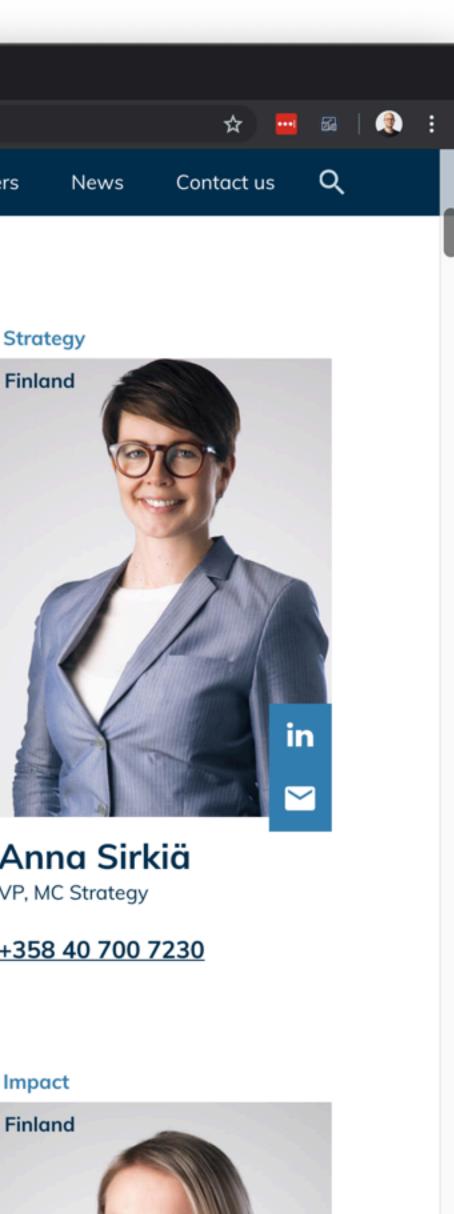




Anna Savelainen Consultant, Insight

### +358 40 56 30 071











### **Structured content**

People are managed in CMS. How they are presented is up to design.

### **Publishing system**

"Pages are managed in CMS. What modules or components are available, is up to design."



### Audio

- Supported quite well on the web
- Rarely used by convention
- Useful for specific use cases and explicit need
- Users might have audio channel reserved or disabled





https://ganharp.ctpt.co/





## **Progressive enhancement**

- Nothing works exactly the same everywhere
- High backwards compatibility
- Fallbacks for fancier features
- Progressive enhancement vs. graceful degradation

- Network quality (e.g. long loading times)
- Device performance (e.g. slow effects)
- Browser features and bugs (e.g. lazy loading)
- OS features (e.g. video autoplay)



# **Progressive enhancement**

- What can I do right now?
  - https://caniuse.com/  $\bullet$
- What can I expect in the near future?
  - https://webkit.org/status/#? 20preview

status=under%20consideration,in%20development,supported%20in%

E.g. real vertical grid control: <u>https://drafts.csswg.org/css-rhythm/</u>



## **Connected services**

- Example
  - Web site shared on a social network
  - Web site saved to home screen
- Web is connected: web site is not just a web site
- Users and platforms have freedom
  - They determine how your web site is used
- Browsers and other services scrape web sites continuously





### Meta info

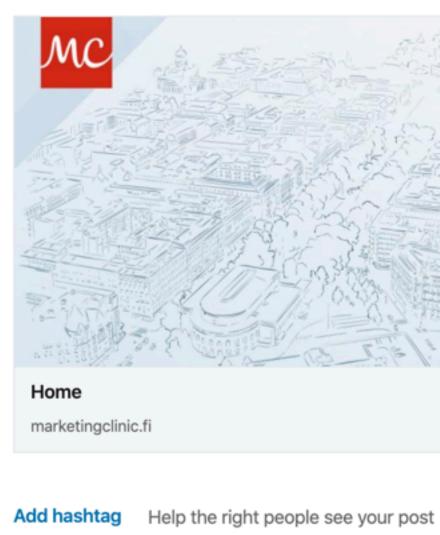
- Web sites use meta tags and manifest files
- Structure of content (web app, site, AMP, article...)
- Machine-readable content (event dates, blog authors...)
- How content should be presented (mobile status bar, dark mode...)



