

Responsive Web Design

ART 326

Navigation



Responsive Web Design (RWD)

*“Devices are becoming smaller
& larger simultaneously.”*

A must for mobile devices.

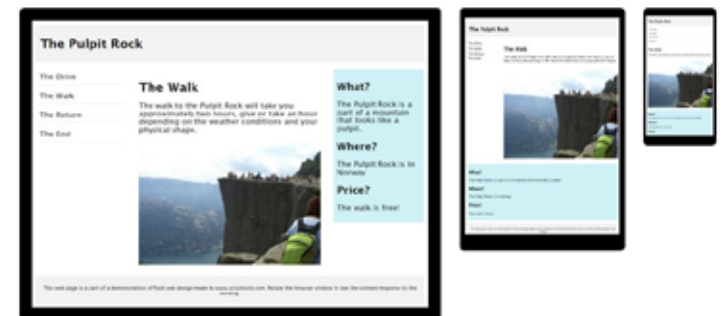
Management across different viewports.

Browser canvas has flexible shape and size.

No need for separate mobile site.

Search engines: Only one site to crawl.

More accessible.



Tryit: http://www.w3schools.com/html/tryrwd_simple.htm

The “Viewport”

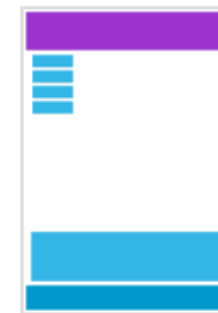
The user’s visible space of a website.

Varies with device.

CSS can be used to *respond* to different sizes.



