

MOBILE FIRST

DESIGN & DEVELOPMENT

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**HOW IMPORTANT
IS MOBILE?**

SHIPPED IN 2014

SHIPPED IN 2014

1.8 BILLION PHONES

SHIPPED IN 2014

1.8 BILLION PHONES

256 MILLION TABLETS

SHIPPED IN 2014

1.8 BILLION **PHONES**

256 MILLION TABLETS

276 MILLION PCs

MORE PHONES SHIPPED
IN **3 MONTHS** THAN
PCs **ALL YEAR**

**“90% [OF USERS] USE
MULTIPLE SCREENS
SEQUENTIALLY TO
ACCOMPLISH A TASK OVER
TIME.”**

GOOGLE, THE NEW MULTI-SCREEN WORLD

**THIS IS THE
NEW REALITY**



WHAT DOES MOBILE FIRST MEAN?

MOBILE FIRST

MOBILE FIRST

IS **NOT** A BUSINESS TERM

MOBILE FIRST

IS **NOT** A BUSINESS TERM
AND DOES NOT MEAN

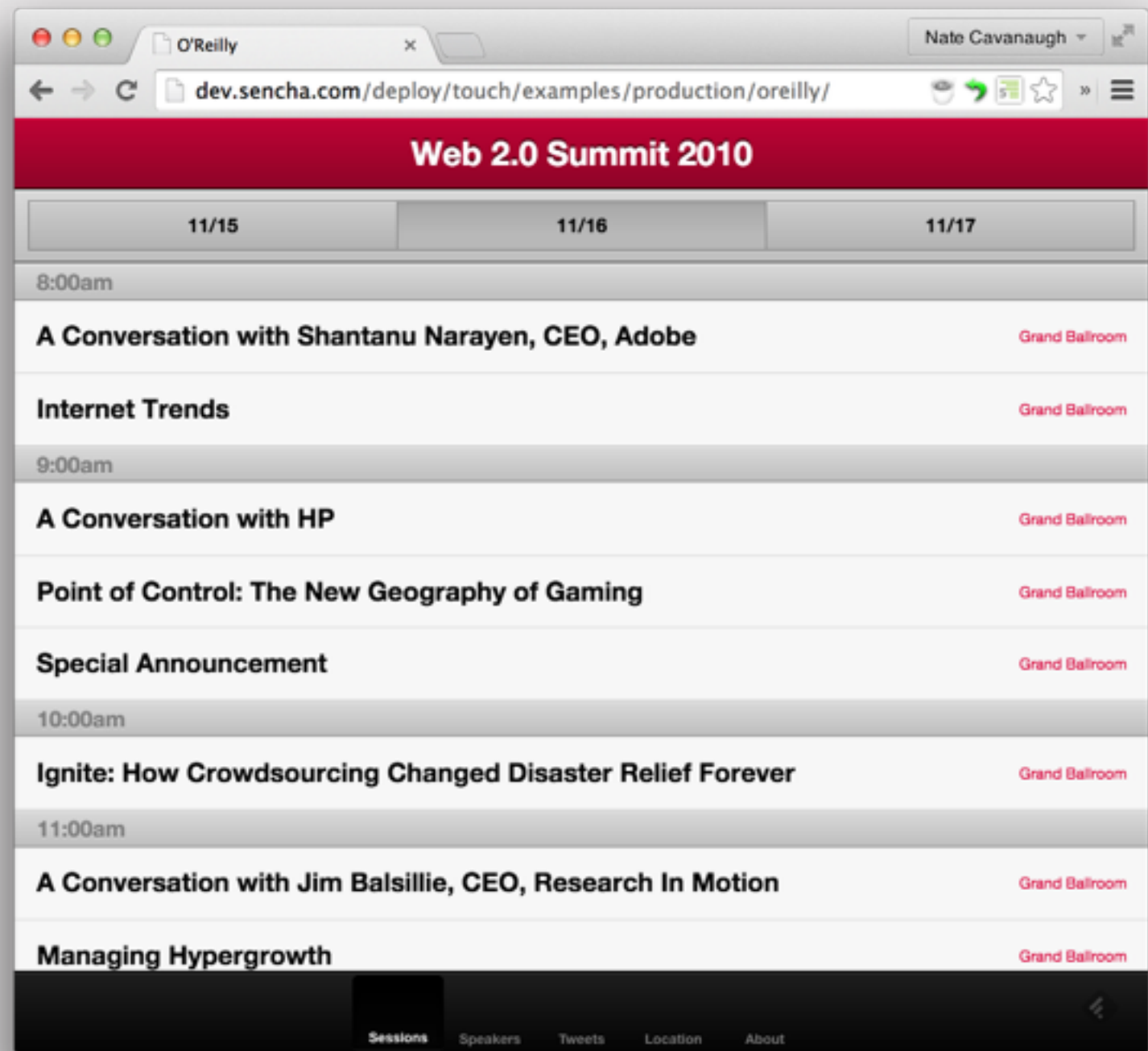
MOBILE FIRST

IS **NOT** A BUSINESS TERM
AND DOES NOT MEAN

“ENGAGING WITH YOUR CUSTOMERS
IN A MOBILE CONTEXT AS THE FIRST
TOUCH POINT OF THE EXPERIENCE
META-FABRIC”

