Team Number: 13

Team Name: GTRideShare

Transportation for Tech without the Wreck

Sally Park, Michael O'Mara, David Kim, Mylon Craig, Chris Yun, Jin Woo Lee

Part 3: Final Prototype Development

Executive Summary

We are working on a rideshare design to connect Georgia Tech commuters who have similar schedules and destinations. While the majority of students do live on campus, there are still accommodations that can be made that will benefit both the environment and Georgia Tech students that do not live on campus. Single-rider commuters face the frustration of high gas prices, expensive GT parking passes, and what could potentially be a long and lonely commute with the high volume traffic within the city. While carpooling is a viable option to reduce the cost of the commute, carpooling options currently available to Tech students such as Uber, ZimRides, and the Carpool Parking Pass option fail to do so and therefore are either not used or not possible to be used due to being discontinued. These options are not popularly used by students due to either costing them more than if they were to commute alone, or because they require too much of an commitment and careful planning in order to be done comfortably. This design will target individuals within the GT community that struggle to find others to carpool with or help manage the carpool in an efficient manner with the option of potentially coordinating long term schedules. The design will do so by using profiles to share information about themselves to other students, connect students based on specific mutual characteristics, and utilize a carefully thought out method of sharing the cost of the commute rather than paying for a service. We hope to provide students with a superior alternative and fundamentally improve how carpooling is viewed by Tech students today.

1. Design Criteria

After further research, we determined the following three ideas to be the most integral in regards to our user's concerns and ultimately established them to be our design criteria. After discussing with the professor, success and failure for each design criteria are discussed in the scope of our coherent solution idea, being the creation of an App.

1) **User Control**: Users should be presented with accurate information which they can use to make their desired type of carpool group, as well as be given the ability to customize said group.

This criterion addresses a major concern our users had when choosing to join or create a carpool group. From our research in P1 and P2 we found that the main reasons users don't carpool are either they are unable to find people to carpool with or they have had terrible experiences when carpooling in the past. These issues are the result of having little to no knowledge about potential carpool members and lacking the flexibility to fine tune their carpool group to match their personal preferences. Therefore, we chose User Control to be one of the design criterias we focus on when developing a coherent design idea to provide users with the control necessary to form their ideal carpool group that reflects the user's ideal preferences.

The success or failure of this design criterion will be measured using the ratio of positive to negative feedback from users who interact with this solution. User feedback is absolutely necessary for deeming the success or failure of this design criteria as the user's sense of control over their ability to customize their carpool group can only be measured through the feedback of said users. If the majority of users feel that they have been given a sufficient amount of user information and flexibility by the prototype of our solution when creating their carpool groups, then User Control will be marked as a success. If the majority of users feel that they were not given sufficient control over their carpool group, then the design criterion will be marked as a failure. The success and failure of this design criterion is measured and analyzed through the through the scope of the final app based solution proposed in this part of the project as allowed by professor Abowd.

User control is implemented in our solution through the flexibility provided during the creation of one's profile and the customization of the search for carpool group members. Users are able to control the type and amount of their personal information they want to make available for other users to access. Additionally, during the search for carpool group members, although a recommended list of matches are provided to the user and an extremely customizable user search with several available filter options give users the freedom to search through users by any carpool preferences they have, user's names, gender, age, and major. The same filtering options will be provided for existing carpool groups that are in search of additional members. Accordingly, this criterion's success will be determined by whether majority of the users through feedback believe this provides enough control they desire, and failure will be determined if majority of the users believe more method of control are necessary.

2) **Punctuality**: Users should experience little to no delays when leaving and/or arriving to their destination in comparison to if they were to drive alone.

This criterion addresses another major concern our users had in regards to problems they would least want to experience when carpooling. From our research we found that the majority of the problems experienced by those who have carpooled in the past were related to time. Common problems include having to deal with members who arrive later than the agreed time, having conflicting views on whether or not to avoid traffic by leaving earlier in the morning or making unexpected stops during a commute, which all result in either unwanted or unplanned delays in their commute. These issues arise from a lack of communication as well as the lack of incentive to follow time related agreements between users. Therefore, we chose punctuality to be another criterion we need to focus on in order to develop a coherent design idea that provides users with the necessary process to follow when dealing with time in order to help promote punctuality between carpool members.

Specific to our coherent solution idea, this criterion is incorporated through the feature that administers a consequence of arriving late in real time. Once the mutually agreed upon time to meet has past, a button to be pressed will be provided for the user who was rightfully on time. Once the button is pressed a timer will begin and for every minute, a certain percentage of the original cost per user will be calculated and accumulated over time until the late user arrives. When the late user arrives, which will be confirmed through a QR Scan, the timer will stop and the additional fee for being late will be added on to the original cost the late user was expected to pay.

The success of the criterion of punctuality will be measured through user feedback. The success of this criterion will be determined by whether the majority of users believe that the way our solution tackles punctuality offers enough of an incentive for them to be on time, as well as if the majority of users believe that our solution offers enough compensation for those who have to wait for late members. Accordingly, failure will be determined if majority of the users through feedback believe that it is not an enough incentive and/or not enough compensation for those who have to wait for late members.

3) **Trust and Safety**: Users should feel at ease when finding people to carpool with.

This criterion addresses a major concern our users had in regards to how secure they felt when commuting with other people. From our research in part 1 and part 2, we found that another reason why a considerable amount of users chose not to carpool is due to not knowing enough information about the people they might carpool with such as their credibility, driving history, and generally who they are. This lack of information made it difficult for users to be able to trust one another when it came to commuting which directly influenced how safe they felt in carpooling with them. Therefore, we chose this to be our last criterion to focus on when developing a coherent design idea in order to provide users with a reliable method to find other potential trustworthy carpool users.

Specific to our coherent solution idea, this criterion is incorporated through the requirement of personal information relevant to one's driving history such as one's driving history and criminal background during the registration process. Additionally, this will be upheld

through a rating system provided to each user that can be in real time altered through feedback left by previous members who have carpooled with said user in the past.

Success for this criterion will be determined by whether majority of the users through feedback believe this them with enough sense of security when finding members to carpool and trust that they aren't anyone who they would want to avoid. Accordingly, failure will be determined if most users through feedback believe this does not provide enough of a sense of security and believe additional features are necessary in order to successfully do so.

2. Stakeholders

Our users can go from being the provider to the consumer at any given time

- When users are providers

Our users will go from consumer to provider and vice versa depending on whether they are driving or riding. Those who are driving at any carpool arrangement at any given time will be the providers. They provide a ride to and/or from the campus to the members of the carpool group. Providers become consumers when, depending on the carpool arrangement or being a member of different carpool groups in different days of the week, they share the ride someone else is driving.

- When users are consumers

Those who ride are the consumers. In return for sharing the ride with the driver, they pay financial compensation for the driver's gas for the particular trip. Consumers become providers when it is their turn to drive. Dependents, who do not own a method of transportation by themselves, will always be consumers.

- GT Parking and Transportation

Another important stakeholder in our solution is GT Parking and Transportation Services. The department is much interested in providing an alternate method of commute to the members of GT community. Through an interview, Lisa Safstrom, Campus Transportation Planner in GT PTS, informed us of what the department would like to see on our solution. First of all, GT PTS wants to be informed of how effective our solution is. The effectiveness can be measured by the number of registered users, the number of active carpool groups and the actual number of daily commutes completed through carpool. Secondly, GT PTS reminded us of the security concern of a rideshare platform and requested a method to verify GT membership. An example it provided was requiring GT ID during registration.

3. Convergence on a Coherent Solution

Our previous set of solutions, which we presented during the critique session, each focused on meeting one design criteria. Upon consultation with the instructor, we decided to change our set of solutions for the P2 deliverable from being single design criteria focused solutions to becoming more developed and unique solutions. Therefore, the critique we have received from the critique session were only relevant to one solution (App based carpool platform, GT Carpool) which we decided to keep. For the other two solutions that were not presented during the critique session, feedback on P2 from the instructor and in-group critiques were mainly used to evaluate them. Here, we present the final solutions that we used in P2 deliverable.

GT Bus is the safest and the most reliable solution among them since it is essentially an extension of existing GT Stinger system. GT Bus received feedback that it fails to meet the criteria of “user control” because GT Bus does not offer users the ability to control who they ride with, and that it is not pragmatic cost-wise. We decided to keep GT Bus’s consistency and safety in mind for our final solution since “Punctuality” and “Trust and Safety” are two of the design criteria we’re focusing on.

WaitingRoom is the most flexible solution as it provides on-demand ridesharing platform that directly corresponds to the design criteria of user control. It received feedback that it is too unreliable; there may not be a driver who is going in the rider’s direction at any given day. Its on-demand functionality carried over to our final solution in the form of the Emergency Ride function.

GT Carpool, a ride-sharing app, was carried over from the critique session into the P2 deliverable and is now being developed into our final solution. During the critique session, it received multiple criticisms that there was little incentive for the drivers to give rides. We initially thought that sharing the gas cost of commute would be enough of an incentive, but we heard the feedback. We decided to rework our incentive system for GT Carpool and continue the design as our final solution.

Our reworked driver incentive program starts with an algorithm to calculate the total gas price of one ride. The total amount of the gas for the ride is divided by all of those in the car, including the driver, before the ride begins. The riders then pay the dividend share, but half of their payment goes directly to the rider and the other half goes to ‘the system’. The other half that is going to the system, will be turned into points that are gifted to the driver. This means that the amount that the riders pay the drivers over all is 25 percent of the total gas cost, so the driver will have to pay the other 75 percent, but the rider was going to pay for this cost anyway For each rider the driver takes, the driver can either choose to take a point that he can put towards a discounted price for a ride later or he can instantly take the cash value equivalent to the points that the driver has earned. For example, if the algorithm calculates the cost from Suwanee to Georgia Tech to be $10, which the driver would normally pay if commuting solely,

