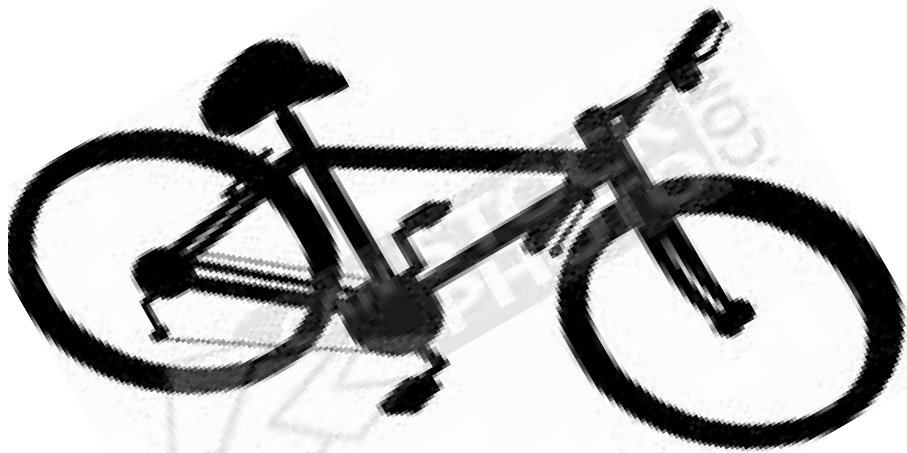


Design Task: Bicycle Light

By: Kathy, Julija, Kasper, Daniel,
and Hakim

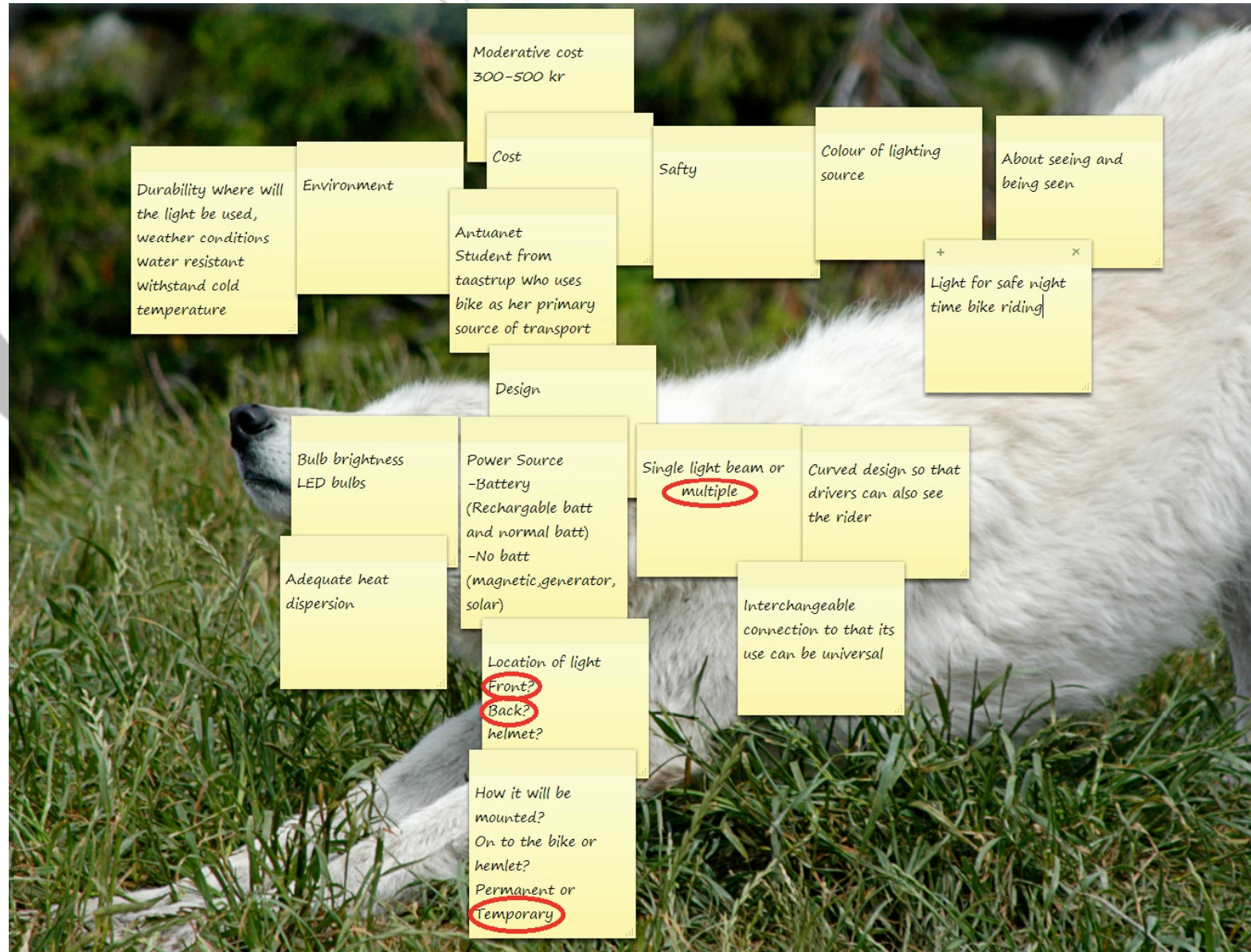


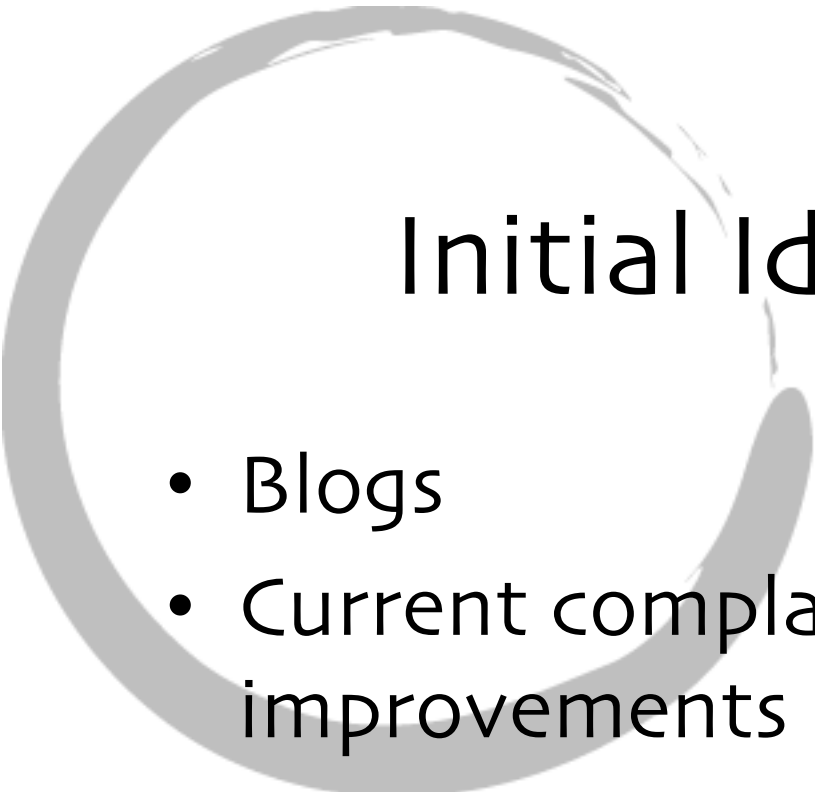
User Persona- Antuanet

- 23 year old female
- Lives in Taastrup
- A Theatre Student
- Her bike is her primary source of transportation
- Goes to grandmothers house in Albertslund to cook dinner
- Student job: house keeper (3,000 kr/month)
- Likes going to Copenhagen to party with her friends
- A fashionista who loves clothes and the finer things in life



