flight

Jason Harris

Engineering Manager, TwitterUIKit | @smeger

Twitter Adaptive UI

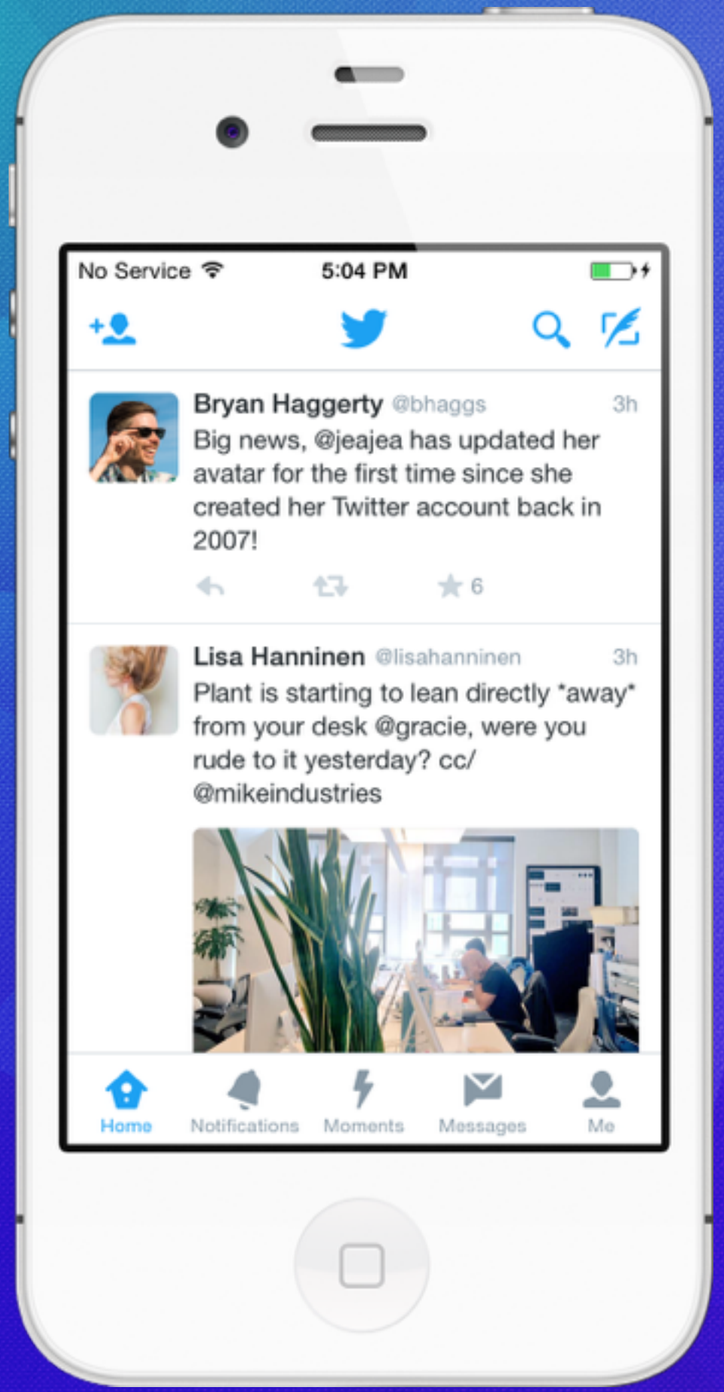
Respond, Modify, Rethink

Twitter Adaptive UI

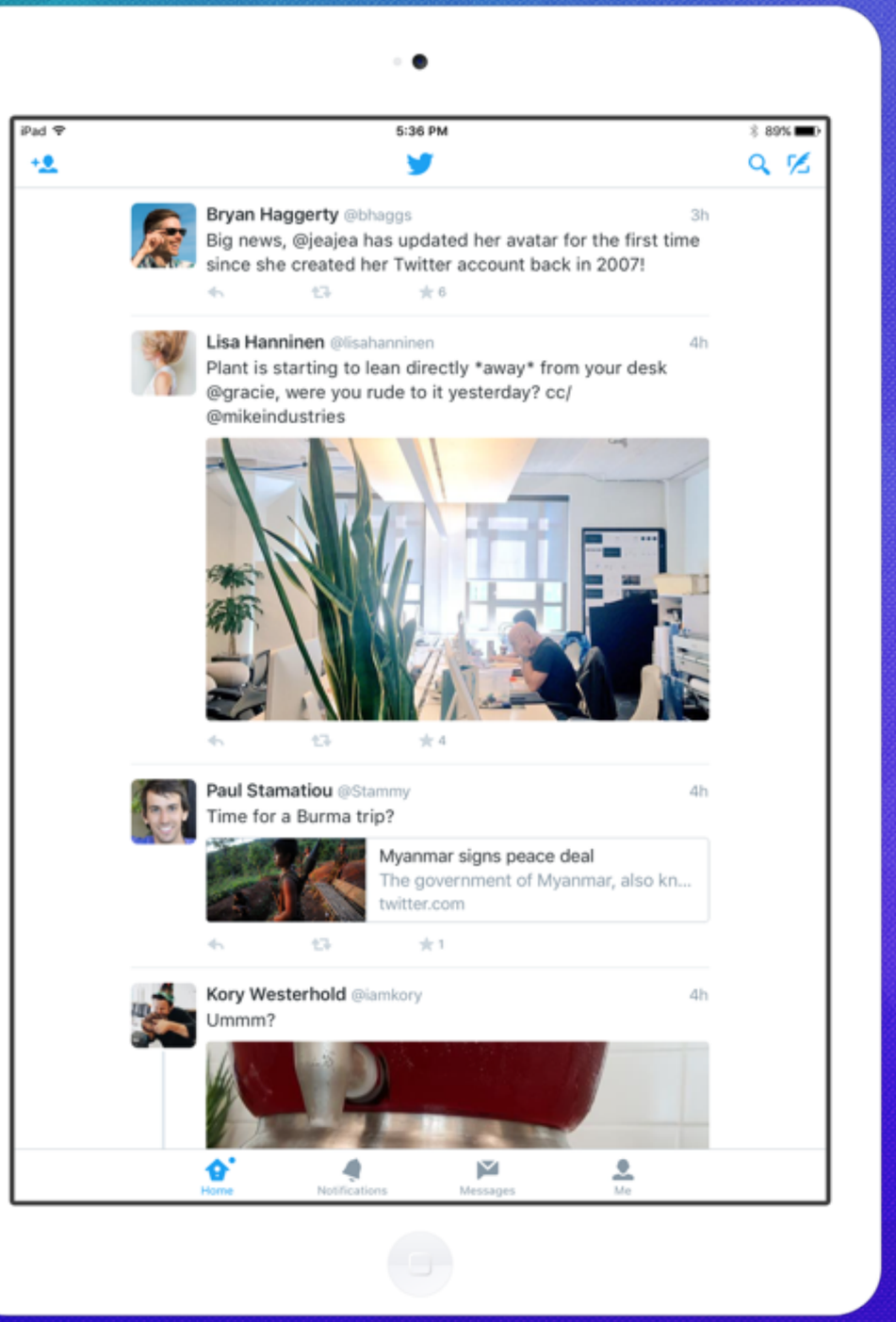
Respond, Modify, Rethink

Twitter Adaptive UI

Respond, Modify, Rethink


No Service
5:04 PM
Bryan Haggerty @bhaggs 3h
Big news, @jeajea has updated her avatar for the first time since she created her Twitter account back in 2007!
6
Lisa Hanninen @lisahanninen 3h
Plant is starting to lean directly "away" from your desk @gracie, were you rude to it yesterday? cc/ @mikeindustries
Home
Notifications
Moments
Messages
Me

flight


iPad
5:36 PM
89%
Bryan Haggerty @bhaggs 3h
Big news, @jeajea has updated her avatar for the first time since she created her Twitter account back in 2007!
6
Lisa Hanninen @lisahanninen 4h
Plant is starting to lean directly *away* from your desk @gracie, were you rude to it yesterday? cc/ @mikeindustries
4
Paul Stamatiou @Stammy 4h
Time for a Burma trip?
Myanmar signs peace deal
The government of Myanmar, also kn...
twitter.com
1
Kory Westerhold @iamkory 4h
Ummm?
Home
Notifications
Messages
Me

flight

iPad 4:53 PM 90%

Bryan Haggerty
@bhaggs

Big news, @jeajea has updated her avatar for the first time since she created her Twitter account back in 2007!

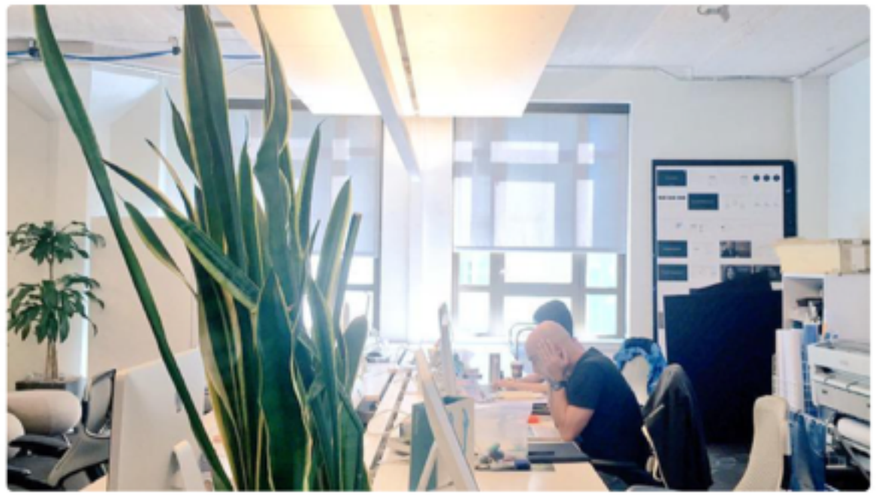
3h

6

Lisa Hanninen
@lisahanninen

Plant is starting to lean directly *away* from your desk @gracie, were you rude to it yesterday? cc/ @mikeindustries

3h



4

Paul Stamatiou
@Stammy

Time for a Burma trip?

3h

Myanmar signs peace deal
The government of Myanmar, also known as B...

Home Notifications Messages Me

What Is Adaptive UI?

“Rather than tailoring disconnected designs to each of an ever-increasing number of web devices, we can treat them as facets of the same experience.”

–Ethan Marcotte

alistapart.com/article/responsive-web-design

What is Adaptive UI?

