

Introduction to Accessibility and User Experience Design

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Topics

- Accessibility
 - "Experiencing disabilities"
 - Introduction to accessibility
 - Analyzing website accessibility (manually & tools)
 - Fixing a mockup – turning website design to accessible
- User Experience
 - UX Design – what, why, how?
 - Process (Diamond, user story)
- Quiz
- Studies at HAMK

Experiencing disabilities



Experience how it feels to navigate website only using the keyboard



1. Do this exercise with your friend(s) next to you. Share your thoughts with others when going through the tasks.
2. Choose a site.
3. Decide what you will try to do. For example:
 1. Online store: I will try to read info about a product and add it to the shopping cart.
 2. Website: I will try to change the site language to English. Navigate to some pages on the site.
 3. Website: I will try to navigate to contact page and fill the contact form (no need to send anything).
4. Tips:
 1. With a TAB key you can navigate through interactive elements.
 2. With Shift + TAB you can navigate backwards.
 3. With Space or Enter you should be able to activate a link/button.
 4. In forms you can use arrow keys.
 5. Esc = close
5. Open the page you chose and put the mouse away/don't use touchpad ☺
6. Questions:
 1. How did it feel to use the website solely with the keyboard?
 2. When you are on an interactive element it should be clearly shown (focus). Usually border. How was it?
 3. The progress going through the interactive elements was logical.

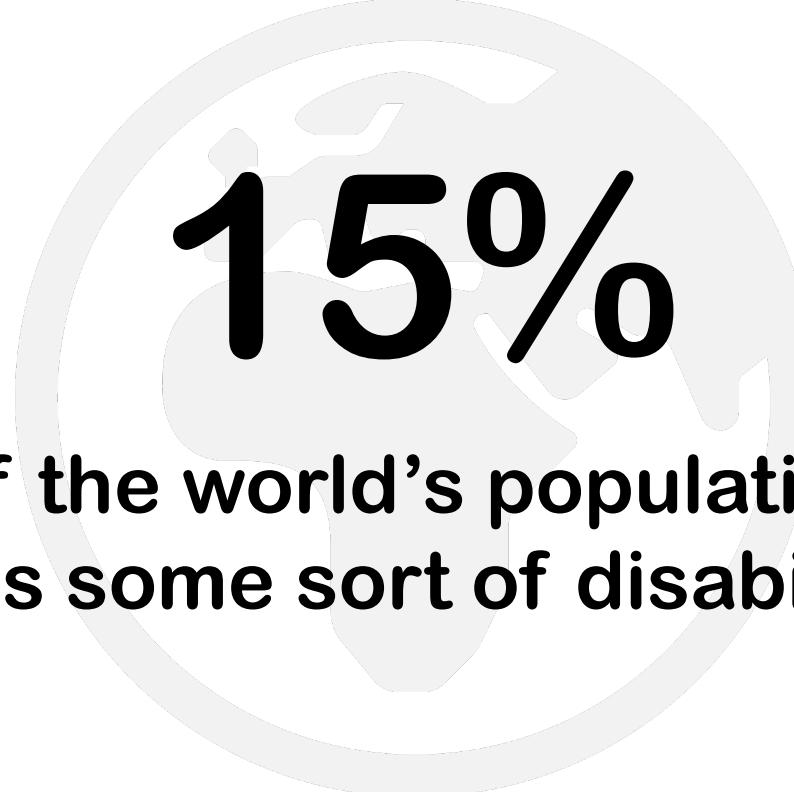
How a blind person uses web – Screen reader demo



Web Accessibility

Web accessibility allows everyone, including people with disabilities, to perceive, understand, navigate and interact with the Internet.





15%

**of the world's population
has some sort of disability**

POUR

Accessibility Principles

Perceivable

User should be able to get the information. Information can't be invisible to all their senses. For example, subtitles in video or text-alternatives for non-text content.

Operable

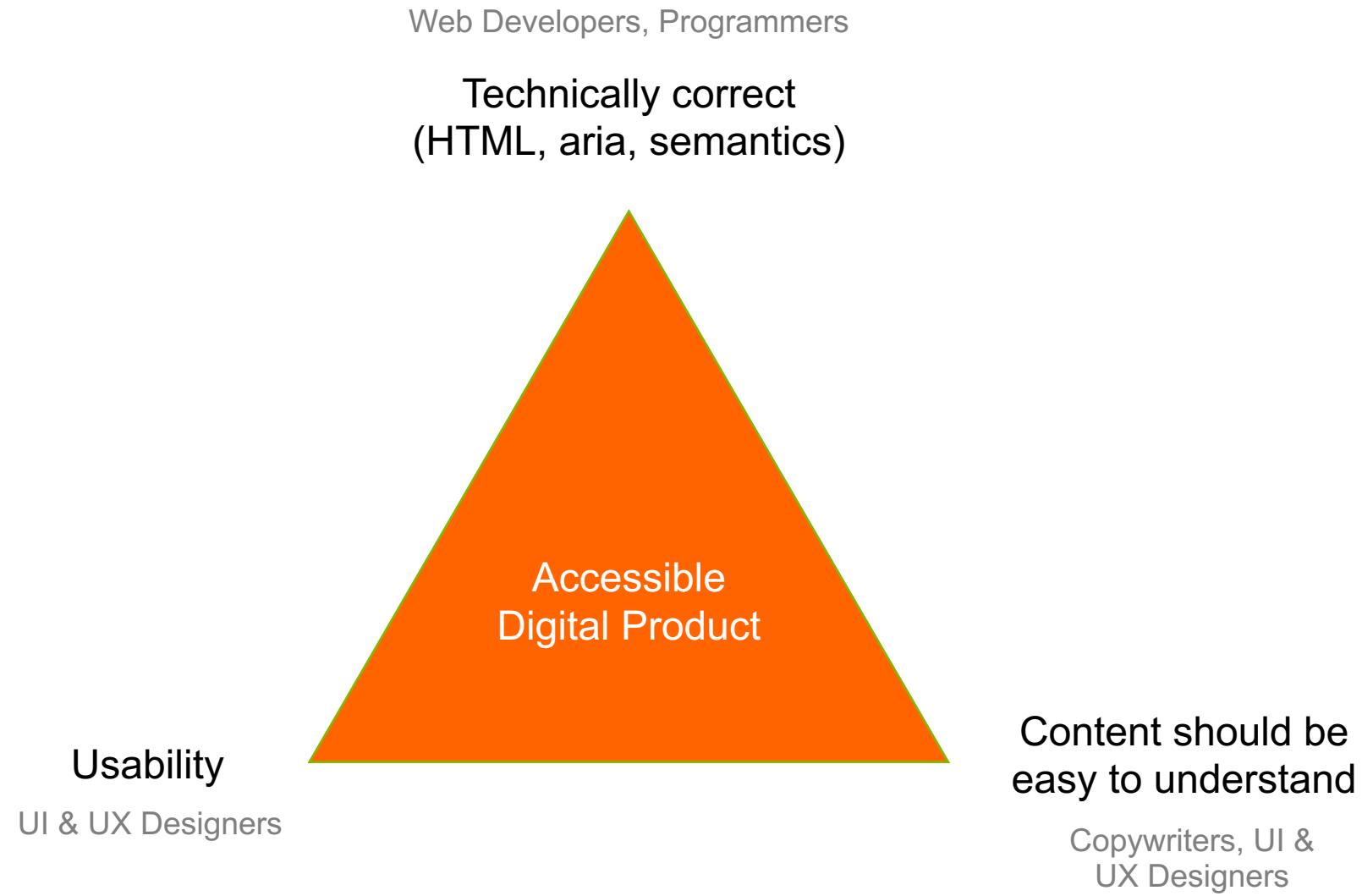
For example, user can click the page links using a mouse OR keyboard.

