

DESIGNING FOR THE DIGITAL ECOSYSTEM

Cornell Tech 2016

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Adam Katz

Matt Delbridge

CLASS 3:

DIGITAL DESIGN BASICS

**WE COVERED
DESIGN BASICS**

WHAT IS DIGITAL DESIGN?

DIGITAL DESIGN

A BIRD'S EYE VIEW



FIRST A BRIEF HISTORY OF DIGITAL DESIGN



File Edit View Special

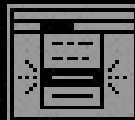
Control Panel

THE G.U.I.

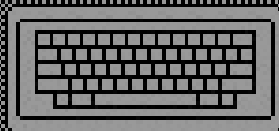
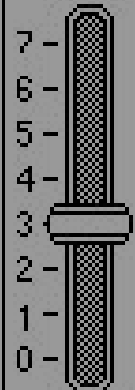


1/17/00

22:32:50



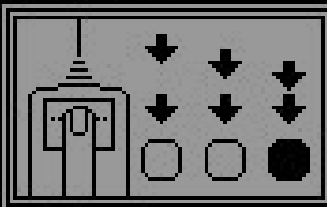
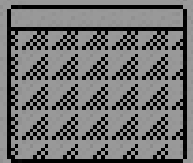
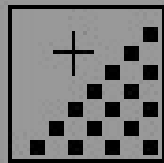
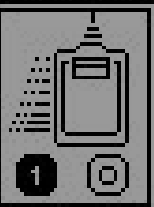
0 1 2 3



0 1 2 3 4

0 1 2 3 4

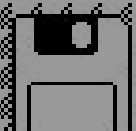
1 2 3



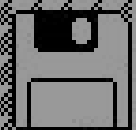
Calculator

0

C E = *
7 8 9 /
4 5 6 -
1 2 3
0 . +



System Disk



Guided Tour

Puzzle

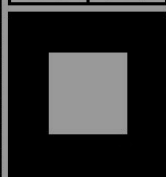
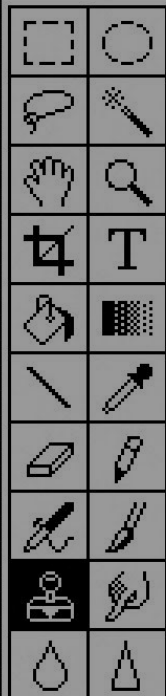
2	5	10	14
1	13	8	15
3		4	7

Key Caps



\	1	2	3	4	5	6	7	8	9	0	-	=	
	q	w	e	r	t	y	u	i	o	p	[]	\

NEW TOOLS (SOFTWARE) 512.tif (1:1)



512K



NEW PROBLEMS (PIXELS) (TYPOGRAPHY)

The quick brown
fox jumps over
a lazy dog.

NEW DESIGN STYLES

The Architecture of Patterns

Design by David Salomon

Paul Andersen and David Salomon

The Architecture of Patterns
Paul Andersen and David Salomon

Salomon

Front Page

World

UK

UK Politics

Business

Sci/Tech

Health

Education

Sport

Entertainment

Talking Point

In Depth

AudioVideo

Tuesday, 29 February, 2000, 07:50 GMT

LATEST:**US applauds Haider resignation**

The United States gives a qualified welcome to the resignation of the leader of Austria's far right Freedom Party, Joerg Haider.

audio video

Also:

- ▶ Analysis: Haider's tactical move
- ▶ Analysis: EU's forceful warning on Haider
- ▶ Profile: Joerg Haider

news in other languages

پښتو او عربي

audio News in Audio: "The move could help him"

NOTICIAS

In Depth: The Haider Factor

HOBOCTM

時事天地

NEWYDDION

**'Looted' art lists unveiled**

Hundreds of works of art suspected of having been looted by the Nazis are hanging in the UK's galleries, a report is to reveal.

audio

Also:

- ▶ Hope for Nazi loot victims
- ▶ Brushing out the taint of looted art
- ▶ Stolen Nazi art returned

Search BBC News Online

Go

Advanced search options

BBC ONE TV NEWS

WORLD NEWS SUMMARY

AUDIO/VIDEO

Dial M for mother

Mobile videophones of the future



real 28k

IN DEPTH

Vote USA 2000

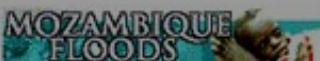
Latest news and features from the US campaign trail



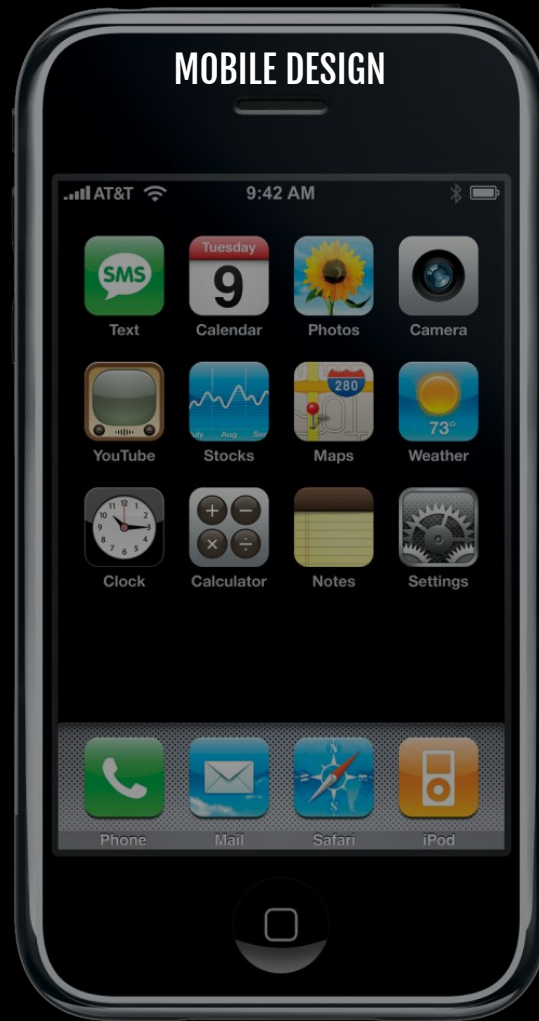
TALKING POINT

Mozambique

Time for an international rescue?

**Kournikova's love match**

MOBILE DESIGN



NEW SCREEN SIZES



INTERNET OF THINGS



WHAT ARE THE COMPONENTS OF DIGITAL DESIGN

UX

+

UI

UX
USER EXPERIENCE

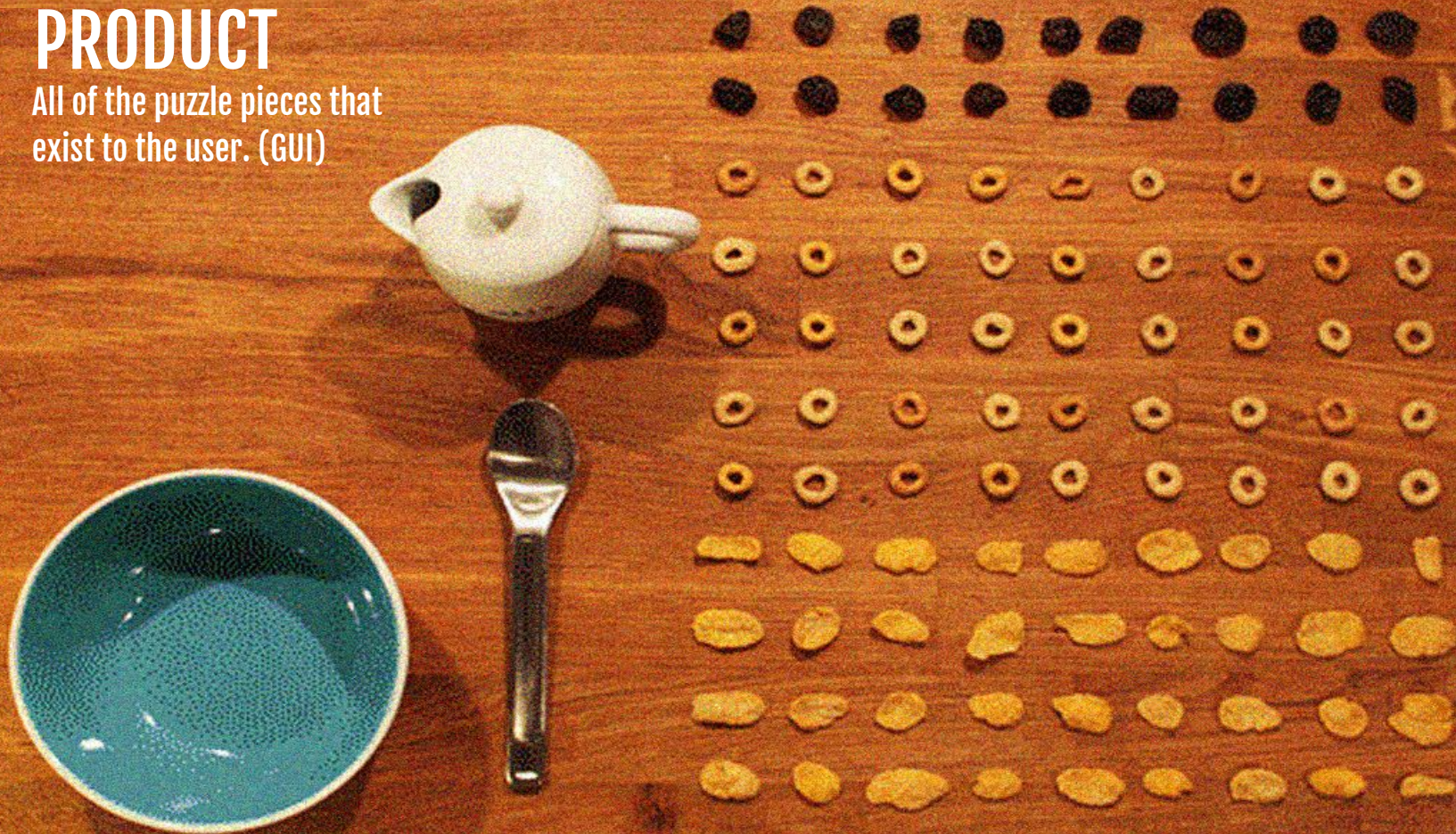
+

UI
USER INTERFACE

The Difference Between UX and UI by Ed Lea

PRODUCT

All of the puzzle pieces that
exist to the user. (GUI)



USER EXPERIENCE (UX)

The whole puzzle, ready to consume.



USER INTERFACE (UI)

The puzzle piece(s) that the user needs to get the job done.



SO TO REPEAT

PRODUCT

All of the puzzle pieces that
exist to the user. (GUI)



USER EXPERIENCE (UX)

The whole puzzle, ready to consume.



from Your location

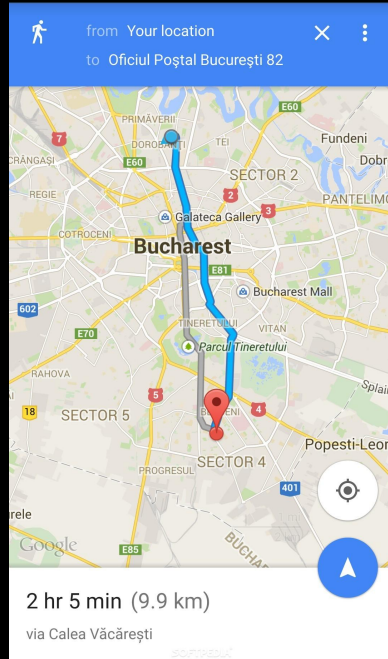


to Oficiul Poștal București 82

Getting you from A - B

USER INTERFACE (UI)

The puzzle piece(s) that the user needs to get the job done.



AND AGAIN

PRODUCT

All of the puzzle pieces that
exist to the user. (GUI)



USER EXPERIENCE (UX)

The whole puzzle, ready to consume.

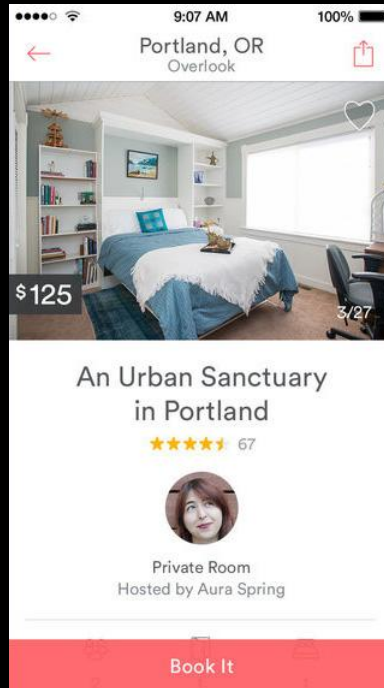


Where are you going?

Finding you a place to stay

USER INTERFACE (UI)

The puzzle piece(s) that the user needs to get the job done.



ONE MORE TIME

PRODUCT

All of the puzzle pieces that
exist to the user. (GUI)



USER EXPERIENCE (UX)

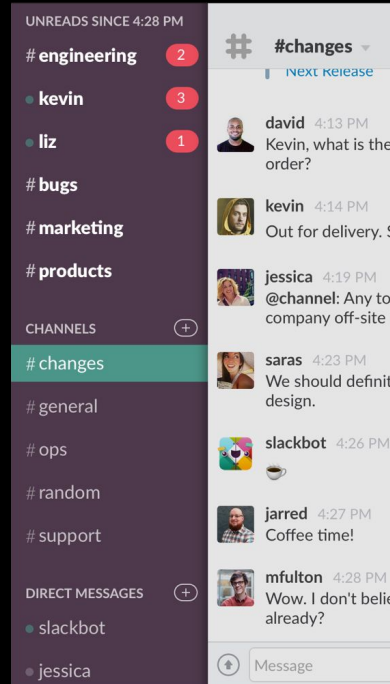
The whole puzzle, ready to consume.



