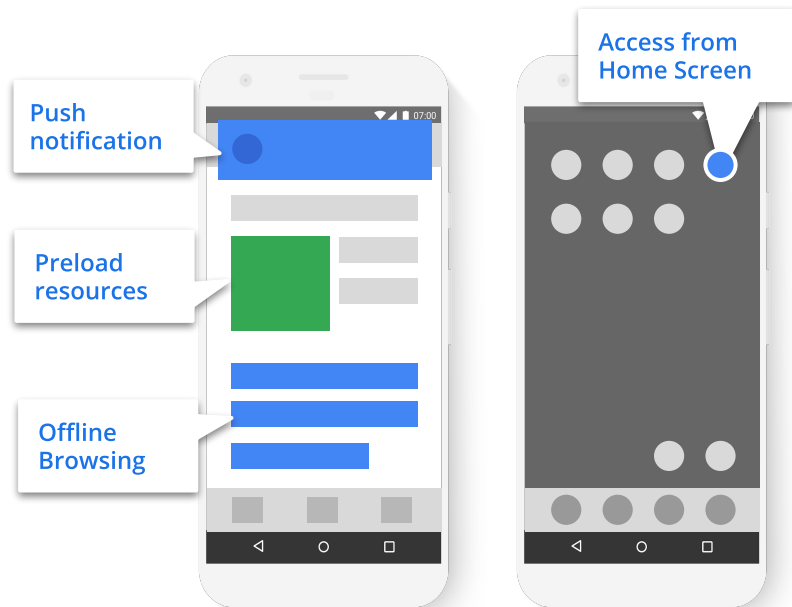


UX Playbook for PWA

Examples for designing great PWAs

Progressive Web Apps (PWA)

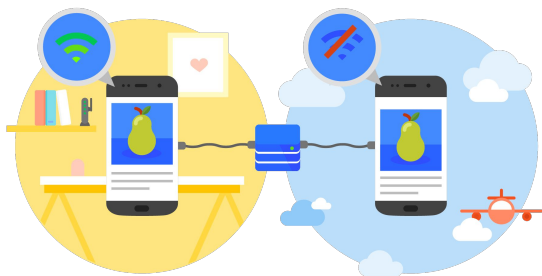
Fancy name for a website that takes advantage of new APIs to offer great user experience



+20% CVR

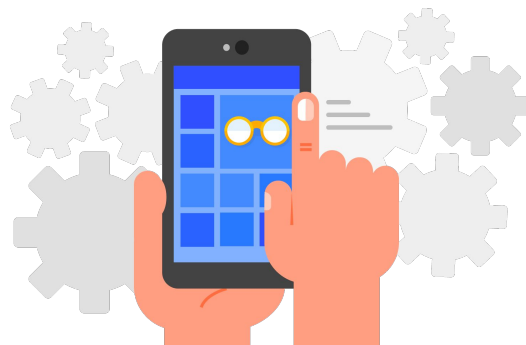
Progressive Web Apps (PWA)

Reliable



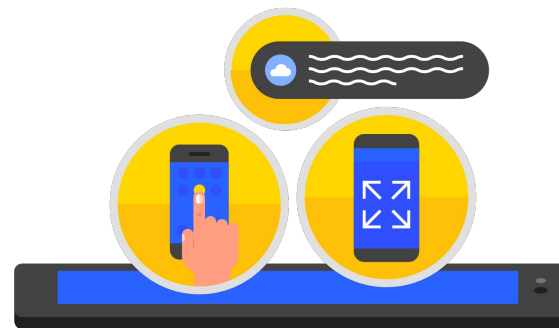
- Works offline
- Works on flaky connections

Fast



- Loads instantly (< 3s)
- Interactive quickly (< 5s)
- Responsive to any input (<100ms)
- Repeat visits are near instant (<1s)

Engaging



- Can be added to Home Screen
- Launch in Fullscreen
- Consistent UI
- Re-engage with Push Notifications

Contents

1. [Designing Promotional Patterns](#)
2. [Designing Installed Experiences](#)
3. [Designing Reliable Experiences](#)
4. [Designing Useful Push Notifications](#)

*like an app
u know*



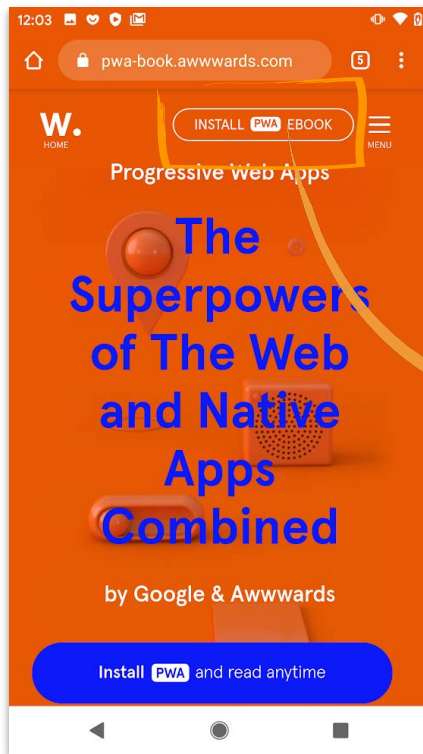
Your User

Designing Promotional Patterns

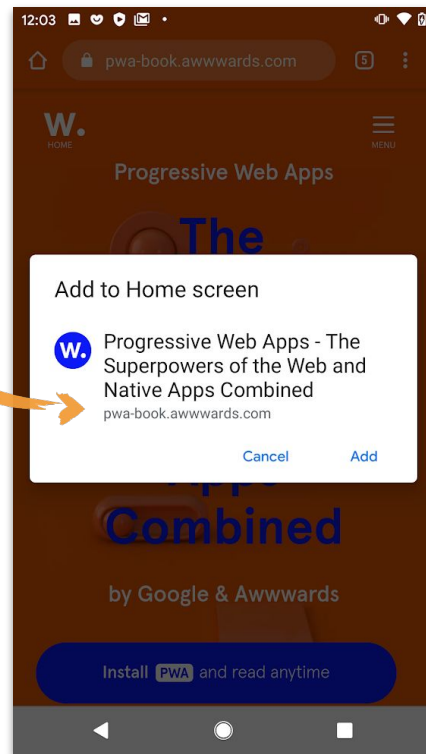
Create a custom UI prompt

Custom UI prompts allow increasing the probability of install by:

- Control the when the prompt appears
- If the user declines the prompt it can be shown again at another time, while if the default mini info-bar gets declined it will not show again for 90 days
- Highlight the value of install with custom value proposition
- Customize the design to make it look more native to your UI (vs a foreign system pop-up)



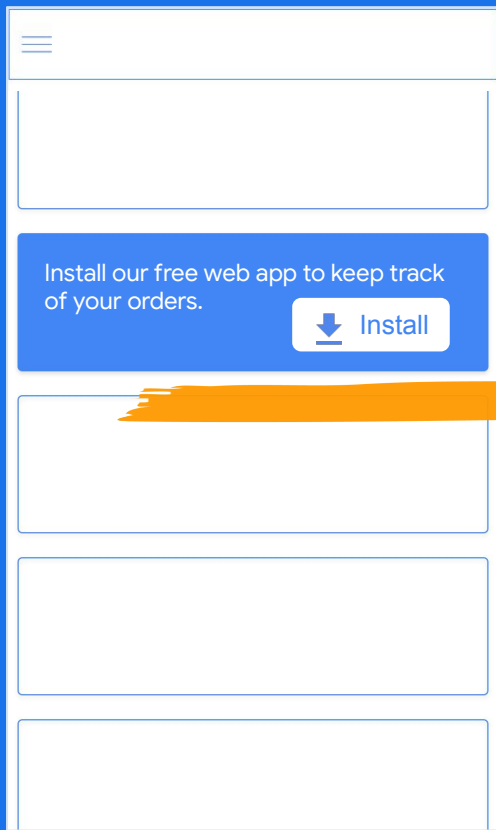
Custom UI CTA prompt.



Following browser prompt.

A good install prompt

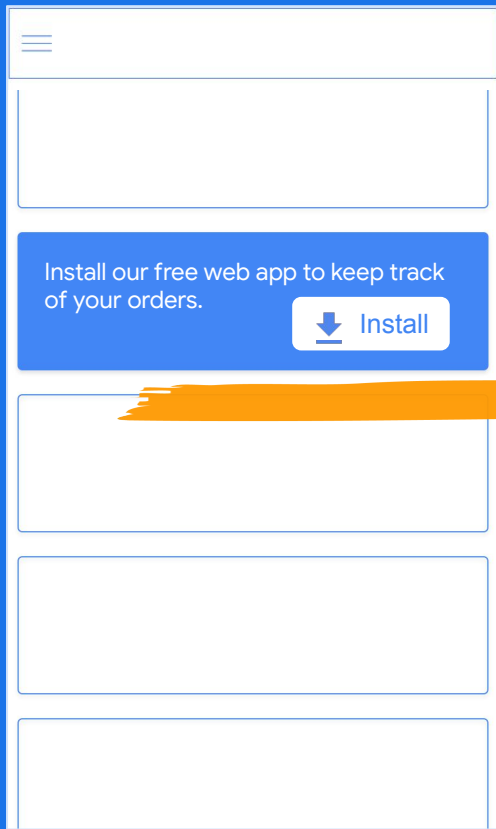
- ✓ Would appear when appropriate
- ✓ Can be (re)discovered throughout the user journey
- ✓ Should not disturb the user from the flow
- ✓ Should look and feel native to the website UI
- ✓ Should contain an install value proposition
- ✓ Can contain icons to illustrate the action



Example: Install prompts - looks and feels native to the UI, contains value proposition and some visuals, appears at the right time, can be re-discovered throughout the journey

A good install prompt

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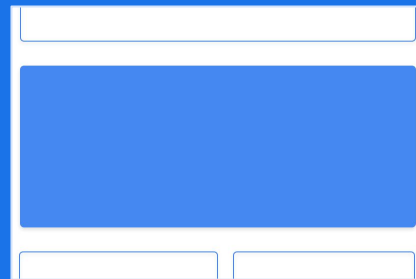
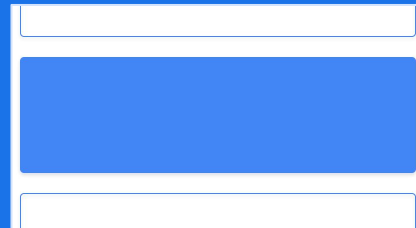
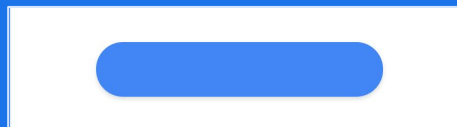
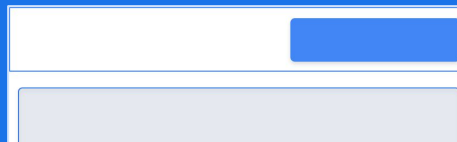
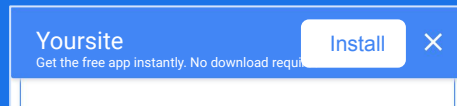


Example: Install prompts - looks and feels native to the UI, contains value proposition and some visuals, appears at the right time, can be re-discovered throughout the journey

Promotional Patterns

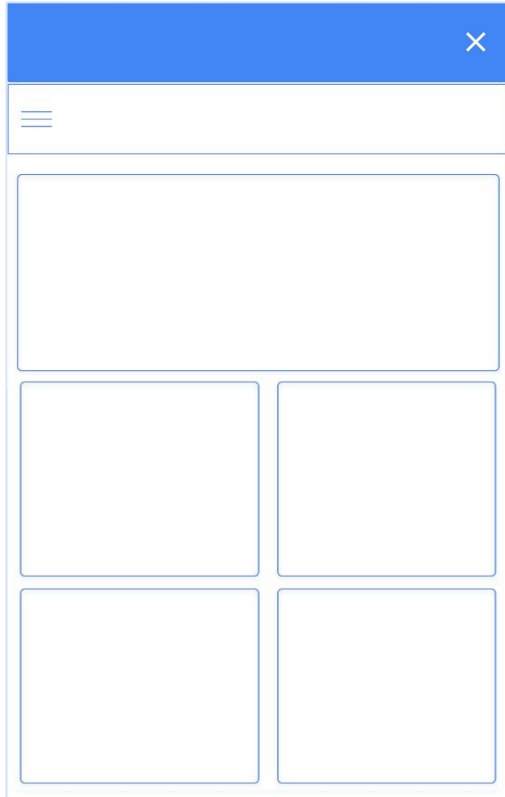
Since you can control the pre-default prompt and place it anywhere in your UI here are few ideas on where it can be:

- Overlay banner
- Header
- Navigation drawer
- In-page CTAs
- CTA menu
- In-feed listing
- Native banner