Desktop



Tablet



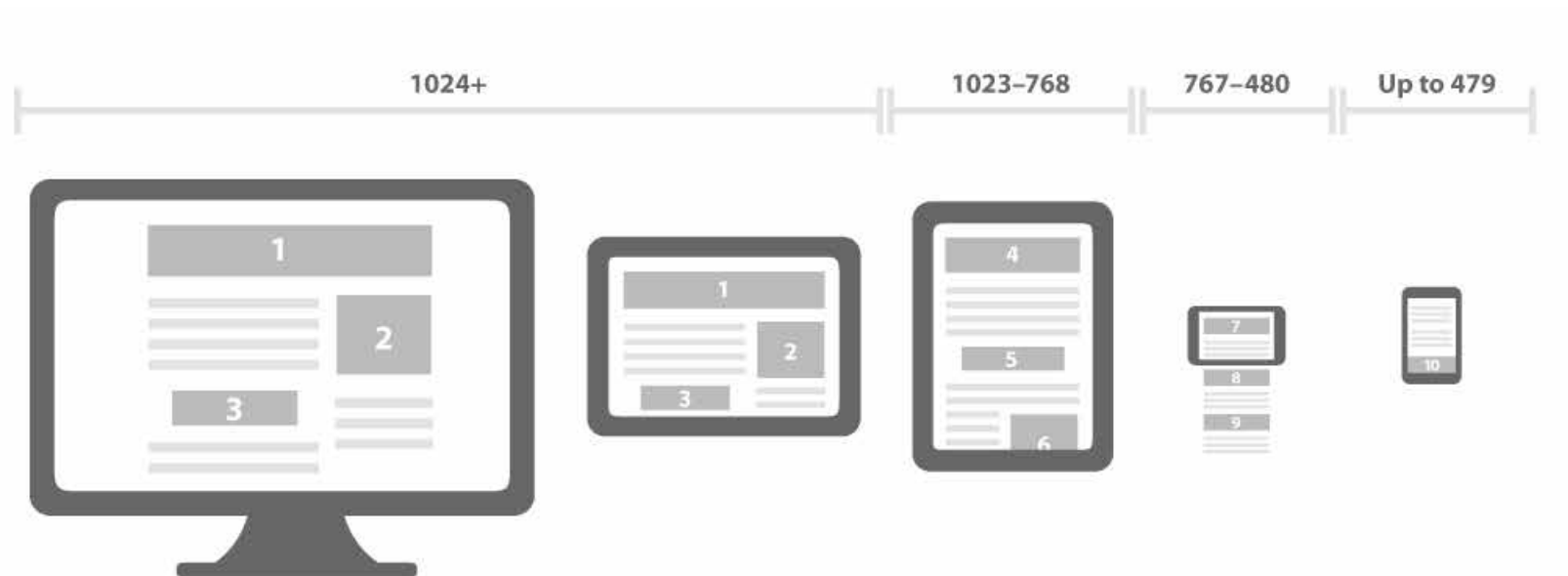
Phone

Breakpoints

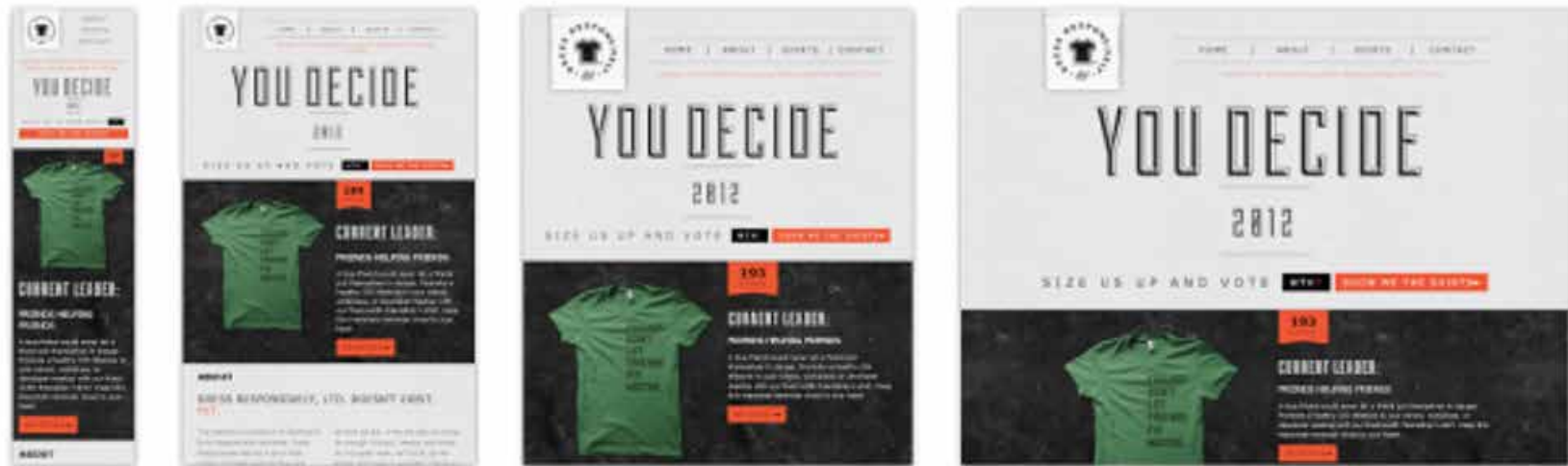
The point (screen width) at which your content will respond to display the best possible layout.

Many designers choose to design mobile first.

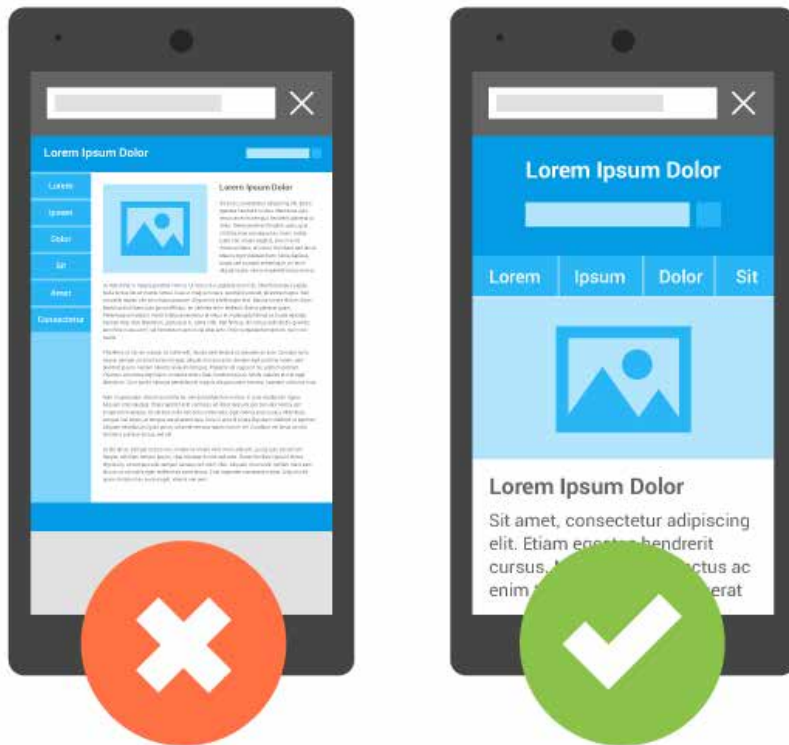
Can add as many breakpoints as desired.



Example



The Fragmented Method



Mobile Websites

/mobile/ assumes width of 320px.

Fragments content across multiple websites.

