



Pilltender

Automated Pill Dispenser for
Seniors with Memory Loss

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Problem

Call James

Take Medicine

Dinner with Alice

Doctor's Appointment

Pick up glasses

Take medicine

Drop off Matthew



Problem

- Memory loss is a common problem with aging

Take Medicine

Dinner with Alice

Doctor's Appointment

Pick up glasses

Take medicine

Drop off Matthew



Problem

- Memory loss is a common problem with aging
- Reminders help both seniors and caretakers

Take Medicine

Dinner with Alice

Doctor's Appointment

Take medicine

Drop off Matthew



Problem

- Memory loss is a common problem with aging
- Reminders help both seniors and caretakers
- Forgetting to set up reminders

Take Medicine

Doctor's Appointment

Take medicine



Problem

- Memory loss is a common problem with aging
- Reminders help both seniors and caretakers
- Forgetting to set up reminders
- Difficult to learn new behavior

Take Medicine

Take medicine



Problem

- Memory loss is a common problem with aging
- Reminders help both seniors and caretakers
- Forgetting to set up reminders
- Difficult to learn new behavior
- Broad solution ineffective



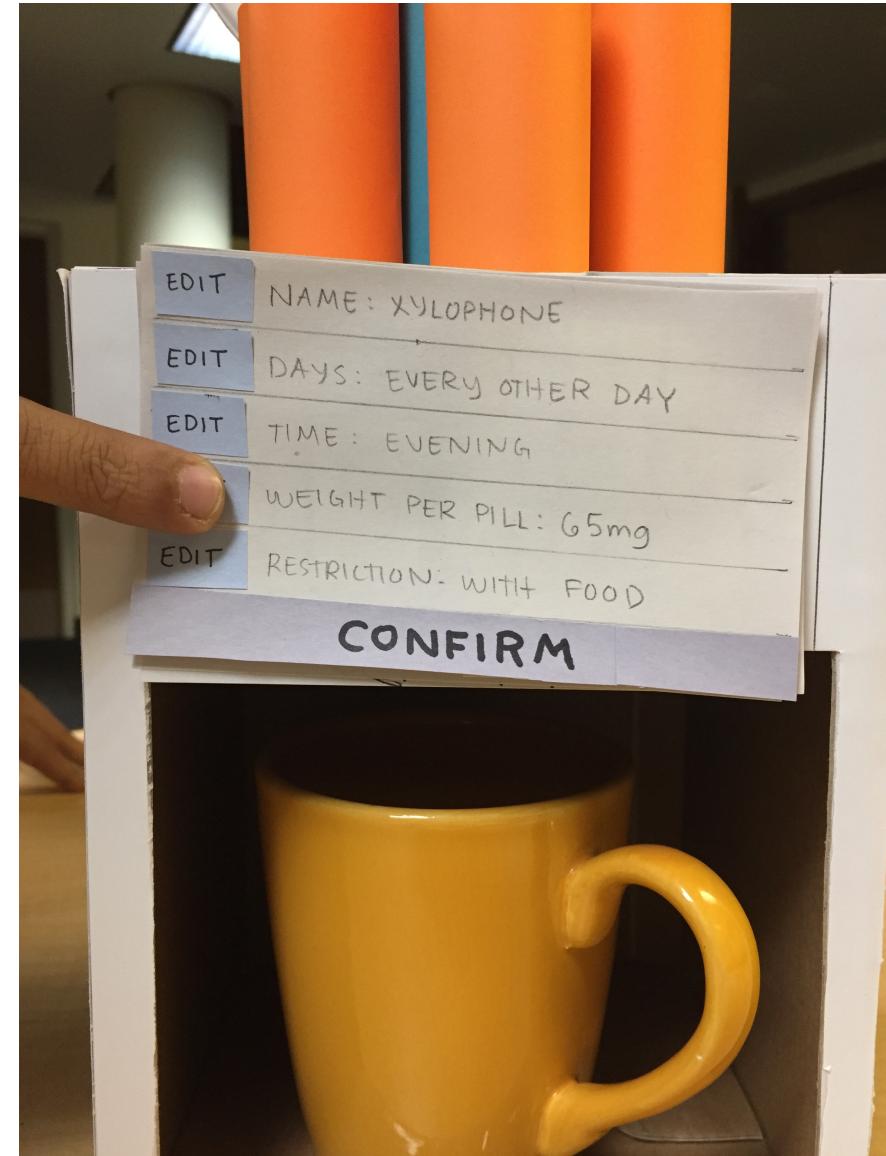
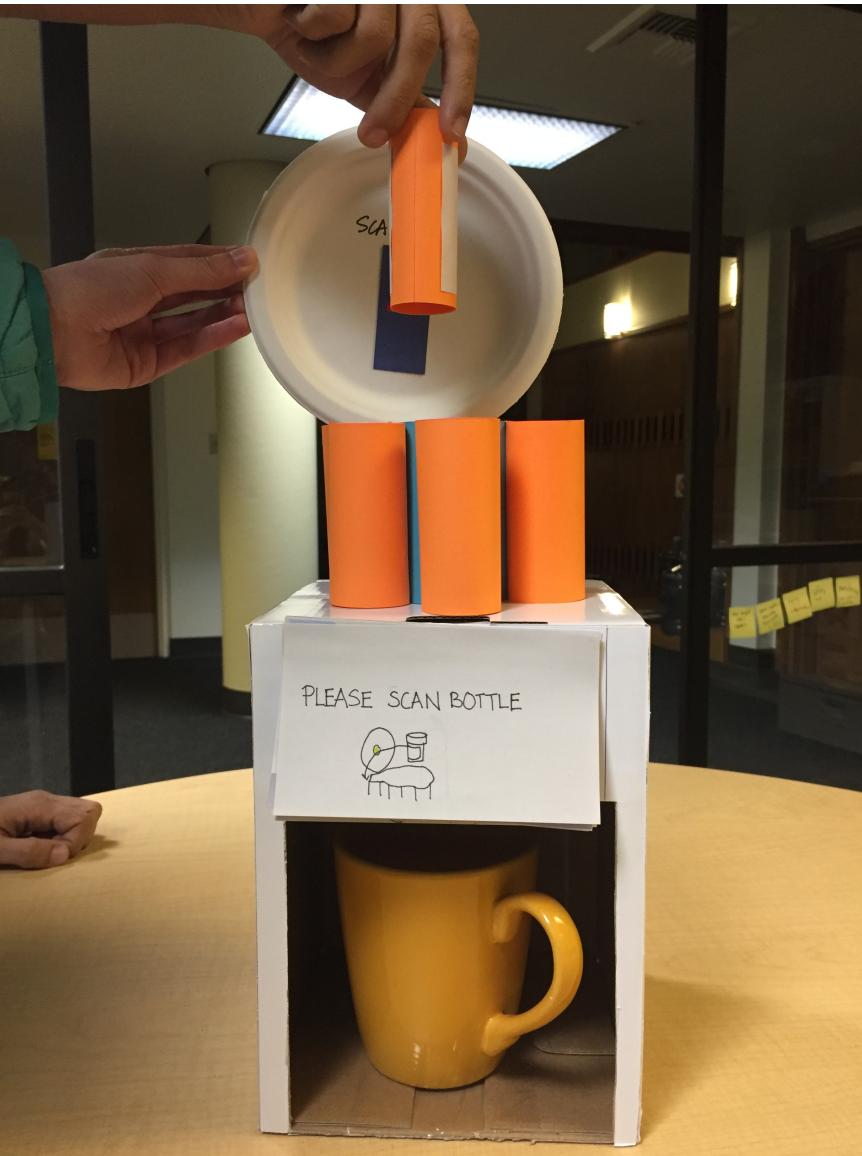
Initial Paper Prototype

