

BOPIIS Curbside Delivery Speed to Athlete

DSG Hackathon 2022

Team Prosperous Phosphorous

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Douglas Johnson, Engineering
Dan Bendit, Engineering
Dominic Paunovich, Engineering
Samuel Sampana, Audit



1. Defining a Direction

Brainstorming

Our team dove into brainstorming right away. We took an “individually together” approach. For about 10 minutes, we all independently brainstormed hackathon ideas onto sticky notes. After, we came together to discuss each idea. Once we had a good idea of everything on the table, we used a dot voting system to determine the team’s top choices.

Our top 5 selections were then plotted onto a 2 x 2 matrix using feasibility* and value** as axes.

* Defining “feasibility” as *doable in a 2-day hackathon*.

** Value being our best *surface-level guesstimate* without diving too deep into numbers.



Project Selection

This was the sticky note idea we landed on as a team.

As indicated by the sticky note, this project could potentially fit into a few prompts. We were initially thinking a flawless pickup experience could spur brand loyalty, it might be cheap and techy for the 50k refresh stores, or it could simply be freeform.

Faster BOPIS
curbside delivery speed, automatic check in (Could be brand loyalty and 50k store)

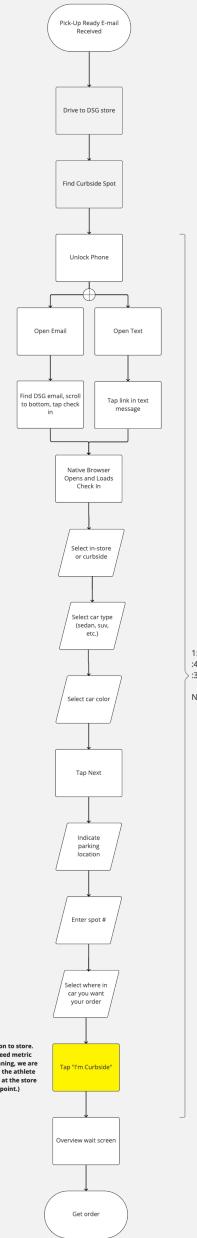
Research

First things first, we needed to understand the current manual check in process and our users. So, we placed a few BOPIS orders and contacted Athlete Experience (AX)!

We sent our best Pawduct Designer, Jr. to do the work, of course.



BOPIS ATHLETE PICKUP FLOW (Happy Path)



1:32 The first time I did the check in,
it was 48. The second time I did the check in,
>30 would be conservative estimate.

No official metrics.

Current Check-In Process

$$11 + 6 = ?$$

Touchpoints Data entries Time

We do not currently have any way to track the time it takes for athletes to complete the check-in process.

Our time tracking metric only begins once the athlete taps the final submission button on the check-in form. This means that there is an indeterminate amount of time that the athlete is physically at the store...and our stores don't know it yet.

Current Check-In Process

The best we could do was time the process ourselves. We found that the first time we checked in, it took us 1:26. The second time we checked in still took us :45, despite being familiar with the process. Therefore, we believe that :30 seconds would be a *conservative* estimate for how long our stores are unaware of the physical presence of curbside athletes at the store.



The Problem

Currently, there is a delay between when athletes show up to a DSG store to pick up a curbside order and when the store is aware of their arrival. This is due to the manual process that athletes follow to check in, which adds additional touch points for the athlete and time to their pick-up experience. This lost time means that athletes are waiting longer than DSG's three-minute target for athlete satisfaction with BOPIS curbside pick ups.

Market Segment / Users

According to Athlete Experience, the top two reasons for using curbside pickup are related to its speed¹.

This motivation for speed is driven by Convenience Cravers, who account for 18% of DSG's business and are considered a priority segment in fulfillment's 2022 strategy.

The most complained about aspect of curbside users is when delivery speeds are slow.

¹Taken from readout presentation provided by AX regarding 2022 priorities.

CONVENIENCE CRAVERS

Looking to make quick trips, these people prefer retailers with multiple products and brands for one-stop shopping, and don't have strong brand preference.