MOBILE FIRST

DOES **NOT**
MEAN
MOBILE
SCREENS ON
DESKTOP
COMPUTERS



MOBILE FIRST

MOBILE FIRST

IS A **STRATEGY** FOR ACHIEVING

MOBILE FIRST

IS A **STRATEGY** FOR ACHIEVING
DEVICE AGNOSTIC WEBSITES
& WEBAPPS USING

MOBILE FIRST

IS A **STRATEGY** FOR ACHIEVING
DEVICE AGNOSTIC WEBSITES
& WEBAPPS USING
RESPONSIVE WEB DESIGN &
PROGRESSIVE ENHANCEMENT

MOBILE FIRST

IT IS SIMPLY A WAY TO
GUARANTEE YOU SERVE THE
HARSHEST ENVIRONMENT
FIRST

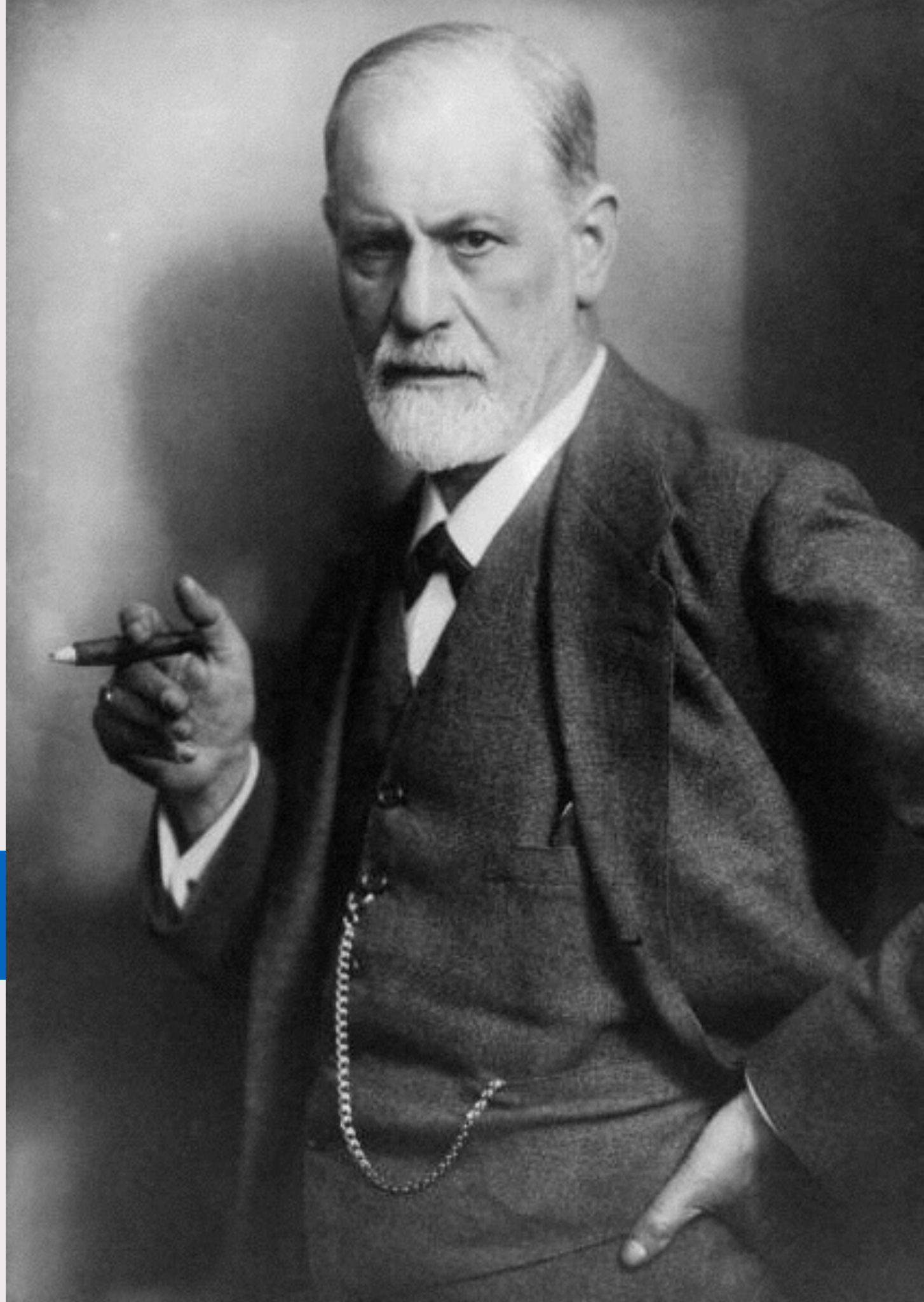
DEVICE AGNOSTIC DESIGN

**DEVELOPERS HAVE LONG
SUFFERED A BAD CASE OF**

**DEVELOPERS HAVE LONG
SUFFERED A BAD CASE OF
APP ENVY**

**“APP ENVY IS THE
CREATION OF A
NATIVE IDEAL AS A
SURVIVAL OF THE
GUI COMPONENTS
THAT THEY
THEMSELVES
ONCE USED.”**

SIGMUND FREUD



**WE HAVE ALL
SEEN THIS**

Navigation

←

→

View tools

▲ Collapse all

🔍 Zoom to fit

▼ Expand all

View resolution

10 weeks

1 year

Try some features...

☐ Highlight critical chain

☐ Highlight tasks longer than 7 days

☐ Filter: Tasks with progress < 30%

☐ Scroll to last task

☐ Cascade changes

Search for task...

Tasks	Start ▲	Duration	% Done	Mon 18 Jan 2010							Mon 25 Jan 2010							Mon 01 Feb 2010							Mon 08 Feb 2010	
				M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T
📁 Planning	2010-01-18	11 days	40																							
📄 Investigate	2010-01-18	8 days	30																							
📄 New task	2010-01-18	8 days	0																							
📄 Gather documents	2010-01-25	6 days	40																							
📄 Assign resources	2010-01-28	3 days	0																							
📄 Report to management	2010-02-02	0 day	0																							

Gather documents

Start: 10-01-25

End: 10-02-01

Progress: 40%

Gather documents

Assign resources

Delete task(s)

2/mosql/mongoddb/geo.nsl/start.jsp

Deleted selected entries

Name	Type	Address
— Aral	Gas station	Haid-und-Neu-Strasse 60, 76131 Karlsruhe, Deutschland
— Aral	Gas station	Durlacher Allee 46, 76131 Karlsruhe, Deutschland
— Athen Palast	Restaurant	Gartenstrasse 68, 76135 Karlsruhe, Deutschland
— ESSO	Gas station	Durlacher Allee 102, 76137 Karlsruhe, Deutschland
— JET	Gas station	Haid-und-Neu-Strasse 30, 76131 Karlsruhe, Deutschland
— Kap	Restaurant	Kapellenstrasse 68, 76131 Karlsruhe, Deutschland
— Theodor Reibbeck-Strasse 6		76131

