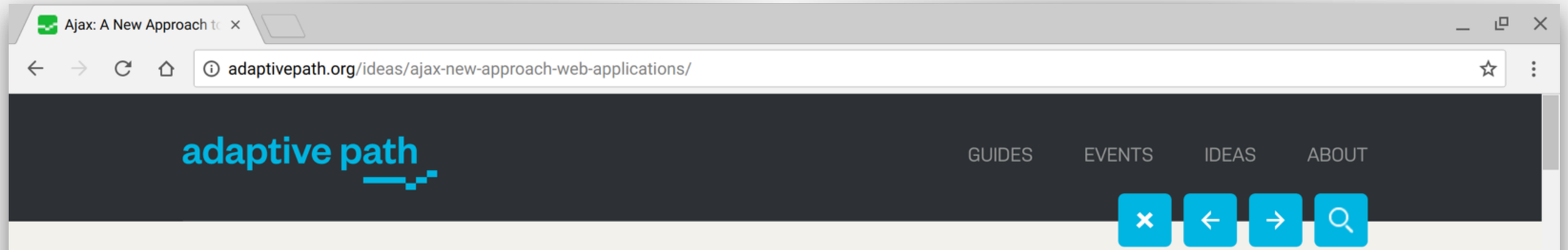
Keynote

Code of Conduct

Treat everyone with respect.
Speak up if you see or hear something uncool.
Assume positive intent.

We have a zero tolerance policy for harassment.
Talk to a staffer, or email pwa-roadshow-na@google.com.

https://goo.gl/s0UaDu



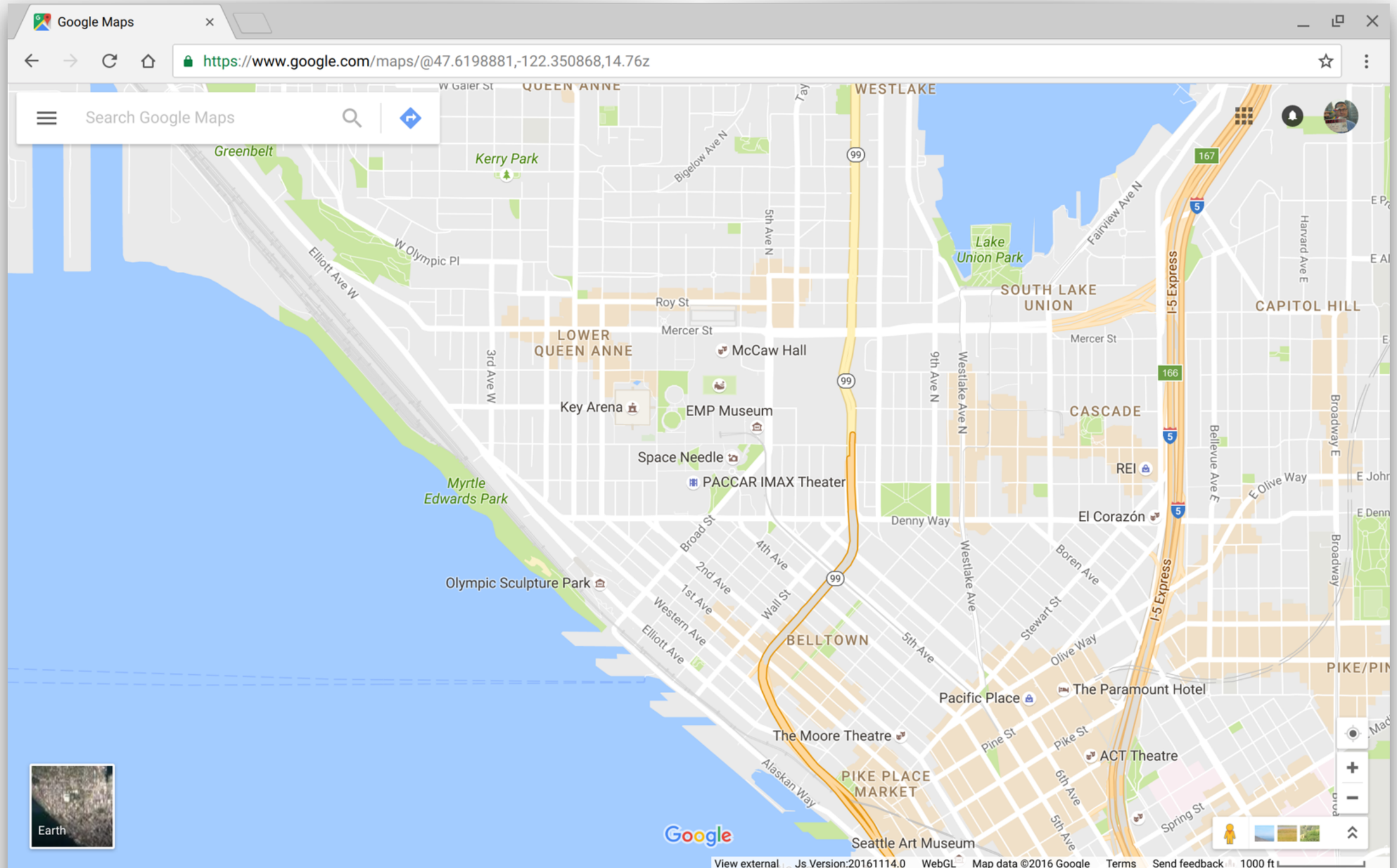
Ajax: A New Approach to Web Applications

February 18, 2005 | By Jesse James Garrett

If anything about current interaction design can be called "glamorous," it's creating Web applications. After all, when was the last time you heard someone rave about the interaction design of a product that wasn't on the Web? (Okay, besides the iPod.) All the cool, innovative new projects are online.

Despite this, Web interaction designers can't help but feel a little envious of our colleagues who create desktop software. Desktop applications have a richness and responsiveness that has seemed out of reach on the Web. The same simplicity that enabled the Web's rapid proliferation also creates a gap between the experiences we can provide and the experiences users can get from a desktop application.

That gap is closing. Take a look at Google Suggest. Watch the way the suggested terms update


Google Maps
https://www.google.com/maps/@47.6198881,-122.350868,14.76z
Search Google Maps
Greenbelt
Kerry Park
Lake Union Park
SOUTH LAKE UNION
CAPITOL HILL
LOWER QUEEN ANNE
McCaw Hall
Key Arena
EMP Museum
Space Needle
PACCAR IMAX Theater
Myrtle Edwards Park
Olympic Sculpture Park
CASCADE
REI
El Corazón
BELLTOWN
PIKE PLACE MARKET
Pacific Place
The Paramount Hotel
The Moore Theatre
ACT Theatre
Seattle Art Museum
Elliott Ave W
W Olympic Pl
Roy St
Mercer St
3rd Ave W
5th Ave N
Bigelow Ave N
Fairview Ave N
9th Ave N
Westlake Ave N
Westlake Ave
Broad St
4th Ave
2nd Ave
1st Ave
Western Ave
Elliott Ave
Wall St
Denny Way
Boren Ave
Stewart St
Olive Way
Pine St
Pike St
6th Ave
5th Ave
Spring St
Alaskan Way
E Olive Way
Bellevue Ave E
Broadway E
Broadway
Harvard Ave E
I-5 Express
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View external
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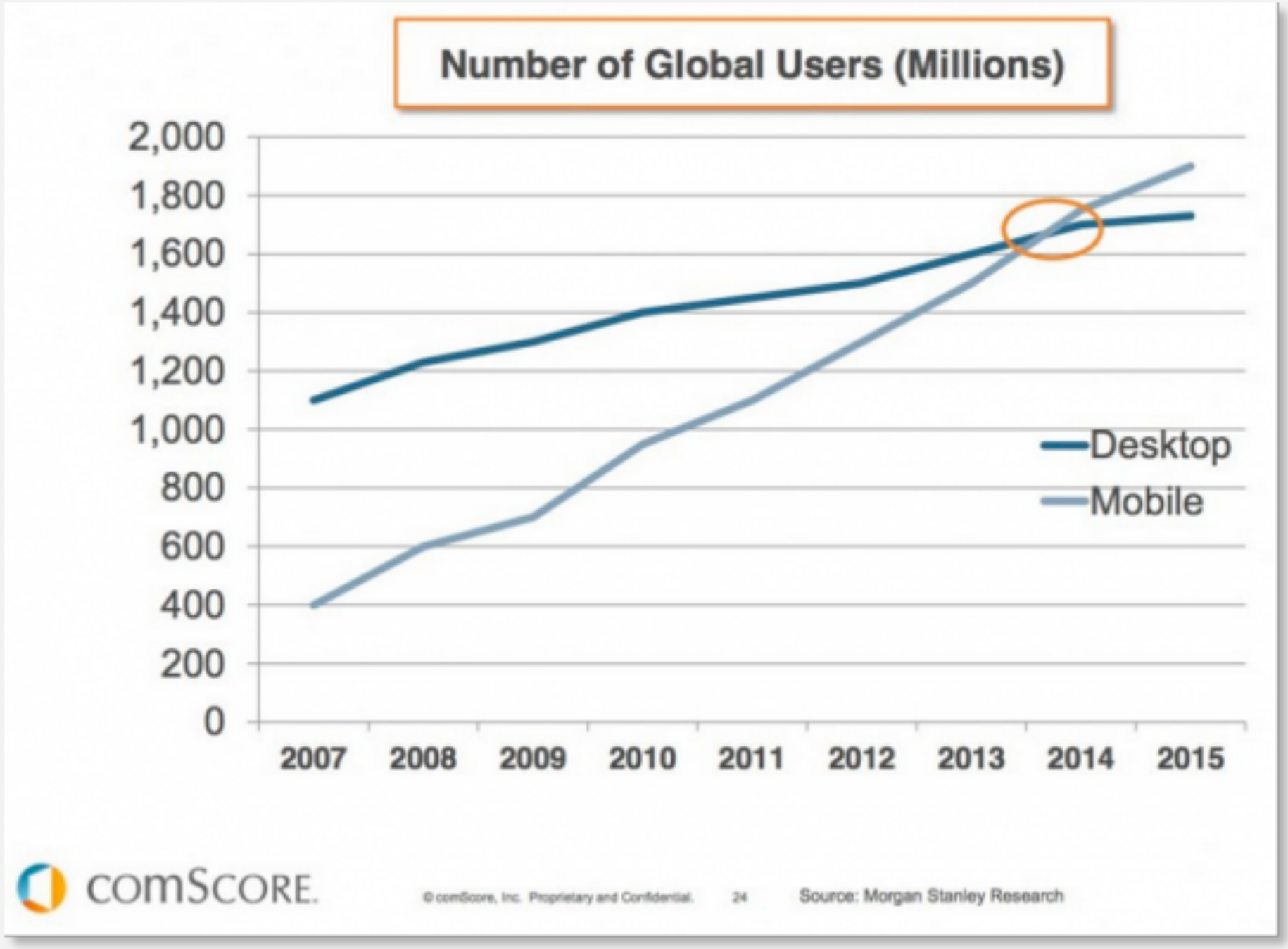
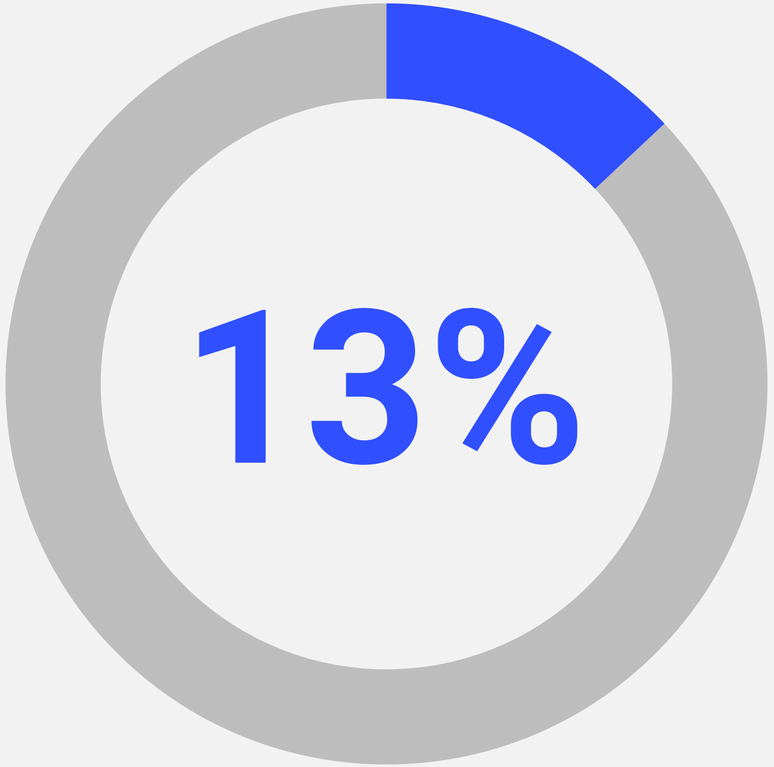
Map data ©2016 Google
Terms
Send feedback
1000 ft



comScore

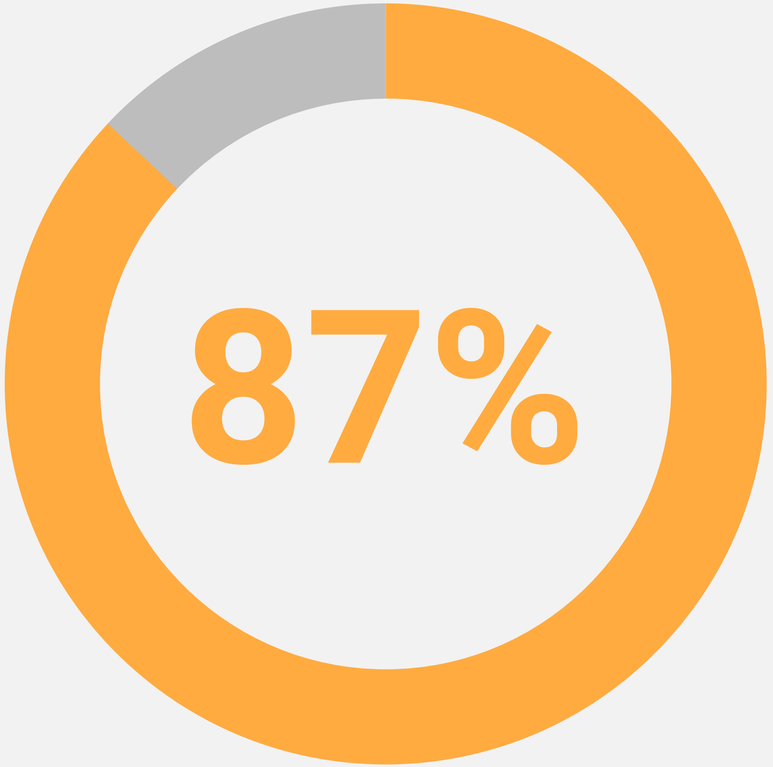
© comScore, Inc. Proprietary and Confidential.

Source: Morgan Stanley Research



Mobile web

vs.



