



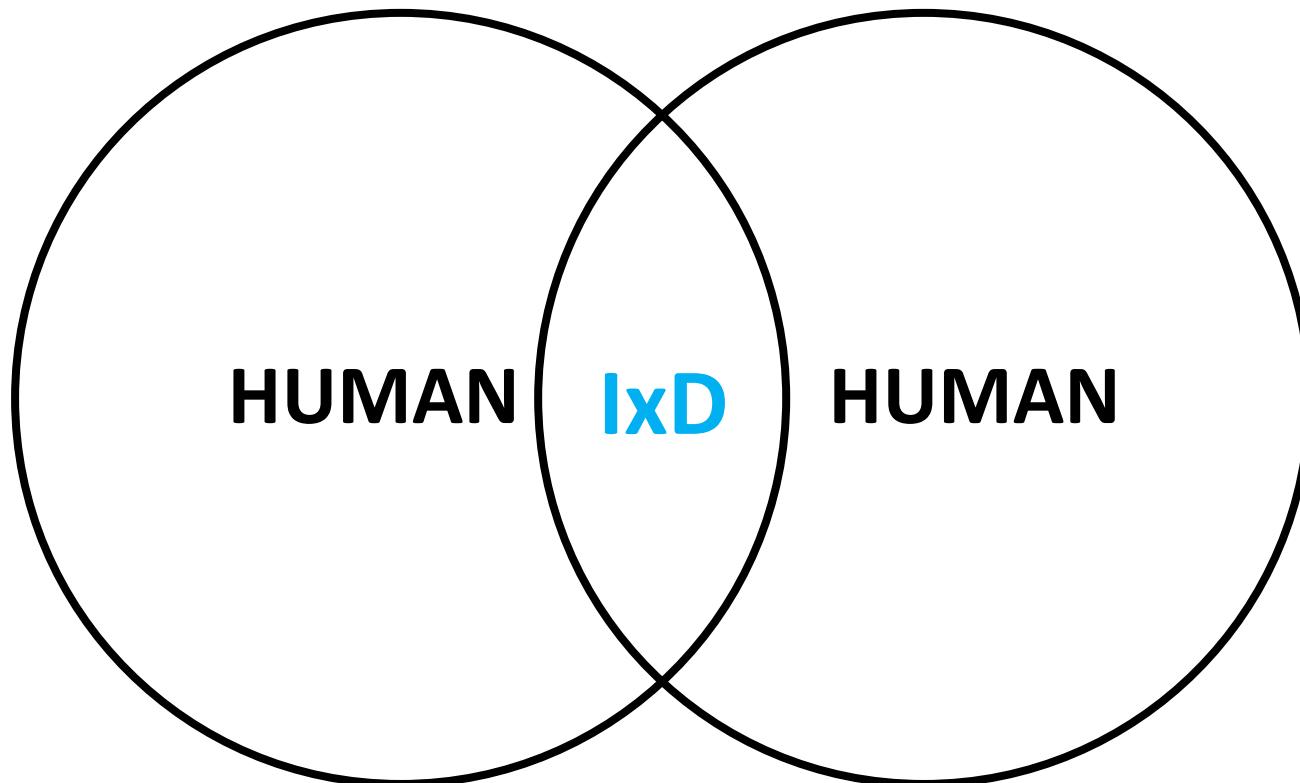
An introduction to
INTERACTION DESIGN

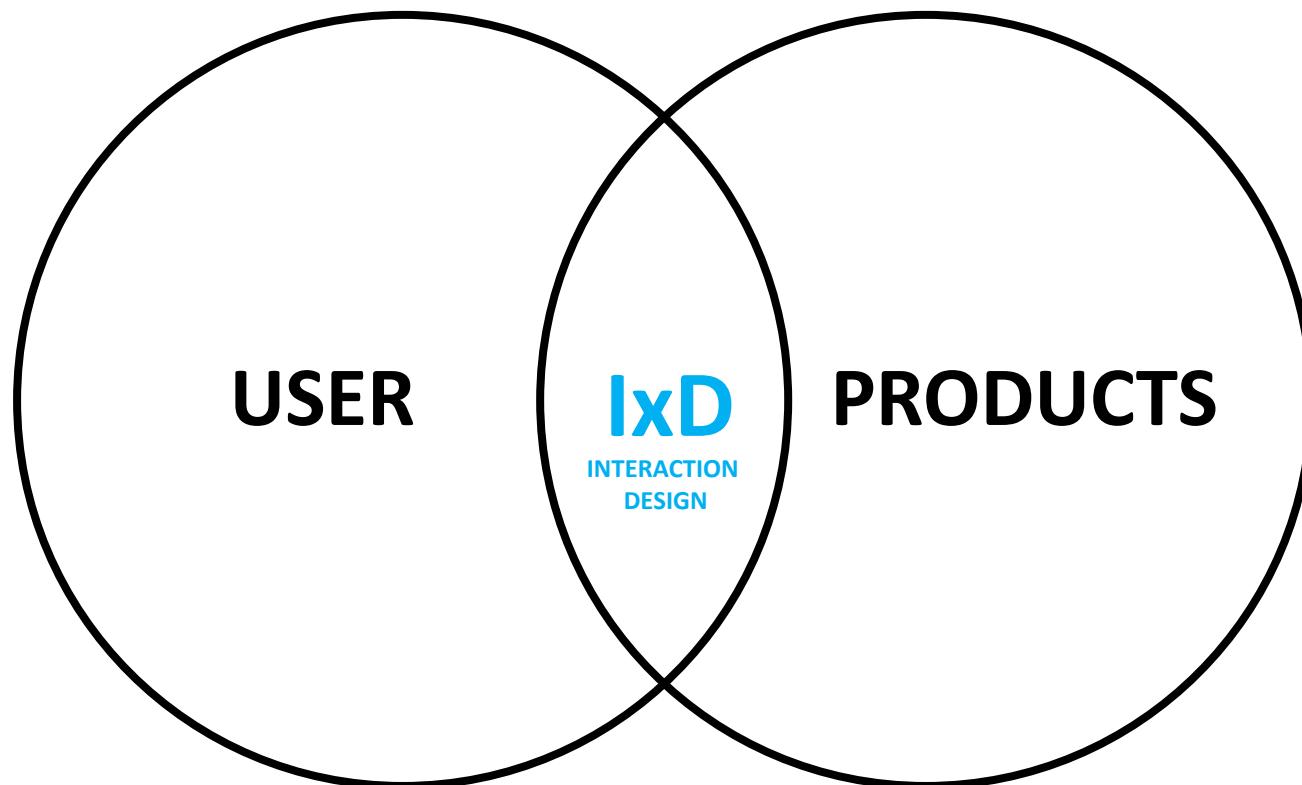
by Andreia Pinto de Sousa

Interaction | ɪntər'ækʃ(ə)n |

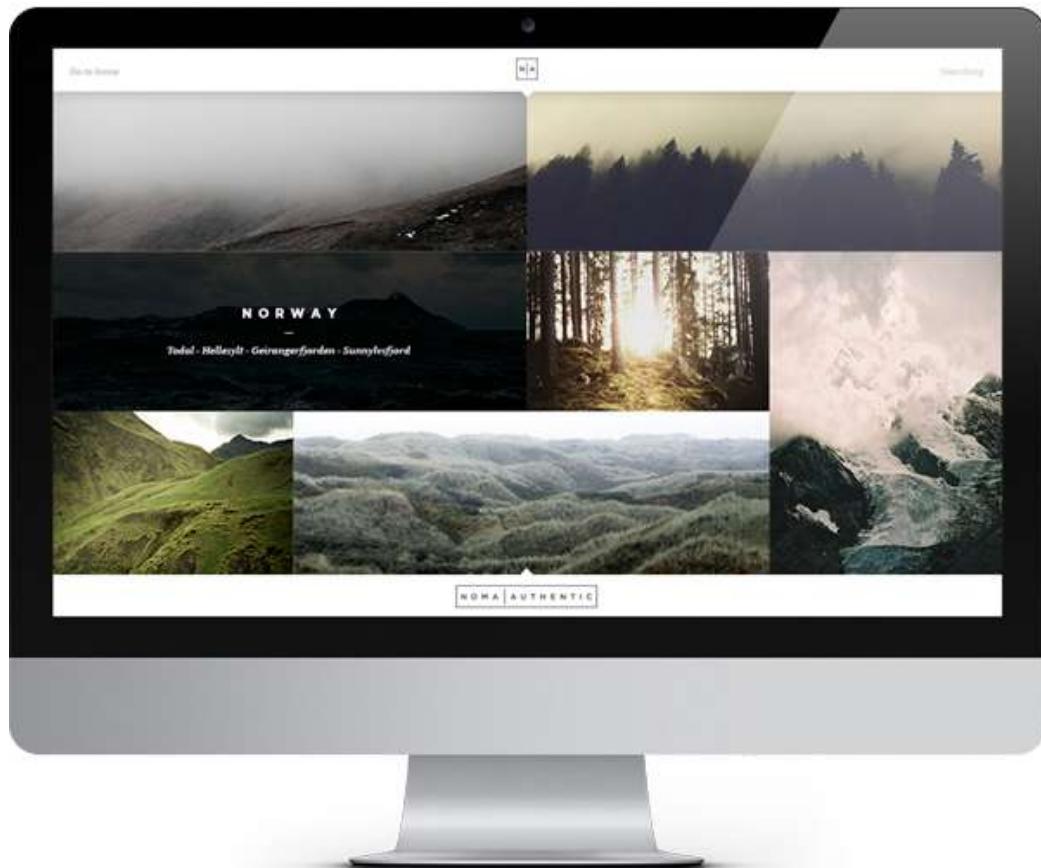
reciprocal action or influence:

ongoing interaction between the two languages.





**The products we design,
must have a conversation
with their users**



www.nomisauthentic.dk

Go to home

Search

FAROE ISLANDS

FALL

CATFISHING: THORSHAVN
HØVÍG

GALICHTEDÍR: ØYVI
EVÍVÍG

KED. HERR. HUNTEK: TJÓRNUVÍK
MÍMIKZ

GØRVERTH: RØNNVÍK
JØRVIK

COMMODITIES

The one traditional worse dish with a chain to international popularity is smoked salmon. It is now a major export, and could be considered the most important Faroese food contribution to modern international cuisine. Smoked salmon.

Read more Go to top Share

SNORRI HÚSPAL

Faroese food traditions are largely based fisheries and agriculture. Many dishes are based on salmon.

Read more Go to top Share

THORSHAVN

The Gerðararfjall is located in the south-western part of the country of Streymoy, in the northern part of the Faroe Islands, approximately 10 km from the town of Klaksvík.

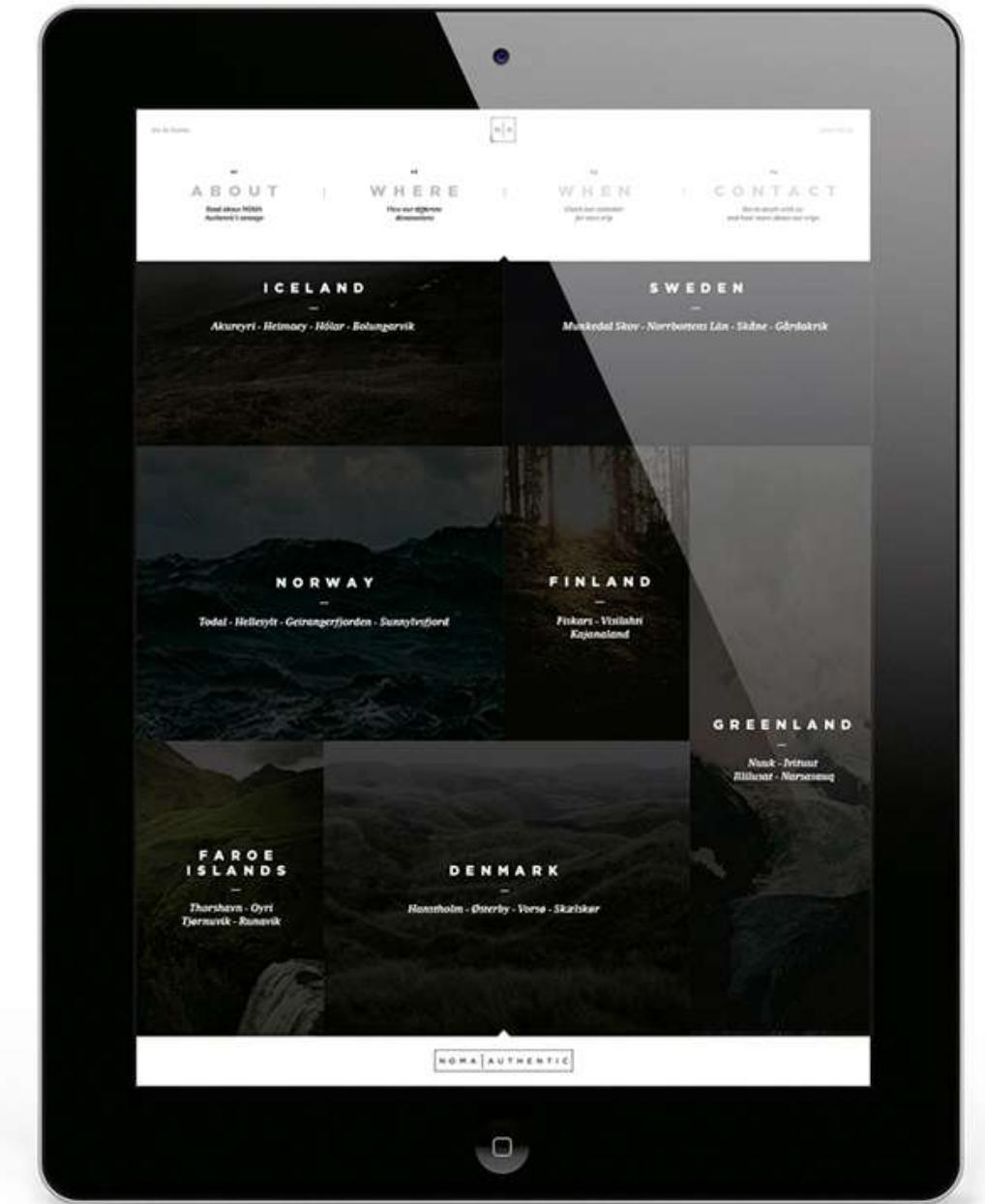
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ORDER EXPEDITION

