



INTRODUCTION TO: **Interaction Design**

WEEK 05

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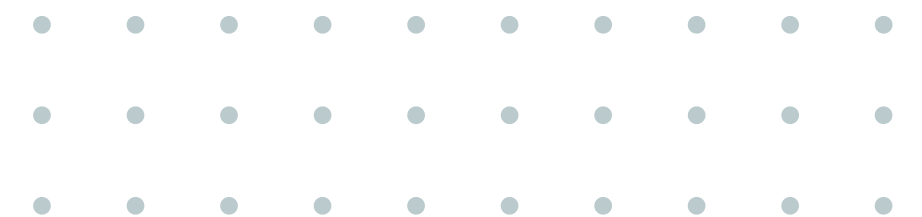
01

UI ANIMATION

UI animation **adds movement/motion** to different parts of a digital product to make it more interactive. Designers use animation to help users understand, influence or navigate different information and actions.

UI Animations can help users navigate the interface, show when something changes, influence user decisions, and show how different parts are related.

Animation also makes websites and apps feel more natural and easy to use

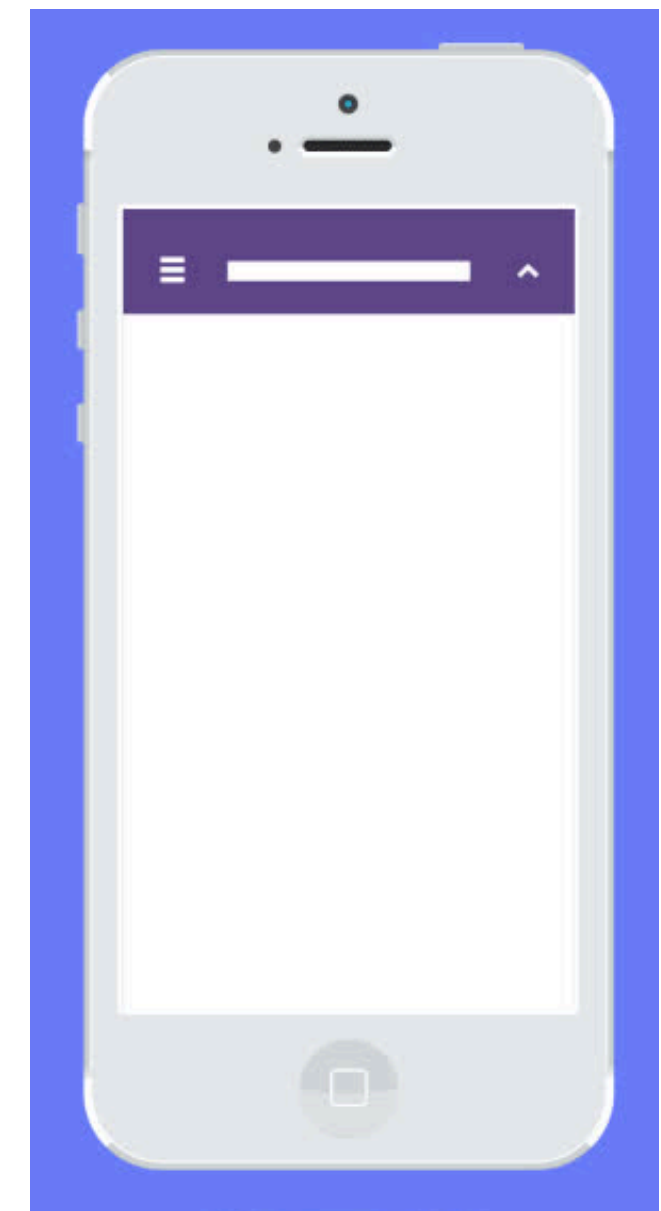




WHY UI ANIMATION IS IMPORTANT

Increasingly, more people are beginning to expect interactive designs to have user-friendly interfaces that are easy to use.

Adding animations allows digital products to feel more interactive with the physical world, objects and people. This reduces the cognitive load and guides users through the designs without realizing it. While also providing updates and real-time feedback, keeping users informed and happy.





02

TYPES OF UI ANIMATION

Typically there are four primary types of UI animations within Digital Designs:

- Loading and Progress
- State changes
- Navigation
- Microinteractions
- Storytelling and Branding



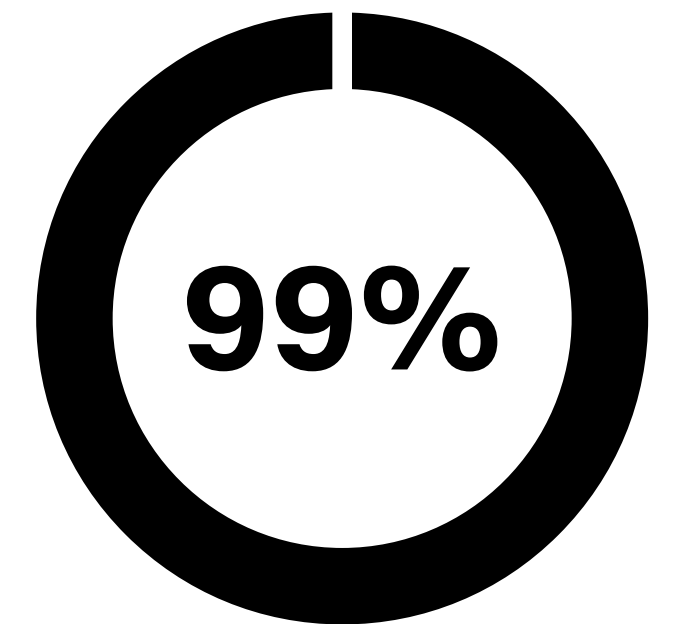


UI ANIMATION: LOADING

Refers to using animations to indicate that the system is actively working on a task. This can be represented by a loading animation, such as a rotating throbber or a percentage indicator, which assures the user that a product is loading a page or handling data.



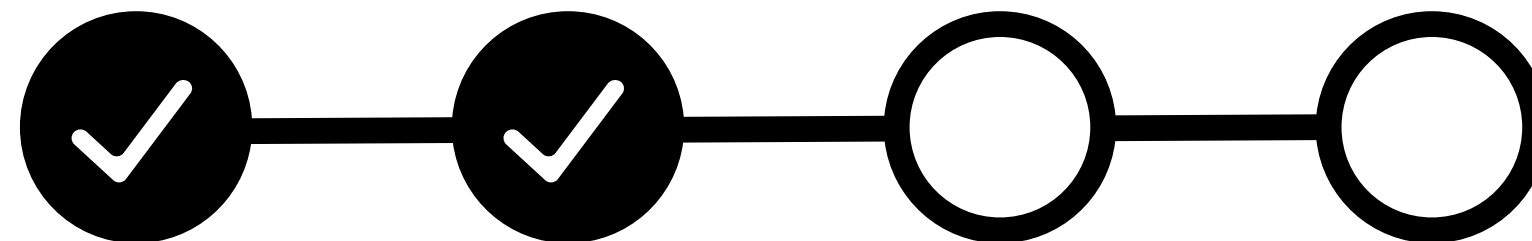
These loading animations are crucial because they prevent users from assuming that the product or website has become unresponsive and abandon it before it has finished loading.



UI ANIMATION: PROGRESS

Involves animations that inform users about their current position in a sequence of steps and how much more they need to complete. This visual feedback enables users to gauge their progress and understand how far they are from completing the task at hand.