Apps

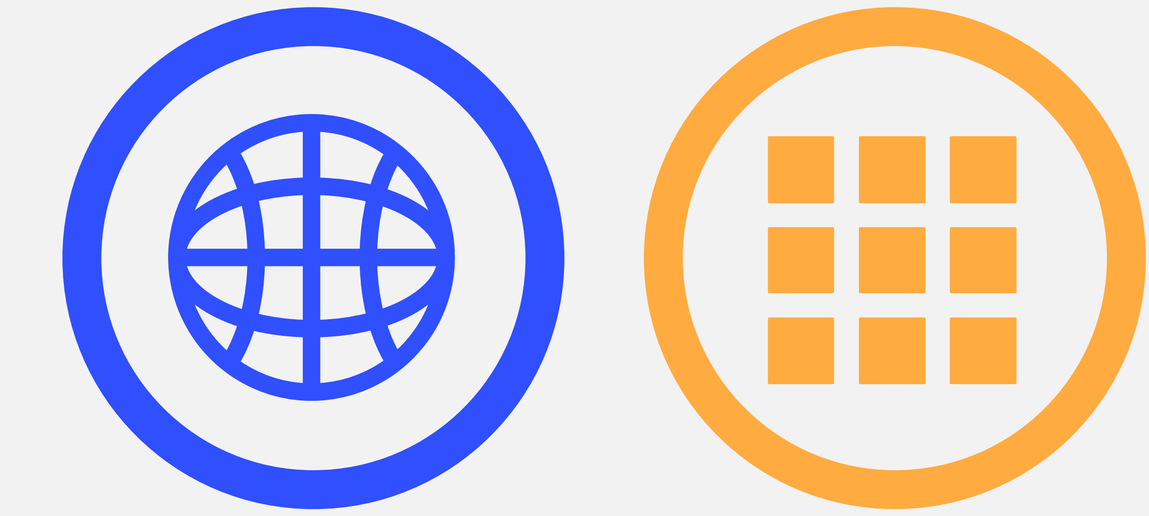
Source: comScore Mobile Metrix, U.S., Age 18+, June 2015