- Pilltender machine
 - Scanner
 - Pods
- Specialized cup



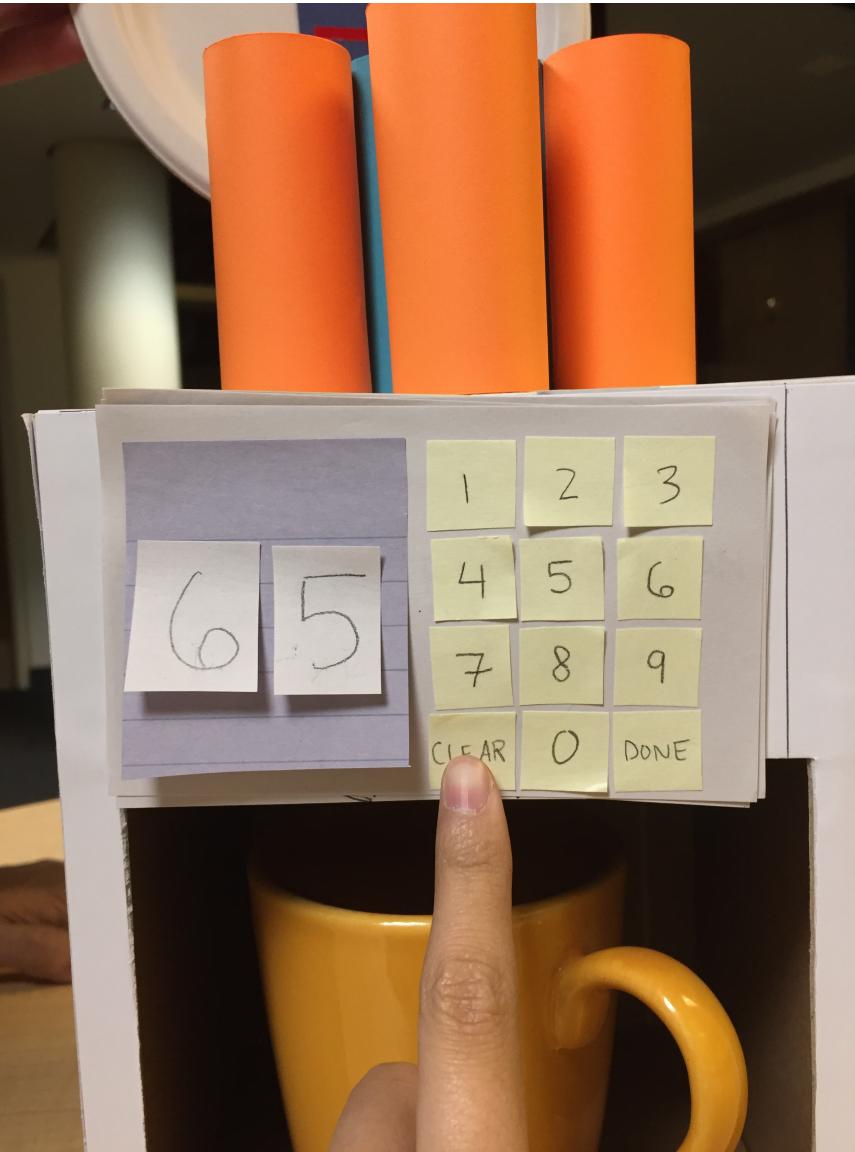


Initial Paper Prototype Task 1: Adding Medicine



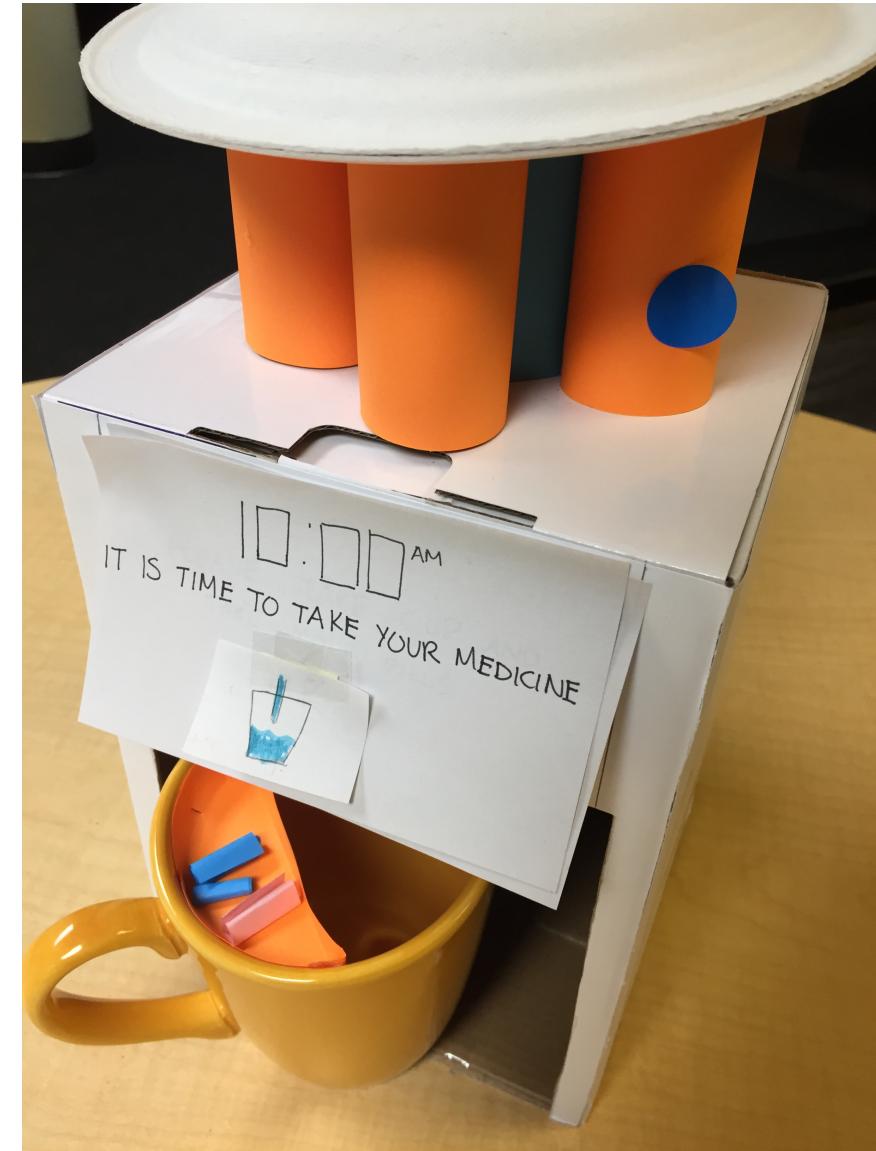
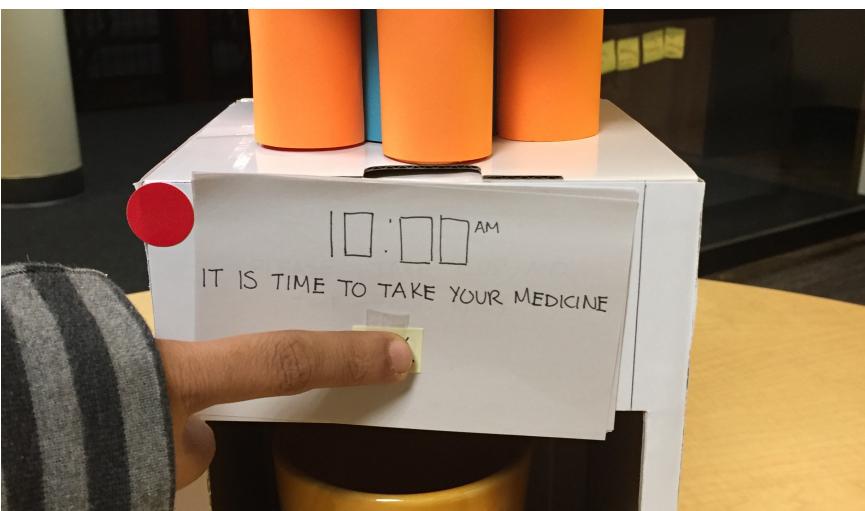