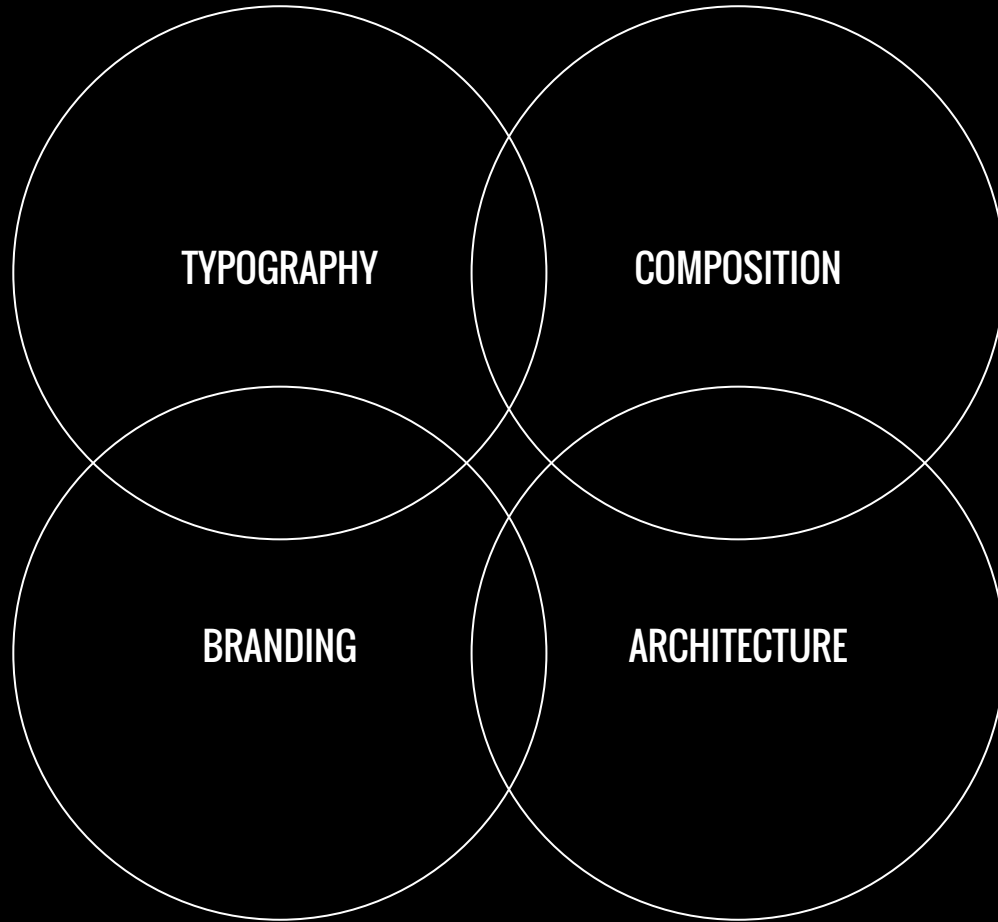
Project management through messaging.

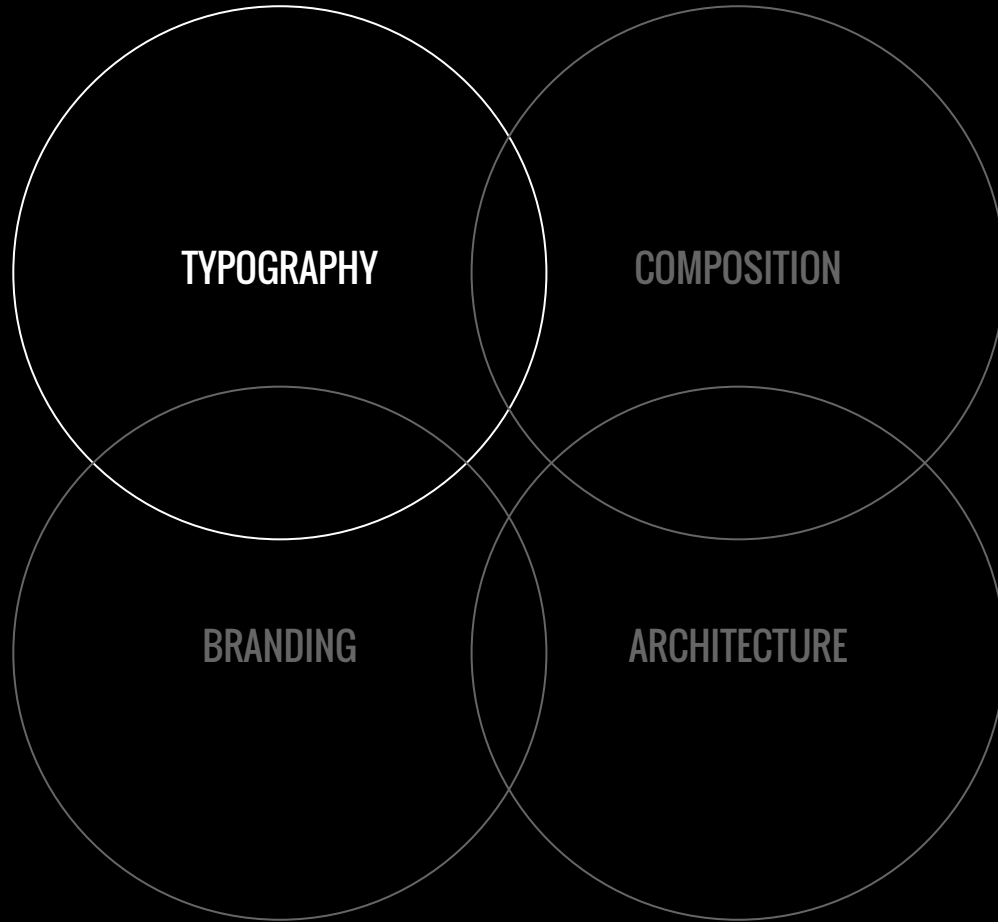
USER INTERFACE (UI)

The puzzle piece(s) that the user needs to get the job done.



UI = VISUAL DESIGN





**DIGITAL DESIGN TYPOGRAPHY
OPERATES UNDER A FEW RULES**

TYPE SHOULD BE SIMPLE AND READABLE.

MOST LIKELY A GEOMETRIC SANS-SERIF.

HAS TO WORK AT SMALL SIZES.

ONE TYPEFACE WITH MULTIPLE WEIGHTS SHOULD BE PLENTY.

Heading 1

<h1></h1>

CSS

Heading 2

<h2></h2>

Elements

Body Paragraph

<p></p>

Lorem ipsum dolor sit amet, consectetur
adipiscing elit, sed do eiusmod tempor
incididunt ut labore et dolore magna rut
exercitation ullamco laboris nisi ut aliquip.

Ordered List

```
<ol>  
<li></li>  
</ol>
```

Unordered List

```
<ul>  
<li></li>  
</ul>
```

- | | |
|-------------------|------------------|
| 1. Lorem ipsum | • Lorem ipsum |
| 2. Dolor sit amet | • Dolor sit amet |
| 3. Consectetur | • Consectetur |
| 4. Ad minim quis | • Ad minim quis |

Link

a:link

[LINK HERE](#)

Font

Properties

```
h1 {  
  line-height:normal;  
}
```

Font Properties

```
h1 {  
  padding:0;  
  align:left;  
}
```

Font

1.15 x font size

Properties

```
h1 {  
  line-height:1.15;  
}
```

Font Properties

```
h1 {  
  padding:30px 30px 30px 30px;  
}
```

Font Properties

```
h1 {  
  font-style:normal;  
  font-weight:bold;  
}
```

Font Properties

```
h1 {  
  font-style:normal;  
  font-weight:normal;  
}
```

Font Properties

```
h1 {  
  font-style:italic;  
  font-weight:bold;  
}
```

Font Properties

```
h1 {  
  font-style:italic;  
  font-weight:normal;  
}
```

Font Properties

```
h1 {  
  font-family: Helvetica,  
  Arial, sans-serif;  
}
```

Font Properties

```
h1 {  
  font-family: Helvetica,  
  Arial, sans-serif;  
}
```

Font Properties

```
h1 {  
  font-family: Helvetica,  
  Arial, sans-serif;  
}
```

Font Properties

```
h1 {  
  font-size: 0.5em;  
}
```

Text Properties

```
h1 {  
  text-align:left;  
}
```

text properties

```
h1 {  
  text-transform:lowercase;  
}
```

Text Properties

```
h1 {  
  text-decoration:underline;  
}
```

T e x t P r o p e r t i e s

```
h1 {  
  letter-spacing:50px;  
}
```

THE GOOD

FEATURED CATEGORIES



LARGE-SCALE SCULPTURE

SUBJECT MATTER



YOUTH



WATERSCAPE



RELIGION



MORTALITY



OLEG DOU >

MK1 from Mushroom Kingdom series, 2013

C-print face mounted with Acrylic

47 1/5 x 47 1/5 in

120 x 120 cm

Galeria Senda >

Price: €10,000



FEATURED PARTNER

**GUGGENHEIM
JAMES TURRELL**

Featured Works for Sale >

CURRENT SHOWS

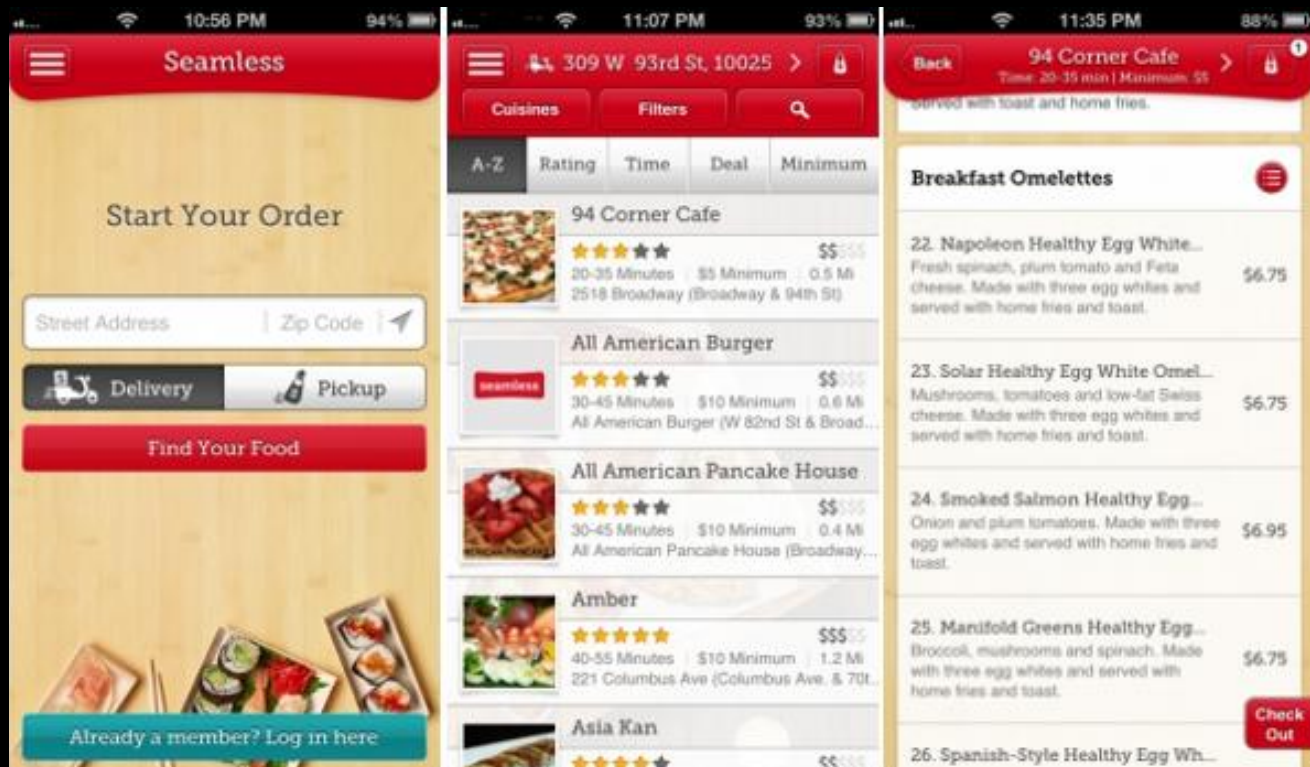
Jeff Koons: New Paintings and Sculpture
Gagosian Gallery

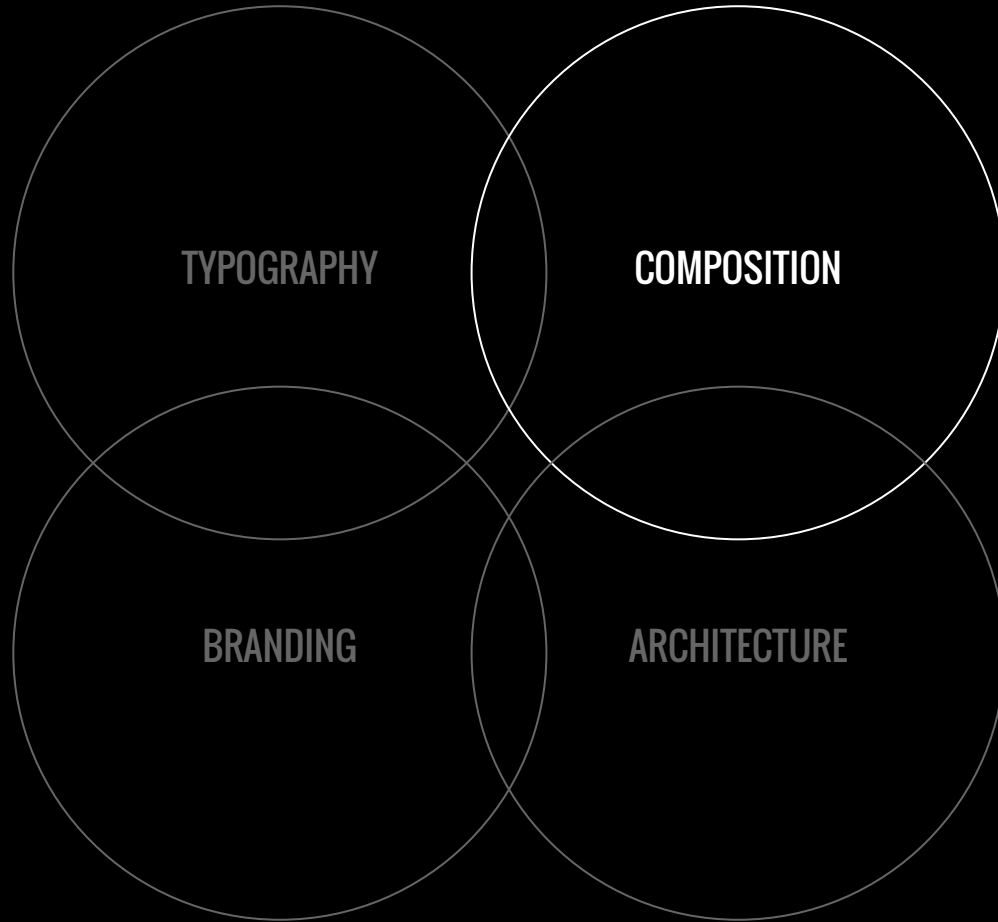
May 9 - Jul 3, New York



THE BAD

SEAMLESS





ALWAYS USE A GRID

THE GRID IDEALLY IS FLEXIBLE FOR BOTH VERTICAL...

