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**There's more
than one way to
a PWA**



Agenda

1. Demystifying mobile web technologies
2. Real world examples
3. Features and challenges
4. Final Thoughts



PWA presents huge opportunities to deliver better experiences. Whether it's bookings, engagement, dwell time, loyalty, retention or cross selling, **PWA** can help boost these metrics.

ENOMIC



PWA is easily confused with
other technologies and systems

Demystifying mobile web technologies

Demystifying **mobile web technologies**

PWA augments the web

A WEB APPLICATION



Distributable



Instant deploy



Frictionless updates

WITH NATIVE-LIKE FEATURES



Offline support



Push notifications



Full screen mode

Demystifying PWA

FEATURES

	NATIVE	PWA	
Instant deploy	☐	☐	
Deliver cross platform	☐	☐	Via one codebase
Accessible	☐	☐	
Offline support	☐	☐	
Full screen mode	☐	☐	Hacks required for iOS
Push notifications	☐	☐	No iOS support yet
Linkable	☐	☐	
Save to home screen	☐	☐	Hacks required for iOS
Persistent login	☐	☐	Has security implications
Camera access	☐	☐	Some issues on iOS
Microphone access	☐	☐	Some issues on iOS
Contacts access	☐	☐	
Gyroscope access	☐	☐	Android only
Bluetooth support	☐	☐	Chrome and opera only

NOTES

Demystifying **mobile web technologies**

SPA (SINGLE PAGE APP)