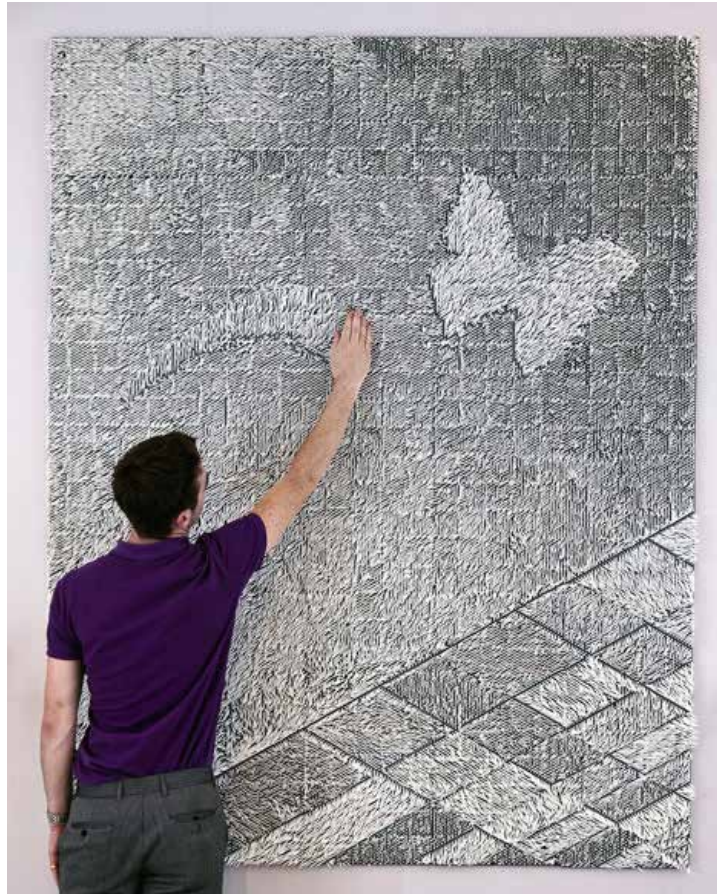
Con: Multiple websites to manage.

Responsive Design

3 Components:

01. A flexible, grid-based layout
02. Flexible images + media
03. Media queries (module from CSS3)

Responsive Architecture



Source: doornob.com

Responds in real time.

Users influence + inform

Artists: Respond to sound + space

bkaprt.com/rwd/5/

bkaprt.com/rwd/6/

Smart-glass technology

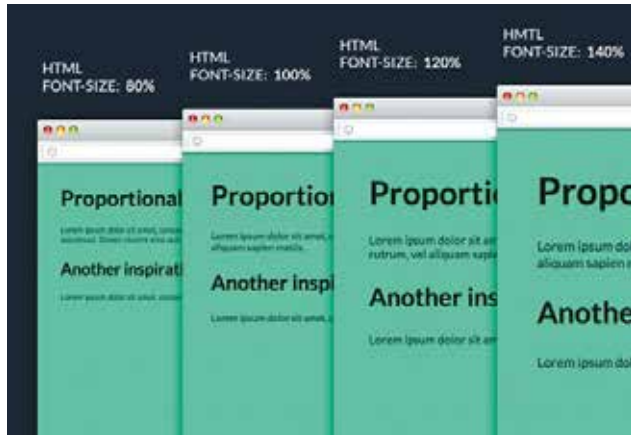
Interactive Wall: German Design



Source: weburbanist.com

Relative Typesetting

A little simple math:



target / context = result

24px / 16px = 1.5em

context: Base font size (*typically the browser default*). All other type sizes are relative to this value.

target: Size you are trying to convert to ems.

QUIZ: *If I wanted to set my h2 to 20px, how many ems is that? h3 to 18px?*

Font-Size

Based on

8px = .5em

12px = .75em

16px = 1em

24px = 1.5em

32px = 2em

Sets base type size to the browser's default (16px).

Create complex typographic systems for easy scaling.

Set type in **ems**: Relative to base type size.

Online converter: PXtoEM.com

```
body {  
    font-size: normal 100%;  
}
```

Responsive Type System

As the browser width changes, adjustments need to be made to:

Type size

Line length

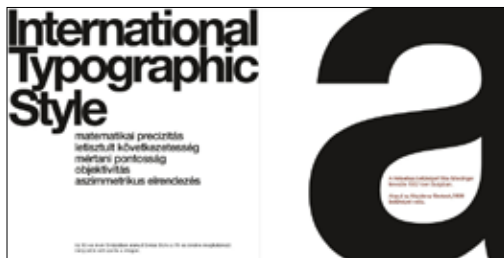
Paragraph spacing

Margins

The Flexible Grid



Josef Müller-Brockmann



Emil Ruder



Jan Tschichold

The Grid: Popularized by Modernist Graphic Designers Jan Tschichold, Emil Ruder + Josef Müller-Brockmann.

Flexible and proportional.