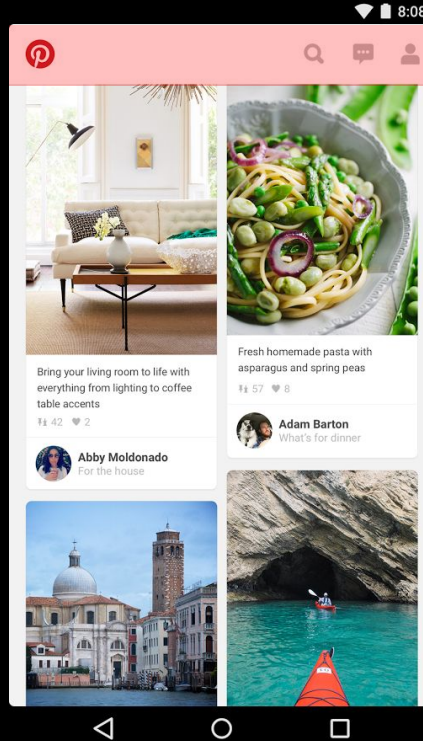


AND HORIZONTAL DISPLAYS



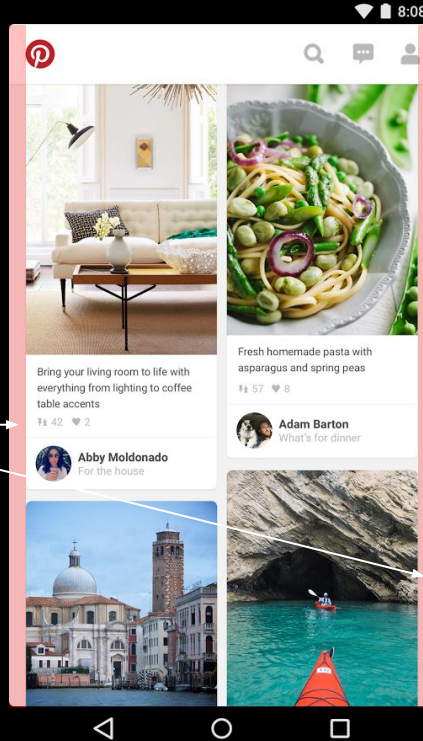
THESE GRIDS HAVE

Headers



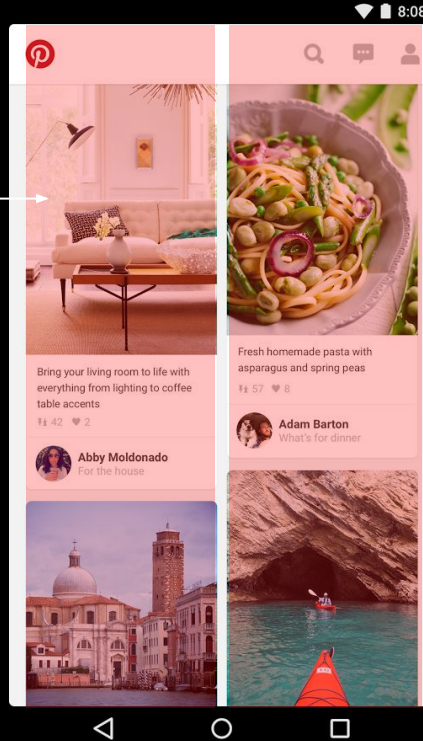
THESE GRIDS HAVE

Margins



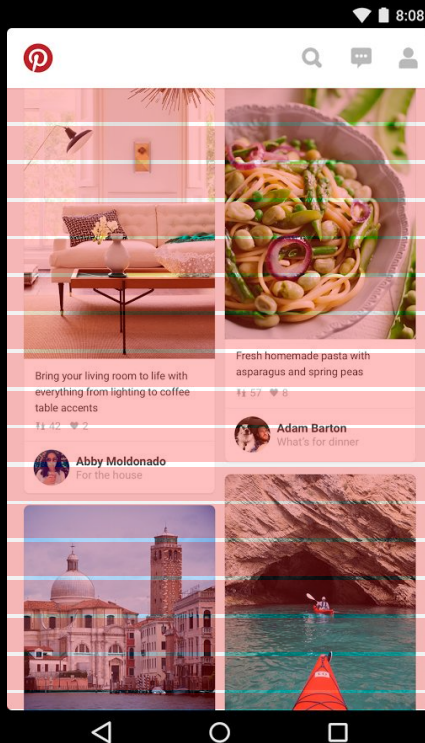
THESE GRIDS HAVE

Columns

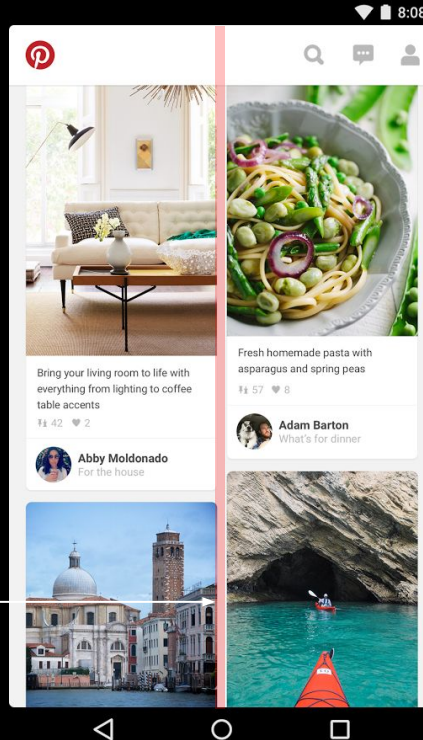


ROWS

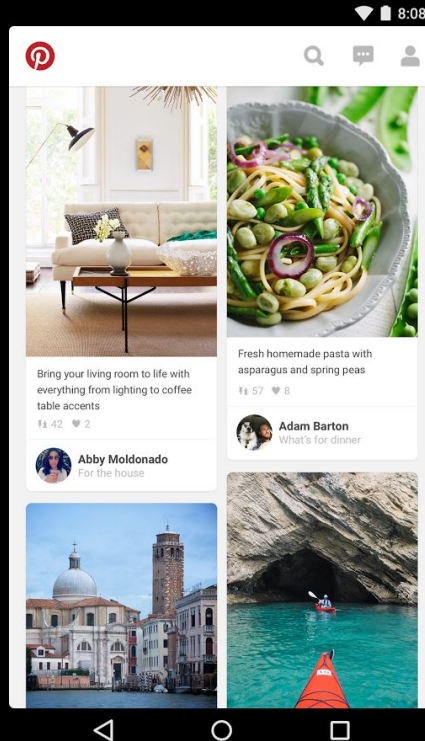
Rows →



GUTTERS

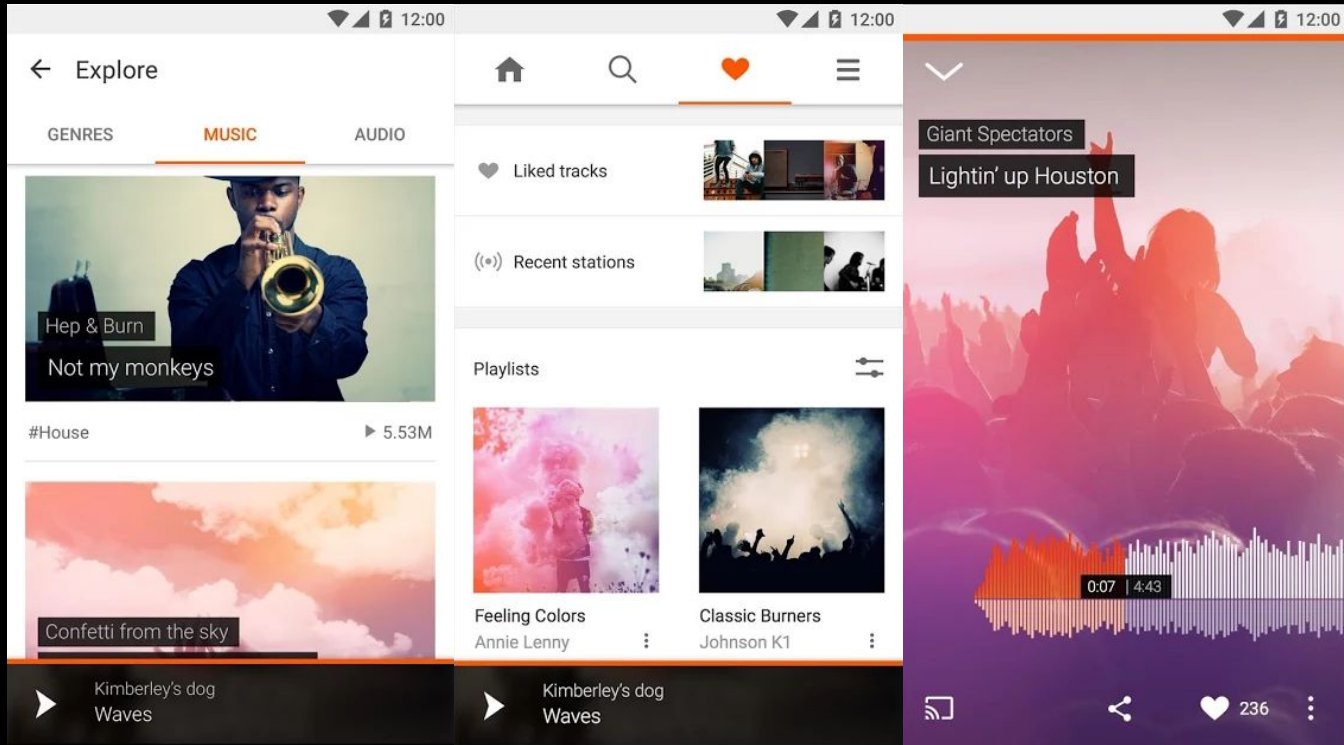


AND WHITE SPACE



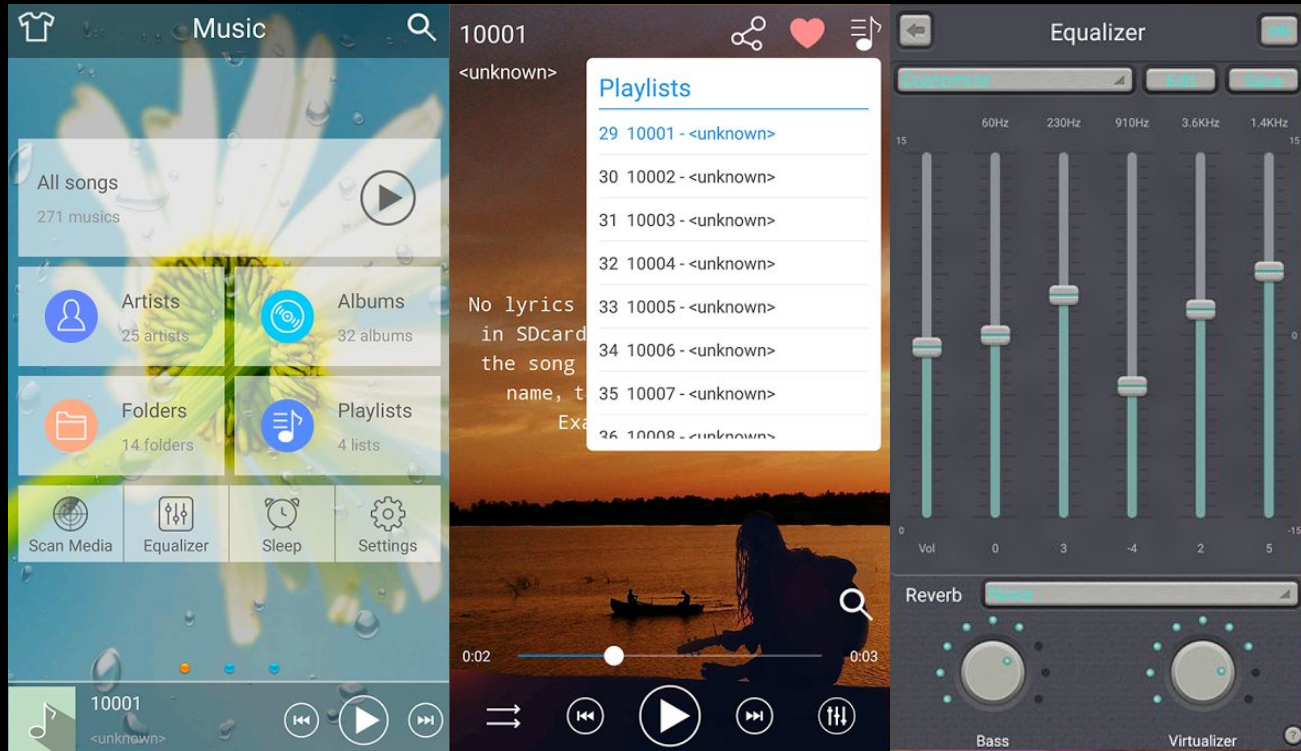
THE GOOD

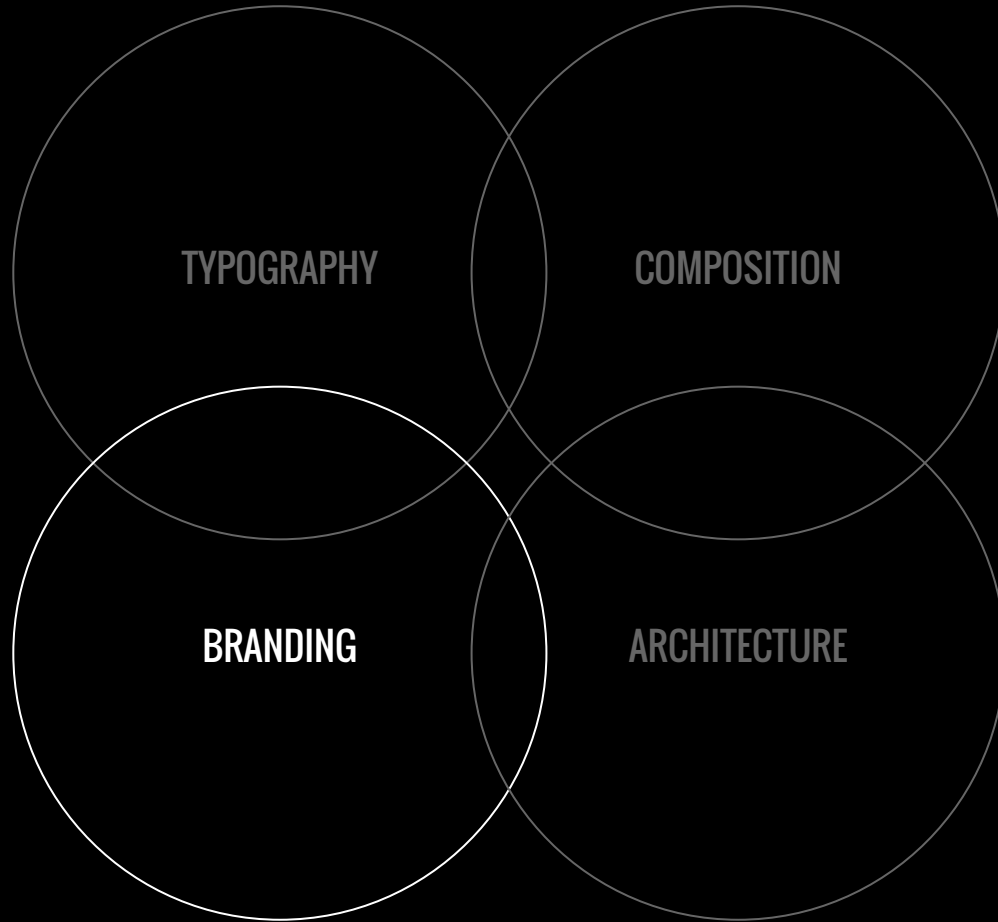