Initial Ideas: Mind-mapping





Initial Ideas- Research

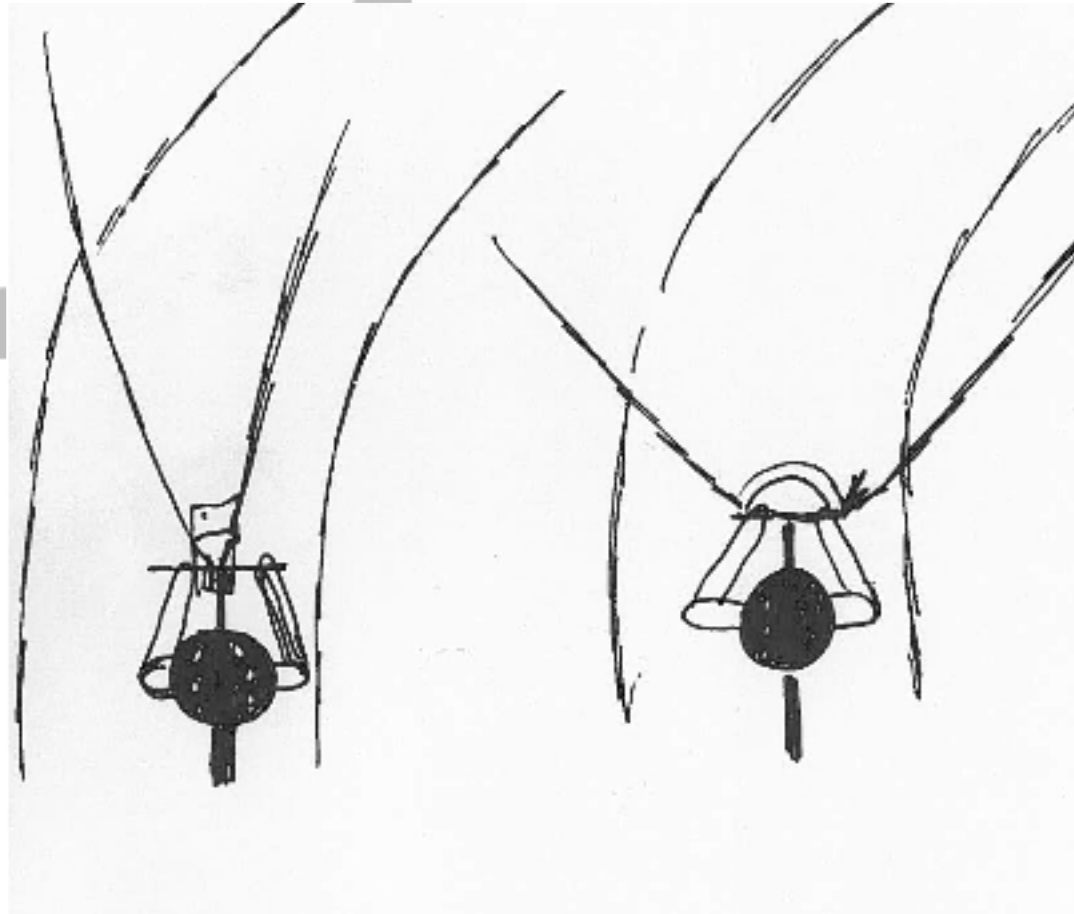
- Blogs
- Current complaints/desired improvements
- Light coverage
- General prices
- General uses

The Legal Requirements

- A red light on the rear of your bike - that is either steady or flashing.
- A bright white light on the front of your bicycle - that is either steady or flashing.
- Both the headlight and rearlight must be visible from a minimum of 200 meters.
- They should also be visible 50 meters from the side.
- A rear red reflector - that is visible from 50 meters when a low beam headlight is shone at it.
- Pedal reflectors, and Side-rim or Wheel reflectors.

