

INTRODUCTION TO: Interaction Design

WEEK 03

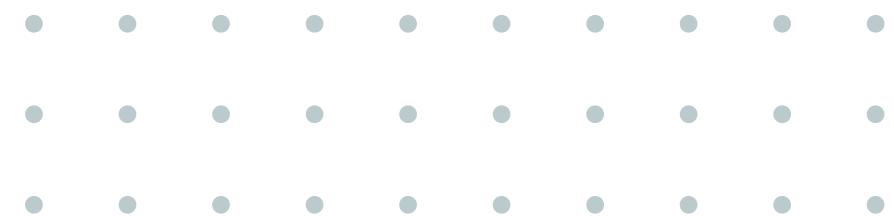




01

USER-CENTERED DESIGN

User-centred design is an approach that **prioritizes the needs and preferences of the end-users** throughout the design process, ensuring that the resulting product or service is intuitive, efficient, and user-friendly.



× × × ×

HUMAN-CENTRED VS. USER-CENTRED

All users are human, but not all humans will be your users.

Who is your target audience?



USER-CENTERED DESIGN PRINCIPLES

There are five major UCD principles:

1. A clear understanding of user and task requirements.
2. Incorporating user feedback to define requirements and design.
3. Early and active involvement of the user to evaluate the product's design.
4. Integrating user-centred design with other development activities.
5. Iterative design process



THE ESSENTIAL ITEMS OF USER-CENTERED DESIGN

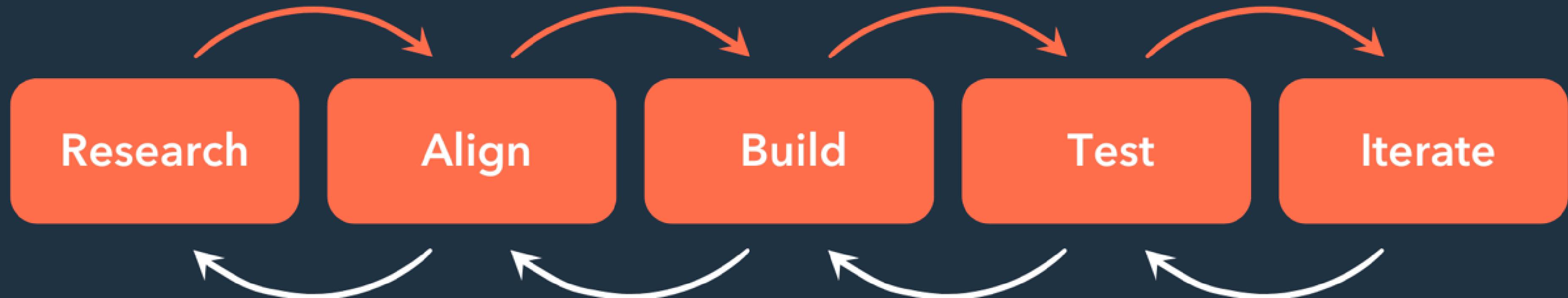
Visibility: Users should be able to see from the beginning what they can do with the product, what it is about, and how they can use it.

Accessibility: Users should be able to find information easily and quickly. They should be offered various ways to find information, for example, call action buttons, search options, menus, etc.

Legibility: Text should be easy to read. As simple as that.

Language: Short sentences are preferred here. The easier the phrase and the words, the better.

User-Centered Design Steps





1. RESEARCH: COLLECT & ANALYZE DATA

Persona: is created at the beginning of the process to have an example of a target, who you are trying to reach. **However, they often lack nuance and is too generalized that leads to assumptions and biases.**

Shift towards Behavioural Data: Use actual user behaviour, Journey Maps or Job stories to understand how users interact. Build **Scenarios:** for an outcome/event-based event for your product and build a **Use case:** or a series of steps for the user to achieve the goal.



1.1 RESEARCH:

Changing User Contexts:

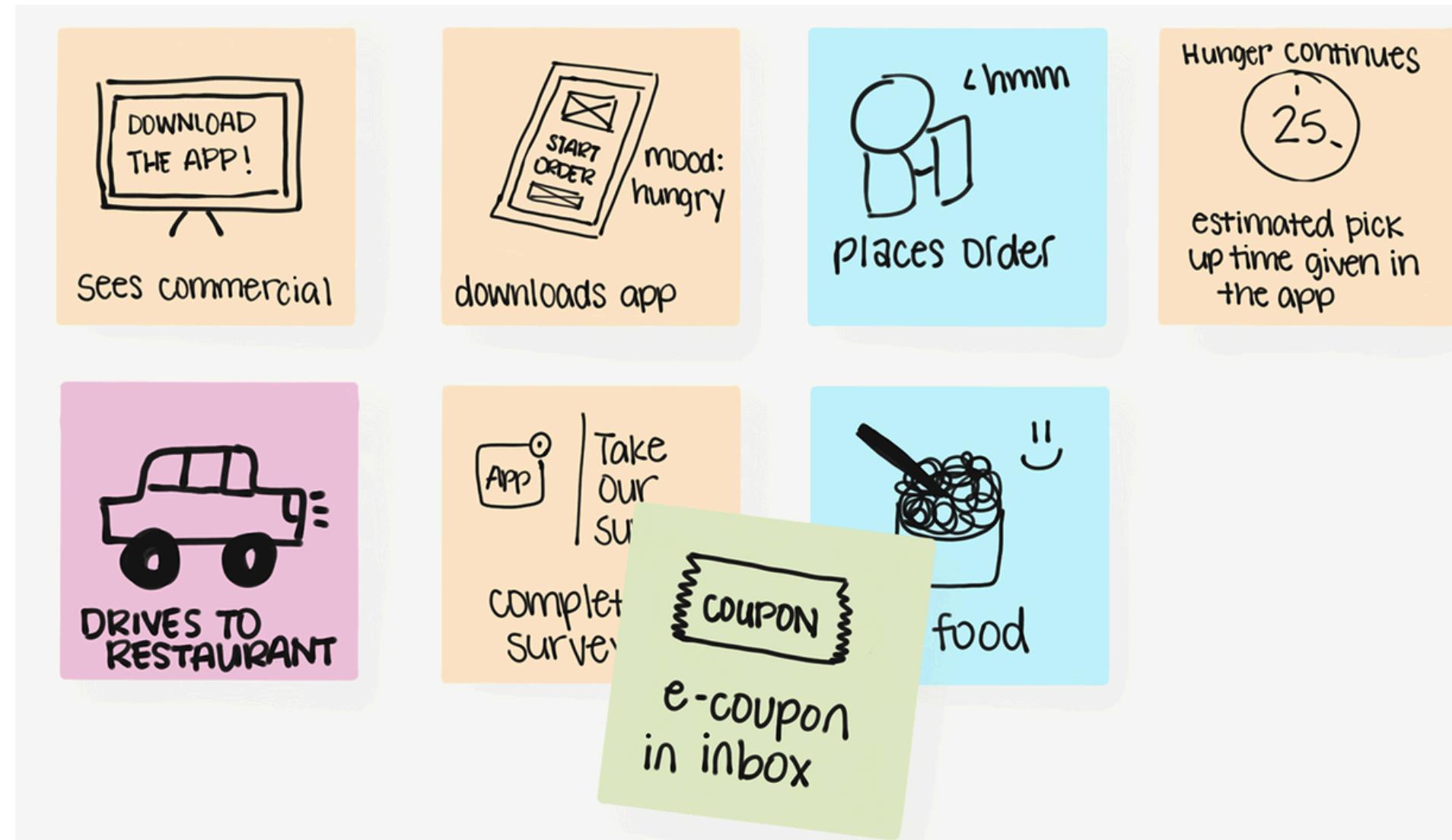
- Personas often fail to account for **contextual variables**, like where or how users interact with a product in different situations.
- Modern UX design prioritizes the fluidity of user experiences and environmental factors, which personas struggle to reflect accurately.

