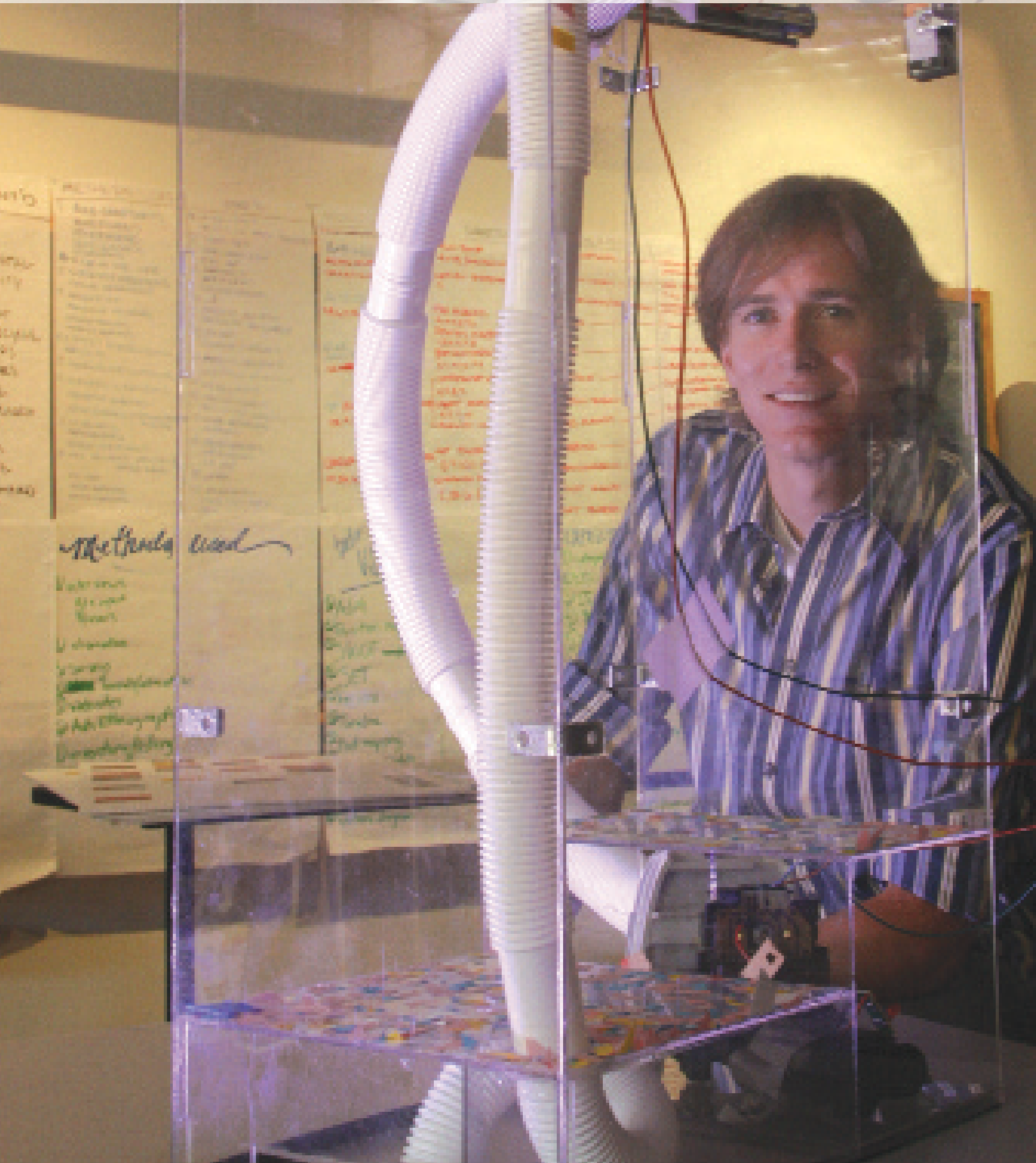


Baby boomers, a catalyst for student innovation

By Nicole Romanoff



“The experience was about the innovation and creativity fostered by bringing together four disciplines.”

Entering into the design and development laboratory of ASU's InnovationSpace are top undergraduate students in engineering, business, industrial design and graphic design. Coming out of InnovationSpace are bold ideas, innovative products and students with broader minds and new perspectives.

Mechanical engineering senior David Vanderiet is one of those students.

After semesters of core engineering classes, David craved a change from familiar faces and familiar curriculum. With a collaborative blend of students and professors from four disciplines, InnovationSpace brought the exposure to different people and perspectives that he was looking for.

The InnovationSpace concept uses interdisciplinary collaboration to create new products for possible introduction into the marketplace. With the support of professors and graduate students, the mixed-major teams research and create business plans, product designs, brand identities and working prototypes of products aimed to fulfill significant social needs while minimizing impacts on the environment.

“For engineers, the InnovationSpace experience takes them away from typical textbook problems and gives them experience with a true open-ended problem,” explains Mark Henderson, Department of Engineering professor at the Polytechnic campus and co-founder of InnovationSpace. “This is good practice in being able to give structure to vague problems and create a successful product.”

David was accepted into the intensive two-semester course and paired with students from the three other disciplines. Despite different backgrounds, he says the group meshed well.

Their objective was to develop a product to benefit America's aging baby boomers. As part of the research, the team began interviewing potential consumers – examining their daily tasks, problems and

views of the consumer market. Following an in-depth analysis of the existing market, David says the group generated as many “crazy ideas” as it could.

“The process was really fun, but frustrating at times,” says David. “We began with such broad research, which allowed for more ideas, but also more dead ends and wrong turns. It was a learning experience.”

After exhaustive research and brainstorming, the group devised Optio Waste-Management System. The space-age waste bin offers a convenient hands-free lid with infrared sensor. A built-in vacuum allows users to sweep dirt in front, where it is sucked into the main bin without bending or hassling with dustpans, filters or bags. Optio also opens in front to reveal an easily removed slide-out bin with a handle and wheels to eliminate heavy lifting for boomers with back problems or arthritic fingers.

Members of the Optio team approached the problem of waste management based on their individual area of expertise. The designs developed by the team addressed technical viability, user-friendliness, production feasibility and marketability. As the group's engineer, David devised the functional prototype with moving lid and vacuum. The designs were showcased in a public exhibition at the end of the 2006 spring semester.

“The experience was more than the end product,” David says. “It was about the innovation and creativity fostered by bringing together four disciplines.”

The interdisciplinary experience taught him to see beyond product function and opened his eyes to the different applications and career opportunities of mechanical engineering. After graduation this December, David plans to continue the innovative path with a career in product design and development.

Interested in partnering? InnovationSpace collaborates with corporations, entrepreneurs and university researchers to develop product concepts that meet the demands of the market while improving society and minimizing impacts on the environment.

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◀ Mechanical engineering student David Vanderiet is seen here with a functional prototype of the Optio Waste-Management System he developed with a transdisciplinary team of students at InnovationSpace.