Proposal for the Bike Track App

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A. Proposition

A large population of students at the University of Arizona depends on bicycles as their mode of transportation around campus. With campus spanning hundreds of acres and student’s schedules packed with classes and other activities a bike can be key in getting students where they need to go on time and efficiently. With so many students using bikes on campus, it is no surprise that bike theft tops the list of crimes at the University of Arizona. The campus is like a kid in the candy store for bike thefts as there are so many bikes parked together throughout the campus. In recognizing the problem of bike theft on campus and understanding the frustration for a student who has his or her bike stolen, our group decided to come up with a way for a student to track their bike and increase their chances of getting their bike back after it is stolen. With that idea in mind, our group came up with the idea of the Bike Track app.

We propose a mobile app, called Bike Track, that is able to alert a student if their bike is getting stolen and that can track its location. We named our app Bike Track because it is short and simple. The name gives the person looking to download the app an immediate idea of what the purpose of the app is. To use Bike Track, it requires an initial purchase of a GPS device specific to Bike Track. This GPS devise will be small and simple to make it undetectable by a thief. This GPS will go around the frame of the bike and will be locked in place so in the case that a thief does discover the device, it will be difficult to be removed from the bike. Furthermore, if the GPS device is found by the thief, the thief will be required to not only find a way to break the lock off the bike, but also a method of
taking off the GPS. In stealing a bike with the GPS device the thief is required to perform more work and waste time to steal that particular bike. This extra work and time makes it more obvious that the bike is being stolen and increases the thief’s chance of being caught. So even though initially the GPS device is designed to be hidden and undetectable by a thief, if it is discovered it might deter a thief from stealing that particular bike.

After purchasing the GPS, the free Bike Track app can be downloaded onto a student’s smartphone from the App Store. Each GPS device comes with a code when it is purchased. When the student first opens the Bike Track app, he or she will need to enter the code that came with the GPS so that the app can connect to that specific GPS device. Once entering in the code the app will start tracking the bike that the GPS is attached to. In order to use the app the student will first lock their bike in a location on campus using a normal bike lock. It is recommended that students use a bike lock in addition to using the Bike Track app in order to decrease the probability of his or her bike being targeted by a thief. Once they have their bike in a specific location they are going to open the app and they will see a map and an indicator pinpointing where his or her bike is. The student will then press the button “Lock” displayed on the screen in order to lock the location of the bike into the app. By pressing the lock button, the app will record and save the exact location of the bike. The student can then go to class or any other activity they need to perform. Because the location is locked into the Bike Track app, a forgetful student will easily be able to check where he or she parked his or her bike on campus.

If the student’s bike begins to move from the location that he or she locked into the app, Bike Track will immediately send a notification to the student’s phone. The notification will say something along the lines of “Warning! Your bike has been moved
from its locked location”. This warning is the first indication to the student that their bike might be in the process of being stolen. The student can proceed to open the Bike Track app and see where their bike is and track where it is moving, shown by the indicator on the map. The app provides a button that gives the student the opportunity to directly call the UAPD. The immediate display of the “Call UAPD” button will encourage students to contact the police rather than trying to go after the thief and retrieve their bike themselves. This feature will not only increase the amount of bike thefts reported but it allows a student to contact the police almost immediately after the theft occurs.

Furthermore, because the GPS is providing the location of the bike to the app, the student is able to tell the police exactly where the theft has their bike. In the case where the bike was not stolen from its location, the student can simply press the “Unlock” button in the app when they return to their bike in order to let Bike Track know that the bike can be moved from its location without sending the user a notification. Bike Track is a security app that is designed to protect a student’s bike from thieves on campus.

**B. Value Proposition**

The Bike Track App will improve the campus in many ways. It will make the U of A campus much safer, since there won’t be as many bike thefts. The bikers will therefore be much happier and not have to worry as much about getting a new bike, if it is stolen. Bike theft is one of the most common crimes on a college campus, and by having the Bike Tracks App, people will have that confidence that their bike is being tracked if anything happens. Due to that, people on campus will be less worried, and not as many people will steal bikes. It will improve campus since more students will be happier with knowing their bikes could be tracked if they are stolen. People who have the App will assure other
people coming to see the campus with concerns for their bikes. More students will then be more confident with their decision to come to the University of Arizona. Since the police officers from campus will also have fewer cases to work on for bike theft, it will help improve the campus since they will be able to work on different cases. By working on different cases, it might benefit the students and make campus a better place for everyone. The students will enjoy their campus more and more be willing to buy a bike, since they'll know that they have higher chances of getting it back if it gets stolen. By being able to track their bike, they'll also know that their bike will be where they left them after they come back from class. Students will feel more assured and confident that they will have their bike at the end of the day, and this leads to more happy students on campus life. These people will also tell their friends about the App and reduce bike thefts around different campuses as well. More people will be informed of the App, and the campus will be much safer and more students and teachers will be content with where they go. By having an idea of where their bike is at any moment, bikers will know if it has been moved and how to track it if it was. If the people that are planning to steal the bike see that there is a device attached to it, they will probably not choose this bike, and might not want to steal one at all. If most bikers on campus have this app, it will reduce the bike thefts, and people might reconsider stealing one on campus. The campus will become a securer and less harmful environment and people would be more satisfied. Their satisfaction will lead more people to enjoy their university, and perhaps to want more people to come study at the University of Arizona campus. There will be fewer complaints from students and less reporting of bikes being stolen. More people might want to buy bikes after knowing they will be tracked, and there could be an increase in
the amount of bikes being bought, which will also help the people selling them. The people with these bikes will most likely be content and enjoy riding their bikes to campus everyday, and knowing that they will be there when they get back. If they are not there, they will at least know that they can track their bike and potentially get it back. The confidence of many students could increase, and they might have a better appreciation of the campus. Once these bikers are more satisfied with riding their bikes and knowing how they can track their bikes, they will be more assured with riding their bikes around campus. People will want to ride their bikes as well, and perhaps get one if they don’t since they have a better reason now. By knowing it could be tracked, more people could desire a bike for themselves. Bike Tracks will improve campus and not only with the benefits to the bikers, but by making the campus a safer place, and perhaps by making more students from different places want to come to our school campus.