The Concept

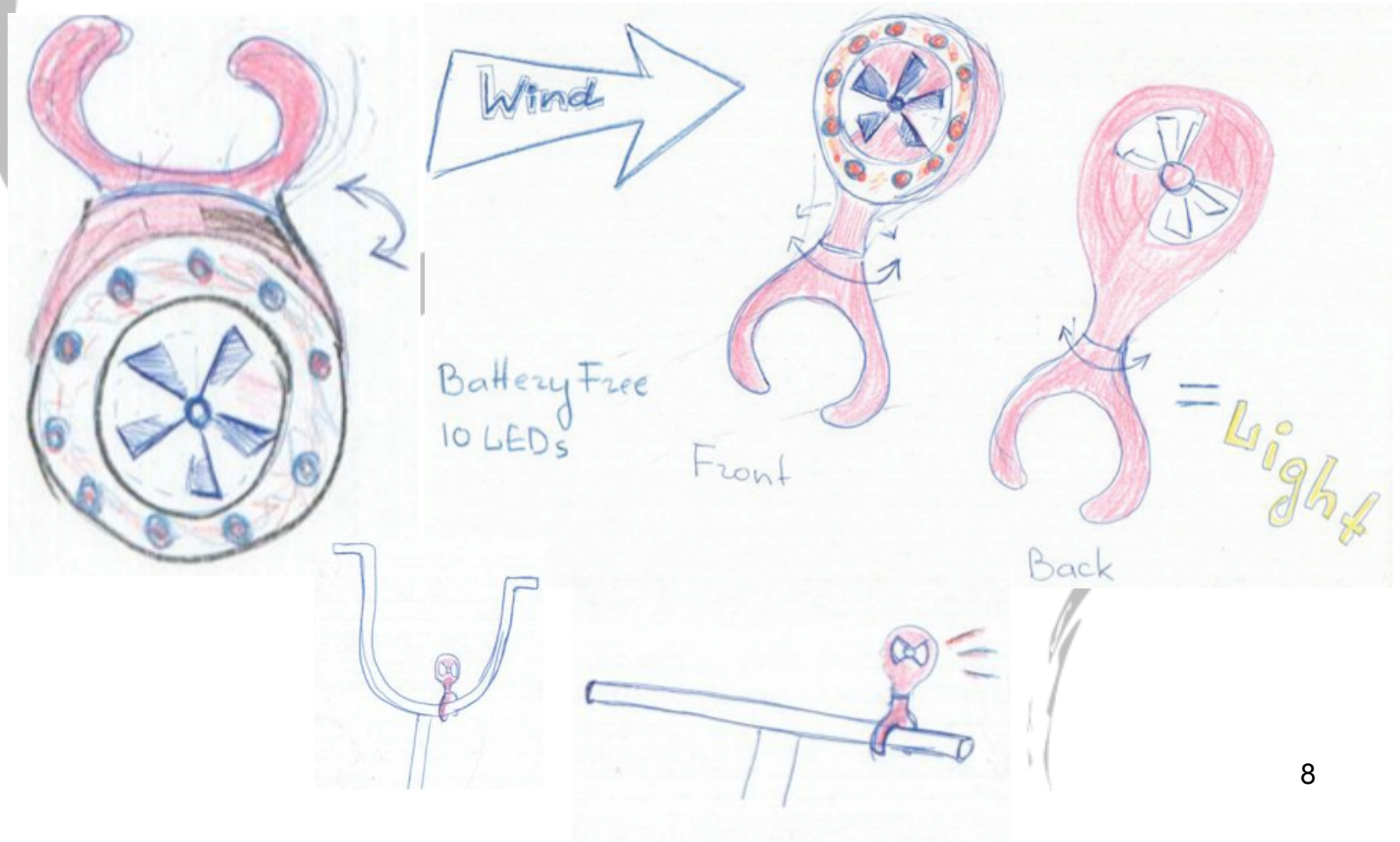
"To See and Be Seen"