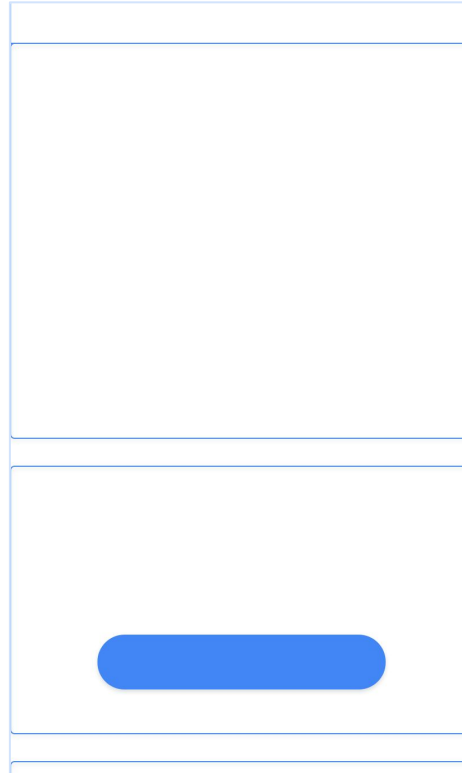


Promotional patterns: landing page

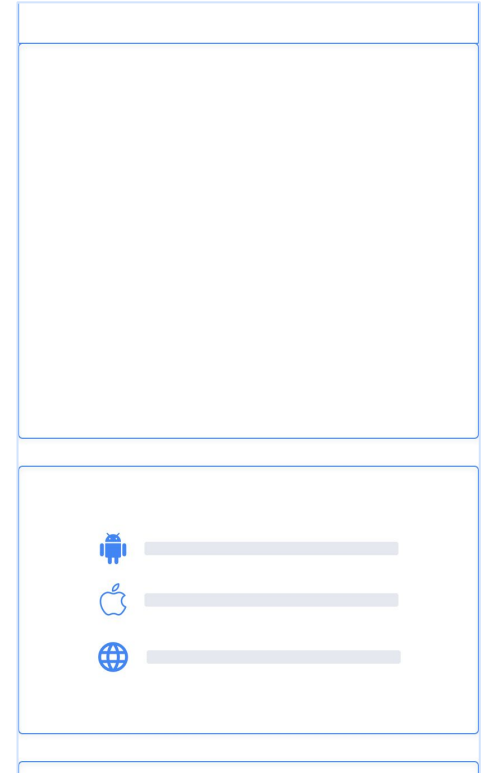
Overlay banner



In-page CTA

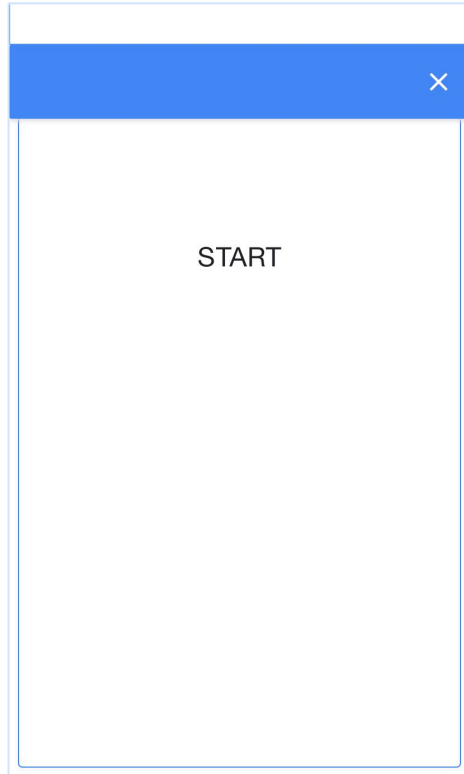


CTA menu

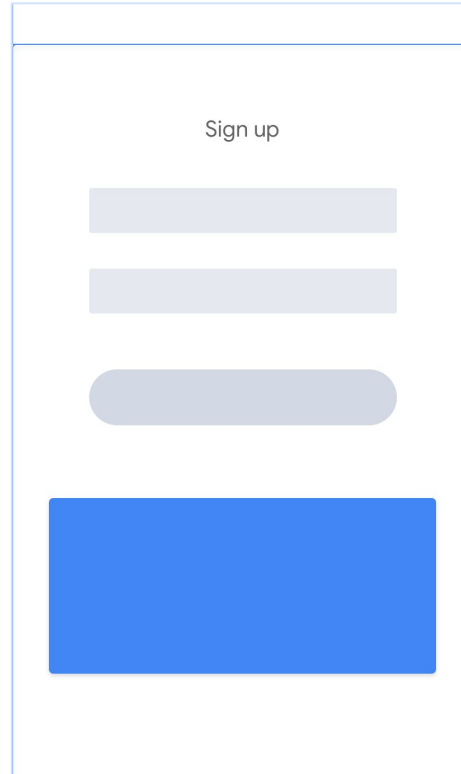


Promotional patterns: beginning of the task

Game start

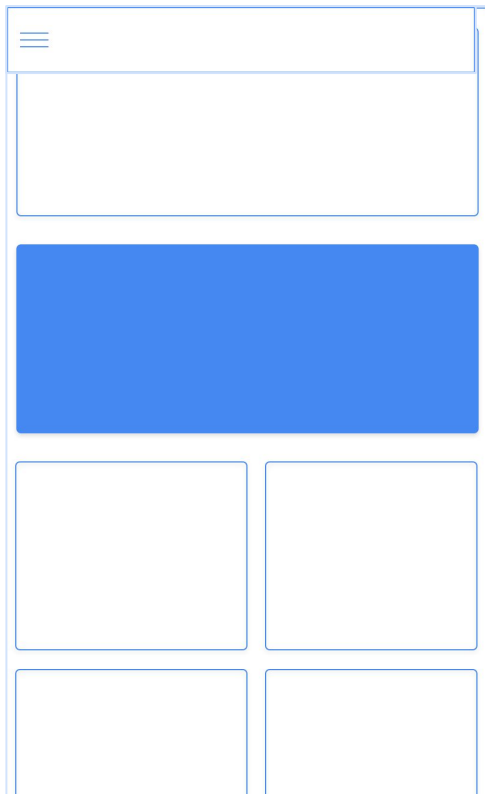


Pre-form completion

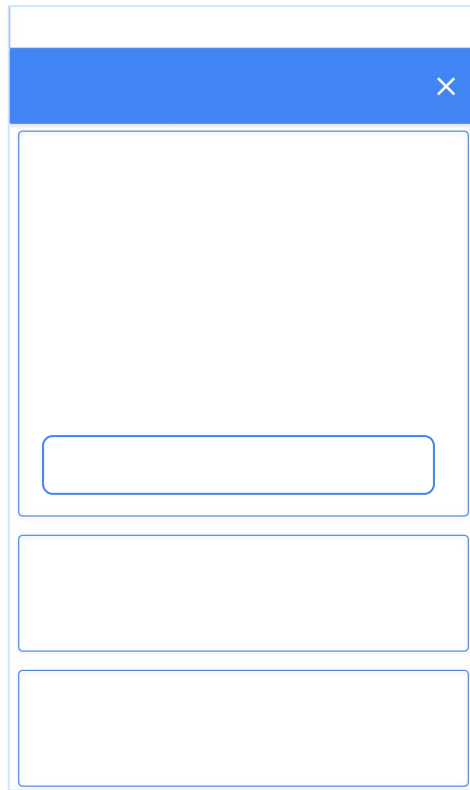


Promotional patterns: throughout the journey

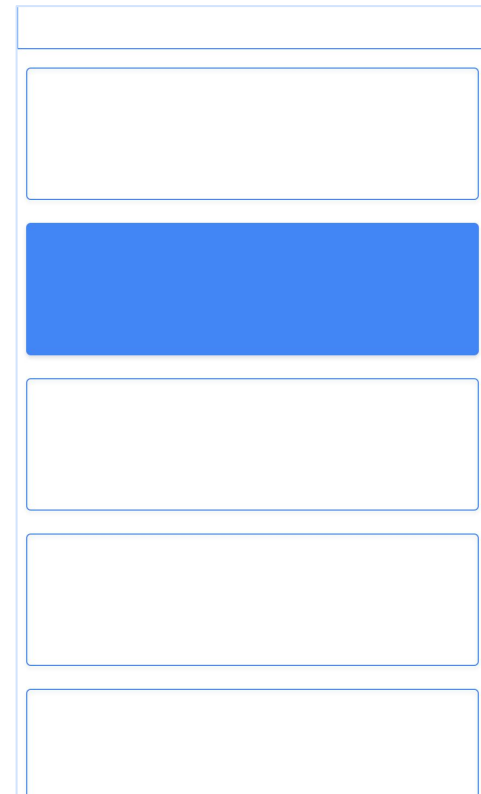
Native banner



Install banner at a later stage

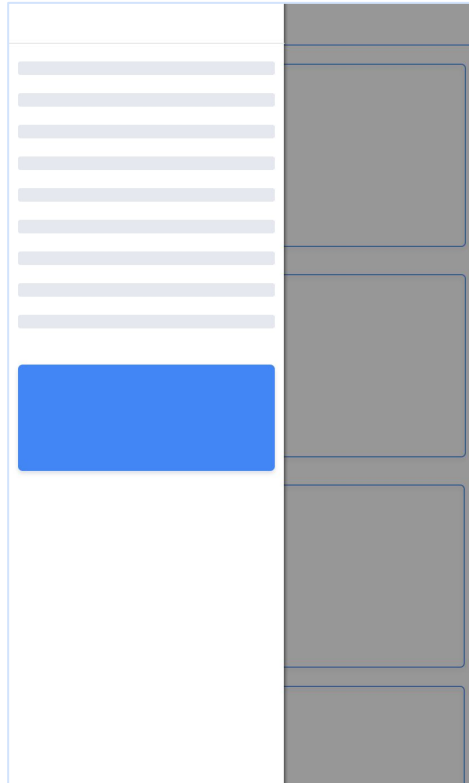


Listing

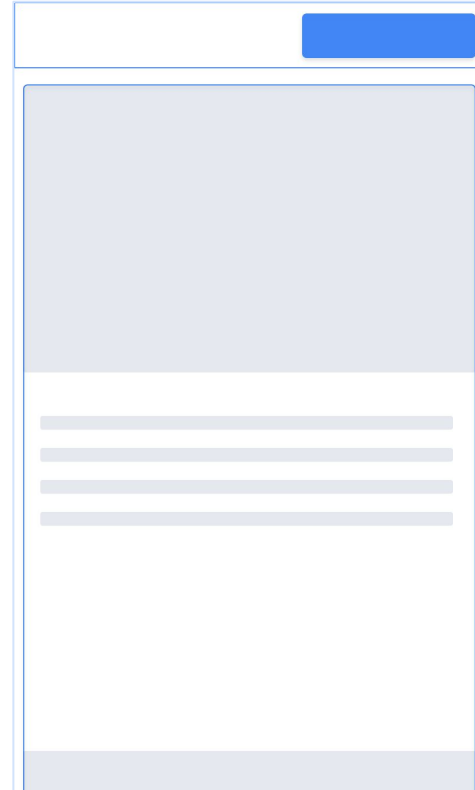


Promotional patterns: re-discoverable

Side navigation



Sticky header



Promotional patterns: at the task completion

Post-purchase

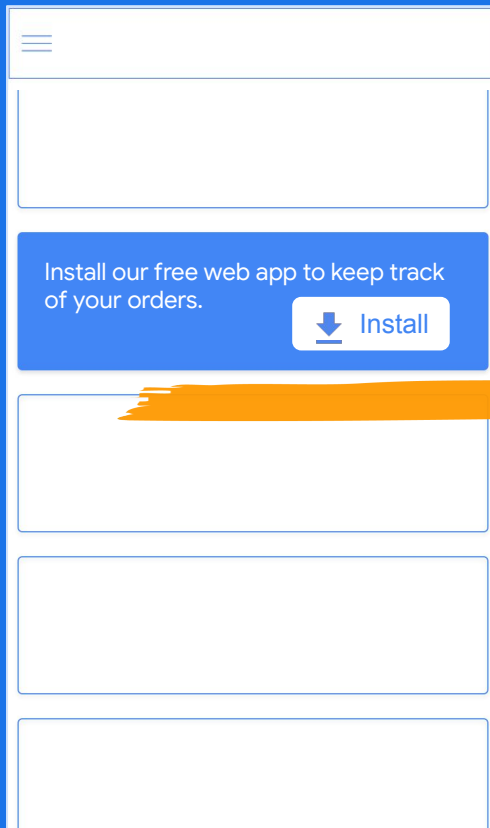


Game completion



A good install prompt

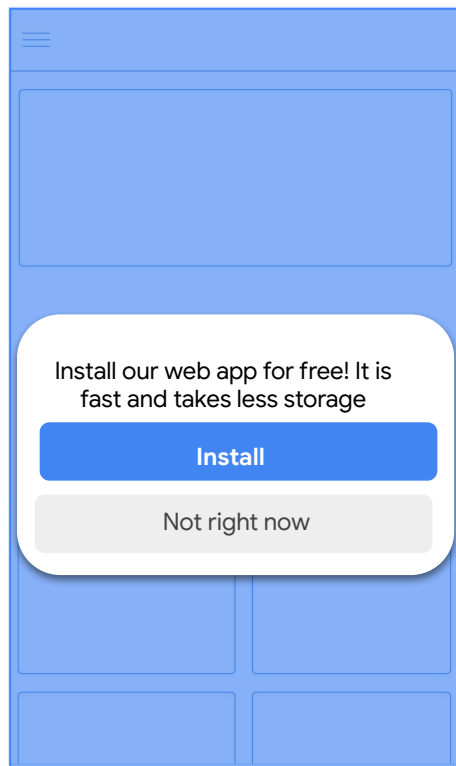
- ✓ Would appear when appropriate
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- ✓ Should not disturb the user from the flow
- ✓ Should look and feel native to the website UI
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- ✓ Can contain icons to illustrate the action



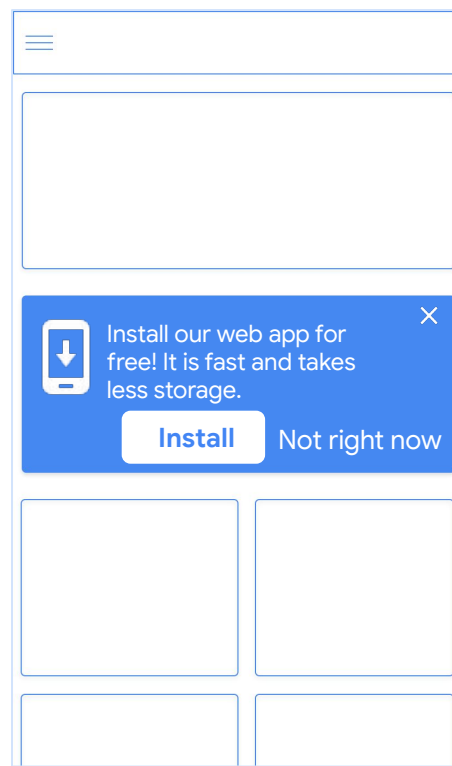
Example: Install prompts - looks and feels native to the UI, contains value proposition and some visuals, appears at the right time, can be re-discovered throughout the journey

Design prompts with native look and feel

Pop-ups and overlays usually get ignored and dismissed



Don't

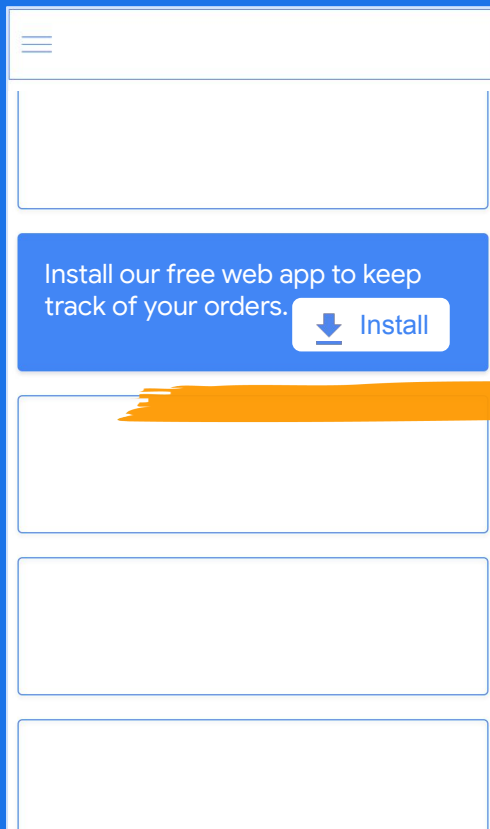


Do

Native look and feel of the prompt creates a less intrusive experience

A good install prompt

- ✓ Would appear when appropriate
- ✓ Can be (re)discovered throughout the user journey
- ✓ Should not disturb the user from the flow
- ✓ Should look and feel native to the website UI
- ✓ Should contain an install value proposition
- ✓ Can contain icons to illustrate the action



Example: Install prompts - looks and feels native to the UI, contains value proposition and some visuals, appears at the right time, can be re-discovered throughout the journey

Test and customize install value proposition

Our app is fast, reliable and takes less storage.