C. Consumers

One of the most common forms of transportation at the University of Arizona, besides walking, is biking. One can observe the pathways crowded with bikers when classes let out, and when classes start, every bike rack is filled to capacity. There is no question that biking is a big and essential part of campus life, however, this also makes bike theft a greater problem. With such a large amount of people who ride their bikes on campus and the large amount of bike thefts, there would definitely be interest in any solution to this problem. Bike Track’s ability to track a stolen bike gives these people the hope of getting their bike back, and it can give everyone some insurance that their bike is safe when they lock it up. Specifically, Bike Track will benefit bike-riding students and
teachers by preventing the theft of their bike and also the UA Police Department by saving them time and money spent on bike theft every year.

The target consumers for this product are the students at the University of Arizona who use bikes as their main source of transportation. Most students are warned about the bike theft problem that exists on campus, and this often instills fear in them that every time they lock up their bike it is not guaranteed to be there when they return. Bike Track can help give these students a peace of mind whenever they leave their bike. The app will give them an extra layer of defense after the bike lock. First off, the device can possibly prevent the bike from being stolen because most thieves want a bike that is easy to take, with little hassle. This extra form of protection gives them more work to do in order to successfully steal the bike. Secondly, the GPS gives the students the ability to track their bike if it is stolen and call the police, giving them a better chance of getting the bike back, where as normally students lose any hope of retrieving their bikes once it is gone. The loss of ones main source of transportation can be extremely inconvenient and frustrating. Students would probably try anything in order to avoid the exasperating situation of losing their bike, which, in turn, creates a big market for this invention, and hopefully a high demand. The benefits of Bike Track will out weigh the costs because what ever the student pays for the GPS and mobile app, it will be far less than the cost of a new bike. The market for Bike Track can also expand beyond students to teachers and faculty who ride their bikes. It can even expand off the U of A campus to all people who regularly use bikes to get around. All bike riders, not just students, would be interested in a way to keep their bike safe and secure.
Another group of people who would benefit from Bike Track is the University of Arizona Police Department. At the beginning of freshman year a UAPD officer talks to the students on how to be safe on campus, and one of the topics broached is bike theft. It is clear that bike theft is not only a problem for students but also the police officers. With so many bike thefts on campus the department must spend valuable time and money that can be used elsewhere if the problem is solved, or at least reduced. Of the bikes that are stolen on campus, many are not reported because the bike owner has little hope of getting it back, therefore he or she often does not even try. With a direct link to call UAPD from the Bike Track app, hopefully more people will be encouraged to report their bikes stolen. Then, when stolen bikes are reported to the UAPD, the GPS tracking device gives the officers a helpful tool in locating. Also, the immediate notification sent to a student's phone when his or her bike is being stolen gives them a quick reaction time in order to find the bike before it get too far away. As stated before, Bike Track can expand off campus to help city police, such as the Tucson Police Department, locate any thefts that may occur around town. Bike Track would be a great benefit to the bike users and police officers on the U of A campus, but it is not specific to college students, making universal use outside college campuses possible.

**D. Responsible Organization**

To get Bike Tracks to actually become something real would take the work of several people and companies. It is a simple idea, but there are several steps required to make it reality. The various aspects of the app require the work of people in completely separate fields and areas of expertise. When all these people come together, they can make this app something great.
First, a web designer would have to work with the creators of Bike Tracks. Since the people who came up with the idea are business people and not computer scientists, they would not know the process of creating an app. This web designer would make the app attractive and functional. He or she would also be able to make it available to the public.

Once the app is created, a technology company would need to develop the GPS tracking device. As stated before, the creators of this app are not experts in technology. It would have to be a small, discrete device that would have the ability to connect to the app itself. Ideally, the technology company and the web designer could work together to assure that the app and the tracking device would be compatible.

Another group required for the success of this app would be the University of Arizona Police Department. A key component to this app is its direct connection to UAPD if a bike theft occurs. Police cooperation is essential to make this app a true success. The main goal of Bike Tracks is to give students a way to get their bike back if it has been stolen. In theory, the GPS would allow users of the app to track down the bike themselves. This would obviously be unsafe, seeing as the person who stole the bike could be very dangerous. Working directly with UAPD makes it much easier and safer to locate a stolen bike.

The final component of the creation of Bike Track would be an advertising team. This group would not have to be outsourced, as it would be part of the company itself. Marketers would come up with campaigns for television, the internet, print, and any other form of media that could get the word out about the app. Since Bike Track is geared towards students at the University of Arizona, advertising and demonstrating on the mall would be another great marketing tactic. Their emphasis on security and the ability to return stolen bikes would be able to entice thousands of college students at this university.
There is another group that could be part of Bike Track development, but it is not a necessary part of the app. This extra group would be bike manufacturers. If the app were to become successful and expand past the University of Arizona, bike companies could start selling bikes with the GPS tracking device already implanted inside of them. The tracking device could be put inside the seat or even inside the frame of the bike. This would ensure security of the tracking device and make the bike itself even safer. If bike manufacturers were to partner with Bike Track, they would be able to sell the Bike Track bike at a higher price than a normal bike. Customers would only have to purchase the bike and download the app, instead of having to purchase the tracking device separately and having to attach it to their bike.