Its currently very hard for people with vision impairments to get around. Some use just a cane which can lead to obstacles where they don’t see sudden drops. Some use a visual helper who might not always be available, and some use a seeing eye dogs witch could be unreliable and cost a lot of time and money to use correctly. The current smart canes use ultrasonic frequencies to detect distance from the nearest obstacle usually three feet in front of the user. They use an audio or a vibrating alert to help the user know about nearby obstacles. However the current options on the market are very heavy and bulky, they tire the users arms and they are extremely expensive options. The latest versions can give gps navigation to their destination, however this option doesn’t provide its full benefits to the users because of the lack of accuracy of smartphone gpses. For instance, the gps does not fully get a user to their destination, it usually gets the user within twenty or thirty meters of their destination. While that’s great if you can see the building, it leaves the smart cane user still needing to ask for directions to fully arrive at their destination. This leaves the smart cane market only serving one percent of the visually impaired market.

They decided to conduct a survey from blind people to see why they were only adopting at a one percent rate and they gave a lot of feedback. One of the main issues they had with the current devices is that they wanted to be able to choose how far out to detect obstacles. When surveyed there was no clear perfect distance to detect objects from. They wanted to be able to detect not just objects on the ground but above their heads as well. They also wanted to be able to detect object from a variety of angles, not just directly in front of the users. They are currently taking the feedback from the smart cane adopters in engineering the perfect low cost cane for the visually impaired.