NOMIS AUTHENTIC



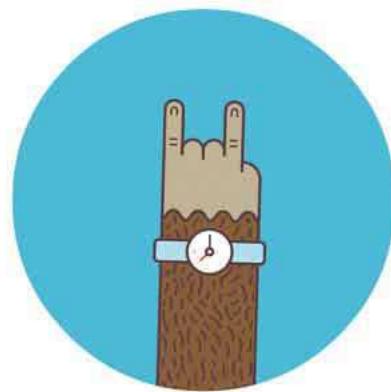




- Discover
Art Hard
Jim Denevan







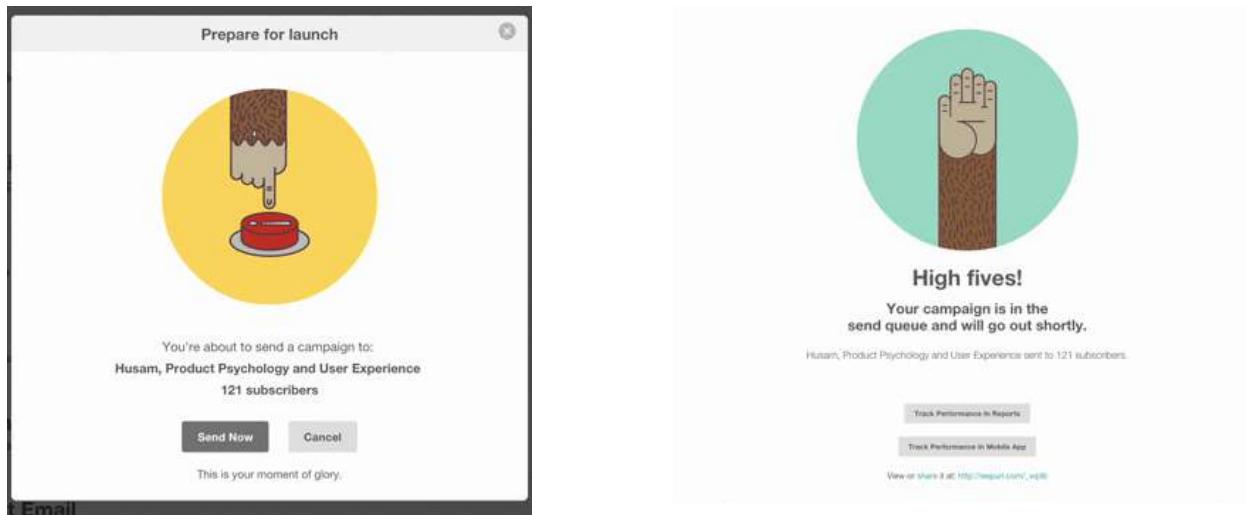
Rock on!

Your email has been scheduled.

Your campaign will be sent on [REDACTED]

[Get The Mobile App To Track Reports](#)

[Make a paper buddy while you wait for your reports to come in.](#)





Anytime you get an @mention, comment on a post or any notification at all, Olly will gently release a scent into the air around you.



„ „

**Interactions with a digital system
should be similar in tone and helpfulness
to interactions with a polite,
considerate human.**

,”

What would a helpful human do?

What would a thoughtful, considerate interaction feel like?

Does the product treat the primary persona humanely?

How can the software offer helpful information without getting in the way?

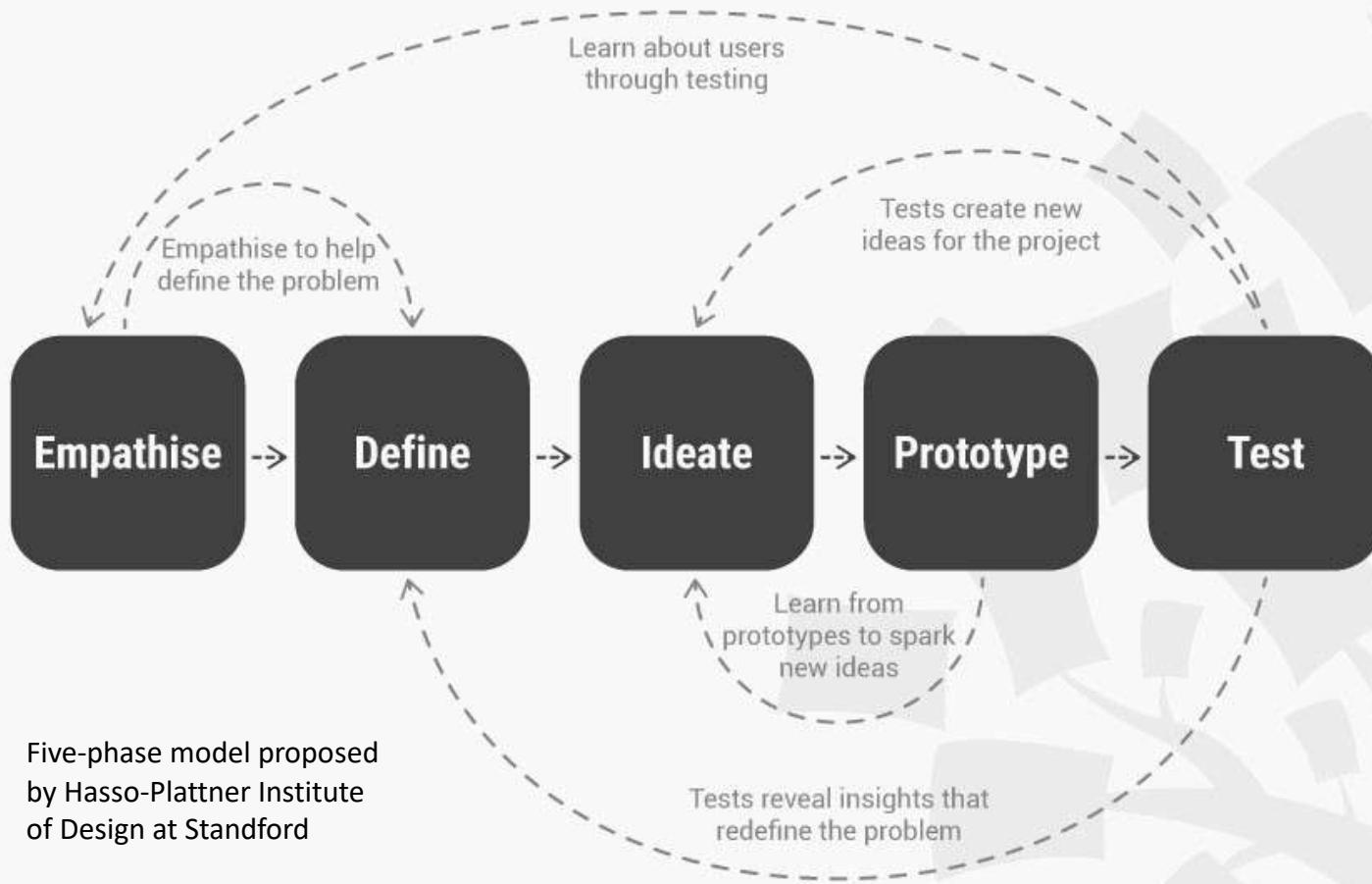
How can it minimize the person's effort in reaching goals?



INTERACTION DESIGN PROCESS

Design Thinking

DESIGN THINKING: A NON-LINEAR PROCESS



Human-Computer Interaction

‘’

Human-computer interaction is a discipline concerned with the design, evaluation and implementation of interactive computing systems for human use and with the study of major phenomena surrounding them..

,”

It is an **academic discipline** that studies
the interaction of people with machines.
Mainly computing technologies.

How do people interact?

,”

It is a **design discipline** that cares how technology is created for people.

How do you create technology for people?

, ,

HCI is a broad field which overlaps with areas such as **user-centered design**, **user interface design** and **user experience design**.

In many ways, HCI was the forerunner to User Experience (UX) Design.

User-Centered Design & Participatory Design

METHODS

User Centered Design

Introduced by Don Norman in 1986

Is a philosophy based on user interests and needs with an emphasis on making usable and understandable products.

In this methodology the design and development process is done with the user in mind but he is not part of the development team;

METHODS

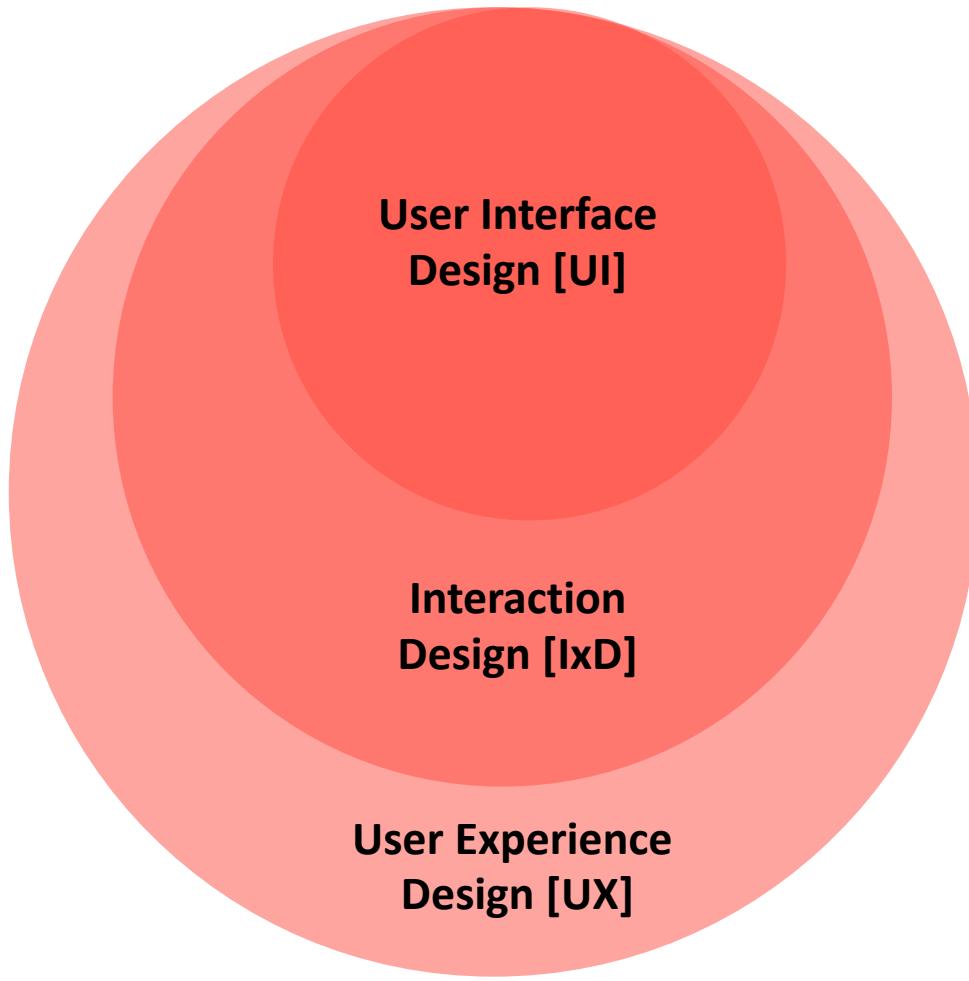
Participatory Design (Cooperative Design)

The users are co-designers.