Initial Paper Prototype Task 1: Adding Medicine





Initial Paper Prototype Task 2: Taking Medicine





Initial Paper Prototype Task 2: Taking Medicine

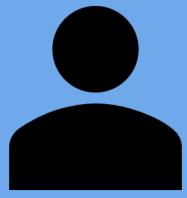




Testing Process



2 heuristic evaluations



3 usability tests



Testing Results



Flexibility of use



Visibility of System Status

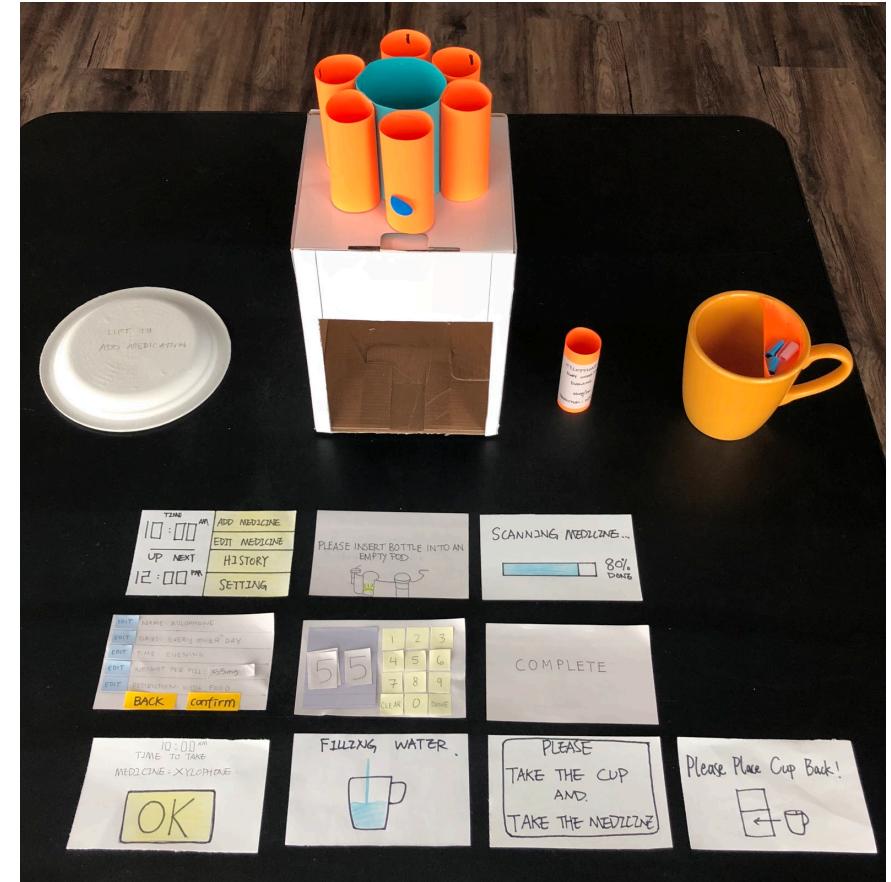


Error prevention



Final Paper Prototype

- Scanners in pod
- Larger text and buttons
- Progress bar
- Hidden menu in home screen