target / context = result

Use percentages

Grid Calculator: <http://www.responsivegridsystem.com/calculator/>

Flexible Margins + Padding

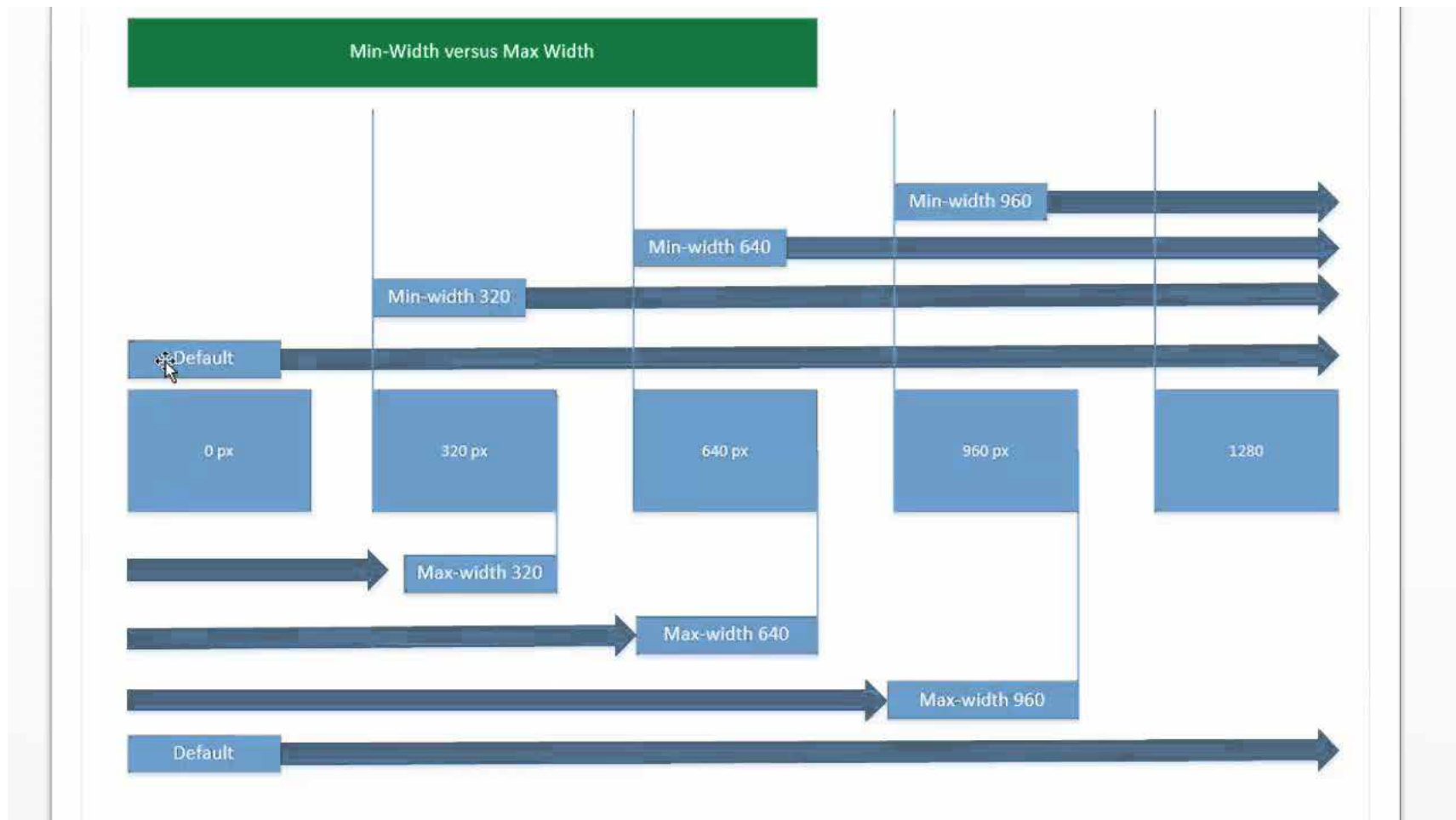
target / context = result

Margins: Context is the width of the element's container.

Padding: Context is the width of the element itself.

max-width + min-width

Sets the maximum and minimum width of an element.



Flexible Images

```
img { max-width: 100%; }
```

When smaller than container: renders at normal size.

When larger than container: forces an image's width to match the width of its container.

Max-width can also be applied to other fixed-width elements including video and other rich media:

```
img, embed, object, video {  
    max-width: 100%; }
```

<http://clagnut.com/sandbox/imagetest3/>

Resizing Background Images

background-size

Specifies the size of the background image.

cover: Makes bg image as large as possible so that the background area is completely covered by the background image (may hide some parts from view).

contain: scales to largest size possible (may have extra space).

Javascript solutions

Scott Robbin's jQuery Backstretch plugin

(bkaprt.com/rwd/21)

Wide Images in Flexible Layouts

Rich Rutter's Experiments

clagnut.com/sandbox/imagetest/

The Overflow Property

overflow: hidden;

Clips off excess image.

Generally less useful than max-width.

Various Media Stylesheets

Print Stylesheets

alistapart.com/article/goingtoprint

Recognized Media Types

all, braille, embossed (pages braille printers), handheld, print, projection, screen, speech (speaking browsers and interfaces), tty, and tv.

CSS3 Media Queries

Identifies the type of media, as well as inspects characteristics of the devices/ browsers that renders content.

```
@media screen and (min-width: 1024px) {  
    body {  
        font-size: 100%; }  
}
```

Two components:

01. Media type (screen)
02. Query (feature + value)

Media queries can assess:

01. width + height of browser
02. width + height of device
03. orientation
04. resolution

Responsive Web Design Inspiration

<http://bestwebgallery.com/category/responsive/>

<http://www.dtelepathy.com/blog/design/responsive-design-great-ux>

<http://mediaqueri.es>

Stephen Caver



Project 2



Motivations + Goals

Before beginning, it is important to understand:

Motivations [Why a visitor is coming to your site]

Entertainment *or* goal-oriented?

Personal goal *or* professional goal?

Time on site: necessary *or* luxury?