Home

Message

✉️

Attachment

Image

Cc/Bcc

Send

Message

Tahoma

11px

B

I

U

ABC

x²

x₂

Font

Design Preview

Tab 1

Tab 2

A Panel inside a TabPanel

Lists

Item 1

Item 2

Item 3

Bars

🔍 Search

Text

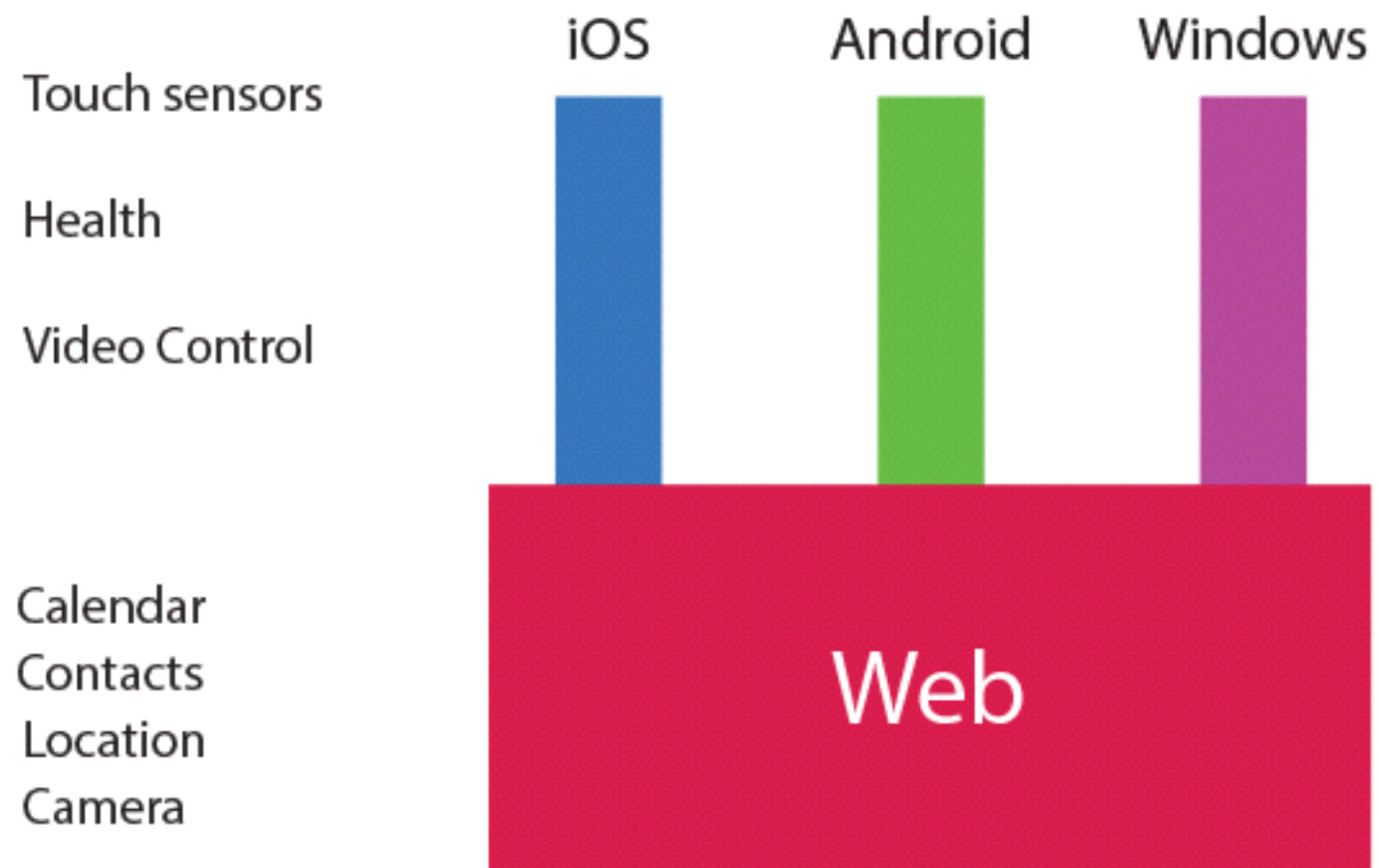
Select ▼

**THIS IS A PROBLEM
OF INSECURITY**

NATIVE VS. WEB IS A FALSE DICHOTOMY

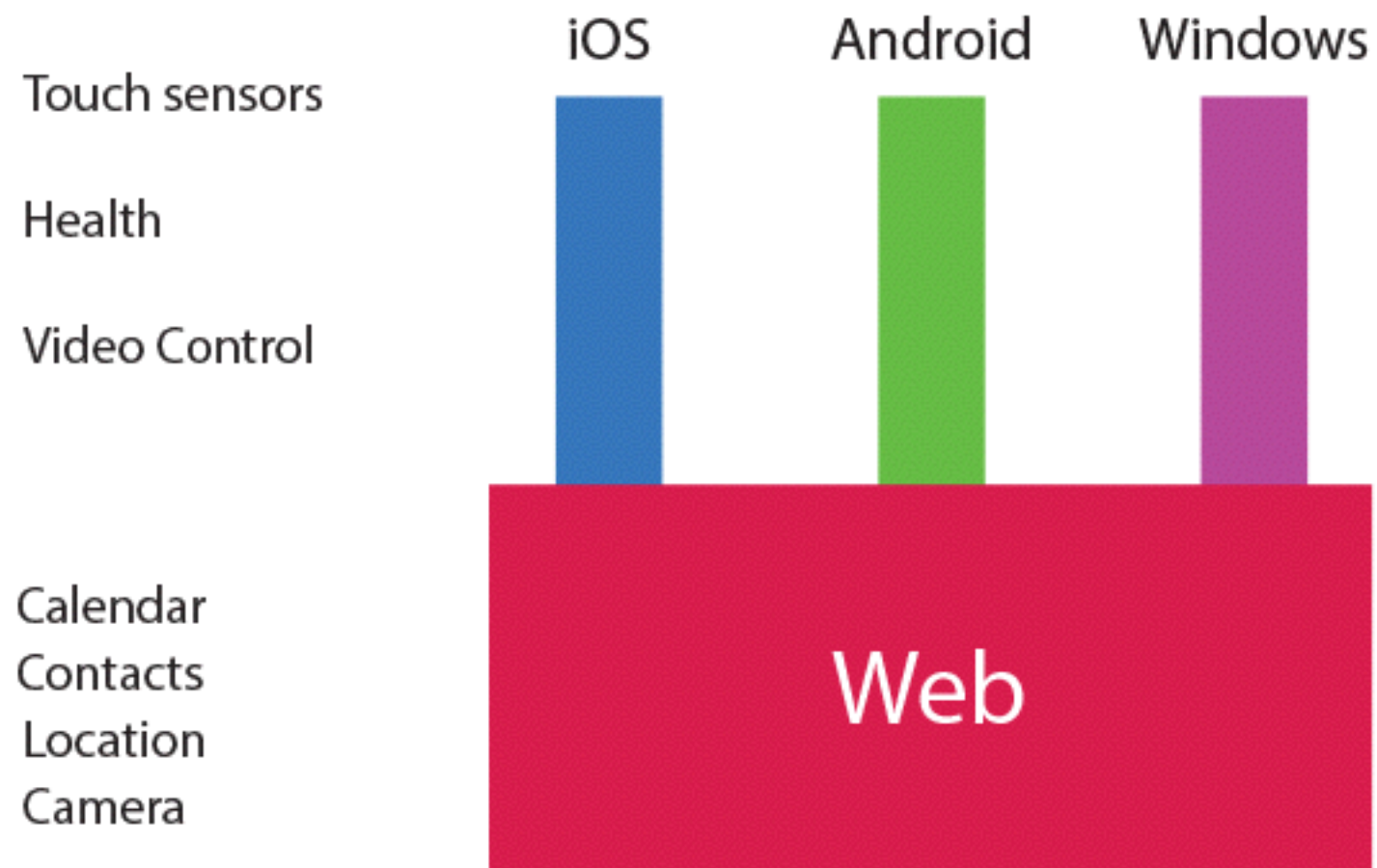
Our Imagination

VR



Our Imagination

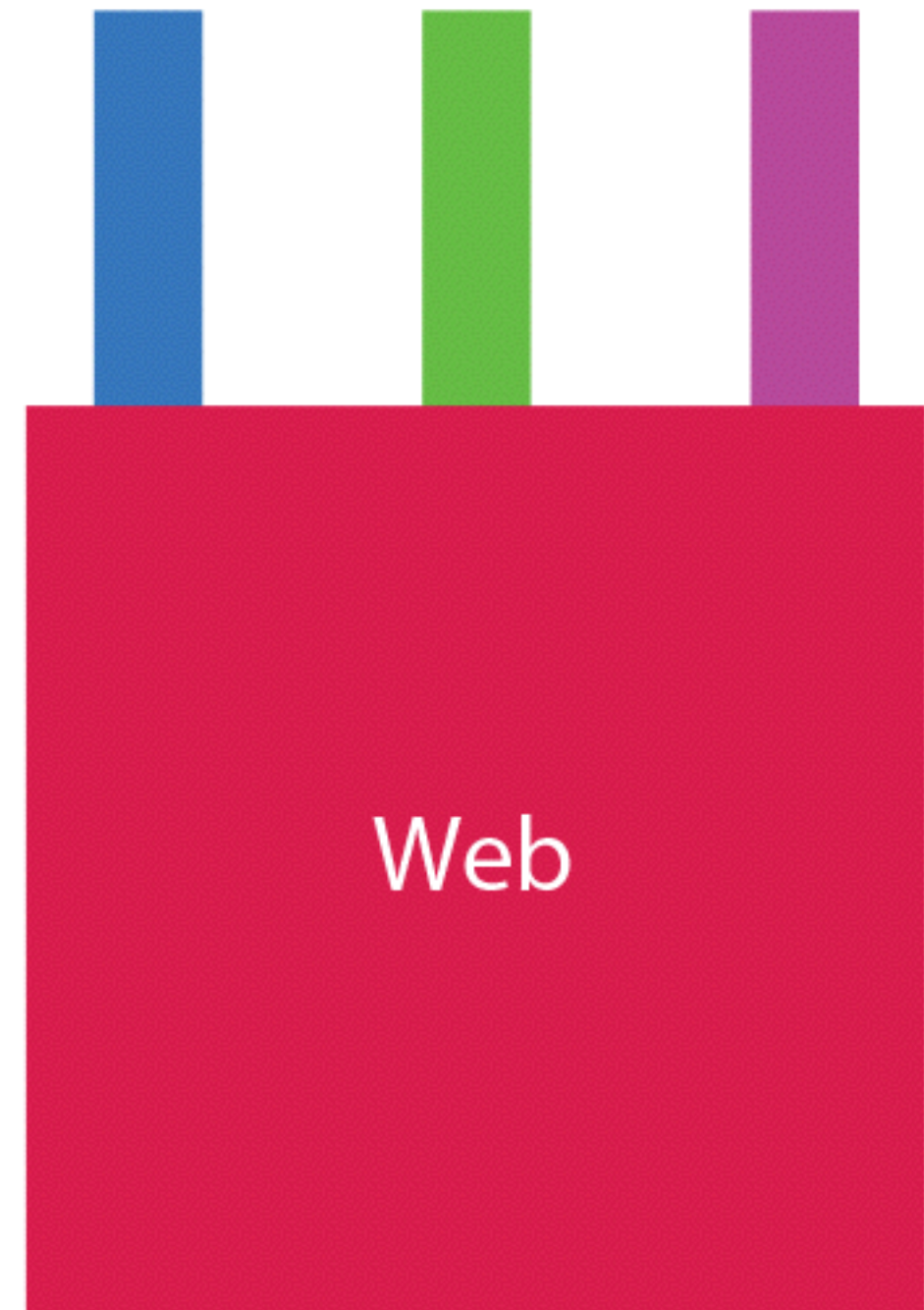
VR



iOS

Android

Windows



**THE CONTEST
DOES NOT EXIST**



#LRNAS2014



**INSTEAD OF TRYING
TO COMPARE**

**INSTEAD OF TRYING
TO COMPARE**

**APPLES VS. ORANGES,
PUGS VS. BULL-MASTIFFS**

**INSTEAD OF TRYING
TO COMPARE**

**APPLES VS. ORANGES,
PUGS VS. BULL-MASTIFFS**
**THINK IN TERMS OF
TRADEOFFS**





**THERE'S A
BETTER WAY**

**GO WITH
THE GRAIN
OF THE MEDIUM**

**“IF NOTHING WITHIN YOU STAYS RIGID,
OUTWARD THINGS WILL DISCLOSE THEMSELVES.
EMPTY YOUR MIND, BE FORMLESS.**

SHAPELESS, LIKE WATER.