Jobs-to-Be-Done (JTBD) Approach:

- emphasize tasks and outcomes rather than user demographics.
- JTBD focuses on what users are trying to achieve and the problems they face, leading to more actionable insights.



2. DEFINE & ALIGN TO YOUR REQUIREMENTS



This will include the user as well as your business requirements of the company. Ask before initiating the design why this design is beneficial for both business and user.

× × × ×

3. DESIGN & BUILD SOLUTIONS OR DESIGNS

Create your wireframe with a user journey map and storyboard. The map will help you visualize your users' journey as they interact with your product, and the storyboard will provide an emotional justification for each design choice along the way.





4. TEST... & GET FEEDBACK!

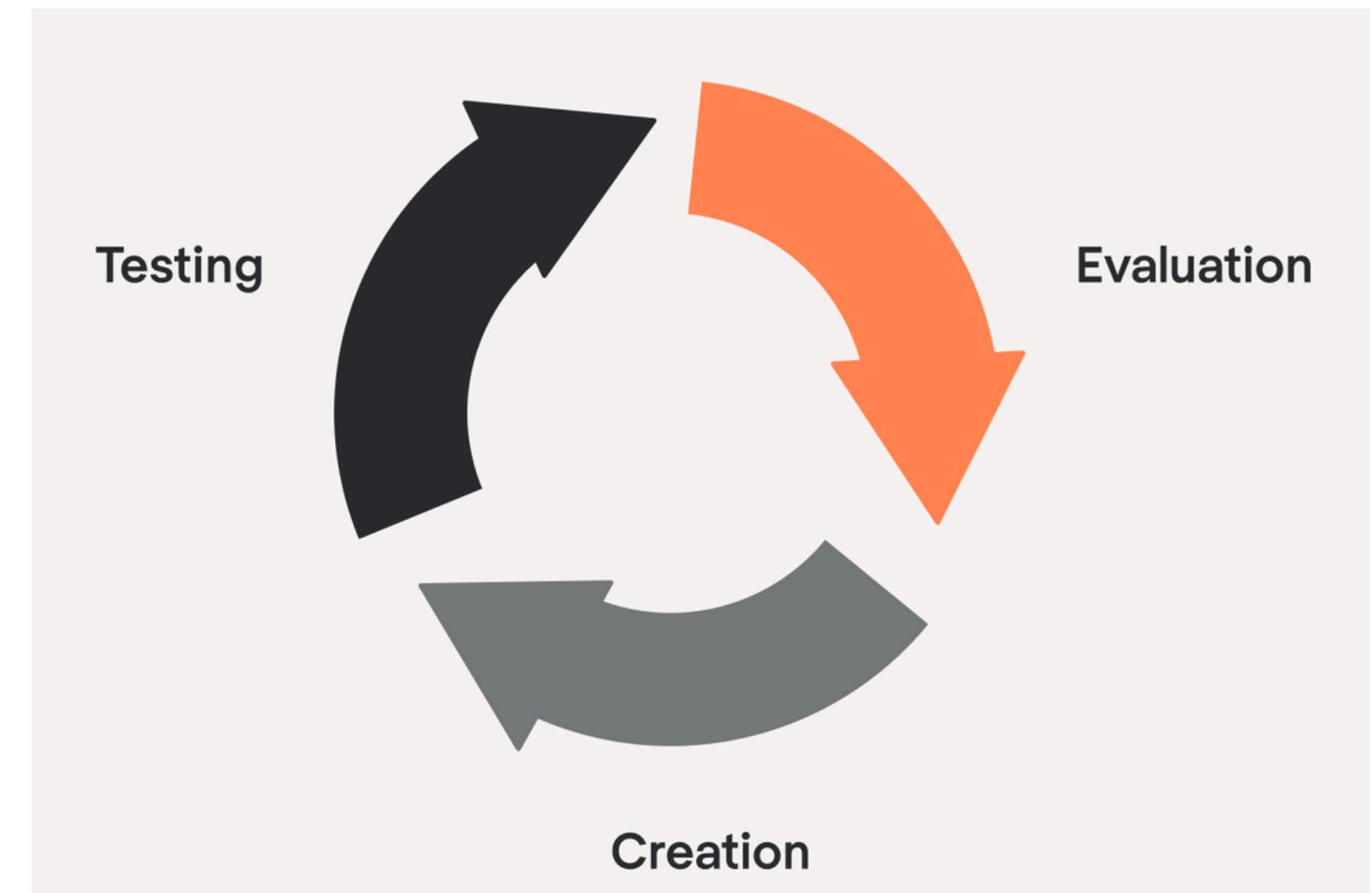
With your created prototypes, you can now conduct usability tests with your intended user group and watch how they experience your product.

