



Light at Night

Fiona Tran Hanna Allen
Sevilla Elementary School



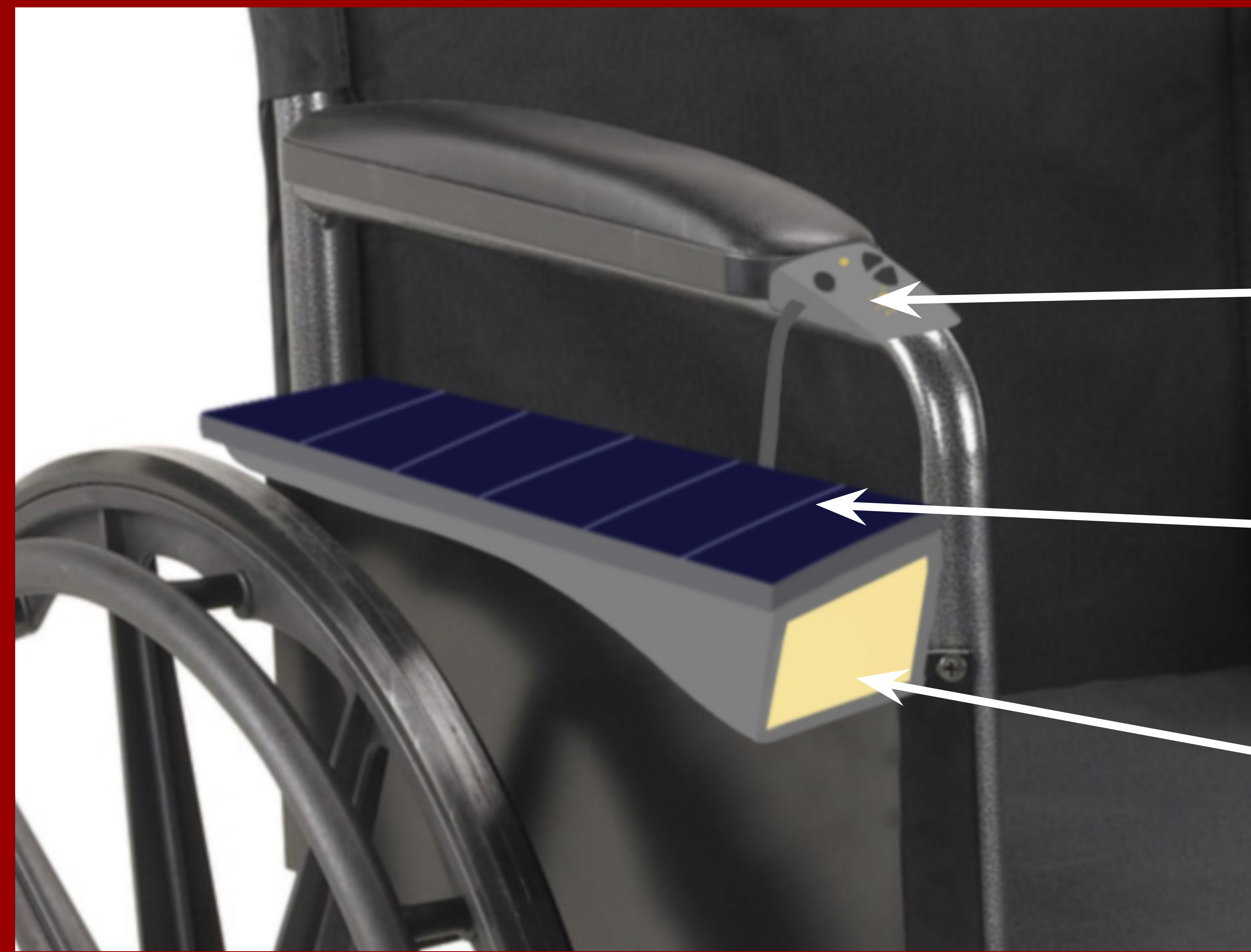
Wheelchair users have trouble traveling at night, because it is too dark to see obstacles in the ground.

