

Patterns that Demystify Great UX/UI

A photograph of a person sitting in a field of tall, dry grass. The person is seen from the back, wearing a dark jacket and light-colored pants. Their hands are clasped behind their head in a relaxed, contemplative pose. The background is a soft-focus view of more grass and a clear blue sky.

@MrJasonGrant



<https://github.com/JasonGrant>

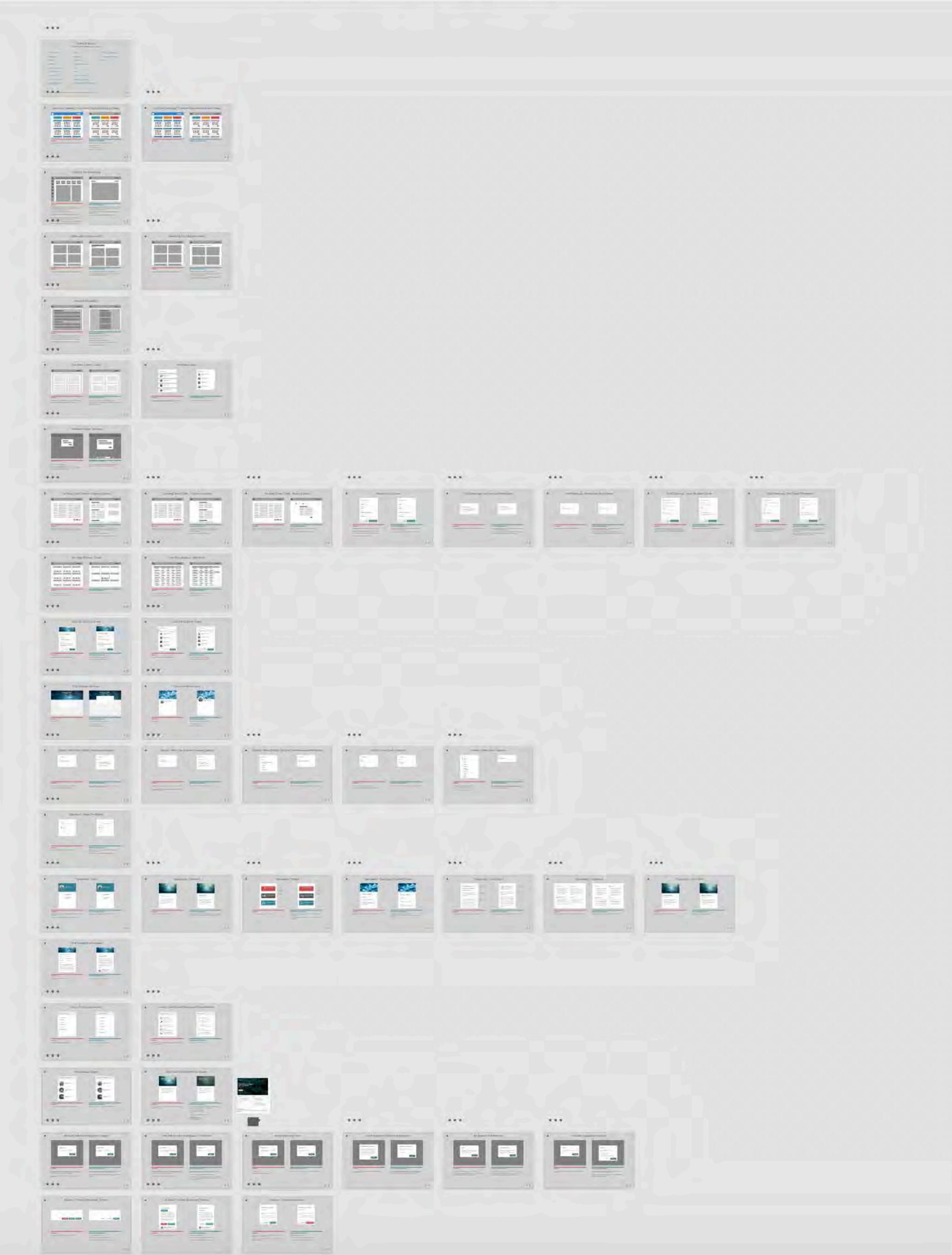
Photo by Aziz Acharki on [Unsplash](#)

UX Magic Black Box

Designs != Magic



- ARTBOARDS
 - Field Warnings - Be Short...
 - Be Clear and Not Ambiguo...
 - Too Many Cards
 - Don't Go Grid/Line Crazy - 1
 - Banner Images
 - Typography - Line Height
 - Icons - Enlarged
 - Required vs Optional
 - Too Many Buttons - Cards
 - Typography - ALL CAPS
 - Icons - UL
 - Color Outside the Lines - 1
 - Think Outside the Database
 - Typography - Spacing
 - Typography - Weight
 - Typography - Alignment
 - Too Many Layers Dialogs
 - Typography - Hierarchy
 - Alignment
 - Desaturate Images
 - Don't Go Grid/Line Crazy
 - Color Outside the Lines
 - Too Many Form Fields - 1...
 - Use Color Sparingly To Ind...
 - UI Best Practices
 - Too Many Form Fields - Wi...
 - Typography - Color
 - Where Am I for Multiple Le...
 - Selects - When You Want...
 - Use Color Sparingly To Ind...
 - Too Many Form Fields - 2...
 - Too Many Buttons - Data...
 - Too Many Layers Cards
 - Improve Readability
 - Where Am I for One Level?
 - I Want to See Everything
 - Pasteboard



- Repeat Grid
- W 0 x 0
- H 0 y 0
- RESPONSIVE RESIZE
- APPEARANCE
- 0%



Think Outside the Database



Project Name Project 123

Asset Asset ABC

Created By Mary Canmore

Created Date 05/01/2018

Description

Asset-centricity is an approach to investing in the life sciences field with a focus on key assets, such as a pharmaceutical molecule that could form the basis for a novel new drug which has already been identified,



Project 123

Asset ABC

Asset-centricity is an approach to investing in the life sciences field with a focus on key assets, such as a pharmaceutical molecule that could form the basis for a novel new drug which has already been identified, rather than on discovering such assets through basic research & development.



Mary Canmore
Created on May 1, 2018

Issues

Everything is at the same visual hierarchy.

Recommendations

Increases legibility by creating visual hierarchy.





Too Many Form Fields - 2 Column Solution

Issues

Difficult to ensure that form is completely filled out which leads to a negative experience when errors are shown when user tries to submit.

Recommendations

Think of a form as a checklist. How many times do you make a multi-column checklist? It is easier to go down one column making sure everything is complete.

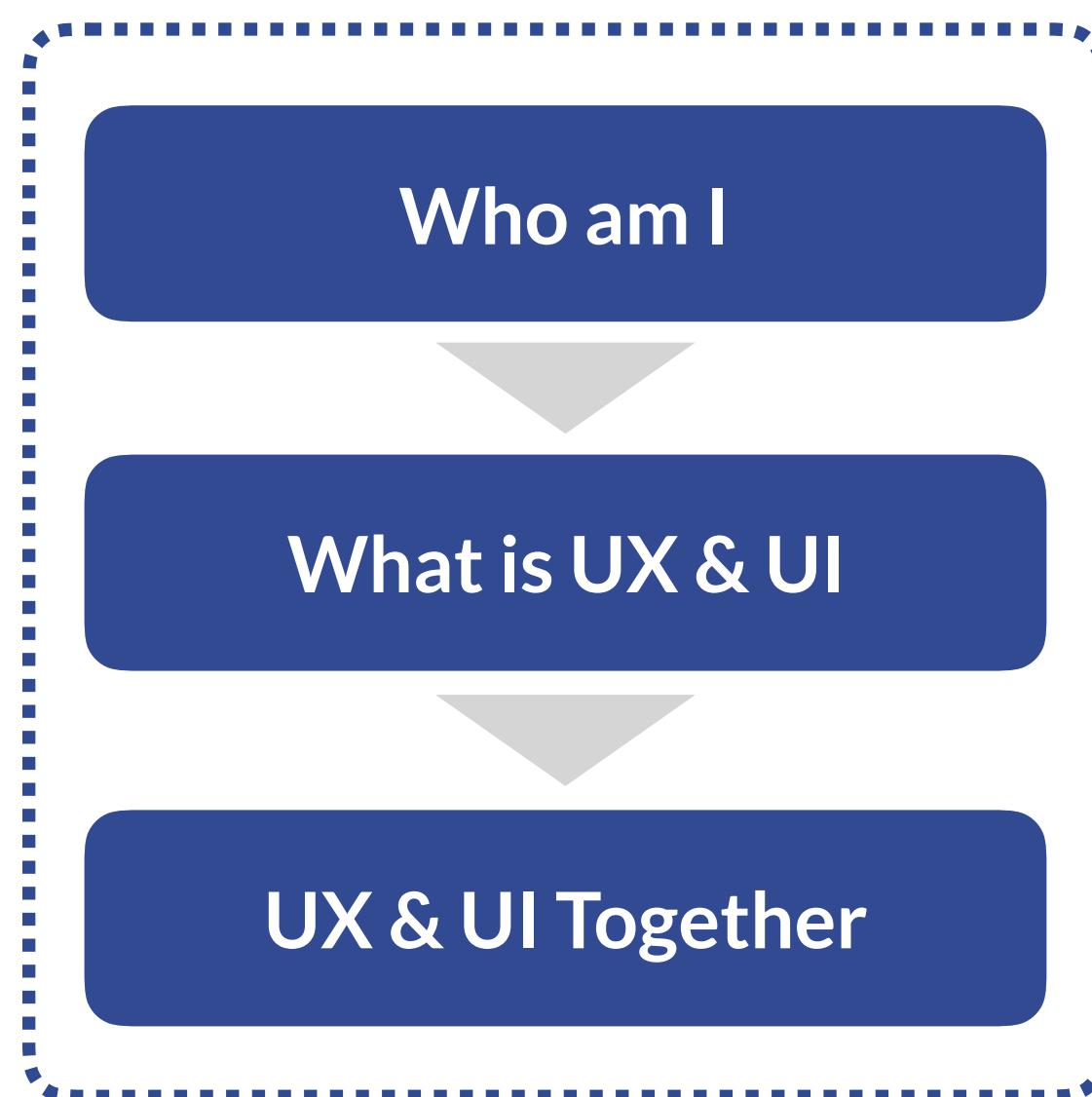
Break sets of fields into groups with a header.

Use additional side space to provide instructions or additional information.



What will we cover?

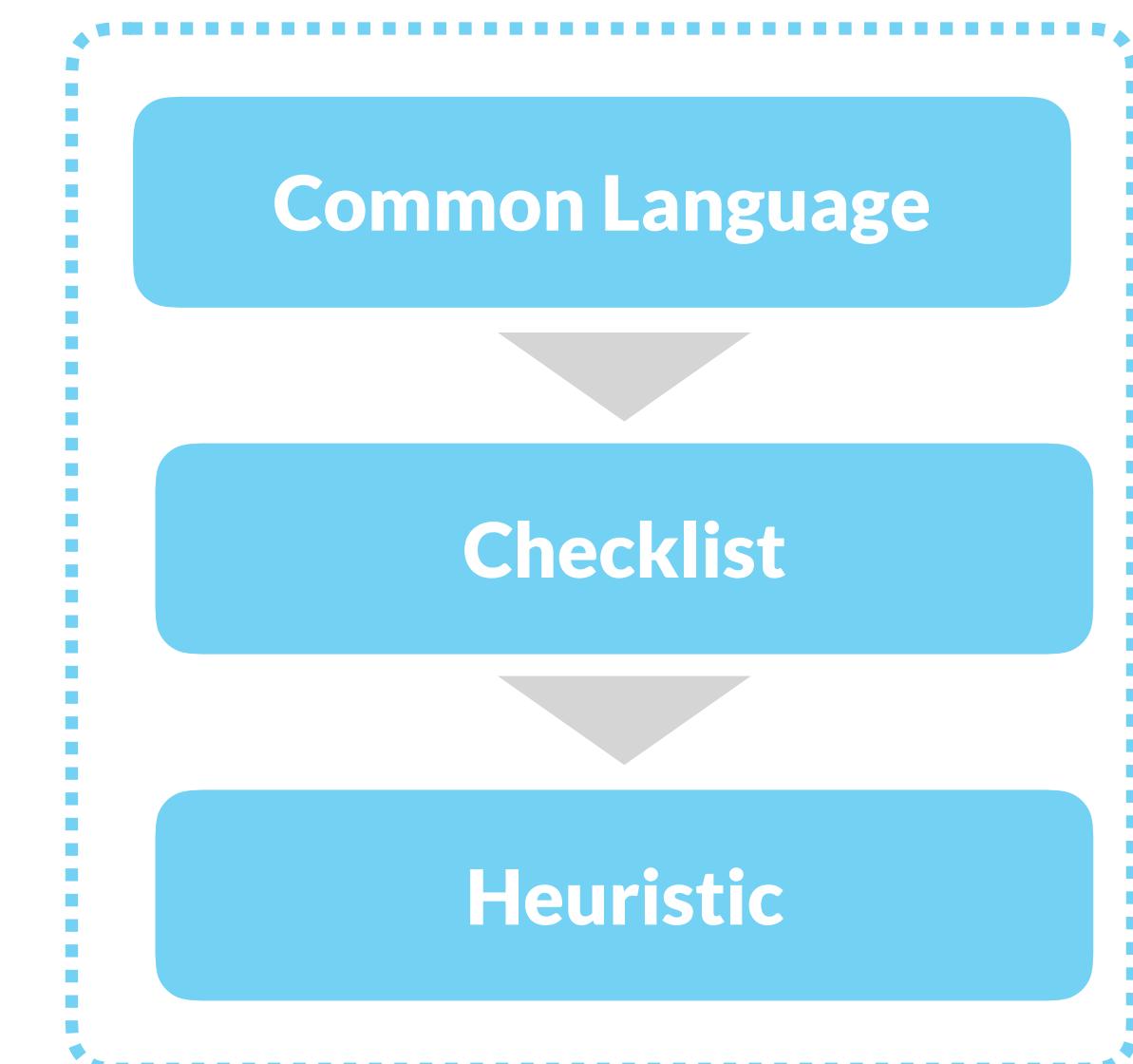
Fast Overview



Top 5 Principles



What Next?



Jason Grant



@MrJasonGrant

Always been at the crossroads of design and technology

Photo by [Firdouss Ross](#) on [Unsplash](#)

User Experience (UX)

User Interface (UI)



User Experience (UX)

Analytical Thinking

Human Centered Design

Data

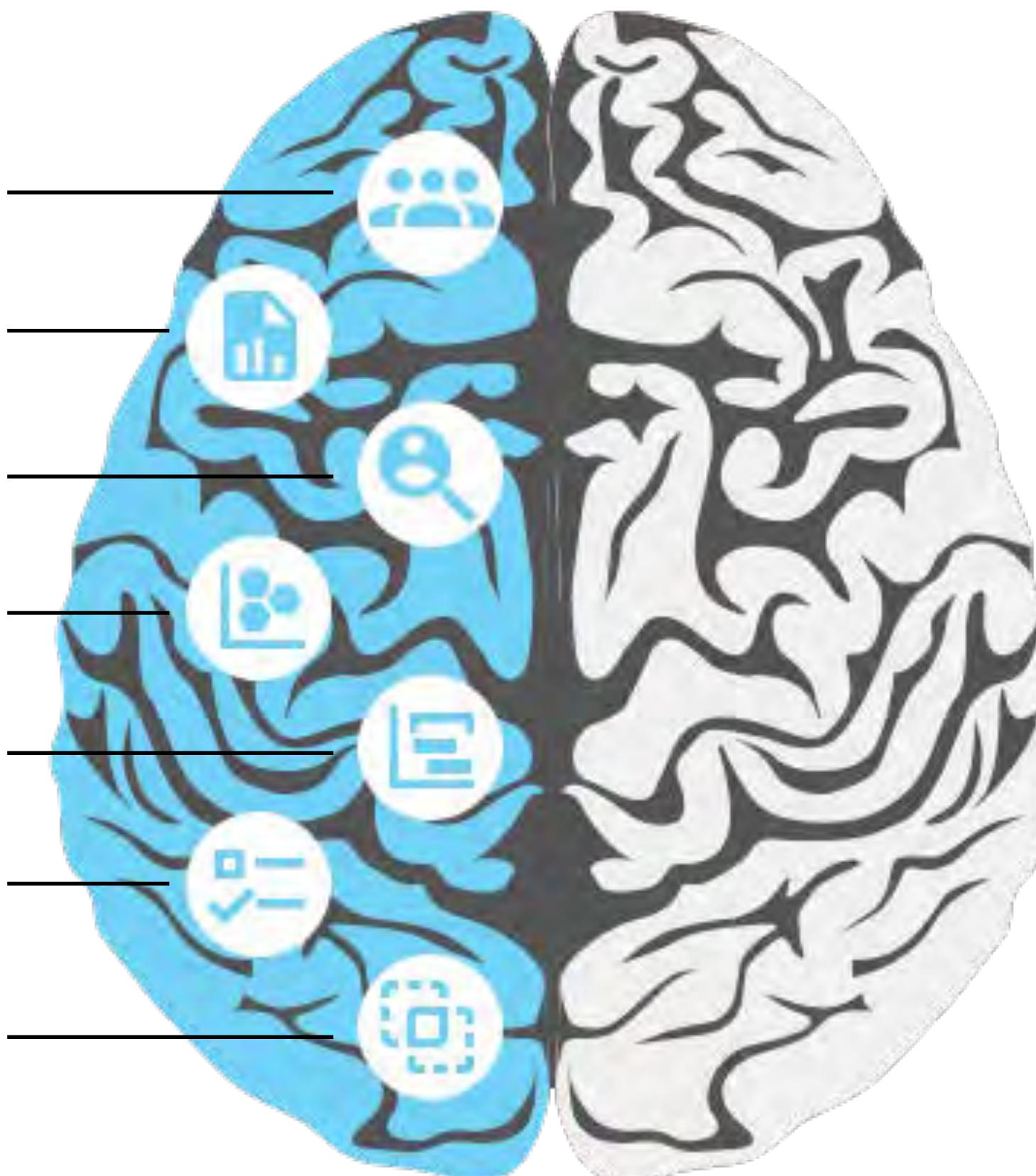
Research

Analysis

Flows

Testing

Interactions



User Interface (UI)

User Experience (UX)

Analytical Thinking

Human Centered Design

Data

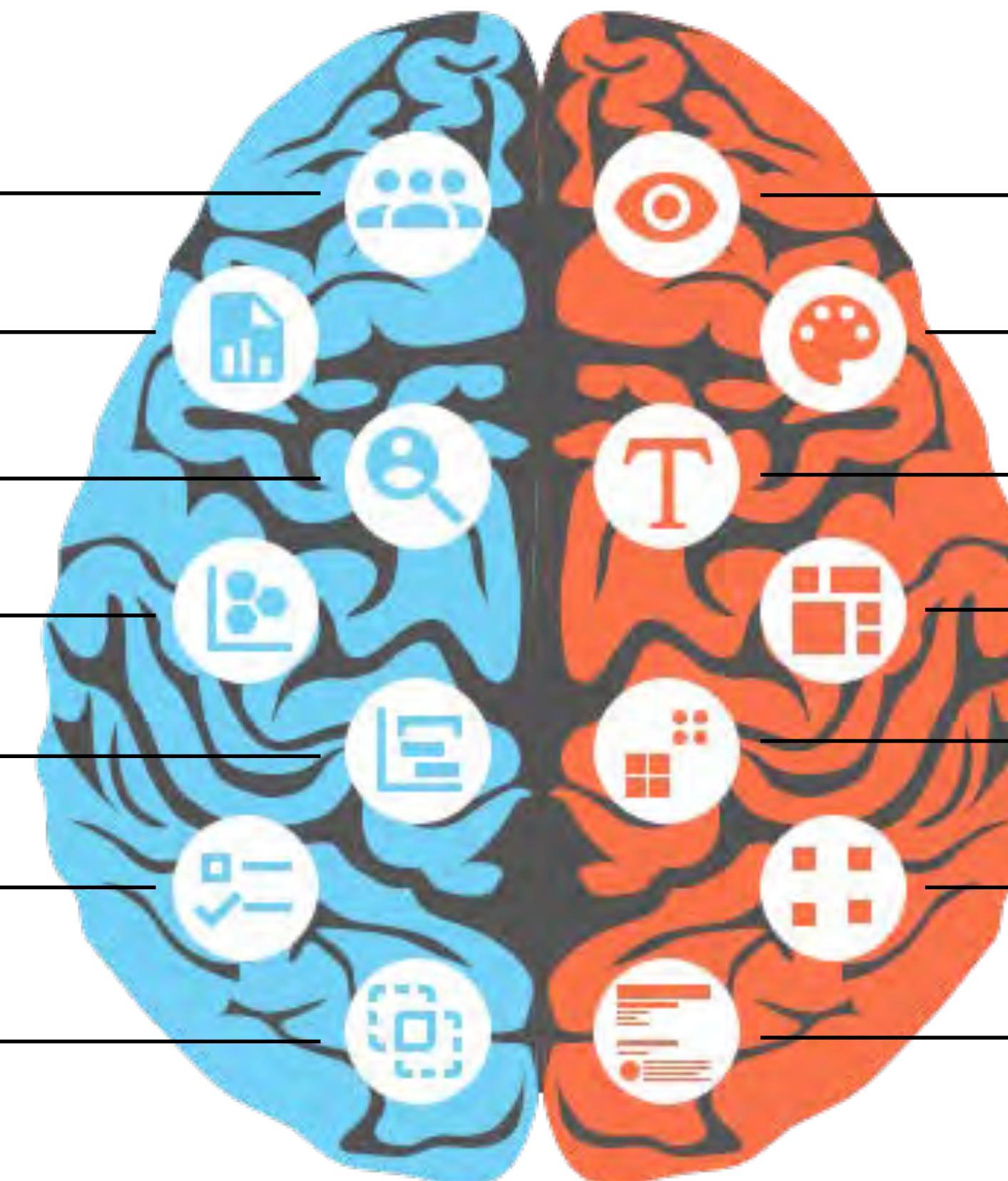
Research

Analysis

Flows

Testing

Interactions



User Interface (UI)

