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Google Express

Case Study

Google Express was a dedicated shopping experience on web and mobile apps that offered same day delivery of everyday essentials from local stores, *saving users from making a weekly trip to the grocery store*.

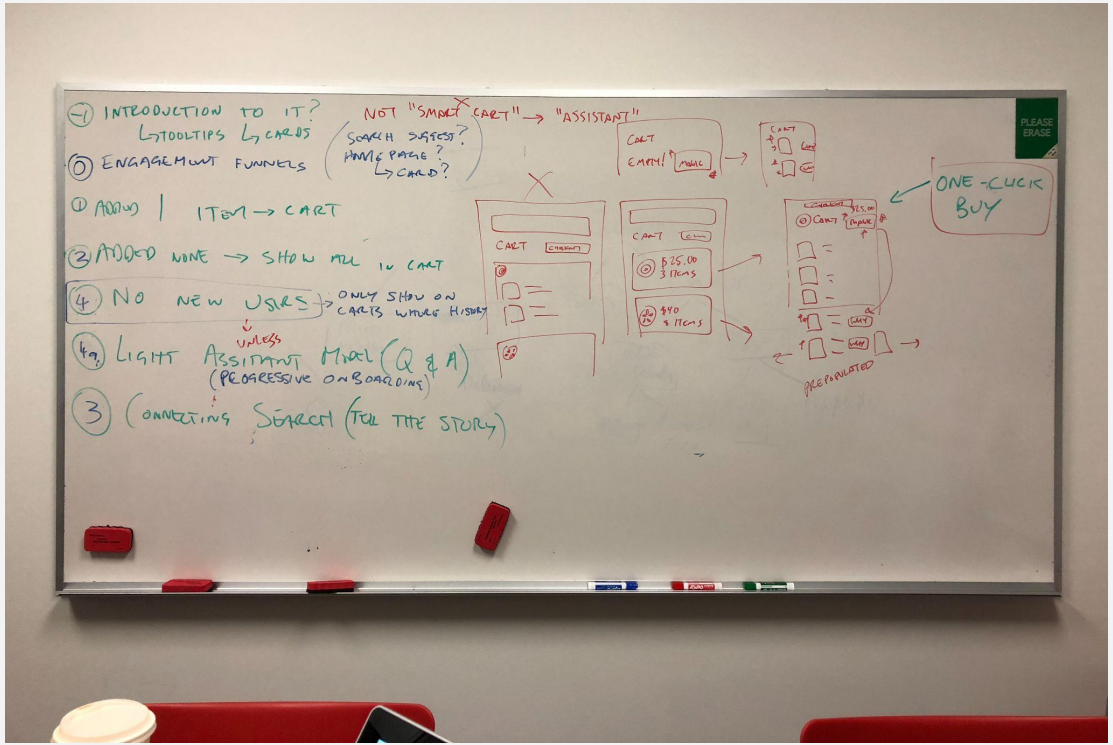
However, at an average session time of 30-45 minutes to build a cart, meet order minimums, checkout and set a delivery window, *it wasn't actually saving them time and effort*.

The product director approached the user experience team with an ambitious ask:

Leverage Google technology to create an assistive, predictive shopping experience and reduce time to mere minutes.

Discovery

Ideation



To tackle this ambitious and ambiguous ask, I collaborated directly with our lead product manager (PM) in a series of iterative whiteboarding sessions over the course of a week.

In these sessions, we defined the product requirements, assessed technical capabilities and explored high level product features and flows.

We established a weekly collaboration session with myself, the lead PM, technical lead and product director throughout discovery.

Discovery

User stories

User Story 1

Anaya is a long time Google Express shopper

User Story 2

Javier is a first time Google Express shopper

Once we had a general direction for the product feature, we drafted user stories for two personas:

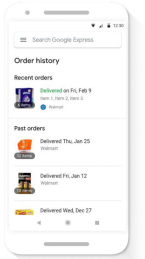
1. **A long time user**
   This user would have a rich history of repeat orders. Modeled on our average user, who was a 24-40yr old female with high income.

2. **A new user**
   This user would have no existing data on our product. They were modeled on an average Google search user with mid-high income..