Understandable

For example, make text understandable, use labels in form fields...

Robust

Website should work on different devices, like mobile phones, desktop computers...



WCAG

Web Content Accessibility Guidelines

**DON'T BE
AFRAID
OF...**

WCAG



Lady Justice Image:
lindamercy@123RF.com



European Union

The Web Accessibility Directive:

Websites and mobile applications of the public sector (for example hamk.fi) needs to be accessible 2020-2021 and must follow WCAG 2.1 guidelines levels A and AA.

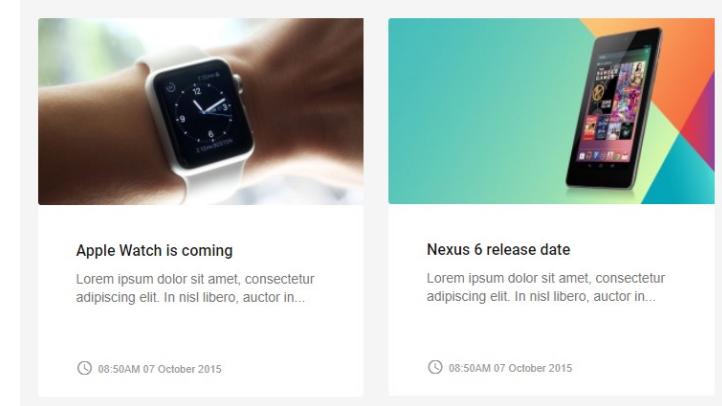
Switzerland

Switzerland's Disability Discrimination Act:
Public organizations must follow the Level AA standards of the Web Content Accessibility Guidelines (WCAG)

Get started!

Mainly for web developers

- Make sure the contrast between the text and the background is good: <https://webaim.org/resources/contrastchecker/>
- Don't use colors to convey information alone.
- Make sure you can navigate using a keyboard.
- Use HTML tags as they are meant to be used (semantics):
 - a, button, nav, main, h1, p...
- Use alt parameters if the image is not decorative.
- If there is no tag for a needed function, use [WAI-ARIA](#) to change the role of the element. With Aria you can make dynamic content accessible (for example accordion)
- Test manually, with tools or maybe even with a screen reader.
- Text:
 - Don't justify the body text or use left align
 - Line length maximum about 80 characters
 - Avoid using capital letters, LIKE THIS
 - Underline the links and nothing else



The image shows a user interface element called an accordion. It consists of four blue horizontal bars, each containing white text and a small circular icon with a plus sign. The first bar is labeled 'Accordion Heading One'. The second bar is labeled 'Accordion Heading Two'. The third bar is labeled 'Accordion Heading Three'. The fourth bar is labeled 'Accordion Heading Four'. To the right of each bar is a small circular icon with a plus sign, likely indicating that clicking it will expand the corresponding section.

Heuristic analysis

- Again, do this with you friend(s) next to you.
- Choose one website and test only one page (contact, service, about us)
- Write your names on a column and the chosen site.
- Main thing is discussion and learning 😊
- <https://tinyurl.com/accessibility-1>



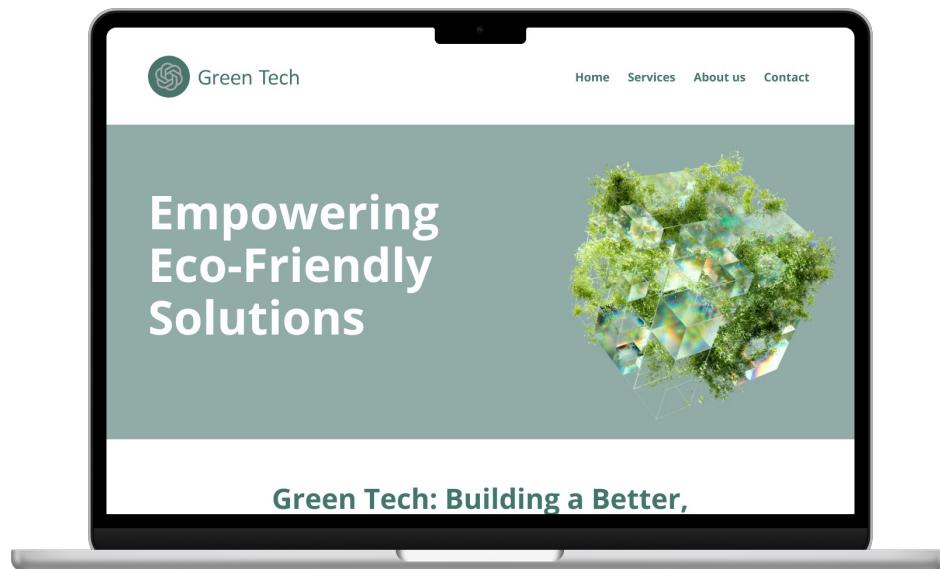
With a tool

- Wave: <https://wave.webaim.org/>
- Run the test using the tool
- Check especially the errors
- How the results reflect your manual, heuristic test?



Fixing a mockup

<https://tinyurl.com/green-tech-figma>



UXD

User Experience Design



**"Every product comes
with a user experience
regardless of whether
someone has designed it
or not"**

UI vs UX – simply put

UI

The look of the form, buttons and so on. The colors, typography, spacing...

