Qualitative field research for the rideCAT Mobile App

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OBJECTIVE

An independent qualitative research study was conducted to gain insights into the user experience of the rideCAT mobile ticketing app. The main goals were to:

- Gauge satisfaction and uncover pain points of app users.

- Discover barriers for riders not currently using the app.

- Assess how the app is performing in relation to stakeholder goals.

The study was administered eight months after the launch of the rideCAT app. Field research was completed over nine days with times and locations chosen based on stakeholder recommendations. Feedback was obtained from app users, non-app users and drivers.
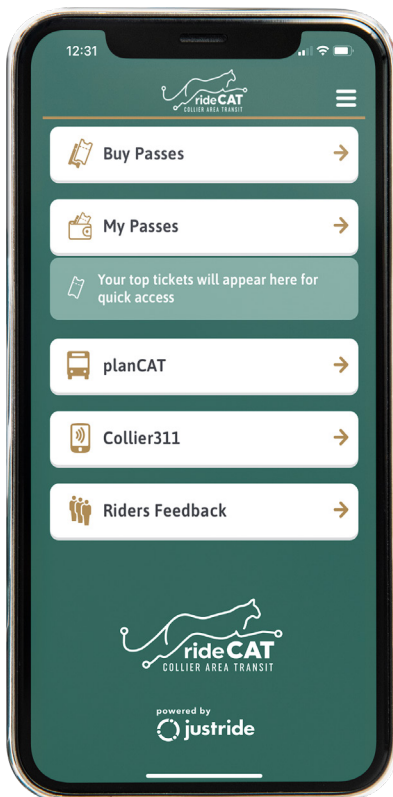
KEY TAKEAWAYS

- Riders currently using the app find it, overall **easy and convenient** to use. However, **technical glitches** with other apps, between the validator and the app, and with the Avail system prevent riders from having a seamless experience.

- App users emphasized accurate, **real-time bus tracking and service alerts** all in one place as a priority for them.

- Most of the non-app users interviewed **weren't aware of the app**, despite bus and wait station posters and digital ads.

- Potential barriers for non-app users include **a lack of financial tools, insufficient devices**, riders who don't use a cellphone at all and those who are concerned about digital security.

- **Drivers prefer the app over the farebox**, but have no way of advocating for the app currently.

RESEARCH METHODOLOGY

- **Review Development Plan for data and opportunities**

- **Gather Stakeholder Insights**

- **Analyze Existing Rider Feedback**

- **Observation, In-person Interviews and Paper Surveys**

- **Report Findings and Recommendations**

Review Development Plan

The Ten Year Development Plan included details for technical improvements and explicit goals that CAT wants to achieve. This study was able to track and validate some of CAT's stated goals.

(7.2.2 Technology)

- Identify Super Users/Product champions
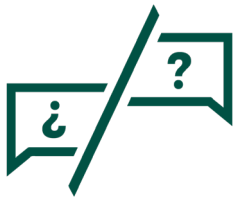
- Replace/upgrade Avail systems

(8.3 Goal 5)

- Use technologies and innovations in service delivery to improve productivity, efficiency, reliability, and cost-effectiveness of mobility services and operations.

Gather Stakeholder Insights

Getting analytic app data from Masabi, and interviewing CAT staff on route usage and the population helped inform which routes and times to focus on to intercept participants.

Analyze Existing Rider Feedback

Results from the in-app customer feedback survey were reviewed, as well as Facebook questions and answers from when the app was about to launch.

Observation, In-person Interviews and Paper Surveys

- Observations of current riders fare payment behaviors were made onboard various routes.

- In-person Interviews were completed at the Government Transfer Center, CAT OPS and onboard buses.

- Half-page paper surveys in English and Spanish were distributed onboard to reach more people.

- In-person interviews and paper surveys covered the same main questions. Interviews allowed more time for demographic questions.

LIMITS AND CHALLENGES OF THE STUDY

Sample Size

The study was designed to be a snapshot in time. With a short timeframe and a solo researcher, the sample size was always going to be small. A larger study could yield more in-depth analysis.

Covid-19

The Covid-19 pandemic presented some challenges in gathering data. Masks were worn onboard and at the Government Transfer Center and six feet of distance was observed while interviewing and passing out surveys. There were some safety resources available onboard— hand sanitizer, masks, plastic sheet barriers for drivers. However, some riders were very cautious and didn't want to talk or touch surveys, especially on-board the close quarters of the bus. When buses were idling at the Government Center, it was difficult to hear, which encouraged closer proximity movement to try to understand what was being said, which was not ideal.

