Pilltender

Automated Pill Dispenser for Seniors with Memory Loss

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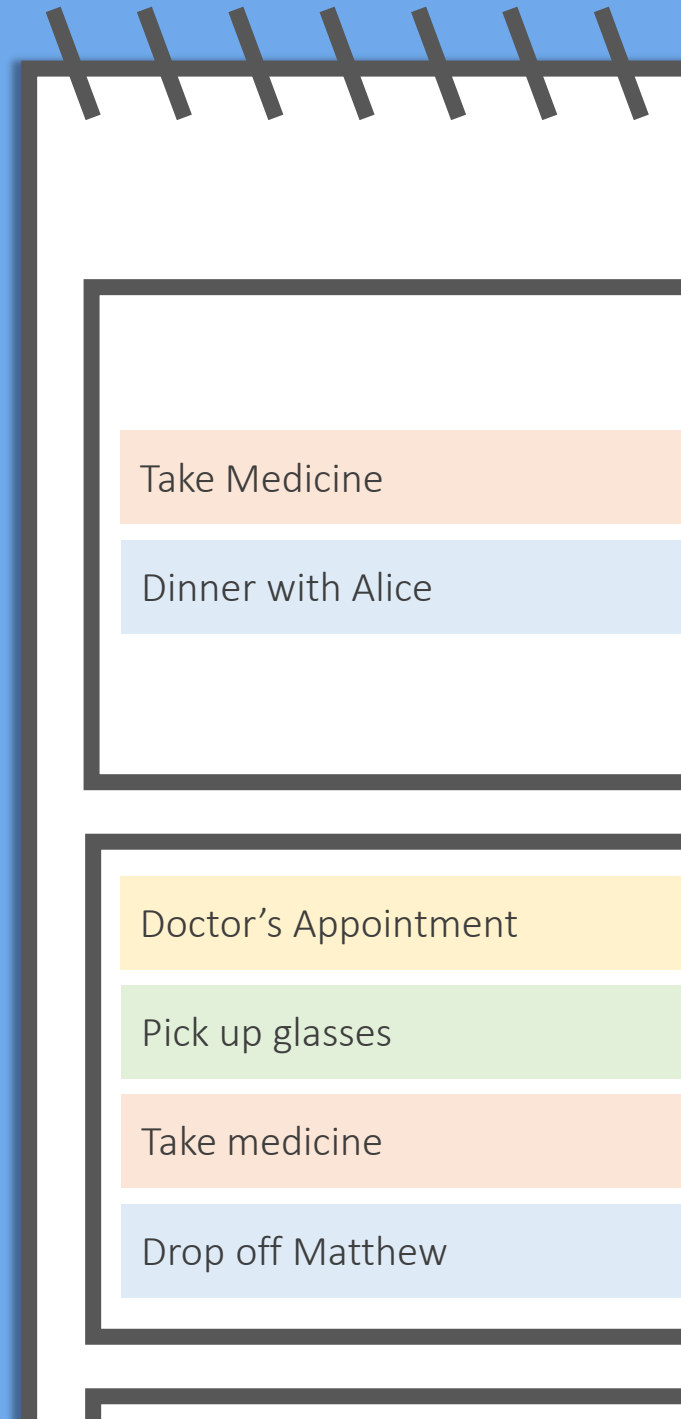
Problem

