

# Spicy Avocado

## Social Reflection

We believe strongly in our goals of making travel planning easy and accurate in a busy city like Boston, and making travelling itself more efficient for the people and the environment.

For the people, our app will make travelling with bikes easier, as our users won't have to spend money during rush hour to get from one point to another using expensive ride sharing services. In fact, planning trips with BlueMaps doesn't even require owning a bicycle, which can cost hundreds of dollars and cause headaches for storing over summers. Instead, our app uses Blue Bikes, costing \$2.50 per 30 minute trip, and whose \$99 yearly subscription is much less expensive than other public transport alternatives, such as the MBTA at \$90 a month. In this way, we hope to help both regular Blue Bikes users by giving them more control over their trip planning, and also people who use other transportation services by providing a cheaper alternative.

For the environment, our app will promote eco-friendly transportation services, such as biking and walking, over the widely-used cars, buses, and trains. Ironically, our app uses Blue Bikes to create green trips, and can hopefully reduce the carbon emissions that result from cars, which are harmful to our planet. The fact that Boston is a smaller city also helps our mission; many destinations can be reached with a combination of bicycling and walking in a short period of time. Additionally, with the ability to add multiple stops to a trip, users can be flexible in the trips they plan around the city, and they can take in the wonderful sights as they bike and walk.

In order to achieve these goals, we recognize the importance of creating an accurate maps system; not only must the map and routes be correct, but so should the estimate arrival times. Otherwise, users will very quickly lose our trust and stop using BlueMaps. For the walking time durations from origins to bike docks and from bike docks to destinations, our app uses Google Maps data, which is reliably accurate. For the biking time durations between bike docks, we use averaged Blue Bike real user data over three months time. We believe this approach gives us an accurate portrayal of the time users actually take between bike docks, since Google Maps cannot provide the time it takes to arrive at the

dock station, get off the bike, and place the bike on the dock, among other real situations. By incorporating real-life user data into our time estimations, we believe we make our data much more accurate for the real-life user.

Now, we discuss the different stakeholders in our system:

- **Blue Bikes:** They will be used more, and the company will make more money since more people will be using them with our app
- **MBTA, ride sharing companies:** These entities will lose money, since more people will choose to walk and bike with our app
- **Students:** They will be able to plan trips more accurately, such that they don't waste time going to empty/full hubs, so they will be able to save time
- **Tourists:** Tourists that are visiting Boston will be able to easily plan their trips using our planner app to more easily explore the Boston area.
- **Bostonians:** People living in Boston will have easier access to transportation via Blue Bikes and can plan their trips easily with the option to save their favorite trips so they can revisit it in the future within re-entering location information.
- **Public roads (bike lanes):** With increased use of Blue Bikes, public bike lanes will be stress-tested and if the capacity is not enough, then bike lanes in Boston may have to be expanded to accommodate the increased use of bikes.