Female: 60%
Married: 50%
Have Kids: 69%
Average Age: 47

How They Shop

When choosing a Sporting Goods retailer, they are more likely to shop at [mass merchandise retailers](#) and place less importance on an easy-to-use website and easy-to-use mobile app.

Shopping Behaviors and Preferences

- Shop at one store that has everything they need
- Choose products that are practical
- Want to get shopping done as quickly as possible
- Buy product from the same brand they're already using
- Seek advice from others about their purchases

What They Value

- Teammates demonstrate how to use the product
- The teammates there know what I like
- Teammates are unbiased
- The retailer accepts coupons/discounts
- The store is easy to navigate/find what I want

**SPENDS \$21 BILLION A YEAR
12% DSG SHARE**

Sources of Inspiration

- Given that they are all about convenience, they don't go out of their way to research and focus on what's easiest (Google search, retailer websites, etc.)

Attitudes Towards Brands

- You can't tell much about them from the brands they purchase

Why They Shop

Convenience Cravers are more likely to shop for **functional reasons**:

- List Accomplishment
- To Deal Seek

Sports Participation

Password: DSGathletes22!

EVERY SEASON STARTS AT
DICK'S
SPORTING GOODS

| 18

The Value

4,200

of curb. orders / day at present

3.95

Ave. minutes to deliver to athlete

3.00

DSG's target delivery speed

Based on data from the past two weeks. This is higher at certain times per year.

This time does not include the delay between actual athlete arrival and when stores are made aware.

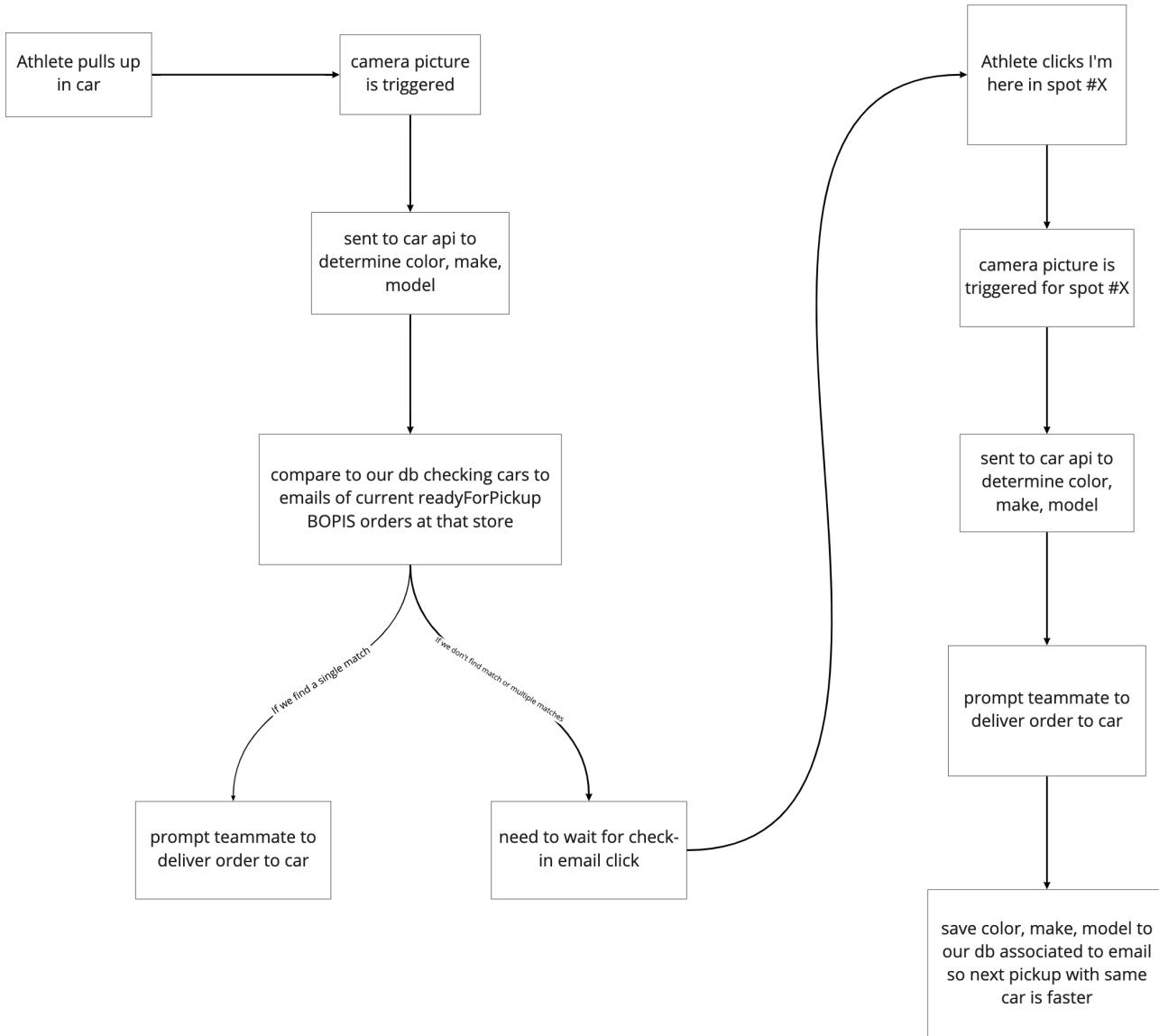
We see a huge jump in CSAT when orders are under three minutes. This is also industry standard.