For instance, in an eCommerce checkout process, a progress bar on the page animates as the user progresses closer to finishing the checkout.





UI ANIMATION: STATIC CHANGE

Designers frequently utilize animations as a means of conveying the status of a digital product or element.

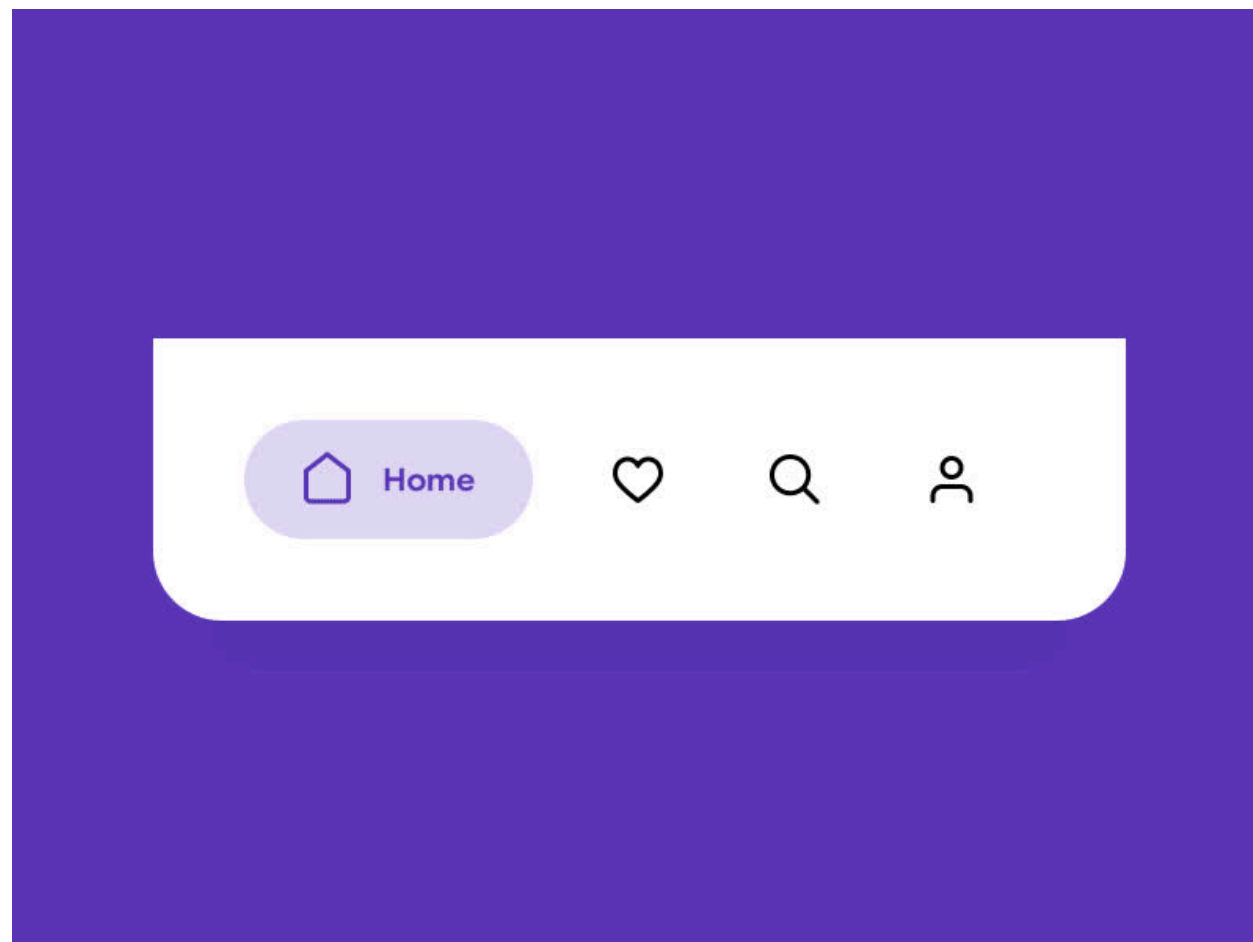
To illustrate, consider a button that initially appears dimmed and disabled until a user fills out all the necessary form fields. Once the form is properly completed, the button transforms, becoming active and clickable, thereby informing users that they can proceed by clicking the button.

The image shows a mobile application interface for a registration process. At the top, there is a red logo with a white 'X' and the text '1. PERSONAL INFORMATION' next to a hamburger menu icon and an 'Exit' link. Below this is a light blue informational box stating: 'These informations were added during opening account. Please check if it is correct and continue final registration.' The form contains several input fields: 'Email' with the value 'emil.samojlo@xtb.com', 'First Name' with the value 'Emil', 'Last Name' with the value 'Samojlo', 'Mobile Number', and 'Your Website (not required)' with a link to '+ Add another website'. At the bottom, there are two buttons: 'BACK' and 'CONTINUE'. The 'CONTINUE' button is currently dimmed and disabled, indicating that the user must complete the form fields before proceeding.

UI ANIMATION:

STRUCTURE & NAVIGATION

UI animations for navigation assist users in navigating through interfaces and locating desired content. Designers employ animations to indicate the current page or tab and create smooth transitions between pages.



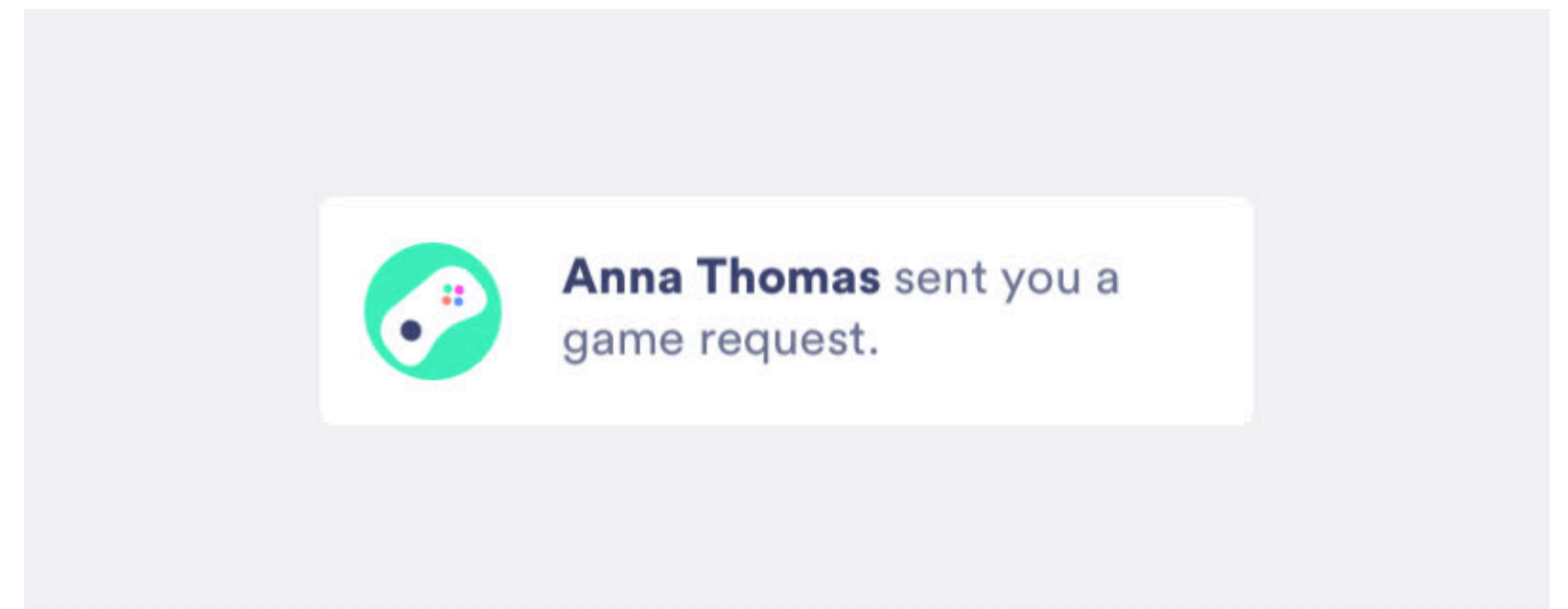
Moreover, UI animation plays a crucial role in conveying the navigational hierarchy, allowing users to comprehend the structure of a product or website. This, in turn, enhances the overall user experience, making it more enjoyable and intuitive.