User story 1

User Story 1
Long time GX shopper

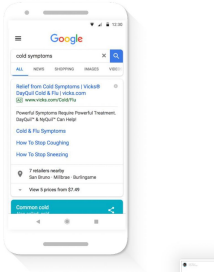
Anaya has a fairly regular shopping schedule on Google Express, buying her everyday essentials.



User Story 1
Long time GX shopper

When it comes time for another order, Anaya is feeling under the weather and doesn't really want to spend a long time shopping.

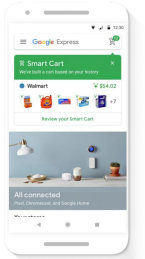
She searches on Google first to see if it's a cold or something worse.



User Story 1
Long time GX shopper

Next, she goes to Google Express for her shopping.

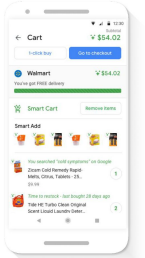
She notices a new cart feature that sounds like a real time saver!



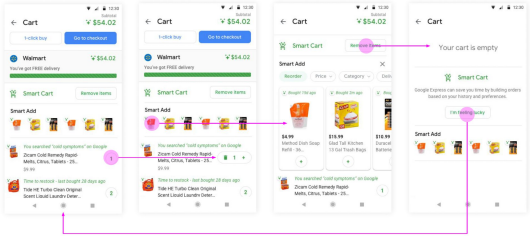
User Story 1
Long time GX shopper

She discovers that Google Express has already built an order for her based on her regularly ordered items. It has everything she needs.

Even cold medicine! Google Express captures her earlier search query and gives her some much needed relief.



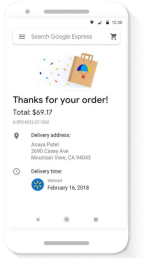
Anaya can customize her order quickly and easily.



User Story 1
Long time GX shopper

When she's happy with her cart, Anaya places the order with one click.

Now she can rest up while she waits for a speedy delivery.



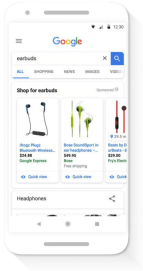
Discovery

User story 2

User Story 2
First time GX shopper

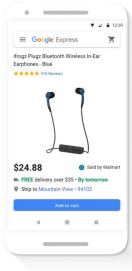
Javier is looking to buy some replacement wireless earbuds.

He starts with a Google Search to see what's out there.



User Story 2
First time GX shopper

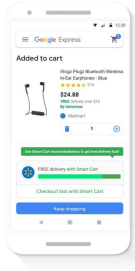
He clicks through to Google Express and likes what he sees.



User Story 2
First time GX shopper

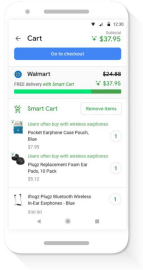
He adds the earbuds to his cart.

The item is under minimum, but the assistant feature can help him build a cart to get there immediately.



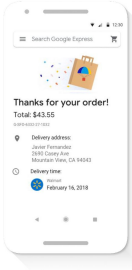
User Story 2
First time GX shopper

Javier checks out the recommendations and thinks they're a perfect fit for the earbuds.



User Story 2
First time GX shopper

He places the order and the earbuds are on their way!



Discovery

User research

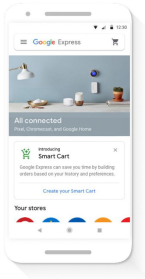
Prototype 1.0

A simple prototype for two cart building scenarios:

- Click search box for an augmented cart
- Click promo module on home for a fully automated cart

CLICK-THROUGH PROTOTYPE ON FLOW >

STATIC MOCKS ON GALLERY >



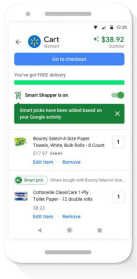
Prototype 2.1

Items are automatically added to the user's cart

- Click search box to start
- First or second items in any product lists are usually clickable

CLICK-THROUGH PROTOTYPE ON FLOW >

STATIC MOCKS ON GALLERY >



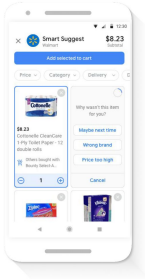
Prototype 2.2

Items are not added to cart without user action

- Click search box to start
- First or second items in any product lists are usually clickable

CLICK-THROUGH PROTOTYPE ON FLOW >

STATIC MOCKS ON GALLERY >

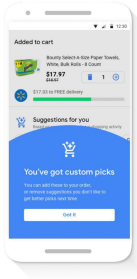


Prototype 3

Users are automatically sent to suggestions after add to cart

- Click search box to start
- First items in any product lists are clickable

CLICK-THROUGH PROTOTYPE ON INVISION >



After reviewing and refining the user stories with our team, I quickly translated our recommended approach into a series of prototypes.

