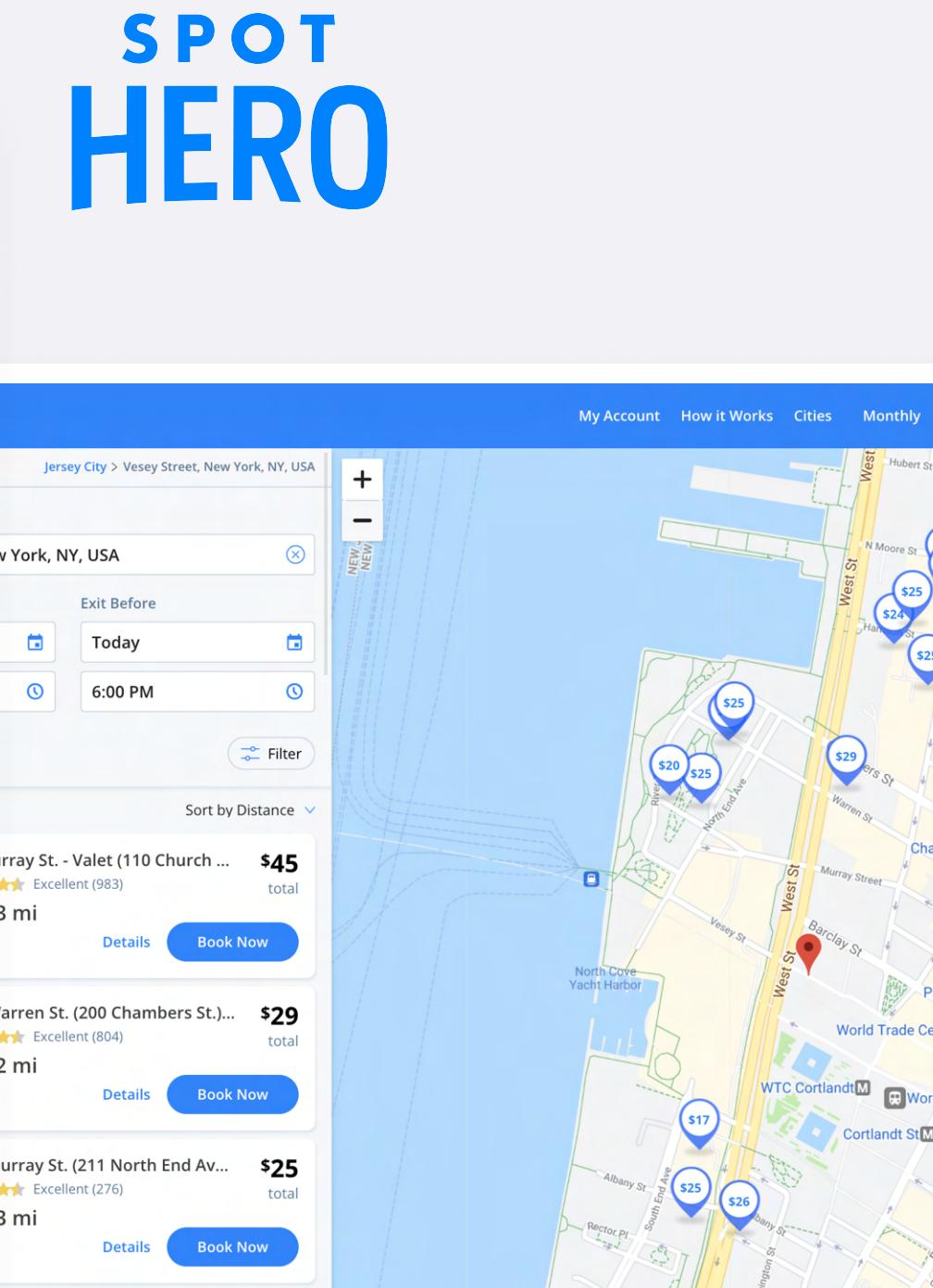
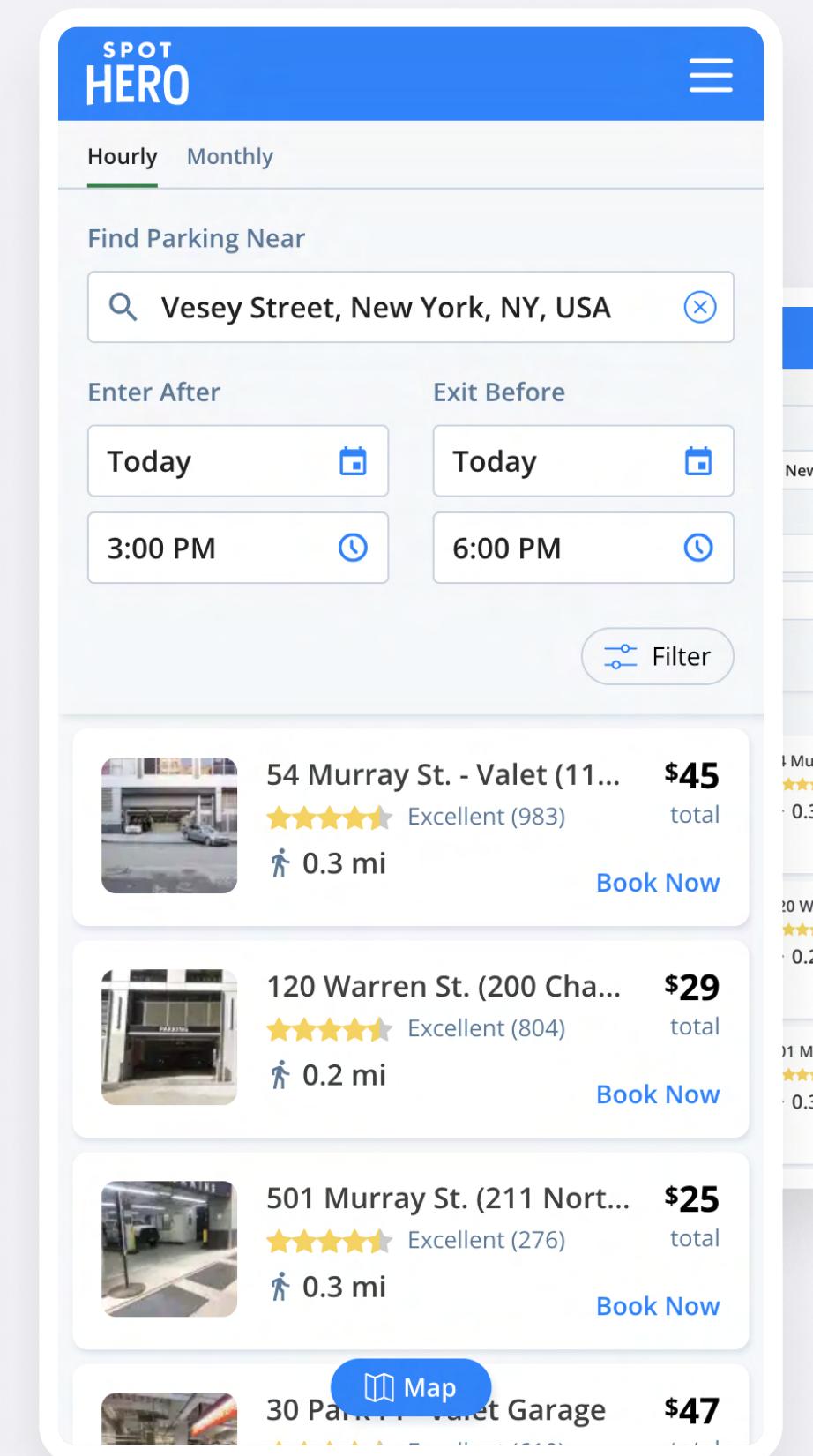


SpotHero Web Renovation

How I increased the conversion rate on [spohero.com](http://spothero.com) by over 25% with research and targeted experiments.



Work Project // 20-30min Presentation

Overview

Role: Product Designer

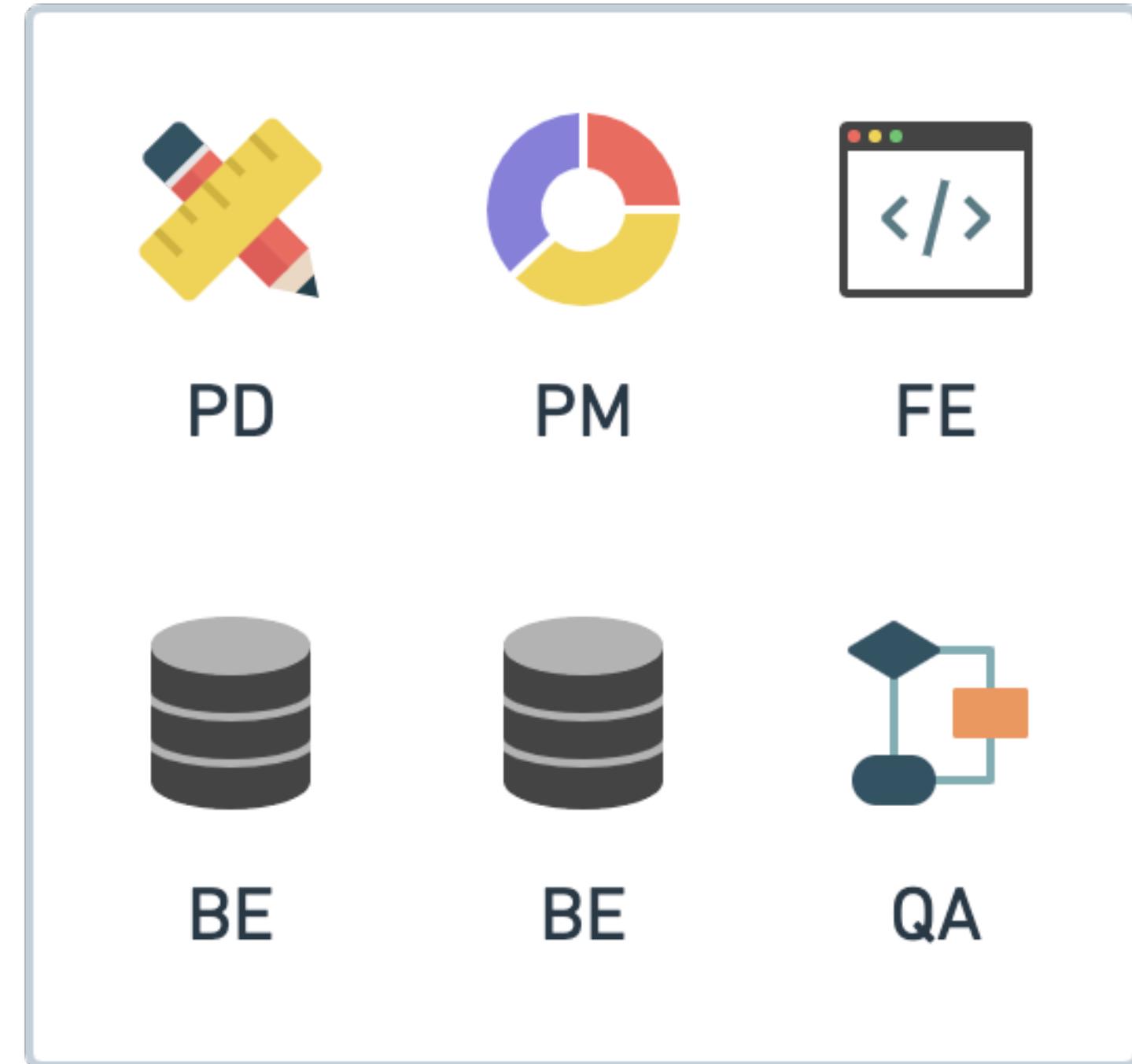
Duration: Mar 2019 - Jan 2020

Platforms: Web

Responsibilities

- (All design work)
- Discovery & user research
- Interaction design
- Visual/UI design
- AB testing & experimentation

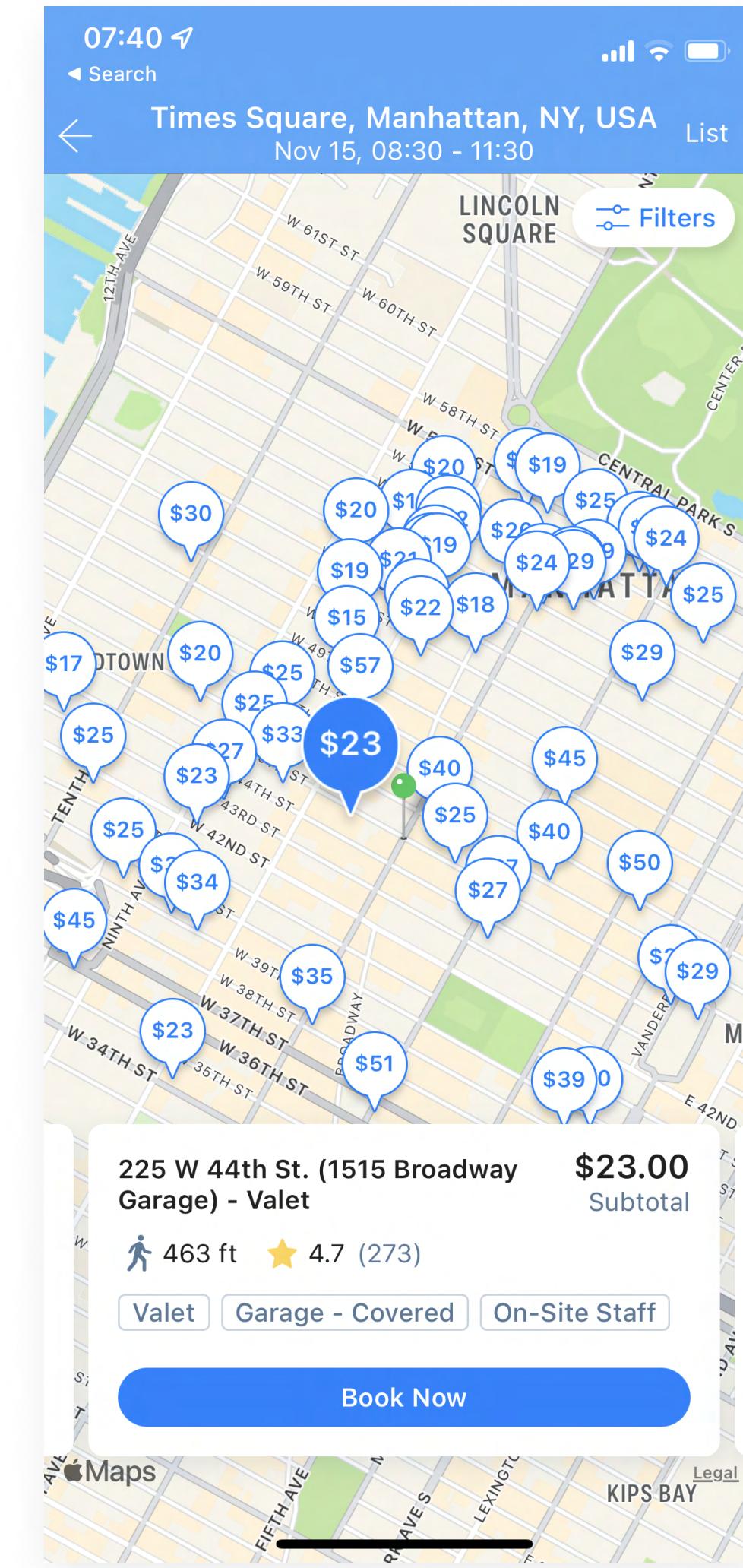
Team Setup



What is SpotHero?

SpotHero is the #1 largest off-street parking reservation service in North America (US & Canada).

Our app and website lets you find, compare and pay for parking at thousands of locations in 40+ cities.



Platforms

- iOS/Android
- Website
- Android Auto
- Apple CarPlay

Major Markets

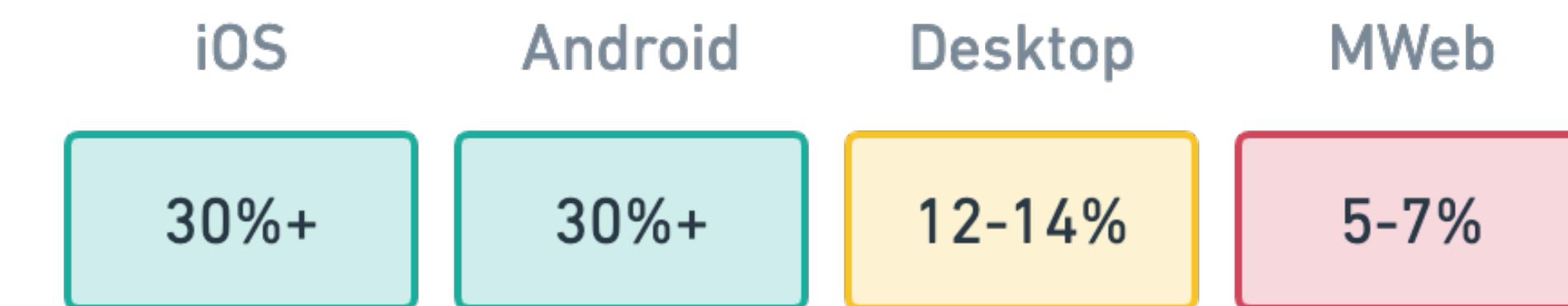
- Chicago
- NYC
- DC
- San Francisco
- Boston

My Role

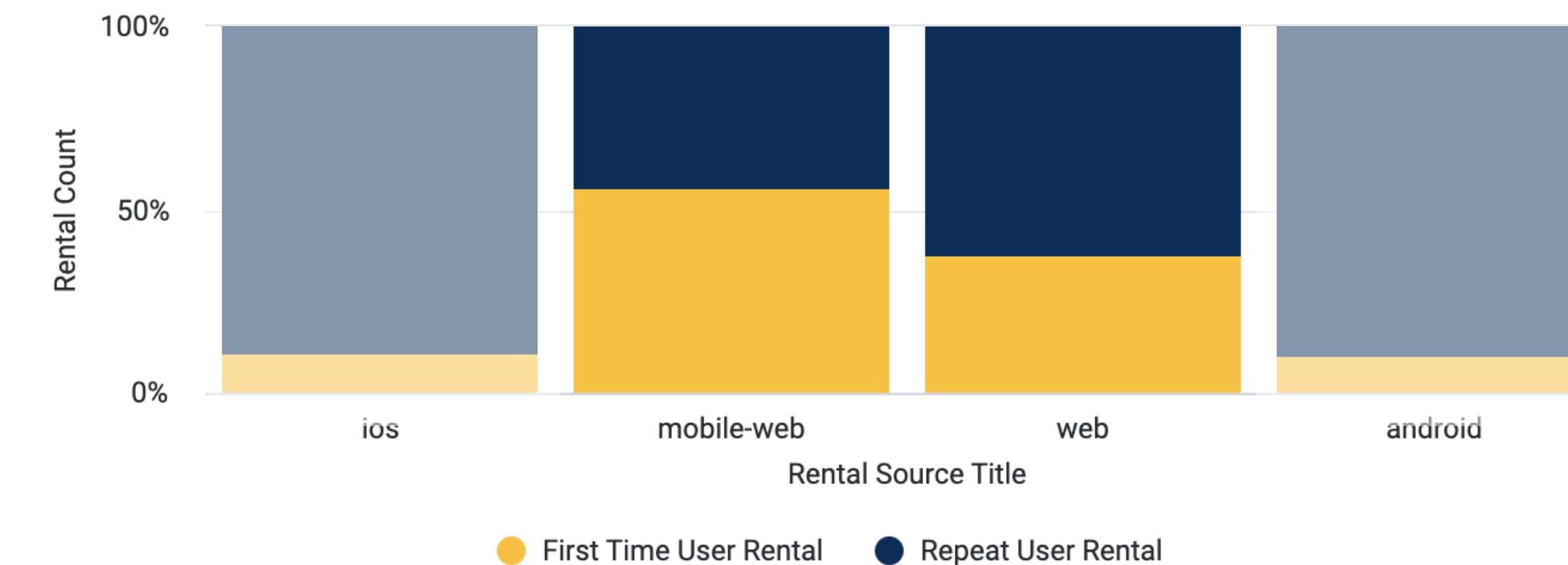
In mid-2019, I moved to SpotHero's consumer web team. SpotHero was fundraising and in **growth mode**.

I was tasked with **improving the low conversion rate** on our website, especially on mobile web—which was growing faster than desktop, and skewed towards new users.