UI ANIMATION: MICROINTERACTIONS

Microinteractions are small but significant interactions that provide feedback and information to users based on their actions or changes in the system. These interactions often involve some form of visual animation within the user interface.

Some examples include when we receive a message on a mobile device and a pop-up appears to notify us or how designs respond to scrolling and swiping gestures.

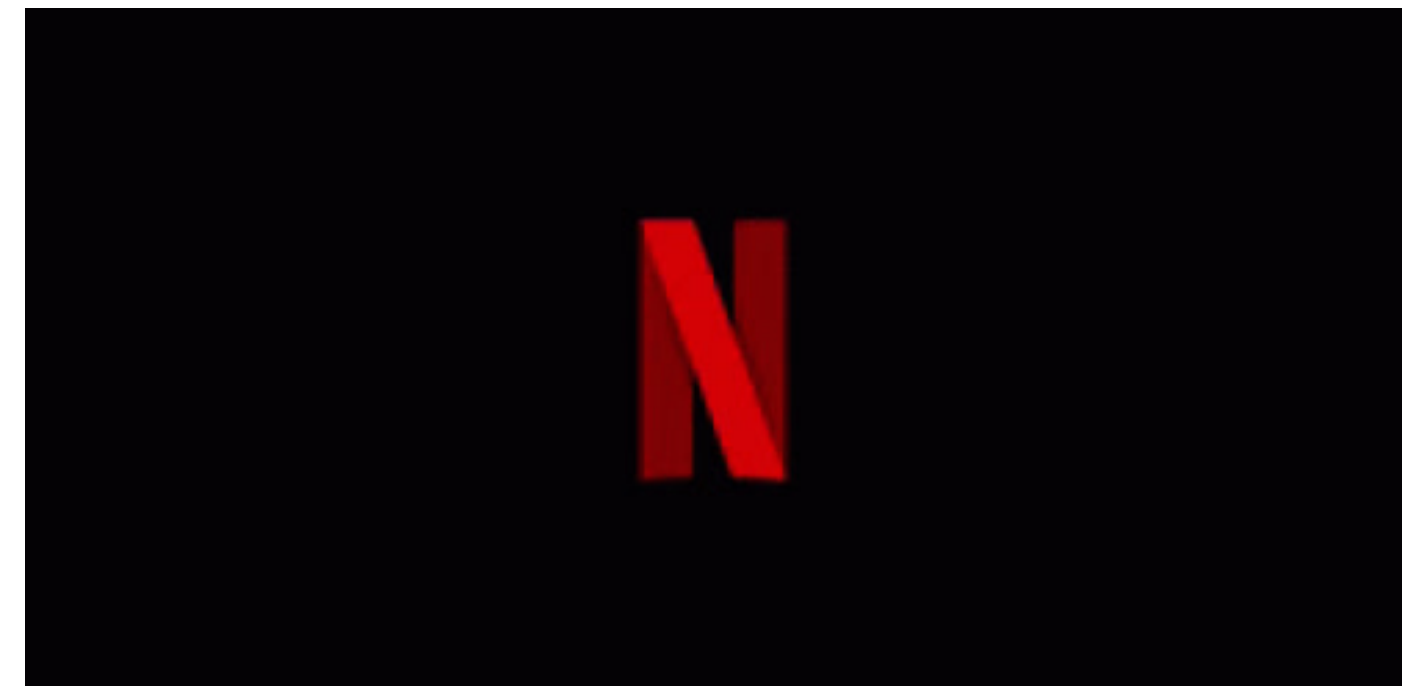


UI ANIMATION:

STORYTELLING & BRANDING

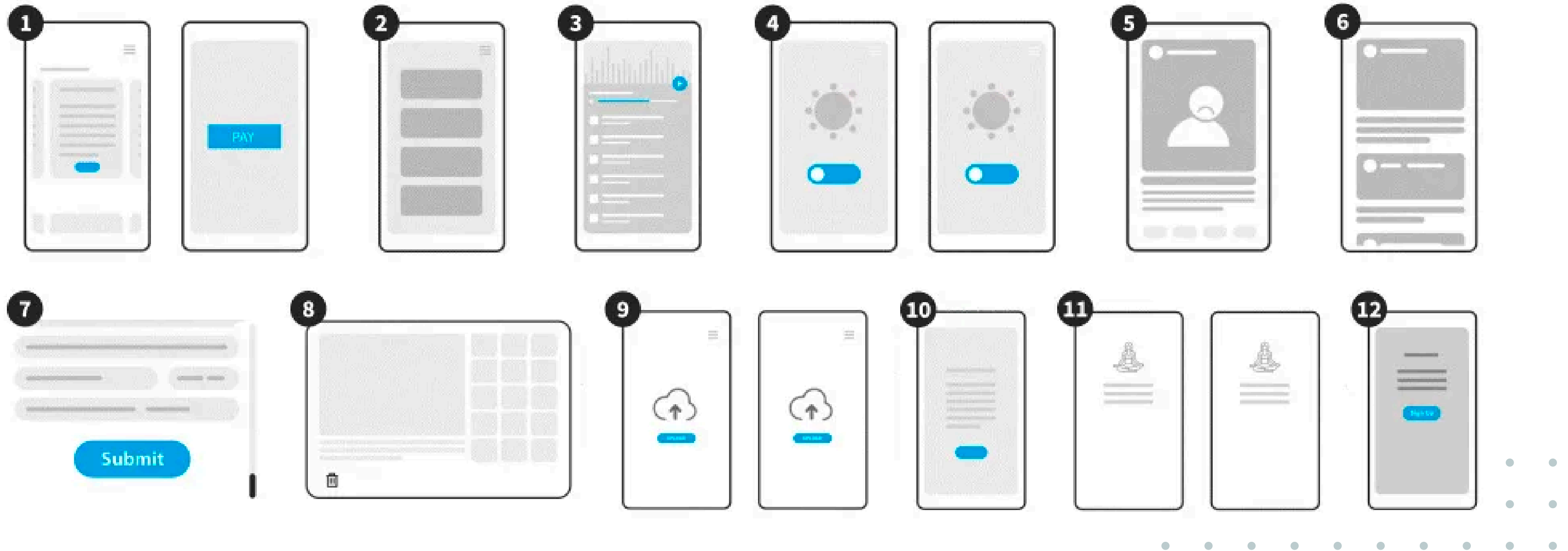
Decorative animations are commonly seen on welcome screens and serve as an excellent tool to enhance a brand's identity and convey a story within a short period. Animations can draw users' attention to specific elements of a brand and showcase a product in an enjoyable and captivating manner.