Adaptive UI is not a single *thing*.

It is a series of tools, techniques and APIs for building interfaces that are adaptive.

What does Adaptive UI mean for Twitter?

At Twitter, it is a **strategy**.

It is also a **framework for communicating** between Design and Engineering at Twitter.

What's old is new again

Android apps have been adaptive for a long time. And the Web community has been thinking this way even longer.

Many of the things we'll talk about today are platform agnostic and should help us **think adaptively** for any environment.

Agenda

- **History** How did we get here?
- **Goals** What are we trying to solve?
- **Thinking Adaptively** Considerations
- **Strategy** Spectrum for problem solving
- **Case Studies** Adaptive UI in practice

History

Designing for a single device:

- iPhone
- Limited variables
- Highly optimized design solutions

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History

Designing for specific devices:

- iPhone and iPad
- Limited variables
- Highly differentiated design solutions

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History

Designing for a range of devices:

- Many devices
- Many variables

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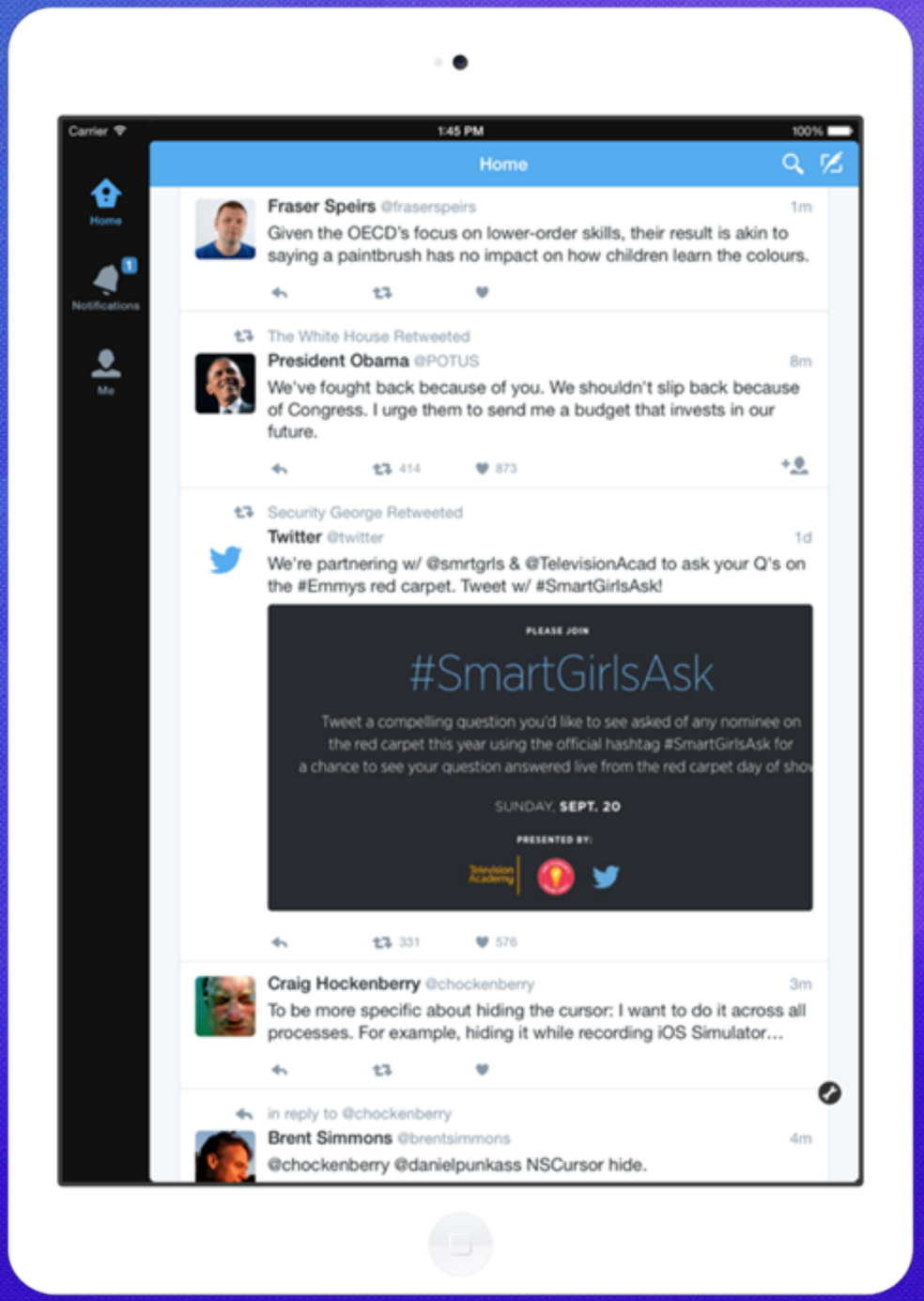
History

And one more thing...

- our iPad app needed lots of love



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Intermission

Some Fun Numbers

Some fun numbers so far

- **Major Public Releases** 3 (so far!)
- **Discrete Work Items** over 800
- **Time Required** over 1 year
- **Source Code Files Affected** around 3000
- **Team Size** small

Goals

What are we trying to solve?

Goals

- Present content appropriately on any device
- Respect the user’s stated and unstated consumption preferences
- Preserve the intent of our interface

Thinking Adaptively

Considerations

“Implementing Adaptive UI successfully requires thinking about the attributes of the devices, not the devices themselves.”

–Jesse Squires

jessesquires.com/adaptive-user-interfaces/

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Implementing Adaptive UI successfully requires **considering the characteristics of the environment**, not the devices themselves.

Device Orientation Canvas Size Class Typography

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Device

When thinking about devices, consider a general type of device, not a specific model or version.

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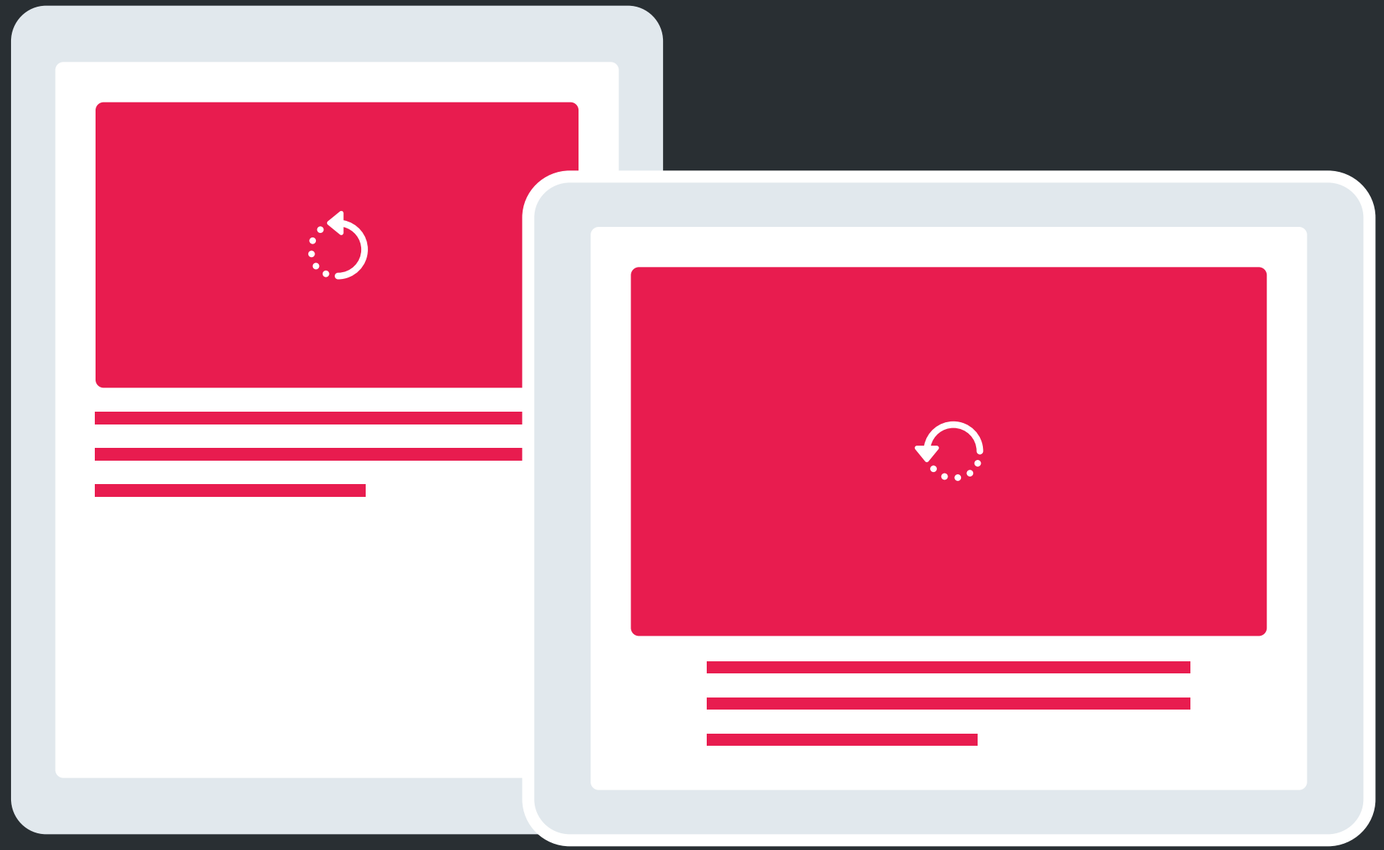
Orientation

Device orientation is used to describe the relative rotation of a device. It is an attribute than can be changed on-the-fly by the user at any time.