Language Barrier

The language barrier was definitely a limit of the study. Spanish translation from Rosio was very productive for in-person interviews. The Spanish language option for the survey was decent, but could be improved for user familiarity with surveys. It appeared that many riders had trouble understanding the answer flow.

Future studies should include Creole and Spanish language speakers as in-person interviewers. The ability to expand on the qualitative questions in real-time is valuable to getting good data.

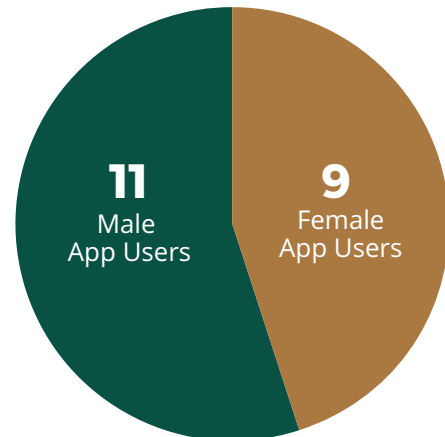## In-person Interviews and Paper Surveys

Interviews and surveys were done over **9 days** (March 23rd-April 23rd) at the Government Center Transfer Station and onboard routes that had a high percentage of riders using the app.

LOCATIONS AND ROUTES

	Morning	Afternoon	Evening
Government Center	March 23rd, 7:00am-8:00am	March 25th, 3:00pm-4:00pm	April 22nd, 4:45pm-5:30pm
Route 11	April 5th, 7:30am-9:00am	April 17th, 2:00pm-5:20pmpm	
Route 13			April 6th, 4:25pm-5:35pm
Route 15	April 12th, 6:20am-8:30am	April 7th, 3:50pm-5:20pm	
Route 17		April 8th, 3:50pm-5:25pm	
Route 24		April 8th, 2:20pm-3:30pm	

A range of rideCAT
app users were interviewed,
however most were **young,
white, and male.**

APP USERS BY SEX

11
Male
App Users

9
Female
App Users

APP USERS

26
App Users
(20 in-person interviews,
6 paper surveys)

> **"**
> Easy!
> The money doesn't go in the fare-box all of the time, and [I] hate to hold up the line of people waiting to board the bus.

Riders who use the app love it, but don't have a seamless experience.

App users find it overall **easy and convenient** to use. High satisfaction scores were recorded as well as a feeling of disappointment if they could no longer use the app. There were, however, issues that prevented them from having a seamless experience.

Technical glitches were the major pain point app users stated.

- The older Avail system and hardware on the buses seem to play a role in delayed or frozen GPS updates.

- One rider mentioned having to restart the rideCAT app when switching between other apps—it seems to freeze if it is open in the background. This could be a phone problem (Android), or a problem with the app itself.

- Two users mentioned the validator failing to scan the barcode and having to wave the phone around until it registered.

- Wifi connection issues were noted as an annoyance, but they did not specify if it was app related or not.

App users emphasized **accurate, real-time bus tracking and service alerts** all in one place as a priority for them.

- A couple of riders stated that jumping between two apps (planCAT and rideCAT) or having to check Mystop, was annoying. It is extra frustrating when the information isn't up to date.

- Someone also mentioned that they never received service alerts. This is especially hard for riders who rely on exact times to transfer buses. This again may result from older Avail hardware.

User experience issues were mentioned as "nice to have" updates—they didn't impede use of the app. Because the rideCAT app is run on the Justride platform, any feature improvements will have to be worked out with Masabi.

- Users said they wanted fewer screens to click through to retreive the ticket.

- More language options were suggested. Spanish and English are the only ones available currently. It is also not easy to find language options in the app.

- One user requested increasing the number of times to buy a single fare ticket.

> **"**
> More convenient than a card... always have my phone, I won't forget it.

PAIN POINTS FOR APP USERS

Pain points for app users can be sorted into two main buckets, User Experience and Technical, though there is overlap in the specifics.

USER EXPERIENCE	TECHNICAL
Include **real time service alerts**. Have to switch between the website and other app to get basic information. Wish planCat and rideCAT were combined. Just **don't like that it switches and have to use two apps**.	**Service alerts are not up-to-date** and GPS on the buses is usually delayed.
Wish there was a **longer window of time when purchasing** single fare.	The **app glitches** when switching between apps. When returning to the rideCAT app, it will glitch and it will have to be restarted (Keep the app open while waiting to transfer buses, but looking at another app). *Android phone*
Make getting to the ticket easier/quicker instead of having to click through multiple screens.	Validator sometimes **doesn't scan**. Have to wiggle the phone around to scan. "…makes me feel like I have to prove I have money on the app"
Bilingual options are good (Spanish and English). **Provide more languages?** I had trouble finding the language options and when I called customer service they couldn't help me find it.	Sometimes **internet/wifi is slow or out.**
User ID feature to logins.	When **Avail is glitching** the planCAT app has to be reloaded because there's no way to know if the bus is really coming.
Obtaining a **reduced fare ticket in-app** is not easy to understand. (Have to get in-person approval first before able to refill in-app)	Sometimes the app **gets stuck** on loading when boarding the bus (connection issue).