A prime example of utilizing animation for storytelling and branding purposes would be an animated logo that instantly communicates the nature and essence of a brand.



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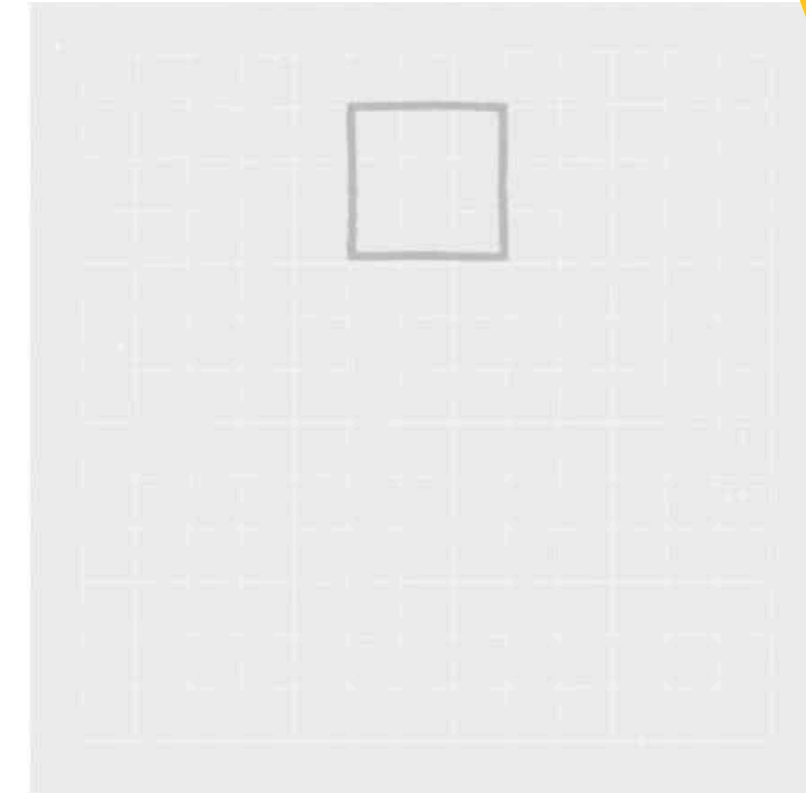
UI ANIMATION PRINCIPLES





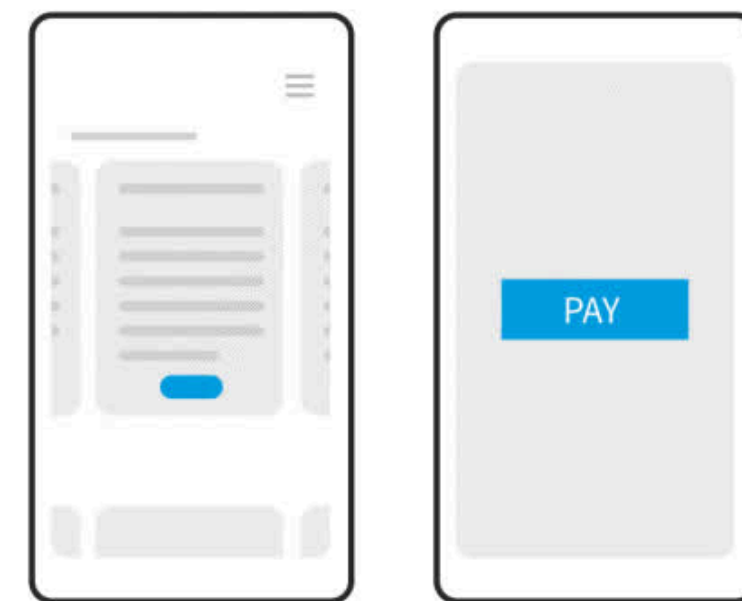
1. SQUASH AND STRETCH

In the realm of user interface (UI) design, the concepts of squash and stretch can be applied to buttons. When a button is pressed, it enters a "squashed state." This principle enables us to assign interactive qualities to any UI element, allowing them to change their appearance or behavior in response to specific actions.



1. Squash and Stretch

12 Animation Principles Applied to UI

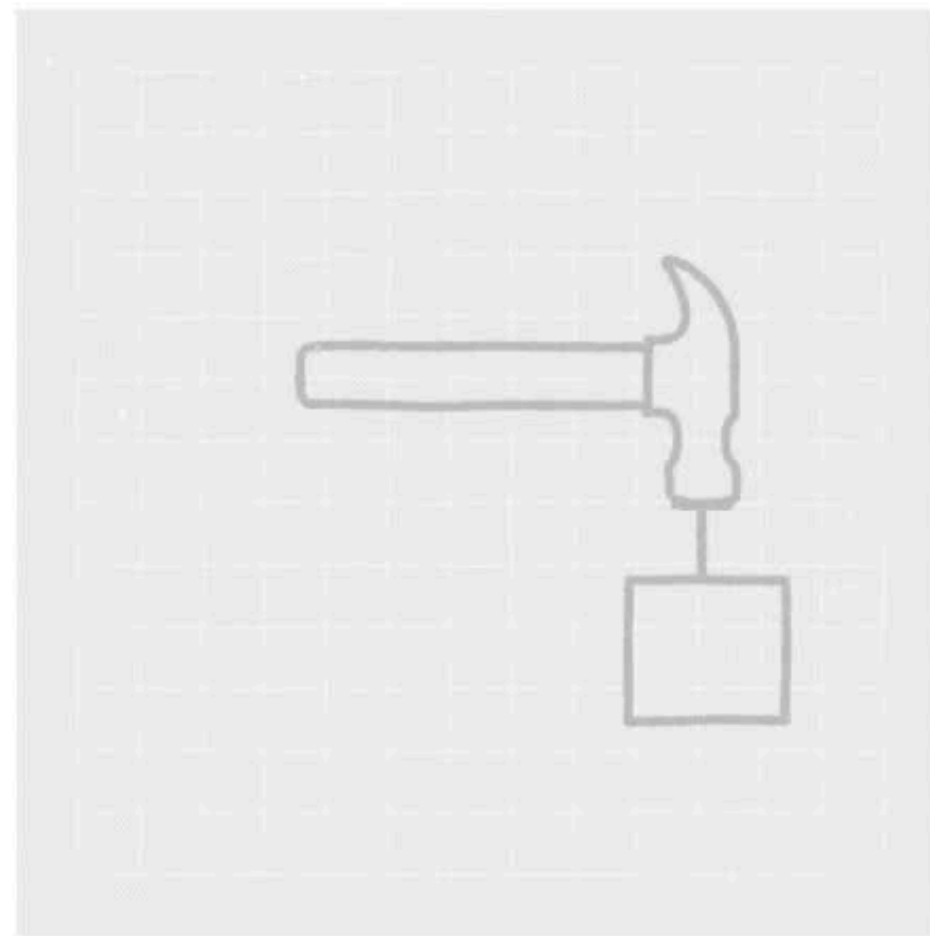


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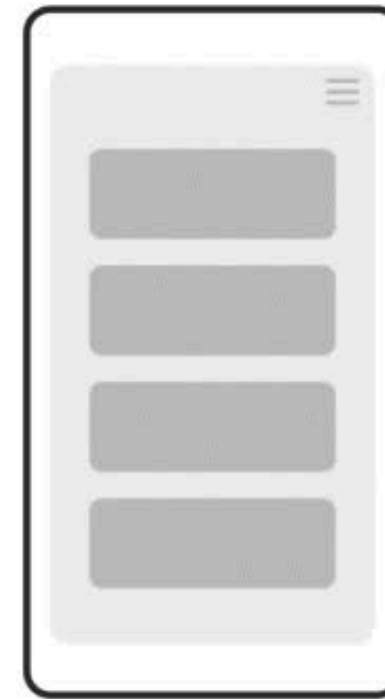
2. ANTICIPATION

Anticipation can be described as the expectation of a forthcoming action, or put, small movements or visual cues that precede significant actions.



