MODU

Design Process

Our design process for this challenge was approached in three primary segments: problem, research, and solution. The first segment: "problem"- we started with preliminary research on aging in place, identifying the problem in aging in place common challenges in aging in place, recognizing the statistics, and connecting with our local community, partnering with Dr. June Fisher, Paul Nowicki, and Ramon Bruselas, a diverse group of elders, and living environments. Our next step in the process is, "research." In this component, we conducted market research on products related to MODU, defined our design drivers (utility, modular, universal), recognized our target user, environment ergonomics, and began basic ideation and iterations for potential solutions. We've purchased the most common assistive walker and food tray found on the market, and constantly documented its strengths and weaknesses in the home environment. In this component of the process, it was crucial for the design to fully understand our user and their potential challenges, thus we coordinated home visitations with Dr. June Fisher and Ramon Bruselas, to better grasp their living norms and everyday challenges they face. At last, in our final component "solution" we finalize the design of MODU from low-fidelity to high-fidelity prototyping, and user-testing with our community partner, Paul Nowicki. Paul Nowicki provided valuable insight for MODU, overall the result of the process yielded three low-fidelity foam core models, and a final model. The team aspires to further develop solutions, and attachments for MODU for a more inclusive design and defined product.

Design Description

MODU's design intends to assist those who face challenges in mobility; the product is designed to promote independence in the home environment. The intent is to create a universal tray, along with an ecosystem of accessories that is highly modular, and customizable per user for existing common assistive products on the market such as the walker, rollator, and wheelchair, because these solutions are widely used. Ideally, MODU and its ecosystem has its own redesigned walker to further customize the system for the user. The system is organized into two components: externals and internals. The externals include the cradle (attachment system), the tray itself, and the lid. The internals include various modular internals. All components are interchangeable to fulfill user's needs around the home. The intent is to design a highly customizable system to meet specific user needs in three home environments: the kitchen, bathroom, and living space. Additionally, the objective is to create an "ecosystem" of accessories or attachments for MODU. These accessories provide the option for users to further customize MODU to their lifestyle. For example, MODU can be customized solely for the kitchen, specifically food prep where a user may have challenges standing up for long periods of time, and all kitchen accessories and tools are centralized in MODU so the user may food prep sitting down. At last, universal design principles are utilized throughout MODU's design. The design focuses on principles such as flexibility in use, simple and intuitive use, low physical effort, and size and space for approach and use. MODU's external design solely focuses on the user's experience from how the lid is opened to access MODU's contents, and the form. The design keeps the user in mind.