NON-APP USERS

56
Non-App Users
(18 in-person interview,
38 paper surveys)

Three categories of pain points affect non-app users.

Lack of awareness is the easiest to address immediately. Circumstantial barriers and behavior and beliefs are more nuanced and should be researched further for innovative solutions.

- **Lack of awareness:** Most of the non-app users interviewed weren't aware of the app, despite bus and wait station posters and digital ads. Riders were also unsure of specifics of the app such as how to download the app, how to get their fares (reduced, veteran), and the rules of the app (is there a minimum amount needed to load tickets?).

- **Circumstantial barriers:** A lack of financial tools, such as bank accounts or credit or debit cards can hinder non-app users. Insufficient devices such as using a non-smartphone, or using a smartphone that doesn't support new apps, or a phone that doesn't have enough memory or battery life, present obstacles to app usage.

- **Behaviors and beliefs:** Habits and preferences can be hard to change, but trying to understand riders for whom this is an obstacle to app usage can be beneficial for CAT's mission and goals. This category includes riders who don't use a cellphone at all, or who don't use the bus often, and riders who are distrustful of digital devices for fear of scams.

Lack of Awareness
- Don't know about it
- Don't know how to get it (step-by-step)
- Assumptions about app usage

Circumstantial Barriers
- Phone doesn't have enough memory or the battery fails
- Don't have a smartphone
- Don't have a bank account or a credit or debit card

Behavior and Beliefs
- Don't travel much/use the bus often
- Don't use a cellphone
- Prefers physical cards
- Scared of scams on digital devices
- Doesn't use many applications

> " Nothing keeping me from using it, except would want to be able to put a few dollars in and not a whole $20.

> " I prefer a physical card because I'm afraid of online scams.

DRIVERS

16
Drivers

Drivers prefer the app over the farebox.

Drivers were asked about their experience with riders who used the rideCAT app. All 16 drivers interviewed said that the **app was great**. The riders they encountered who used the app rarely had any issues and never asked for help. Compared to the farebox, where the driver has to intervene often when cash gets jammed and paper tickets won't swipe. All of the operators were frustrated with these farebox malfunctions and some expressed that it put them in unsafe positions, one example being holding cash on their route. They also mentioned that it took up time from their route to troubleshoot those issues.

Drivers said that they didn't know much about the app and when some non-app riders asked them about it, all they could do was direct them to the app store. They had no information to share with riders.

> **"**
> When the farebox gets jammed, it's not safe...especially in Immokalee, there is no supervisor out there to fix it, so you end up holding cash the whole time—it's not safe!

> **"**
> Most people know how to use it. If people ask about the app, all I can do is tell them to download from the App store.

RECOMMENDATIONS

1. **Awareness and Adoption**

2. **Driver Safety and Advocacy**

3. **Glitches and User Experience**

1. Awareness and Adoption

Marketing

- Present the "how-to-video" more prominently on the website and on social media.

- Increase the size of signs onboard and at transfer stations, and add a nudge sign at the validator.

- Display ads in multiple languages.

- Provide brochures with step-by-step instructions for riders with low technical literacy. Drivers can utilize these brochures when riders ask about the app.

- Promote the security of the app for riders afraid of scams and protective of their identity.

Information

- Holding in-person workshops to assist riders in on-boarding of the app in real time could be crucial to bridge the gap for those with low technical literacy.

- Equiping customer service desks with standard Q/A's to address rider knowledge gaps. In addition, implementing a log book for incoming questions is a simple way to monitor issues.
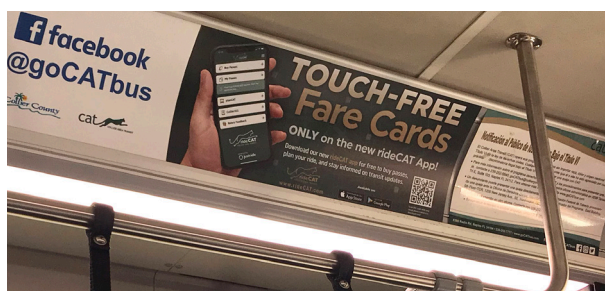
2. Drivers Safety and Advocacy

Drivers can become **front-line advocates** for the app if there are **readily available resources** they can reference and that riders can take with them.