Converting = **buying parking** on website

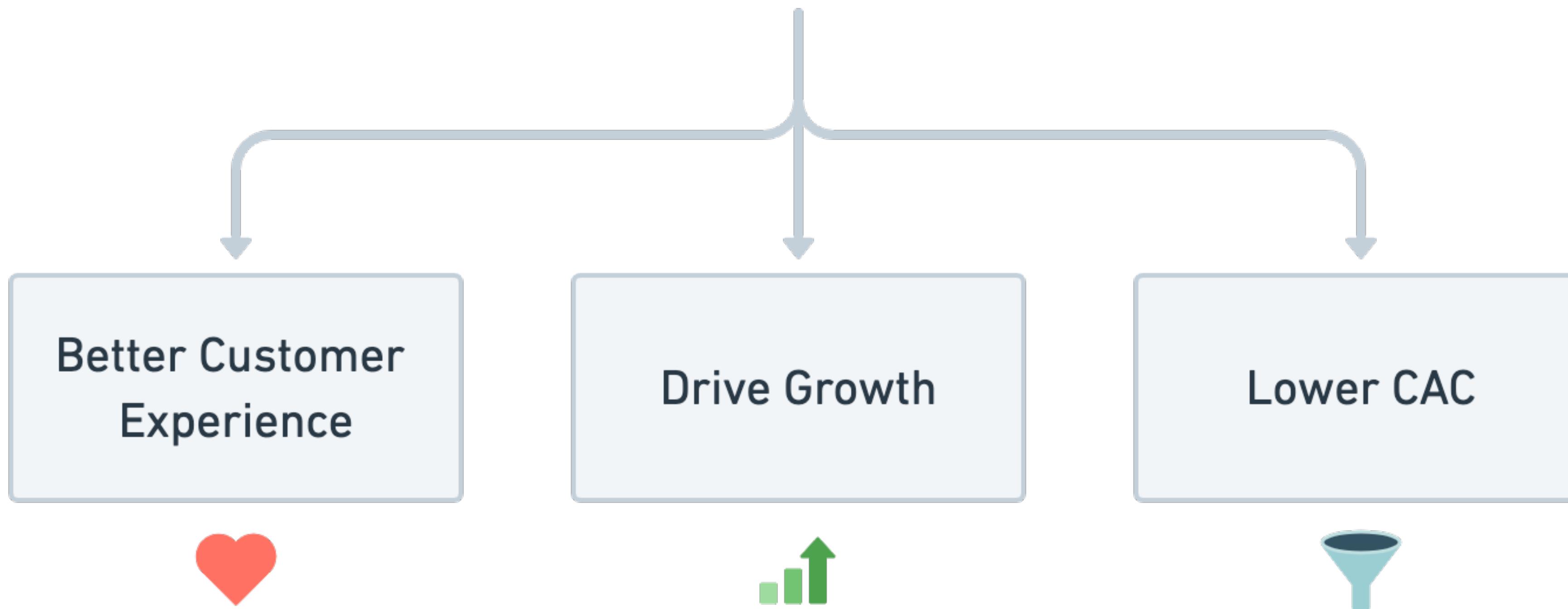


First Time vs Repeat Rentals by Platform - P3M



HYPOTHESIS

By improving the conversion rate...

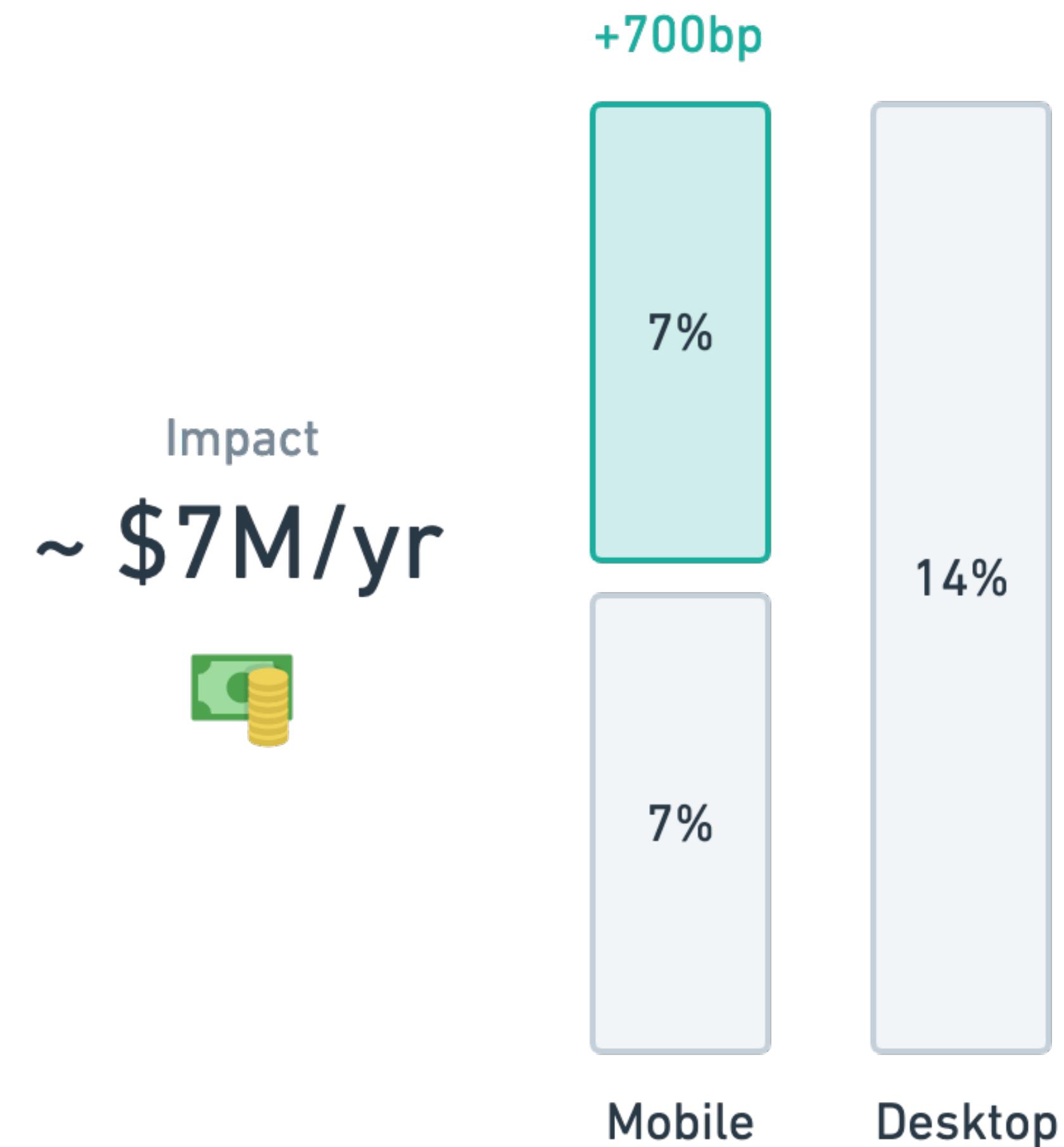


Project Objective

Objective: Drive growth and improve the conversion rate on the web, especially amongst mobile web users.

Key Result: improve the conversion rate on mobile web by  **700bp**.

This would (*ceteris paribus*) roughly double the conversion rate.



Landing/Search

The screenshot shows the SpotHero mobile application's landing screen. At the top, there is a search bar with "Chicago" typed in, a magnifying glass icon, and an information icon. Below the search bar, there are two time filters: "Start Time Today, 2:00pm" and "End Time Today, 5:00pm". The main content area displays four parking facility options:

- \$16 /** 181 N Clark St. - Government Center Garage. Includes a thumbnail image of the garage entrance, an EV charging availability indicator (+4), and a "Share" button.
- \$16 /** 81 W Lake St. - Government Center Garage. Includes a thumbnail image, an EV charging availability indicator (+4), and a "Share" button.
- \$25 /** 171 W Randolph St. - Valet. Includes a thumbnail image, a "Valet" button, an "Accessible" button, and an "EV Charging Available" indicator (+3).
- \$16 /** 81 W Lake St. - Government Center Garage. Includes a thumbnail image and a "Share" button.

Facility Details

This screenshot shows the "Facility Details" screen for the 181 N Clark St. - Government Center Garage. At the top, there is a back arrow and a "Back" button. The main content includes a large image of the garage entrance, a time range indicator "Today, 2:00pm - 5:00pm", a summary box showing "\$16 Total", and detailed information about the spot:

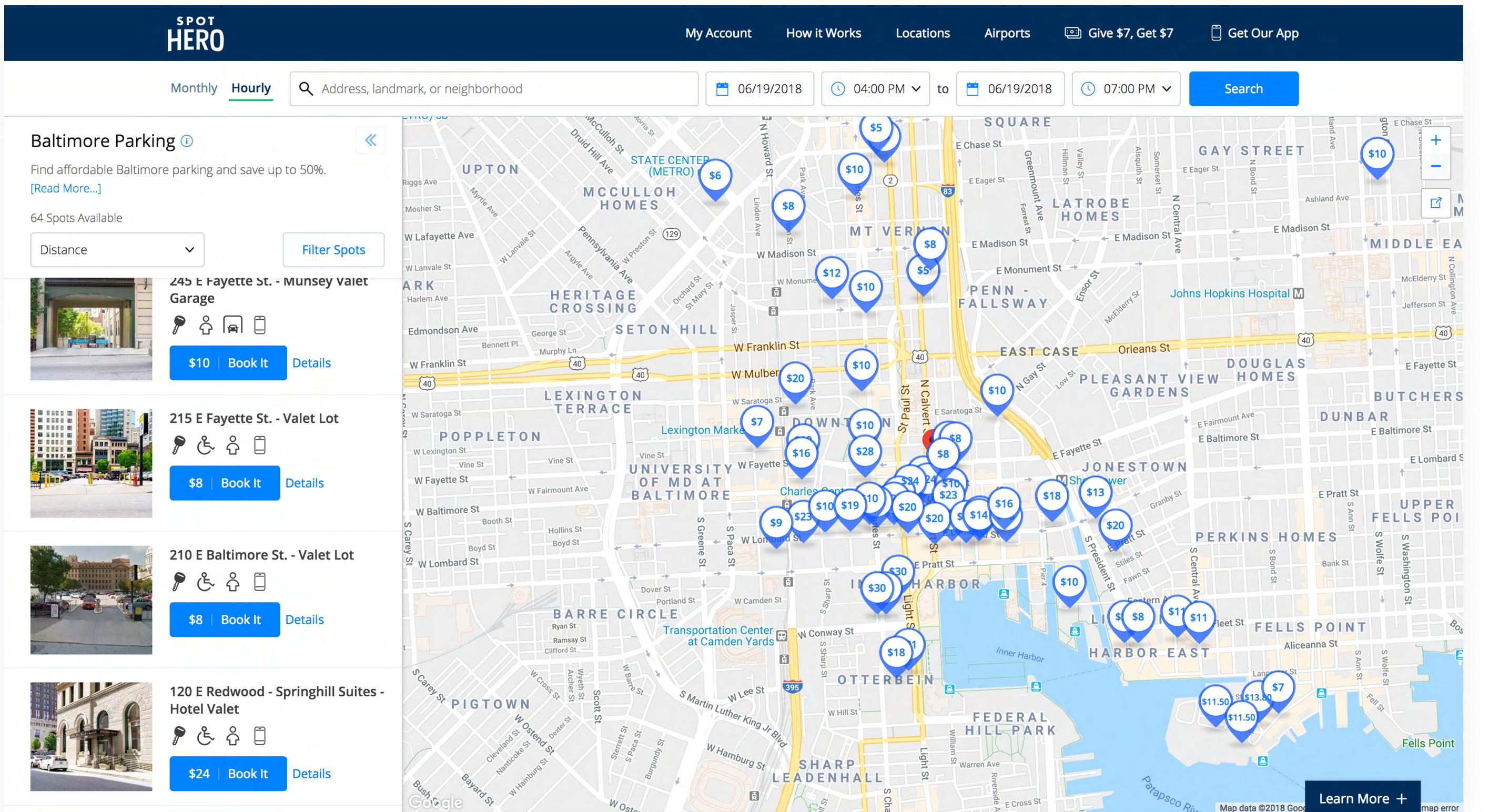
- 181 N Clark St. - Government Center Garage**
- ★★★★★ (19426 ratings)
- 0.10 mi walking
- Save as Favorite**
- Book It**

Checkout

This screenshot shows the "Checkout" screen. At the top, it displays the total amount "\$16 Total" and the reservation dates "Fri Jun 29 at 10:30am - Fri Jun 29 at 1:30pm". There is a "Change time or date" link and a "Share Spot" button. The main content area is divided into sections:

- SPOT DETAILS**: Includes the spot name "181 N Clark St. - Government Center Garage".
- ACCOUNT INFO**: Includes the email "nik@spothero.com" and a "Change" link.
- A dashed line separator.
- Phone (optional)**: A text input field with placeholder text "We'll text your reservation details."
- Continue to Payment**: A green button at the bottom.

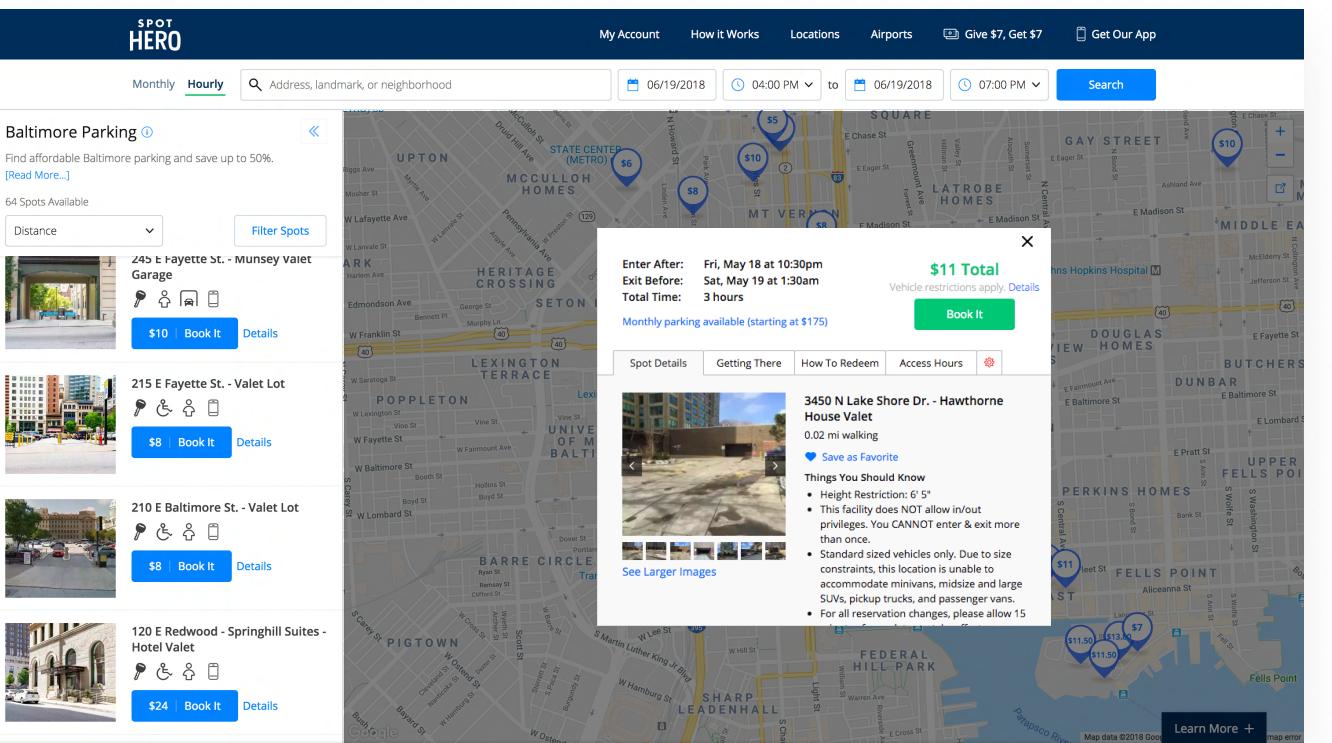
Landing/Search



The landing page for SpotHero Baltimore Parking. At the top, there are navigation links for My Account, How it Works, Locations, Airports, a "Give \$7, Get \$7" button, and a "Get Our App" button. Below this is a search bar with dropdowns for date, time, and destination, followed by a "Search" button. The main content features a map of Baltimore with numerous parking spots marked by blue circles containing dollar amounts. To the left of the map, there are four listed parking locations with small thumbnail images, price, booking button, and details link:

- 245 E Fayette St. - Munsey Valet Garage**: \$10 | Book It | Details
- 215 E Fayette St. - Valet Lot**: \$8 | Book It | Details
- 210 E Baltimore St. - Valet Lot**: \$8 | Book It | Details
- 120 E Redwood - Springhill Suites - Hotel Valet**: \$24 | Book It | Details

Product Details

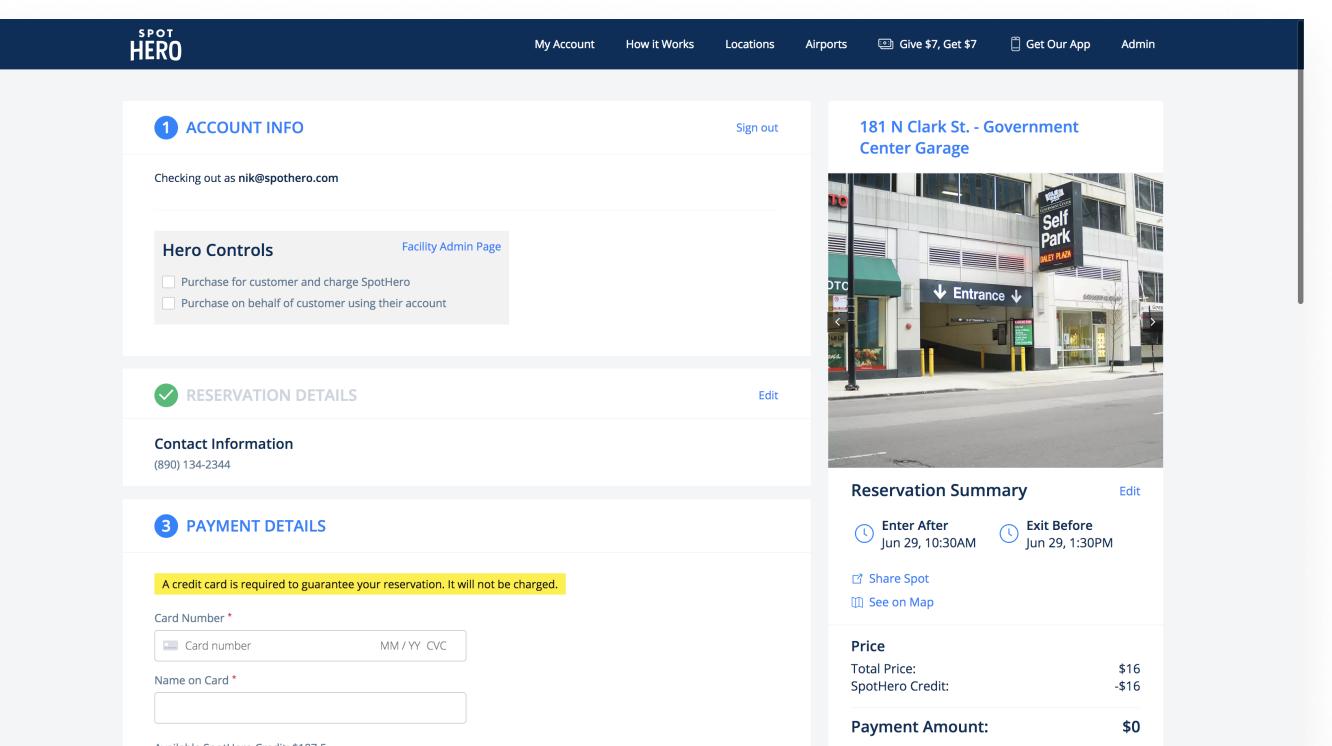


The product details page for Baltimore Parking. It shows a map of Baltimore with specific parking locations highlighted. A modal window for "245 E Fayette St. - Munsey Valet Garage" is open, displaying the following information:

- Enter After:** Fri, May 18 at 10:30pm
- Exit Before:** Sat, May 19 at 12:00am
- Total Time:** 3 hours
- \$11 Total**
- Booking Options:** Book It, Details

Below the modal, there are other parking options listed with their prices and booking buttons.

Checkout



The checkout page for a reservation. It has three main sections: ACCOUNT INFO, RESERVATION DETAILS, and PAYMENT DETAILS.

ACCOUNT INFO: Checking out as nik@spothero.com

Hero Controls: Purchase for customer and charge SpotHero (checkbox), Purchase on behalf of customer using their account (checkbox)

RESERVATION DETAILS: Contact Information (890) 134-2344

PAYMENT DETAILS: A credit card is required to guarantee your reservation. It will not be charged.

Card Number: Card number MM / YY CVC
Name on Card:

Available SpotHero Credit: \$187.5

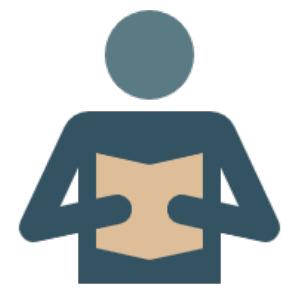
Strategy

With **no prior CRO experience**, a website full of **tech debt**, and **only 1 FE engineer** on staff, we weren't confident a big redesign would be feasible or successful in hitting our goals.

We opted for a strategy of "**renovation**," favoring experimentation & incremental improvement over a full redesign.