### Create a post

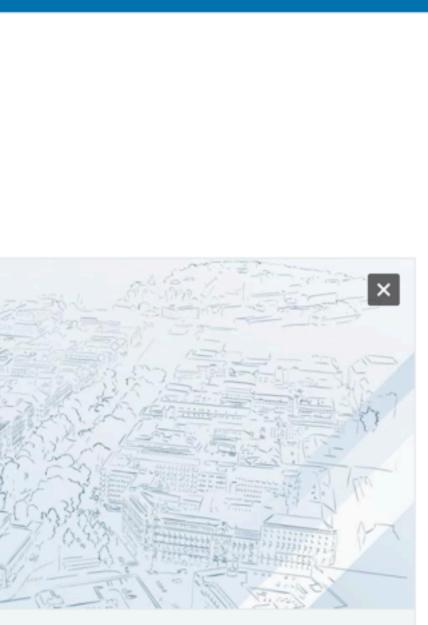


### marketingclinic.fi





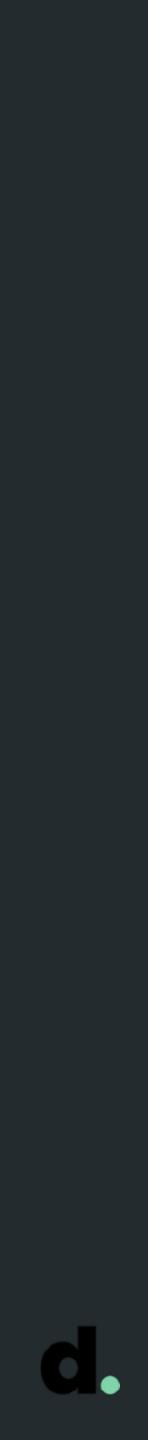








```
{
  "name": "ProductBeat",
  "short_name": "ProductBeat",
 "start_url": "./",
  "display": "standalone",
  "orientation": "portrait",
  "lang": "en-US",
  "background_color": "#ffffff",
  "theme_color": "#ffffff",
  "prefer_related_applications": false,
  "icons": [
    {
      "src": "./img/icons/android-chrome-192x192.png",
      "sizes": "192x192",
      "type": "image/png"
    },
      "src": "./img/icons/android-chrome-512x512.png",
      "sizes": "512x512",
      "type": "image/png"
l
```



## Accessibility

- Web is an open, universal platform
- Most of us have two eyes and 10 fingers
- Most people.
- Some rely on aids to use digital services
- Some have impairments
- Some are not familiar with the target platform or conventions
- Some services are experienced in less traditional environments



### URLS

- URLs need to be user friendly
- They should be canonical
- They shouldn't be too long
- They can encode information that's important



### Persistence

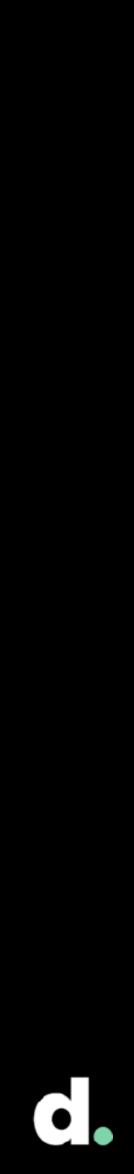
times?

