



THE IDEAL EXPERIENCE OF BIKING IN SAVANNAH, GA

CONTEXTUAL RESEARCH

A detailed human centered design
research project about the Ideal
Experience of Biking in Savannah, GA.

November 14 / Fall 2018





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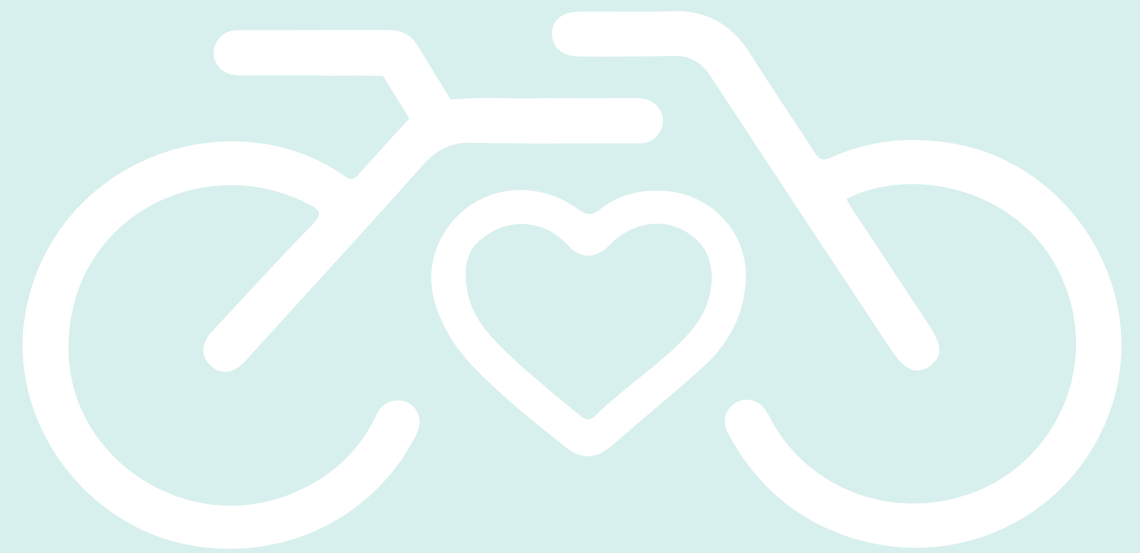
STORYTELLING

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For this Contextual Research project, the design team chose the ideal experience of Biking in Savannah, GA. Brainstorming about ideas on what product or experience to improve was a challenge in itself due to the group's divergent thinking. Finally, they narrowed down the topic of transportation and then biking because they do it so often and they know it's something that could be improved in their current setting. The group chose this specific location in their research considering they have been all living there for at least a year, and 4/5 members ride bicycles on a regular basis as a lifestyle.

THE IDEAL EXPERIENCE OF BIKING IN SAVANNAH



MEET THE TEAM



MANUELA ARROYAVE

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FRAMEWORK

MUST HAVE **SHOULD HAVE** **NICE TO HAVE** **CORE**



SAFE

Drivers and bikers need education on traffic laws in order for them to be considered and respected as vehicles.



SAFE & AWARE

WE ARE

Vehicles see me as an equal and significant individual on the road.

WE ARE

I belong to a biking community that cares about my needs and safety.



It is necessary that my ideal biking experience includes a visual and physical separation between bike and car traffic.

AWARE

Practical

IT IS FUNCTIONAL

It has an adaptable and collapsible lock.
Sustainable and long-lasting material for my bicycle and the road.
It is quiet, and light weighted.
It has an effective storage system to carry my daily objects.

IT IS CONVENIENT

It is fast and allows me to get from point A to B in a short period of time.
It fits my budget.
I need parking options for my bike.

WE ARE HEALTHY

My daily biking routine allows me to exercise and feel positively healthy, while being eco-friendly.



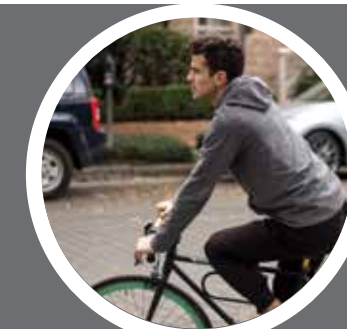
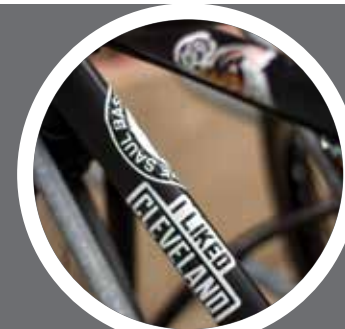
“Makes me realize a lot more people should bike here. And cars dont take bikers seriously.”

Personal

IT IS SELF-EXPRESSIVE

I get the chance to express the things I like through bicycle aesthetic.
It has a story behind it.

ME AND MY BICYCLE ARE A UNIT.



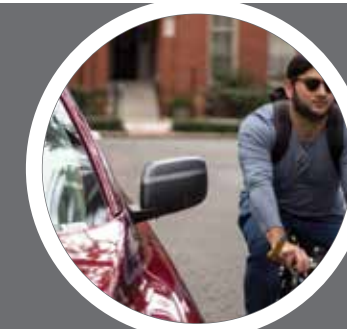
“My bike is my baby”