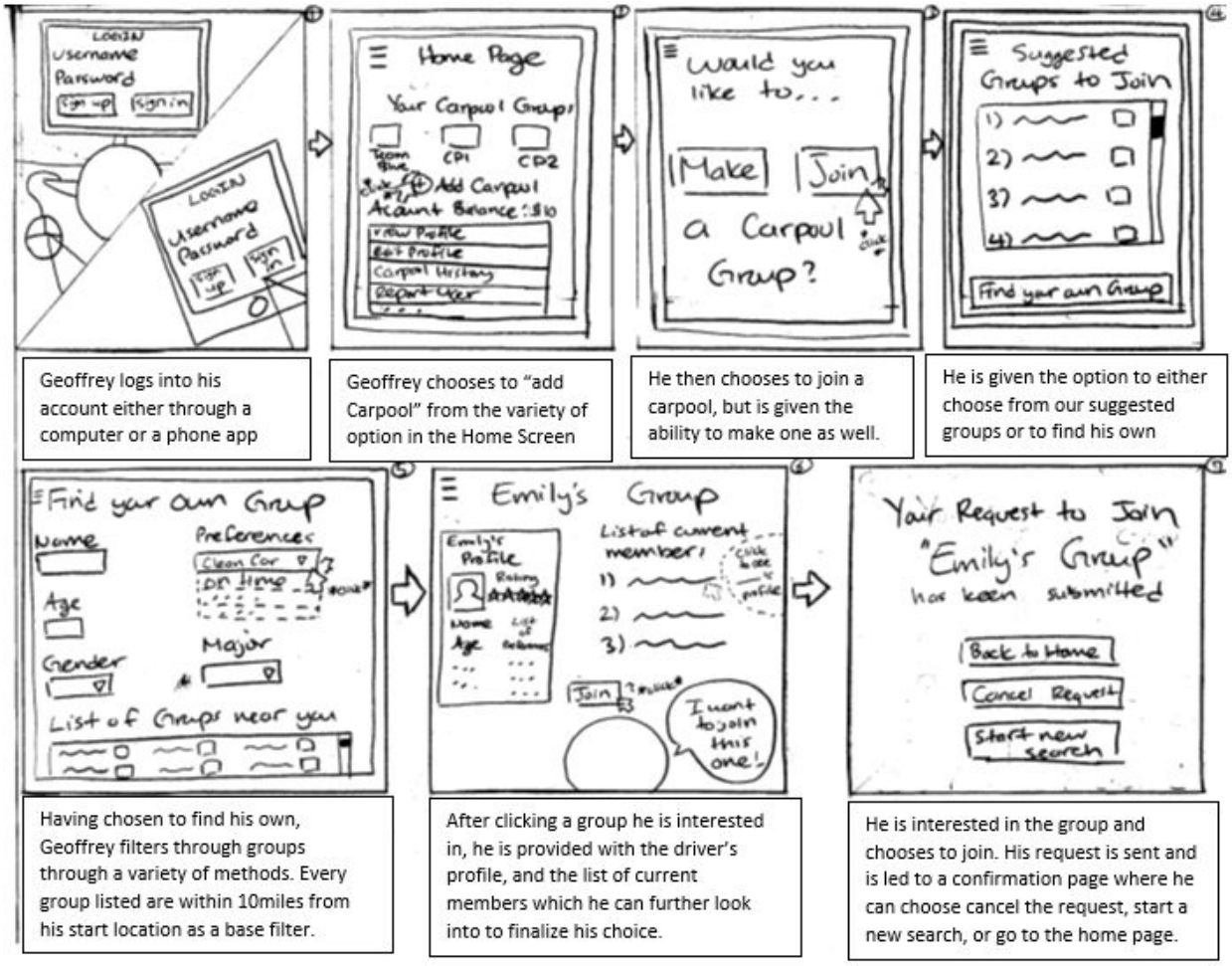
then 25% of the cost would fall onto the driver, 25% goes to system, and 50% of the cost would fall onto the driver. The $2.50 that goes to the system would be converted to points that the driver can either use to pay for rides later on or translate to cash.

We also revamped the positive features found in the other two solution ideas and added them to the final solution. We took the focus on punctuality from the GT Bus solution and implemented it in the final app using the idea of late fees which arose after focusing on a reliable Time Management solution during our critique session. In this revised punctuality feature, users agree ahead of time on what time their carpool should depart, and late users will be charged a percentage of the total ride for each minute they are late. We also added new features to encourage punctual behaviors such as holding on to the cost of each carpooling ride in both the rider and driver's accounts, if the rider or driver cancels their ride too last minute, if they are too late, or if they don't complete the ride, the funds will be automatically transferred from the transgressor's account to the inconvenienced party's account. From WaitingRoom, we took the idea of on-demand rideshare concept and implemented it in our final solution as an Emergency Ride feature that gives late users the option to search and temporarily join another carpool going in his/her direction in the case that they're too late or too early for their own carpool's agreed upon meeting time.

4. Final Prototype

A. Visual Storyboards

1. Becoming a Rider - Consumer-focused Task



Geoffrey logs into his account either through a computer or a phone app

Geoffrey chooses to "add Carpool" from the variety of option in the Home Screen

He then chooses to join a carpool, but is given the ability to make one as well.

He is given the option to either choose from our suggested groups or to find his own

Having chosen to find his own, Geoffrey filters through groups through a variety of methods. Every group listed are within 10miles from his start location as a base filter.

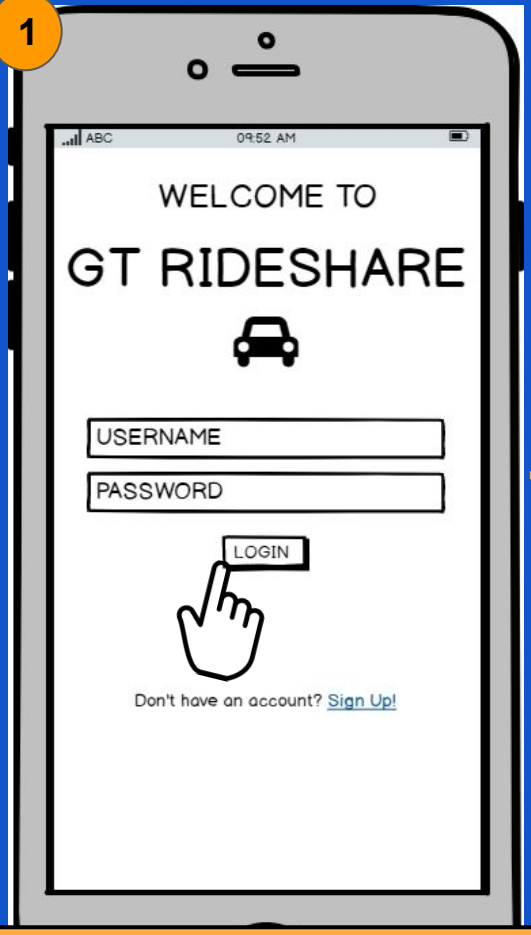
After clicking a group he is interested in, he is provided with the driver's profile, and the list of current members which he can further look into to finalize his choice.

He is interested in the group and chooses to join. His request is sent and is led to a confirmation page where he can choose cancel the request, start a new search, or go to the home page.

BENCHMARK 1 WIREFRAME
Consumer Perspective

“Searching for and joining a carpool group”

1



If the consumer/rider already has an account they can log in

All of the carpools the user is currently a member of are openly displayed on the home page

The amount of money the user has in their account is located on the home page so they can easily see if they have enough money their account for a ride.

The home page has a list of setting and editing options that can be accessed no matter what page the user is on by pressing the menu button at the top of the screen

2

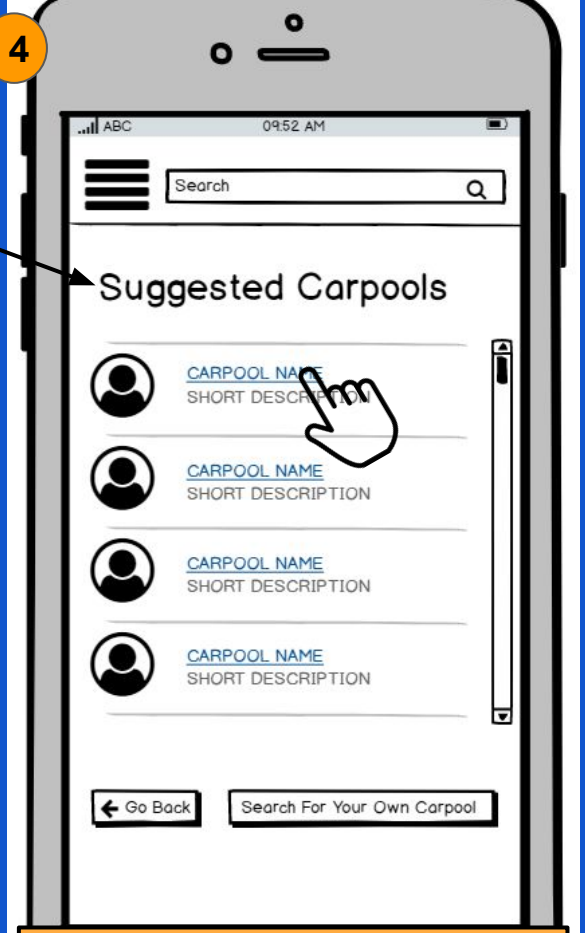
The consumer can press the plus button to find a carpool to join

3

The consumer can choose to join a pre-existing carpool or piece together their own carpool group

The app gives the user a list of suggested carpools and/or drivers they would be eligible to carpool with based on the schedule and carpooling preferences the user lists in their profile

4

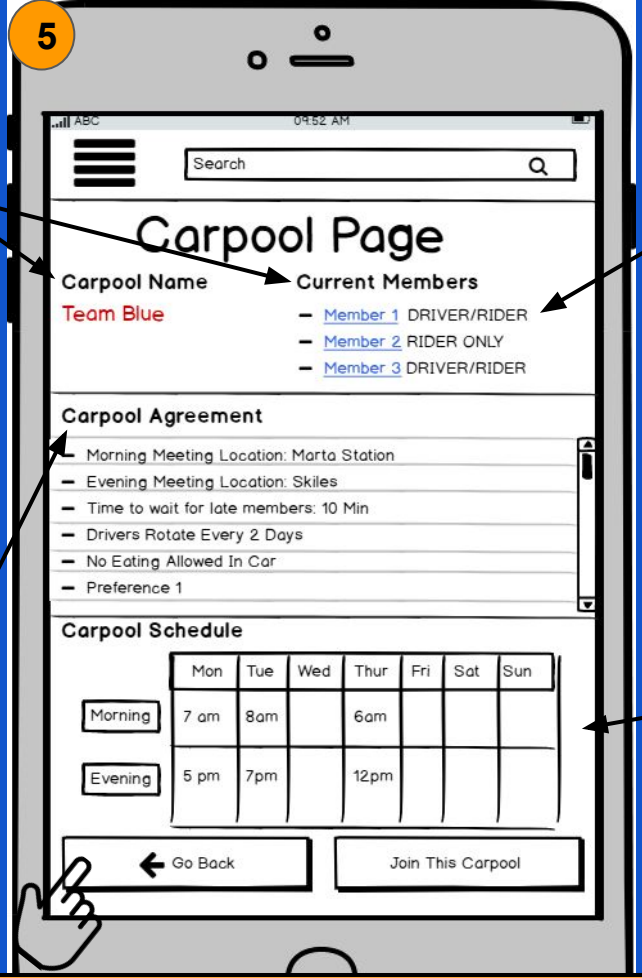


The consumer can click onto one of the suggested carpool groups to find out more about it

5

The Carpool Page contains all of the carpool's information such as the carpool's name, members, and agreements

The list of current members gives users the ability to click on a member's name to view said member's profile. Also The list displays the roles each member plays in the carpool group



The Carpool Page has the carpool agreement which includes all of the rules the carpool group has agreed on such as meeting locations, car rules, and how late carpool members can be before the group will just leave

The Carpool Page has the schedule of the carpool openly displayed on the screen even though the information is in the carpool agreement so that people can quickly view it when searching

The consumer can view the details of the carpool group on it's carpool page and either choose to join the group or go back to go back to the suggested list

