

**HACK
YOUR
FUTURE**

18.10.2020

UX/UI module

user experience design

an introduction

User experience design

Design is creative problem solving within constraints

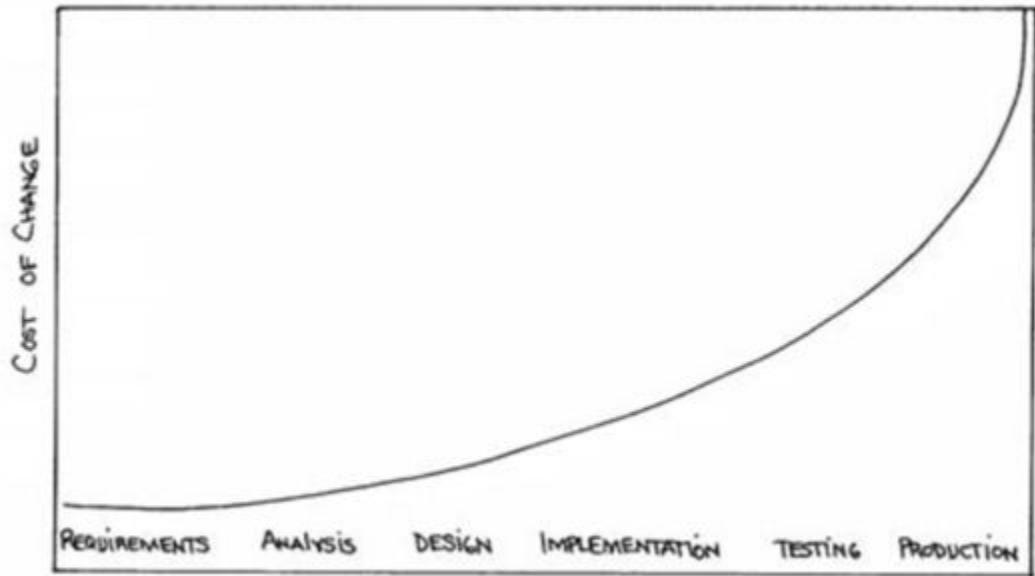
- What **problem** are you trying to solve?
- What **users** need, trying to achieve and want to do?
- Where can your solution bring **added value** and **impact**?



Design a solution that is:

- Useful
- Intuitive
- Usable
- Recognisable
- Findable
- Accessible

User experience design





at the workplace

designer workflow

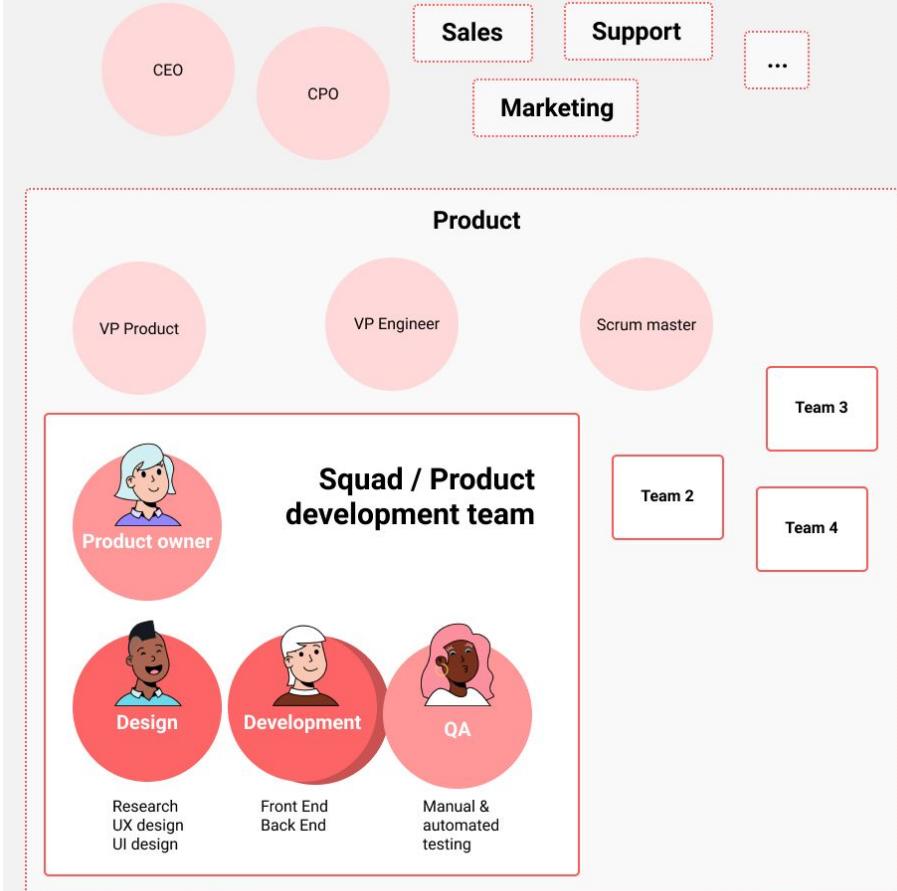
At the workspace

Product owner (PO) drives **scope**, priorities, backlog, user stories.

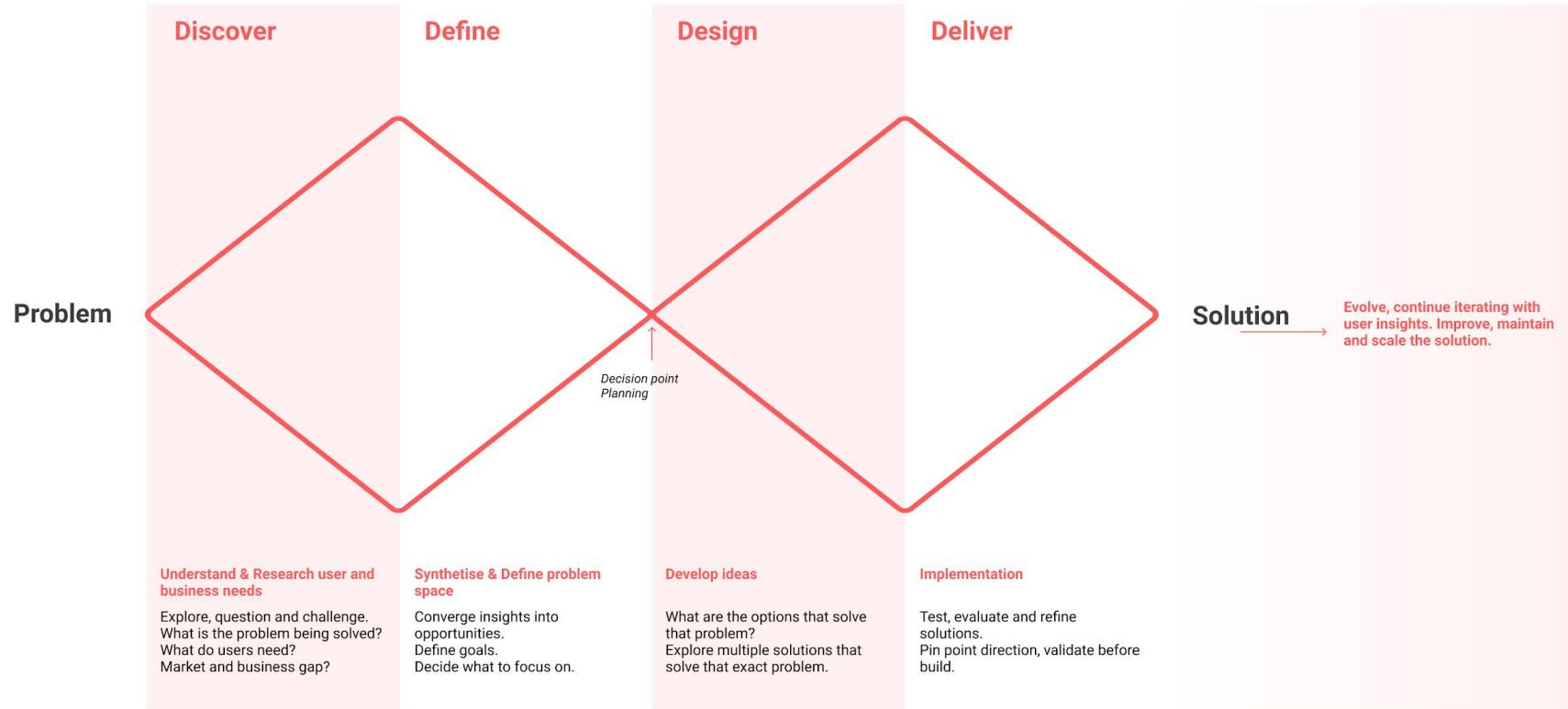
Design (Research, UX, UI) & **Development** (Front end, back end) **collaborate** to build creative solutions. **What** and **how**.

Quality assurance (QA) owns and organizes manual and automated **testing**.

Roles and team composition varies on how organizations are setup and which method they follow!