SOUNDCLOUD



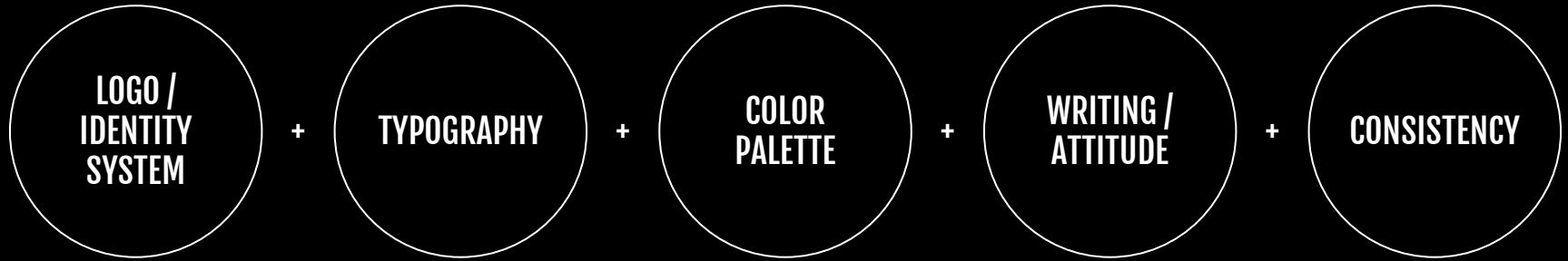
THE BAD

LEOPARD MUSIC PLAYER





BRANDING IS COMPRISED OF:



**THE LOGO SHOULD BE READABLE,
SCALABLE, SIMPLE AND EVER-PRESENT**

SCALABLE

The logo should be able to shrink down to tiny sizes and screens.



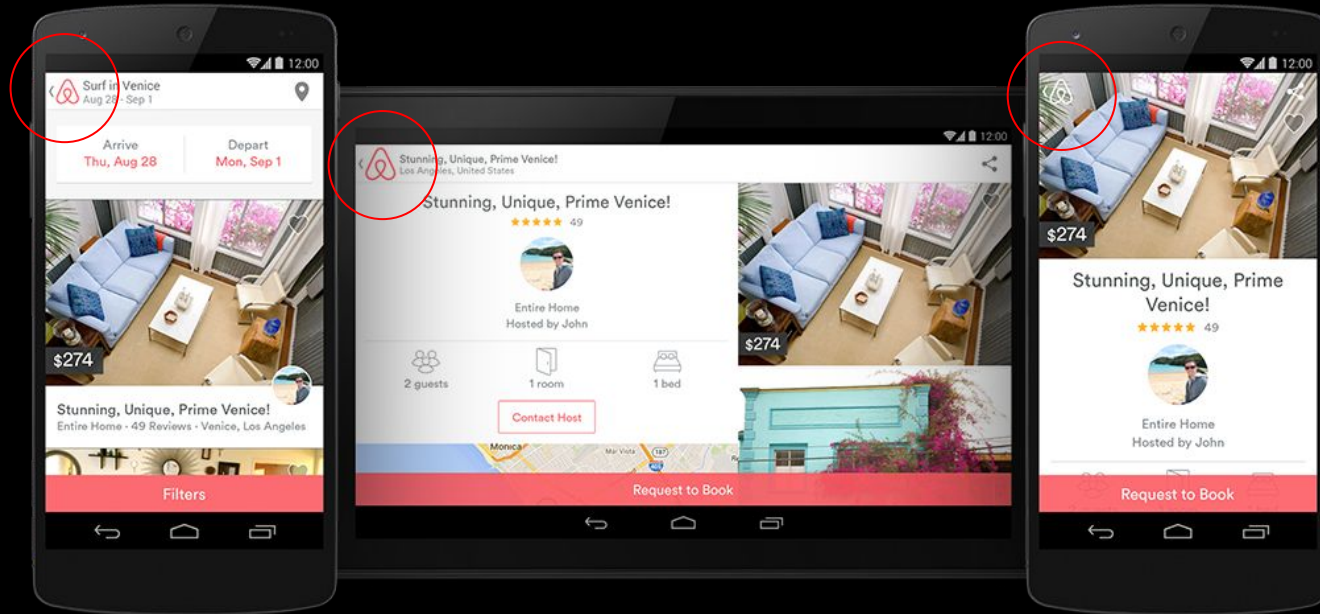
SIMPLE

The logo should be able to be reproduced in black and white and in icon.



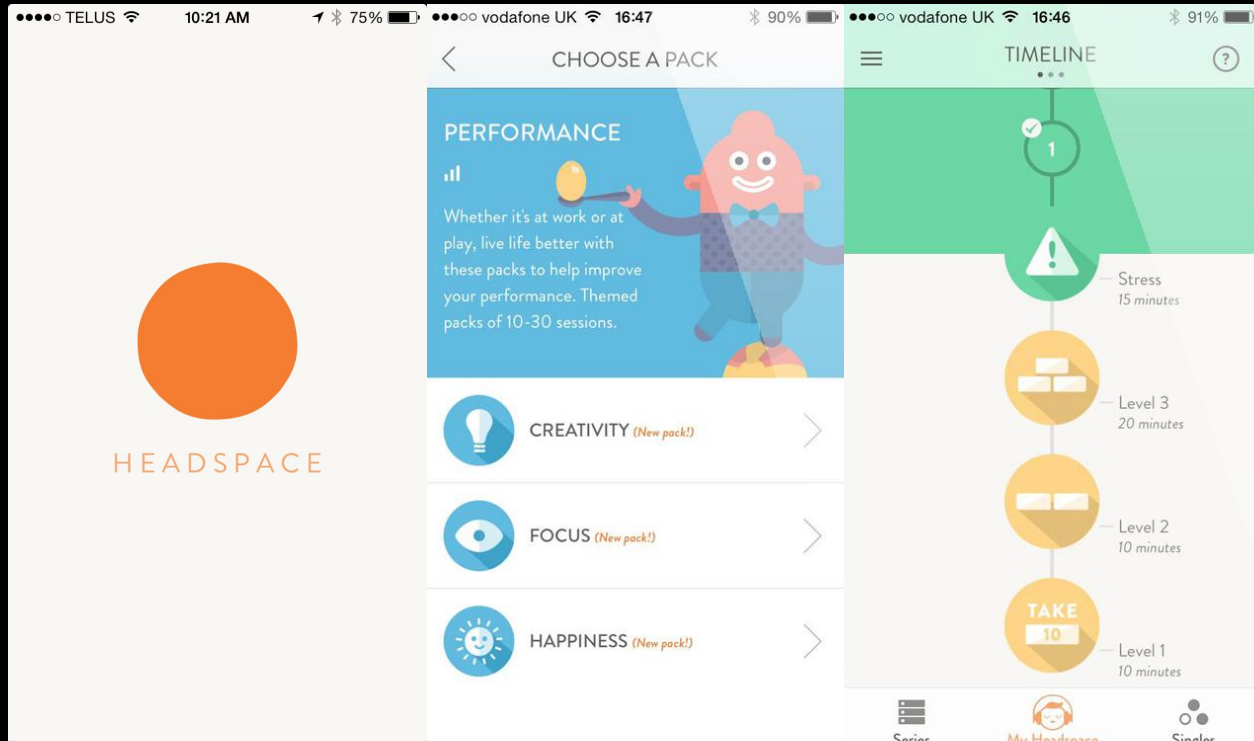
EVER-PRESENT

The logo should be on every screen it can be and remain the same proportion.