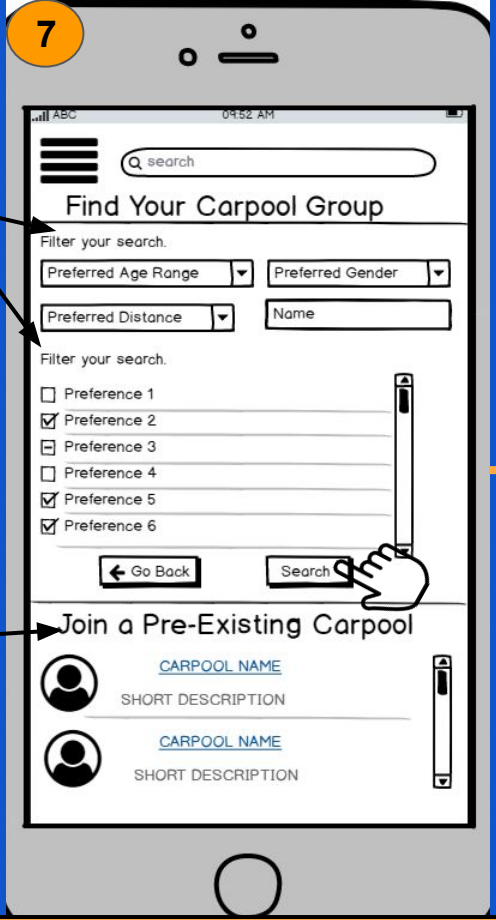
6

The consumer has the option to search for their own carpool instead of using the recommendations provided

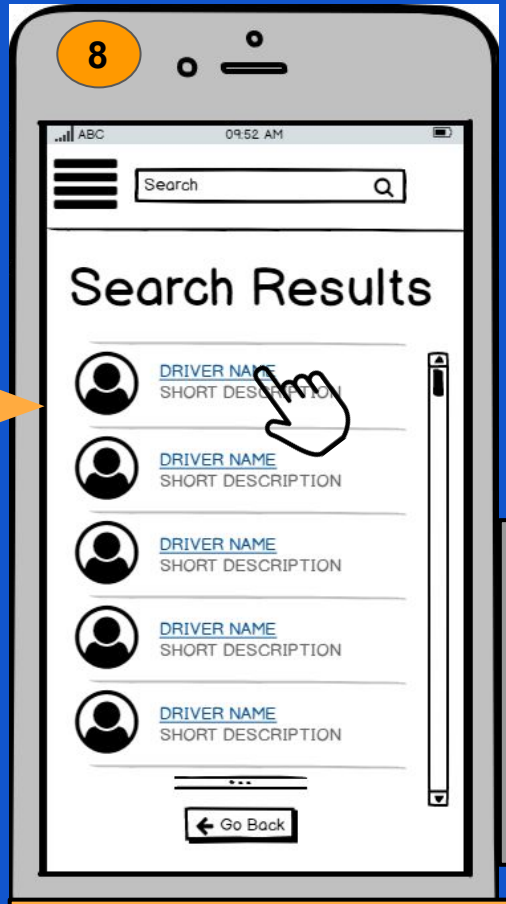
Users can filter through the list of pre-existing carpools and carpool members by customizing the search to look for people that match a specific preference, age range, gender or any other sort of criteria.

A list of all possible carpools are listed at the bottom of the screen.

7



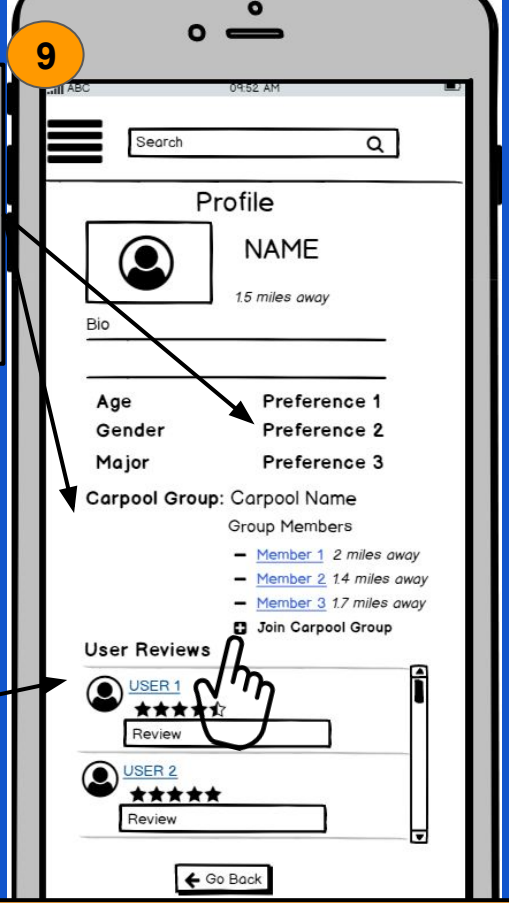
The consumer can customize their own search to find the perfect carpool. They start the search by pressing the search button.



The consumer can click onto an eligible carpool group or user's name to view their profile

When you look at someone's profile you can see their preferences, the carpool groups they're a part of, as well as any additional information they decide to include.

When you look at someone's profile you can see the reviews that other people that have carpooled with this user have left. You can also click on the profile of those that left the review to see if the review is credible

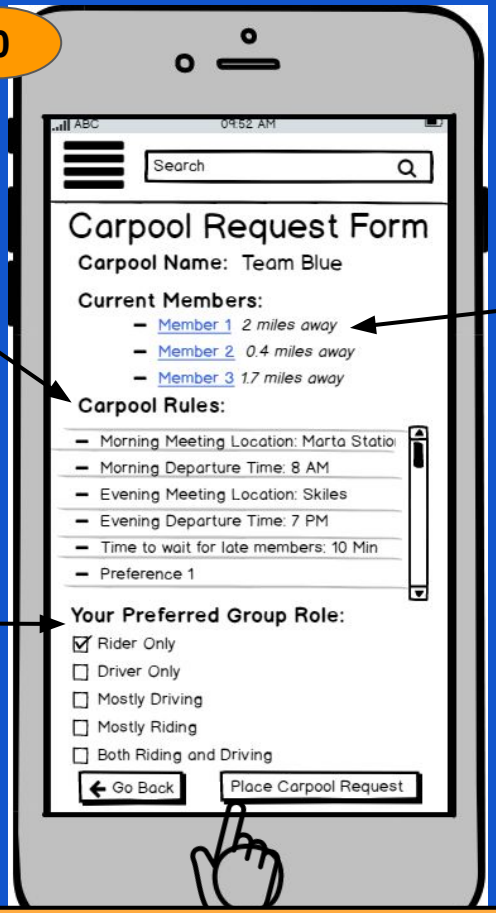


When the consumer views another user's profile, they can decide if they want to join a group that the user is in. To do so they only need press the plus sign to join the group

10

The carpool request form allows users to look at all of the rules the carpool group has made in their carpool agreement

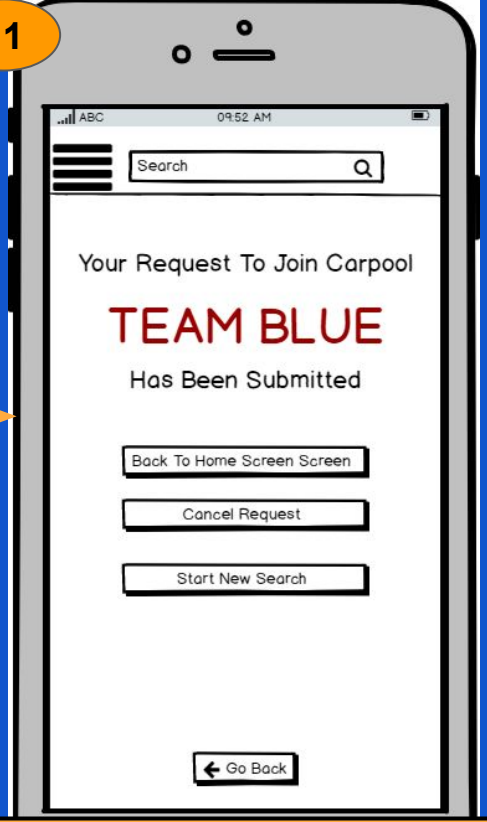
When seeking entry to a carpool group, the user enters what they want their role in the group to be.



The carpool request form shows users a list of all the members in the group and how far each members lives from the user seeking entry to the group

The Carpool Request form allows the consumer to review all of the information about the carpool. If the consumer decides to join the group, they only need press a button to send the request to join to the carpool group

11

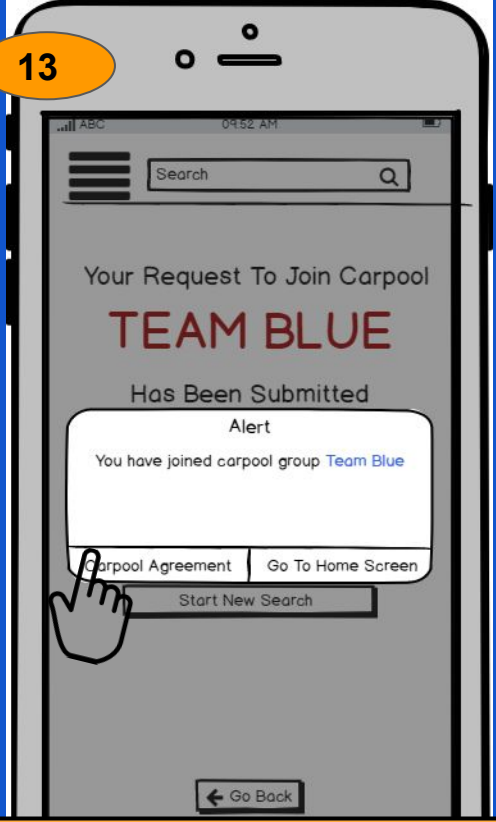


When the consumer sends a request to join a carpool group the app will use this screen to confirm that the request has successfully been sent.

12

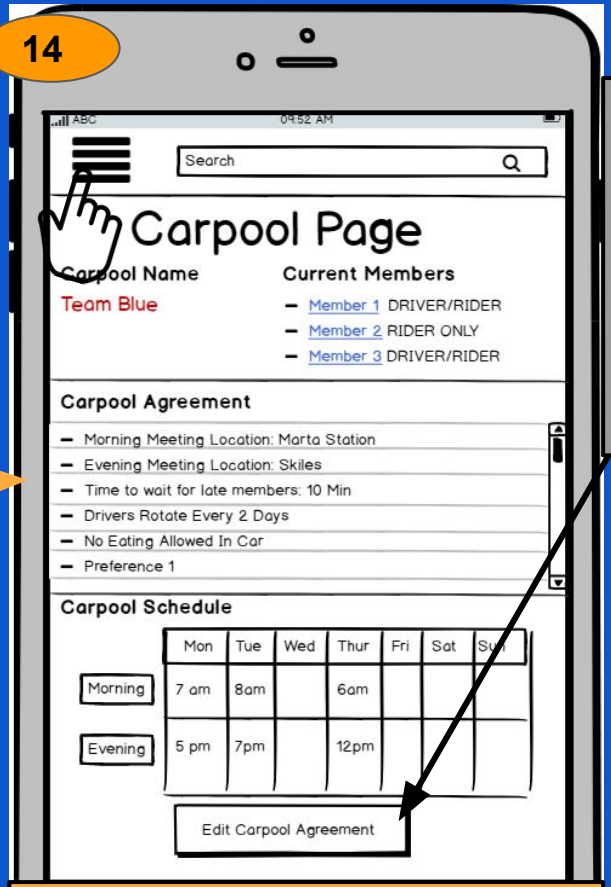
If a carpool group accepts the consumer's request. The app alerts the consumer of this development and will give the consumer a chance to decide to join the group or cancel their request.