The introduction of machinery into the workplace forced adaptation resulting in a decrease in motivation and an increase in abstention.

The inclusion of users in development teams was the way to circumvent this situation.

Use prototypes, such as mockups (three dimensional paper-based representation), or a paper-based outline of the screen of a webpage, or a product.



So what do interaction designers do?

1. Design Strategy

User goals (tasks)

Interactions needed to achieve user goals

2. Wireflows (wireframes + flowcharts) — TASK TO PRACTICAL CLASS #3

3. Prototypes (User Interface Prototype)

WIREFLOWS

Wireflows document interactions

WIREFLOWS

WIREFRAMES

are a common deliverable to show page-level layout ideas;

are a great way of showing layout, **but they don't describe interaction well;**

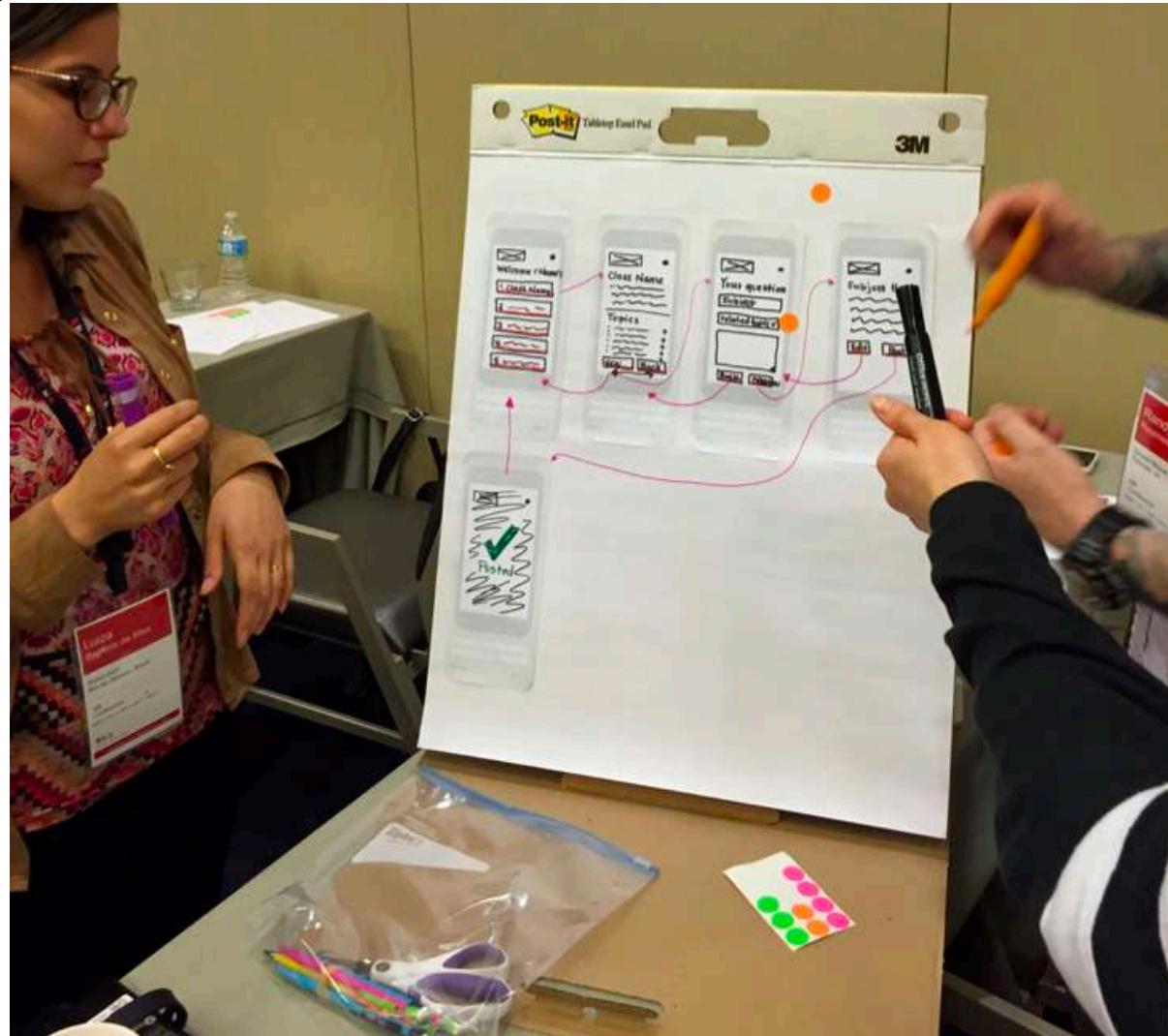
FLOWCHARTS

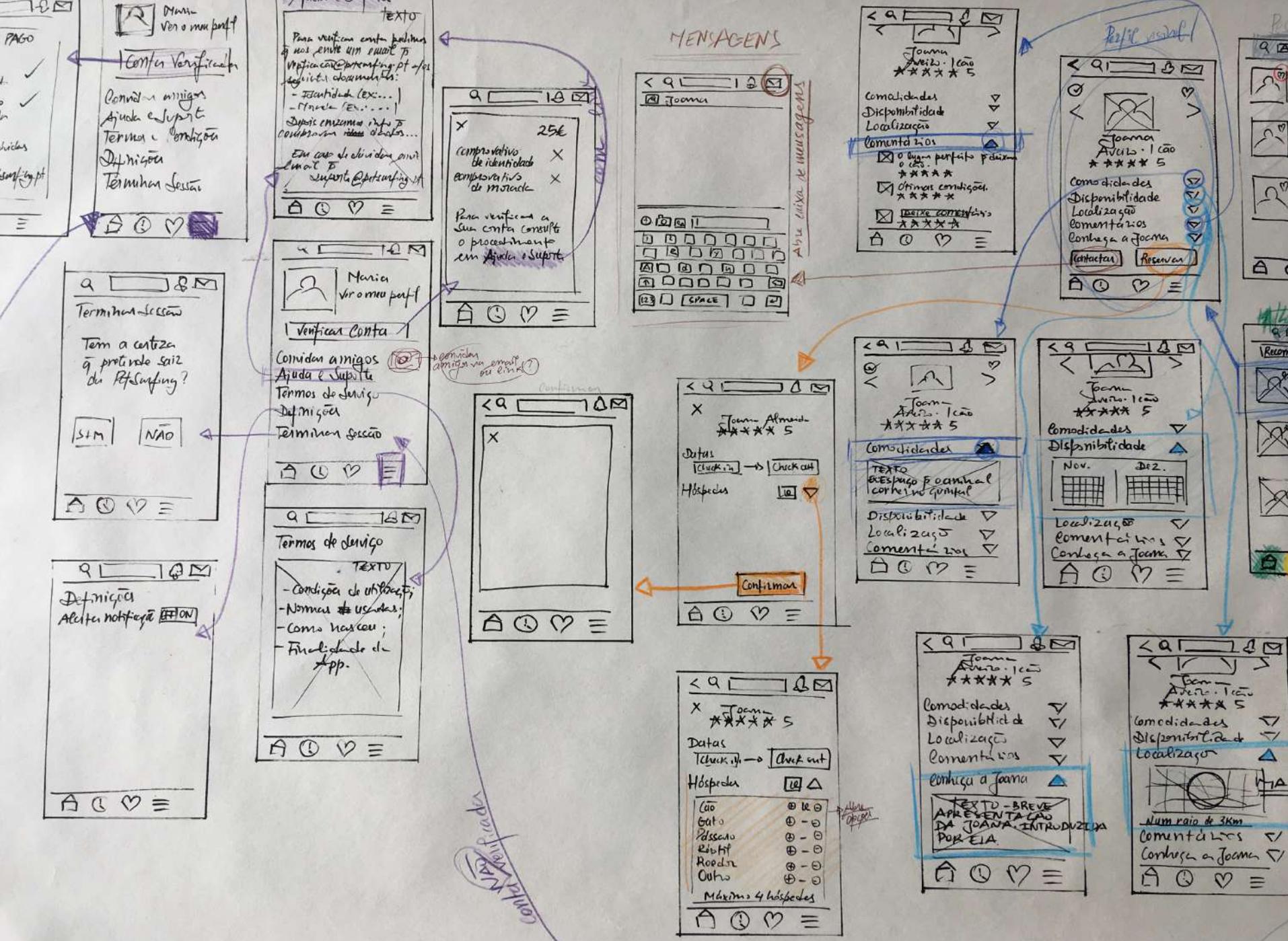
for documenting complex **workflows** and **user tasks (interactions)** with multiple steps or paths,

but typically leave out the context of the interactions and its impact over users.

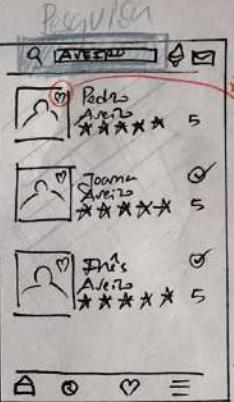
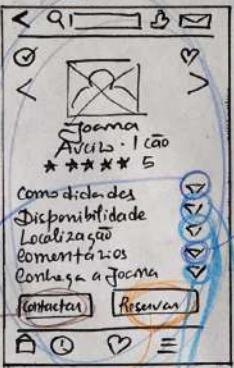
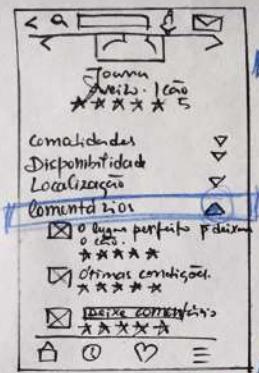
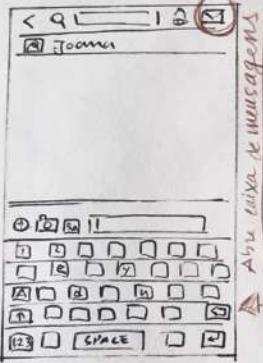
WIREFLOWS

A tool for collaboration

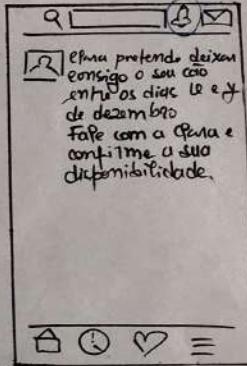
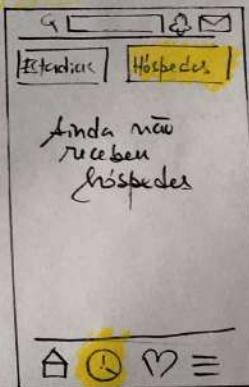
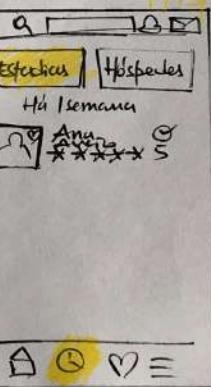
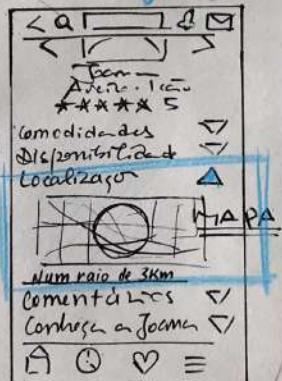
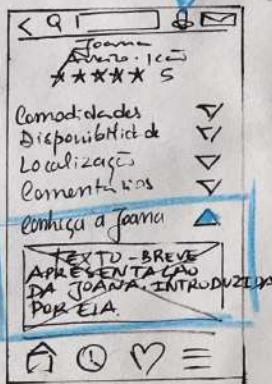
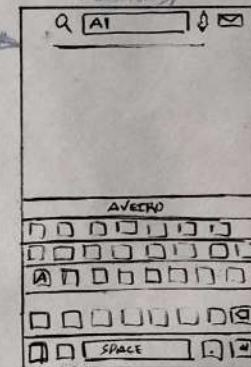
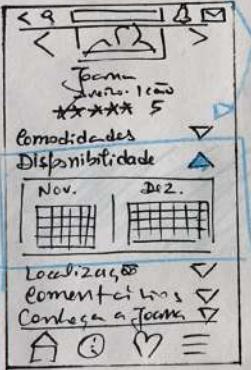
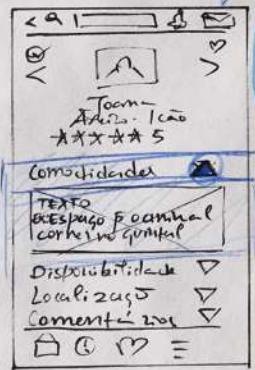
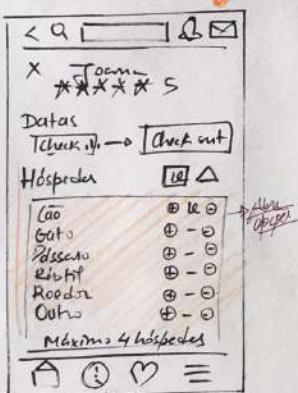
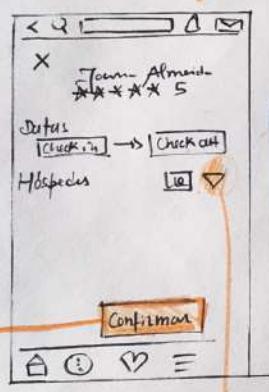
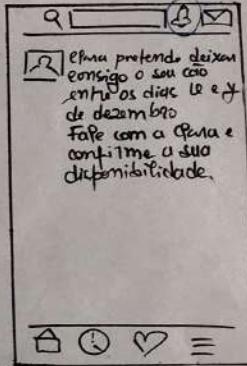