2. Proposed Solution

The Technology



Webcam - \$10
Raspberry Pi 2 - \$35
WiFi - \$20
Power Source - Variable



The Design

Despite doing some very different things on the back end for an automated check in experience, we decided to keep a simplified form of check in for the athlete. Our reasoning?

1. Athletes still need to feel like they have checked in to give them a sense of confidence. By providing a check in button and the overview screen, we are providing “visibility of system status¹”.
2. It is externally consistent² with industry to provide a check in.
3. It allows us to offer a direct line to help on the check in overview screen³ for athletes, in case problems are encountered.
4. We still need a fall back for if our system fails. If our processes don’t work as expected, we need a back up to ensure the athlete doesn’t fall through the cracks.

¹ <https://www.nngroup.com/articles/visibility-system-status/#:~:text=Definition%3A%20The%20visibility%20of%20system,appropriate%20feedback%20within%20reasonable%20time.>

² <https://www.nngroup.com/articles/consistency-and-standards/>

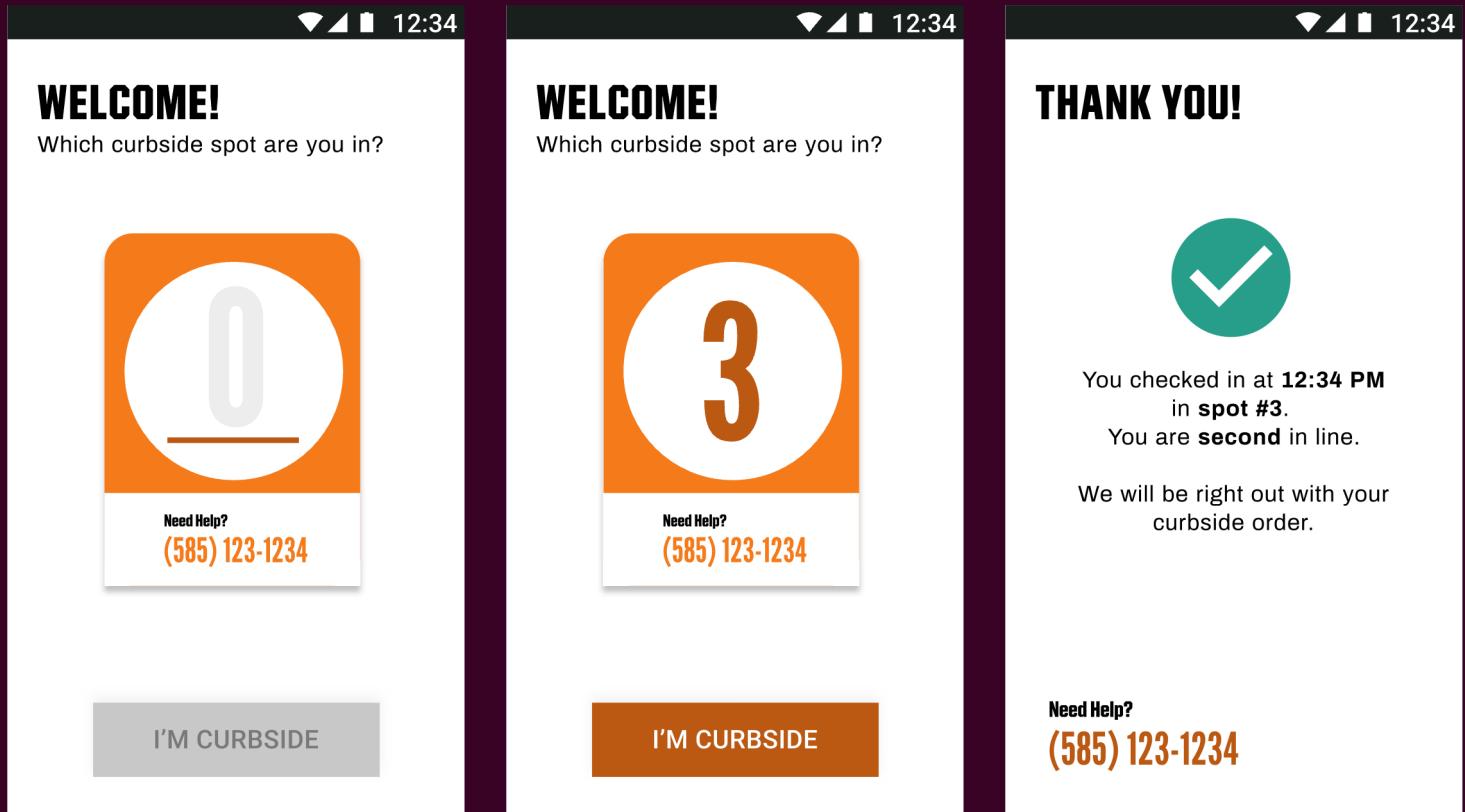
³ <https://www.nngroup.com/articles/help-and-documentation/>