13



If the consumer confirms that they would still like to join the carpool group, the app will show that consumer has successfully joined the group. The consumer can then choose to look at the carpool agreement again to make sure everything still works with their schedule

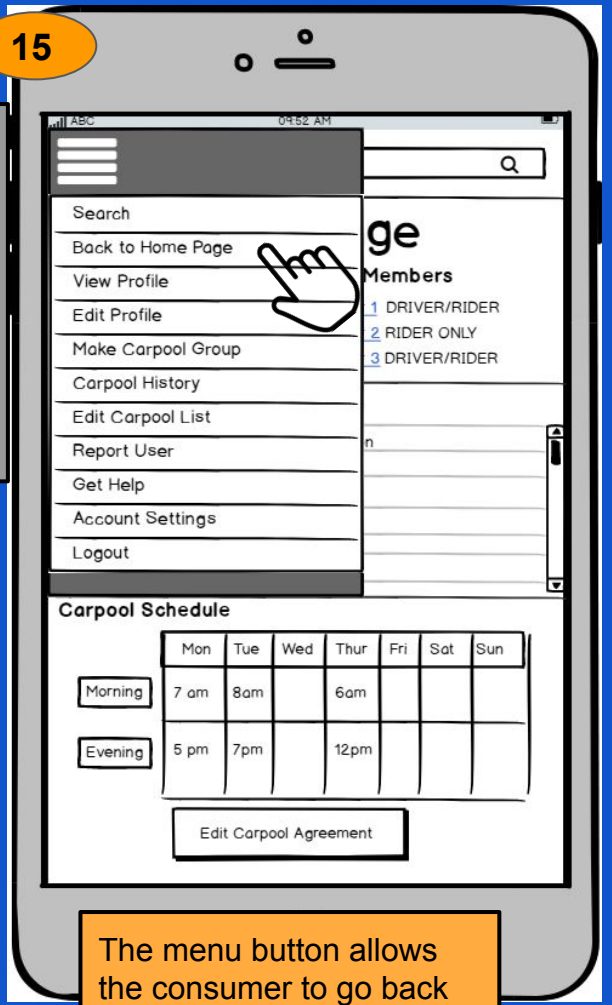
14



When the consumer becomes a part of a carpool, they have access to send an edit to the carpool page.

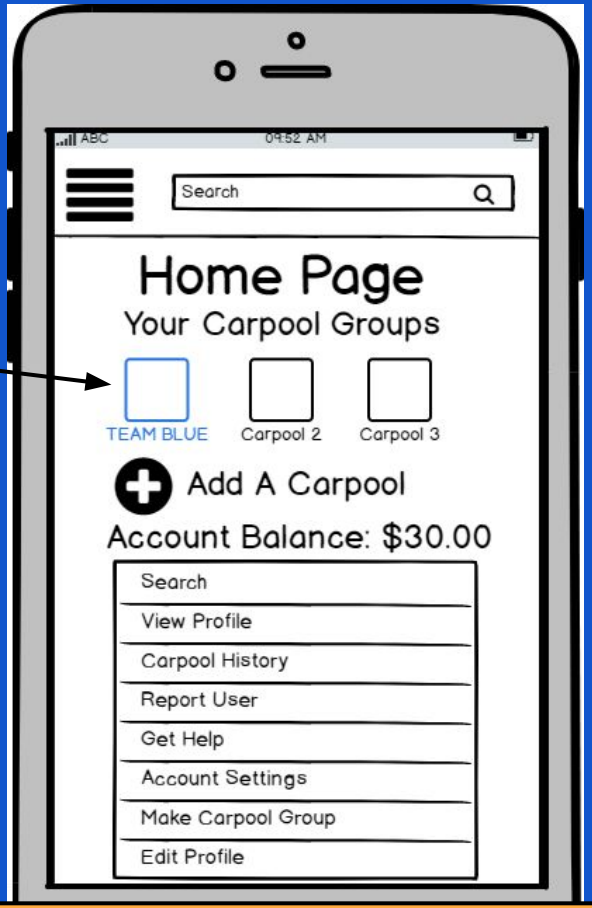
The “Edit Carpool Agreement” button to remove themselves from a carpool group or to send out a request to change one of the carpool rules. In the latter case each member will have to approve the change before it can be made.

15



The menu button allows the consumer to go back to the main page

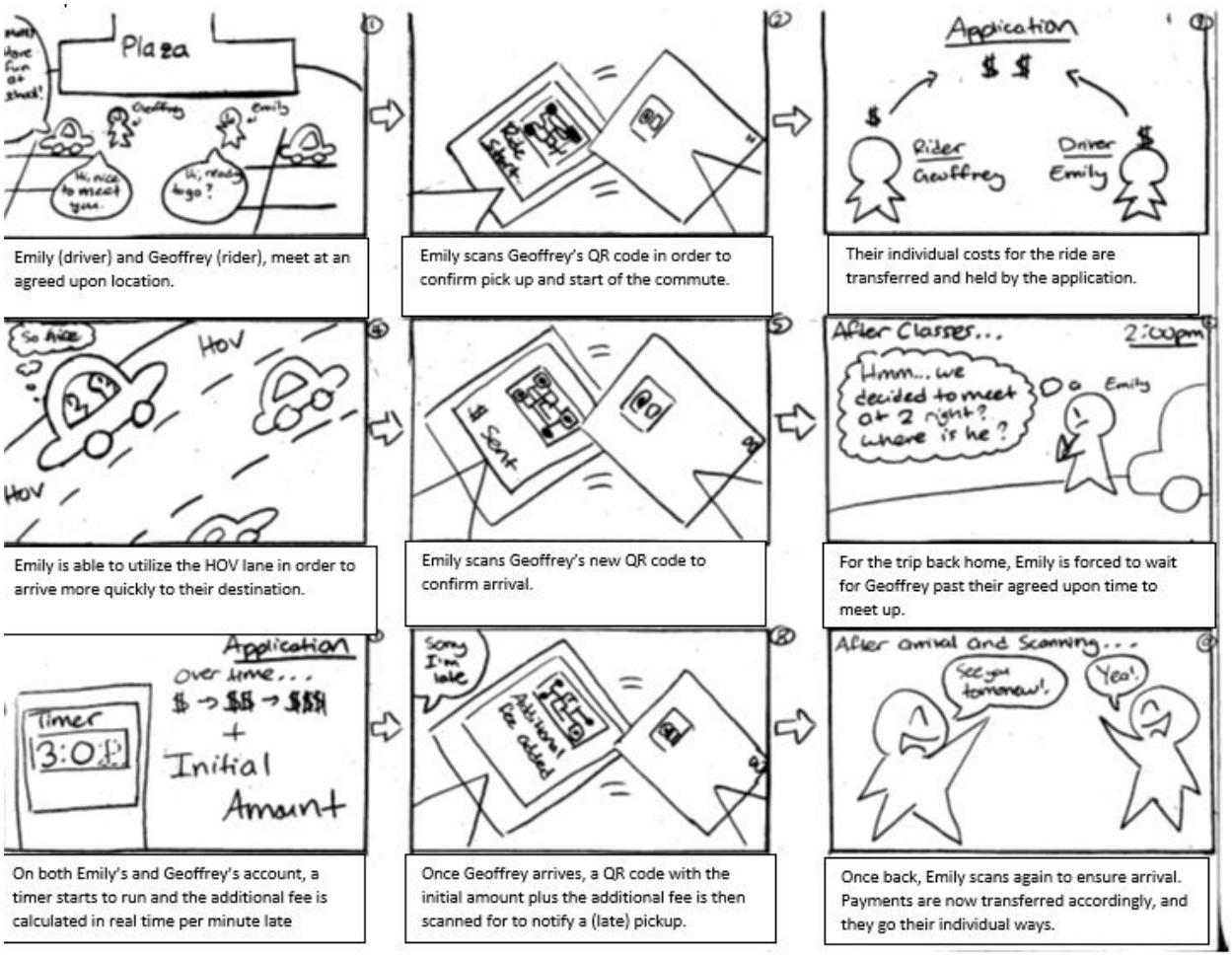
The home page will update to show all of the added carpool groups



After a consumer is a part of a carpool group, they can see the carpool group on their home page

Benchmark 1 Completed

1. The Waiting Driver - Provider-focused Task



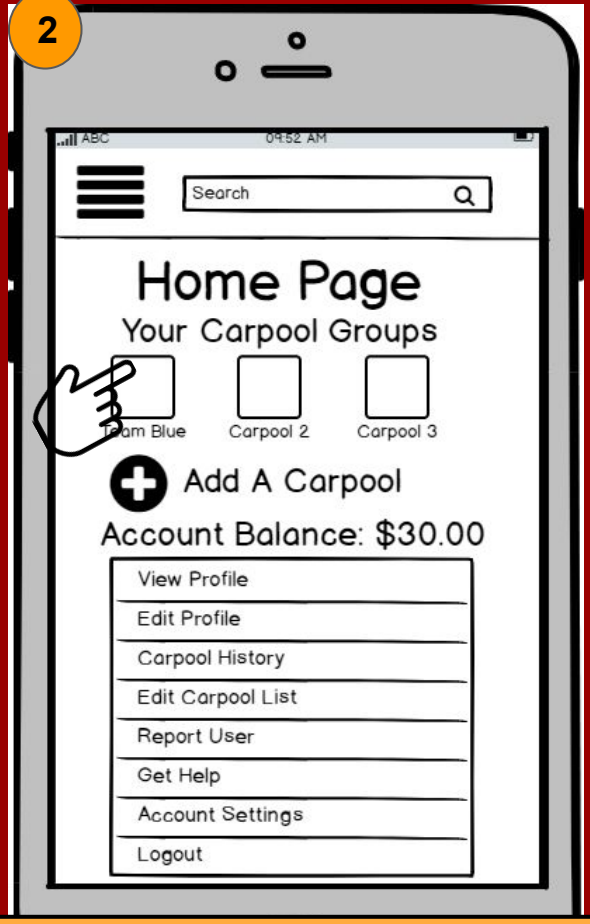
BENCHMARK 2 WIREFRAME
Producer Perspective

“Taking a carpool ride home”

1

If the driver/provider already has an account they can just log in.