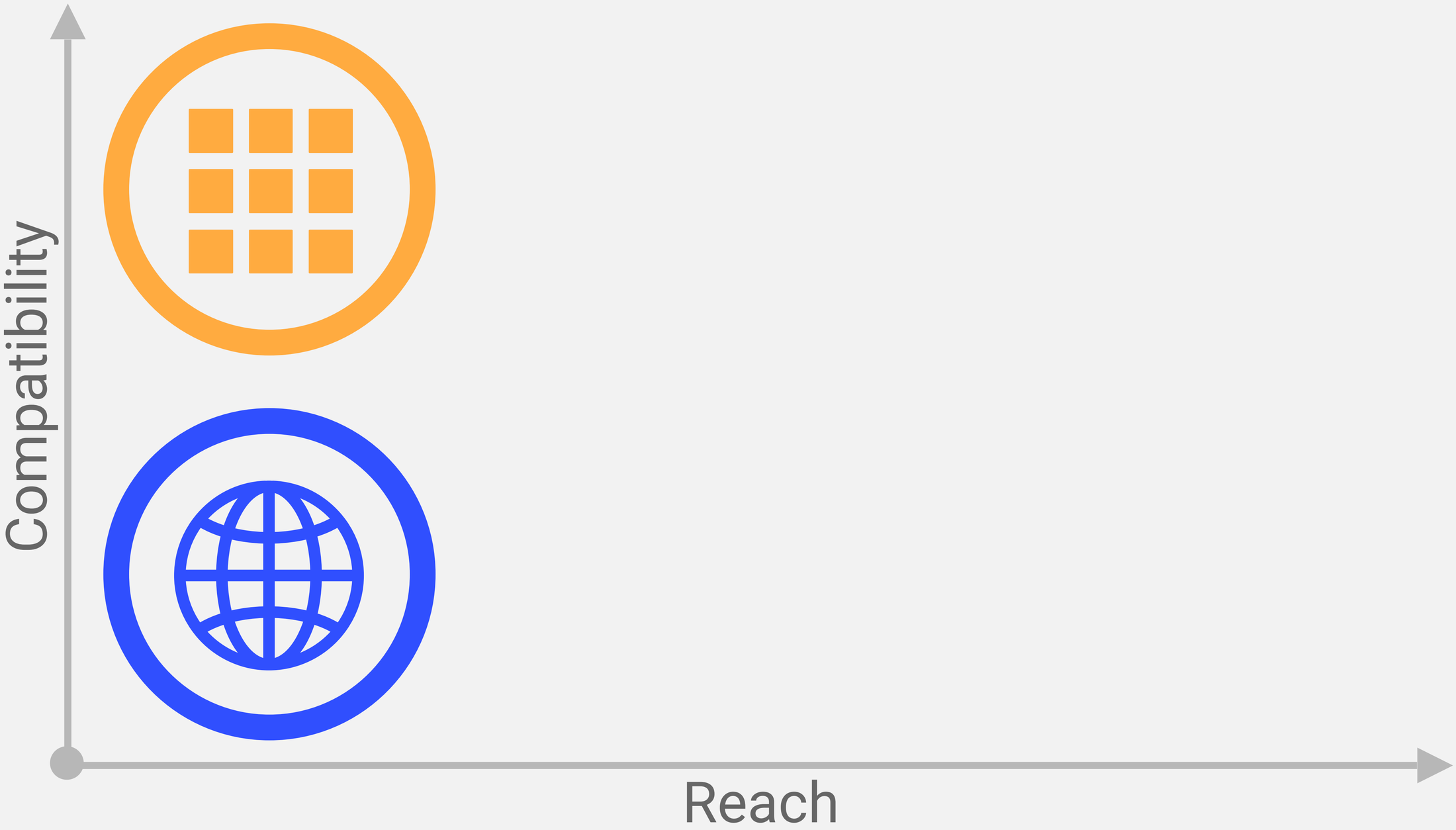
80%

OF TIME SPENT IS IN USERS' TOP 3 APPS

Source: comScore Mobile Metrix, U.S., Age 18+, June 2015

Compatibility

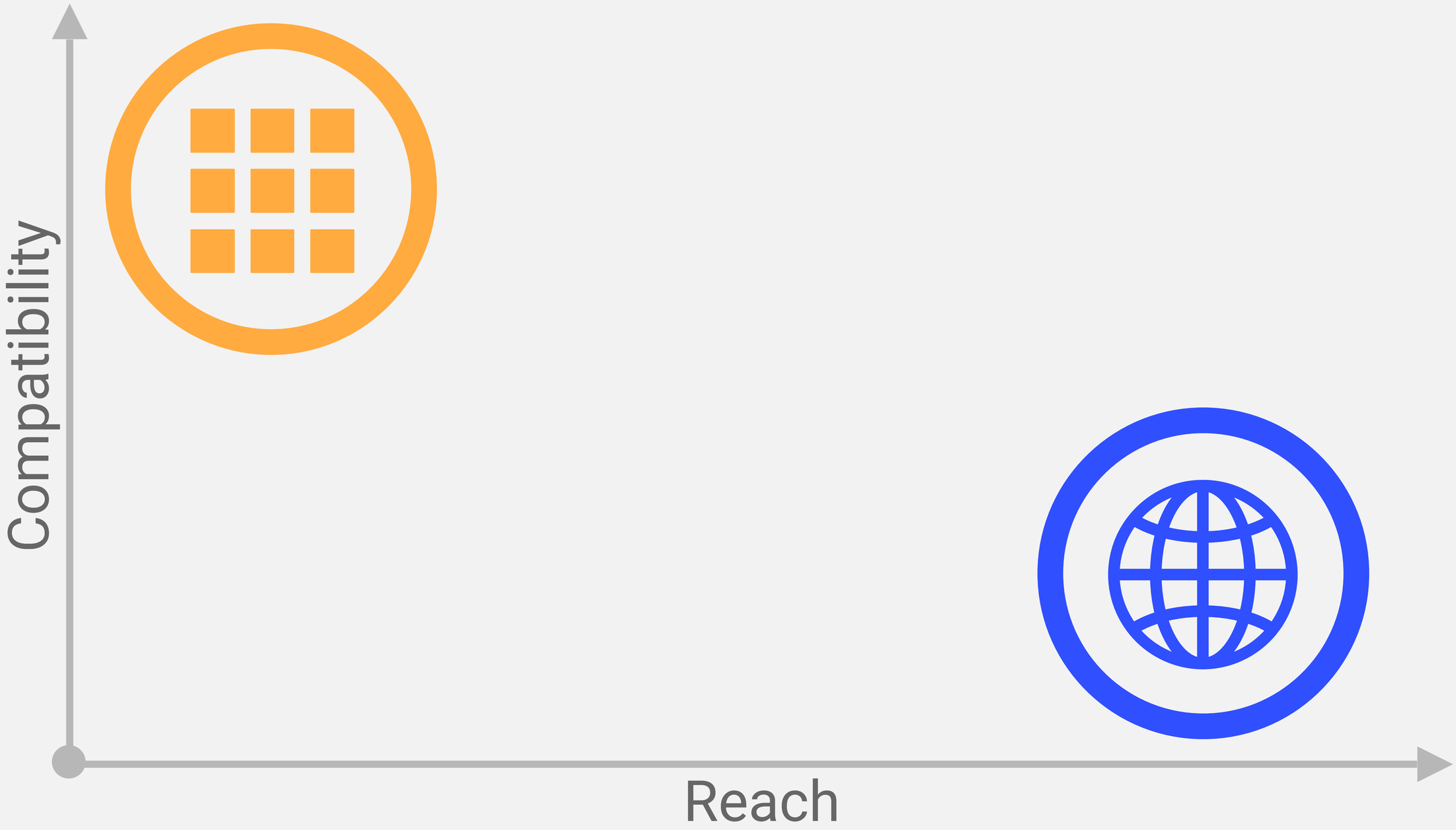


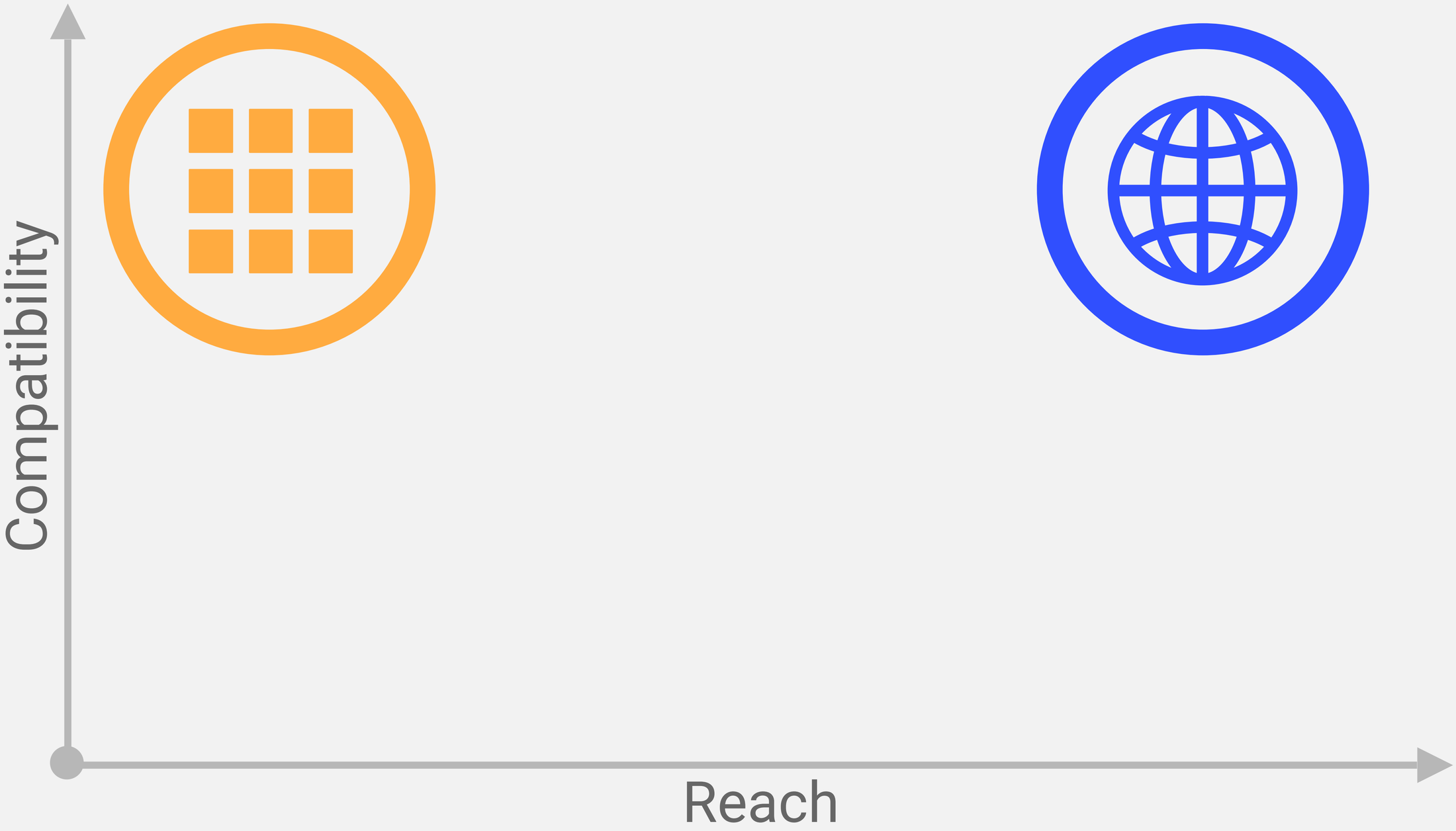

Compatibility
Reach

ZERO

NUMBER OF APPS
AVERAGE USER
INSTALLS PER MONTH

Source: comScore Mobile Metrix, U.S., Age 18+, June 2015


Compatibility
Reach

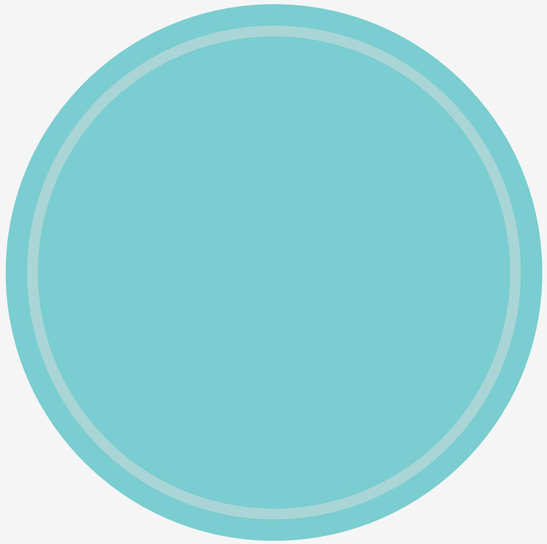

Compatibility
Reach

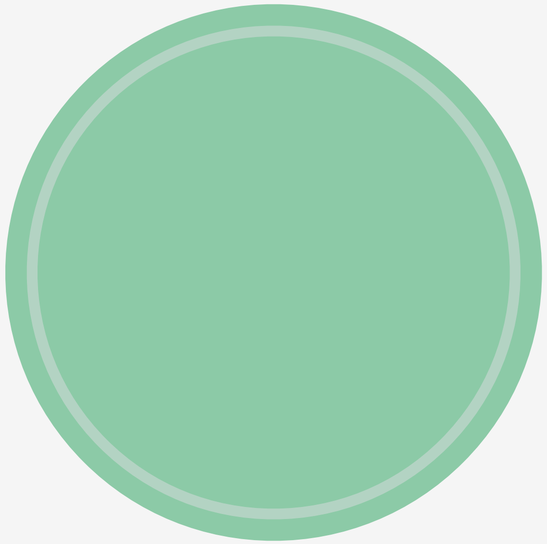
Progressive Web Apps

radically improving
web user experiences

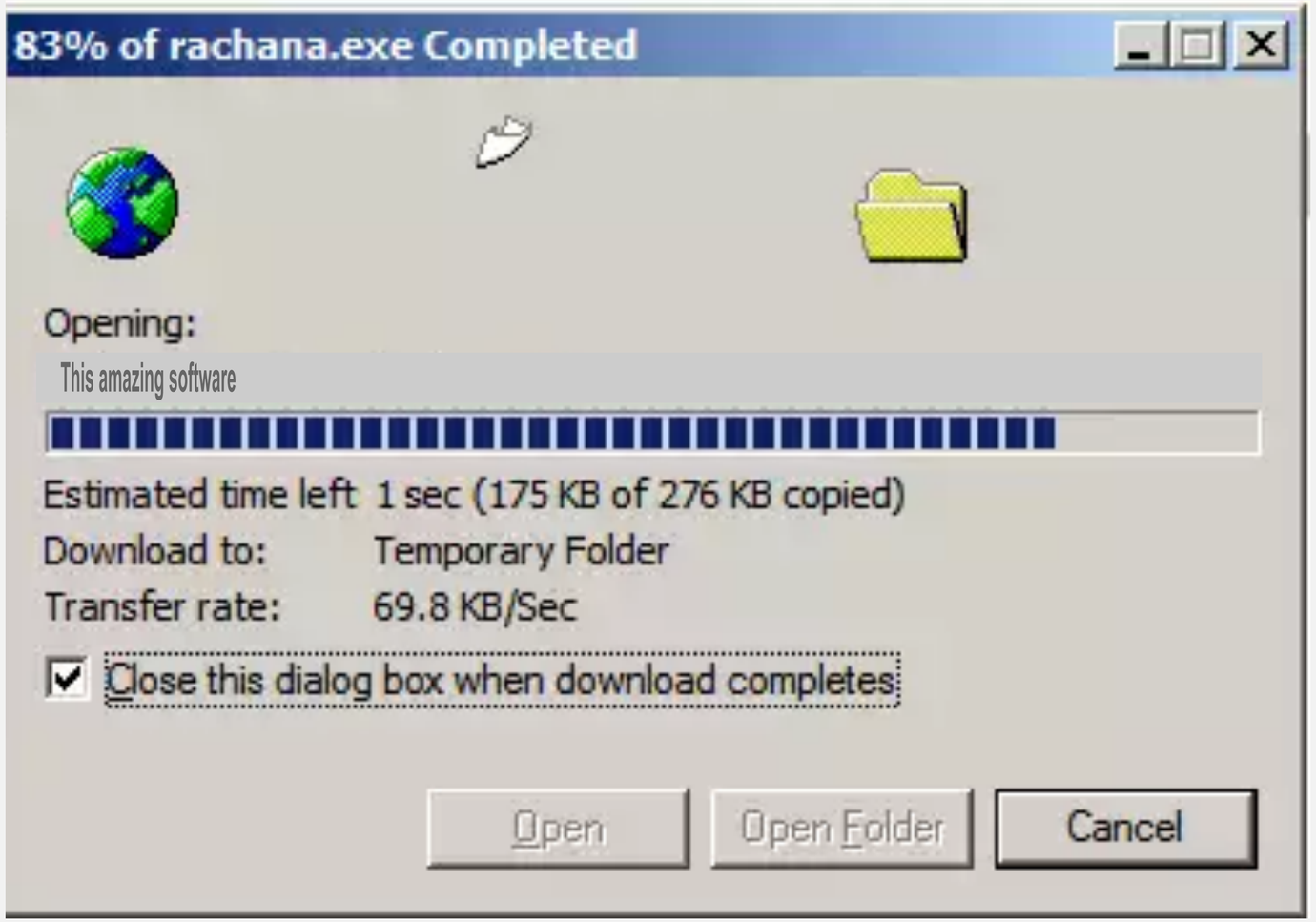
User experiences need to be...

Reliable

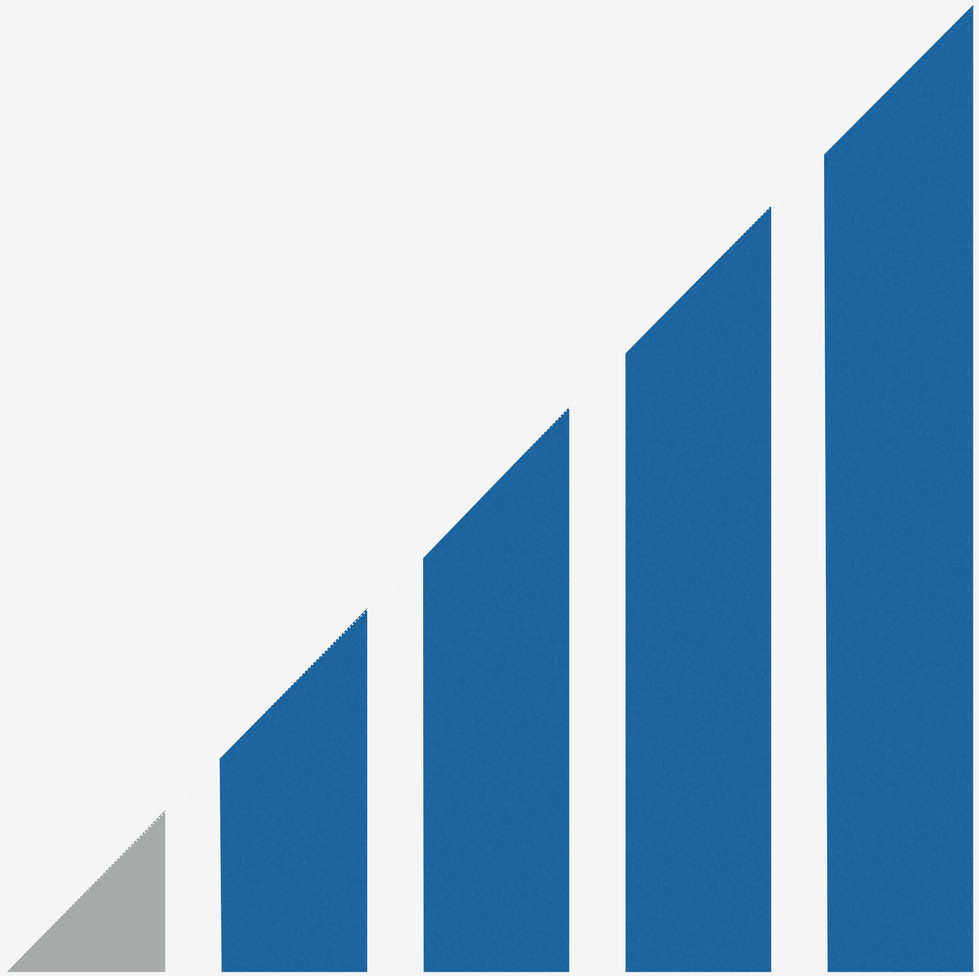




flickr.com/photos/monado/4405843023


83% of rachana.exe Completed
Opening:
This amazing software
Estimated time left 1 sec (175 KB of 276 KB copied)
Download to: Temporary Folder
Transfer rate: 69.8 KB/Sec
Close this dialog box when download completes
Open
Open Folder
Cancel

Lie-Fi

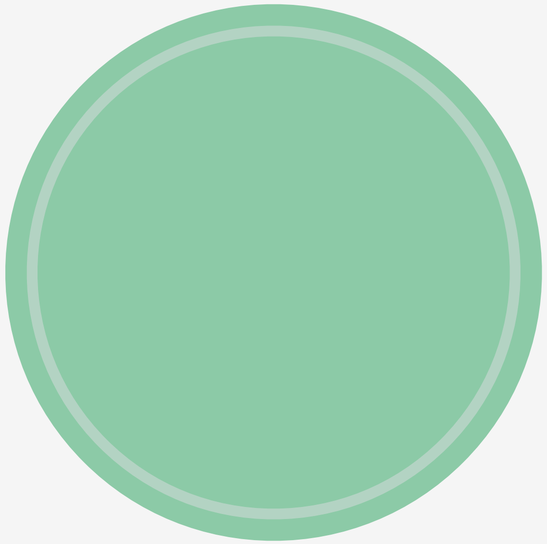


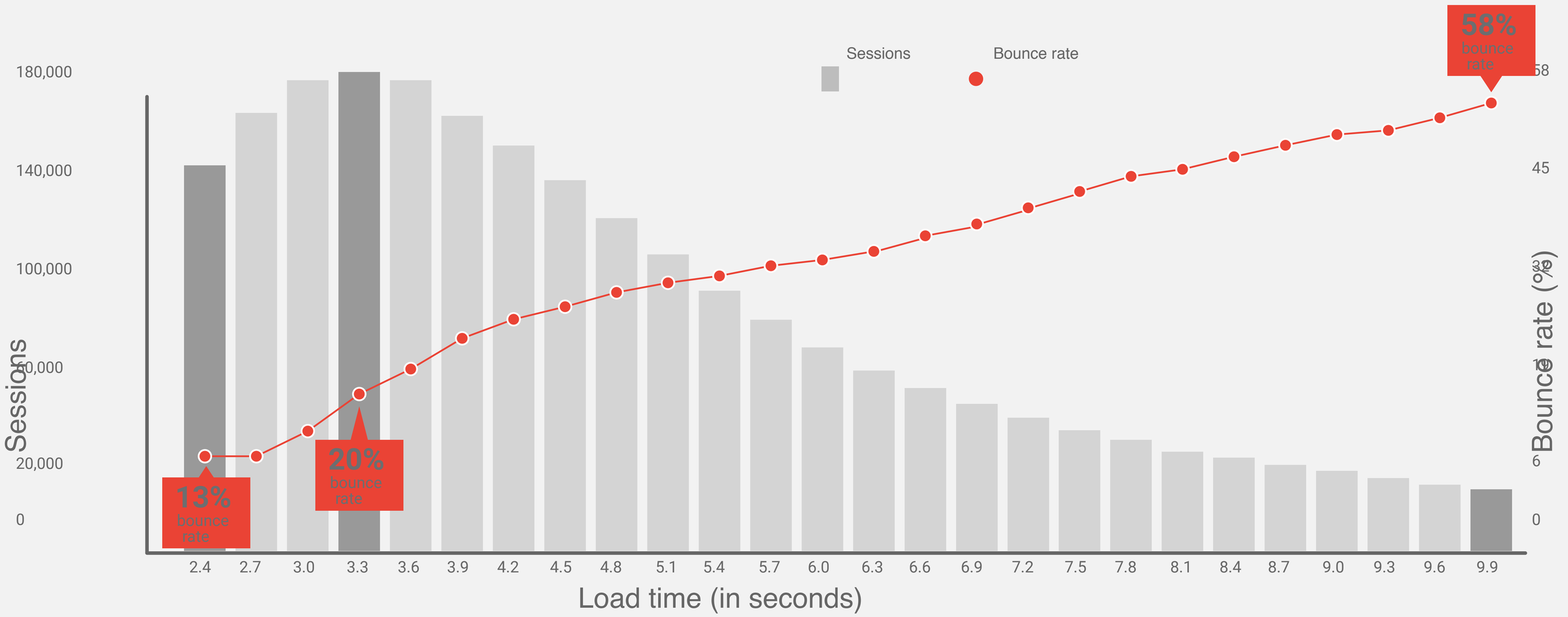
Reliability means never showing the Downasaur

User experiences need to be...

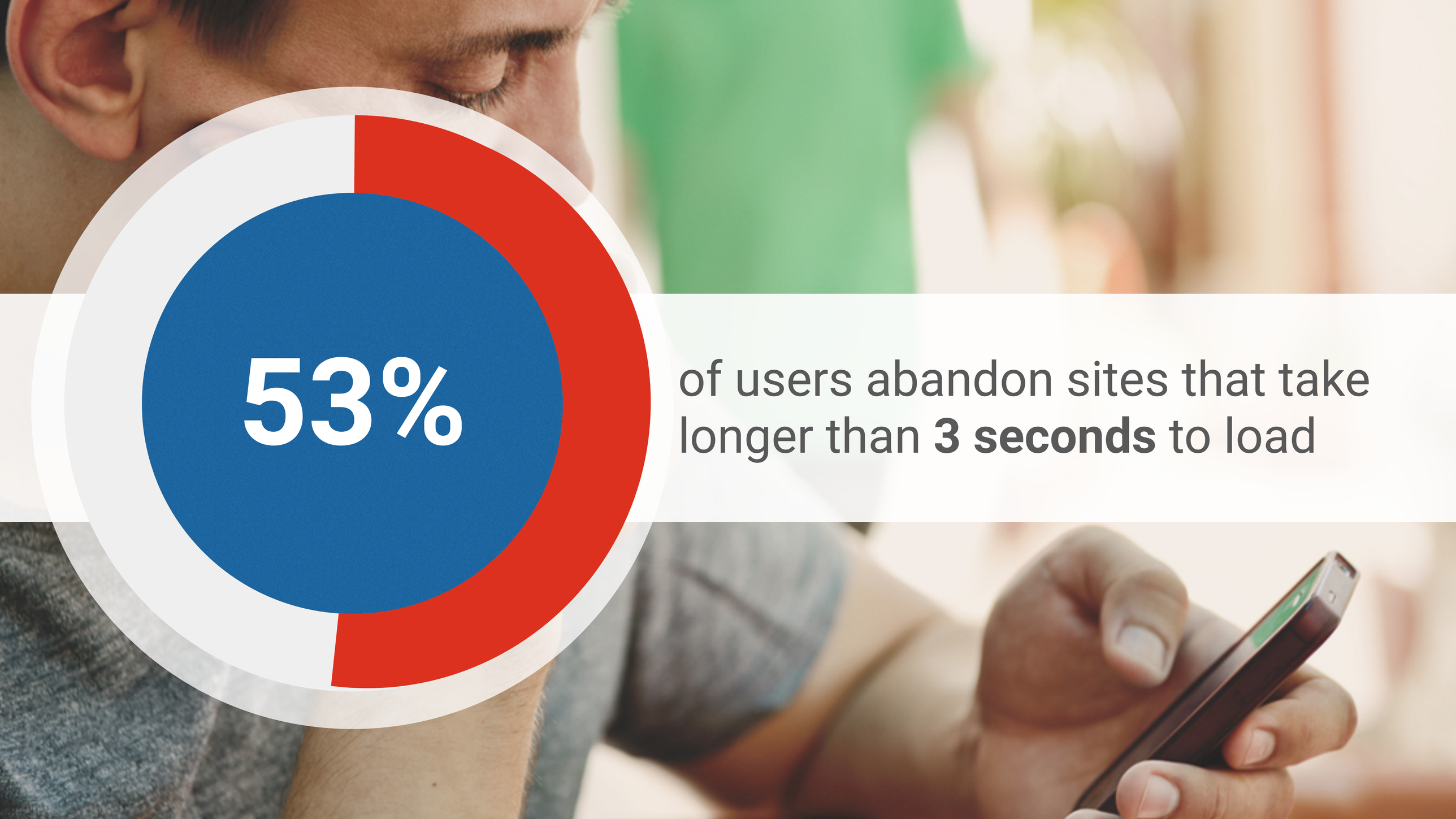
Reliable

Fast





Sessions
Bounce rate
58%
bounce rate
13%
bounce rate
20%
bounce rate
180,000
140,000
100,000
60,000
20,000
0
Sessions
58
45
32
19
6
0
Bounce rate (%)
2.4
2.7
3.0
3.3
3.6
3.9
4.2
4.5
4.8
5.1
5.4
5.7
6.0
6.3
6.6
6.9
7.2
7.5
7.8
8.1
8.4
8.7
9.0
9.3
9.6
9.9
Load time (in seconds)



of users abandon sites that take longer than **3 seconds** to load

User experiences need to be...