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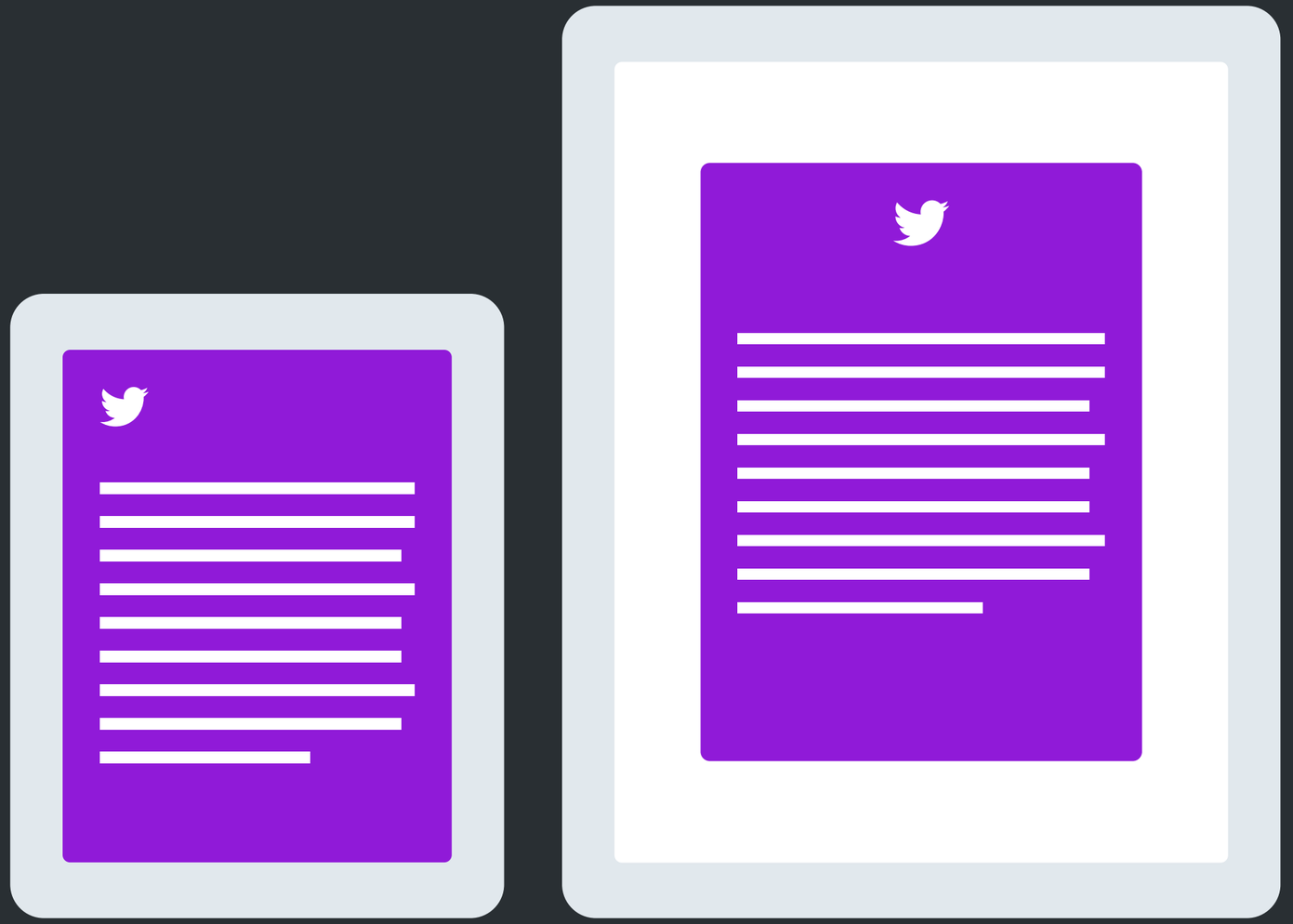
Canvas

The canvas is the drawable area defined by the horizontal and vertical limit.

Size Class

In iOS 8, Apple introduced size classes as a general way to describe the nature of any canvas.



Typography

How we think about typography provides a range of type metrics: **text size**, **line height**, **line length**, and more.

Device Orientation Canvas Size Class Typography

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But what about Autolayout?

Strategy

An approach for designing adaptively

Strategy

Adaptive UI is a design strategy that **responds** to the characteristics of an environment, encouraging designers to **modify** the presentation where it makes sense and **rethink** the experience where it matters most.

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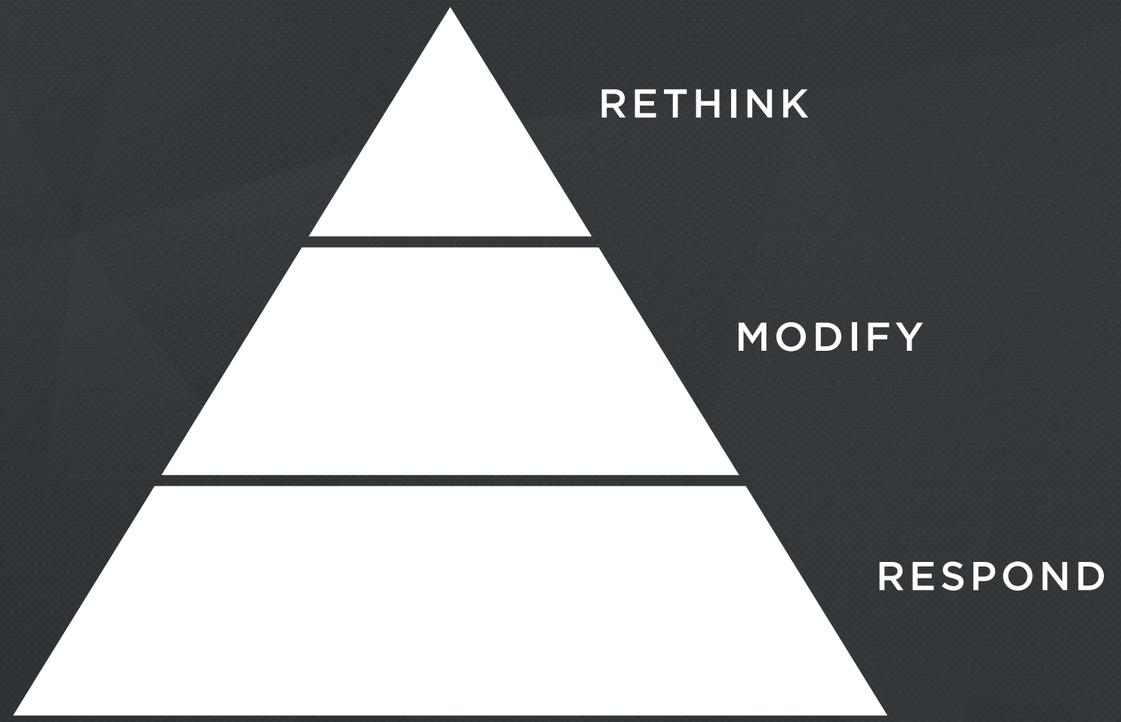

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Strategy

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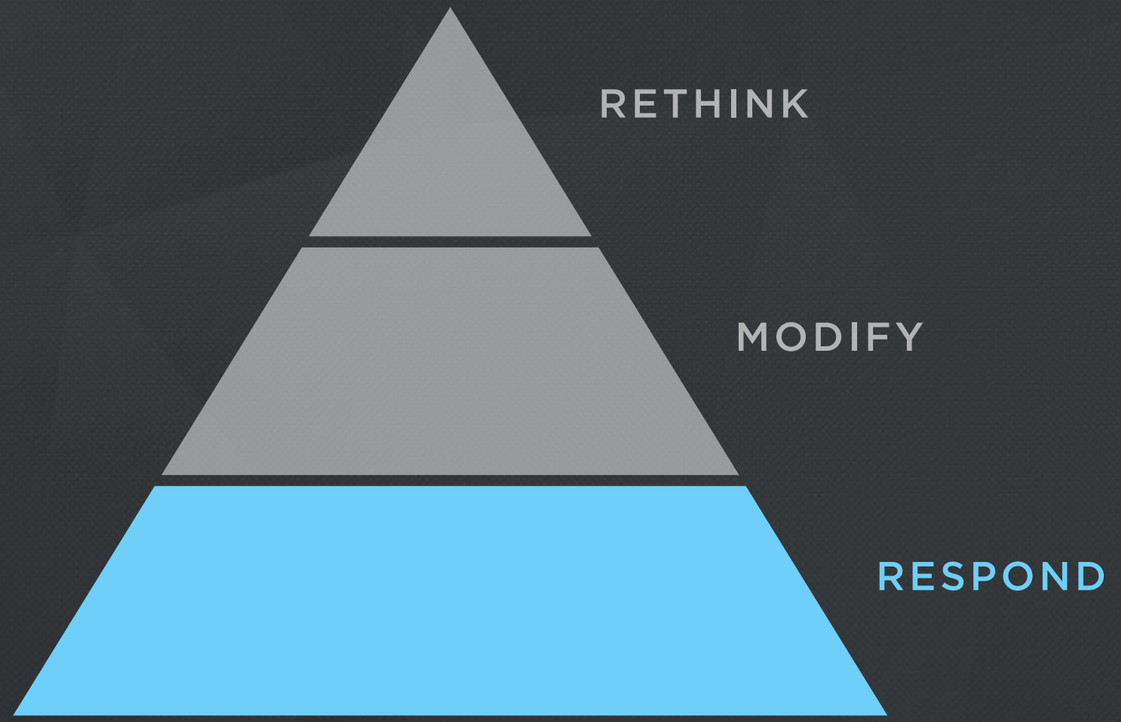