2

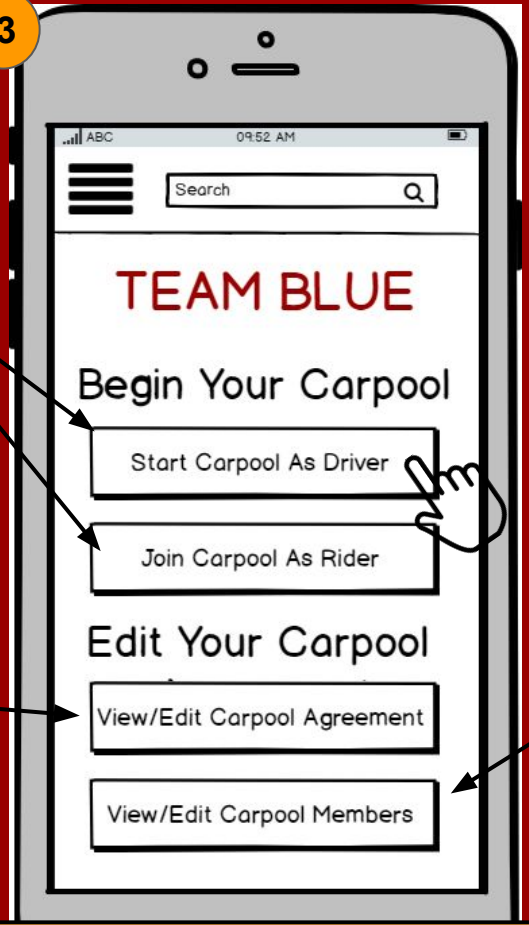


The driver can click on the carpool group when they want to start a carpool ride or edit any of the information about the carpool group

3

When users actually decide to start a ride in the morning or evening they can ensure that they are considered on time by pressing either “start carpool as driver” or “join carpool as rider” Having these options also allows the carpool to rotate who the drivers and riders will be for each carpool ride

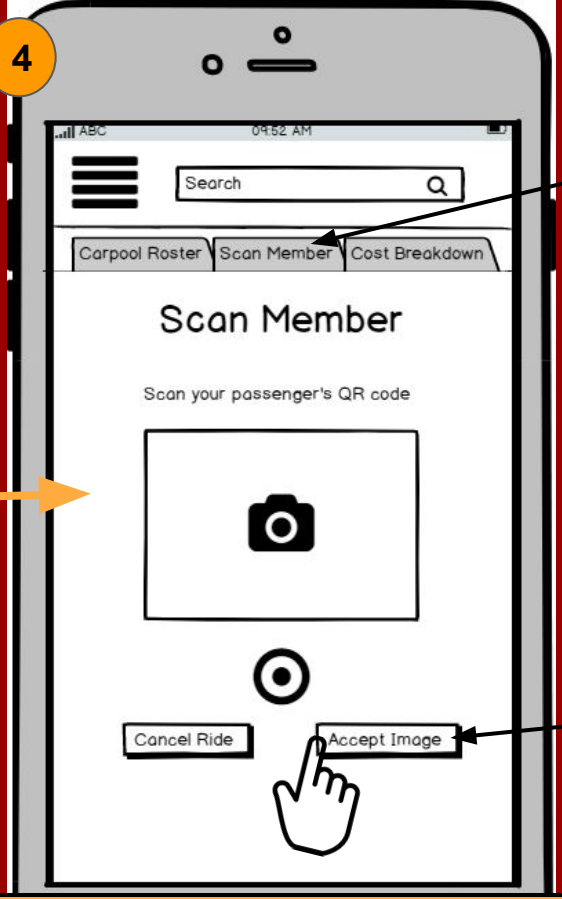
When Users click on a carpool name from the home page they can choose to edit the rules of the carpool by pressing “View/Edit Carpool Agreement”



When users want to remove themselves or someone else from a carpool group they can do so by pressing “View/Edit Carpool Members”

If the user decides to be the provider/driver for a carpool, they can chooses to start the carpool as a driver

4

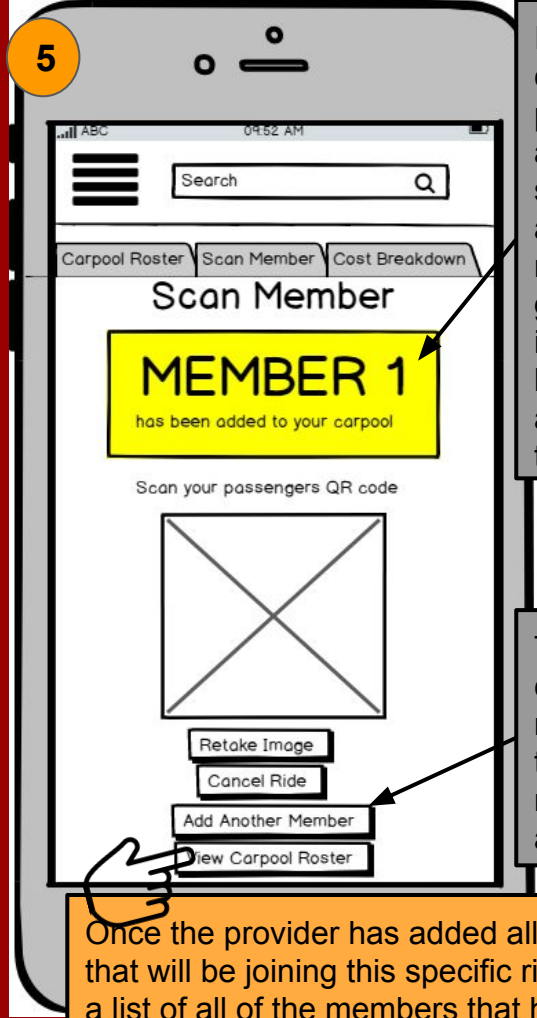


Users can always return to this scan member page to add more members to their carpool by clicking on the “scan member” tab at the top of the screen

When the provider/ driver feels that the image of the QR code is clear, they will press “accept image”

When the provider/driver wants to add people to their carpool they just need to take a picture of the QR code that the app will generate on each rider’s phone (The consumer’s screen that is necessary for this process will be shown on Consumer Screen 3)

5



If the image of the QR code taken in the previous screen is clear and the QR code scanned belongs to an already registered member of the carpool group, the app will indicate that a member has been successfully added to the ride about to take place

The driver/provider can continue to add registered members to the carpool until all of the members have been added by pressing here

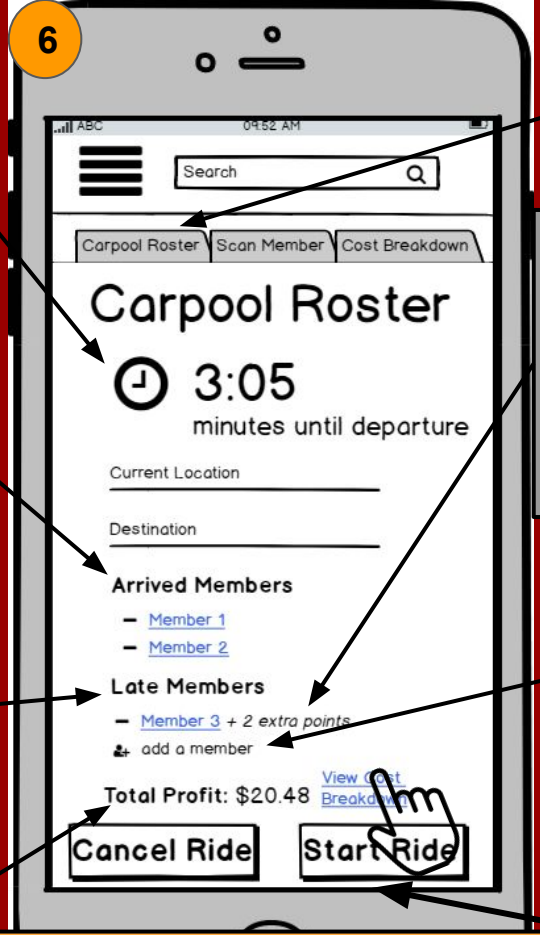
Once the provider has added all of the carpool members that will be joining this specific ride or if they want to see a list of all of the members that have been added to their carpool, they can click to see the carpool roster

When the time the carpool has agreed to meet has past, a timer will start on the carpool roster that tells the provider how long the group has decided they must wait for late members before they can leave without being penalized.

The arrived members list contains all of the names of the members of the carpool group whose QR codes have been scanned and successfully added to the carpool ride

The late members list has contains all of the members that are registered to be a part of the carpool group, but have not shown up at t agreed upon time

Providers can see how much money they're earning from the current ride on the carpool roster form



The driver can check to see if their total profit listed on the roster is correct by choosing to view the cost breakdown

The Carpool Roster can be accessed at any time during the ride process by using the "Carpool Roster" tab

Providers/Drivers earn extra points that can be used for discounts on future rides or cashed out for money when they have to wait for riders. The late members list will show how many extra points the provider is earning by waiting for a late carpool member

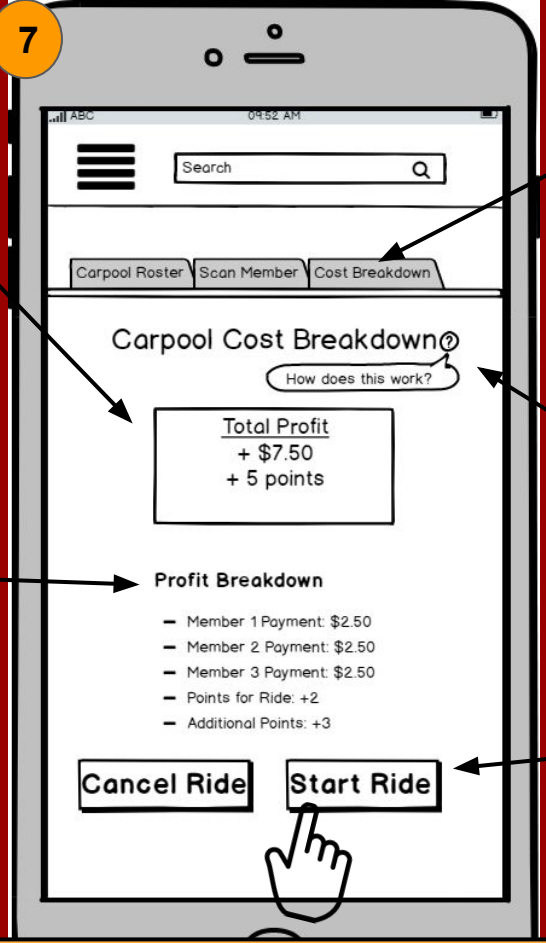
The Carpool Roster offers an "emergency ride" feature. If a rider has missed their own carpool group's ride, the provider can add a carpool member that is not a member of their carpool group to their roster for a one time ride. The provider earns extra points for adding emergency riders.

If all of the members for the ride have been added, the provider can choose to start the ride by clicking here

7

The Carpool Cost Breakdown page shows providers the total of how much money they're earning from the ride and also how many points they've earned for the ride

The provider can access the carpool cost breakdown at any time during the ride by pressing the "Cost Breakdown" tab at the top of the screen



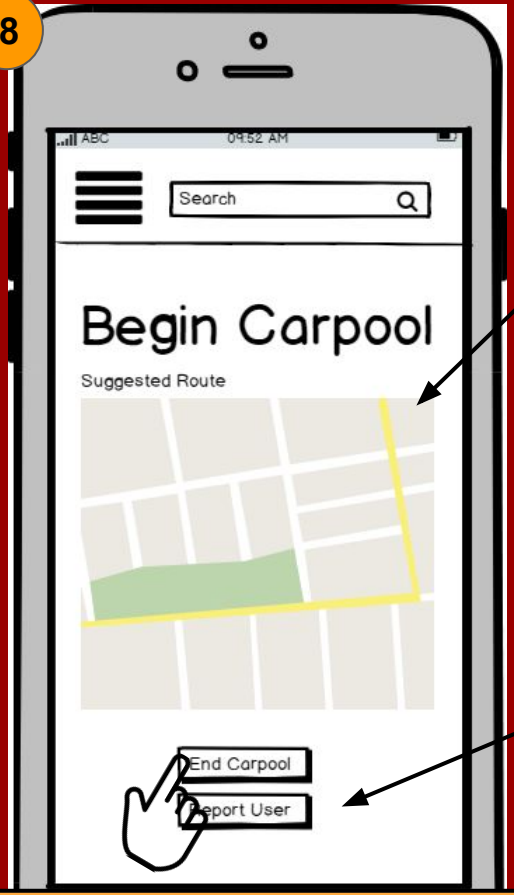
Drivers can click the question mark to see how price/ points distribution system the app uses operates

The profit break down shows the users how much money they're earning from each carpool member

If all of the members for the ride have been added and the profit for the ride is correct, the provider can choose to start the ride by clicking here

Right before the provider is about to drive home, they indicate that the ride will begin by pressing the "Start Ride" button.