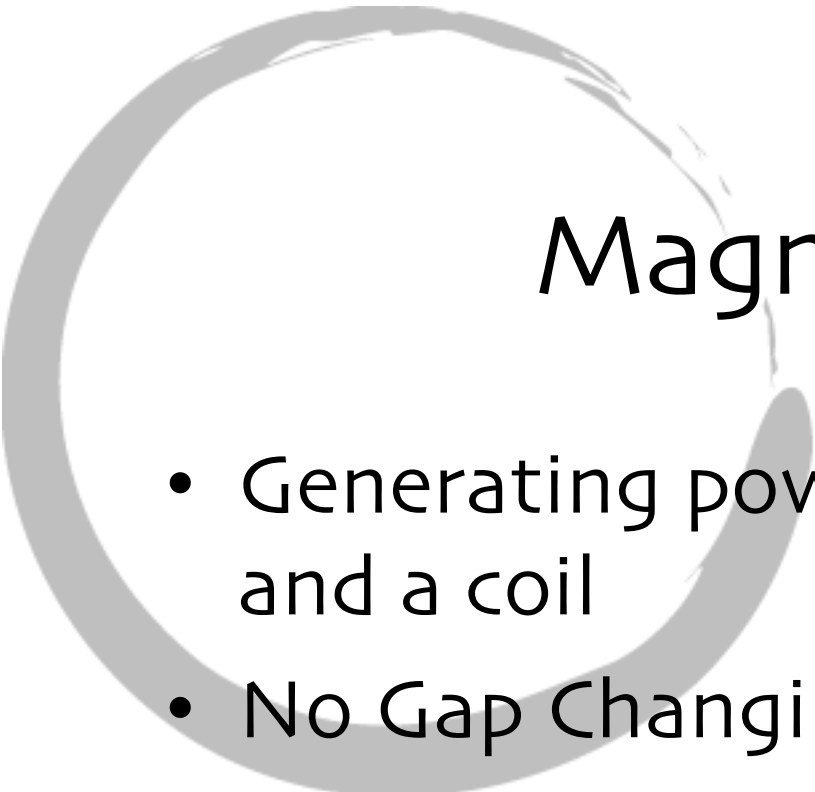


Wind Power

- Operates by a mini turbine
- Power a 1700 lux LED light
- A bicycle traveling at 13 mph will produce continuous power of 3.5 volts at 70mA
- Rechargeable lithium battery

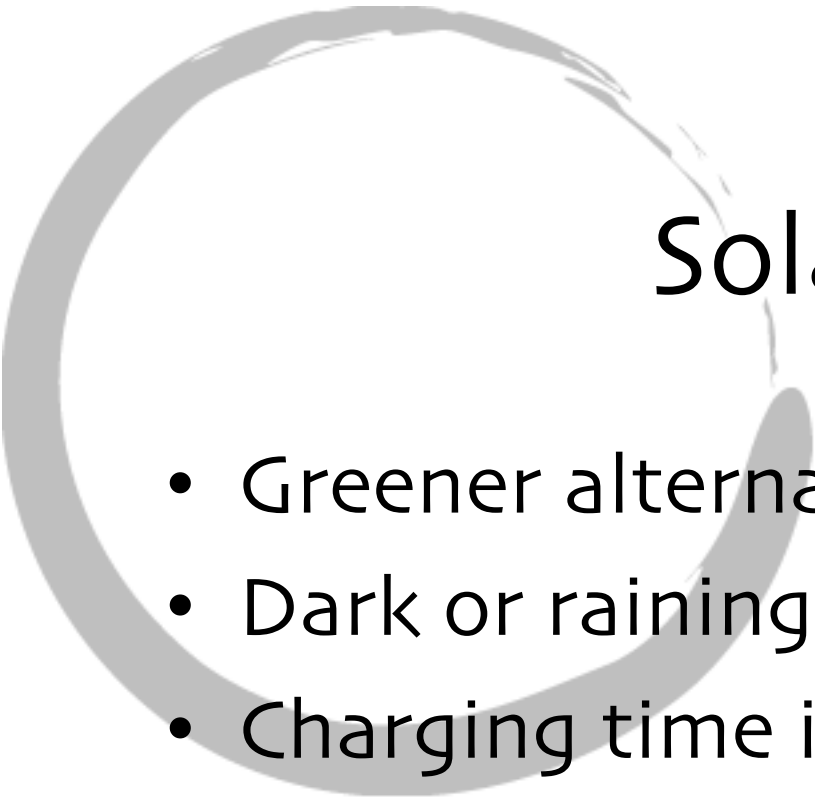
Wind Power





Magnetic Power

- Generating power with two magnets and a coil
- No Gap Changing
- No need to disconnect