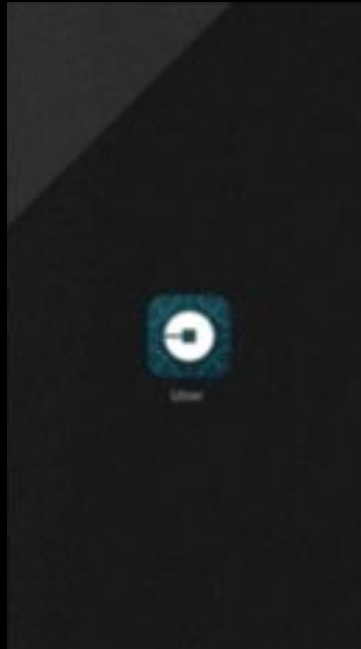
THE GOOD

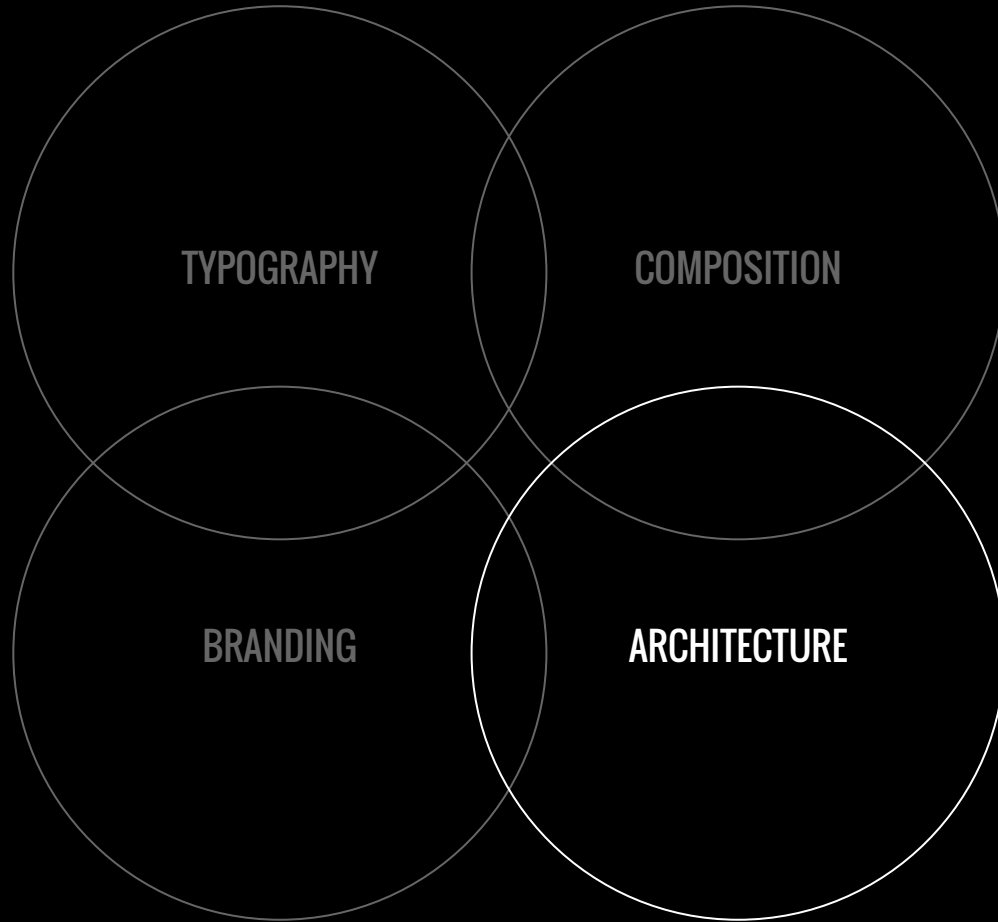
HEADSPACE



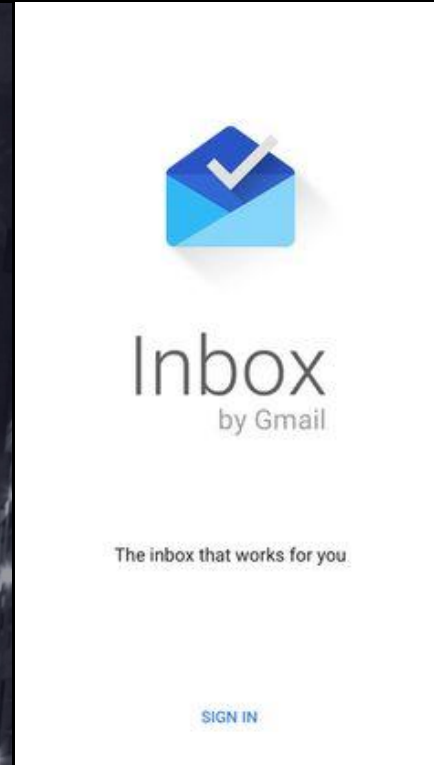
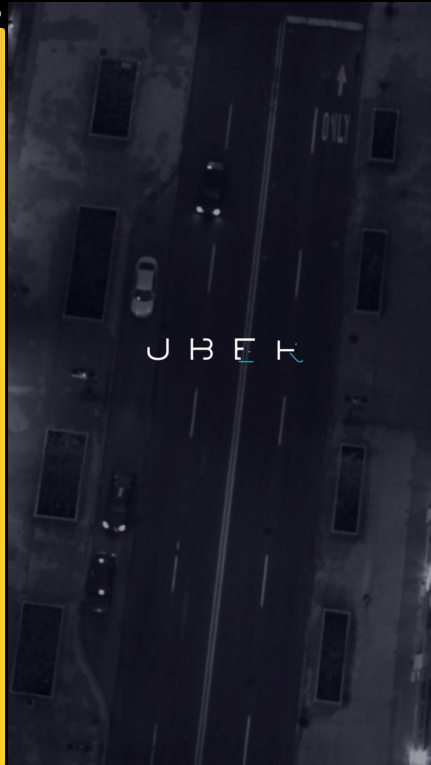
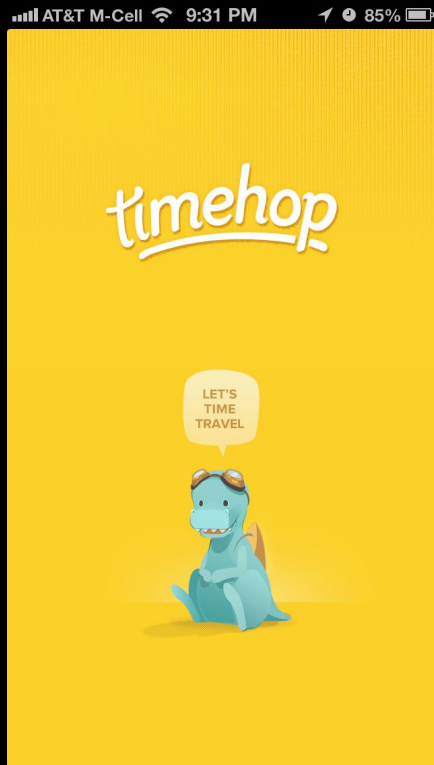
THE BAD

UBER

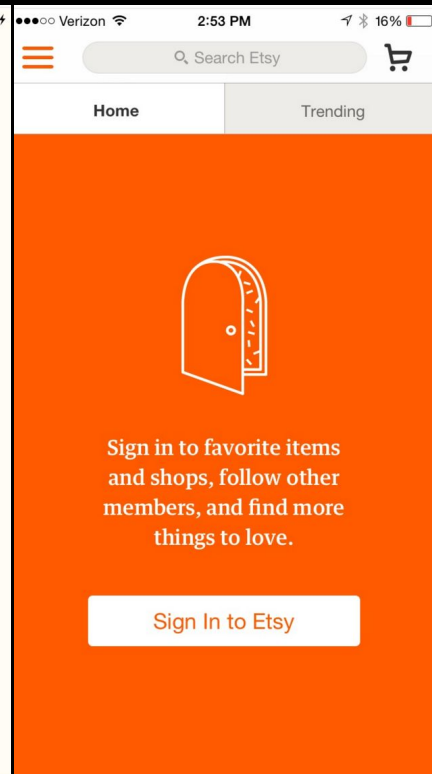
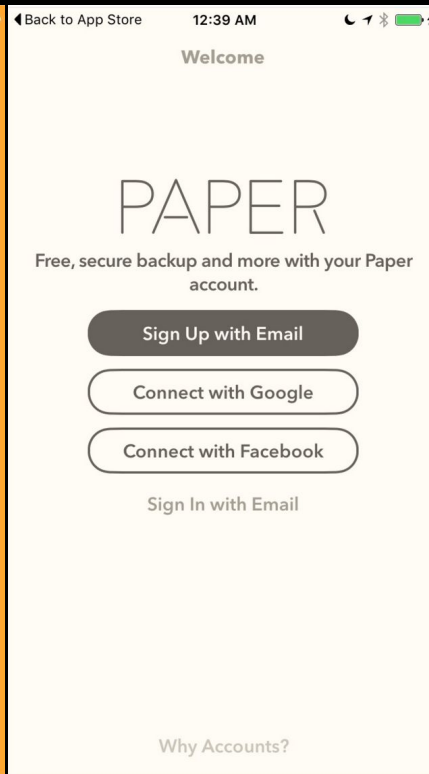
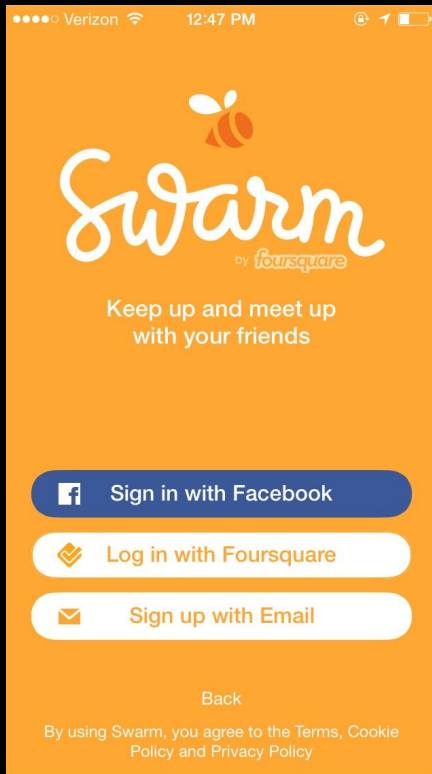




SPLASH / LOADING SCREENS



LOGIN SCREENS



LOGIN SCREENS

t Log in

email ⓘ

password

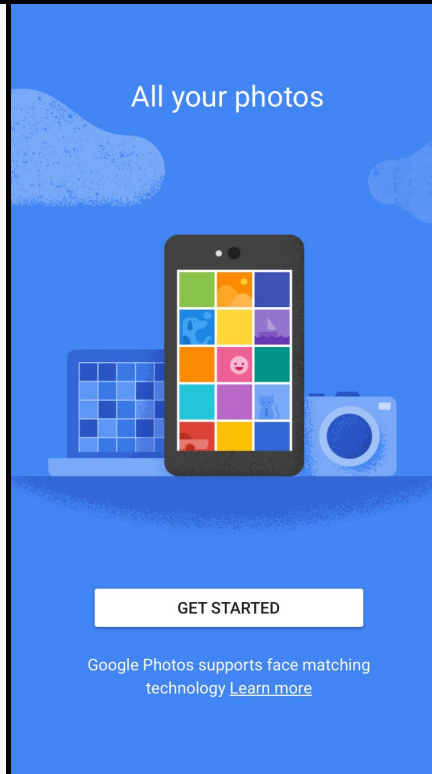
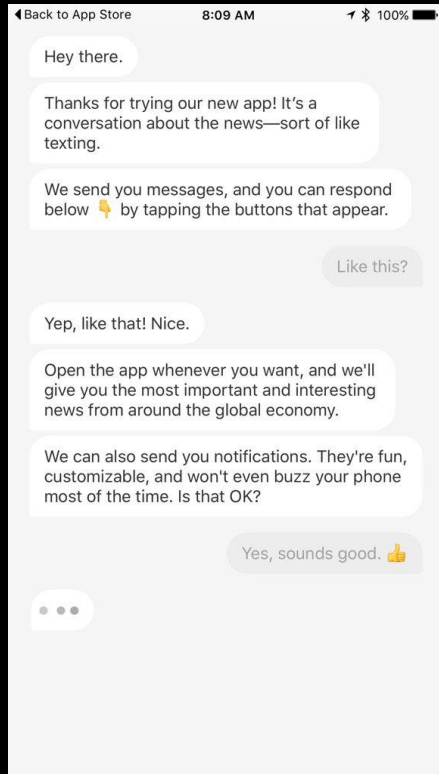
[Forgot your password?](#)

[Sign up](#)

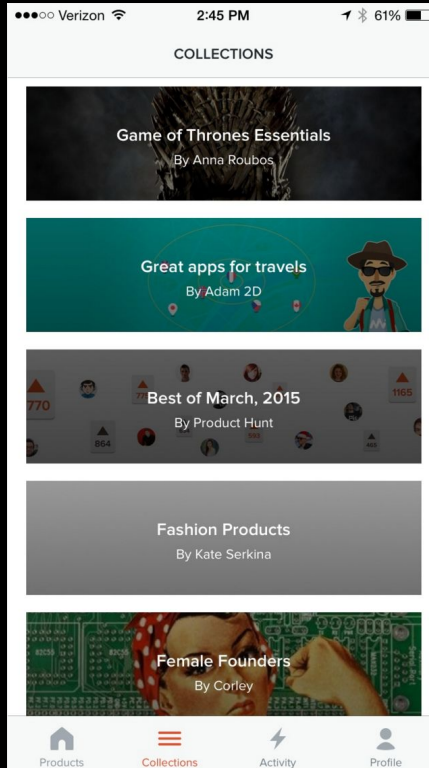
Q W E R T Y U I O P
A S D F G H J K L
↑ Z X C V B N M ↵
123 🌐 space @ . Next

*Don't forget about
me, the keyboard!*

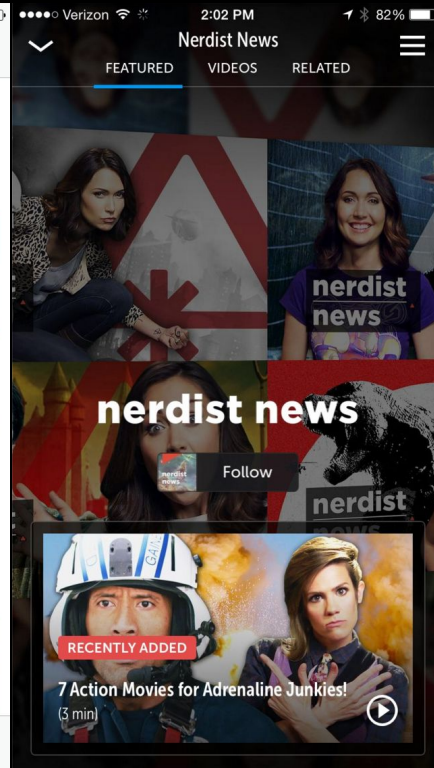
WARM WELCOME



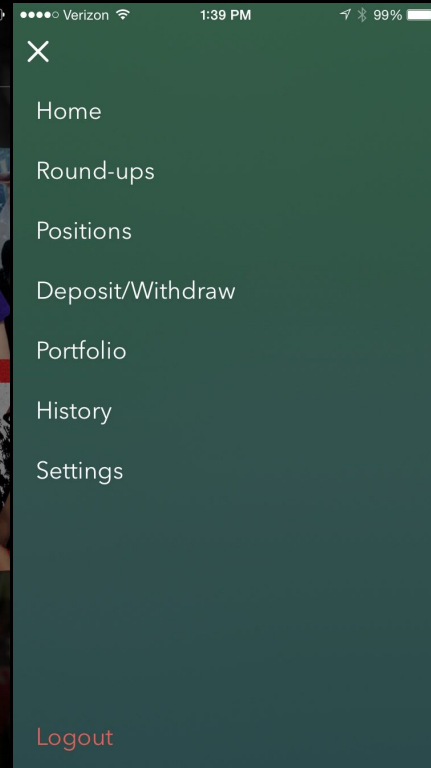
NAVIGATION



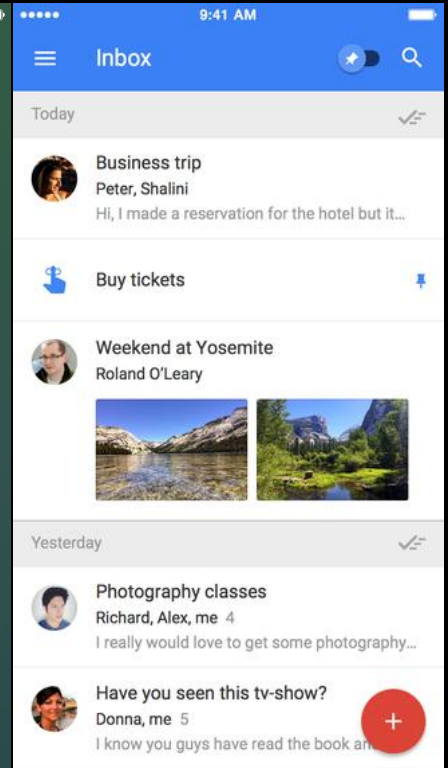
Bottom Buttons



Top Tabs



Overlays



Hamburger Icon

SEARCH

AT&T LTE 3:20 PM 65%

CANCEL REFINES SEARCH CLEAR ALL

ACTIVITY

Select Activities

NEAR Clear my location

Current location

0.5 MI 1 MI 5 MI 10 MI 25 MI

START TIME

4:00 AM 11:00 PM

STUDIO AMENITIES

Whisper Lockdown

APPLY

- Search
- Browse
 - Discover
 - Radio
 - Playlists
 - Inbox
 - Friends
 - Settings
- Daft Punk
Get Lucky - Radio Edit

