

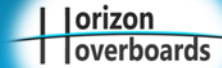


Development of Consumer-Grade Levitating Hoverboards

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Project Scope

The objective of the project is to create an inexpensive hoverboard that can be used for recreational purposes and targets a wide market of people. This board will use air as levitating medium.

Background

The concept of a levitating hoverboard comes from the original model of existing hovercrafts. A hovercraft is a medium of mobility that is sustained on a pad of air that is provided by a powered fan which is placed on the craft.

Entrepreneurial Aspects

Product Name: Horizon Hoverboards

Tag Line: "Let Us Lift You"

InNOLEvation Challenge:

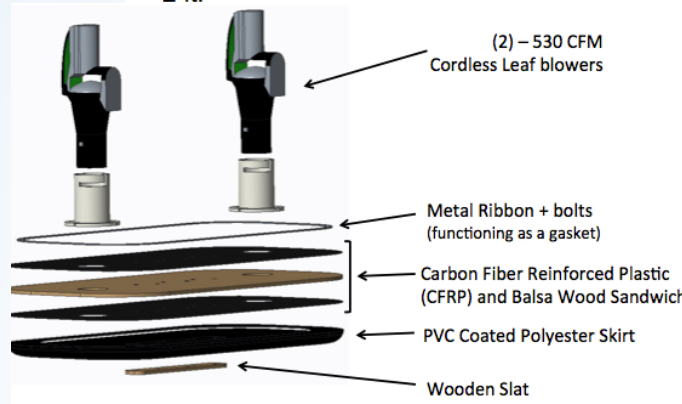
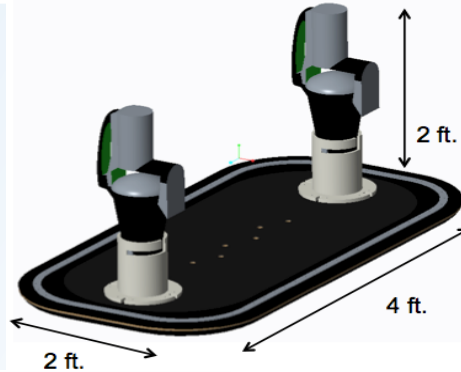
- FSU Business Model Competition with a focus on identifying problems and potential solutions, and precisely defining the assumptions of a new venture, testing those assumptions in the field, and then pivoting based on the lessons learned.

- Team made it to the semi-finals (top 13)

Shark Tank Competition:

- FAMU-FSU College of Engineering Business pitch competition among 7 technology-based commercial venture ideas.
- Team made it to the finals on April 13th, 2017.

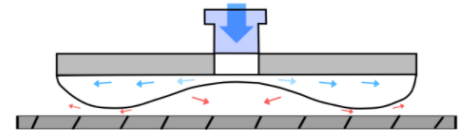
Design



Components

- Board:
 - 2' X 4' X 1" CFRP + Balsa Wood Sandwich
 - Custom Rubber O-ring Gasket
- 5' X 7' PVC plastic bag skirt
- Two 530 CFM Cordless Rechargeable Electric Leaf Blower for Lift

Methodology



1. Blower thrusts air into the board's skirt.
2. Light Blue Arrows:
 - Shows the direction in which the air enters and distributes along the skirt.
3. Red Arrows:
 - Displays the way in which pressured air is escaping through small holes located at the center bottom of the board. Air's only way to escape is by lifting the board, which creates the air gap for hovering.

Conclusion

Horizon Hoverboards has successfully designed a hoverboard that is functional, relatively inexpensive, aesthetically pleasing, and durable as well. Though from our tests, we would have to change our focus to children under 100 lbs as the key market.

As a business, we plan to further our exploration in the hoverboard field in order to find the best performing materials and components so our customers enjoy a fun and exciting ride.

We consider this project a success:

- Functional Design
- Significantly under budget
- Met customer needs