- **Job satisfaction and performance should increase** with more rideCAT app usage. App usage could alleviate some job stresses such as dealing with faulty machines, handling cash, and physically interacting with riders.

- **Safety** could be increased by minimizing physical interactions drivers have with riders.

- Less time spent on cash exchange could produce **quicker boarding times and more efficient routes**.

Alex Driehaus/Naples Daily News/USA TODAY - FLORIDA NETWORK
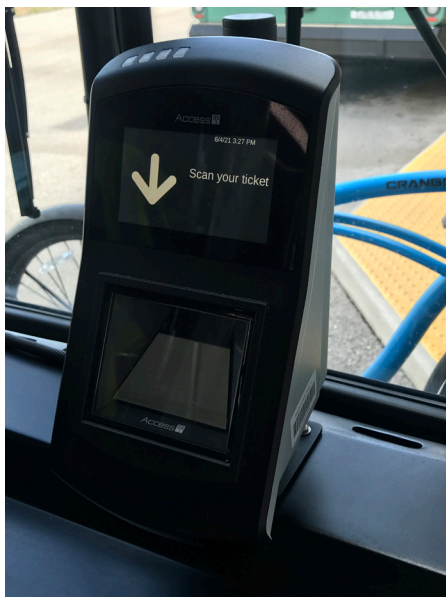
3. Glitches and User Experience

- This study further validates the need for investment in Avail system **hardware upgrades or replacement** cited in section 7.2.2 Technology of the Ten Year Development Plan.

- Many of the user experience pain points of app users are reliant on Masabi to update or customize the Justride platform. **Working directly with Masabi to customize the app would be ideal**. If that is not possible, passing along rider feedback and feature requests is recommended.
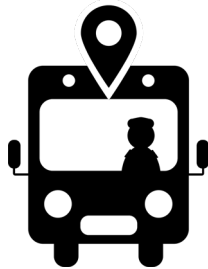
WHAT CAN BE MEASURED GOING FORWARD?

Route Efficiency

Comparing pre-app and post app efficiency on routes that have higher app usage or increasing adoption of the app is a recommended.

Adoption Rate of App

Masabi stated a good starting goal is 8% of riders adopting the app. Set a goal for a six month check-in to assess progress.

Rider Satisfaction

This is a standard metric that is used in the customer survey from the Justride app. One shortcoming is that everyone has a different standard of satisfaction and unless they are provided a place to explain themselves, it will not be explicit "why" they gave a particular satisfaction rating.

Rider Disappointment

Loss is a better indicator of how essential a service is to people's lives. The goal is to move riders from "I don't use the app" to being "Very disappointed if I could no longer use the app". This is easy to track over time and can be paired with other metrics.

Driver Satisfaction

Driver satisfaction rate could be measured to see if app adoption rate has any effect on their feelings of satisfaction of their job.

APPENDIX

METHODOLOGY DETAILS AND RESULTS

Gather Stakeholder Insights

Masabi ridership data was the most helpful in deciding where to intercept participants in the field because it gave clear times and locations of app users. CAT stakeholders also made recommendations that were helpful in reaching a broader segment of riders.

Review Development Plan

The Ten Year Development Plan included details for technical improvements and explicit goals that CAT wants to achieve. This study was able to track and validate some of CAT's stated goals.

(7.2.2 Technology)

- Identify Super Users/Product champions

- Replace/upgrade Avail systems

(8.3 Goal 5)

- Use technologies and innovations in service delivery to improve productivity, efficiency, reliability, and cost-effectiveness of mobility services and operations.

7.2.7 Technology Trends

CAT offers real-time fixed-route bus information on the CAT website and in the MyStop app. Passengers can board CAT buses using reloadable smart cards. The public can use the online trip planner on the Google Maps platform to find transit solutions. CAT had a technology consultant assess needs and these findings are summarized below.

CAT established organizational goals for technology as noted:

- Improve customer satisfaction and convenience (e.g., be more proactive with customers, provide customizable alerts/information);

- Obtain and utilize reliable data to make service improvements;

- Provide more coordination/collaboration/connection between fixed route and paratransit, and between transit and other modes (traffic, bike-sharing, ride-sharing, microtransit);

- Improve operational efficiency and service reliability;

- Establish a unified climate among CAT, the County, community and contractor (e.g., improve perception);

- Foster innovation within CAT;

- Adapt to changing customer needs and transportation ecosystem;

- Ensure fiscal discipline and explore financial options; and

- Ensure technology efficiency and minimize duplication.

