

SPONSOR:

Ron Hilton

Handheld Electric Duster with Internal Vacuum

Ron Hilton is the founder of VacDuster and the sponsor of our project. His son, Nathan Hilton, is the CEO of the company and our liaison for this project. Ron and Nathan are entrepreneurs who believe they have found the solution to one of the greatest problems in the cleaning industry, namely dust. The most common dusting products include, small hand held vacuums for desks and other small surfaces, dry dusters with replaceable brushes, or a simple wetted rag. The real issue with these dusting products is that they tend to wipe dust to other surfaces or they aren't large enough to clean effectively. The Hiltons realized that there is no all-inclusive product on the market.



The VacDuster shown here is demonstrating its effectiveness in cleaning a typical wooden surface found in a home.

The VacDuster is the solution to this age-old problem. Our product is a handheld duster, with a circular rotating bristle, and an internal vacuum. The bristle is made of microfiber, making it soft enough to dust any household surface and the inward rotating action insures dust is entering the system. Then the vacuum component sucks the dust up into the receptacle so it is contained rather than wiped to another surface.

Mr. Hilton came to Capstone with a patented concept and a desire to solve the dust problem. With his guidance, we were able to create a product that falls under the protection of his patent and performs at a level to make it competitive in the market. Moving forward Mr. Hilton is now in a position to take our design immediately to manufacturers or use our prototype to gather venture funds.

YEAR

2016-17

TEAM

26: Aero

COACH

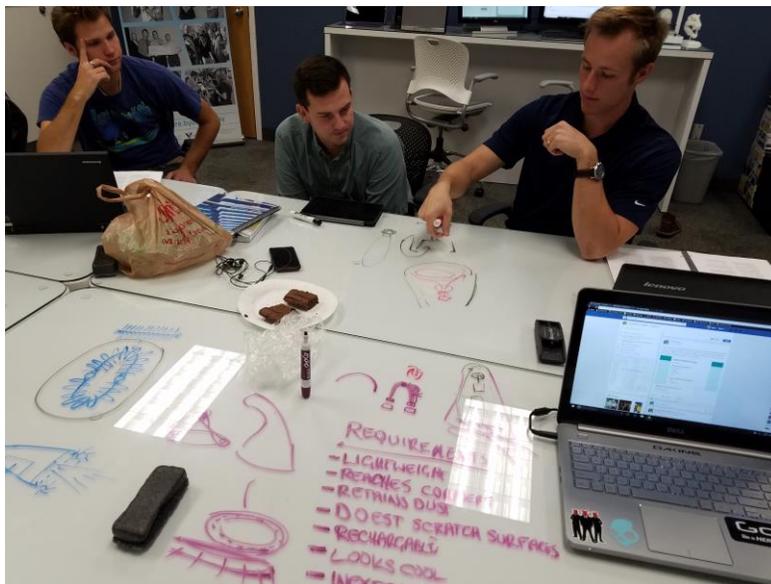
Dorothy Taylor

STUDENTS

Ryan Romero, Preston Emerson, Jacob Olson, Willie Atkin, Devin Needs



The design team from left to right: Dorothy Taylor, Preston Emerson, Ryan Romero, Devin Needs, Jacob Olson, Willie Atkin. Each is holding various components including: a prototype bristle, performance prototype, benchmark hand vacuum, printed prototype, and bristle samples.



Early in the design process, the team considered many different concepts to meet the market requirements. These concepts were then brought together within the constraints set by the sponsor.