Seamless CX



Easy to evolve



Fast

IDEAL FOR



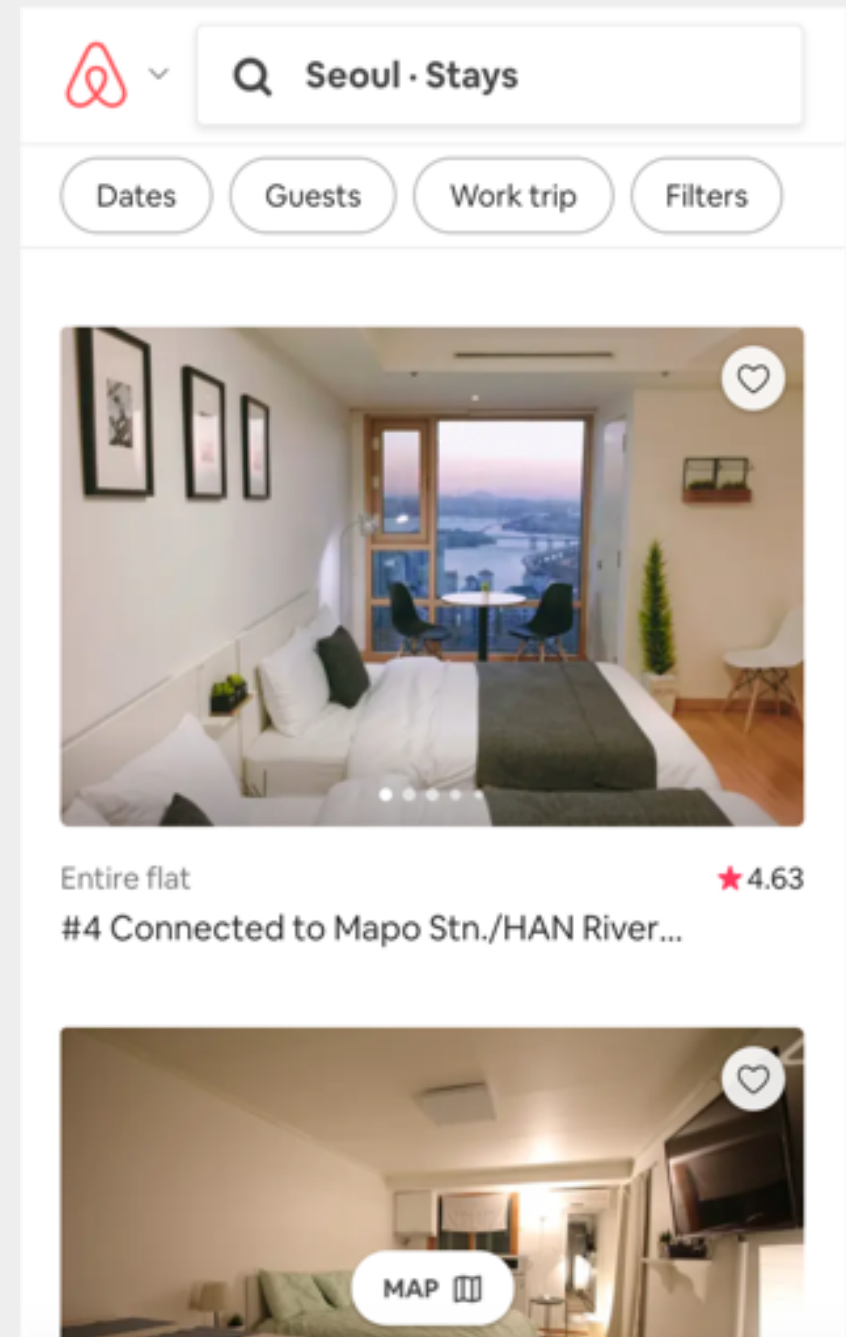
Complex forms

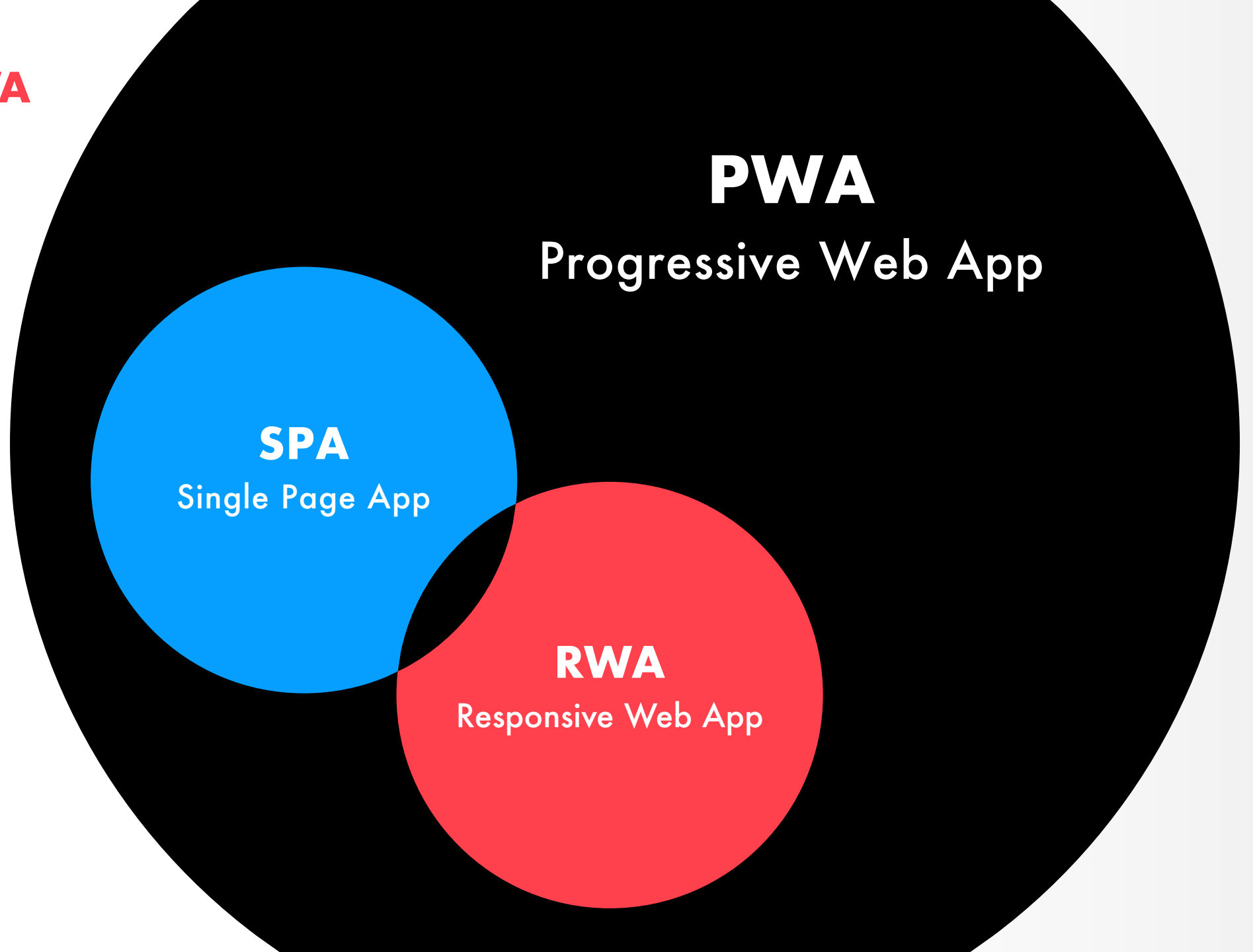


Search & filters



Real time data

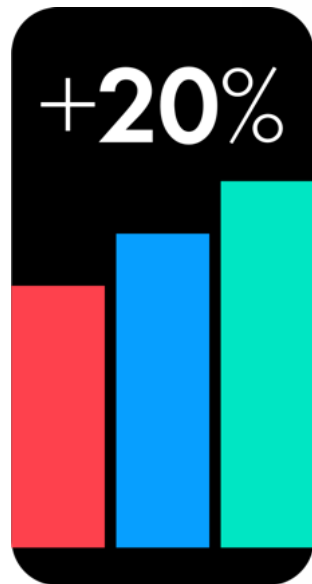




Debenhams Case Study

The Results

Debenhams' bravery in transforming itself into a truly mobile-first business has paid extraordinary dividends.



per year

Mobile sales have overtaken desktop's. This figure is growing at about **20%** a year. Revenue has grown by **>40%**.

More customers are visiting the site in peak commuting hours.



Debenhams is now more of a consideration for time-pressed consumers looking to make the most of their valuable free time.

