**Enabling by design**

They like to travel the world and putter in the back-yard garden. They also are adept at whipping up a perfect soufflé after working up a sweat with their friends. Unlike their mothers, older women in America are far less sanguine about trading in their Reeboks for a recliner. They place a premium on staying healthy, attractive, and physically fit.

At the same time, however, these women are more likely than men to suffer from cropping arthritis or to be widowed and living alone. They don’t have an extra pair of hands to help pull up a zipper, haul a bag of yard waste, or host a piece of luggage into the overhead compartment of an airplane.

Of the 35 million Americans age 65 and older, more than 20 million—nearly 60 percent—are women. As the population ages, the ratio of women to men increases dramatically. Yet despite such demographic muscle, the needs of women in this age bracket are largely ignored in the marketplace.

The untapped commercial potential was the subject of an intensive, three-month-long course sponsored in spring 2006 by the InnovationSpace program at Arizona State University. Prasad Boradkar is the program’s co-director and an ASU associate professor of industrial design. He says that four teams of undergraduate students were drawn from industrial design, graphic design, engineering, and business programs. Their first task was to identify product opportunity gaps, known as POGs.

Their goal? Improving daily life for older women. So just how do 20-somethings come to understand the complex needs of people who are, well, old enough to be their grandmothers? For starters, they interviewed their mothers and grandmothers. They took notes as they watched them go about their daily routines such as planting flowers or cleaning the bathroom. They tagged behind carts in discount stores, observing shoppers as they puzzled over the tiny print on labels or struggled to pull jumbo boxes of detergent off tall shelves.

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For example, graphic designer Chip Davenport was charged with creating the protective packaging for his team’s vitamin dispenser. The item is a small, lotus-shaped object known as Arava. Davenport tucked the product in a jute bag that could be starched in the shape of a bow. Purchasers could then launder the bag to remove the starch and reuse it for other purposes.

Other teams developed ingenious methods for understanding their targeted consumers. For a brand called Via, the group noted that people over 65 make up nearly 80 percent of all leisure travelers. Yet for most people, getting to and from their destination is anything but a vacation.

The Via team charted what they called travel stress points. They used an EKG-style graph of peaks and troughs. Spikes of anxiety were marked by activities such as checking tickets, checking luggage, or getting on and off aircraft.

The students then devised ways of easing stress along these points with the needs of older travelers in mind. This strategy led industrial design student Erik Hernandez to design modular luggage fashioned together like nested nesting boxes. He built a prototype of a luggage system that could be maneuvered and disassembled at the touch of a finger. Another was a bedside diffuser that delivers timed doses of calcium to sleepers throughout the night. A third involved dispensing systems for soaps and sunscreens using capsules that are easy to pack and, at the same time, eliminate excess packaging waste.

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The students’ field observations resulted in a long list of POGs. Once they zeroed in on a single product idea, they began to methodically work through four criteria of product development known as integrated innovation.

In every InnovationSpace course, student teams are required to consider four questions:

- Is the product desirable to users?
- Is it possible through engineering?
- Is it valuable to business?
- Is it good for society and the environment?

For help in these tasks, the ASU students benefited from the experience of a diverse group of professional consultants. Leading the way was a trio of seasoned design managers from Cincinnati-based Proctor & Gamble, Inc. Their conference calls and site visits proved helpful in developing product brands.

Products need a recognizable identity that is created through the use of color, texture, typography and language. Good branding is critical since “most products get a five-second glance from consumers,” comments consultant Lisa Kashuba, one of the participating P&G design managers. “Within that time, you need to convey a story that is inspirational, memorable, and crisp.”

To better understand their target users, students also get valuable advice from Patricia Moore, an industrial designer and gerontologist. Moore made headlines in the late 1980s when she walked the streets of 116 cities disguised as an elderly woman. Her field study provided stunning insights into the obstacles that older women confront in daily life.

From Moore, for example, students learned to watch their language, especially the use of the term “aging women.” “‘We’re all aging,’” Moore says.

Designers need to understand how difficult it is for people with failing eyesight and arthritic fingers to open tamper-proof pill bottles or to apply mascara. She suggested that students wear eyeglasses smeared with a light coating of petroleum jelly, or bind some of their fingers with masking tape.

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