Goals [What they want to achieve on your site]

Information: general *or* research *or* particular fact?

Product familiarity: already known *or* need introduced?

Will there be time sensitive information, i.e. news?

Are they deciding whether or not they want to buy something?

Contact: hours *or* location map *or* telephone *or* email?

Mobile First

Recognizes constraints of mobile.

Clarifies priorities and needs of users.

Strips away unnecessary details.

Avoids having to cram content later.

Progressively enhance the experience as viewport allows.



Know Your Audience

Researching the characteristics and needs of the **target audience** is one of the most important parts of the design process.

- Who is your primary audience?

- How Internet-savvy are they?

- Platform? Monitor size? Browser use?

- How often will they be visiting your site?

- How long will they stay during an average visit?

Personas

Name:

Age: [Consider an age from a particular range]

Gender:

Location:

Education Level:

Occupation:

Quote/Bio/Lifestyle:

Personality/Key Attributes:

Goals:

Preferences/Like:

Frustrations/Dislikes:

Favorite Websites:



Information Architecture

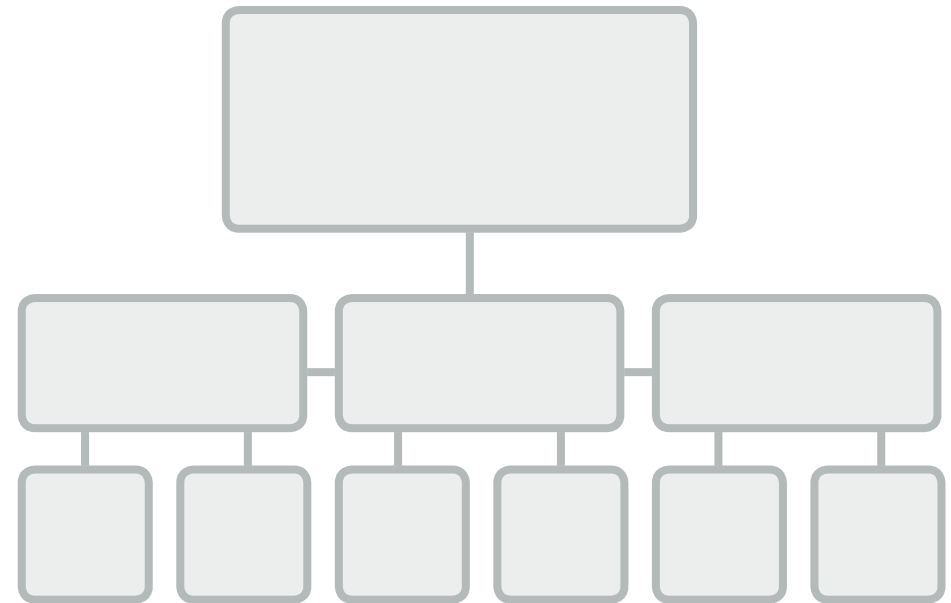
Once you know what needs to appear on the site, you can begin to organize the content into sections or pages.

Draw a diagram or flow chart of how users will move through your web site.

Outlines navigation.

Will become the basis of your site map.

Pages and their content can be renamed/reorganized.

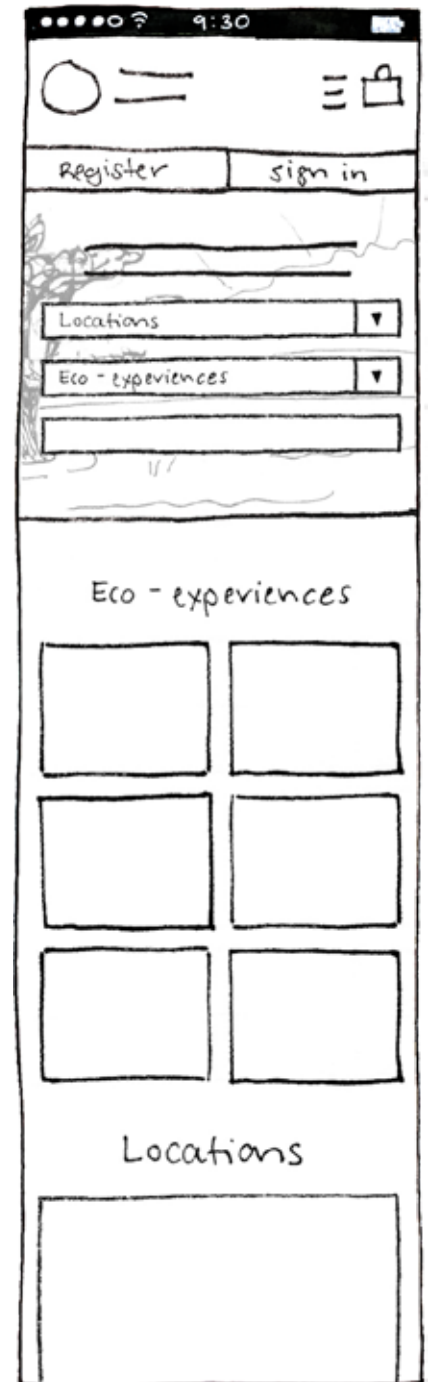
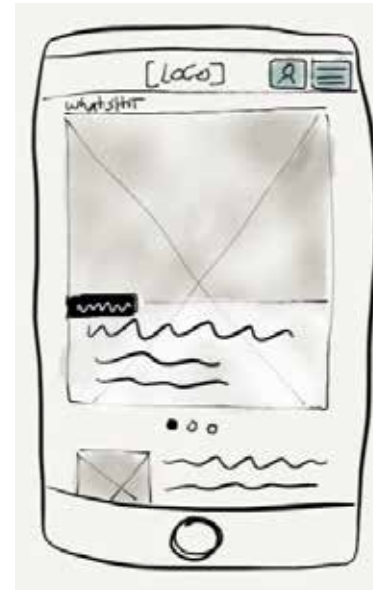
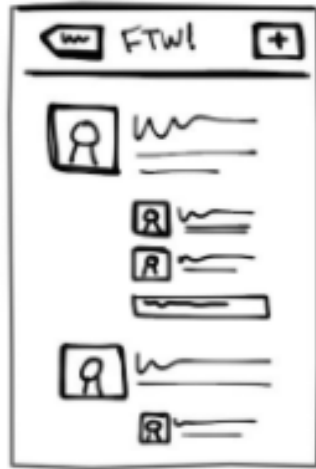