UX

How does it feel when filling out the survey? Does it feel too long, are the form fields understandable/logical, help available if needed?

1. Indicate the degree to which you seek the following abilities when making a new hire

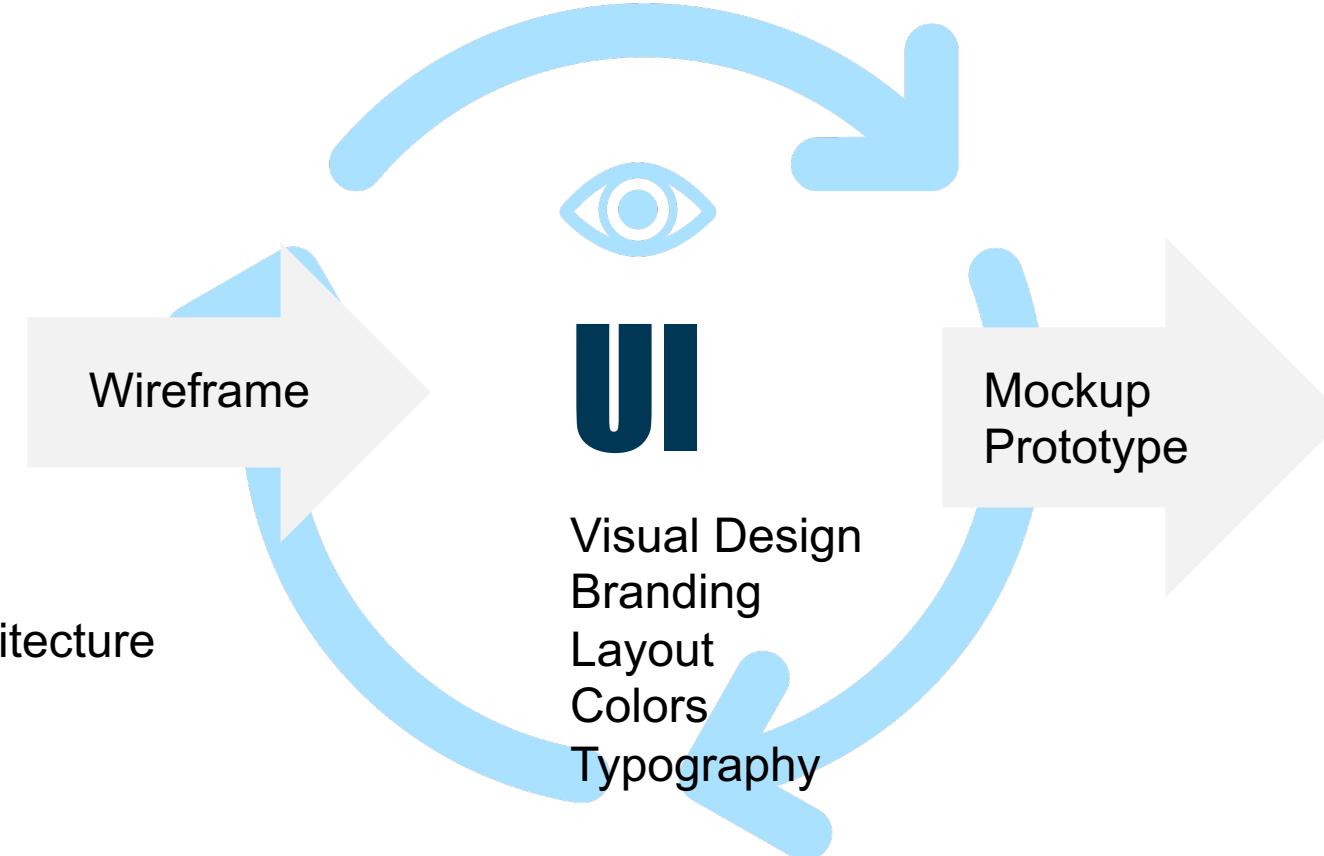
	Not at all	Small degree	Moderate degree	High degree	Very high degree
Good job skills	○	○	○	○	✓
Sense of humor	○	○	○	✓	○
Intelligence	○	✓	○	○	○
Can play jazz	○	○	○	○	○
Likes the Beatles	○	○	○	○	○
Snobbishness	○	○	○	○	○
Ability to lift heavy objects	○	○	○	○	○
Grace under pressure	○	○	○	○	○
Grace on the dance floor	○	○	○	○	○
Likes animals	○	○	○	○	○
Makes good coffee	○	○	○	○	○
Eats all his / her vegetables	○	○	○	○	○

