Executive Summary

Imagine riding a bicycle without headlights during night in a dimly lit street while sharing the road with cars passing by. Having to control a bicycle with one hand and extend the other arm to signal while watching out for cars, would one not feel unsafe with the multitasking and the minimal protection that is offered by the bicycle? Envision stress added to the constant multitasking, something that especially college students experience, and with this riding on the bike with them is unsafe. After recognizing the importance of the issue and being in similar situations frequently, Air Lights was developed by Eureka!

AirLights is an armband that allows bicyclists to signal safely, intuitively, and handsfree. Essentially, to use AirLights, users wear the armband. By nudging the elbow away from the body, while holding the bicycle's handles, an arrow signaling a left turn is triggered. By nudging the elbow towards the body, while holding the bicycle's handles, an arrow signaling a right turn is triggered. When the elbow is resting or in standard position, the signals stop. After developing the prototype and testing, Eureka found that out of twenty tests, AirLights successfully passed seventeen of them, resulting in an 85% success rate.

AirLights has the potential to prevent accidents involving bicyclists and other vehicle drivers. This device can be used by various people who ride bicycles and frequently share the road with other drivers. In the future, AirLights has the potential to become almost seamless and substantially compact in design with its components embedded into the armband. In addition, switching to other forms of rechargeable power to reduce battery wastage and pollution and decreasing its overall costs are also some of AirLights's future possibilities.