**IF YOU PUT WATER INTO A CUP, IT BECOMES THE
CUP. YOU PUT WATER INTO A BOTTLE AND IT
BECOMES THE BOTTLE. YOU PUT IT IN A TEAPOT
IT BECOMES THE TEAPOT.**

**NOW, WATER CAN FLOW OR IT CAN CRASH.
BE WATER MY FRIEND.”**

BRUCE LEE

THE WEB IS A CONTINUUM OF

THE WEB IS A CONTINUUM OF DEVICES

THE WEB IS A CONTINUUM OF DEVICES CAPABILITIES

**THE WEB IS A CONTINUUM OF
DEVICES
CAPABILITIES
CONSTRAINTS**

THE **STRENGTHS** OF THE WEB

THE **STRENGTHS** OF THE WEB

UBIQUITY

THE **STRENGTHS** OF THE WEB

UBIQUITY

THE WEB IS THE MOST
WIDELY DEPLOYED RUNTIME
OF **ANY** TECHNOLOGY

TAKE THAT



JAVA

TAKE THAT



JAVA

THE **STRENGTHS** OF THE WEB

THE **STRENGTHS** OF THE WEB VARIABILITY

THE **STRENGTHS** OF THE WEB

VARIABILITY

THIS IS NOT A
CONSTRAINT, BUT A
FEATURE OF THE WEB

CONSTRAINTS OF THE WEB

CONSTRAINTS OF THE WEB

PERFORMANCE

CONSTRAINTS OF THE WEB

PERFORMANCE

CPU

CONSTRAINTS OF THE WEB

PERFORMANCE

CPU

WEBKIT IS FASTER THAN IE, BUT...

CONSTRAINTS OF THE WEB

PERFORMANCE

CPU

**WEBKIT IS FASTER THAN IE, BUT...
AN IPHONE 4S IS EQUIVALENT IN
SPEED TO IE8.**

CONSTRAINTS OF THE WEB

CONSTRAINTS OF THE WEB

PERFORMANCE

CONSTRAINTS OF THE WEB

PERFORMANCE

NETWORK SPEED

CONSTRAINTS OF THE WEB

PERFORMANCE

NETWORK SPEED

**GLOBAL BROADBAND IS
GROWING, BUT...**

CONSTRAINTS OF THE WEB

PERFORMANCE

NETWORK SPEED

**GLOBAL BROADBAND IS
GROWING, BUT...**

**THE DEVELOPING WORLD IS STILL
FAR BEHIND.**

CONSTRAINTS OF THE WEB

PERFORMANCE

**THIS INCLUDES SUCH
REMOTE PLACES AS**

EQUATORIAL GUINEA





BOLIVIA

BOSTON, MA



CONSTRAINTS OF THE WEB

CONSTRAINTS OF THE WEB

INTERRUPTED ATTENTION

CONSTRAINTS OF THE WEB

INTERRUPTED ATTENTION

ONE FINGER

ONE EYEBALL

CONSTRAINTS OF THE WEB

CONSTRAINTS OF THE WEB

**THESE CONSTRAINTS
HAVE ALWAYS BEEN HERE,**

CONSTRAINTS OF THE WEB

**THESE CONSTRAINTS
HAVE ALWAYS BEEN HERE,
JUST EASY TO IGNORE
WHEN IT'S SOMEONE
ELSE'S DESKTOP**

CONSTRAINTS OF THE WEB

CONSTRAINTS OF THE WEB

**“WELL THEY SHOULD GET A
BIGGER MONITOR”**

CONSTRAINTS OF THE WEB

**“WELL THEY SHOULD GET A
BIGGER MONITOR”**

**“WHO USES A CORE 2 DUO
PROCESSOR ANYMORE?”**

CONSTRAINTS OF THE WEB

**“WELL THEY SHOULD GET A
BIGGER MONITOR”**

**“WHO USES A CORE 2 DUO
PROCESSOR ANYMORE?”**

**“MAYBE THEY SHOULD GET THEIR
EYE-SIGHT CHECKED, THIS IS THE
PERFECT SIZE FOR THE TEXT”**

CONSTRAINTS OF THE WEB

**“WELL THEY SHOULD GET A
BIGGER MONITOR”**

**“WHO USES A CORE 2 DUO
PROCESSOR ANYMORE?”**

**“MAYBE THEY SHOULD GET THEIR
EYE-SIGHT CHECKED, THIS IS THE
PERFECT SIZE FOR THE TEXT”**

**“PEOPLE DON'T USE COMPUTERS
THAT WAY”**

CONSTRAINTS OF THE WEB

**MOBILE HAS FORCED US TO
CONSIDER USERS OUTSIDE OF
OURSELVES**

MOBILE FIRST DESIGN

MOBILE FIRST DESIGN

**YOU DON'T HAVE TO
START FROM SCRATCH**

MOBILE FIRST DESIGN

MOBILE FIRST DESIGN

**DESIGN FOR MOBILE AS IF IT
WERE FIRST**

MOBILE FIRST DESIGN

**DESIGN FOR MOBILE AS IF IT
WERE FIRST**

MOBILE FIRST DESIGN

**DESIGN FOR MOBILE AS IF IT
WERE FIRST**

**USE THE EXERCISE TO
REFINE AND IMPROVE THE
DESKTOP VERSION**

MOBILE FIRST DESIGN



**“A DESIGNER KNOWS HE HAS
ACHIEVED PERFECTION NOT
WHEN THERE IS NOTHING
LEFT TO ADD, BUT WHEN
THERE IS NOTHING LEFT TO
TAKE AWAY”**

ANTOINE DE SAINT-EXUPÉRY

MOBILE FIRST DESIGN

**KEEP THE END GOAL IN MIND
FIRST ABOVE THE DESIGN**

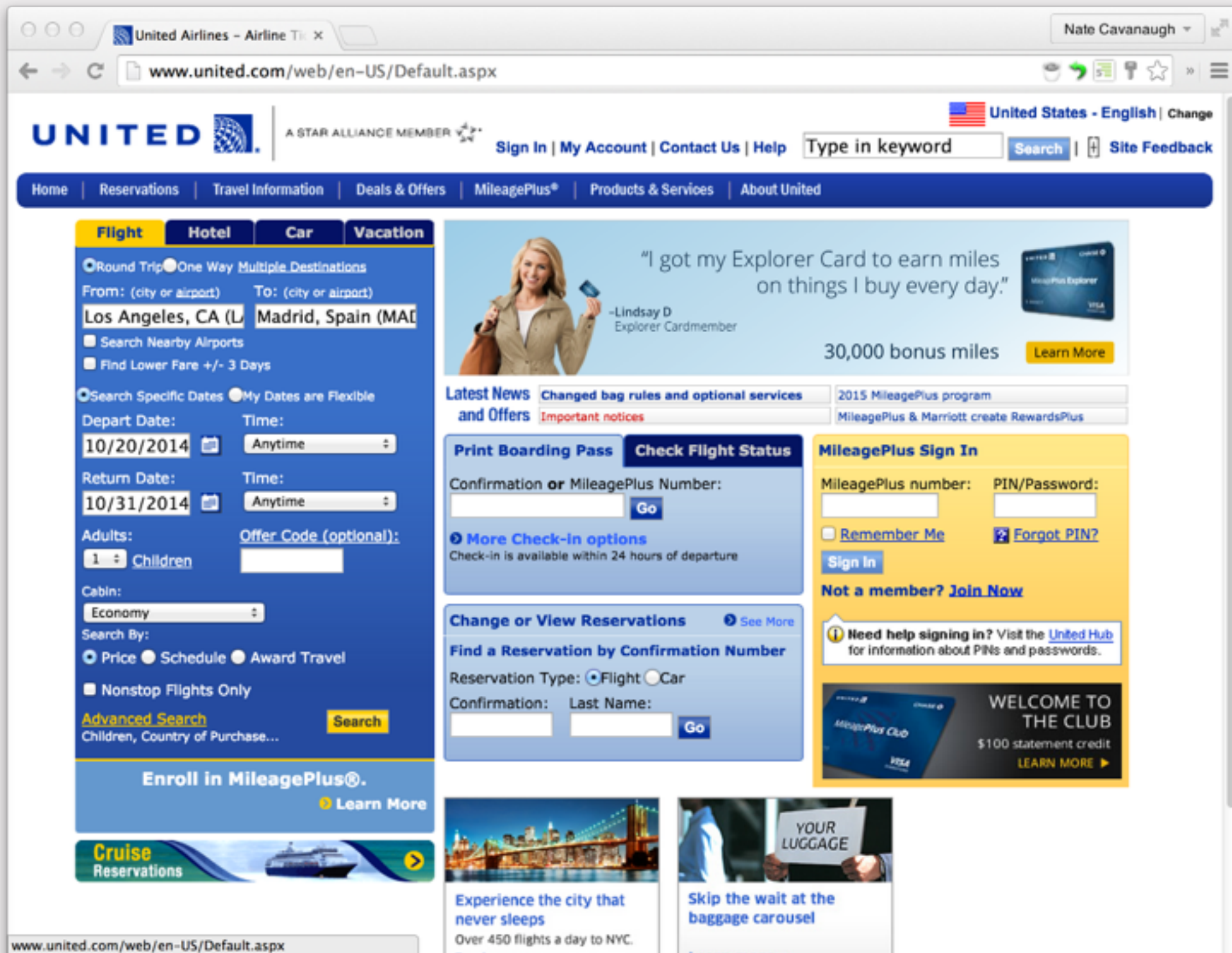
MOBILE FIRST DESIGN

THE DESIGN SHOULD SERVE
THE “WHY”