Targeted improvements, not a big redesign

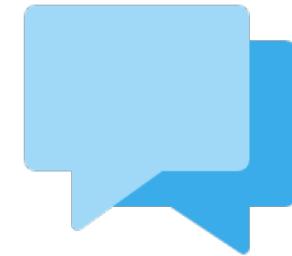


Mix in-house research with industry best practices



All new design work will be mobile-first & responsive

Project Overview



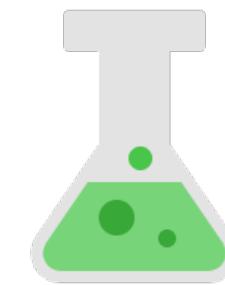
1 month

Discovery



2 months

High Priority Issues



6 months

Execution & Experimentation

Project Overview



1 month

Discovery

User Research

- User interviews & live moderated usability testing with new users (n=9)
- Issues: search, navigation, content, checkout

Secondary Learning

- Baymard Institute
- Google Ecomm. Playbook
- Optimizely & AB testing



2 months

High Priority Issues

[Serious] Product Issues

- BUG: product details URL issue
- BUG: search params persistence issues

Preparation & Tech Debt

- Prioritization work w/ PM (eg. RICE)
- Shift to server side rendering (SSR) for page speed & SEO
- Checkout lift & shift & refactor to bring into SPA and use new components



6 months

Execution & Experimentation

AB Tests: 9 Total

- Navigation & search
- List results
- Product details
- Checkout optimizations, etc.

Product Improvements & Followup

- New SpotHero Parking guarantee
- FAQ improvements
- Research: desktop usability & post-purchase

Skip to Outcomes →

Discovery Research

How do new users approach making
online parking reservations on our site?

Owner: Nik Payne, Product Designer
Audience: 9 car owners who park frequently, recruited via Respondent
Last updated: 16 January 2019

Invite PM's + Engineers to sessions

User Interview Guide

Introduction (5 min)

[Introduce myself & note taker]. During this 45 min session, we'll be asking you a few questions to understand your driving and parking habits and then we'll give you some real/hypothetical parking-related tasks with working software.

Our goal is to understand a bit about your background, and then to have you try out a website. The site was built ~4 years ago by a previous set of engineers in a couple of weeks, so we want to evaluate how effective it is. We're testing the software—not you—so don't worry if anything's confusing, and call it out.

We will be recording audio and video of this session. This recording will only be used for our purposes of relistening to see if we missed any notes. We will not associate your name with any of this research or the recording. The consent form explains your rights.

To Summarize:

1. We'll be asking you some questions about your driving/parking habits
2. We'll be giving a couple hypothetical tasks w/ live software
 - o We'll be sharing screen, giving you control of the screen. Simulating the experience of using a **mobile phone** in the browser
 - o We want you to think aloud as you go through those tasks, and **speak your mind**. Take us into your thought process, and call out any questions you have while going through the tasks (eg. "what does this term mean?"), anything that's confusing or unclear (eg. "what just happened?"), and anything else that comes to mind.
3. Feel free to ask us **clarifying questions**, or if you get **stuck** at any point
4. We'll have a little debrief at the end where we discuss what we went over

Do you have any questions about the process? [Start recording]

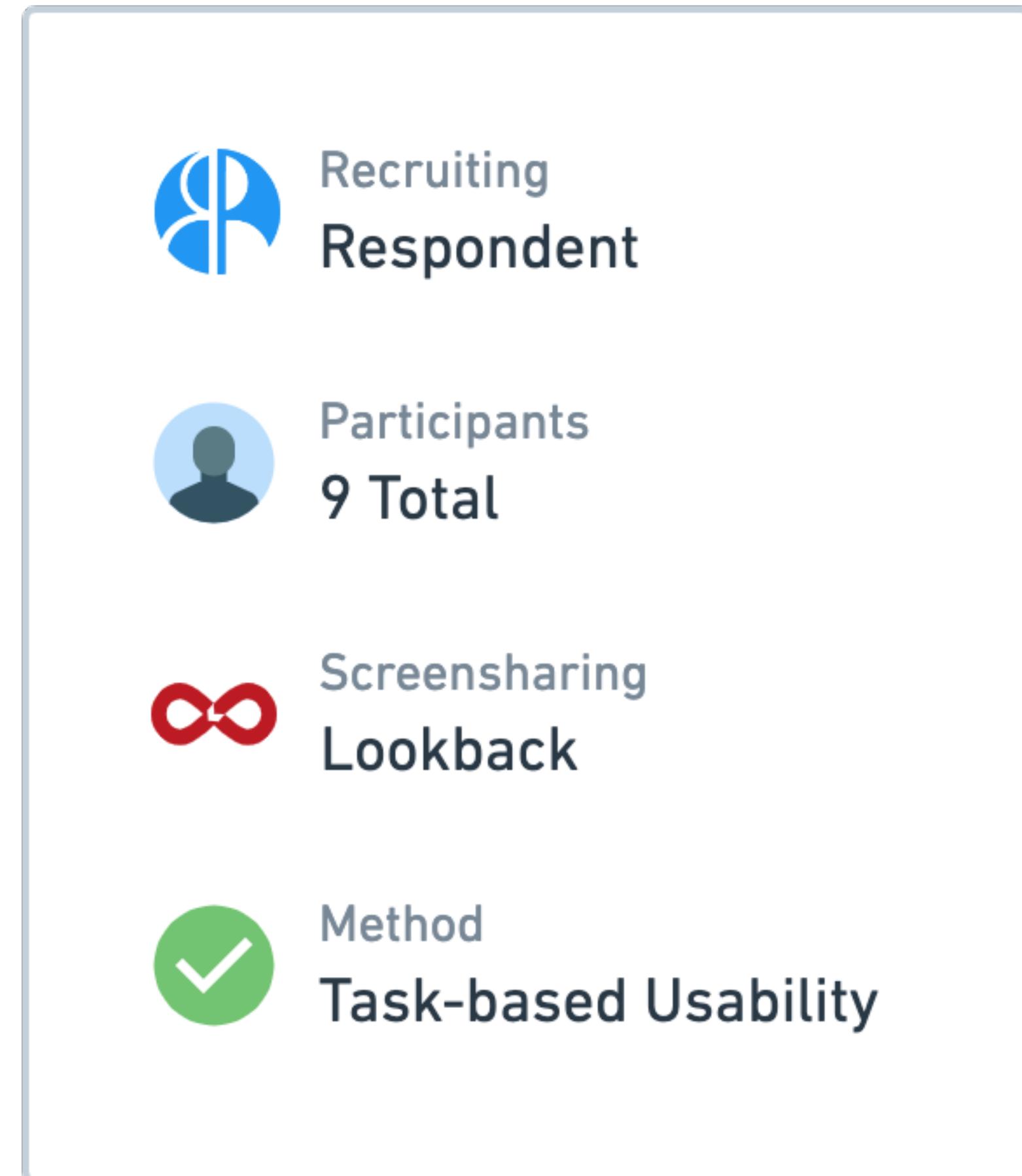
User Research

Research Goal

1. Uncover product issues
2. Understand [new] user behavior

Target Users: Car owners who live in or around metropolitan US cities who had never heard of SpotHero before.

Method: moderated, task-based usability testing using parking scenarios drawn from their experiences (n=9)



Finding 1/5



Parking, Online?

New users had a lot of **questions and concerns** about buying parking online, including the logistics of how it could work, and the legitimacy of our service.

"Like how could booking online work? It never occurred to me that it would exist."

VM, Boston

"When I show up will they know about SpotHero or look at me like I'm crazy?"

GL, Los Angeles

Finding 2/5



Burned Before

Customer experience expectations of parking were low. Users didn't expect things like our **free cancellation policy** or **live customer support**.

"I would call the garage to ask for a refund—but I don't think they would give it to me because it's SF."

GM, San Francisco

"I would expect to get full refund minus a service fee, if it's too close to the trip I expect 0-50% of it returned, similar to Airbnb."

BH, New Jersey

Finding 3/5



Guarantee Me

Although 5/9 of the new users I spoke to organically mentioned wanting a **guarantee of their parking**, we didn't actually have one.

"I would want a guarantee that I had an spot and nobody would be in that spot"

BH, New Jersey

"I worry, because I know how shady Joe's parking is, I would worry that they over sell spots."

JD, Los Angeles

Finding 4/5



Feeling Insecure

Despite using Stripe, a leading and secure payment provider, our checkout had few **visual indications of being secure**, which gave new users pause.

"Secure checkout is a big factor for me [when paying online]. I'd want to be able to do paypal..."

GM, San Francisco

"[I would want to see something] to gain my trust...maybe testimonials or other brands that endorse it...especially if [I am] putting payment info into it"

BH, New Jersey

Finding 5/5



“Lots” of Confusion

Throughout our booking funnel, usability and content issues, particularly around **pricing, facility info and redemption**, added confusion and eroded trust.

“It doesn't SAY what the price is for. I have to assume and it isn't clear if it's the hourly price or the total price.”

VM, Boston

“not sure what mobile parking pass means...so you would like show them your phone?”

TO, Washington DC

Problem Areas



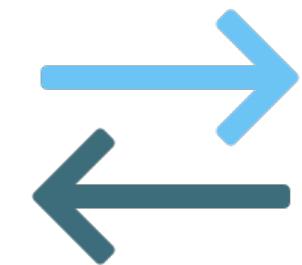
Search

- Users not modifying search defaults
- Unclear labels
- Persistence issues across pages
- Tap target issues



Content

- Many content & info hierarchy problems
 - Search labels
 - List results
 - Product details
- Users want info around redemption



Navigation

- URL issue causing users to leave site
- Search params issue
- Can't find map view
- Can't find filters

Checkout

- Perceived as not especially secure
- Desire for more secure payment methods
- Unclear what happens next

The screenshot shows the SpotHero mobile application interface. At the top, there's a blue header with the 'SPOT HERO' logo. Below it is a search bar containing the text 'Merchandise Mart Parking'. Underneath the search bar, there are fields for 'Start Time' set to 'Today, 11:00am' and 'End Time' set to 'Today, 2:00pm'. The main content area displays a list of parking options:

- \$18 / 0.07 mi walking**
353 W Hubbard St. - Valet
Valet Accessible + 2
2 spots left
- \$16 / 0.07 mi walking**
325 W Wolf Point Plaza - Wolf Point Garage
EV Charging Available + 4
- \$14 / 0.10 mi walking**
360 W Hubbard St. - Hubbard Place Garage
On Site Staff + 3
- \$14 / 0.12 mi walking**
221 W Hubbard St. - Garage

At the bottom of the screen, there's a promotional message: 'Love SpotHero? Install our app!' followed by a 5-star rating and '(1,345)' reviews, with a blue 'GET' button.

Annotations and Quotes:

- "JM: 'oh. Here it is...and voila! a map'" (pink box)
- "BH: 'is there a map feature on here?...oh duh—here it is. Right in front of me'" (pink box)
- "BH: I like having start and end time prominent up top" (green box)
- "VM: I'm not sure what start time and end time mean" (pink box)
- "VM: 'Oh, this is sorted by distance. Now walking distance makes sense'" (pink box)
- "VM: I want to check out the site first to know what I'm dealing with [closes app download modal]" (yellow box)
- "GL: I think I'd probably get a discount for downloading the app...it would also save your information and let you book faster" (yellow box)
- "JM: I assume it's \$15/hr...It doesn't SAY what the price is for. I have to assume and it isn't clear if it's the hour or total. It would be better to know what you're paying for" (pink box)
- "KT: The +5, +3 made me think but I assumed it was the number of spots" (pink box)
- "JM: Knowing how many spots are available—that's important" (yellow box)
- "JM: it's giving me walking distance, but walking to what? I haven't entered a destination yet. Maybe it's to the center" (pink box)
- "VM: Tags were the first thing that stood out - that kind of stuff is important, especially when parking in the sketchier areas of DTLA. Interested to see what" (green box)

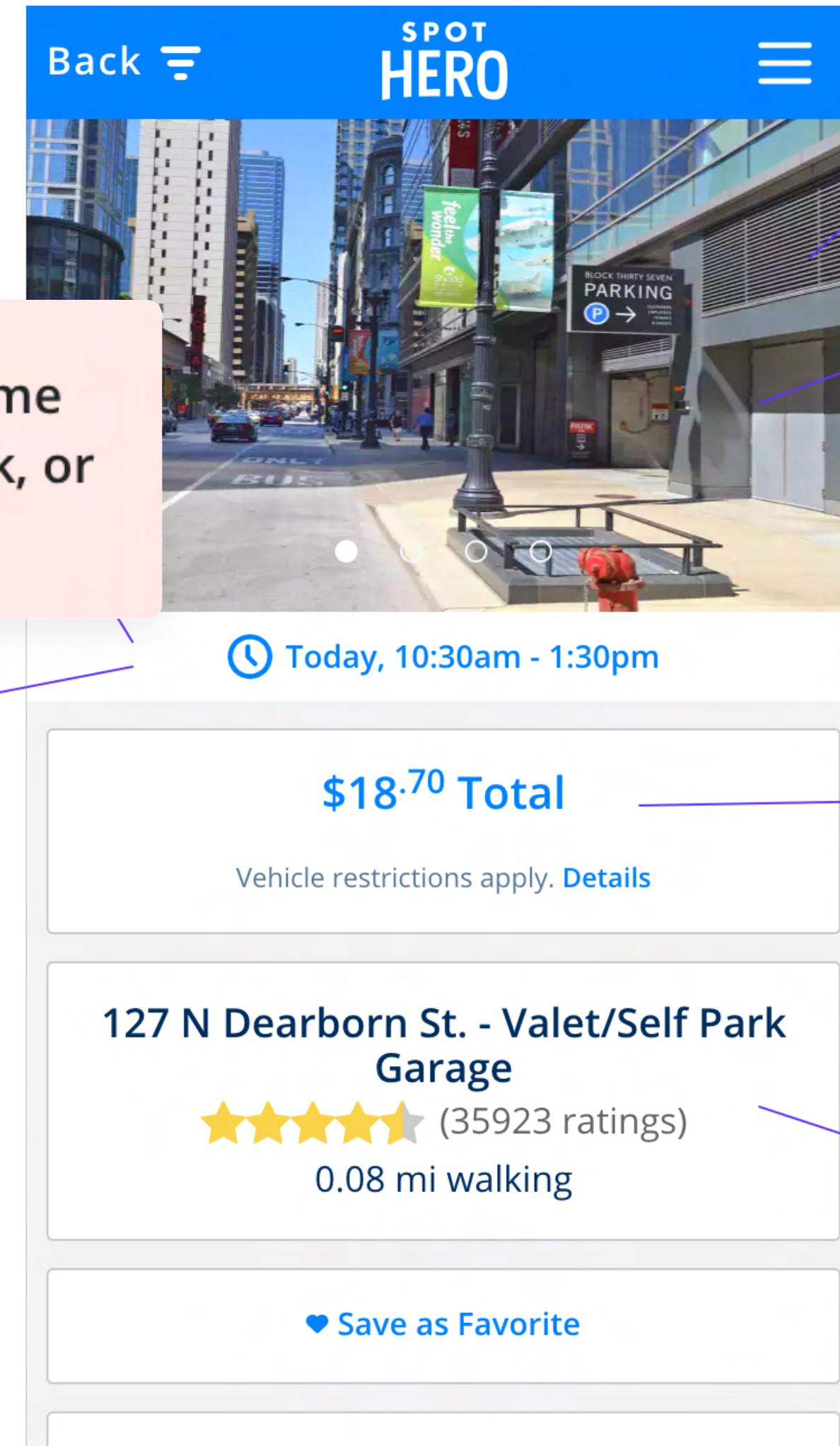
“ GL: I think this is the open and close time...what if I wanted to stay for the whole day?...oh that's a 2hr time period

“ GL: This is the time limit...the times that

“ VM: I don't know if this is the start time and end time for when I want to park, or when the lot is open

“ It didn't carry over my time correctly, because I selected 5-11:30, but now I have it from 5-5am "bug in the system."

“ Is gave me 24hr of parking but it doesn't say that it's open all night. So if I'm exiting the next day, is it open at 11:30 PM? That would be useful.



“ JM: It doesn't show me how many spots are available at this location

“ TO: I like that the pictures are bigger without me having to click it...so I know what I'm looking for when I'm driving to

“ VM: [updates times]...Interesting, the prices went up, im guessing it's probably a premium for SpotHero

“ BH: Are these ratings from Spothero reviews or Google reviews?...it makes me feel better that they're from SpotHero customers since I know it's coming from people who are in my same

Lastly

The screenshot shows the Google UX Playbook for Retail. At the top left is the Google logo. Below it, the title "UX Playbook for Retail" is displayed in large, bold, dark font. Underneath the title, the subtitle "Collection of best practices to delight your users" is shown in a smaller, dark font. To the right of the title, there is a grid of various user interface wireframes and design components, likely from different retail websites. The overall background is white.

Google Ecom. Playbook

Google's ecommerce playbook is great. I used their template to audit our website, find patterns.



Bayard Institute

To avoid reinventing the wheel, I referenced many of the Bayard Institute's ecommerce studies.

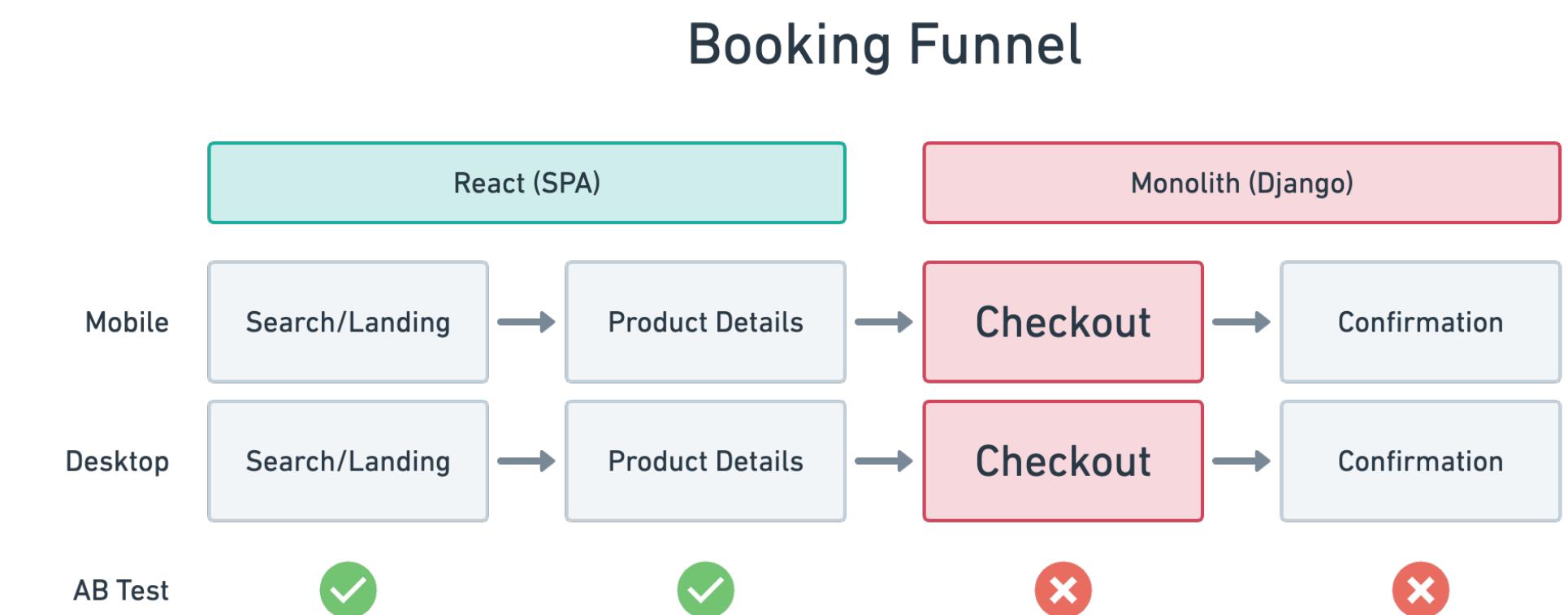
The screenshot shows the Optimizely Sample Size Calculator. At the top, it says "Evan's Awesome A/B Tools (home)". Below that is a "Sample Size Calculator" section with links to "Chi-Squared Test", "Sequential Sampling", "Sample T-Test", "Survival Times", and "Count Data". A call-to-action button "Download A/B Buddy today" is visible. The main calculator area asks "Question: How many subjects are needed for an A/B test?". It shows "Baseline conversion rate: 20%" with a 20% bar, "Minimum Detectable Effect: 5%" with a 5% bar, and "Sample size: 1,030 per variant". It also includes sections for "Statistical power 1-β" (80%) and "Significance level α" (5%). A note at the bottom says "The Minimum Detectable Effect is the smallest effect that will be detected (1-β)% of the time." There are radio buttons for "Absolute" and "Relative" effects, and a note that "Conversion rates in the gray area will not be distinguishable from the baseline." The Optimizely logo is at the bottom right.

AB Testing Tools

I watched Optimizely tutorials on AB testing, and learned about the things like sample sizes, MDE's.

High Priority Product Issues

Before we redesign anything, what needs to be fixed or improved?