User Experience Design & User Interface Design



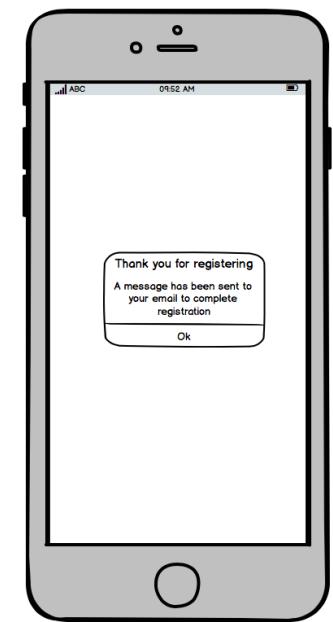
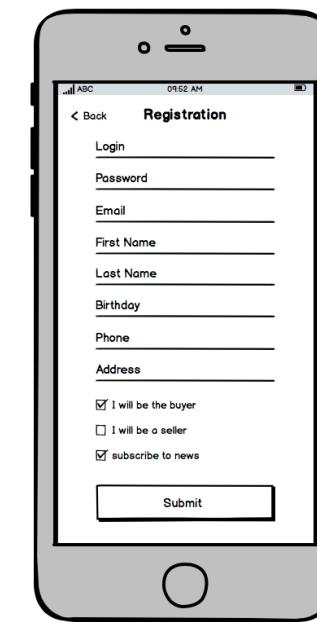
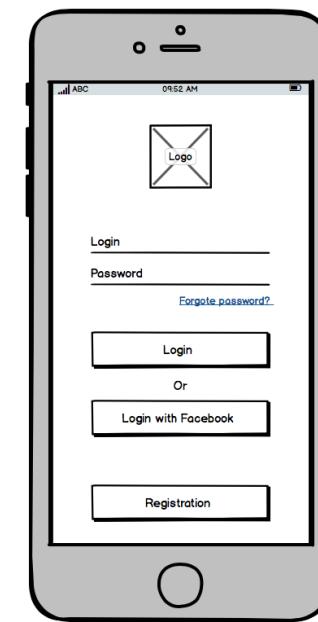
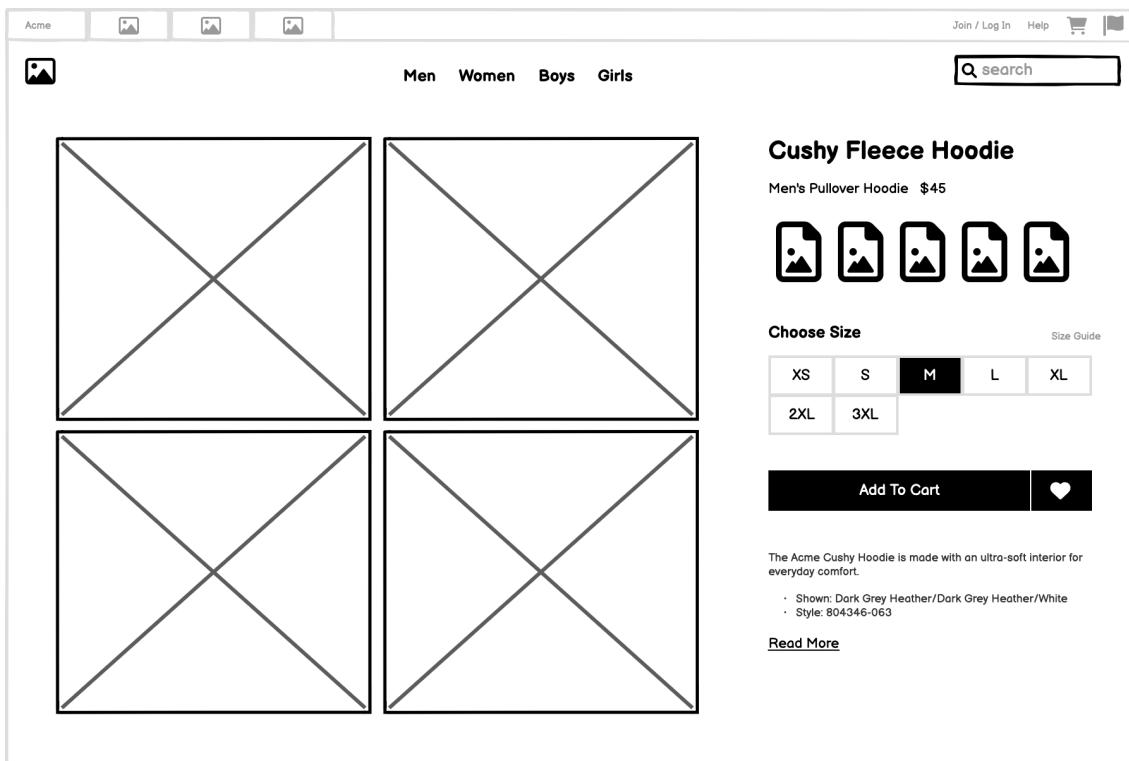
UX