The Design

Sign Design

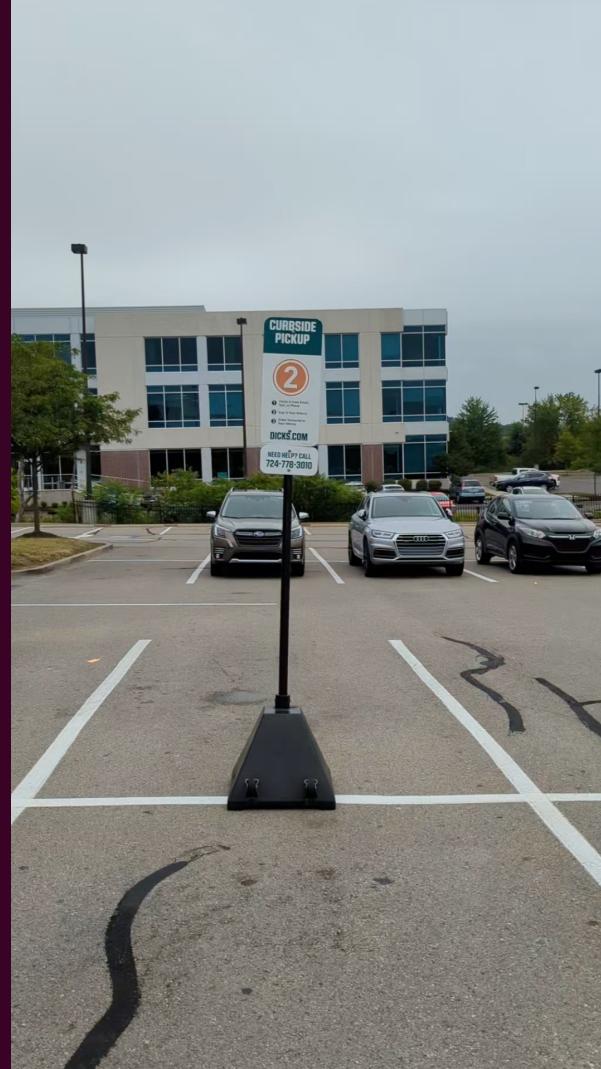


Check-In Design