Design workflow



the basics of

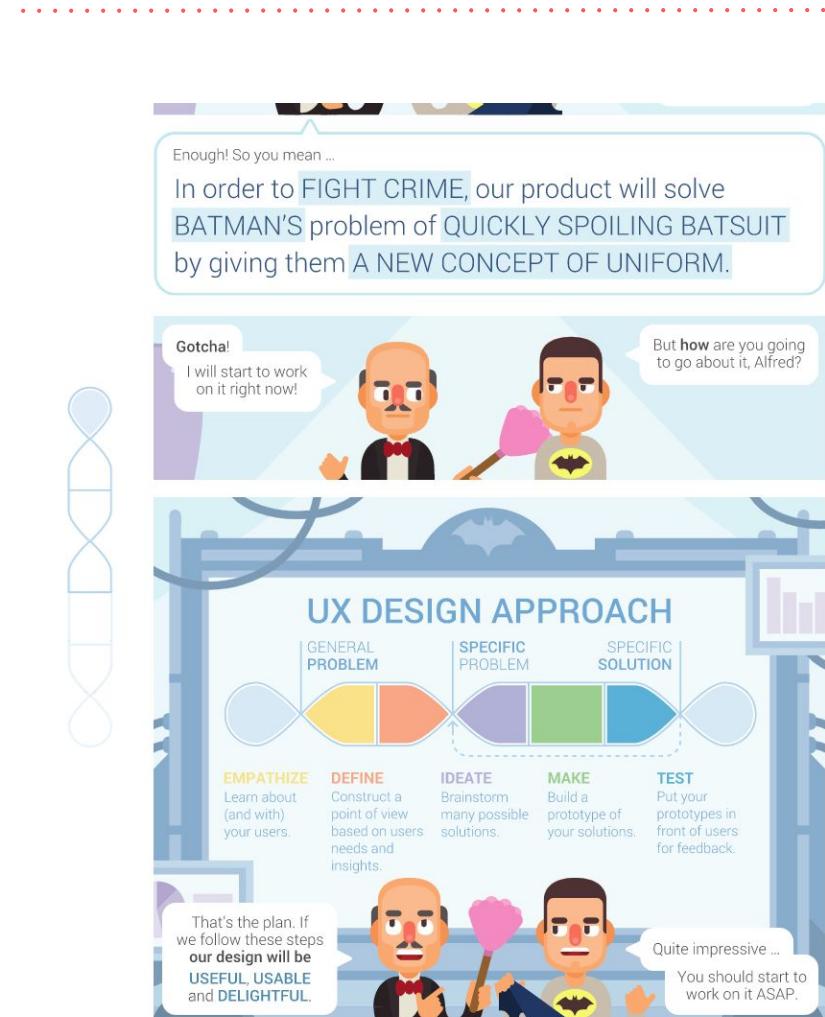
user experience design

User research

Design solutions for people

Understand target **users'**:

- Context of usage
- Goals, drivers and motivation
- Needs, wishes and expectations
- Frustrations and pains points



User flows

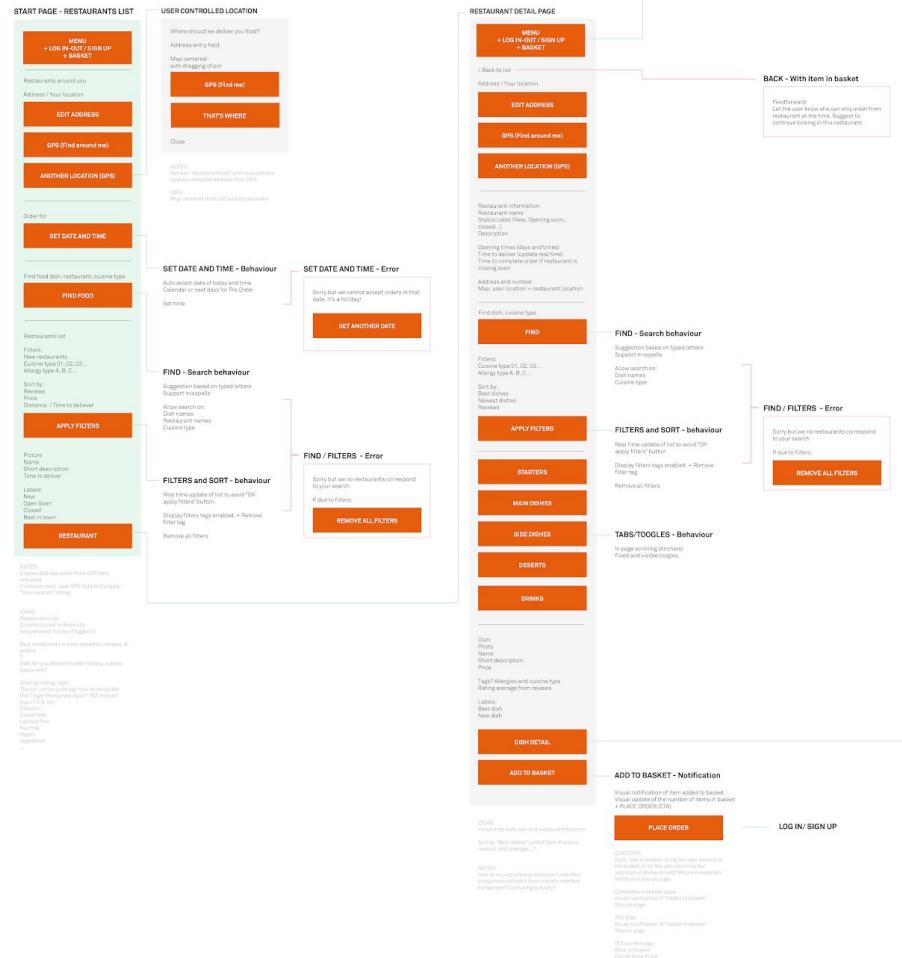
Design solutions that support user's main tasks

Lay out the user **path** into the application:

- **Entry** points, **steps** to complete a task,
- **Dependencies**, happy and error paths.

Outcome:

- which **pages** need to be build,
- what **content** and **actions** need to be supported
- **navigation** flow



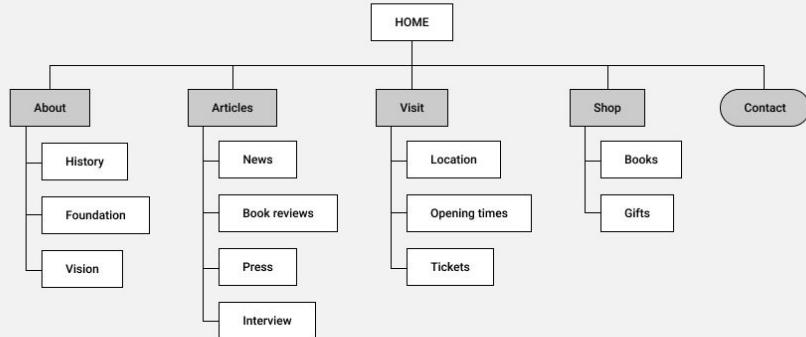
Information architecture

Information architecture (IA):

- structure,
- organization,
- labelling of information

Defines:

- what is it called,
- how is it sorted,
- relationships between labels and categories.



Navigation



Tips

- Minimum **levels**
- **Group and order** items logically (*for example: alphabetical*)
- Menu labels: clear, meaningful and consistent.
 - Say what is inside.
- Design to look **interactive**, visual distinguishable between levels.
 - Use different fonts styles, weights, or backgrounds colors.
- Indicate **where** users are.
- Navigation is easy to **find**, not hidden!

3 Levels
3 visual styles:
Font size, weight, case
Background colors

The screenshot shows the ASOS mobile website. At the top, there's a navigation bar with 'WOMEN' and 'MEN' tabs, a search bar, and a user profile icon. Below the bar, a 'Sale' banner is visible. The main content area features a 'SHOP BY PRODUCT' section with a list of shoe categories like 'Boots', 'Flat sandals', and 'Trainers'. To the right is a 'SHOP BY BRAND' section listing brands such as 'ASOS DESIGN', 'Dr Martens', and 'Public Desire'. A sidebar on the left shows 'New in' items. The background has a subtle grid pattern. A green dashed box highlights the 'WOMEN' tab, another highlights the 'New in' section, and a third highlights the 'SHOP BY PRODUCT' list.

Way finding
Where user is
Path to go back
Menu visible

Women's Sandals

Get your feet summer-ready with our collection of women's sandals, with styles for every occasion. Play by your own rules and shop new from ASOS DESIGN – you'll find everything from wedge sandals to flatfoms and everything in between. Shop New Look for women's ideal for kicking on and off when you're in the garden or on the beach, or check out Glamorous for black sandals that'll help you step day to night.

View less

Sort ▾ Sale/New Season ▾ Product Type ▾ Style ▾ Brand ▾
Body Fit ▾ Colour ▾ Size ▾ Leather/Non Leather ▾ Price Range ▾

520 styles found

The screenshot shows a detailed view of the ASOS website for women's sandals. At the top, it shows the ASOS header with 'WOMEN' and 'MEN' tabs, a search bar, and a user profile icon. A green banner at the top says 'SALE: MORE STYLES ADDED + BIGGER DISCOUNTS'. Below the banner, a breadcrumb path 'Home > Women > Shoes > Sandals' is shown. The main content area is titled 'Women's Sandals' and describes the collection. It includes a 'View less' button and filters for sorting, product type, style, brand, color, size, material, and price range. A sidebar on the left shows 'New in' items. A green dashed box highlights the breadcrumb path, another highlights the 'Women's Sandals' title, and a third highlights the 'Sort' dropdown.

