

CS 361 – Software Engineering

UI design

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Agenda

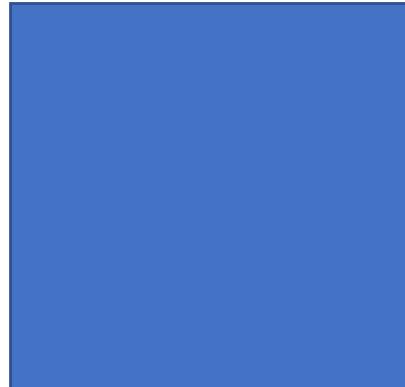
- What is user interface?
- UI vs UX
- Aesthetic vs Functionality
- Guidelines
 - Just in time features
 - Leverage mental model
 - Provide Sneak Peeks
 - Feedback
 - The key functional layout designs
- Ambiguous design
- Put them all together

What is user interface?

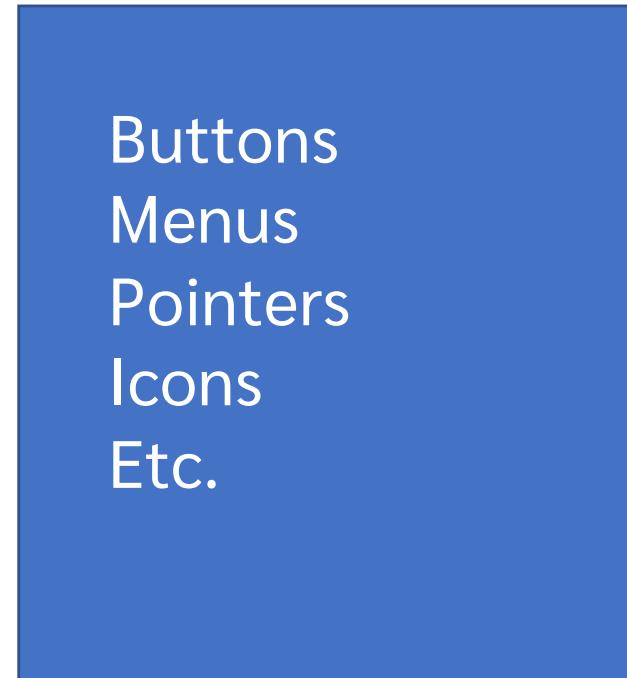
SCREEN



Mobile phone



Laptop



Computer

What is user interface?

USER

SCREEN

Interface

User is a person interacting with the content.

Interface is a bridge that user can get the content.

That bridge can shape the way the user experiences the content.

UI vs UX

UI

Form

Aesthetics

Look & feel

Organization

UX

Feel

Navigation

Story

Structure

How it looks
(interface)

Visual design

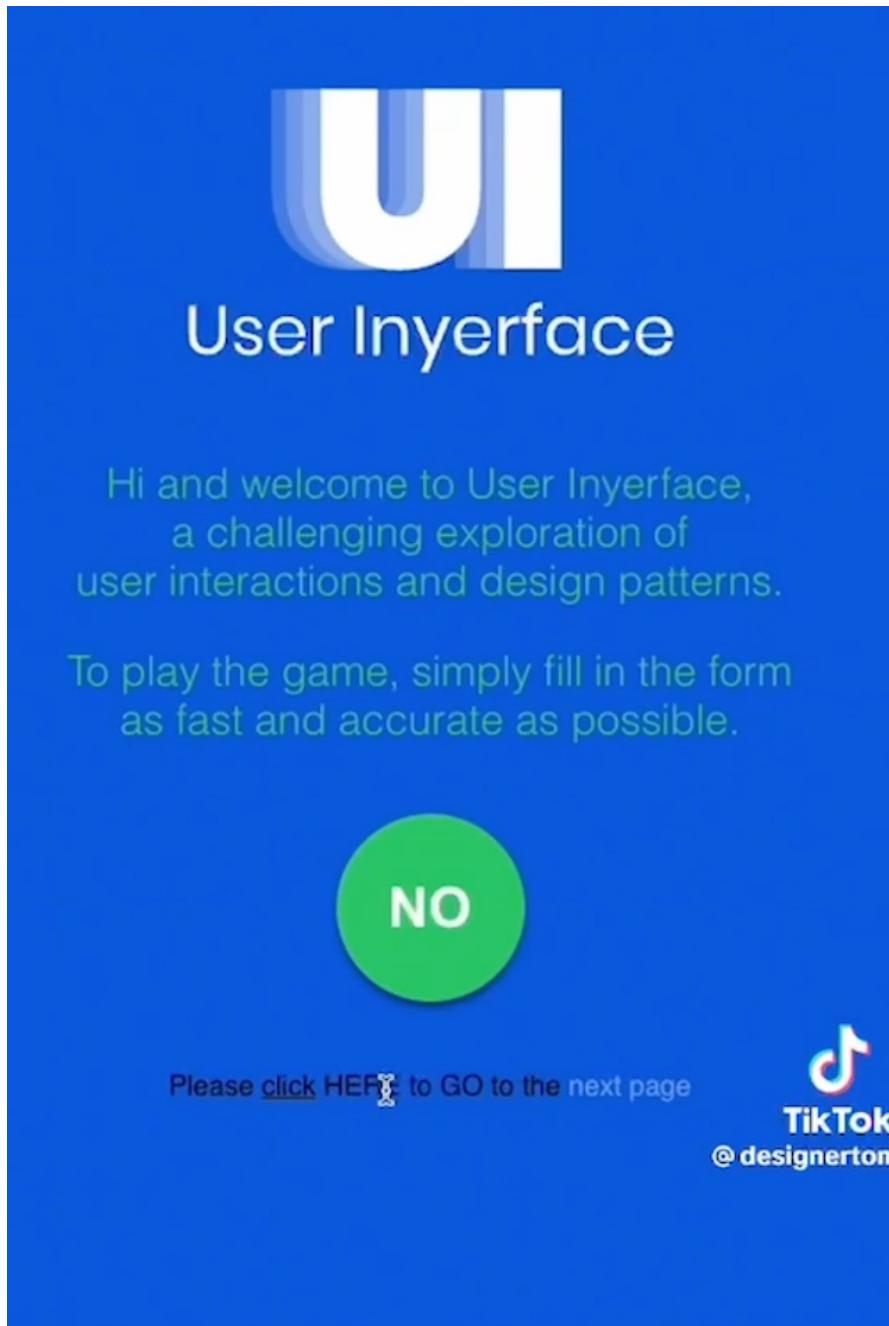
How it feels
(experience)

Non-visual design

Surface
Visual identity
(Design driven)

Content
Engagement
(User driven)

Watch this !



- I can't even read this.
- How do I enter?
- Which one do I click?
- “Yes” is unclickable.
- Why is there timer?
- How do I dismiss it?
- Choose a password for what?
- What does it mean?
- How do I close it?
- Passwords don't block out.
- Unsure to click “Next” or “Cancel” button. Name and color are so confused.