- Call James
- Take Medicine
- Dinner with Alice

- Doctor’s Appointment
- Pick up glasses
- Take medicine
- Drop off Matthew

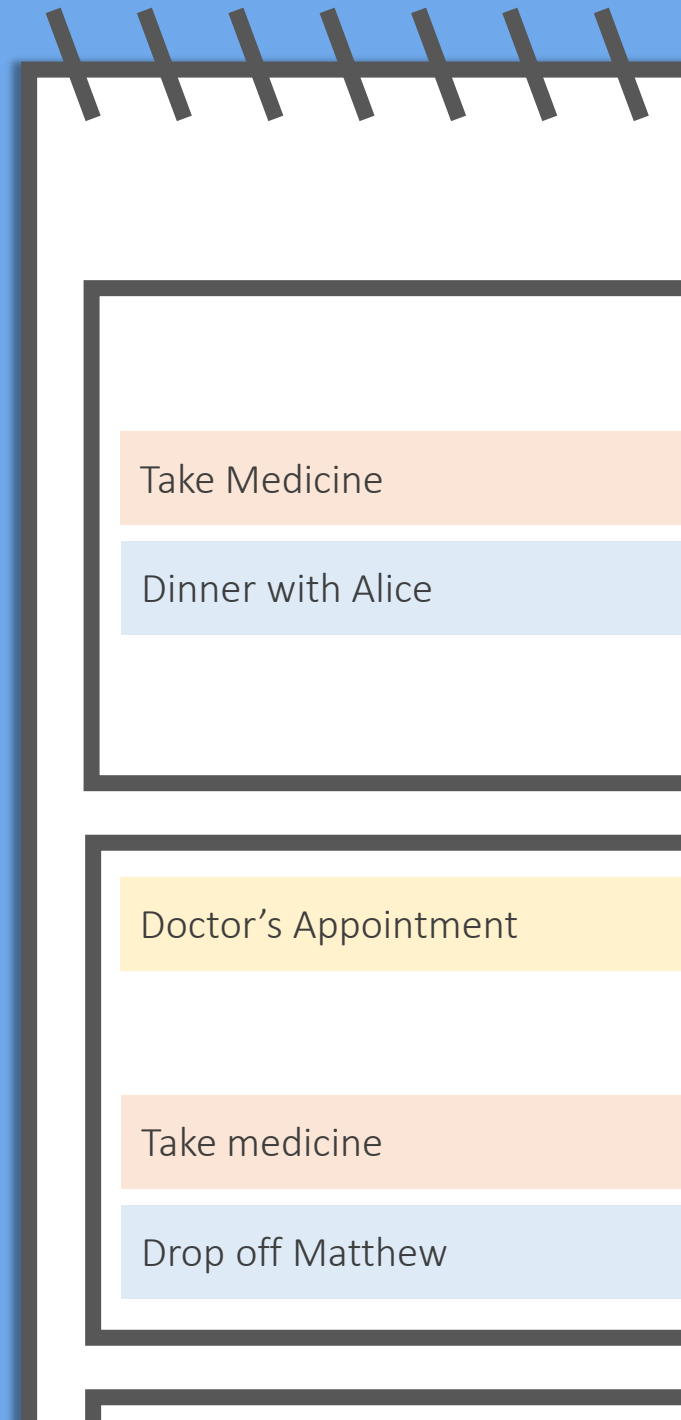
Problem