Wireframe

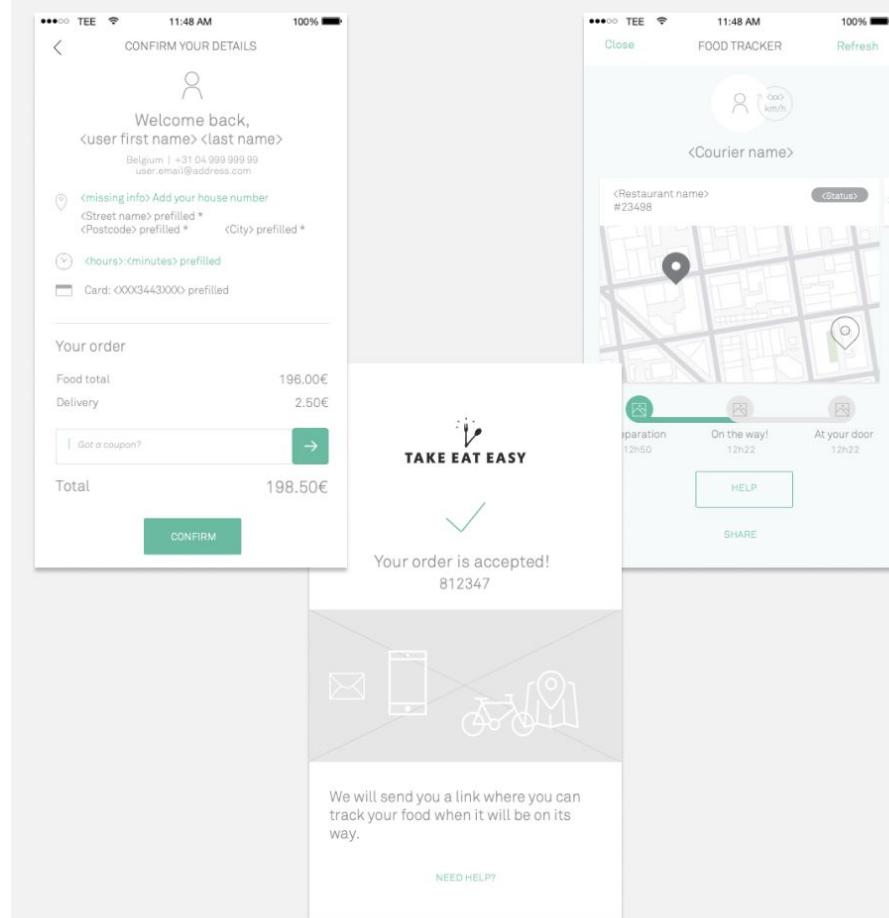
Content and function made tangible

Cheap sketching tool for fast iterations

Focus on:

- Page **layout**
- Information **hierarchy**
- **Content** sections
- Actions and **functions**
- Design the **requirements**

Do not focus on visual details (color, fonts, images)



visual

design principles

Grid

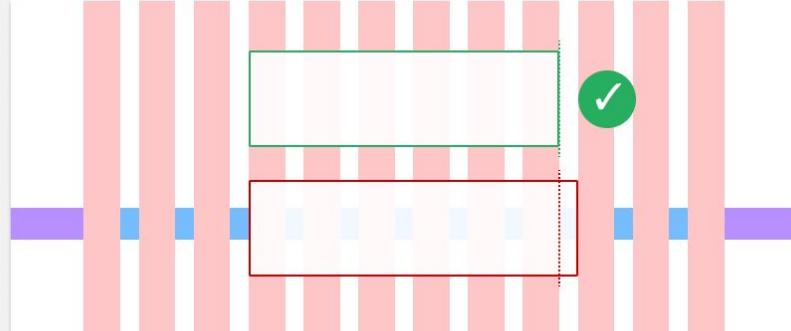
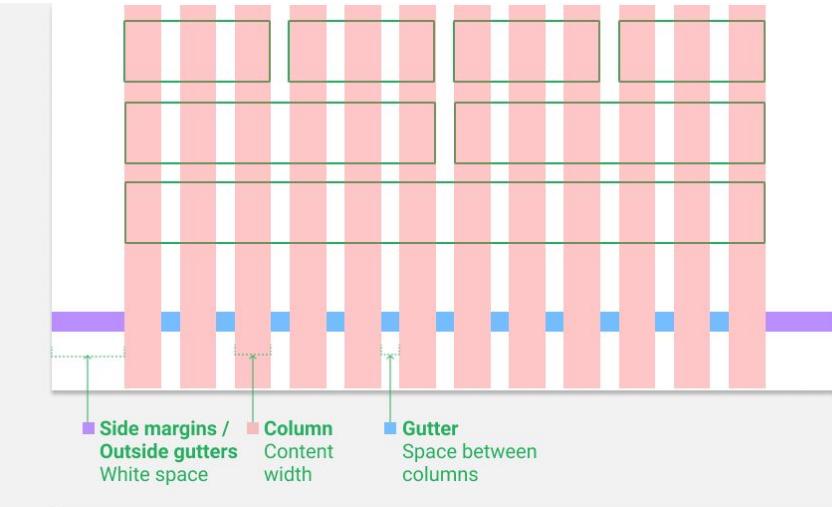
- Content and design elements' visual **hierarchy**
- Groups** content sections
- Coherent design and composition **layout**
- Rules of **alignment** and **relationship** of elements
- Flexible** and responsive designs easy to implement

Terms:

- Column
- Gutter
- Side Margins



Stick elements to the columns, not gutters



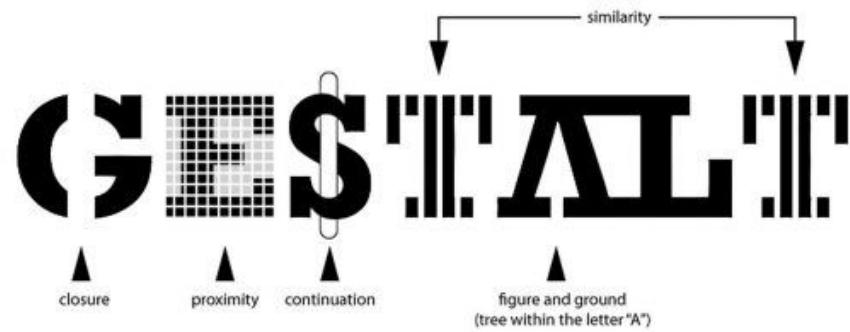
Gestalt

“Gestalt” is German for “unified whole”.

- Set of principles on how we make sense and **organize** images.
- How we recognize **patterns** and **simplify complex** images when we **perceive** objects.



Play with scale, typography, alignment, color, contrast following Gestalt rules.



Proximity

Elements that are **close together** appear to be **grouped** and **related**, then elements that are further apart.

[Log in](#) for faster checkout, Family discount during offers and endless returns!

[Continue to checkout](#)



KONCIS

Balloon whisk
stainless steel
102.259.52

€ 5.96
€ 1.49

[Move to shopping list >>](#)



4



DVALA

Pillowcase
light pink
60x70 cm
303.576.92

€ 3.99

[Move to shopping list >>](#)



1



BRIMNES

Cabinet with doors
white
78x95 cm
403.006.62

€ 209.85
€ 69.95

[Move to shopping list >>](#)



3



€ 5.99



STUK

Box with compartments
white/grey
34x51x10 cm
003.095.65

[Move to shopping list >>](#)



1



Proximity

Elements that are **close together** appear to be **grouped** and **related**, then elements that are further apart.



You don't necessarily need borders or boxes to group elements. Use space, put them **closer** to each other.

Manon Brulard	Manon Brulard
Belgium	Belgium
Marie Smith	Marie Smith
France	France
Nadia Ferreira	Nadia Ferreira
Portugal	Portugal
Olivier Dieu	Olivier Dieu
Belgium	Belgium
Patrick Jens	Patrick Jens
Netherlands	Netherlands

Similarity

Elements that are **similar** convey a sense of similar

- **function,**
- **priority**
- and **impact.**



- Keep visual and functional **consistency** of the **same** elements across the interface and page

The screenshot shows a mobile application interface for the Pocket app. At the top, there's a navigation bar with a search icon, a plus sign, an envelope icon, and a checkmark icon. Below it is a header for 'Favorites' with a dropdown arrow. A section titled 'Article card' is shown with a dashed border, containing an image of a ruler, the title 'What metrics and KPIs do the experts use to measure UX...', the source 'userzoom.com', and a duration of '4 min'. Below this, another article card is partially visible with a purple background and the title 'Making more informed design judgements – Tanner Christensen'. To the right, there are several other cards with different designs and titles, such as 'Four Things Working at Facebook Has Taught Me About Design...', 'Medium - 7 min', and 'Read the full post and more over on my personal blog at...'. At the bottom, there are sections for 'Best Of' and 'Design Principles Behind Great Products' with various links and icons.

Similarity

Elements that are **similar** convey a sense of similar

- **function,**
- **priority**
- and **impact.**



- Keep visual and functional **consistency** of the **same** elements across the interface and page
- Not all actions are equal!
 - Different **variants** per elements.
 - **Guide** users to the primary call to action.

The screenshot shows a privacy consent interface from SourceForge. At the top right are 'ACCEPT ALL' and 'REJECT ALL' buttons. Below that is the heading 'We value your privacy'. A text block explains how users can set consent preferences for third-party companies. It includes a note about Google ads being personalized based on consent. A table lists four companies with toggle switches for 'OFF/ON' status. At the bottom left is a 'Back to Purposes' link, and at the bottom right is a large green 'SAVE & EXIT' button.