2. Anticipation

12 Animation Principles Applied to UI



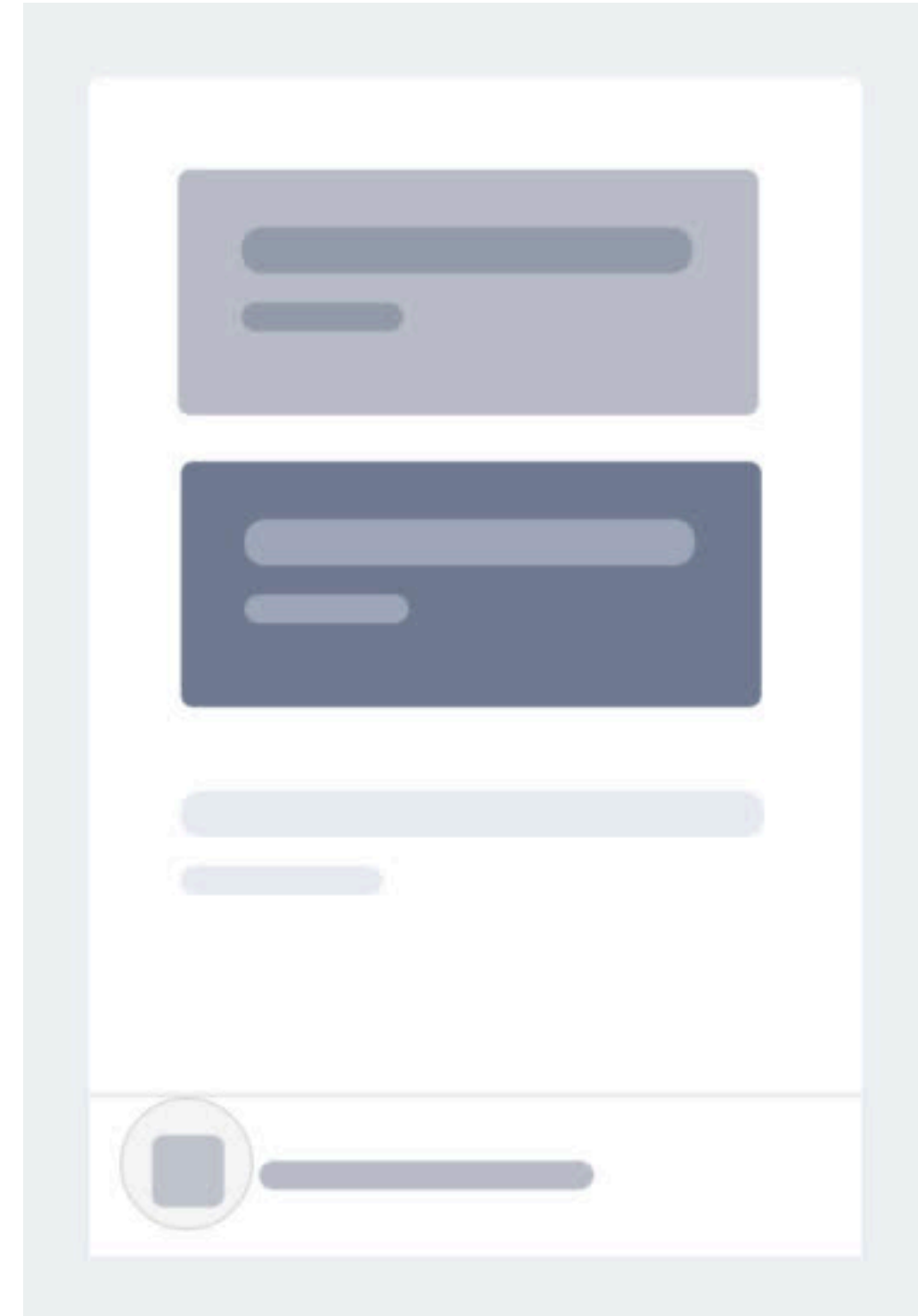
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Image source: Interaction Design Foundation

3. STAGING

Staging, in simple terms, means preparing the environment for action. It involves arranging and organizing the elements in a particular way to encourage the user to perform a specific action, like clicking a button or completing a task.

Some examples include: Viewing your cart on Uber Eats. Staging is used to bring your items in cart, into focus.



4. STRAIGHT-AHEAD ACTION & POSE TO POSE

This concept relates to two distinct methods of animation. Straight-ahead animation involves drawing each frame individually, progressing from the beginning to the end. On the other hand, the pose-to-pose technique begins by creating key frames at the start, middle, and end. In computer animation, the software fills in the remaining frames automatically.

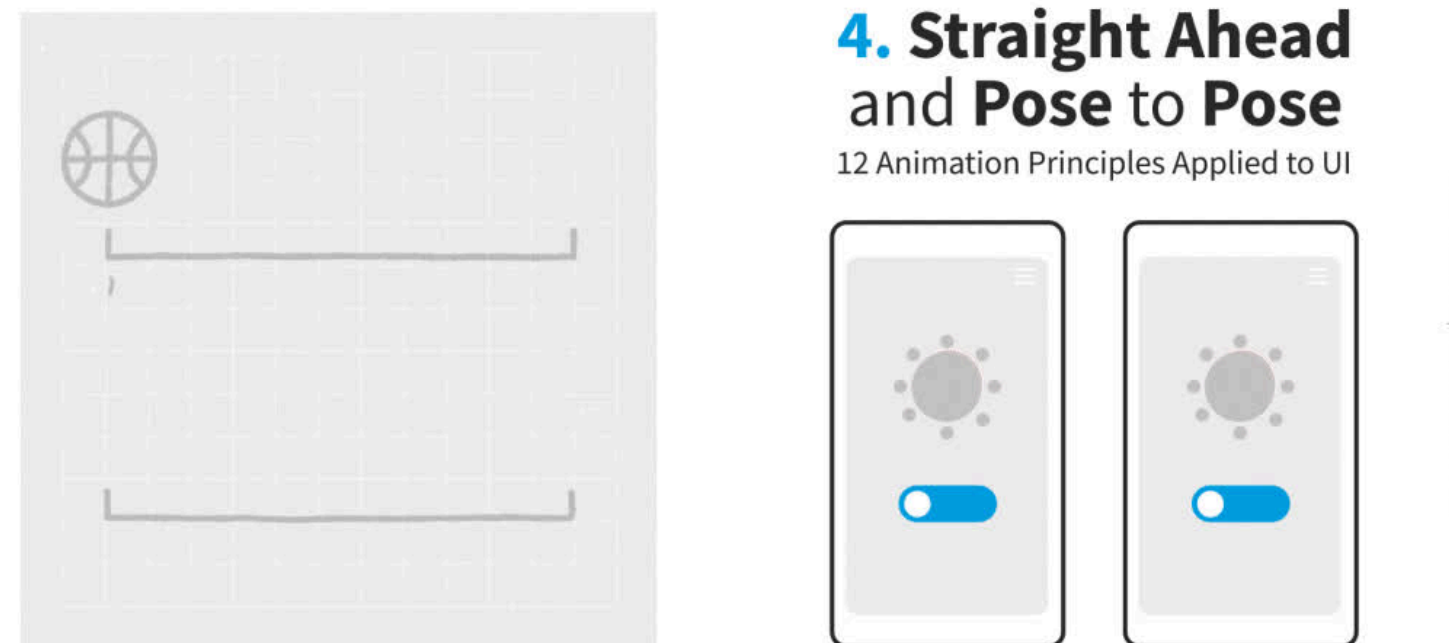


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5. FOLLOW THROUGH & OVERLAPPING ACTION