Issue 1/3

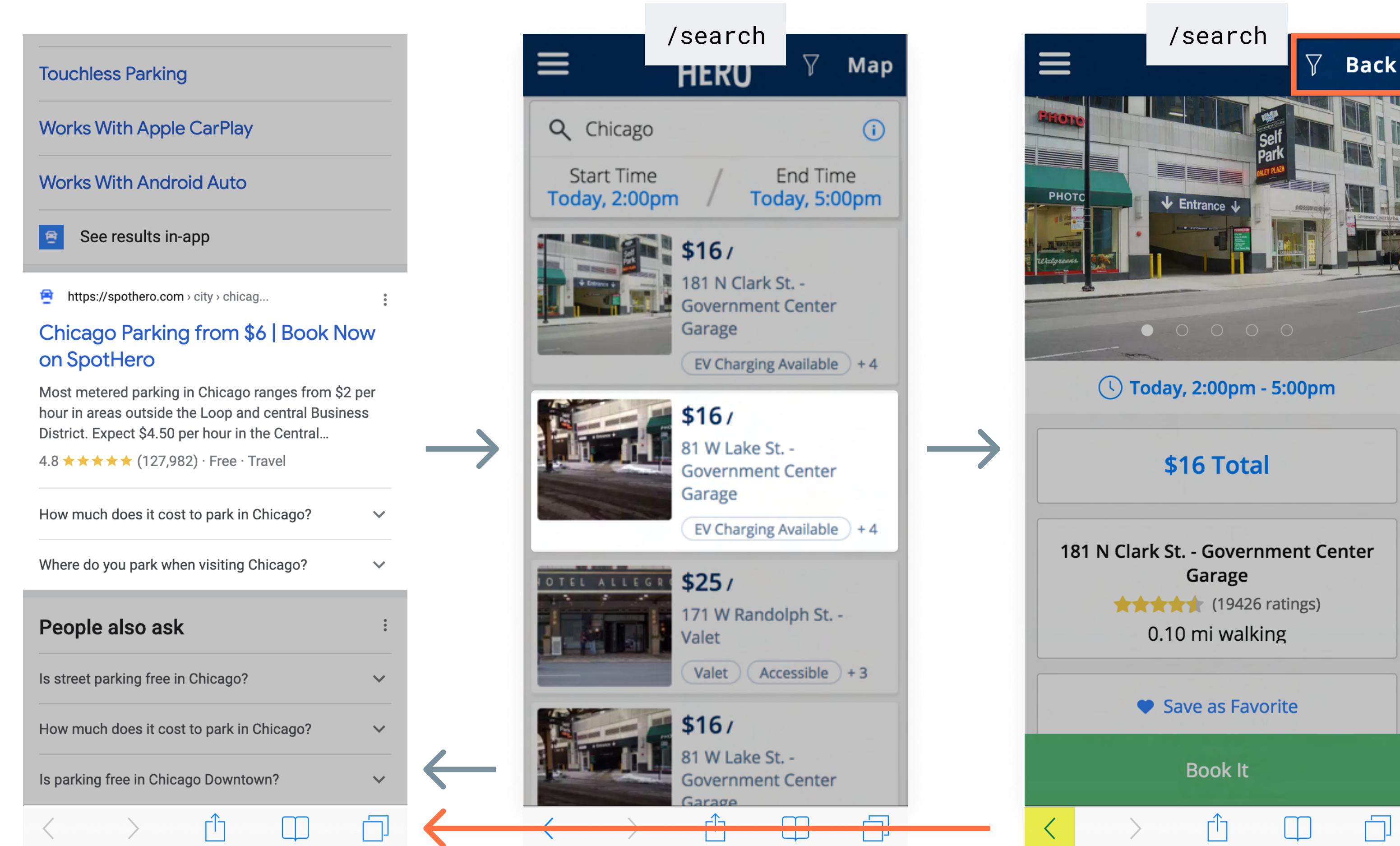
Navigation

Our “spot details” page (product details) page was originally built as a modal on desktop.

The screenshot shows the SpotHero website's search interface. At the top, there's a header with the SpotHero logo, a search bar, and navigation links for 'count', 'How it Works', 'Locations', 'Airports', 'Give \$7, Get \$7', and 'Get Our App'. Below the header, a search bar is set to 'Address, landmark, or neighborhood' with the placeholder '06/19/2018' and time dropdowns for '04:00 PM' to '06/19/2018' and '07:00 PM'. A 'Search' button is present. The main content area displays a map of Baltimore with several parking spots marked by blue circles. One specific spot is highlighted with a larger circle and labeled '\$11 Total'. To the left of the map, a sidebar lists four parking options with their names, prices, and booking buttons ('Book It'). The sidebar also includes a 'Filter Spots' dropdown set to 'Distance' and a 'Distance' input field. A modal window is open over the map, showing detailed information for a spot at '3450 N Lake Shore Dr. - Hawthorne House Valet'. It includes a thumbnail image of the building, a summary table with 'Enter After: Fri, May 18 at 10:30pm', 'Exit Before: Sat, May 19 at 1:30am', 'Total Time: 3 hours', and a price of '\$11 Total'. It also contains a 'Book It' button, a 'Save as Favorite' link, and a 'Things You Should Know' section with bullet points about height restrictions, facility policies, and vehicle size constraints. A 'See Larger Images' link is also provided.

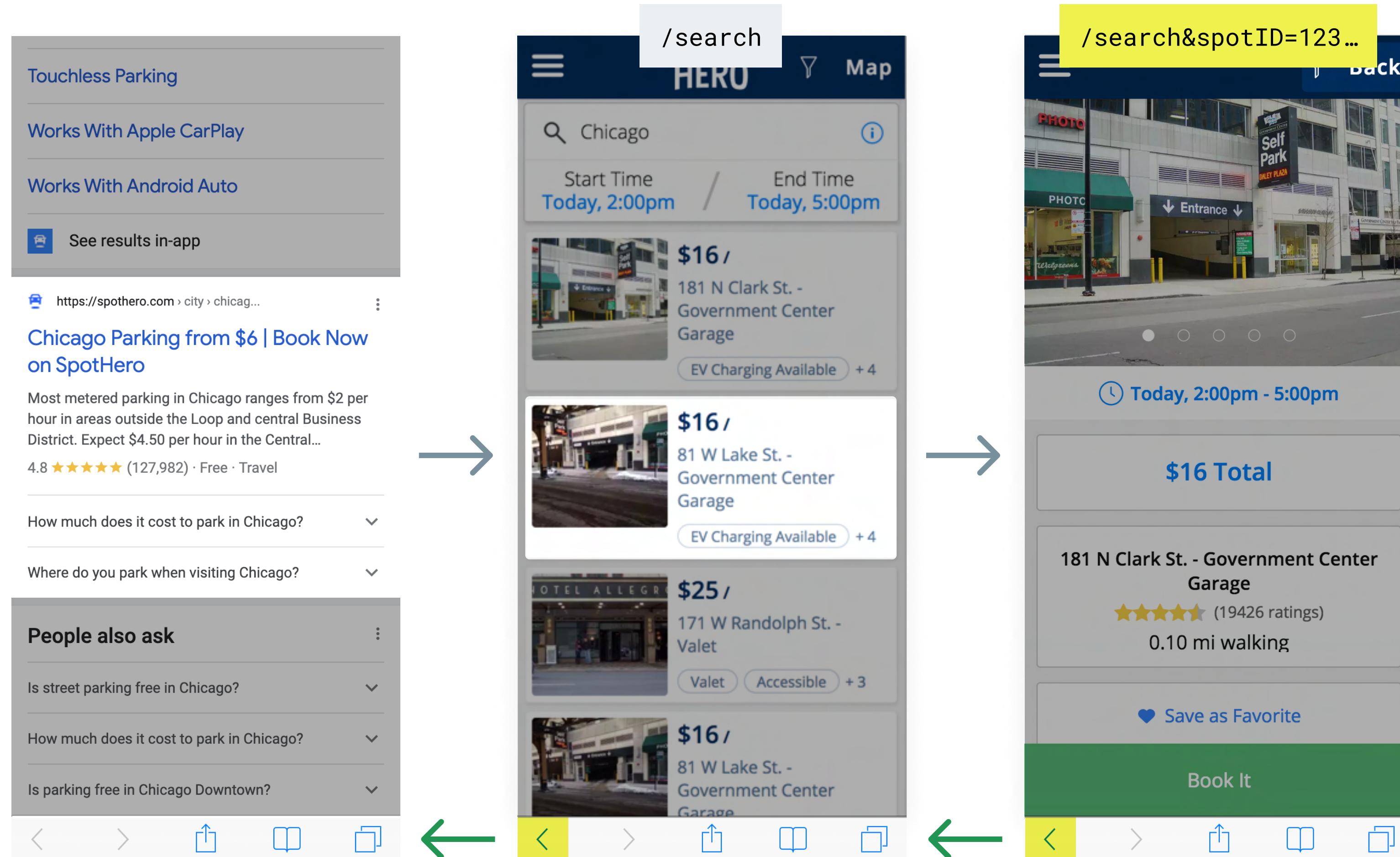
This modal was **styled to look like a page** on mobile web.

Because it lacked its own URL, users were **accidentally leaving the site** when they hit the browser back button to get to the list!



Solution

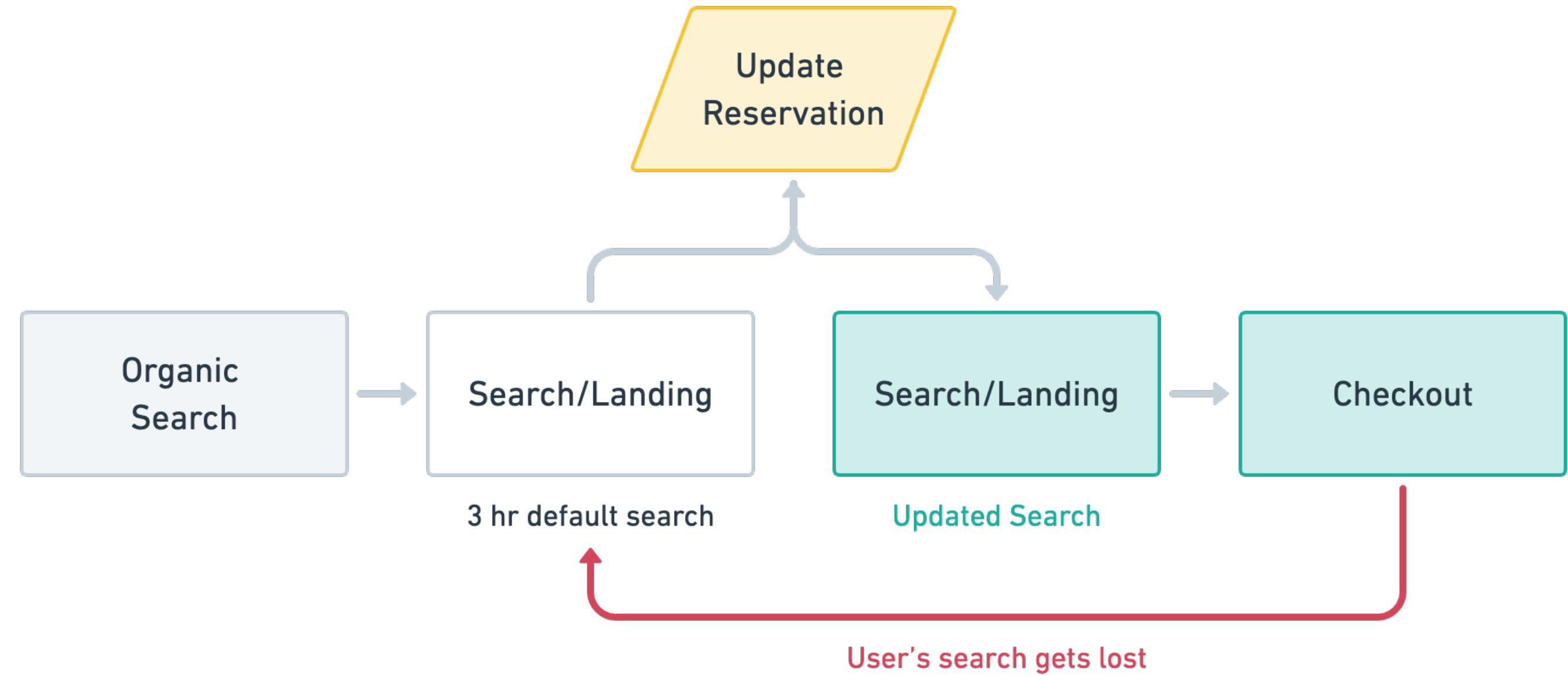
We gave our product details page a **new URL parameter** for the browser could register the change in context.

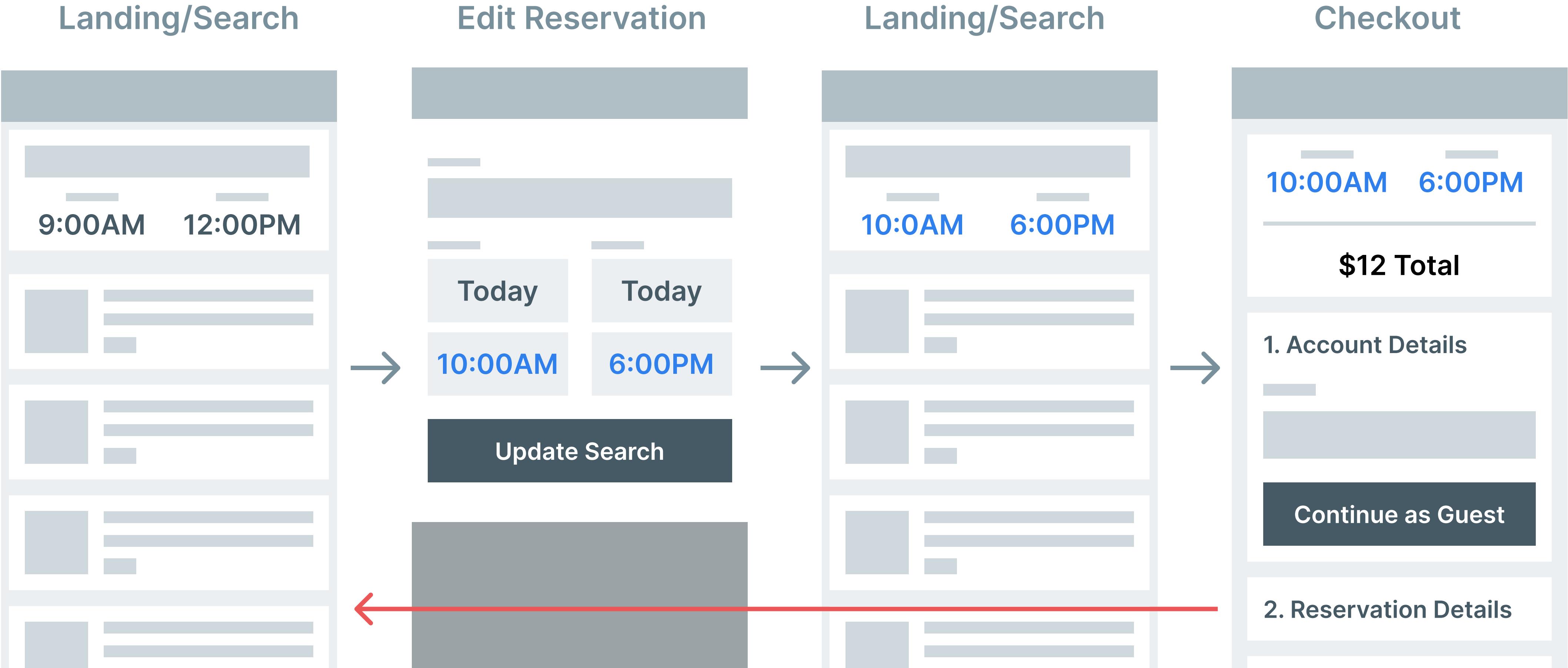


Issue 2/3

Persistence

Users who had taken the time to updated their search times lost them if they backed out of checkout.





Solution

New URL parameters to handle search state, and round of QA to make sure it worked as expected.

Example: Jan 30, 12:30PM - 3:30PM

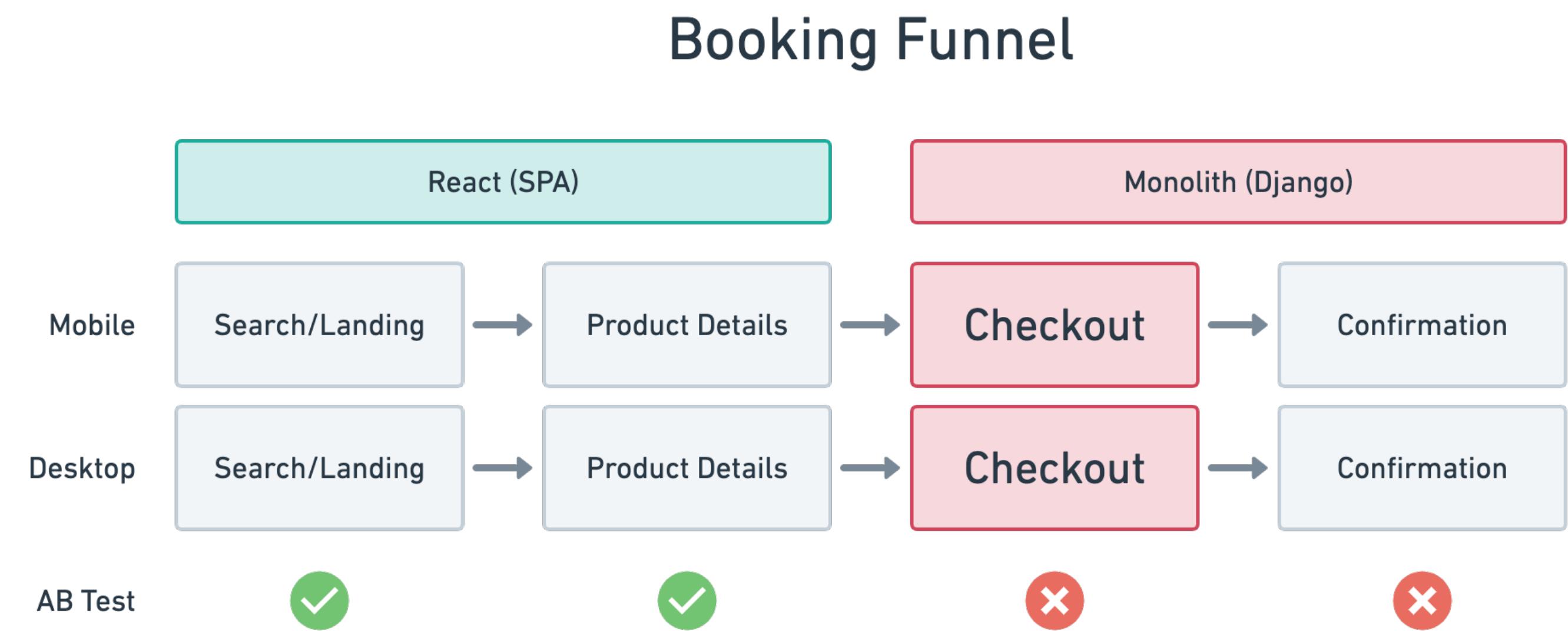
&starts=2020-01-30T12%3A30
&ends=2021-01-30T15%3A30

Issue 3/3

Split Funnel

Our booking funnel was fractured across tech stacks.

Checkout wasn't part of our React codebase, which meant we wouldn't be able to run AB tests on it using Optimizely.

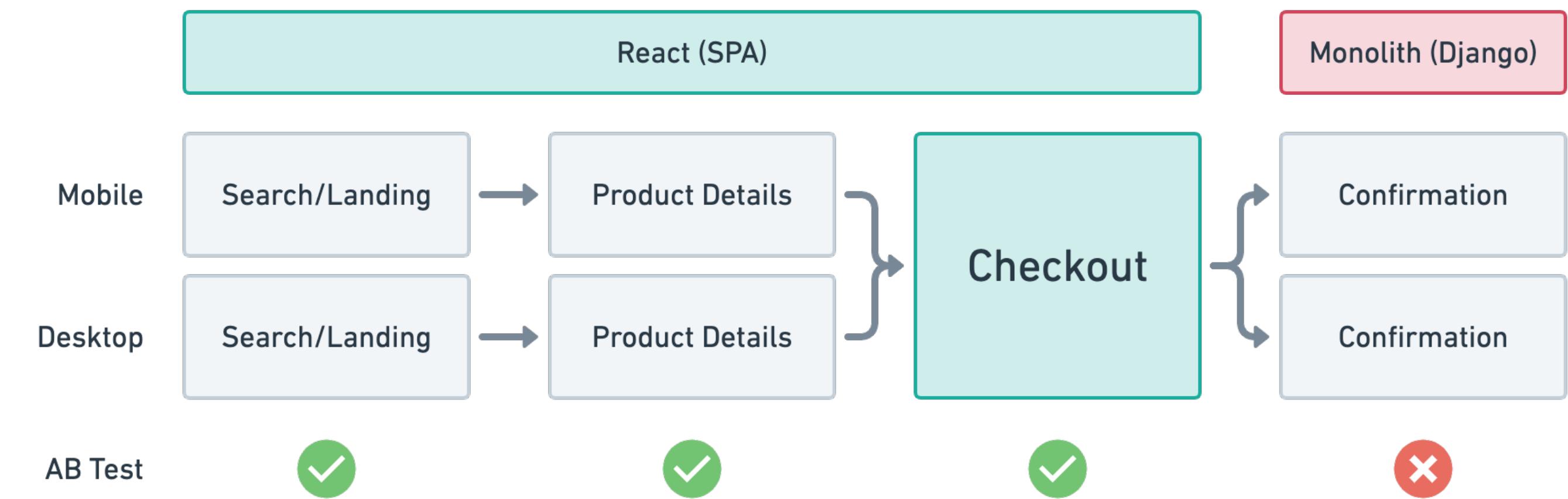


Solution

A “lift and shift.” I designed a **new responsive checkout** using our new react library.