Don't worry about the space! Our app won't take too much.

-
- ✗ Don't talk about the app features - users are not very technical. Consider: what does it mean for the user?
 - ✗ Avoid negative wording.

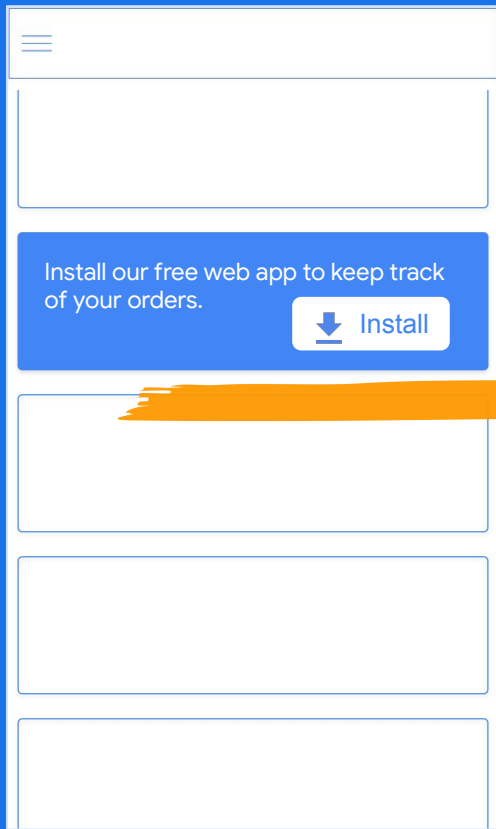
Get the **free app** to keep track of **your** orders.

Welcome back! Get our web app to always have your bookings with you even when you are offline.

-
- ✓ Highlight user benefits. Talk about the user, not about the app.
 - ✓ Customize the message depending where the user is in the funnel.
 - ✓ Personalize depending on user signals

A good install prompt

- ✓ Would appear when appropriate
- ✓ Can be (re)discovered throughout the user journey
- ✓ Should not disturb the user from the flow
- ✓ Should look and feel native to the website UI
- ✓ Should contain an install value proposition
- ✓ Can contain icons to illustrate the action

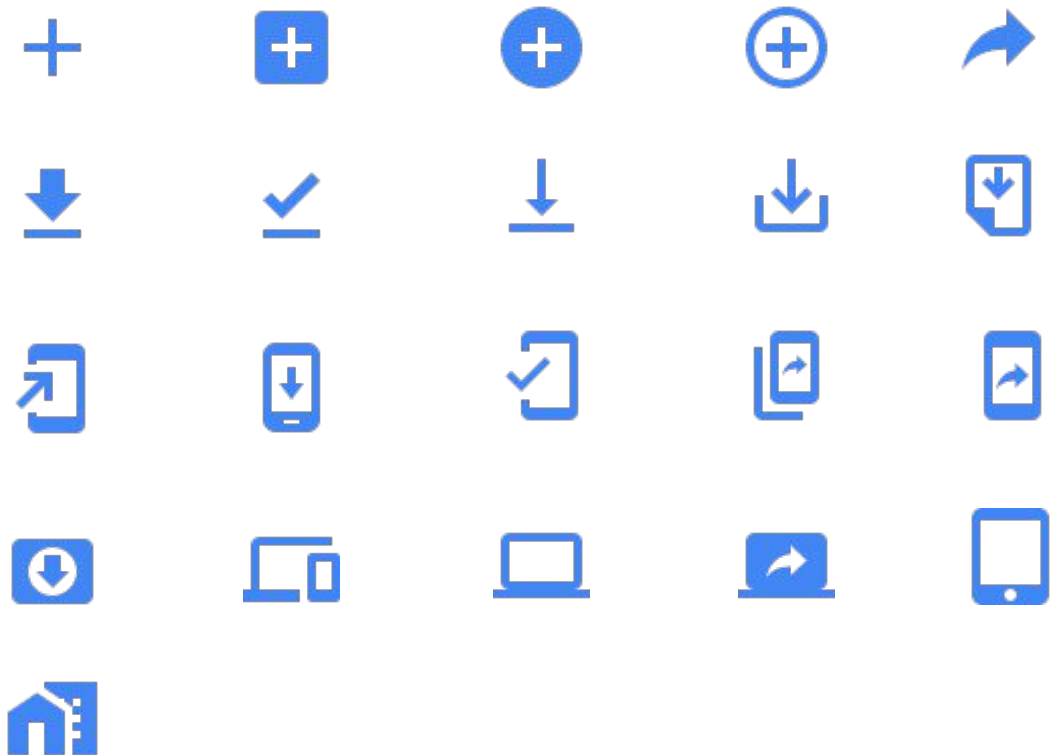


Example: Install prompts - looks and feels native to the UI, contains value proposition and some visuals, appears at the right time, can be re-discovered throughout the journey

Use visuals to illustrate action

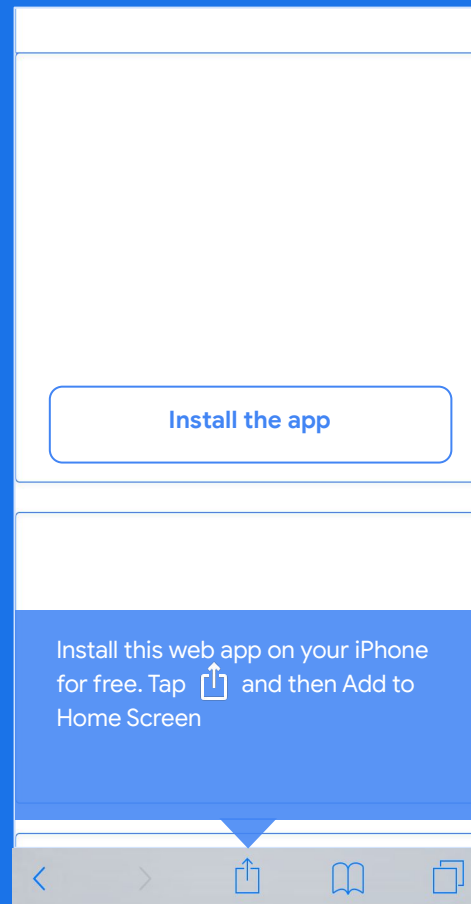
Different icons might be used depending on device, stage of the funnel or value proposition used.

Make sure you don't use just the icon. Always add a text label.



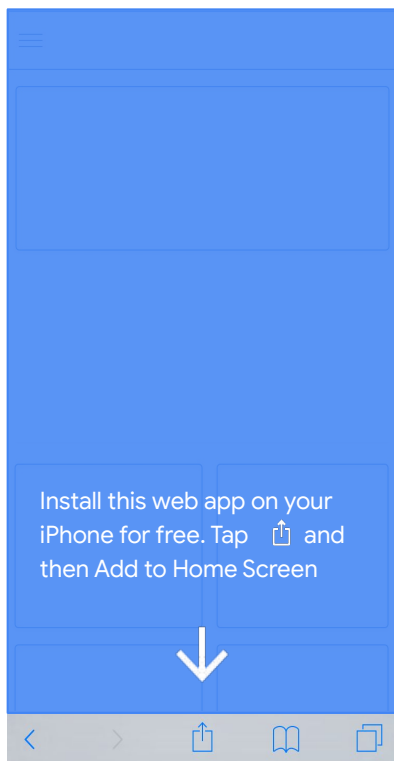
Other considerations

- ✓ iOS requires users to install from the actions menu
- ✓ Design desktop prompts separately from mobile

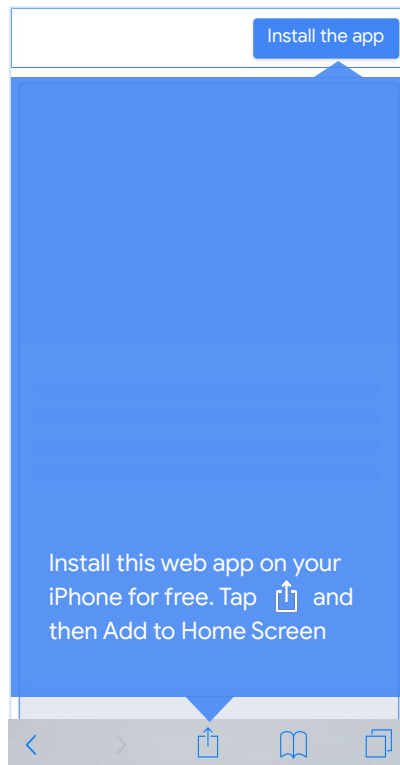


iOS example prompt

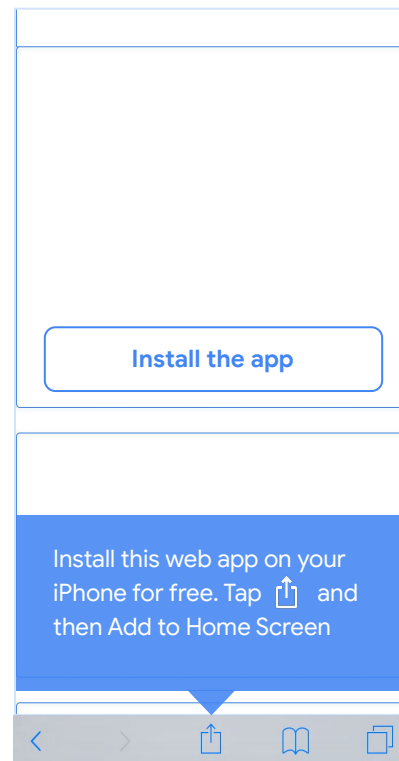
Guide users through the installation process on iOS



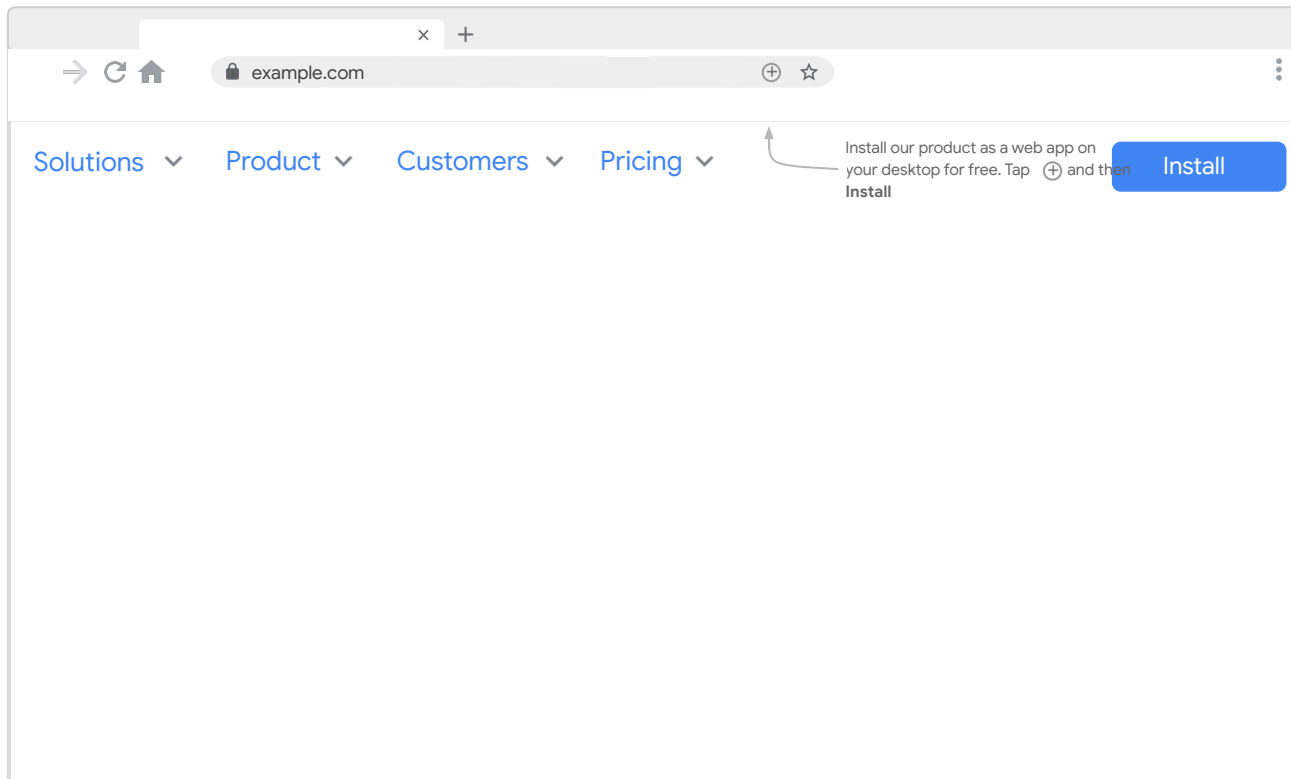
X Pop-ups and overlays usually get ignored and dismissed



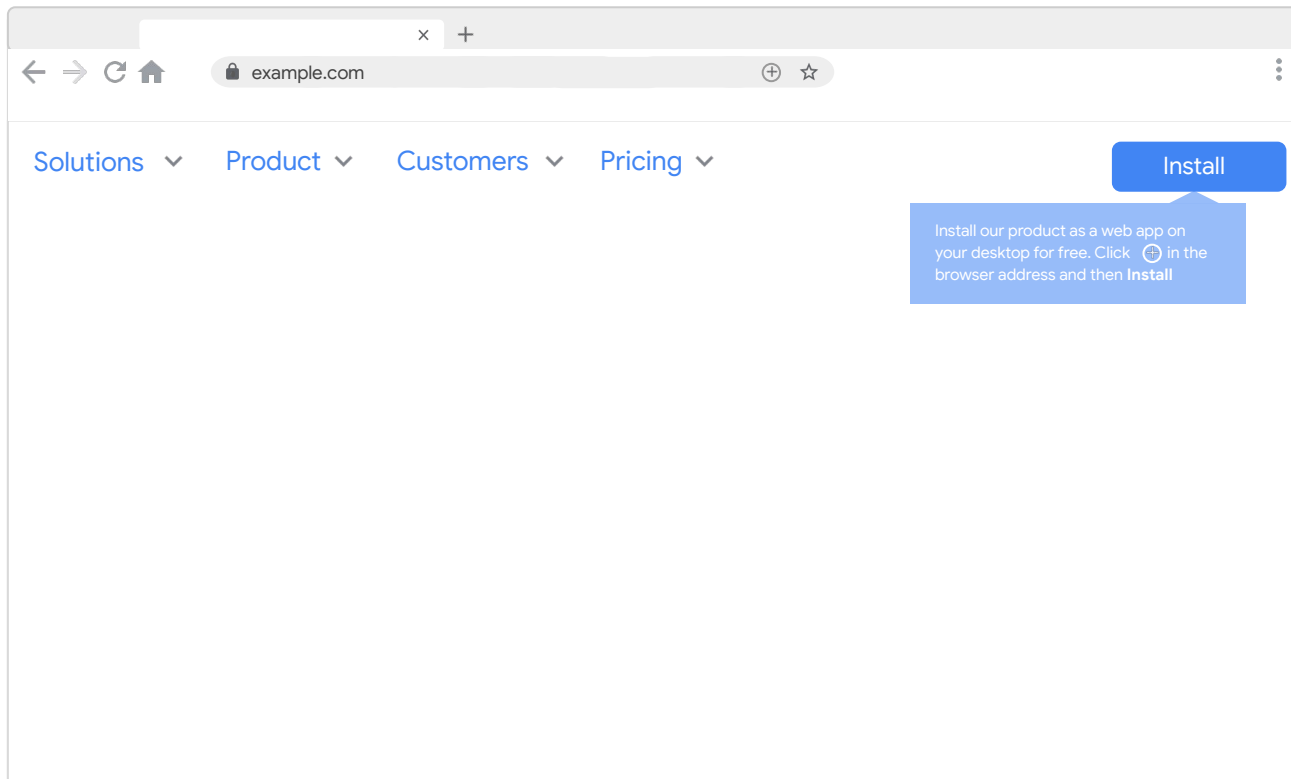
✓ Native look and feel of the prompt creates a less intrusive experience