Solar Power

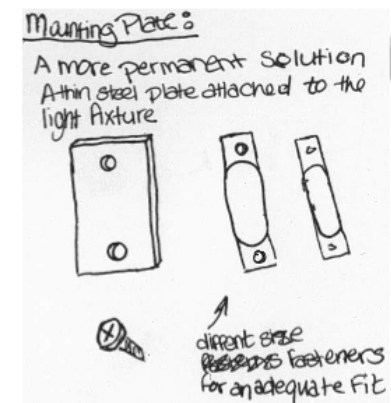
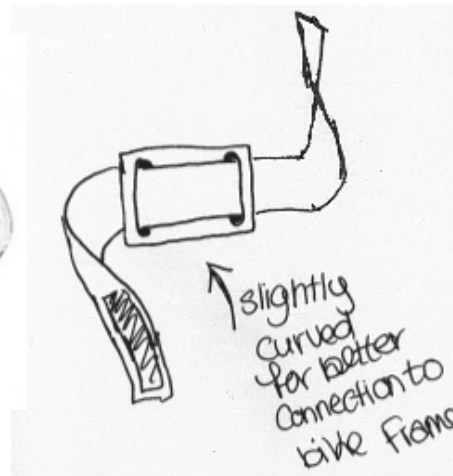
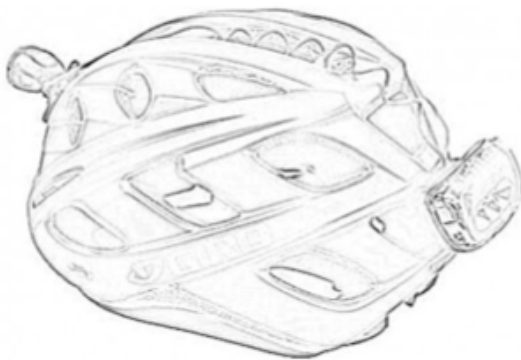
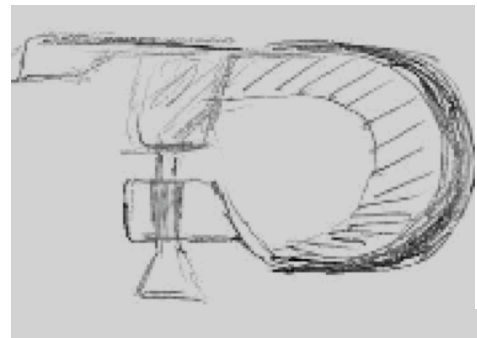
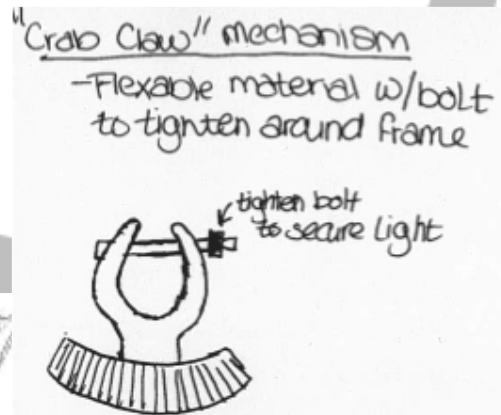
- Greener alternative power source
- Dark or raining days, may lose power
- Charging time is a factor

Battery Power

- Rechargeable
 - Standard batteries and environmental impact
- Internal or Removable Battery?
 - Daily inconvenience of replacing light
 - Risk of being stolen
 - Use both standard and reusable batteries

