

9/14/12

B9 Plastics

Interviewing: Bob Bechold, Kate Chamberlain (PM) – contact information from Vince (may be on PRP)

Company Information:

- B9 is a sister company to Harbec
- Currently BWM has an estimated 100 units in 16-18 developing countries around the world
- In the final stage of field-testing to:
 - Find out if there are any weak links
 - Case studies, to build credibility
 - Going into a major build
 - Cost is a major factor
- Idea came from the bicycle
 - Not happening in 3rd world country
- Women and girls are the ones who purify and deal with water
 - They are the customer
- The BWM started out as generating power through pedaling
 - Women in developing in countries (in Africa) are not allowed to pedal
 - For this reason, they made it into a hand generating device
- Before being sent out to developing countries, it was always tested on men
 - When they went to the developing countries, the women said that they could not do it.
 - Solved the mistake by giving them 2 generators and Y wide plug
 - Now children can do it
 - Worked well but it doubles the price
- Students from last year made good calculations about momentum
- Need to spin it 80-90 rpm
- It has to be 50-60 rpm
- By doing it faster does not make a difference

- Timed to a specifically because it kills bacteria
 - Cleans itself for the first 10 seconds
- Stepping, pedaling and play are all possible ways of generating power
- Must carry water on their head – do not let them use their hands will not be accepted
 - Current design uses a backpack and trailer (Stores energy)
 - One hour of walking created 40 min of running water
- Number of charging options
 - ALWAYS 12 VOLT
- Play pumps → Took a trailer to Ghana, kids made the trailer as a toy the kids kept going back and forth running around with it. Started to charge the trailer. Plugged into the trailer to let the water to keep running.
- Peru → Kids took the rope and made a swing. Kids have pent up energy that could be used to produce energy.
- Currently, selling water pump and the generator for \$150. The UV light bulb is the perishable – lasts about 6000-8000 hours –150,000 gallons water. 1/10th of a cent per gallon. Strands of pathogenic E-coli causes the highest rate of infant mortality. Turbidity almost killed the project because it did not take that out. Turbidity in the water did not take out the e-coli. Bacteria grow faster in other countries because of humidity. Decrease turbidity
- Country has a large resource of charcoal
- Are there any general guidelines? Safety, health, cultural?
 - No guidelines exclusively for women and children
- Are there any human power generators beyond bicycling?
 - Don't know, do research on any other cultural restrictions
- Make something that incorporates play and that women can do also
 - Adults should have fun too
- LED's have a very long shelf size, but cannot sustain 254 CC.
 - Sarah Brownell: The current LED's that do have 254 CC are very expensive and are used in the military

- Before using the BMW, they filter through a cloth
 - People use shirts or flour sacks
- Shipping logistics is very hard due to the corruption in developing countries
- Currently, use a DC motor -\$4 dollars apiece
 - Various motors perform differently
- A possible idea is the Pull cord idea
 - Place pull on a tree or something tall and use the weight of your body and constantly pull. More powerful way to generate the water.
 - Teeter totter, swinging, and etc. always keep in mind cost.
- Kate from B9 will provide files of exploded views of parts.