This helped chip away at tech debt, and set us up to run experiments on our funnel.

Booking Funnel



SPOT HERO

\$16 Total

Fri Jun 29 at 10:30am -
Fri Jun 29 at 1:30pm

[Change time or date](#)

[Share Spot](#)

SPOT DETAILS

181 N Clark St. - Government Center Garage

ACCOUNT INFO

nik@spothero.com
[Change](#)

Phone (optional)

We'll text your reservation details.

[Continue to Payment](#)

SPOT HERO

[My Account](#) [How it Works](#) [Locations](#) [Airports](#) [Give \\$7, Get \\$7](#) [Get Our App](#) [Admin](#)

1 ACCOUNT INFO

Checking out as nik@spothero.com [Sign out](#)

Hero Controls [Facility Admin Page](#)

Purchase for customer and charge SpotHero
 Purchase on behalf of customer using their account

2 RESERVATION DETAILS [Edit](#)

Contact Information
(890) 134-2344

3 PAYMENT DETAILS

A credit card is required to guarantee your reservation. It will not be charged.

Card Number * Card number MM / YY CVC

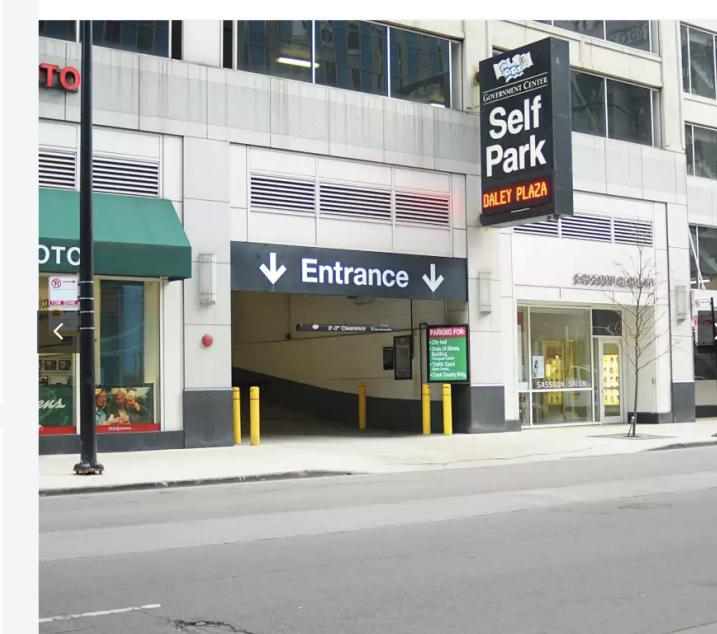
Name on Card *

Available SpotHero Credit: \$187.5 [Add promo code](#)

[Reserve Now](#)

By selecting "Reserve Now" you are agreeing to SpotHero's [Terms and Conditions](#).

181 N Clark St. - Government Center Garage



Reservation Summary [Edit](#)

Enter After Jun 29, 10:30AM Exit Before Jun 29, 1:30PM

[Share Spot](#) [See on Map](#)

Price
Total Price: \$16
SpotHero Credit: -\$16

Payment Amount: \$0

 SPOT
HERO

Back

 WallyPark ORD Uncovered
Valet
[View on Map](#)

Reservation Summary [Edit](#)

Enter After Exit Before
8:00 AM → 6:00 PM
Sat, Jun 6 Sat, Jun 13

Subtotal \$14

Total: \$14

1 Account Details [Edit](#)

Checkout as a Guest

Email

Where should we email your parking pass?

SPOT
HERO

My Account How It Works Cities Monthly Airports Stadiums Get the App

1 Account Details

Checkout as a Guest

Email

Where should we email your parking pass?

[Continue as Guest](#)

or

Sign In or Create an Account

Email

Password

Stay signed in [Forgot Password?](#)

[Sign In and Continue](#)

[Create an Account](#)

Sign In with Social Account

 Google  Facebook

2 Reservation Details

3 Payment Details

 WallyPark ORD Uncovered
Valet
[View on Map](#)

Reservation Summary [Edit](#)

Enter After Exit Before
8:00 AM → 6:00 PM
Sat, Jun 6 Sat, Jun 13

\$20 x 7 days \$140
Taxes: \$35
SpotHero credit: -\$43
Promo code applied: -\$30

Total: \$132

Execution & AB Testing

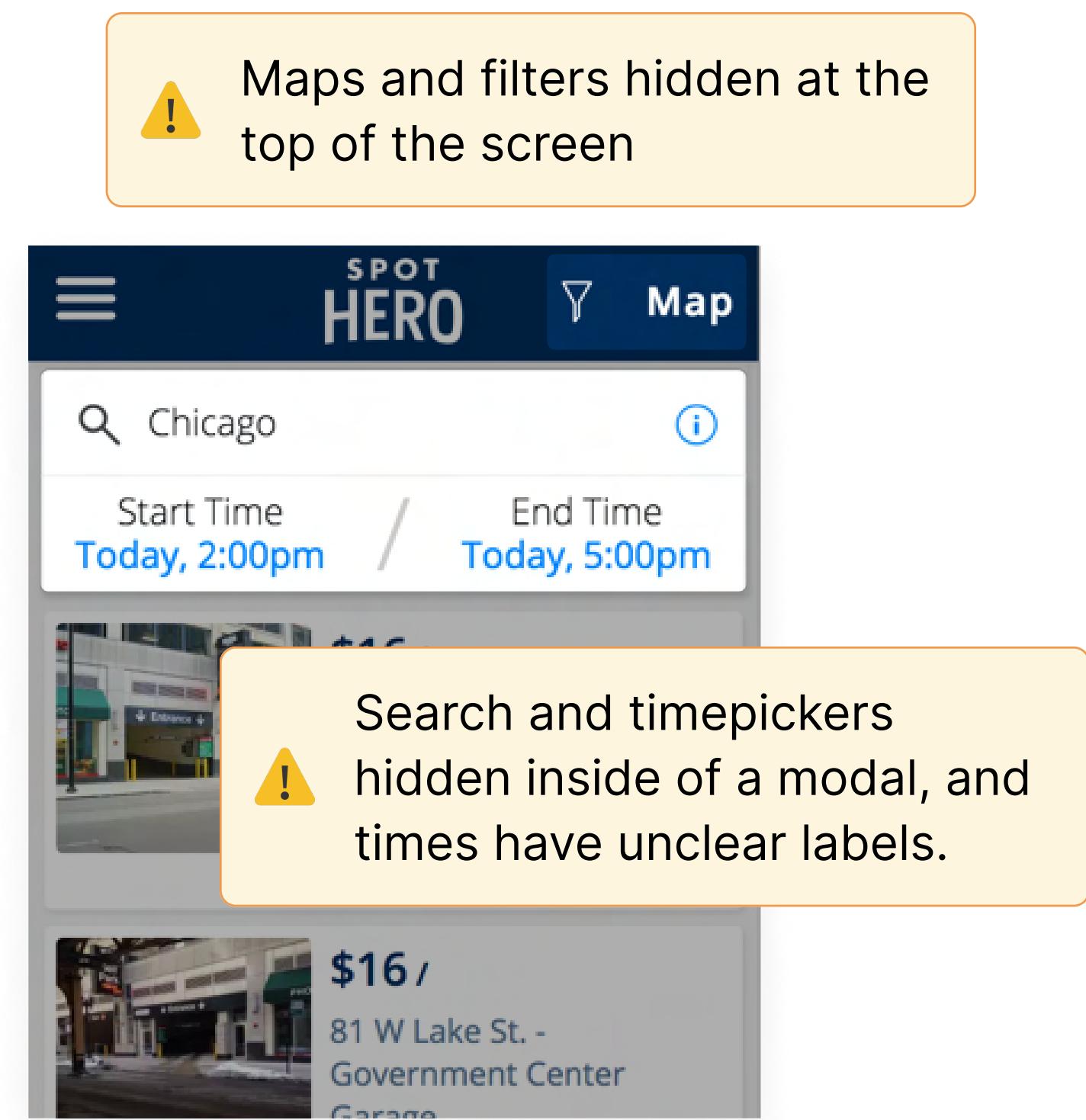
How might we improve the product and
create learnings via experimentation?

Variation Key *	Description	Traffic Distribution
mw_spot_cards_*	star ratings AND location type	25 %
<hr/>		
Feature		
mw spot cards		<input checked="" type="button"/> On
mw_spot_cards		
Variable Key	Value	
distance	True	<input type="button"/>
Boolean		
total_price	True	<input type="button"/>
Boolean		
star_ratings	True	<input type="button"/>
Boolean		
access_hours	False	<input type="button"/>
Boolean		
garage_type	True	<input type="button"/>
Boolean		
amenities	False	<input type="button"/>
Boolean		
CTAs	False	<input type="button"/>
Boolean		

Example 1/4

Search/Navigation

Users were missing key steps like modifying our search defaults, and had difficulty finding the map view.



"I would like to use the map because these streets are long and you want to be on the proper side of the street."

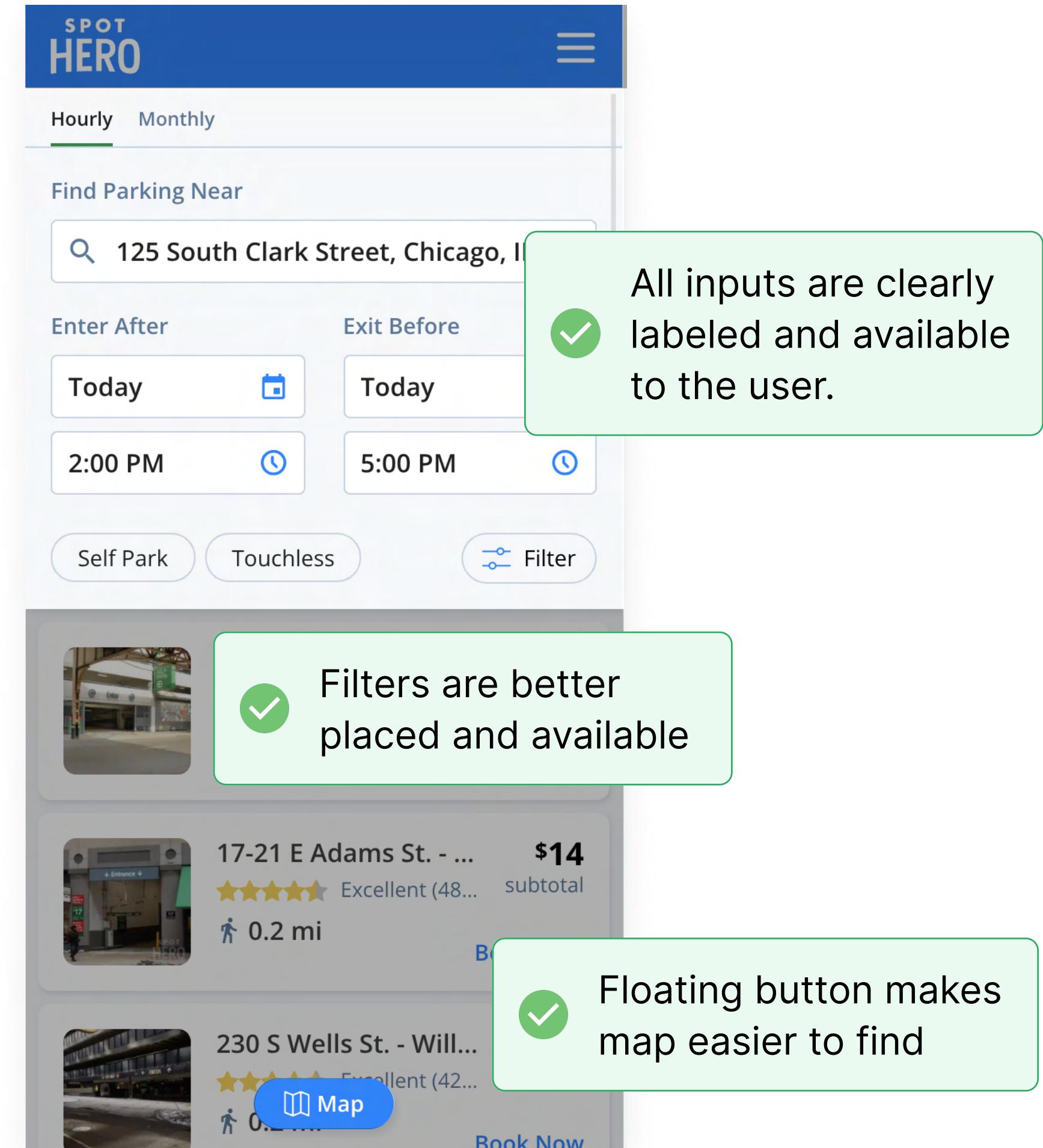
JM, San Francisco

Solution:

- New responsive search/time pickers displayed inline to improve clarity & booking speed
- Map button more discoverable

Outcomes:

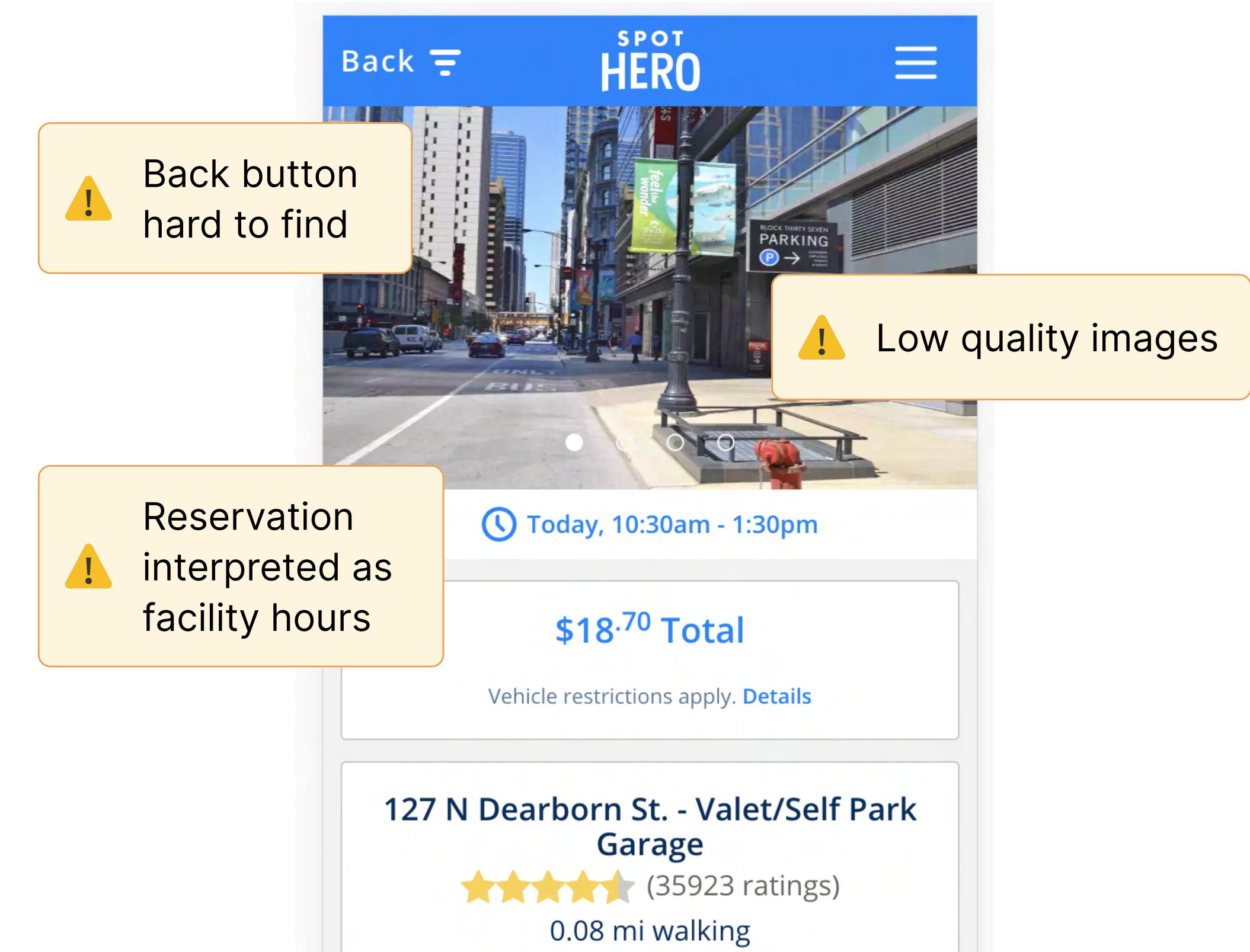
- No hit to conversion
- Increased use on map view



Example 2/4

Product Details

Users had confusion understanding important content on our product details (“spot details”) pages.



“I think this is the open and close time? What if I wanted to stay for the whole day...”

JM, San Francisco

Solution:

- New responsive page with improved layout, content hierarchy & visual design
- New footer with common FAQ's and trust-builders

Outcomes: +100bp gain across mobile web and desktop.

The screenshot shows a mobile web page for a parking reservation. At the top is a header with the "SPOT HERO" logo and a menu icon. Below the header is a large image of a multi-story parking garage. To the left of the image is a circular arrow icon with a blue arrow pointing left, and to the right is a three-dot menu icon. Below the image, the address "183 W Monroe St. - Valet/Self-Park Garage" is displayed, along with a "Excellent (13,897)" rating and a distance of "0.2 mi". A "Parking Reservation" section shows a price of "\$18 subtotal" for the time "Today 6:30 PM - 9:30 PM". A green "Book Now" button is below this. Below the reservation section is a "Things You Should Know" list with the following items:

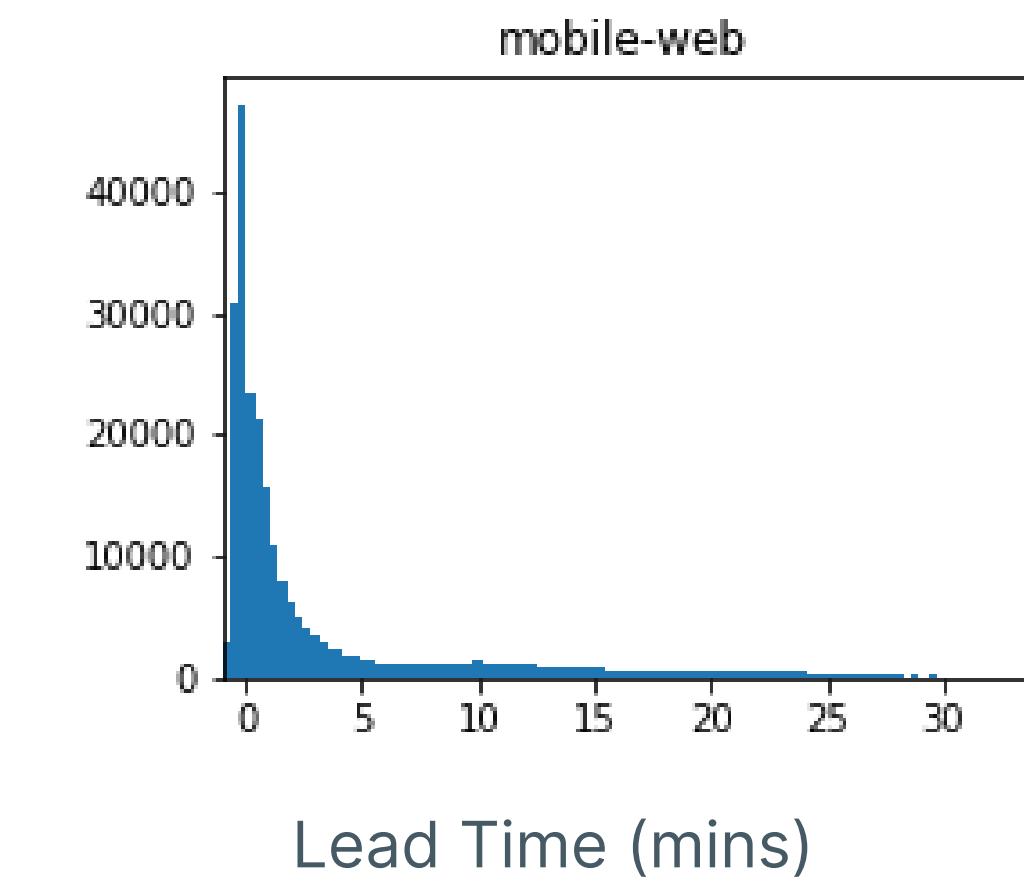
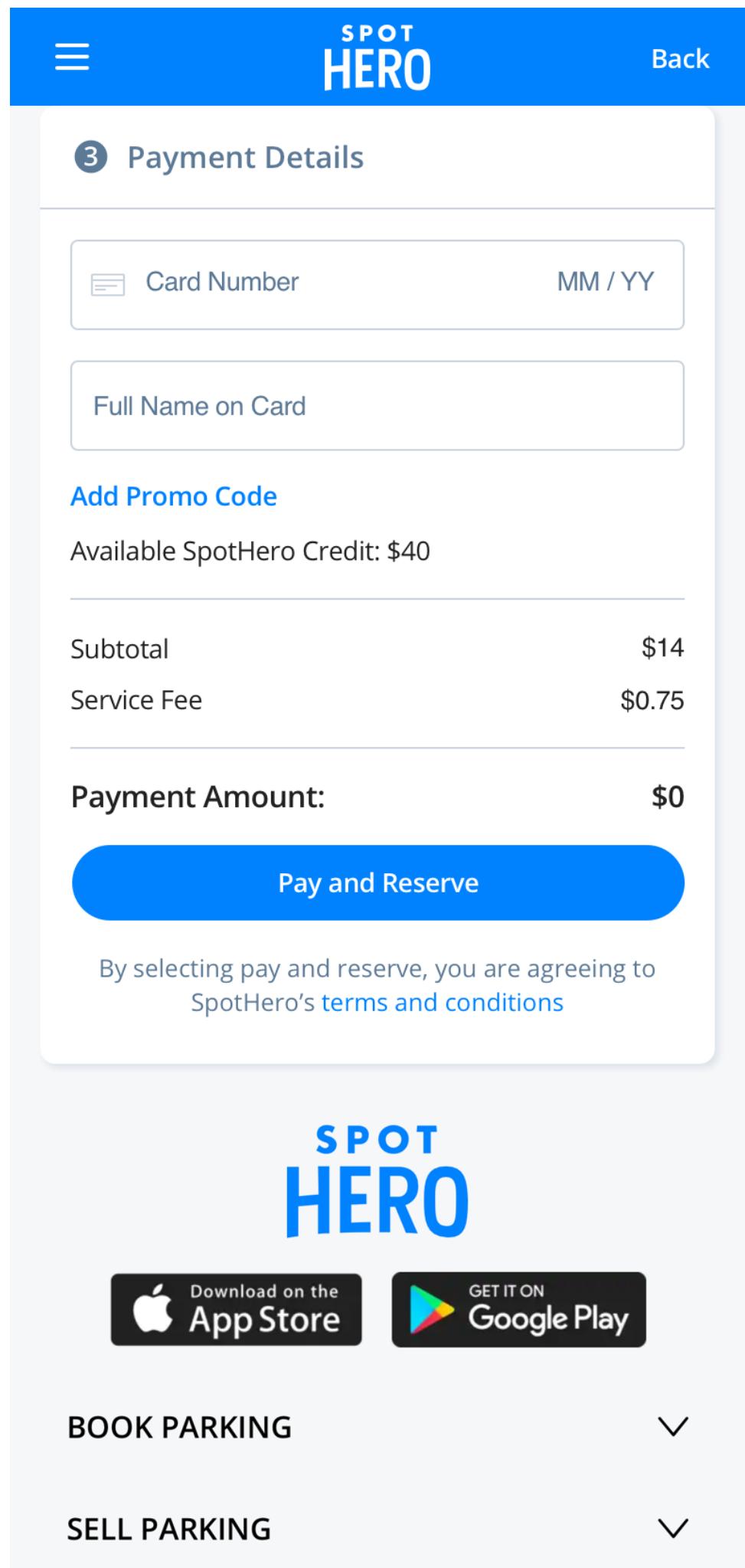
- Height Restriction: 6' 10"
- This facility does NOT allow in/out privileges. You CANNOT enter & exit more than once.
- All trucks and vehicles that take up more than one parking space will be charged an additional \$10.00 "oversize fee" on-site.

On the right side of the page, there are sections for "Amenities" (Self Park, Valet, Lot - Uncovered, On-Site Staff), "Getting There" (with a note about the location being at the intersection of Monroe and Wells, just before the Northern Trust building), and "Content to boost trust" (with a checkmark icon). At the bottom right is a Norton Secured logo with the text "powered by digicert".

Example 3/4

Checkout

Our checkout page worked, but it had distractions, didn't look very secure, and wasn't optimized for our users, who tend to book parking on short notice.



"[I would want to see something] to gain my trust...especially if I'm putting payment info into it"

BH, New Jersey

Enhancements:

- Optimized for guest checkout
- New distraction-free nav and footer
- Added Apple and Google Pay
- Added security reassurances
- Value props (eg. “free cancellation”)
- Apple/Google Pay integration
- Trust seals

Outcome: **+450bp** gain across mobile web and desktop

SPOT HERO Secure Checkout

Reservation Summary Edit

71 W Monroe St - Italian Village Valet
Thu, Dec 23, 6:30 PM
Thu, Dec 23, 9:30 PM

Subtotal	\$16.00
Service Fee <small>i</small>	\$0.75
Total	\$16.75

✓ Free cancellation up to your start time
✓ Easily edit or extend your reservation
✓ Excellent customer support

✓ Account Info Sign in

Checking out as guest nikolasapayne@gmail.com [Edit](#)

✓ Reservation Details Edit

Vehicle Info

Trust seals and security indicators

Norton SECURED powered by digicert

Subtotal \$16.00
Service Fee i \$0.75
Total \$16.75

Add promo code

Choose payment method:

Apple Pay
 Credit or debit card
 Secure and encrypted payment

Apple Pay

By purchasing, you agree to SpotHero's [Terms and Conditions](#) and [Privacy Policy](#).

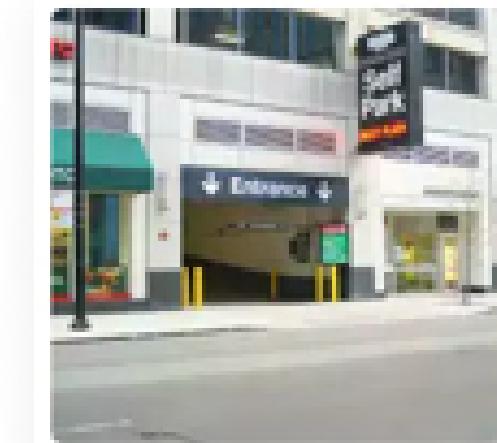
SpotHero ©2021
844-324-SPOT (7768) Daily, 6am – 11pm CST

Example 4/4

List Results

Our list results were reeaally bad. Users weren't clear on even the basics, like how pricing worked.

Mobile Web



\$16 /

181 N Clark St. -
Government Center
Garage

EV Charging Available + 4



Unlabeled prices caused confusion around cost

Desktop



215 E Fa



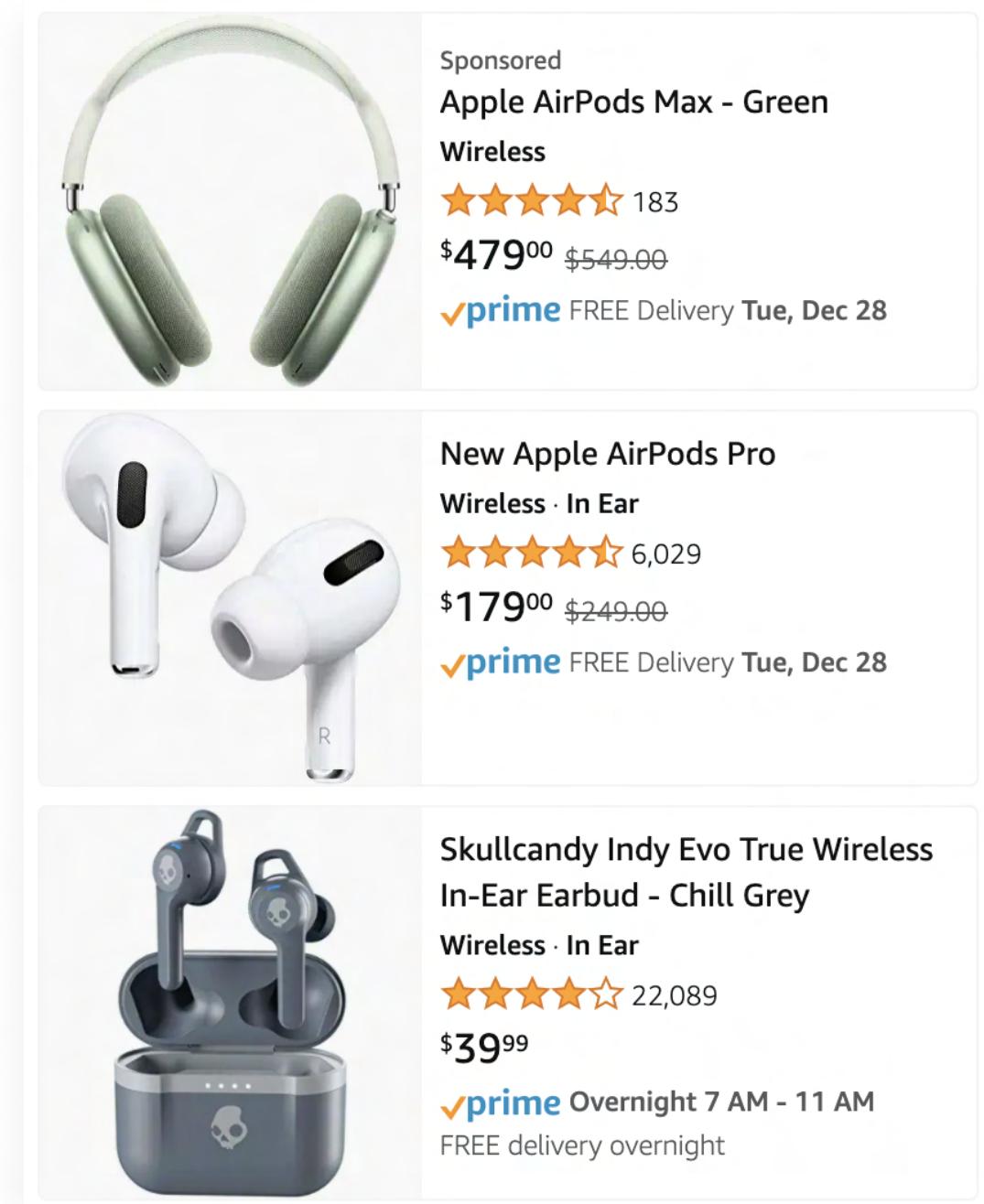
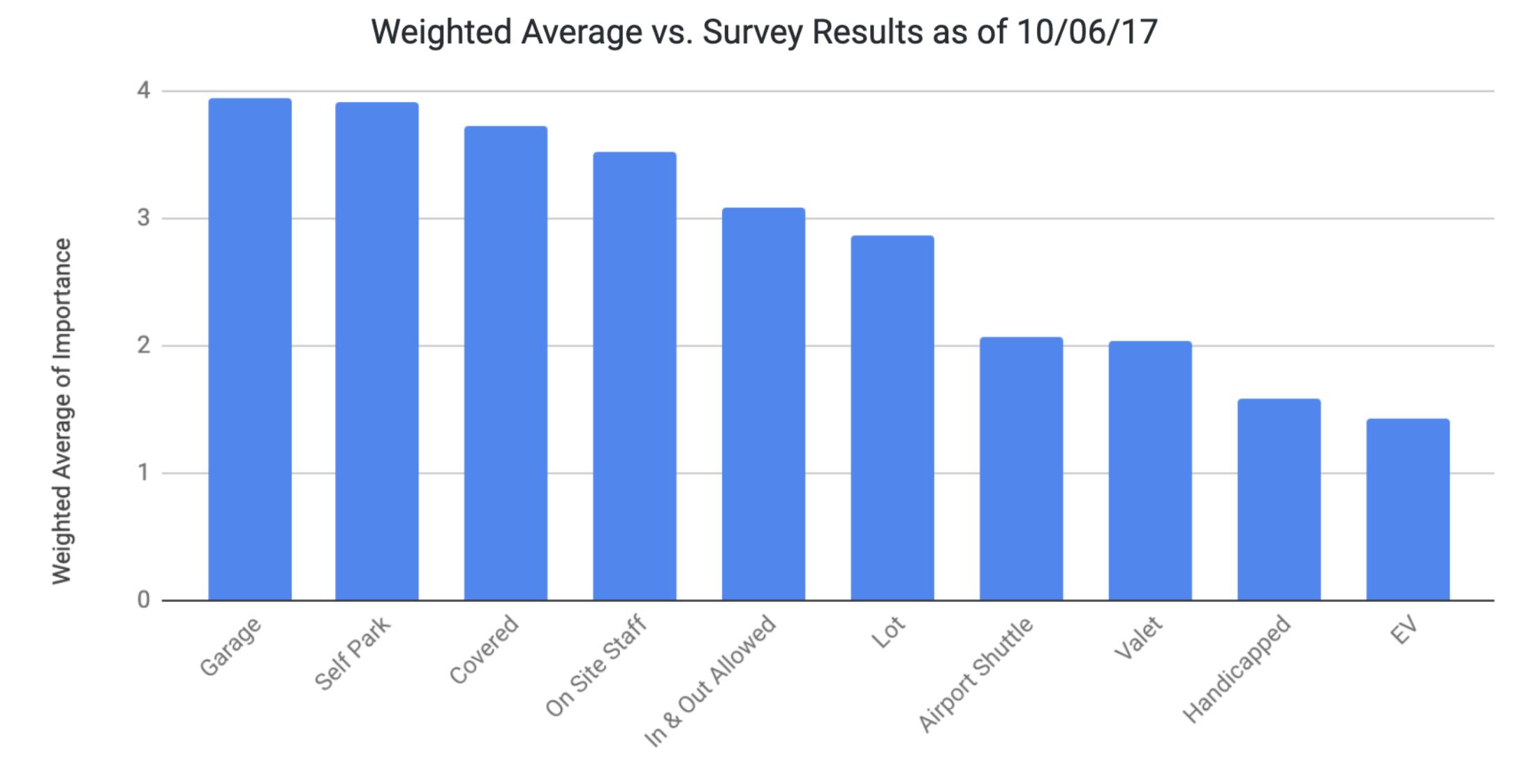
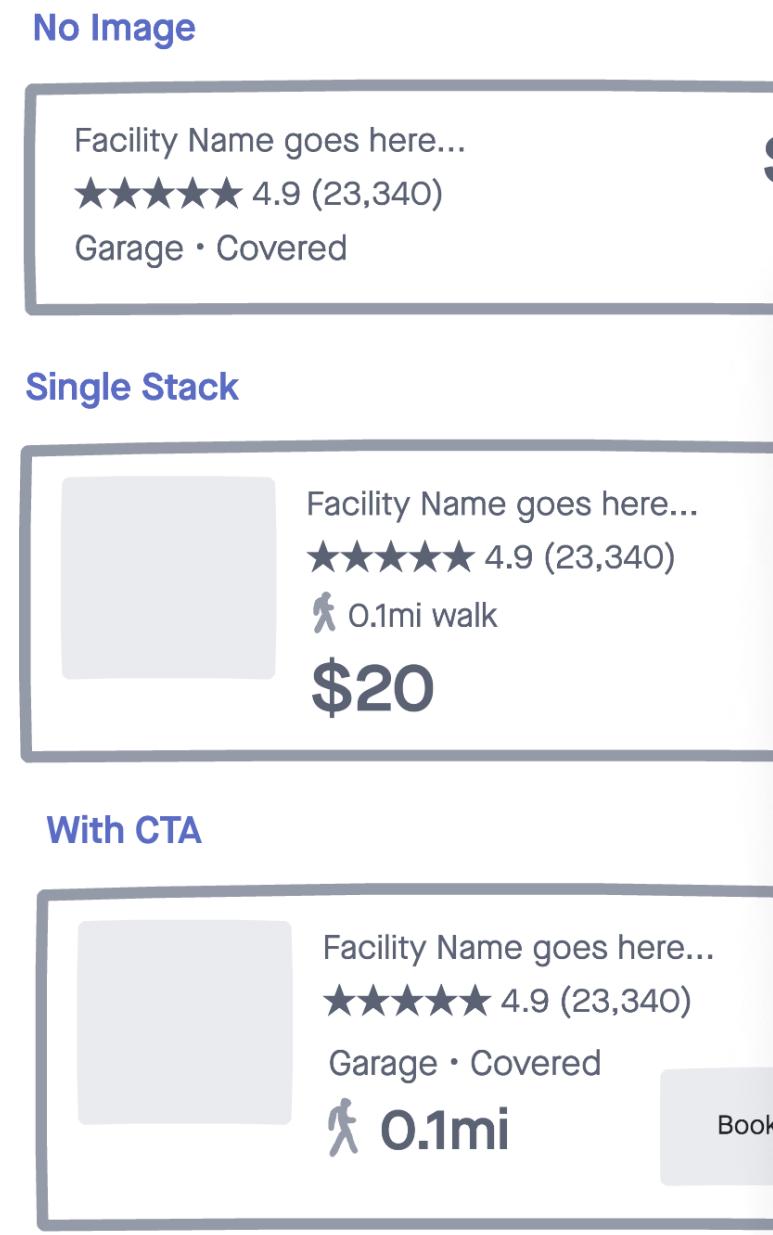
\$8 | Book It Details



Unlabeled amenity icons were neither clear nor helpful

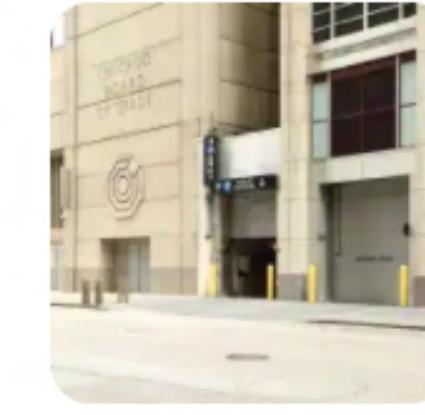
"I assume this is per hour?...It doesn't SAY what the price is for....it isn't clear if hourly or the total."

VM, Los Angeles



My PM and I looked at data, gathered examples, and sketched out ideas

Variable Key	Value
1 distance	True
Boolean	
2 total_price	True
Boolean	
3 star_ratings	True
Boolean	
4 access_hours	False
Boolean	
5 garage_type	True
Boolean	
6 amenities	False
Boolean	
7 CTAs	False
Boolean	



111 W Jackson Blvd. - Vale... 2 \$20 subtotal

3 Excellent (2,016)

1 0.2 mi

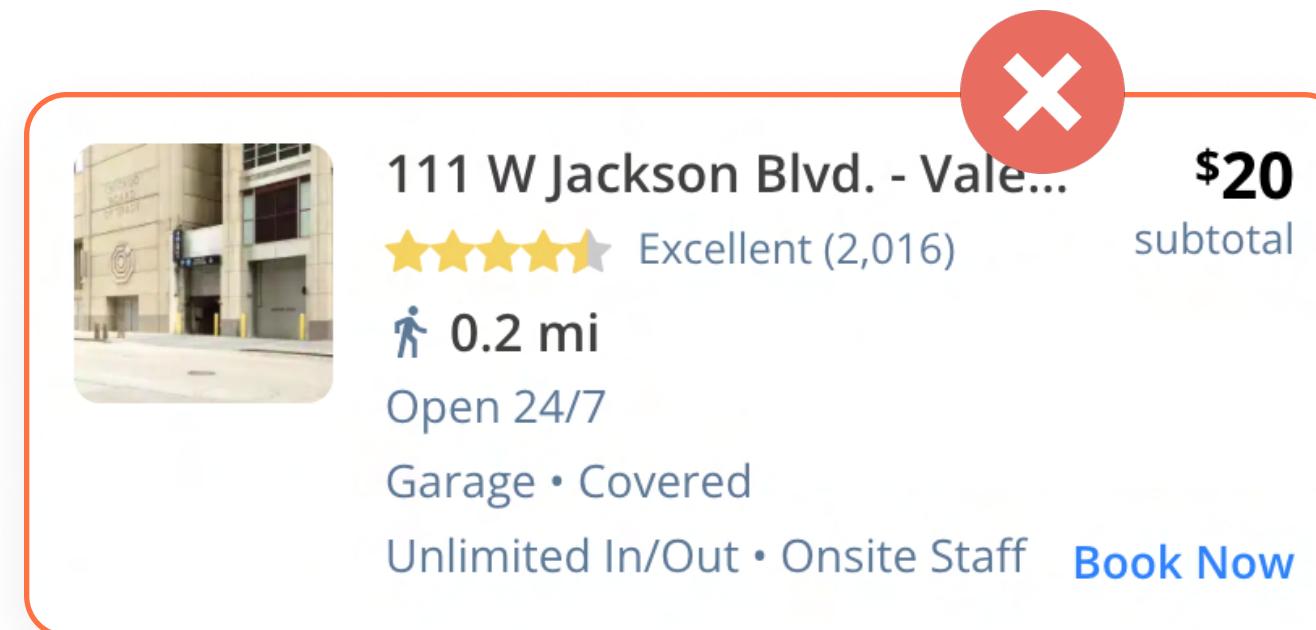
4 Open 24/7

5 Garage • Covered

6 Unlimited In/Out • Onsite Staff

7 [Book Now](#)

We worked w/ our FE to create a multivariate



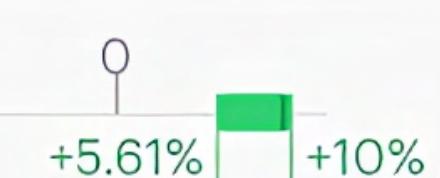
Conversion Rate [?](#)

39.42%

Improvement [?](#)