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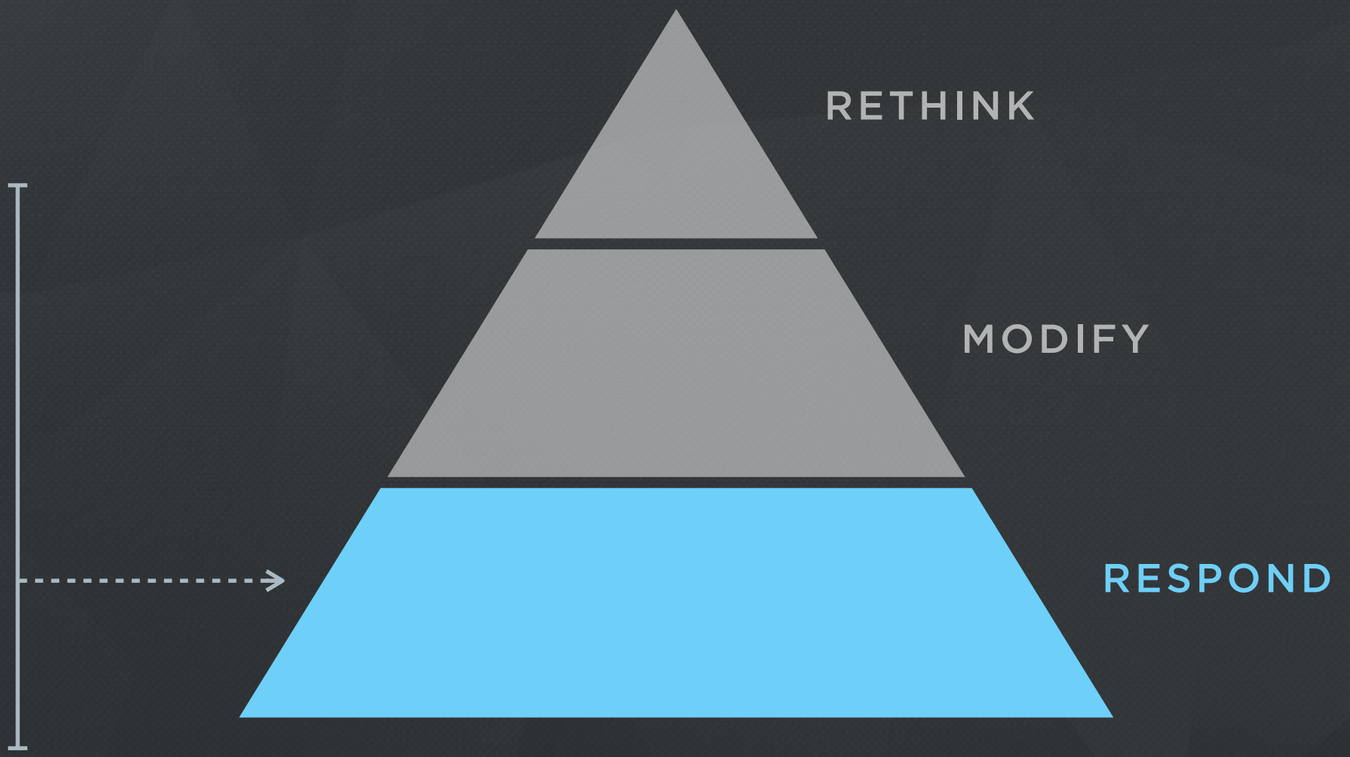
Strategy

Creating flexible layouts

Using existing patterns

Recognize that patterns have limits



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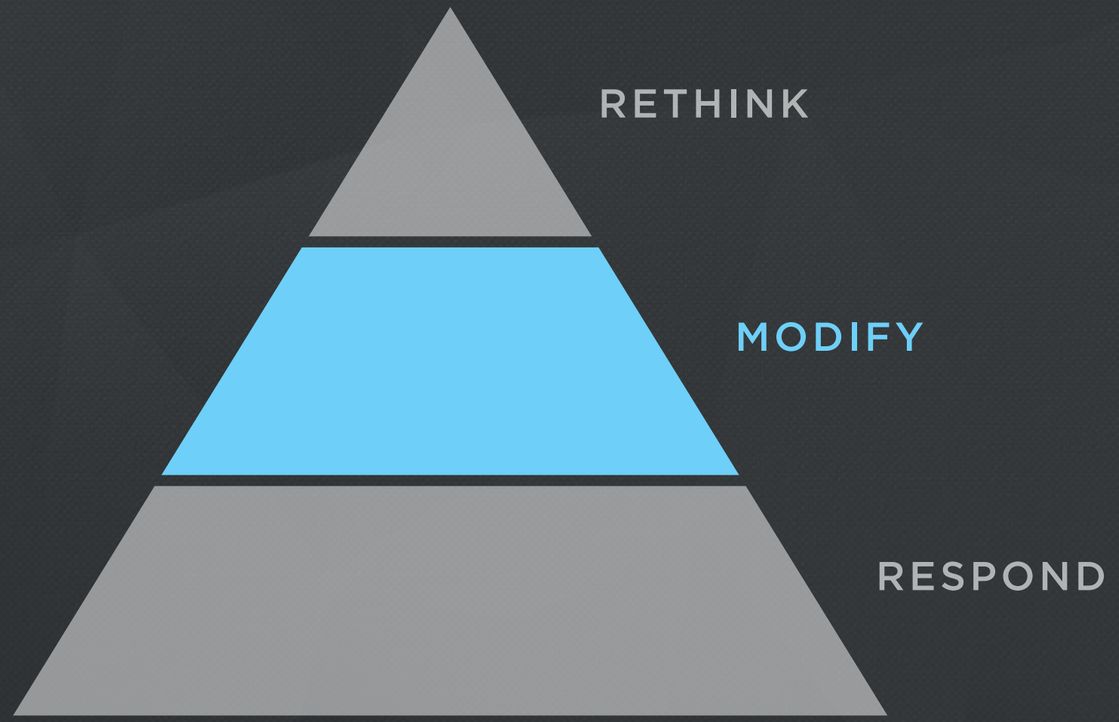

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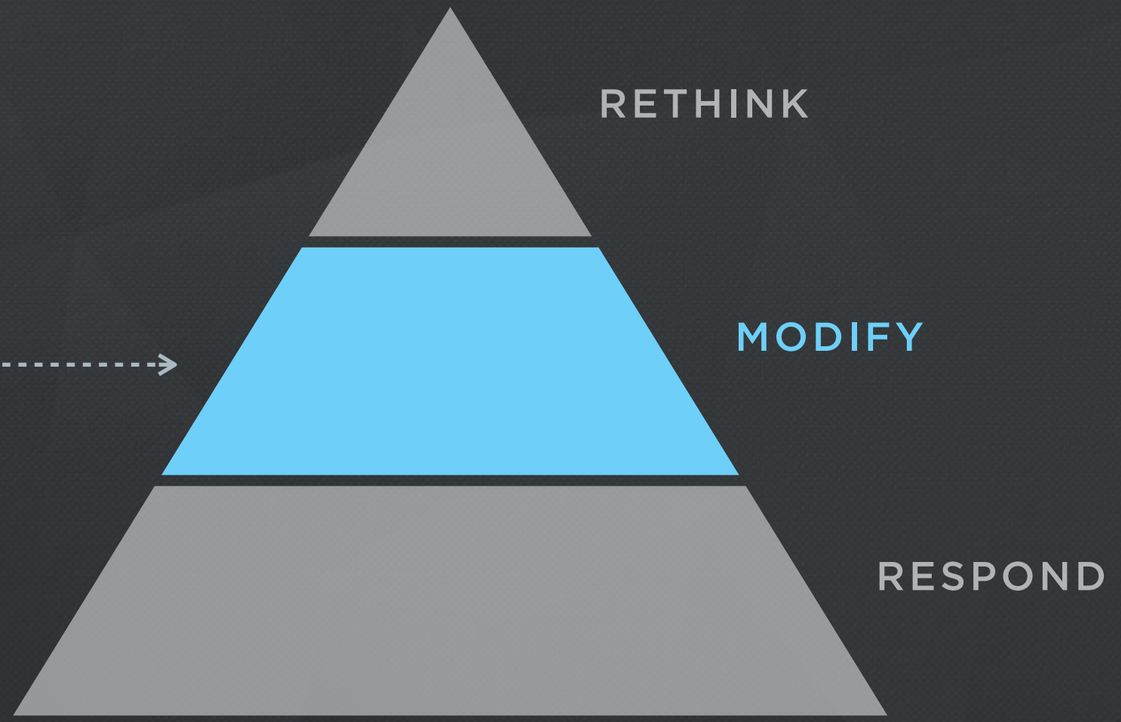
Strategy

Balancing needs

Finding advantages

Thinking beyond presentation

Looking for new patterns



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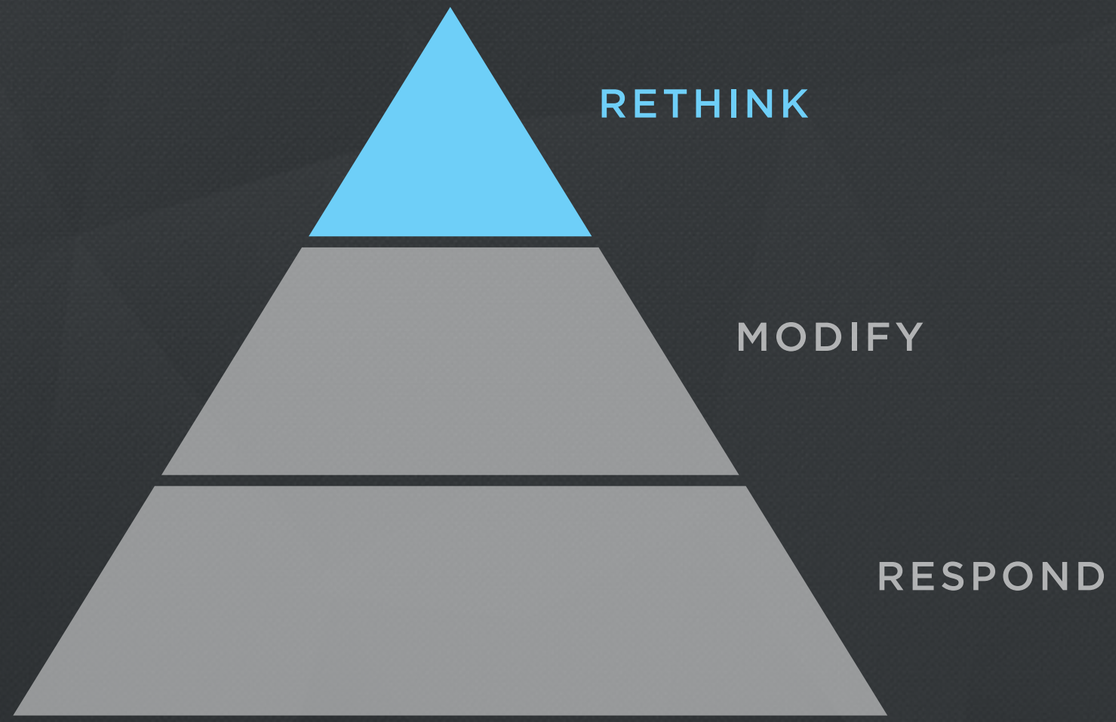