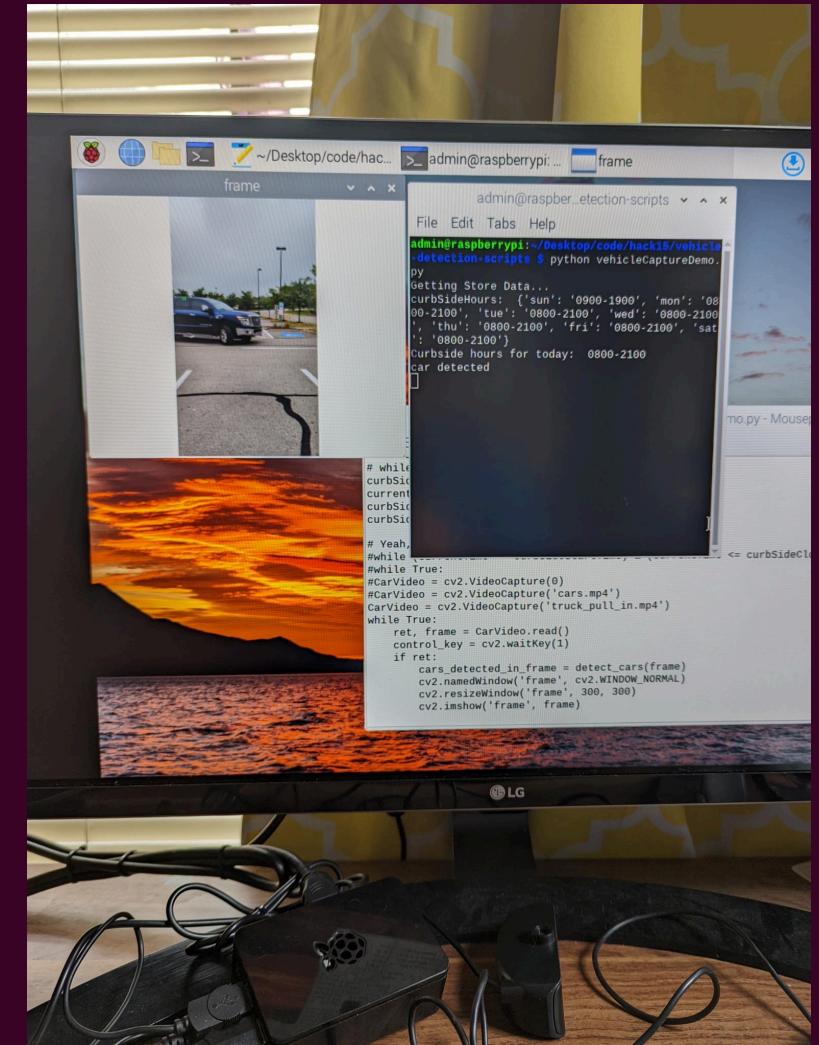
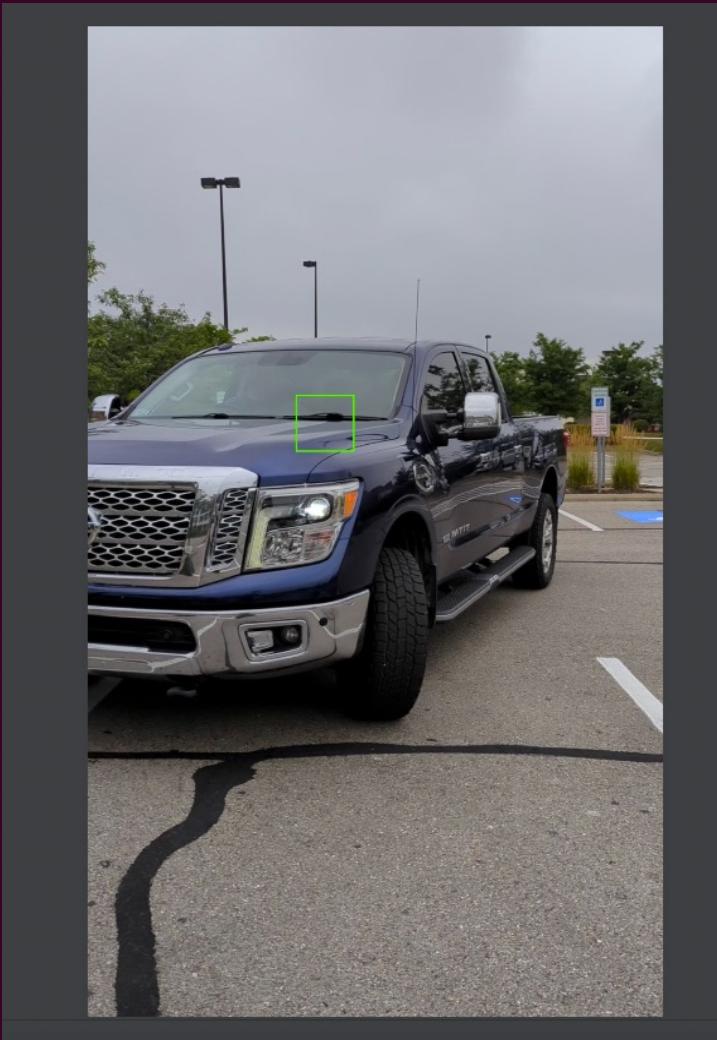
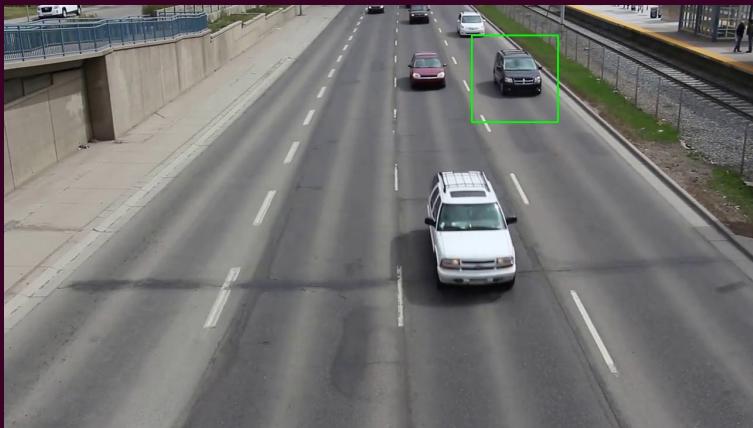


