

Electric Bicycle Fruit and Produce Cart



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Abstract:

This project would seek to generate accessibility to fresh fruit and produce to students around campus. There is a lack of distribution and signage for fresh fruit and produce at HSU which leads to the consumption of more packaged and processed foods. In cooperation with the Oh-Snap program, this bicycle produce cart would distribute healthy alternatives with convenience. Additionally, this project will serve as a learning demonstration for electric powered transportation, food justice, community supported agriculture, and appropriate technology.

1. Project Description

This project proposes the idea of a electrical powered food cart that will be able to move around campus to the most trafficked areas. The cart will be equipped with a food safe cold box, rain cover, cleaning utilities, informational signage, and a pedal powered blender. The cart itself will be interactive so that those who engage with it can both learn where there food comes from and pedal blend their own smoothie. The produce cart will be electrified for ease of traversing the campus while demonstrating the benefits of electric transportation. The cart could be operated by a WRAAP, Oh-Snap, or and AS employee.

This project was ideated in an Engineering 305 with fellow classmates Aidan Belleau, Rebecca Hueckel, and Victoria Alvarez-Conn. In this class we created a preliminary design and prototype of this project and tested it on campus as well as documented multiple interviews before and after. The prototype was instantly a point of interest for passing by students, and even more so when offered free fruit and produce. The students interacting with the cart stressed that they would consume healthier foods if it were only available to them and information was provided on where and when that food would be available. Taking this into account, a weekly campus wide email of times and location of the cart would be necessary so that those interested can be informed.



Photo taken by Aidan Belleau.

2. Need Statement

This project has the potential to meet the following goals:

- This project will be developed entirely by students in development teams and hopefully HEIF's Co-directors, with the possibility of some faculty, staff, and community involvement.
- HEIF will require accountability by measuring and reporting quantitative and qualitative results, as well as levels of involvement by students and other participants, in all its projects. The results of this project will be both qualitative and quantitative. Energy comparisons can be made surrounding the energy required transport fruit and produce versus local sourcing and electric bicycle energy usage. There can also be an analysis and comparisons made on the how much fruit and produce is being distributed on campus and diverted from the waste stream. The quality of this project will be determined by the amount of attraction that this unique design for food distribution and waste diversion creates, the amount of student involvement, and the interaction and learning experience that will entail.
- HEIF will strive to make its projects derive from and be connected to the curriculum of the university. HSU's environmental studies program has been of great asset to the University that help gather the attention of many students through its interdisciplinary approach. This project can bring in students from various disciplines such as engineering, economics, sociology, environmental science, and environmental studies.
- HEIF will support dissemination of information about its projects through public outreach and educational activities. This project will not only be a part of educational opportunities for HSU students the CSU system as a whole to create healthy food accessibility, minimize waste, and utilize electrical transportation. The implementation and success of this project will be publicized with the public and any associated programs through various media sources such as the Lumberjack, clubs, organizations' newsletter, North Coast Journal, etc.

3. Outcome

Benefits of this project, as included above, are in alignment with HEIF's goals and missions, and advancement of Humboldt State's goal of sustainability- decreased importation and production of energy intensive food, access to healthy food options, waste stream reduction that is crucial to reducing environmental impact, and the demonstration of a unique appropriate technology. Student learning outcomes include hands-on experience in appropriate technology, product sourcing, and presenting data during development and implementation process.

4. Partners

There are several campus organizations, faculty, staff, and community organizations that have high potential to support this project. Oh-Snap is in the position to distribute fresh fruit and produce for free as it is a federally funded aid program. After interviewing a high representative from WRAAP, there is great excitement to collaborate, and plenty of produce that currently goes to waste.

WRAAP also facilitates the bicycle learning center, compost earth tub, and educational branches that would align with the ideas of this project. Possible faculty resources include Lonny Graffman from the Engineering department. Potential student partners could come from three programs: Environmental Resource Engineering, Environmental Studies, and Economics. Local community supported agriculture farms could be incorporated as a supply source.

5. Appendix

This project was a collaborative idea formed by Aidan Belleau, Rebecca Hueckel, and Victoria Alvarez-Conn, and myself upon contemplation of the food crisis that HSU students may encounter.