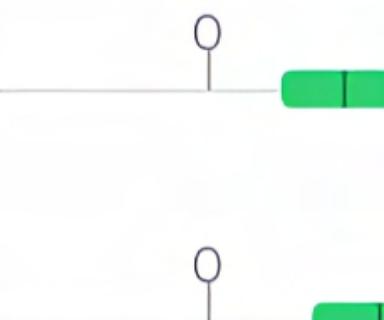
+9.19%

Confidence Interval [?](#)



43.04%

+7.64%

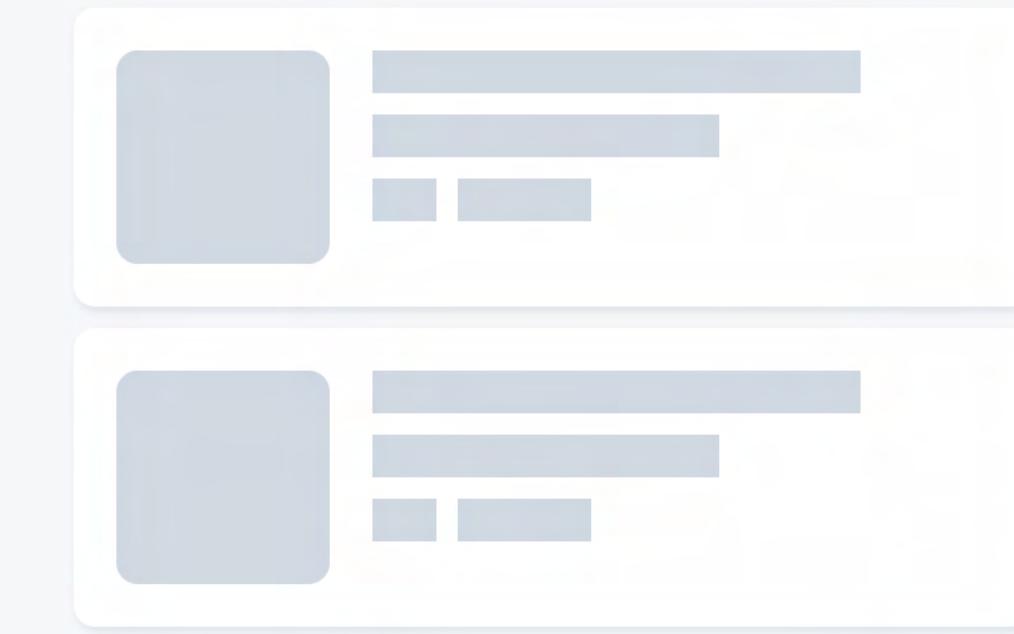


After 2x4 rounds, we found that less converts the best

Solution:

- New, simpler responsive spot cards with improved content hierarchy
- Skeleton loaders to improve perceived loading speed

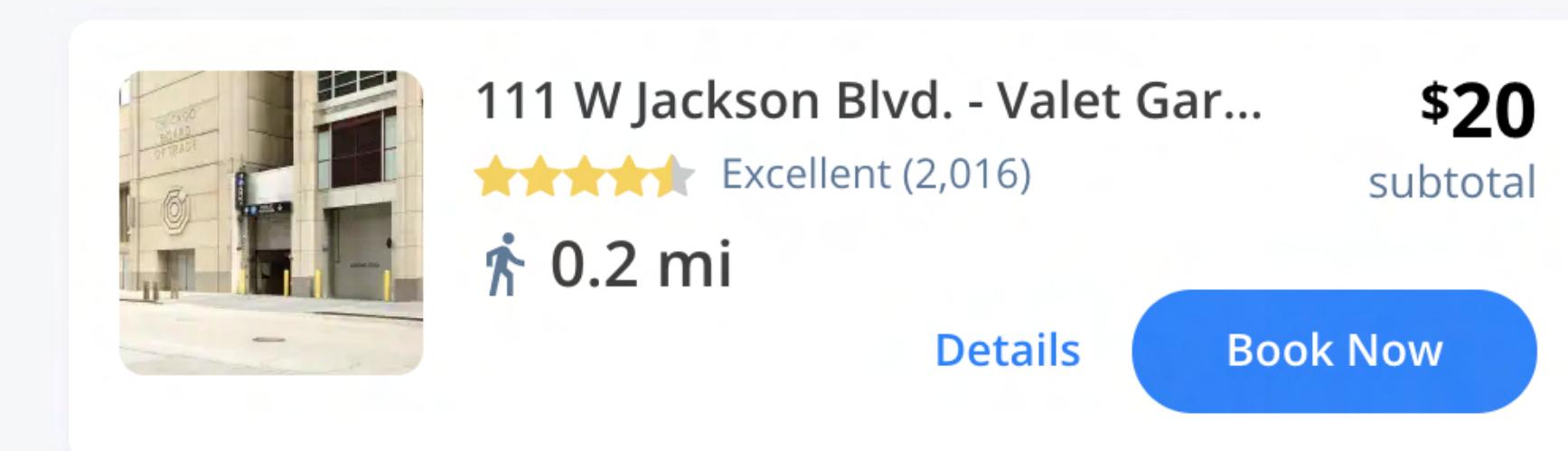
Outcome: +200bp increase across mobile and desktop



Mobile Web



Desktop



Improvement 1/2

The Guarantee

Users wanted a guarantee, but we didn't actually have one on our site.

So, to make SpotHero's first legally-backed guarantee, I **researched best practices** and looked at guarantees on two-sided marketplaces (eg. Stubhub).

Guarantee Best Practices

To craft a strong SpotHero parking guarantee, I read articles on best practices. This includes both what it should be in a guarantee, but also how it should be framed and written. The main findings are summarized below:

TLDR:

- **Good guarantees:**
 - a. Avoid legalese
 - b. State your confidence in your own product
 - c. Cover the *essential element* of the product being sold
 - d. Are short, clear and memorable (we're immune to "30 day money-back")
 - e. Are brand-specific (Casper 100-night guarantee, Dominos 30min delivery..)
 - f. Have generous evaluation periods (Shorter trial periods can increase returns)
 - g. Have clearly-stated conditions (and max 2-3 restrictions)
 - i. Live near the price
 - j. Explain what to do if you're dissatisfied
 - k. Are good ethical practice
 - l. Build long-term relationships and loyalty (eg. Patagonia)
- **Guarantees are creative opportunities, and can take a huge range of forms**
 - a. Product/service/results guarantee
 - b. Satisfaction Guarantee ("Classic")
 - c. Free Trial Guarantee (incentivize new users)
 - d. Lifetime guarantee
 - e. ...
- **Unless your product is terrible, Guarantees don't increase risk:**
 - a. They are offset by increased sales
 - b. Most people don't use them
 - c. They can lower legal risk too, by specifying terms of use

I wrote the orginal draft, and **worked with legal** (Kevin) to refine the draft, and approve it.

The SpotHero Guarantee

Pay and Park with Confidence

SpotHero has helped millions of people find and book convenient parking at thousands of lots across North America.

4.9 iOS App Store Rating 30,000+ Reviews	A+ Better Business Bureau Rating	25,000,000 Cars Parked Since 2011	 Norton Secured powered by Symantec	Secure and Encrypted Payment
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Your Parking Is 100% Guaranteed

When you book parking with SpotHero, we guarantee you will have a spot to park in, at the price you paid, or your money back.

Although we cannot guarantee you a specific spot, we work closely with our partners to monitor inventory levels and avoid overbooking. All SpotHero reservations include:

- **Lot Full Protection:** If a parking facility is ever full when you arrive, call us immediately! We'll rebook your parking at the closest nearby facility at no extra charge or give you a full refund. We'll reach out to our partner to prevent this from happening again.
- **365-Day Customer Support:** SpotHero has your back. If you have any issues while parking, please call our Customer Heroes immediately. Talk to a real person 7 days a week 6am-11pm CST, even holidays!
- **Free Cancellation:** Plans change. With SpotHero, you can easily cancel your hourly or monthly parking reservation up to the minute it starts for a full refund!^{*}

We know parking can be stressful and occasionally things will go wrong. Please call us if you run into trouble or if you're not satisfied with your experience. We're here for you, and we'll go out of our way to make things right!

Customer Heroes: (844) 324-7768

For non-urgent issues you can email us at support@spothero.com



Kevin Sherlock
Sep 30, 2019

Do we want to include this? It could drop below A+ and have to update this page. Same goes for app store rating



Nik Payne
Sep 30, 2019

1) Yes, I think it has value as part of our statement of confidence in our product. 2) The app store ratings could shift, but I'd imagine they wouldn't drop below 4.7, which is a huge discrepancy. The BBB rating just depends on how responsive we are to complaints, so as long as we continue our standard response processes there, it shouldn't drop.



Kevin Sherlock
Sep 30, 2019

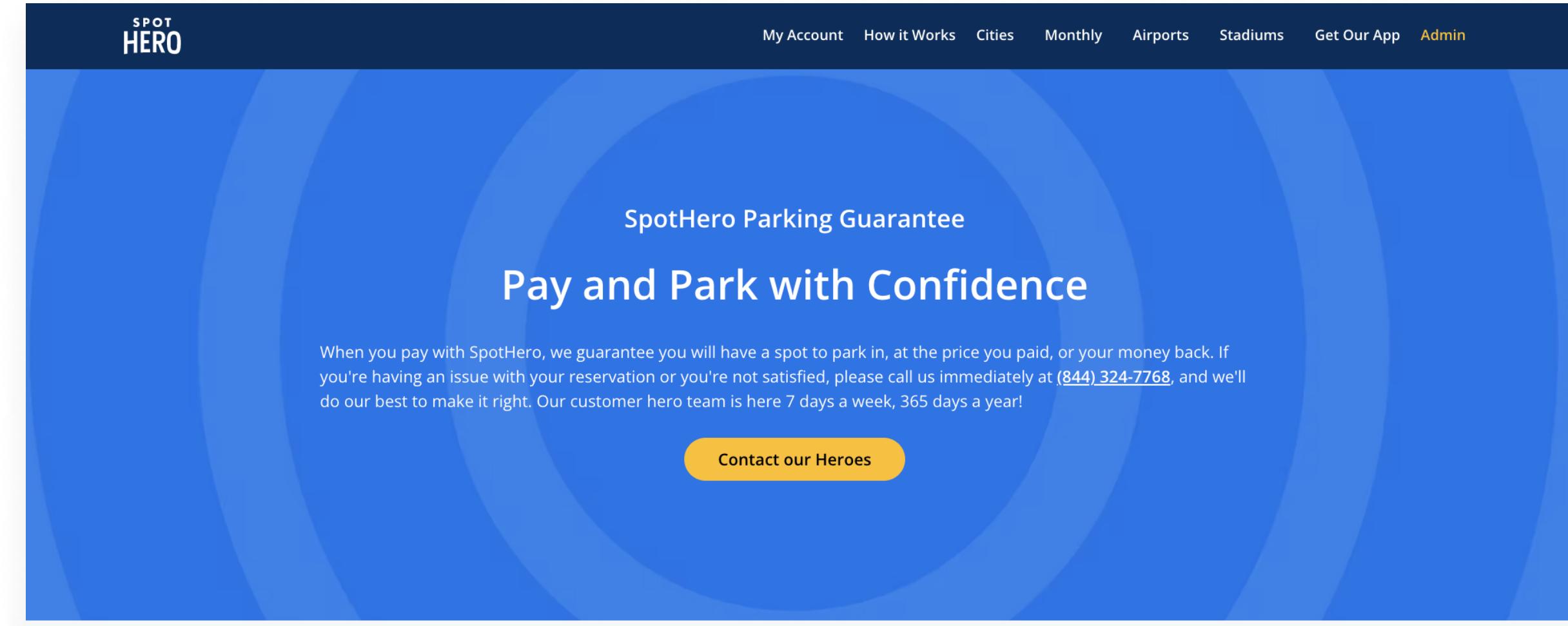
Plus a refund?



Nik Payne
Sep 30, 2019

Good call. I think we either do a refund or a rebooking (both), but heroes have the ability to give credit/make changes at their discretion. I'll add the 'or' in there

It's now live on our site,
and users have
responded well to it in
followup research rounds.



The screenshot shows the SpotHero homepage with a dark blue header featuring the logo and navigation links: My Account, How it Works, Cities, Monthly, Airports, Stadiums, Get Our App, and Admin. Below the header is a large blue circular graphic containing the text "SpotHero Parking Guarantee" and "Pay and Park with Confidence". A paragraph explains the guarantee: "When you pay with SpotHero, we guarantee you will have a spot to park in, at the price you paid, or your money back. If you're having an issue with your reservation or you're not satisfied, please call us immediately at [\(844\) 324-7768](#), and we'll do our best to make it right. Our customer hero team is here 7 days a week, 365 days a year!" A yellow button labeled "Contact our Heroes" is visible. Below the graphic are three circular icons with statistics: "4.8" with a 5-star rating icon and "iOS" below it, "40M" with "Cars Parked" below it, and "A+" with "BBB Rating" below it. Below each icon is a corresponding descriptive sentence: "4.8 avg. iOS App Store rating", "40 Million Cars Parked since 2011", and "A+ Better Business Bureau Rating".

Our Guarantee

Your Parking Reservation is 100% Guaranteed. When you pay with SpotHero, we guarantee you will have a spot to park in, at the price you paid, or your money back.

While SpotHero does not physically hold a specific spot open for each reservation, we work closely with our partners to monitor inventory levels and avoid overbooking. All SpotHero reservations include:

- **Lot Full Protection:** If a parking facility is ever full when you arrive, call us immediately! We'll rebook your parking at the closest available nearby facility* at no extra charge, or offer you credit or a full refund. We'll also reach out to our partner to prevent this from happening

Improvement 2/2

FAQ Page

The FAQ and how it works page (our #2 most visited unique page) was a text-heavy mess.

Heat maps had shown that most users just wanted basic info around **how our service works.**

The screenshot shows the SpotHero FAQ page with a dark blue header containing the logo and navigation links: My Account, How it Works, Cities, Monthly, Airports, Stadiums, Give \$7, Get \$7, and Get Our App. Below the header is a section titled "FREQUENTLY ASKED QUESTIONS" with several collapsed sections. The first section, "How it Works", is expanded, showing questions like "What is SpotHero?", "Booking", "Monthly Parking", "Post Purchase", "Parking Pass", "Accounting/Billing", and "Commuter Benefits". Each question has a collapse arrow to its right.

- How does SpotHero work?
- Are SpotHero parking spots guaranteed?
- What is SpotHero's cancellation policy?
- What is a parking pass?
- Do I have to enter and exit at the exact times on the parking pass?
- What do the prices mean?
- What if something goes wrong with my reservation?
- Can I make multiple reservations?
- Why isn't my reservation showing up in my app?
- Why can't I extend my reservation?
- Why isn't my normal spot showing up in the app?
- SpotHero Protection Plan/ Why should I reserve with SpotHero?
- How do I change the dates/times on my SpotHero reservation?
- What if the scanner doesn't work?
- Is my vehicle oversized?

I partnered w/ our visual designer, Mary, who created **illustrations of the key steps** to create a more scannable FAQ and how it works page.

The image shows a screenshot of the SpotHero website. At the top, there's a dark header with the 'SPOT HERO' logo and navigation links: My Account, How it Works, Cities, Monthly, Airports, Stadiums, Get Our App, and Admin. Below the header is a large blue banner with a map background. The title 'How SpotHero Works' is centered in white. A paragraph of text describes the service, mentioning parking at thousands of lots and garages across North America, backed by the 'SpotHero Guarantee'. A 'Read More' button is in the bottom right of the banner. Below the banner are three illustrated steps: 'Find Parking' (a map with location pins), 'Pay and Reserve' (a smartphone displaying a pass with a time of 9:00 AM), and 'Arrive and Park' (a car with a 'HERO' sign). Each step has a brief description. At the bottom, there's a 'Frequently Asked Questions' section with three collapsed questions: 'How does SpotHero work?', 'Are SpotHero parking reservations guaranteed?', and 'What is SpotHero's cancellation policy?'. The overall design is clean and modern, using a blue color scheme and clear typography.

Outcomes

Was the project and successful?

Improvement [?](#)

+9.19%

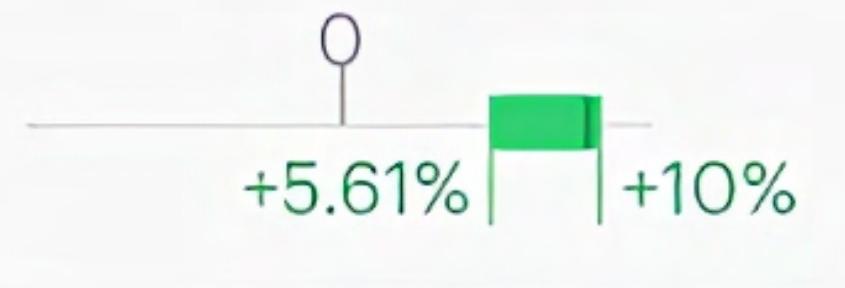
+7.64%

+9.5%

Confidence Interval [?](#)

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Before

Landing/Search

The screenshot shows the SpotHero mobile application's landing screen. At the top, there is a search bar with "Chicago" and a location icon. Below it, time filters are set to "Start Time Today, 2:00pm" and "End Time Today, 5:00pm". The results list four parking options:

- \$16 /** 181 N Clark St. - Government Center Garage. Includes a photo, EV charging availability, and a link to view more.
- \$16 /** 81 W Lake St. - Government Center Garage. Includes a photo, EV charging availability, and a link to view more.
- \$25 /** 171 W Randolph St. - Valet. Includes a photo, valet and accessible parking availability, and a link to view more.
- \$16 /** 81 W Lake St. - Government Center Garage. Includes a photo.

Facility Details

This screenshot shows the "Facility Details" screen for the 181 N Clark St. - Government Center Garage. It features a large image of the garage entrance, which has a "Self Park" sign and a "PHOTO" sign above it. Below the image, the time range "Today, 2:00pm - 5:00pm" is displayed. A summary box shows a total price of "\$16 Total". Another box provides details about the spot: "181 N Clark St. - Government Center Garage", "★★★★★ (19426 ratings)", "0.10 mi walking", and a "Save as Favorite" button. A prominent green "Book It" button at the bottom is highlighted.

Checkout

The "Checkout" screen displays the total cost of "\$16 Total" for the selected time period. It includes the start and end times: "Fri Jun 29 at 10:30am - Fri Jun 29 at 1:30pm" and a "Change time or date" link. There is a "Share Spot" button. The "SPOT DETAILS" section shows the location: "181 N Clark St. - Government Center Garage". The "ACCOUNT INFO" section shows the email "nik@spothero.com" and a "Change" link. A "Phone (optional)" input field is present. A note states "We'll text your reservation details." and a "Continue to Payment" button is at the bottom.

After

Landing/Search

The SPOT HERO mobile application interface. At the top, there are tabs for "Hourly" and "Monthly". Below that is a search bar with the placeholder "Find Parking Near" and a location input field showing "125 South Clark Street, Chicago, IL". Underneath the search bar are date and time filters labeled "Enter After" and "Exit Before", both set to "Today" from "2:00 PM" to "5:00 PM". Below the filters are buttons for "Self Park" and "Touchless", and a "Filter" button. The main content area displays three parking facility options:

- 318 S Federal St. - S...** **\$14** subtotal
★★★★★ Excellent (42...)
0.2 mi [Book Now](#)
- 17-21 E Adams St. - ...** **\$14** subtotal
★★★★★ Excellent (48...)
0.2 mi [Book Now](#)
- 230 S Wells St. - Will...** **\$21** subtotal
★★★★★ Excellent (42...)
0.2 mi [Map](#) [Book Now](#)

Facility Details

The SPOT HERO mobile application interface showing details for the "17-21 E Adams St. - Adams & Wabash Garage". The top half of the screen shows a photograph of the parking facility entrance. Below the photo, the facility name and address are displayed, along with its rating of "Excellent" (48,739 reviews) and distance of "0.2 mi". A "Parking Reservation" section shows a price of "\$14" for the specified time period "Today 2:00 PM - 5:00 PM". A large green "Book Now" button is centered below this information. At the bottom, a section titled "Things You Should Know" lists two important rules:

- Height Restriction: 6' 10"
- This facility does NOT allow in/out privileges.
You CANNOT enter & exit more than once.

Checkout

The SPOT HERO mobile application interface during the checkout process. The top bar indicates "Secure Checkout". The "Reservation Summary" section shows the details of the booking: "17-21 E Adams St. - Adams & Wabash ...", "Wed, Dec 8, 2:00 PM", and "Wed, Dec 8, 5:00 PM". It also lists the subtotal (\$14.00), service fee (\$0.75), and total (\$14.75). Below this, a list of benefits is shown with checkmarks:

- Free cancellation up to your start time
- Easily edit or extend your reservation
- Excellent customer support

Under the "Account Info" section, there is a field for "Email" and a note stating "We'll send your reservation with clear instructions". At the bottom are buttons for "Continue as Guest" and "Sign In or Create Account".

Before

The screenshot shows the SpotHero search interface for Baltimore. At the top, there's a dark header with the SpotHero logo, navigation links (My Account, How it Works, Locations, Airports), and promotional buttons (Give \$7, Get \$7, Get Our App). Below the header, there are tabs for 'Monthly' and 'Hourly' (which is selected), a search bar, and date/time inputs for '06/19/2018' from '04:00 PM' to '06/19/2018' at '07:00 PM'. A 'Search' button is also present.