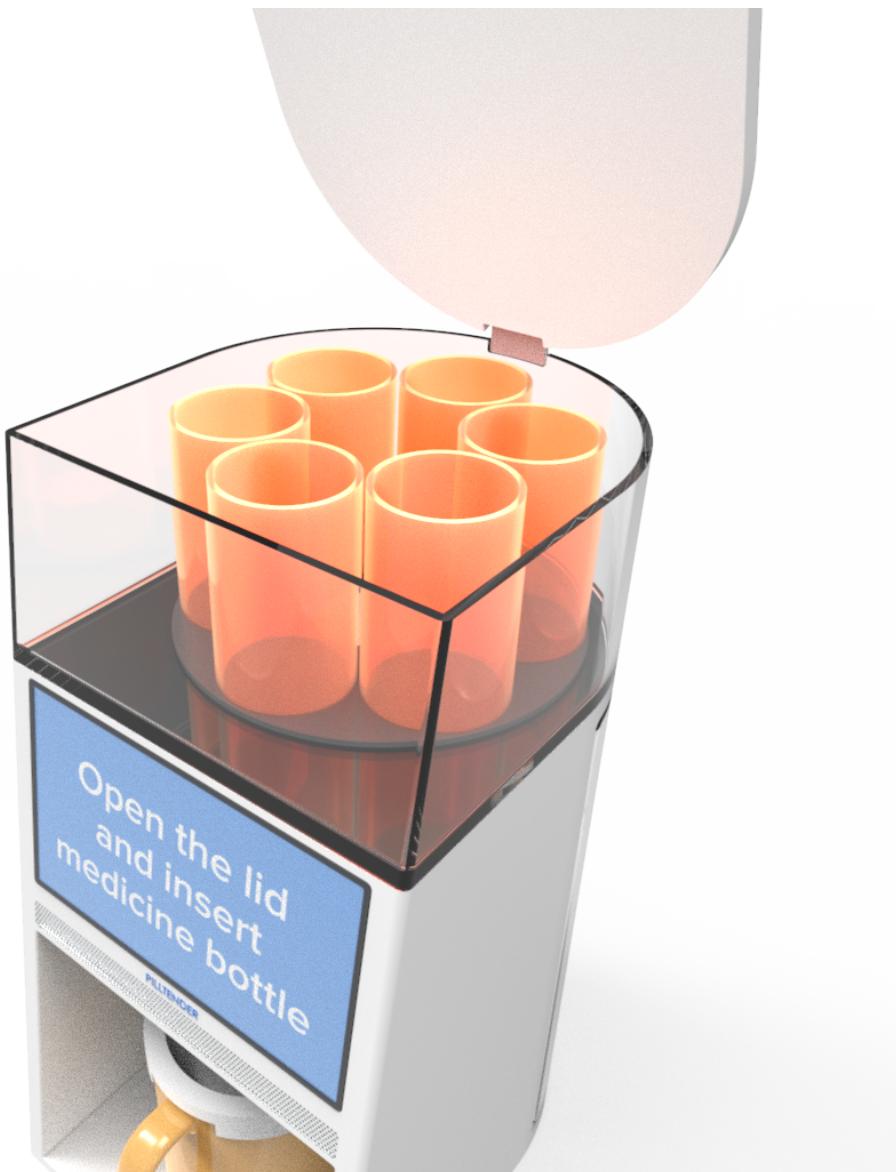


Digital Mockup Task 1: Adding Medicine