COMPANY	OFF/ON
1020, Inc. dba Placecast and Ericsson Emodo	<input type="checkbox"/>
1plusX AG	<input type="checkbox"/>
2KDirect, Inc. (dba iPromote)	<input type="checkbox"/>
33Across	<input type="checkbox"/>

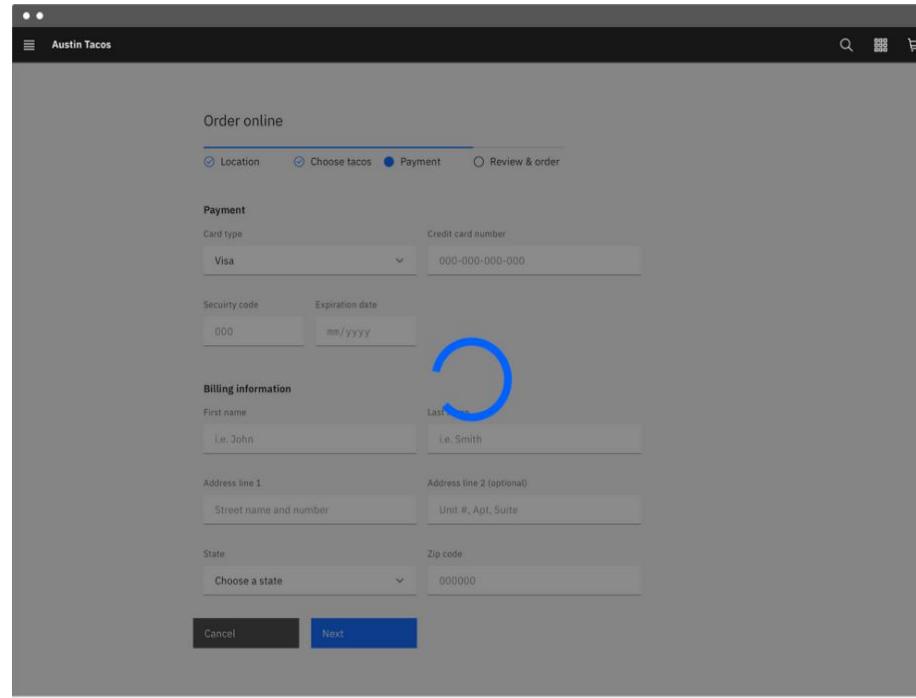


Primary Secondary Tertiary Destructive

Closure

Our perception **fills** in the visual **gap**, even when parts are missing.

For example: icons, loading spinners, progress indicators.



Size & scale

Bring **hierarchy** and **prioritization** for content information and actions to support user **tasks** and content **scalability**.



- **Larger** items are more **prominent**
- **Size** determines **hierarchy** levels in composition
- Max. **3** content section sizes

Welcome to BBC.com

The BBC.com homepage features a large, prominent article about Hong Kong delaying elections due to virus fears. Below it are several smaller news cards: one about Maxwell-Epstein emails, another about Christopher Nolan's movie, and one about the water wars of the Sahara Desert. The 'News' section below includes images of people wearing face masks and a portrait of Ellen DeGeneres.

News



UK PM 'squeezes the brakes' and delays easing

Plans to ease lockdown measures in England are halted, with the use of face coverings widened.

| WORLD



Vietnam records first Covid-19 death

The country had spent three months without any new infections before an outbreak in Da Nang city.

| ASIA



Ellen apologises to staff over workplace 'issues'

The star is "disappointed" to hear allegations of harassment and intimidation on her chat show.

| ENTERTAINMENT & ARTS

Sport



Fans not allowed to attend pilot



The NBA wants to talk about



Verstappen fastest in first

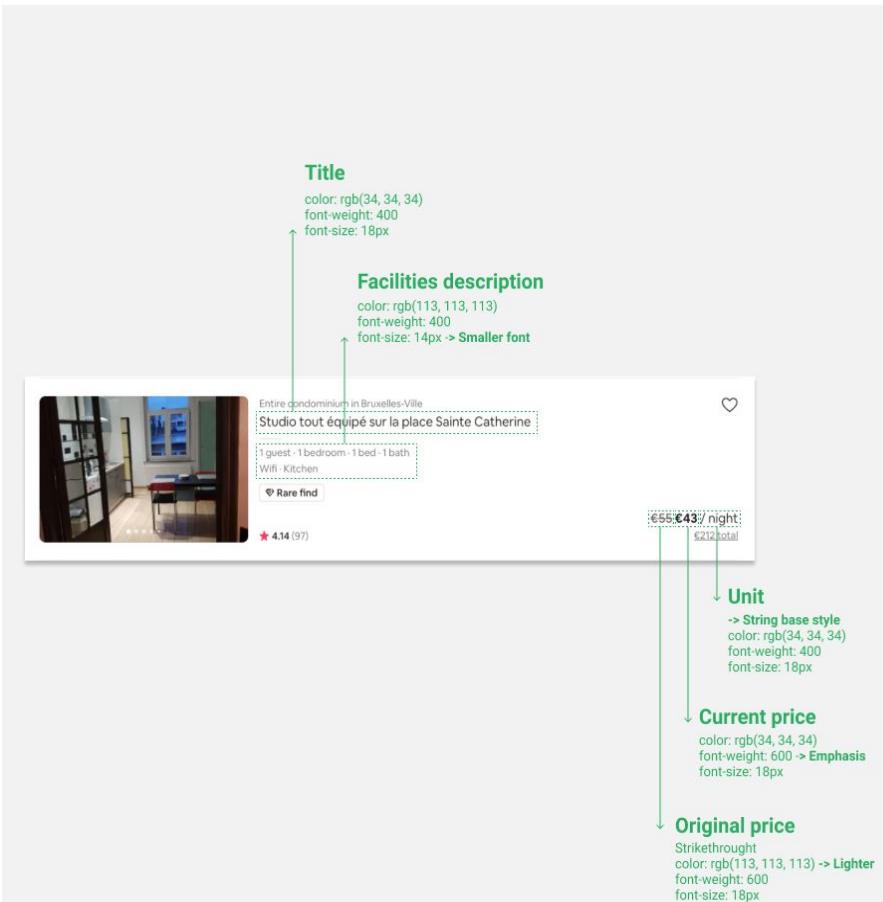
Visual & typography hierarchy

Guide the user attention to the most **critical content** on the page or element.

- Supports **Scale** principle
- Tight to **user tasks** and actions.



- Max. **2-3** typefaces p/ page
- Play with placement, font size, weight and colour.



elements of

typography

Typography

Text formatting influences how users read and scan content

- **Meaning**
- **Hierarchy** and organization of content
- **Readability**

💡 Consider:

- Goals of the content, website or application
- Users, branding and message
- Language support
- Licensing

You will always be mine

YOU WILL ALWAYS BE MINE

Secure your money with us
Register today

Secure your money with us
Register today

Typography

Typeface

font-family

- Serif (*Georgia, Times New Roman, Garamond ...*)
- Sans-serif (*Arial, Helvetica, Futura, Montserrat...*)
- Monospace (*Courier, Monaco...*)

font-weight

- Light `font-weight: 300`
- Medium `font-weight: 500`
- Bold `font-weight: 700 ...`

font-style

Normal, italic, oblique...

font-size

Size in pixels, percentages or EMS

Typeface

Serif

Sans serif

monospace

Font weight

`Georgia: Light`

`Georgia: Bold`

`Arial: Light`

`Arial: Bold`

`Courier: Light`

`Courier: Bold`

Font style

`Georgia: Light, Italic`

`Georgia: Bold, Italic`

`Arial: Light, Italic`

`Arial: Bold, Italic`

`Courier: Light, Oblique`

`Courier: Bold, Oblique`

Font size

`Georgia: 16px`

`Georgia: 21px`

`Georgia: 36px`

`Arial: 16px`

`Arial: 21px`

`Arial: 36px`

`Courier: 16px`

`Courier: 21px`

`Courier: 36px`

Typography

Text (a few examples)

`text-transform`

- Upper case
- Lowercase
- Capitalize, ...

`text-decoration`

- None
- Underline
- Overline, ...

Text transform

GEORGIA: UPPERCASE
Georgia: Capitalize

ARIAL: UPPERCASE
Arial: Capitalize

COURIER: UPPERCASE
Courier: Capitalize

Text decoration

Georgia: None
Georgia: Underline

Arial: None
Arial: Underline

Courier: None
Courier: Underline

Typography

Terms

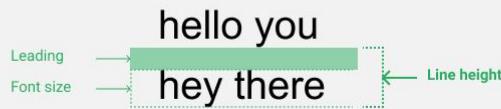
- Ascender, Cap height, x-height, Baseline and Descender



Leading

- Space between lines of text.
- line-height** = font size + leading

Line height



text-align

- Left / Right
- Center
- Justified. ⚠ Watch out for readability issues!

Text align

In Georgia, this text is left aligned. In Georgia, this text is left aligned.

In Arial, this text is justified. In Arial, this text is justified.

In Courier, this text is right aligned. In Courier, this text is right aligned.