Creative Thinking

Visual Design

Colors

Typography

Alignment

Proximity

Consistency

Contrast

“A beautiful product
that doesn’t work
very well is ugly”

Jonathan Ivy
Apple

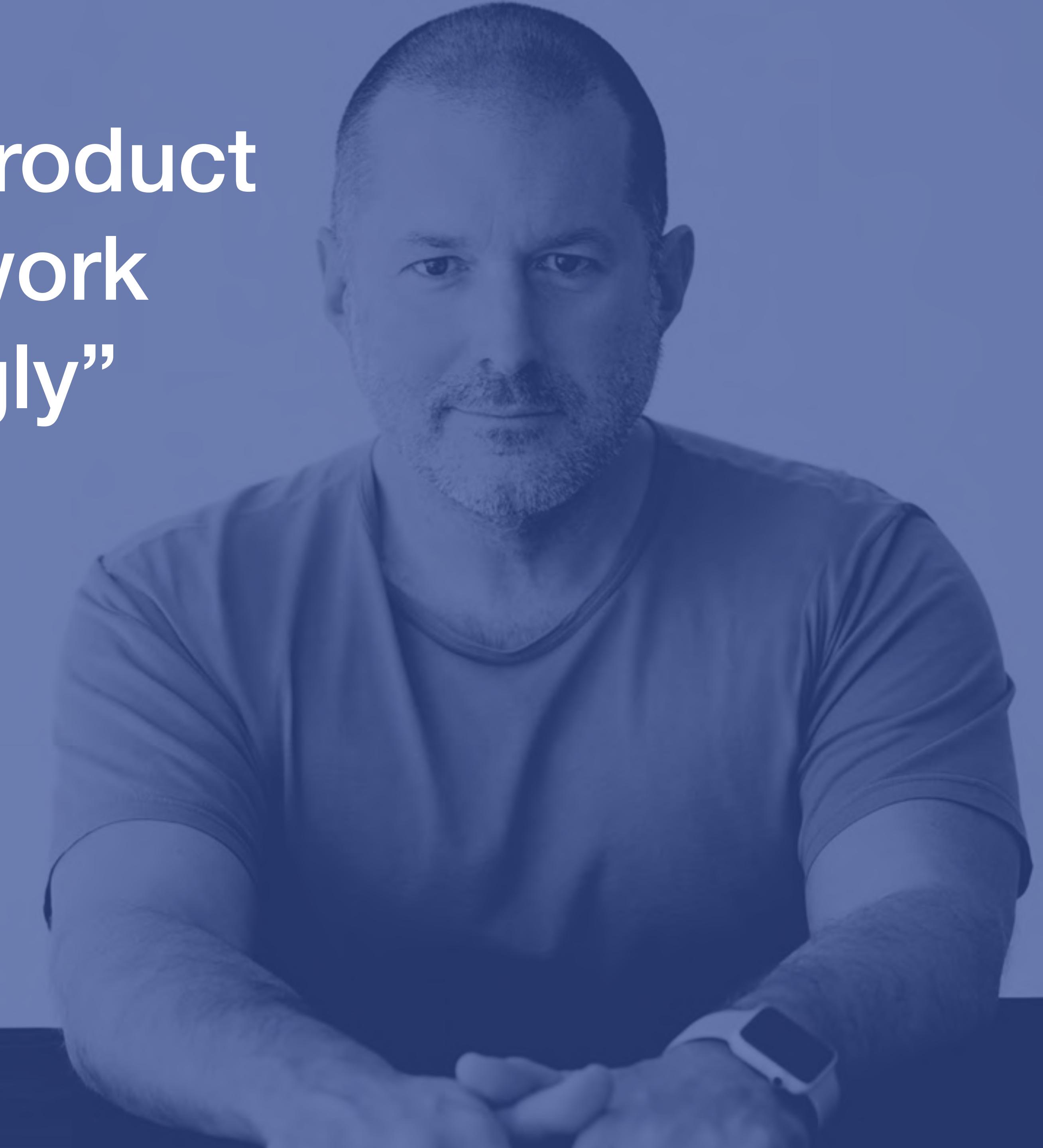




Photo by Nathan Dumlao on [Unsplash](#)

UX/UI

Work Together



Stylized Branding

UX/UI
Work Together



Stylized Branding
Common Patterns

UX/UI
Work Together



Stylized Branding
Common Patterns
Foundational UI

UX/UI
Work Together



Stylized Branding

Common Patterns

Foundational UI

Foundational UX

UX/UI

Work Together



Stylized Branding

Common Patterns

Foundational UI

Foundational UX

User Needs

UX/UI
Work Together



Stylized Branding

Common Patterns

Foundational UI

Foundational UX

User Needs

Workflows & Processes

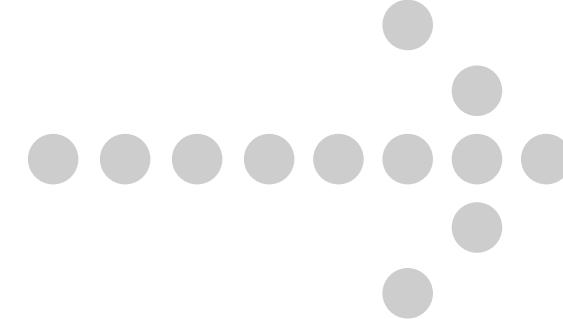


Demystify Principle #1

Listen

Photo by [Kristina Flour](#) on [Unsplash](#)

Minimum UX

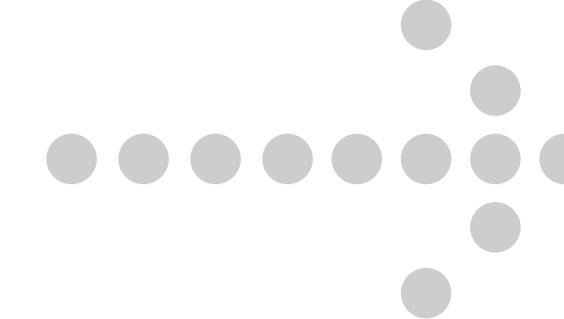


User & Business Goals

A user goal is what the user is trying to achieve.

A business goal is what is required outside of user needs.

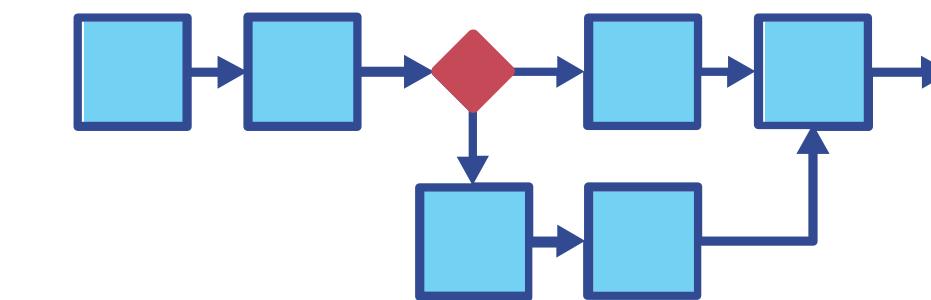
Both of these must be understood so the solution meets both of these goals. If the goals conflict either user adoption will fail or you will never be able to build it in the first place



User Tasks

To accomplish the goal, user must do the following (example):

- Open the app
- Enter Information
- Review Information
- Submit
- Get Confirmation
- Update Status
- And More... each with more detail



User Flow Diagrams

User flow diagrams help you determine all of the decisions and outcomes that will be needed to accomplish both the goals and the tasks.

This helps determine the screens required before prototyping or building starts.

A man with a beard and short hair, wearing a light blue and white checkered long-sleeved shirt, is seated at a desk. He is looking down at a laptop screen which displays a business dashboard titled "Company's Growth". The dashboard includes a world map, several bar charts, and the text "GLOBAL BUSINESS REVIEW". In front of him on the desk is a white mug. The background is slightly blurred, showing what appears to be a window or a glass partition.

Who?....

What?....

Where?....

When?....

How?....

Why?....

Photo by [rawpixel](#) on [Unsplash](#)

Tips on Talking with Users



Listen, Listen & Listen

- Listen more than talk
- Never ask a user what they want
- 5 Whys

Ask these Questions

- What difficulties do you run into while completing tasks?
- How do you solve this problem now?
- What would you expect to happen when you...?
- How do you use this app? Can you show me?

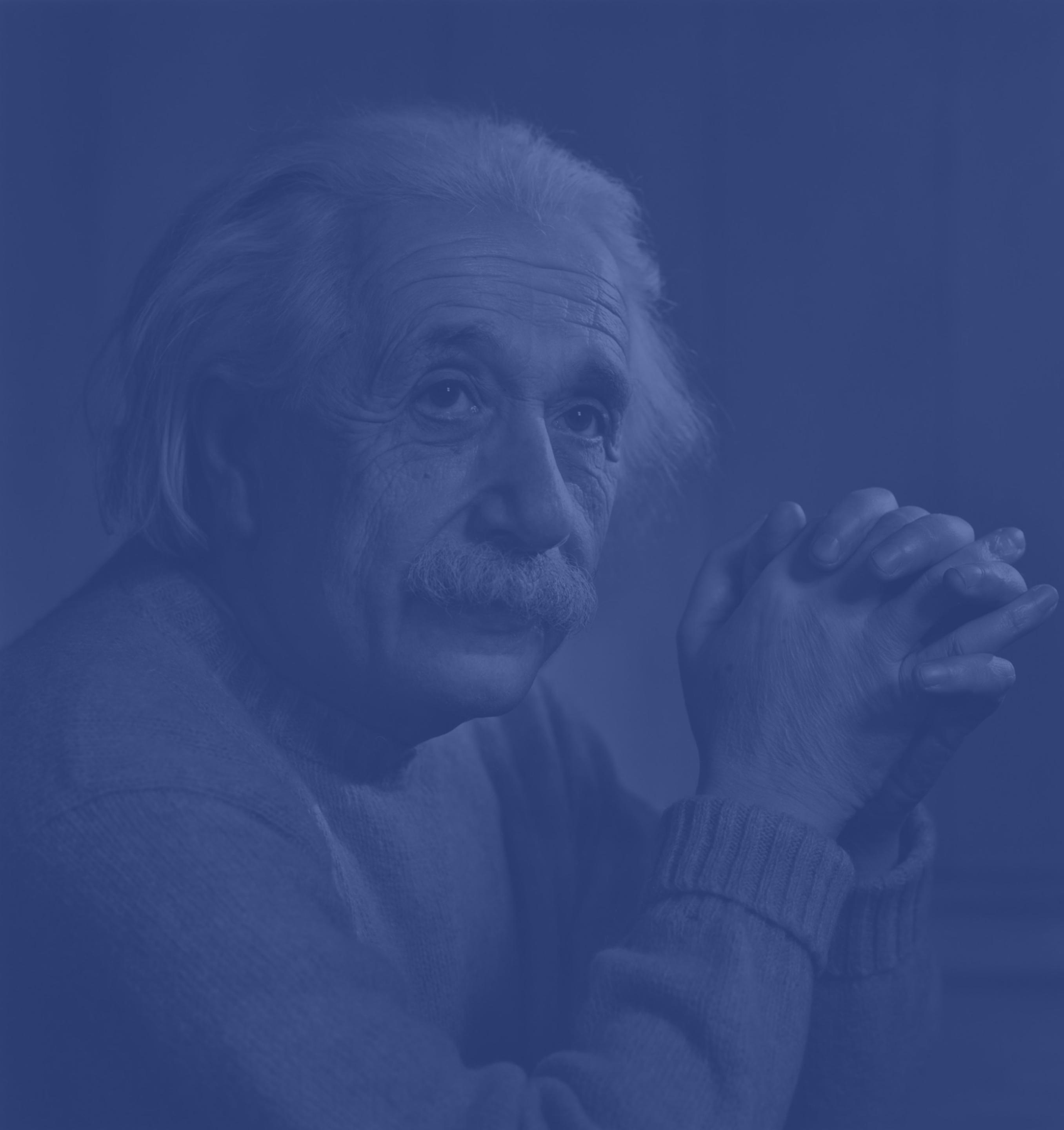
NOT these Questions

- Do you like this app?
- How would you alter this feature?
- Is this easy to use?
- Do you think you would use this app?

Demystify Principle #2

Simplify the Complex

Photo by [Hal Gatewood](#) on [Unsplash](#)

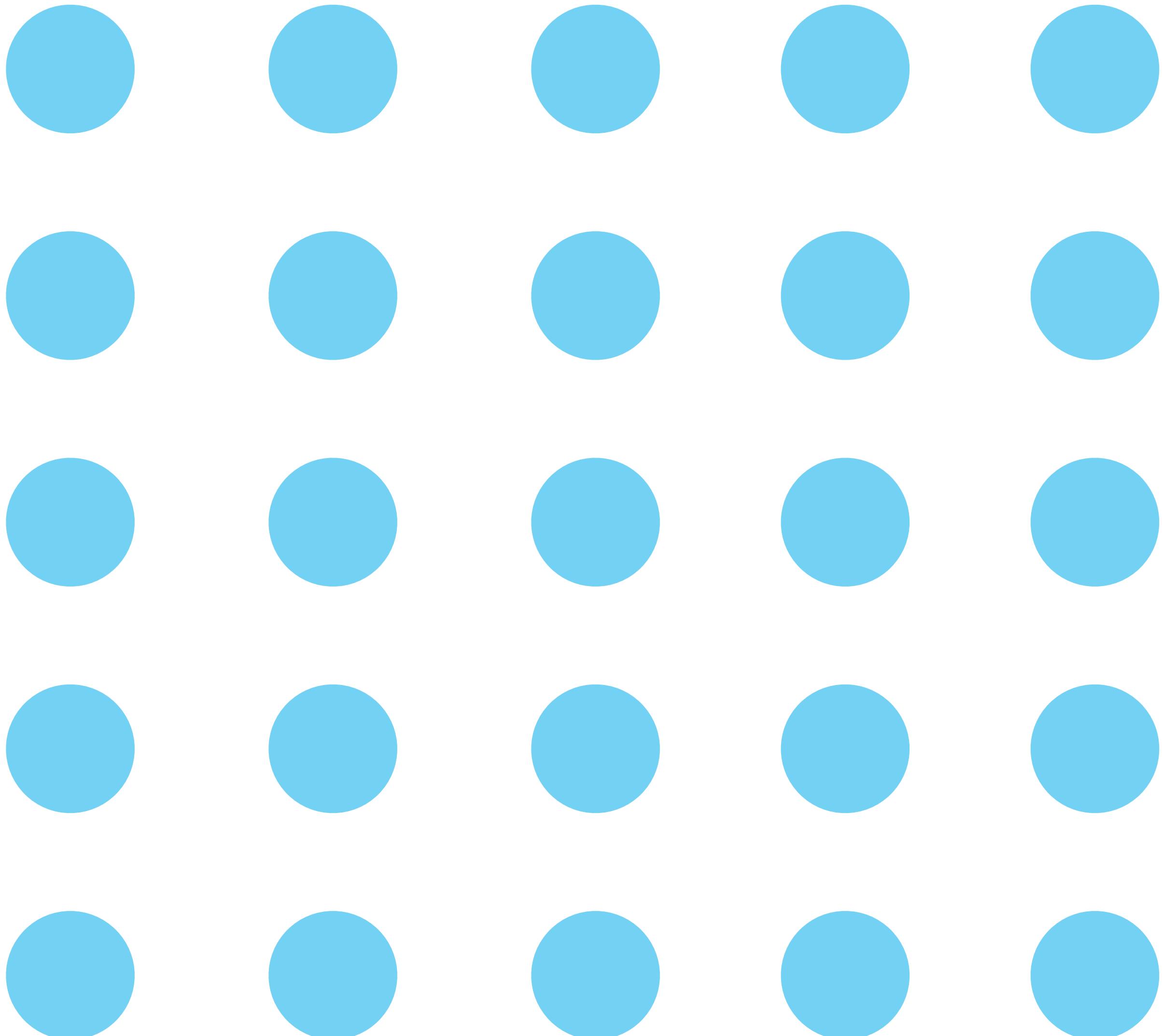
A black and white photograph of Albert Einstein. He is shown from the chest up, wearing a dark, ribbed sweater. His hands are clasped together in front of him. He has his signature wild, grey hair and a full, bushy grey beard. He is looking slightly to the right of the camera with a thoughtful expression.

“Any darn fool can
make something
complex; it takes a
genius to make
something simple.”