Enjoyable

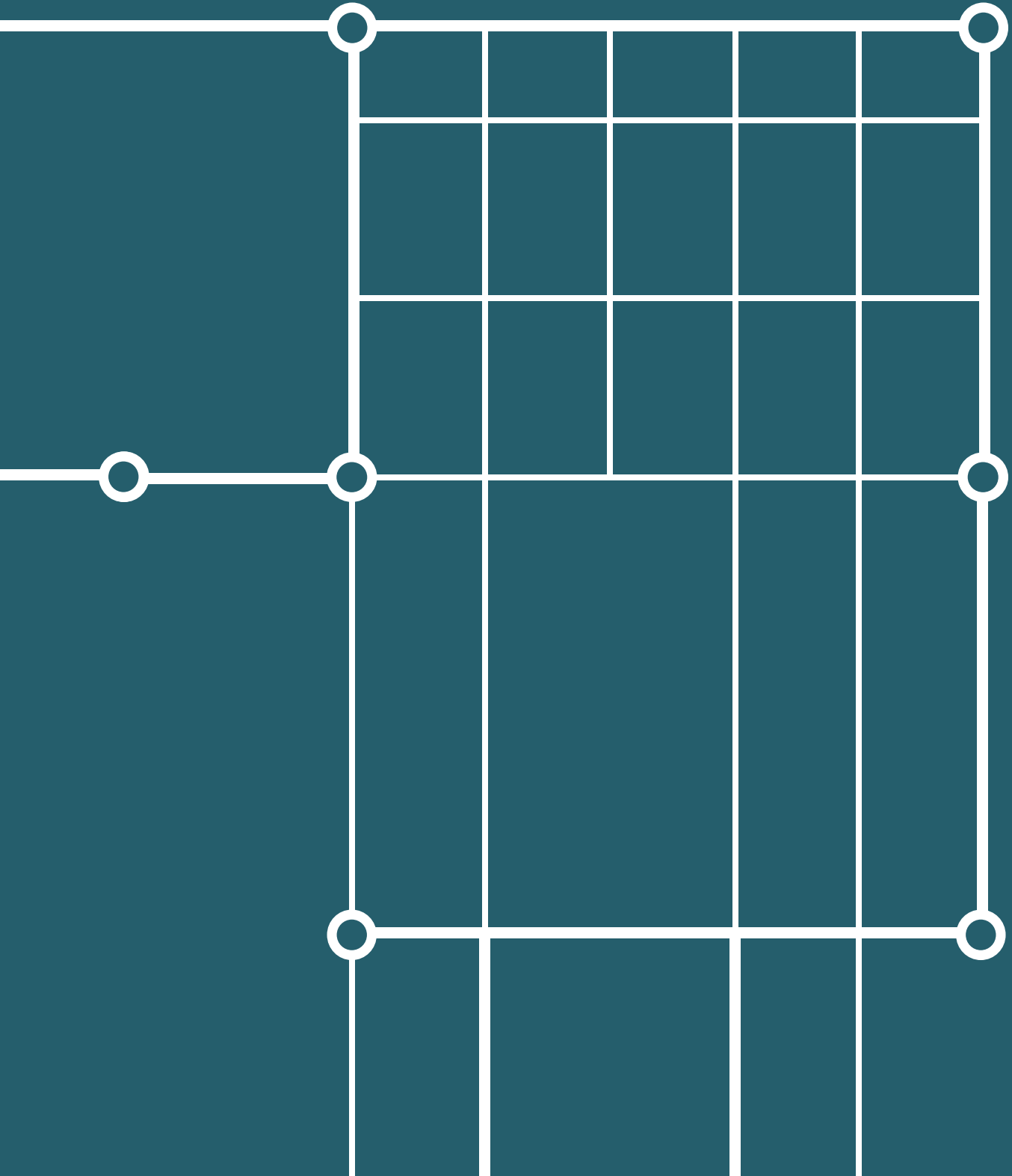
IT IS FRIENDLY

It allows me to have fun and feel free, while taking in the environment.

It allows me to be in control and engaging with myself and other vehicles.



WE BIKE AS A COMMUNITY



UNDERSTANDING MOBILITY

PROVIDING AID & SERVICES

CONNECTING ALL VEHICLES

CONNECTING WITH HUMANS

FOSTERTING A COMMUNITY

MY IDEAL EXPERIENCE IS

SAFE & AWARE

2 RELEVANCE

TIME TABLE

10-WEEK PLAN

Through the ten week quarter we go through 5 stages of research, and application. The process included a secondary sink exercise whihc would allow the students to get into the mindset of thinking about what users need and want in terms of being a research designer.

WEEK 1

Introduction, & Secondary Sink Design Challenge

Relevance

WEEK 2

Primary Research: Observations & Interviews

WEEK 3

Stakeholder Map & Continued Interviews

WEEK 4

Cultural Probe: First Friday & Forsyth Farmers Market

WEEK 5

Midterm Review & SCK Recruitment

Methods & Techniques

WEEK 6

Affinity Map: Yellows, Blues, & Pinks

WEEK 7

Synthesis & Greens

Analysis

WEEK 8

Finalize the Framework and reigning ideas in.

Framework

WEEK 9

Finalize the Framework and align ideas.

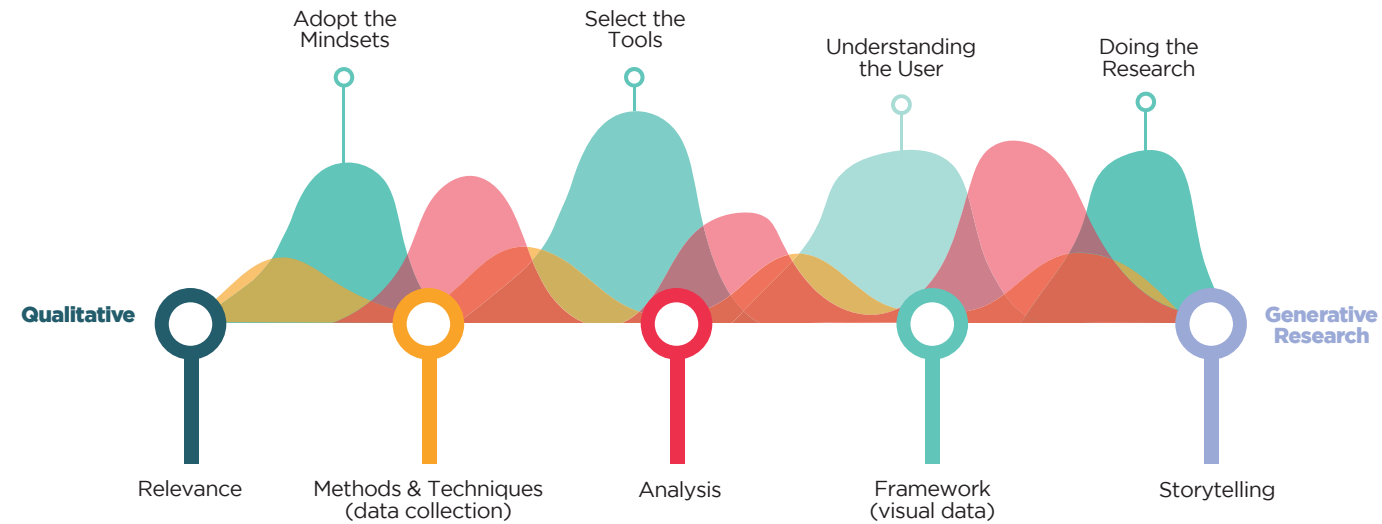
WEEK 10

Final push for Magazine & Final Presentation

Storytelling

ETHNOGRAPHY & MISSION

5 PHASES OF RESEARCH:



ETHNOGRAPHY

“Ethnography is the branch of anthropology that involves trying to understand how people live their lives. Unlike traditional market researchers, who ask specific, highly practical questions, anthropological researchers visit consumers in their homes or offices to observe and listen in a nondirected way. Our goal is to see people’s behavior on their terms, not ours. While this observational method may appear inefficient, it enlightens us about the context in which customers would use a new product and the meaning that product might hold in their lives.”

Ken Anderson for the Harvard Business Review.



“DESIGN IS FOR THE PEOPLE.”

SOCIAL

HUMANITY

EMPATHY

IT'S A COMMUNITY

We reached out to bikers in the community in order to find out how they really feel about biking in Savannah. We heard that their needs went beyond the bike itself, and was even more about those around them. We heard that in the future, they would like a safer experience, and for everyone (from biker to drivers) to be aware of their surroundings and educated.



IT'S ALL IN THE PROCESS

Different extensive research methods included everything from face-to-face interviews, video conferences, to random interactions with the public.

1. OBSERVATIONS:

We started out by observing those biking in and around Savannah. This included Liberty Street & Barnard, Forsyth Park, Moonlight Garden Ride, and Broughton Street. We observed the non-traditional bikes such as pedi-cabs, and finished by observing the locks and bike racks around Kroger and Forsyth Park.

2. CULTURAL PROBE

We conducted research out in the community at the First Friday Art March, and twice at the Forsyth Farmers Market. This included a lot of interaction with the cultural probe that led to many data points. Many of these interactions went further to where we could get even more data points on their individual biking experience.