I recruited our user research team to conduct testing with small groups of target users to test and validate key hypotheses.

While users were generally receptive to an assisted experience, they expected a high level of clarity, transparency and control over the process. They were not ready for a fully automated shopping experience.

Discovery

Outcome

Design principles

- **Be fundamentally useful**
  Save time, effort and money
- **Keep personalization optional**
  Give users the opportunity to choose whether or not they want to use the feature
- **Provide context for recommendations**
  Communicate the to the user about why and how we are personalizing
- **Make it focused and lightweight**
  Don't complicate or replicate the full shopping experience

Writing principles

- **Show user benefit**
  Show the magic rather than talking about it
- **Only name the feature in promotional content**
  Focus on what the feature does, not its name
- **Annotate what each recommendation is based on**
  Example: "Bought last month"

With clear user feedback and alignment across the team on a recommended product vision flow, we were approved to design and build a product feature for launch.

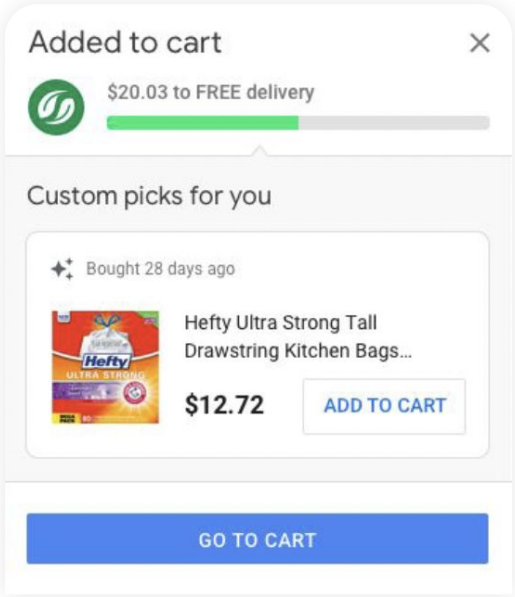
I summarized our insights in a set of principles to guide the development of the feature and collaborated with the PM on a product requirements document (PRD) to define the minimum viable product (MVP).

The key finding for the initial ask was that we needed to **build user trust** through iterative assistive features.

Product design

Product design

Overview



I reviewed our work with the product management and engineering team leads and determined that the optimal integration for an near-term assistive feature would be in our existing mobile app add to cart flow.

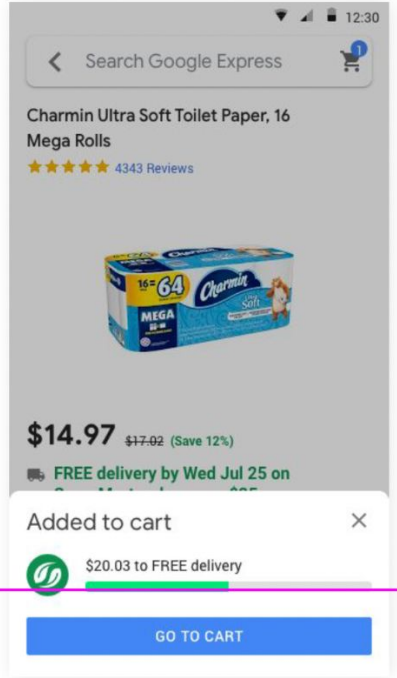
Reaching order minimums for free delivery was a well-documented pain point for our users, and the feature could be integrated into a single controlled surface to launch quickly and assess user engagement.

Working with my cross functional partners, I prepared an MVP flow.