Based on the above goals and in response to a ranking and prioritization effort, CAT has prioritized the following technology initiatives:

- Kiosk Information Media

- Enhanced Data Strategy

- On-board Surveillance System Enhancement

- Transit Signal Priority

- On-board Information Media

- Identify Super Users/Product Champions

- Upgrade Fare Logistics

- Paratransit IVR/Notifications

- Fixed Route Scheduling Software

Collier County| *2021–2030 Transit Development Plan*   7-10

Analyze Existing Rider Feedback

Results from the in-app customer feedback survey were reviewed, as well as Facebook questions and answers from when the app was about to launch.

Tiffany Weeks
Hi my name is tiffany weeks and I was wondering how am I going to be paying the drivers on the paratransit bus if there are going to be contactless fares?
Like · Reply · 46w   👍 1

> **Author**
> **Collier Area Transit - CAT**
> Hi Tiffany. You will still have the option to pay as you were, we are just offering an alternative way to pay and travel, with the app on our fixed-route buses. Thanks.
> Like · Reply · 46w · Edited

Linda Irwin
What about the discount pass?
Like · Reply · 46w   👍 1

> **Author**
> **Collier Area Transit - CAT**
> Hi Linda. You can get a new pass (Smart Card) at either of our transfer stations. Or when you go to get your new pass, they can set up your account with your discount so that you can purchase it right from the rideCAT app so that you don't need to carry the pass anymore. It will be stored in the app on your mobile device to make traveling easier and faster.
> Like · Reply · 46w   👍 1

Travis Anderson
So two separate apps?
Like · Reply · 43w   👍 1

> **Author**
> **Collier Area Transit - CAT**
> Hi Travis. No, there is just one app depending which type of phone you use. If you have an Android, you can download it in the Google Play Store and if you have an iPhone, then you can download it in the App store.
> Like · Reply · 43w

> > **Author**
> > **Collier Area Transit - CAT**
> > **Travis Anderson** Thanks for your feedback. It should be fairly easy once everything is downloaded.
> > Like · Reply · 42w

> > **Author**
> > **Collier Area Transit - CAT**
> > **Travis Anderson** Oh yes, sorry for the confusion! Please download both rideCAT and planCAT so then when you want to view the routes it will automatically take you there from the rideCAT app.
> > Like · Reply · 43w

> > **Travis Anderson**
> > **Collier Area Transit - CAT** my two sense for what it's worth, two apps is not great for the end-user.
> > Like · Reply · 42w   👍 1

> > **Travis Anderson**
> > **Collier Area Transit - CAT** no the new app rideCAT, when you open it and click planCAT, it pushes you back to the app store to download the planCAT app to actually view routes.
> > Like · Reply · 43w · Edited

> **"**
> Scanner for phone only works sometimes. It makes me feel like I have to prove I have the fare money on your app.

Observation, In-person Interviews and Paper Surveys

Observe riders ticketing behavior

Riders were observed as they purchased tickets and paid fare while boarding the bus. Mobile and smart cards usually went smoothly, but single pass cards and cash took longer and were prone to getting stuck. Many riders needed the assistance of the driver to swipe or insert the cash for them.
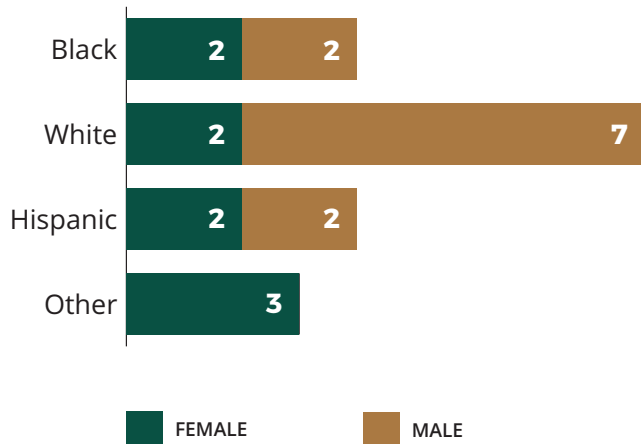
In-person Interviews and Paper Surveys