- Memory loss is a common problem with aging



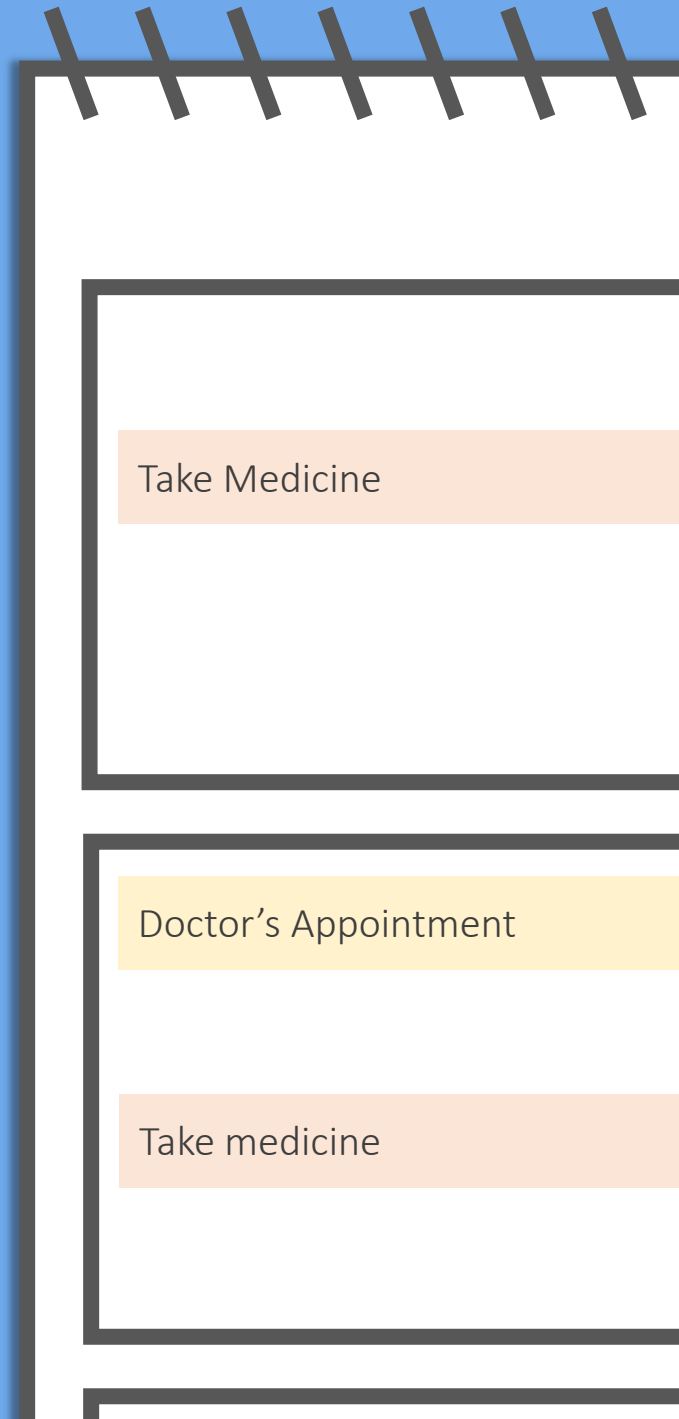
Problem

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



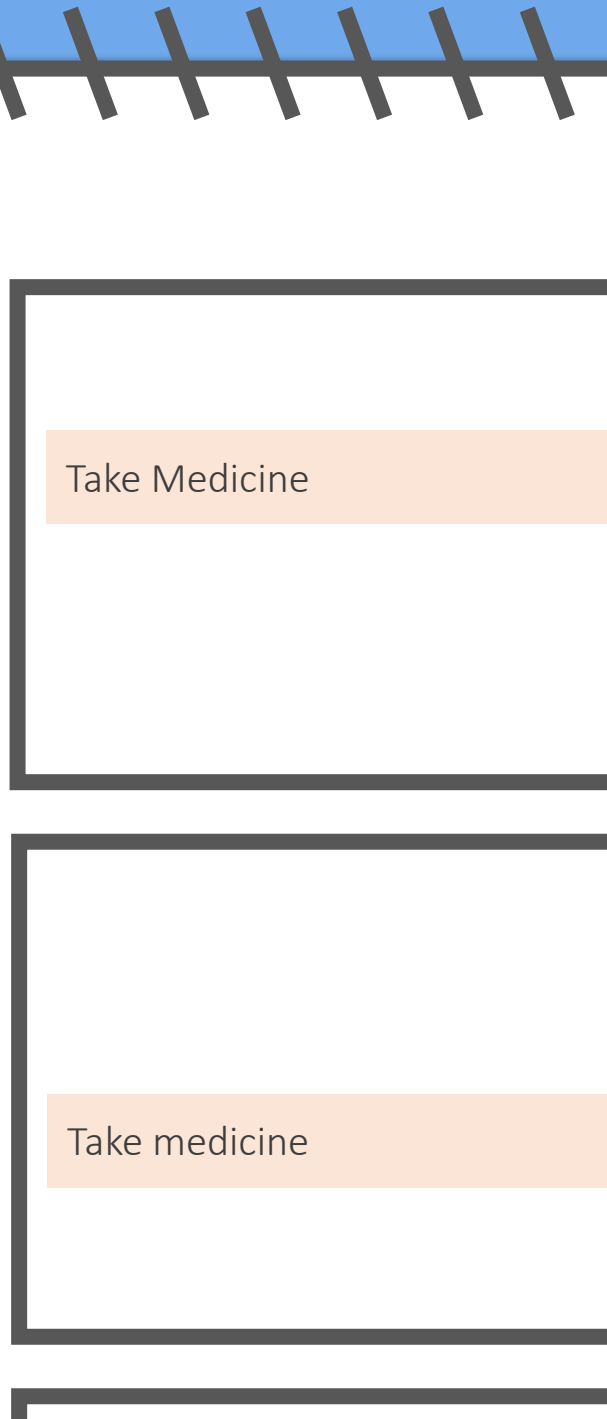
Problem