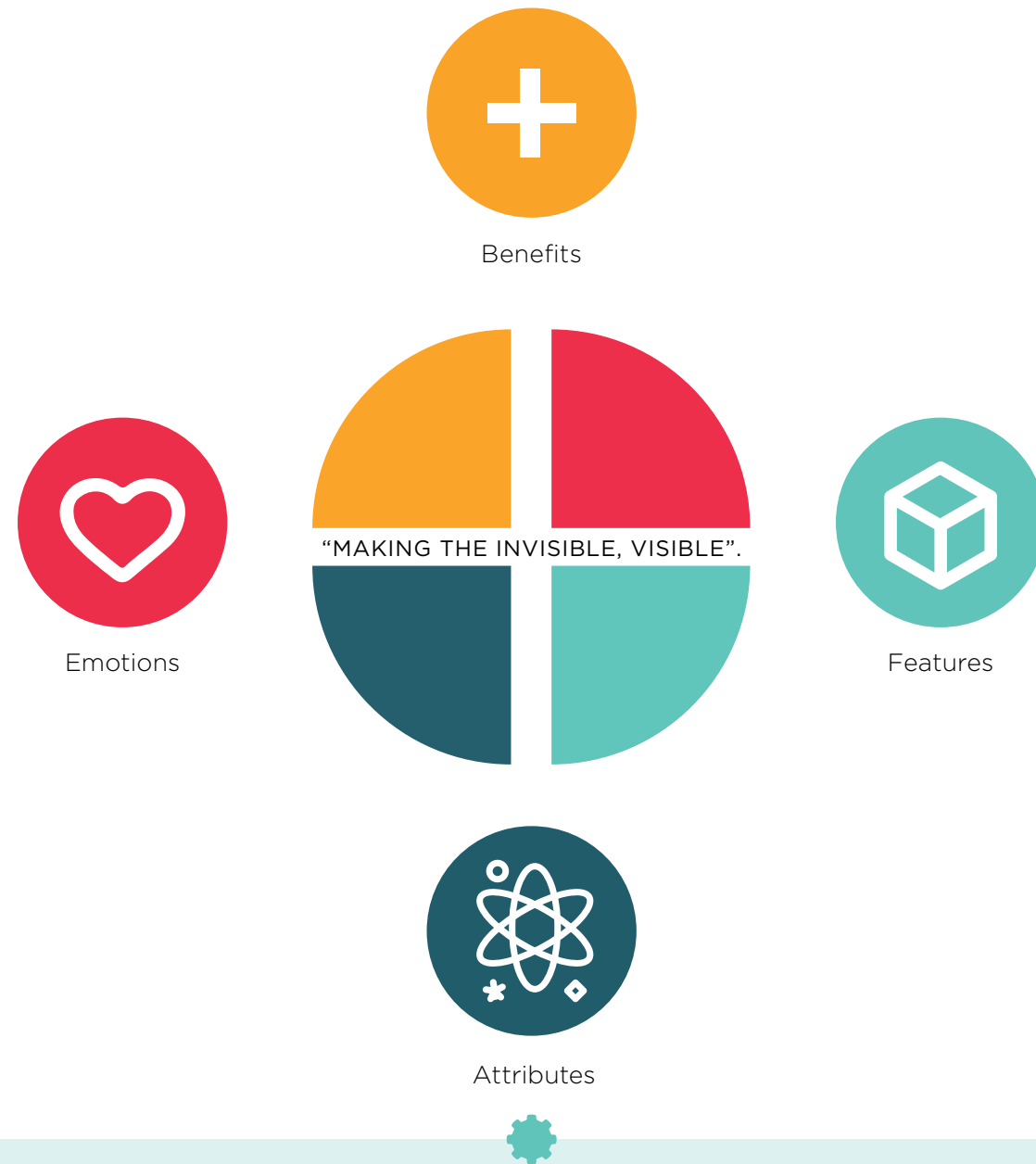
3. INTERVIEWS

In total, there were 21 interviews where we asked individualized questions tailored to the specific individual. We looked for different interviewees that fit into our stakeholder map.

4. SENSORY CUE KIT

The sensory kit included various materials that could or could not be related back to the experience of biking. We played around with textures, shapes, colors, sounds, visual interactions and words, that triggered the creation of their own ideal experience of biking. We had 5 participants ranging in gender and ages, they all chose different objects and materials that helped them feel personal and closer to the experience of biking even if they weren't frequent bikers.

INSIGHTS-BASED DESIGN



A COUPLE THINGS TO REMEMBER:

- Understanding the user and their social interaction with a specific environment or ecosystem.
- Don't assume anything.
- Open minds lead to divergent thinking.
- Affordance: the ability of an object to tell the user its' purpose and the way it works.

3

METHODS & TECHNIQUES

OUR TECHNIQUES

CULTURAL PROBE

The group sought out to make a cultural probe that was highly interactive and at the same time, collect as much data as possible from each user. The probe consisted of three panels, each with its own function. The first panel collected the user's gender information, it included a non-specified option for those who did not feel comfortable giving out personal information. the second panel consisted of nine questions in regards to biking in Savannah. In the third panel there were two maps of downtown Savannah, one for pointing out the commonly used roads for biking in the city, the other one for pointing out roads the users would usually avoid.



INTERVIEWS

We interviewed a total of 21 participants. The participants varied in age and ranged from bike users to non-bike users, as well as from college students to engineering professionals. The questions asked were in relation to the users' experience as a biker in the city of Savannah. Our intention was to ask a questions that would get the participant to say things they normally wouldn't, such as future recommendations for the city's improvement in regards to the topic and their personal perspective on the positive and negatives of biking.



SENSORY CUE KIT

The sensory cue kit related to the ideal bike consisted of objects related to sight, and touch. It included objects such as padding, different types of leather, graphics, stickers, lights and handlebar grips. The purpose of this process was to get the participant to create his or her ideal bike.

The sensory cue kit related to the ideal biking experience consisted on different cutouts of roads, bike lanes, street signs and toy cars. The purpose of this process was to get a participant to lay out his or her ideal street for biking. In order to appeal to the multi-sensory aspect of the process, the group added a track of bike and city noises that would constantly play on a loop while the participants were creating their ideal road.