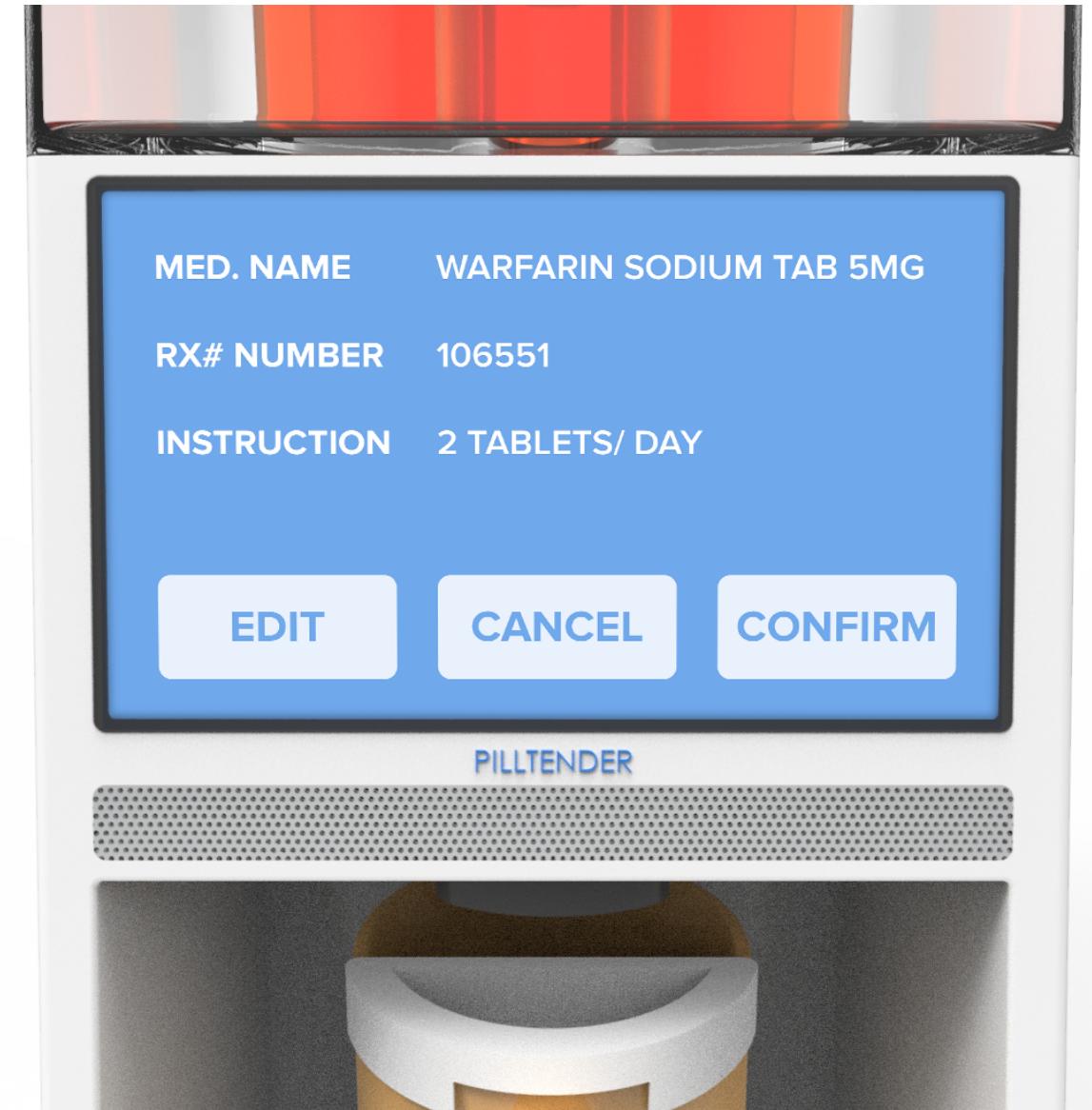
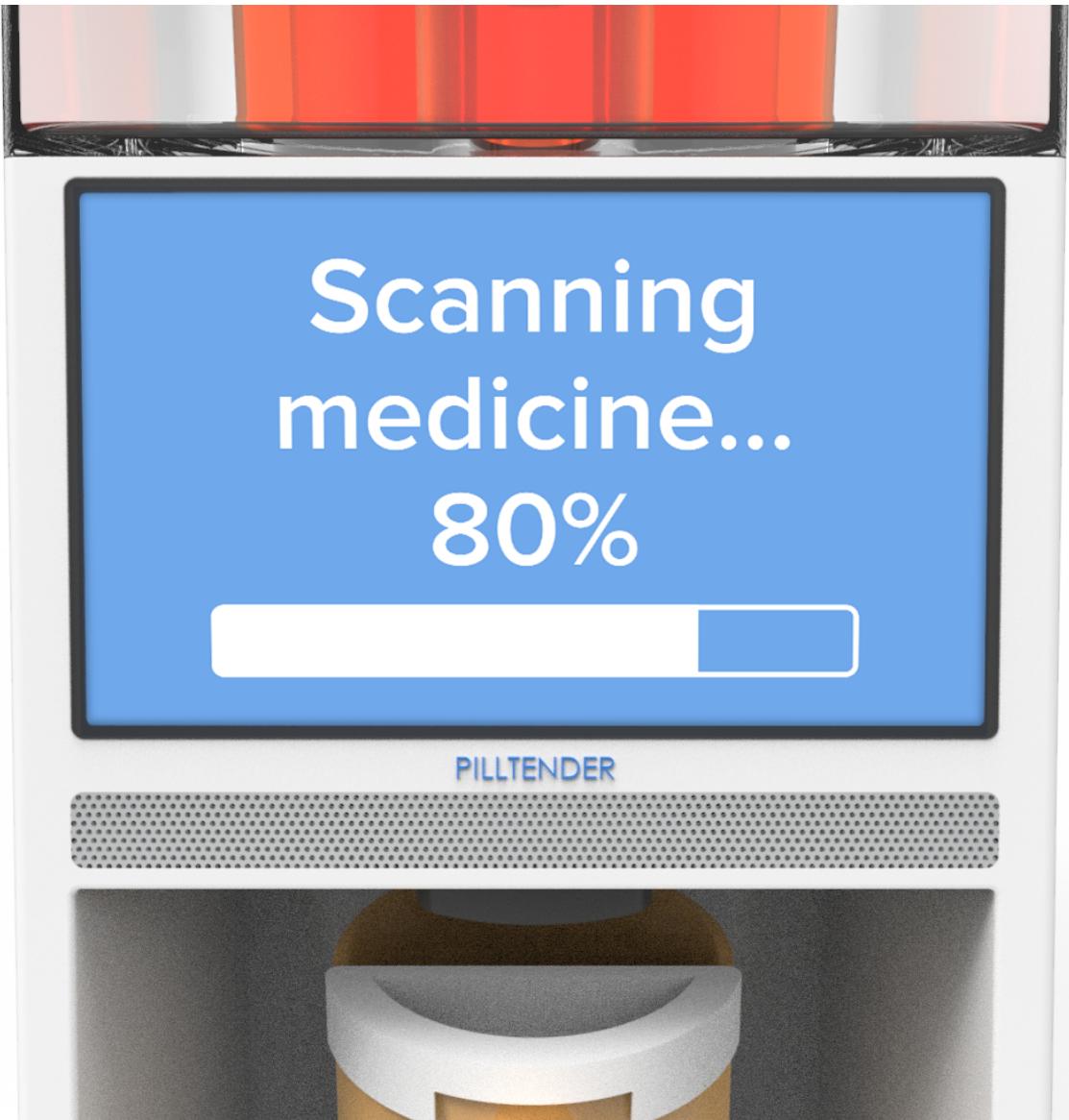