MENSAGENS



notificações



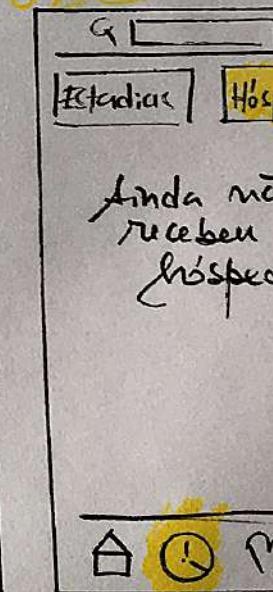
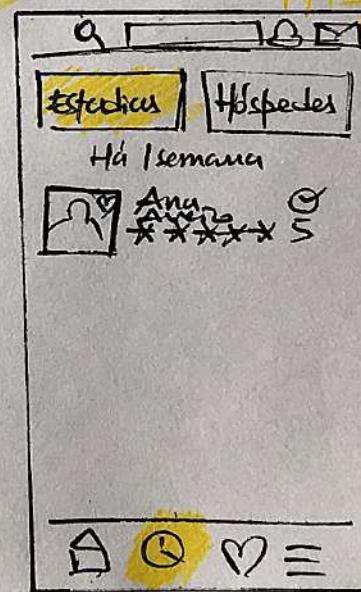
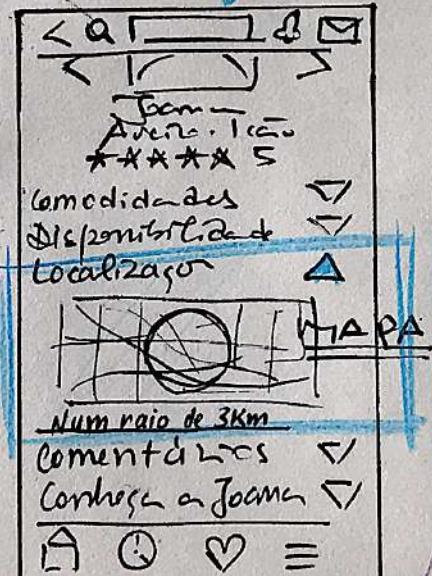
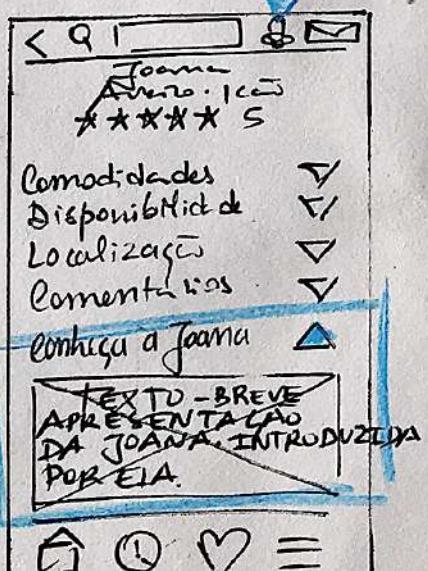
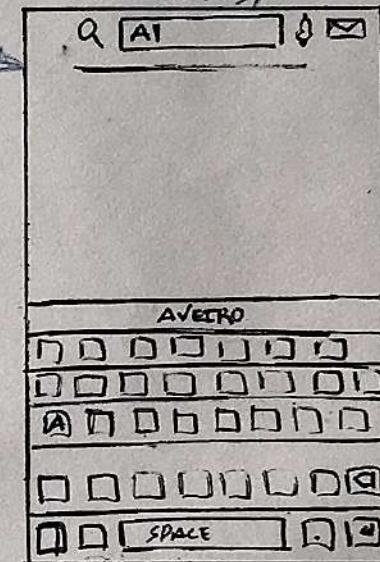
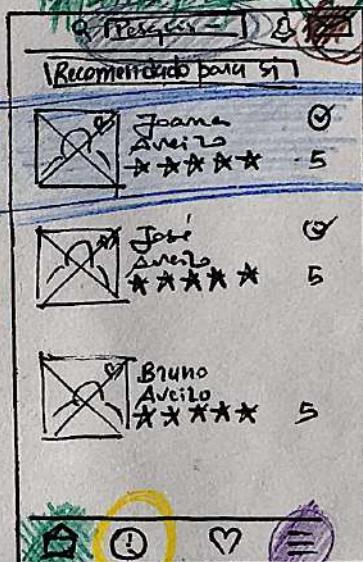
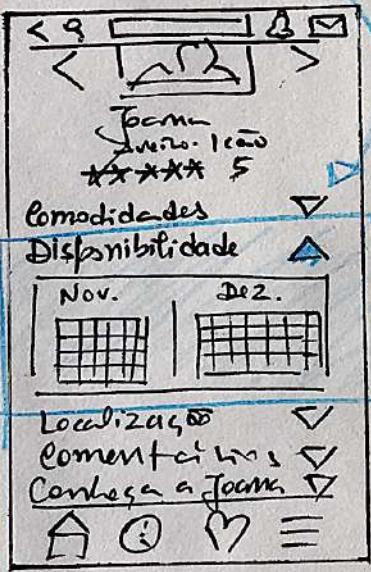
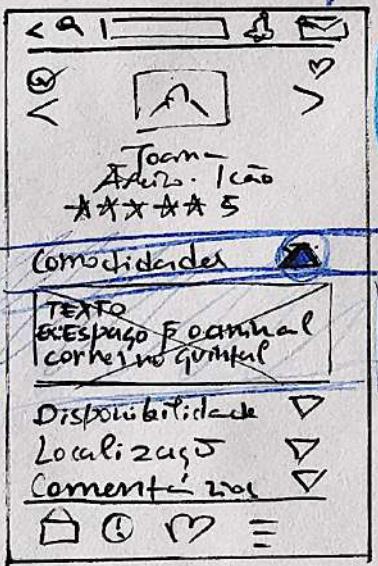
Há 1 semana