Style Tiles

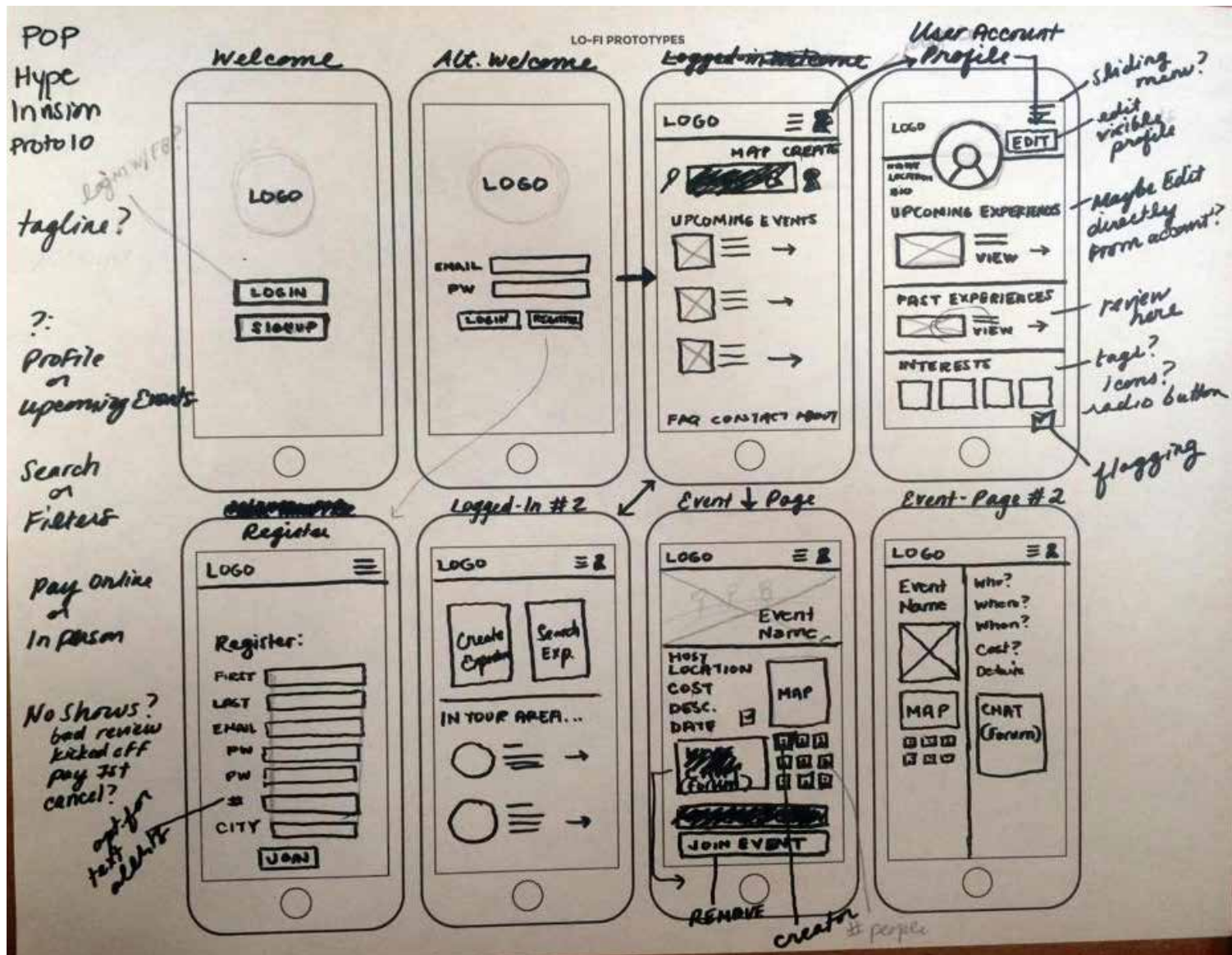
“A design deliverable that references website interface elements through font, color, and style collections delivered alongside a site map, wireframes, and other user experience artifacts.”