For example, you can ask users to accomplish some task in your product and see what choices they make while taking notes on their actions and feedback.



5. ITERATE & DESIGN IMPLEMENT CHANGES!

Iteration is one of the core principles of user-centered design. These steps are designed to be retraced however necessary. You may need to go back one step, or several steps, or repeat the entire process multiple times before your product is in a good place.



Activity: IxD Detectives



3

IXD DETECTIVES: SOLVE THE MYSTERY OF THE BAD INTERFACE!

Objective: In groups of 3–4, each of you will become detectives, investigating an interface trying to identify usability issues and recommend creative fixes based on UCD and IxD Principles.

Your mission is to decipher and crack the case to discover:

- 1. Whats the clue?** – What usability issues did you find?
- 2. Whos the suspect?** – What part of the user interface is responsible for the issue?
- 3. Whats the evidence?** – Why do you think this would confuse or frustrate a user? Why? How?
- 4. Whats the solution?** – How do you solve this using IxD and UCD Principles?

Use the worksheet provided on the Figma Classroom to record your findings!

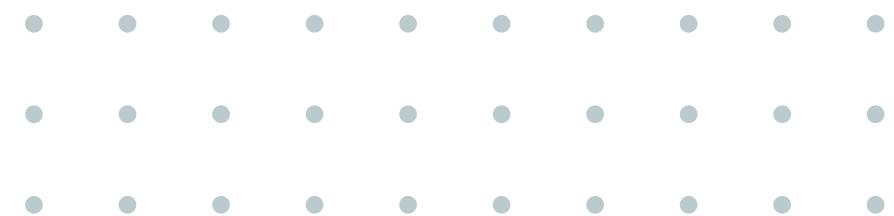


02

USER RESEARCH

User research is a methodic study of target users or audiences – including their **requirements, needs, preferences and pain points** – to give designers a realistic context and insight to make the best designs possible.

The idea is to reveal valuable information, uncover problems and design opportunities.





GETTING TO KNOW YOUR USERS & WHAT THEY WANT

User research is a crucial part of the interaction design process, as it's the only way to discover *exactly* what the users need, after discovering who they are.

By gathering your information through a **structured approach**, you will **use methods that suit your research purpose**, and what will yield the **clearest** information. Then, you must interpret your findings and pull out the most important information.



2.1

TYPES OF RESEARCH

In Interaction Design (IXD) there are various types of research that are essential to inform the designer and the design process to create human-centred solutions.

These can get broken down into two types:





QUANTITATIVE RESEARCH

... is a systematic research approach that **collects and analyzes numerical data** to understand and **explain various instances**.

It is characterized by the use of structured research models, statistical techniques and quantifiable measurements. It often **focuses on measuring and quantifying relationships, patterns, and outcomes**, and often makes generalized conclusions.



QUANTITATIVE METHODS:

Surveys and Questionnaires: Gathering data from participants using standardized sets of questions to measure their opinions, behaviours, or characteristics.

Experiments: Manipulating variables and collecting data under controlled conditions to examine cause-and-effect relationships.

Observations: Systematically recording and quantifying behaviours, events, or phenomena as they occur.

Tests and Assessments: Using standardized tests or assessments to measure specific attributes or abilities.

Secondary Data Analysis: Utilizing existing datasets, such as government statistics or database records, for research purposes.





QUALITATIVE RESEARCH

...is a research approach that explores and understands the depth and context of **human experiences, behaviours, and perceptions.**

It is characterized by collecting **non-numerical data**, such as text, audio, images, or video, to uncover themes, patterns and insights. It seeks to provide rich and **detailed information about a particular instance**, often emphasizing the “why” and “how” behind human interactions. **Usability testing** is another dimension of this type of research.



QUALITATIVE METHODS:

Interviews: Conducting in-depth, open-ended interviews with participants to gather their perspectives and experiences.

Observations: Actively observing and recording behaviour, interactions, and contextual details in natural settings.

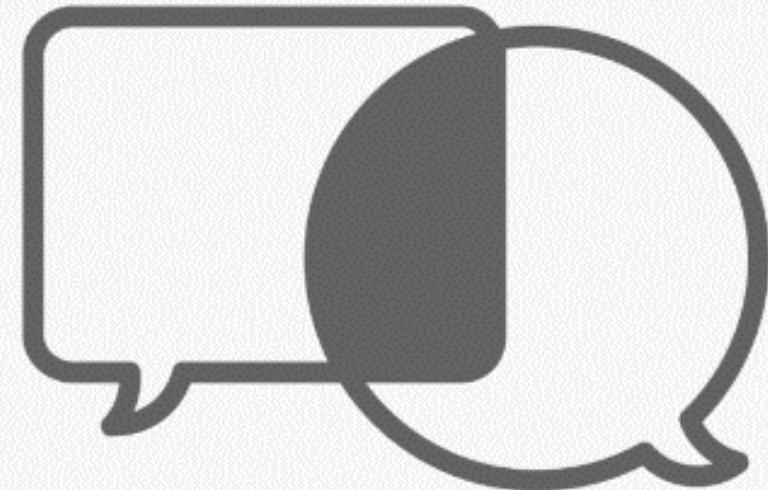
Focus Groups: Facilitate group discussions among participants to explore their opinions and viewpoints on a specific topic.

Surveys with Open-Ended Questions: Using surveys that allow participants to provide detailed, text-based responses.

Document Analysis: Examining written or visual materials, such as diaries, letters, or photographs, to extract insights.

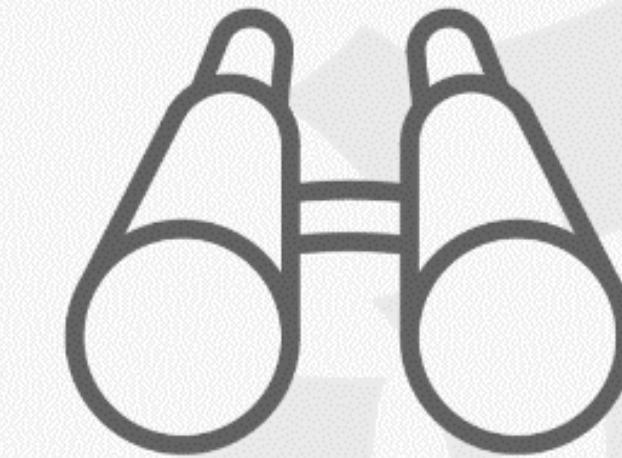


WE CAN ALSO SPLIT USER RESEARCH INTO TWO APPROACHES:



Attitudinal

Listen to what users say



Behavioral

See what users do through
observational studies



INTERACTION DESIGN
FOUNDATION

INTERACTION-DESIGN.ORG





**“RESEARCH IS CREATING
NEW KNOWLEDGE.”**

– Neil Armstrong

WHY DO WE TEST?