Aesthetic vs Functionality

Aesthetics
(how it looks)
Visual interest

Functionality
(how it works)
Ease of use

Aesthetics

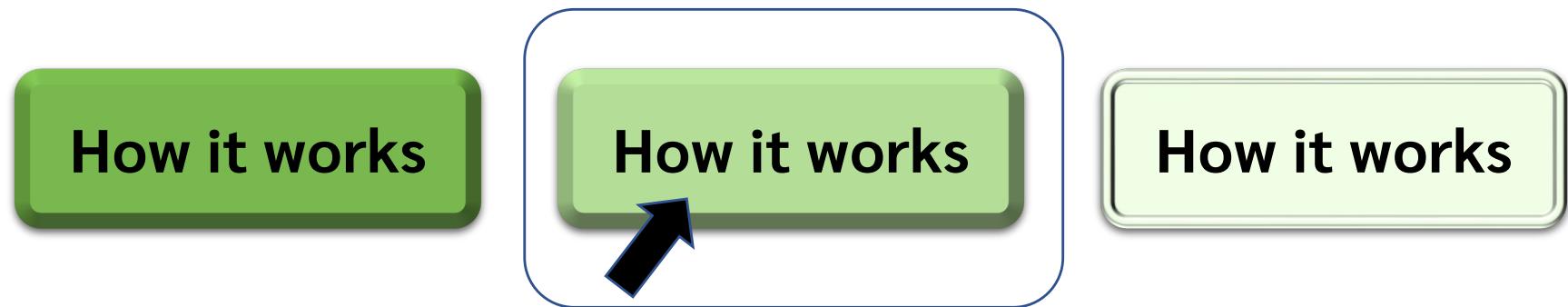
How it looks

How it looks

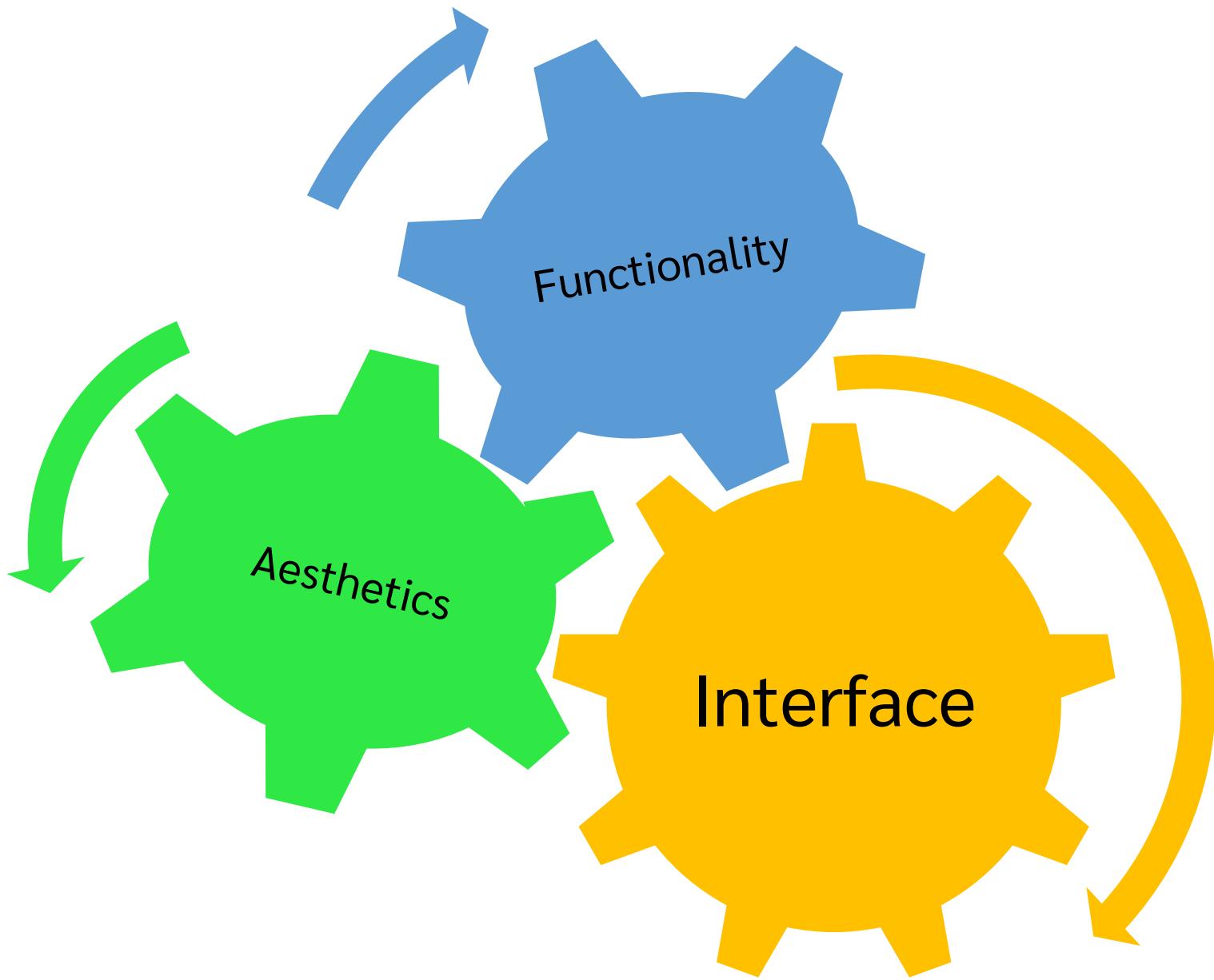
How it looks

- create a **background shape**, so we've got a physical area that we know is interactive,
- add some **text** so we know what the button is going to do.
- create a **three dimensional** to make it look physical.
- change the **typography** and color of the typography.

Functionality

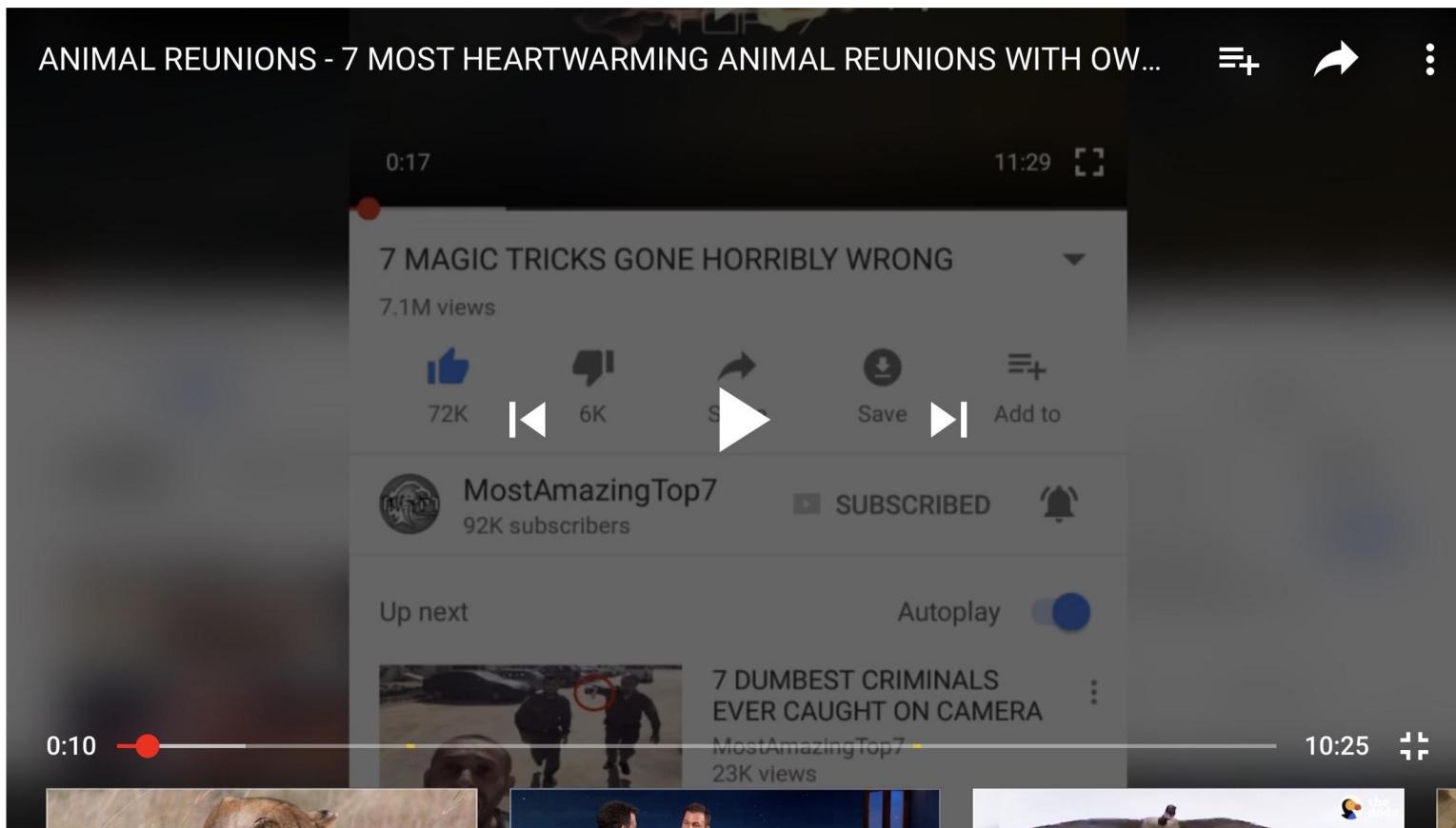


- When mouse over button, it might change color.
- When it's clicked, it might change color again.



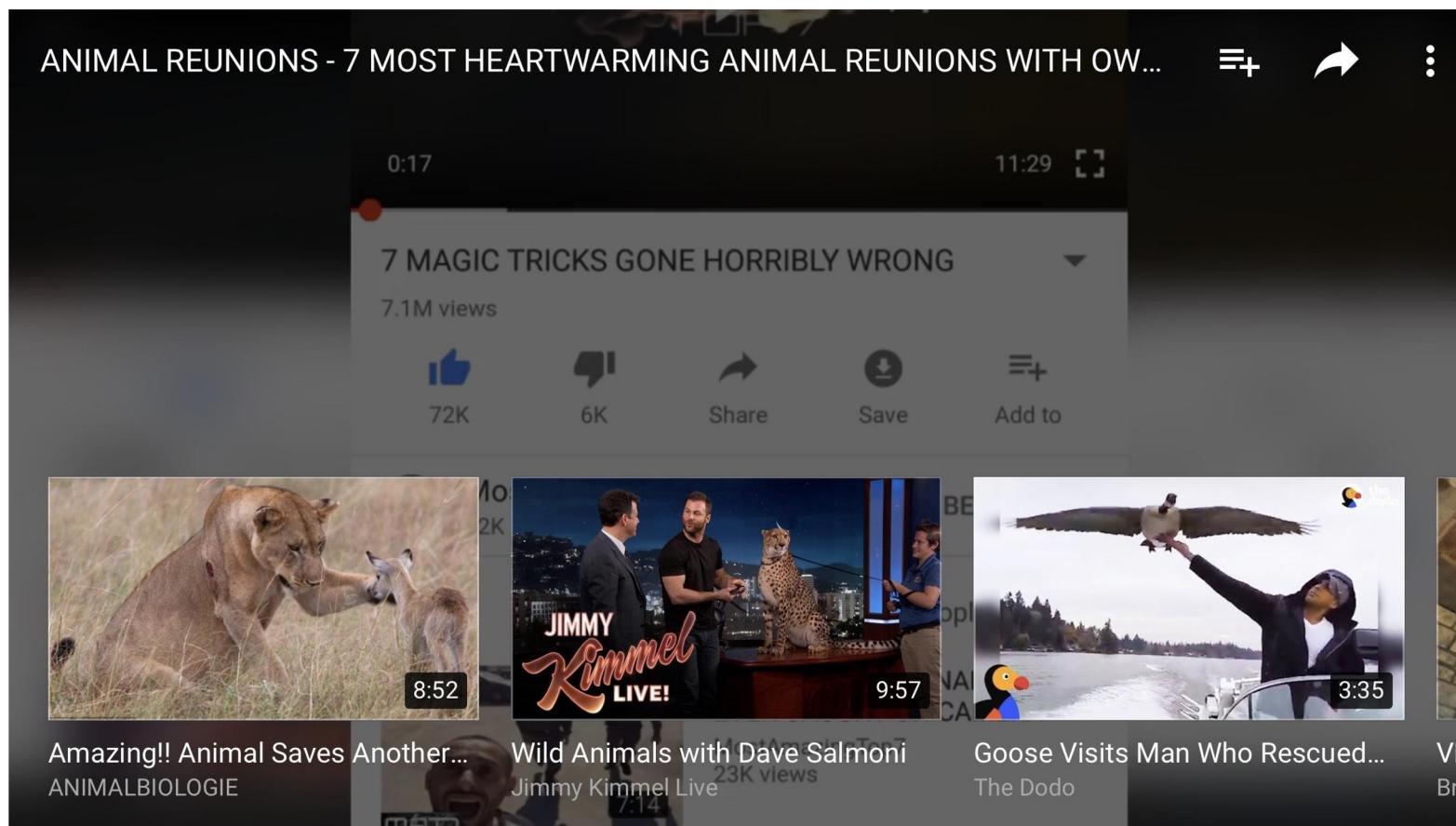
Guideline of functionality

Just in time features: Only show features when needed to, but users also can access it.