This principle highlights the idea that different parts of an object do not move simultaneously.



5. Follow Through and Overlapping Action

12 Animation Principles Applied to UI

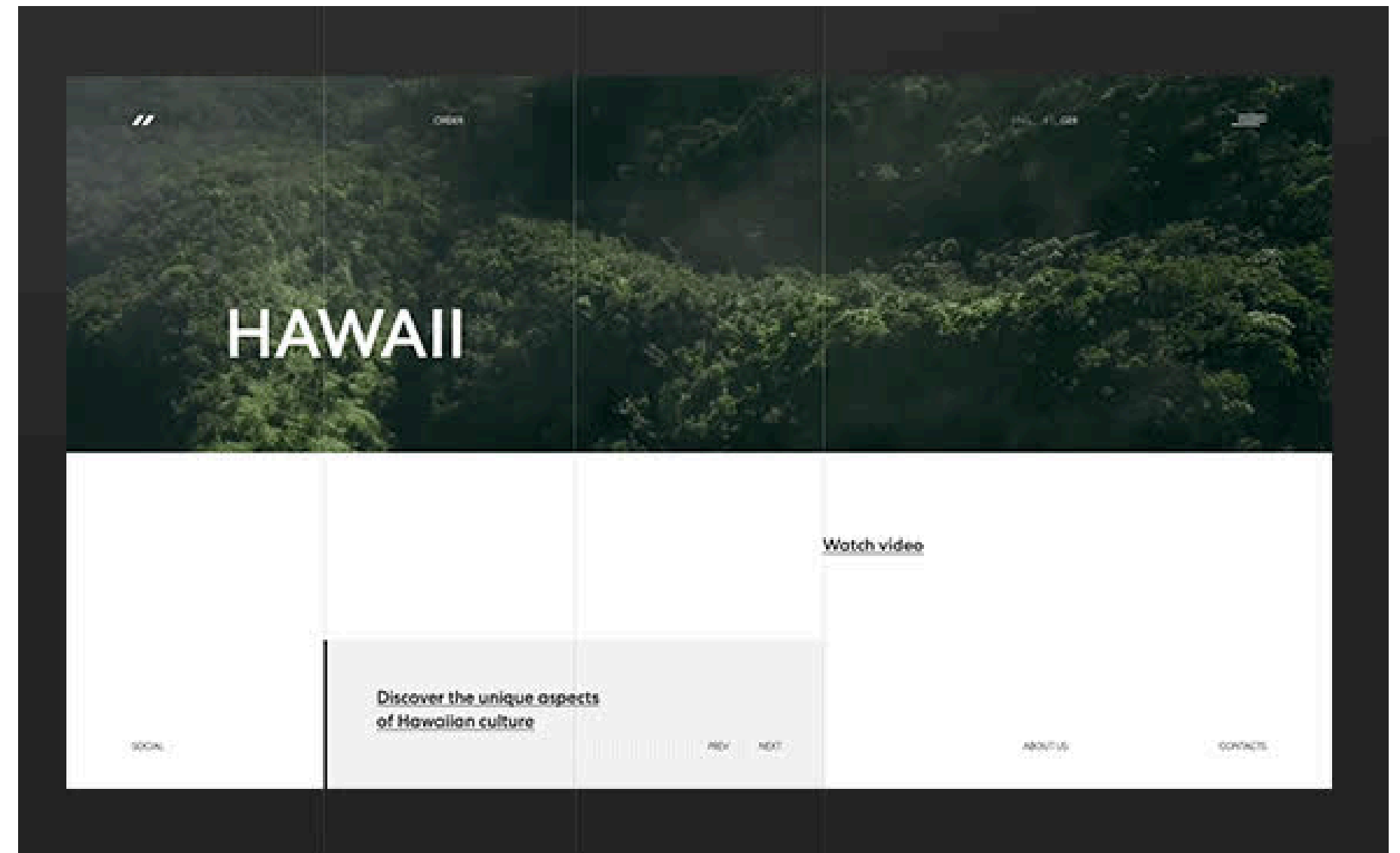


Image source: Interaction Design Foundation

6. SLOW IN AND SLOW OUT (EASING)

When you incorporate easing into the elements of your interface, it brings them to life and makes them look more realistic.

You can effectively design your motion systems by carefully controlling the timing and smoothness of movement.