User Research
Personas
Information architecture
User Stories
Usability testing



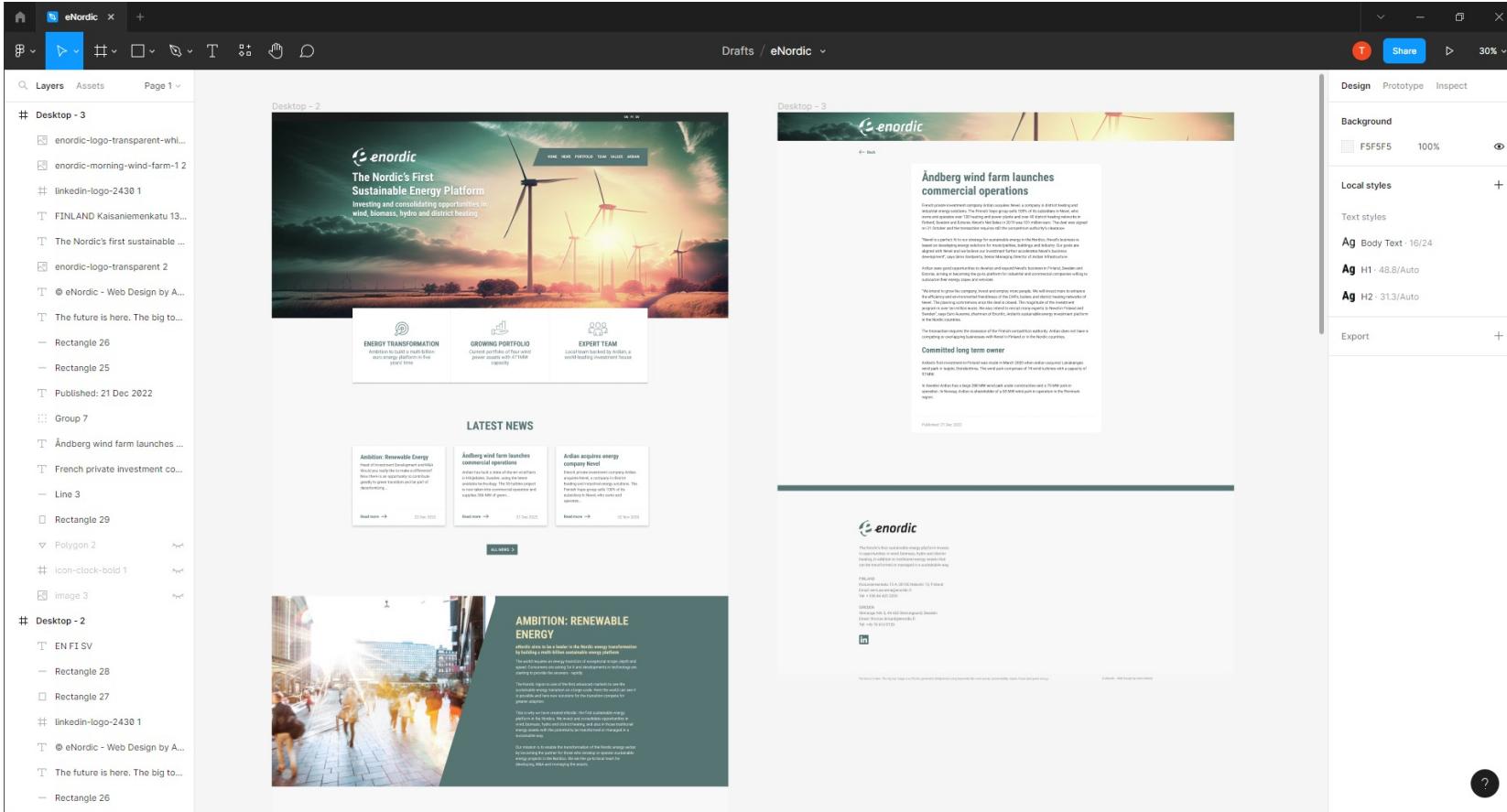
Software Developer

Wireframe



Mockup

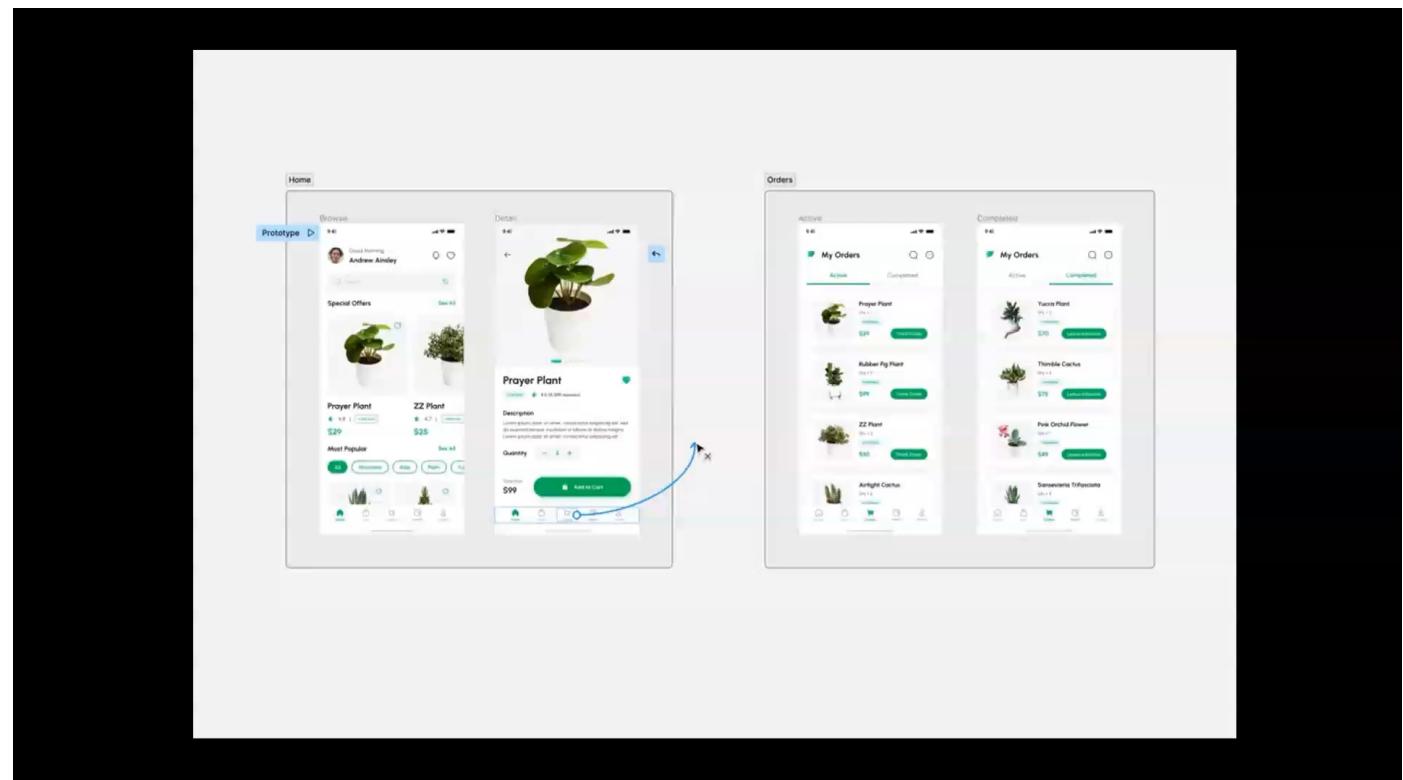
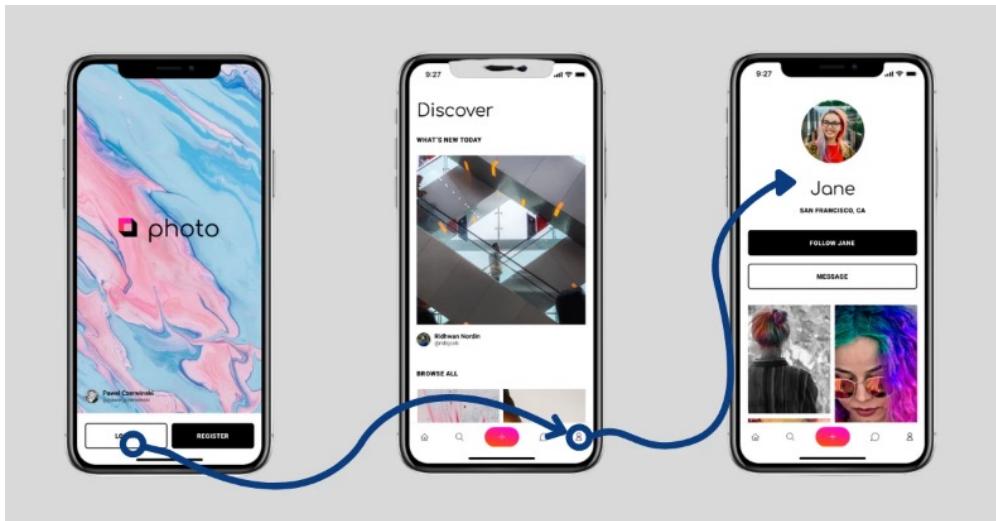
Image of the website/app. Static, high-fidelity



Figma, Sketch (Mac), Adobe XD, Photoshop

Prototype

Interactive, a sample of a final product (some use cases/user stories)