Reliable

Fast

Engaging

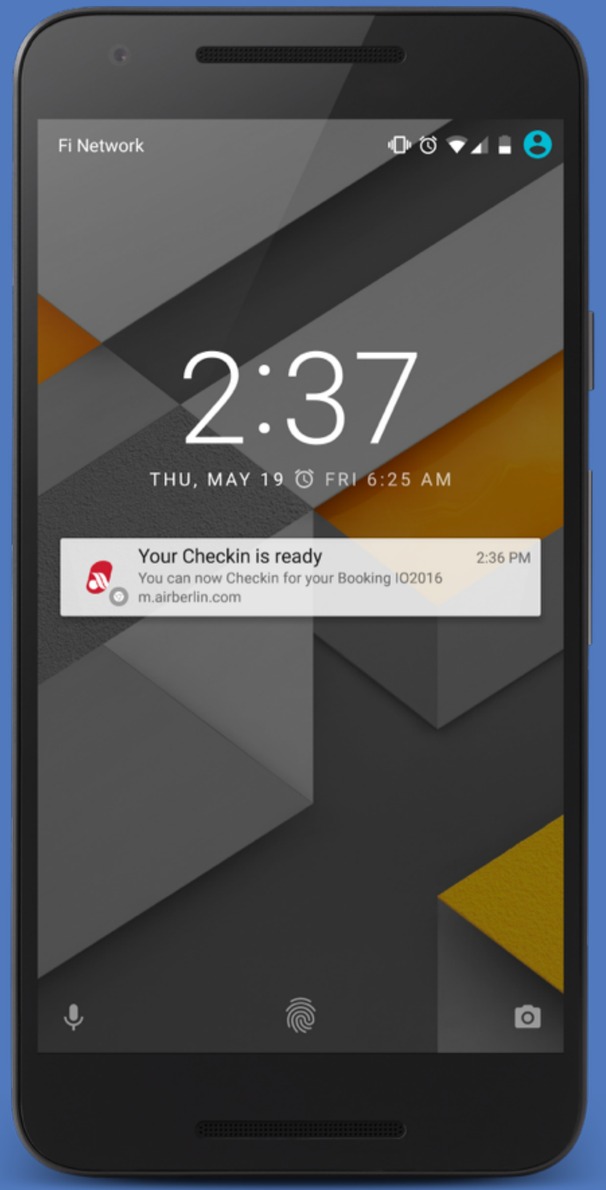
Engaging

Home Screen

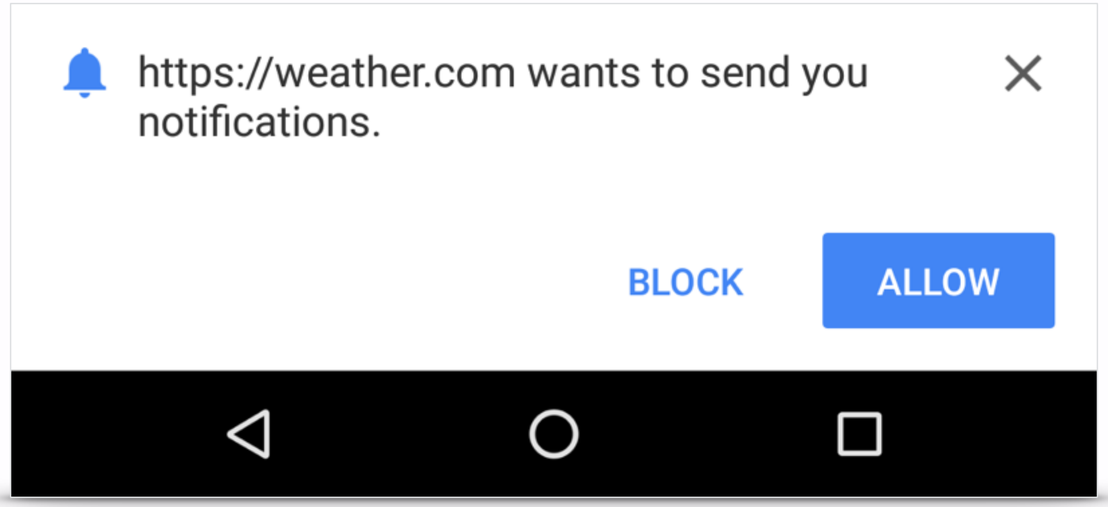
Immersive

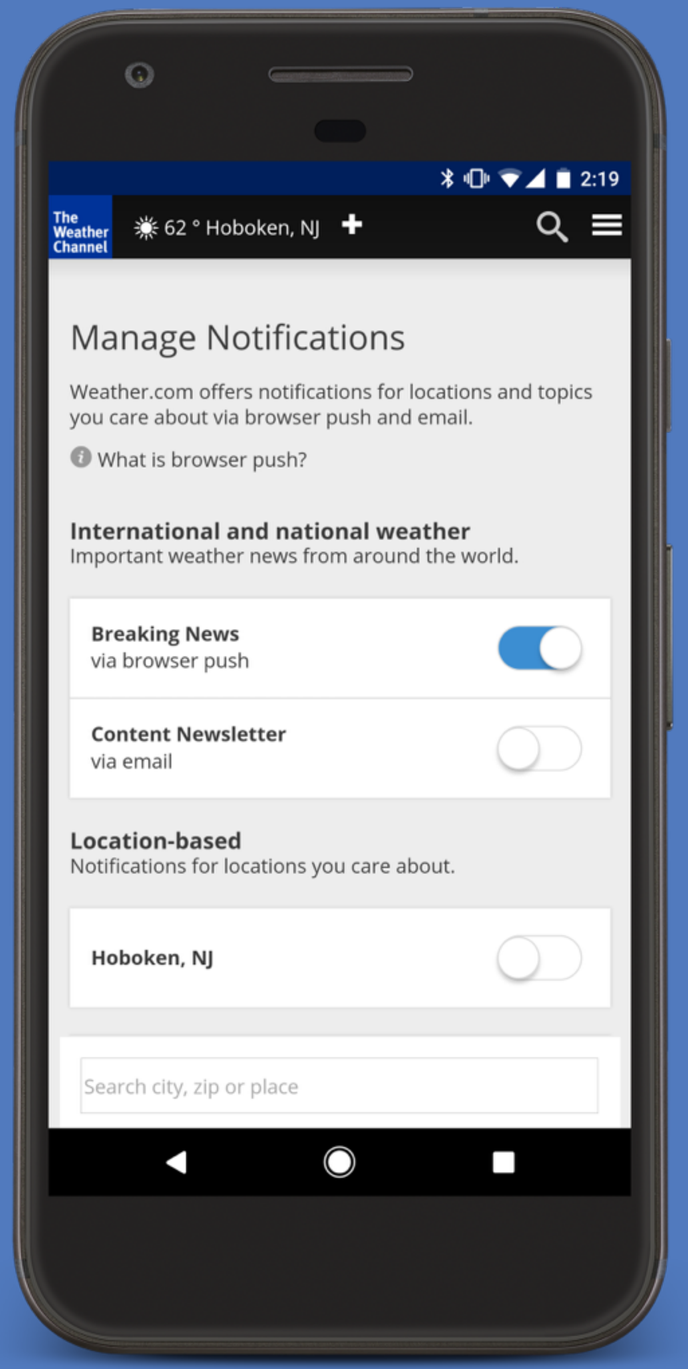
Notifications

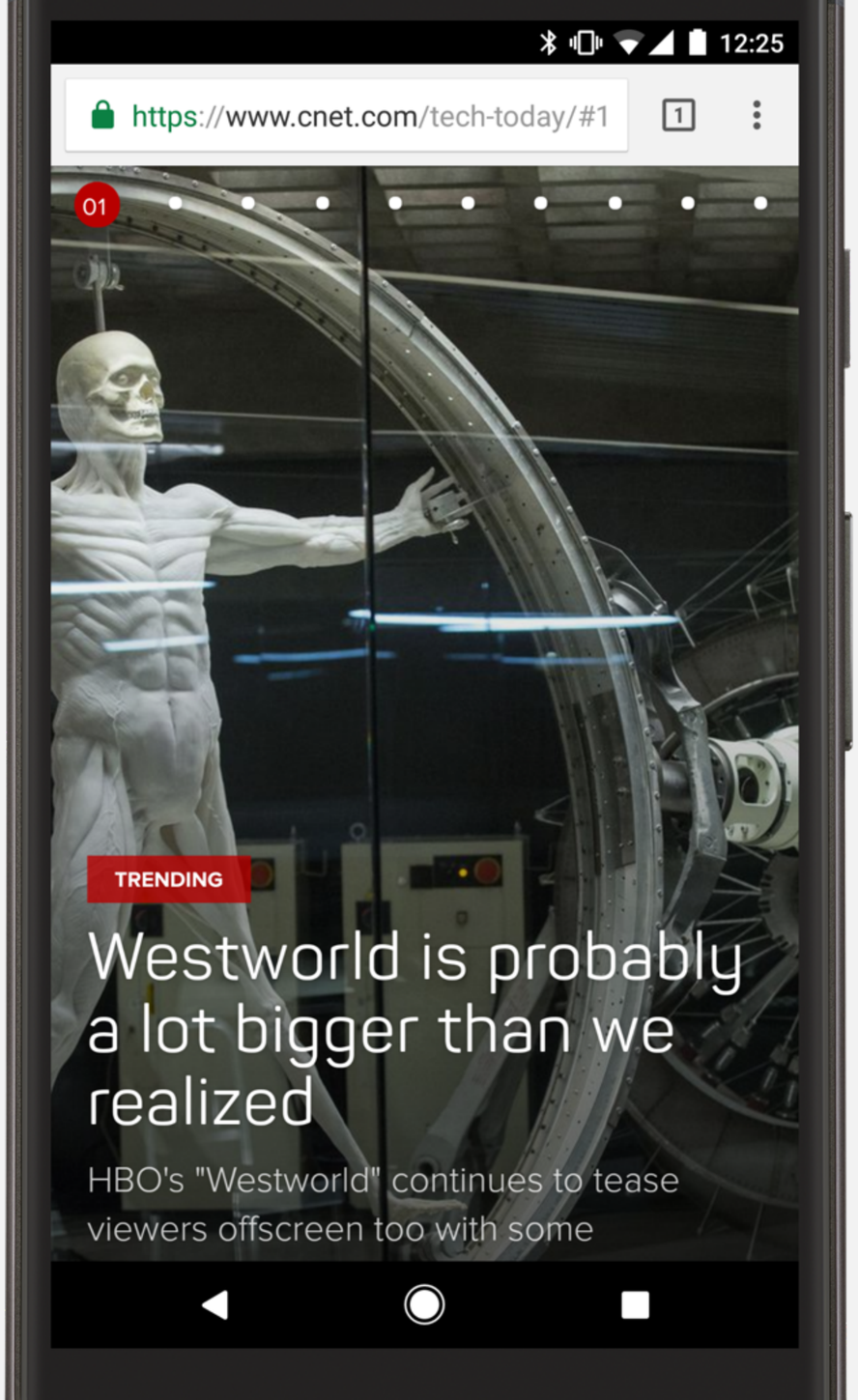
Web Push Notifications

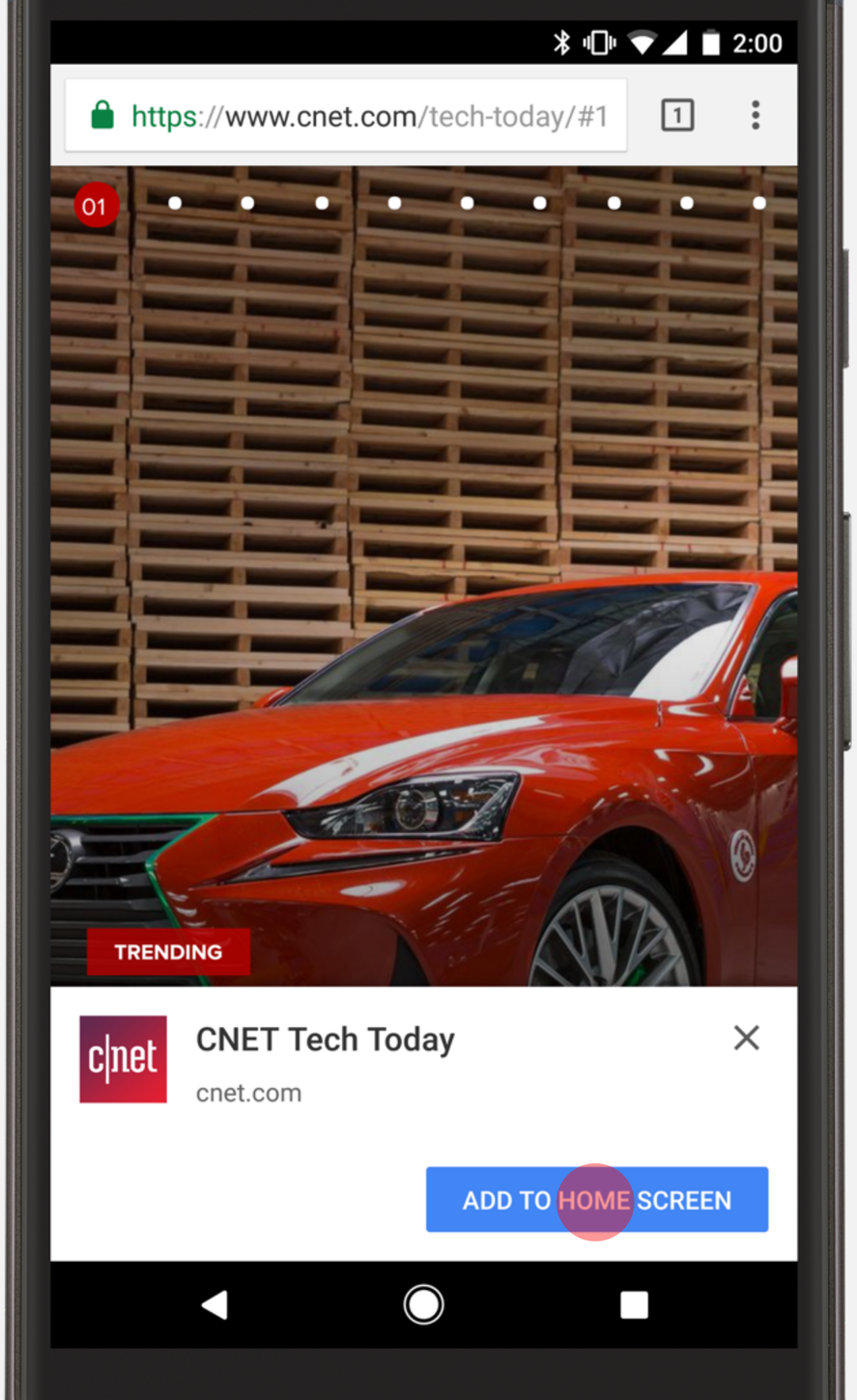


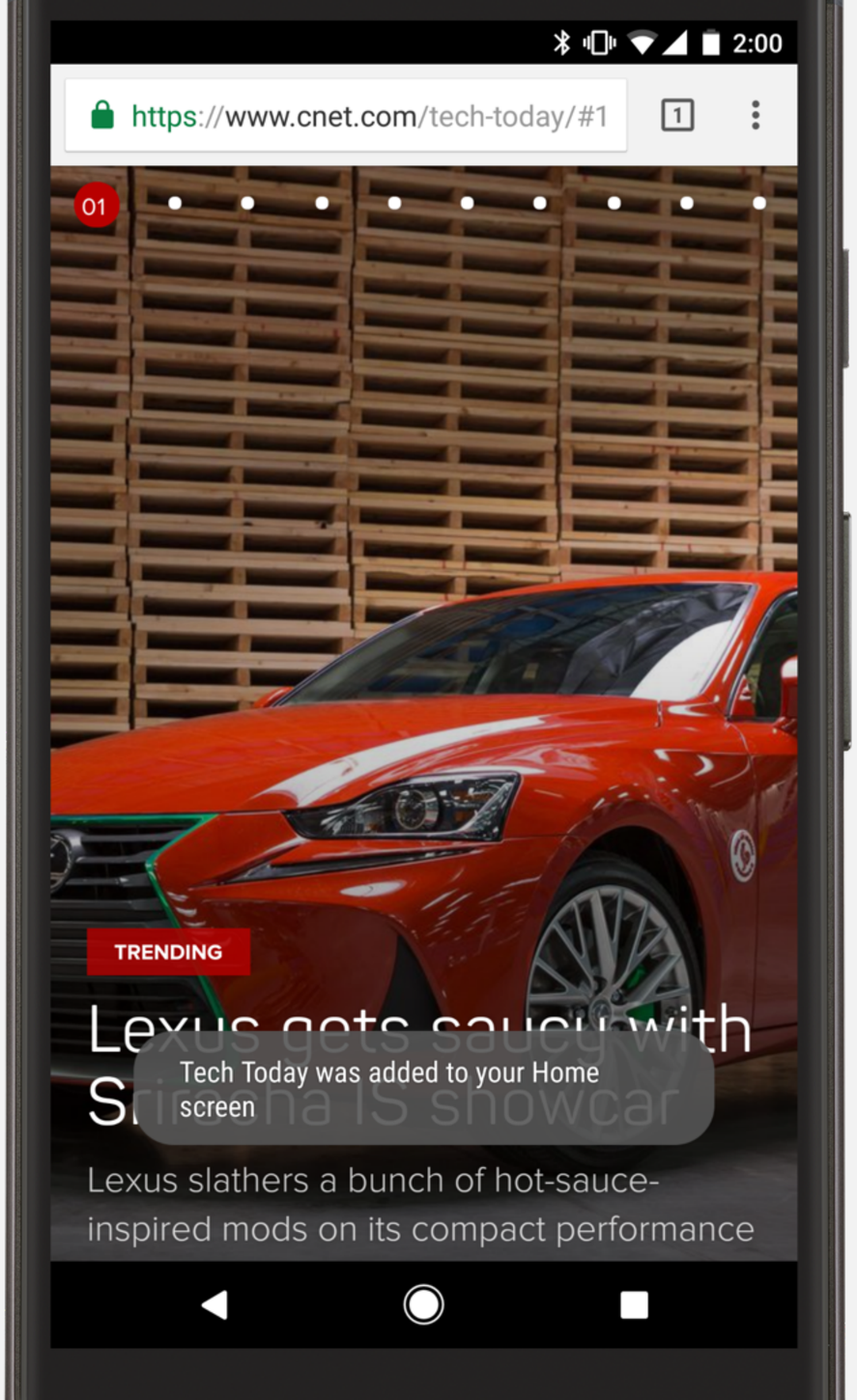
No surprises!