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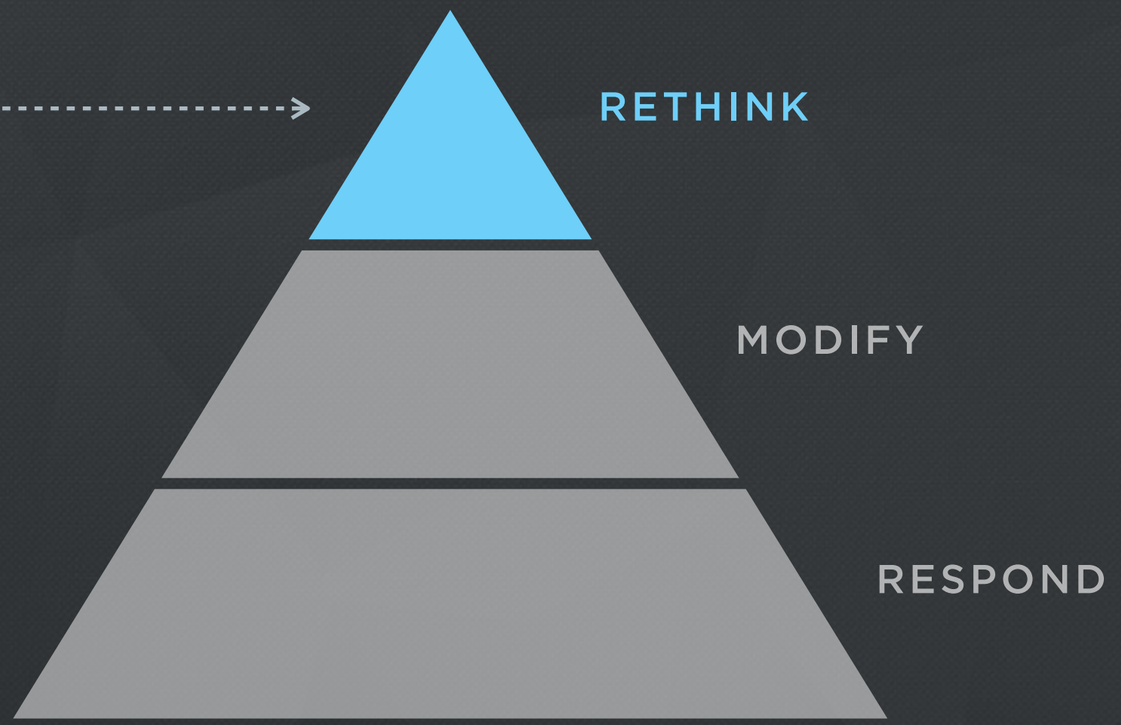
Strategy

Enhancing the experience

Finding new opportunities



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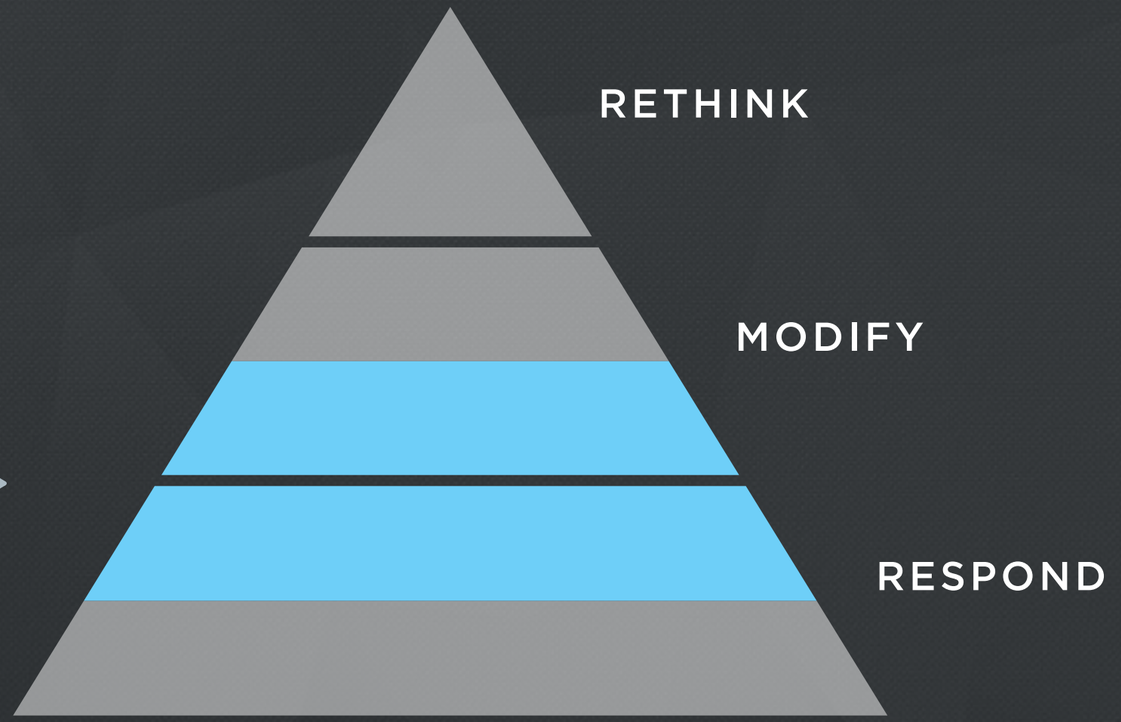
Strategy

Responsive and inexpensive



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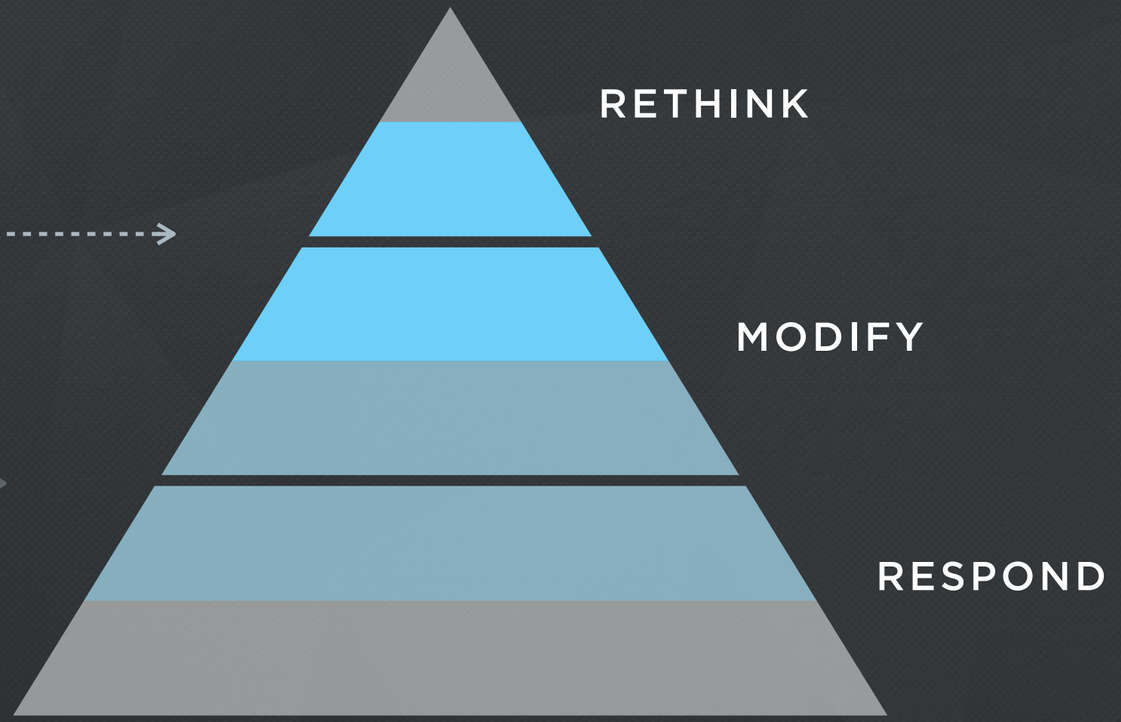
Strategy

Differentiated and expensive

Responsive and inexpensive



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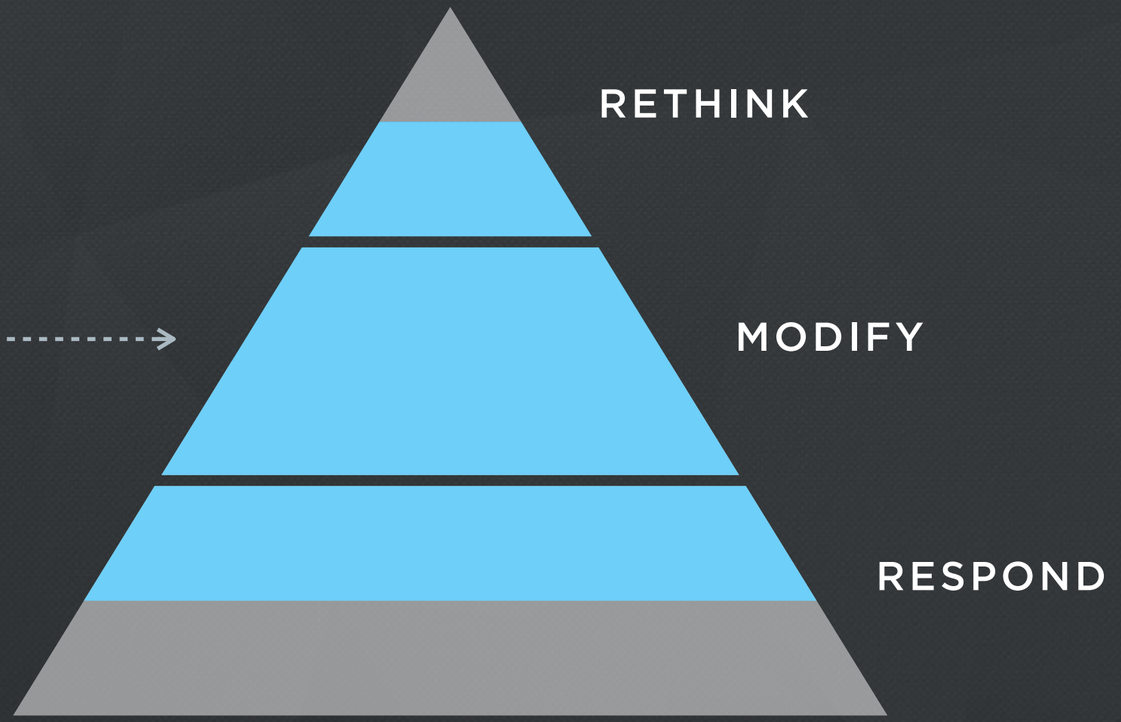
Strategy