UNCOVER

Help us uncover problems that may potentially be in the design, flow or architecture of the prototype

DISCOVER

Discover opportunities on how to improve the design, and learn more about the users behaviour and preferences

EMPOWER

Makes our users feel more empowered and able to voice how they feel -we want to allow users to feel heard.



USER RESEARCH METHODS THROUGHOUT THE DESIGN PROCESS

01.

Discover

Determine what is relevant for users.

- Diary Studies
- Contextual inquiries

02.

Explore

See how to address all user's needs.

- Card Sorting
- Customer Journey Maps

03.

Test

Evaluate your designs.

- Usability Testing
- Accessibility Evaluations

04.

Listen

Put issues in outlooks uncover any new problems and spot trends.

- Analytics
- Survey
- Questionnaires

DISCOVERY**EXPLORING****TESTING****LISTENING**

FIELD STUDY

DESIGN REVIEW

USABILITY TESTING

SURVEY

DIARY STUDY

PERSONA BUILDING

ACCESSIBILITY
EVALUATIONSEARCH-LOG
ANALYSIS

USER INTERVIEW

TASK ANALYSIS

BENCHMARK
TESTINGUSABILITY-BUG
REVIEWSTAKEHOLDER
INTERVIEWCOMPETITIVE
ANALYSIS

ANALYTICS REVIEW

REQUIREMENTS
GATHERINGPROTOTYPE
TESTING

FAQ REVIEW

JOURNEY MAPPING

WRITE USER
STORIES

CARD SORTING

BREAK TIME!

× × × ×

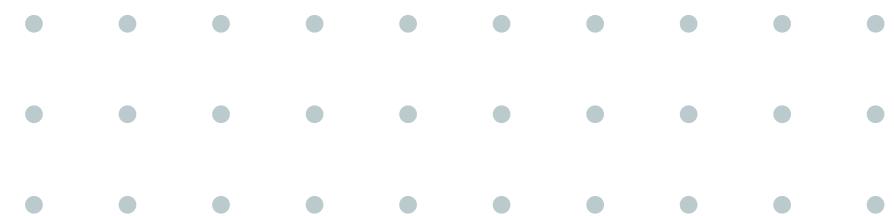


03

WIREFRAMING

Wireframing, sometimes known as a "**screen blueprint**," is a way to prototype, test, and design systems (typically websites/apps) at a **structural and skeletal level** – while taking into account user needs.

It's a 2D design in the **early stages of development** meant to help create layouts, compositions and basic structure of something before the visual design and content are added.





WHEN & WHY DO YOU WIREFRAME?

The process takes place during the exploratory phase of the product life cycle. Great for when you are:

- testing the scope of the product
- collaborating on ideas
- identifying business requirements.

Because they:

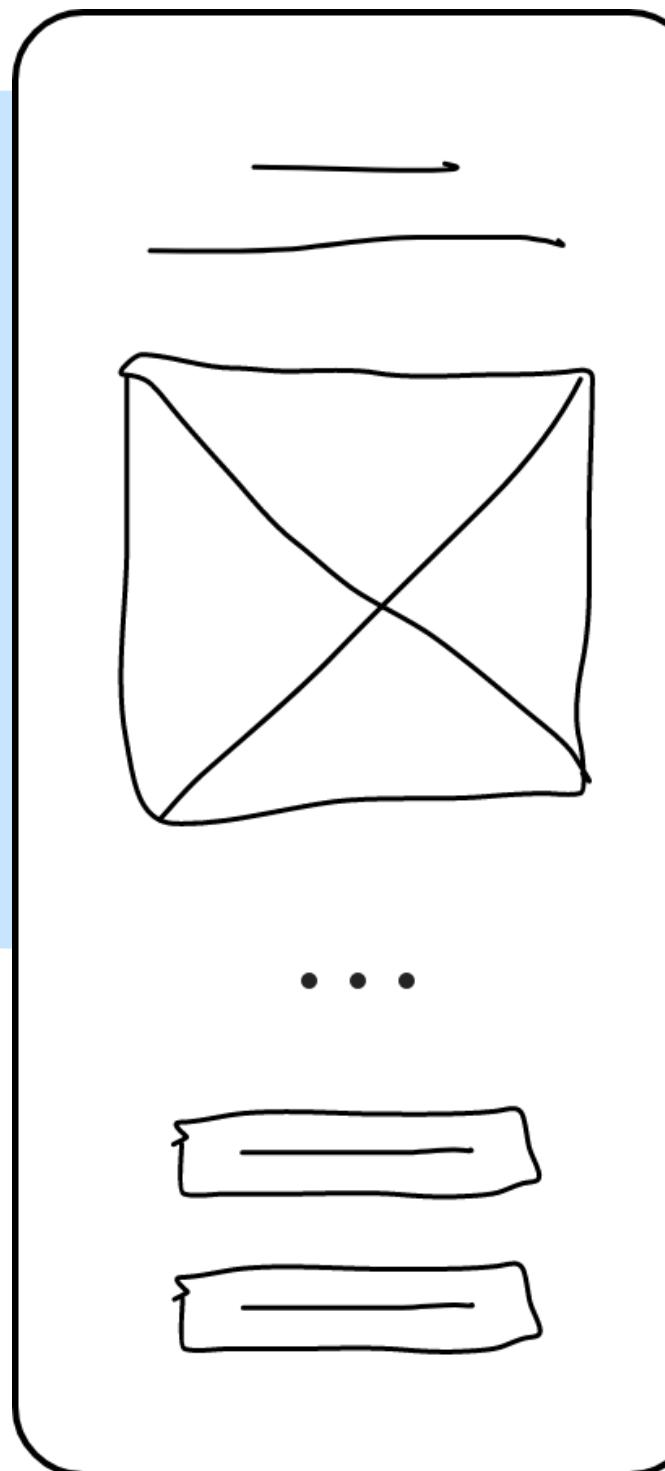
- Are User-focused Concepts
- Define Product Features
- Low Cost to Create