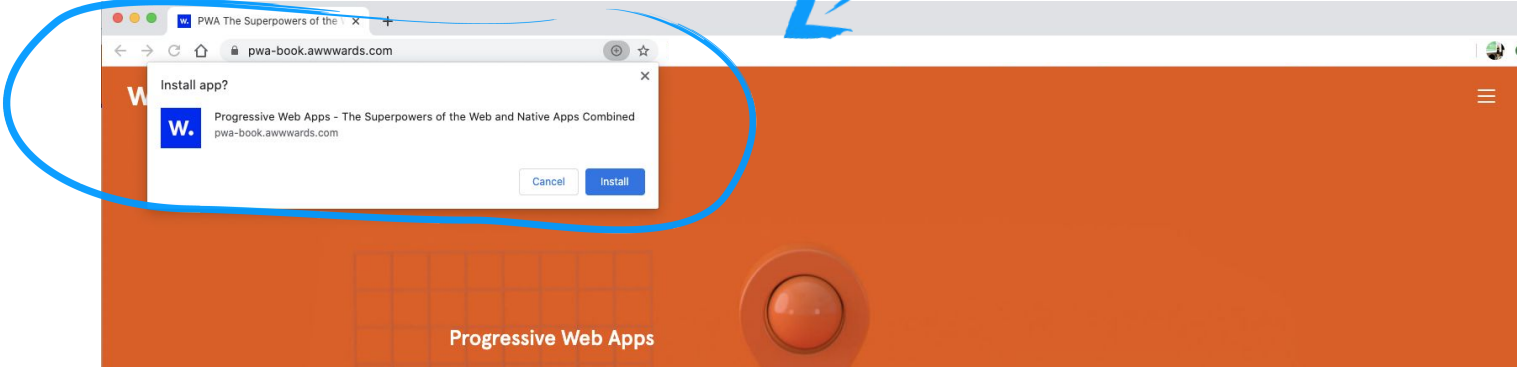
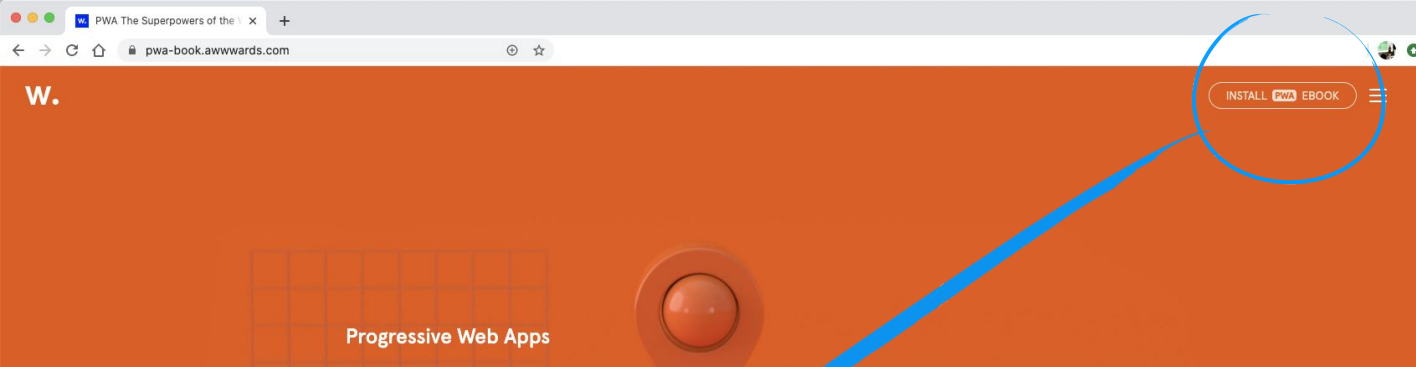
Design desktop prompt separately from mobile



...and consider the length of the browser address bar



Desktop prompt example



Tip!

Don't promote your PWA to users that already have the native app installed!

Use the `getInstalledRelatedApps` API to promote PWA install only to users that don't have the native app installed. See <https://web.dev/get-installed-related-apps/> for details.

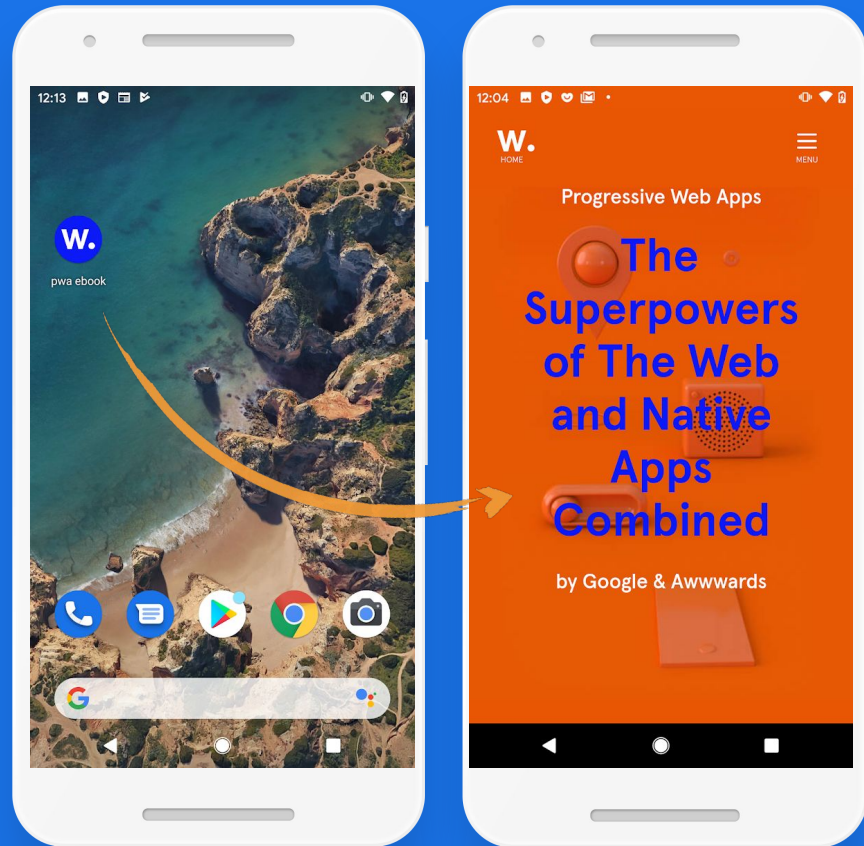
Designing **Installed Experiences**

A good installed experience

Once the app is installed enjoy premium real estate on the homepage and full screen capabilities.

Things to consider:

- ✓ Naming
- ✓ Icon
- ✓ Launch screen
- ✓ Fullscreen navigation
- ✓ Colour schemes

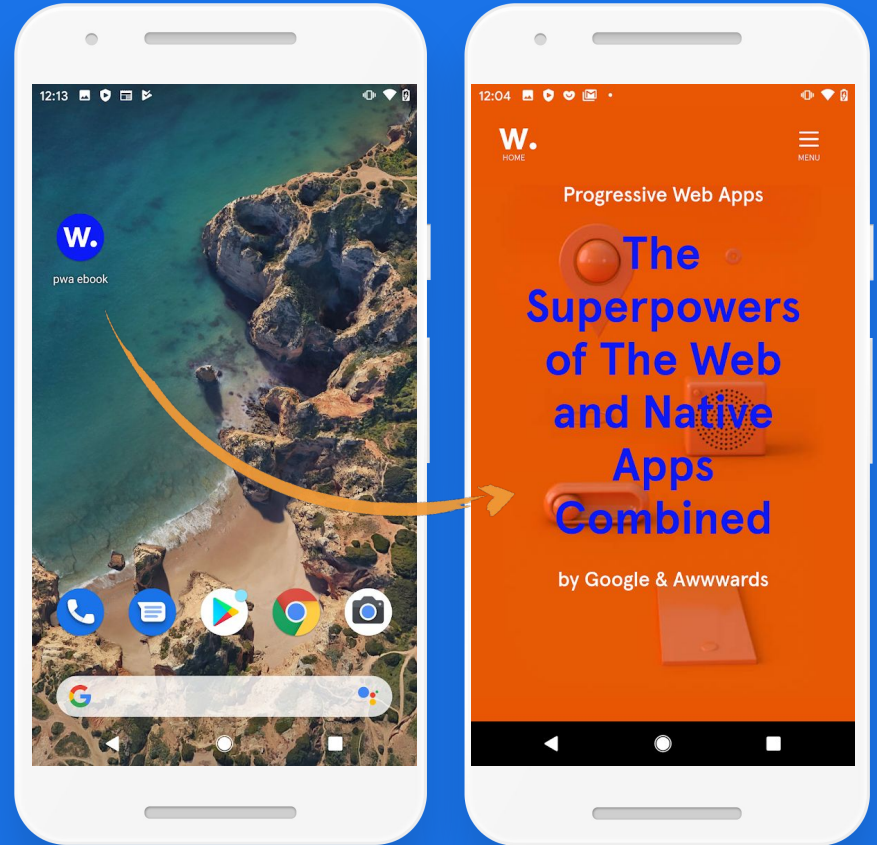


A good installed experience

Once the app is installed enjoy premium real estate on the homepage and full screen capabilities.

Things to consider:

- ✓ Naming
- ✓ Icon
- ✓ Launch screen
- ✓ Fullscreen navigation
- ✓ Colour schemes



Naming: define a differentiation strategy

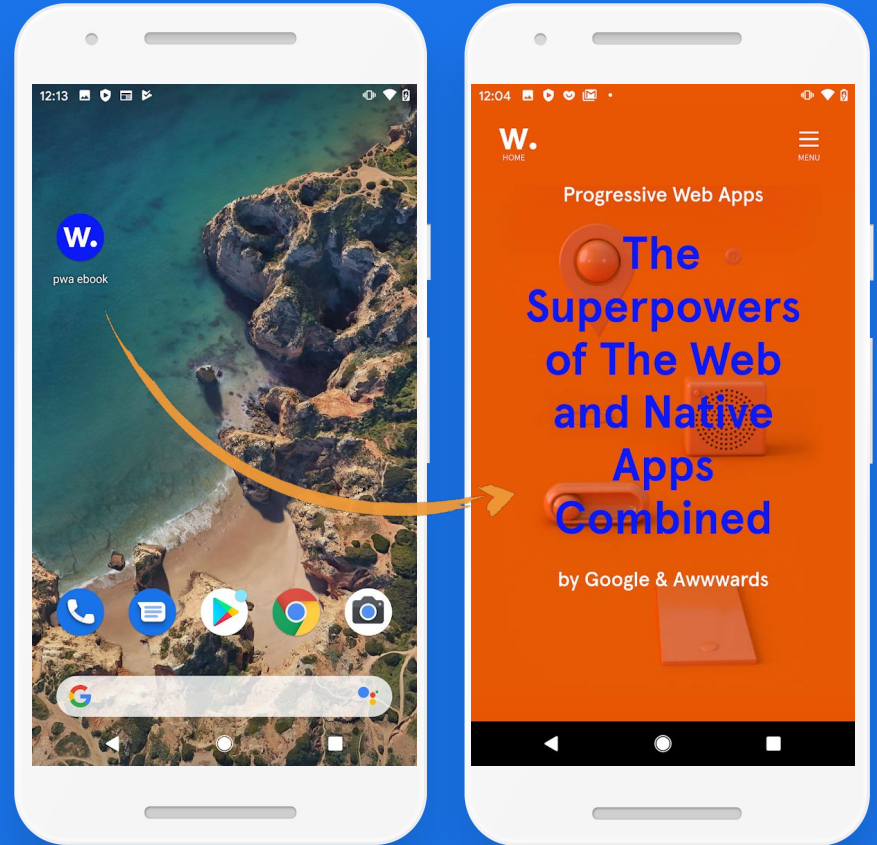
- Consider naming PWA consistently with your app name.
- Consider adding country domain if running business in different markets
e.g. example.co.uk, example.fr
- Add a suffix “Lite” if you want to differentiate
- Note: on iOS the users **can** change the app name before installing it
- For more strategy considerations read [here](#)

A good installed experience

Once the app is installed enjoy premium real estate on the homepage and full screen capabilities.

Things to consider:

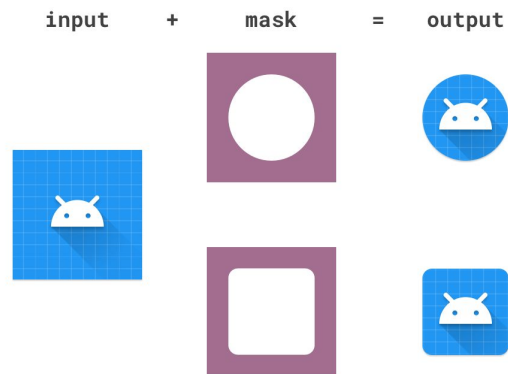
- ✓ Naming
- ✓ Icon
- ✓ Launch screen
- ✓ Fullscreen navigation
- ✓ Colour schemes



Icons: consider OS design guidelines

For Android, consider designing maskable icons that can adapt to any icon shape required by the phone manufacturer. Read more about designing adaptable icons [here](#).

For iOS use regular [iOS icon design guidelines](#), but note that iOS does not use the icons from the manifest file - just add an apple-touch-icon meta tag with the proper image.