MegaFon 1:51 PM 21%

Cancel Filters Reset

P ☕ 🏠 🎫

Beds

- 2 +

Bedrooms

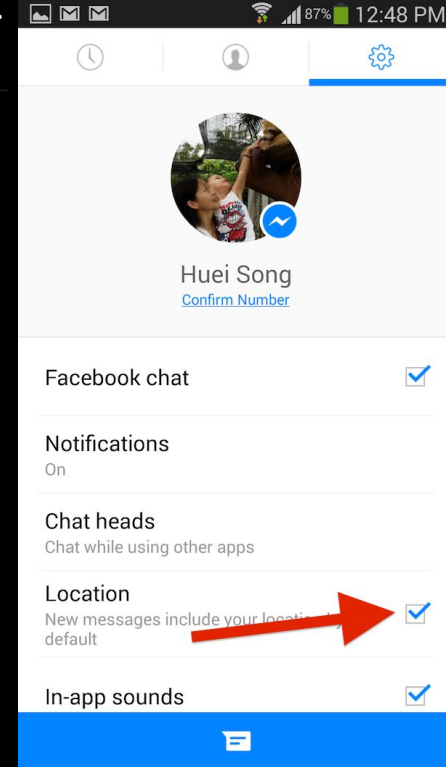
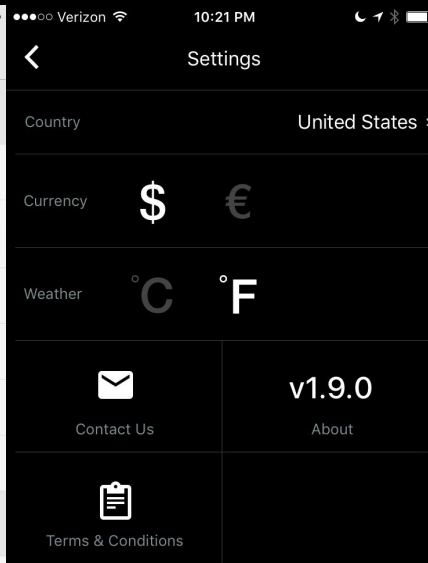
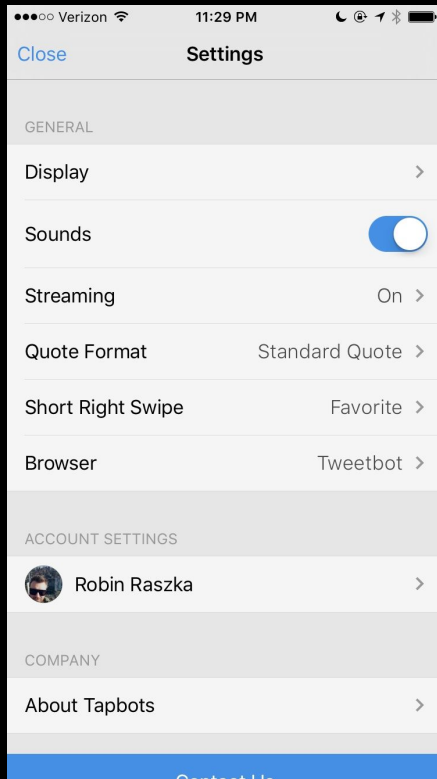
- 2 +

Bathrooms

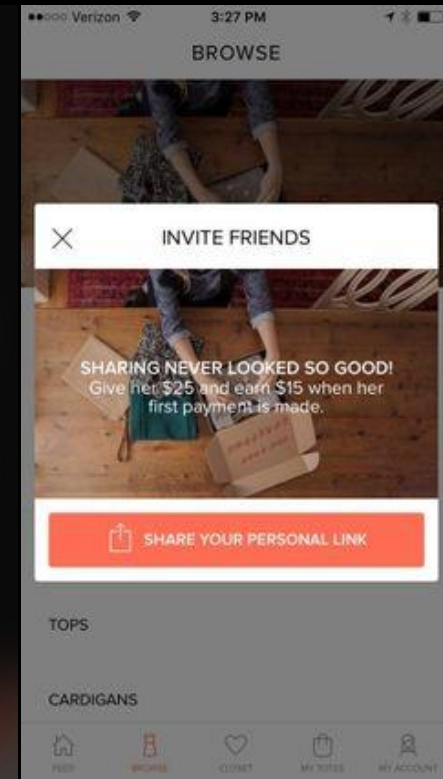
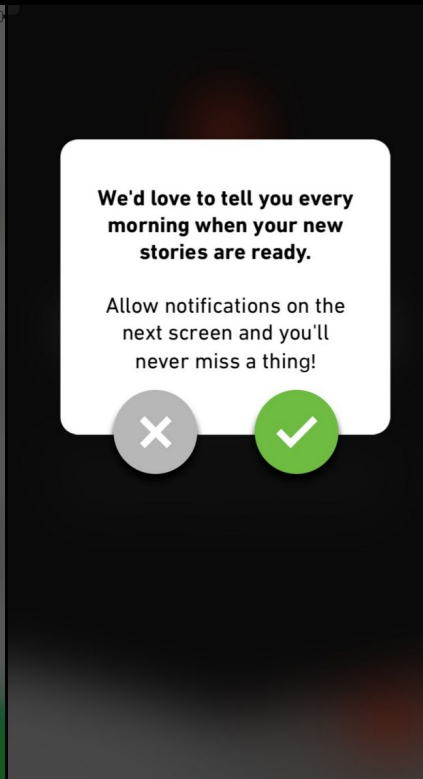
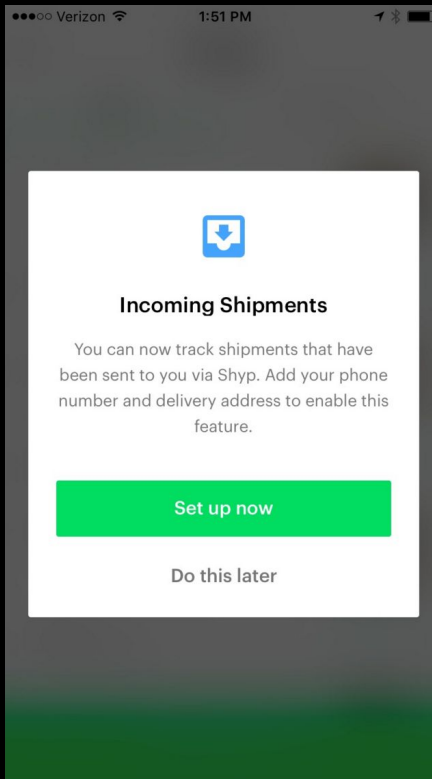
- Any +

Save Filters

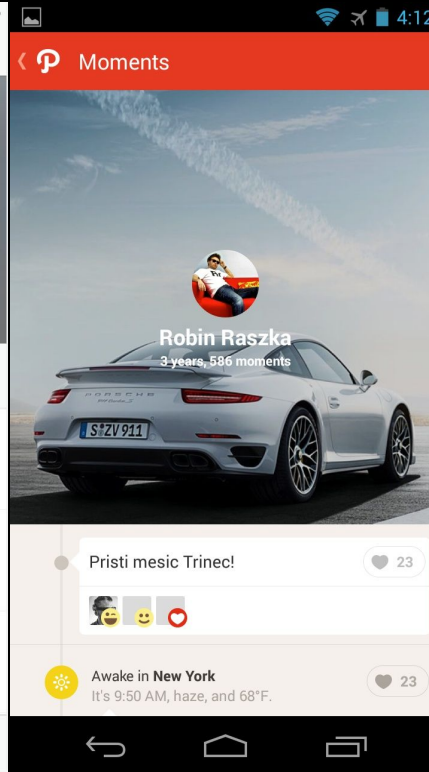
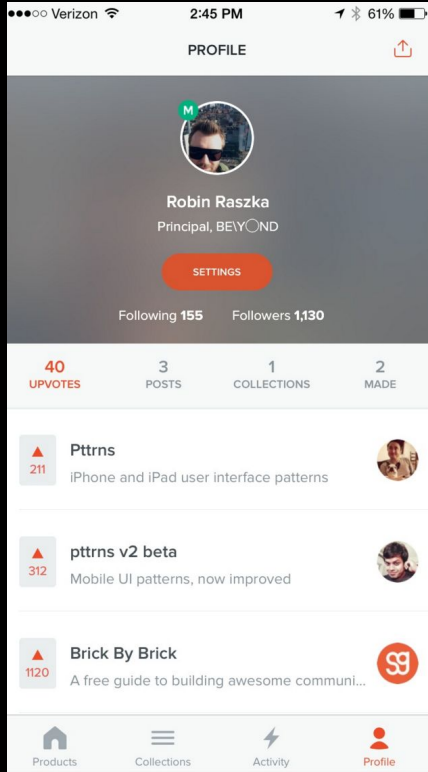
SETTINGS



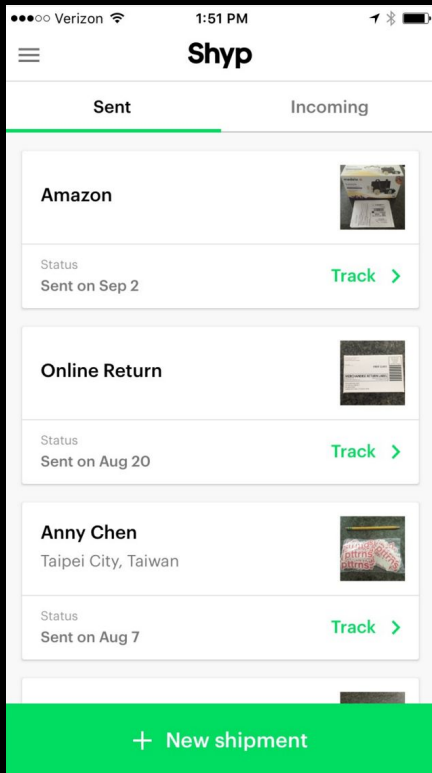
MODALS



PROFILES



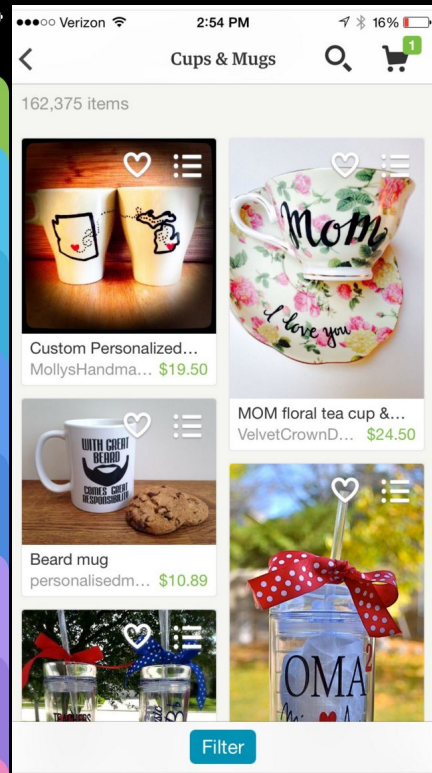
LISTS



Stacked Events



Horizontal Blocks





Grids


FEEDS


1:00


🔔 📊 📋 ⚙️

 **The White Spider** 🔄 reposted
Between the street and the crown
36 min ago

 **iamorangenow** 👤 followed you
1 hour ago

 **Made in Berlin** 💬 commented on
Lightin' up Houston
"Wow! Huge vocal hook! Who's the singer??"
7 hours ago

 **Ill \$** ❤️ liked
Silver beats lead
7 hours ago

 **FiftyThousand&1** 💬 commented on
Lightin' up Houston
"This is my sonnnngggg!!!!"
7 hours ago


9:41 AM 100%

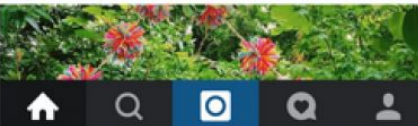
Instagram 📧

 **ashleyyyuki** 3h



🍷 75 likes
ashleyyyuki Looking good, SF #thatsfbridge
View all 5 comments
kweenpri that bridge! ❤️
jeffreydgerson 🍷🍷🍷🍷
alexeikarpenko Nice shot!


 **ninanyc** 3h

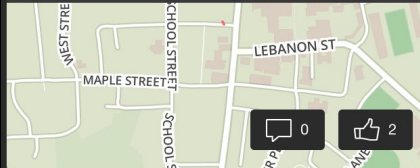



Carrier 4:59 PM


Feed ▾ FOLLOWING 🔔 1

TODAY 21

 03/24/2014 Hanover, NH - More
Kung Fu
Brian Riordan
🚴 17.2 mi 1:00:00

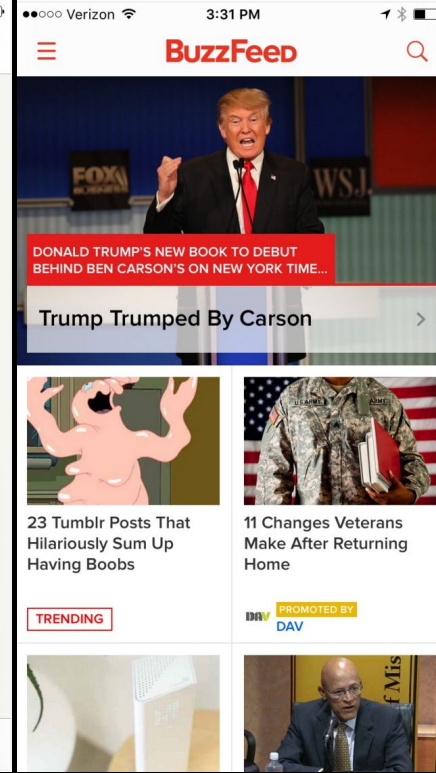
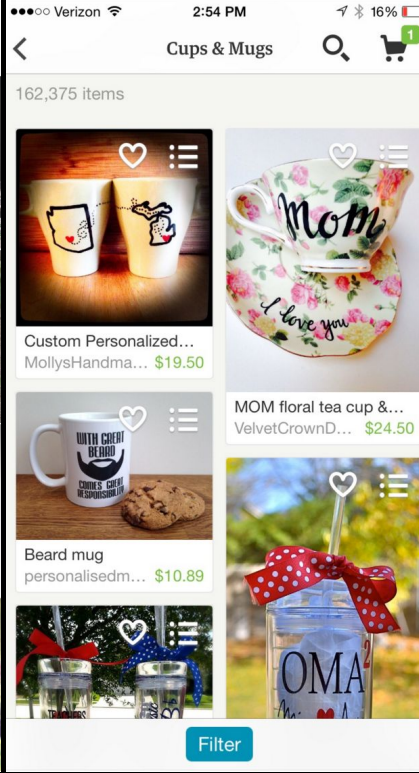
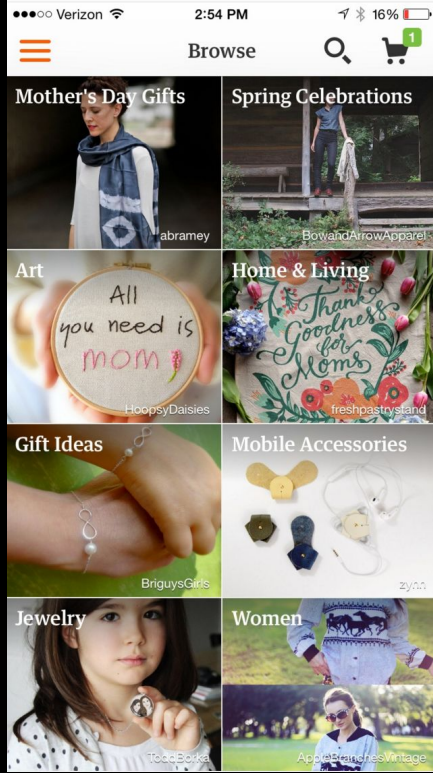