Mobile Sketches



Lo-Fi



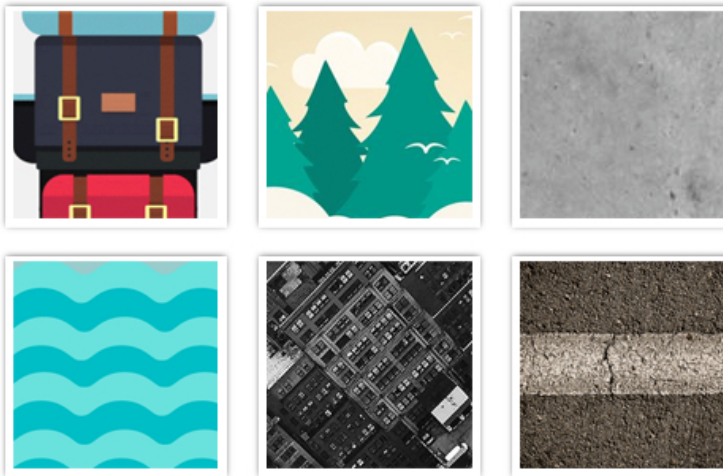
troubadour

colors



textures “urban landscape”

wood, city greens, concrete, exterior paints, pavement



Join the Experience

Join the Experience

Adventures that don't suck.

New experiences with new people

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[Learn more about this experience >>](#)

brand words

adventurous

urban

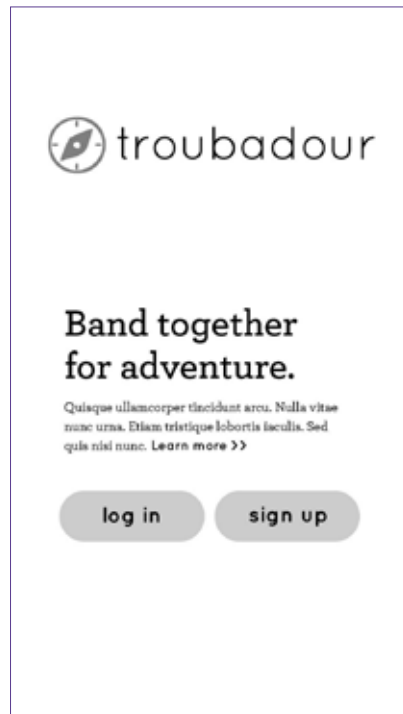
fun

bold

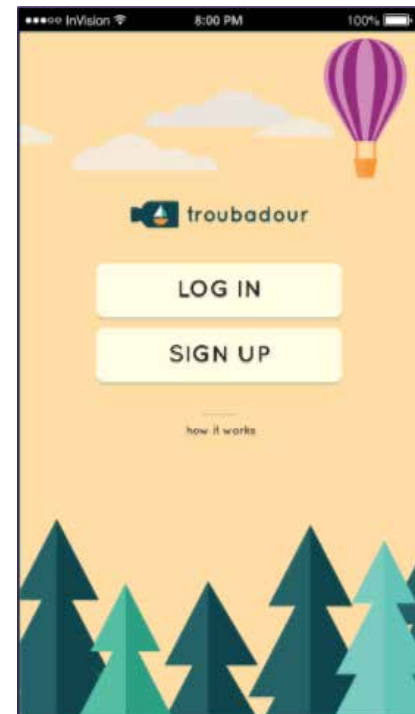
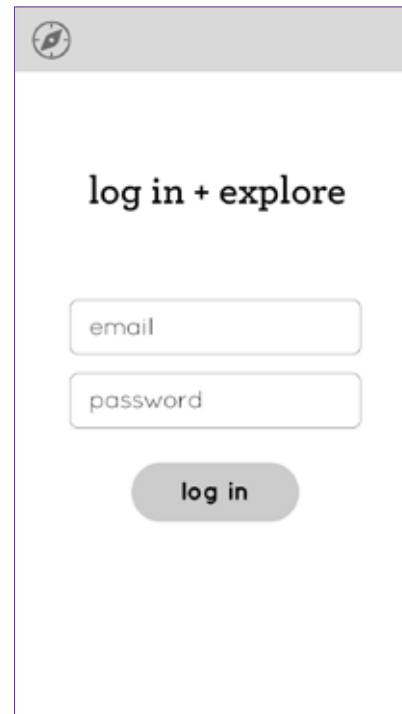
new