Albert Einstein

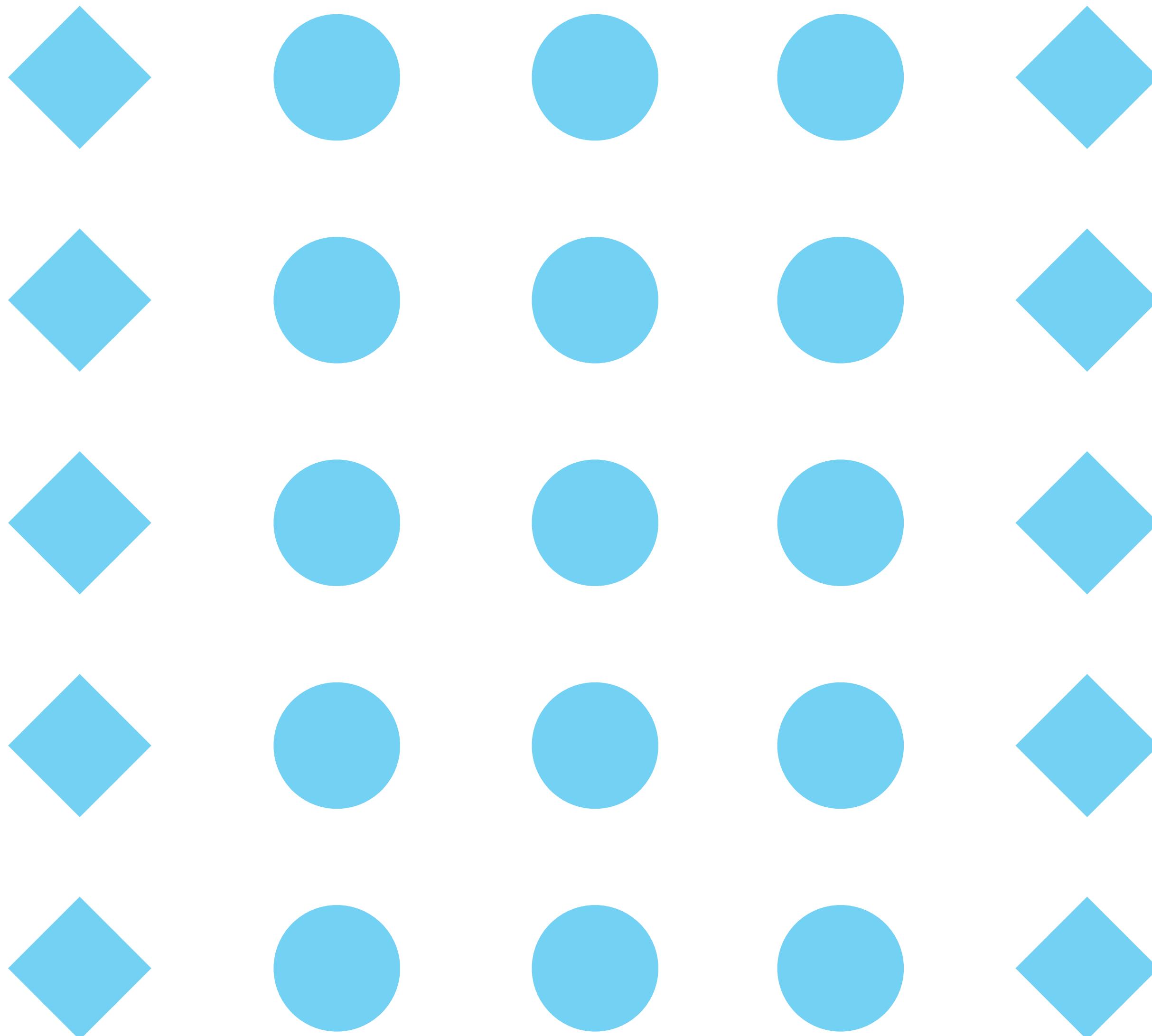
Gestalt Principles

Similarity



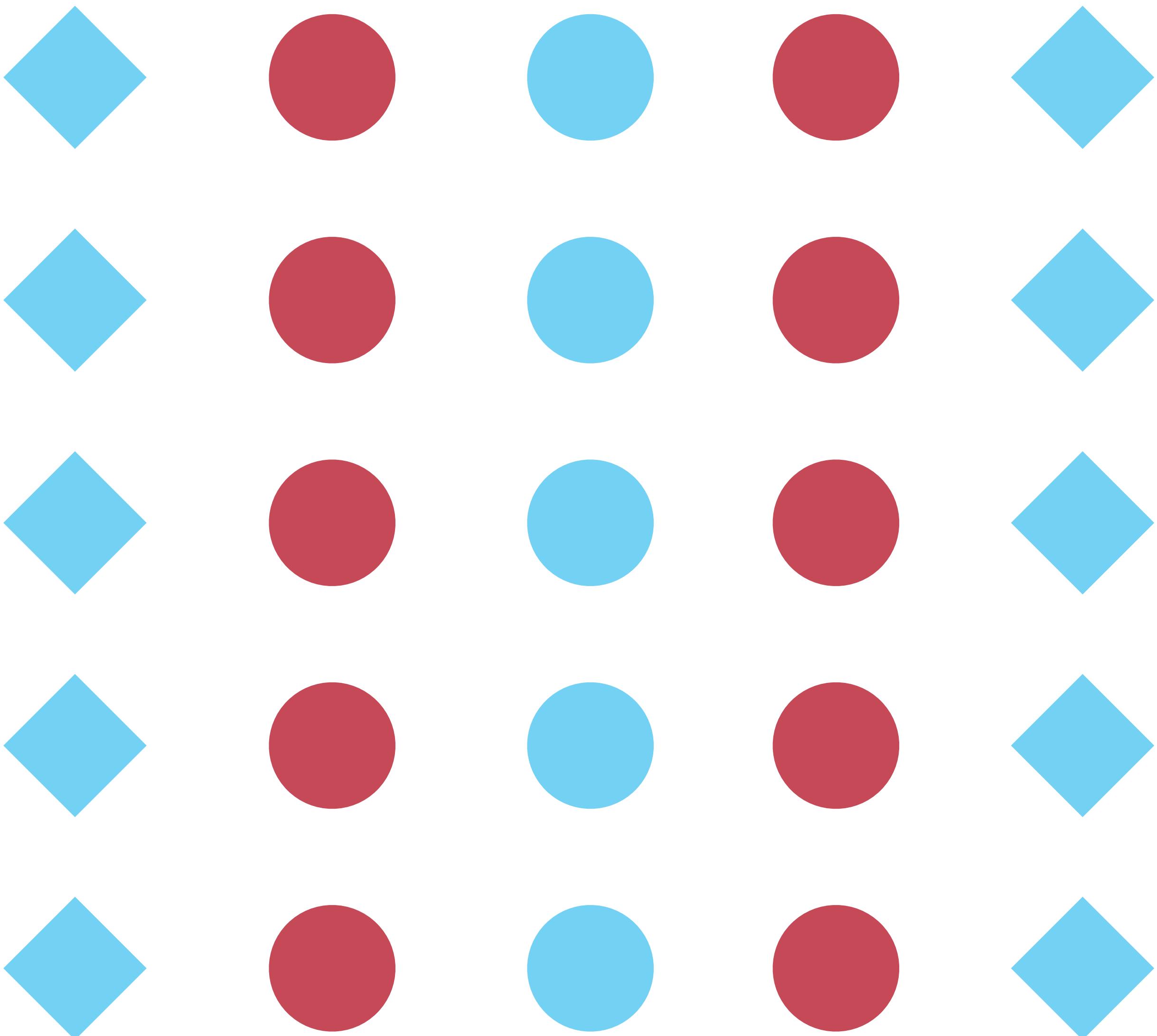
Gestalt Principles

Similarity



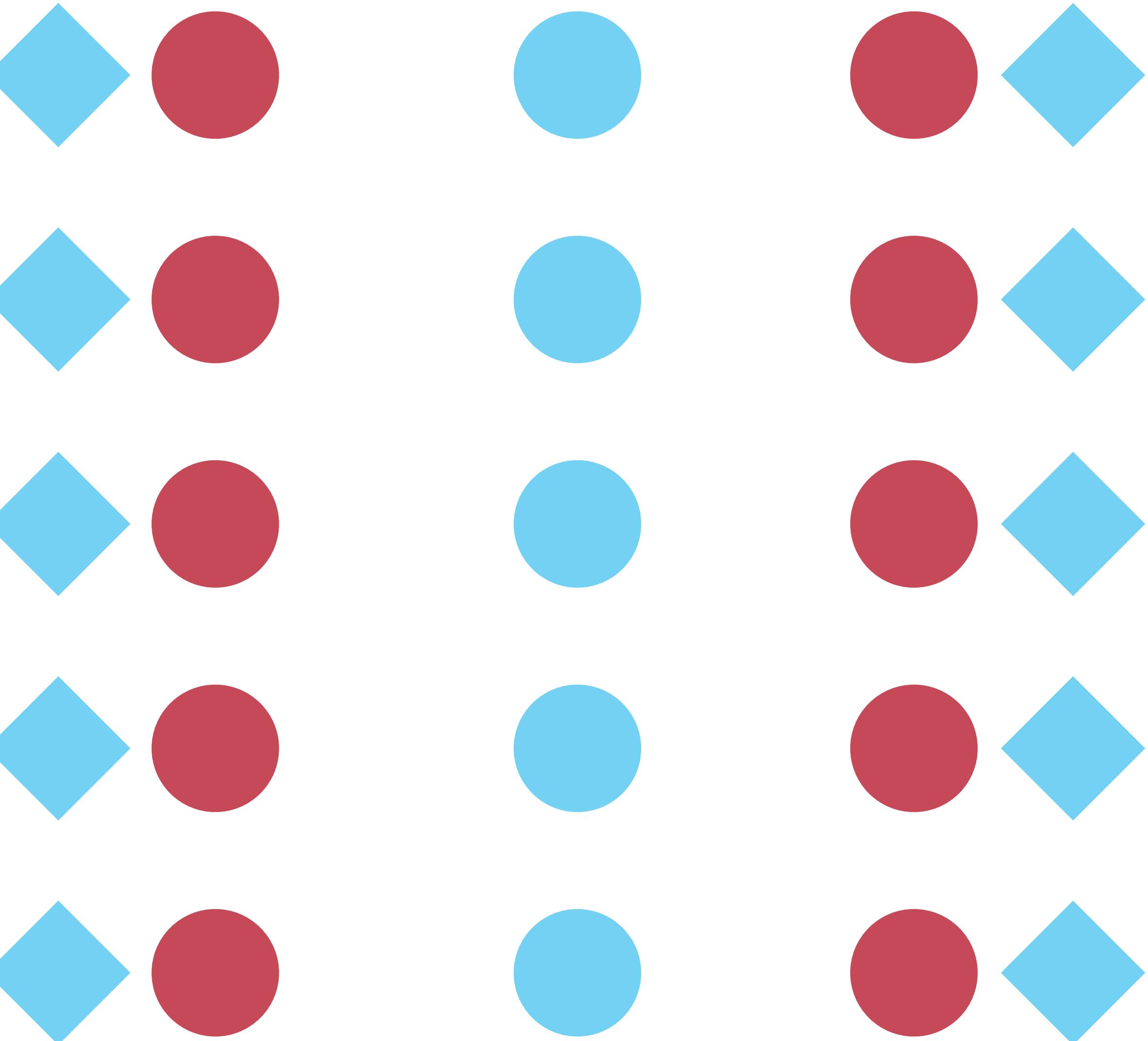
Gestalt Principles

Similarity with Color



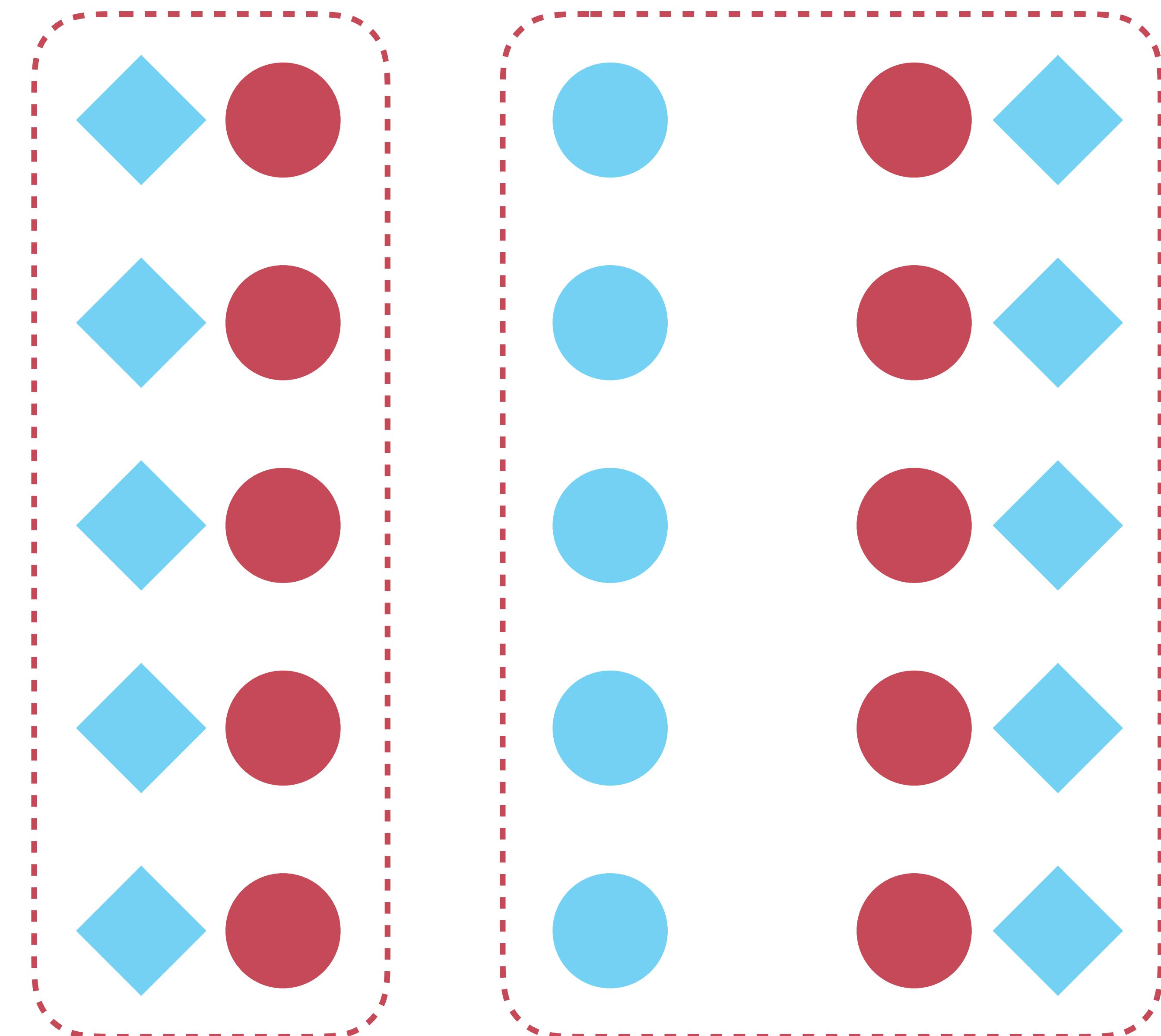
Gestalt Principles

Proximity



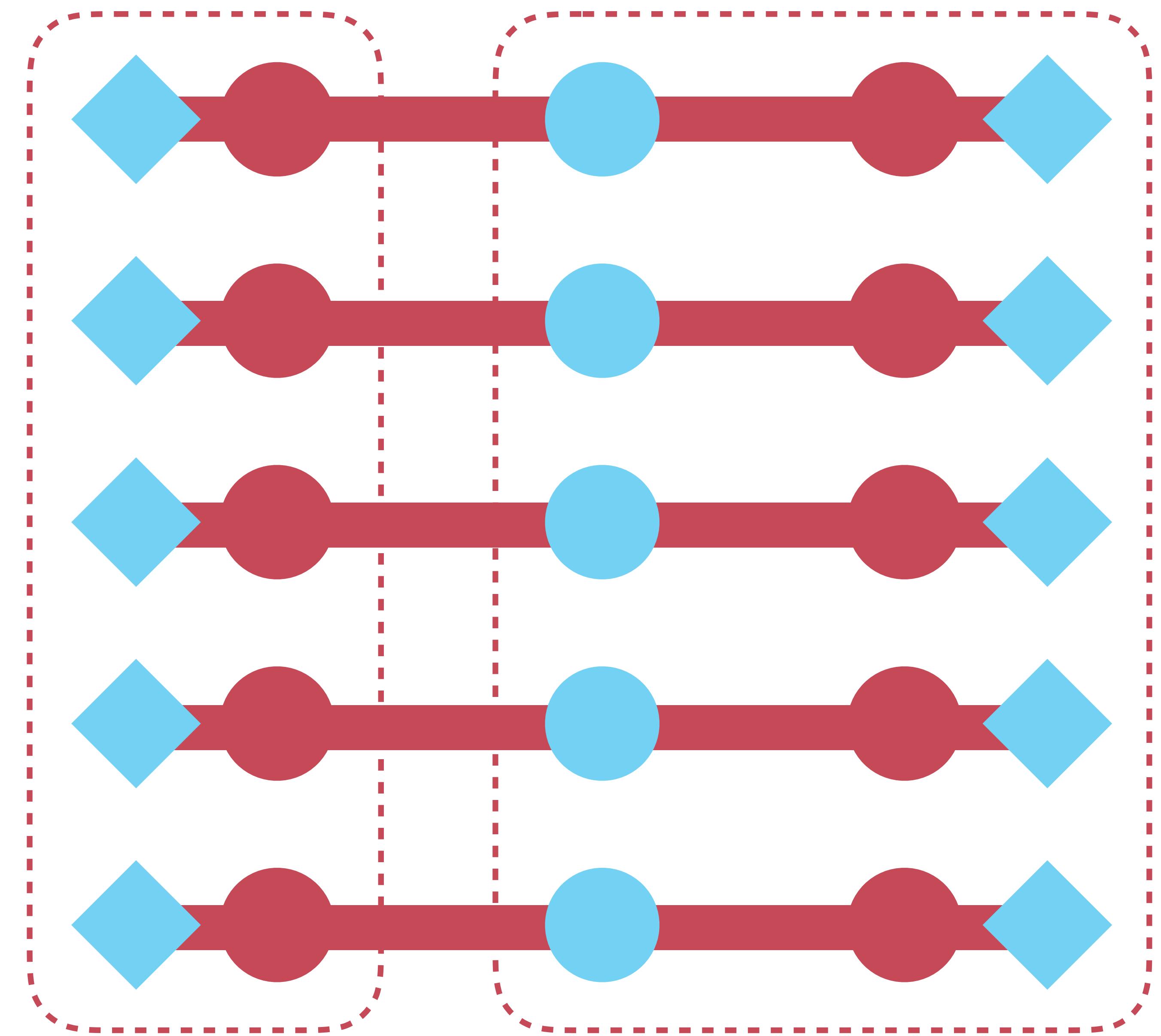
Gestalt Principles

Enclosure



Gestalt Principles

Continuation



Components

Limit the number of components on a page based on user needs.

User A

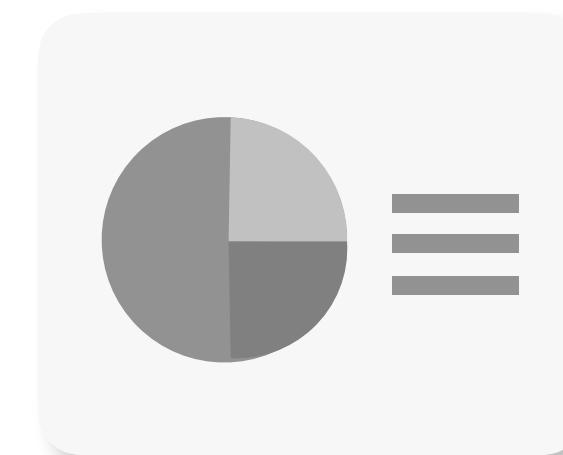
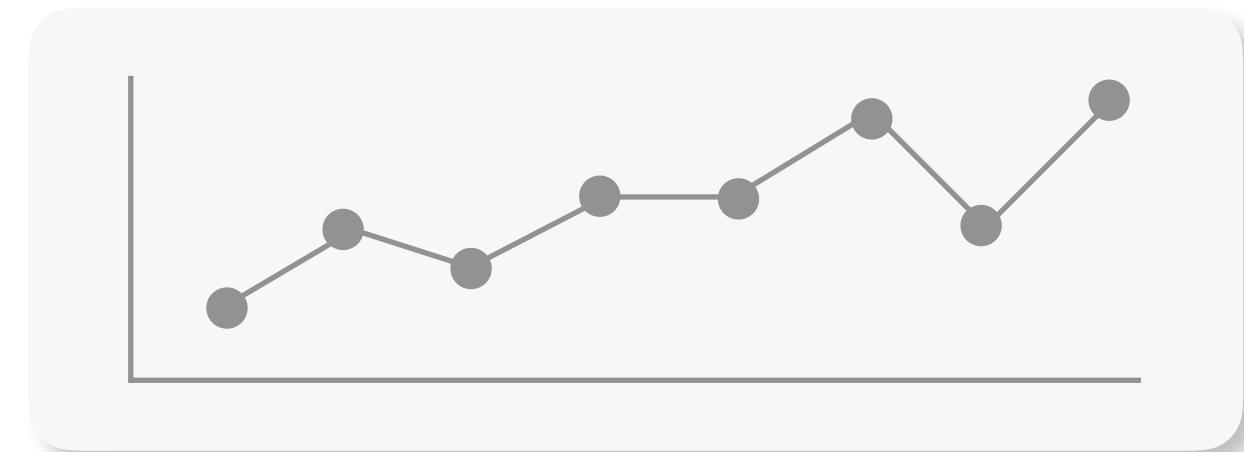
User B

User C



Components

Limit the number of components on a page based on user needs.