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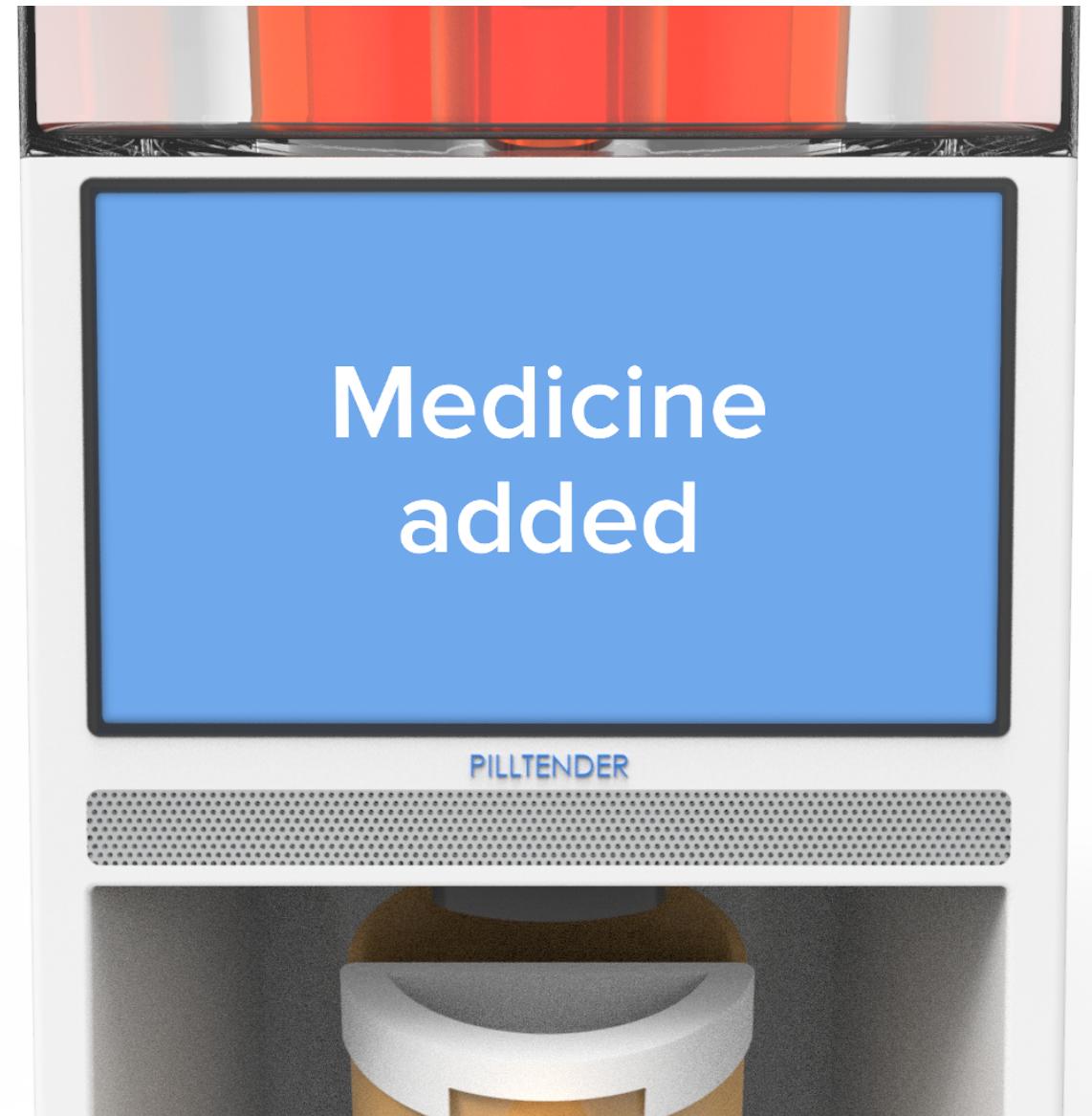
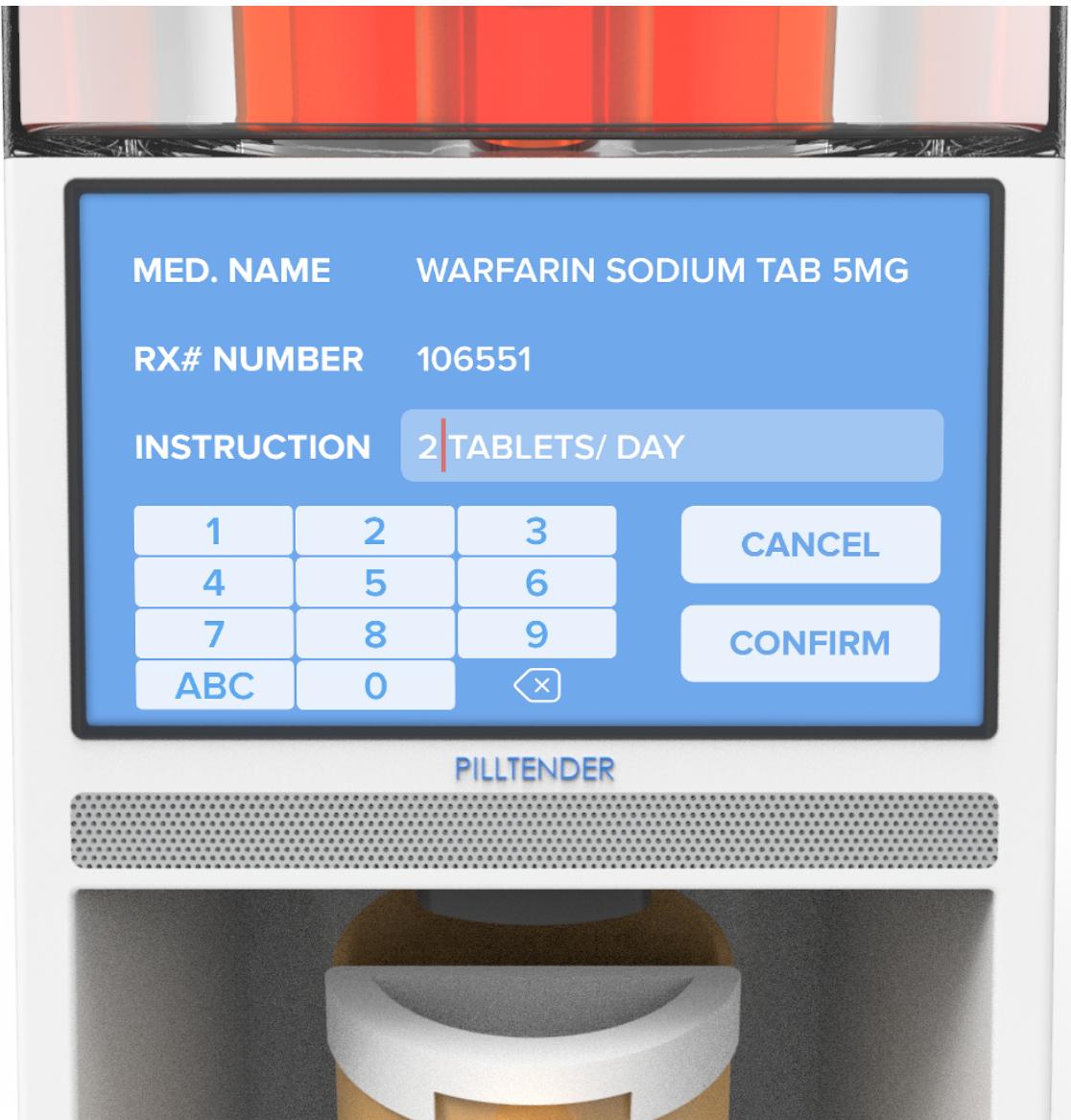