DEZEMBRO

Há 10 dias

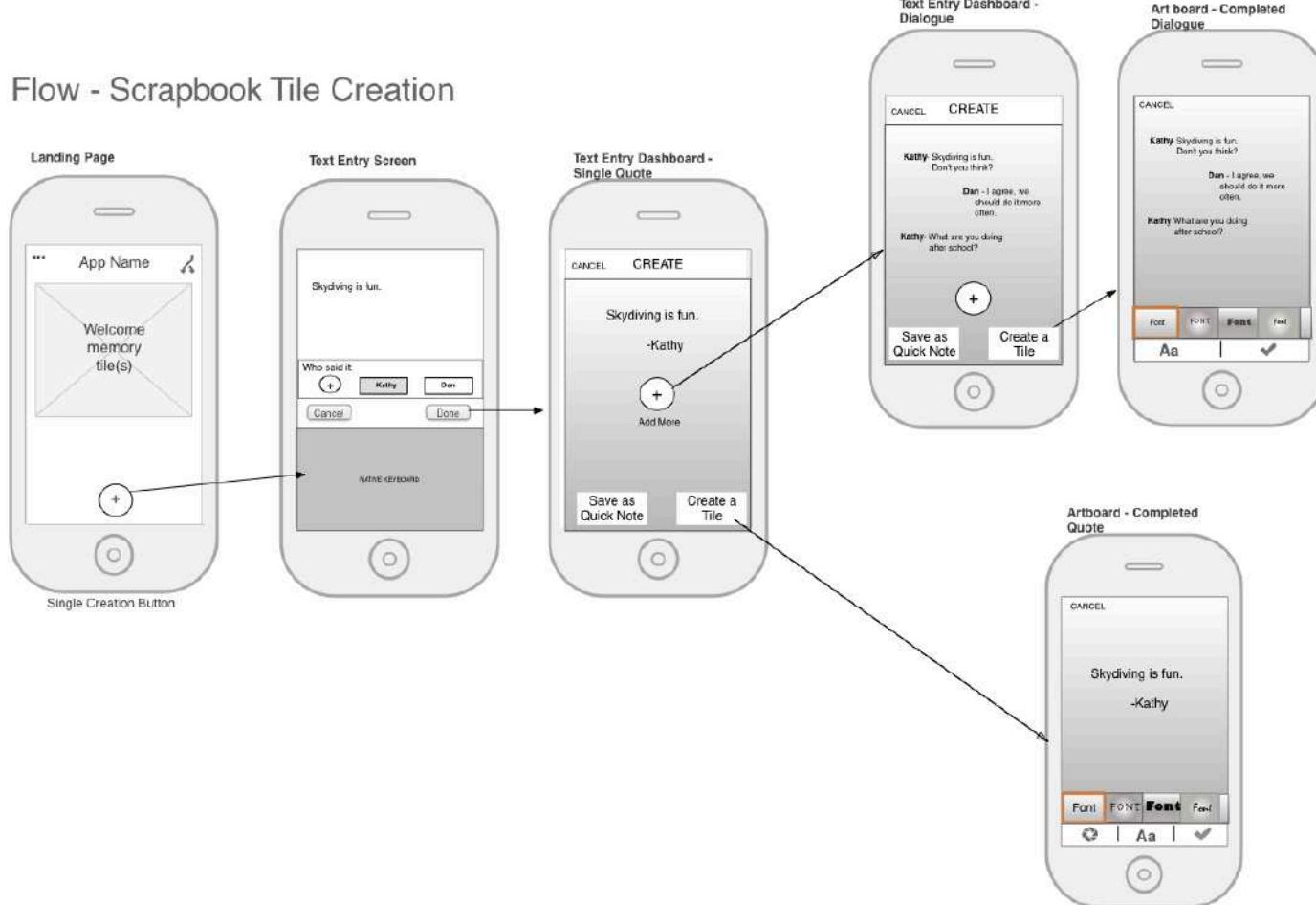
DEZEMBRO

14

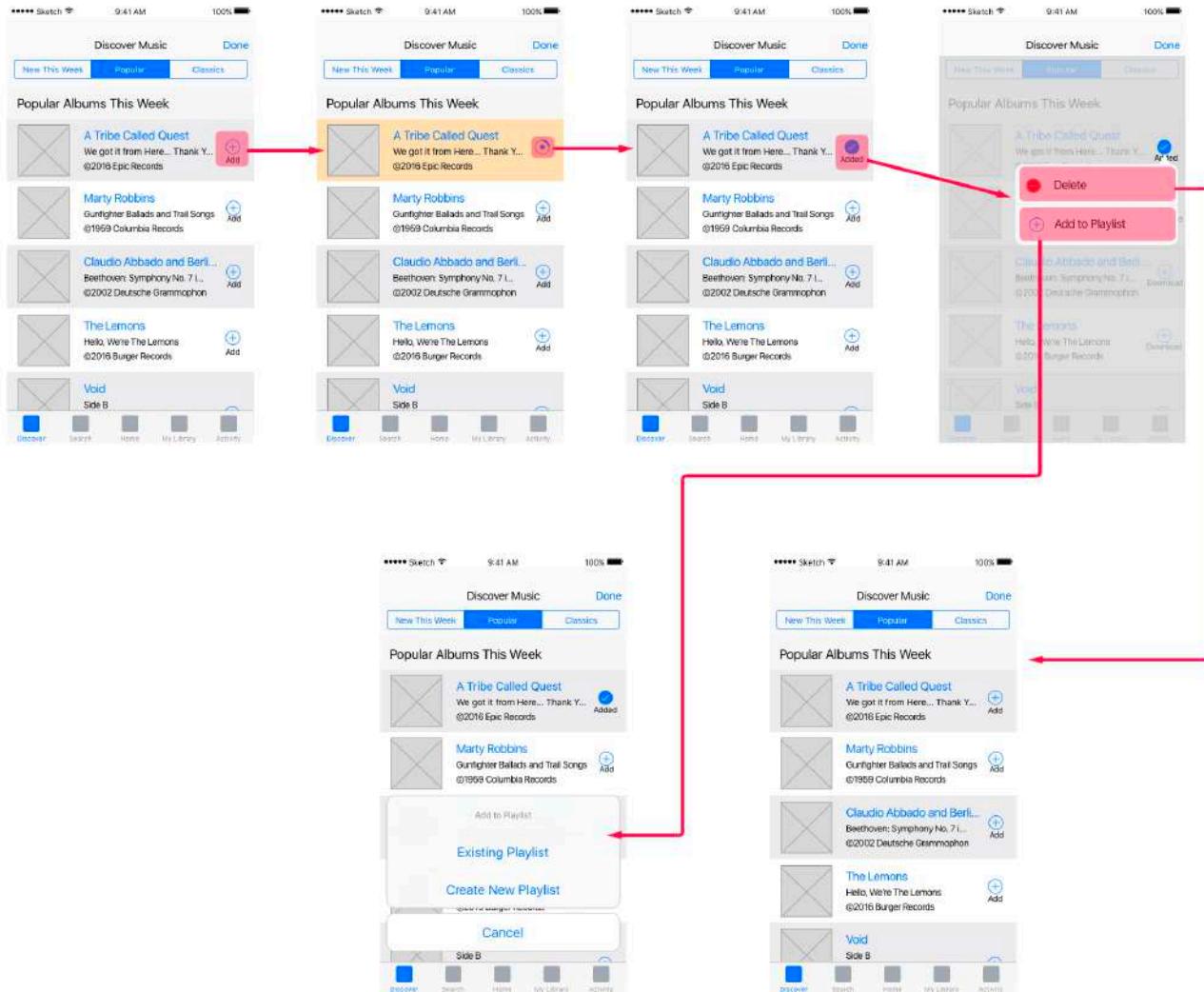


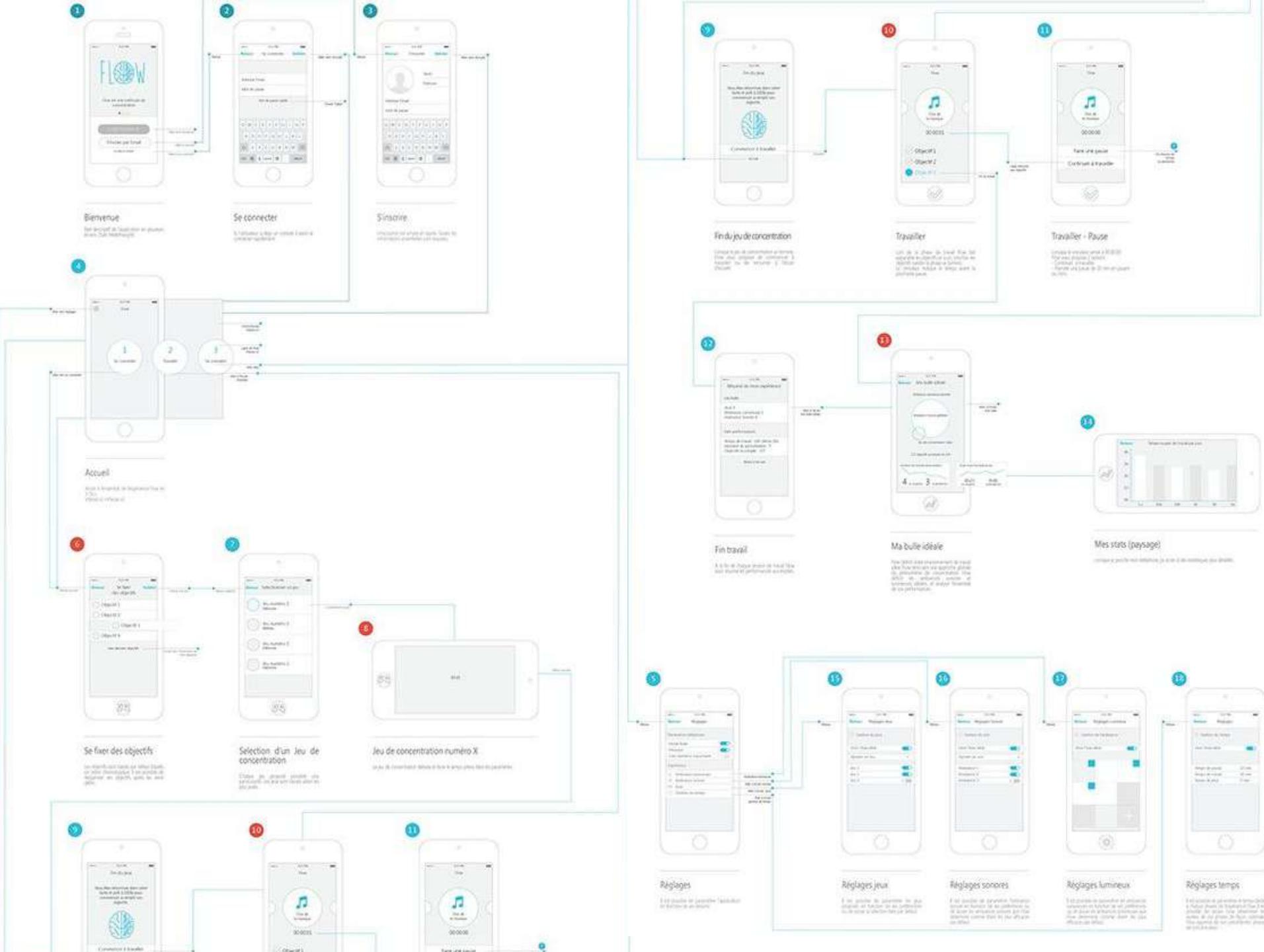
WIREFLOWS

Flow - Scrapbook Tile Creation



WIREFLOWS







INTERACTION DESIGN DIMENSIONS

5 DIMENSIONS OF INTERACTION DESIGN

Application Form

Please enter the description below:

Curabitur lobortis massa. Donec tempus, dui et aliquam rhoncus, metus tortor viverra lectus, ut hendrerit luctus lacus. Aliquam ante ipsum primis in fausto uno factori ut aliquis posset inibitis. Utique, Merle mountens, cornu et fovea spissi, capitulo.

SUBMIT



INTERACTION DESIGN
FOUNDATION

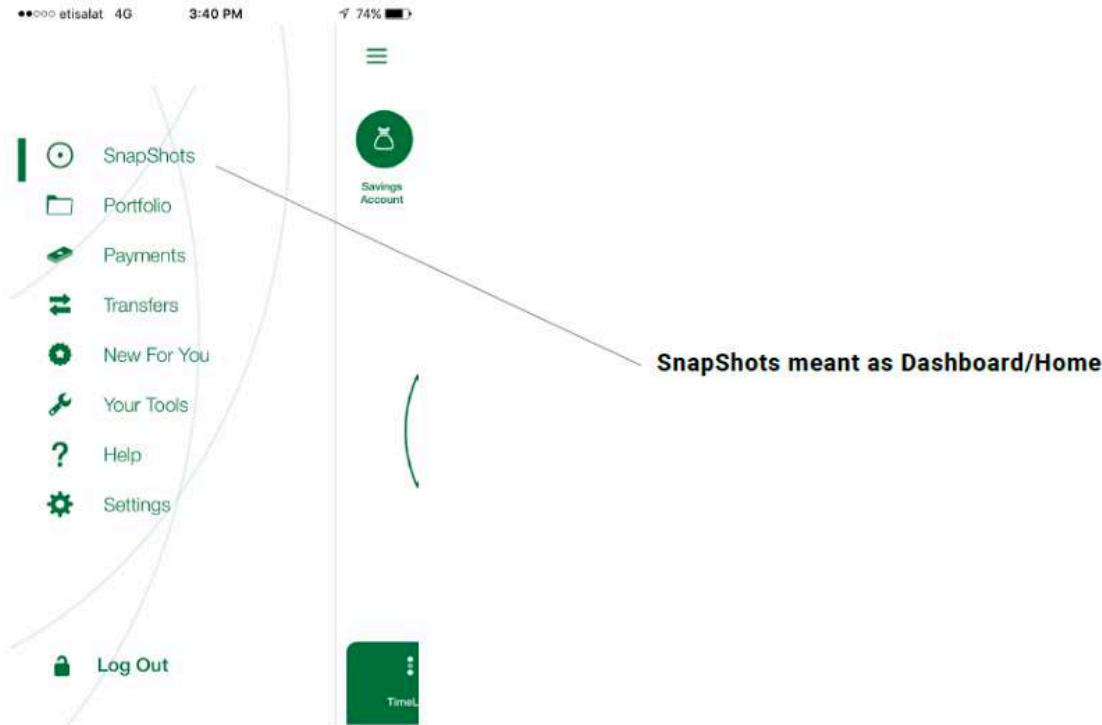
INTERACTION-DESIGN.ORG



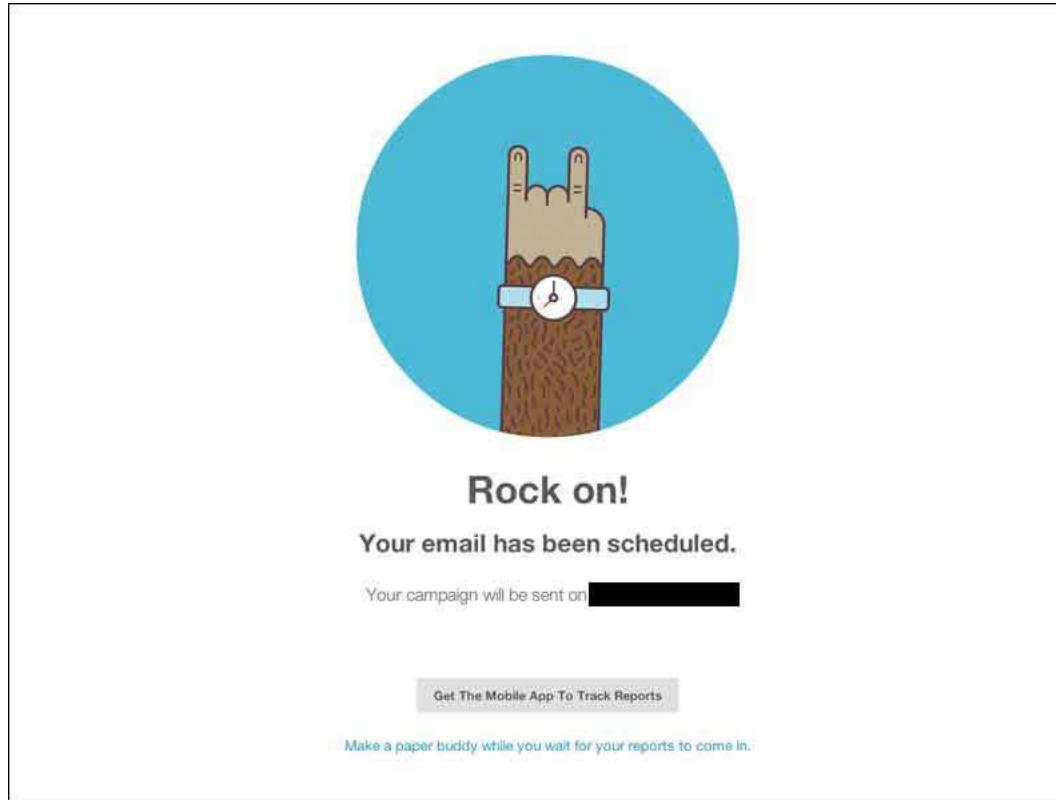
1D: Words

Should be meaningful, consistent and with a suitable “tone of voice”

DON'T



DO





2D: Visual representations

Usually supplement the words used to communicate. Colors, typography, icons etc. should be aligned with words

DON'T

Looking at Sydney Opera House

There are countless philosophies for guiding design as the design values and its accompanying aspects within modern design vary, both between different schools of thought and among practicing designers.



