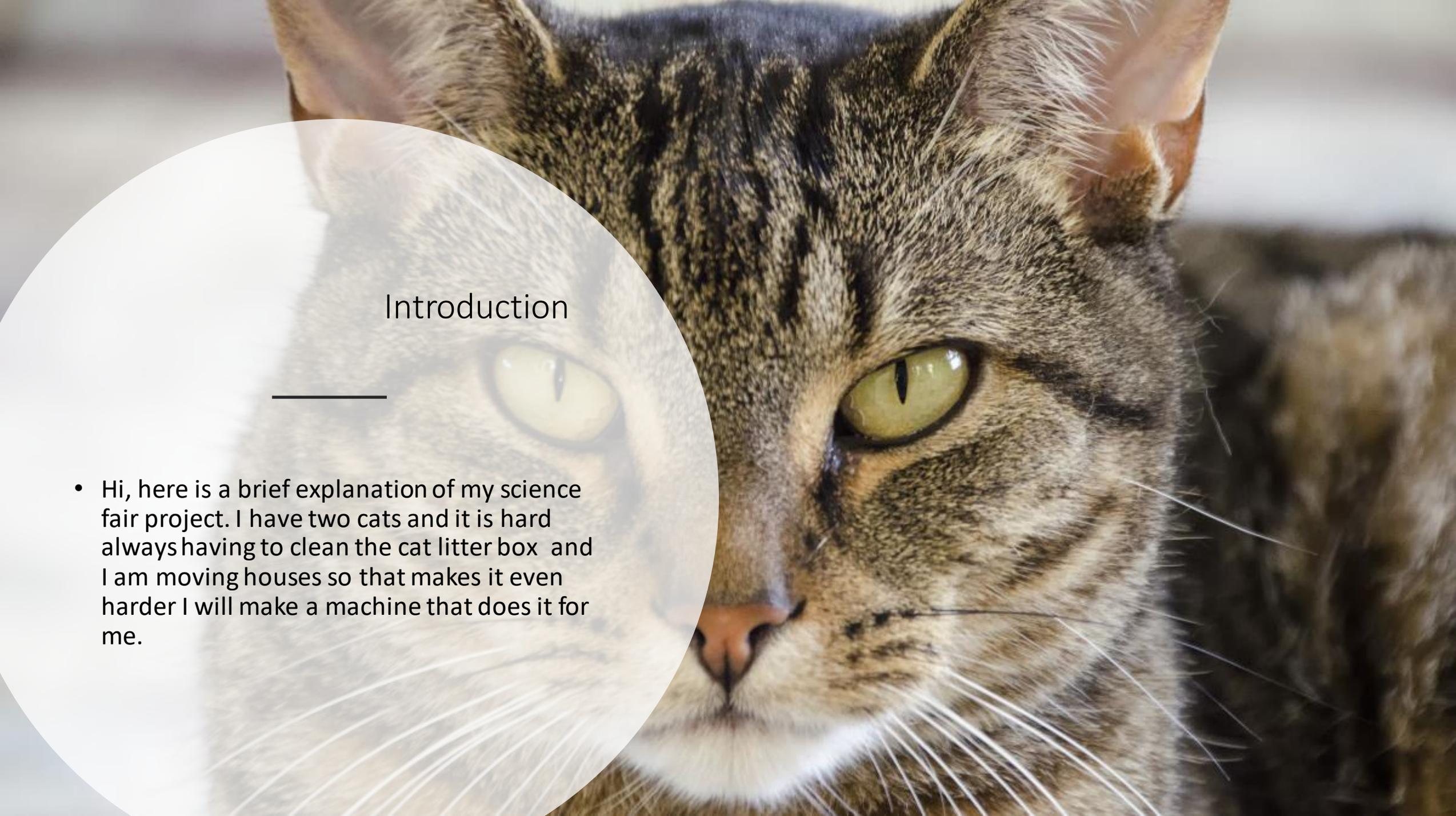


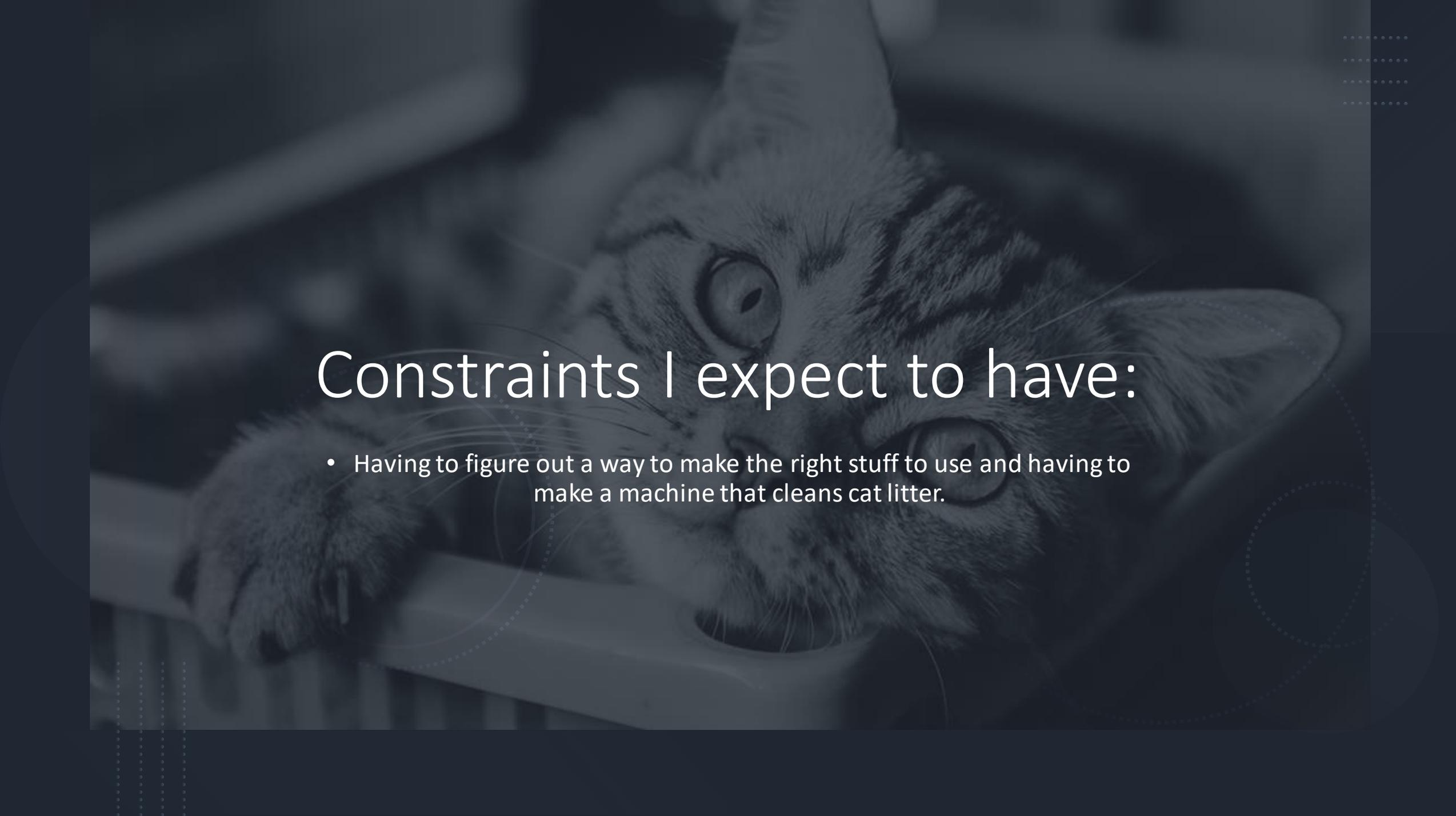
The Quicker Litter Cleaner

My project is to make a machine that cleans my cat litter by it's self, and all of it runs with a flick of a switch



Introduction

- Hi, here is a brief explanation of my science fair project. I have two cats and it is hard always having to clean the cat litter box and I am moving houses so that makes it even harder I will make a machine that does it for me.



Constraints I expect to have:

- Having to figure out a way to make the right stuff to use and having to make a machine that cleans cat litter.

Background research:

- A small pulley can lift up to 125lb. The amount of cat litter a smaller cat needs is about 7lb per week or 28lb a month. One pulley makes the weight of cat litter(7lb) and makes that weight feel like a quarter of that which is about 1.75lb. A plastic cat litter box is 3lb, so 7lb plus 3lb is 10lb, and a quarter of that is 2.5lb of pull power steel string for the pulley can lift 160lb. My DC motor runs with 12v, so 2 of my 9v battery's is too much because this will cause too much current to flow, and in turn, burn out the motor. If the motor is rated 12v it should get at most 10% more of what it's rated or 13.2v. One 9v battery plus 3 1.5v batteries are okay.