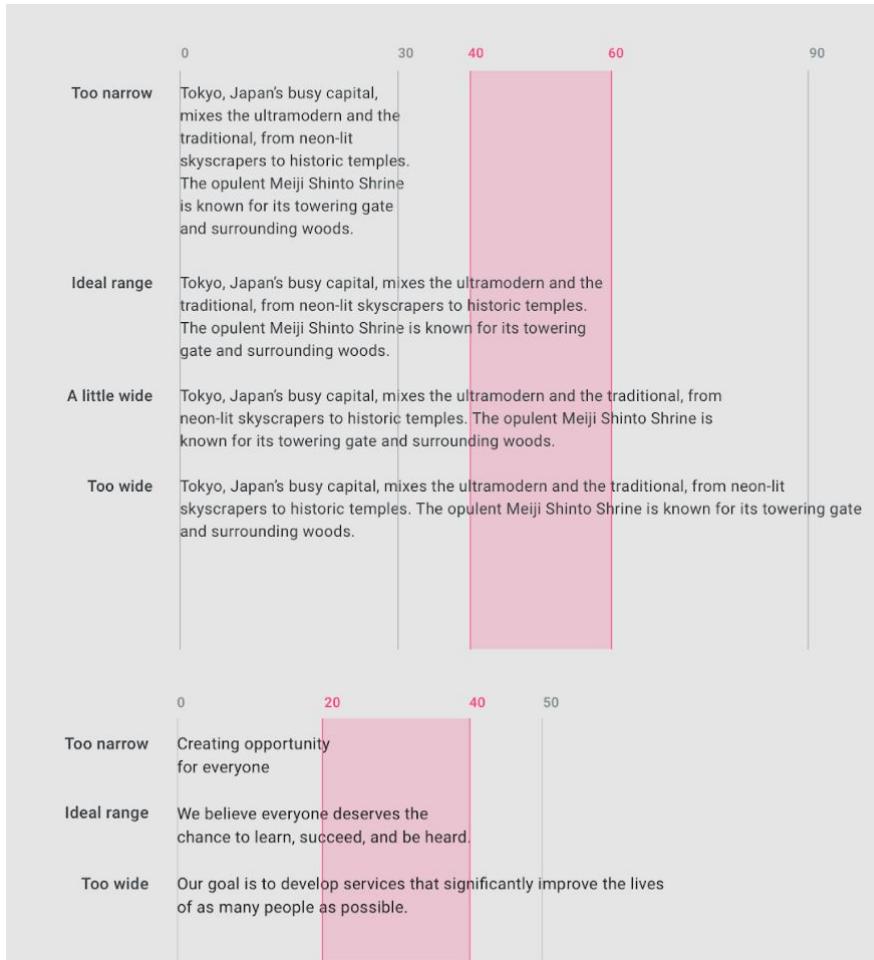
Typography



Ideal line length

- Paragraph, body text: 40-60 characters
- Short lines: 20-40 characters

(English body text)



how to use

colour

Color

RGB values

0-225

Hex codes

- Values for red, green and blue in hexadecimal code
- Not case sensitive
- #~~ffff~~ = #~~ff~~ Abbreviated when characters are the same

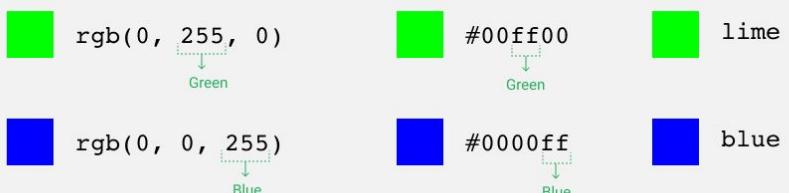
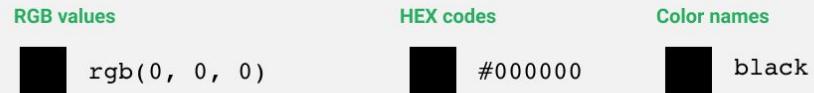
Color names

Few color names supported in browsers.

Hue: Technical idea of colour

Saturation: Amount of **grey** in a color

Brightness / Value: Amount of **black** in a colour



Color

Color harmony examples:

- **Analogous:** colors directly adjacent to a chosen color.
- **Complementary:** Colors that are directly opposite on the color wheel.
- **Triadic:** Three colors same distance from each other.

The screenshot shows the Adobe Color Wheel interface. At the top, there are tabs: Color Wheel, Extract Theme, Extract Gradient, Accessibility Tools, and a New button. To the right of the tabs is a color palette bar with four colors: teal, dark teal, yellow, and purple. Below the tabs, there's a section titled "Apply Color Harmony Rule" with a list of options: Analogous, Monochromatic, Triad (which is selected), Complementary, Split Complementary, Double Split Complementary, Square, Compound, Shades, and Custom. To the right of this list is a circular color wheel with three points highlighted in yellow, green, and magenta. Below the color wheel is a horizontal color bar divided into five segments labeled A through E. Each segment has a corresponding hex code above it: A (#21EBBE), B (#0E9E7E), C (#EBBA21), D (#95169E), and E (#DB09EB). Below the color bar is a "Color Mode" dropdown set to "RGB". Underneath the color bar, there are five rows of color sliders for Red (R), Green (G), and Blue (B) components, along with their corresponding hex values and numerical values. A "Save" button is located on the far right.

Color Wheel Extract Theme Extract Gradient Accessibility Tools New

Apply Color Harmony Rule

Triad

Analogous

Monochromatic

Complementary

Split Complementary

Double Split Complementary

Square

Compound

Shades

Custom

A B C D E

#21EBBE #0E9E7E #EBBA21 #95169E #DB09EB

	R	G	B		R	G	B		R	G	B		R	G	B		R	G	B		R	G	B	
#21EBBE	33	14	235		149	22	235		149	22	235		149	22	235		149	22	235		149	22	235	
#0E9E7E	235	158	190		22	158	126		22	158	126		22	158	126		22	158	126		22	158	126	
#EBBA21	186	33	33		186	33	33		186	33	33		186	33	33		186	33	33		186	33	33	
#95169E	235	158	158		235	158	158		235	158	158		235	158	158		235	158	158		235	158	158	
#DB09EB	219	9	92		219	9	92		219	9	92		219	9	92		219	9	92		219	9	92	

<https://color.adobe.com/create/color-wheel>

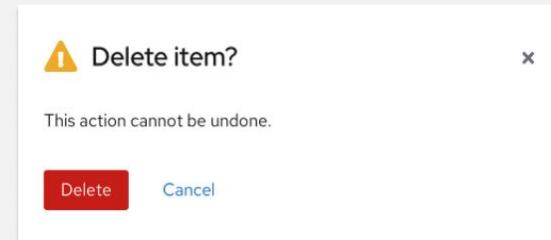
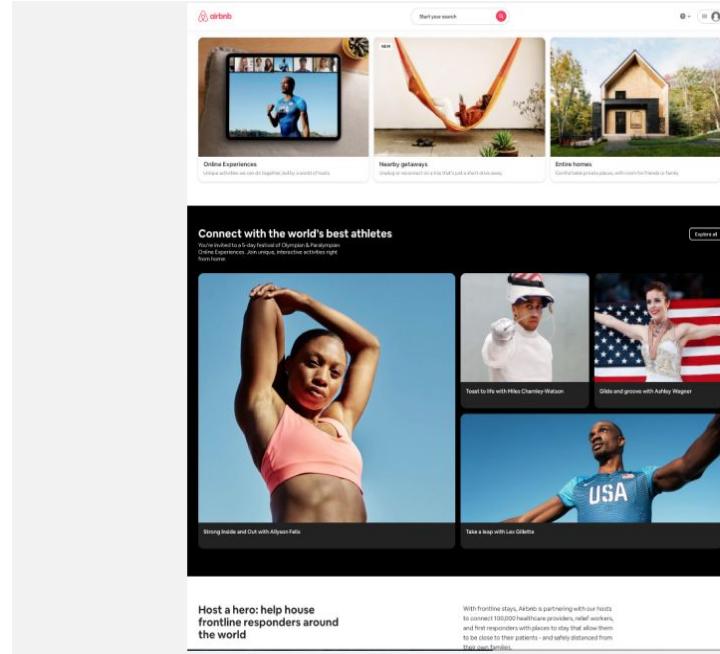
Color and contrast

Color

- Determines first impression and **mood** of a design
- Critical to **hierarchy** and **clarity**
- Supports the **message**

Contrast

- Distinguish elements that **behave** differently, have different **importance**.
-  Play with color, backgrounds, font weight.
- *For example:* buttons, content sections, text strings



Contrast

⚠️ Low contrast

- Text hard to read
- Problematic for visually impaired or color blindness
- Bad monitors still exist!

Contrast issues

- Text size
- Text size to background color
- Irregular or unpredictable backgrounds
- Color combinations

This text is too small

```
font-family: Arial;  
font-weight: normal;  
font-size: 10px;  
color: #000000;  
  
background: #FFFFFF;
```

This text is too small doesn't have enough color contrast with the background

```
font-family: Arial;  
font-weight: normal;  
font-size: 10px;  
color: #C0C0C0;  
  
background: #F2F2F2;
```

This text is color doesn't have enough color contrast with the background

```
font-family: Arial;  
font-weight: normal;  
font-size: 15px;  
color: #000000;  
  
background: #3E3E3E;
```

Text on top of picture - part of the text is missing

```
font-family: Arial;  
font-weight: normal;  
font-size: 25px;  
color: #000000;  
  
background: image.png;
```

Menu item 1

Menu item 2

Menu item 3

Menu item 1

Menu item 2

Menu item 3

Menu item 1

Menu item 2

Menu item 3

Deutanopia

Protanomaly

introduction to

Figma



Brief and user stories:

<https://github.com/HackYourFutureBelgium/u-x-ui-design/blob/master/homework-briefs/hero-ca-contact-tracing.md>

Figma starter file:

<https://www.figma.com/file/FRdfx12LjrsqMYfKcRm7Bu/Class-11-12-2020?node-id=3%3A2>

Delivery board:

<https://github.com/HackYourFutureBelgium/class-11-12/projects/3>

a11y

accessibility

Accessibility

Make content accessible to everyone

Goals

- Increase access , reduce friction
- Inclusive and better user experience
- Flexible design and maintainable code quality
- Legal requirements

Design

- Products that are **usable** (accessible) and open to **all** (inclusive)
- **Diverse** ways to access and experience your product.