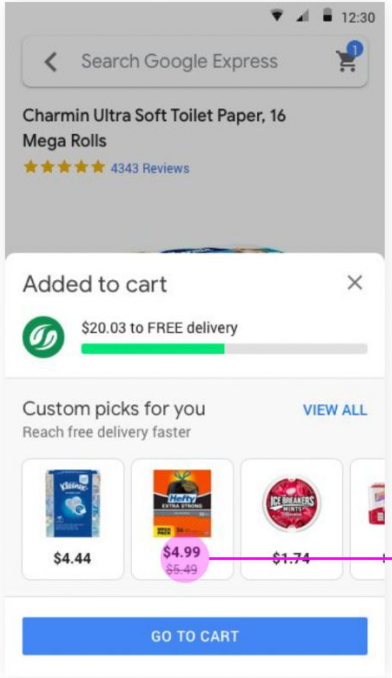
Product design

Initial MVP flow

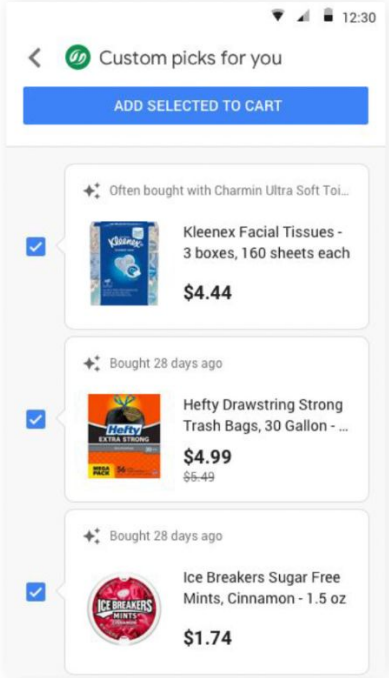
1. PDP



2A. ATC confirmation (Default)



2B.. ATC confirmation (Suggestions available)



3. Suggestions page

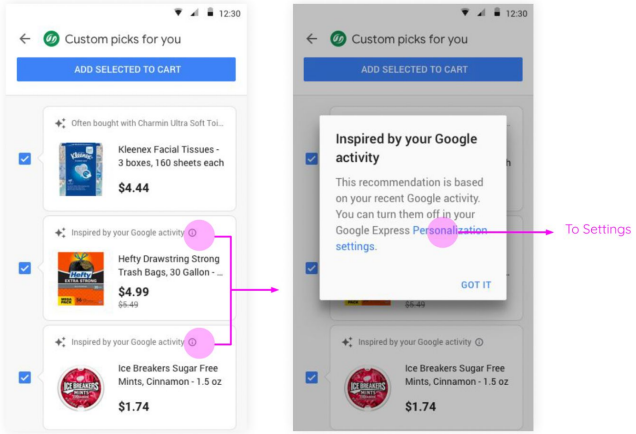
Detailed design

Proposed direction

Include “i” icon on individual suggestion type that utilize a user’s personal information.

Resulting dialog links to Settings, where user can elect to turn the use of their data for cases like this. Turning off personalization will remove this type of suggestion in the future.

This matches current pattern on GX (see following slide).



1. Module with personalization control

2. Informational dialog

Over the next few weeks, our team proceeded to build out the back end capabilities while I refined the design and tailor it for iOS and Android.

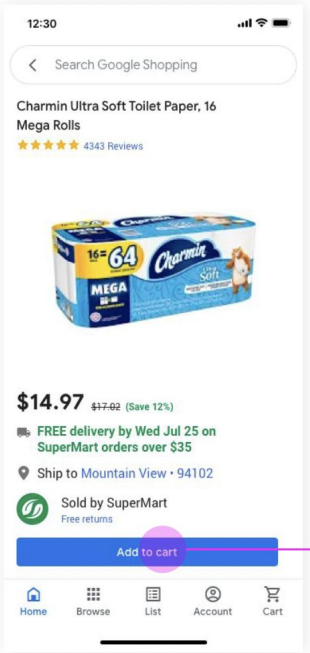
We continued user research and found opportunities to further simplify and sharpen the interaction and visual presentation.

I also coordinated reviews with partner teams, particularly on our privacy and personalization efforts, to align this feature to the overall patterns and frameworks across the experience.