12:25
https://www.cnet.com/tech-today/#1
1
01
TRENDING
Westworld is probably a lot bigger than we realized
HBO's "Westworld" continues to tease viewers offscreen too with some

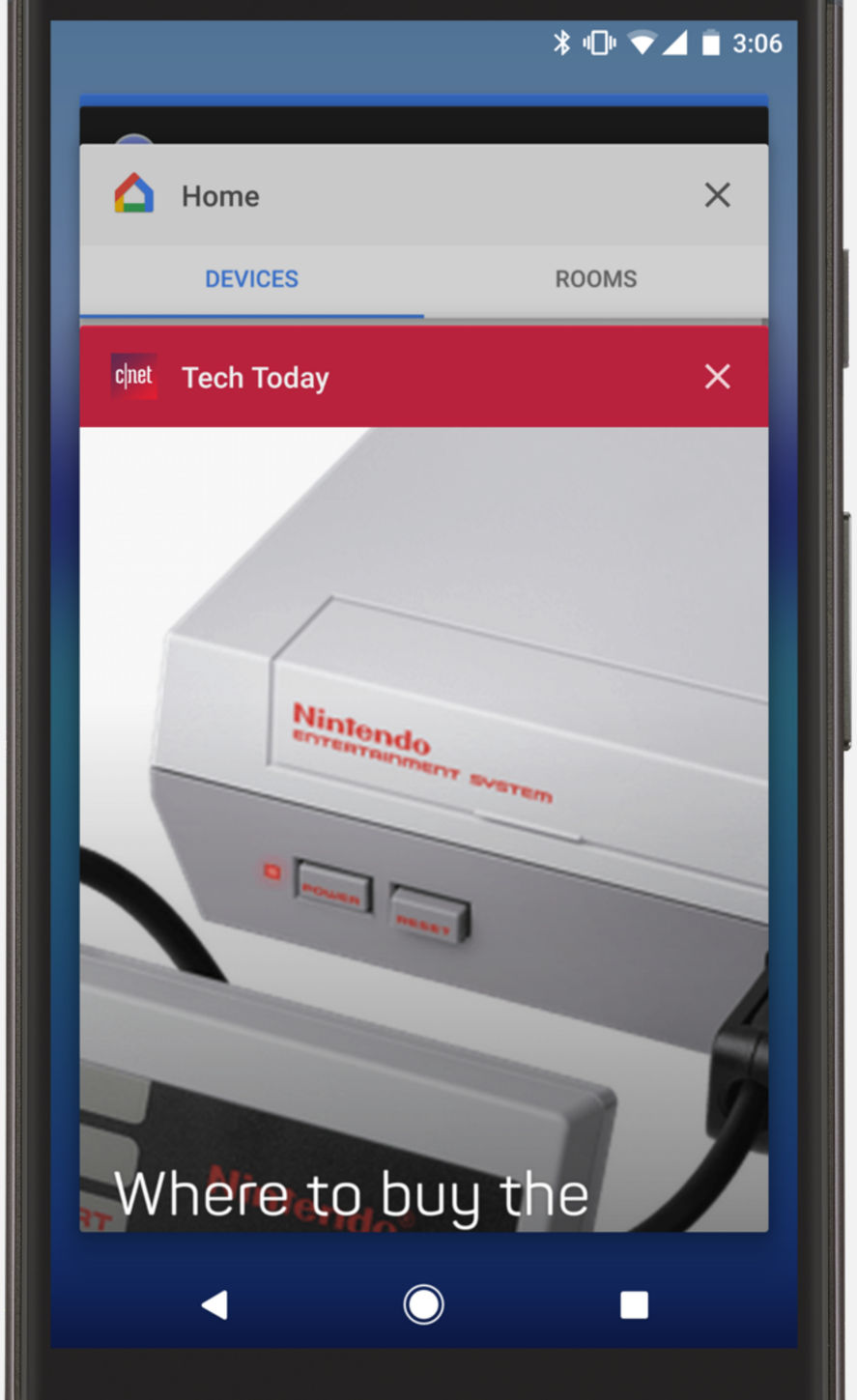

2:00
https://www.cnet.com/tech-today/#1
1
01
TRENDING
CNET Tech Today
cnet.com
ADD TO HOME SCREEN


2:00
https://www.cnet.com/tech-today/#1
1
01
TRENDING
Tech Today was added to your Home screen
Lexus slathers a bunch of hot-sauce-inspired mods on its compact performance

2:01
c|net
Tech Today

2:01
c|net
CNET Tech Today

3:05
01
Nintendo
ENTERTAINMENT SYSTEM
POWER
RESET
Where to buy the Nintendo NES Classic Edition
On the lookout for the NES Classic Edition?


3:06
Home
DEVICES
ROOMS
c|net
Tech Today
Nintendo
ENTERTAINMENT SYSTEM
POWER
RESET
Where to buy the

