Industrial design grad Raphael Hyde brings good design to the assistive device market

Shortly after graduation in May 2011, InnovationSpace industrial designer Raphael Hyde landed a job in a Silicon Valley company that develops “stylish, functional, compact, portable and, most of all, cost-effective products,” he says. Apple? No, but a company that is just as ambitious about transforming the marketplace through beautiful, user-centered design.

Meet 6dot Innovations, Hyde says, a Palo Alto startup with a goal to revolutionize the products that help people with disabilities live independent, fully functional lives.

Hyde points out that assistive devices, especially products for people with visual impairments, have been slow to incorporate new materials and technologies or take advantage of strides in ergonomics. Design-conscious companies like 6dot, he says, have “a chance to make a big value-added change,” he says.

And Hyde hopes to be on the forefront of that change. He joined the company just as it was finalizing the design of its first product—a device that allows users to imprint braille lettering onto plastic labels. For people with visual impairments, such labels are the essential navigational aids of daily life, enabling them, say, to distinguish a blue shirt from a red one, blood pressure medication from vitamins, a light switch on a microwave oven from a timer.

But until the 6dot label maker came on the market, users were forced to operate a device which Hyde says resembles a clunky, cast-iron typewriter from the 1940s. Taking its redesign cues from interviews with many users, the new 6dot solution features a molded plastic chassis that is ten times lighter than its competitor, enabling the device to be easily stowed in a backpack or large purse. Smooth, rounded edges and an ergonomic keyboard give users a stable and comfortable work platform. A USB port connects the labeler to a computer, extending its versatility so that sighted users such as teachers, physicians, pharmacists and grocery store personnel, for example, can print labels in multiple languages. And the crisp white and green colors lend the device a stylish, contemporary flair. Blind users may not be able to see these colors, Hyde points out, but their research shows that people with visual impairments are just as concerned as sighted individuals that their personal objects make a favorable impression on the people around them.

Because 6dot Innovations is a small start-up, Hyde found that he had to be prepared to hit the ground running and to wear many different hats. His duties have included not just design and engineering but also operations, manufacturing, assembly, marketing and sales. It’s the kind of multitasking that InnovationSpace’s transdisciplinary teamwork has prepared him for. “When you design something in InnovationSpace, you’re always asking, Are we going to be able to sell this? Is it manufacturable? Is this something we can scale or distribute? Is this something that
people from all different demographics are going to like? InnovationSpace gives you a very good top-down view of the process. You're always thinking, we're not just developing this amazing product but we're developing something that has to be sold, maintained, repaired or maybe refurbished. Those concerns are really important because in running a business, if you don't organize the company in a way where all of the parts work together, nothing's going to come together in the end.”