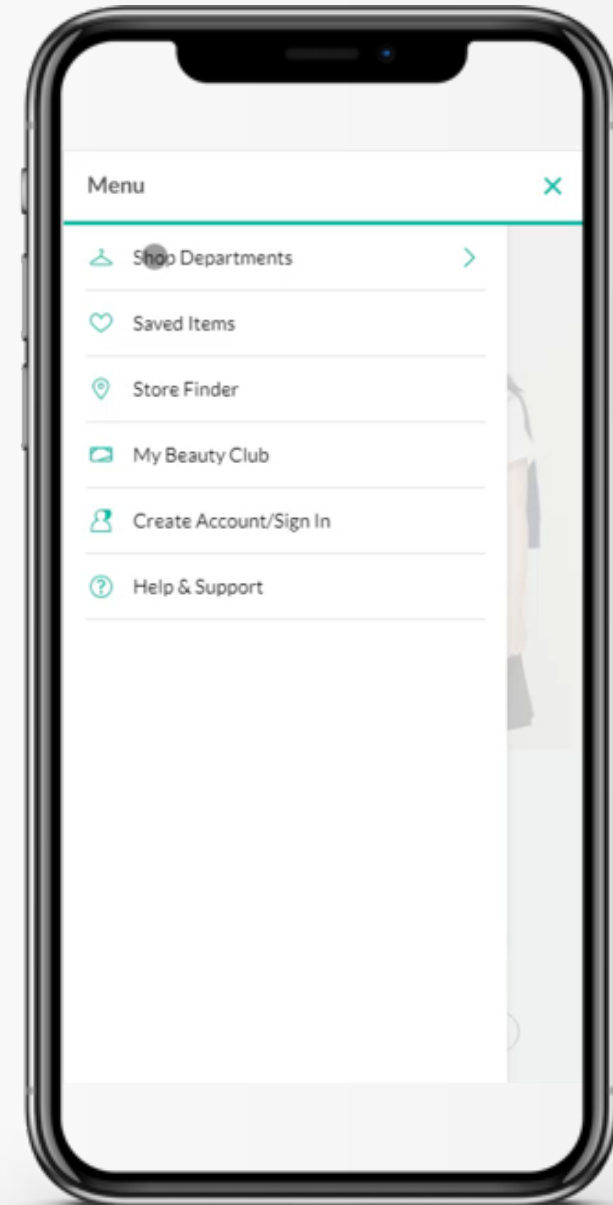
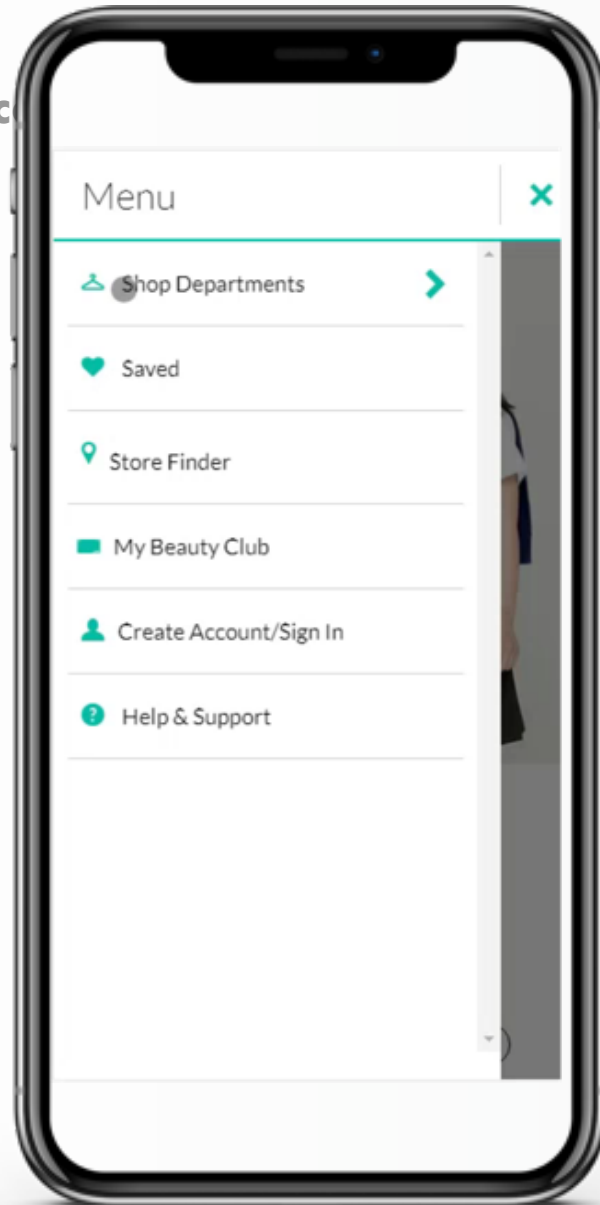


Mobile conversion rates are up by at least **20%**

PWA is **2x** fast as the old experience

Debenhams

Speed of customer experience





Get the right combination of product, service and experience and customers will visit more often. We do well, and the customer is happy too.