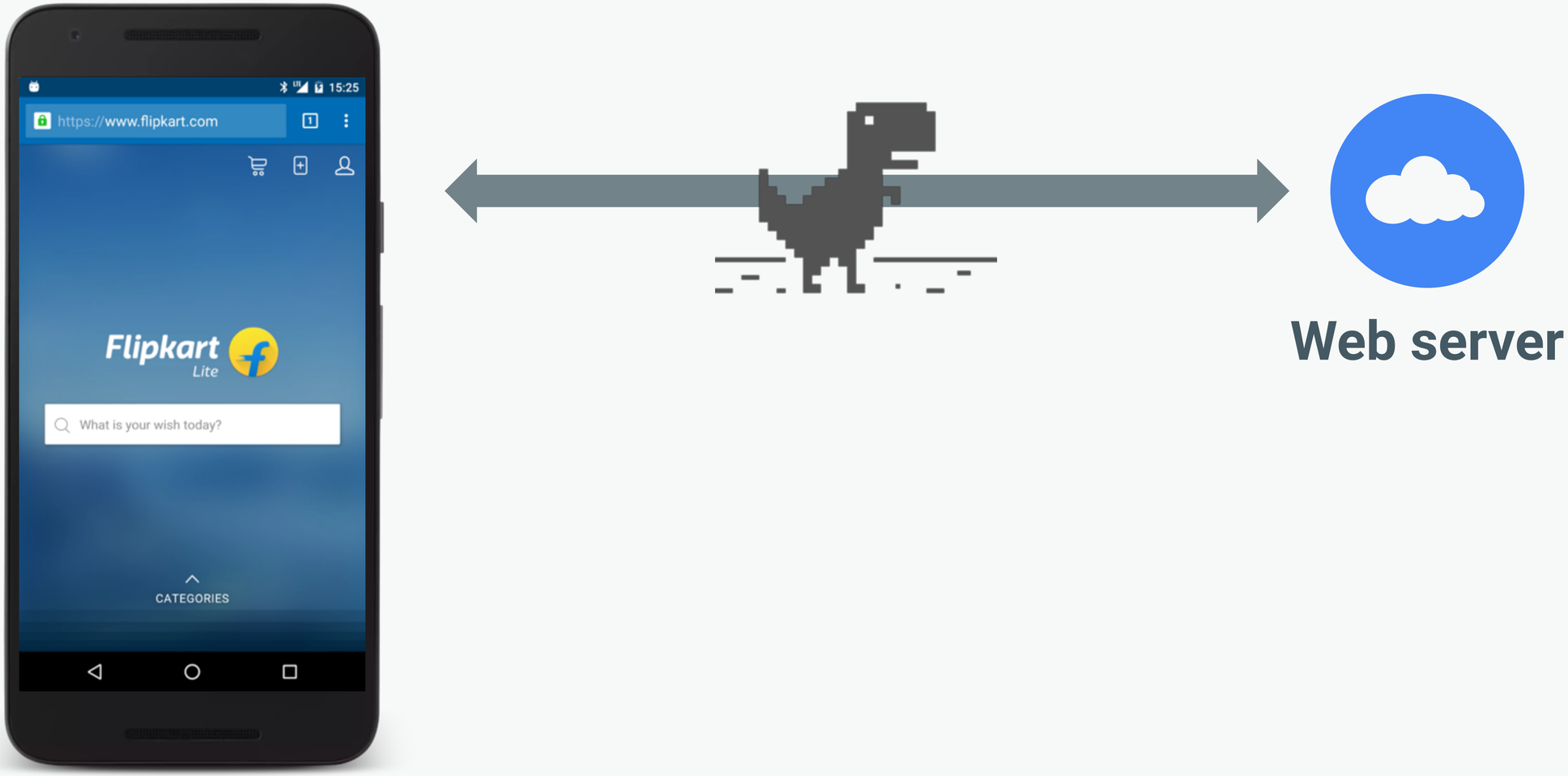
Progressive Web Apps are…

Reliable

Fast

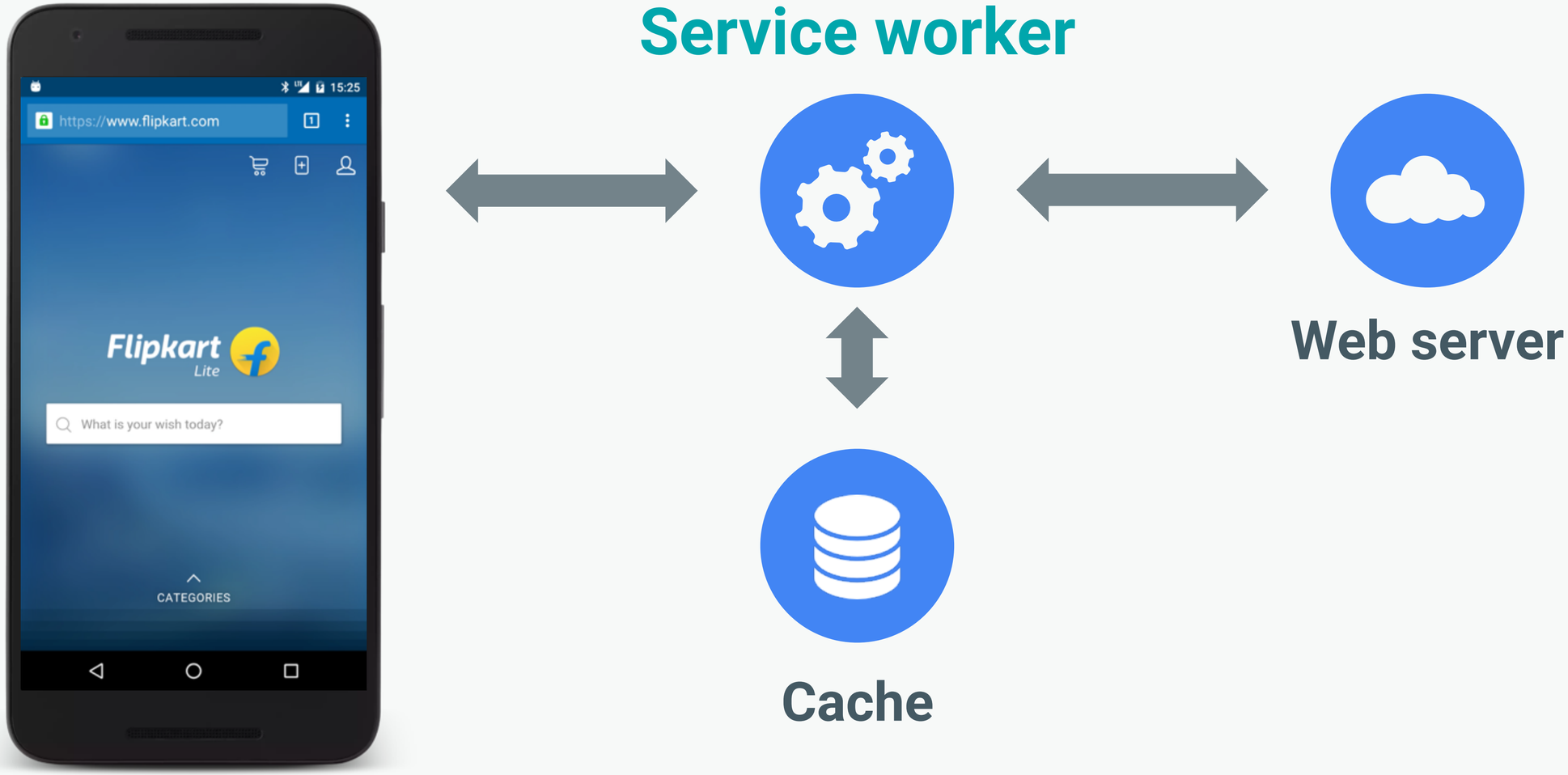
Engaging

Traditional Web Request

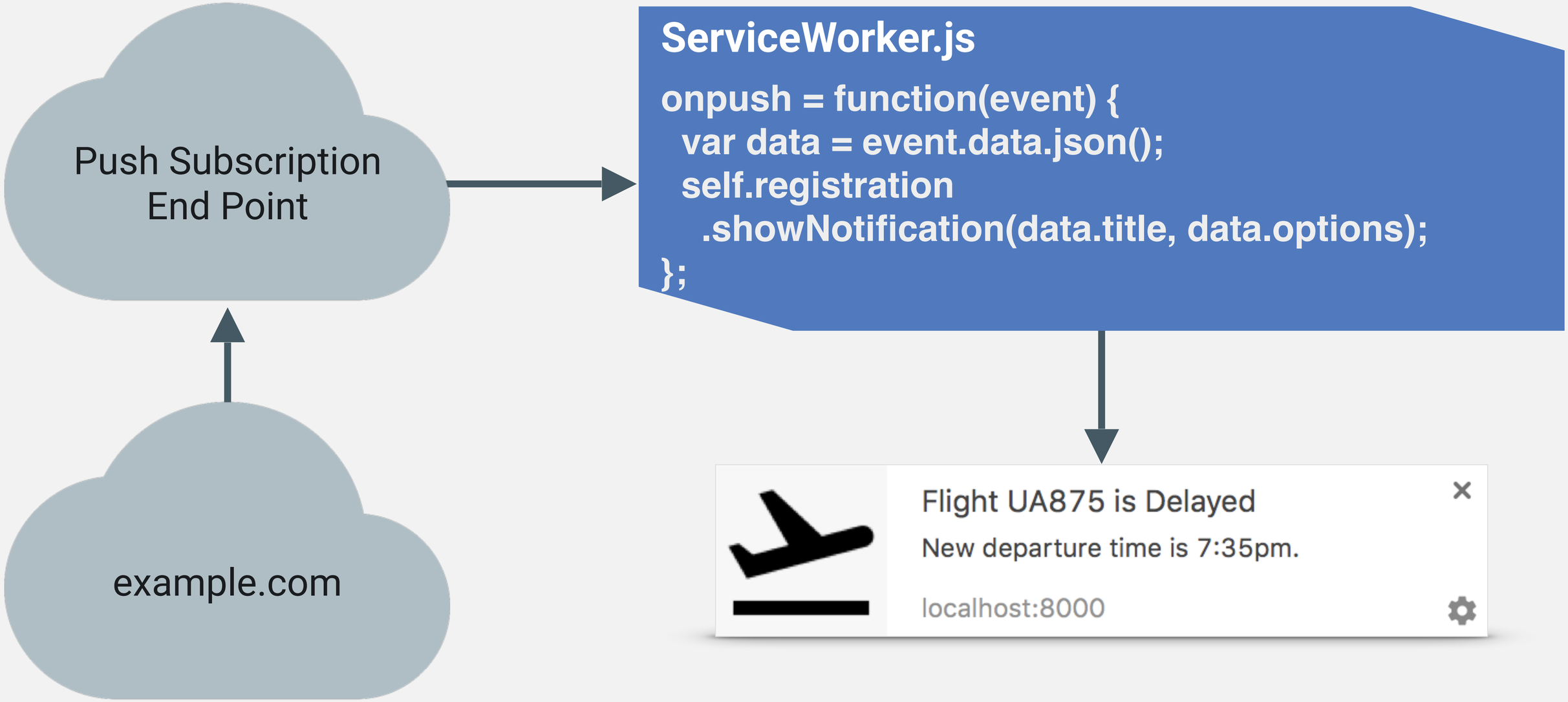


Service Workers

A client side proxy written in JavaScript



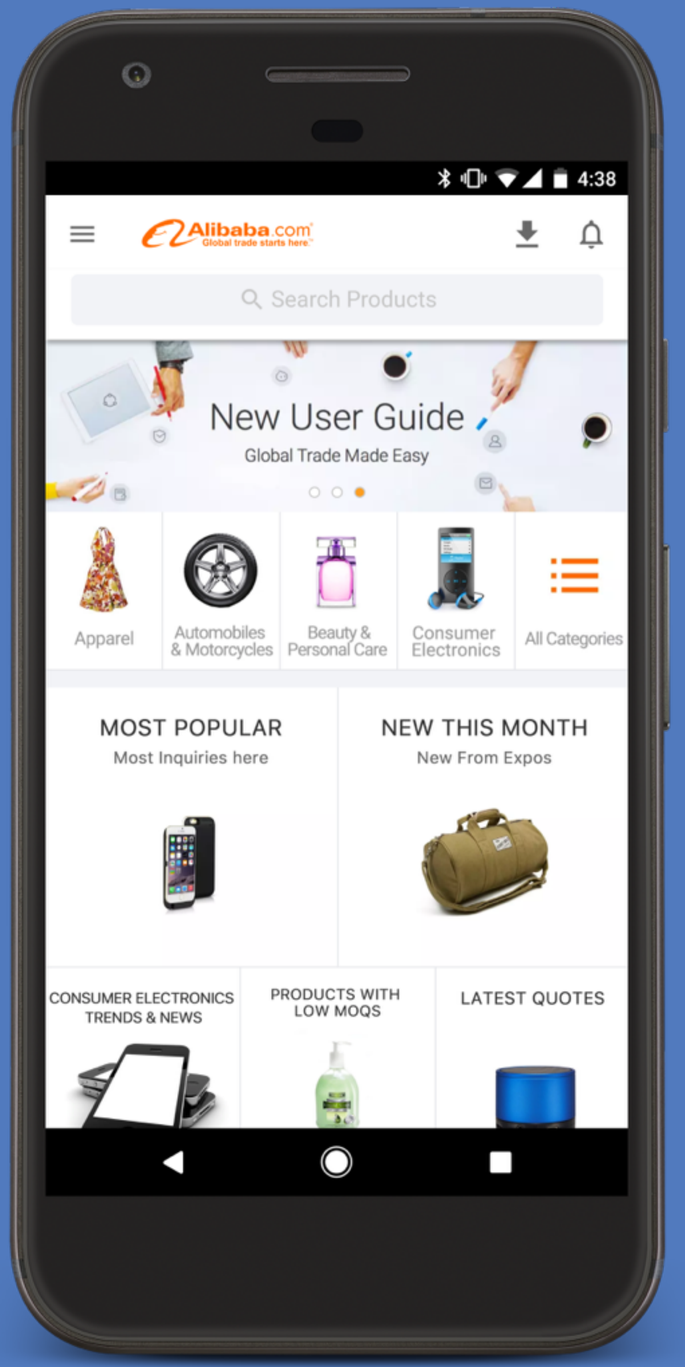
Push is built on Service Workers



Alibaba.com®
Global trade starts here.™

76% increase

IN CONVERSIONS



Alibaba.com®
Global trade starts here.™

76% increase

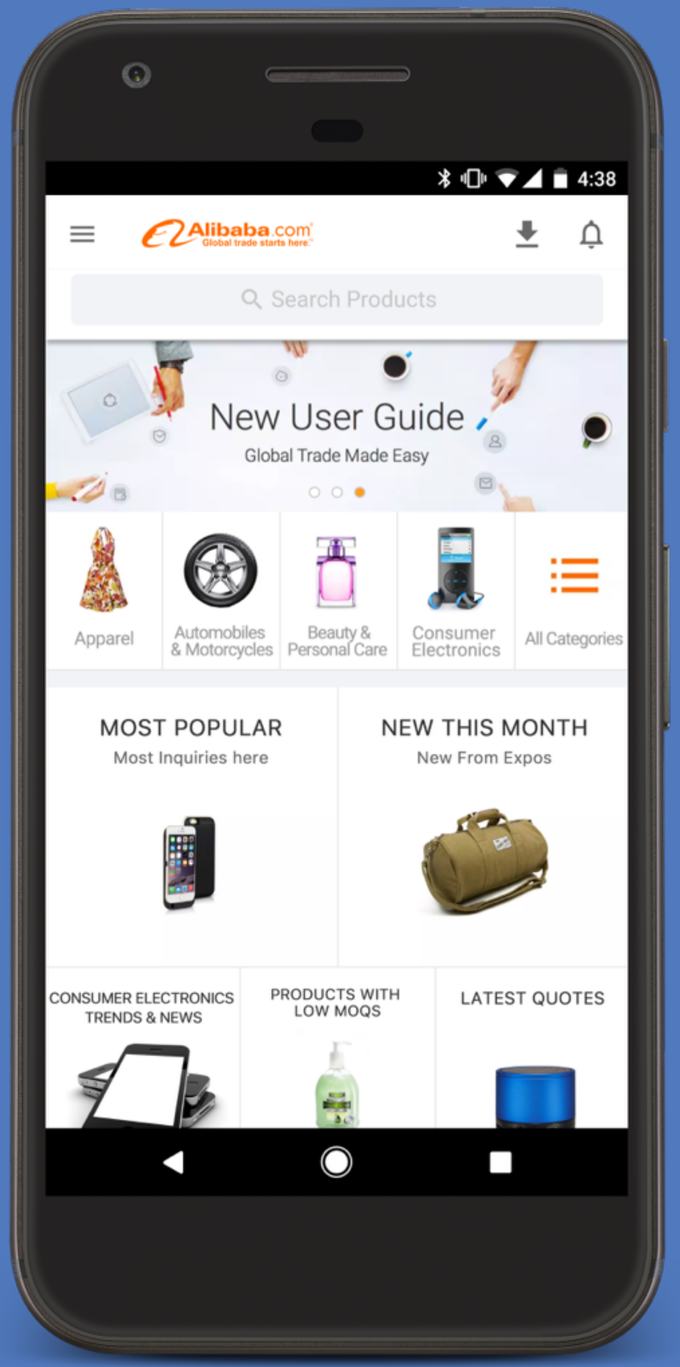
IN CONVERSIONS

14% more monthly

ACTIVE USERS ON iOS

30% more monthly

ACTIVE USERS ON ANDROID



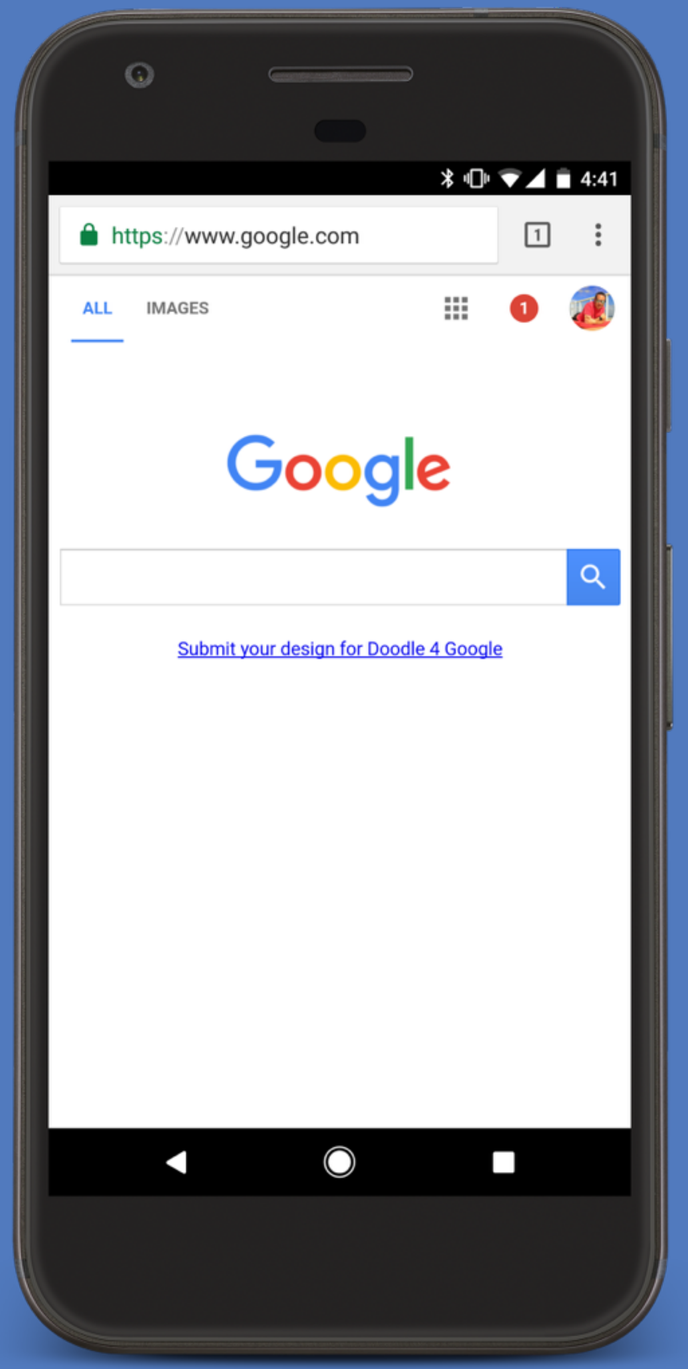
Progressive Web Apps

are progressive.

How do I get started?