8

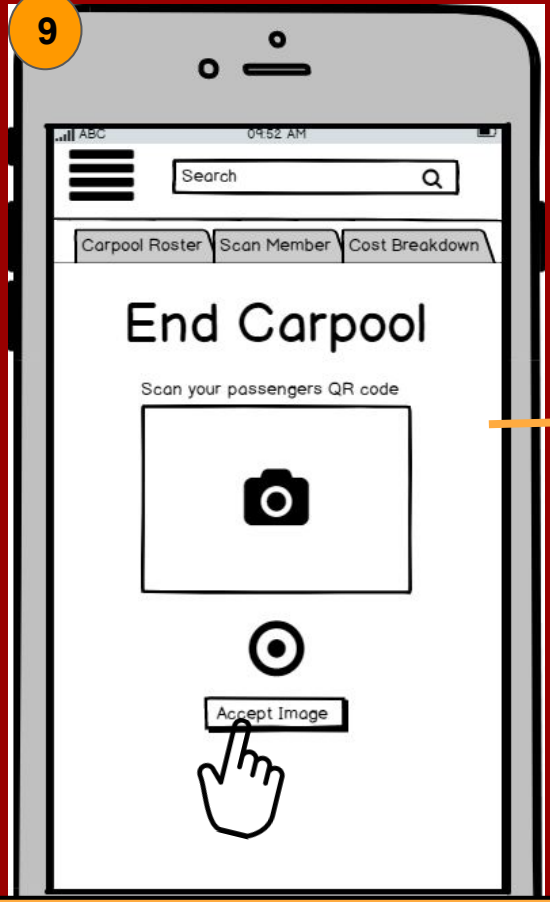


When the carpool has begun, the app will show the directions for the suggested route home, but users are allowed to take their own routes

In the case that a rider's conduct is extremely dangerous or inappropriate during the ride, the provider is given the option to immediately report the user

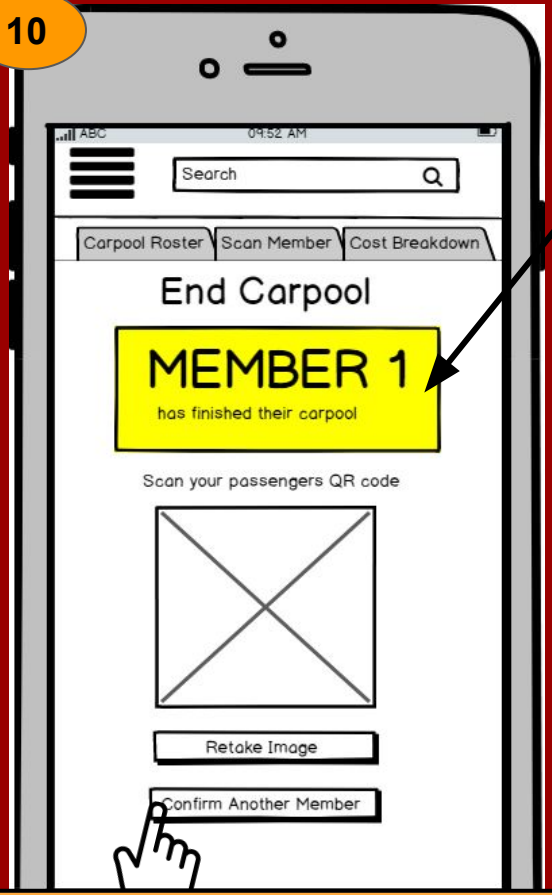
When the provider has arrived to the carpools final destination, they press "End Carpool"

9



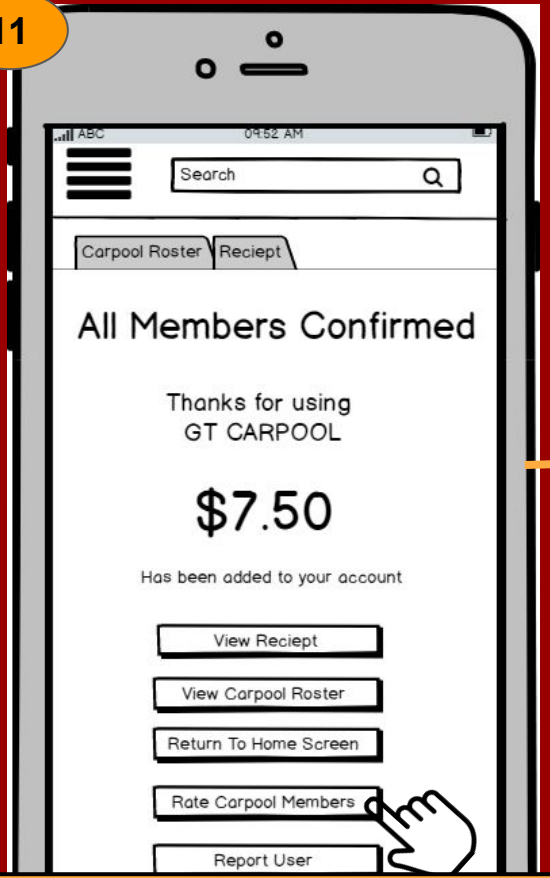
The provider will scan the new QR code that will appear on each consumer's screen (shown later on Consumer Screen 4) to confirm that each consumer has arrived to the destination

10



The app will confirm on the screen when each member of the carpool ride has had their QR code successfully scanned to confirm that their ride has ended

11

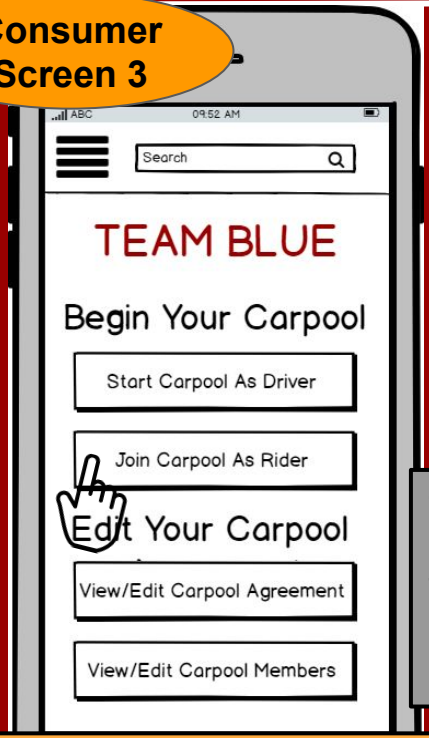


Once each member of the carpool ride has been confirmed to have made it to their location, the app will automatically transition to the next screen and the ride will officially end

Once the ride has ended, the total profit from the ride will be transferred into the provider's account. And the rider will be given the opportunity to rate their carpool member's

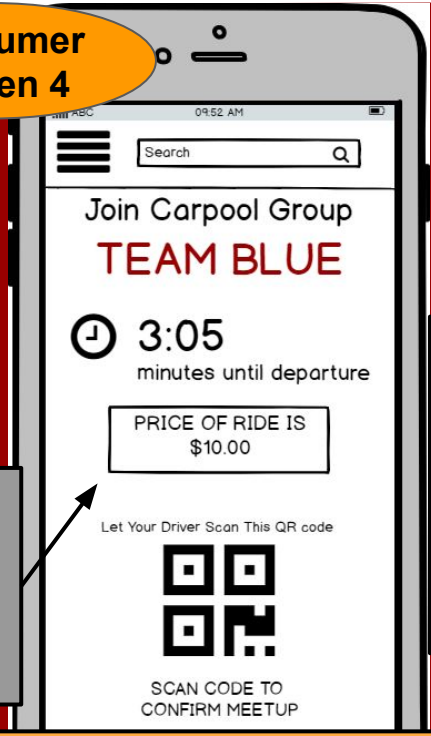
2 SLIDE DETOUR: because the producer's benchmark involves the consumer's screens when the consumer is late for their carpool home, the screens of the consumer leading up to joining the carpool group and paying are being shown. Detour Starts after screen 2.

Consumer Screen 3



The rider/consumer would choose to join the carpool as a rider when it's time to ride home

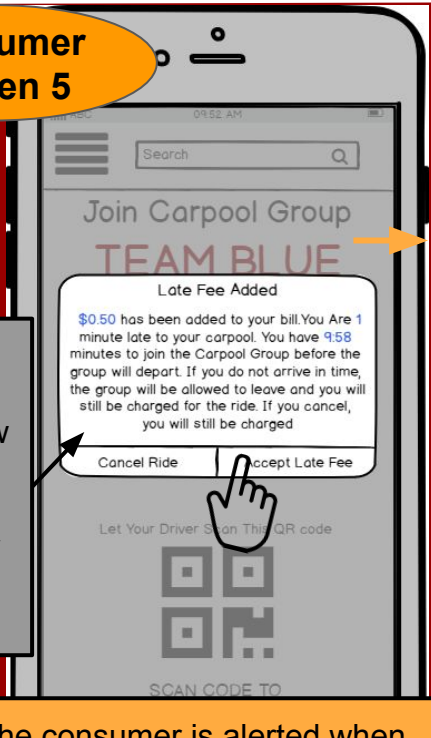
Consumer Screen 4



The price of the carpool ride they're joining is listed on the screen

The rider is given a timer for how long they have to get their QR code scanned by the driver (screen 4). before they're counted as late for the carpool

Consumer Screen 5

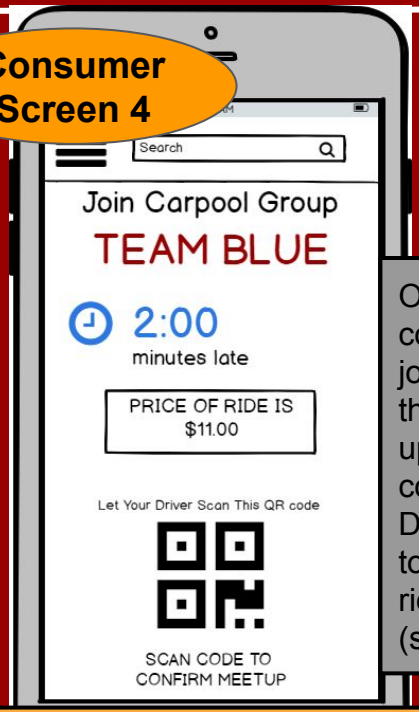


The alert tells consumers how late they are, how long they have to make it to the carpool, and how much their late fee will be

The consumer is alerted when late. They are given the option to accept the late fees they've accrued or cancel their ride

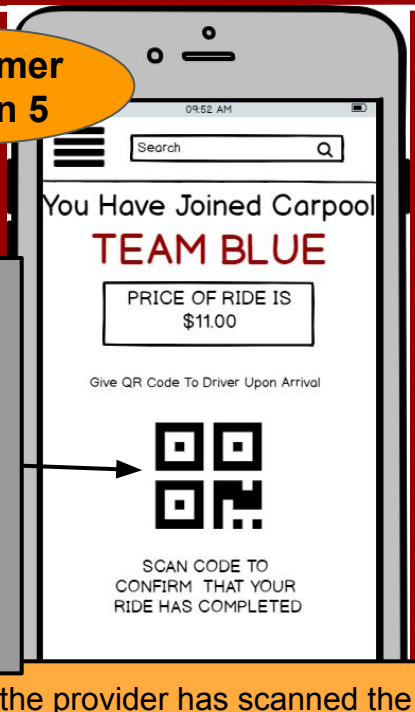
LAST DETOUR SLIDE: Because the provider's benchmark involves the consumer's screens when the consumer is late for their carpool home, the screens of the consumer leading up to joining the carpool group and paying are being shown.