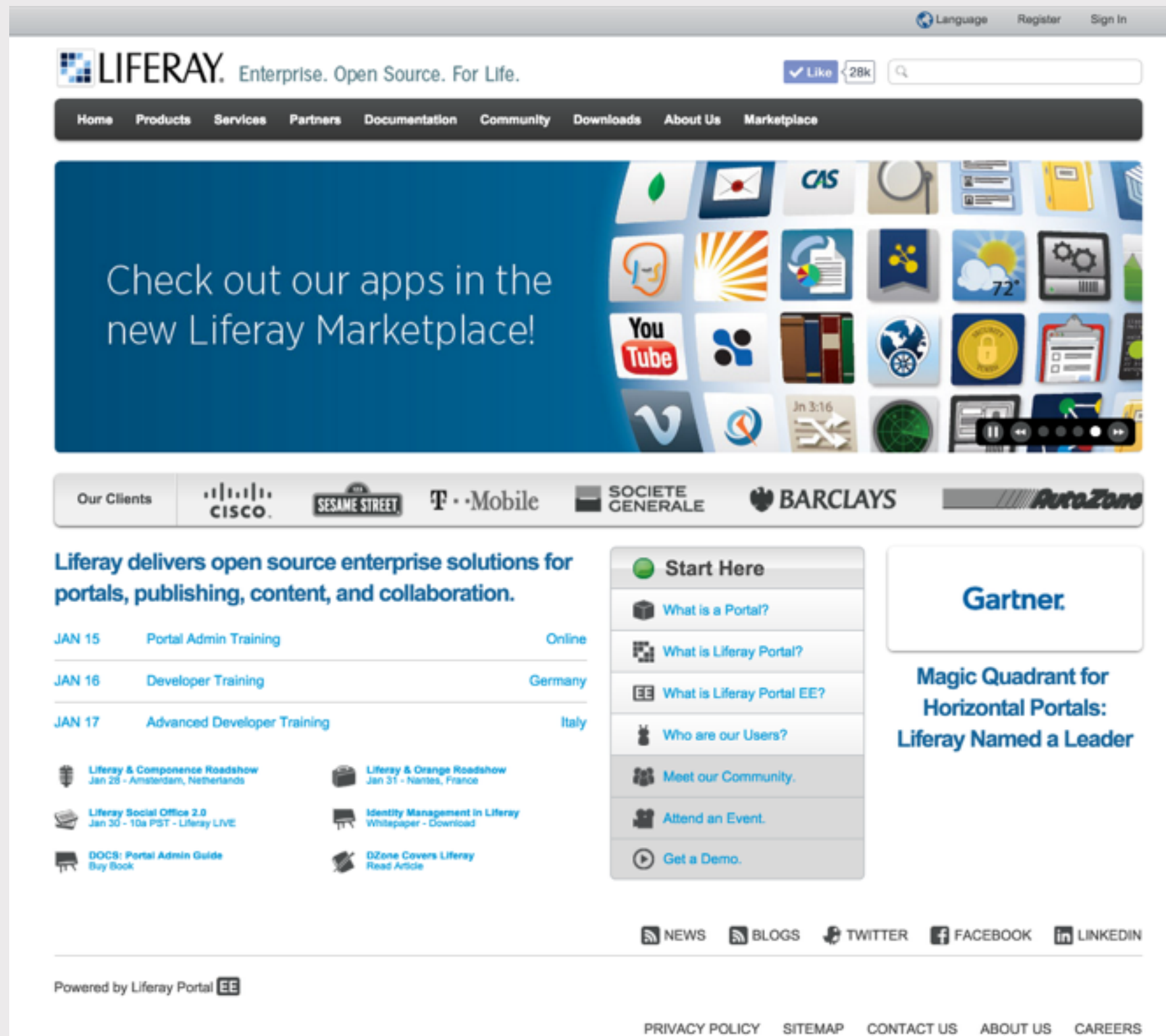
MOBILE FIRST DESIGN

**CONTENT IS MORE
IMPORTANT THAN
NAVIGATION**

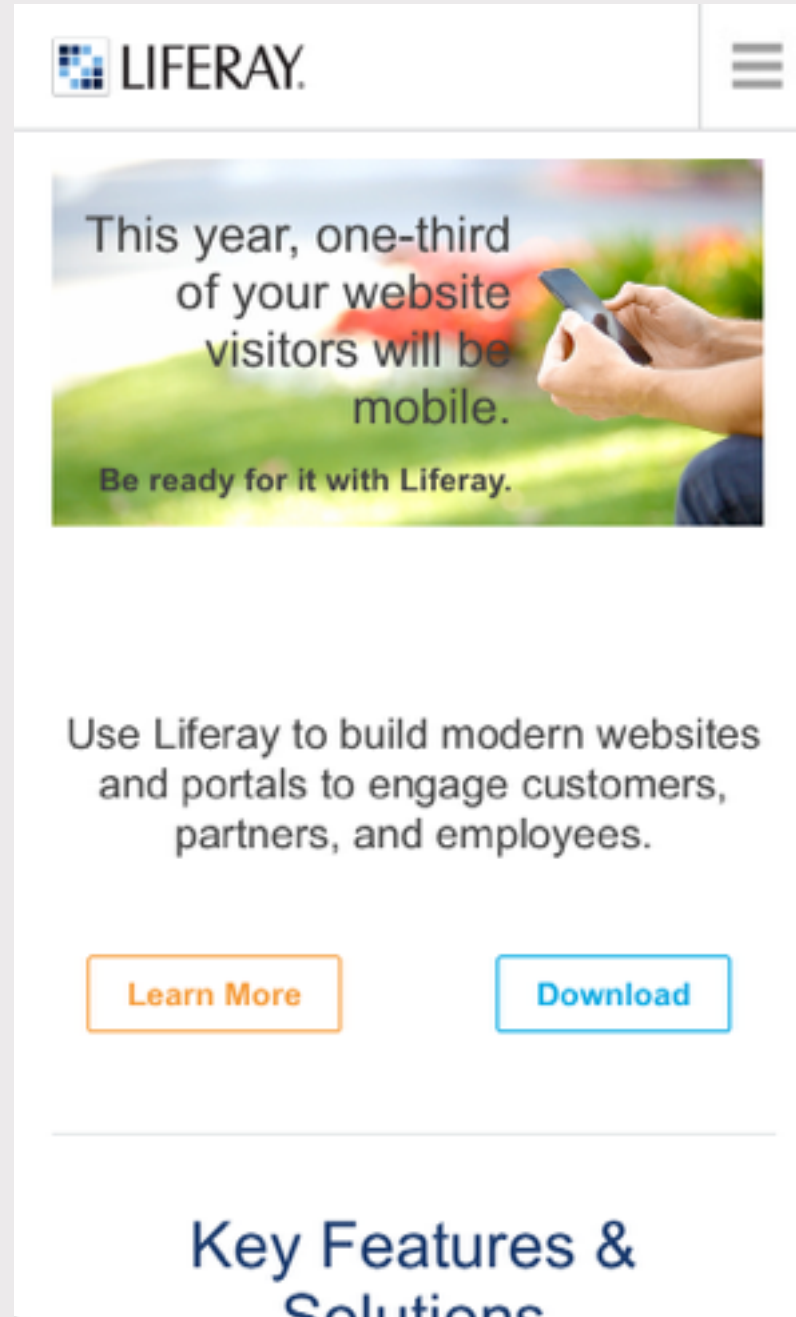
MOBILE FIRST DESIGN



MOBILE FIRST DESIGN



MOBILE FIRST DESIGN



The screenshot shows the Liferay website interface. At the top left is the Liferay logo, consisting of a blue square icon with a white grid pattern followed by the word "LIFERAY." in a sans-serif font. To the right of the logo is a hamburger menu icon (three horizontal lines). Below the header is a large banner image. The banner features a blurred background of a person's hands holding a smartphone, with a bright, sunlit outdoor scene. Overlaid on the banner is the text: "This year, one-third of your website visitors will be mobile." in a large, dark font, and "Be ready for it with Liferay." in a smaller font below it. Below the banner is a paragraph of text: "Use Liferay to build modern websites and portals to engage customers, partners, and employees." Below this text are two buttons: "Learn More" with an orange border and "Download" with a blue border. At the bottom of the visible section is a horizontal line followed by the text "Key Features & Solutions" in a large, dark font.