Start Secure

HTTPS: Secure connection between site and users



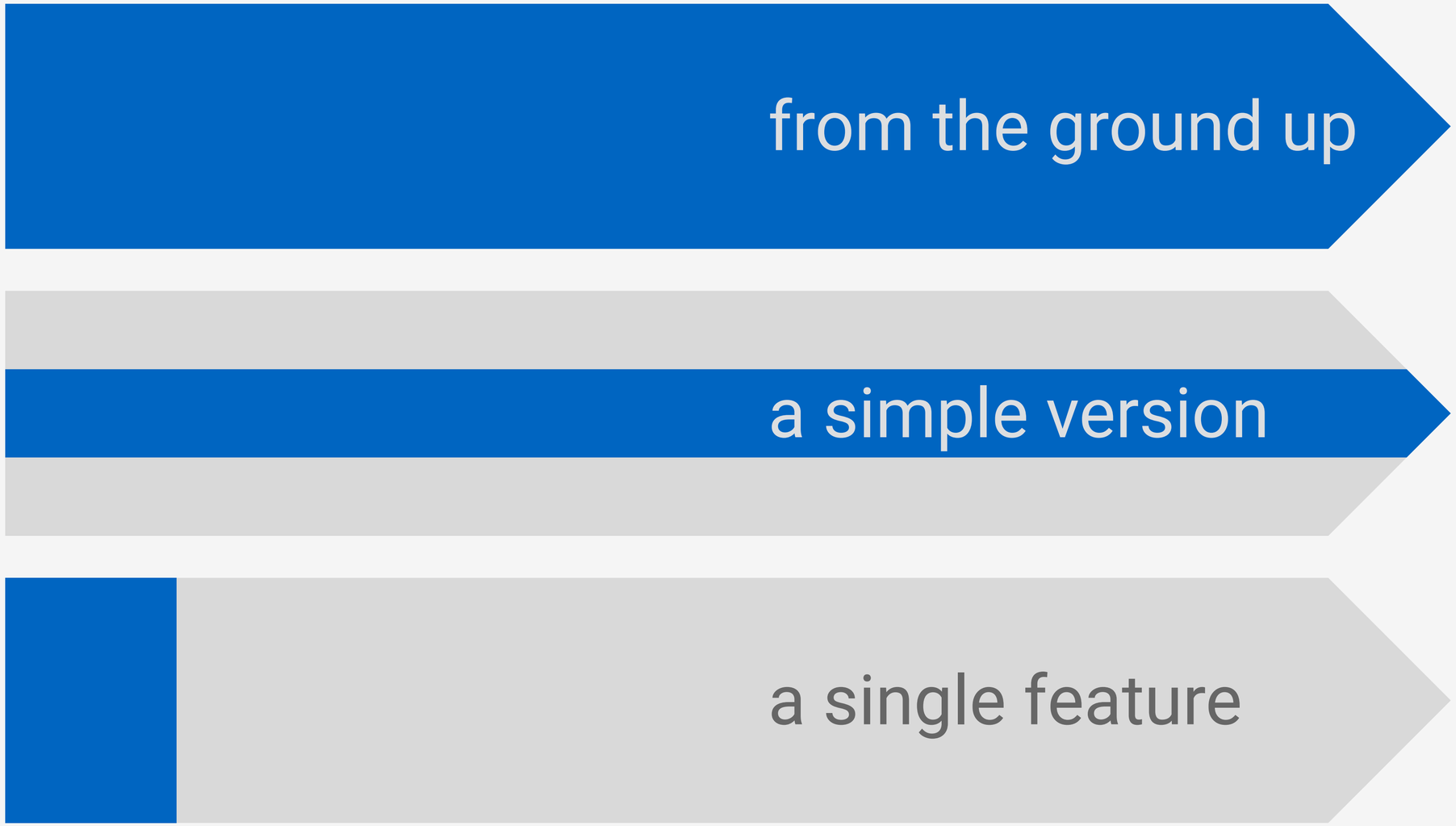
Keeping Users Safe

Identity

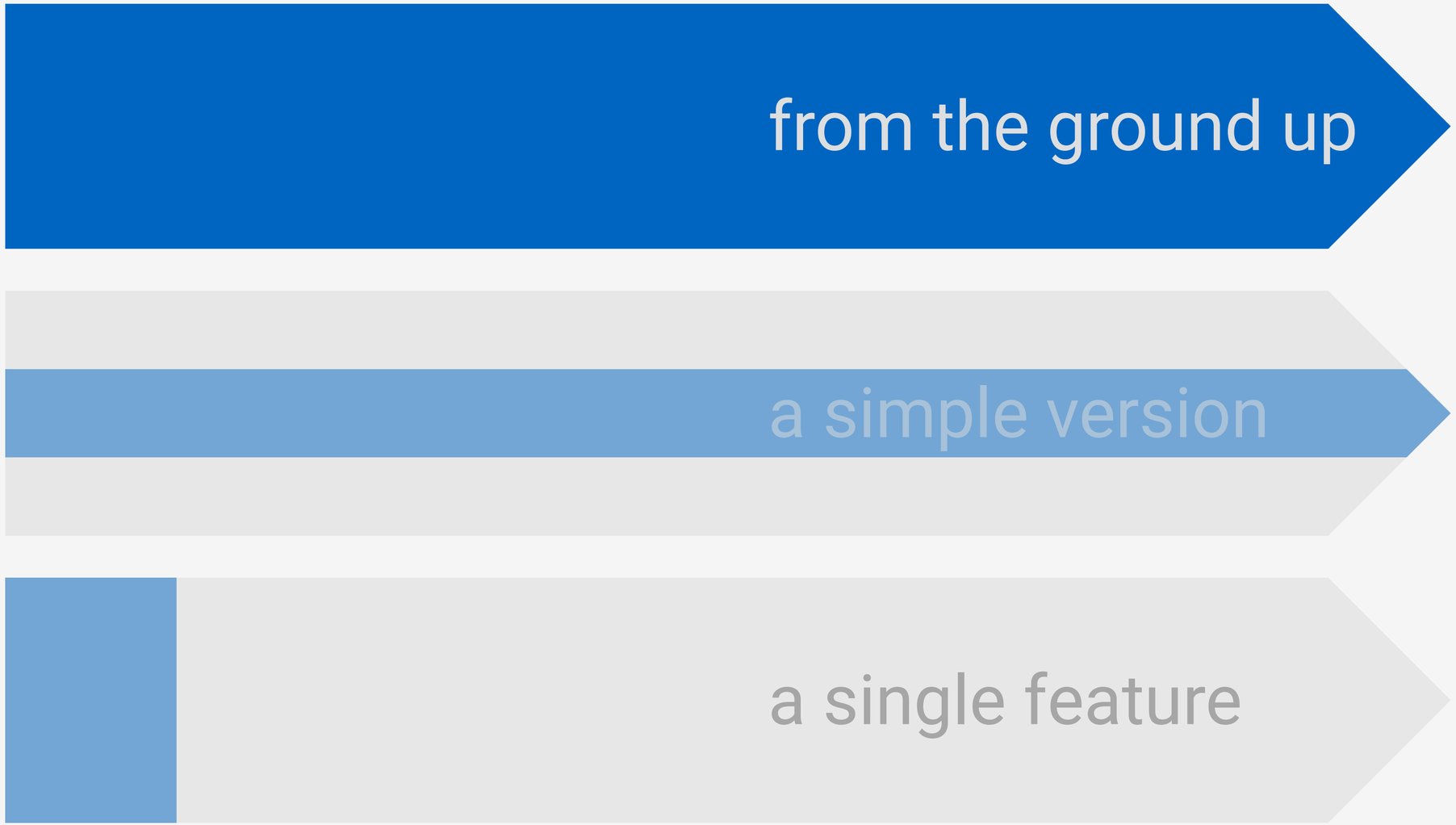
Confidentiality

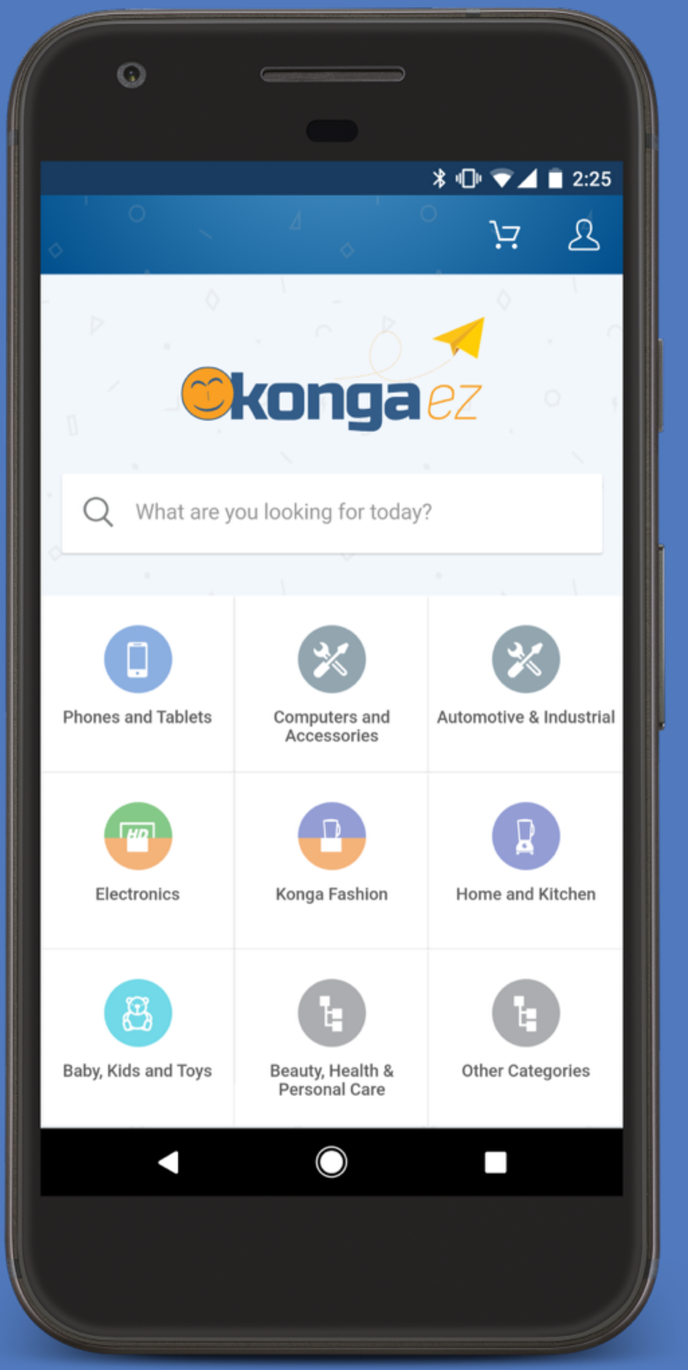
Integrity

Three Approaches to PWA-ifying



Three Approaches to PWA-ifying





Both data points are compared to native app

konga.com

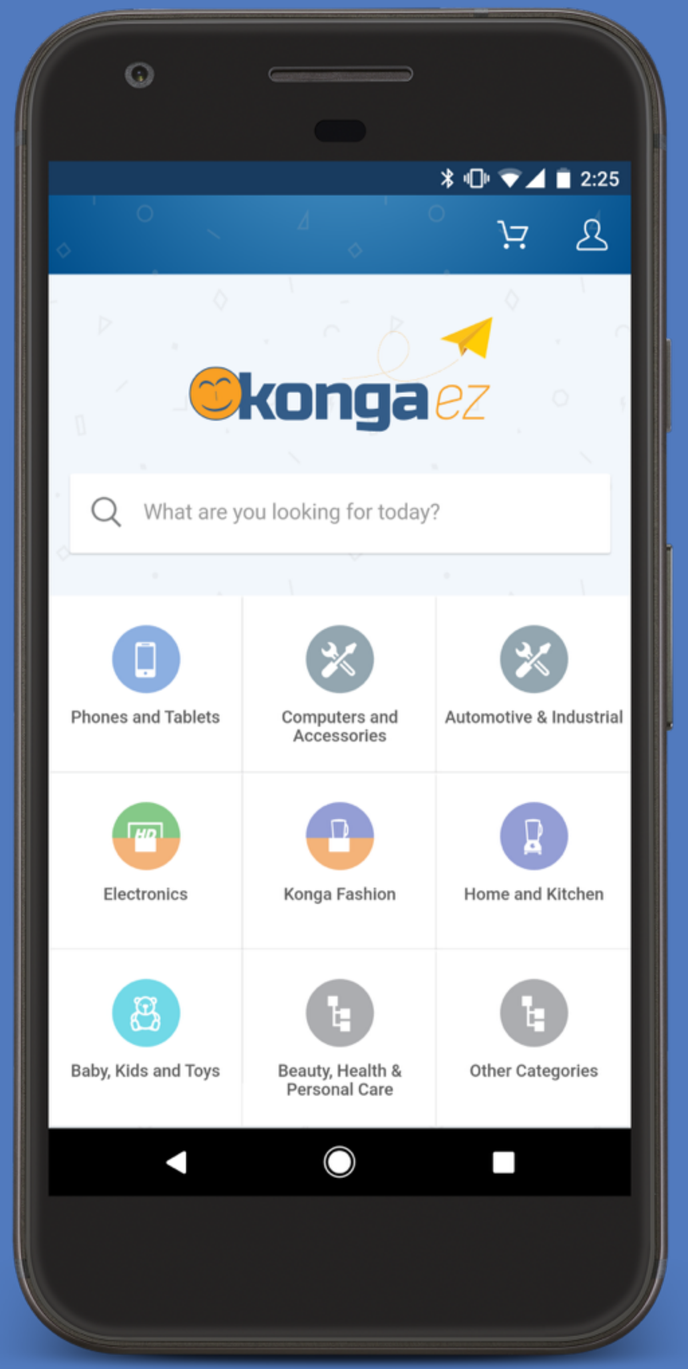
92% less data

FOR INITIAL LOAD

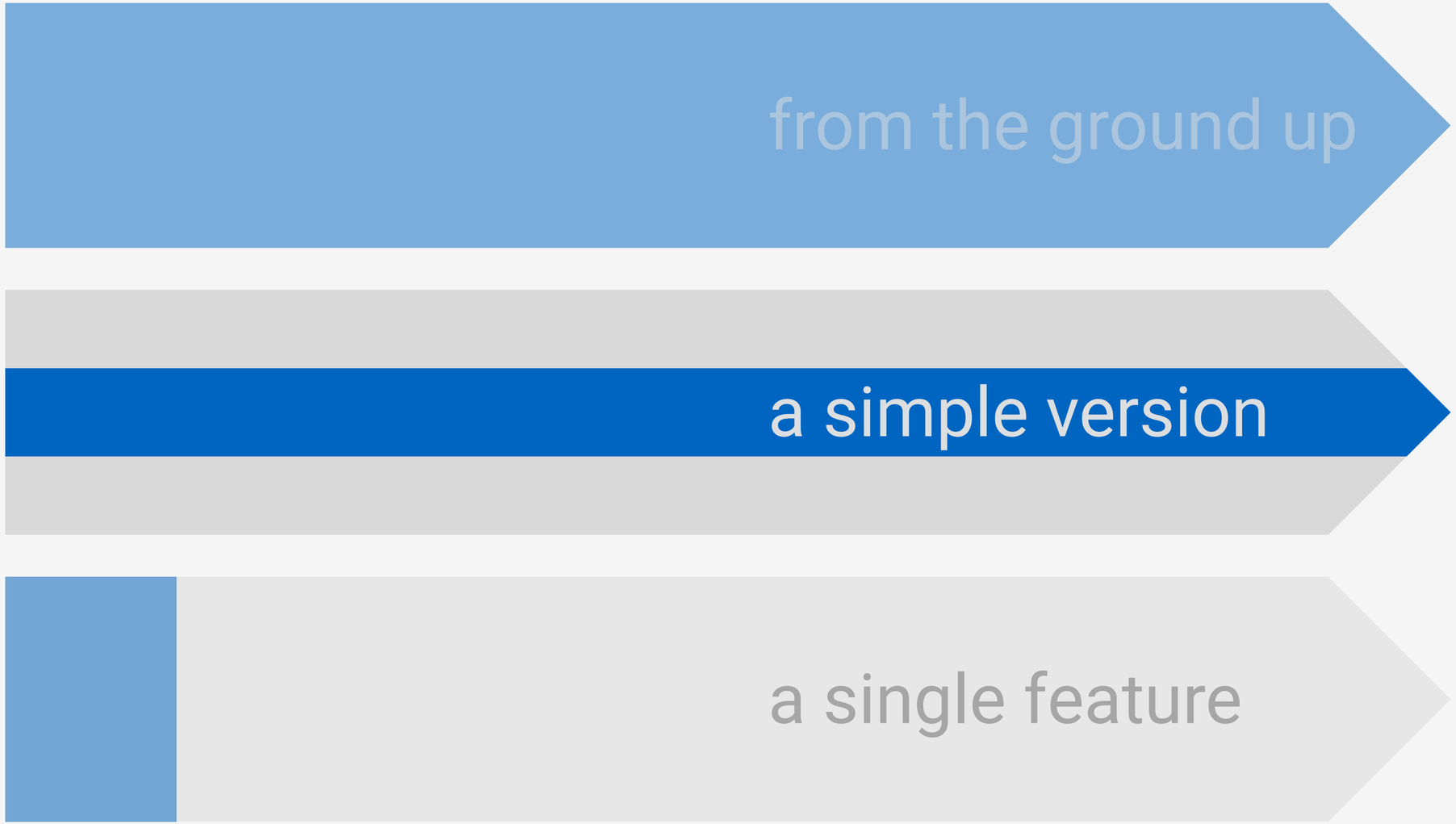
82% less data

TO COMPLETE FIRST TRANSACTION

Both data points are compared to native app



Three Approaches to PWA-ifying



airberlin

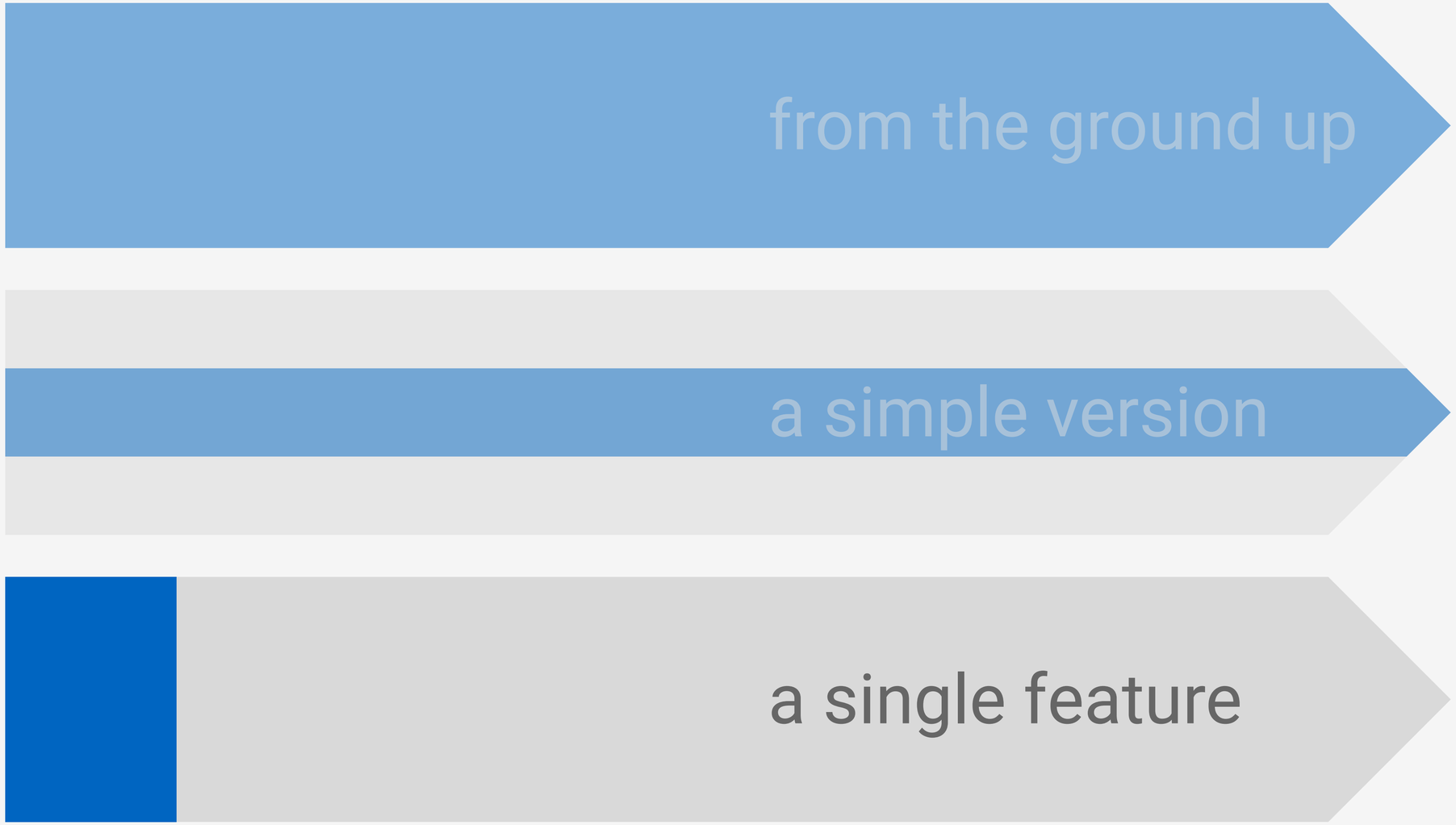
9:25
https://m.airberlin.com
Flightnumber
AB8708
Terminal / Gate
C30
TXL – FCO
Berlin
Rome
Date
2016-05-23
Passenger
HANNES SCHWAGER
Boarding / Departure time
13:55 / 14:20
Seat
18A
PRIORITY FASTLANE
Fare: ECOBASE / J
Security No.: 013
Need help? Phone: Call 0049 (0)180 6 334 334
(charges apply: EUR 0.20 per call/German landlines,
max. EUR 0.60 per call/German mobile phone)