Twitter @nikolasklein

Figma, Sketch (Mac), Adobe XD

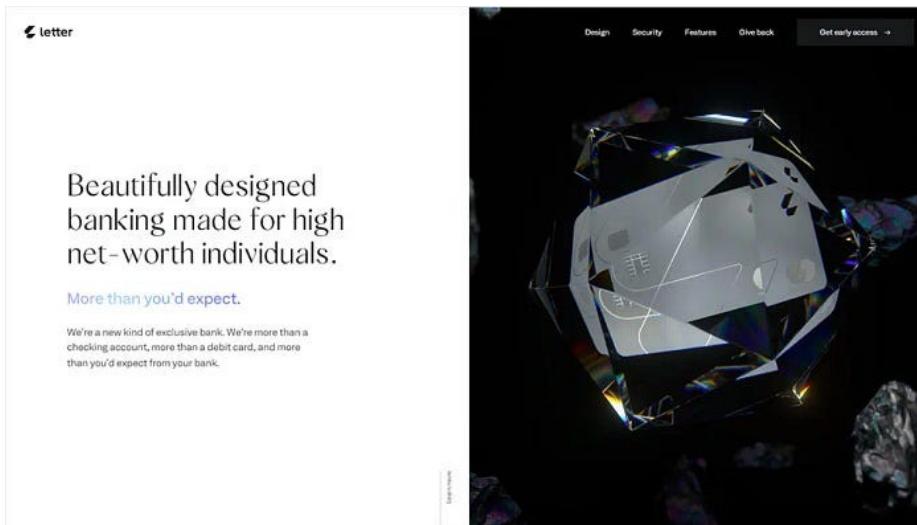
What is **layout** then?

Layout may refer to the final look of the website.

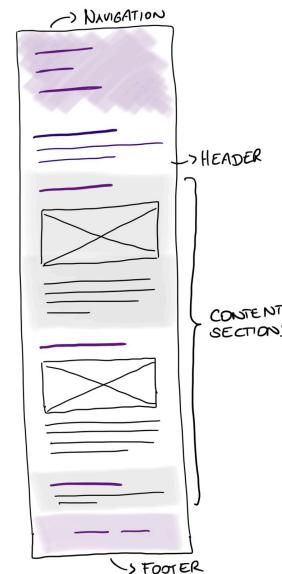
OR

The app OR the placement of the elements. Below are examples of typical website layouts.

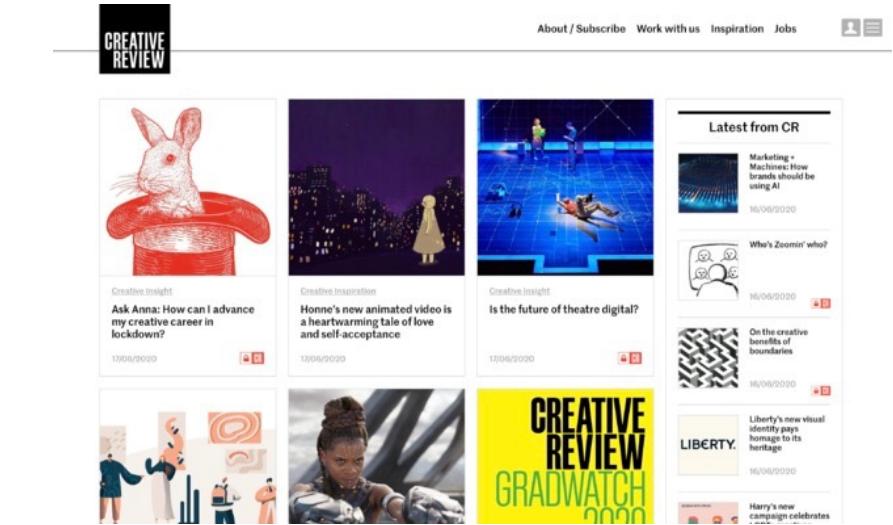
Split screen layout



Single column layout



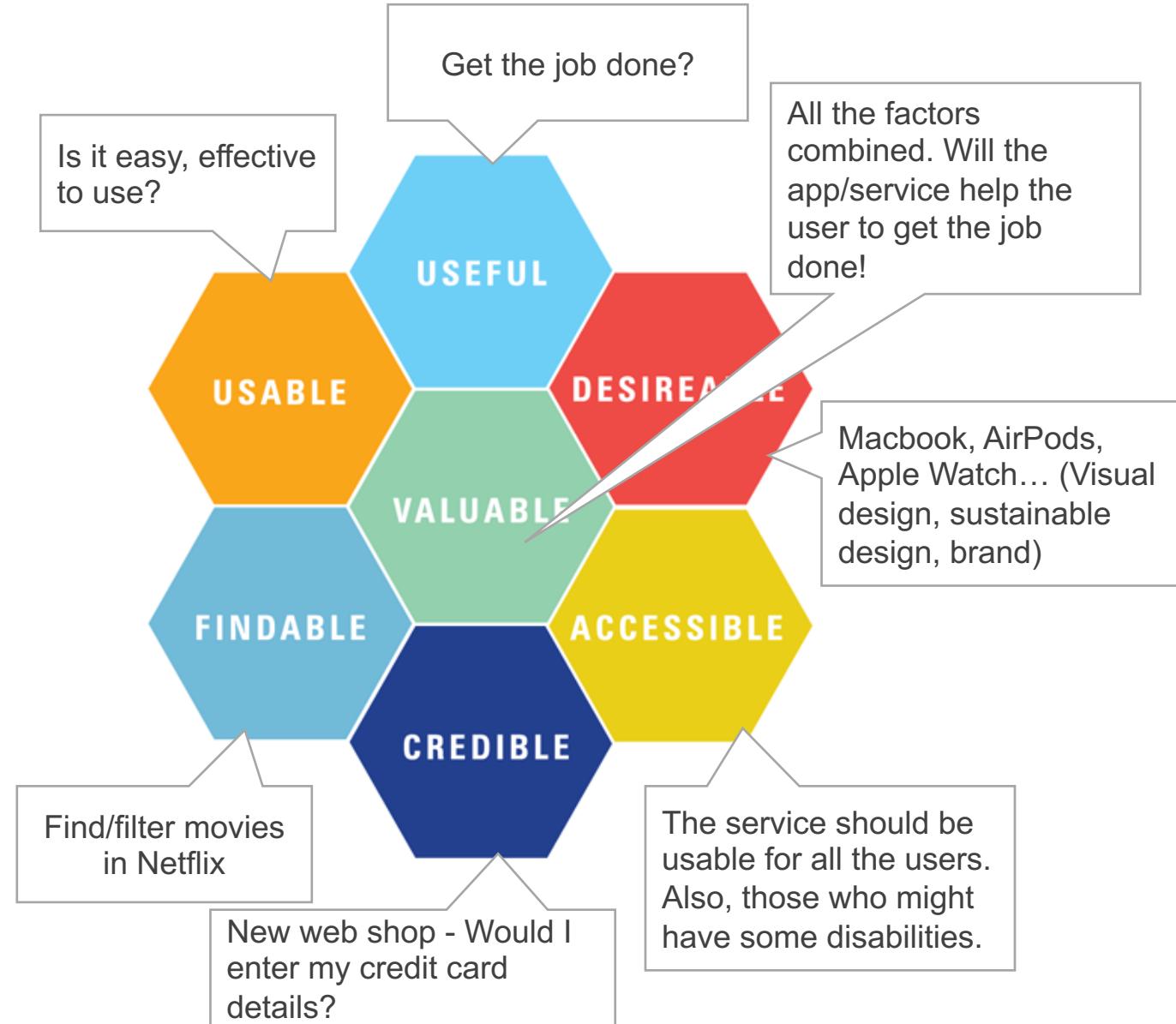
Magazine layout



Others: grid, boxes, asymmetrical, fullscreen image, F-pattern, Z-pattern layout...

