Writing III: Commercial Opportunity and Social Impact

The Commercial Opportunity

The market of our application is the subset of mobile device users who walk outdoors with music playing in their headphones. This is quite a large group of users. In a 2009 survey, The National Household Travel Survey estimated that there were around 40.9 billion walking trips done each year, so many people could benefit from this app and thus we can consider them in our addressable market. Specifically, in big cities there is a very large market. It was found that over 355,000 people enter Times Square daily as pedestrians.

There are 2 major consumer demographics we expect to be interested in such an app. Firstly, pedestrians in cities that have a large amount of commuters and traffic. Due to the quickness of traffic in these areas, we expect to need to be able to respond quickly to possible auto accident stimulus. The other major demographic is parents who will buy this product for their children to help bring them peace of mind about their children commuting, to and from school, sports practice, etc.

As a business model, we plan to collect revenue from a one time app purchase. We also have the option to collect ad revenue with occasional advertisements upon startup of the app. Ads can be implemented visually and audibly as long as the ads don't have higher privilege than the audio messages alerting pedestrians.

Many apps that try to address pedestrian safety neither utilize the total, high processing functionality found in modern phones nor do they use sound processing as a way of predicting threats. Some use video processing to view for cars, some scan for bluetooth devices, or send alerts when users enter intersections, but very few focus on using sound and location to predict possible threats to the user. In terms of the competitive landscape, large scale improvement that would make our approach ineffective does not seem feasible. For such an improvement, a system would have to be developed that could actively track both vehicle drivers and pedestrians and makes inferences based on real-time behavior. On top of developing this complicated system, it would need to gain traction to be a viable solution to the problem and rival the functionality found in our app.

In terms of actual revenue, we have to distinguish by plan how we intend to commercialize our product. Assuming we use just the app store purchasing plan, the revenue projections are very easy to estimate, its just the revenue of a single app purchase multiplied by the number of users we expect. Obviously, we can do one of two things: we can make our app cost very little, such as the standard 99 cents seen on most apps today, to maximize our number of users who will buy it, or could maximize our app price so that even if we have a limited user base, we still can make considerable revenue. It is estimated that the first option would be more effective due to the market already having free options which are able to perform a fraction of the features found in our product, so it would be hard to convince a user to spend a fee that is significant for this product.

Societal and Global Impact

The broader societal need we are addressing is the alarming number of pedestrian deaths related to headphone use and distracted walking. In a study published by Injury Prevention, it was found that that the number of pedestrians killed while listening to music has nearly tripled in the years from 2004 and 2011, going from 16 to 47, and that in nearly 70% of the cases, the accident was fatal.

If our product was widely used, it would result in a large decrease in pedestrian deaths due to distracted walking. As the number of pedestrian deaths continues to increase, a product like ours is becoming more and more of a necessity. Specifically, we would see decreases in pedestrian deaths of young commuters, our target demographic, since they are the most likely users of this app. Additionally, we hope to see train-related deaths decline significantly. Because getting hit by a train accidentally is essentially due to distracted walking, our app would be extremely effective in preventing this behavior

The app poses no issues in terms of health or environment, and has no risk of being used unethically. Should the app be compromised, there would be a risk of user data being accessed which would obviously be problematic. For this reason, we are taking many measures to so secure user and other aggregate data. It is important that this app be accessible by young children. Thus, we want the UI to be simple and very easy to read. We will match colors to indicate if certain weather, traffic, or crime levels are good and nonthreatening (green) or are very threatening (red), or even if they are between the two (yellow). Also, we will use very simple to understand audio cues to ensure that young users can understand them.

One of the global issues we could encounter is the app will only be in English. Thus, if you don't speak English, you won't be able to use the app. Similarly, that could make it hard to access if you live in another country, even if you speak English. However, implementation of language support for other countries would be exceedingly simple and the system would still work under the exact same protocol. Google’s locations services API will work on any country, and as long as crime and weather data could be gathered in these areas, the app could run anywhere and be used by anyone.