Modern day engineering

In engineering, design is a component of the engineering process. Many overlapping methods and processes can be seen when comparing Product design, Industrial design and Engineering.

DO

Looking at Sydney Opera House



There are countless philosophies for guiding design as the design values and its accompanying aspects within modern design vary, both between different schools of thought and among practicing designers.

Modern day engineering

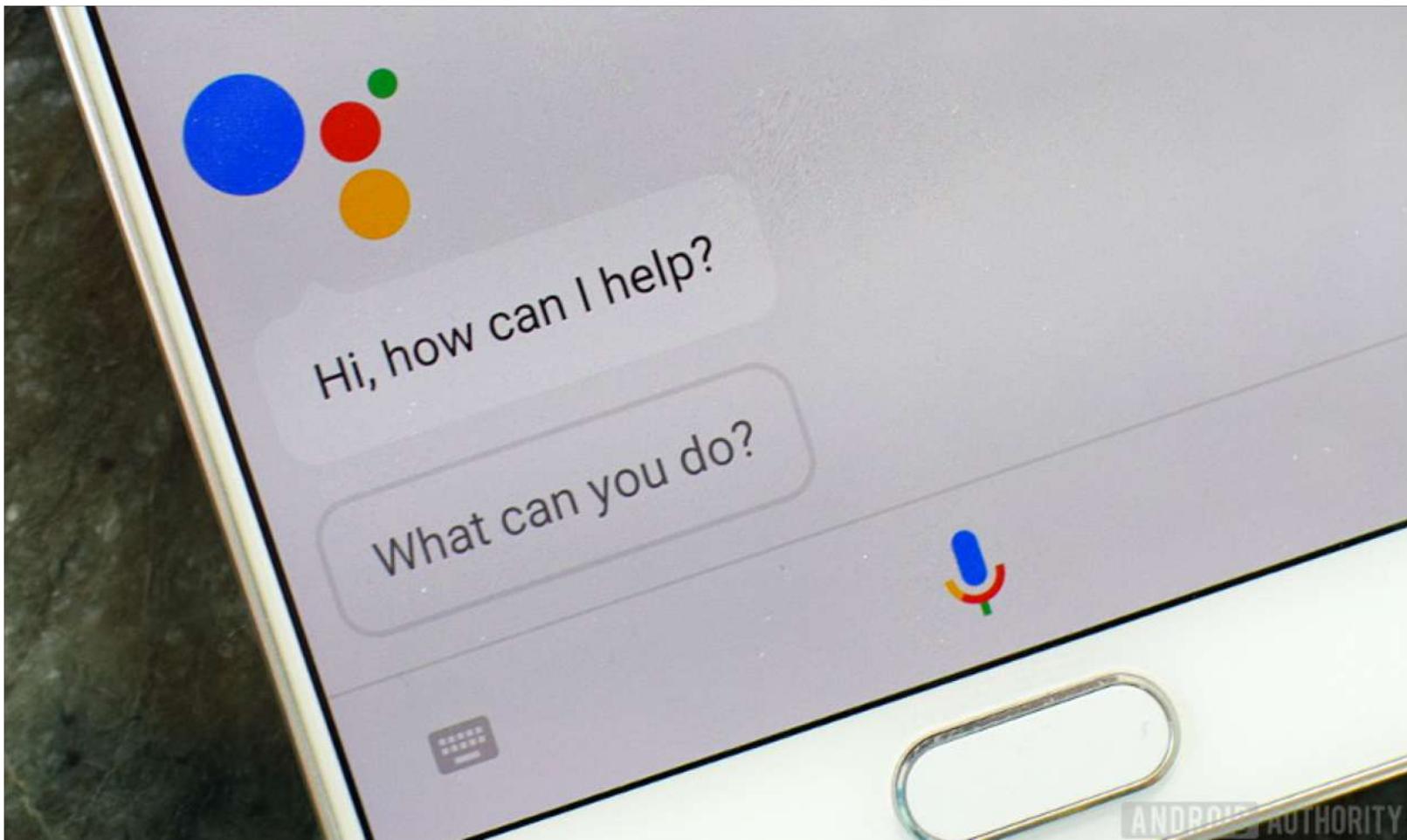
In engineering, design is a component of the engineering process. Many overlapping methods and processes can be seen when comparing Product design, Industrial design and Engineering.



3D: Physical objects or space

The context and the object has an important role in interaction definition

DO

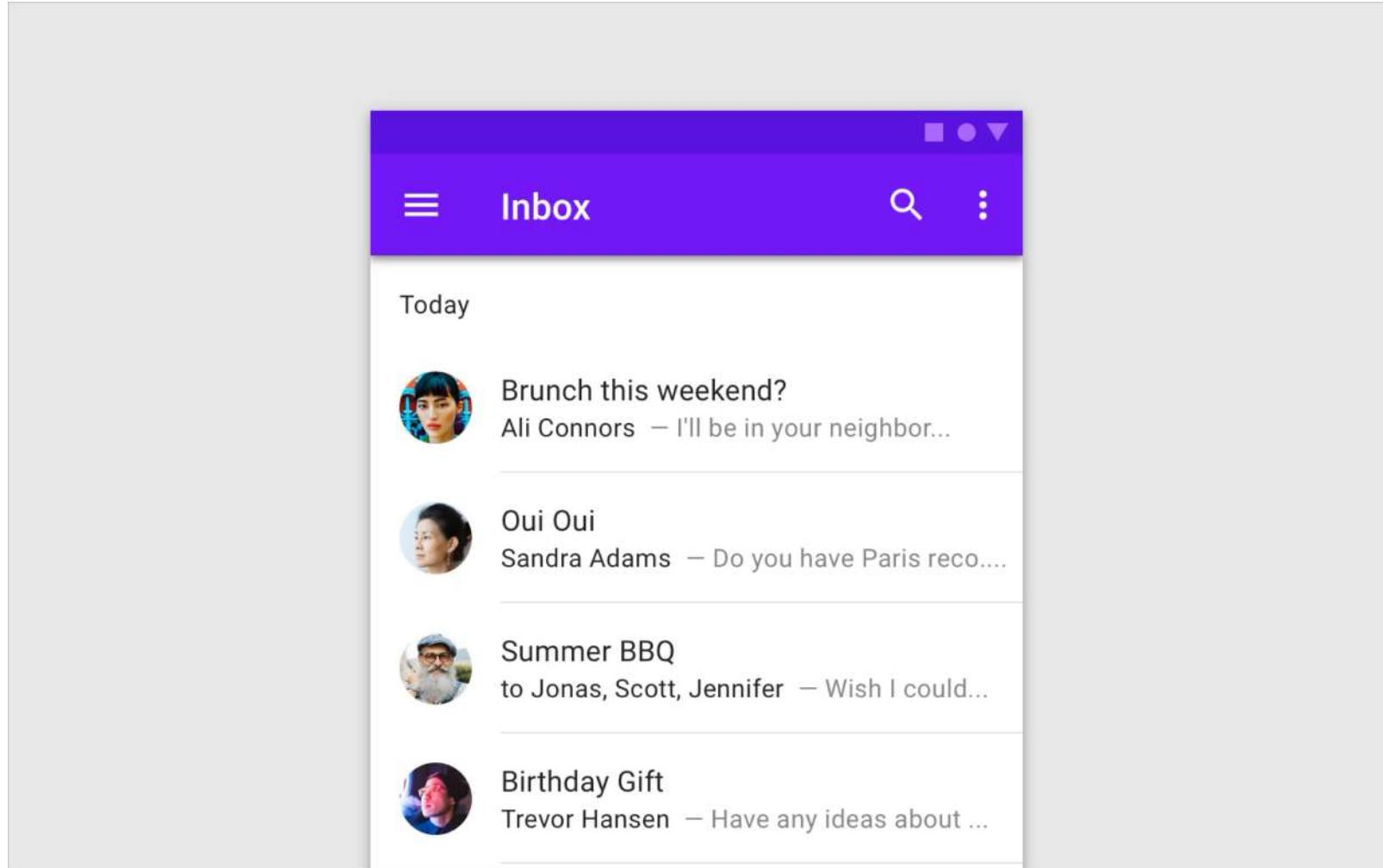


ANDROID AUTHORITY

4D: Time

It's mostly related with motion. Motion increases meaning. Could also be concerned with the time a user spend interacting with the product







5D: Behaviour

How do users perform actions on the website and what is their emotional response

MENTAL MODELS



How do you
think something
should work?

**In early 2016 Fiat Chrysler automobiles
recall over 1 million vehicles**

121 accidents
30 injuries



System Model vs Interaction Model?

,”

Follow user's mental models



IxD PRINCIPLES

by Donald Norman

VISIBILITY



A screenshot of a Microsoft PowerPoint slide titled "Presentation1". The slide has a red border around the content area. The content area contains two text boxes: one large box with the placeholder "Click to add title" and a smaller box below it with the placeholder "Click to add subtitle". The slide footer shows "Slide 1 of 1" and "English (United States)".

FEEDBACK

Submit

.....



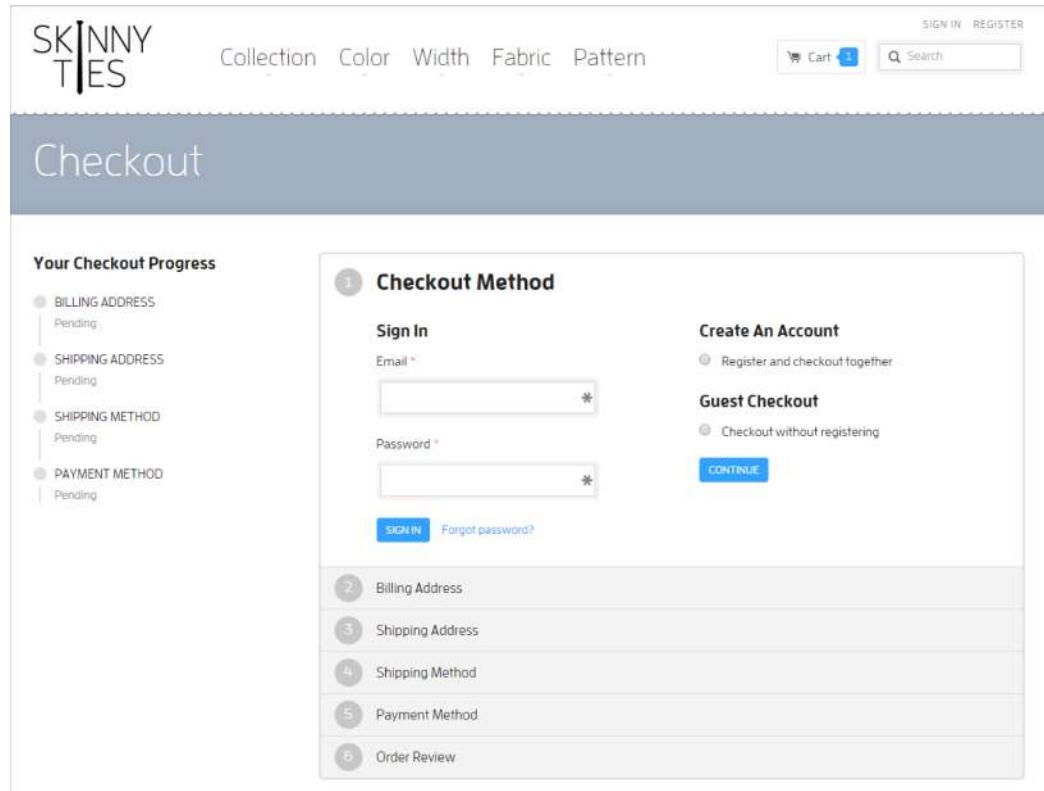
Your password must have:

- ✓ 8 or more characters
- ✓ Upper & lowercase letters
- ✓ At least one number

Strength: strong

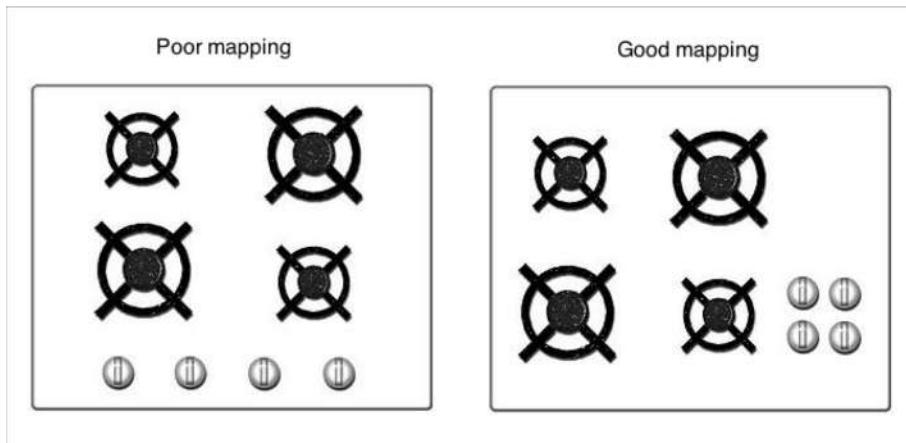
Avoid passwords that are easy to guess or used with other websites.