Connection Option

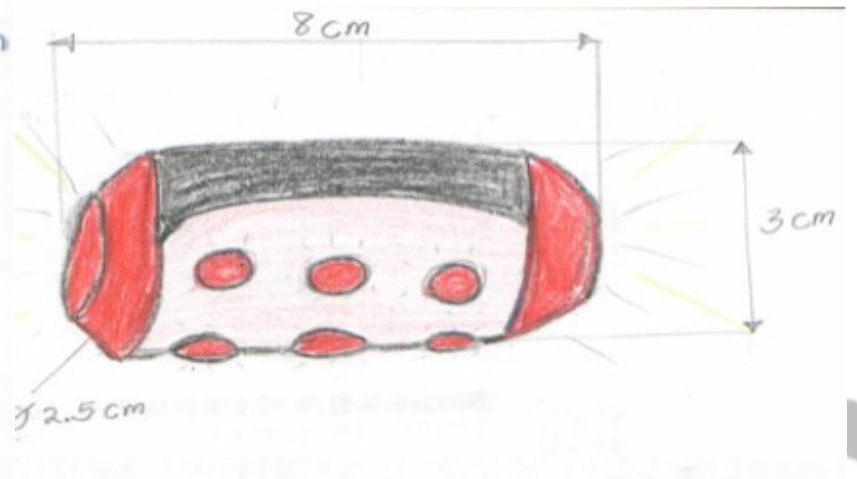
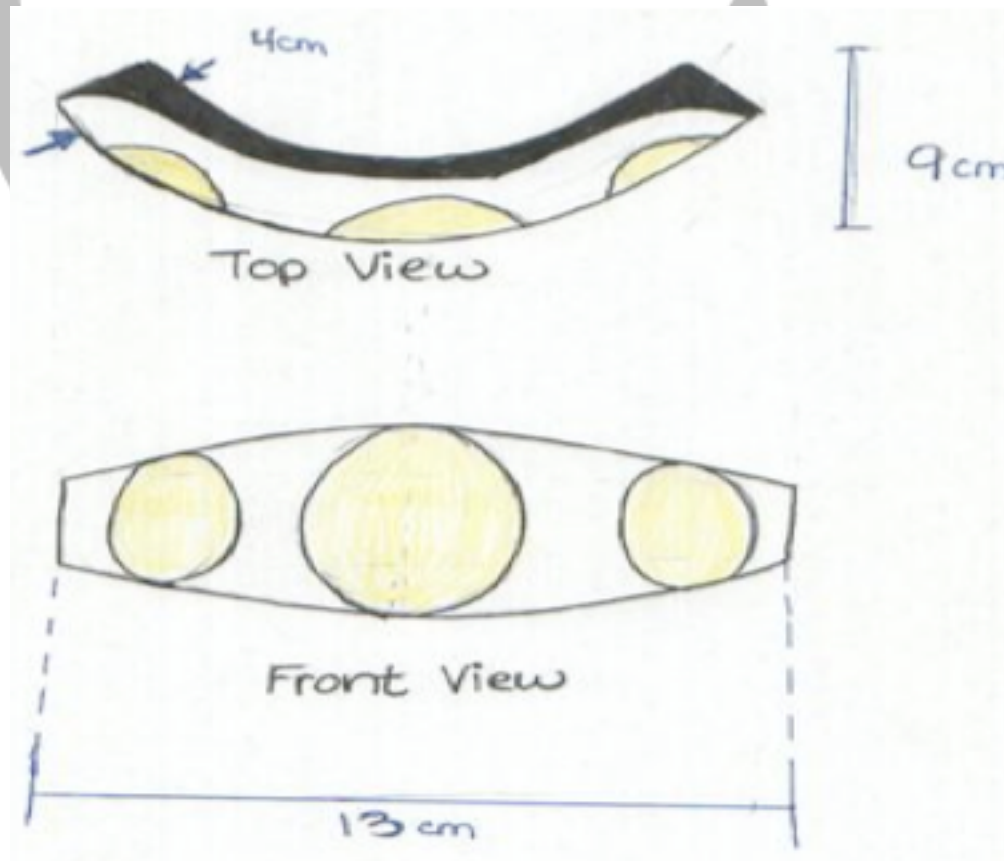
- Universal Appeal
- Permanent vs. Temporary



Illumination Options

- Selected LED's
 - Low maintenance
 - Energy Efficient
- Approximately 400 lumens
 - Most recommended
 - Visible at approx. 200 meters
 - Calculations proved it to be twilight on a clear night

Finalized Concept



Marketing: Competitive Strategy

- Cost leadership
- Production: China
- Company: Sunding Electronic (H.K.) CO.,LTD
 - The company exist since 1998 and has 300 employees.
 - Specialized in producing small home electronic products.
 - mainly manufactures bicycle computer, bicycle light, flash light, spy ear, and switch controller.
 - They have professional **research engineers** and **machine to design models**.

Fin