- URLs
- Cookies lacksquare
- LocalStorage
- Server-side storage

### How can user's experience persist when they visit a web service multiple



# 1. Device interaction 2. Layout model **3. Visuals** 4. Elements 5. Auditing 6. Technical terminology



## Auditing

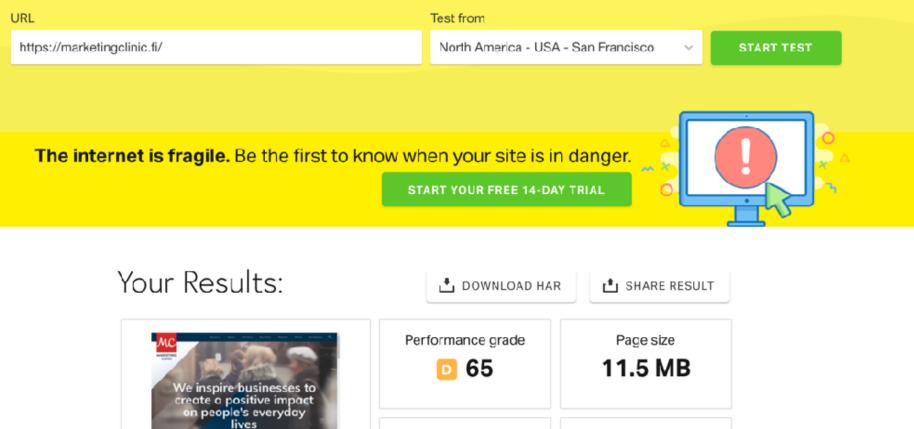
- Always audit your work!
- For the user, end result matters not the design on paper
- Be ready to make changes when it doesn't work in practice



## Tools

- Content analysis: <u>https://www.similarweb.com/</u>
- Google's Lighthouse: <u>https://developers.google.com/speed/pagespeed/insights/</u>
- Pingdom's speed test: <u>https://tools.pingdom.com/</u>
- Mobile test: <u>https://search.google.com/test/mobile-friendly</u>
- <u>https://www.thinkwithgoogle.com/feature/testmysite</u>
- <u>https://gtmetrix.com/</u>
- https://app.neilpatel.com/en/seo\_analyzer/
- https://yellowlab.tools  $\bullet$





## Requests Load time 108 10.59 s

## Improve page performance

GRADE	SUGGESTION	
<b>F</b> 0	Make fewer HTTP requests	$\checkmark$
<b>F</b> 0	Use cookie-free domains	$\overline{\bullet}$
<b>F</b> 0	Add Expires headers	•
<b>F</b> 10	Reduce DNS lookups	
<b>F</b> 23	Compress components with gzip	$\overline{\bullet}$
<b>F</b> 40	Avoid URL redirects	$\overline{\bullet}$
A 100	Avoid empty src or href	$\overline{\mathbf{v}}$

## Response codes

RESPONSE CODE	RESPONSES
200 OK	98
204 No Content	1
206 Partial Content	1
301 Moved Permanently	2
302 Found	6

## Content size by content type

## Requests by content type

CONTENT TYPE	PERCENT	SIZE	CONTENT TYPE	PERCENT	REQUESTS
🖼 Image	58.14%	984.2 KB	🖼 Image	45.63%	47
Js Script	31.16%	527.5 KB	Js Script	29.13%	30
{} css	5.51%	93.3 KB	{} css	8.74%	9
Aa Font	3.32%	56.2 KB	➡ Redirect	6.80%	7
🖻 HTML	1.32%	22.3 KB	🖻 HTML	3.88%	4
➡ Redirect	0.41%	6.9 KB	A Font	3.88%	4
► XHR	0.14%	2.3 KB	D XHR	1.94%	2
Total	100.00%	1.7 MB	Total	100.00%	103

track.adform.net	0.28%	31.6 KB	px.ads.linkedin.com	2.78%
other	0.69%	78.7 KB	other	24.07%
Total	100.00%	11.4 MB	Total	100.00%