Digital Mockup Task 1: Adding Medicine





Digital Mockup Task 1: Adding Medicine



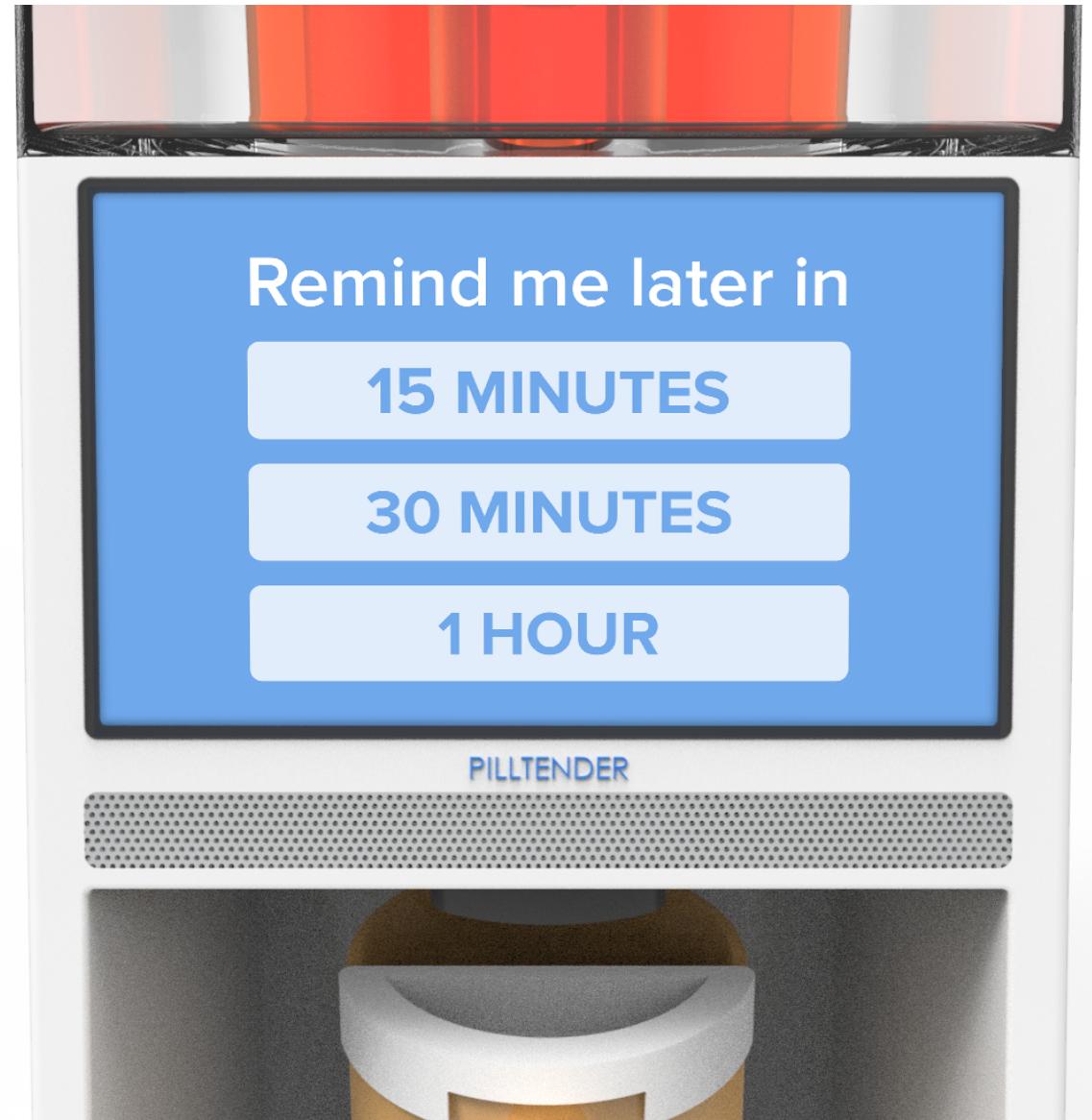


Digital Mockup Task 1: Adding Medicine



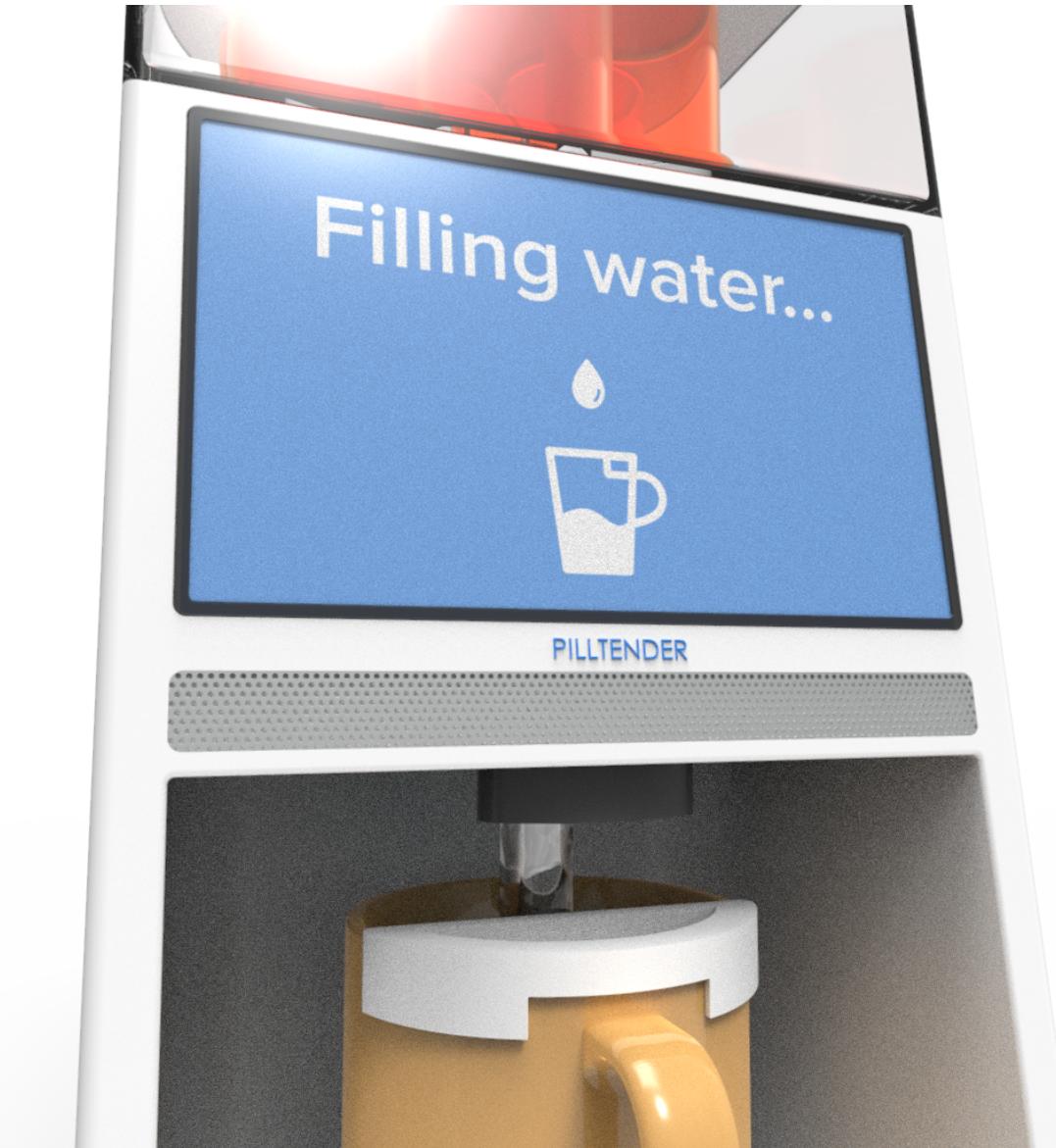


Digital Mockup Task 2: Taking Medicine





Digital Mockup Task 2: Taking Medicine





Digital Mockup Task 2: Taking Medicine





Digital Mockup Task 2: Taking Medicine





Key Takeaways

- Tailoring usability testing methods such as heuristic evaluation to our project is important
- Helpful if usability tests are conducted before every major improvement of the prototype
- Maximizing the variety of participants within a target group helps gain more inclusive insights from usability testing