LIFERAY.

This year, one-third of your website visitors will be mobile.
Be ready for it with Liferay.

Use Liferay to build modern websites and portals to engage customers, partners, and employees.

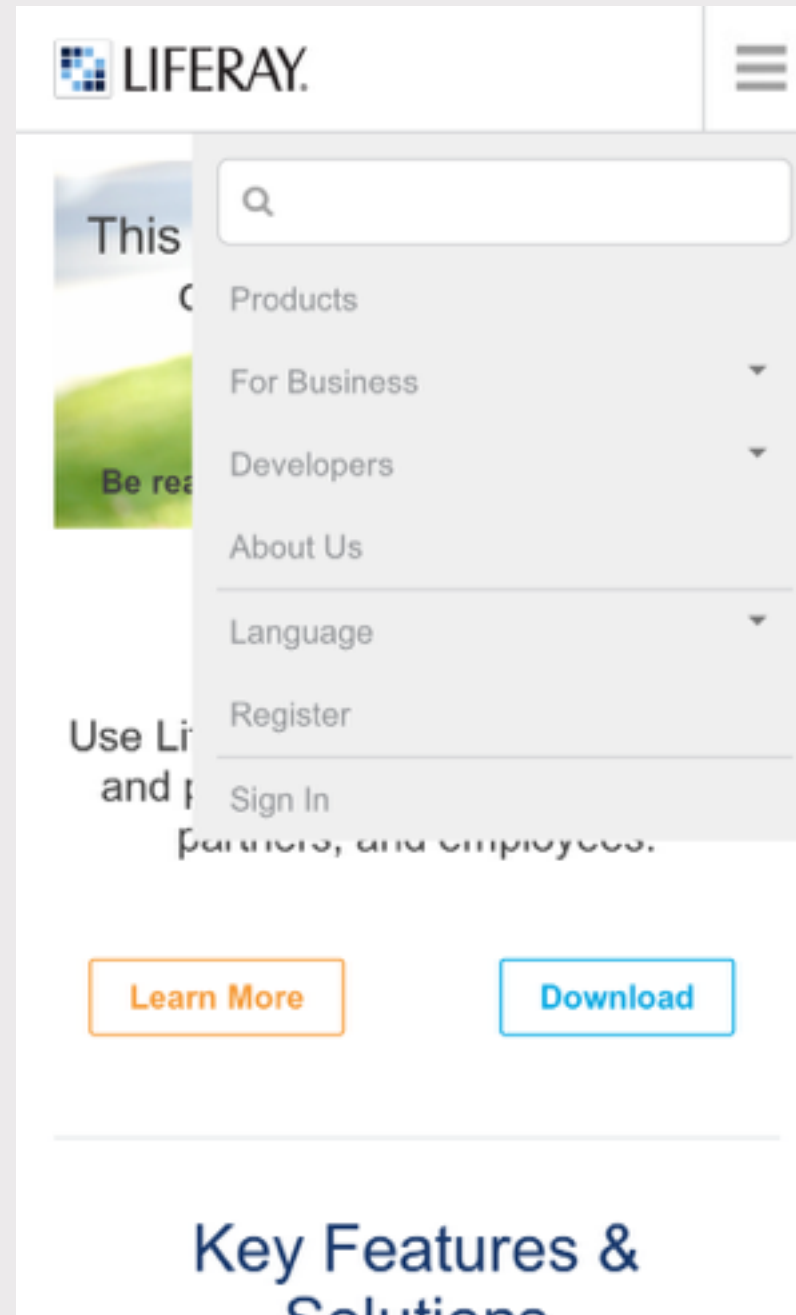
[Learn More](#) [Download](#)