Consumer Screen 4



When the consumer is late, the price of the ride will update as late fees increase. The consumer will also be provided with a timer showing how late they are

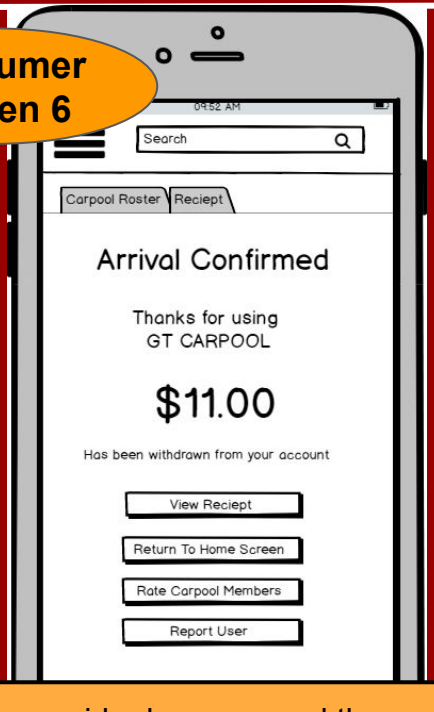
Consumer Screen 5



Once the consumer has joined the carpool, the QR code will update to the QR code that the Driver must scan to confirm that the ride has ended (screen 9)

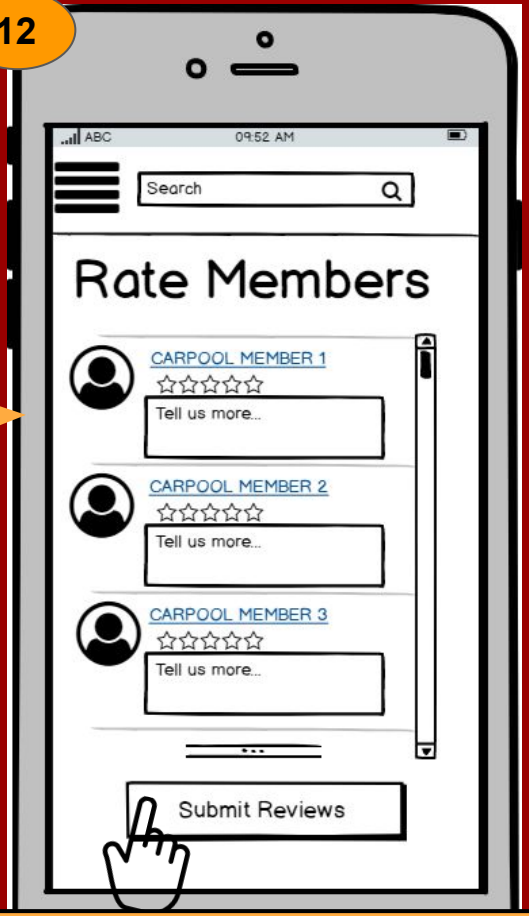
Once the provider has scanned the consumer's QR code (screen 4), the app will show that the consumer has successfully joined the carpool ride and the consumer's QR code will change

Consumer Screen 6



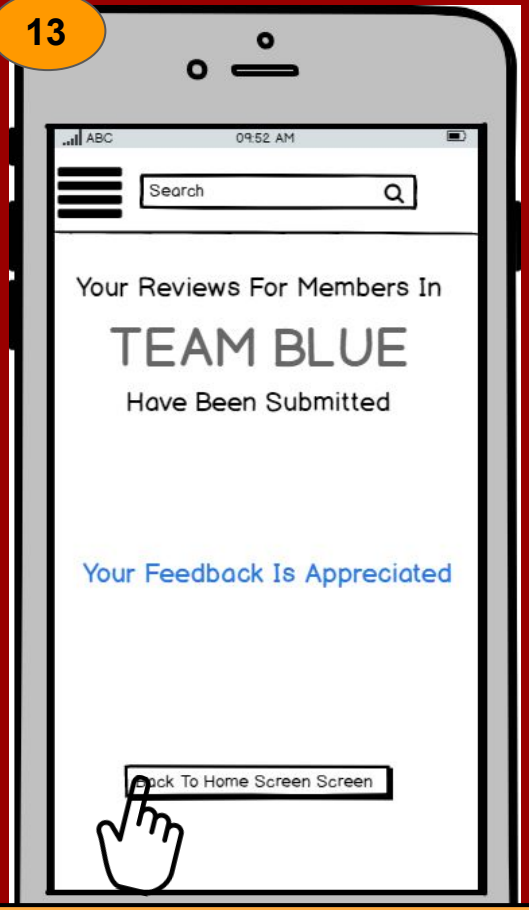
Once the provider has scanned the consumer's FINAL QR code(Screen 9), the app will show that the ride has completed and the cost of the ride will be withdrawn from the consumer's account

12



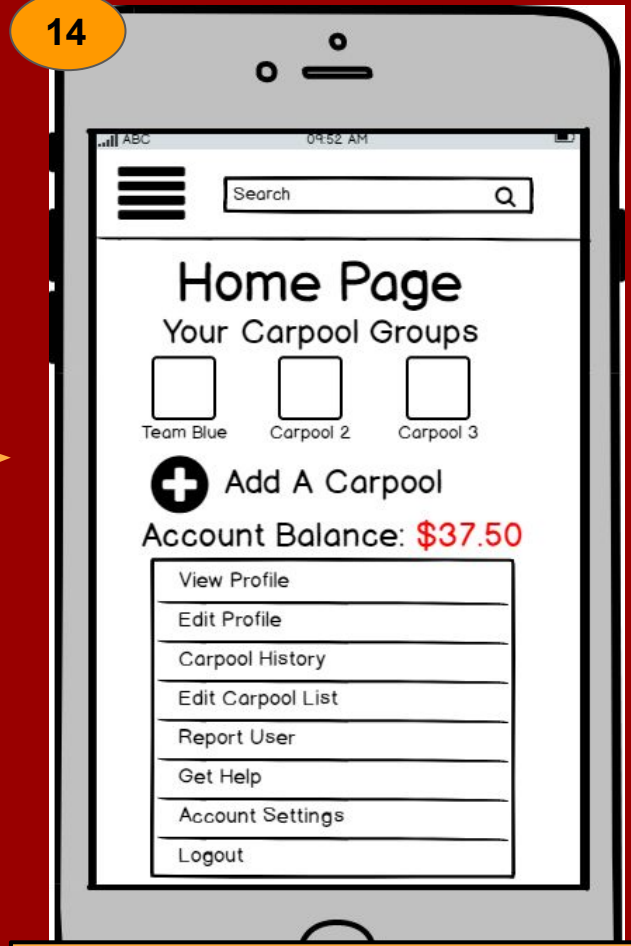
The Provider can rate their riders using stars and can also leave a written review. The provider can submit their reviews then they are finished

13



The app confirms that the providers reviews of their carpool members have been submitted and gives providers the option to return to the home screen

14



The home screen will automatically update the account balance when the ride is over

Benchmark 2 Completed

5. Reflection

- How well, and in what ways, do you think your efforts in Part 1-2 informed your activities in Part 3?

The process of creating and refining the previous deliverables for the GT Rideshare project have definitely aided in the creation of the part 3 deliverable. In the solution presentation we gave in part 2, we were given useful feedback about the positive aspects and shortcomings of our solution ideas. That feedback helped us to refocus our efforts so that our final solution would be worthwhile to use for both consumers and producers. The personas from part 1 were also helpful in making sure that the final solution design benefits both consumers and producers. Thinking about how these people with realistic backgrounds and problems would interact with our solution played a definite role in what we decided to include and discard from the design. The solution and idea based affinity diagrams from part 1 and 2 proved to be useful when we were deciding what features to include in our final solution. We had forgotten some of the reasons that we included certain features in our top 3 solution ideas. So we often had to go back to the first affinity diagram to see what user responses correlated to certain features to see if all the features included were necessary. When we were trying to melt the important aspects of the top 3 solution ideas together, not all of the useful features of the solution ideas could automatically transposed onto another solution idea, so we referred back to the second affinity diagram to look for features that fall under the same category that might work better with the final solution idea.

- What aspect of the class so far best prepared you for this project?

The in-class project working sessions were the most helpful aspect of the class so far. Lecture days are nice for knowing the basics, but we didn't realize how many gaps there were in our comprehension of the material and the misconceptions he had during the implementation of the material until we were able to get direct feedback from the professor and TA's. When talking to the professor and TAs in class we were able to immediately ask follow up questions that helped to clear things up. And in the case that when we still didn't understand, the professor and TA's would ask us to explain our thought process so they could point out where we went wrong. The in-class project working sessions are the only reason we feel confident about making affinity diagrams, producing storyboards, and making major changes to our solution ideas.

- On what aspects do you feel you most needed better instruction to perform correctly?

Better instruction on what exactly to include in the video for this deliverable would've been helpful. We weren't sure if we could use the same benchmark tasks included in the storyboards and wireframes for the video until consulting the professor. We were unsure how in-depth the presentation of the prototype in the video needed to be to thoroughly outline the major components of our solution. There was lots of helpful tutorials and information given

about the wireframe, but having that same kind of help for the video would’ve been very helpful too.

APPENDICES

Appendix A
In-Class Critique Feedback

notes taken during the in-class critique session during Part 2 of the project

Notes from Presentation - 3/7

- Appeal process - warning, given time to appeal or fix their problem
- Baseline contract - during registration, can be further personalized per group created
- Same individuals options
- Contract upheld how?
- Late leave - create a emergency support team to handle people who are left behind due to reasons such as being late
- How to deal with accidents?
- What is the incentive for the provider to make it a sharing economy?
    - Being a rider is something you have to work towards, for example if you were a driver __ amount of times you can then given a rider position
- Different solution types
    - On demand vs schedule
    - Lasting relationship vs one day
    - User driven, app driven
    - Instagram vs snapchat

copies of the feedback cards that were presented to us by other students in the class

Understanding of Design Criteria

*You should walk away from your interaction with the team with an understanding of what each design criteria irepresents, at a high level, **and** how the team arrived at these criteria.*

Write at least one question for the team to **inquire about regarding one of their defined design criteria.**

would the driver get compensated for waiting for a user

What **suggestions** do you have for the team to **help them better define their criteria?**

A combination of the 3 criteria could work really well

Communicate these suggestions to the team!

Understanding of Design Criteria

*You should walk away from your interaction with the team with an understanding of what each design criteria irepresents, at a high level, **and** how the team arrived at these criteria.*

Write at least one question for the team to **inquire about regarding one of their defined design criteria.**

Have a public feedback profile in control

What **suggestions** do you have for the team to **help them better define their criteria?** Have drivers face a penalty if they are late too.

Communicate these suggestions to the team!

Understanding of Design Criteria

*You should walk away from your interaction with the team with an understanding of what each design criteria irepresents, at a high level, **and** how the team arrived at these criteria.*

Write at least one question for the team to **inquire about regarding one of their defined design criteria.**

Focus on incentivising drivers to join! Maybe have users pay subscription fee + then use that $ to pay for drivers parking pass.

What **suggestions** do you have for the team to **help them better define their criteria?**

Communicate these suggestions to the team!