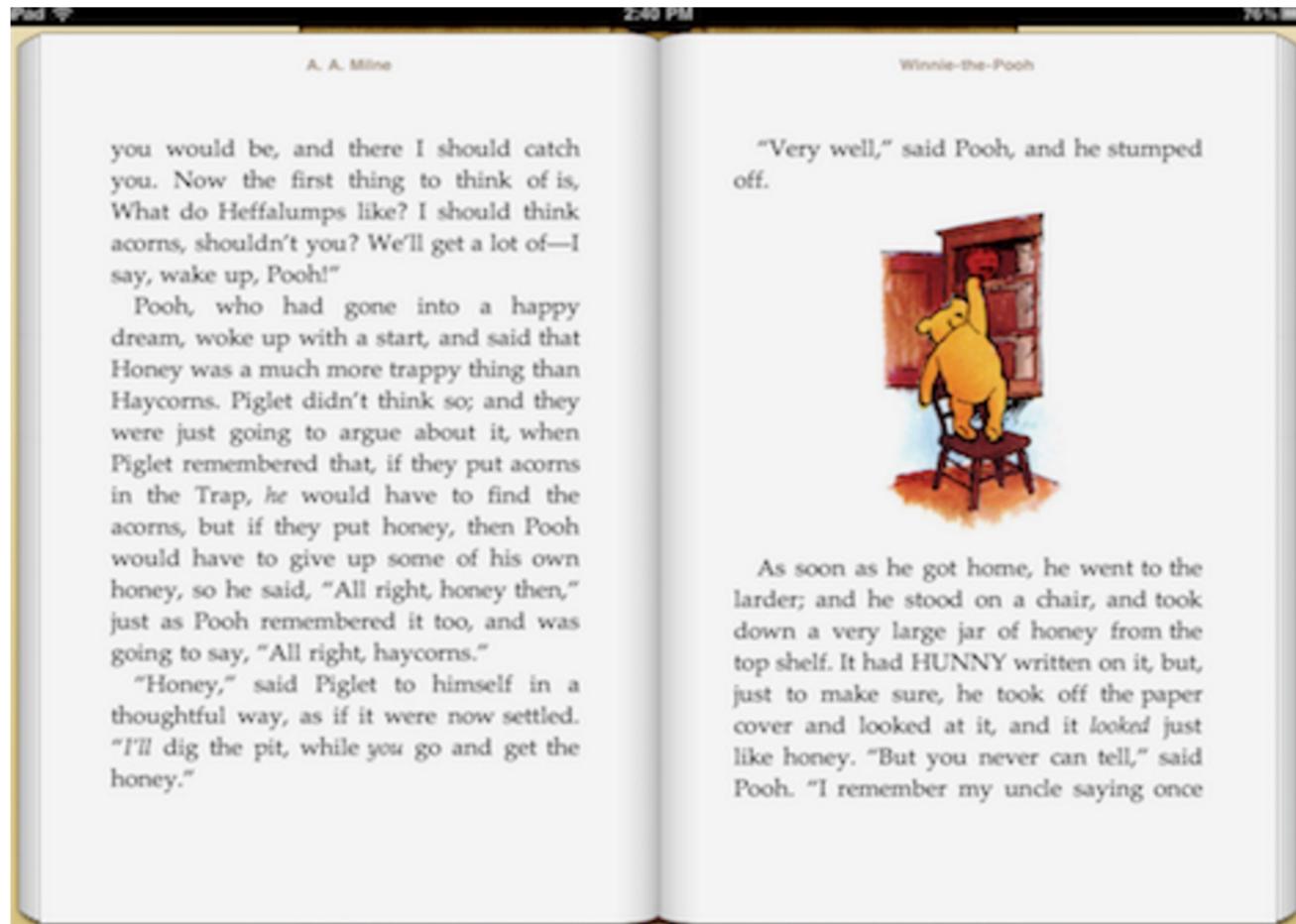
Guideline of functionality

Just in time features: Only show features when needed to, but users also can access to it.

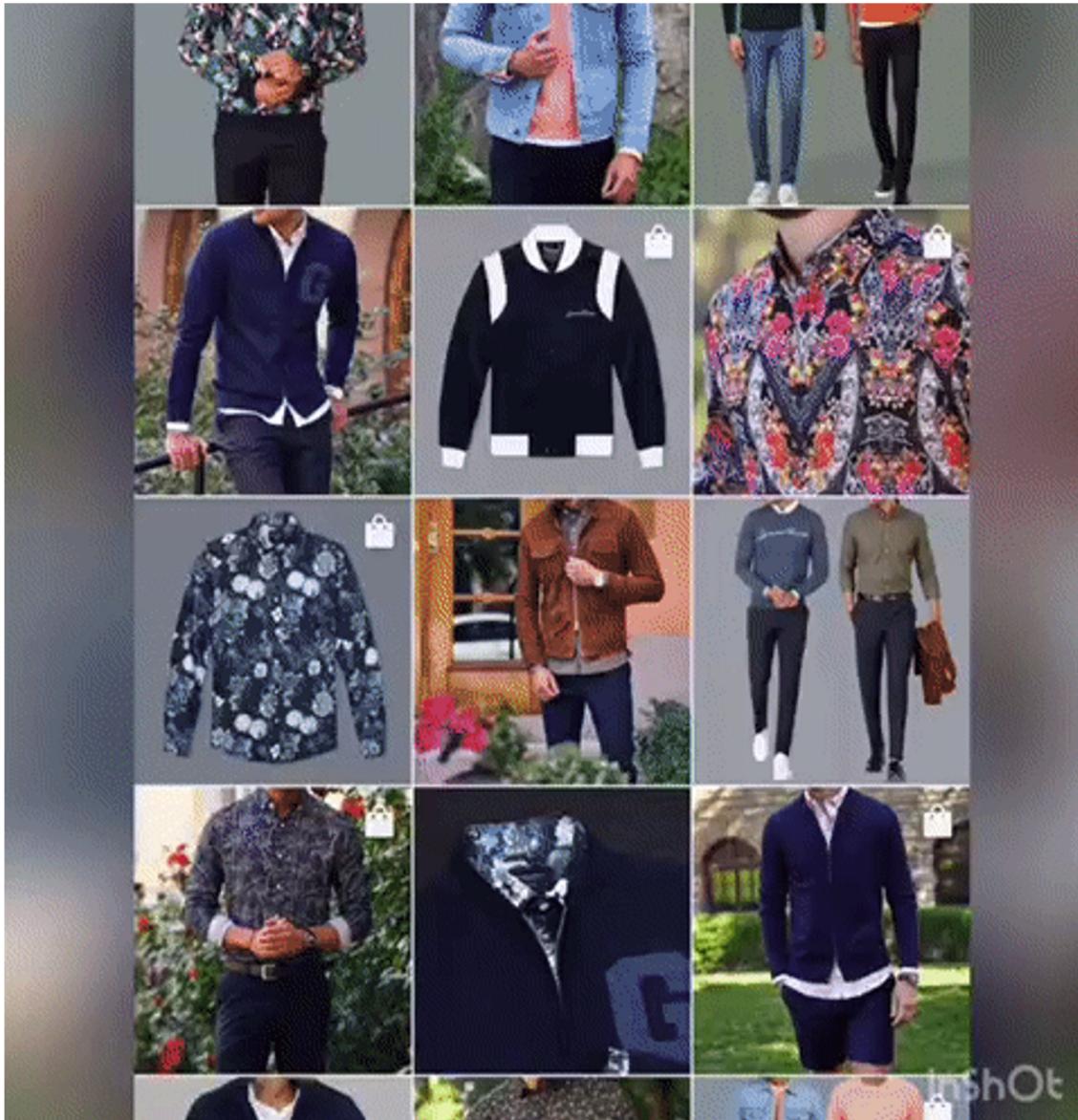


Guideline of functionality

Leverage mental model: do things that people normally do.