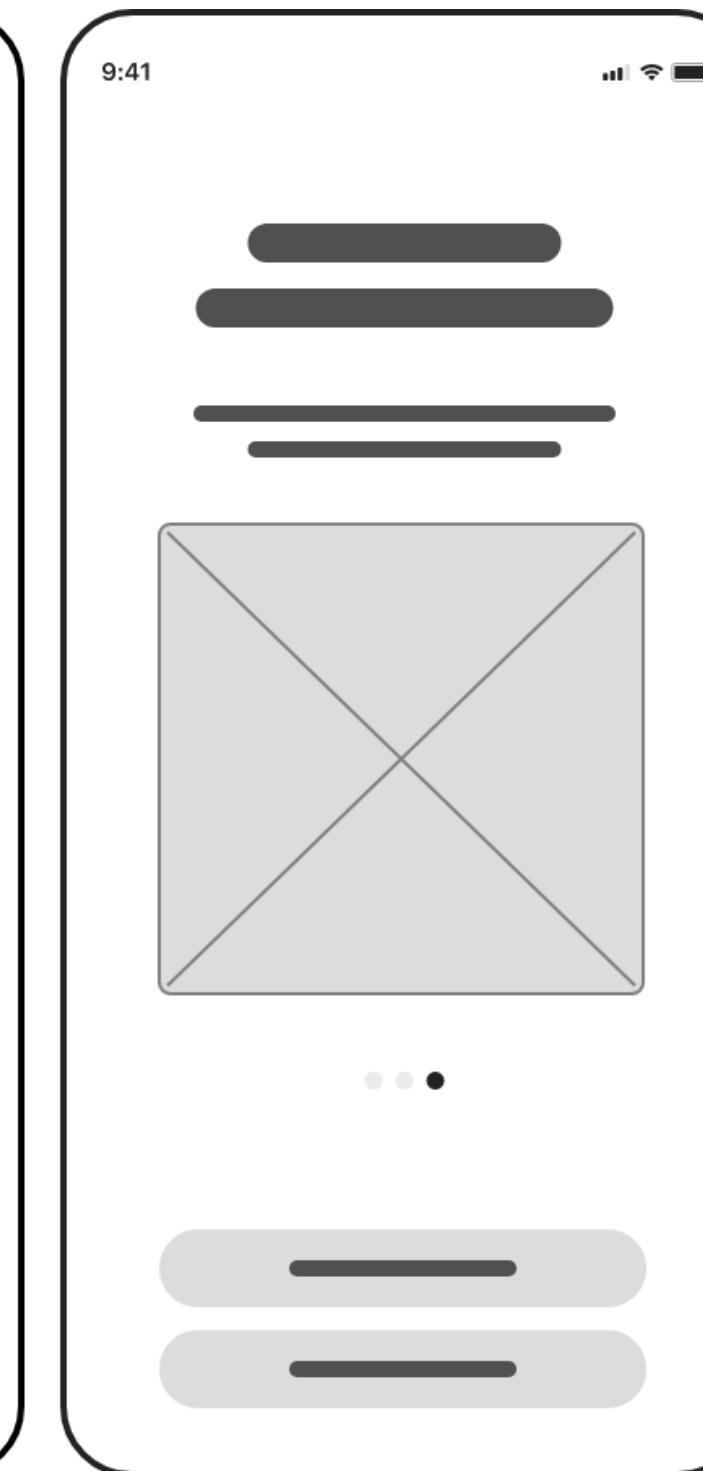


TYPES OF WIREFRAMES

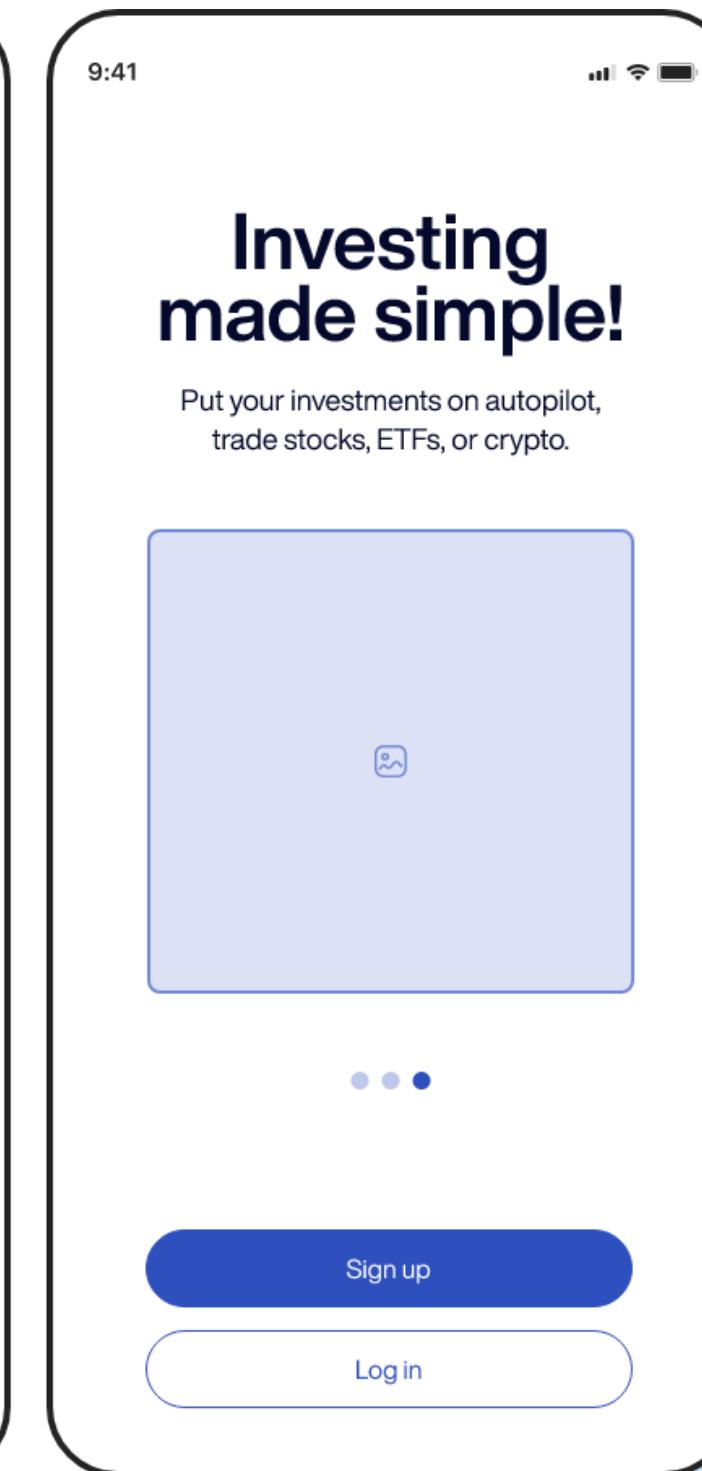
Low Fidelity



Mid Fidelity



High Fidelity



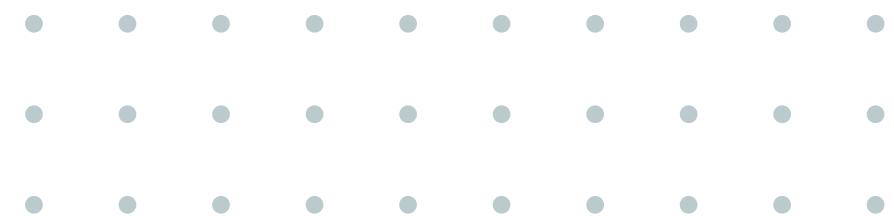


03B

PROTOTYPING

Prototyping is a scaled-down version of your product, a “sample version” that allows you to test your ideas and designs before investing more time and money into full production of the product.

Prototypes help gain insight into the interactions users will take and react to, identify flaws or usability issues early on and aid in making informed decisions about design, layout and features of your designs.