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



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



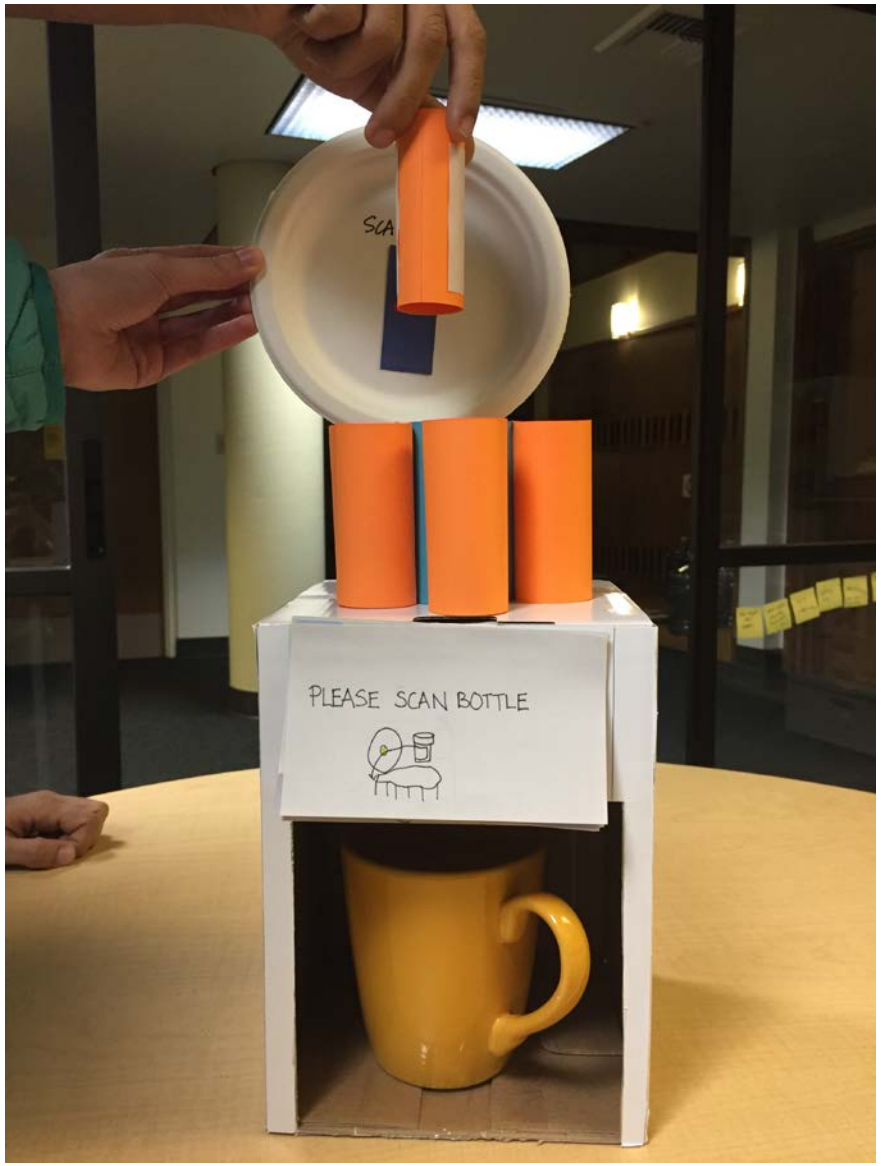
Problem

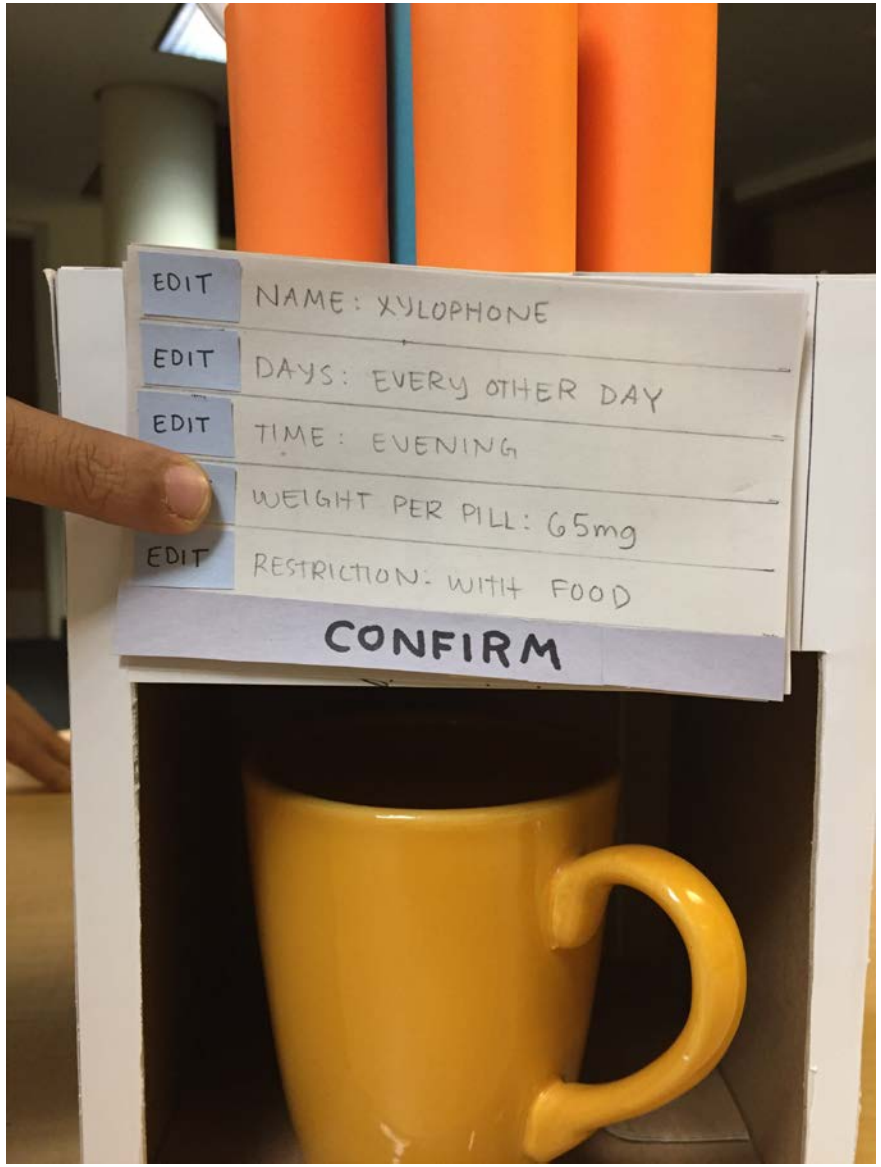
- Memory loss is a common problem with aging
- Reminders help both seniors and caretakers
- Forgetting to set up reminders
- Difficult to learn new behavior
- Broad solution ineffective