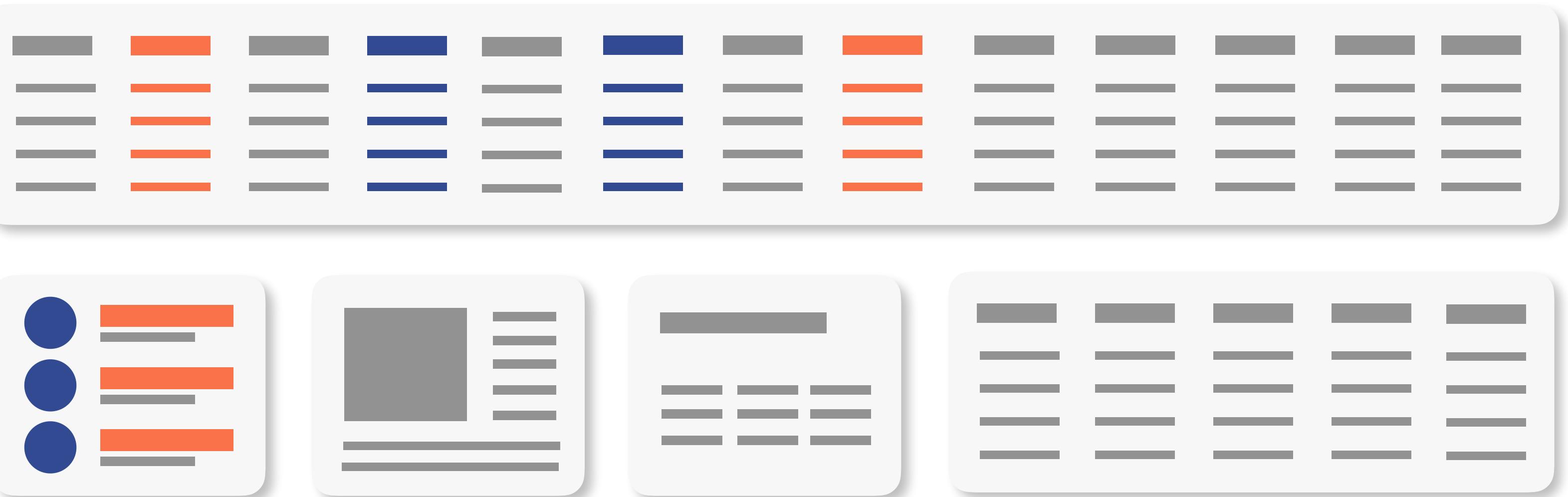
User A

User B

User C

Components

Limit the number of components on a page based on user needs.



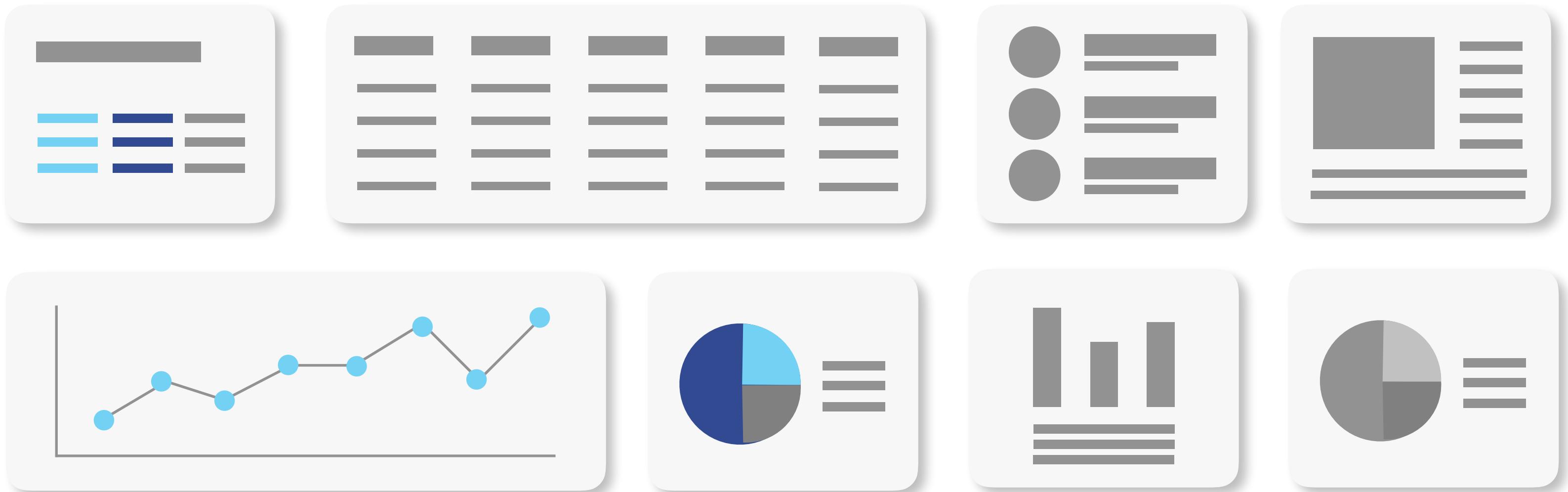
User A

User B

User C

Components

Limit the number of components on a page based on user needs.

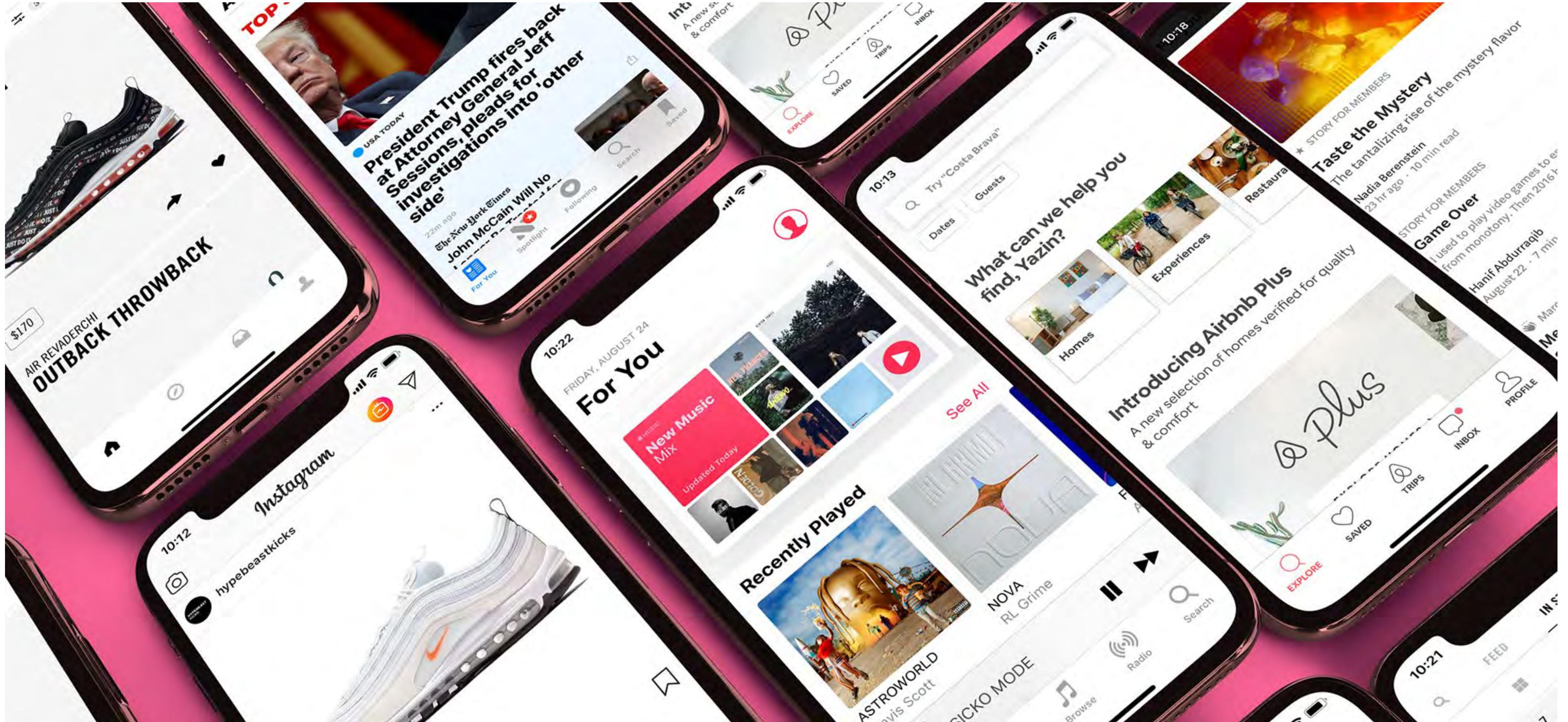


User A

User B

User C

Consistency Across Apps



<https://www.inc.com/yazin-akkawi/ever-wonder-why-your-favorite-apps-are-starting-to-look-same-it-might-a-good-thing.html>

Demystify Principle #3

Consider Each State

Photo by Anthony Tran on Unsplash

New User State

What should I do?

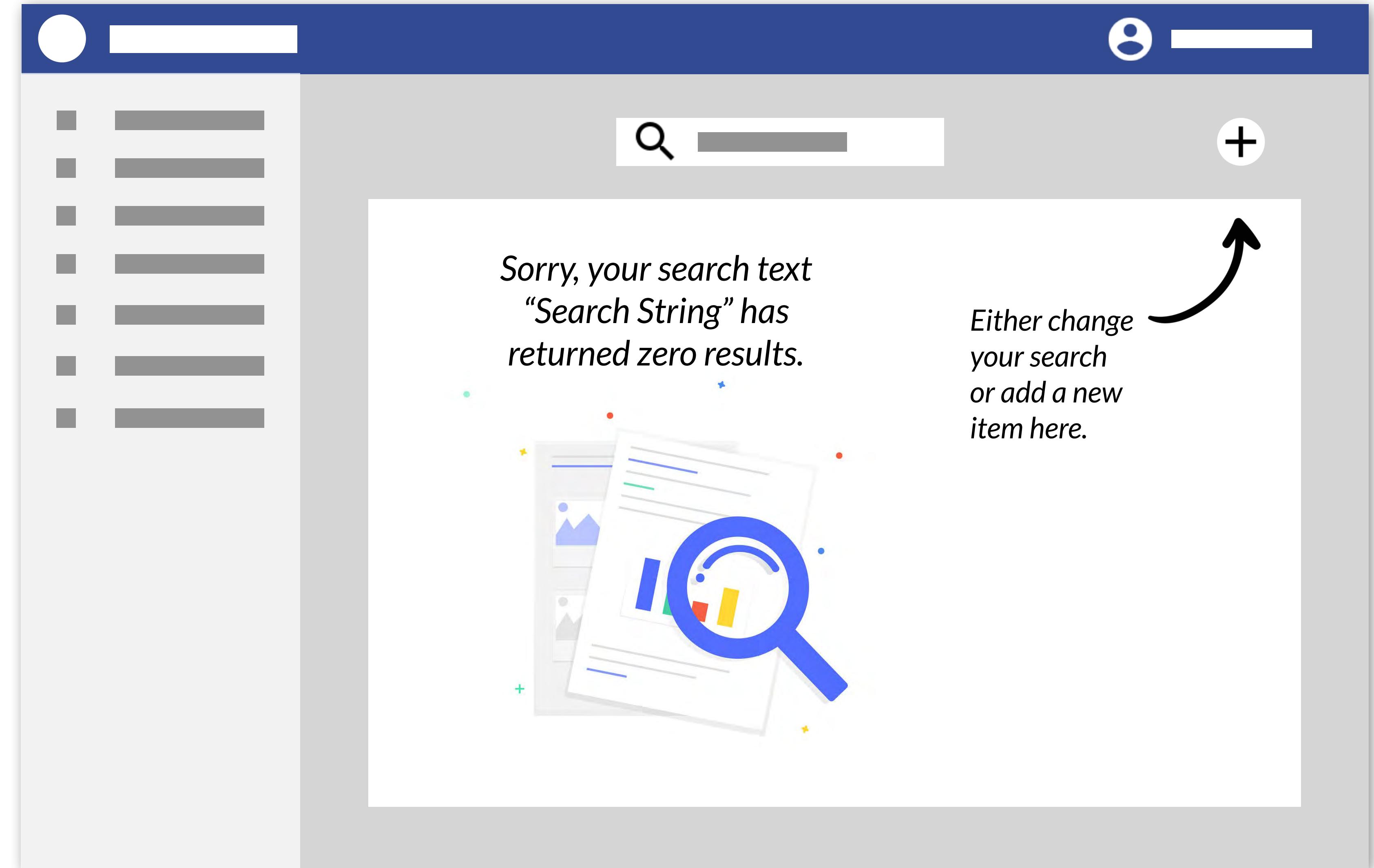
To make it easier for new users to learn about what an app has to offer and what first steps are required, empty screens can be populated with content.

The image shows a mobile application's user interface. At the top, there is a blue header bar with a white circular icon on the left and a white user profile icon on the right. Below the header is a light gray navigation bar containing six dark gray horizontal bars. The main content area is white and features the text "Welcome to the App" in a large, black, sans-serif font. Below this, in a smaller italicized font, is the text "The first things you should do are X, Y and Z." To the right of the text is a cartoon illustration of a man in a suit standing next to a large smartphone. The phone's screen displays a user interface with three blue rectangular cards, each containing a white circle and some text. A small blue plant is visible at the bottom right of the phone. To the left of the phone, there is a block of text: "This is the best app for doing anything you can dream of. But if you dream up something we cannot do, contact us at whynot@app.com".

Empty State

Why nothing is shown?

No results, nothing in the list, or data table empty, tell the user what happened and how they can move forward.



Success State

Congratulations

When the user completes something big it is best to inform them that it was successful and let them know what will happen next.

You completed the Form

Expect the following things to happen next.

You will receive an email

We will keep you informed

You will get what you wanted in X days.

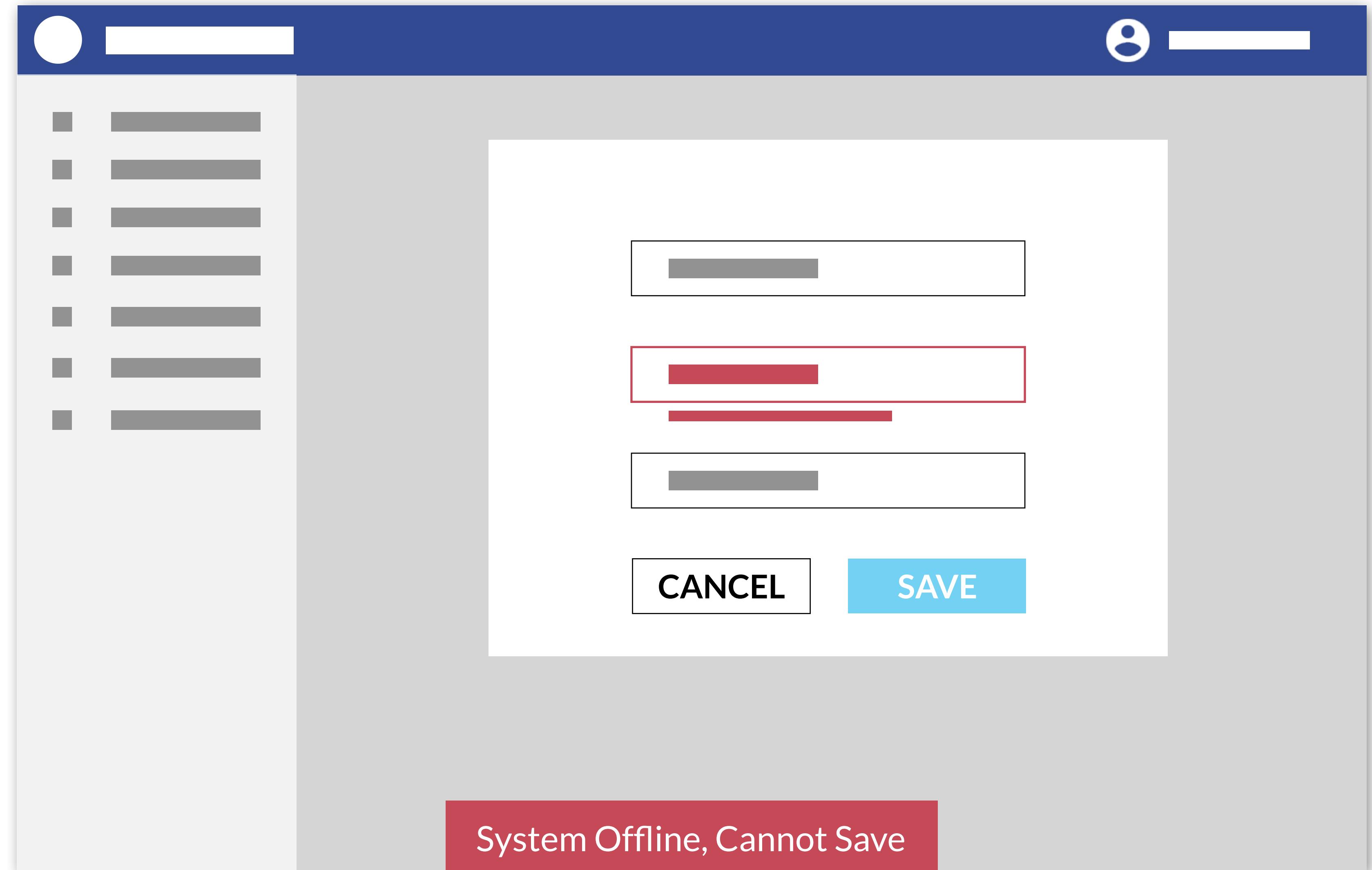


OK

Error States

User Entry

Errors should either be at the point of error or if global they need to be in an obvious position with clear, common language text.



Error States

System

Try to anticipate any error the user might encounter and provide relevant information about the issue “in their language” and how they can recover from it.

Oops... you are not the page I was looking for.



[Go To Landing](#)

If you start back at the beginning, hopefully we can find what you need.

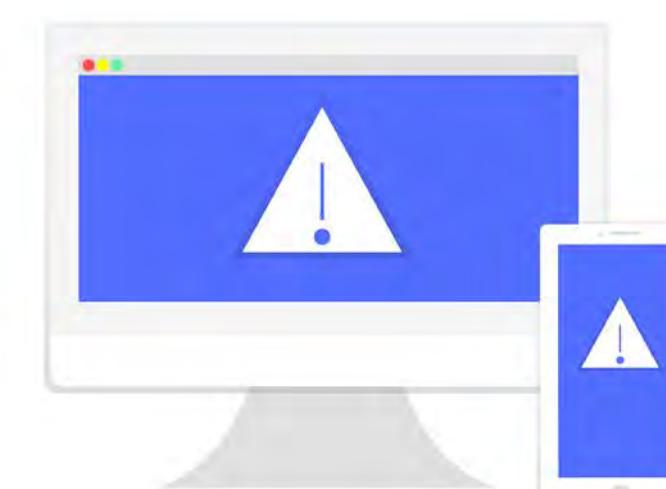
I'm sorry, you don't seem to be authorized to view this app.



[Email Admins](#)

If you feel like this is incorrect please reach out to us.

Something happened that we couldn't predict.



[Email Support](#)

If this continues to happen and it impedes your work please let us know.

You have been logged out of the system due to inactivity.