## File requests

Sort by	Rising	Filter				SSL Coppe	et <b>=</b> Send <b>=</b> V	Vait 📕 Receive 🔳 B	locked
Load Order v	~	Q		.*			senu - i		lockeu
FILE		SIZE		0.0s	0.	).3s	0.6s	0.9s	1.2
https://marketingclinic.fi/			11.2 KB						(
{ } • https://fonts.googleapis.com/css?family=Muli%3A400			1.6 KB						
JS • https://apis.google.com/js/platform	n.js		20.6 KB						
{ } • https://marketingclinic.fi/wp-includes/css/dist/bl			4.9 KB						(
Is https://marketingclinic.fi/wp-includes/js/jquery/j			4.6 KB						(
Is • https://marketingclinic.fi/wp-includes/js/jquery/j			34.6 KB						
{ } • https://marketingclinic.fi/wp-conte	nt/plugins/y	op	26.0 KB						(
<pre>{ } • https://marketingclinic.fi/wp-content/themes/mc/bo</pre>			25.1 KB						
{ } • https://marketingclinic.fi/wp-conte	nt/themes/r	nc/th	1.9 KB						
{ } • https://marketingclinic.fi/wp-conte	nt/themes/r	mc/ad	680.0 E						
108 requests			< 1/11 >					Entries per pa	ge: 10

## Nobody Likes a Slow Website

We built this Website Speed Test to help you analyze your website load speed.

The test is designed to help make your site faster by identifying what about a webpage is fast, slow, too big, and so on.

We have tried to make it useful both for experts and novices alike. In short, we wanted it to be an easy-to-use tool built to help webmasters and web developers everywhere optimize their website performance.

## About Pingdom

## State Colors

The following colors are used in the chart bars to indicate the different stages of a request.

	DNS	Web browser is looking up DNS information
	SSL	Web browser is performing an SSL handshake
	Connect	Web browser is connecting to the server
	Send	Web browser is sending data to the server
_	14/- 14	Web business is multiple for data from the second

- Wait Web browser is waiting for data from the server
- Web browser is receiving data from the server Receive
- Web browser is not ready to send Blocked





(e

Think with Google						
Test My Site	Overview	Optimize	Other Tools			

Your results for marketingclinic.fi 🛈

## Your mobile page speed is 4.2 seconds on a 4G - connection.

RATING

Slow

Slow pages start to load in over 2.5 seconds.