Our Goals

- Create a light that can be attached to a wheelchair
- User friendly
 - Easy access to controls
 - Easy charging

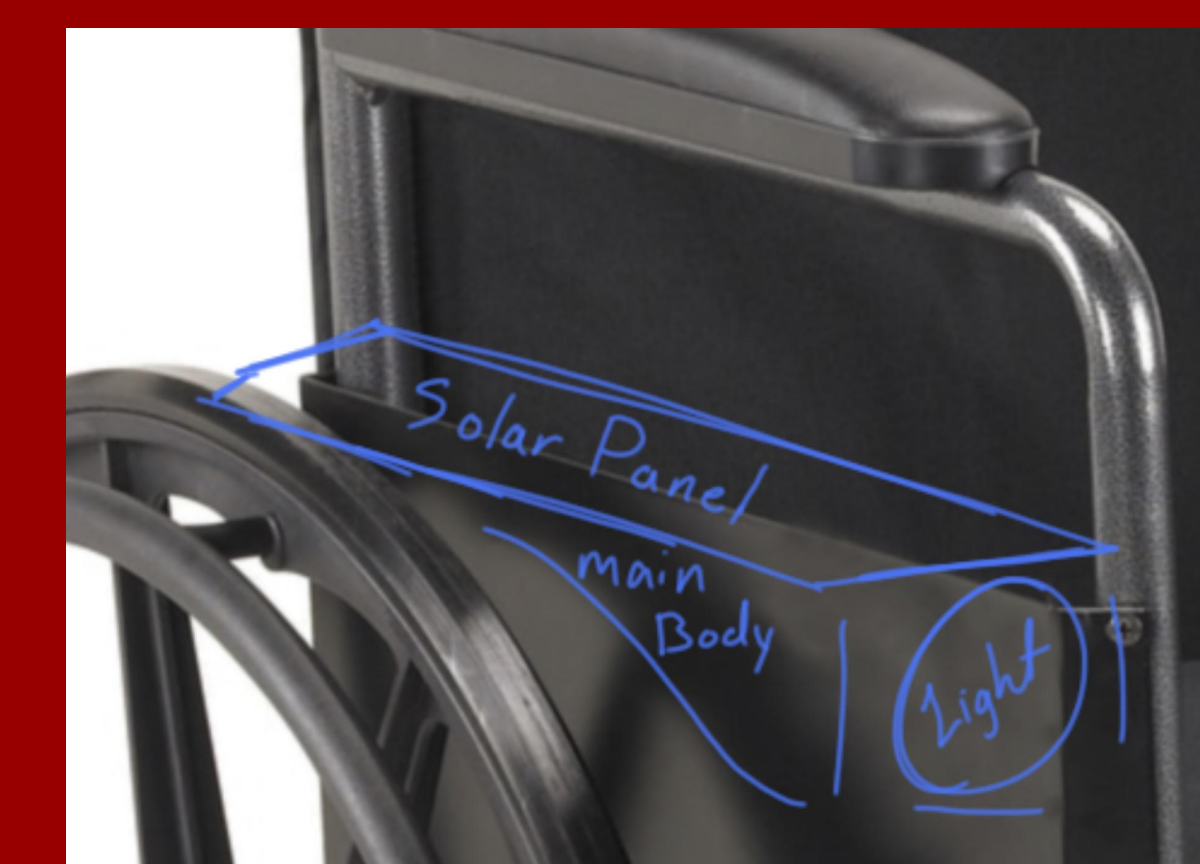
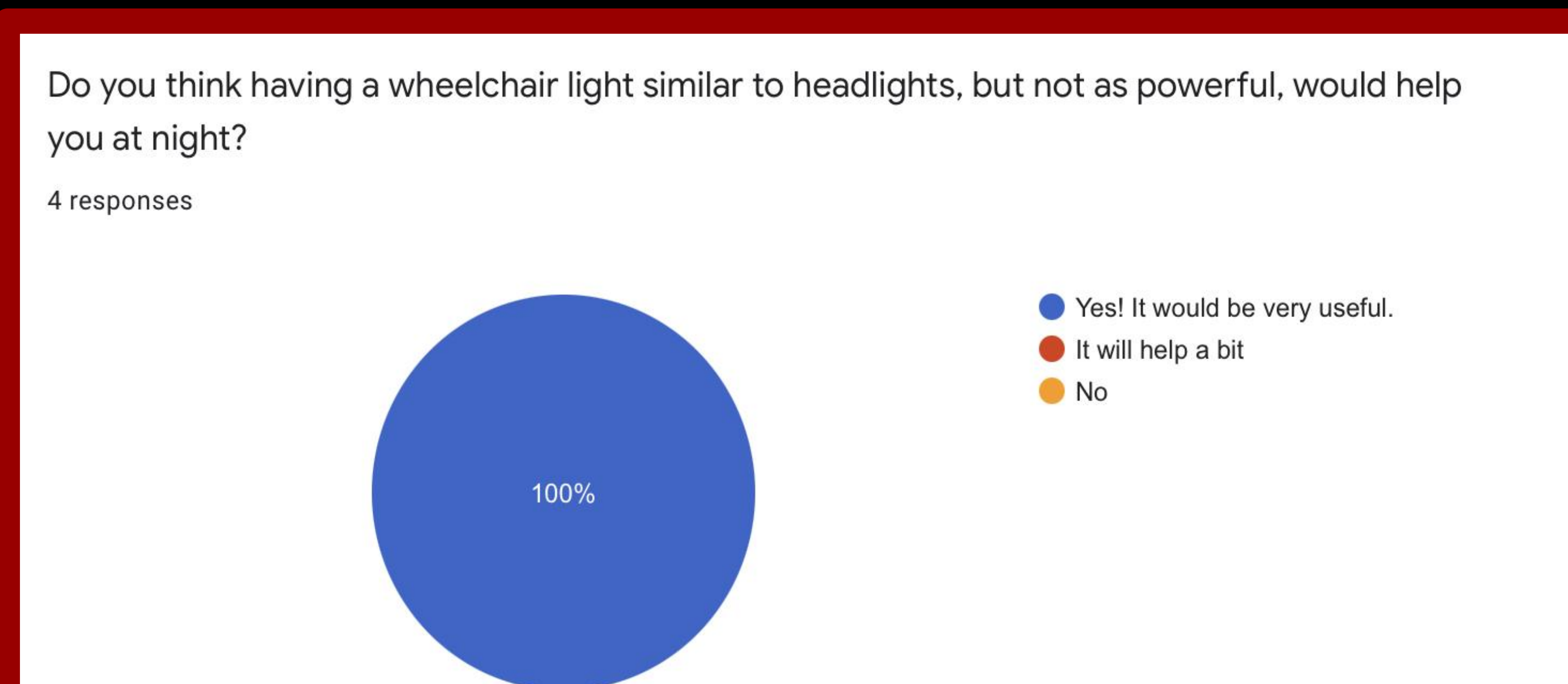
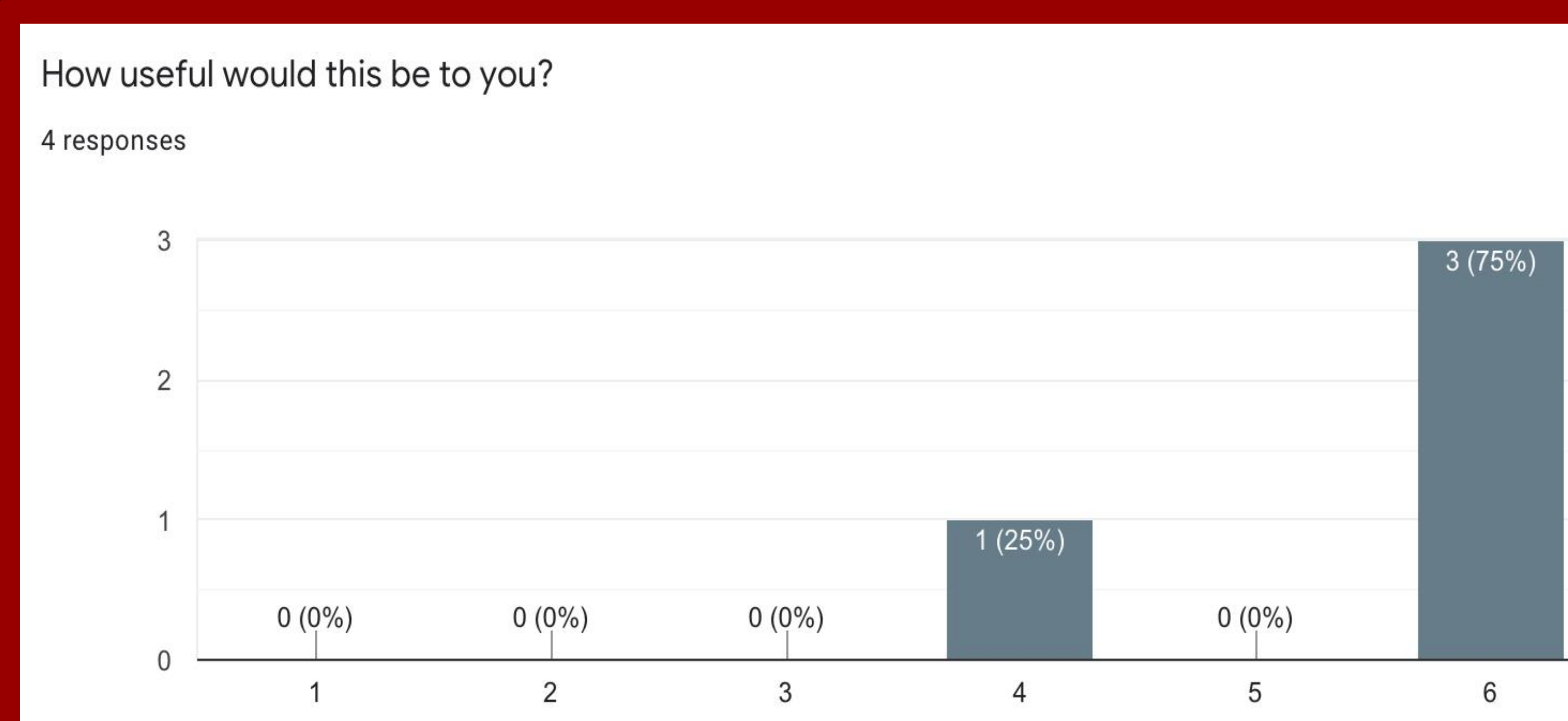
User Needs

- Easy access and charging
- Different light levels
- Able to be attached to a variety of wheelchairs



Clips on the side of the wheelchair, not in the way of anything

- Remote control
 - Clips on armrest for easy access
- Solar Panel
 - Charges light throughout the day
- Headlight
 - Angled towards the ground to show any obstacles



This was our first sketch. We were mainly deciding the shape and the basic idea of the product.

After the basic sketch, we made the shape of the product and changed from the circular light to a rectangle, since it would light up more of the user's path. We also added the remote since it would make using the product easier.

Testing Process

Since we are unable to make a physical prototype and test it, we mainly tested what code we had. It involves running the code every time we add or change a component.

Results

Our product would be controlled by the remote that can be held or clipped on the armrest. It would help users see the ground in the dark to help avoid obstacles.

Conclusion

Overall, our product meets the requirements of being easy use, accessible and charge. If we were to continue, we would build a prototype and continue looking into how we can improve the design to be usable by people with different wheelchairs.