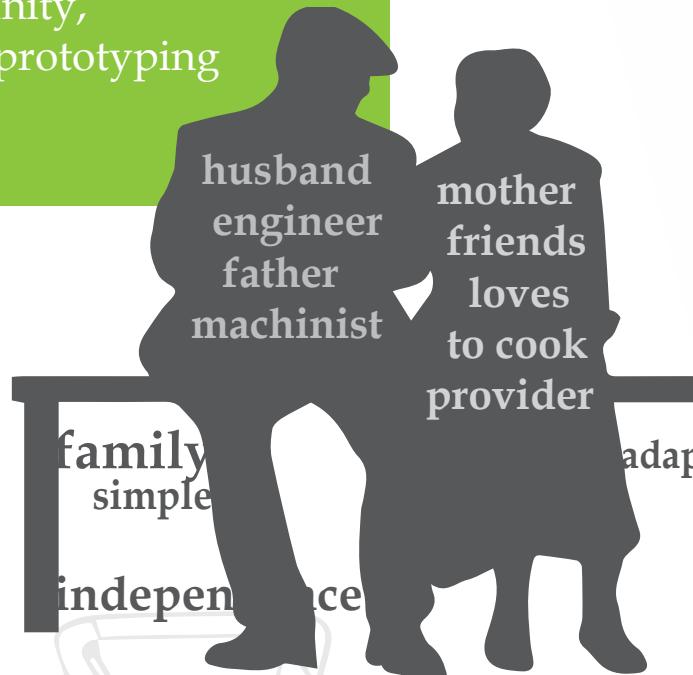


kitchenware for low vision | product ideation

Engineering for Humanity

Role: Student Designer

Responsibilities/ Skills:
user interviews, user testing,
areas of opportunity,
codesign, rapid prototyping



Over the course of 10 weeks, our 3-person team developed a customized product for John and Lauren, an older adult couple who-- in spite of multiple surgeries each and fading senses-- count themselves lucky for what they have.

NEEDS

Physical Limitations

- multiple back and knee surgeries
- difficulty bending over
- vision & hearing loss

House Limitations

- steep stairs to basement
- low-access storage spaces
- small kitchen

OPPORTUNITY AREAS

Kitchen Aids

- Cutting
- Organization
- Measuring

Ease of Access

- Laundry
- Cleaning
- Bedsheets

Vision & Daily Tasks

- Zipper Pulls
- Pill Boxes

Between their physical and environmental limitations, there are many rich opportunity areas. However, food plays an especially large role in their cultural and social connections. Given the couple's (especially Lauren's) penchant for cooking and hosting, both they and our team agreed that kitchen aids would help the most with maintaining their sense of independence and fulfillment, especially as Lauren's vision worsens due to her macular degeneration and geographic atrophy in her eyes.

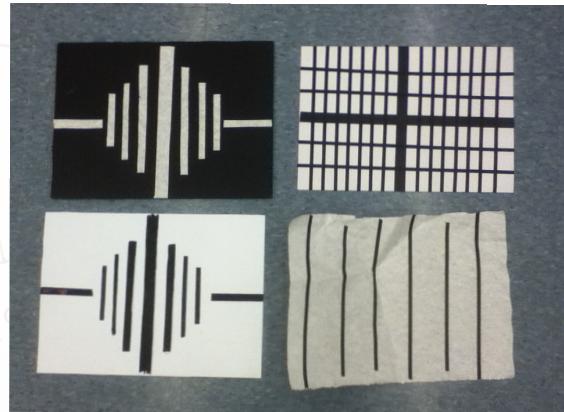
To ensure we product a high-impact product, our team designs for both the current situation and the worst case scenario-- blindness and living alone.

kitchenware for low vision | product development

Spring 2014

As we ideated and designed with John and Laurice, we rapidly prototyped and tested our most promising ideas in parallel, applying learnings almost immediately.

iterative refinement



function testing

Using paper models and tape, we quickly discovered more about Lauren's vision loss and her envisioned usage of the board.

Usage:

- dry foods (bread, fruit, etc.)
- needed reference lines to find object in space
- preferred an easy-to-clean, easy-to-store solution

Realizing our initial designs made positioning food more confusing, we switched to a simple design of vertical lines. We also removed unnecessary features, instead exploring John's suggestion of a cutting guide for butter, a previously unknown need.



interaction & character

Confident in the functionality of the design, we tested and refined line weights, spacing, tactile feedback, look and feel of the board. The results informed our decision to integrate the guidelines into the aesthetic of a well-finished wood cutting board.

in-home user testing (IHUT)

We sent a high-fidelity prototype to Lauren's kitchen for a week, along with an easy-to-read interaction log. The log confirmed its use, but pointed to cleaning and storage considerations and a need for rubber feet, finger grooves, and refined fit of the cutting guide.

kitchenware for low vision Engineering for

Product Specifications:

Minimalist white maple cutting board with black inlay.
Finished with tung oil (food-safe).

Removable aluminum cutting guide for butter sticks.

Dimensions: 15" x 12" x 1"

Features:

Easy to clean with sponge

Removable guide for easy storage

Comfortable grooves for handling

Non-slip rubber feet

| final product
Humanity