ROSS CLEMMOW, MANAGING DIRECTOR, DEBENHAMS



SECTION 2

Real World Examples

Find your ideal place to stay

Try searching for a city, a specific hotel, or even a landmark!

Q Paris

Check in
 Mon, 13/01/20
 |
 Check out
 Tue, 14/01/20

Room
 Double room

Search

Get back to an earlier search


Paris
 13/01/20 - 14/01/20
 -

Find your ideal place to stay

Try searching for a city, a specific hotel, or even a landmark!

Search input: Paris

Check in: Mon, 13/01/20 | Check out: Tue, 14/01/20

Room: Double room

Search

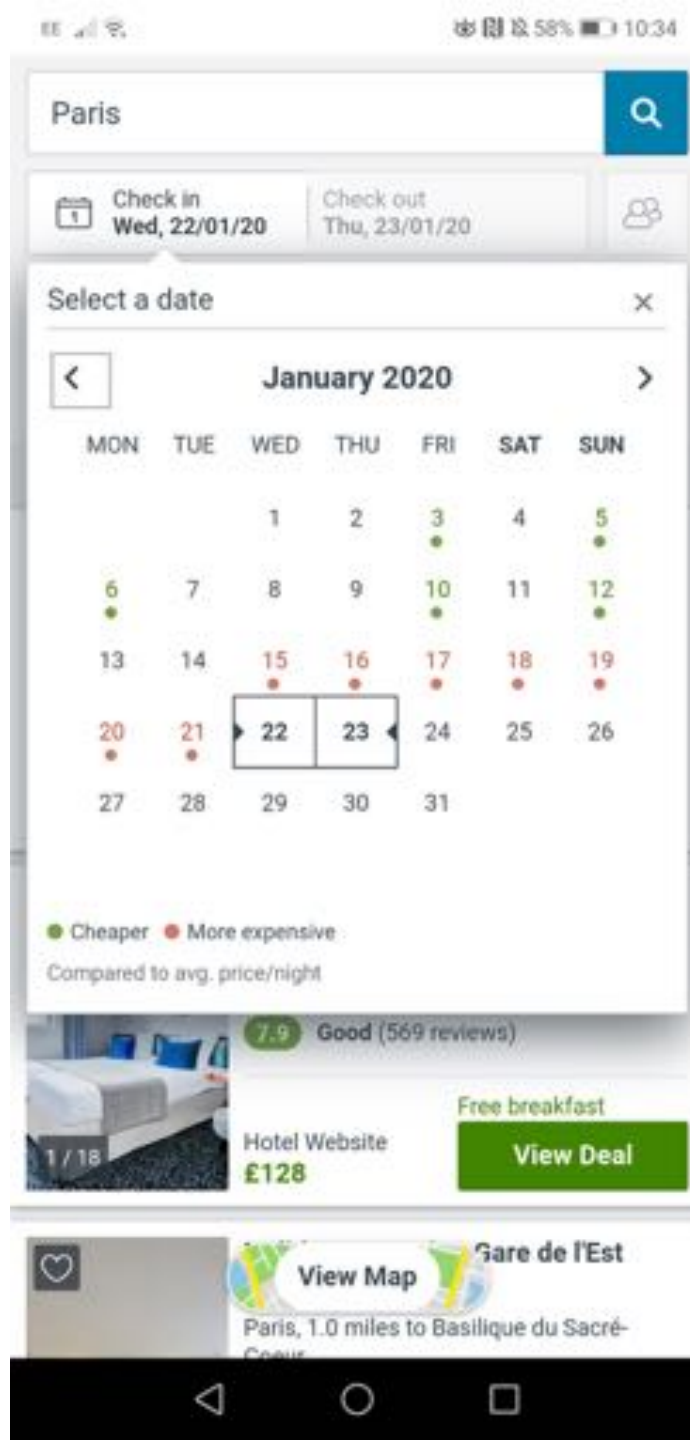
Get back to an earlier search

Paris

13/01/20 - 14/01/20

You are offline

Reconnect



Paris

Check in: Wed, 22/01/20
Check out: Thu, 23/01/20

Select a date



7.9 Good (569 reviews)



Free breakfast
Hotel Website
£128
View Deal

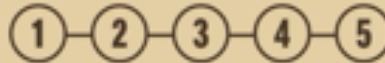
Gare de l'Est

You are offline Reconnect



GET A
FREE McCafé.

PunchCard McCafé



\$2



*Offer valid only for full-price McCafé drinks.
Valid at part. McD thru 01/17/2027

Buy 1 10oz Coffee, Get up to 1 McCafé for \$0.50 off

Buy 1 10oz Coffee, Get up to 1 McCafé for \$0.50 off



Offer expires 05/14/2020

\$1 Hash Browns with purchase of 2 for \$4 Sausage McMuffin with Egg

Valid at participating McDonald's!