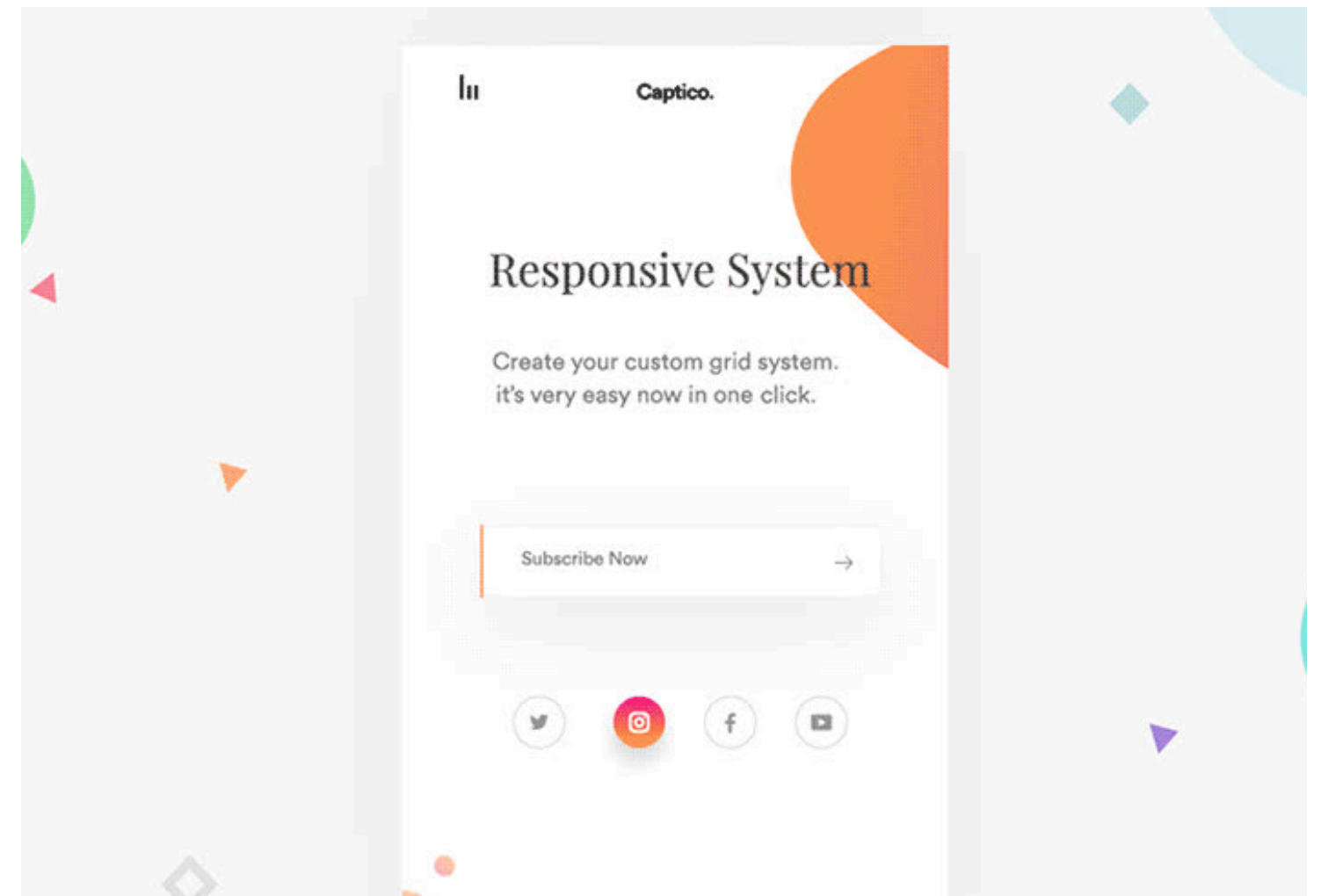




7. ARCS

In user interfaces, we usually arrange elements in a grid, which makes it difficult to create curved animations along arcs. But we can make it seem like elements are moving in curved paths by using easing techniques in our animations.

However, it's also valuable to include real curved movements in animations because they make things look smoother and more natural. The important thing is to figure out when it's best to use these curved motions in your animations.



8. SECONDARY ACTION

Secondary action is any action that happens in addition to the main action. These actions are generally used to support the main action.



A real-world example would be the turning of a wheel as a bicycle moves. Secondary actions are excellent for giving the user additional information about their actions. Icons in buttons are a pretty common example of this.



9. TIMING

How quickly or slowly an object moves will give us information. In UI design, you can use timing to inform your users. For instance, you can link the speed of a file-loading animation to how big the file is.

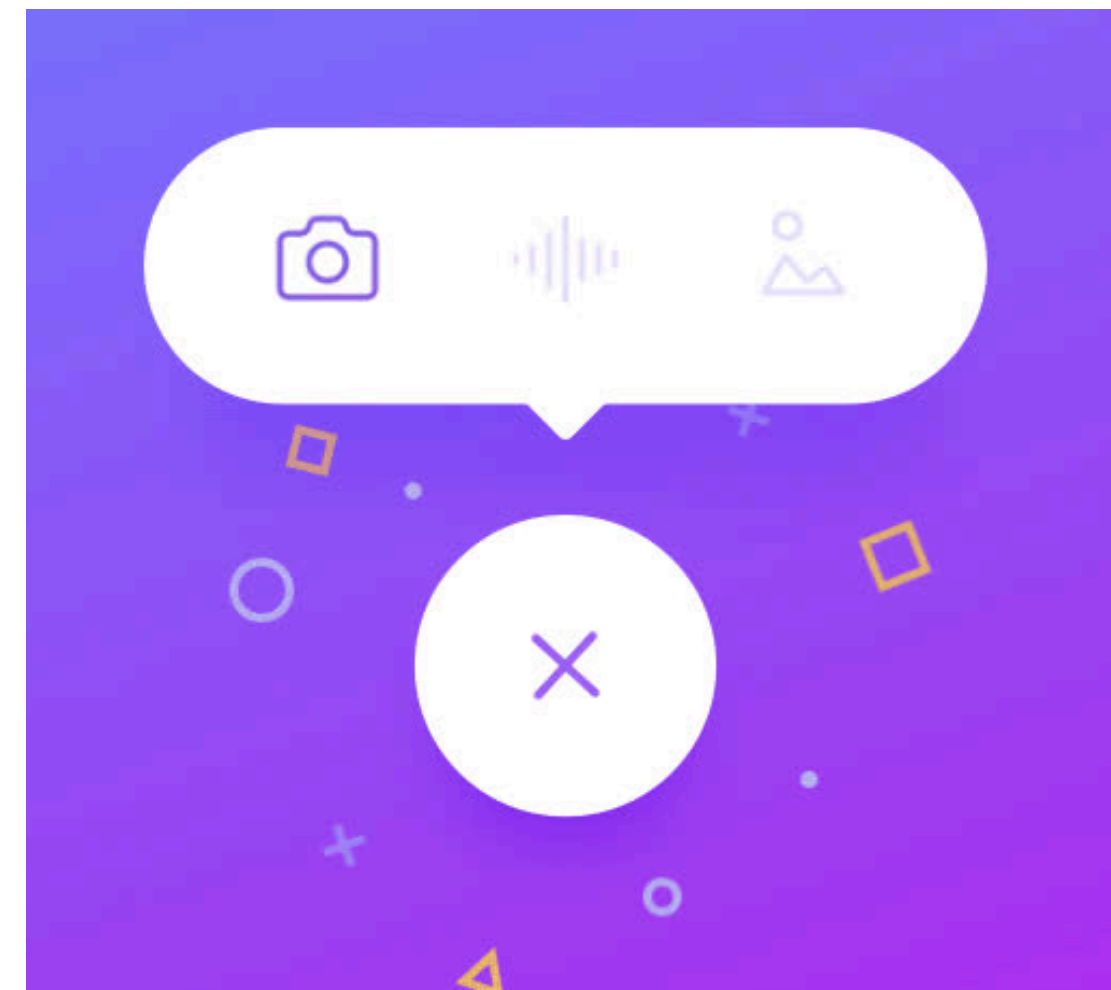
This will give your user a sense of how long the process will take and why—so the upload will be slower if you're uploading a big file and much quicker if it's a small file.