	Permanent	Temporary	Situational
Touch			
See			
Hear			
Speak			

Accessibility

WCAG - Web Content Accessibility Guidelines

4 Principles

- Perceivable
- Operable
- Understandable
- Robust

3 Levels of conformance requirements

- **A:** minimum level, or Level A alternative version
- **AA:** Level A + Level AA, or Level AA alternative version
- **AAA:** Level A + Level AA + Level AAA or Level AAA alternative version

W3C Recommendation

TABLE OF CONTENTS

Abstract

Status of This Document

Introduction

- 0.1 Background on WCAG 2
- 0.2 WCAG 2 Layers of Guidance
- 0.3 WCAG 2.1 Supporting Documents
- 0.4 Requirements for WCAG 2.1
- 0.5 Comparison with WCAG 2.0
- 0.5.1 New Features in WCAG 2.1
- 0.5.2 Numbering in WCAG 2.1
- 0.5.3 Conformance to WCAG 2.1
- 0.6 Later Versions of Accessibility Guidelines

Perceivable

- 1.1 Text Alternatives
- 1.1.1 Non-text Content
- 1.2 Time-based Media
- 1.2.1 Audio-only and Video-only (Prerecorded)
- 1.2.2 Captions (Prerecorded)
- 1.2.3 Audio Description or Media Alternative (Prerecorded)
- 1.2.4 Captions (Live)
- 1.2.5 Audio Description
- 1.2.6 Sign Language
- 1.2.7 Extended Audio
- 1.2.8 Media Alternatives
- 1.2.9 Audio-only Text
- 1.3 Adaptable
- 1.3.1 Info and Relationships
- 1.3.2 Meaningful Structure
- 1.3.3 Sensory Characteristics
- 1.3.4 Orientation
- 1.3.5 Identify Input
- 1.3.6 Identify Purpose
- 1.4 Distinguishable
- 1.4.1 Use of Color
- 1.4.2 Audio Control
- 1.4.3 Contrast (Minimum)
- 1.4.4 Resize Text
- 1.4.5 Images of Text
- 1.4.6 Contrast (Enhanced)
- 1.4.7 Low or No Vision
- 1.4.8 Visual Pretext
- 1.4.9 Images of Text

TABLE OF CONTENTS

1. Introduction

2. WCAG 2.2 Requirements

WCAG 2.2 success criteria continue to cover most additional use-cases from WCAG 2.1.

- 2.1 Utilize the WCAG 2.0 conformance model.
- 2.2 Utilize the WCAG 2.0 A/AA/AAA model.
- 2.3 Utilize the WCAG 2.0 A/AA/AAA model.
- 2.4 Example

3. Success Criterion Acceptance Criteria

- 3.1 Success Criterion Characteristics
- 3.2 Success Criteria Considerations
- 3.3 Research
- 3.4 Acceptance into Editor's Draft

A. Change Log

- A.1 Substantive changes since the last public working draft
- A.2 Other substantive changes since the First Public Working Draft

B. References

- B.1 Informative references

W3C Editor's Draft

Web Content Accessibility Guidelines (WCAG) 2.1

W3C Recommendation 05 June 2018



This version:

<https://www.w3.org/TR/2018/REC-WCAG21-20180605/>

Latest published version:

<https://www.w3.org/TR/WCAG21/>

Latest editor's draft:

<https://w3c.github.io/wcag/21/guidelines/>

Implementation report:

<https://www.w3.org/WAI/WCAG21/implementation-report/>

Previous version:

<https://www.w3.org/TR/2018/PR-WCAG21-20180424/>

Previous Recommendation:

<https://www.w3.org/TR/2008/REC-WCAG20-20081211/>

Editors:

Andrew Kirkpatrick (Adobe)

Joshua O Connor (Invited Expert, InterAccess)

Alastair Campbell (Nomensa)

Michael Cooper (W3C)

Requirements for Web Content Accessibility Guidelines 2.2

W3C Editor's Draft 30 September 2020



This version:

<https://w3c.github.io/wcag/requirements/>

Latest published version:

<https://www.w3.org/TR/wcag-22-requirements/>

Latest editor's draft:

<https://w3c.github.io/wcag/requirements/>

Editors:

Alastair Campbell (Nomensa)

Michael Cooper (W3C)

Andrew Kirkpatrick (Adobe)

Copyright © 2019-2020 W3C® (MIT, ERCIM, Keio, Beihang). W3C liability, trademark and document use rules apply.

Abstract

This document outlines the requirements that the Web Content Accessibility Guidelines Working Group (WCAG WG) has set for the development of Web Content Accessibility Guidelines (WCAG) 2.2. These requirements build on the existing requirements for WCAG 2.0, and are designed to work in harmony with the WCAG 2.0 and WCAG 2.1 standards.

Status of This Document

This section describes the status of this document at the time of its publication. Other documents may supersede this document. A list of current W3C publications and the latest revision of this technical report can be found in the W3C technical reports index at <https://www.w3.org/TR/>.

This document was published by the Web Content Accessibility Guidelines Working Group as an Editor's Draft.

Comments regarding this document are welcome. Please send them to public-comments-wcag2@w3.org (archives).

Publication as an Editor's Draft does not imply endorsement by the W3C Membership. This is a draft document and may be updated, replaced or obsoleted by other documents at any time. It is inappropriate to cite this document as other than work in progress.

This document was produced by a group operating under the W3C Patent Policy. W3C maintains a public list of any patent disclosures made in connection with the deliverables of the group; that page also includes instructions

Accessibility

Distinguishable

Provide sufficient contrast between foreground and background

WCAG: 1.4.3 The visual presentation of text and images of text has a contrast ratio of at least 4.5:1, [...] with exceptions.
(Level AA)



Small text

- Less than 18pt / less than 14pt if bold
- Contrast ratio: **4.5:1** (level AA) and **7:1** (level AAA)

Large text

- More than 18pt / more than 14pt if bold
- Contrast ratio: **3:1** (level AA) and **4.5:1** (level AAA)

Contrast ratio



Small text

8.74	6.09	5.02	4.20	3.56	2.48	1.96	1.51	1.23	
AAA	AA	AA	FAIL						

2.40	3.45	4.18	5.00	5.90	8.48	10.69	13.87	17.01	
FAIL	FAIL	FAIL	AA	AA	AAA	AAA	AAA	AAA	AAA

Large text

8.74	6.09	5.02	4.20	3.56	2.48	1.96	1.51	1.23	
AAA	AAA	AAA	AA	AA	FAIL	FAIL	FAIL	FAIL	FAIL

2.40	3.45	4.18	5.00	5.90	8.48	10.69	13.87	17.01	
FAIL	AA	AA	AAA	AAA	AAA	AAA	AAA	AAA	AAA

Accessibility

Operable

Interactive components are easy to identify and keyboard accessible

WCAG: 2.4.7 Focus Visible (Level AA) and 2.1.1: Keyboard (Level A)



- Distinguishable **styles for interaction**: links, buttons, navigation
- Different **states**: on mouse hover, keyboard focus, touch screen trigger, active, disabled, etc
- Use styles **consistently** and everywhere
- All interactions must be triggered also via keyboard
- Follow **logical** sequential tabbing order

Default button

Default link

Focused button

Focused link

Hover button

Hover link

Active button

Active link

Disabled button

Visited link

Accessibility

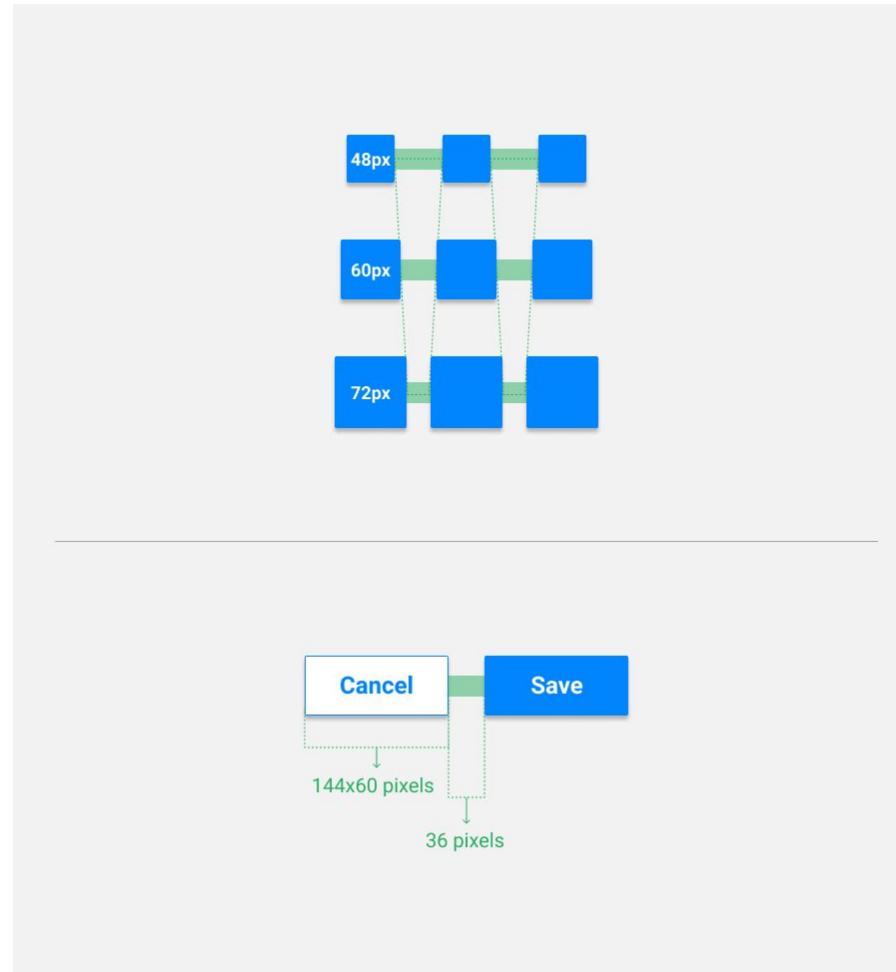
Operable

Touch targets should be large enough

WCAG: 3.2 Touch Target Size and Spacing: [...] elements must be big enough and have enough distance from each other so that users can safely target them by touch.