Initial Paper Prototype

- Pilltender machine
  - Scanner
  - Pods
- Specialized cup

Initial Paper Prototype Task 1: Adding Medicine





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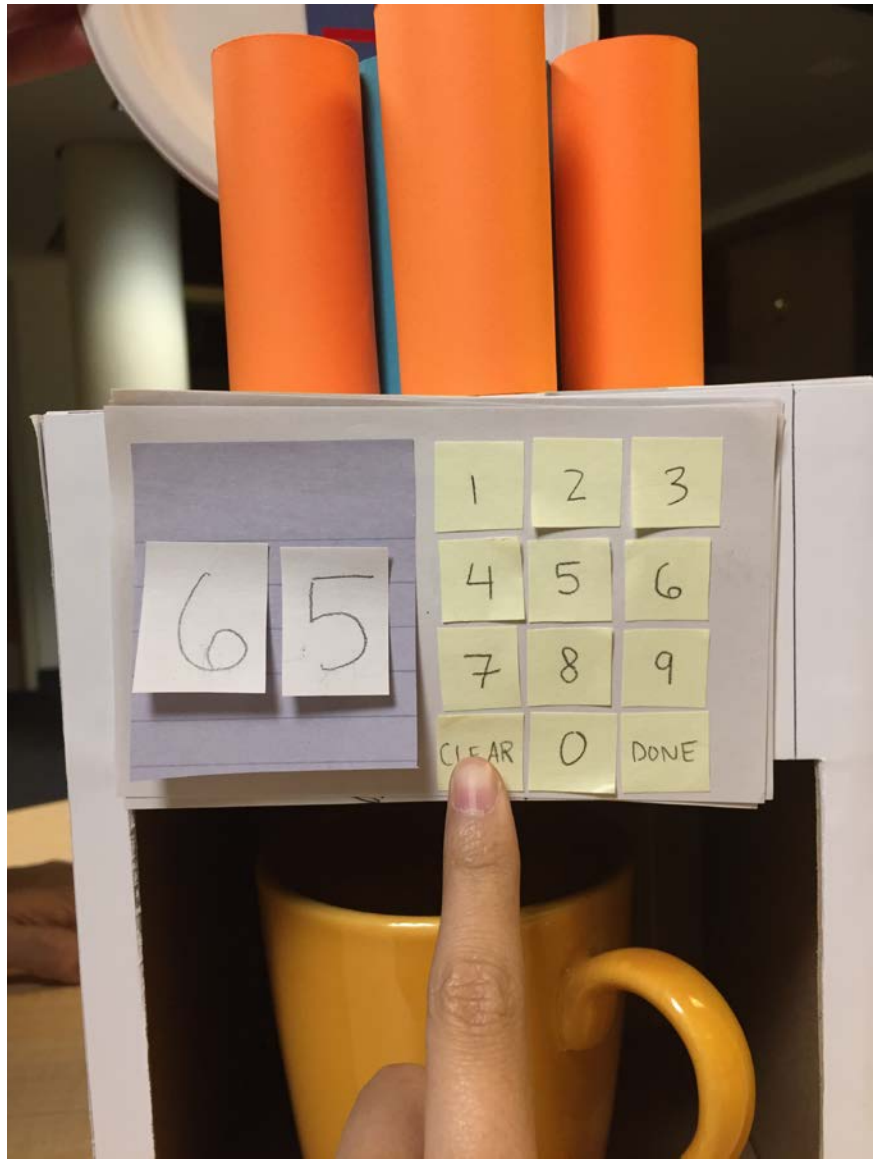
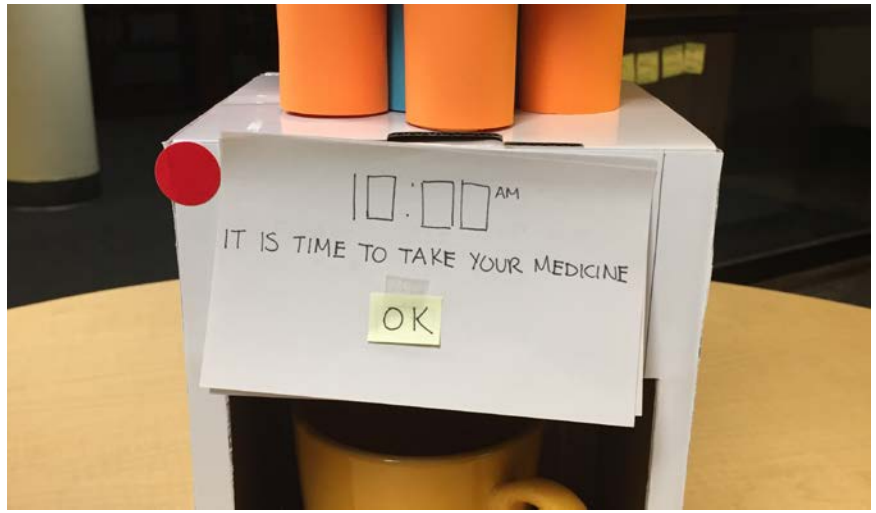
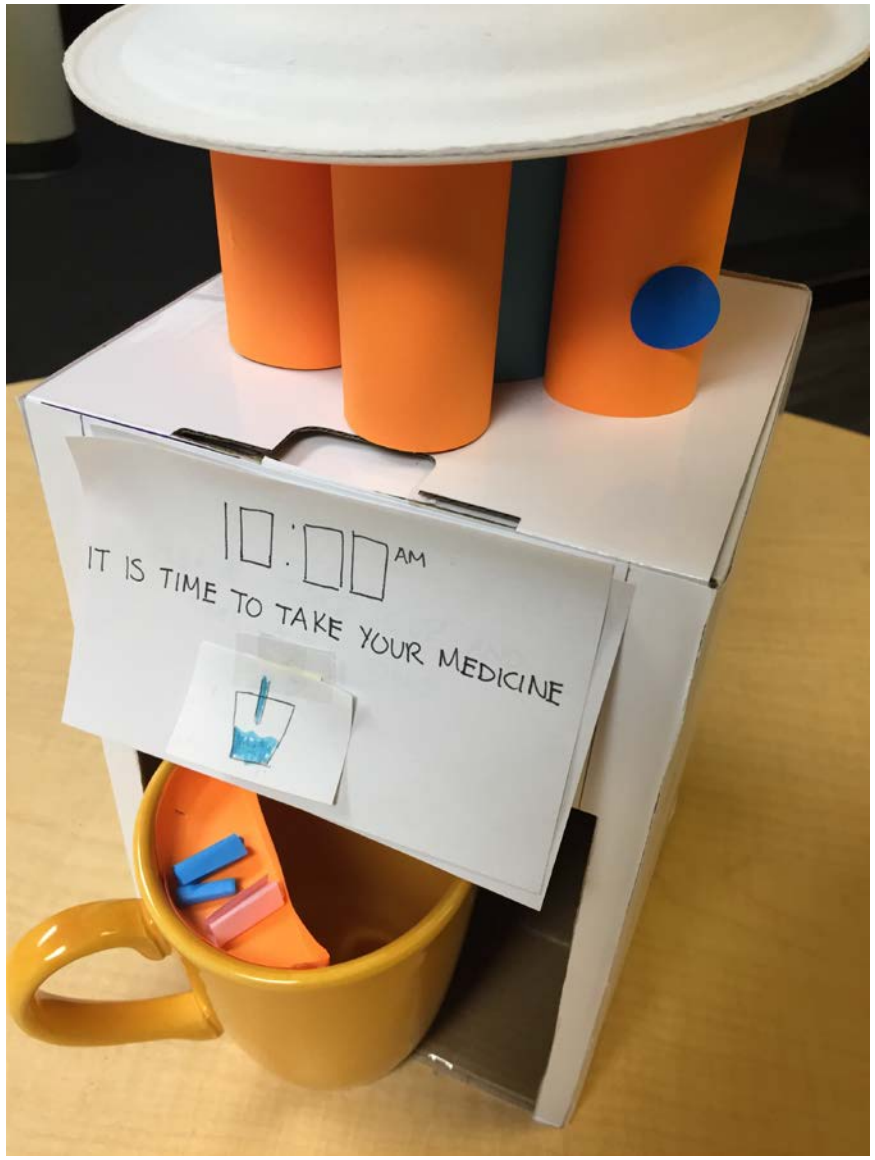