Offer expires 10/29/2020

Buy one Quarter Pounder w/Cheese get one FREE

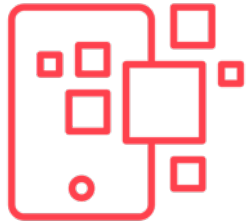
69¢



SECTION 3

Features and Challenges

Features Overview



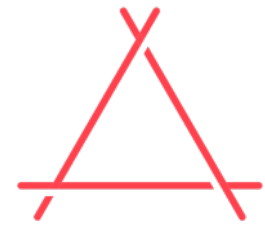
**Updates
& caching**



**Add to
home screen**



**Push
notifications**



**App store
listing**

Updates and caching

Cater for **no** or **low** connectivity



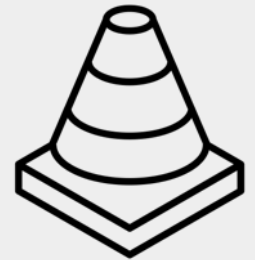
**People in
developing
countries**



**People in
transit**

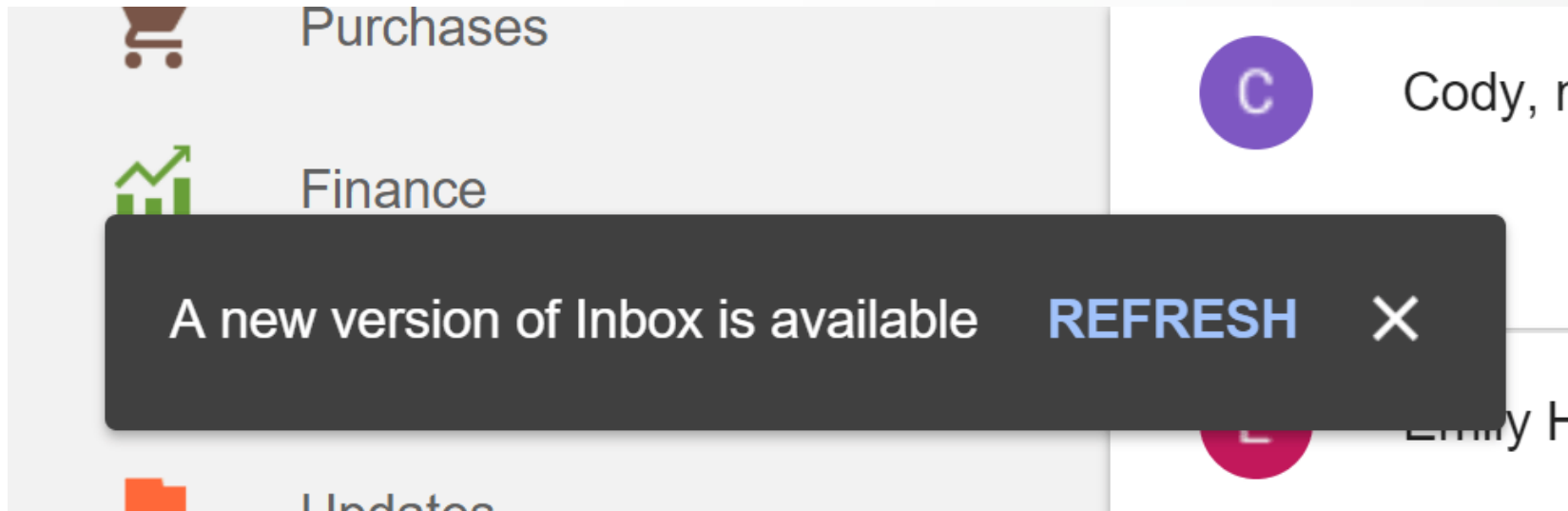


**People in low
coverage areas**

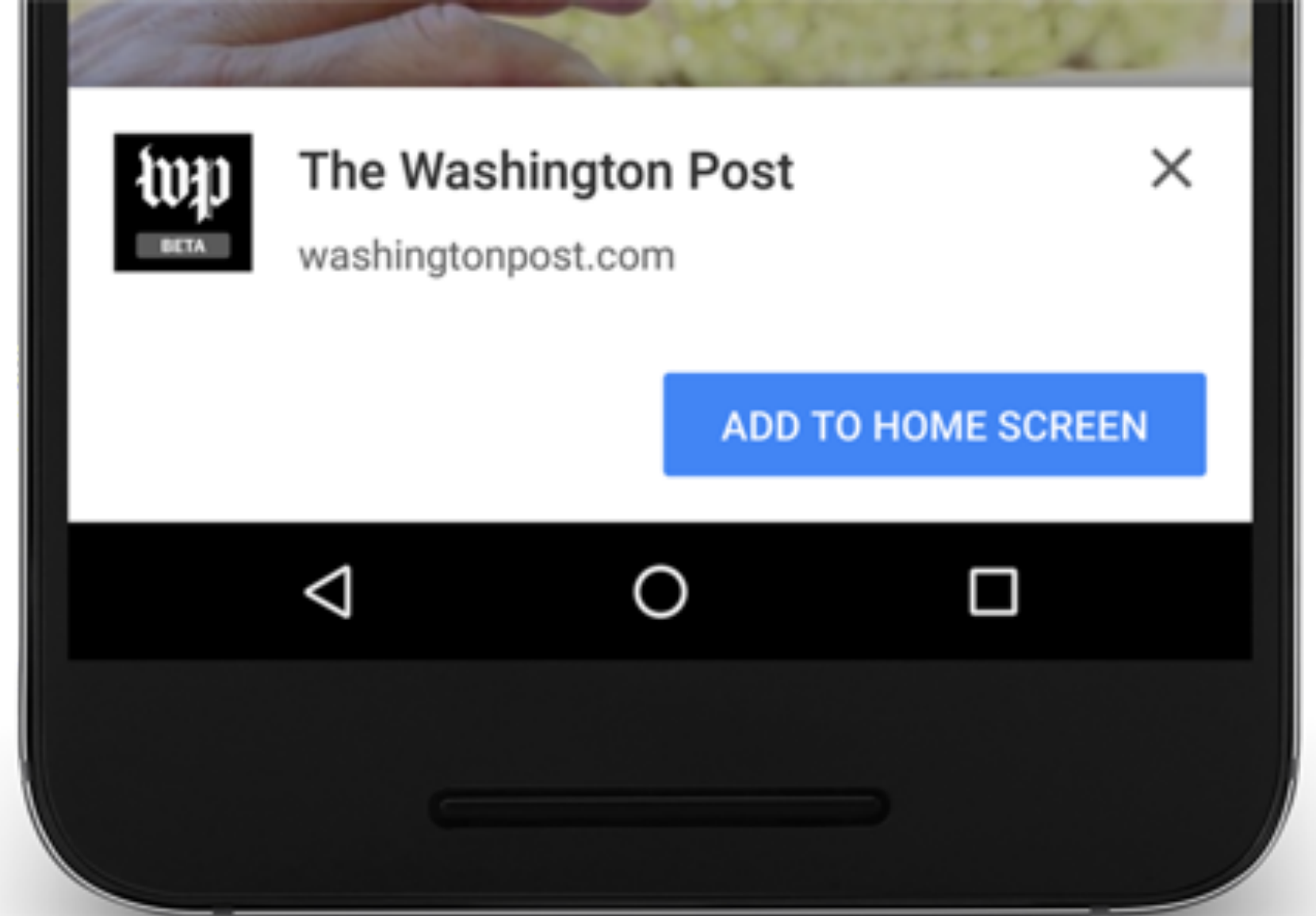


**People with
temporary issues**

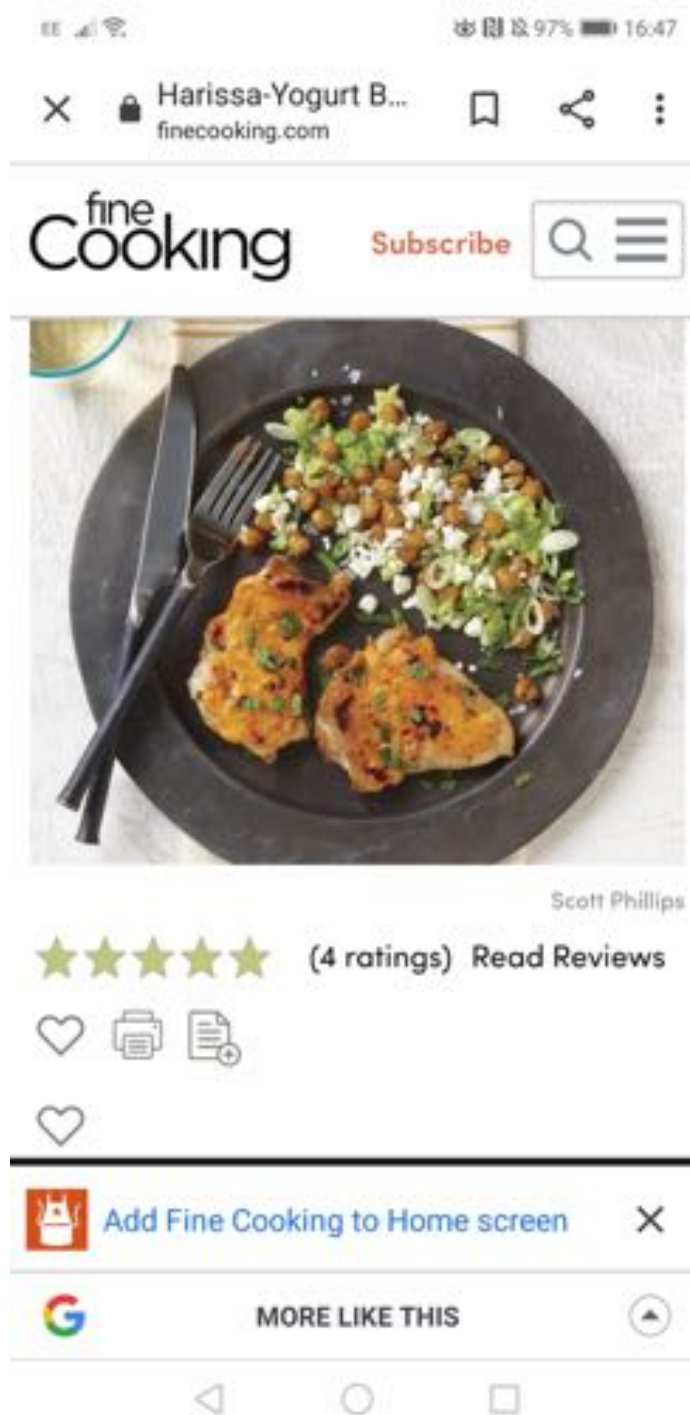
Updates and caching