Android: Adaptive icon structure



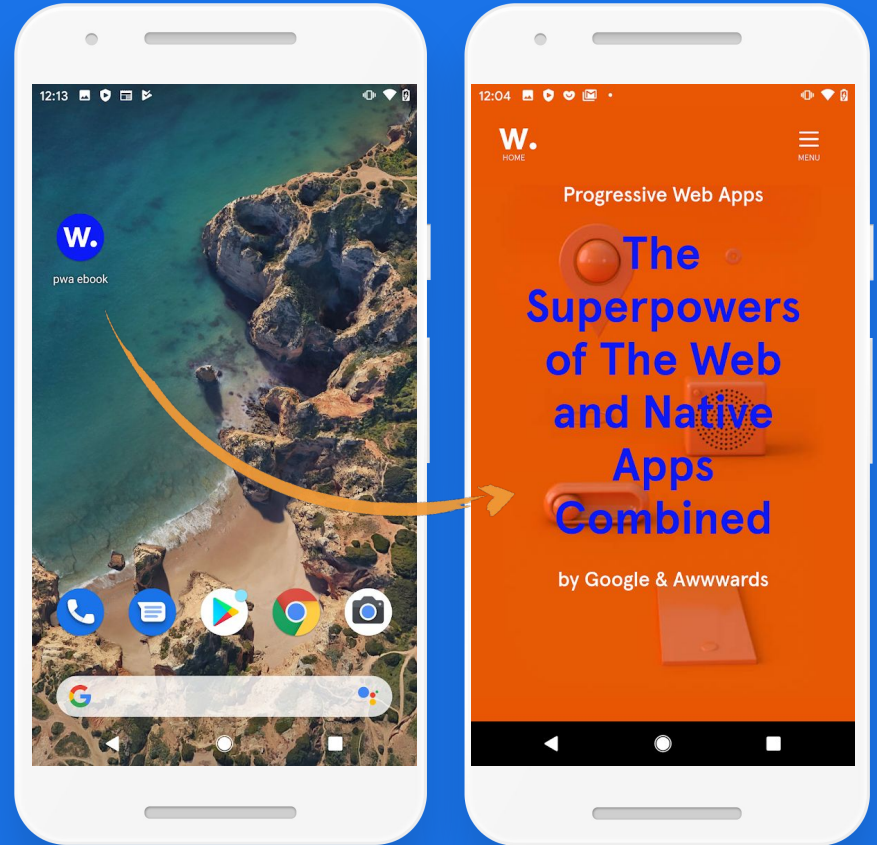
iOS: Apple design guidelines

A good installed experience

Once the app is installed enjoy premium real estate on the homepage and full screen capabilities.

Things to consider:

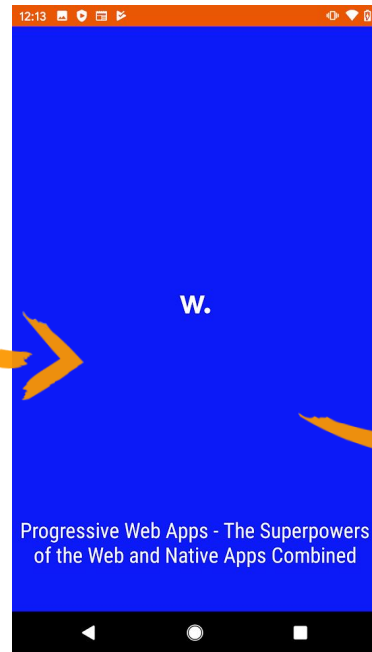
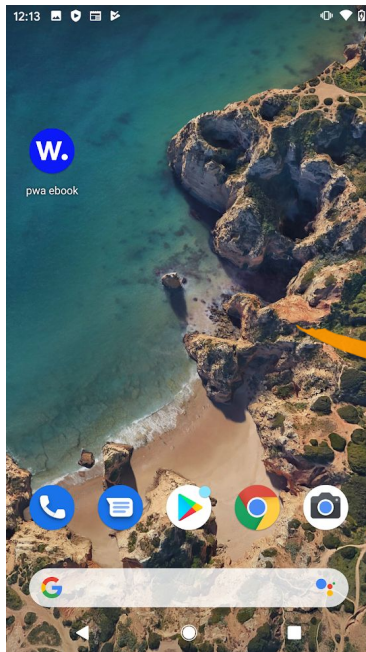
- ✓ Naming
- ✓ Icon
- ✓ Launch screen
- ✓ Fullscreen navigation
- ✓ Colour schemes



Customize your Splash Screen on Android

Customize the launch screen on Android Chrome by including these items in the manifest:

- The name property
- The background_color property is set to a valid CSS color value
- The icons array specifies an icon that is at least 512px by 512px
- The icon exists and is a PNG



Tip!

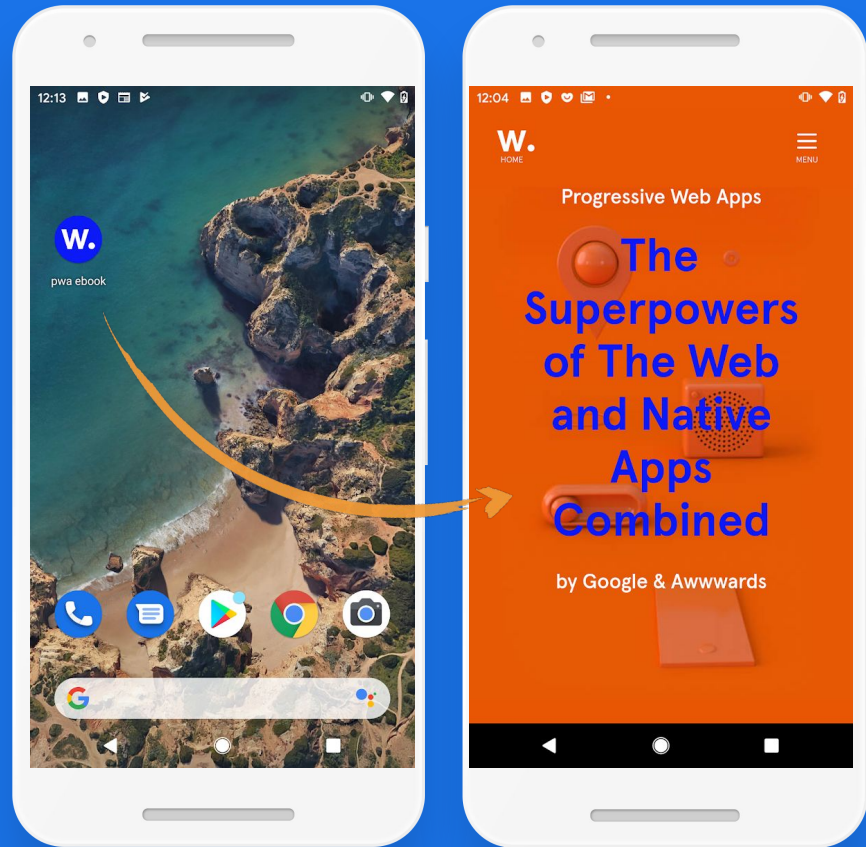
Please note there is no splash screen customization on iOS at the moment, but you can implement workarounds - to [implement meta-tags](#) to specify pre-generated splash screens of all sizes.

A good installed experience

Once the webapp is installed enjoy premium real estate on the homepage and full screen capabilities.

Things to consider:

- ✓ Naming
- ✓ Icon
- ✓ Launch screen
- ✓ Fullscreen navigation
- ✓ Colour schemes



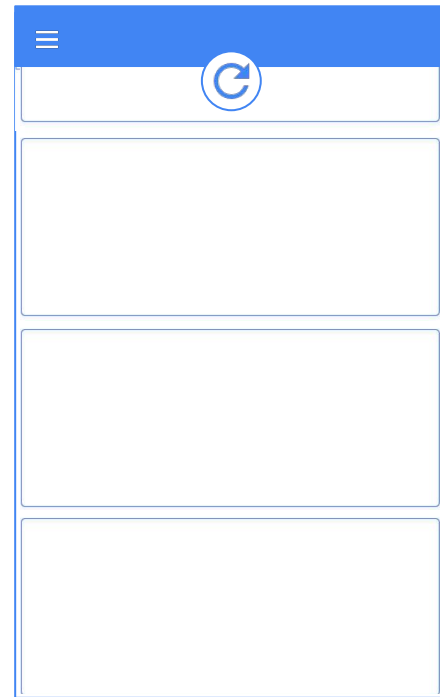
Design for full screen: substitute absent browser navigation capabilities



Adding "Back" button for standalone mode

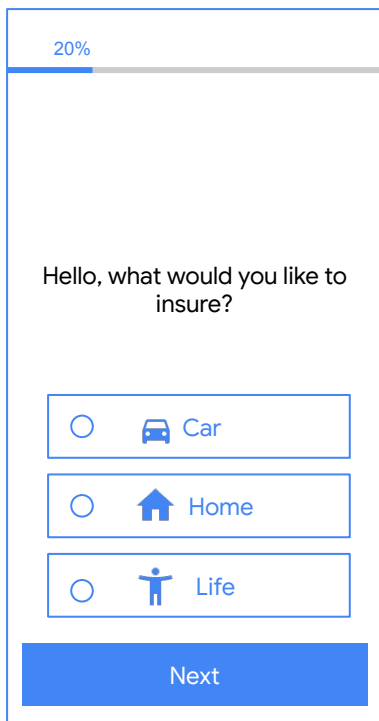


Adding "Share" button for the standalone mode



Drag down to refresh

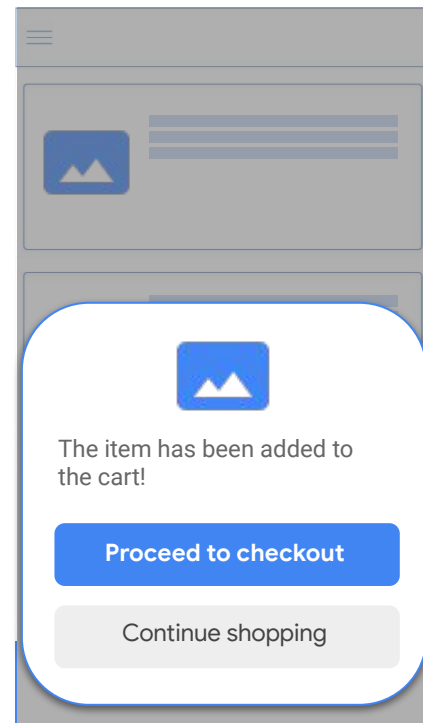
Design for full (longer) screen: consider mobile ergonomics



Anchored CTAs & step-by-step forms



Bottom navigation



Anchored modal pop-ups

Aim for consistent navigation experience across platforms

Ensure consistent navigation across platforms to make it easy for users when if they switch between experiences.

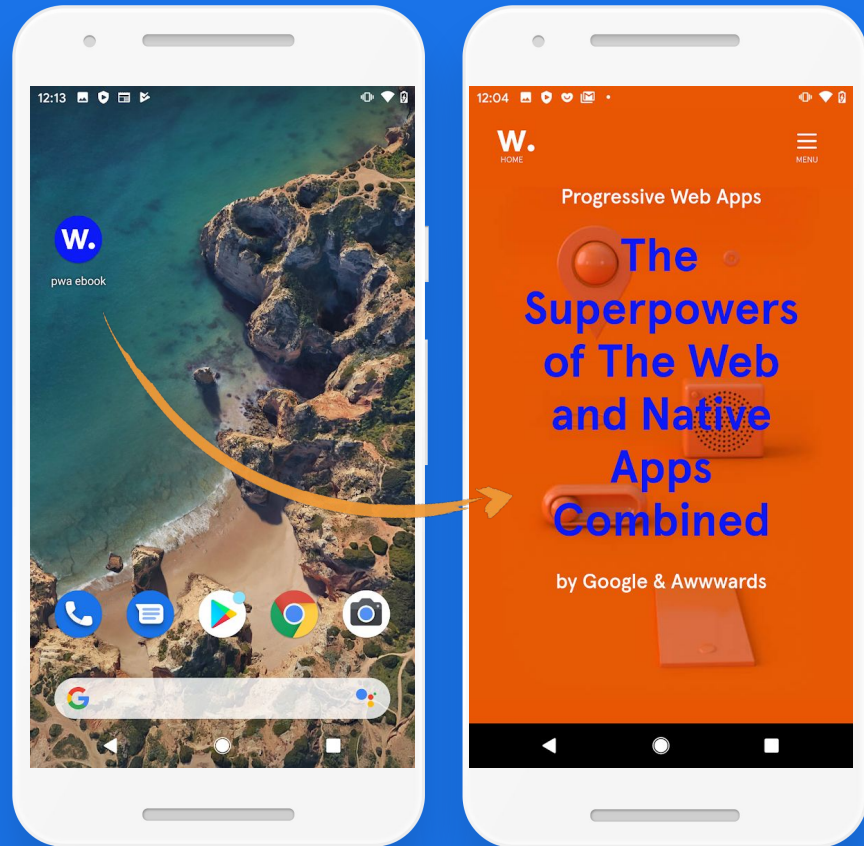


A good installed experience

Once the webapp is installed enjoy premium real estate on the homepage and full screen capabilities.

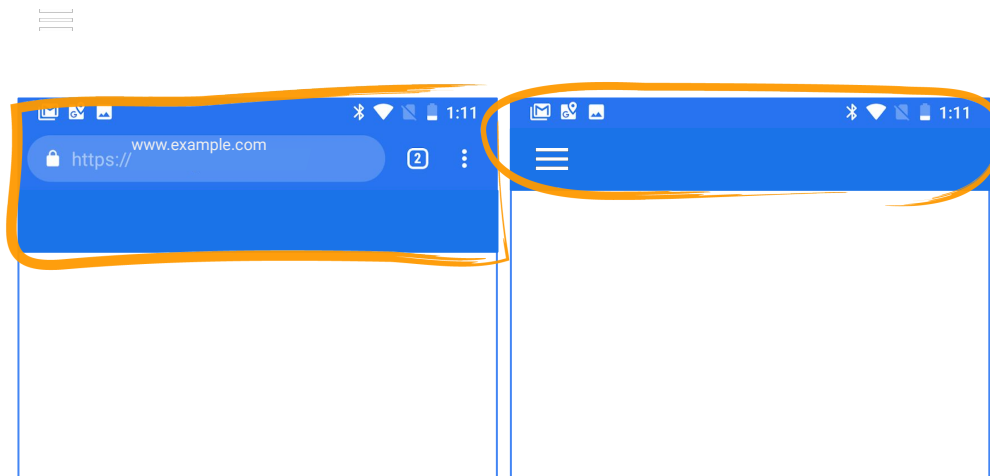
Things to consider:

- ✓ Naming
- ✓ Icon
- ✓ Launch screen
- ✓ Fullscreen navigation
- ✓ Colour schemes



Colour the browser bar to match brand colours

On Android, the browser bar can be changed to match your brand color. This will also affect the standalone mode, specifically the color of the system notifications panel.



*Example browser mode:
brand-colored browser bar and
system notifications panel*

*Example standalone mode:
brand-colored system
notifications panel*

Tip!