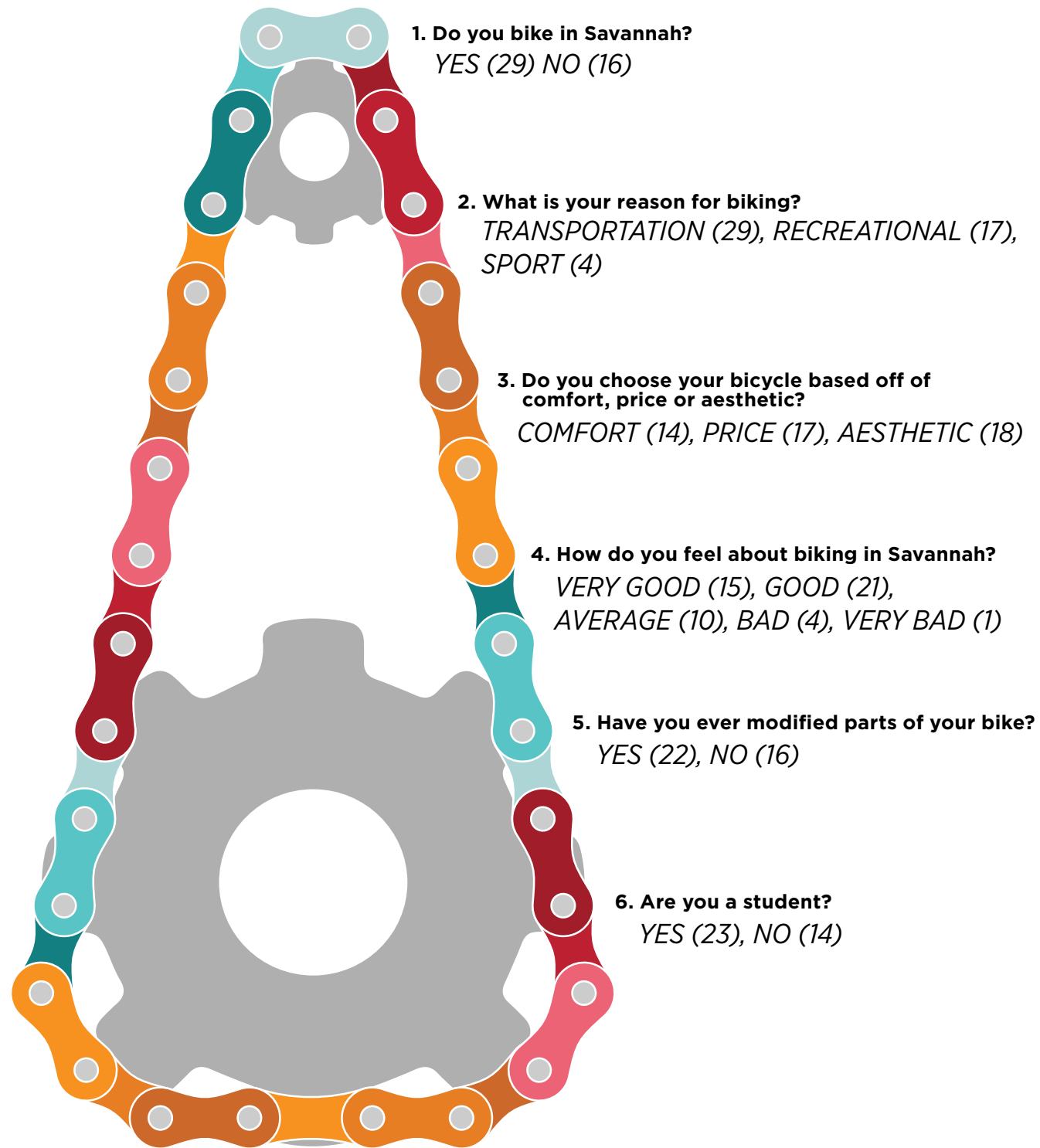


INSIGHT

These different methods and techniques allowed us to have raw data to transform and synthesize results. It was crucial to compact the voice of the user in order to understand the perspective of each of our stakeholders and move forward into affinity mapping.



CLOSED QUESTIONS



OPEN QUESTIONS

WHY DO YOU CHOOSE BIKING OVER OTHER MODES OF TRANSPORTATION? (OPEN BASED)

Environmental Concerns
Apt for SAV Streets
Less Expensive (gas)
Quicker than a car
Sport

Easier for sight seeing
My own pace
Free Parking
Fun during certain weather
Better for short distance travel

Sustainable
Recreational
Silent
Convenience
Affordable



WHY DO YOU CHOOSE BIKING OVER OTHER MODES OF TRANSPORTATION? (OPEN BASED)

More Bike Laws
More Public Racks
Guarded Bike Lanes
More Bike lanes
Bike-Only Lanes

Connection Path thru City
Newly Painted Bike Lanes
Awareness between cyclists + drivers
Connection Lane from West to East
Bikes having the right away

Security Awareness
Better Quality Roads
2-Way Bike Lanes
More Bike Lanes
No Cars North of Forsyth



DO YOU KNOW WHAT SAFETY REGULATIONS REGARDING BIKING IN SAVANNAH? (FUTURE ORIENTED)

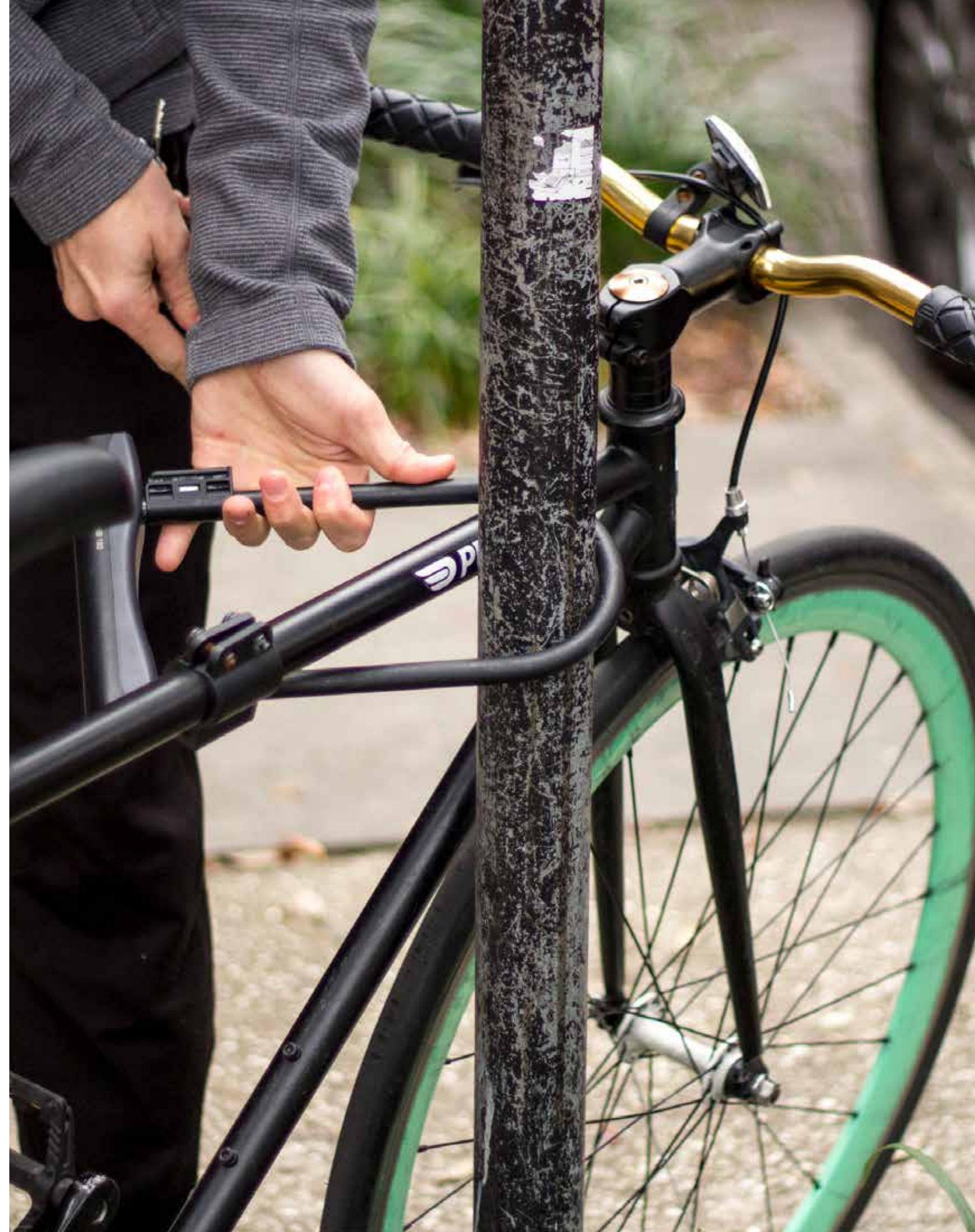
No
Helmets for under 18r riders
Follow transit rules
Lights on bike in the dark

No cellphones
No need for helmets
No cycling on Broughton
Same side as cars

No cycling on sidewalks
Avoid danger
Stop at crossing
Same side as cars



“My bike is my baby” “It is stressful knowing that you have a car behind trying to pass you and vice versa; if i’m driving, I get anxious having a cyclist in front or close to me because it can be a potential dangerous situation.” **“When I am in a car, I am a driver.”** “Sometimes like I see a lot of bikes and pedicabs run stop lights” **“She’s my buttercup, I don’t know what I would do if I lost her”** “The city is capable of being a bike friendly city but the way people drive here and the lack of bike lanes makes it impossible” **“It is not true that you never forget how to ride a bike”** “Makes me realize a lot more people should bike here. And makes me think that like cars don’t take bikes very seriously.” **“On certain roads, some people shouldn’t pass me.”** “they don’t treat us as cars but at the same time get super mad at us when we are not as fast as cars, so they treat us like garbage so it’s really not safe.” **“I was just riding with me myself and I was just having a good time with myself.”** “Something like a time saver.” **“Bikers kind of go slow in comparison to a car and if I had one in front of me I’d have to change lanes and pass them.”** “cars are obvious, it was easier for me to move around on a bike.” **“The part of the exercise and like you enjoy the moment, cause you’re one with the surroundings like nature and the streets.”** “I don’t. I’m a little more aggressive so I will probably go up to a car.” **“They say they’re trying but they need to look at some other communities.”** “When I am biking in the bike lanes I feel pretty safe because the traffic here in Savannah is a little crazy.” **“Price and comfort, I think they’re pretty equal.”** “Wearing earphones with both in.” **“I feel like sometimes they hate us bike riders”** “a bike, the first contact with the floor or object would be me.” **“as some people do like riding on sidewalks.”** “3 cars per 1 bike.” **“we had no rush and we didn’t have any plan or timetable.”** “they close all of the streets in the downtown location allowing pedestrians to walk and bike riders without being stressed out about cars.”