[Go To Login](#)

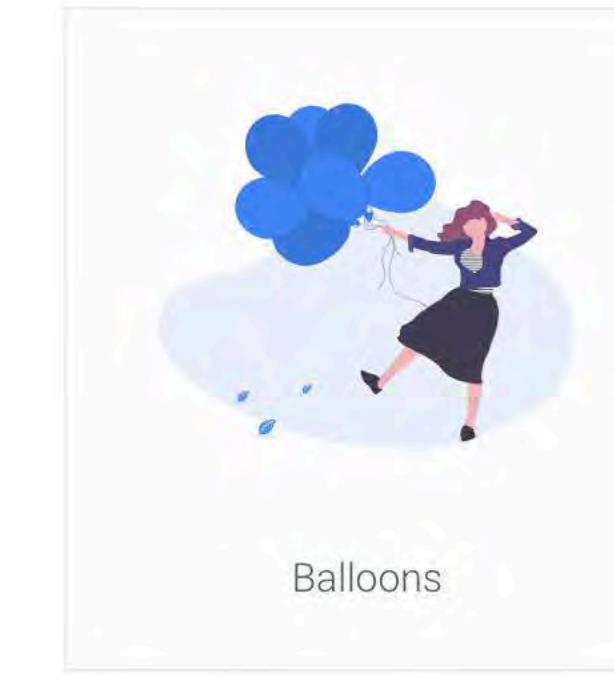
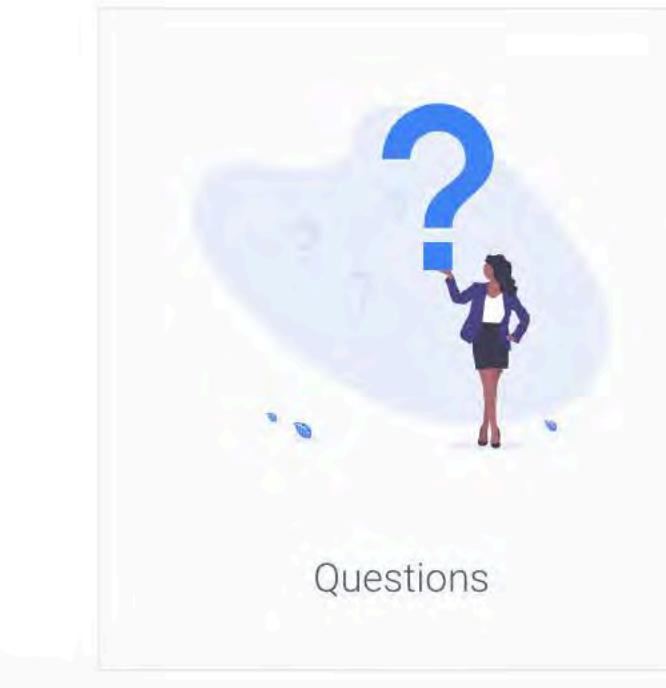
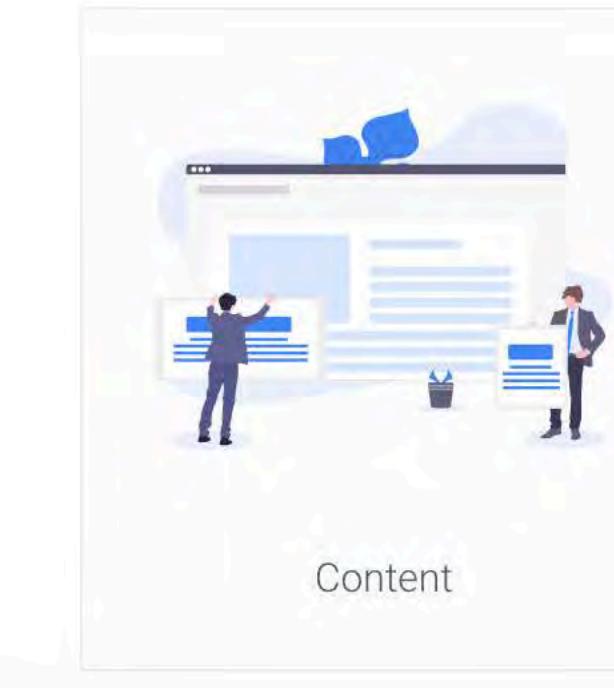
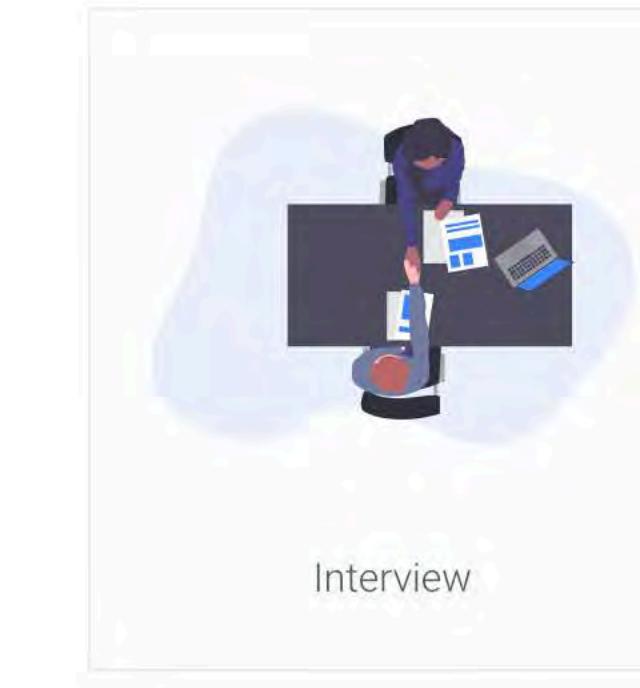
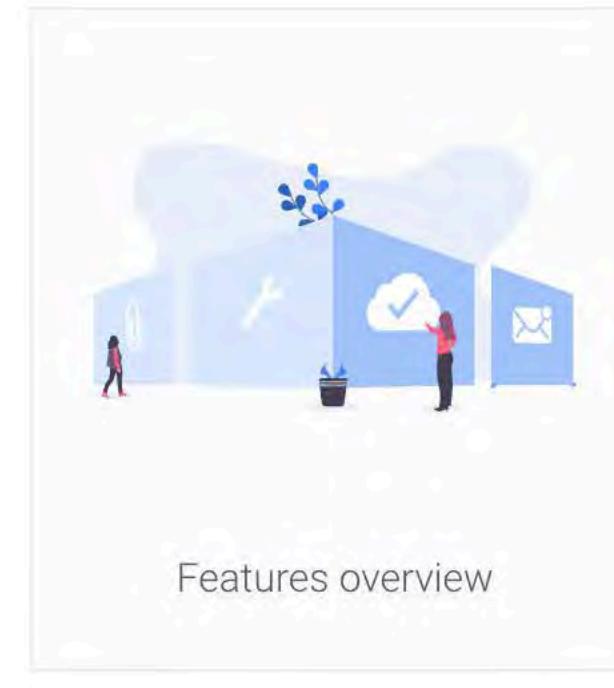
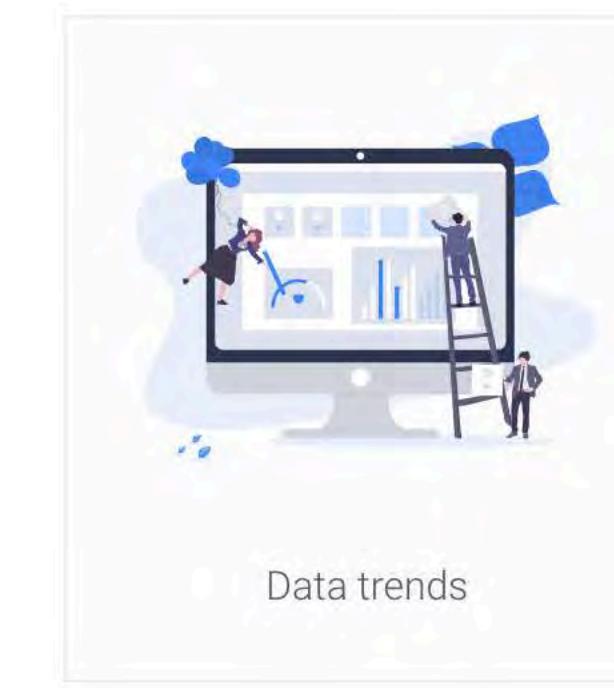
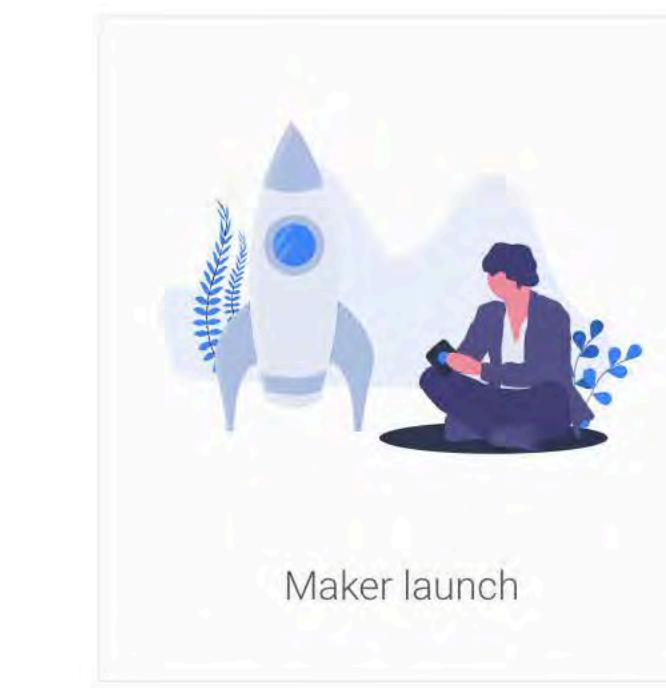
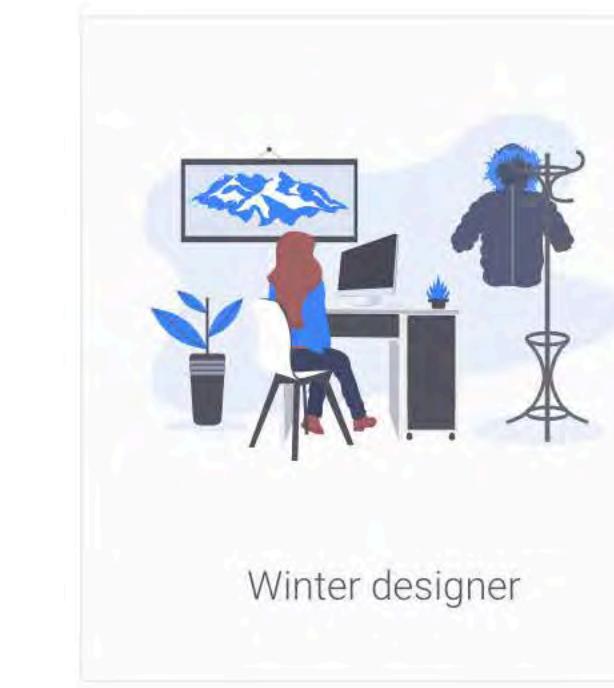
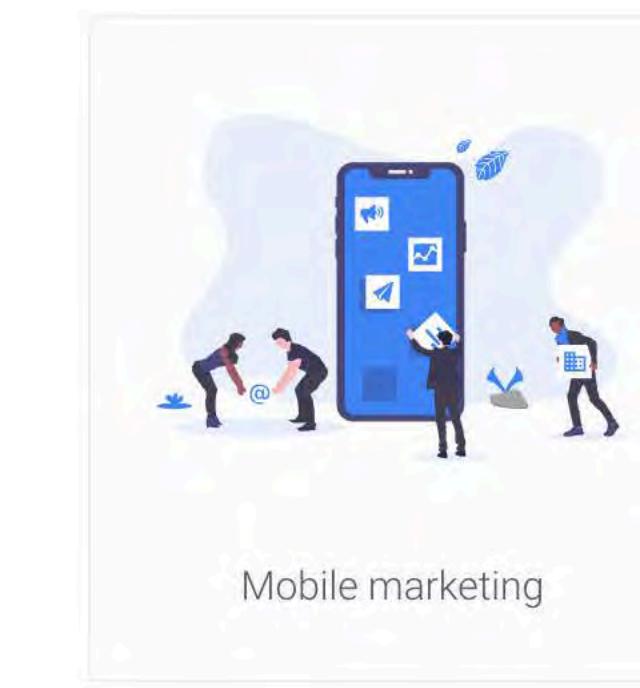
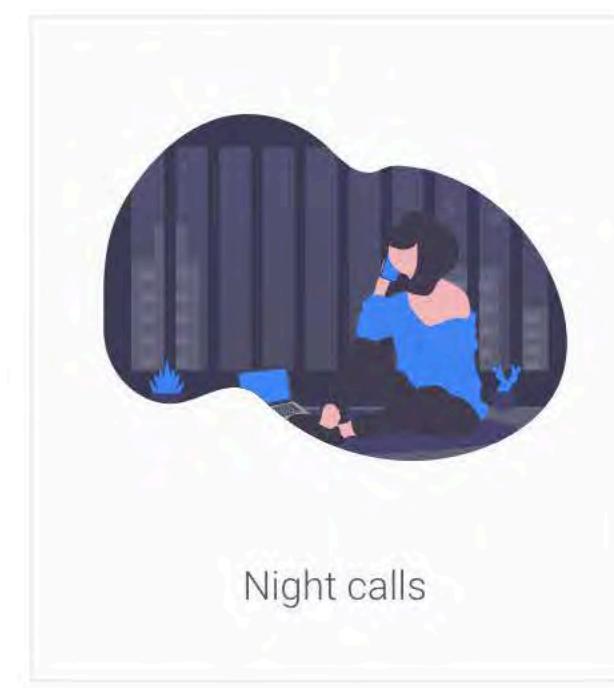
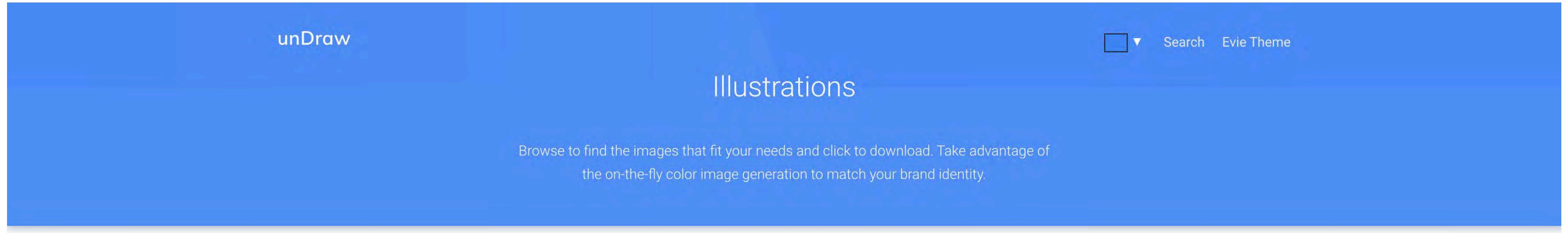
We hope to see you again soon!

<https://undraw.co/illustrations>

unDraw

Illustrations

Browse to find the images that fit your needs and click to download. Take advantage of the on-the-fly color image generation to match your brand identity.



Demystify Principle #4

Don't Make Users Wait

Photo by [Gian Prosdocimo](#) on [Unsplash](#)

User Abandonment

If Poor Load Time



Comparing faster sites (5 seconds) to slower ones (19 seconds), the faster sites had average session lengths that were 70% longer and bounce rates that were 35% lower.

<https://developer.akamai.com/blog/2016/09/14/mobile-load-time-user-abandonment>

- ~28% of world is still on 2G and declining
- ~52% of world is on 3G and growing

<https://www.statista.com/statistics/232601/2g-mobile-wireless-penetration-worldwide/>
<https://www.statista.com/statistics/232602/3g-mobile-wireless-penetration-worldwide/>

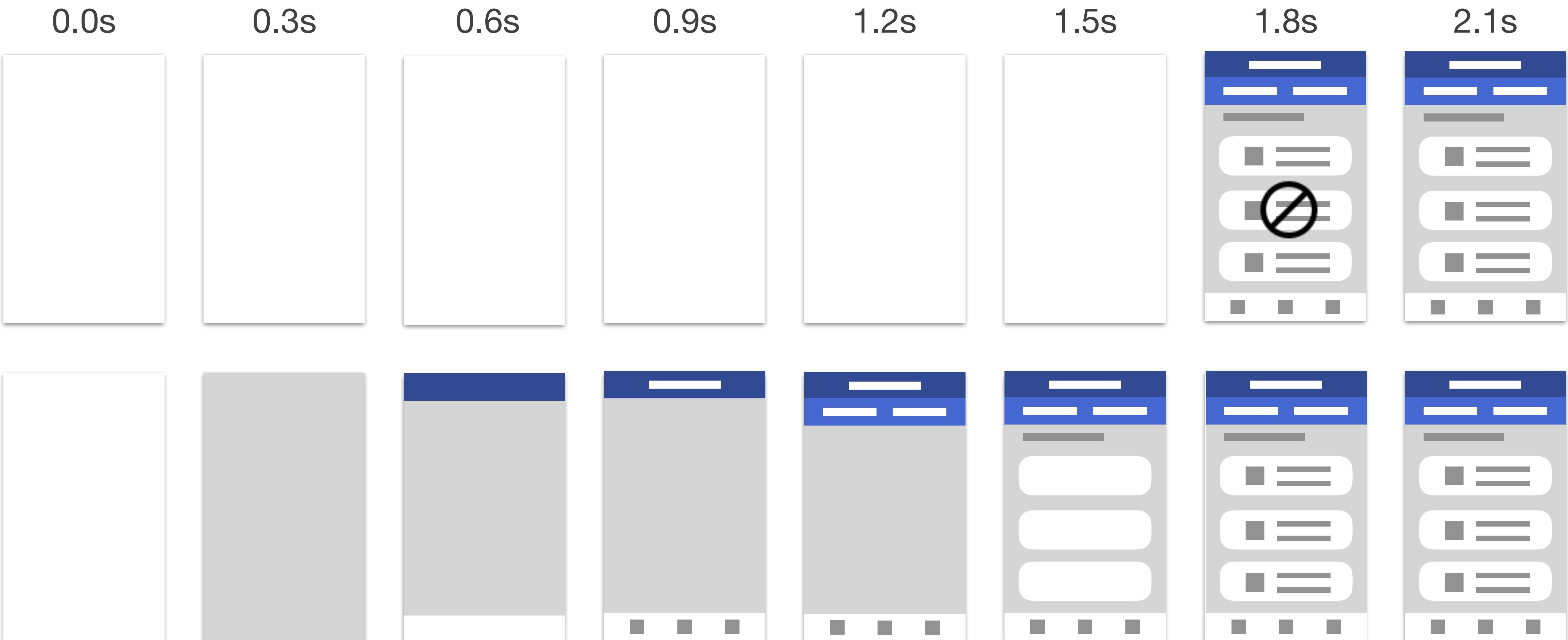
of visits are abandoned if a mobile site takes longer than 3 seconds to load.

Think with Google

Google Data, Global, n=3,700 aggregated, anonymized Google Analytics data from a sample of mWeb sites opted into sharing benchmark data, Mar. 2016.

Progressive Load

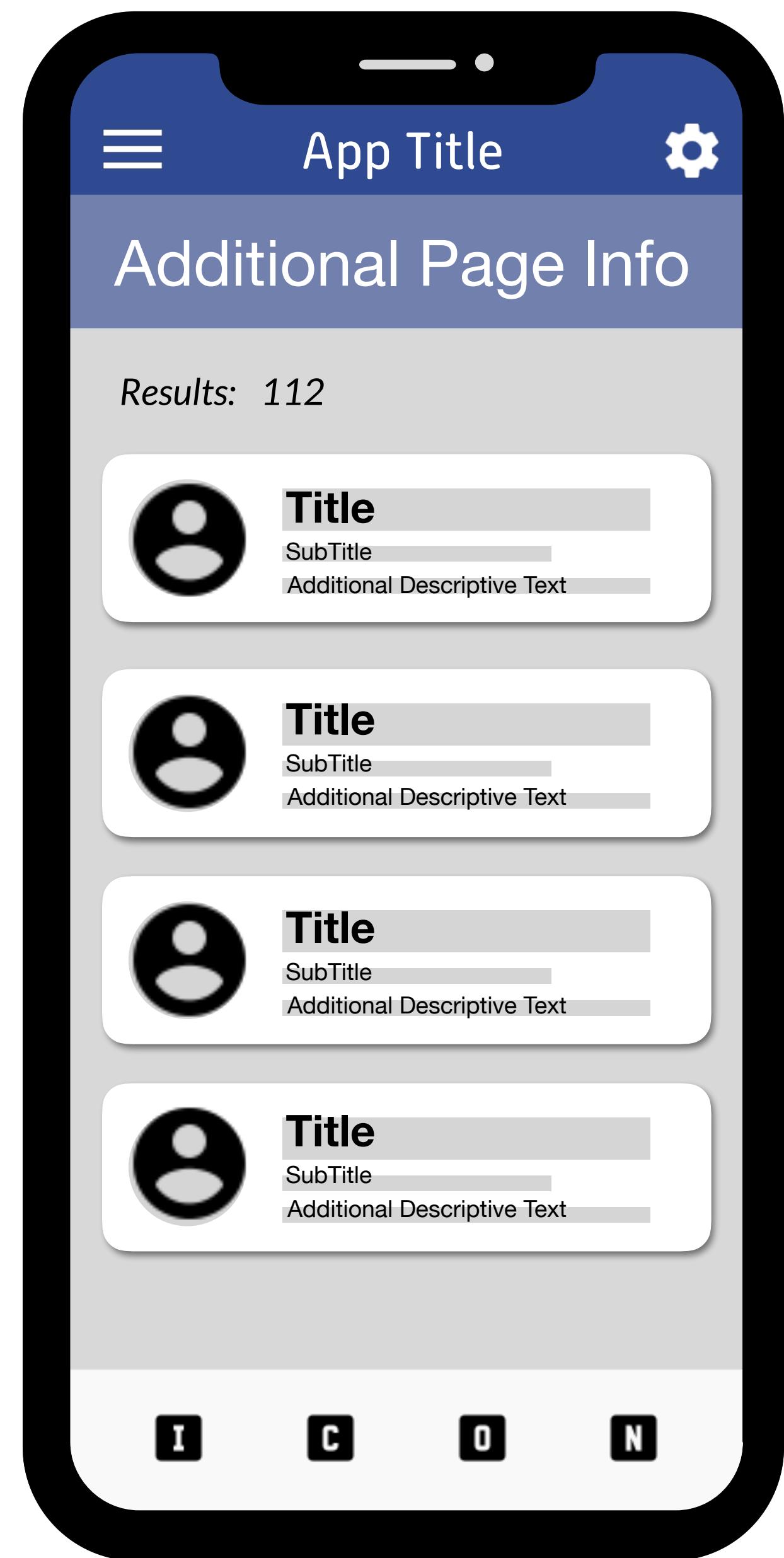
1st Paint to Interaction



Animation

Perceived
Performance

11.5s



Progress Indicator

- Greater than 1 second needs a progress indicator.
- 0.1 to 1 second keeps the user focused on task even though they notice hesitation.
- Custom indicators allow you to move abandonment from 14s to 22s
<https://www.viget.com/articles/experiments-in-loading-how-long-will-you-wait/>
- When available, give the user as much information as possible.