Sustainable and affordable



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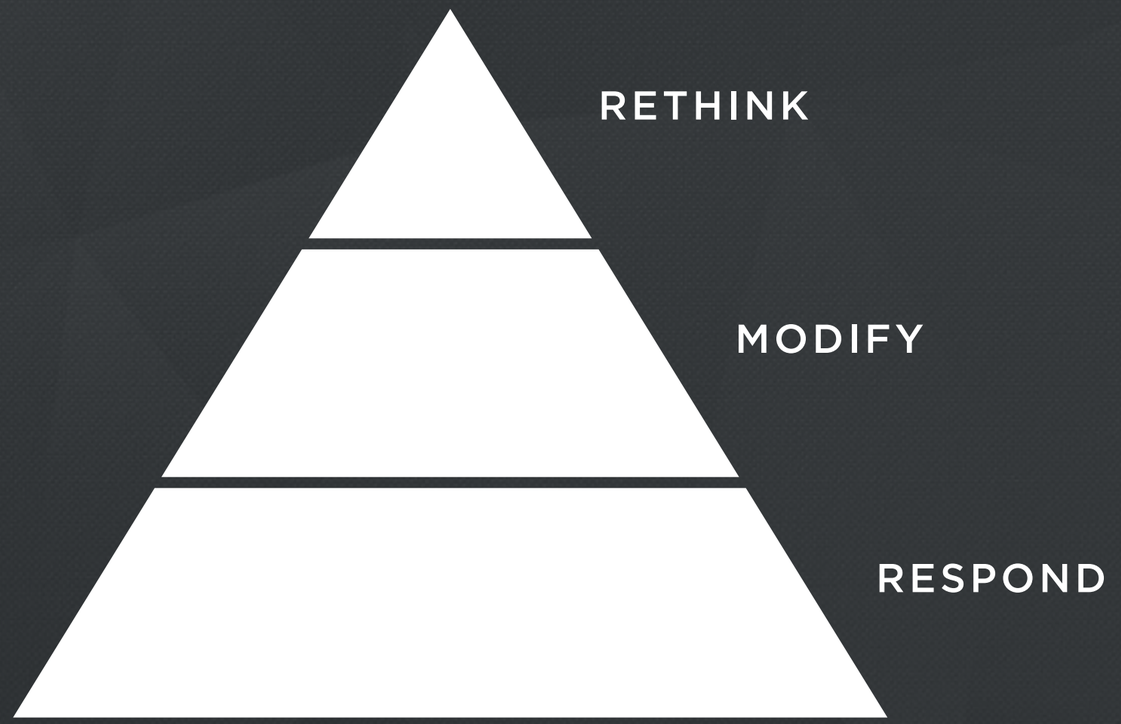

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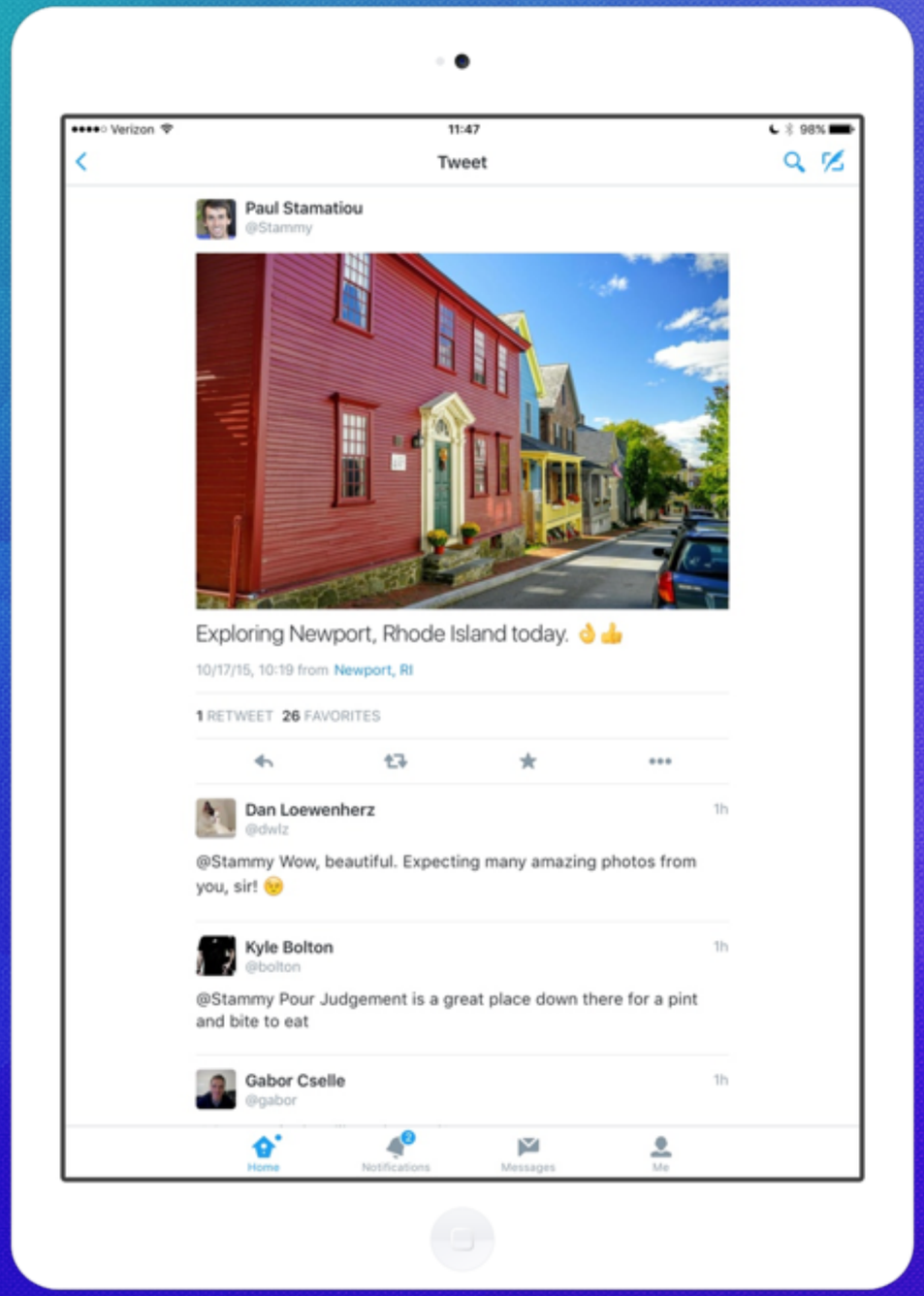
Case Study

Deriving the home timeline

Respond

Verizon
11:48
76%
Tweet
Paul Stamatiou
@Stammy
Exploring Newport, Rhode Island today.
10/17/15, 10:19 from Newport, RI
1 RETWEET 26 FAVORITES
Dan Loewenherz
@dwlz
1h
Home
Notifications
Moments
Messages
Me

Respond


Verizon
11:47
98%
Tweet
Paul Stamatiou
@Stammy
Exploring Newport, Rhode Island today.
10/17/15, 10:19 from Newport, RI
1 RETWEET 26 FAVORITES
Dan Loewenherz
@dwlz
1h
@Stammy Wow, beautiful. Expecting many amazing photos from you, sir!
Kyle Bolton
@bolton
1h
@Stammy Pour Judgement is a great place down there for a pint and bite to eat
Gabor Cselle
@gabor
1h
Home
Notifications
Messages
Me

Respond

Verizon
11:47
98%
Tweet
Paul Stamatiou
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Exploring Newport, Rhode Island today.
10/17/15, 10:19 from Newport, RI
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Dan Loewenherz
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Notifications
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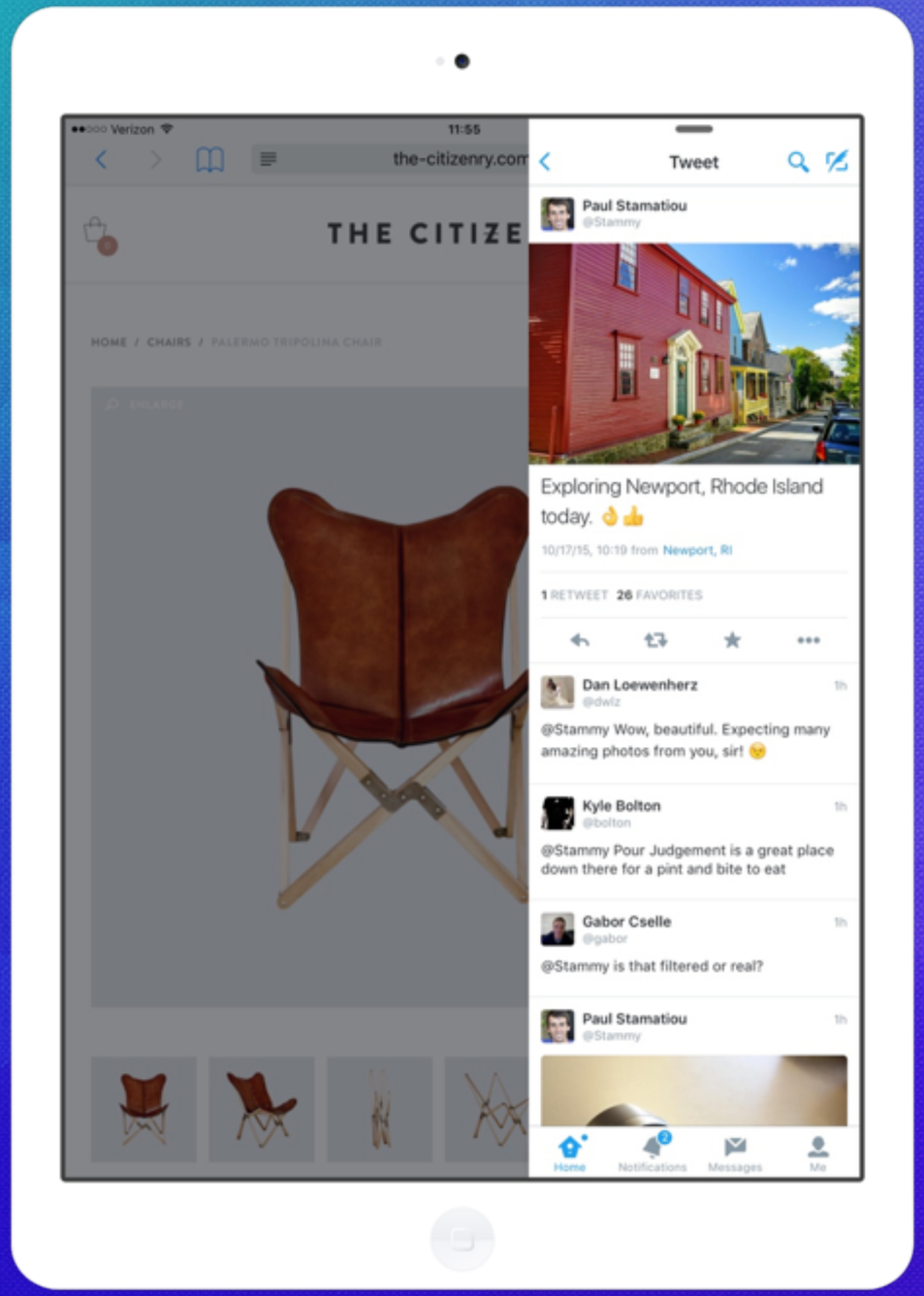
Respond