DEVELOPMENT

After gathering a large amount of data points from the cultural probe, interviews and sensory cue kit, we were able to organize all the data in the affinization process. This process lead the group to an outcome of all that has been researched throughout the project. In other words, it serves as a bridge that connects raw data to the framework and storytelling.



**YELLOWS,
ALL
DATA
POINTS**

I WE YELLOW

This process starts out with the yellow post-its. Every group member writes down all of their data points including cultural probe, interviews and sensory cue kits. Every yellow post it, represents a single data point. After all of the data has been transcribed, each post-it is randomly placed on a wall. After this, we began clustering them by meaning and message.

821 YELLOWS



WE THEY BLUE

After all of the yellows are clustered, the blue post-its come in. These underlying messages within the yellow clusters in the voice of the user have an intention that the research design team has to decipher.

114 BLUES



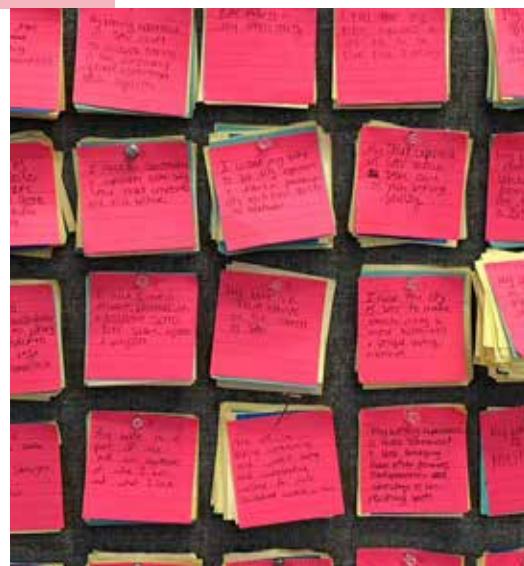
The blues are telling the team how they feel about certain things even if it is the same object or aspect they can always have different meanings and belong to different blues . In other words, **“What matters to the user?”**.



**BLUES
US
INDIVIDUALITY**

SYNTHESIS

After the blue post its, we started working on the pinks. For this step, the team clustered the blues into key issues in the voice of the user. By this point, the high frequency words come out even further, giving the team somewhat of an idea on how the outcome will be.



**PINKS,
CORE
STORIES**

**IT
IS
PINK**

The last step of the affinization process are the pink post-its. These give the research team all of the information in order to make the framework. Our final post-its included words such as Safe, Aware, Practical, Enjoyable, and Self-Expressive. These words would later on make way into the final framework.

45 PINKS

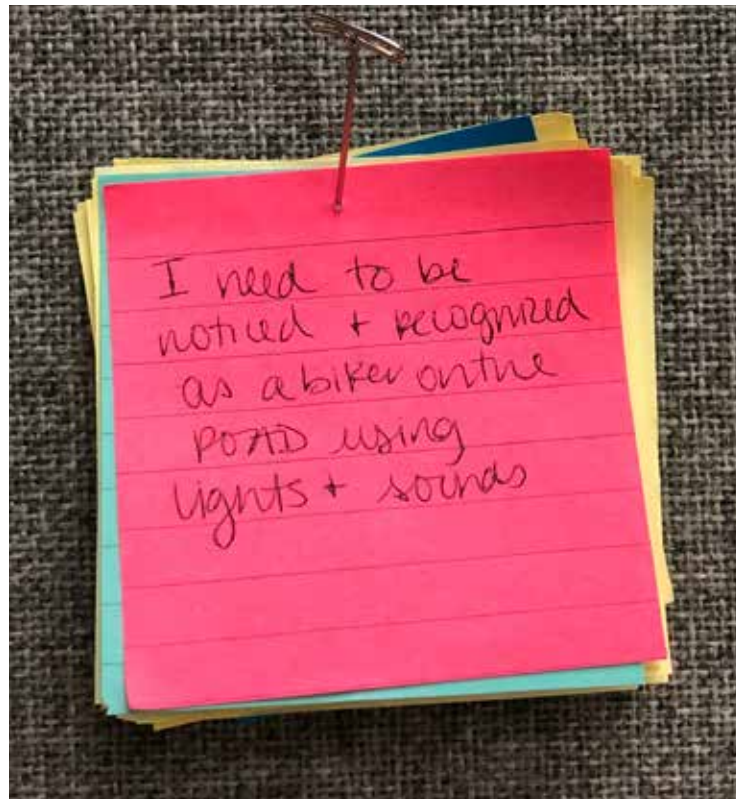
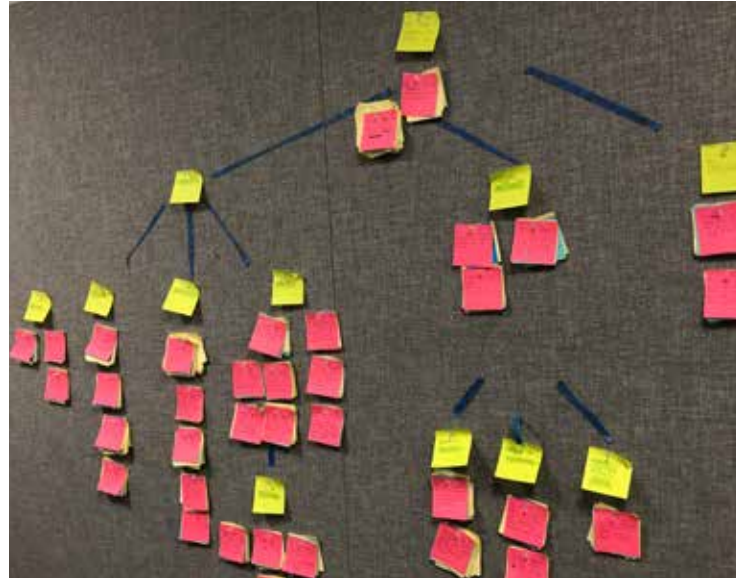


5

STORYTELLING



“ WE WANT TO FEEL SAFE AND VALUED IN THE ROAD”
“WE WANT SYSTEMS OF PROTECTION AND DELIMITATION BETWEEN CARS AND BIKES”



The connections between humans and their surroundings are crucial for our development as a society. For this reason, being able to identify the core stories around biking in Savannah, will allow the design team to create from the users' perspective, taking into account every aspect of their experience, from the most functional ones to the most heart felt requests.