Key Features & Solutions

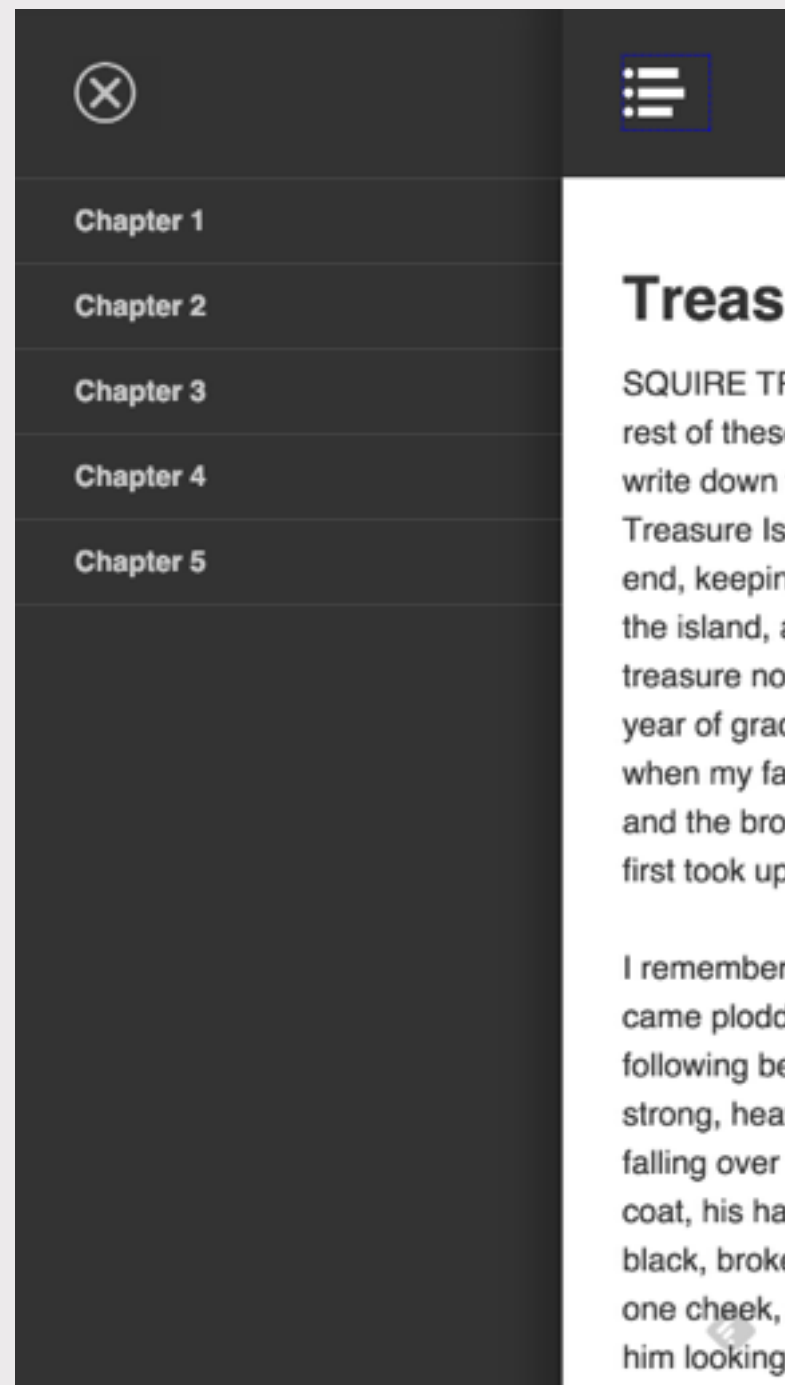
MOBILE FIRST DESIGN

**KEEP NAVIGATION
WITHIN CONTEXT**

MOBILE FIRST DESIGN



MOBILE FIRST DESIGN



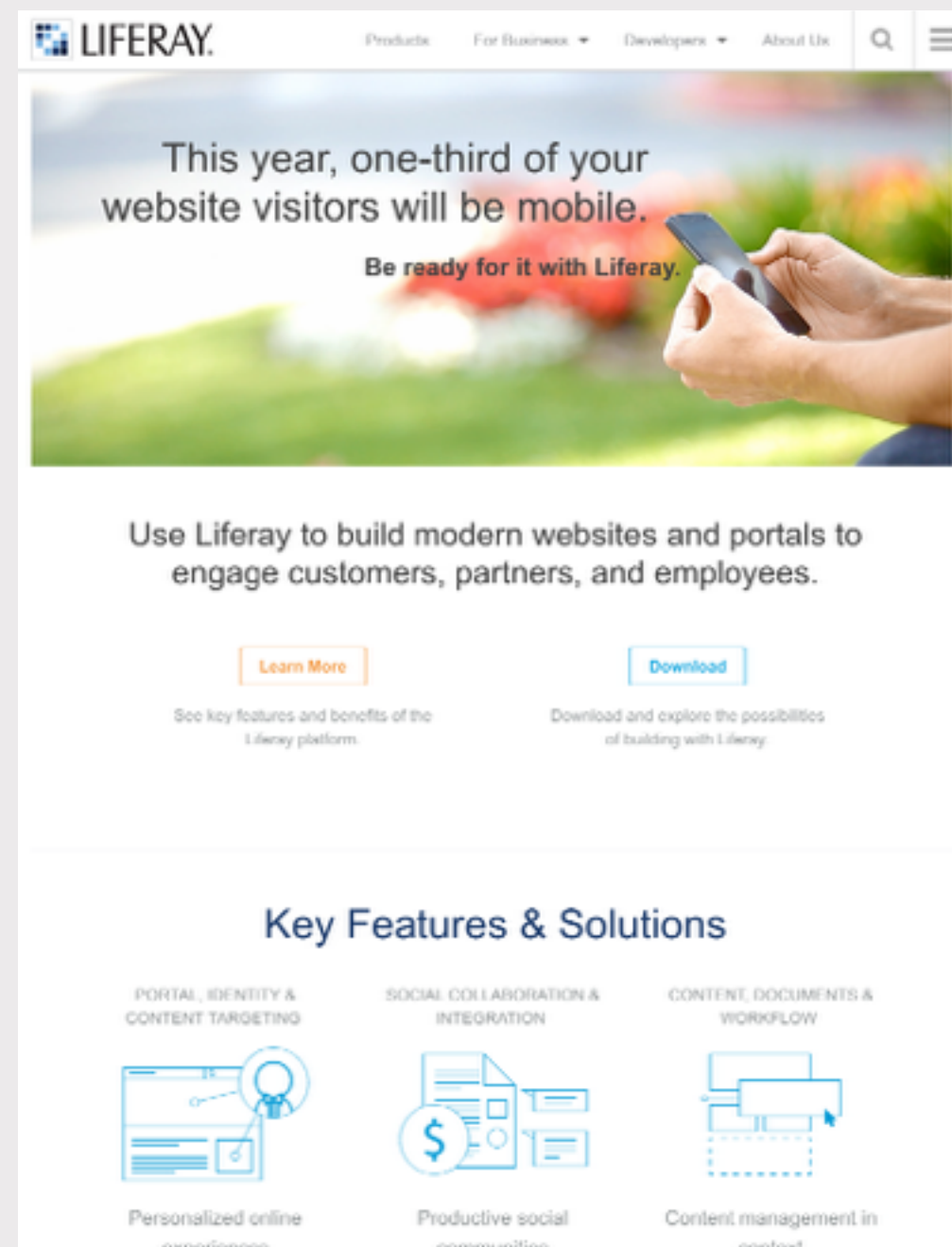
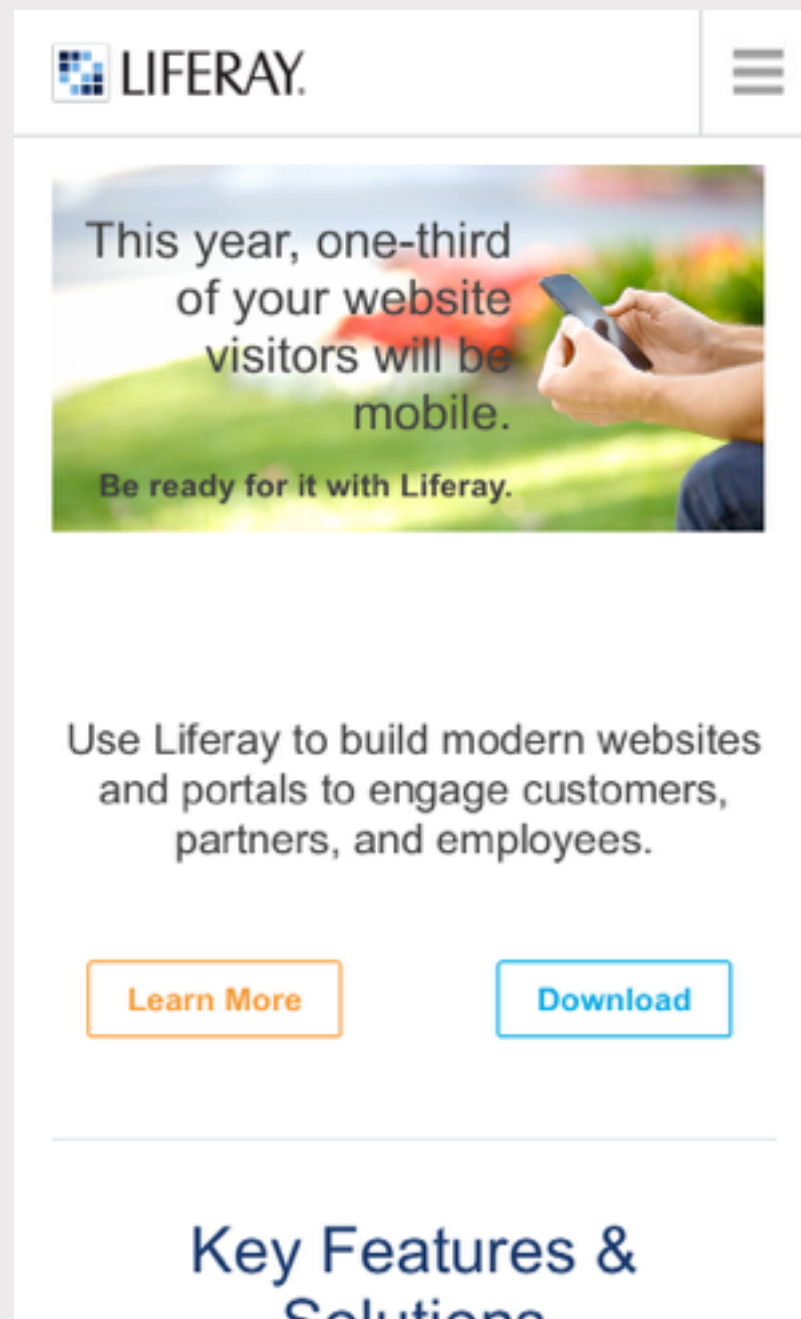
MOBILE FIRST DESIGN