airberlin

<1s

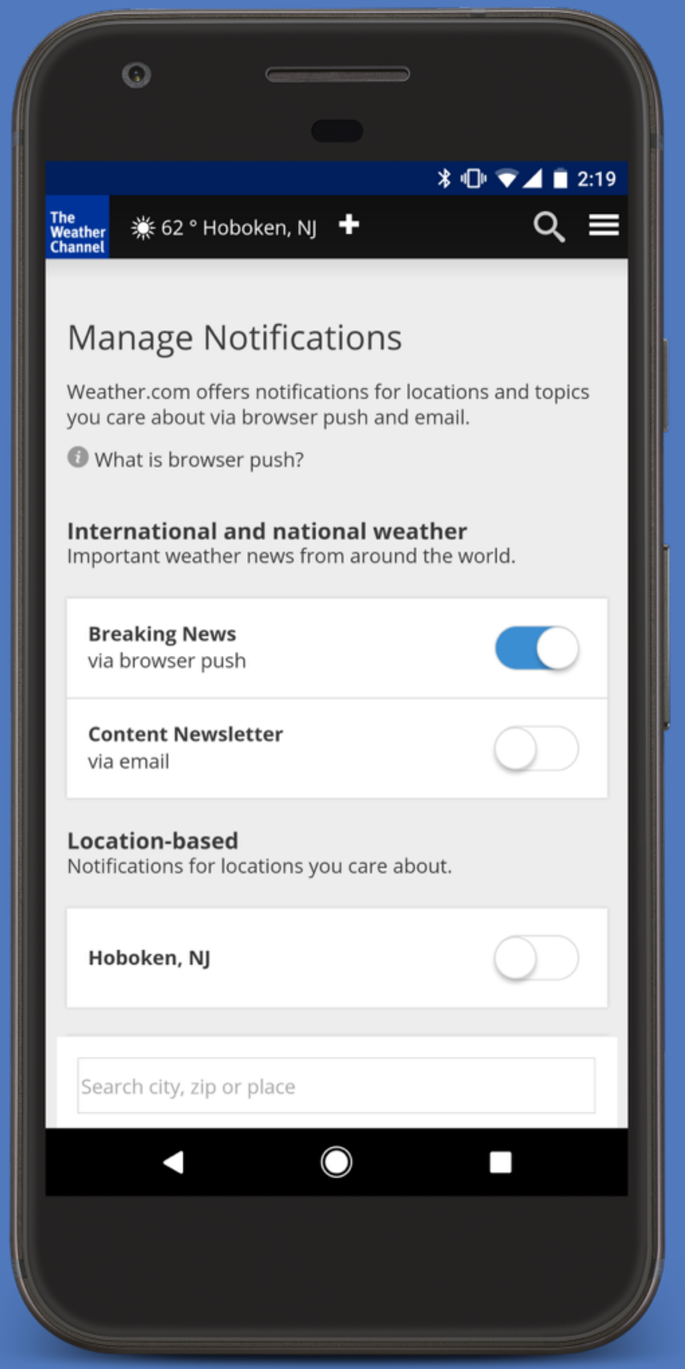
INITIAL LOADING TIME AND EVEN FASTER FOR SUBSEQUENT LOADS

Three Approaches to PWA-ifying



The Weather Company

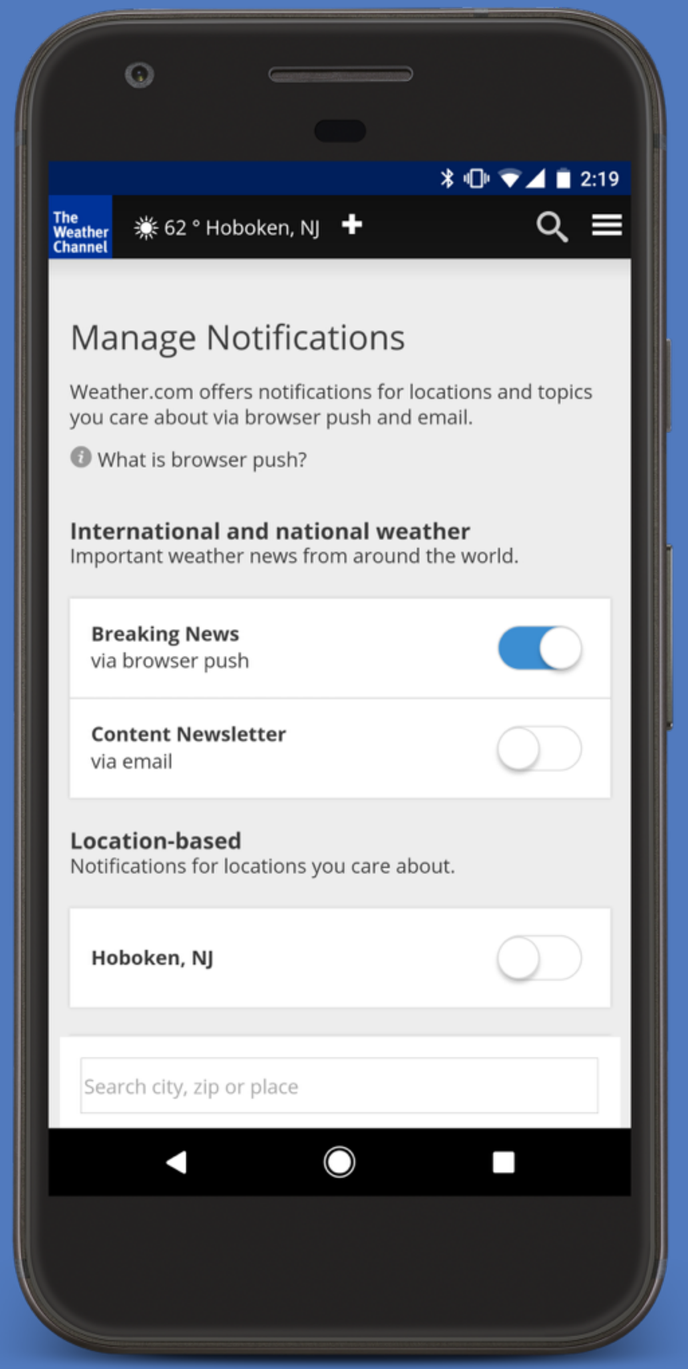
An IBM Business



The Weather Company
An IBM Business

60+ languages

ROLLED OUT GLOBALLY WITH WEB PUSH NOTIFICATIONS



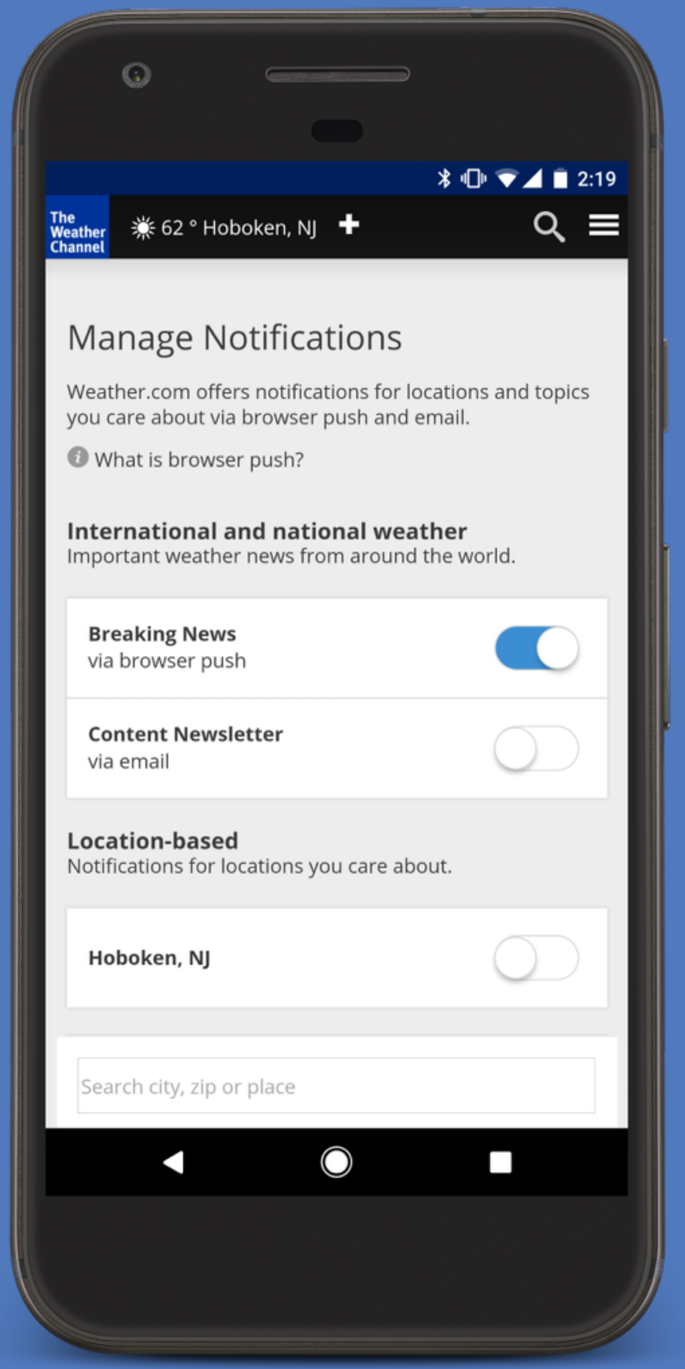
The Weather Company
An IBM Business

60+ languages

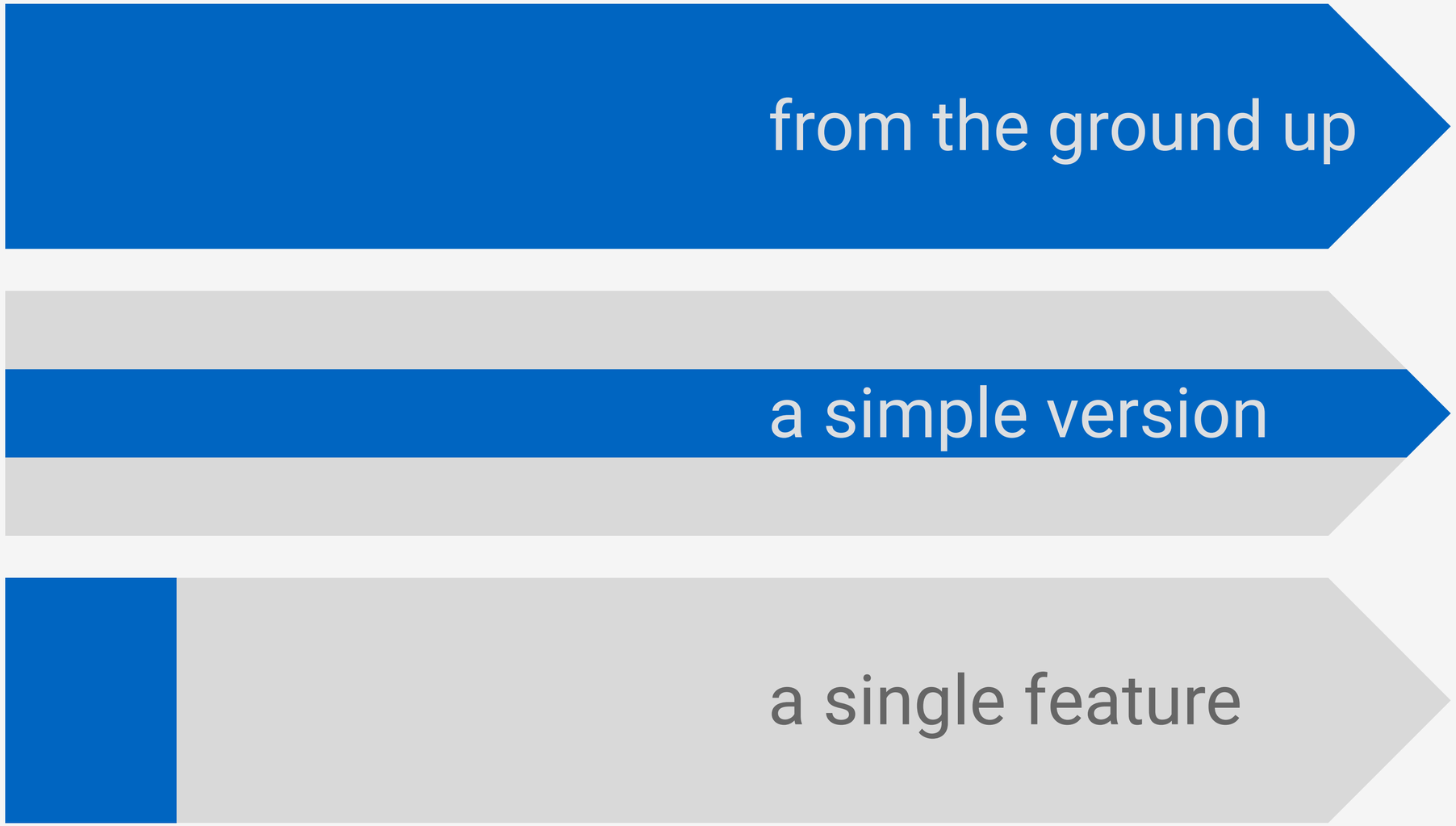
ROLLED OUT GLOBALLY WITH WEB PUSH NOTIFICATIONS

1,000,000+

OPT-IN'S IN THE FIRST THREE MONTHS



Which Approach Will You Take?



snapdeal
interjet
Geo
5miles
Flipkart
JabongTikus
.Mic
magicbricks
SMASHING MAGAZINE
terra
cnet
The Weather Company
An IBM Business
NFL
west elm
airberlin
make my trip
XING
FT
FINANCIAL TIMES
theguardian
lyft
Alibaba.com
Global trade starts here.™
CNN
HOUSING.COM
JUMIA
TUI GROUP
infobae
AliExpress
voot
Walgreens
vivanuncios
PURE FORMULAS
letras
BABE
mynet
The Washington Post
suumo
TKM
Mobify
makaan
konga.com
BukalaPak.com
TOWNWORK
KOMPAS.com

meow
Go build!

Thank You!

PROGRESSIVE WEB APP

ROADSHOW 2016