Interviews and surveys were done over **9 days** (March 23rd-April 23rd) at the Government Center Transfer Station and onboard routes that had a high percentage of riders using the app.
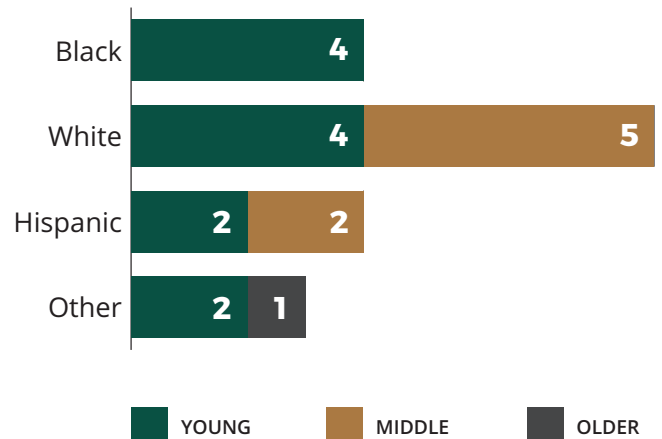
The Government Center was a good location to gather the most data at one time because so many routes stopped there for riders to transfer and there were people waiting as well, which provided a more relaxed environment to interview. Routes were chosen based on Masabi app usage data provided by stakeholders. The times were picked to get the most rider feedback as possible and reach different populations (people heading to work or coming home from work, students, shoppers, etc.).

Paper surveys were utilized early in the research on very busy routes to reach as many people as possible. There were a **total of 44 paper survey responses, with 6 app users.** In-person interviews were done when there were less people on the bus and while waiting for the bus a the Government Transfer Station. There were a total of **38 riders interviewed, with 20 being app users and 18 being non-app users**.

APP USERS BY SEX + ETHNICITY

	FEMALE	MALE
Black	2	2
White	2	7
Hispanic	2	2
Other	3	

APP USERS BY ETHNICITY + AGE

	YOUNG	MIDDLE	OLDER
Black	4		
White	4	5	
Hispanic	2	2	
Other	2		1

IN-PERSON INTERVIEW BREAKDOWN BY SEX

	App Users	Non-App Users
Female	9	9
Male	11	9

APP USERS BY ETHNICITY

Hispanic (Spanish Speaking)	Hispanic (English Speaking)	Other	Black	White
2	2	3	4	9

APP USERS BY ETHNICITY + SEX

	Black	White	Hispanic	Other
Female	2	2	2	3
Male	2	7	2	0

APP USERS BY ETHNICITY + AGE RANGE

	Black	White	Hispanic	Other
Young	4	4	2	2
Middle	0	5	2	0
Other	0	0	0	1

APP USERS BY DESTINATION AND PASS TYPE

Destination	Users
Work	3
Home	2
Shopping	3

8 out of 20 answered

| Pass Type	Users
15 day	4
31 day	6
Single	1

11 out of 20 answered

Interviewees were asked the same questions as survey respondants.

▸ *App Users were asked:*

- **How disappointed would you be if you could no longer use the phone app?**
(Options: Not at all Disappointed, Somewhat Disappointed, Very Disappointed)

  – Please explain why you answered that way.

- **If you had a magic wand, what would you change about the phone app?**

- **How satisfied are you with the phone app?**
(Options: Unsatisfied, Kind of Unsatisfied, Neutral, Kind of Satisfied, Satisfied)

  – Please explain why you answered that way.

▸ *Non-app users were asked:*

- **Does the phone app sound like something you would like to use? Why or why not?**