CONSTRAINTS



Exemplo retirado de: <https://www.howdesign.com/web-design-resources-technology/donald-normans-design-principles-applied-modern-web-design-part-2/>

MAPPING



Min: -10

Max: 40

- 3 +

A horizontal slider control with a value of 3. It features a blue track bar, a white input field with the number '3' in it, and blue minus and plus buttons on either end.

It's responsive too!

CONSISTENCY



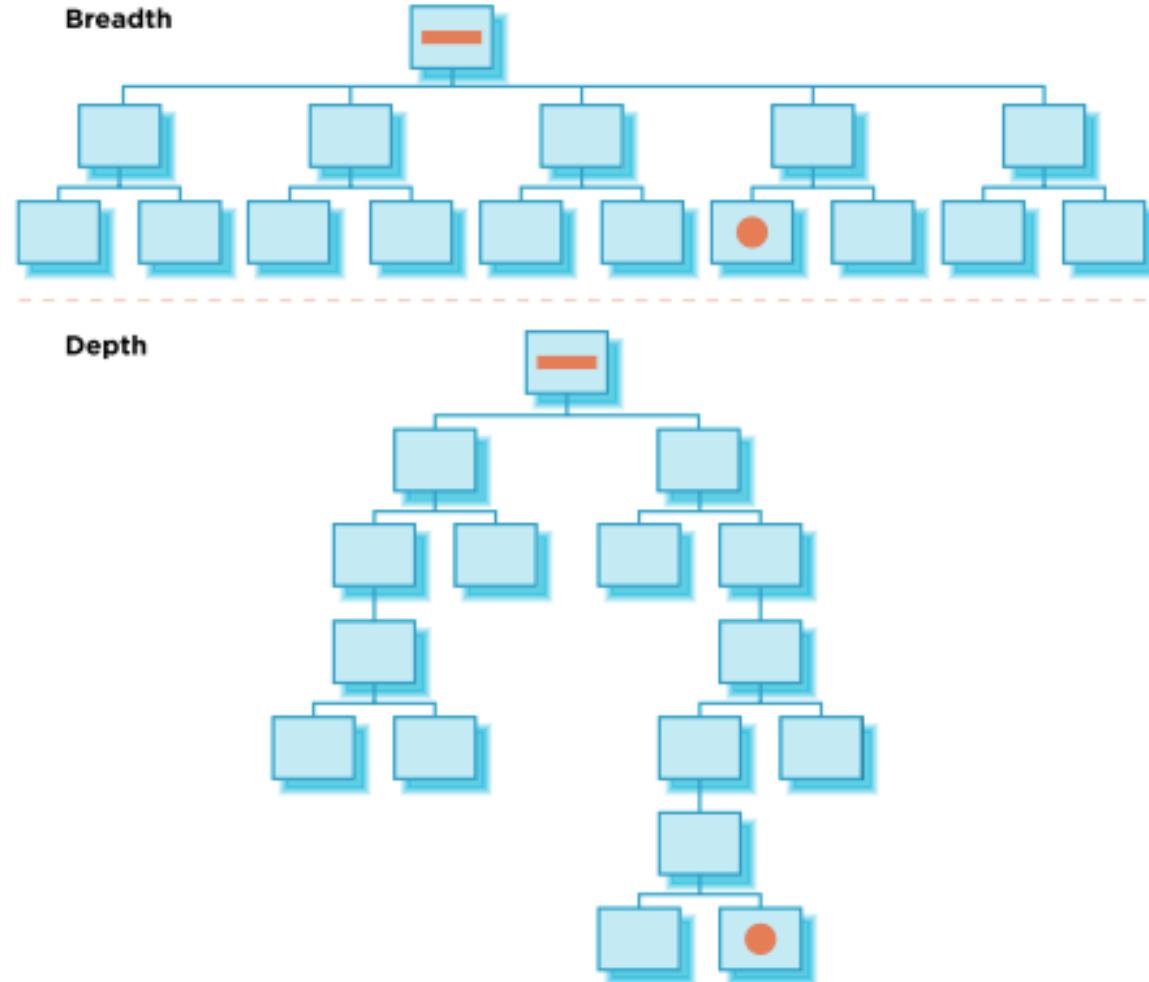
AFFORDANCE



QUALITIES OF SUCCESSFUL NAVIGATION

by James Kalback

BALANCE



BALANCE

Between the number of visible menu items on a page (breath) and the number of hierarchical levels in a structure (depth);

Broader structures works better than deeper ones;

Create clusters of information;

EASE OF LEARNING

The ease of learning is directly related to ease of navigation;

On the Web there is no idea of training that was associated with applications in the beginning of the computational systems;

The duration of time spent on the web is measured in seconds.

CONSISTENCY AND INCONSISTENCY

Consistency is a perceived quality;

Should be present in mechanisms and links
that appear in a steady location;

Consistency ≠ Uniformity!

FEEDBACK

The navigation system should give clues about how to navigate through the website;

Where are we?

What can we do?

Where can we go?

EFFICIENCY

The path to information should be efficient;

To improve efficiency:

- Duplicate access points

- Create shortcuts

- Create escape hatches

CLEAR LABELS

Labels, especially links, are essential for creating navigation.

Avoid jargon, brand names, abbreviations and overly cute or clever;

Meaningful categories that are mutually exclusive

Consistent forms of labels

A coordination of navigation labels with other text elements.

VISUAL CLARITY

Color, typography and layout all contribute to a richer experience.

Create a visual logic;

Foster scanning and make skimming options as easy as possible – **Scannability**;

Buttons and links should look clickable –
Clickability.

APPROPRIATENESS FOR THE TYPE OF SITE

The success of navigation is relative to the kind of site it appears on;

A ecommerce website does not have the same structure as a social network;;

Patterns and guidelines should be selected based on site type.

ALIGNING WITH USER NEEDS

Identify your target group;

Identify the key information needs of each group;

Effective navigation is aligned with deeper user goals and expectations.



USABILITY

,”

Usability is a **quality attribute** that assesses how easy user interfaces are to use. The word "usability" also refers to methods for improving ease-of-use during the design process.



Usability

by Jakob Nielsen

Learnability
Efficiency
Memorability
Errors
Satisfaction

INTERACTION ELEMENTS

INPUT

- Checkboxes are independent
- So they can come in groups
- Or stand alone

Checkboxes – allow the user to select one or more options from a set. Multiple selection.

- Radio buttons
- Come in groups
- And are used to make
- Mutually exclusive selections
- Burma-Shave

Radio buttons – allow users to select from a set of mutually exclusive options.

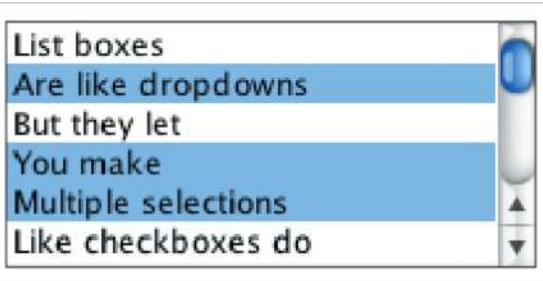
Text input fields let you input text

Text fields – allow users to enter text.

INPUT

Dropdown lists work like radio buttons ↴

Dropdown lists – allow users to select one item at a time, similarly to radio buttons, but are more compact allowing you to save space. They also hide available options.



Lists boxes – provide the same functionality as checkboxes, but they take up less space. They also hide available options.

Buttons perform actions

Action buttons – can have different actions upon touch.

INPUT



Date and time picker – allows users to select a date and/or time.

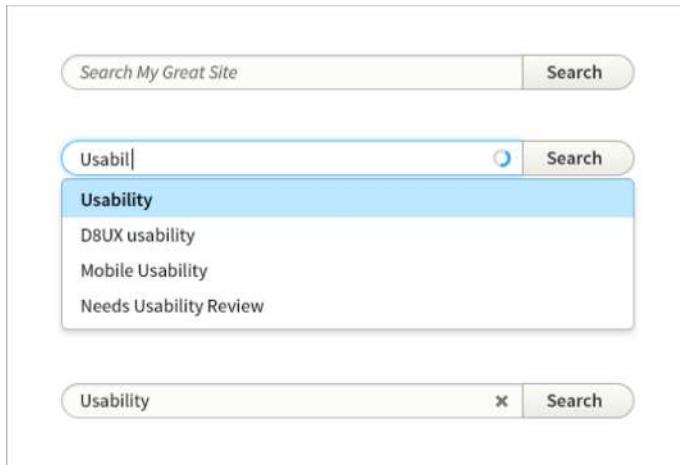


Toggles – allow the user to change a setting between two states.



List views — are toggles but are considered by many authors as navigation elements.

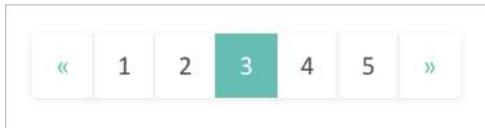
NAVIGATION



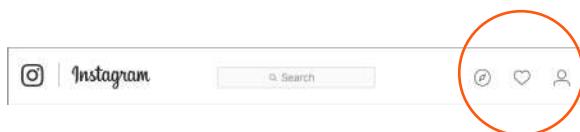
Search field – allows users to enter a keyword or phrase (query) and submit it to search the index with the intention of getting back the most relevant results.

Typically search fields are single-line text boxes and are often accompanied by a search button.

NAVIGATION



Pagination – allows users to skip between pages or go in order through the content.



Icons – typically combined with hyperlinks allows users to navigate the system.

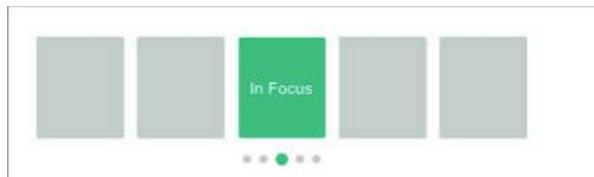


Image carrousel – allows users to browse through a set of items and make a selection of one. Typically, the images are hyperlinked.

NAVIGATION



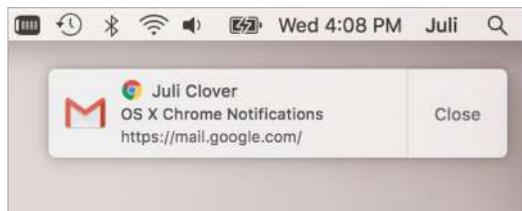
Home » Team » Designers » Sinjin Smythe

Breadcrumbs – allow users to identify their current location within the system by providing a clickable trail of proceeding pages to navigate by.

OUTPUT



Notification – announces something new. They need an action for the notification to disappear.

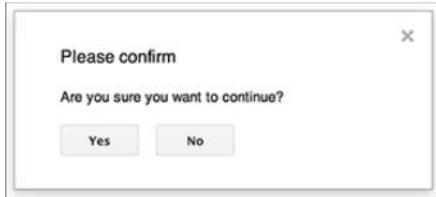


Flash notification – announces something new, but have an associated time.



Progress bar – A progress bar indicates where a user is as they advance through a series of steps in a process. Typically, progress bars are not clickable.

OUTPUT



Message boxes – is a small window that provides information to users and requires them to take an action before they can move forward.



Modal window – requires users to interact with it in some way before they can return to the system.

Tooltip

Tooltips – allow a user to see hints when they hover over an item indicating the name or purpose of the item.



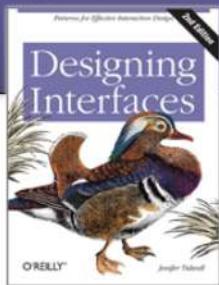
DESIGN PATTERNS

,”

Patterns are **structural** and **behavioral** features that improve the "habitability" of something - a user interface, a Web site, or even a building.
They make things **more usable**, **easier to understand**, or **more beautiful**.