Guideline of functionality

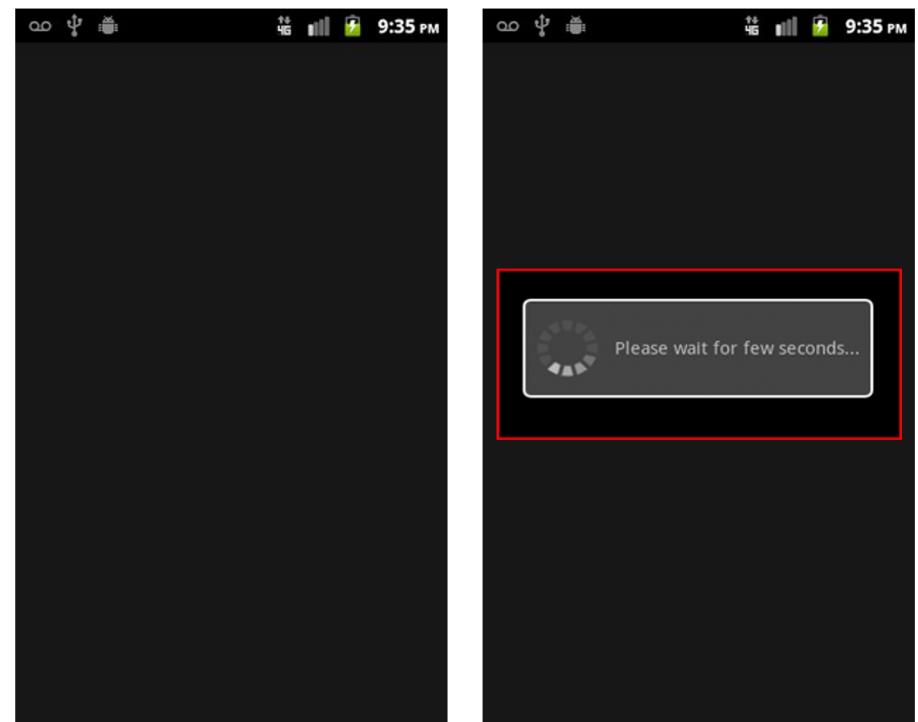


Provide Sneak Peeks: Shows secondary action first and hides it.

Guideline of functionality

Feedback !

- Actions need reactions!
- Don't leave the user hanging (add spinners)
- Sound alerts
- Give good error messages
- **What else?**

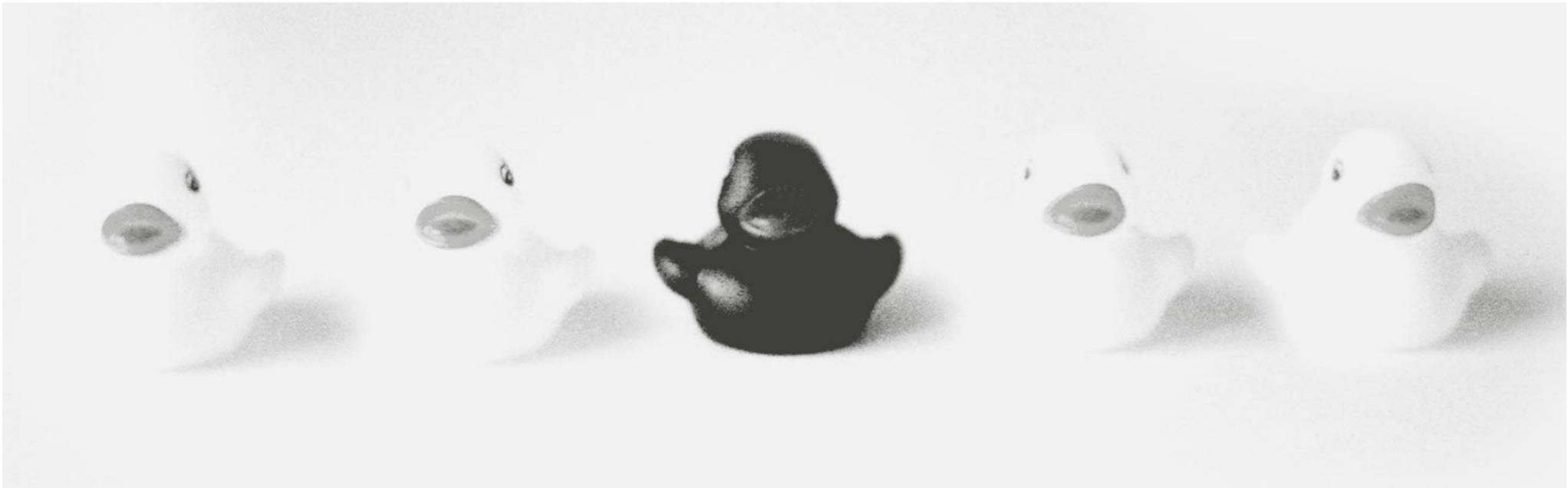


Guideline of aesthetics

Create attention

Contrast affects visual weight

The center duck draws your eyes most.



Guideline of aesthetics

Depth and size change visual weight

The front, center duck attracts more attention



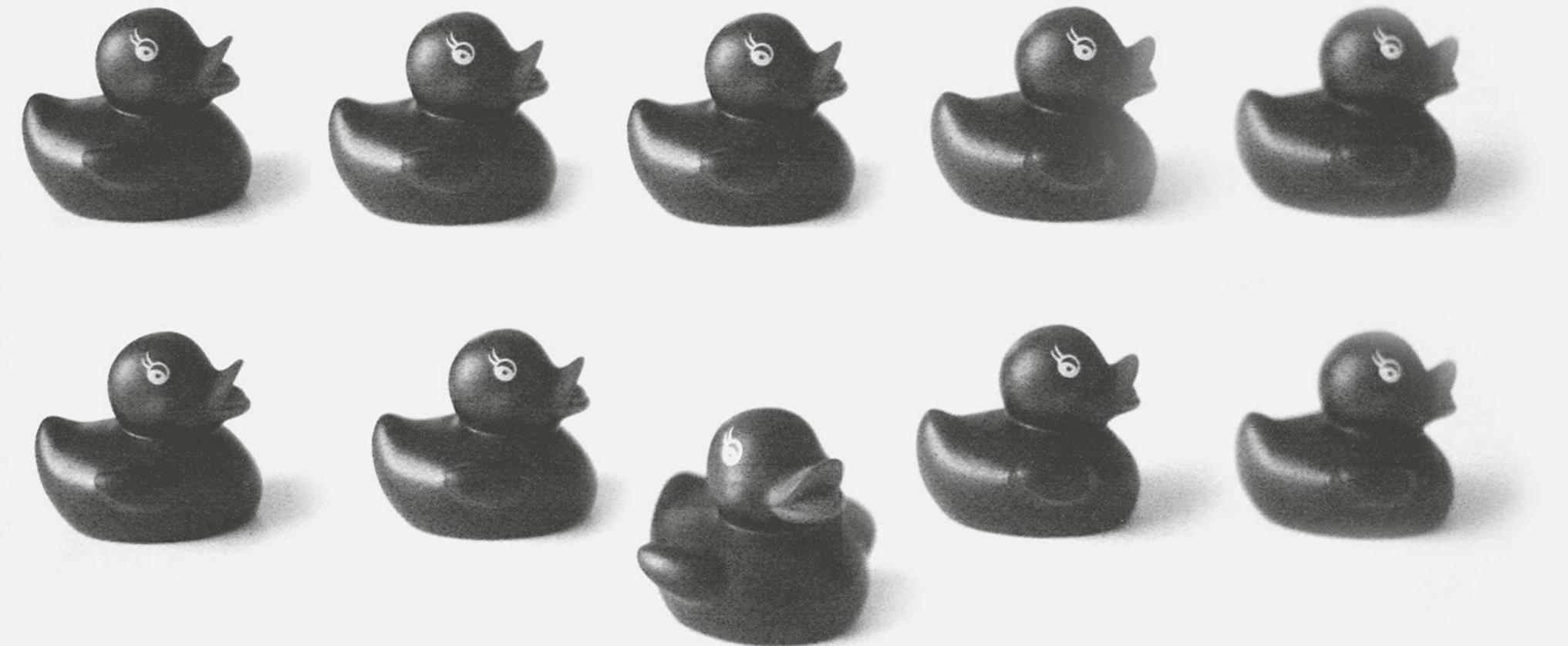
Guideline of aesthetics



- (Loud) Warm colors are good for something like a “buy” button should have the color that appears to jump off the screen.
- (Quite) Cool colors are good for something that always appears on screen (e.g., a menu button) where you don’t want to cause a distraction to the users

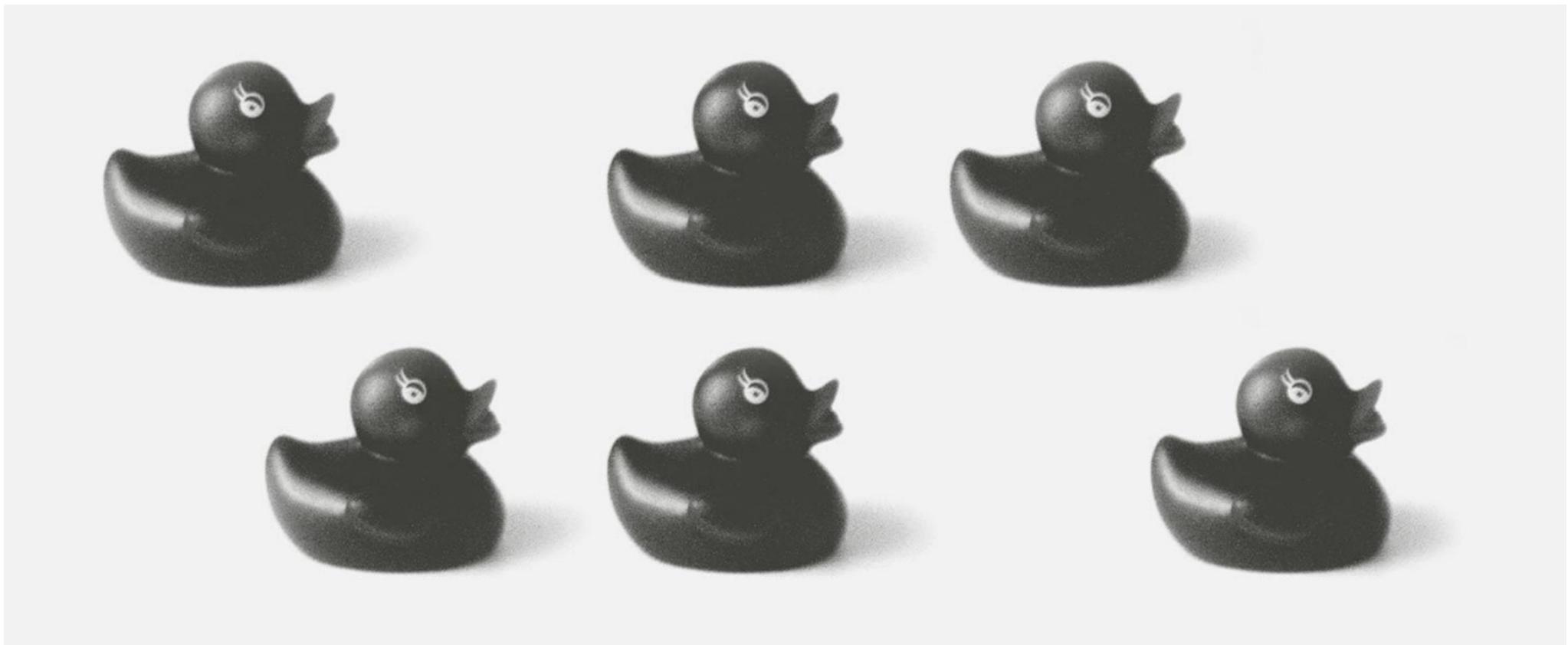
Guideline of aesthetics

Whenever a pattern is broken, that's where we *focus*



Guideline of aesthetics

Ducks that are aligned seem more related.