**TRY TO KEEP THE DESIGN
BETWEEN DEVICE VIEWS AS
SIMILAR AS POSSIBLE**

MOBILE FIRST DESIGN

**THIS LIMITS ANY JARRING
BEHAVIOR WHEN RESIZING
WINDOWS AND PAGE LOAD**

MOBILE FIRST DESIGN



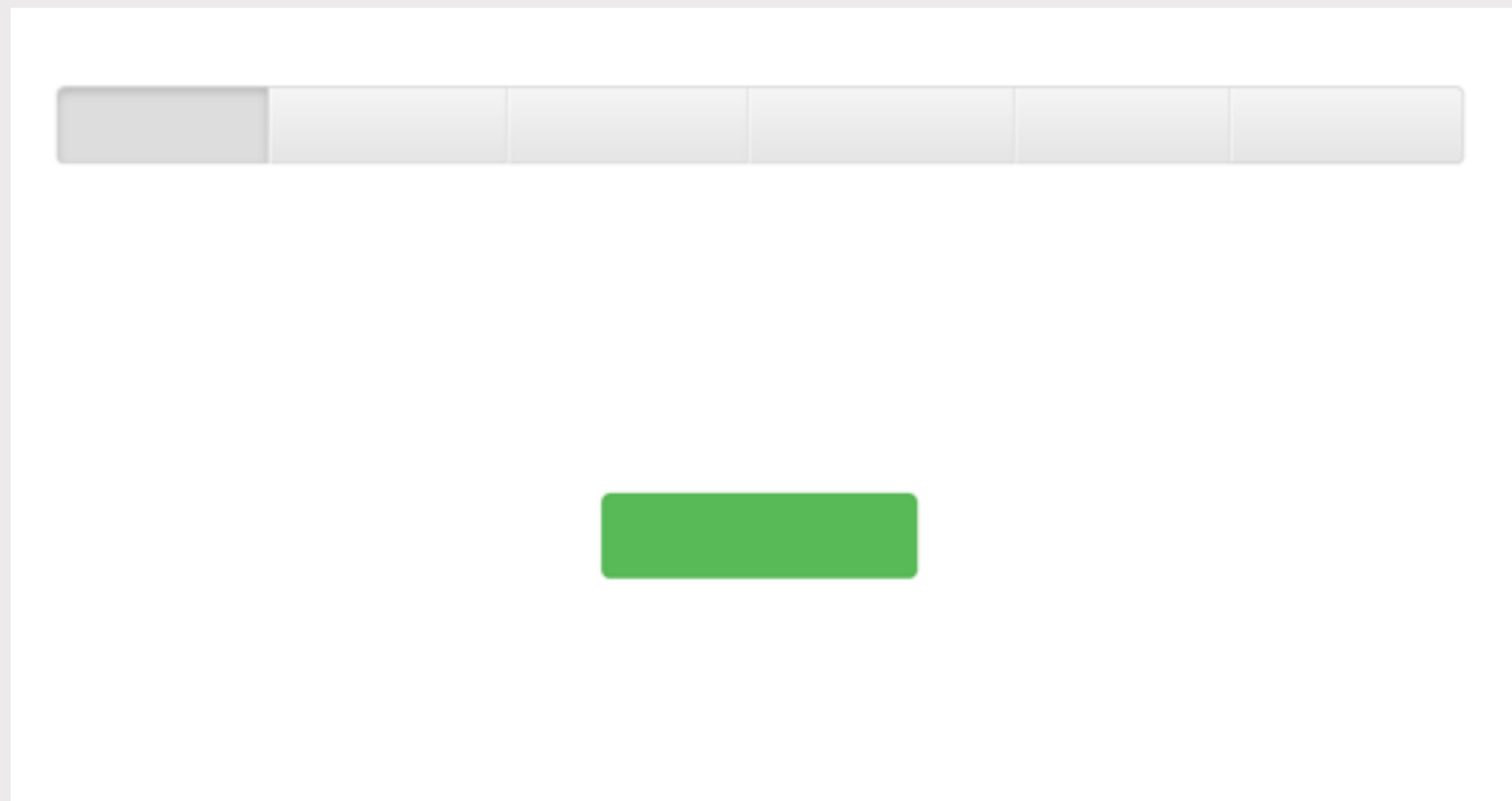
MOBILE FIRST DESIGN

CUSTOM FONTS

MOBILE FIRST DESIGN

CUSTOM FONTS

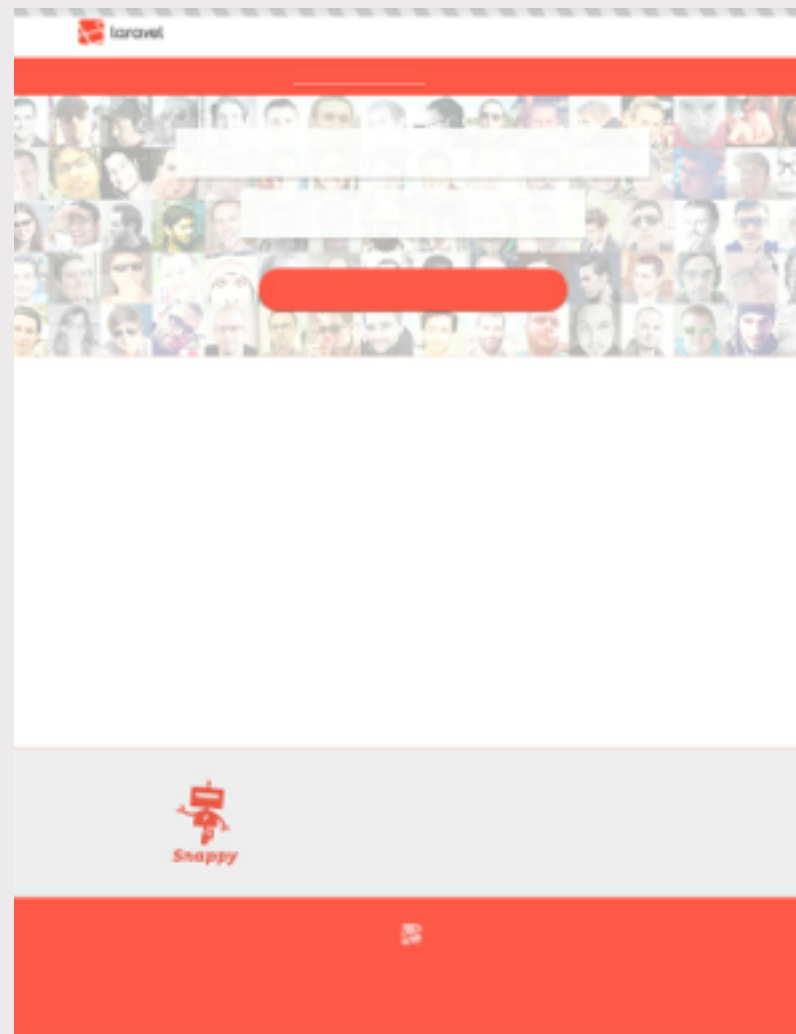
DON'T DO THIS



MOBILE FIRST DESIGN

CUSTOM FONTS

OR THIS



MOBILE FIRST DEVELOPMENT

MOBILE FIRST DEVELOPMENT

**DON'T TIE THE SCREEN SIZE
TO THE INPUT METHOD**

MOBILE FIRST DEVELOPMENT

**DON'T ASSUME THAT A
SMALL SCREEN MEANS
TOUCH INPUT**

MOBILE FIRST DEVELOPMENT

**OR THAT A LARGE SCREEN
MEANS MOUSE INPUT**

MOBILE FIRST DEVELOPMENT



MOBILE FIRST DEVELOPMENT

**DON'T HIDE CRITICAL
FUNCTIONALITY BEHIND
KEYBOARD SHORTCUTS
OR GESTURES**

MOBILE FIRST DEVELOPMENT

CSS

THINK MIN-WIDTH, NOT
MAX-WIDTH

MOBILE FIRST DEVELOPMENT

CSS

**DEFAULT STYLING SHOULD
BE THE FOR THE
SMALLEST DEVICES**

MOBILE FIRST DEVELOPMENT

CSS

**ADD MEDIA QUERIES
FOR EACH
BREAKPOINT UPWARDS**

MOBILE FIRST DEVELOPMENT

CSS

```
div {  
  width: 100%;  
}
```

```
@media only screen and (min-width: 420px) {  
  div { width: 50%; }  
}
```

```
@media only screen and (min-width: 980px) {  
  div { width: 33%; }  
}
```

MOBILE FIRST DEVELOPMENT

JAVASCRIPT

**MOST POWERFUL FEATURE
DETECTION**

MOBILE FIRST DEVELOPMENT

JAVASCRIPT

YOU CAN TEST FOR

TOUCH CAPABILITIES

LOCATION SUPPORT

CSS MEDIA QUERIES

ETC.

MOBILE FIRST DEVELOPMENT

JAVASCRIPT

JUST BE CAREFUL AS IT ADDS A PROCESSING COST

MOBILE FIRST DEVELOPMENT

JAVASCRIPT

LAZY LOAD AS MUCH AS POSSIBLE USING FEATURE DETECTION

MOBILE FIRST DEVELOPMENT

JAVASCRIPT

**THIS CAN INCLUDE SCRIPTS,
CSS FILES, IMAGES,
OR ANY ASSET**



TWITTER/GITHUB
@NATECAVANAUGH



**TWITTER/GITHUB
@NATECAVANAUGH**