Understanding of Design Criteria

*You should walk away from your interaction with the team with an understanding of what each design criteria irepresents, at a high level, **and** how the team arrived at these criteria.*

Write at least one question for the team to **inquire about regarding one of their defined design criteria.**

How can you ensure that a provider always gets people to ride with them?

What **suggestions** do you have for the team to **help them better define their criteria?**

Consider budget in design criteria.

Communicate these suggestions to the team!

Understanding of Design Criteria

*You should walk away from your interaction with the team with an understanding of what each design criteria irepresents, at a high level, **and** how the team arrived at these criteria.*

Write at least one question for the team to **inquire about regarding one of their defined design criteria.**

Is the incentive big enough?

What **suggestions** do you have for the team to **help them better define their criteria?**

Communicate these suggestions to the team!

Understanding of Design Criteria

*You should walk away from your interaction with the team with an understanding of what each design criteria irepresents, at a high level, **and** how the team arrived at these criteria.*

Write at least one question for the team to **inquire about regarding one of their defined design criteria.**

Maybe it would be a good idea to expand on your user preference criteria where groups of users can interact (providing links to Facebook profile/Insta) so that they feel comfortable riding together.

What **suggestions** do you have for the team to **help them better define their criteria?**

Communicate these suggestions to the team!

Understanding of Solutions

*You should walk away from your interaction with the team with an understanding of what each specific solution solves for in terms of design criteria, at a high level, **and** how the team arrived at it all.*

Write at least one question for the team to **inquire about regarding one of their specific solutions:**

With users having late fees, how will you be able to differentiate bad & good drivers that bad ~~[illegible]~~ misconduct?

What **suggestions** do you have for the team to **help them better ideate/refine their solutions?** I like the partnership feature

Communicate these suggestions to the team!

Understanding of Solutions

*You should walk away from your interaction with the team with an understanding of what each specific solution solves for in terms of design criteria, at a high level, **and** how the team arrived at it all.*

Write at least one question for the team to **inquire about regarding one of their specific solutions:**

How will you incentivise drivers

What **suggestions** do you have for the team to **help them better ideate/refine their solutions?**

Provide drivers with rewards

Communicate these suggestions to the team!

Understanding of Design Criteria

*You should walk away from your interaction with the team with an understanding of what each design criteria irepresents, at a high level, **and** how the team arrived at these criteria.*

Write at least one question for the team to **inquire about regarding one of their defined design criteria.**

How can you guarentee no unnecessary delay?

What **suggestions** do you have for the team to **help them better define their criteria?**

make sure your solution encompasses all 3

Communicate these suggestions to the team!

Understanding of Design Criteria

*You should walk away from your interaction with the team with an understanding of what each design criteria irepresents, at a high level, **and** how the team arrived at these criteria.*

Write at least one question for the team to **inquire about regarding one of their defined design criteria.**

Maybe add a "group" function to allow for easy management of a trip for a commuter

What **suggestions** do you have for the team to **help them better define their criteria?**

Communicate these suggestions to the team!

Understanding of Design Criteria

*You should walk away from your interaction with the team with an understanding of what each design criteria irepresents, at a high level, **and** how the team arrived at these criteria.*

Write at least one question for the team to **inquire about regarding one of their defined design criteria.**

Does the rating system go both ways? Ex Riders who signed a partnership elect to not show up

What **suggestions** do you have for the team to **help them better define their criteria?** A more extensive verification process

Communicate these suggestions to the team!

Understanding of Design Criteria

*You should walk away from your interaction with the team with an understanding of what each design criteria irepresents, at a high level, **and** how the team arrived at these criteria.*

Write at least one question for the team to **inquire about regarding one of their defined design criteria.**

Can the users span to GT faculty as well?

What **suggestions** do you have for the team to **help them better define their criteria?**

Maybe think about combining the significance of multiple design criteria to create a more suitable solution

Communicate these suggestions to the team!

Understanding of Solutions

*You should walk away from your interaction with the team with an understanding of what each specific solution solves for in terms of design criteria, at a high level, **and** how the team arrived at it all.*

Write at least one question for the team to **inquire about regarding one of their specific solutions:**

How will accidents be accounted for?
Can ~~dr~~ drivers/passengers be banned for bad behavior?
~~Is there a rating?~~

What **suggestions** do you have for the team to **help them better ideate/refine their solutions?**

Communicate these suggestions to the team!

Understanding of Solutions

*You should walk away from your interaction with the team with an understanding of what each specific solution solves for in terms of design criteria, at a high level, **and** how the team arrived at it all.*

Write at least one question for the team to **inquire about regarding one of their specific solutions:**

How to convince people it is worth the time to go through background checks instead of just messaging someone from a facebook page?

What **suggestions** do you have for the team to **help them better ideate/refine their solutions?**

Maybe look at users finding others who are closest to them

Communicate these suggestions to the team!

Understanding of Solutions

*You should walk away from your interaction with the team with an understanding of what each specific solution solves for in terms of design criteria, at a high level, **and** how the team arrived at it all.*

Write at least one question for the team to **inquire about regarding one of their specific solutions:**

~~Your~~ I ~~don't~~ ~~can't~~ did not see 5 distinct solutions.
The criteria ~~seems~~ from solutions seems overlap.
What incentive that someone wanna share?

What **suggestions** do you have for the team to **help them better ideate/refine their solutions?**

Communicate these suggestions to the team!

Understanding of Solutions

*You should walk away from your interaction with the team with an understanding of what each specific solution solves for in terms of design criteria, at a high level, **and** how the team arrived at it all.*

Write at least one question for the team to **inquire about regarding one of their specific solutions:**

Solutions look good. Maybe clarify who will decide safety criteria. You ~~r~~

What **suggestions** do you have for the team to **help them better ideate/refine their solutions?**

Communicate these suggestions to the team!

Understanding of Solutions

*You should walk away from your interaction with the team with an understanding of what each specific solution solves for in terms of design criteria, at a high level, **and** how the team arrived at it all.*

Write at least one question for the team to **inquire about regarding one of their specific solutions:**

Time-backed assurance and background checks are entirely consumer-oriented solutions for ~~the~~ consumer-oriented criteria.
Any consideration for the drivers' needs?

What **suggestions** do you have for the team to **help them better ideate/refine their solutions?**

Communicate these suggestions to the team!

Understanding of Solutions

*You should walk away from your interaction with the team with an understanding of what each specific solution solves for in terms of design criteria, at a high level, **and** how the team arrived at it all.*

Write at least one question for the team to **inquire about regarding one of their specific solutions:**

How do you match riders with the drivers in a particular geographic area & also communicate the availability of riders and drivers?

What **suggestions** do you have for the team to **help them better ideate/refine their solutions?**

Communicate these suggestions to the team!

Appendix B

Updated Persona descriptions

Persona 1

Emily
Student at GA Tech
Location: Atlanta, GA
Age: 22

About Emily

Emily is a third-year at Georgia Tech majoring in Industrial Engineering. During her first year on campus, she dormed on West Campus with one other roommate and had no negative experiences. Her second year, she lived on-campus as well at 8th Street Apartments on West Campus. However, she decided to commute during her third year because she wanted to spend more time at home and with her family and friends. She now spends about 2 to 3 hours on her commute from Marietta everyday using her own car and is interested in carpooling as a way to not only save money and time by taking the HOV lane, but also as a way to meet new people while benefiting the environment.

Behavior Considerations

- Although Emily is extraverted, she is in the small percentage of students and her friend group who commute. She sees carpooling as a way to meet new people.
- Commuting has taught her valuable time-management skills that she uses in her daily life, but she is worried that carpooling might affect her schedule.

Frustrations

- Emily knows that if she were to carpool, she would be able to utilize the HOV lane and possibly save some time.
- Because she does not own a peach pass, she sees carpooling with someone who has one as a benefit.
- Because her schedule varies everyday, she worries that not having a set schedule might prevent her from sticking to a carpool schedule that involves other people.

Goals

- Emily hopes to save some money by splitting the cost of driving.
- Other than the commute itself, Emily enjoys the freedom of living off campus. and so, she is looking for options to make it more efficient and manageable.

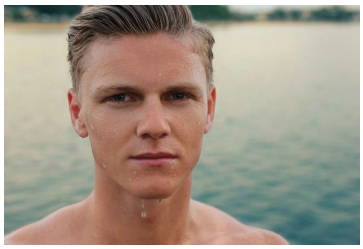
Tasks

- Emily hopes to maximize her study time, which is one reason why she drives alone, so she does not need to adjust to anyone’s schedule.

Changes made to Emily’s User Persona

Although we weren’t required to make any changes from P1, in order to better fit our storyboard, we made it so that she is also from Marietta, Georgia so that she and Geoffrey could actually be matched up into a carpool group.

Persona 2



Geoffrey
Student at GT Tech
Location: Atlanta, GA
Age: 21

About Geoffrey

Geoffrey is a fifth-year student at Georgia Tech who is double majoring in Physics and Applied Mathematics. He is originally from Georgia and and is expected to graduate this spring. For his final year at Tech he has decided to commute from his home in Marietta, Georgia due to family financial issues, and financial issues are also the reason he does not personally own a car.

Behavior Considerations

Geoffrey is an incredibly introverted individual who requires respect for previously agreed upon boundaries. He prefers for his commutes to be quiet and respectful. Additionally, although he normally leaves campus as soon as classes end, he randomly gets the desire to attend certain clubs such as the chess club and stays on campus for a bit longer than usual. Therefore, he has problems with punctually when leaving campus. Although Geoffrey often prefers to be alone, he has a inner personal desire to meet and get to know new people. Carpooling is a viable option for him. It provides his primary need of getting a ride to school and also provides him with a way to meet new people.

Frustrations

Geoffrey does not own a car. However, he does not like using specific rideshare services such as Uber because of their high costs. Riding the Marta is a last resort option for Geoffrey as he finds the cleanliness standards of the Marta to be absolutely awful and is annoyed by how long commuting with Marta takes.

Because Geoffrey refuses to use Uber or Marta, his older brother, who works in Midtown, gives Geoffrey a ride every morning he goes to work. Geoffrey is frustrated by how early he has to leave his house to share his brother's ride, but he has no other choice. Carpooling is an ideal option for Geoffrey because it will ensure that he will be able receive a ride in return for his services. Moreover, carpooling will be a good option for him since it will be a vastly cheaper option than Uber. Lastly, Geoffrey will also vastly prefer carpooling to Marta as it will be cleaner.

Goals

Geoffrey's primary goal for carpooling is to find an reliable method of transportation other than owning a car, which is financially impossible for him, taking public transportation or receiving rides from his brother. Geoffrey should be an ideal candidate for carpooling because it provides an affordable mode of transportation that fits his schedule, unlike his brother's ride. Additionally, Geoffrey is looking to reduce his carbon footprint. Because carpooling reduces carbon output, Geoffrey is looking to start carpooling more frequently. Furthermore, Geoffrey is looking to save more time this year. If Geoffrey starts carpooling as opposed to taking the Marta he believes he will save roughly an hour every week.

Tasks

Geoffrey lives in Marietta, Georgia and is required to commute back and forth to Georgia Tech. He has to arrive at Georgia Tech before 12:00 PM (first class) and needs to be home before 8:00 PM every evening. Because carpooling affords flexibility with respect to drivers and schedules this will make it an ideal solution for him.

Changes made to Geoffrey’s user persona

We made our second persona for Geoffrey more concise. We were told that our second persona had too many details unrelated commuting problems. So all filler information was either justified or removed.