 **Zach (forgot to turn off)**
Mica Stubbs
2 mi

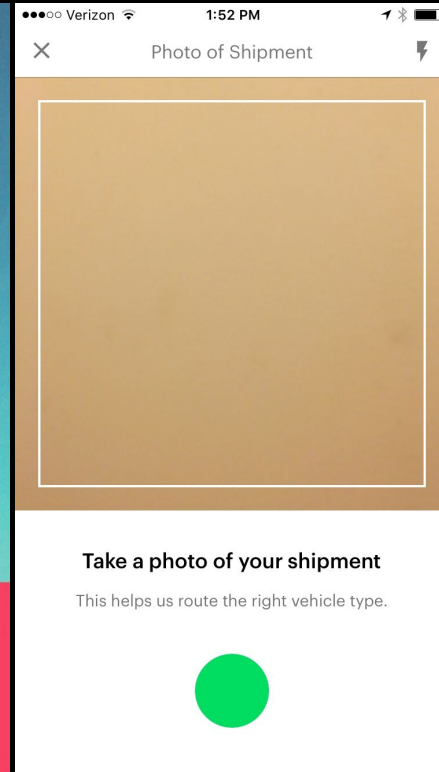
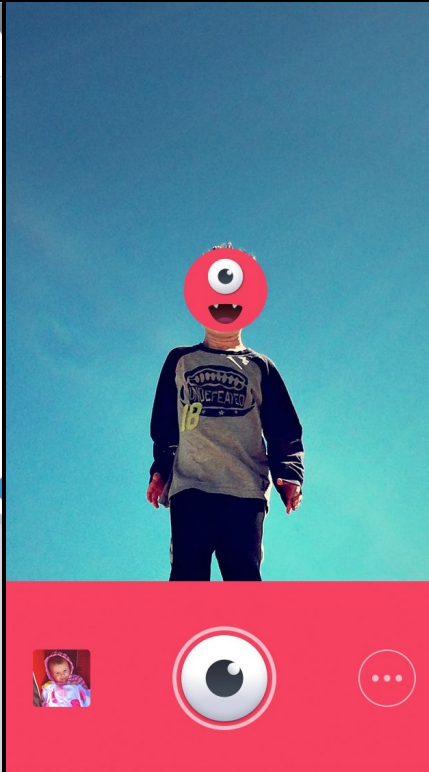
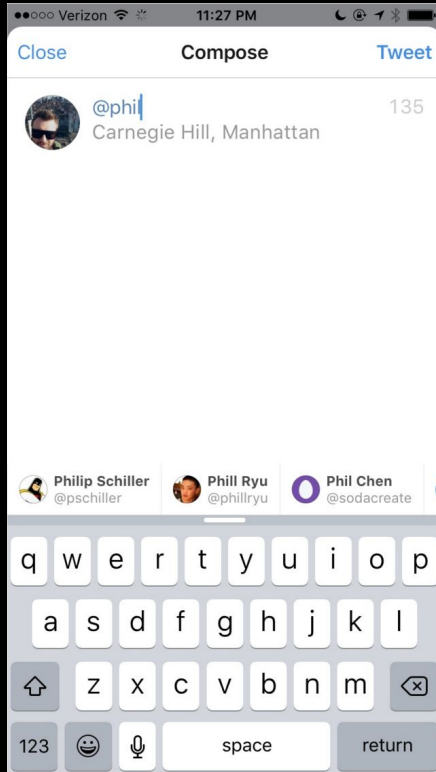
 PA/DE afternoon cruise
Drew Haugen and one other
🚴 21.7 mi 1,429 ft

Record Feed Challenges Profile More

GRIDS

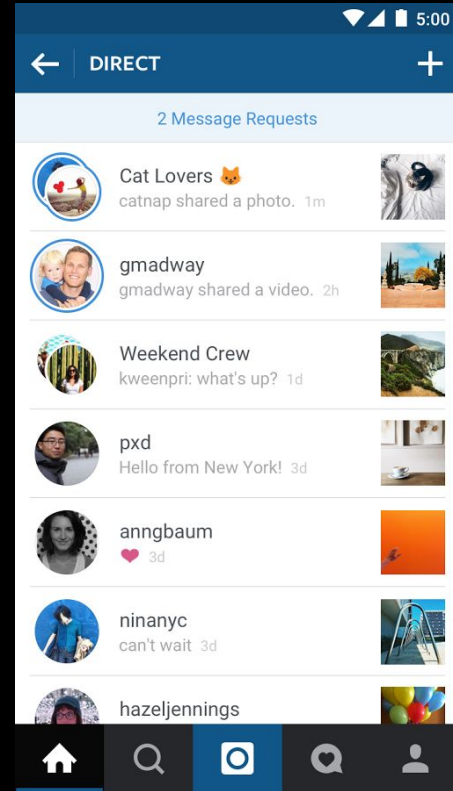
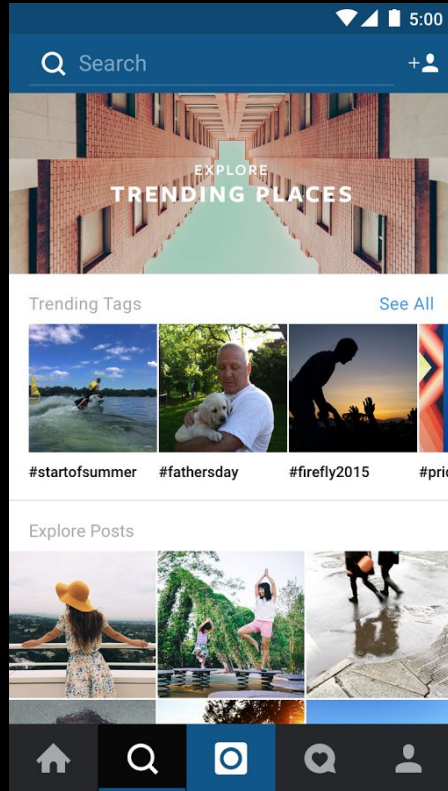
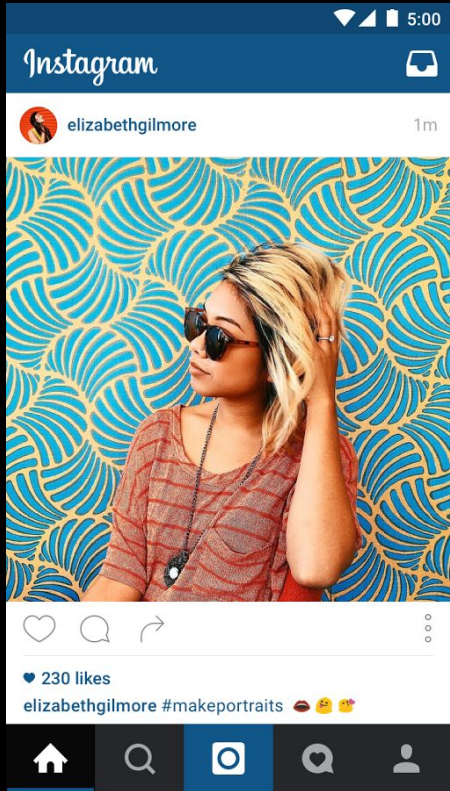


ACTIONS



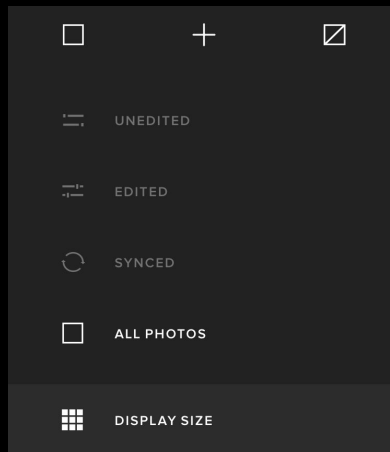
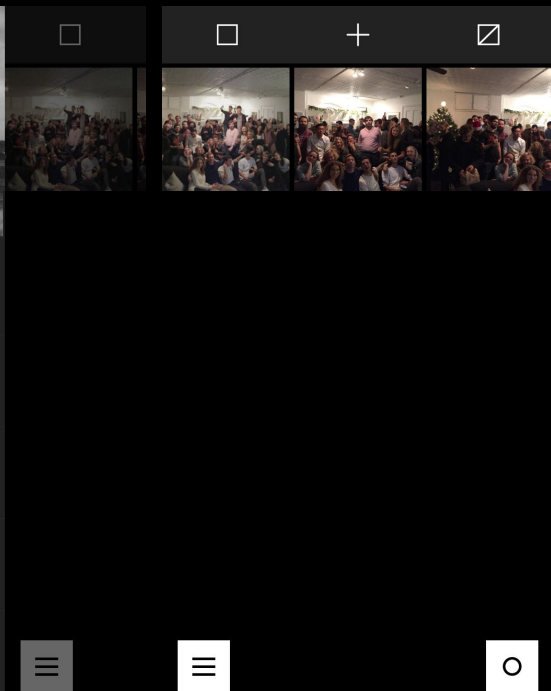
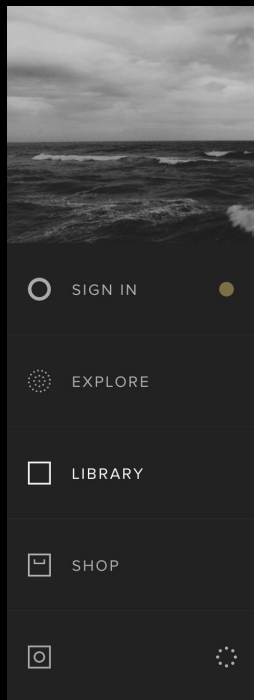
THE GOOD