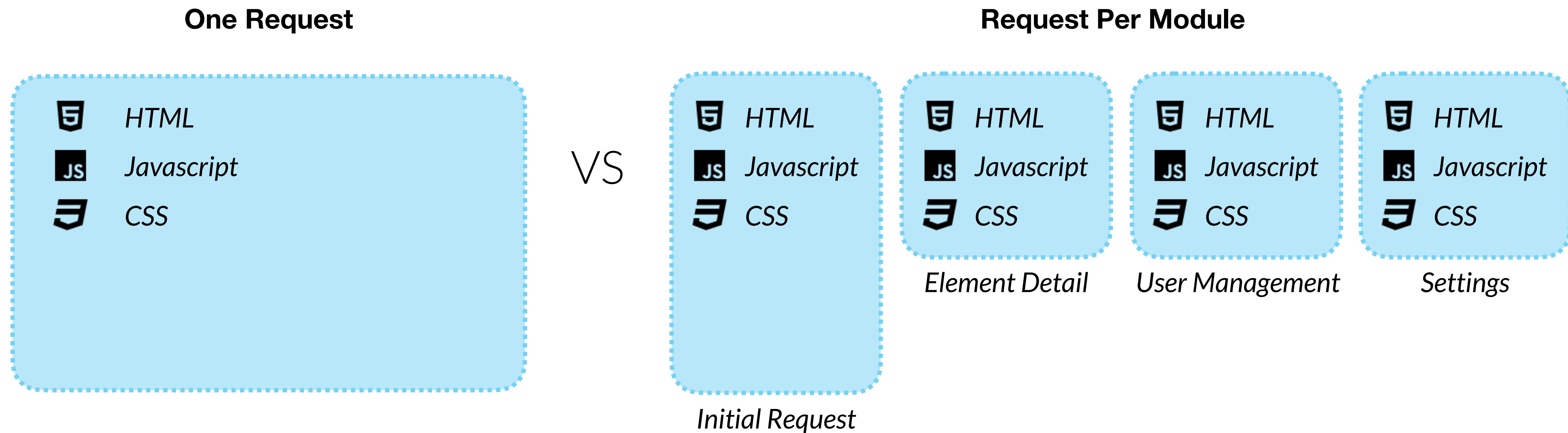


Uploaded 5 of 7 Files

About 2 minutes remaining

Optimize Mobile

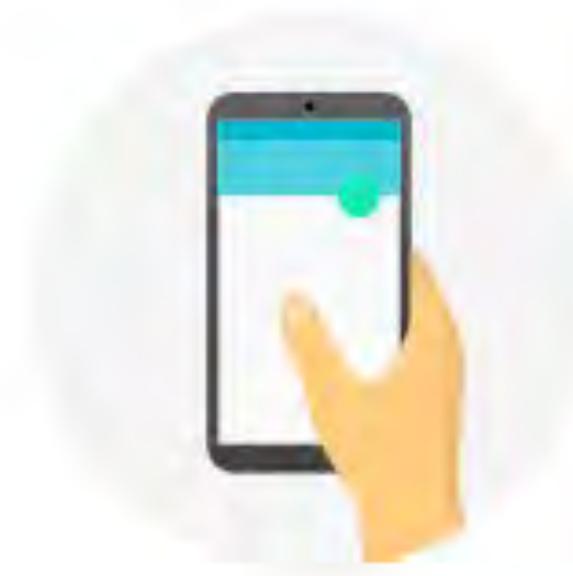
Code Splitting



Demystify Principle #5

Mobile is NOT Optional

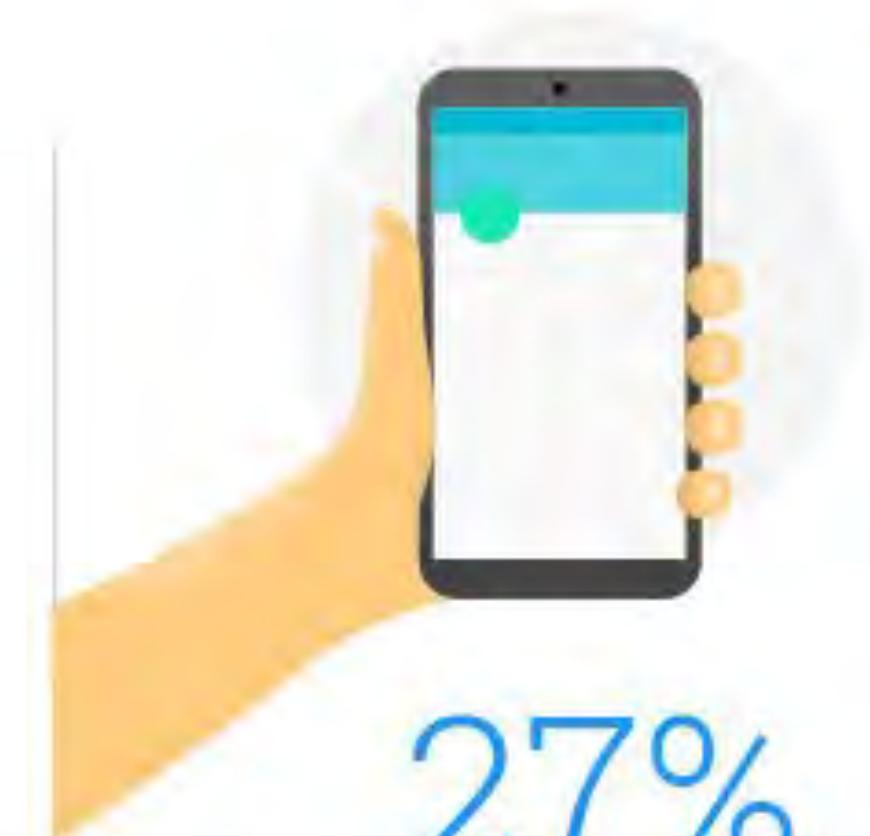
Photo by [freestocks.org](#) on [Unsplash](#)



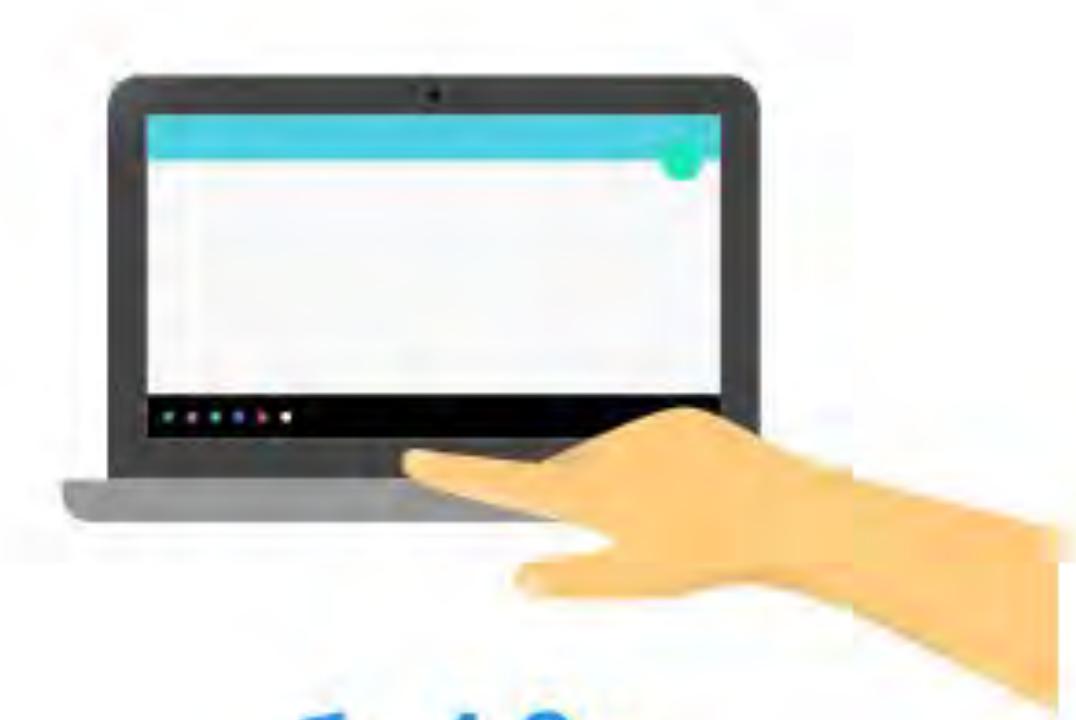
80%
use a
smartphone.



57%
use more than one
type of device.



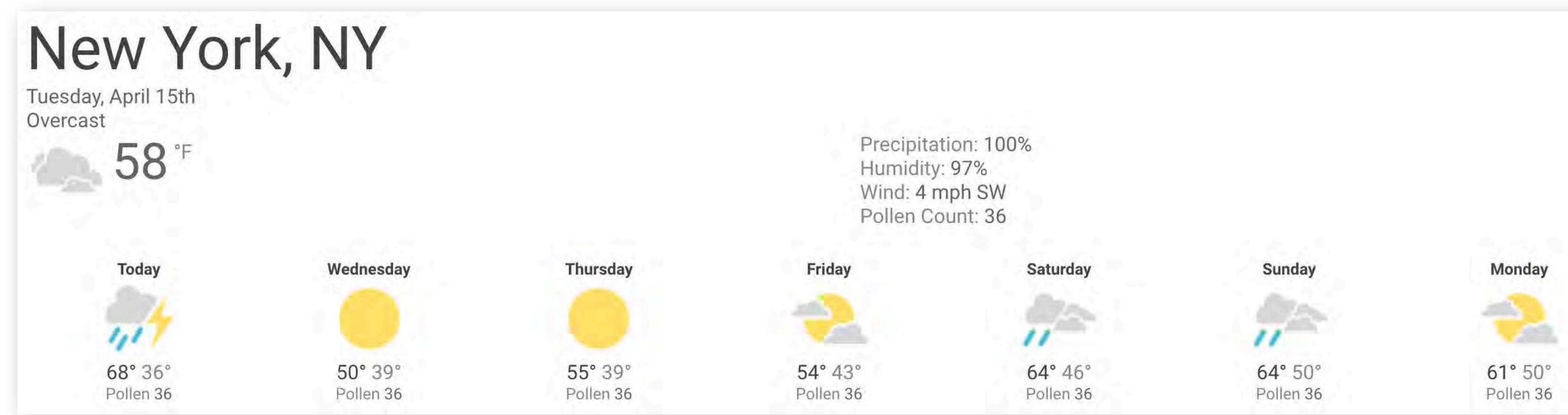
27%
use a
smartphone **only**.



14%
use a
computer **only**.

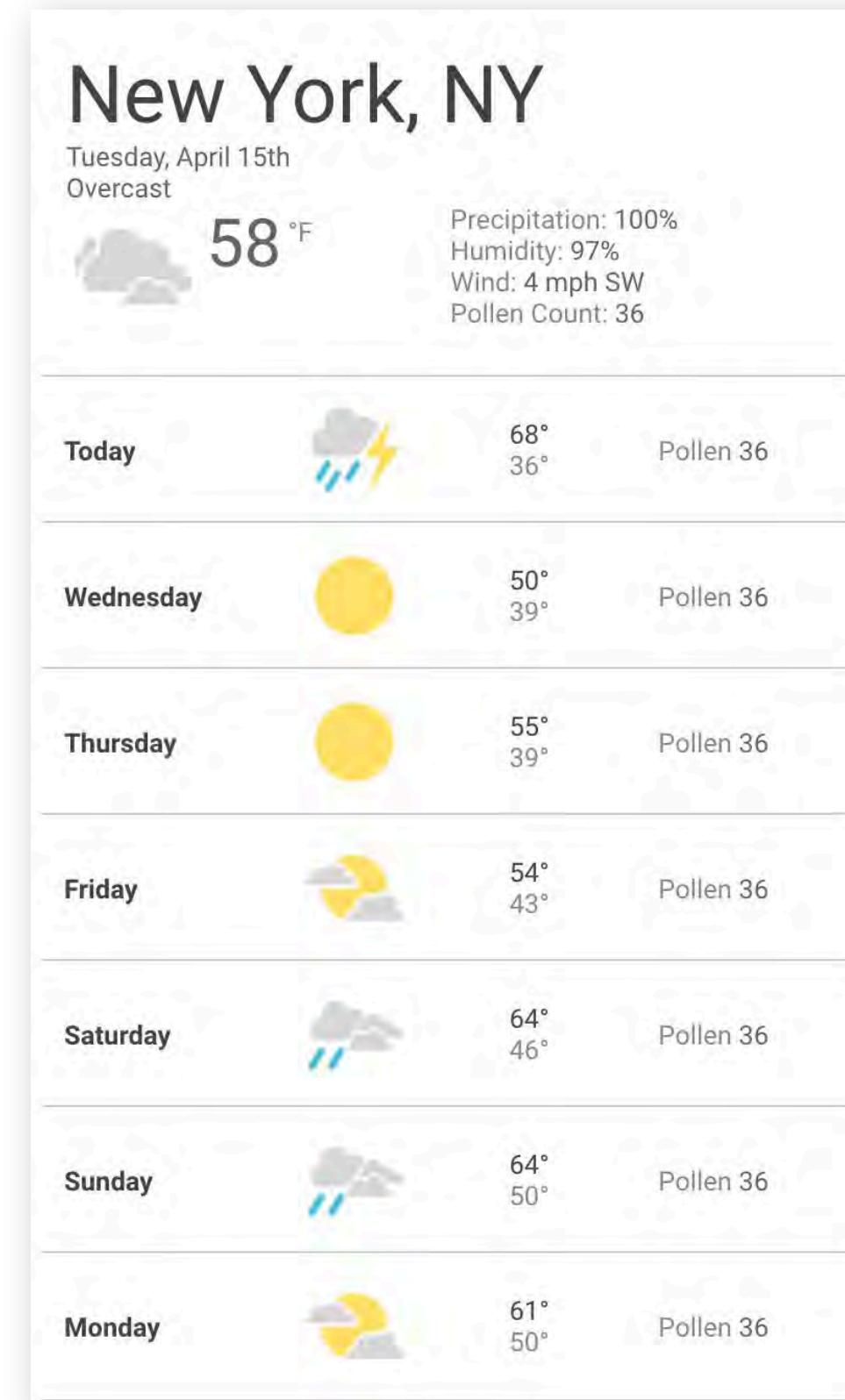
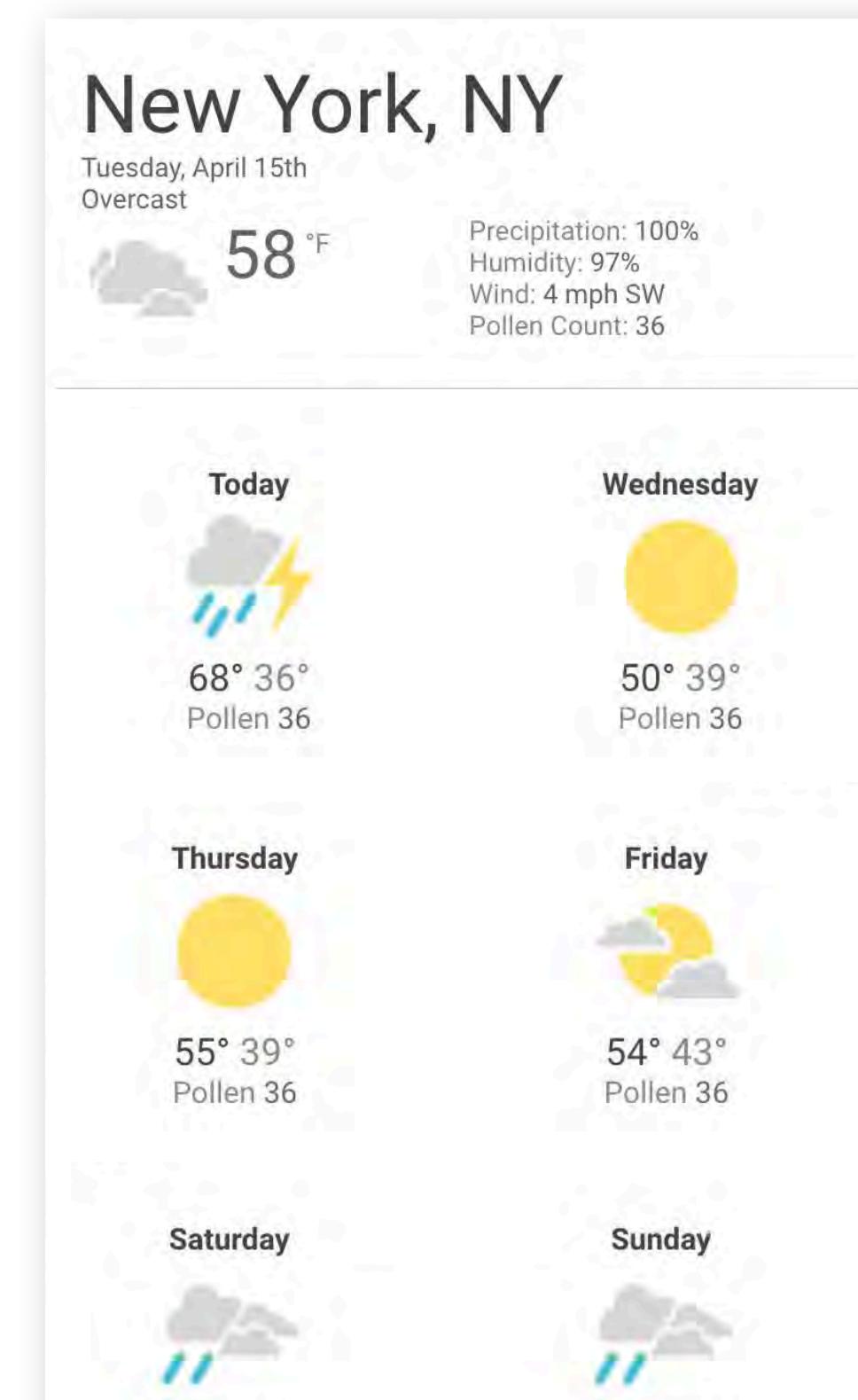
Responsive