3. The Results

The Results



The Results



The Results

```
1 {  
2   "storeNumber": "129",  
3   "carLocation": "Spot 1",  
4   "imageBase64String": "/9j/4AAQSkZJRgABAQAAAQABAAAD/  
2wBDAIIBAQIBAQECAgICAgQDAGICAgUEBAMEBgUGBqYFBgYGBwkIBgcJBwYGCAsICQoKCgoKBggLDAsKDAkKCgr/  
2wBDAQICAgICAgUDAwUKBwYHCgoKCgoKCgoKCgoKCgoKCgoKCgoKCgoKCgoKCgoKCgoKCgoKCgr/  
wAARCALQBQADASIAAhEBAxEB/8QAHwAAAQUBAQEBAQEAAAAAAAAAECAwQFBgcICQoL/  
8QAtRAAAGEDAwIEAwUFBAQAAAF9AQIDAAQRBRIhMUEGE1FhByJxFDKBkaEII0KxwRVS0fAkM2JyggkKFhcYGRoIjicoKSo0NT  
Y30Dk6Q0RFRkdISUpTVFVVW1hZWmNkZWZnaGlqc3R1dnd4eXqDhIWGh4iJipKT1JWWl5iZmqKjpKWmp6ipqrKztLWt7i5usL  
DxMXGx8jJytLT1NXW19jZ2uHi4+Tl5uf06erx8vP09fb3+Pn6/8QAHwEAAwEBAQEBAQEBAQEBAQEBAQEBAwQFBgcICQoL/  
8QAtREAAgECBAQDBAcFBAQAAQJ3AAECAxEEBSExBhJBUQdhcRMiMoEIFEKRobHBCSMzUvAVYnLRChYkNOEl8RcYGRomJygpKj  
U2Nzg50kNERUZHSE1KU1RVVldYWVpjZGVmZ2hpanN0dXZ3eH16go0EhYaHiImKkpOUlZaXmJmaoqOkpaanqKmqsz00tba3uLm  
6wsPFxchHvMnK0tPII1dhX2Nna4uPk5ehn60n8vP09fb3+Pn6/9nADAMRAATRxFAPwD8k7 /
```

```
.PhosphorusController | Received BOPIS notify request with storeNumber=[129] and carLocation=[Spot 1]  
.CarDeterminationService | response from Rapid API isRapidApiResponse{status='SUCCESS', vehicle=[Vehicle{make='Nissan', model='Titan~Crew~Cab', genera  
.CarDeterminationService | Matched vehicle isVehicle{make='Nissan', model='Titan~Crew~Cab', generation='2017~2019', body_style='Pickup'}  
.FitConsumerService | Received 21 BOPIS Orders ready for pickup at storeNumber=[129]  
.PhosphorusController | Found match for email=[Timothy.Wilson@dcsq.com]! Calling FIT Consumer API Notify for orderNumber=[100001228458]
```

The Results

consumer-api-dev.iso.vn01.pcf.dcsq.com - [2022-07-27T14:53:26.490278894Z] "GET /v1/getReadyOrders/129 HTTP/1.1"

consumer-api-dev.iso.vn01.pcf.dcsq.com - [2022-07-27T14:53:26.675713804Z] "POST /v1/notifyByWebsite HTTP/1.1"

🔔 Notifications • now ^

Curbside Pickup

Tim Wilson has arrived. Their 1 item order is located in Main Holding Location, Bin 3 for a curbside delivery to null of a blue Nissan Titan~Crew~Cab in Spot 1.

Check Ins		
Wait ▾	Name ▾	Description ▾
0:11 🚘	Wilson, T.	blue Nissan Titan... Spot 1

← Order #100001228458

Wilson, Tim
(412) 551-1207

🚘 Spot 1 blue Nissan Titan~Crew~Cab

Checked In
3:12

Thank you!