INSTAGRAM



THE BAD

VSCO



**SO WHAT MAKES A
SUCCESSFULLY DESIGNED APP?**

ICONS



BUTTONS

SUBMIT

CANCEL

COMPOSE

OK

+1

+1

+1



COLOR PALETTE

500	#F44336
600	#E33935
700	#D32F2F
800	#C62828
900	#B71C1C
A100	#FF8A80
A200	#FF5252
A400	#FF1744
A700	#D50000

500	#E91E63
600	#D81B60
700	#C2185B
800	#AD1457
900	#880E4F
A100	#FF80AB
A200	#FF4081
A400	#F50057
A700	#C51162

500	#9C27B0
600	#8E24AA
700	#7B1FA2
800	#6A1B9A
900	#4A148C
A100	#EAB0FC
A200	#E040FB
A400	#D500F9
A700	#AA00FF

Deep Purple	
500	#673AB7
50	#EDE7F6
100	#D1C4E9
200	#B39DDB
300	#9575CD

Indigo	
500	#3F51B5
50	#E8EAF6
100	#C5CAE9
200	#9FA8DA
300	#7986CB

Blue	
500	#2196F3
50	#E3F2FD
100	#BBDEFB
200	#90CAF9
300	#64B5F6

TYPOGRAPHY

Roboto

Headline Regular 24pt

Title Medium 20pt

Subheader Regular 16pt

Body 2 / Menu Medium 14pt

Body 1 Regular 14pt

Caption Regular 12pt

BUTTON MEDIUM 14PT

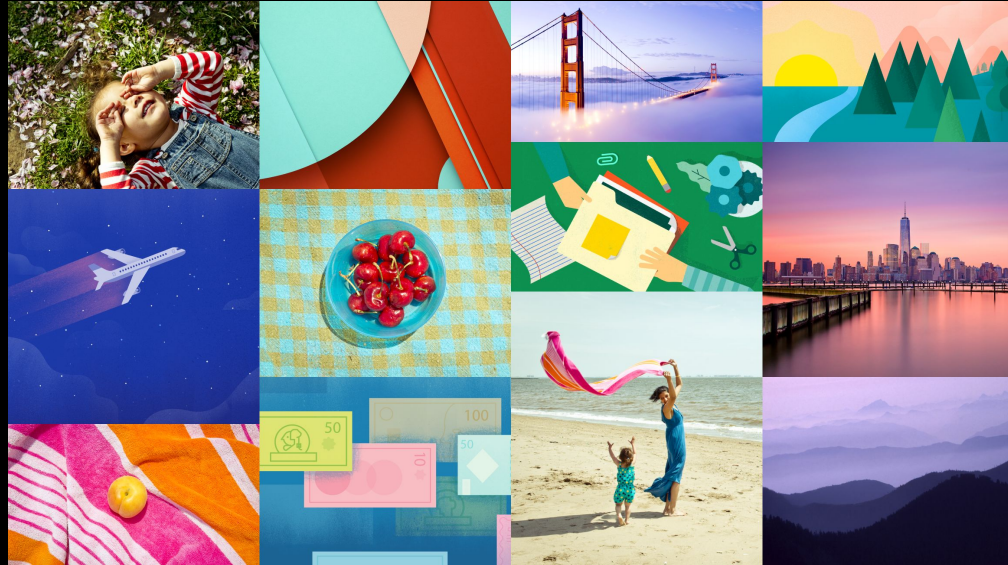
Light theme default type color

Default light bg:
Google Grey 200, #EEEEEE

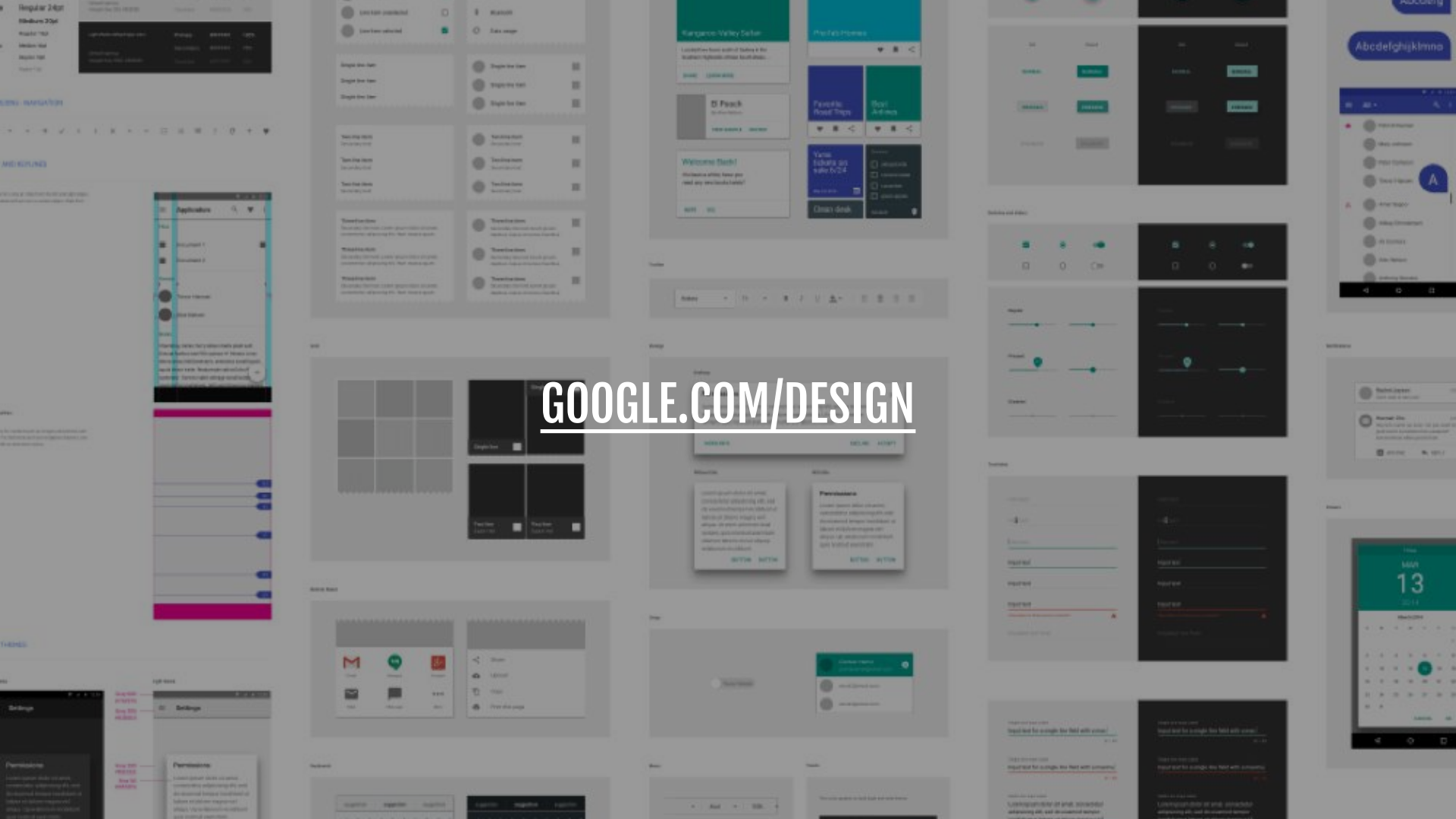
Dark theme default type color

Default dark bg:
Google Grey 900, #212121

IMAGERY



THESE ARE OFTEN PUT TOGETHER INTO UI TOOLKITS



[GOOGLE.COM/DESIGN](https://www.google.com/design/)

DISCUSSION:

**WHAT APPS HAVE YOU USED LATELY THAT ARE DESIGNED
AND BRANDED SUCCESSFULLY?**

WHAT APPS HAVE YOU USED THAT AREN'T?

QUESTIONS?

APP DESIGN INSPIRATION

<http://www.pttrns.com/>

<http://www.mobile-patterns.com/>

<http://inspired-ui.com/>

<https://www.cocoacontrols.com/>

<http://www.lovelyui.com/>

<http://androidux.com/>

<https://developer.yahoo.com/ypatterns/about/libraries.html>

DESIGNER MEETUPS

Maker Club

Designer Meetups

Creative mornings

Archive

PRINCIPLES OF INTERACTION DESIGN

ALWAYS THINK ABOUT THE USER

PRINCIPLE 2

PRINCIPLE 3

PRINCIPLE 4

PRINCIPLE 5

USER EXPERIENCE

TOTAL USER EXPERIENCE OR THE 5 E'S

Considering the big(ger) picture

Whether it's a product or a service:

There's an experience **in the discovery**

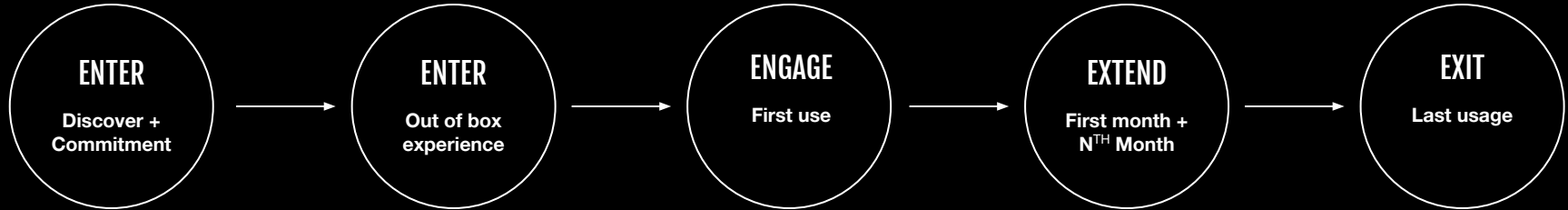
There's an experience **in the purchase**

There's an experience **in the delivery**

There's an experience **in the use/service**

There's an experience **in the sharing**

THE 5 E'S



STEP 1

DEFINE THE ACTORS

STEP 2

MAP HOW THE ACTORS PLAY TO EACH OTHER

STEP 3

DEFINE “MAGIC MOMENTS”

HOW DOES THE BRAND MANIFEST IN THE STORY

EX. ACTORS

PARENTS

Use + manage usage of
others

IMAGINEERS

Imagine and design the good
(e.g. Google)

KIDS

Use with permission

MAKERS

Make the thing (e.g. Belkin)

ALLOWERS

Approve and allow use at a high level
(e.g. politician)

RETAILERS

Put the thing in your hand
(e.g. App Store)

*Not all will be present in every experience.
But it's good practice to consider all to ensure full coverage.*

THEN TAKE EACH ACTOR THROUGH THE 5 E'S

5E'S: ENTICE

ENTICE

ENTER

ENGAGE

EXTEND

EXIT

PROFILES

DISCOVERY

COMMITMENT

OUT OF BOX EXPER.

FIRST USE

FIRST MONTH

NTH MONTH

LAST MONTH

Define all the actors.

How do they find out about your product?

What's the tipping point that makes the conversion from "I'm curious" to "I'm committed"?

Example: Advertising, social media, word of mouth.

Example: In-store experience, test drive, product review.

5E'S: ENTER

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What is the unboxing of the physical product like? If it's digital what's the warm welcome or the "welcome to the product" moment?

Example: Advertising, social media, word of mouth.

Example: In-store experience, test drive, product review.

Example: App warm welcome, packaging quality, packaging that opens in order of setup.

5E'S: ENGAGE

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How do you capitalize on maximum goodwill?

It will never be shinier. Embed it in your user's' lifestyle.

Example: Advertising, social media, word of mouth.

Example: In-store experience, test drive, product review.

Example: App warm welcome, packaging quality, packaging that opens in order of setup.

Example: Instant gratification, moment of joy easter egg, simplicity.

5E'S: EXTEND

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How does it get even better with continual use?

What moment only surfaces after repeated use?

What's better than better?

How does it accrue value over time?

How do you continuously optimize the experience?

Example: Advertising, social media, word of mouth.

Example: In-store experience, test drive, product review.

Example: App warm welcome, packaging quality, packaging that opens in order of setup.

Example: Instant gratification, moment of joy easter egg, simplicity.

Example: Actionable analytics, more easter eggs, machine learning.

Example: Idiot-proof trouble-shooting and service, unlock rewards or bonuses, additional products/add ons.

5E'S: EXIT

ENTICE

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ENGAGE

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What's better than better?

How does it accrue value over time?

How do you continuously optimize the experience?

What happens when the user decides to leave the product? Do they have to? Can you get them to return to the product?

Example: Advertising, social media, word of mouth.

Example: In-store experience, test drive, product review.

Example: App warm welcome, packaging quality, packaging that opens in order of setup.

Example: Instant gratification, moment of joy easter egg, simplicity.

Example: Actionable analytics, more easter eggs, machine learning.

Example: Idiot-proof trouble-shooting and service, unlock rewards or bonuses, additional products/add ons.

Example: No hassle returns, easy service termination, new product releases or updates.

FOR EXAMPLE



ENTICE

User sees
Google On sign
on the subway
platform



ENTICE

Decides to try it:
finds the network
and downloads the
Google On app



ENTER

Enjoys a great
Google On Wi-Fi
experience



ENGAGE

Delighted to
see it actually
works on the
subway too...

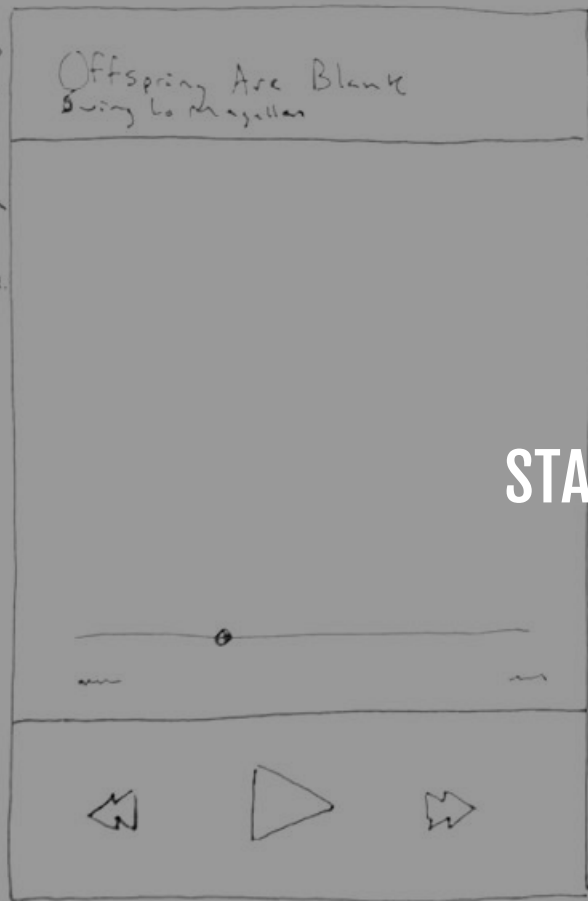


EXTEND

Decides to
bring it home -
and purchases a
new OnHub

WIREFRAMES

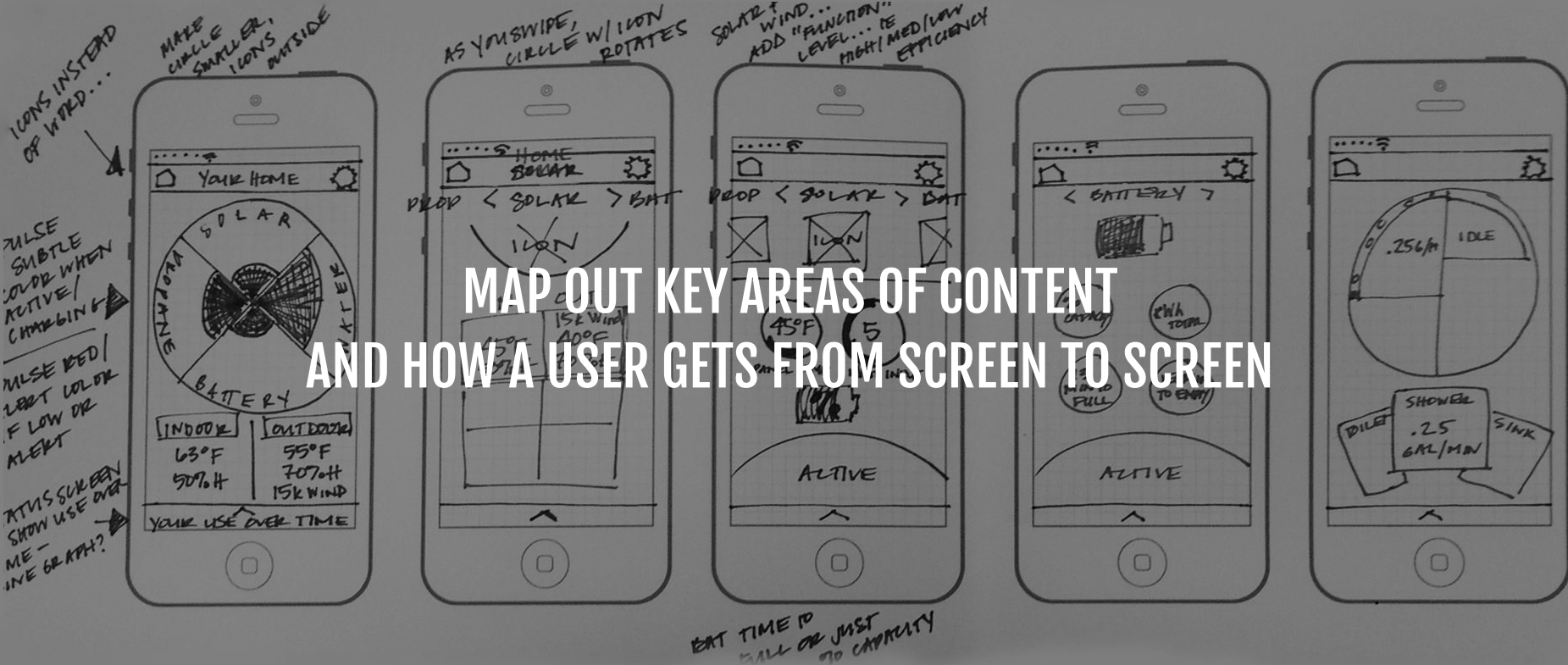
**THINK OF A WIREFRAME AS THE
SKELETON OF YOUR APP OR SITE**



START LOOSE, START WITH A SKETCH

Longpress

MAP OUT KEY AREAS OF CONTENT AND HOW A USER GETS FROM SCREEN TO SCREEN



cancel

save

✓

Event title

Thursday, November 8th

Remind me on
Thursday, November 8th

add a time

add a location

Notes

...

done

5	57	
6	58	
7	59	
8	00	am
9	01	pm
10	02	
11	03	
12	04	

Add end time

done

5	57	
6	58	
7	59	
8	00	am
9	01	pm
10	02	
11	03	
12	04	

Add end time

THEN MAKE IT DIGITAL BUT SIMPLE

LET'S MAKE A WIREFRAME