Please note, on iOS the theme-color to style the status bar won't work; you can use the deprecated meta tag for black or white status bars, or you can use a CSS/HTML trick to emulate a theme-color.

Designing **Reliable Experiences**

“Connectivity Is *Not* On or Off, but
On-and-Off”

When defining your offline experience

Answer the following questions:

HOW LONG DO YOU
WAIT TO DETERMINE
THE SUCCESS OR
FAILURE OF A
CONNECTION?

WHAT CAN YOU DO
WHILE SUCCESS OR
FAILURE IS BEING
DETERMINED?

WHAT SHOULD YOU DO
IN THE EVENT OF
FAILURE?

HOW DO YOU
PRIORITIZE THE
CONTENT TO CACHE
FOR OFFLINE?

HOW DO YOU INFORM
THE USER OF THE
ABOVE?

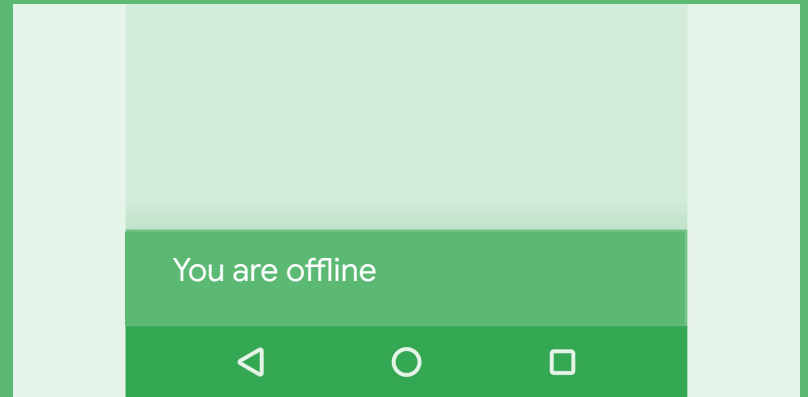
HOW DO YOU RETURN
THE USER BACK TO
CONNECTIVITY?

HOW YOU ILLUSTRATE
THE FUNCTIONALITY
AVAILABLE OFFLINE?

HOW DO YOU KEEP
USERS
ENGAGED/OCCUPIED
WHILE THEY ARE
OFFLINE?

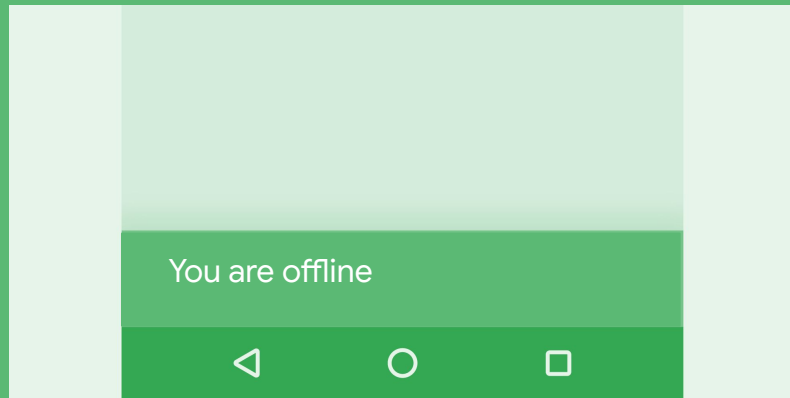
A good offline experience

- ✔ Should **inform** the users about the change of state
- ✔ Should **provide alternatives** - what actions are available offline



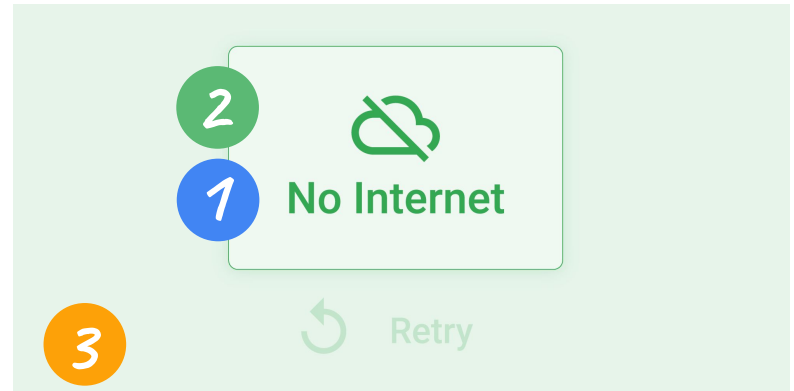
A good offline experience

- ✔ Should **inform** the users about the change of state
- ✔ Should **provide alternatives** - what actions are available offline

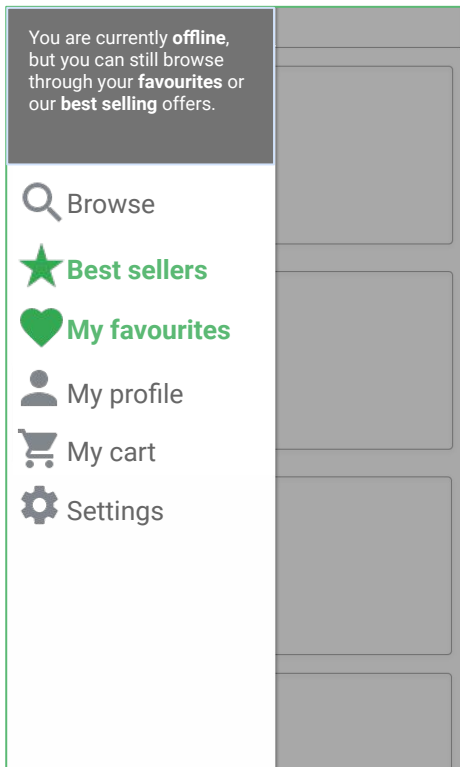


Inform users about change of state with three UI elements

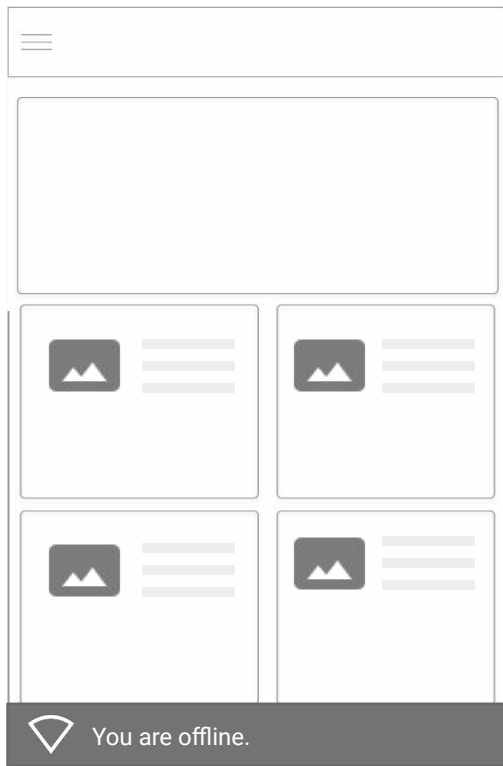
- 1 Copy** - what language do you use to inform users about the change of state
- 2 Icons** - how do you illustrate the current status
- 3 Colours** - are you using colours to highlight the content available offline



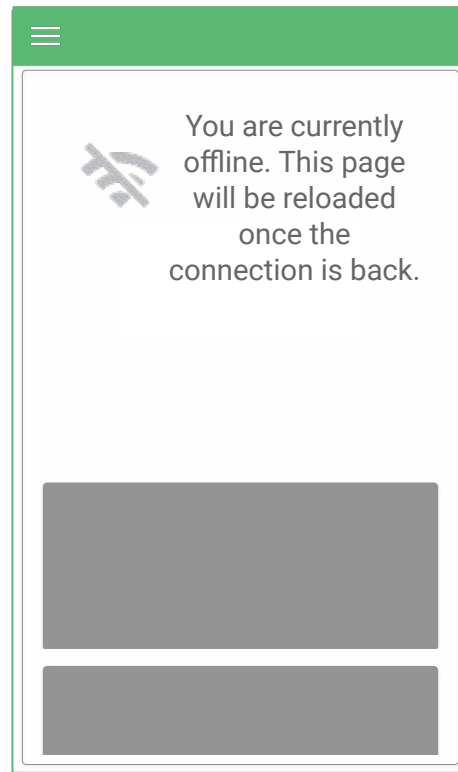
Use minimum 2 elements at the same time



Copy and colors to illustrate the change of state



Copy and colors to illustrate the change of state



Copy and visuals to illustrate the change of state

Test the copy to inform users about reasons of offline

You are not connected to Internet. Please **reconnect** and **retry**.

Looks like **our server is down**.

Sorry, something **went wrong on our end**.

Looks like **something was unplugged**.
Thanks for your patience while **we are getting this fixed**.

-
- X** Don't blame the user.
 - X** Don't ask the user to fix things.
 - X** Don't blame your own systems as it affects service credibility.
 - X** Use informal language with care.

You are currently **offline**.

We will try to reconnect you in N seconds.

The page will be loaded once you are back online.

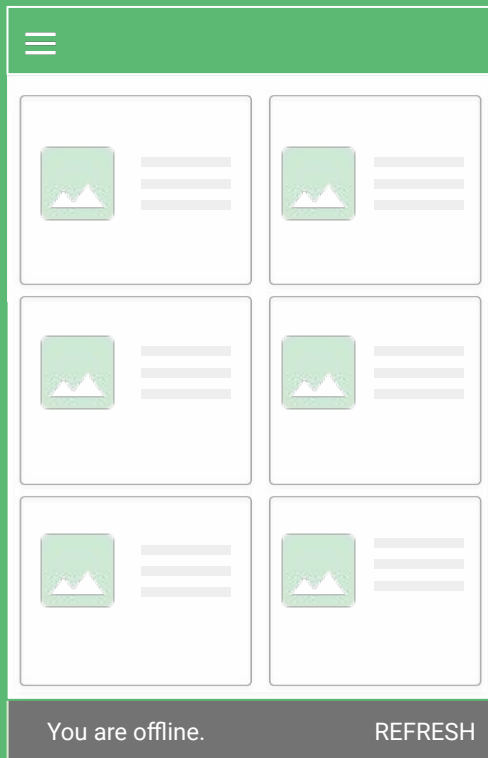
Press here to refresh the page.

-
- ✓** Confirm the state as-is with no blames.
 - ✓** Reassure the user doesn't need to "fix" anything
 - ✓** Explain what is going to happen when the connection is back (if the user needs to refresh or the page will reload automatically).

Pop up Toast (snackbar)

Inform the user about the change of state with a [toast \(snackbar\) element](#)

- ✓ Usually goes on top/bottom of the page
- ✓ should not be placed on top of important call-to-actions
- ✓ besides the copy it can contain an icon illustrating the message and an action



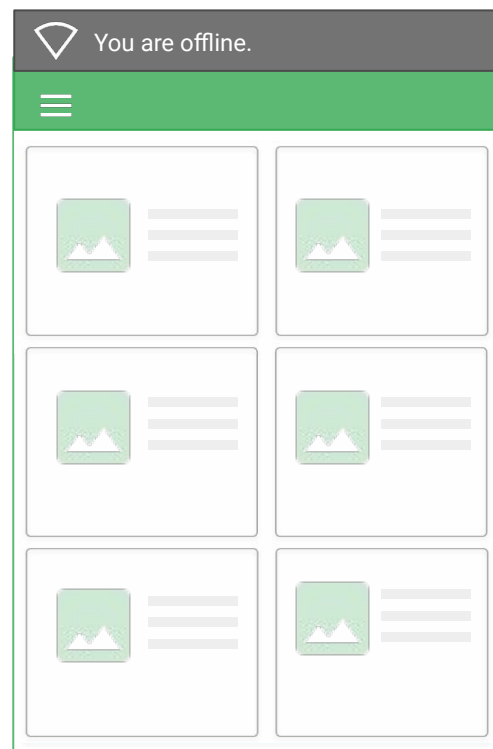
Consider using a pop-up toast (snackbar)



Toast on the bottom of the page with a REFRESH call-to-action



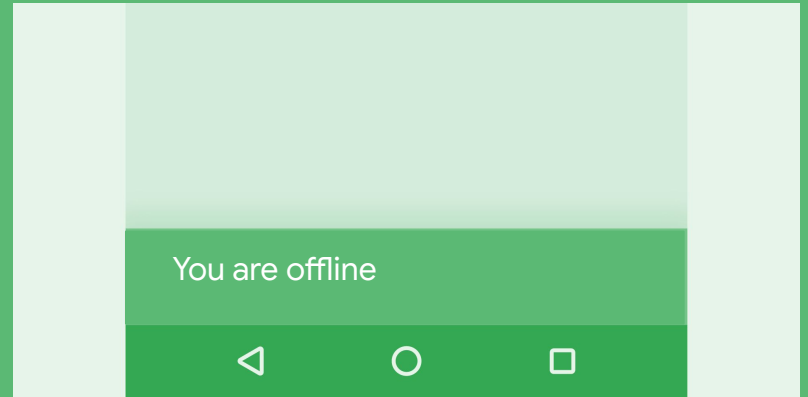
Fade the toast out or let users dismiss it if there is another signal of the ongoing offline state active e.g. greyed out color



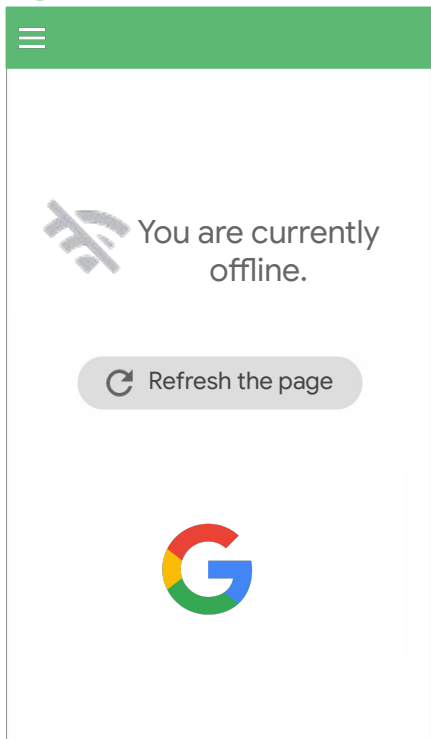
Non-dismissible toast placed above the navigation bar, carrying an icon

A good offline experience

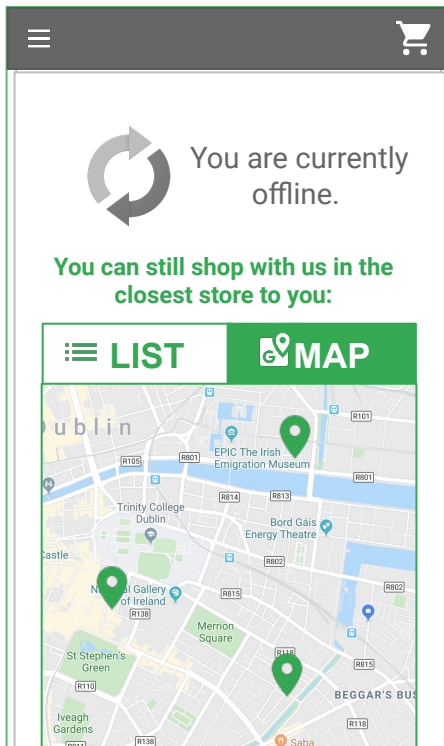
- ✓ Should **inform** the users about the change of state
- ✓ Should **provide alternatives** - what actions are available offline



