Box 1: Overview, Key Words, and Subtopic Name

The potential outcome of the product is to better mobilize individuals and groups of people. The product will give users the ability to better respond to their surroundings when moving through their city on foot. With the influx of applications and resources for people to use to find better driving directions when it comes to avoiding traffic, accidents, or road closures, this product will utilize similar concepts, but now focusing on people on foot.

Areas of technical expertise: Cloud Computing, Mobile Application, Cloud Platforms, Location API

Areas of Application: Mobile phone development, Mobilization, Location-tracking, Routing,

The subtopic of this project is Software Engineering

Box 2: Intellectual Merit

This Small Business Innovation Research Phase I project demonstrates the creation of an algorithm that computes the routing people based on large crowds and events. The intellectual merit is the product's algorithm that calculates the number of people per specific area and decides whether a route needs to be adjusted to avoid a highly crowded area or accidents that will impede the continuation of the user's trip. The development of this algorithm includes location tracking of the app users, computing the best route for getting from one place to another, and determining when an area is to be avoided. Technical hurdles for this product include being able to respond promptly when directions need to be adjusted for users. The algorithm must be able to take in and analyze data fast enough to be effective in giving the user the best experience.

Goals of the R&D include providing users with an experience that will give them the most up-to-date information in the quickest response time. In order to reach these goals, the product will focus on two major elements: accuracy and response time. Accuracy will be measured in the algorithm's ability to find all appropriate paths and give the user the best one. Response time will be measured in the program's ability to continuously pull data about location tracking, accident reports, etc that will aid in adjusting the user's path in real time.

Box 3: Broader/Commercial Impact

The broader impacts of the project are benefits to society by providing an innovative way to better mobilize individuals and groups through a medium that focuses on the movement of people at the ground level. On a commercial level, our project provides a tool for better controlling large gatherings of people in a safe way, which is very appealing in today's global climate. A serious need of today is the need to better mobilize and organize events like protests and marches. The project's planning of protests will result in a decrease in the likeability of violence breaking between two opposite groups and allow for a safer environment both for those involved in the protest as well as the general public.