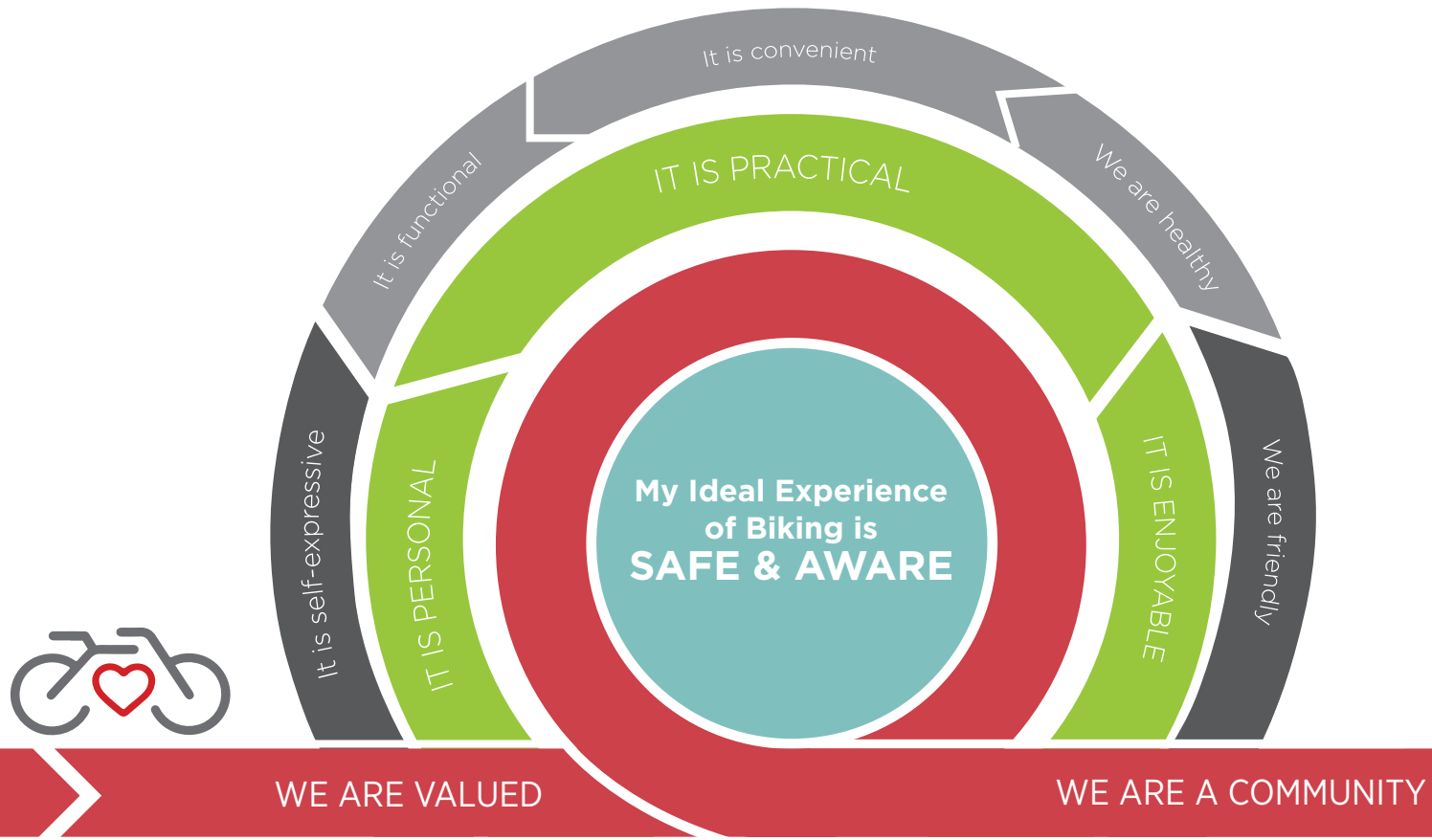
“WE WANT FREEDOM”



“WE WANT CONTROL”

FRAMEWORK

MUST HAVE
 SHOULD HAVE
 NICE TO HAVE
 CORE



SAFE

Drivers and bikers need education on traffic laws in order for them to be considered and respected as vehicles.



Vehicles see me as an equal and significant individual on the road.

WE ARE

I belong to a biking community that cares about my needs and safety.



It is necessary that my ideal biking experience includes a visual and physical separation between bike and car traffic.

AWARE

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It has an adaptable and collapsible lock.
Sustainable and long-lasting material for my bicycle and the road.
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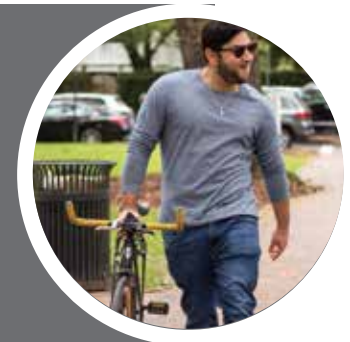
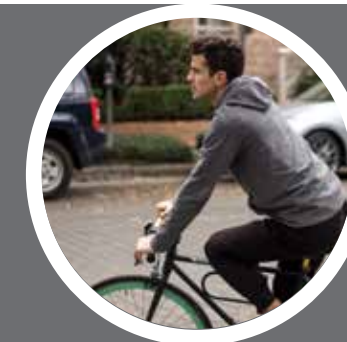
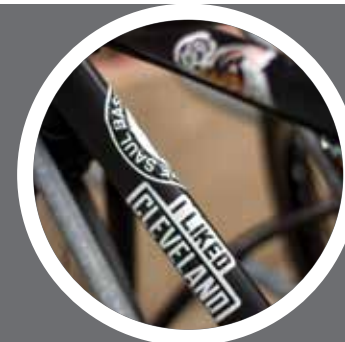
“Makes me realize a lot more people should bike here. And cars dont take bikers seriously.”

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It has a story behind it.

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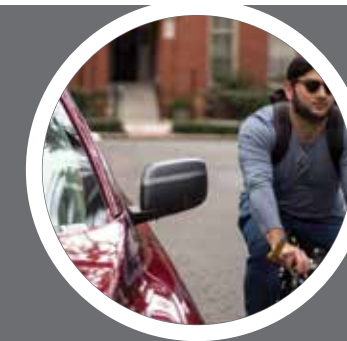
“My bike is my baby”

Enjoyable

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SAFE & AWARE



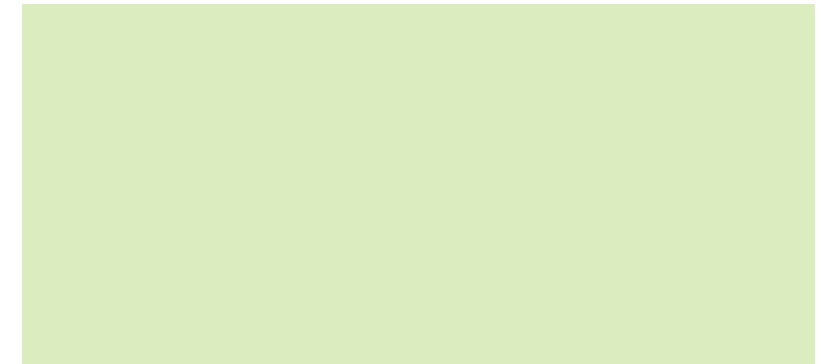
FRAMEWORK is the visualization of the research in an organized and graphic way, which portrays what the user wants and needs in order to have the ideal experience of biking in Savannah.

The framework was designed based in the shapes and movement of a bicycle in order to represent the different directions and elements to be explore in the solution examination.



STORYTELLING furthers the framework in which the user's story really shows through. We were able to tell these stories with the "pinks" from the affinitization process. Through furthering the storytelling step, our research came to life and the storytelling became an asset to our framework. We capture the voice of the user without any bias or assumptions, it was purely the representation of their needs and wishes in order to have the ideal experience of biking.