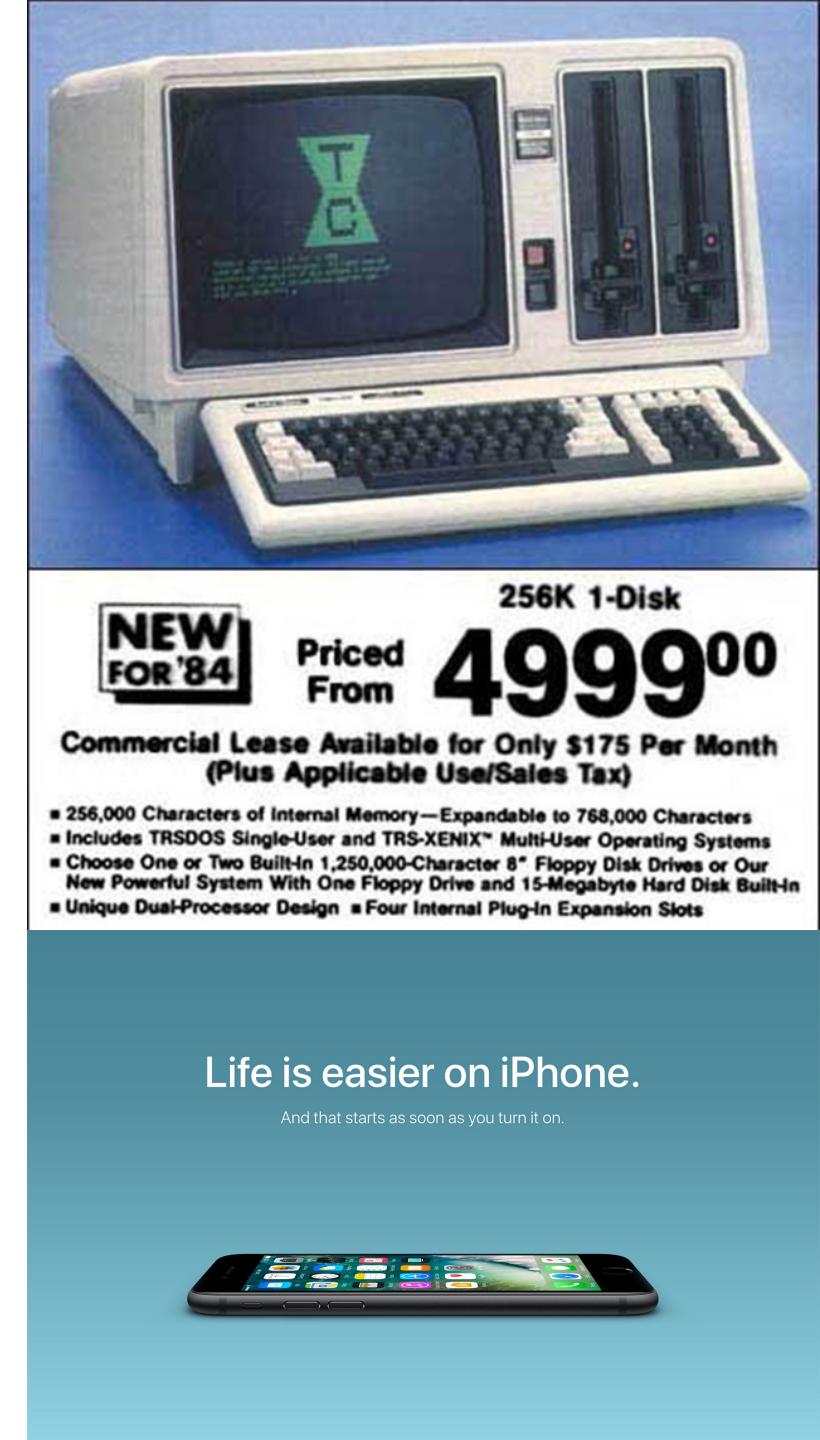
7 Factors of UX

Peter Morville's **UX Honeycomb**



UX – brief history

- The term "user experience" was popularized by Don Norman in the 1990s.
- In the early days of web design, the focus was more on creating visually appealing interfaces.
- Around 2000 companies began to realize how important it was to have a product and service that is usable, intuitive and effective to use (some characteristics of good UX).
 - Increased customer loyalty, higher conversion rates...
 - More money