More than Breakpoints



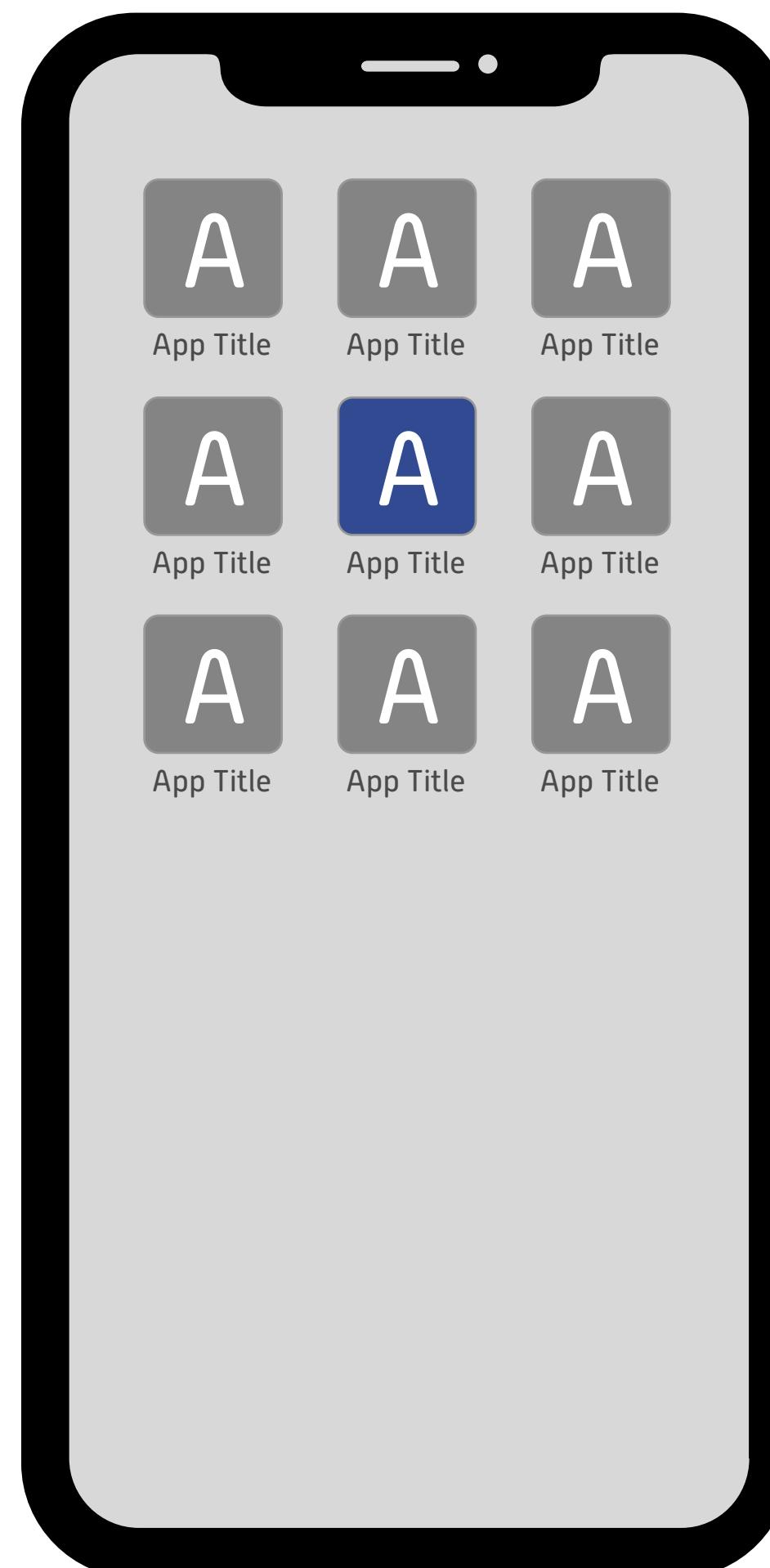
Things to think about:

- What is the critical information?
- Is all content relevant?
- What can go in additional info areas?
- Should it stack or morph?
- Should fonts change?
- Are touch points too big or small?



Progressive Web App

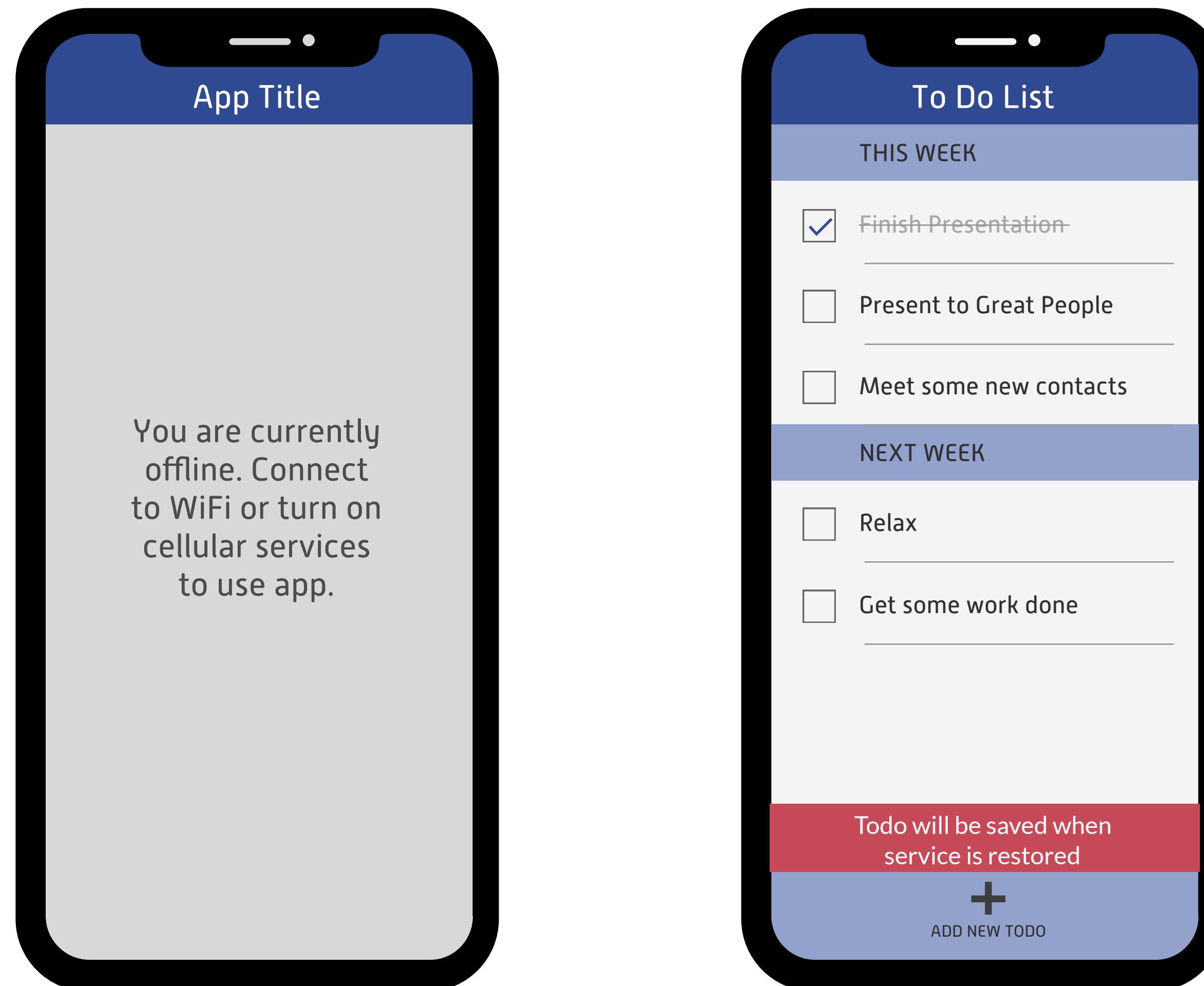
Users Don't Know PWA is



- **Assists with users who don't like to download apps**
- **Add to Home Screen:** Prompt users on how to add to home screen.
- **Reliable:** Fast 2nd+ loading and works offline
- **Engaging:** Launched from home screen and can receive push notification. Users feel like they are native apps and don't know the difference.
- **Negative:** Users think it is native so it should perform like a native app.

Make it Work Offline

Or at least inform the user why not.



- Assume connectivity will be lost at some point with both cellular and WiFi connections.
- If no services can be run, at least tell the user that they are offline.
- Store new activities until service is restored and give an alert

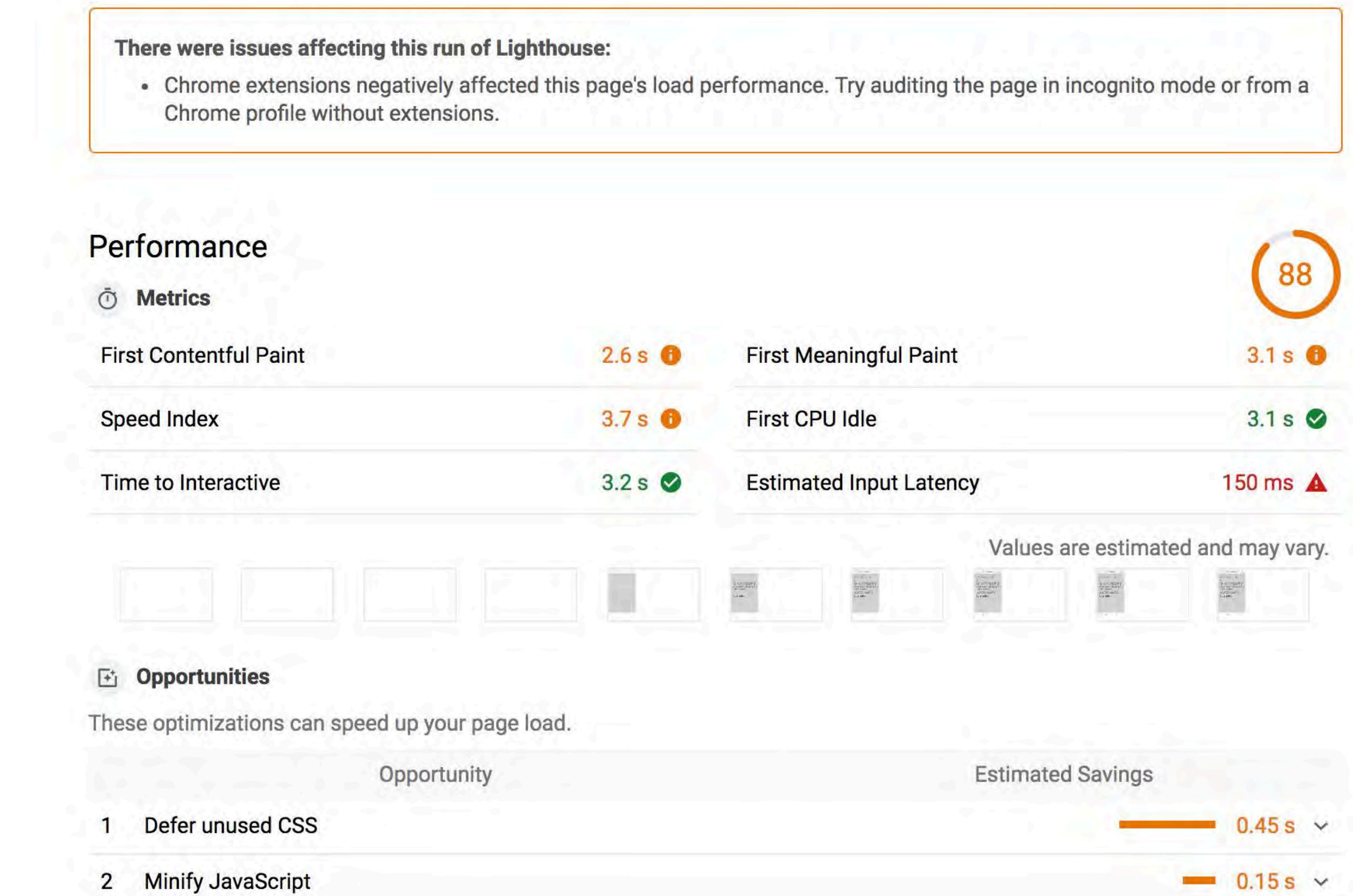
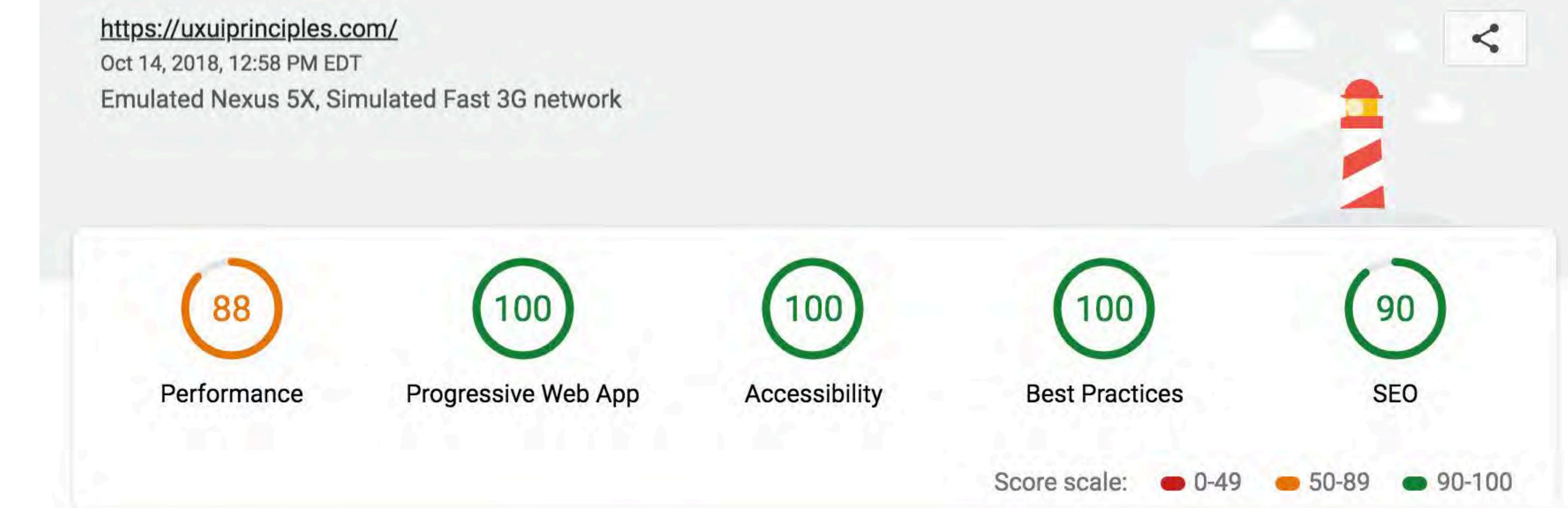
Check Performance

Google Lighthouse

<https://developers.google.com/web/tools/lighthouse/>

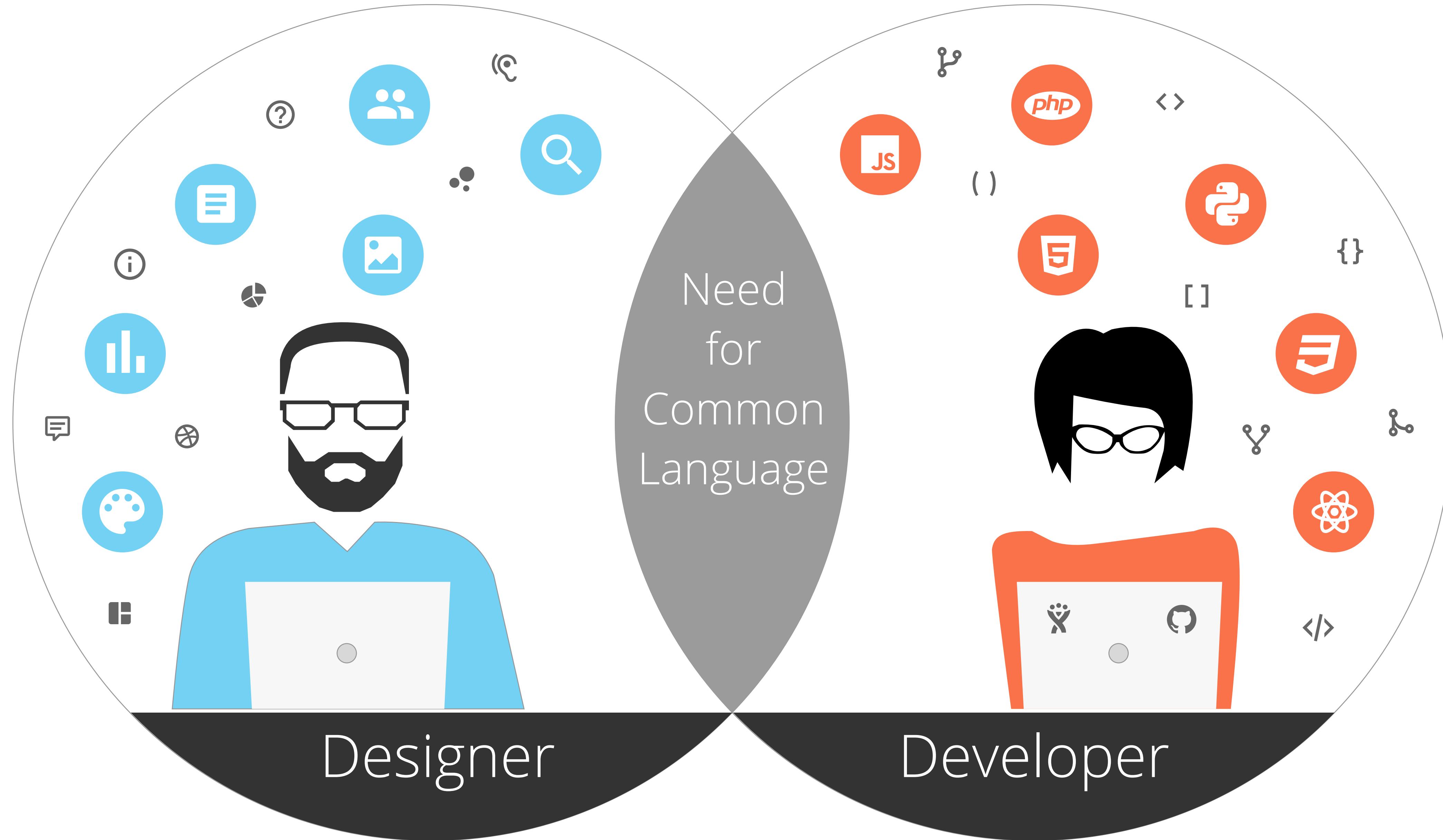
Simulates the following:

- Network as Fast 3G
- Device emulates Nexus 5x
- CPU throttling: 4x slowdown



What Next?