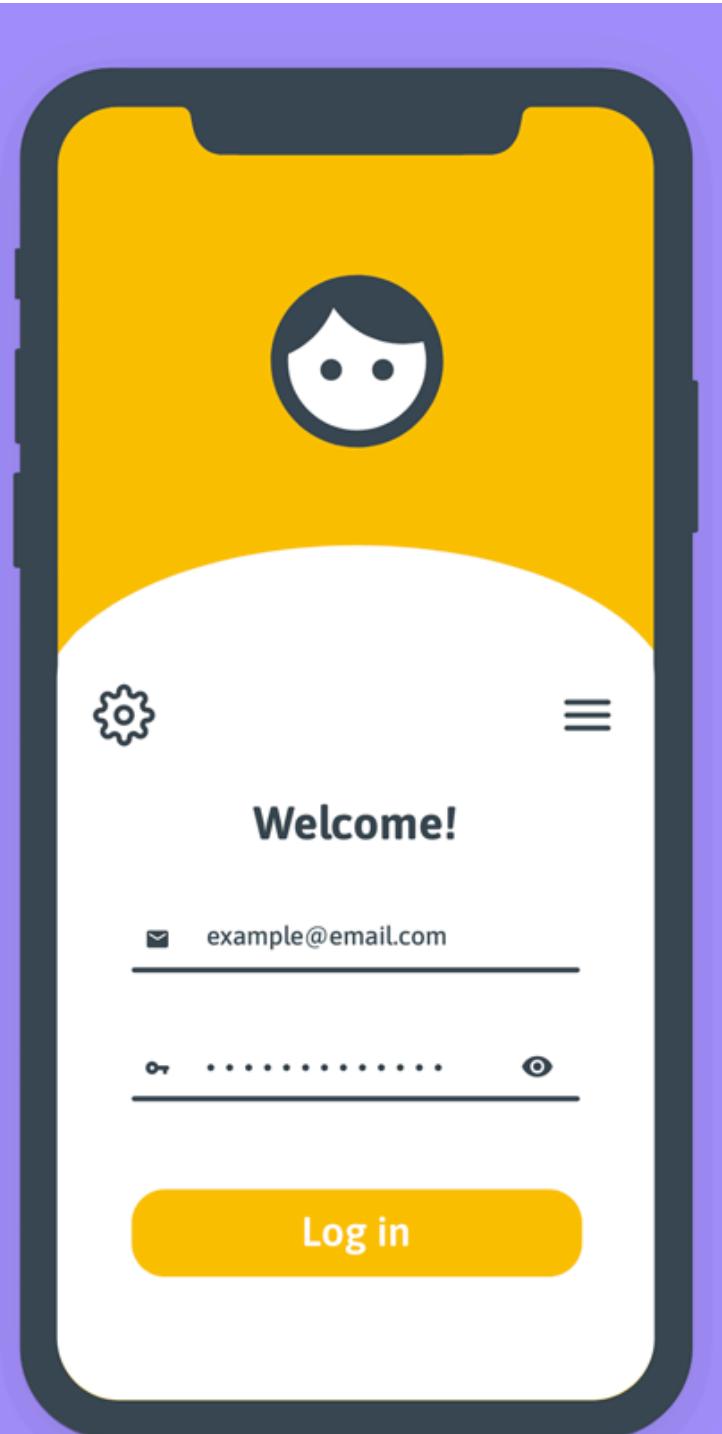
TYPES OF PROTOTYPES

Low Fidelity

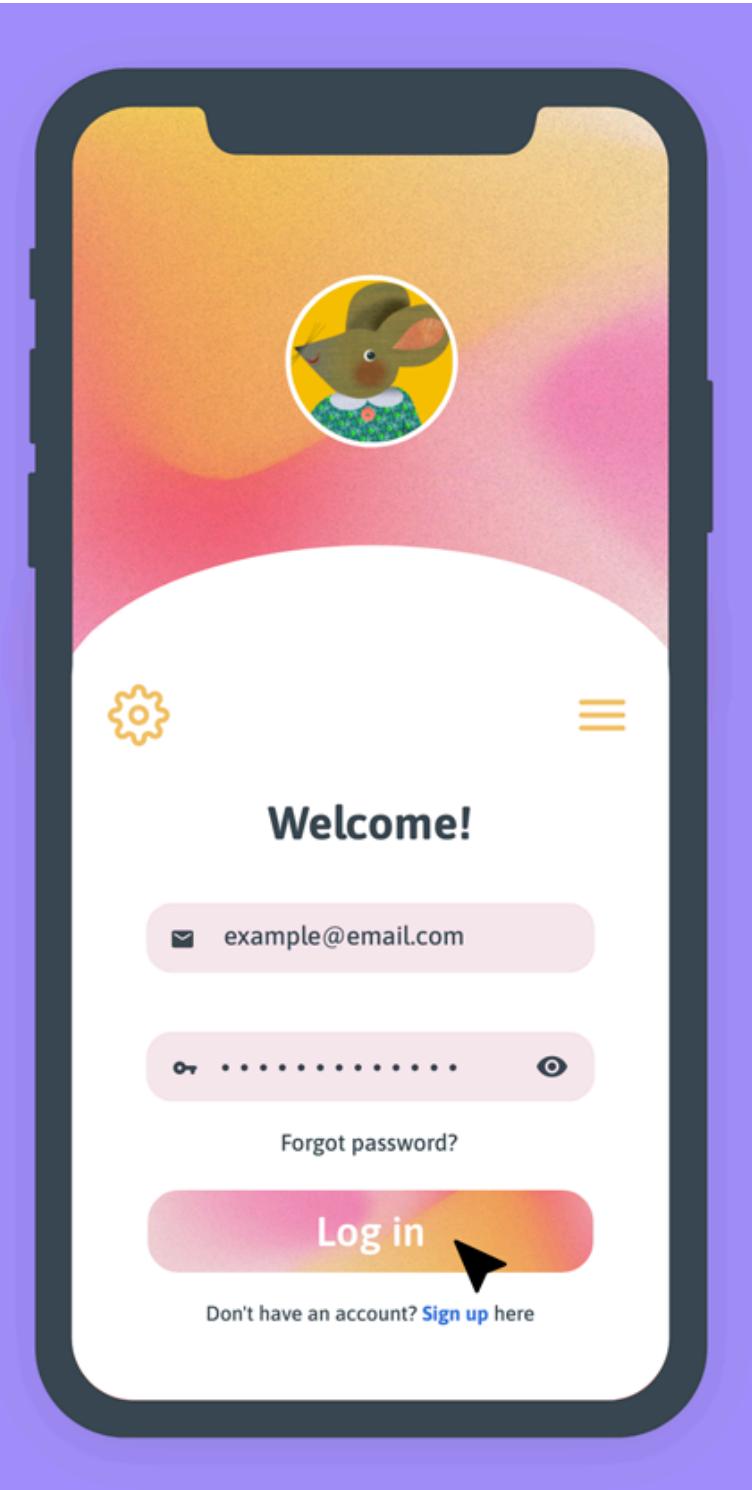


NOTE:
Low + Mid
Fidelity are
often linked
together

Mid Fidelity



High Fidelity