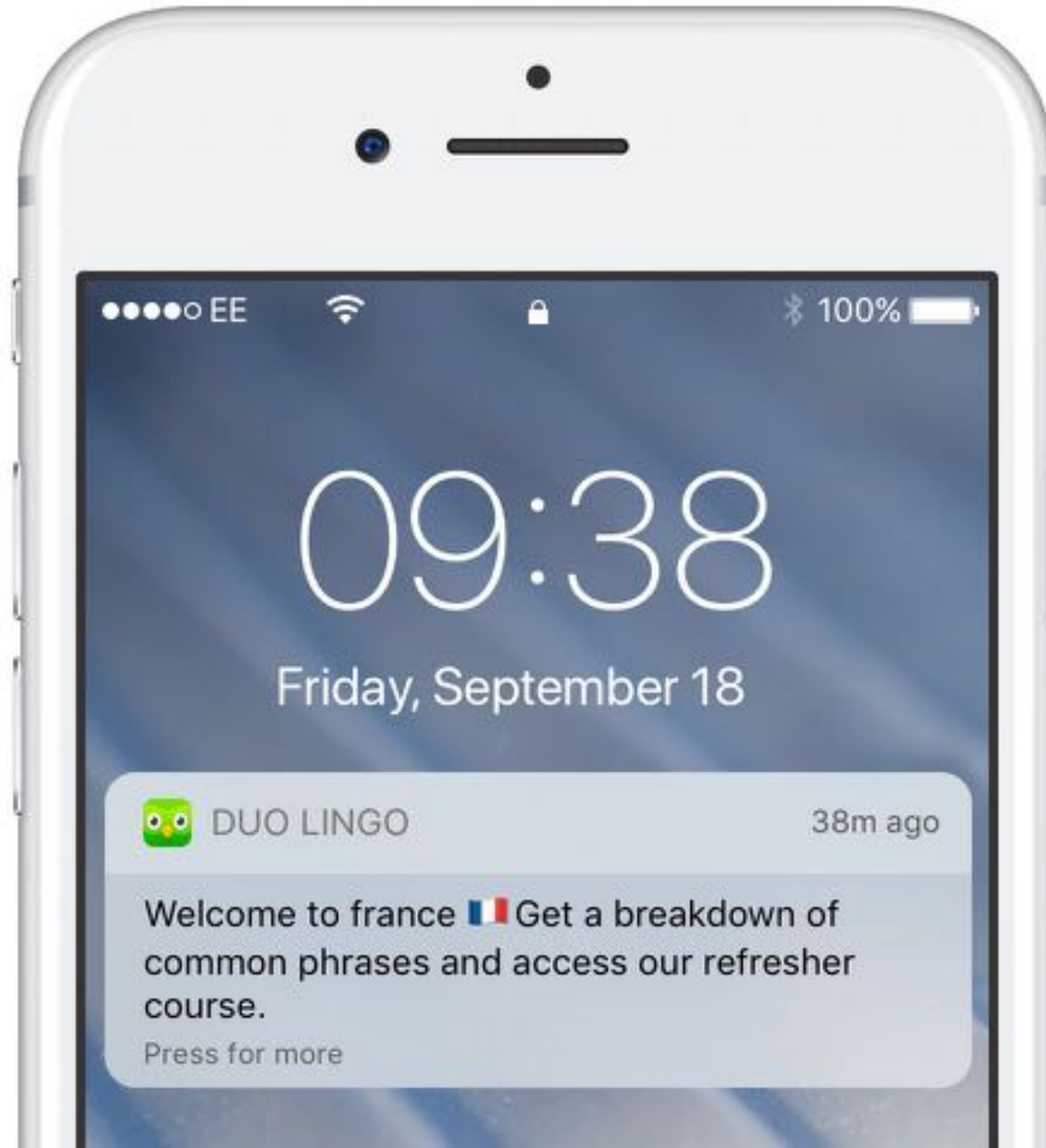
Add to home screen



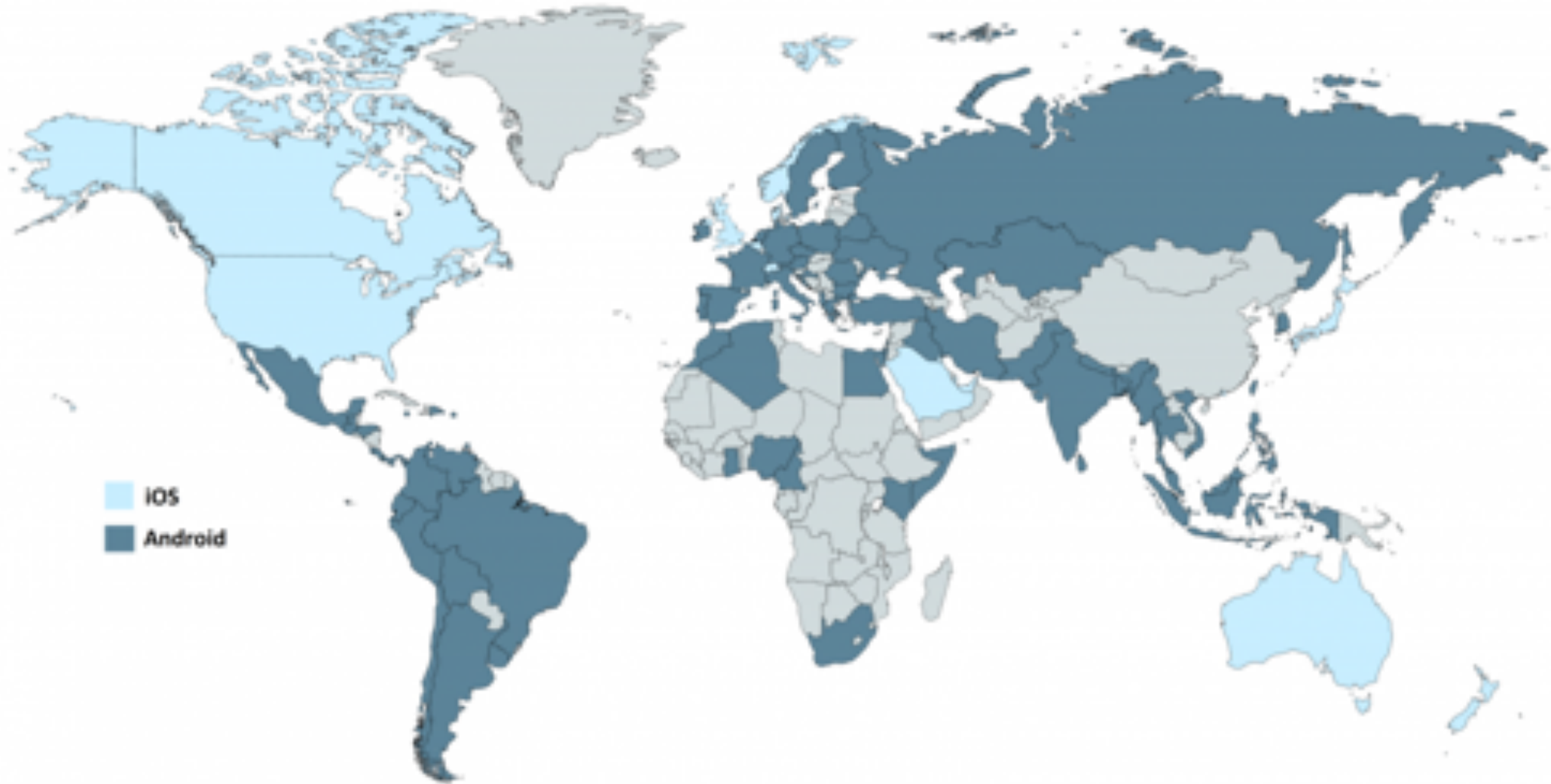
Add to home screen



Push Notifications



Push Notifications



App Store Listing



App Store Listing

1

Set up a
**Trusted Web
Activity**

2

Link the
**website
and app**

3

Get
required
assets

4

Play Store
approval
requirements

SECTION 4

Final Thoughts

When to go **PWA**

1. When you have a highly functional website
2. When you have high frequency repeat usage

How to make it **successful**

1. Run Experiments and leverage Insights
2. Continue to Optimise using Data





Thank you

Appendix



Usage stats

PWA Usage April – Dec 2019

20 million installations from 80,000 different origins (domains)

Samsung Internet counts for +6% of users, so it's a good sample size

Source Samsung Internet browser



Browser issues

iOS

There are still bugs and things that don't work the same in standalone mode (PWA) and in Safari, such as the WebRTC APIs to open the camera (useful for things like QR code readers). While the WebKit team says they are working on it, the "bug" has been opened for 2 years now.



Investment case studies

Uber m.uber.com

When they gave riders the option to book their first trips on [Uber's homepage](https://uber.com) rather than downloading the app, they saw a 10% increase in first trip conversions globally and an approximate 60% increase in first trip conversions in regions such as India and Brazil.

Supporting Desktop

30 percent of m.uber.com users primarily request trips on a desktop computer as opposed to on a mobile device.

Investment case studies

Uber m.uber.com

They began aggressively caching resources using [service workers](#) so that repeat visitors could get a responsive, app-like experience on the web even when using a slow and inconsistent network.

The final results are encouraging. Despite increasing the bundle size, we saw a marked improvement in [time to first byte](#) and the time for the page to become interactive

	Bundle Size	Time To First Byte	Page Interactive	Full Page Load
Older stack	80kb	~1.5s	~2s	~3.5s
Fusion	160kb	1.26s	1.45s	3.77s