## 0

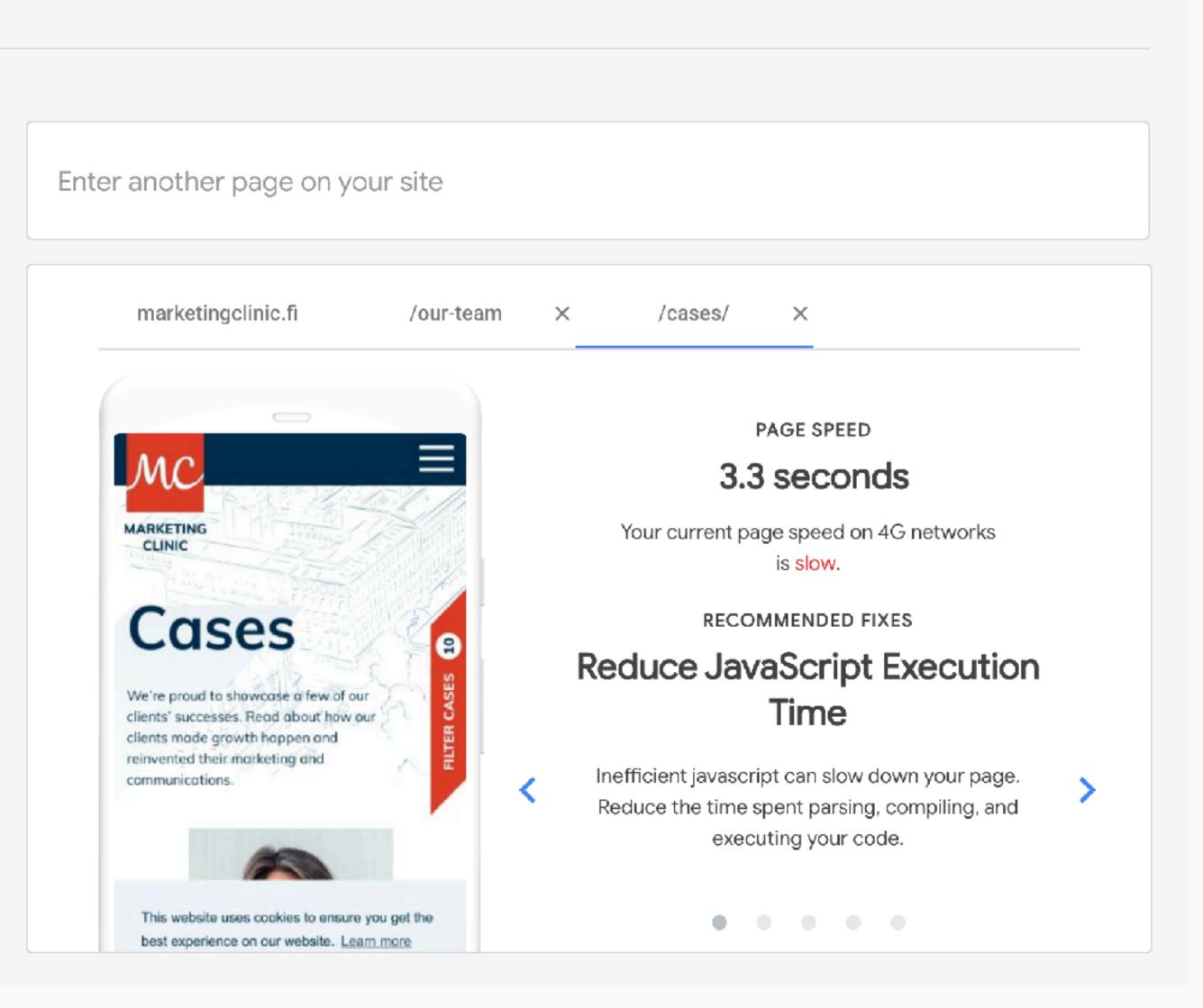
мс  $\equiv$ MARKETING We inspire businesses to create a positive impact This website uses cookies to ensure you get the best experience on our website. Learn more Got it!

## GENERATE REPORT

Page Speed Tools (i)

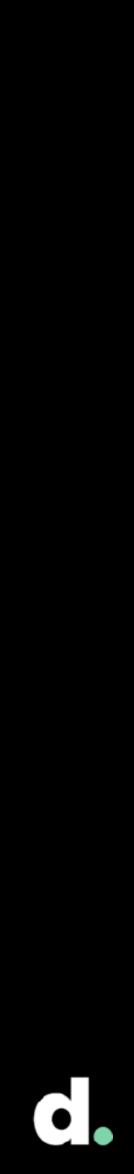
## Optimize your page speed

 Get custom fixes to make each page on your site faster. <sup>(i)</sup>





# 1. Device interaction 2. Layout model 3. Visuals 4. Elements 5. Auditing 6. Technical terminology



## HTML

- HTML is structured content
- HTML and CSS are declarative languages
- https://html.spec.whatwg.org/#toc-semantics  $\bullet$

CSS determines how HTML elements should be rendered by a browser







## Client



## Window



## Document







## HTNL



## JavaScript



















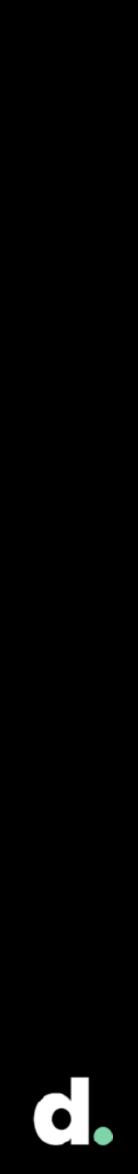
# Deployment







# The second secon





# **Product design consultant**







ProductBeat

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