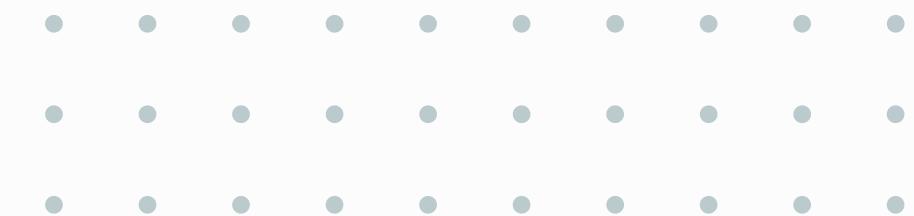


04

LAWS OF IXD

These are commonly found in many places! Can you think of any examples that you have experienced?

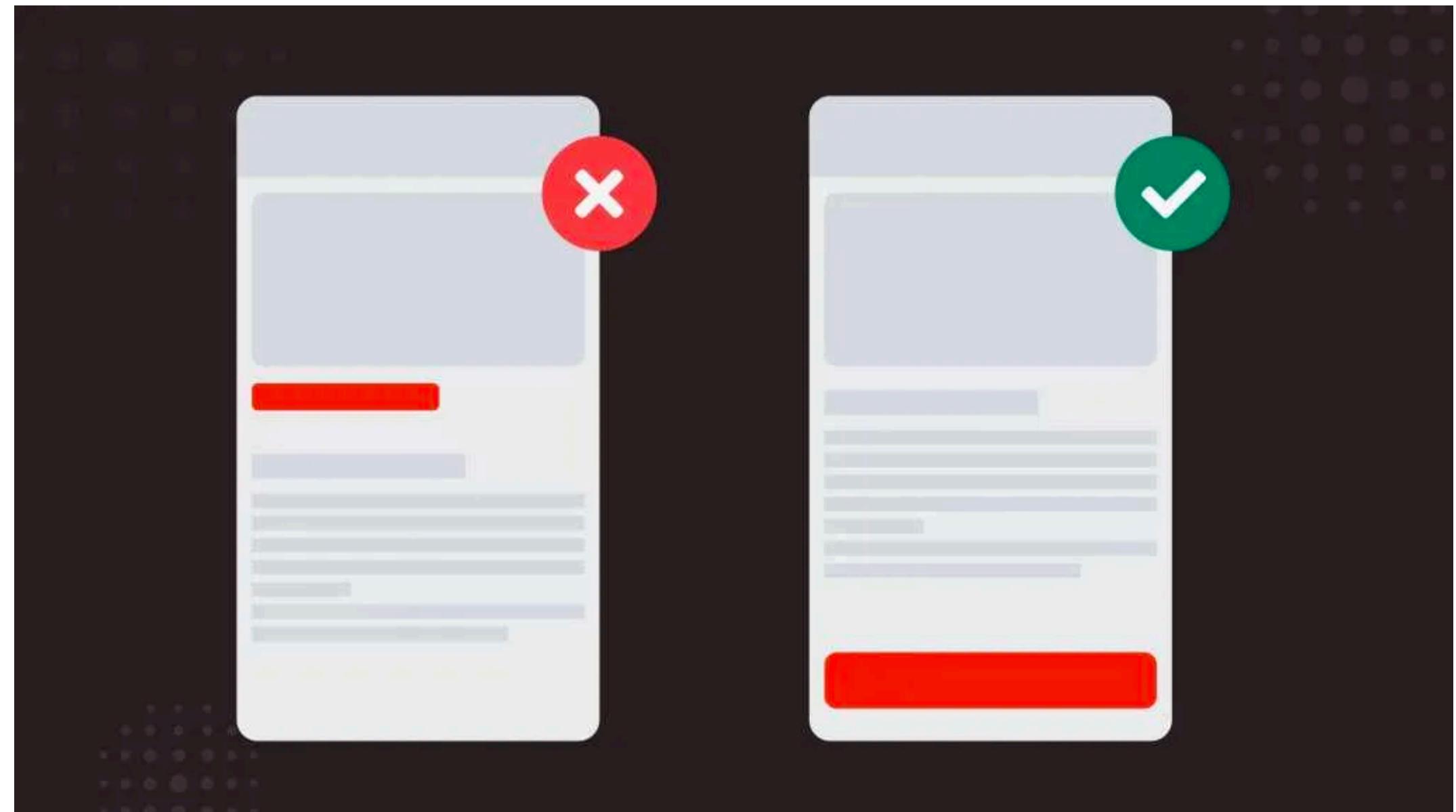
Recap!



