

BIX: Test

Matthew Guo, Sarah Dang, Eric Luong, Qaynaat Oberoi

Group 1

BUS5-16 Section 64: Introduction to Leadership and Innovation

Professor: Dr. Janet Tan

November 14th, 2022

BIX

Throughout this innovation process, feedback from the interviewees remained to be positive, with also bringing awareness to the negatives that need to be worked on. To start off, five different people were interviewed and each gave similar positive feedback, however, there were a variety of negatives.

Positives

From the different interviewees, they were all presented with the same questions (see Figure A.1). Most of them being that this invention is a breath of fresh air, although not a new idea, citizens believe that this invention might have a chance to clean up communities and thus create a better environment for everyone. The interviewees were also pretty adamant on how this idea is good and hope that this product will help keep their areas clean.

Negatives

Despite receiving positive feedback, there were also questions and concerns about this product, BIX, a trash-collecting robot. For example, one of the most common concerns and complaints about BIX was battery life and the structure (see Figure A.3). Through multiple stages of development, BIX's battery life might be a problem because with having a compact design, there would be areas where we need to cut back to make sure everything fits. Though the battery life might not be as long as people want it still would be able to last for 1 week without problems with the battery. It uses an automotive battery, which can last up to three years. The structure for BIX is a common concern for all the interviewee (see Figure A.3). However, with numerous testing, the structure of BIX should be able to withstand about 20-30 lbs without it breaking. Although, everything can't be perfect and many companies can't account for it, there will be compensation, such as a replacement for the robot in exchange for the broken one. This way, there will be an analysis run on the broken one and would help to improve the robot, BIX.

Conclusion

Striving to initiate the interviewees comments and concerns, the BIX robot will undergo further testing to hopefully unveil it to the public soon to help promote a healthier environment. With looking into many of the problems that BIX has, there must be something that can be fixed to make this a better and great product. Feedback from our future customers and community is very important to create a great product and with that feedback, ideas can change and with many changes creates a better product (see Figure A.2, A.3 and A.4).

Appendix A

Figure A.1

Interview Question 1) & Answers

How would you feel participating in beautifying the community with an assistive robot that would help pick up trash for you?

Interviewee #1: I think it would be good for robots to pick up trash. But I feel that people might just throw trash on the ground and have the robot pick it up for them.

Interviewee #2: That would be a good idea... I'd feel like that would help more centralized areas, like the mall centers or marketplaces.

Interviewee #3: It would be good to have a robot pick up trash that people might drop or to clean up the surrounding area

Interviewee #4: I think it would be a good idea, but I have doubts of how effective it would be.

Interviewee #5: I don't know how I would feel about a tiny robot picking up trash because teens or any kids could harass the robot from doing it jobs and it would just be a sitting duck and able to do anything

Figure A.2

Interview Question 2) & Answers

Let's say that you are participating in community service, would you think that this robot would be efficient or would slow down the process?

Interviewee #1: Personally, for me. I think that this robot would slow down the process but could be effective in cleaning trash because I would be able to clean trash up faster, but this robot would be able to do long term. Let's say, 16 hours a day could work, while someone is only willing to do it for 4-8 hours.

Interviewee #2: Growing up I did a lot of community service and know what to do and how everything is organized and I feel like yes it would slow down the process. But it could be useful in how long it could work for.

Interviewee #3: Yes, it would slow down the process, but it could be effective. It all really depends on how big the battery is because if it is small, it won't be able to do much for a long time, if it has a big battery it could for maybe 8-16 hours a day

Interviewee #4: If I was participating... I'd say that your product would probably slow down the process, just because of the limited time... and maybe the robot doesn't work as fast as we do. Plus, there's most likely a large amount of trash that needs to be collected.

Interviewee #5: It depends on how big the robot is and to be honest I wouldn't know until I see how the prototype works.

Figure A.3

Interview Question 3) & Answers

Do you have any concerns with this idea/project?

Interviewee #1: I have a worry about how this robot may not have enough energy to do certain tasks.

Interviewee #2: I worry about the structure of the robot because kids could harass the robot and the robot would be destroyed and ruined.

Interviewee #3: Two worries I have are about the mechanism being unstable and the battery because the design of the robot is good. But with a small frame, i fear there might not be enough juice for the robot to last a long time

Interviewee #4: A worry that every member in my community may have an issue with is the amount of robots cleaning up trash. I fear that if there is a lot of robot cleaning in certain area, it may scare the community.

Interviewee #5: One question that I do have is with the design of the robot and how its structure will stand.

Figure A.4

Interview Question 4) & Answers

(If you agree with our product), what are some ways we could improve?

Interviewee #1: One thing this group could improve on is describing how the elevator and tray mechanism works. I kinda got confused when looking at the drawing and didn't know what it meant

Interviewee #2: Some way this product can be improved is how they present their material because they didn't show where each material goes. They just showcase what the final product will look like

Interviewee #3: What they could improve on is if they plan to sell this invention to the government, they would need to create a document that is easily understandable

Interviewee #4: Growing up, I always wanted a cool robot to pick up trash. It would be a cool invention. Looking at the document, I see nothing that I would change because it is cool

Interviewee #5:

Figure A.5

Interview Question 5) & Answers

Would you buy this product for personal uses or to sponsor a community service?

Interviewee #1: I'm not really sure because I would need to see how it would work.

Interviewee #2: No

Interviewee #3: Yes

Interviewee #4: Yes

Interviewee #5: No