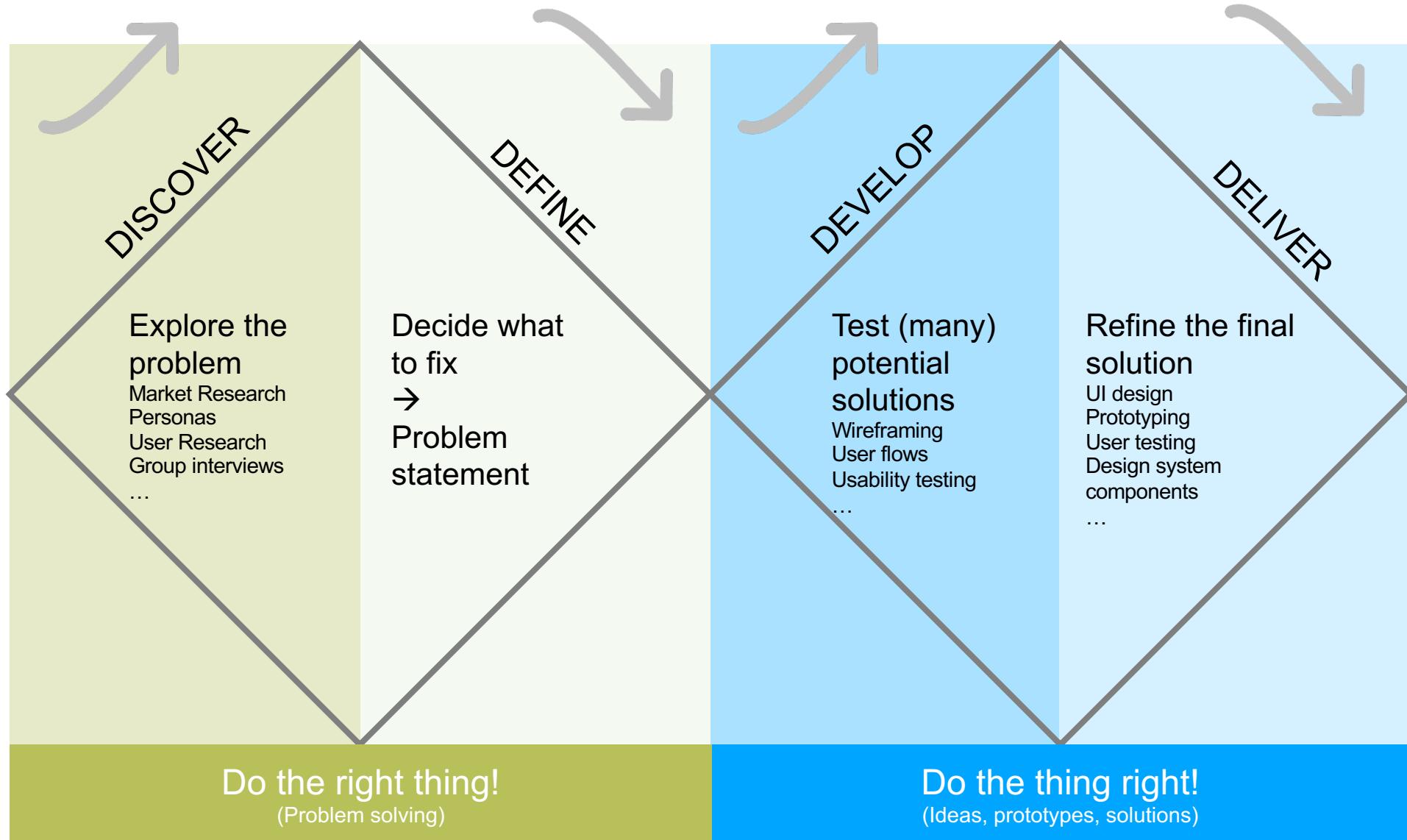


Design Process/Frameworks

- Framework gives a **structure** and **tools** to the design process.
- Important aspects will be considered.
- Collaboration between designers, developers and stakeholders is easier and more effective.
- The design process can be developed even better.
- Not set of rules - more like guidelines.
- There are many different design frameworks (Design Thinking, Double Diamond, Lean UX).



Double Diamond

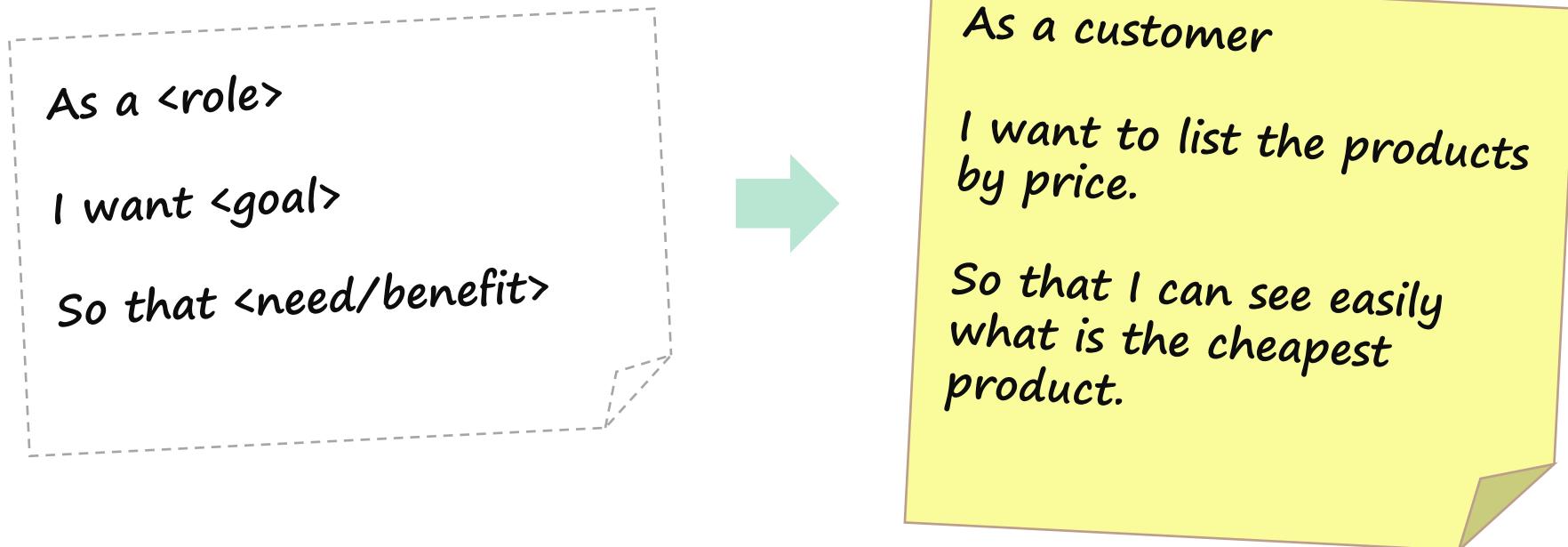


User Story



What is a user story?

- User story is a short, natural language explanation of a feature or functionality written from a user's point of view.
- Used in UX design process, agile software development, brainstorming marketing and so on.



User story mistakes

User story is too technical:

“I want to add my wish list to a database”



“I want to save my wish list”

Use of conjunctions like and, or, but...

“I want to save my wish list and print it”



“I want to save my wish list”

“I want to print my wish list”

After the user stories are created, we could...

- Prioritize the user stories. What are *must have* and what are *nice to have* features in our product.
- Create prototypes.
- Create a user story map

NETFLIX

1. Go to: <https://tinyurl.com/userstory-bfh>
2. Create one user story of a **current functionality** or **feature that you think would be nice addition.**
3. You can create a sticky note clicking icon 



UX Designer as profession???

Characteristics, typical day, tasks...

Thank you!

**Häme University
of Applied Sciences**
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