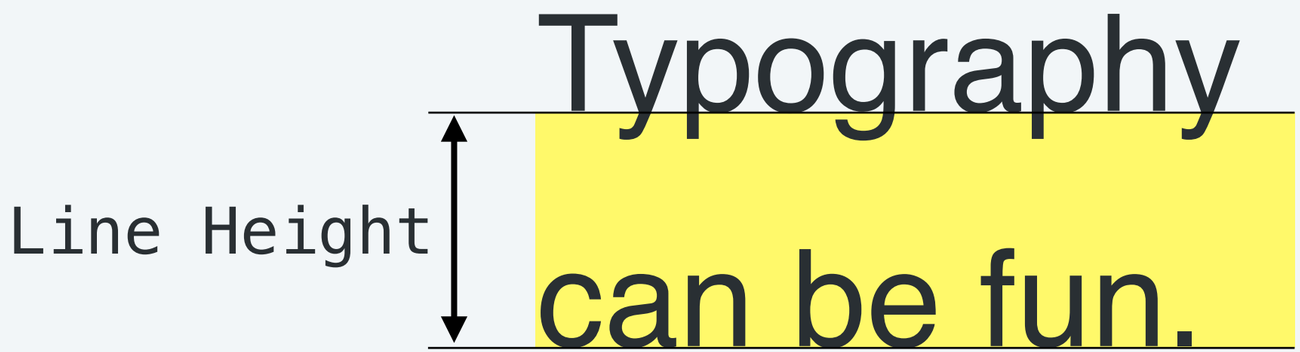

Verizon
11:55
the-citizenry.com
THE CITIZE
HOME / CHAIRS / PALERMO TRIPOLINA CHAIR
Tweet
Paul Stamatiou
@Stammy
Exploring Newport, Rhode Island today.
10/17/15, 10:19 from Newport, RI
1 RETWEET 26 FAVORITES
Dan Loewenherz
@dwlz
1h
@Stammy Wow, beautiful. Expecting many amazing photos from you, sir!
Kyle Bolton
@bolton
1h
@Stammy Pour Judgement is a great place down there for a pint and bite to eat
Gabor Cselle
@gabor
1h
@Stammy is that filtered or real?
Paul Stamatiou
@Stammy
1h
Home
Notifications
Messages
Me

Respond

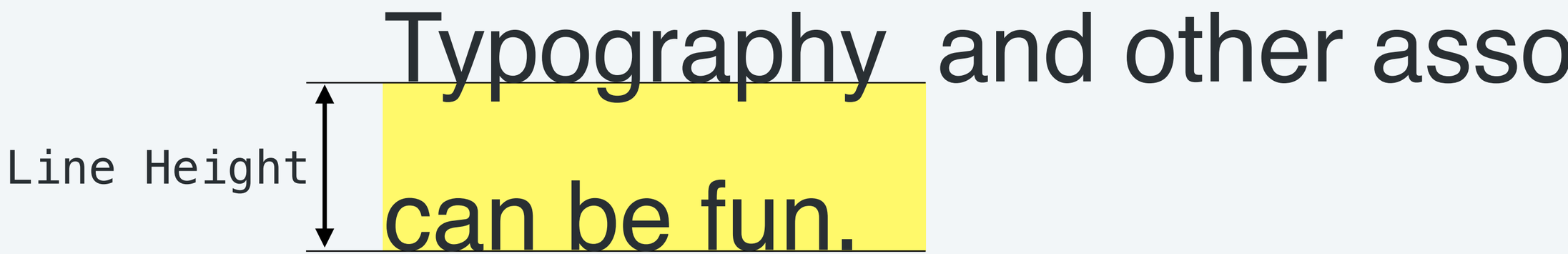
Respond

Typography

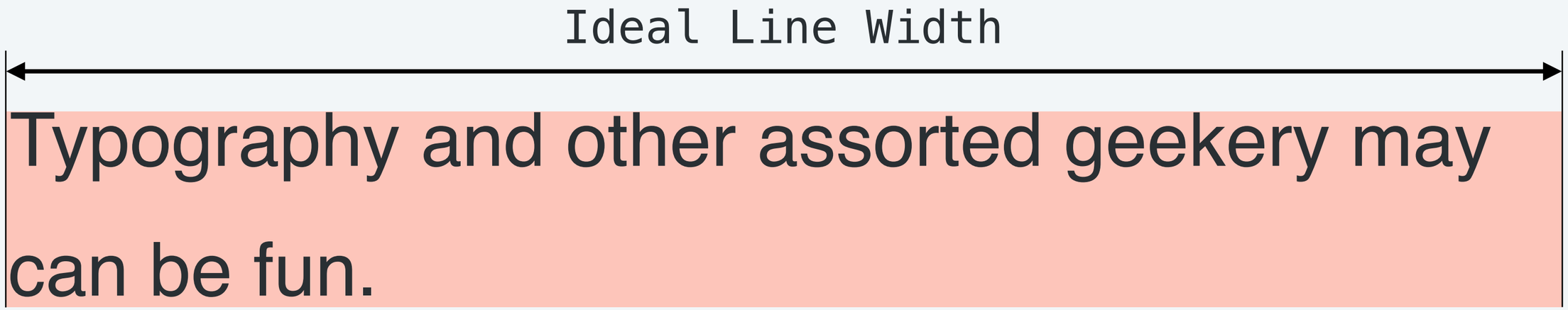
Respond



Respond



Respond


Ideal Line Width
Typography and other assorted geekery may can be fun.

Respond

Typography and other assorted geekery may seem dry, boring and intimidating to many, with good reason. But actually, typography can be fun.