PRACTICAL, PERSONAL & ENJOYABLE





BICYCLE BUDDY

POSSIBLE SOLUTIONS

BICYCLE BUDDY



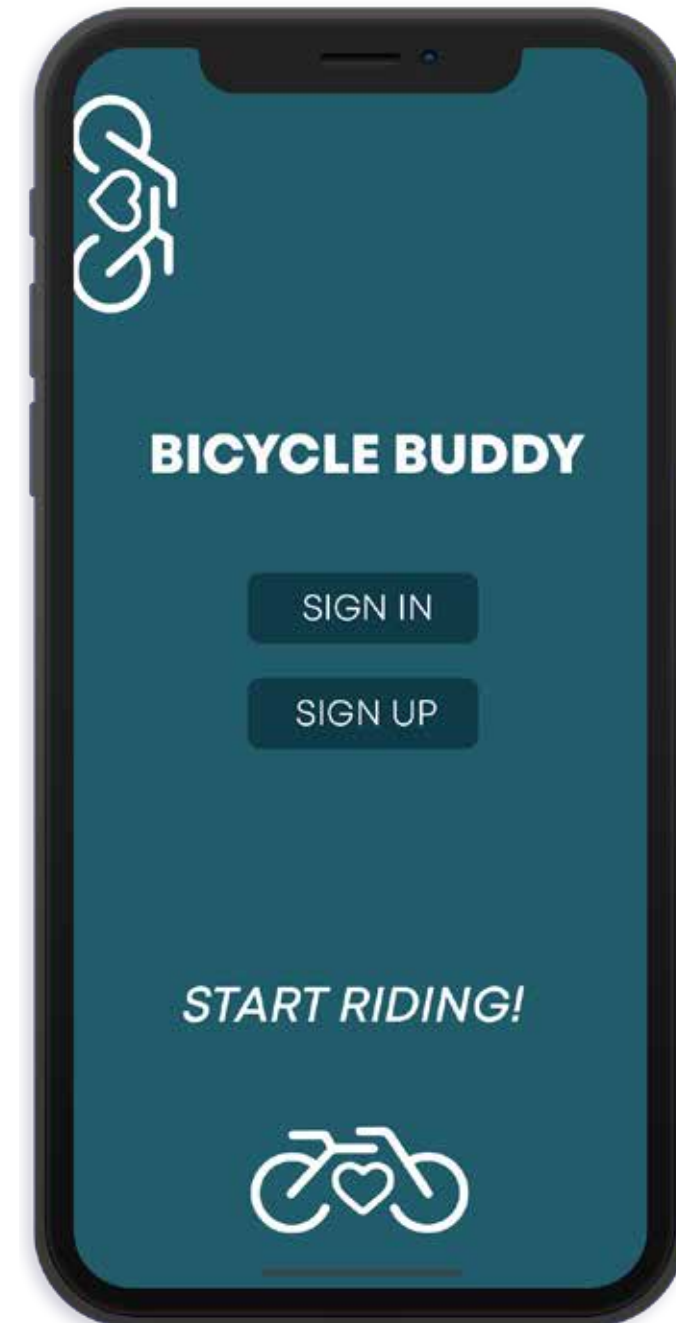
YOUR BIKING BUDDY

BIKING BUDDY

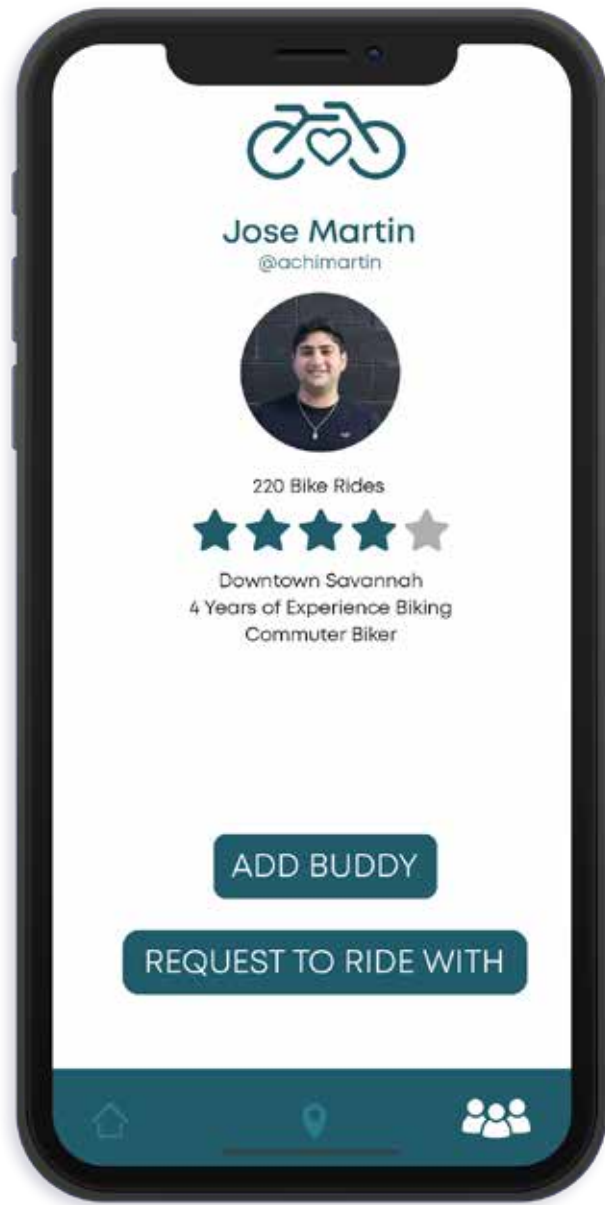
From our framework, we wanted to design a solution that would be a tool in creating the ideal biking experience. The solution was to design an app that was first and foremost focused on safety and awareness. This led us to develop a social platform catered towards cyclists. The app continues to envelop our framework by adding features designed around education and creating a community for the cyclists.



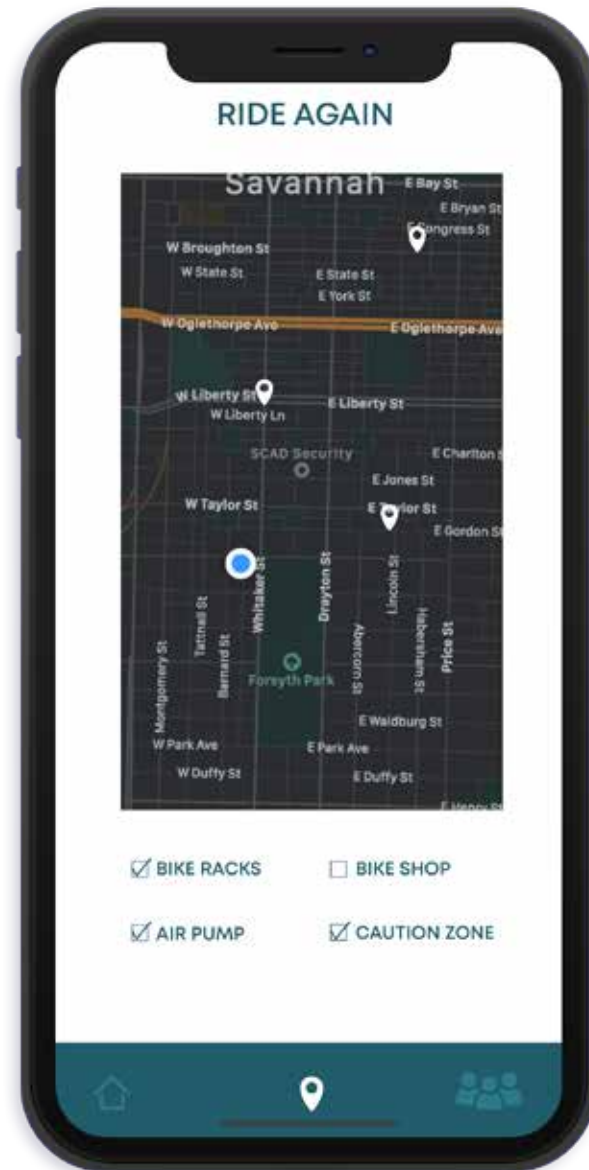
The user can choose to log in or create an account for the app: Once logged in, they will be able to create a profile and add an avatar. They can list their age, type of bike they use and what kind of biking style they prefer.