10. EXAGGERATION

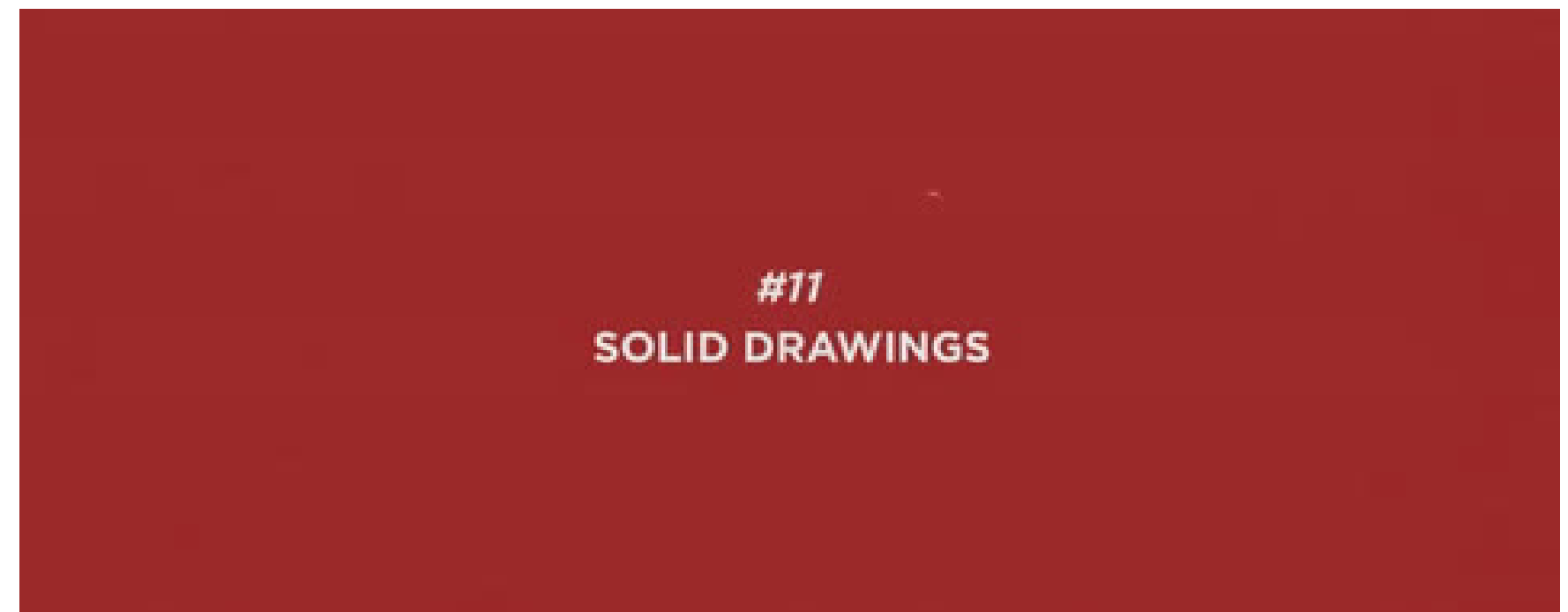
When designing animations for user interfaces, it's possible to emphasize specific elements to effectively communicate to users how they should interact with the interface.

This exaggeration can also bring an enjoyable aspect to the design. The extent to which you can exaggerate an element will vary based on the product's purpose and its overall visual style.



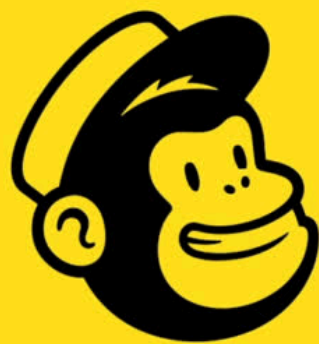
11. SOLID DRAWING

If you create a button with a shadow that doesn't look realistic, users will quickly assume that something is amiss with the application. This effect is particularly noticeable in skeuomorphic design, where elements mimic real-life objects. Although you can be creative with these designs, it's crucial to maintain consistency, and any intentional deviations from reality must be justified and feel purposeful to the user.



12. APPEAL

In the field of UI design, having an appealing design is essential in order to distinguish your product from the competition. With numerous products vying for attention, animation can be utilized to establish your product's character and establish an emotional bond with the user.





IMPORTANCE OF UI ANIMATION:

Guidance: Helps users navigate by using moving visuals to show users which parts are interactive and how to use them.

Feedback: Often used to give immediate responses to the user.

Communicating Functionality: Showing how things work in an app or website.

Adding Personality: Creating a unique character – when done well, animation can show what a brand is all about and make things more fun.



BEST PRACTICES FOR: ANIMATION

When using animation in UI design, there are some important things to remember to make sure the animation works well and improves the overall user experience:

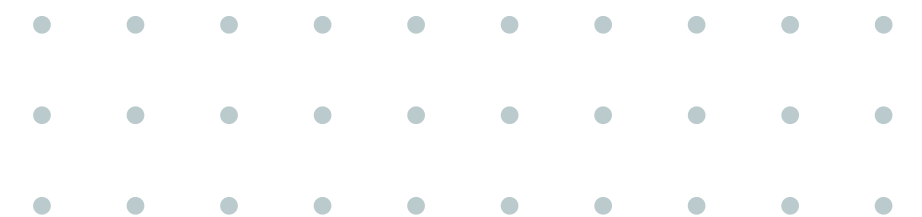
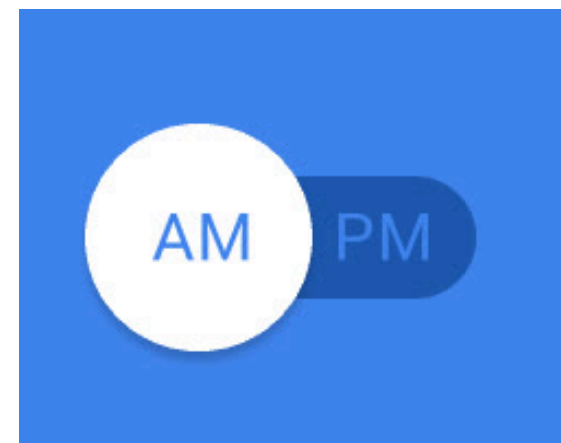
Keep it Simple: Avoid using complicated or distracting animations because they can be too much and take away from the experience. Instead, use simple and subtle animations that are easy to understand and add to the design.

Be Consistent: Make sure the animation matches the overall design and style of the app or website. This helps create a consistent and polished look and feel.

04

MICROINTERACTIONS

Micro-interactions are tiny animations that have a specific purpose in helping users understand what's happening on a website or app. They provide visual feedback and make it easier to see when something changes. They can communicate information without using words.



TYPES OF MICROINTERACTIONS

- Triggers: are like starting points for small interactions. They can happen because a person does something or because the computer system detects specific conditions.
 - When a person triggers something, it means they take action to make it happen. For example, clicking a button or typing a command.
 - When a system triggers something, it means the software notices that certain requirements or conditions are met, and it automatically starts an action.
- Rules: determine what happens once a micro-interaction is triggered.



TYPES OF MICROINTERACTIONS PT.2

- Feedback: is how people are informed about what's going on during the interaction. It can be anything that users see, hear, or feel that lets them know something is happening.
- Loops and Modes: are like the underlying rules of the interaction. They determine what happens to the interaction when things change. For example, if new conditions are met, does the interaction keep going or does it stop?

WHY DO THEY MATTER?

- They improve a website navigation
- They make it easier for users to interact with your website
- They provide instant and relevant feedback about a completed action to a user
- They give tips to your users
- They communicate information about certain elements, like whether or not it's interactive
- They make the user experience much more rewarding
- They encourage sharing, liking, and commenting on your content
- They direct users' attention
- And, finally, they just make your site more emotional



BEST PRACTICES OF MICROINTERACTIONS

Micro-interactions help people out. If there's something they need to do, micro-interactions offer them the solution. Usability is key.

Micro-interactions work best when they're designed with intention. They should never take someone out of a user experience, but rather feel natural and intuitive, blending in with the rest of a design. Micro-interactions complement the visual elements of a website instead of being distractions.

EXAMPLES OF MICROINTERACTIONS

- Contact and newsletter sign-up forms
- Social media like and share buttons
- Call to action buttons
- Tap and hold elements
- Horizontal scroll buttons
- Progress indicator bars
- Audio and/or visual feedback
- Click/hover to reveal text or images
- Page transitions
- Hover animations on buttons or linked graphics

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