- Avoid **unintentional** triggers.
- For touch screens and to help people with limited dexterity.
- Minimum 44×44 px. Aim **48x48px** or higher!
- Smaller the target size, **bigger** the space between interactive elements needs to be.
- Don't go below **36px spacing** for small targets.



Accessibility

Distinguishable

Don't use color alone to convey information

WCAG: 1.4.1 Use of Color "Color is not used as the only visual means of conveying information, indicating an action, prompting a response, or distinguishing a visual element." (Level A)



- Provide additional identification.
 - For example, use an asterisk, a border, an icon, additional label or text.

Text input label

Placeholder text

Helper text

Text input label

Placeholder text



Error message text

Additional error indicators

Icon indicator

Border stroke

Error helping message

Accessibility

Design with accessibility in mind,
design better products for
everyone.

Testing tools (examples)

Browser

- Wave
- ARC
- Lighthouse

Figma

- Stark plugin

The screenshot shows the WAVE web accessibility evaluation tool interface. At the top, it says "powered by WebAIM". Below that is a "Styles" toggle switch set to "ON". The main area is titled "Summary" with tabs for "Summary", "Details", "Reference", "Structure", and "Contrast". The "Summary" tab is selected. It displays the following counts:

- Errors: 19
- Contrast Errors: 432
- Alerts: 4
- Features: 129
- Structural Elements: 407
- ARIA: 211

A "View details" button is located at the bottom right of this section.

This screenshot shows a detailed view of a specific accessibility issue from the WAVE tool. The issue is titled "Very low contrast" and is described as "Very low contrast between text and background colors." It includes a "REFERENCE" and "CODE" section. The background image shows a food delivery app interface for "Banh Mi Express" with various menu items like "Delivery", "Pickup", and "Sort". A specific element, the logo for "dine-in*", is highlighted with a red box and a red "X" icon, indicating it fails the contrast test. The "Sort" section is also highlighted with a red box and a red "X" icon. The "Offers" section lists items like "All offers", "Free Item", "Free Delivery", "Meal Deals", and "Special Offer", each with its own status indicator and icon.

a few

form design patterns

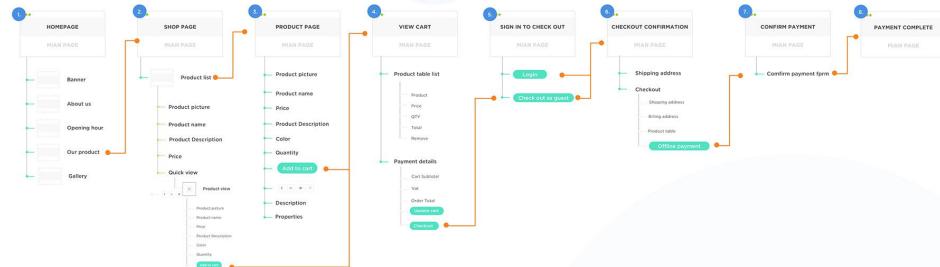
Form flows

Where?

In registrations, in checkouts, surveys, flight booking, ...



- Only ask what you **need**, in **logical** order.
 - Think in steps and content sections.
- Consider a confirmation page with link to **edit** mode.



Form field elements

Label: Above input. Clear, context aware and easy to understand.

Input:

- ```
<label for="firstName">First Name</label>
<input type="text" id="firstName"
name="firstName"/>
```
- and call right keyboard on mobile devices

**Placeholder:** Hints that disappear. ⚠️ Do not use placeholders as labels!

**Constraint text:** Tell upfront the conditions for validation.

.....

## Register

Already registered? [Log in](#)

Label **First name**

Input *Joana*

Placeholder *joanasmith@hotmail.com*

Constraint text **Choose password**  
Your password must be at least 10 characters long and contain at least 1 numeric character [0-9].

\*\*\* [Show](#)

**Register**

# Form controls

**Checkboxes:** Select more than 1 item. Multiple selection.

**Radio buttons:** Select only 1 item, include default. Single selection.

**Selects / dropdowns:** List more than 7 items.

- Consider autosuggest for long lists.
- ⚠️ Don't hide everything in a select! Extra interactions for user.

“Dropdowns should be the UI of last resort.”

- Luke Wroblewski

## Multiple selection

- Unchecked
- Checked
- Checked

## Single selection

- Radio off
- Radio on
- Radio off

## Don't mix styles!

- Unselected
- Is this a radio or a checkbox?

## List 7+ items

Select control ▾

- Item 5
- Item 6
- Item 7
- Item 8
- Item 9

## Don't use selects for dates!

| Day | Month    | Year |
|-----|----------|------|
| 2   | February | 1900 |
| 3   | March    | 1901 |
| 4   | April    | 1902 |

## Date of birth

DD/MM/YYYY

23/11/1992

# Form validation

## Validation

- Inline validation : feedback as user types or leave the field (`onblur`).
- On form submit : Don't disable submit button, validate at once.

## Error messages

**What** is the problem, **where** (which fields), and **how** to fix it (instructions to recover).



- Don't use error codes or blame the user.
- Aggregate errors at the top, with anchor links.

## There is a problem

Please correct the errors below:

- Email address, it must contain the '@' symbol.
- Password, it should be at least 10 characters long.

## Register

Already registered? [Log in](#)

### First name

Joana

### Email address

● This email address is invalid, it must contain the '@' symbol.

joanasmithhotmail.com

### Choose password

● Your password should be at least 10 characters long.

Your password must be at least 10 characters long and contain at least 1 number [0-9].

\*\*\*

Show

Register

Jacob Nielsen's

---

# 10 usability heuristics

# Usability heuristics

Design guidelines to build products that are **reliable, intuitive**, and therefore **trustworthy**.



**Jakob Nielsen**

[nngroup.com/articles/ten-usability-heuristics](http://nngroup.com/articles/ten-usability-heuristics)

1. Visibility of the system status
2. Match between system and the real world
3. User in control
4. Consistency and Standards
5. Error prevention
6. Recognition rather than recall
7. Flexibility and efficiency of use
8. Aesthetics and minimalist design
9. Help users recognize, diagnose and recover from errors
10. Help and documentation

# #1 Visibility of system status

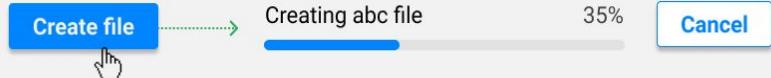
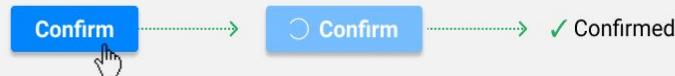
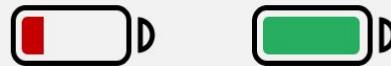
Keep users **informed** about what is going on, through appropriate **feedback** within reasonable time.

Keep users in **control**



Make those status easy available:

- . when user can **take** action and
- . when user **performed** an action



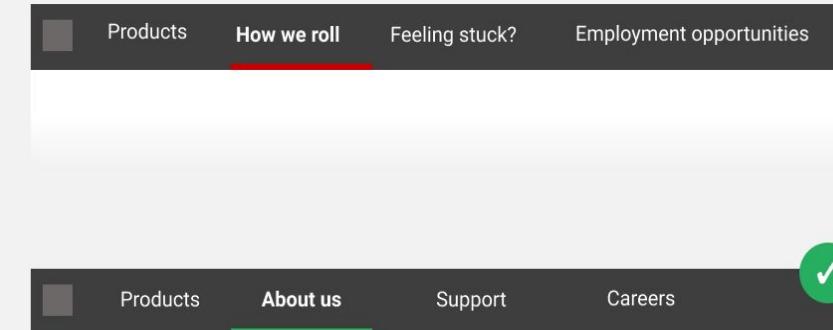
# #2 Match between system and the real world

Use **users' language**, with words, phrases and concepts familiar to the user.

Labels in button, links, menu items (etc) should support follow up interactions.



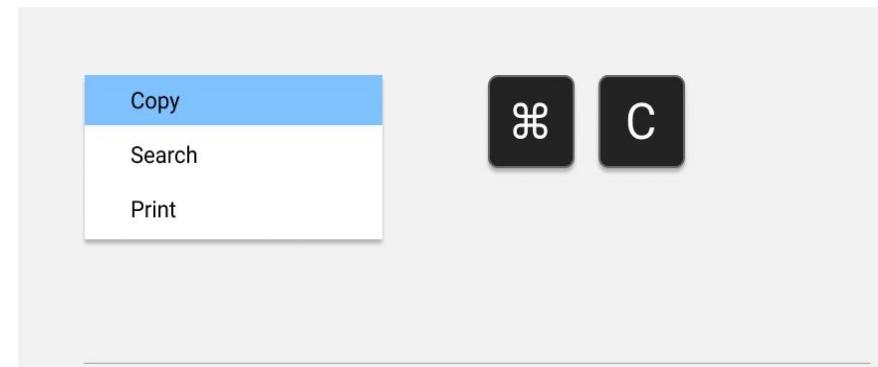
Tell what the user will find, avoid jargon.



# #7: Flexibility and efficiency of use

Interface flexibility for **multiple types of users**: experts, novices, using different interactive technologies, etc.

- **Accelerators** to speed up the frequent interactions.
- They do not come in the way of one another, they both work.