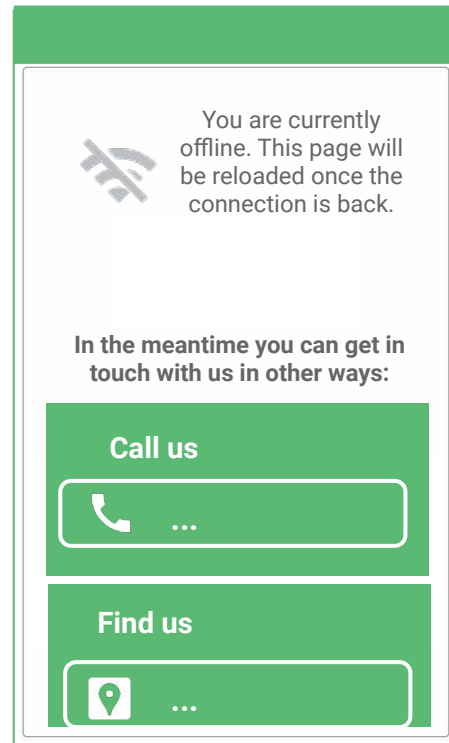
Fallback experience: show a static offline page



Fallback experience: showing a simple branded placeholder page

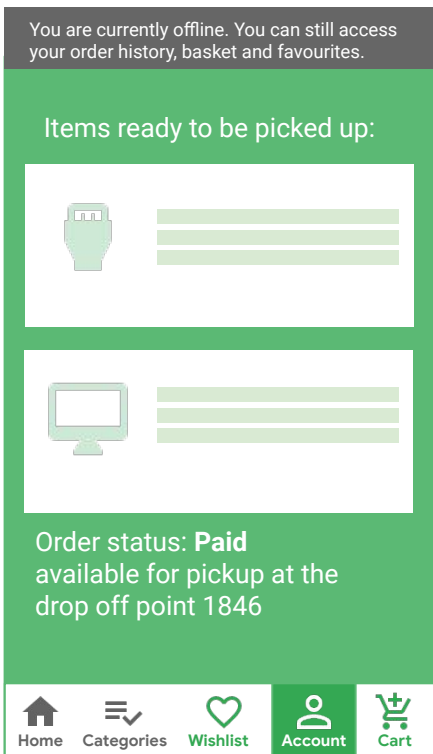


Fallback experience: Showing a store locator

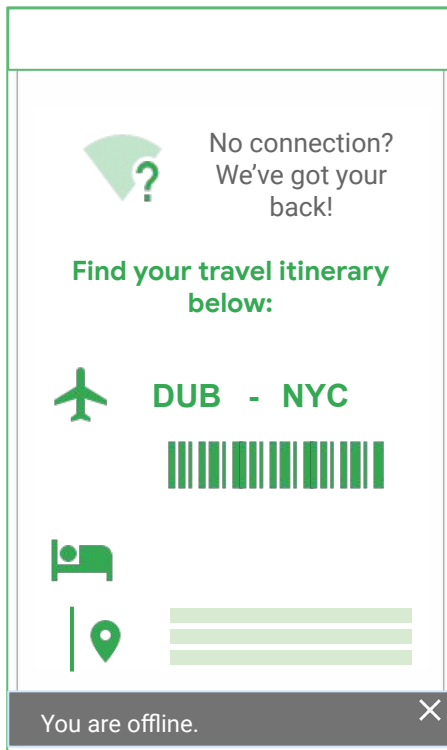


Fallback experience: show contact info to engage with your brand offline

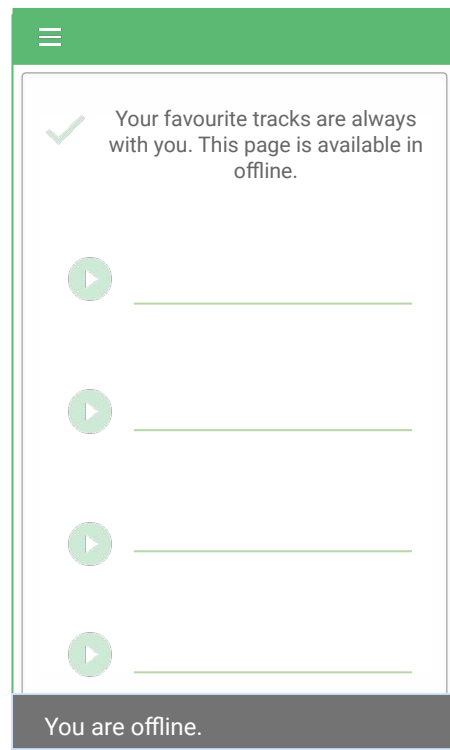
Fallback experience: be useful



Be useful: a retailer could show saved items or items in basket or purchases history

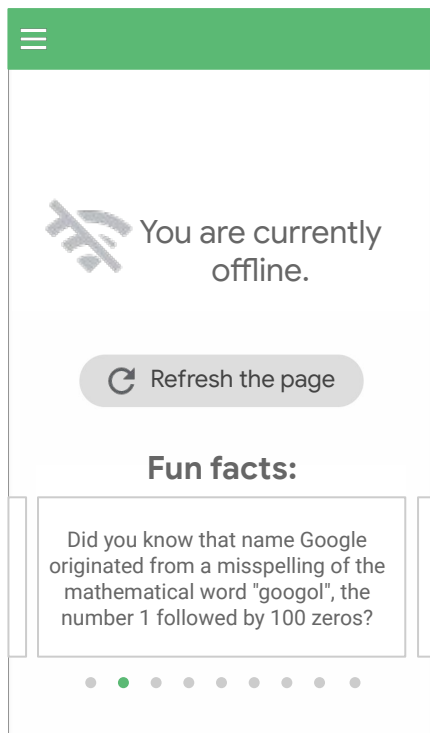


Be useful: A travel company could make tickets or boarding passes available

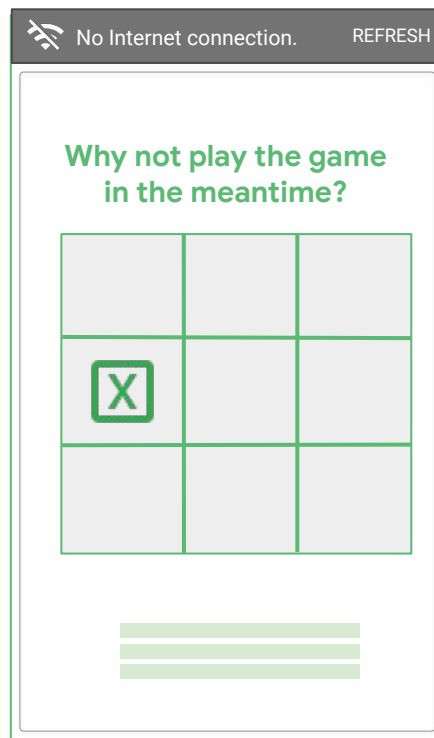


Be useful: Media & entertainment could let users listen to audio/video they saved

Fallback experience: entertain



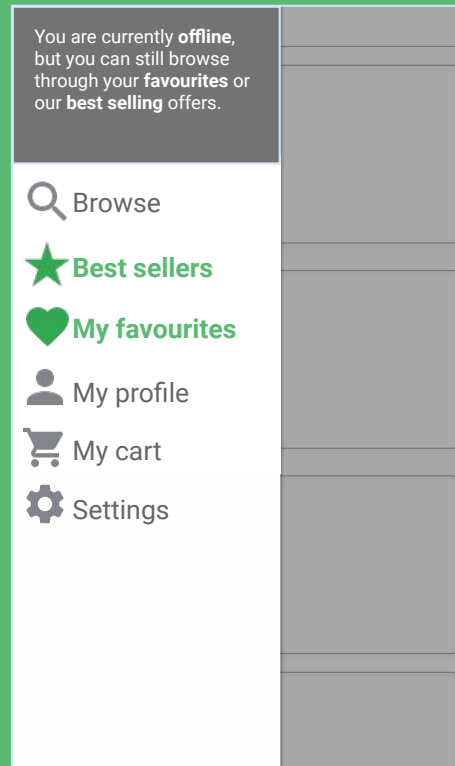
Fallback experience: entertain
Fun facts



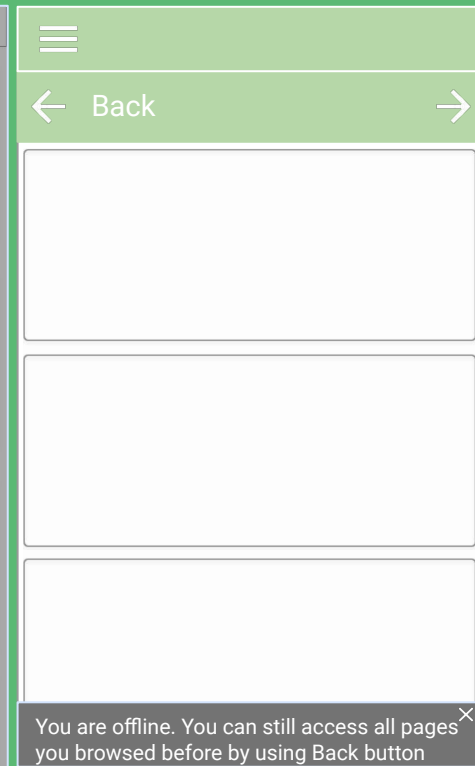
Fallback experience: entertain
Tic Tac Toe

Fallback experience: Let the user continue

- Always cache the current page
- Use **pre-caching** to let the user continue browsing important areas of the site such as top categories or items on sale
- Use **run-time caching** to make any previously viewed page available



Example: pre-caching main categories

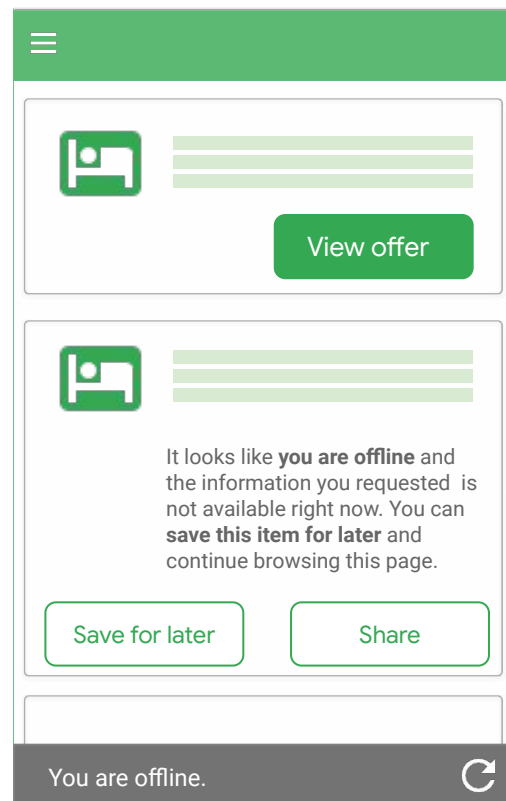
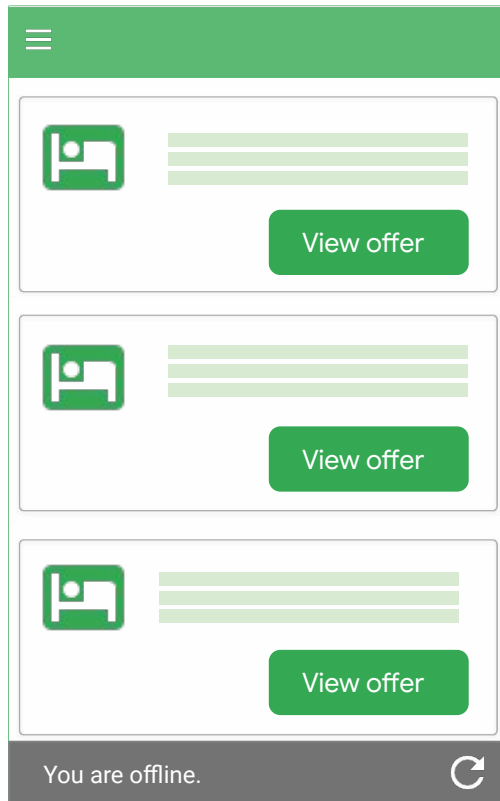


Run-time caching to allow go back through pages with Back button

Keep the user within the context: don't redirect to a blank page

Don't redirect the user to the page that was not cached - let them continue browsing the content available.

- Explain the reason why this piece of the content cannot be shown
- Offer alternative actions e.g. add to favourites to return to the item when online, share to other apps, etc.




Example: keeping the user within the context of the product listing page if the next page is not cached. Offering alternative call-to-actions. e.g. "Share" or "Save for later".

Let the user complete the task

Application form

1 Your quote 2 Your details 3 Your policy

 It looks like you are offline. Don't worry, you can still fill out the form. You will be able to submit your input when you are back online.

Full name..

Street address..

City..


Phone number..

Next to your policy


You cannot go to the next step just yet. It will appear active once you are back online.

Fill out the form




 The product **has been added** to the cart. It will appear in the cart once you are back online.

Undo Great, thanks

You are offline. 

Add to cart

 The item has been added to your wishlist

Home Categories Wishlist Cart

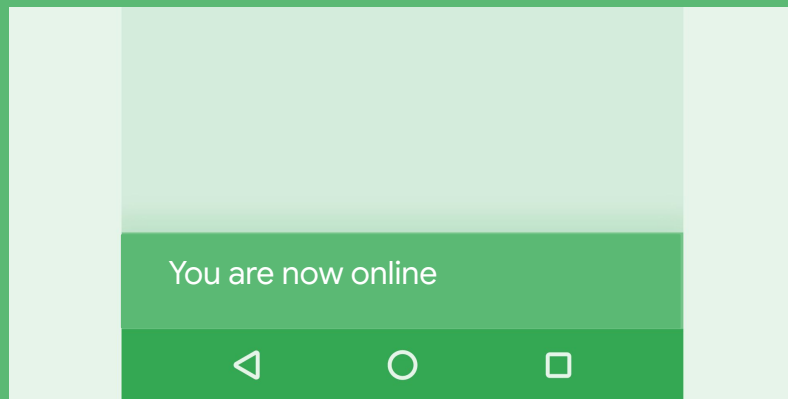
Save to wishlist

Once the connection is back inform the users

About the connection connection change.