× × × ×

FITT'S LAW (SIMPLIFIED)

The bigger an object is, the faster a person can point it out.

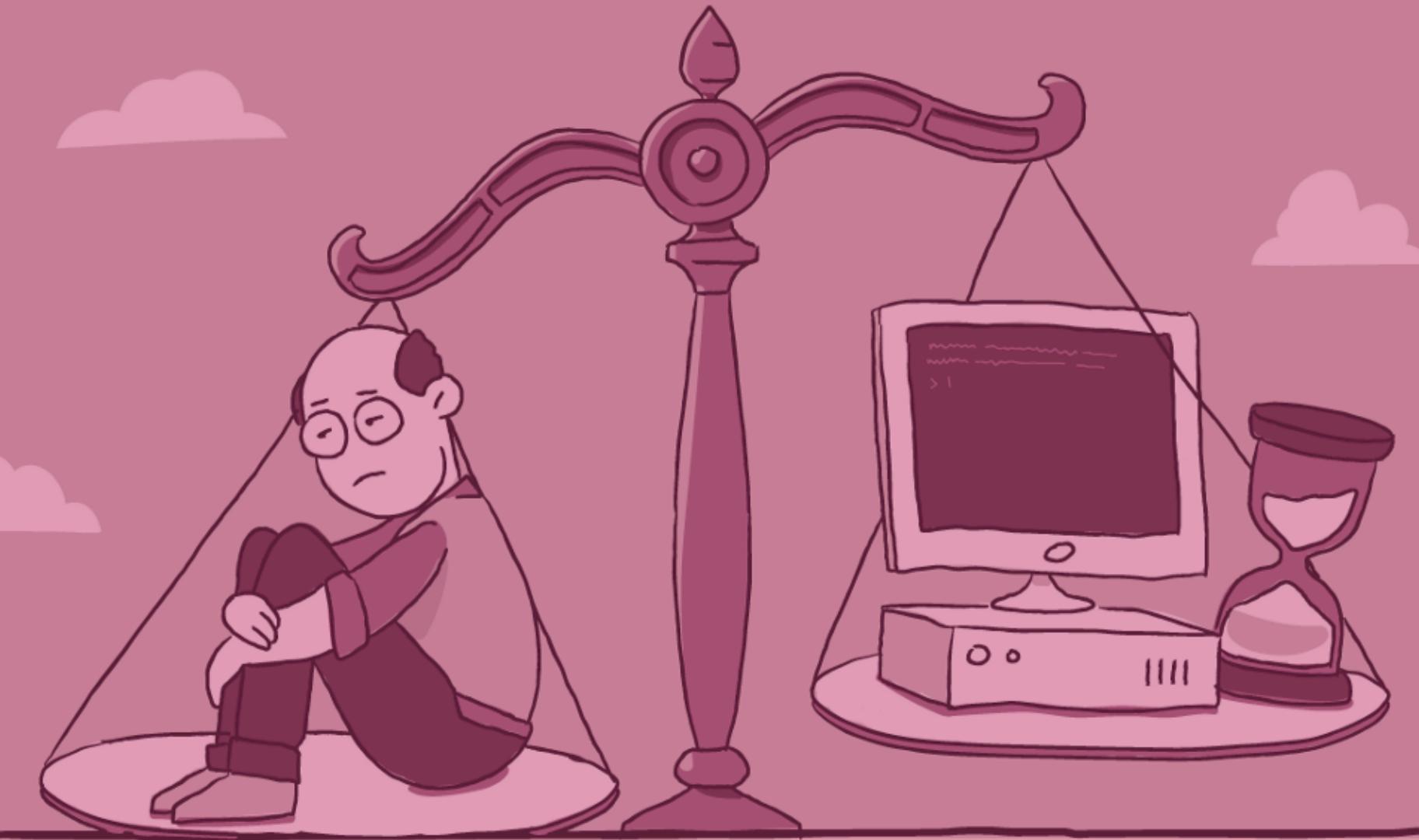




TESLER'S LAW (SIMPLIFIED)

TESLER'S LAW

EVERY APPLICATION HAS AN INHERENT AMOUNT OF COMPLEXITY THAT CANNOT BE REMOVED OR HIDDEN. INSTEAD, IT MUST BE DEALT WITH, EITHER IN PRODUCT DEVELOPMENT OR IN USER INTERACTION.





POKA-YOKE PRINCIPLE

A Poka-Yoke design is one that prevents the error from occurring in the first place. It does this by making sure that error-causing actions are literally impossible.

The diagram illustrates the Poka-Yoke principle through a two-step user interface for selecting a shoe size.

Step 1: A user is prompted to "Select your shoe size" with a row of six numbered buttons: 5, 6, 7, 8, 9, and 10. A grey button below them displays the message "Please select a size". A purple arrow points from this screen to the next screen.

Step 2: The user has selected size 9, which is highlighted with a teal border. The other buttons (5, 6, 7, 8, and 10) are now greyed out. Below the size selection area is a pink button labeled "Add to basket". A purple cursor arrow points towards the "Add to basket" button.



POKA-YOKE PRINCIPLE- ERROR PROOFING

- We write error text for our forms.
- We style problem states, showing what happens when things break.
- We try to help users recover quickly when something goes wrong.

The image shows a user registration form with the following fields and error messages:

- Email: An account using this email address already exists.
- Password: Password must contain between 6 and 12 letters or numbers.
- Repeat Password: Passwords don't match

A red "Continue" button is at the bottom, and a small note below it states: by clicking "Continue" you agree to our [Terms of Service](#).



LET'S JUMP
INTO FIGMA!