Double tap

# #8: Aesthetic and minimalist design

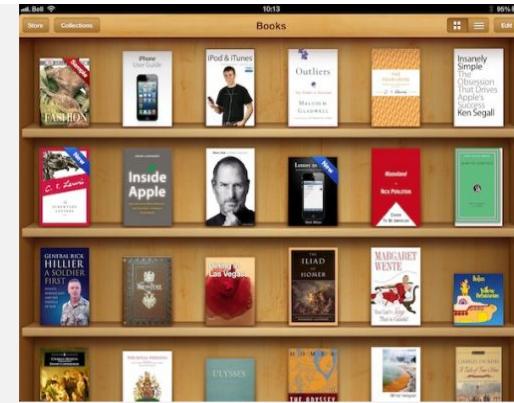
Focus on **essentials**

**Prioritize** relevant content and features.

Visuals to **reinforce** or add something

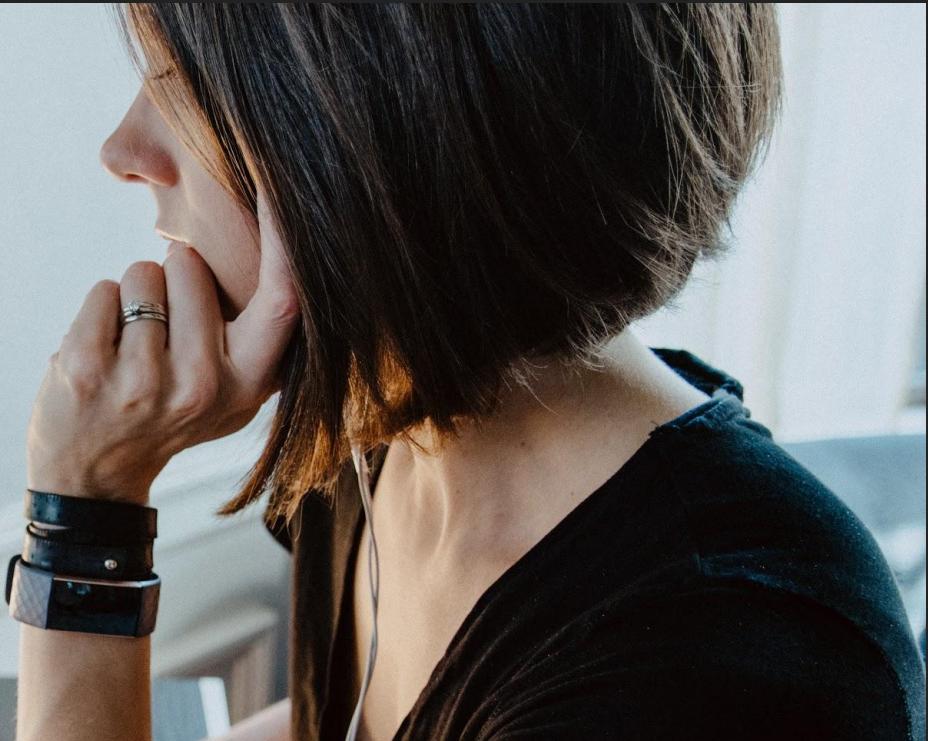
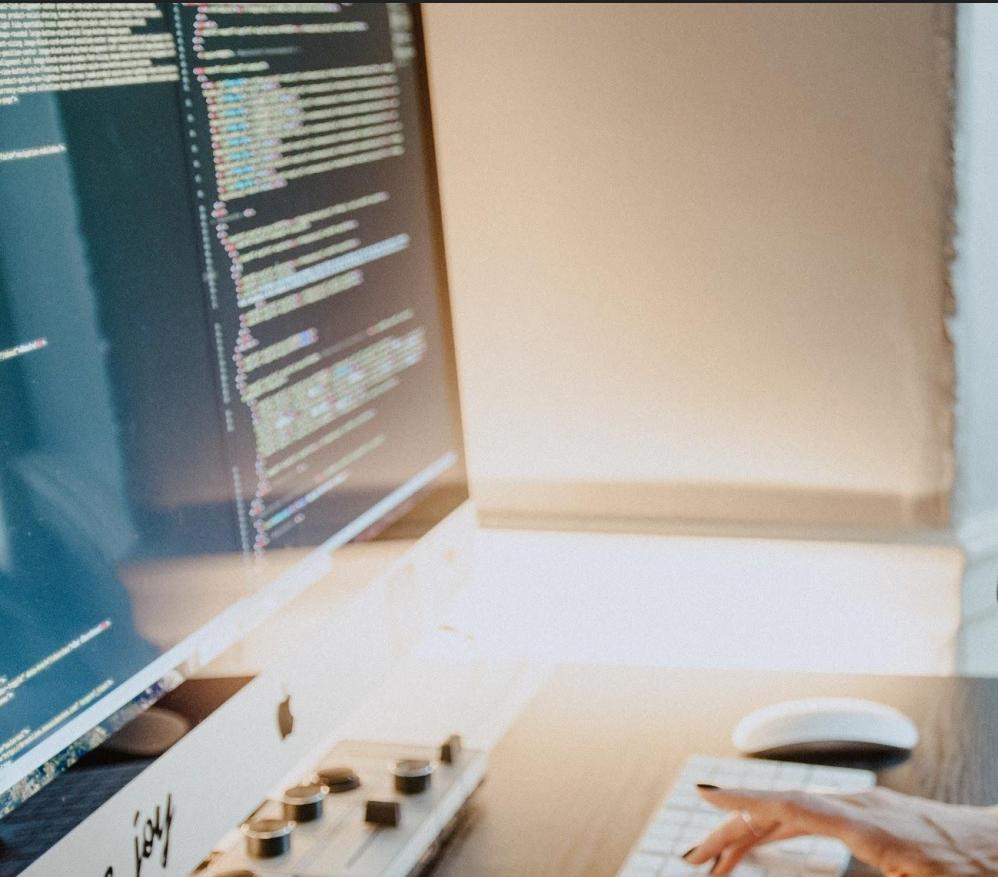


- Avoid visual noise and information that is irrelevant or rarely needed.
- Avoid visuals just for decoration.



.....

# What's next?



**Brief:**

<https://github.com/HackYourFutureBelgium/ux-ui-design/blob/master/homework-briefs/personal-portfolio.md>

# What's next

Find all you need in the **Design resources list**:

<https://study.hackyourfuture.be/ux-ui-design>

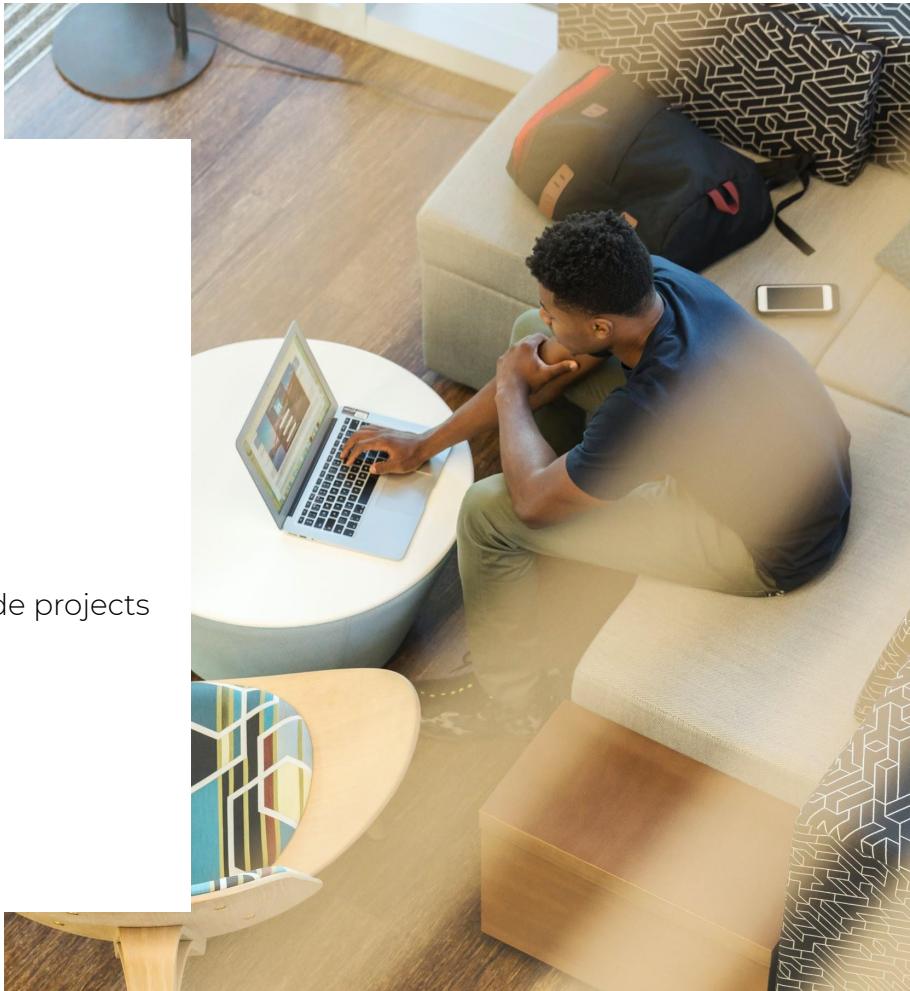
Hand in **HORECA contact tracing** Design project in Figma.

- Feedback will be provided with Figma comments .

Start **Portfolio** (Design and Code) with HYF learnings and side projects

**Reach out:**

- Ping on Slack upcoming week.
- Available for 1-1 requests



# Closing note

---



THE WORLD  
NEEDS  
DESIGNERS

thank you