Give users control to refresh the page if they lost connection when they were reading

You can reload the page for the user (and inform them about that) if you can keep them within the context of their current journey e.g. continue loading products on the product listing page,



When defining your offline experience

Try design-thinking exercise with your team:



Designing **useful push notifications**

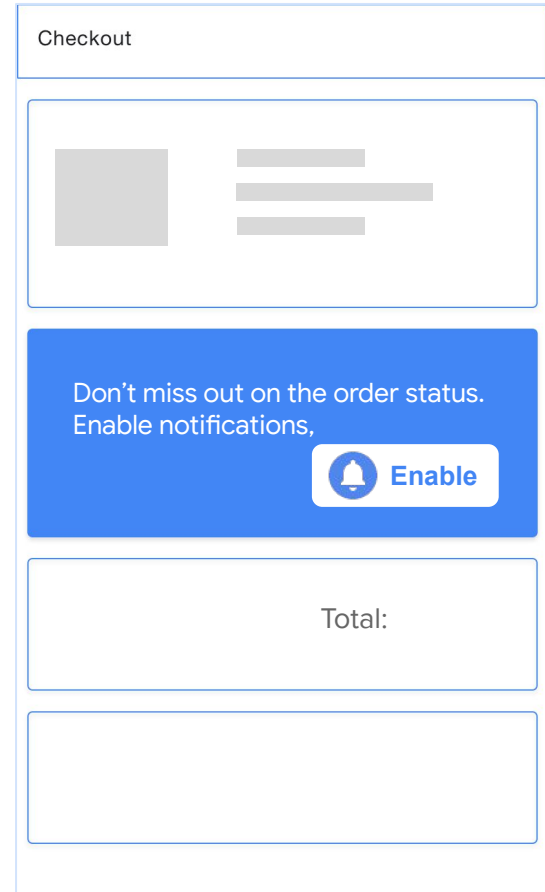
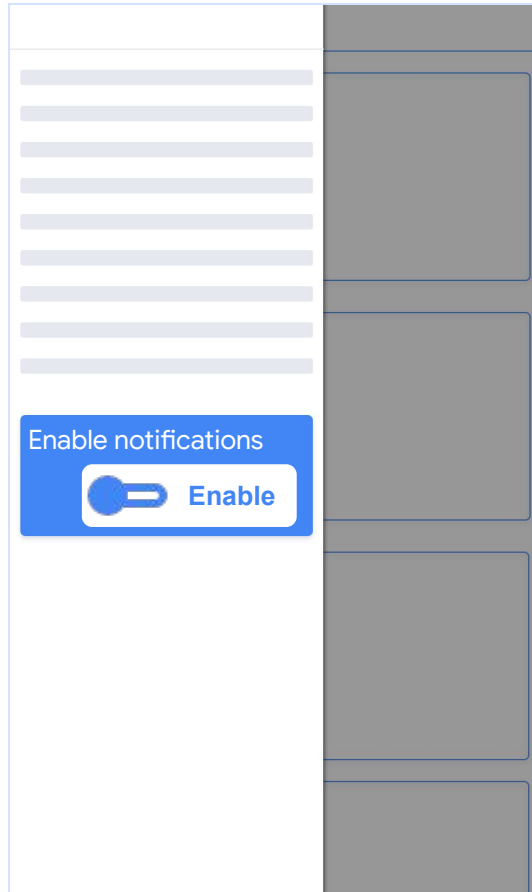
“You must stand out in a sea of notifications. Have a clear purpose with each push and agree on what success means. Create messages that reinforce your product or service value prop. If you don't do these things, you are merely interrupting your most valuable customers.”

–Andy O'Dower, Head of Product at Curiosity

Notifications prompt best practices

Same design considerations apply for notifications prompt as for install one:

- ✔ Would appear when appropriate
- ✔ Can be (re)discovered throughout the user journey
- ✔ Should not disturb the user from the flow
- ✔ Should look and feel native to the website UI
- ✔ Should contain an install value proposition
- ✔ Can contain icons to illustrate the action



What makes a good notification? It is ..

Timely

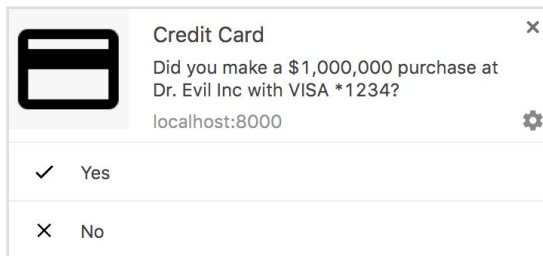
- it should matter in a specific moment.



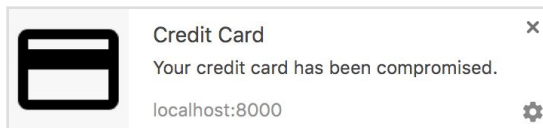
✓ Timely: make sure the message arrives on time for urgent updates

Precise

- should specific info that's good to know or act upon.



✓ Gives the card details and offers action



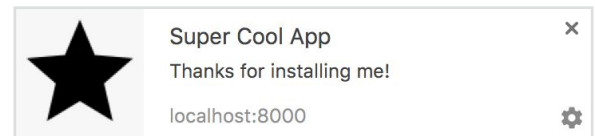
✗ Not precise: which card? Why?

Relevant

- should bring something personal, that a specific user should know.



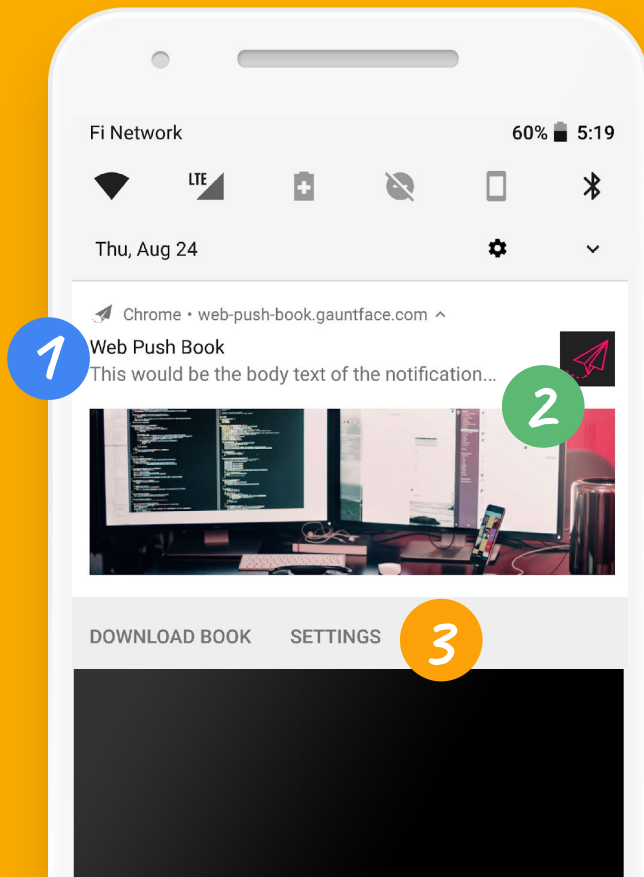
✓ Relevant information - smth the user is interested in



✗ Not relevant: don't oversпам with unnecessary updates

Notification Design

- 1 Copy** - what does the message say and how
- 2 Visuals** - illustrating the message with icons
- 3 Actions** - how can the user action on the message (optional).



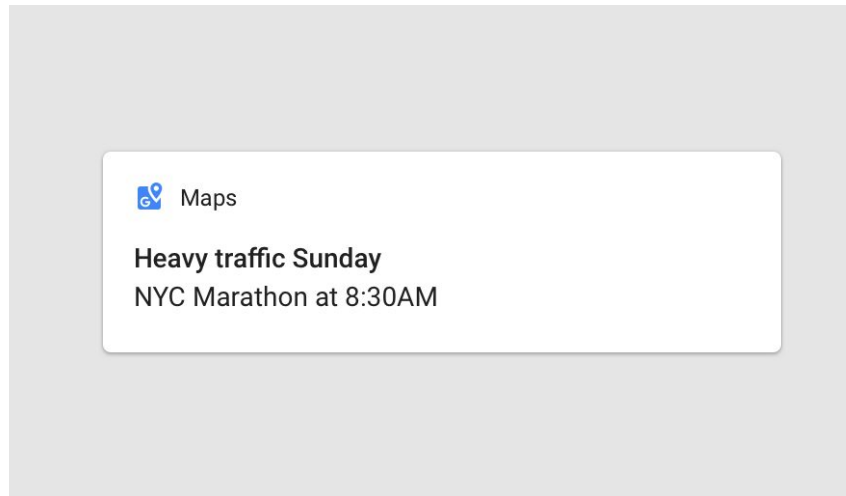
Copy

The copy consists of the app name, message headline and message content

The text has to be:

- Clear and concise
- Be under 40 characters long

Don't duplicate the app name in the headline (it is already in the header)

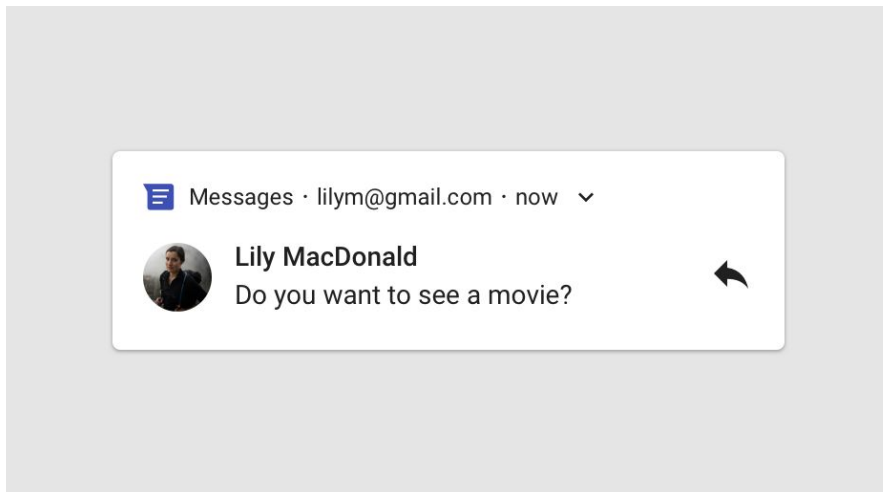


Visuals

App icon is a must have for the notification as it will visually inform the user which app is sending a message

Sometimes an image can be added to visualize some other information of the core message: e.g. picture of the sender, photograph of the product that is back in stock, etc.

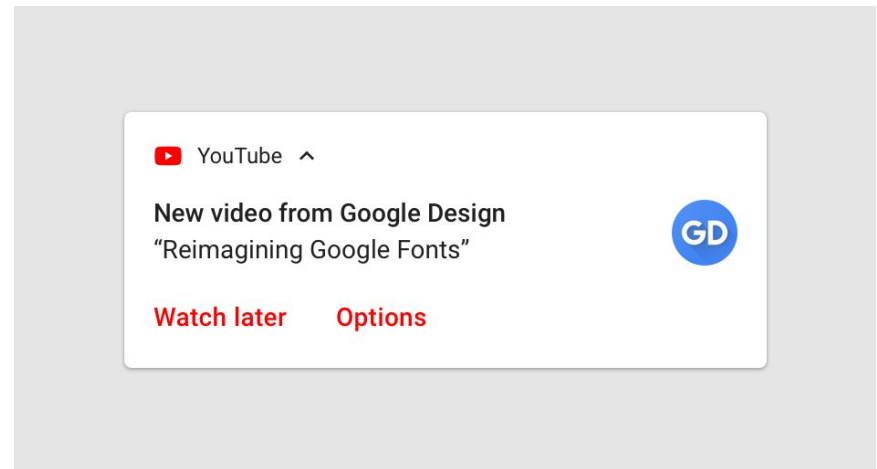
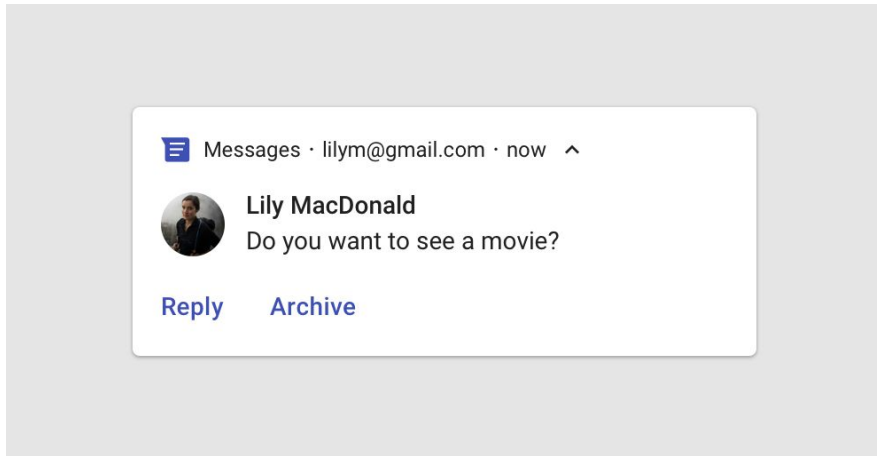
The image and the icon should not duplicate each other and each deliver different value message.



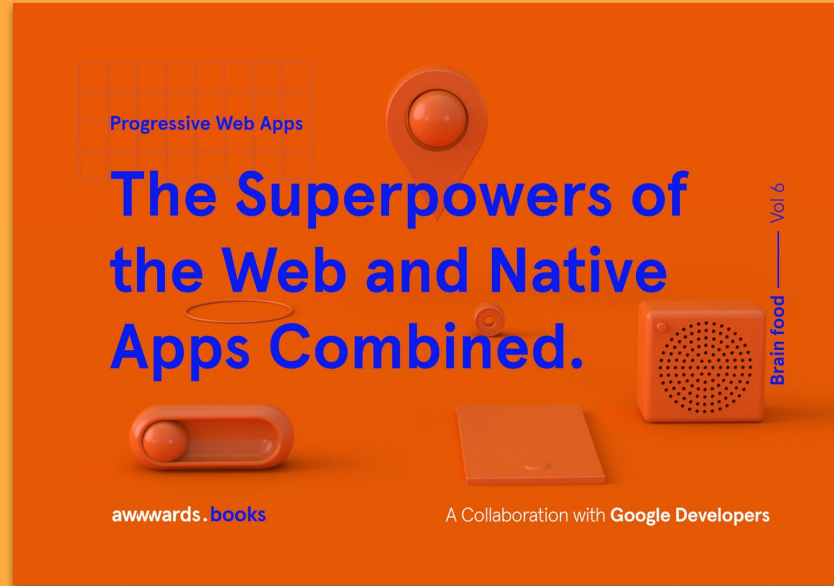
Actions

Make it easy to complete tasks without opening the app.

This one is optional since there is a default actions “tap-to-open” and “Dismiss” built into the Android notifications interaction system. Don’t duplicate these actions.



Thanks!



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