Respond

Respond

Jason Harris 2h

@smeger

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Respond

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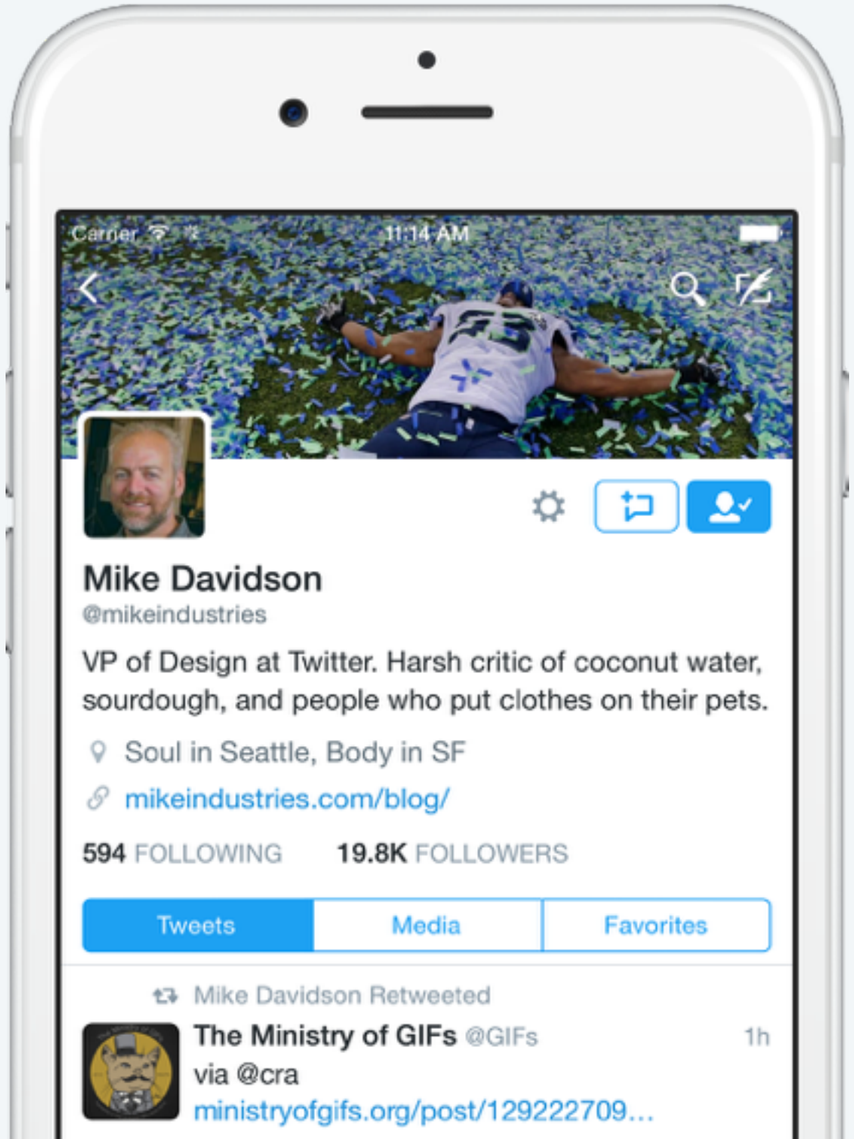
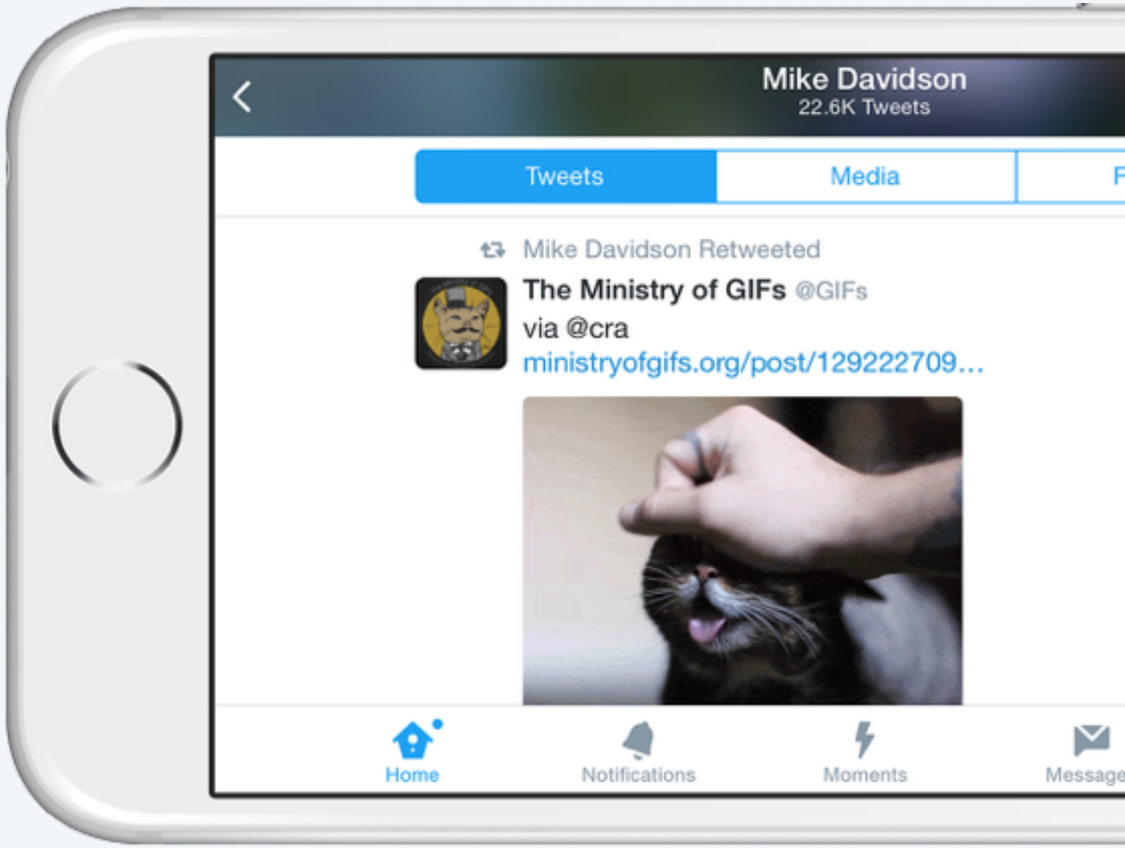
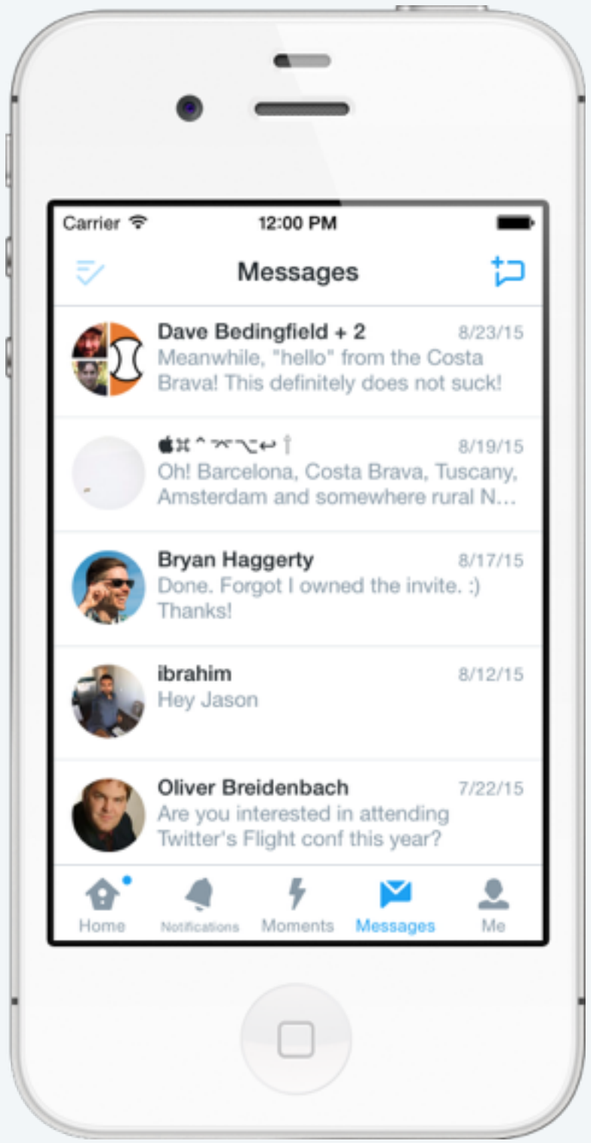
6 18

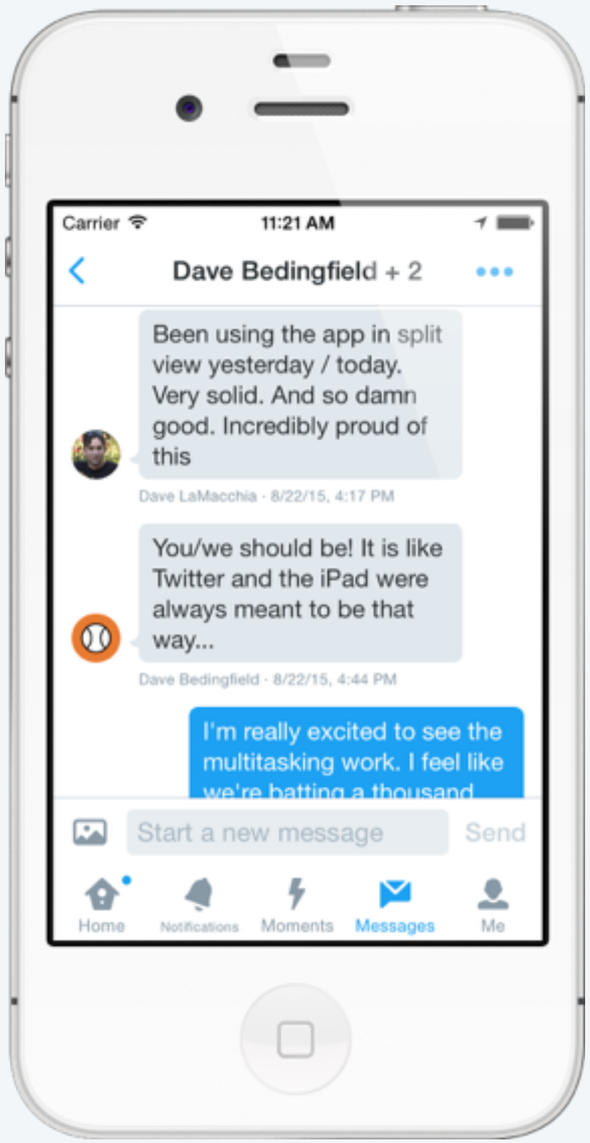
Modify


Carrier
11:14 AM
Mike Davidson
@mikeindustries
VP of Design at Twitter. Harsh critic of coconut water, sourdough, and people who put clothes on their pets.
Soul in Seattle, Body in SF
mikeindustries.com/blog/
594 FOLLOWING
19.8K FOLLOWERS
Tweets
Media
Favorites
Mike Davidson Retweeted
The Ministry of GIFs @GIFs
1h
via @cra
ministryofgifs.org/post/129222709...


Mike Davidson
22.6K Tweets
Tweets
Media
Mike Davidson Retweeted
The Ministry of GIFs @GIFs
via @cra
ministryofgifs.org/post/129222709...
Home
Notifications
Moments

Rethink


Carrier
12:00 PM
Messages
Dave Bedingfield + 2
8/23/15
Meanwhile, "hello" from the Costa Brava! This definitely does not suck!
8/19/15
Oh! Barcelona, Costa Brava, Tuscany, Amsterdam and somewhere rural N...
Bryan Haggerty
8/17/15
Done. Forgot I owned the invite. :) Thanks!
ibrahim
8/12/15
Hey Jason
Oliver Breidenbach
7/22/15
Are you interested in attending Twitter's Flight conf this year?
Home
Notifications
Moments
Messages
Me


Carrier
11:21 AM
Dave Bedingfield + 2
Been using the app in split view yesterday / today. Very solid. And so damn good. Incredibly proud of this
Dave LaMacchia · 8/22/15, 4:17 PM
You/we should be! It is like Twitter and the iPad were always meant to be that way...
Dave Bedingfield · 8/22/15, 4:44 PM
I'm really excited to see the multitasking work. I feel like
Start a new message
Send
Home
Notifications
Moments
Messages
Me

Rethink

Messages
Mollie Vandor + 11
10h
Jeff Lesser: I unfortunately know nothing. Mollie is Tay Tay posit…
Rudy Richter
1d
Yeah, that's what I calculated
Darryl H. Thomas
1d
Ah, ok, no problem. We can sync next Monday. Only immediate…
Andreas Netzmann
9/9/15
Not me :)
Dave Bedingfield + 2
Been using the app in split view yesterday / today. Very solid. And so damn good. Incredibly proud of this
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Start a new message
Send
Home
Notifications
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Messages
Me

Rethink

Carrier
11:20 AM
100%
Messages
Mollie Vandor + 11
10h
Jeff Lesser: I unfortunately know nothing. Mollie is Tay T...
Rudy Richter
1d
Yeah, that's what I calculated
Darryl H. Thomas
1d
Ah, ok, no problem. We can sync next Monday. Only imm...
Andreas Netzmann
9/9/15
Not me :)
Dave LaMacchia
9/8/15
pending dev release!!!
Rosyna Keller
9/1/15
Tweet was deleted. I guess you figured it out? Whatever it wa...
Dave Bedingfield + 2
21h
Meanwhile, "hello" from the Costa Brava! This definitely d...
8/19/15
Oh! Barcelona, Costa Brava,
Dave Bedingfield + 2
Been using the app in split view yesterday / today. Very solid. And so damn good. Incredibly proud of this
Dave LaMacchia · 8/22/15, 4:17 PM
You/we should be! It is like Twitter and the iPad were always meant to be that way...
Dave Bedingfield · 8/22/15, 4:44 PM
I'm really excited to see the multitasking work. I feel like we're batting a thousand on this!
Start a new message
Send
Home
Notifications
Moments
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- **Major Public Releases** 3 (so far!)
- **Discrete Work Items** over 800
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Some fun numbers for the future

- **iPad iOS 9 Multitasking** 3 hours
- **Support for new devices** free
- **Iteration Speed** fast

Some fun numbers for the future

- **iPad iOS 9 Multitasking** 3 hours
- **Support for new devices** free
- **Iteration Speed** fast

Thank You

@smeger

flight