- **Is there anything that would prevent you from using the phone app?**
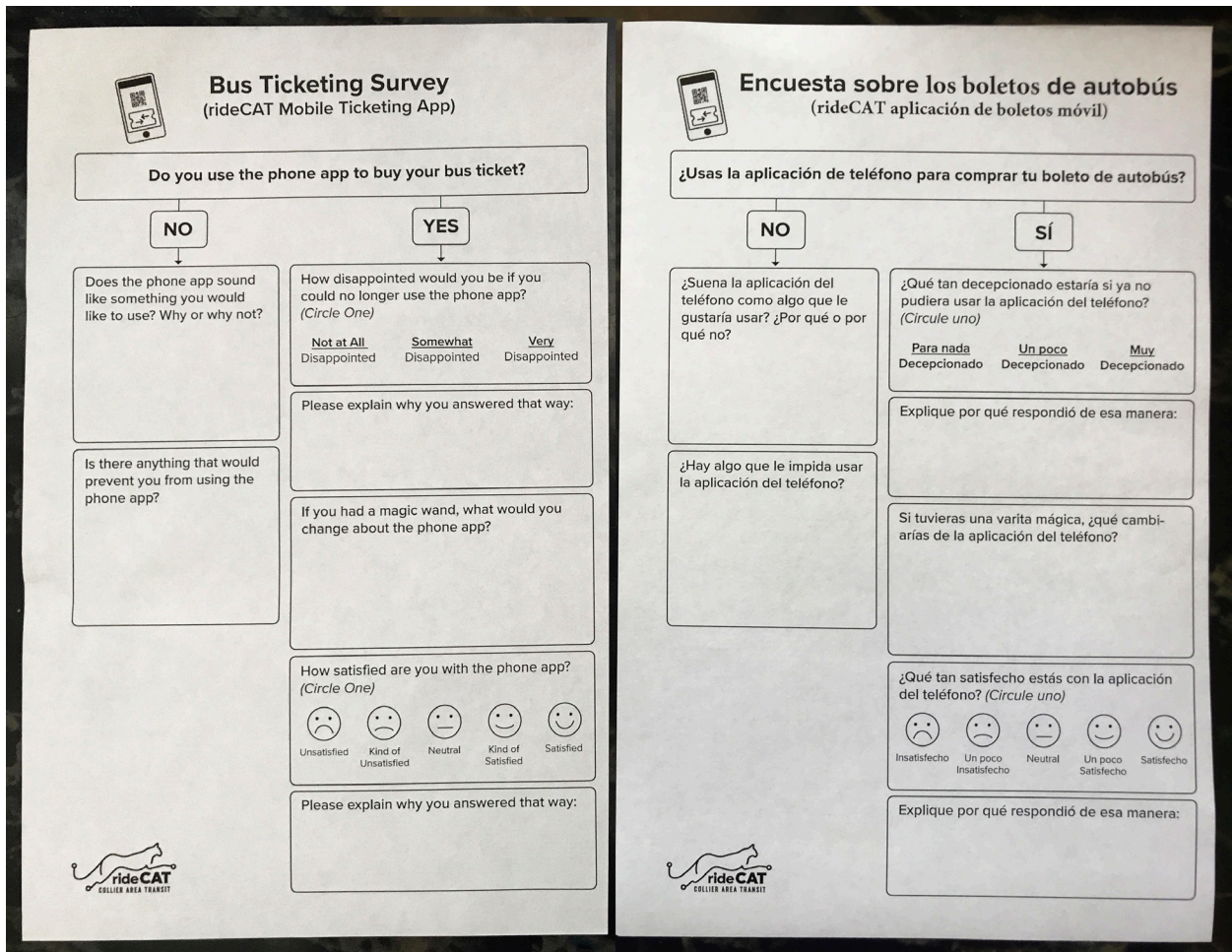

Half page paper surveys in English and Spanish. Future surveys should accomodate a Creole version as well.

App user disappointment rating

Measuring potential for **loss** reflects a different metric for users than satisfaction. Loss is a better indicator of how essential a service is to people's lives. The goal is to move riders from "Don't use the app" to being "Very disappointed if I could no longer use the app". This is easy to track over time and can be paired with other metrics. The most common explanation for "Somewhat Disappointed" and "Very Disappointed" was that the mobile app was **convenient**.