social

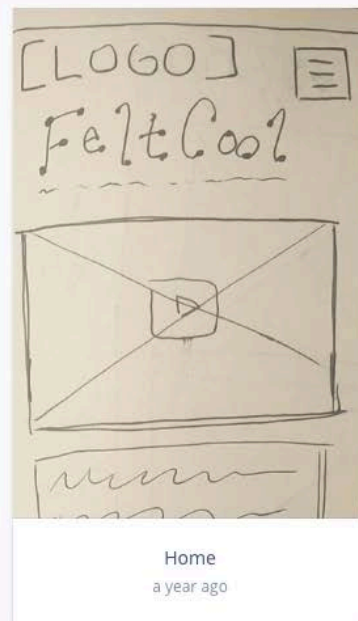
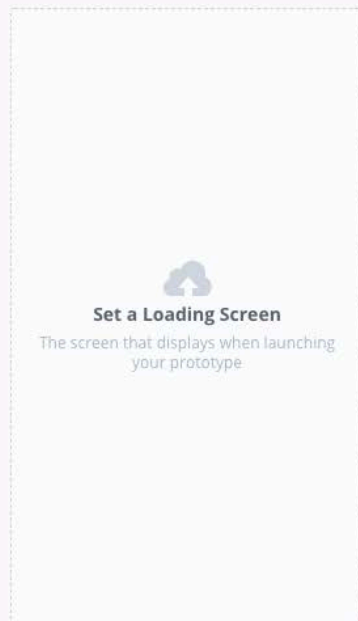
Prototyping



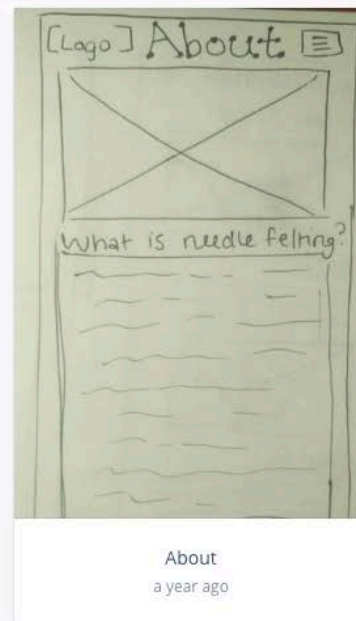
mid-fi



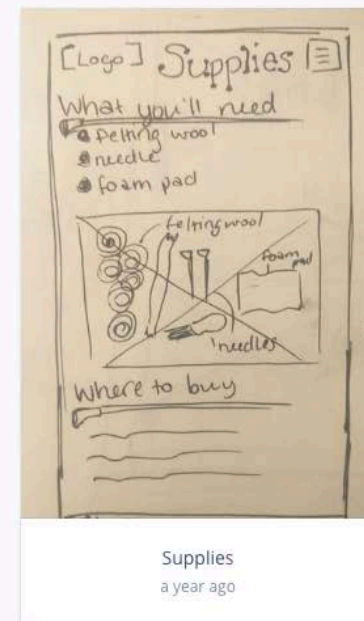
hi-fi



Home
a year ago



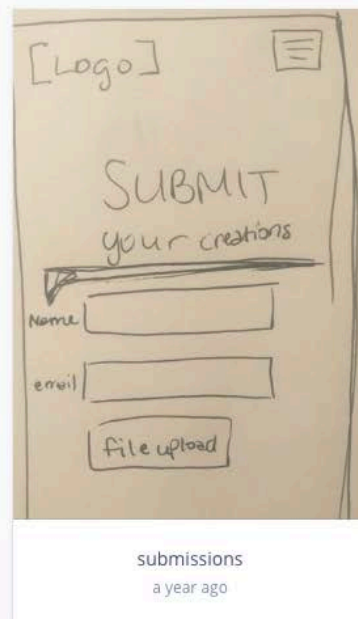
About
a year ago



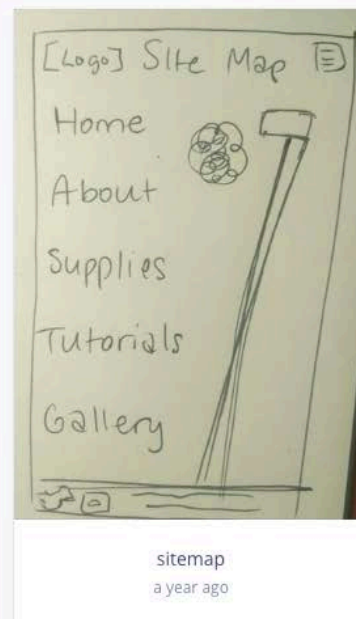
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a year ago



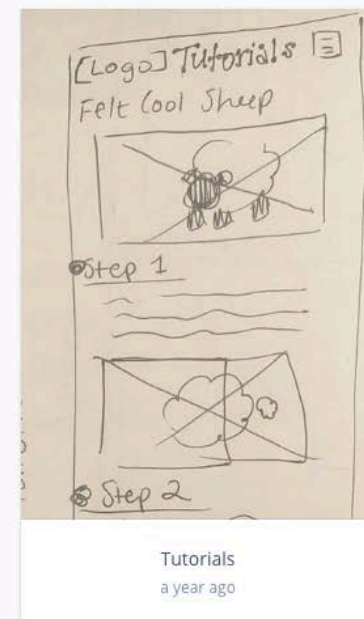
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