Product design

Final MVP flows

iOS app



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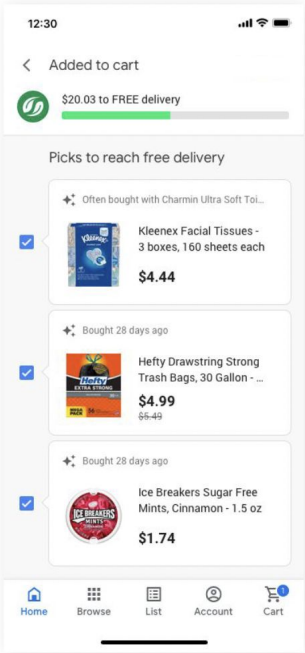
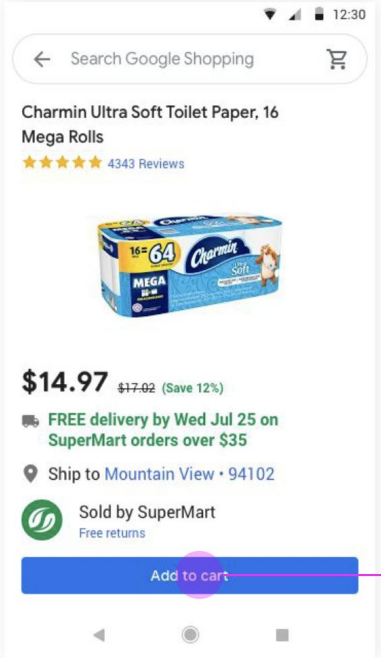
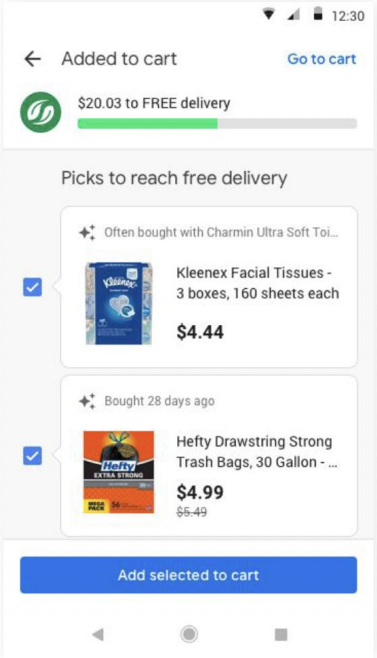


2. ATC confirmation w/suggestions

Android app



1. PDP



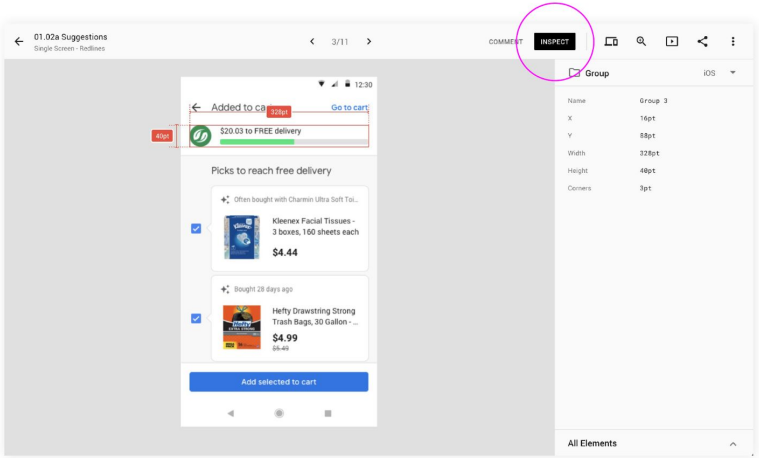
2. ATC confirmation w/suggestions

Delivery

Delivery

Implementation and impact

Redlines



Select a mock and click “Inspect” in the header to view specs.

VIEW IN GALLERY >

I supported the engineering team through launch with documentation, build reviews and approvals.

The final feature launch showed a small improvement in lowering cart abandonment, but was most impactful in improving the data quality of our recommendations and related product results.

This was critical as we transitioned our product into the main Google Shopping experience, where the focus was on single product discovery instead of cart building.

Thanks!

See more samples of my work at
www.stationzero.org/kylehoyt