The main content area features a map of Baltimore with numerous blue location pins indicating parking spots. Each pin has a price tag next to it, such as '\$10', '\$8', '\$24', etc. To the left of the map, there's a sidebar titled 'Baltimore Parking' with a brief description: 'Find affordable Baltimore parking and save up to 50%.' It lists four specific parking options with photos and booking buttons:

- 245 E Fayette St. - Munsey Valet Garage: \$10 | Book It | Details
- 215 E Fayette St. - Valet Lot: \$8 | Book It | Details
- 210 E Baltimore St. - Valet Lot: \$8 | Book It | Details
- 120 E Redwood - Springhill Suites - Hotel Valet: \$24 | Book It | Details

At the bottom right of the map, there are 'Learn More +' and 'map error' buttons.

Search/Landing

This screenshot shows the SpotHero checkout process for a reservation at '181 N Clark St. - Government Center Garage'. The top navigation bar is identical to the search page.

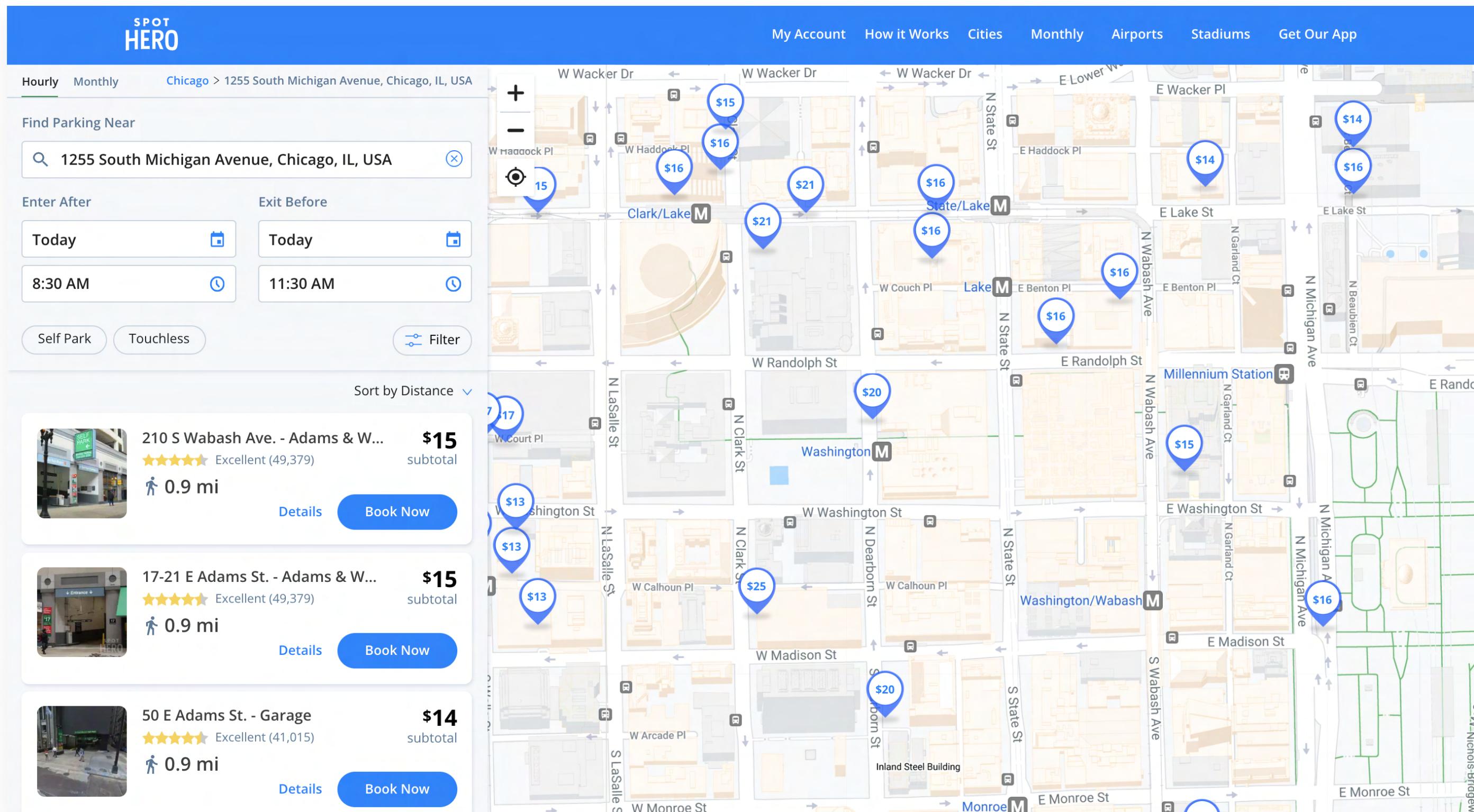
The main form is divided into sections:

- 1 ACCOUNT INFO:** Shows the user is checking out as nik@spothero.com. There are 'Hero Controls' checkboxes for 'Purchase for customer and charge SpotHero' and 'Purchase on behalf of customer using their account'.
- RESERVATION DETAILS:** Includes 'Contact Information' (890-134-2344) and a 'Reservation Summary' table.
- 3 PAYMENT DETAILS:** Requires a credit card for guarantee. It shows the total price (\$16), available SpotHero Credit (\$18.75), and payment amount (\$0).

A 'Reserve Now' button is at the bottom, with a note: 'By selecting "Reserve Now" you are agreeing to SpotHero's Terms and Conditions.'

Checkout

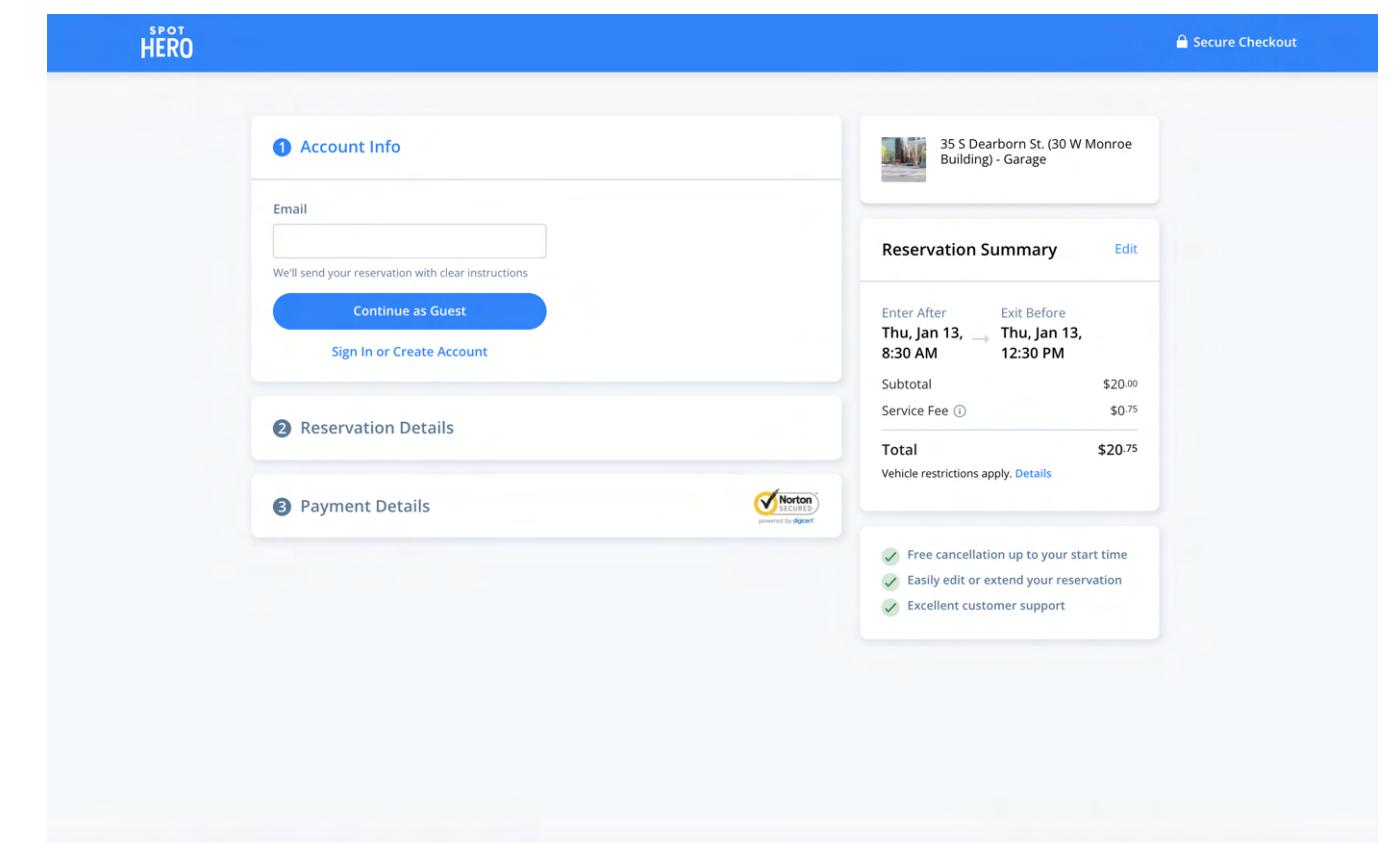
After



The screenshot shows the SpotHero search landing page for Chicago. At the top, there's a blue header bar with the SpotHero logo and navigation links: My Account, How it Works, Cities, Monthly, Airports, Stadiums, and Get Our App. Below the header, there are two tabs: Hourly (selected) and Monthly, followed by a breadcrumb: Chicago > 1255 South Michigan Avenue, Chicago, IL, USA. A search bar displays "1255 South Michigan Avenue, Chicago, IL, USA". Underneath the search bar are filters for "Enter After" (set to "Today" at 8:30 AM) and "Exit Before" (set to "Today" at 11:30 AM), along with "Self Park" and "Touchless" options. There's also a "Filter" button. A map of the Chicago Loop area shows various parking locations with price tags like \$15, \$16, \$21, \$20, and \$25. Below the map, three parking options are listed:

- 210 S Wabash Ave. - Adams & W... \$15 subtotal
0.9 mi [Details](#) [Book Now](#)
- 17-21 E Adams St. - Adams & W... \$15 subtotal
0.9 mi [Details](#) [Book Now](#)
- 50 E Adams St. - Garage \$14 subtotal
0.9 mi [Details](#) [Book Now](#)

Search/Landing



The screenshot shows the SpotHero checkout page. At the top, there's a blue header bar with the SpotHero logo and a "Secure Checkout" button. The main form is divided into sections: 1. Account Info (Email field, "Continue as Guest" button, "Sign In or Create Account" link). 2. Reservation Summary (listing the location as "35 S Dearborn St. (30 W Monroe Building - Garage)", dates "Thu, Jan 13, 8:30 AM - Thu, Jan 13, 12:30 PM", subtotal "\$20.00", service fee "\$0.75", and total "\$20.75"). 3. Reservation Details (checkboxes for "Free cancellation up to your start time", "Easily edit or extend your reservation", and "Excellent customer support"). 4. Payment Details (Norton logo and payment method placeholder). At the bottom, there are links for "How It Works", "Contact", and "Terms & Conditions".

Checkout

The Outcome

We came shy of our ambitious mobile-focused conversion goal, but achieved an equivalent financial impact

Results: gain of **750bp** total across mobile web and desktop.

Impact: approx. **\$7M/yr** revenue



Conversion Rate

↑ 400bp

Mobile Web

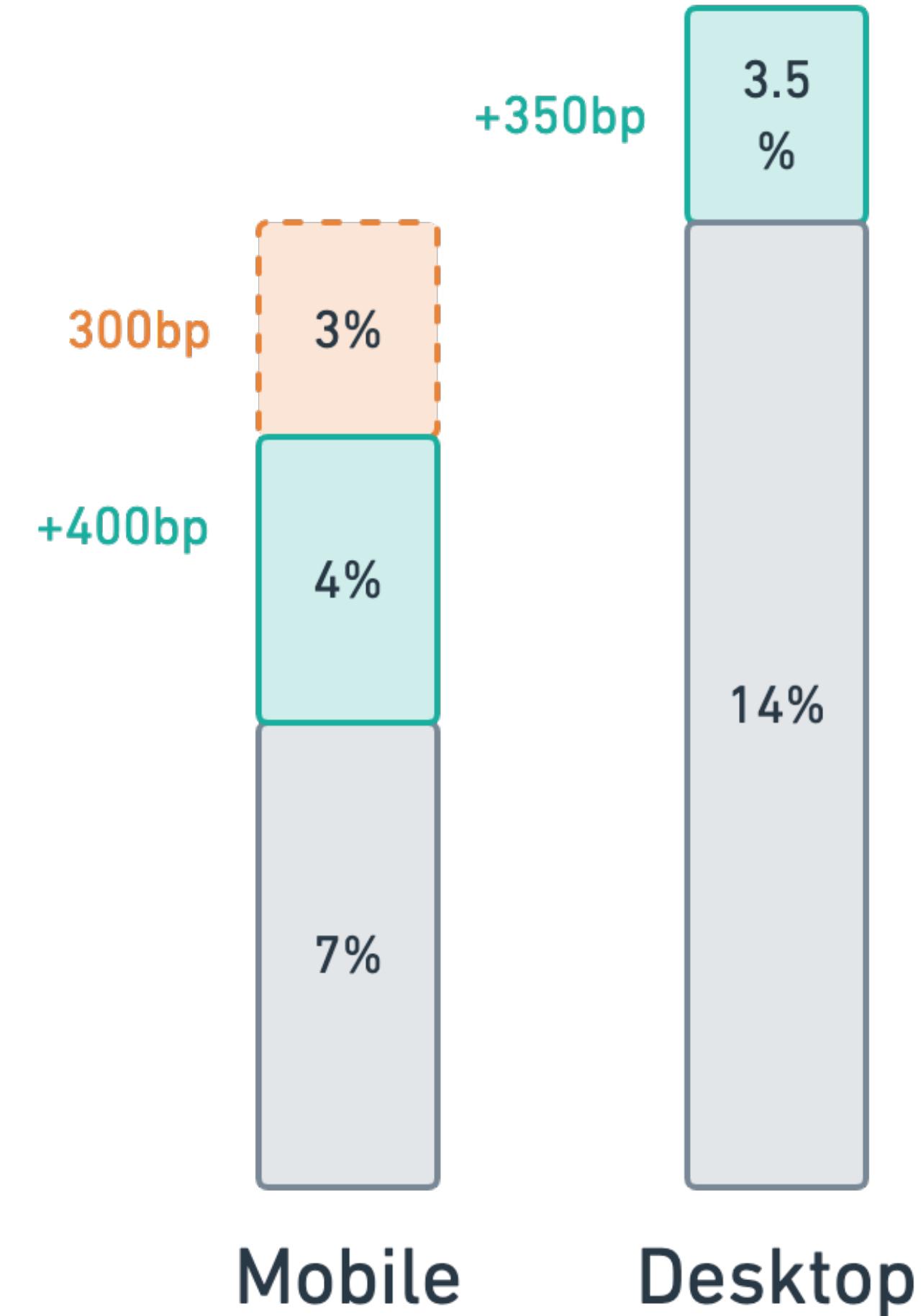
↑ 350bp

Desktop web

Why The Gap?

Hypotheses

1. Mobile websites generally have lower conversion rates than desktop
2. More returning users on desktop w/ higher purchase intent
3. The goal was [too] ambitious



Breakdown



List Results

↑200bp

- Content hierarchy
- New loaders
- Clear CTA's
- Visual design



Product Details

↑100bp

- Content hierarchy
- Visual design
- Trust/clarity
- Image quality

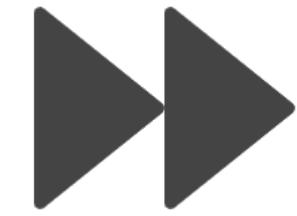


Checkout

↑450bp

- Reduced distraction
- Emphasis on security
- Optimized for guest
- Apple/Google pay
- Trust seals

Additional Results



Not Measured

- Critical bug fixes to navigation/persistence
- **SpotHero Guarantee**
- FAQ Improvements

Inconclusive

- New search/time picker layout
- Landing on map view
- Sorting by price and distance on mobile

Paused

- Search result ordering
- Scarcity (eg. “3 left”)
- Social proof (eg. “booked 5x today”)

Bonus Outcomes

Search Rankings: user experience improvements helped drive SEO gains on both mobile and desktop web.

Outcome: we saw a significant growth in YOY traffic, especially on mobile web (67%) which was our project focus.



YOY Site Traffic

↑ 67%

Mobile Web

↑ 35%

Desktop web

Landing Pages (SEO)

The screenshot shows the SpotHero website for Wrigley Field. At the top, the "SPOT HERO" logo is displayed. Below it, the navigation path "Chicago > Venues > Wrigley Field" is shown. The main title "Wrigley Field Parking" is prominently displayed, followed by the address "1060 West Addison Street, Chicago, IL, 60613". A navigation bar below the title includes tabs for "Event", "Hourly", and "Monthly", with "Hourly" being the active tab. The "Event" section lists three upcoming events:

- APR 04** St Louis Cardinals at Chicago Cubs - Home Opener
Mon, 4/4 at 1:20 PM [Find Parking](#)
- APR 06** St Louis Cardinals at Chicago Cubs
Wed, 4/6 at 6:40 PM [Find Parking](#)
- APR 07** Milwaukee Brewers at Chicago Cubs
Thu, 4/7 at 6:40 PM [Find Parking](#)

A "Show More" button is located at the bottom of this section. Below the events, a link says "I'm not looking for event parking". At the very bottom, there is a Norton Secured badge and a "Top Rated App" badge with a 4.8/5 rating.

Purchase Confirmation

The screenshot shows the SpotHero purchase confirmation page. It features a large green checkmark icon and the message "Thanks! Your reservation is confirmed". Below this, it states "We sent a confirmation email with a link to your parking pass to nik@spothero.com". The "Parking Reservation" section shows details for a reservation at "17-21 E Adams St. - Adams & Wabash Garage" on "Wed, Dec 8, 2:00 PM" to "Wed, Dec 8, 5:00 PM". The subtotal is \$14.00 and the service fee is \$0.75, totaling \$14.75. It also lists payment methods: Pay, Pay by Phone, Cash, and AMEX. A "Continue as Guest" button is available, along with links to "Account Info" and "Sign In or Create Account". A note at the bottom says "You're all set! Check your parking pass for info, directions and instructions on how to park." A blue "View Parking Pass" button is at the bottom. A "Try the SpotHero App" button is located at the bottom right.

Project Learnings

Overall: I'm Happy with what we achieved with a small team and my first time doing any AB testing

Learnings

- Ecommerce patterns generally hold for parking
- “Test to learn” is time-consuming for small teams and/or sites with moderate traffic (~2x)

Next Time

- 1FE → less reliance on AB tests
- More qualitative evaluation of ideas
- Push even harder for engineering resources

The image consists of several overlapping components:

- Top Left:** A screenshot of a mobile application interface titled "SPOT HERO". It shows a search bar for "Merchandise Mart Parking" with "Start Time Today, 11:00am" and "End Time Today, 2:00pm". Below the search are two sections: "walking St. - Valet" and "walking Plaza - Wolf". A callout box contains transcribed user feedback: "JM: 'oh. Here it is...and voila! a map'", "BH: 'is there a map feature on here?...oh duh—here it is. Right in front of me'", and "VM: hopefully, if this isn't per hour...".
- Top Right:** Another screenshot of the "SPOT HERO" app showing a list of parking options near Vesey Street, New York, NY, USA. The results include:
 - 54 Murray St. - Valet (110 Church St.) \$45 total
 - 120 Warren St. (200 Chambers St.) \$29 total
 - 501 Murray St. (211 North End Ave) \$25 total
 - 30 Park Row - Valet Garage \$47 totalA callout box contains: "JM: I assume it's \$15/hr...It doesn't SAY what the price is for. I have to assume and it isn't clear if it's the hour or total. It would be better to know what you're paying", "KT: The +5, +3 made me think but I assumed it was the number of spots", and "JM: Knowing how many spots are available—that's important".
- Bottom Left:** A screenshot of the "SPOT HERO" app showing a list of parking options near Vesey Street, New York, NY, USA. The results include:
 - 54 Murray St. - Valet (110 Church St.) \$45 total
 - 120 Warren St. (200 Chambers St.) \$29 total
 - 501 Murray St. (211 North End Ave) \$25 total
 - 30 Park Row - Valet Garage \$47 totalA callout box contains: "JM: I assume it's \$15/hr...It doesn't SAY what the price is for. I have to assume and it isn't clear if it's the hour or total. It would be better to know what you're paying", "KT: The +5, +3 made me think but I assumed it was the number of spots", and "JM: Knowing how many spots are available—that's important".
- Right Side:** A map of the New York City area around Vesey Street, showing various parking locations marked with blue circles and labeled with prices like \$25, \$26, \$27, etc.
- Bottom Right:** A user flow diagram titled "Flow Funnel" showing the progression from Desktop to Search/Landing to Product Details. The "Checkout" step is highlighted in green, indicating success, while the final "Confirmation" step is marked with a red "X", indicating failure.