List materials:

- * Sieve
- *litter box
- *pulley
- *steel string
- *clip
- *Cardboard
- * small pull



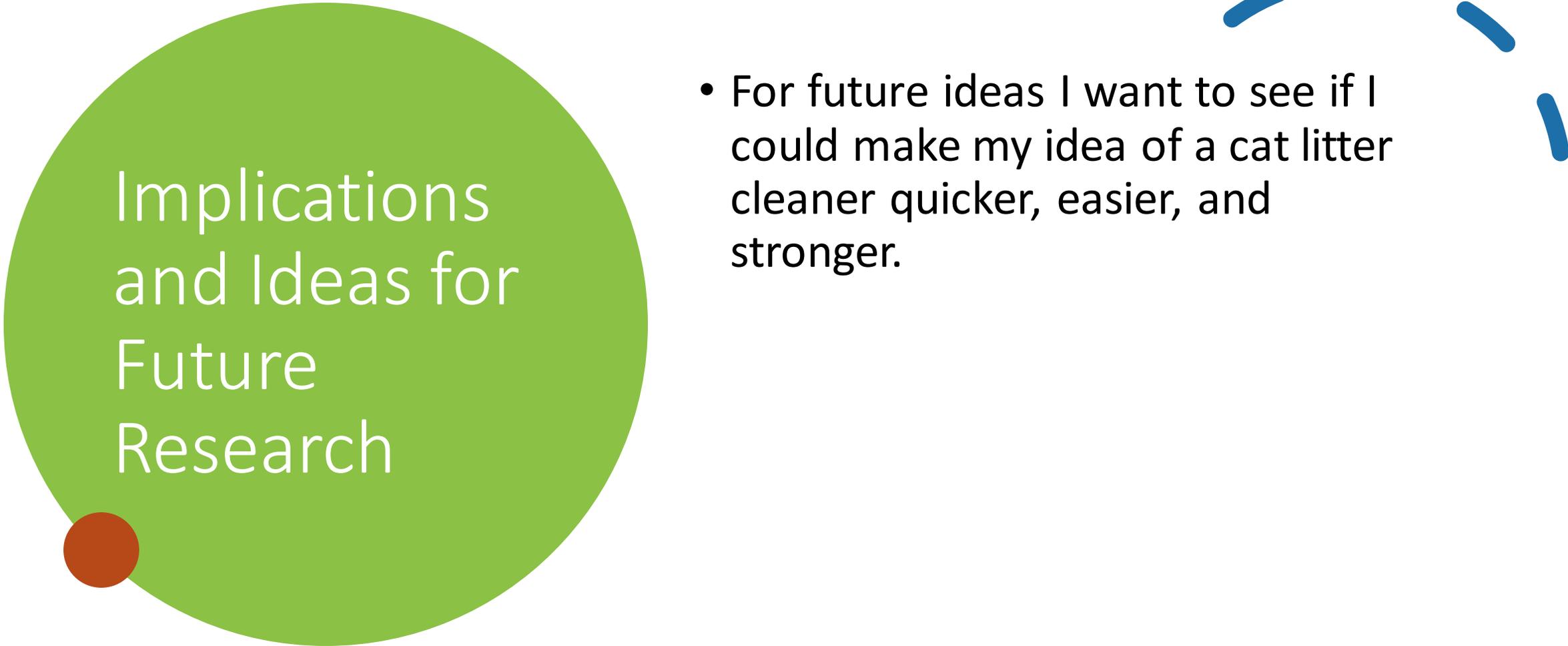
Written description of my prototype

- My prototype is basically a machine that starts with a switch and when you turn it on it turns on a motor connected to a battery. The motor will pull a string connected to a pulley. Which will reduce the weight by a quarter. The string will connect to a sieve which will be under the litter in the cat litter box so when the motor lifts the sieve it will drop the sand and leave the other stuff. To put the sieve back in there is a hole at the bottom of the cat litter box to put it in.



Test/Analyze/Redesign:

- The wire I used for my science fair project did not work because, the wire was too thick to rap around the motor, so I got a thinner, but still strong string. Everything worked for the most part though.



Implications and Ideas for Future Research

- For future ideas I want to see if I could make my idea of a cat litter cleaner quicker, easier, and stronger.