Guideline of aesthetics

**You see a line of ducks with a gap.
Why don't you see 8 ducks**



Guideline of aesthetics

The closer the ducks are to each other, the more related they seem



Guideline of aesthetics

Color has meaning



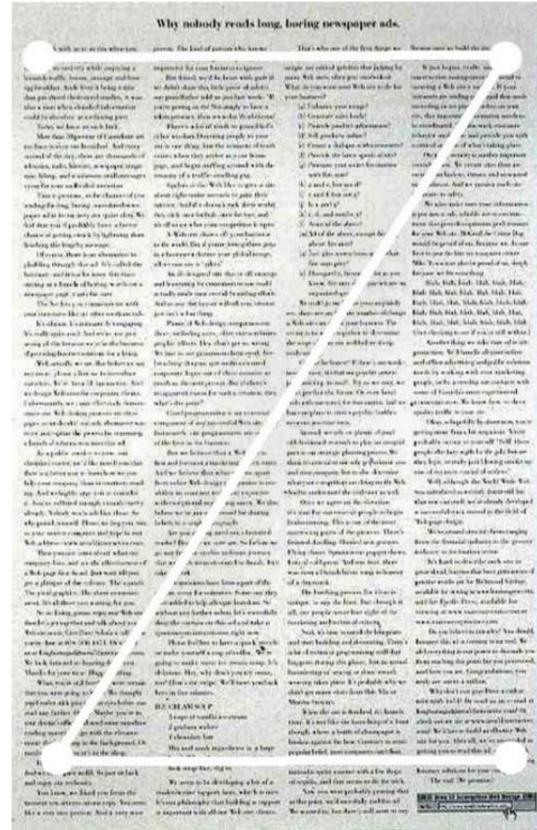
**What if we change these ducks to buttons
What does each color mean?**

Identical buttons, but colors change the meaning

The key functional layout designs

- Users don't read they **SCAN**
- They only stop to read when something catches their eyes.

Z pattern



F Pattern



Visual Hierarchy

And then this

YOU READ THIS FIRST

And then this,
maybe?

The key functional layout designs

Do not give too much weight for visuals that don't matter



The key functional layout designs

The Axis of Interaction (Where should I put a button)

The diagram illustrates the concept of the Axis of Interaction. It features two columns of text, each with a red dot at the top labeled "AXIS OF INTERACTION". A large red arrow points downwards from the left column towards the right column, indicating the flow of the axis. Below each column are four dark grey rectangular buttons with white text:

- Left Column: "BUTTON HERE..." and "...OR HERE..."
- Right Column: "...OR HERE...." and "...OR HERE?"

The text in both columns is placeholder Latin (Lorem ipsum) and describes a similar scenario involving a pulvinar and a mattis turpis.

The Axis of Interaction is the imaginary “edge” your eye follows naturally.
The closer something is to the Axis, the more visible it is to the user.