Questions? Reach out to

Timothy.Wilson@dcsig.com

or

Anna.Heisey@dcsig.com

Special Thanks

Leslie Mamula, FIT, Excel Queen

Joenal Castma, E-commerce Experience

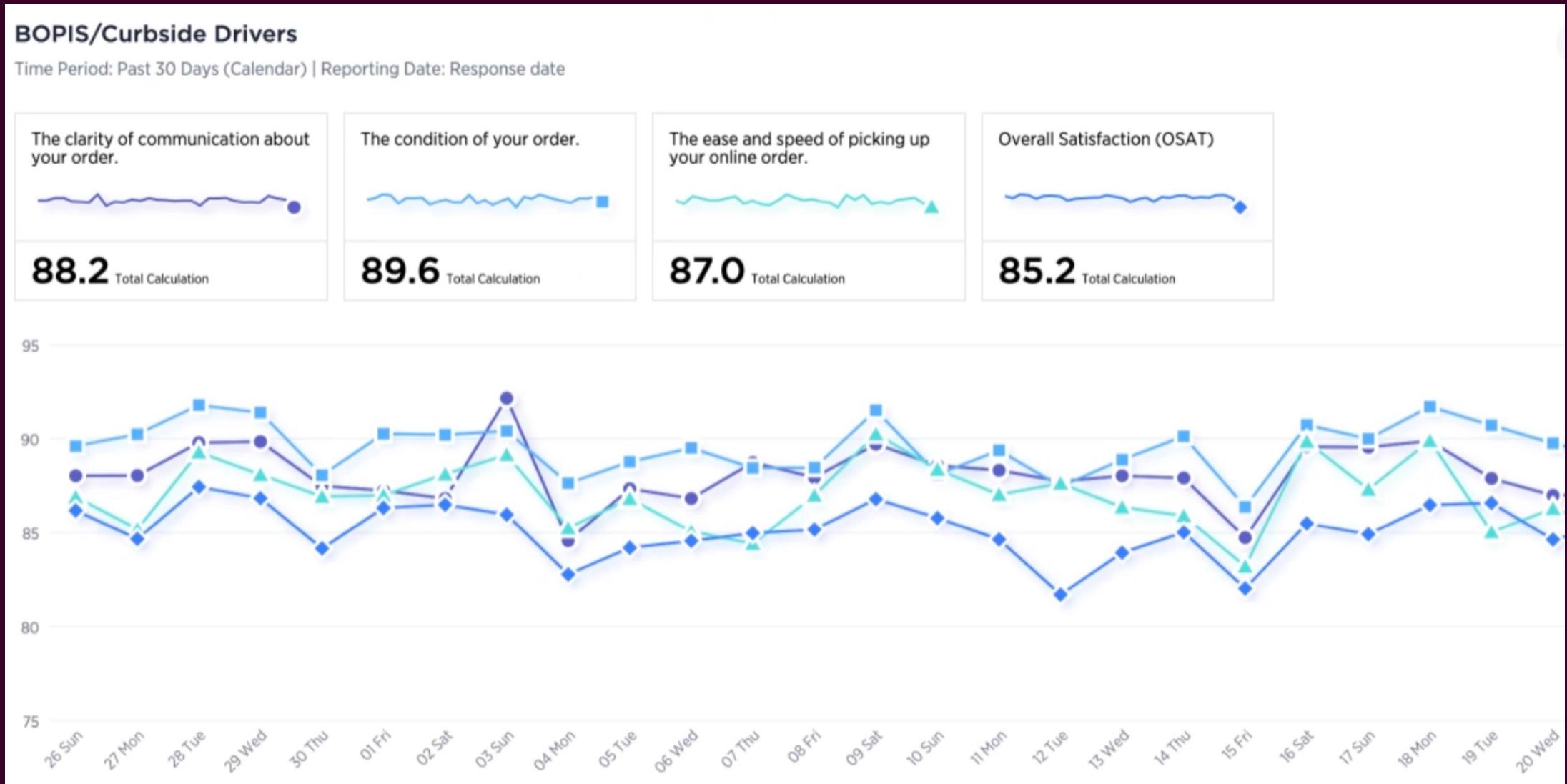
Chris Love, E-commerce Experience

Alex Acosta, Athlete Experience, Medallia Queen

DSG Hackathon Planning Team



Trending Feedback



Links

Our Miro Board

<https://miro.com/app/board/uXjVOjwYi5A=/>

Our Figma Check-In Prototype

<https://www.figma.com/file/KWeRNfT3sPl5ODt7MERLEu/OmniMobile-'22?node-id=19684%3A95522>

Our GitHub

<https://github.com/dsg-tech/hack15>

Our Business Model

[Auto Checkin Business Model.pptx](#)

Resources

<https://opencv.org/>