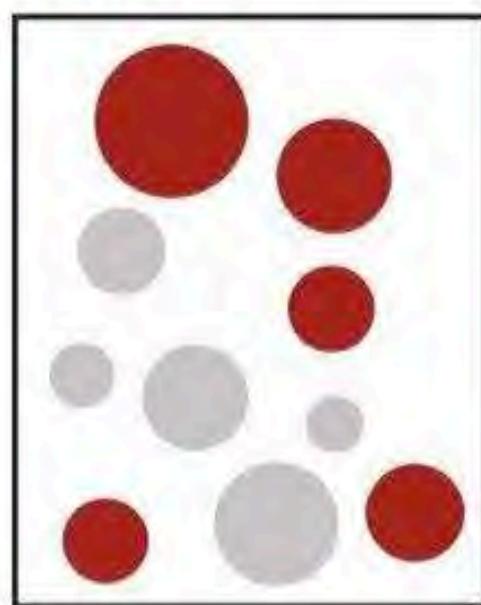


Usability Test

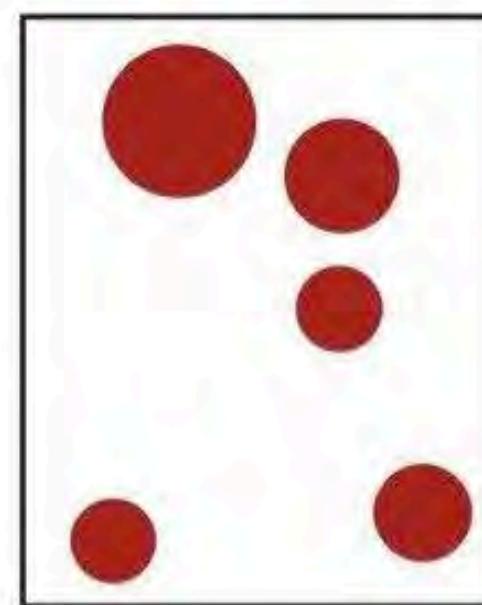
To Validate

ONE TEST WITH 8 USERS

8 users

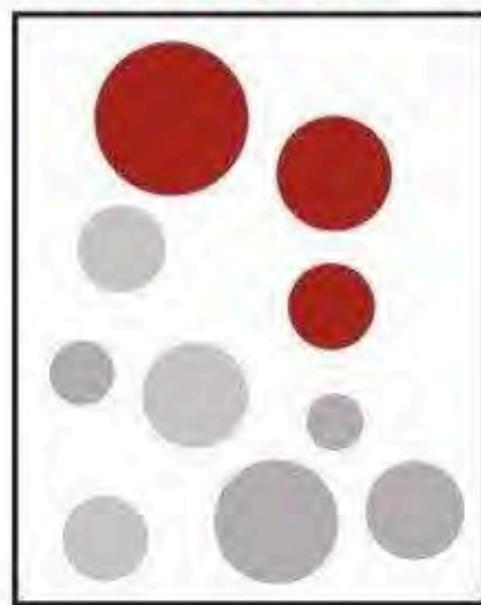


TOTAL PROBLEMS FOUND: 5



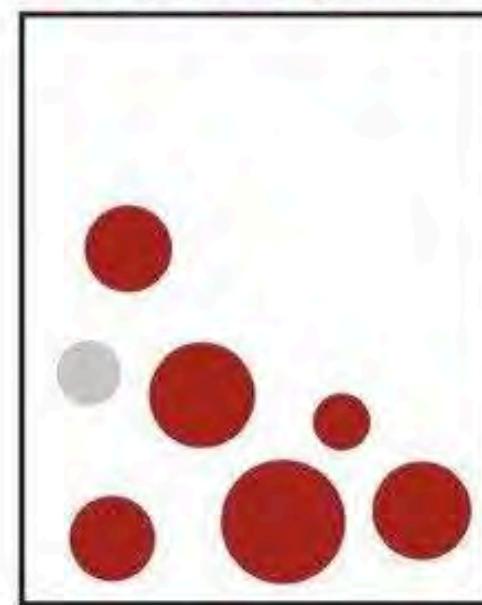
TWO TESTS WITH 3 USERS

First test: 3 users



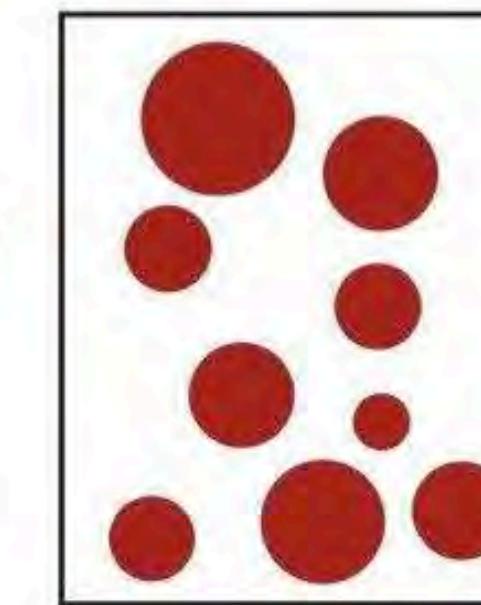
Three users may not find as many problems in a single test.

Second test: 3 users



But in the second test, with the first set of problems fixed, they'll find problems they couldn't have seen in the first test.

TOTAL PROBLEMS FOUND: 9



Participants: 3-7

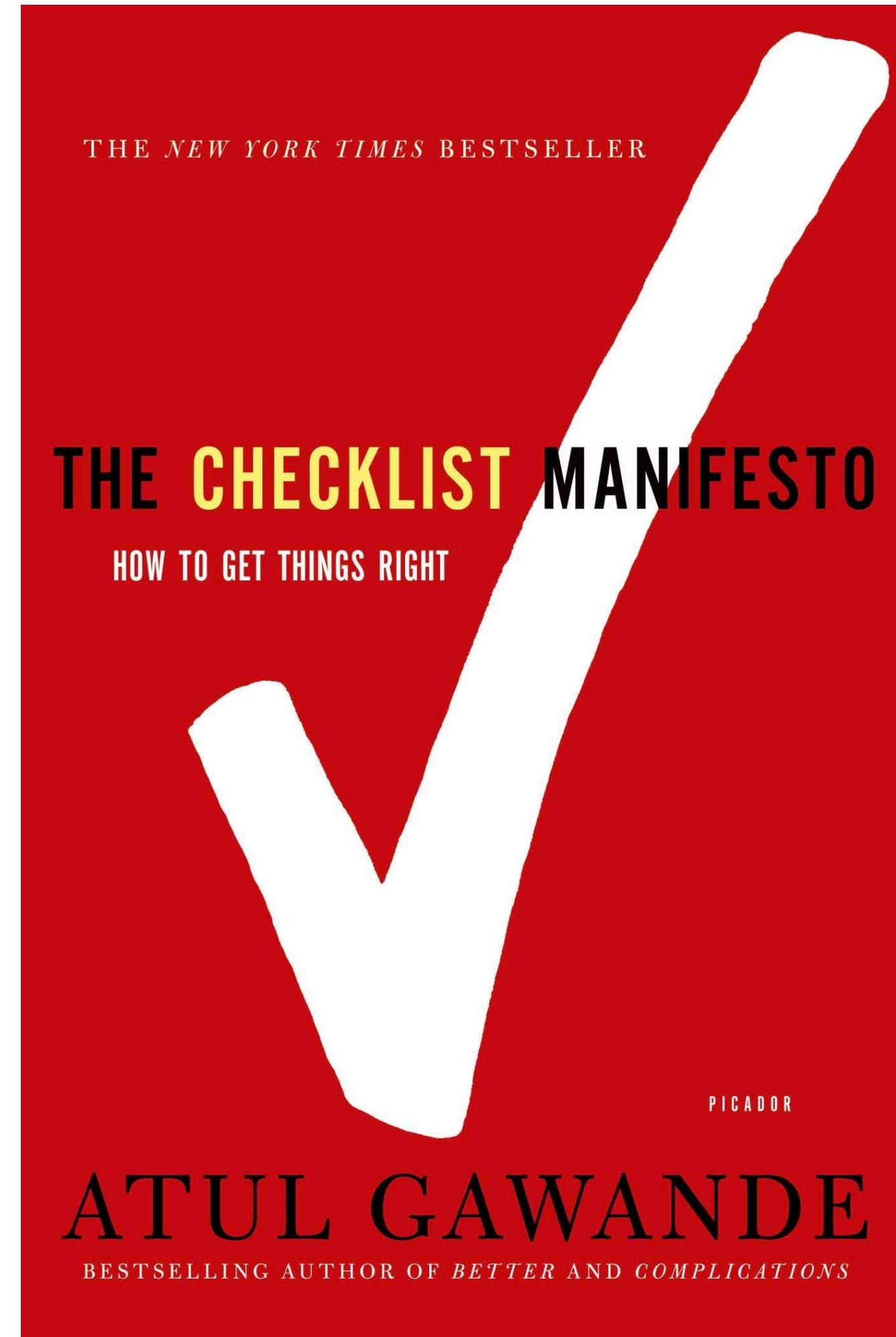
Tasks: 3-5

Time: 30-45 minutes

To conduct a usability test, begin by identifying the target audience. The target audience will consist of one or more user groups and **3-7 representative users** from each group. Each user group should be given tasks to perform during testing that reflect their different usage patterns. Ideally, participants should be new to the app e.g. not part of the project team.

Typically, participants will perform a set of **3 to 5 tasks** within a **30 or 45-minute session**. Tasks should represent the most common activities performed within the app (e.g. adding a record, searching)

Checklists



Even enhanced by technology, our physical and mental powers are limited.

- Need to be clear and concise
- Highlights what needs to be done to avoid disaster
- Contain essential items
- Readable in one minute

Use a checklist when:

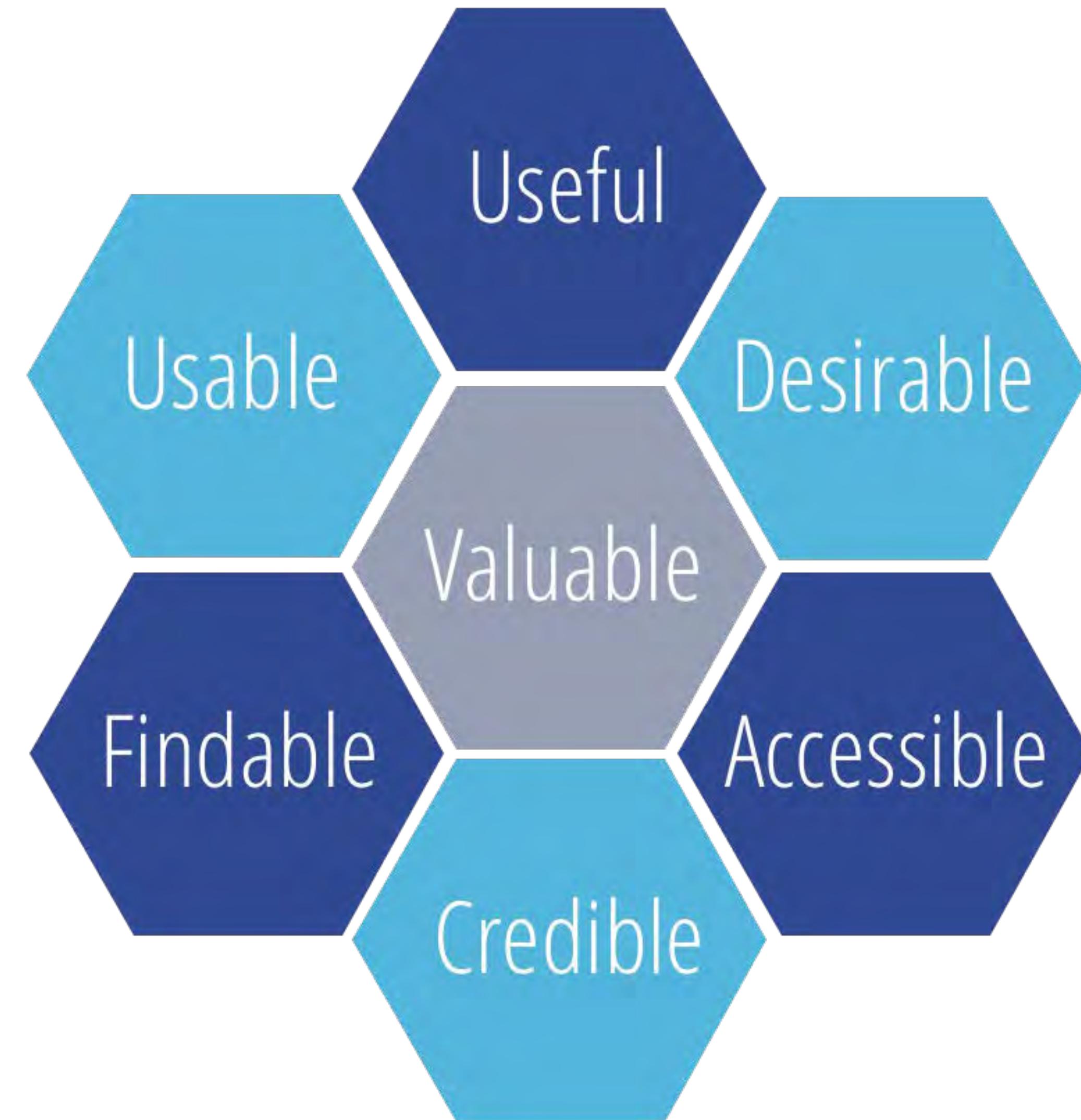
1. You have routine tasks that
2. when not done can
3. cause great harm.

Heuristic Check

<https://www.nngroup.com/articles/ten-usability-heuristics/>

- Visibility of System Status
- Match between System and the Real World
- User Control and Freedom
- Consistency and Standards
- Error Prevention
- Recognition rather than recall
- Flexibility and Efficiency of Use
- Aesthetic and Minimalist Design
- Helps users recognize, diagnose, and recover from errors.
- Help and Documentation

7 Facets of UX



Source Peter Morville



Great User Experience is Everyone's Responsibility

Business

Engineers

Analysts

Developers

Project Managers

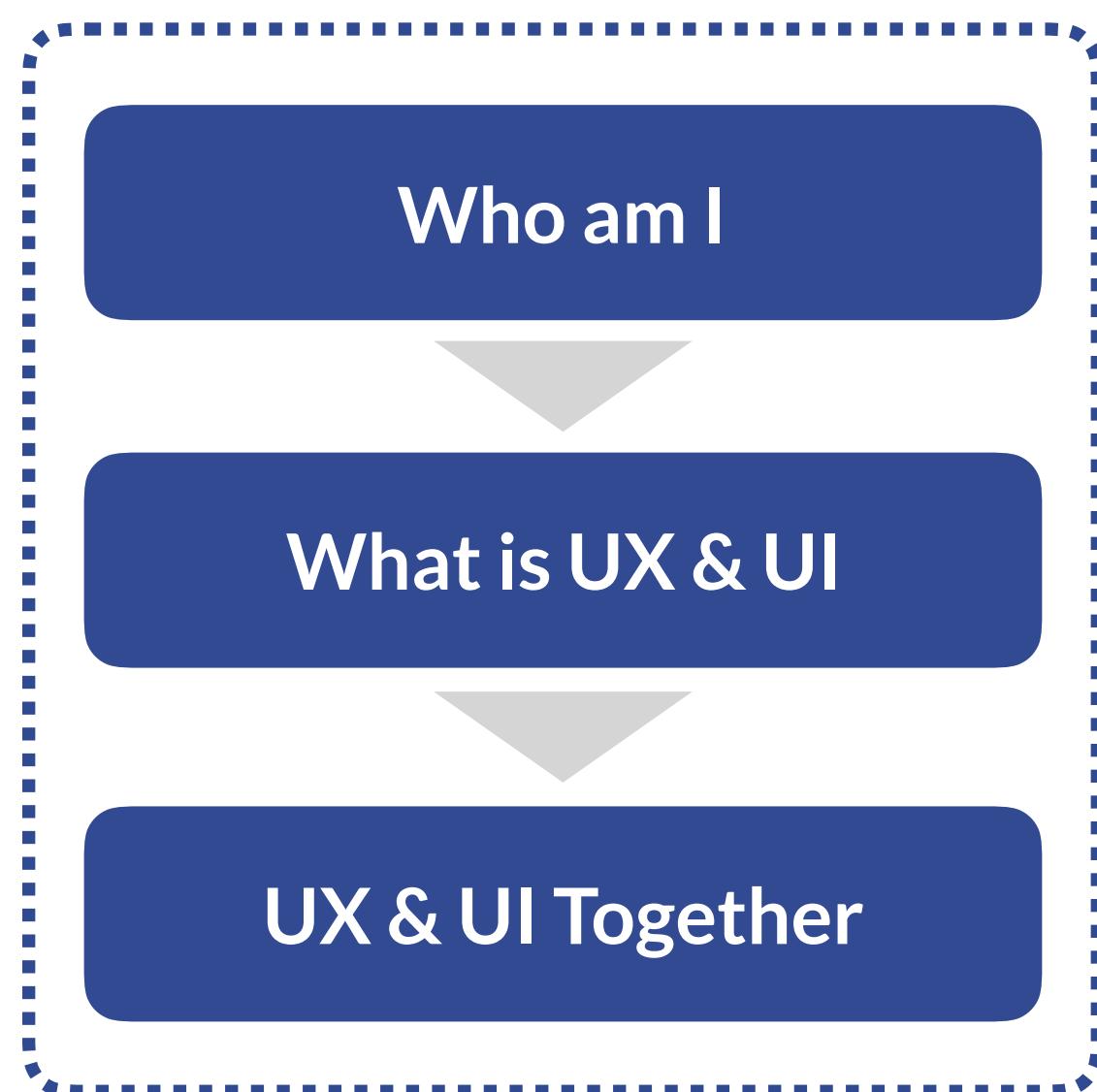
Executives

Creatives

Management

What we covered?

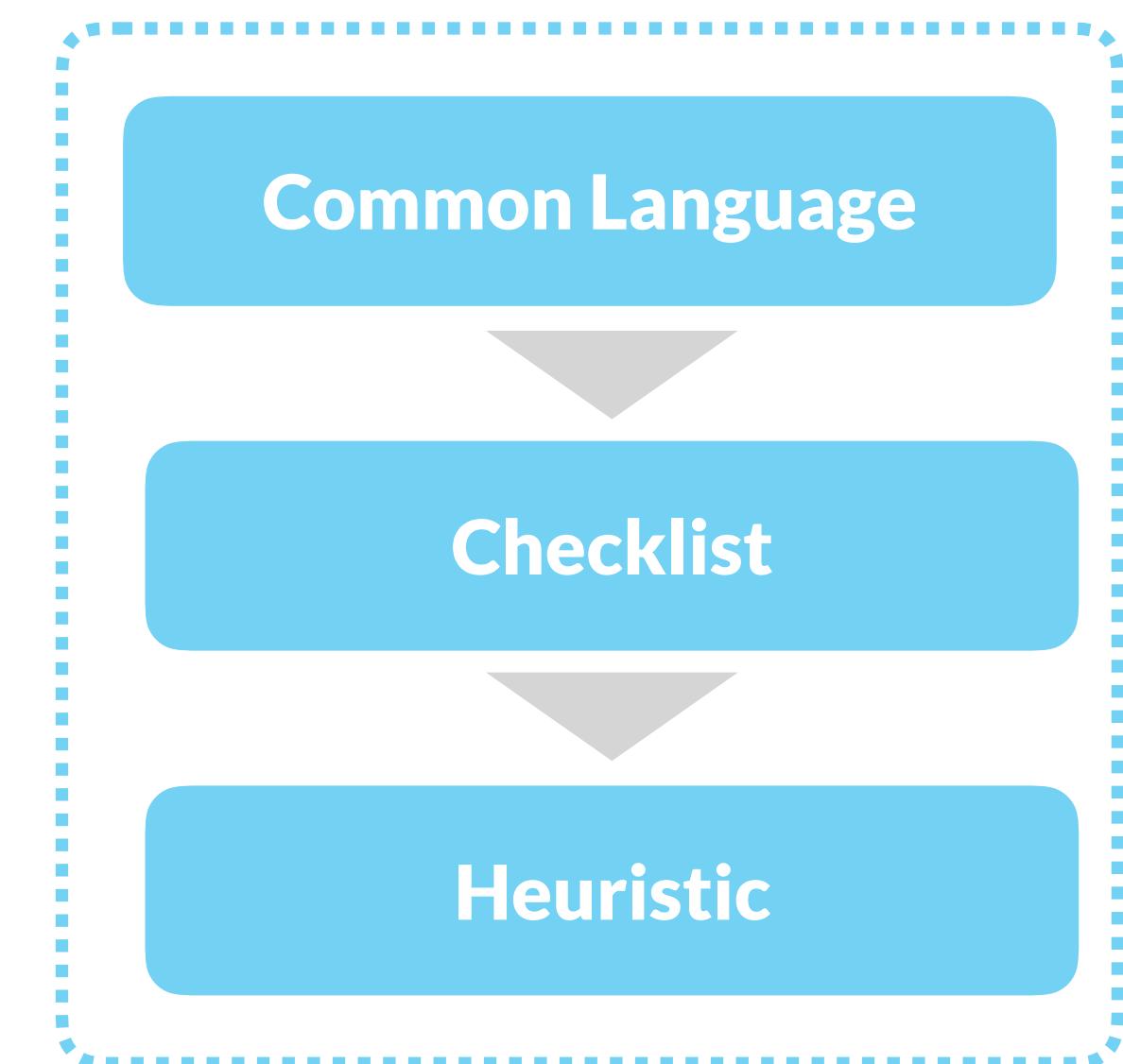
Fast Overview



Top 5 Principles



What Next?



Questions?

 @MrJasonGrant

 <https://github.com/JasonGrant>

Photo by [Camylla Battani](#) on [Unsplash](#)