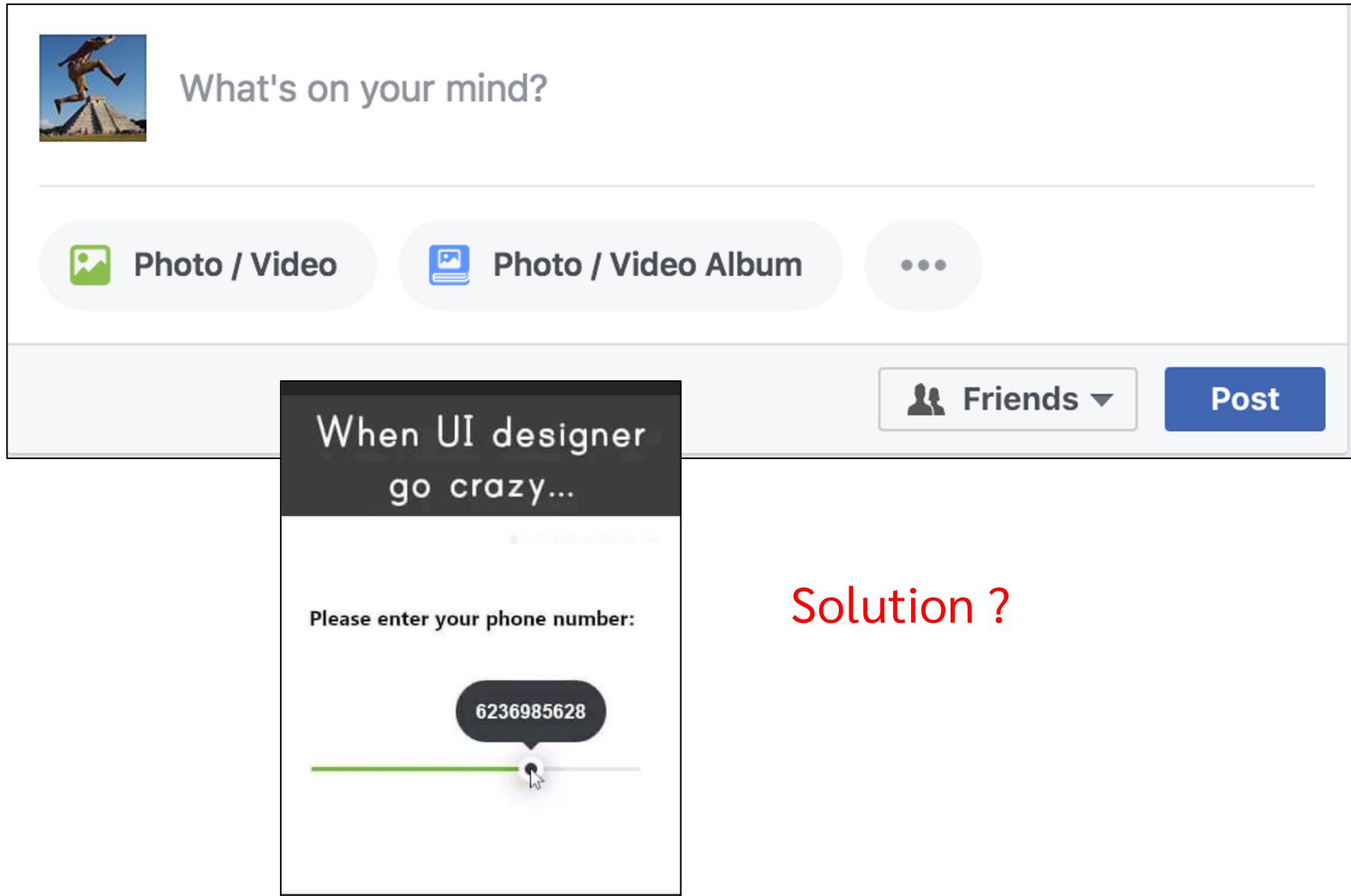
www.TheHipperElement.com

The key functional layout designs

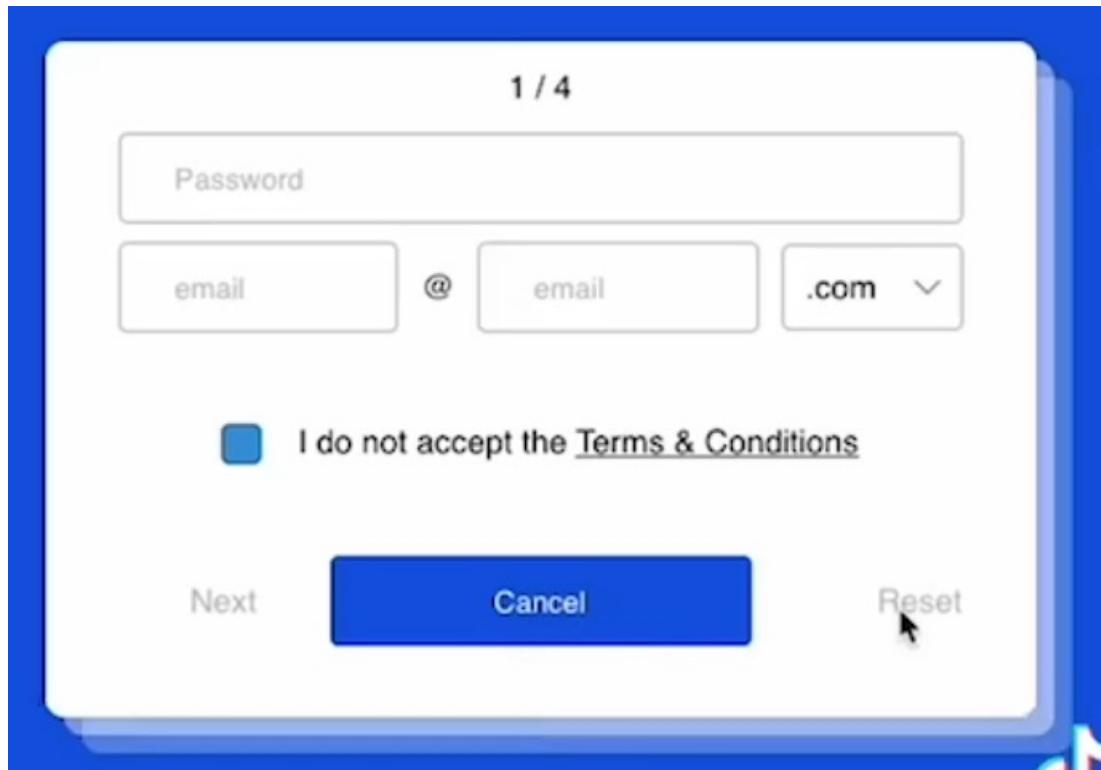
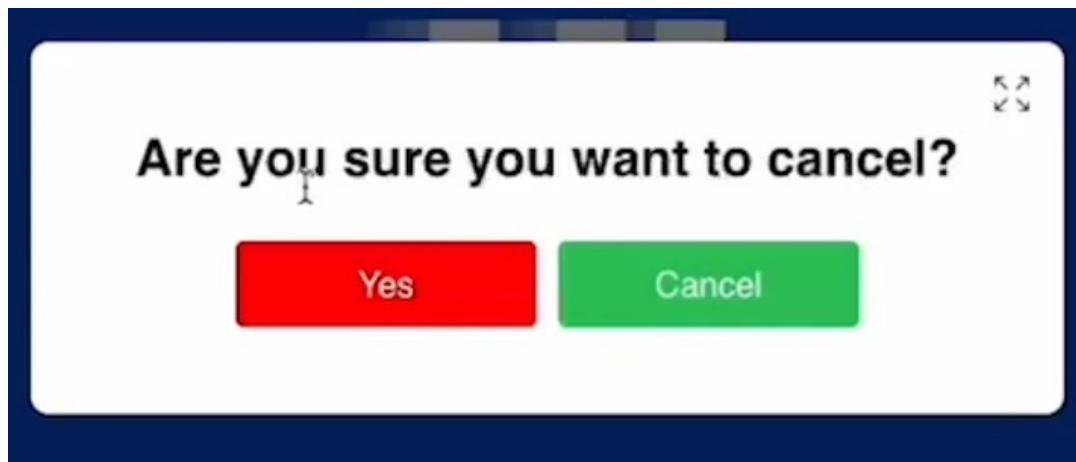
Form:

- Keep form as short as possible
- Make it feel simple. Don't make the user feel bored.
- Labels and instructions are necessary for complicated input (e.g. placeholder)
- Make sure it is smart enough to handle different inputs (e.g. phone # (000)-000-0000, 0000000000, (000)000000)
- If the form can do something **destructive or important** (e.g. delete) put the button on the right side (*The axis of interaction*)

Ambiguous design

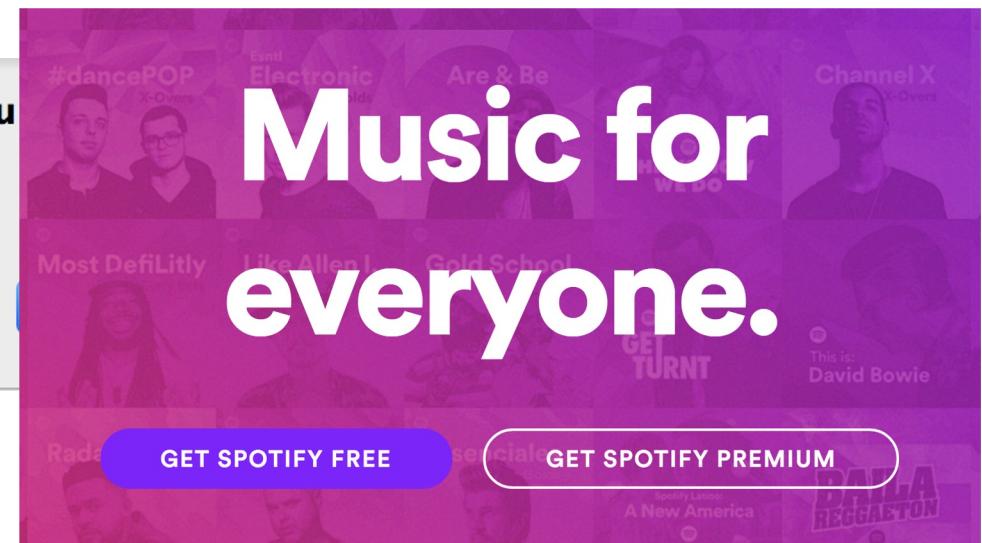
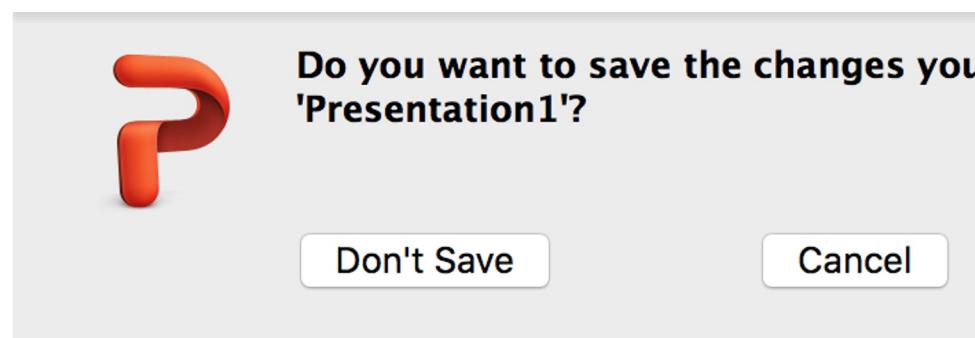
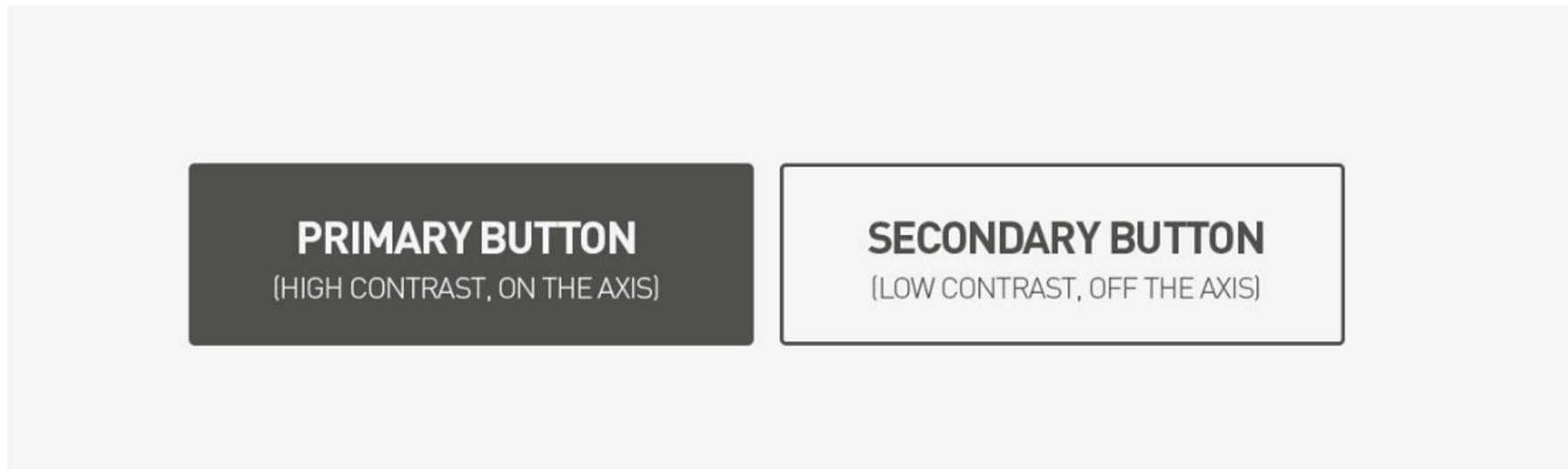


Ambiguous design



Solution ?

Primary and Secondary Buttons



Calls-to-Action (CTA)

The **headline** or the **text** on/near a button that tells people what to do

General Rule:

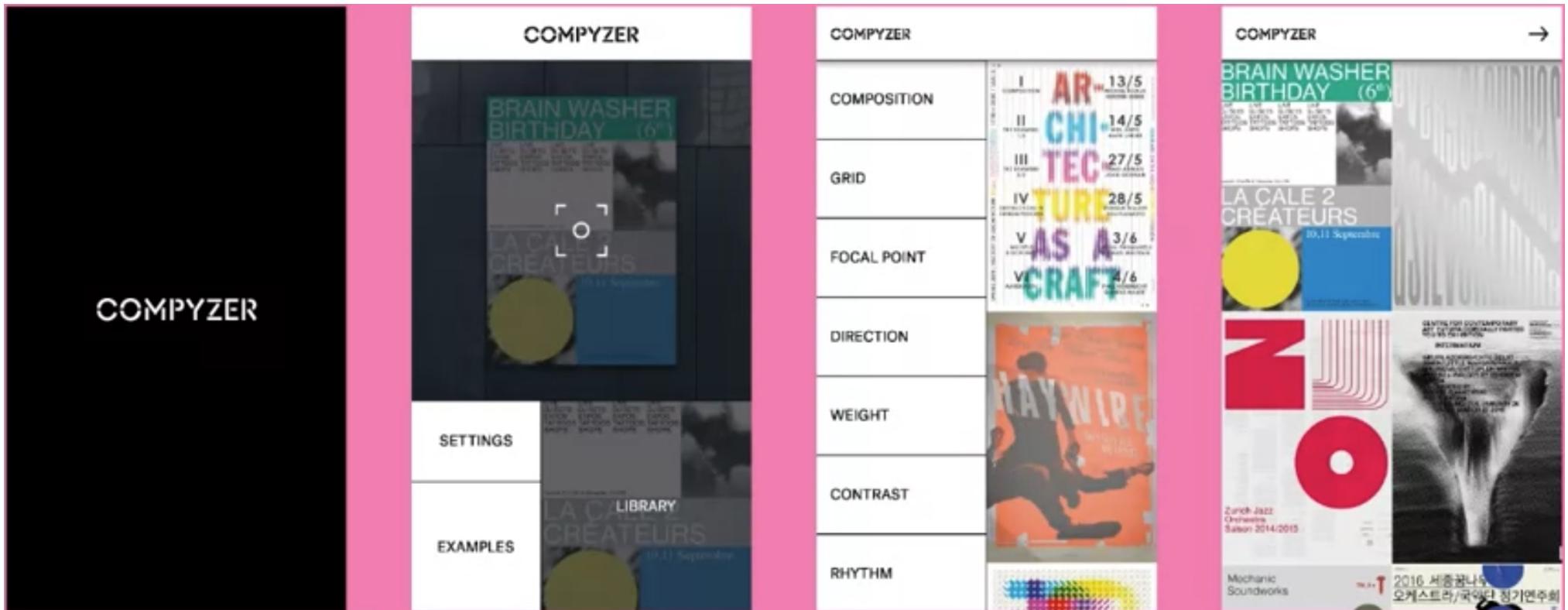
VERB + BENEFIT + URGENT TIME or PLACE

Download the app
now!

Sign up for free
today!

Put them all together

- แอปพลิเคชันนำเสนอภาพกราฟิกประเภทต่างๆ

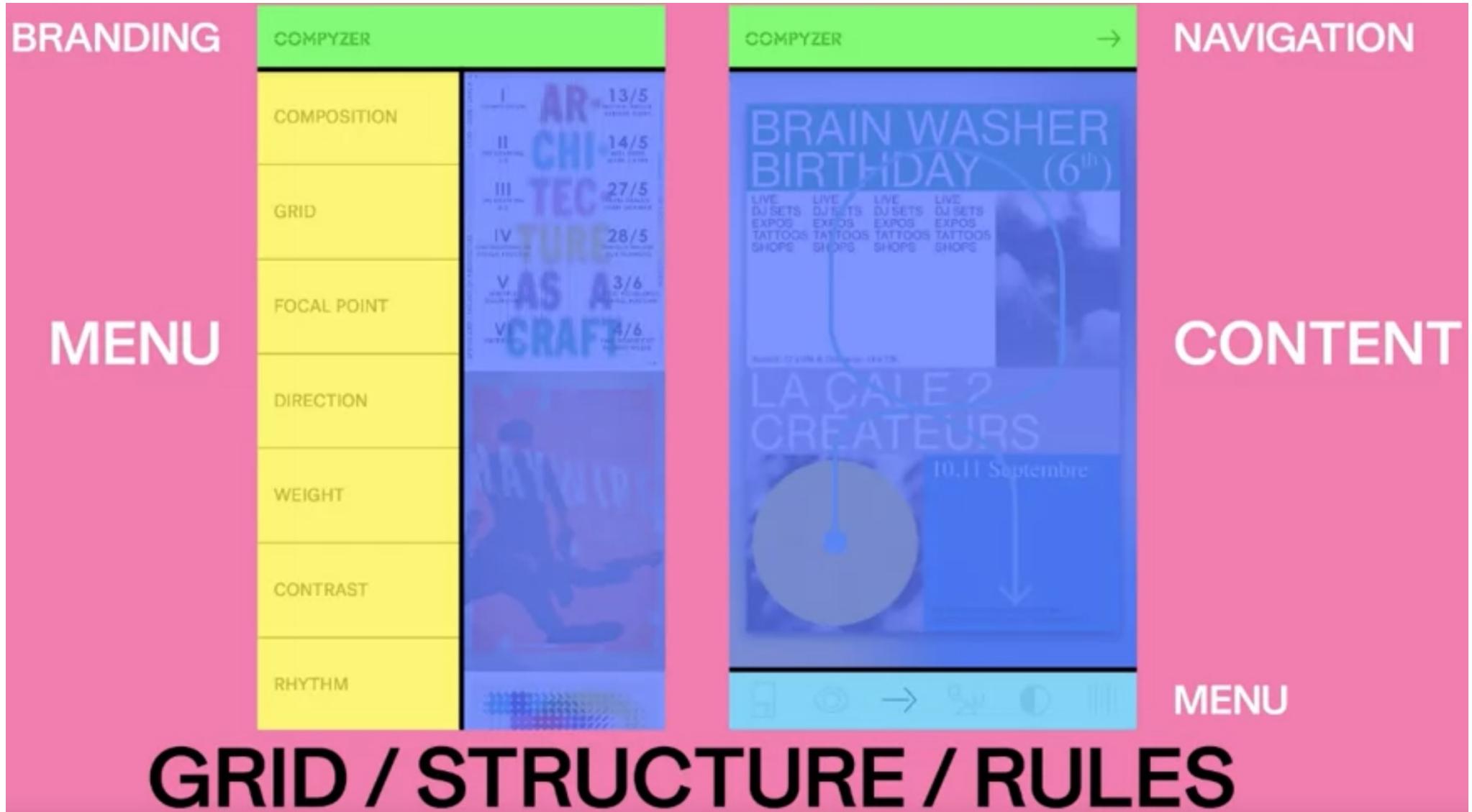


- แสดง Visual elements บน Wireframes

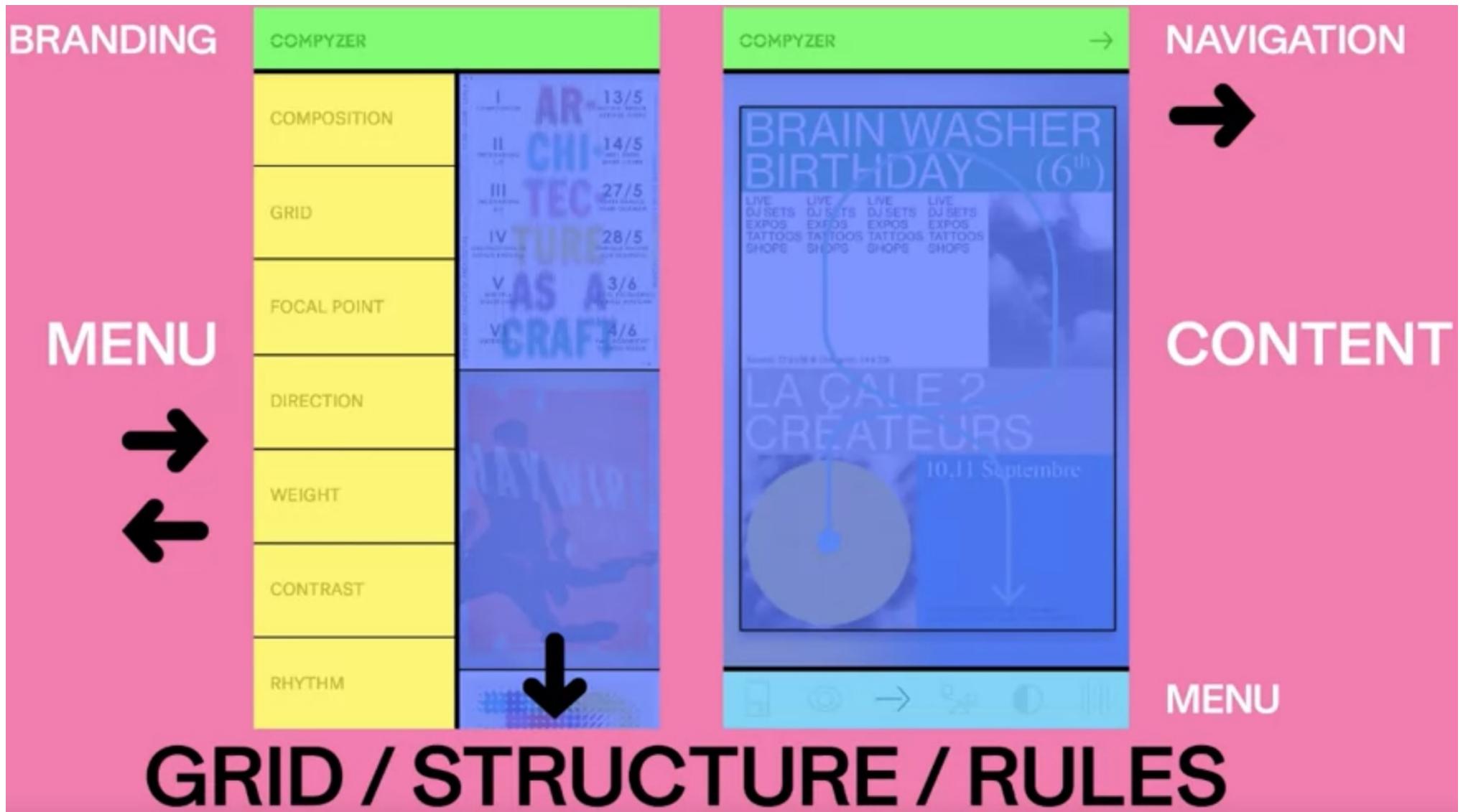
COMPYZER		COMPYZER		COMPYZER	
COMPOSITION	In the visual composition placement or arrangement of elements or 'ingredients' of art, as distinct from the subject.	FILTER	ABC	BRAIN WASHER BIRTHDAY (6 th)	→
GRID				LA CALE 2 CREATEURS 10,11 Septembre	
FOCAL POINT					
DIRECTION					
WEIGHT					
CONTRAST					
RHYTHM					

The wireframe diagram illustrates the visual elements of user interface design. It features a grid structure with various UI components such as buttons, text fields, and icons. A large yellow circle is positioned on the left side of the grid. The right side of the slide compares a wireframe representation with a final design for an event poster. The poster for 'BRAIN WASHER BIRTHDAY (6th)' at 'LA CALE 2 CREATEURS' on '10,11 Septembre' is shown in both its wireframe form and its final, visually rich version. The wireframe version is minimalist, while the final version is colorful and includes a large yellow circle, a grid pattern, and a person's face.