2nd Edition

Excerpts from



Home

About the book

What's new in the second edition

Blog

Patterns

Picture Manager

News Stream

Wizard

Settings Editor

Alternative Views

Many Workspaces

Fat Menus

Sitemap Footer

Animated Transition

Two-Panel Selector

One-Window Drilldown

List Inlay

Grid of Equals

Radial Table

Infinite List

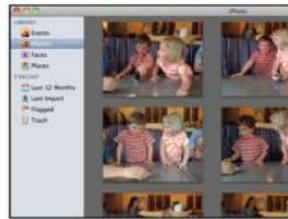
Password Strength Meter

Liquid Layout

Deep Background

Patterns

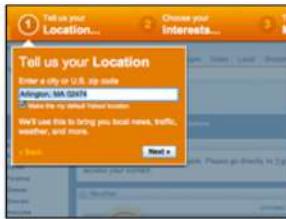
Selected patterns from the book are featured here on the website, in their entirety.



Picture Manager



News Stream



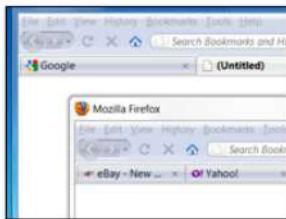
Wizard



Settings Editor



Alternative Views



Many Workspaces



Fat Menus



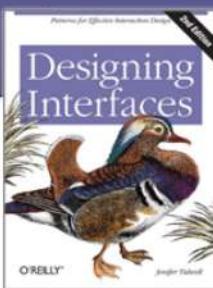
Sitemap Footer



Animated Transition

Buy from Amazon

Excerpts from



2nd Edition

Infinite List

What

At the bottom of a long list, put a button that loads and appends more items to the list.

A screenshot of an email inbox interface. At the bottom of the list, there is a blue button labeled 'Load More Messages...'. Above the button, a message preview says 'Why don't the angles go for two? Great, now it's 13 - 24. Am I missing something or this like the longest drive in...'. Below the button, it says '1,995 messages total, 365 unread'. A refresh icon and the date 'Updated 1/19/09 9:33 PM' are also visible.

Use when

You need to show long lists of email messages, search results, an archive of articles or blog posts, or anything else that is effectively “bottomless.”

Users are likely to find desired items near the top, but they sometimes need to search further.

Why

The initial loading of a screenful or two of items is fast, and the user doesn’t get stuck waiting for a very long initial page load before she sees anything useful.

Each subsequent loading of a new chunk of items is also fast, and it’s under user control—the user decides when (and whether) she needs to load more items.

Since the new items are just appended to the current page, the user never has to context-shift by going to a new page to see new items, as she would with paginated search results.

How

When the page or list is initially sent to the mobile device, truncate the list at a reasonable length. That length will vary greatly with item size, download time, and the user’s goal—is she reading everything (as with Facebook), or just scanning a large number of items to find the one she wants (as with search results)?

At the bottom of the scrolled page, put a button that lets the user load and show more items. Let the user

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Google Custom Search Search

Pattern library

All patterns are listed here. It's quite a bunch of them, but I have tried to group them meaningfully.

User needs

Patterns that meet a direct need of the user.

Navigating around	Searching	Shopping
<ul style="list-style-type: none">· Accordion· Headerless Menu· Breadcrumbs· Directory Navigation· Doormat Navigation· Double Tab Navigation· Faceted Navigation· Fly-out Menu· Home Link· Icon Menu· Main Navigation· Map Navigator· Meta Navigation· Minesweeping	<ul style="list-style-type: none">· Advanced Search· Autocomplete· Frequently Asked Questions (FAQ)· Help Wizard· Search Box· Search Area· Search Results· Search Tips· Site Index· Site Map· Footer Sitemap· Tag Cloud· Topic Pages	<ul style="list-style-type: none">· Booking· Product Comparison· Product Advisor· Product Configurator· Purchase Process· Shopping Cart· Store Locator· Testimonials· Virtual Product Display
		Making choices
		<ul style="list-style-type: none">· Country Selector· Date Selector· Language Selector

Suggest a pattern

Have you seen new examples of patterns out there that have not been described on this site? Send me a link to an example and I'll add it to my to-do list.

[Suggest a pattern](#)

Latest comments

[Form \(Lucas Gwadana\)](#)
Sometimes the ERROR handling is not explicit enough because when a user makes an...

[Map Navigator \(Marcus\)](#)
For print pages etc static maps are still relevant. For them, narrow navigation ...

[Accordion \(dellmre\)](#)



Navigating around

- [Accordion](#)
- [Headerless Menu](#)
- [Breadcrumbs](#)
- [Directory Navigation](#)
- [Doormat Navigation](#)
- [Double Tab Navigation](#)
- [Faceted Navigation](#)
- [Fly-out Menu](#)
- [Home Link](#)
- [Icon Menu](#)
- [Main Navigation](#)
- [Map Navigator](#)
- [Meta Navigation](#)
- [Minesweeping](#)
- [Panning Navigator](#)
- [Overlay Menu](#)
- [Repeated Menu](#)
- [Retractable Menu](#)
- [Scrolling Menu](#)
- [Shortcut Box](#)
- [Split Navigation](#)
- [Teaser Menu](#)
- [To-the-top Link](#)
- [Trail Menu](#)
- [Navigation Tree](#)

[< Pattern index](#)

Accordion

Problem

The user needs to find an item in the main navigation

Solution

Stack panels vertically or horizontally and open up one panel at the time while collapsing the other panels

1. Accordion

2. AutoSize

It also supports three AutoSize modes so it can fit in a variety of layouts.

- **None** - The Accordion grows/shrinks without restriction. This can cause other elements on your page to move up and down with it.
- **Limit** - The Accordion never grows larger than the value specified by its Height property. This will cause the content to scroll if it is too large to be displayed.
- **Fill** - The Accordion always stays the exact same size as its Height property. This will cause the content to be expanded or shrunk if it isn't the right size.

3. Control or Extender

4. What is ASP.NET AJAX?

From [ASP.net](#)

Use when

Accordions are often used as part of [Main Navigation](#) or subnavigation. If used for navigation it

Also known as

[Closable Panels](#)

[Collapsible Panels](#)

Code examples

[DHTML Accordion Menu 2.0](#)

[ASP.NET: Accordion Sample](#)

[Spry: Accordion Sample](#)

PLME

Main Page – Social Patterns

designingsocialinterfaces.com/patterns.wiki/index.php?title=Main_Page

Home About The Book Patterns Events

Main Page

#What is this site? #What's a pattern?

Contents [hide]

- [1 Social Patterns & Best Practices](#)
 - › [1.1 Principles](#)
 - › [1.1.1 Fundamental Principles](#)
 - › [1.2 Self](#)
 - › [1.2.1 Engagement](#)
 - › [1.2.2 Identity](#)
 - › [1.2.3 Presence](#)
 - › [1.2.4 Reputation](#)
 - › [1.3 Activities](#)
 - › [1.3.1 Collecting](#)
 - › [1.3.2 Broadcasting & Publishing](#)
 - › [1.3.3 Sharing](#)
 - › [1.3.4 Feedback](#)
 - › [1.3.5 Communicating](#)
 - › [1.3.6 Collaboration](#)

The interface pattern for managing and displaying availability may also be referred to as "online presence indicators" (OPIs). They provide a way for a user to display to other people (either the public, or their contacts, depending on the rules of the system) when they are available for contact and when not.

kim.hans	
nickterry	
Yep, I'm here.	
nzmarshall	
ryochijiwa	
shuanlo	
tom_croucher_y	
rickym007	
idle	
jonokane	
irish springin it, yo.	
nosnaab	
GO CAP!	
runningwithscissors42	
Away	

A small set of icons can be used to indicate at a glance who is available, who is idle, and who is away. The interface may optionally sort the listed people by availability, as in this Yahoo! Messenger window.

Contents [hide]

- 1 Problem
- 2 Use When
- 3 Solution
 - 3.1 Stealth Mode
- 4 Rationale
- 5 Open Questions
- 6 Yahoo! OPIs
- 7 Sources

Problem

Users need to see who else is online, available and open to contact.

Use When

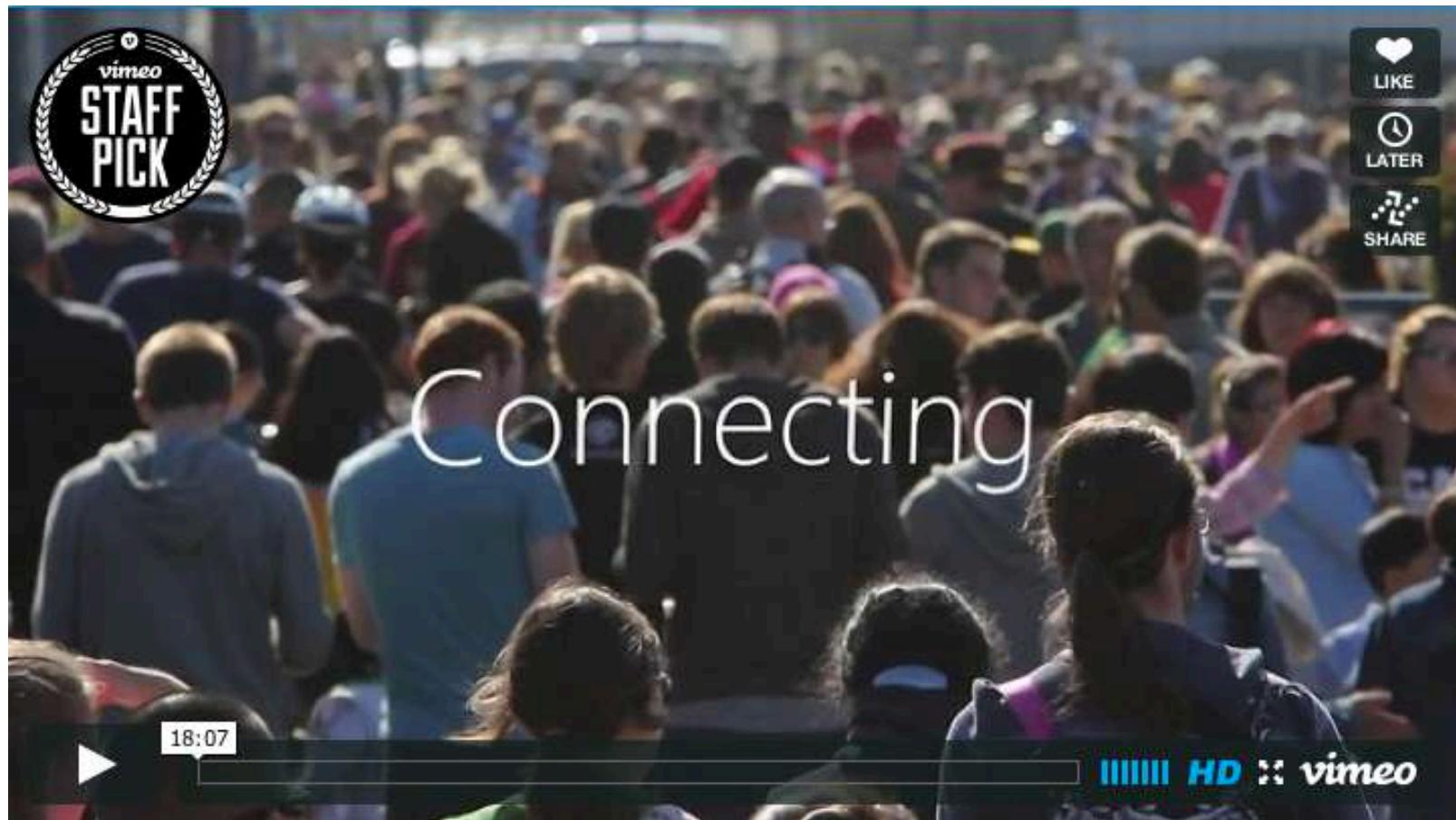
Here are four typical use cases for online presence indicators:

- A person wants to determine whether their friend is online.
- A person wants to see who is available for contact.
- A person wants to see if their friend is available for communication.
- A person wants to show that they are busy to their contacts.

Solution

Allow the user to visually identify themselves in one of three possible states - "Available", "Busy", or "Offline". Additionally,

RECOMMENDATION



<https://vimeo.com/52861634>

TASK TO PRACTICAL CLASS #3

Wireflows

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BAD DESIGN EXAMPLES

<https://www.reddit.com/r/softwaregore/>

<https://darkpatterns.org/>