Out of 26 app users (20 in-person interviews and 6 app users from the paper surveys), 16 reported they would be "Very Disappointed if they could no longer use" the app.
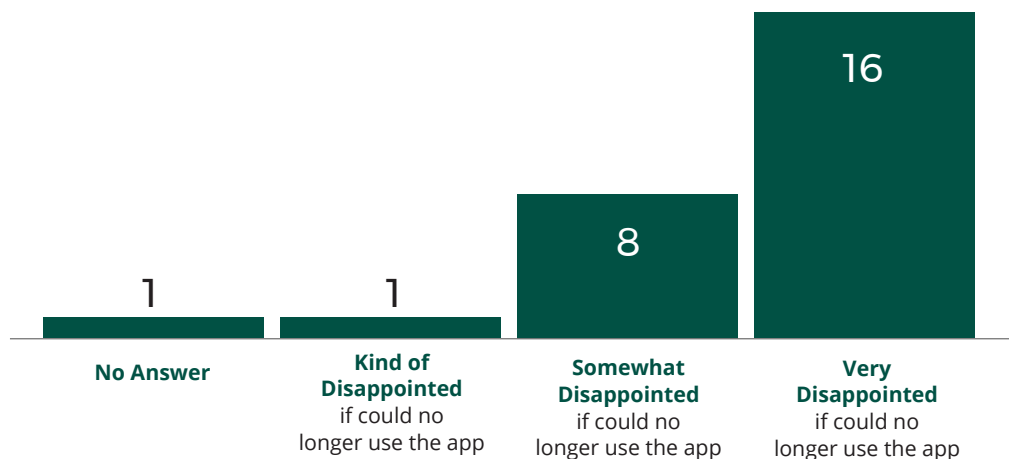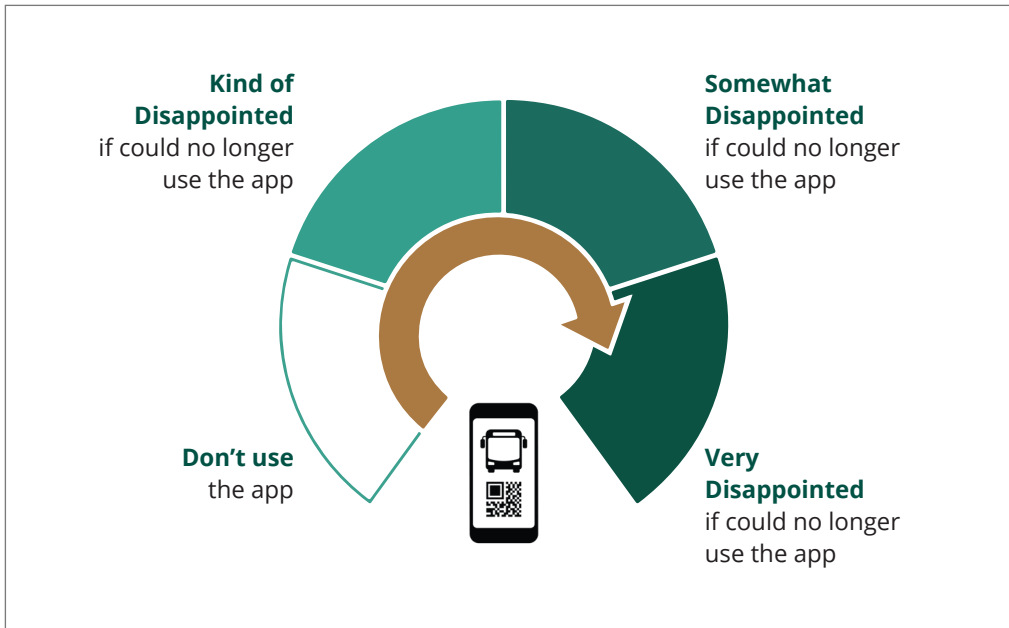
If you had a magic wand, what would you change about the app?

App users were asked this question on paper surveys and in-person interviews. Answers were pretty concrete, with calls for less technical friction and some feature requests.

> **"**
> Include service alerts. I have to switch between the website and other app to get basic info.

> **"**
> I wish there was a longer window of time when purchasing single fare.

> **"**
> Finger print or user ID feature to login could be nice.

> **"**
> It would be easier if planCat was combined (I don't like that it switches and I have to have two apps).

> **"**
> It glitches if I go to another app and then come back. I have to restart it.

> **"**
> The reader sometimes doesn't track, I have to wiggle it [phone] around to scan.

App user satisfaction rating

App users were asked on paper surveys and in-person interviews how satisfied they were on a scale of 1-5 (1 being unsatisfied, 5 being satisfied). Users were asked to explain their answer to extract more useful information. Some explanations given were, "the app does everything it's supposed to", "it's easy", "convenient", "works as intended", "helpful".

Out of 20 users interviewed, 16 reported they were "Satisfied" and 4 reported they were "Kind of Satisfied". Paper surveys only had 6 respondents who used the app, 4 of which were "Satisfied" and 1 was "Neutral"
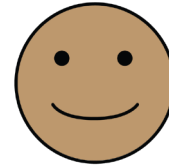
> **"**
> Easy, convenient, don't have to play with money. Nice to be able to buy a pass and can activate it when you want to instead of right away like some other apps.
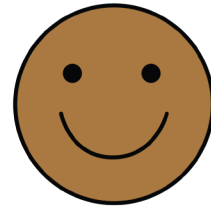
20
Satisfied

4
Kind of
Satisfied

1
Neutral

0
Kind of
Unsatisfied

0
Unsatisfied

MISCELLANEOUS

Miscellaneous incidents and suggestions that riders recounted are cateloged below.

Customer Service

- Streamline Q&A by setting up a frequently asked questions book.

- Record questions that come in for future Q&A.

- Keep logs of complaints and suggestions

Business partnerships and locals

- Promotions for locals with local business partnerships.

- Offer a discount for downloading the app.

- Discounted tickets for locals.

Technical

- Charging outlets on the bus or at bus stops so riders can charge their phone and retrieve their ticket.

- Kiosks with the ability to access accounts if riders forgot their phone, they would still be able to print or scan a ticket.

Other

- Frequency of routes and lack of bike racks leave riders to resort to Uber/Lyft.

- There were at least two separate statements addressing rude behavior from bus drivers.
  - An older white male recounted an incident which involved the driver grabbing his arm, preventing him from swiping his card. And ordering him to board the bus quckly and ignoring his comments.
  - An older black female stated that Hispanic drivers were racist to black and white.