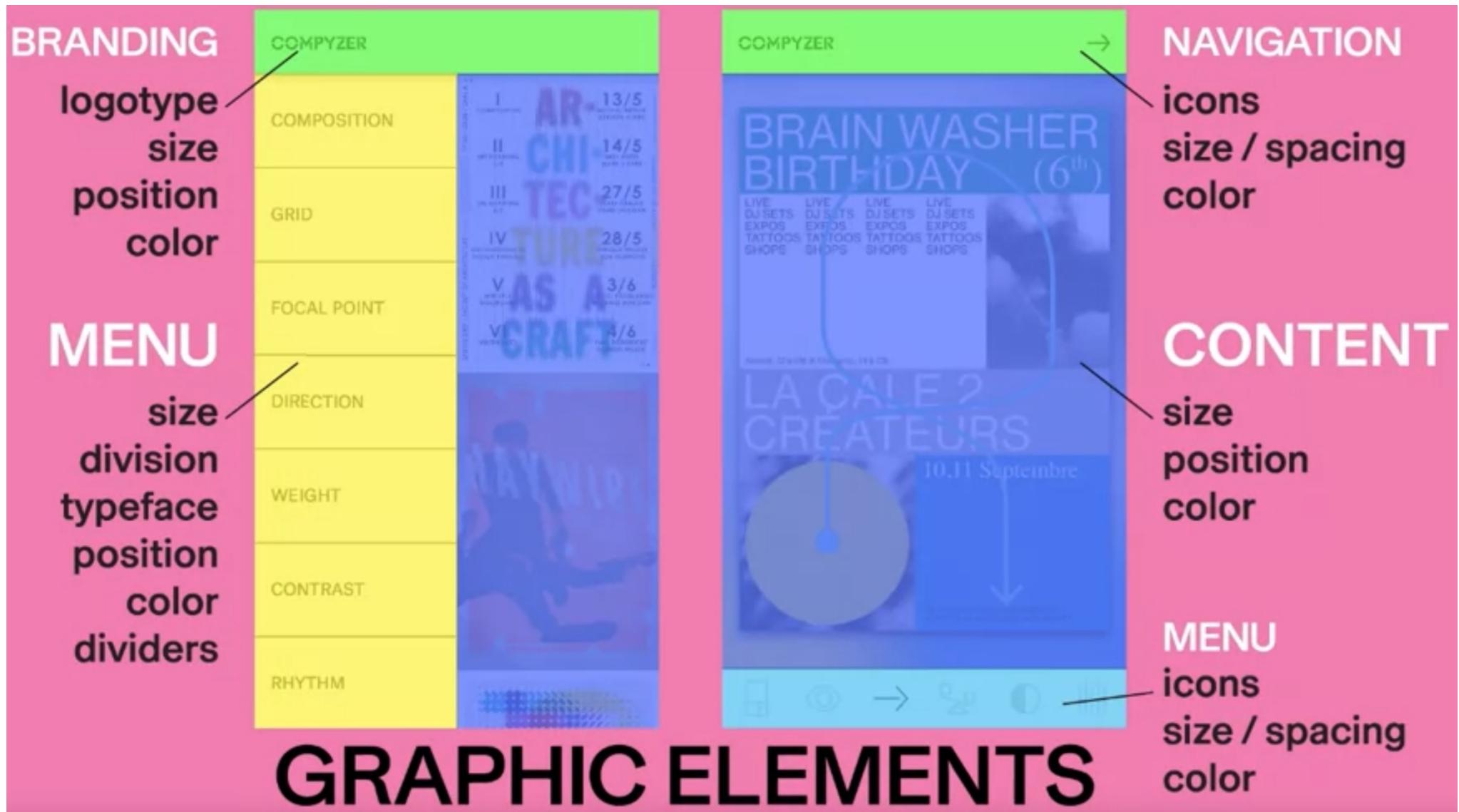
- แบ่งหน้าจอเป็นสัดส่วน และมีโครงสร้างสอดคล้องกันในทุก Wireframes



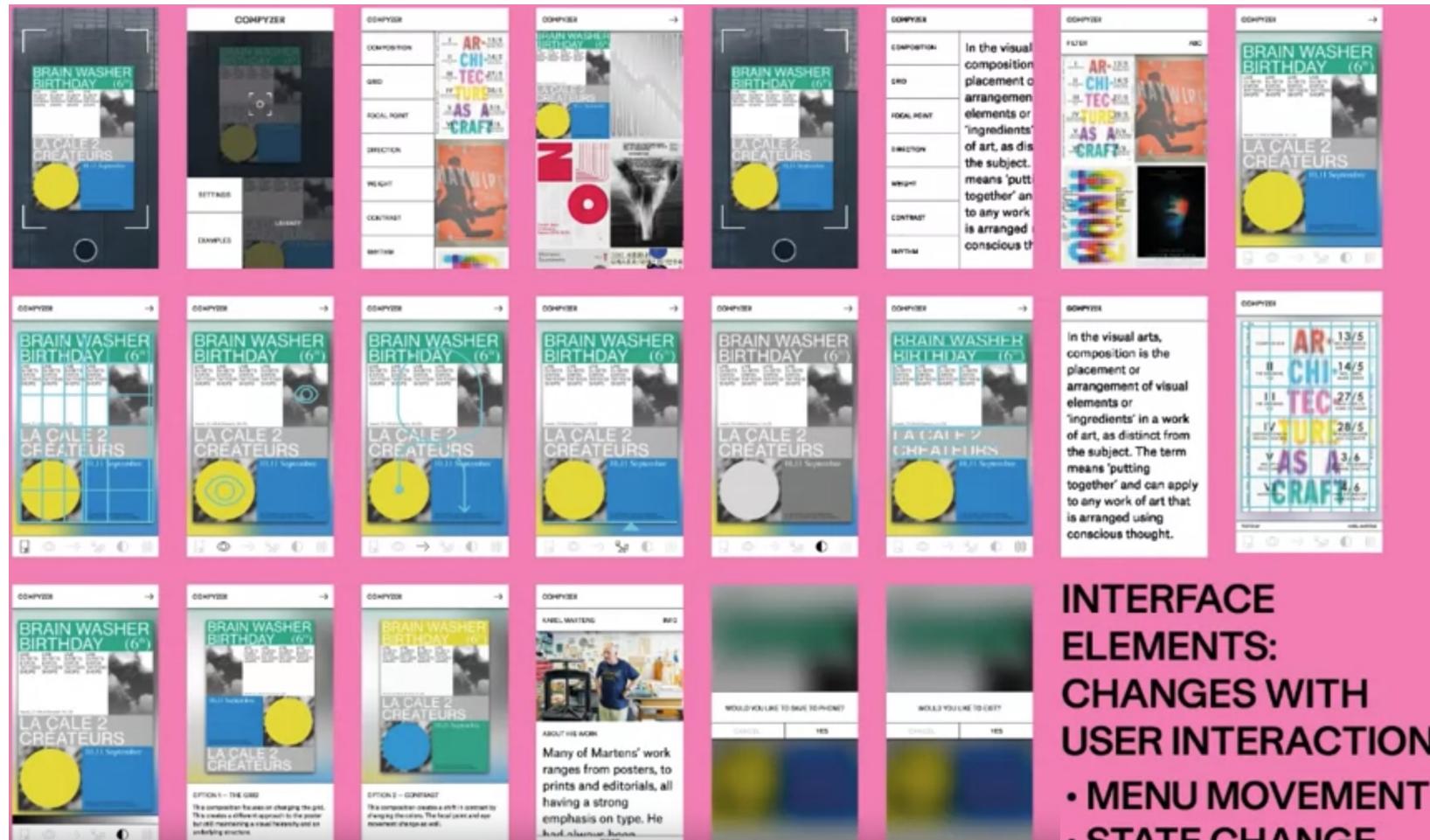
- Movement ของแต่ละส่วนถูกกำหนดเพื่อการแสดงผล



- Graphic elements ของแต่ละส่วนถูกออกแบบตามหลัก aesthetics และ functional layout



Map of interface



**INTERFACE ELEMENTS:
CHANGES WITH
USER INTERACTION**

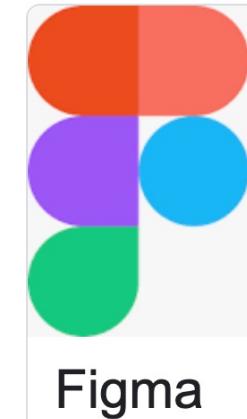
- MENU MOVEMENT
- STATE CHANGE
- ACTIVE ELEMENTS
- INTERACTIVE ELEMENTS

Tools

- iRise
- Balsamiq
- Mockup
- FlairBuilder
- MockFlow
- Pencil Project
- Cacoo



- Fluid-UI
- Proto.io
- UXPin
- Moqups
- Wireframe Sketch
- Figma
- Adobe XD



- Now, we are mostly investigating the graphic design and aesthetics of the interface.
- Next, we are going to think much more about how are we going to bring our designs to life.
 - How user is going to interact with them
 - How the interface is going to change.
 - Ex. how the menus might move, how buttons or elements might change states, and what kind of areas are going to be active.
- **UI meet UX**
 - 204365 Human-computer interaction (2nd semester)

Questions ?