BICYCLE BUDDY

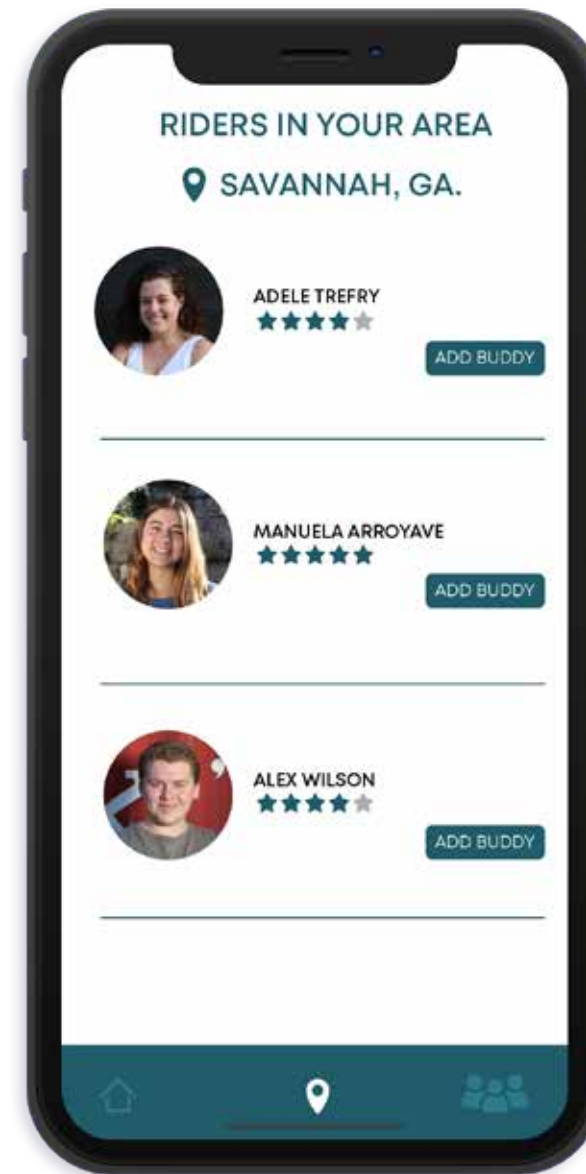


The profile page will allow each user to have their own personalized profile and will be allowed to look at other users' profile and add them as their biking buddy.

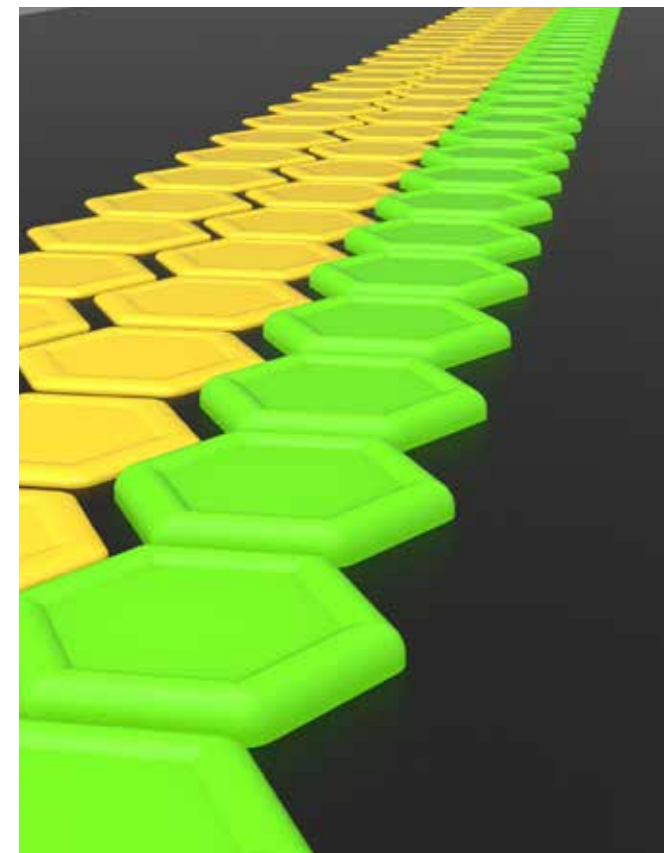


The map page shows their current location and options to showhide. These options will show them around the area to help them with their biking experience. Examples include bike shops, bike racks, air pumps, and cautions to help them bike.

The event page will allow showcasing different events happening in their community, and it will allow the user to join the group and see who will be going to the event. This will allow promoting a more connected biking community.



YOUR IDEAL BIKING LANE



“We need to feel safe in the road”

We created a median that divides the bike lane from the drivers. This median is raised from the surface and will create a rumbling noise when someone drives over it in order to let the driver know they are too close to the bike lane. The green is raised more than the yellow as a physical and visual safety indicator, for both vehicles. This design intervention will allow a clearer communication between drivers and bikers, as well as a sense of safety and control.



“SPEAK HUMAN. FEEDBACK IS FOR HUMAN BEINGS, SO ADDRESS THEM AS SUCH. USE THE WORDS YOUR USERS USE.”

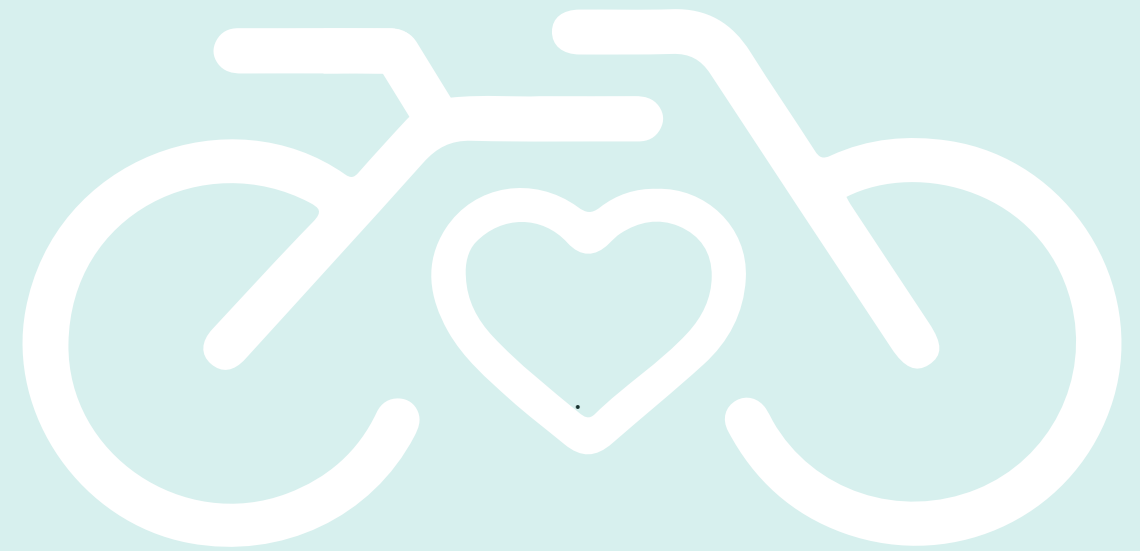
- DAN SAFFER

BIKING IN SAVANNAH, GA

YOUR TURN TO RESEARCH



This is a journey through an unknown path, a path filled with failures, success and learning opportunities. The process has challenges, but in those, imaginative opportunities. This leads you to embrace ambiguity and trust the process as it goes, opening the exploration to infinite possibilities. You will feel overwhelmed after 800 yellow post-its, blues that don't relate or are truly unique to a cluster, you will think and overthink every single data point and anchor word because you want to listen to the user's voice. Contextual research is the first step to live and experience a human-centered design career.



Anderson, Ken. "Ethnographic Research: A Key to Strategy." Harvard Business Review, 1 Aug. 2014, hbr.org/2009/03/ethnographic-research-a-key-to-strategy.

"Weird bike 4." Ridersmate, Ridersmate Ltd, <https://www.ridersmate.com/wp-content/uploads/2015/07/weird-bike-4.jpg>

Lextant. "Generative Research." 2013, elearning.scad.edu/bbcswebdav/pid-2084079-dt-content-rid-28100872_1/courses/IDUS-215-02-11532.201910/Generative%20Research%20Lextant%20U.pdf.



Contextual Research IDUS 215-02
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