Initial Paper Prototype Task 2: Taking Medicine





Initial Paper Prototype Task 2: Taking Medicine

Testing Process

2 heuristic evaluations

3 usability tests

Testing Results

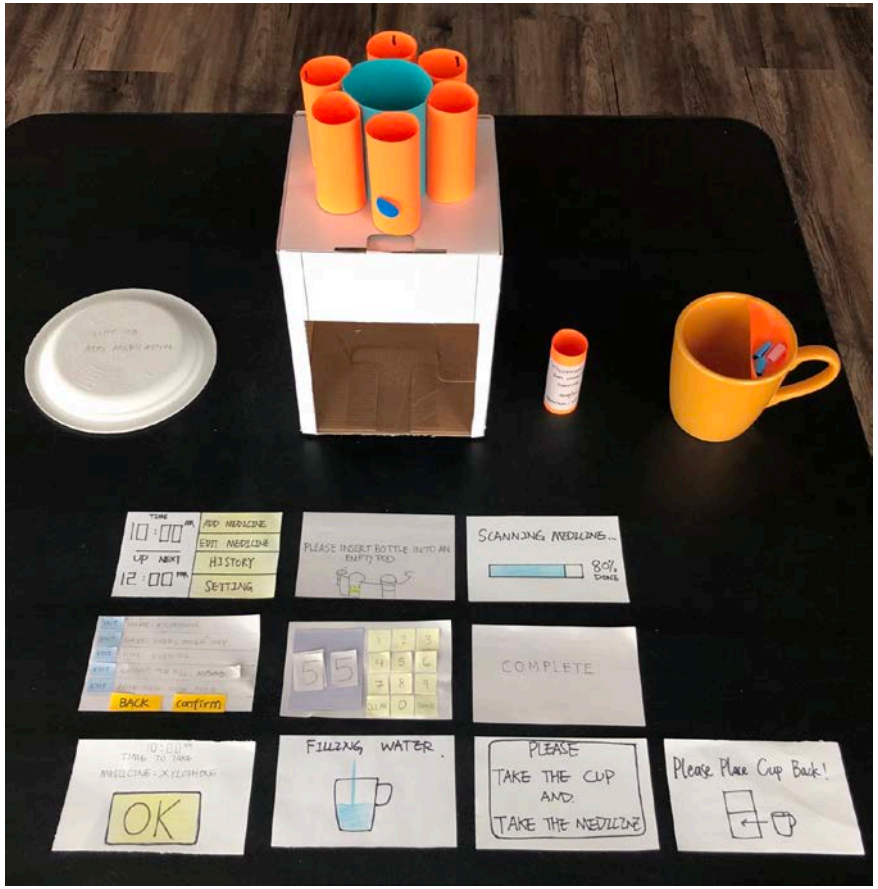
Flexibility of use

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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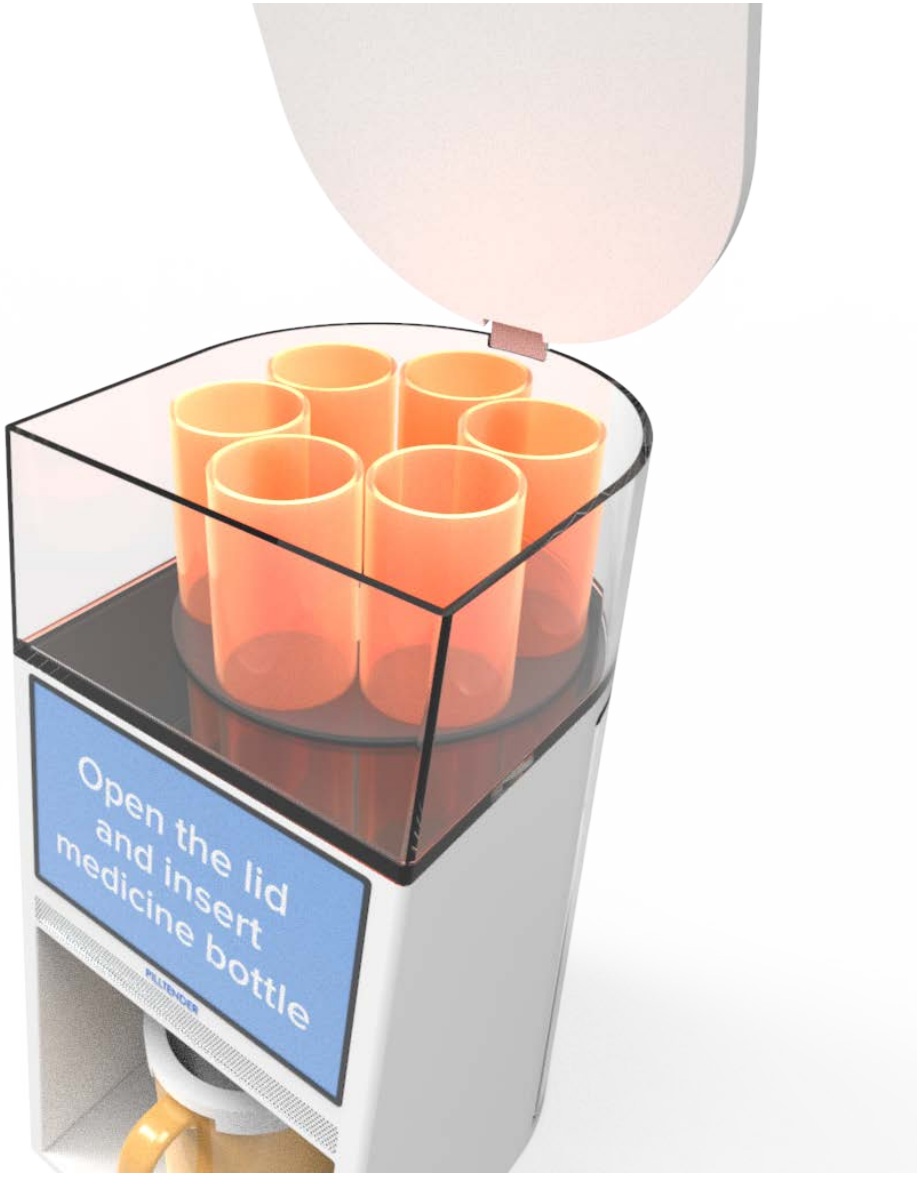

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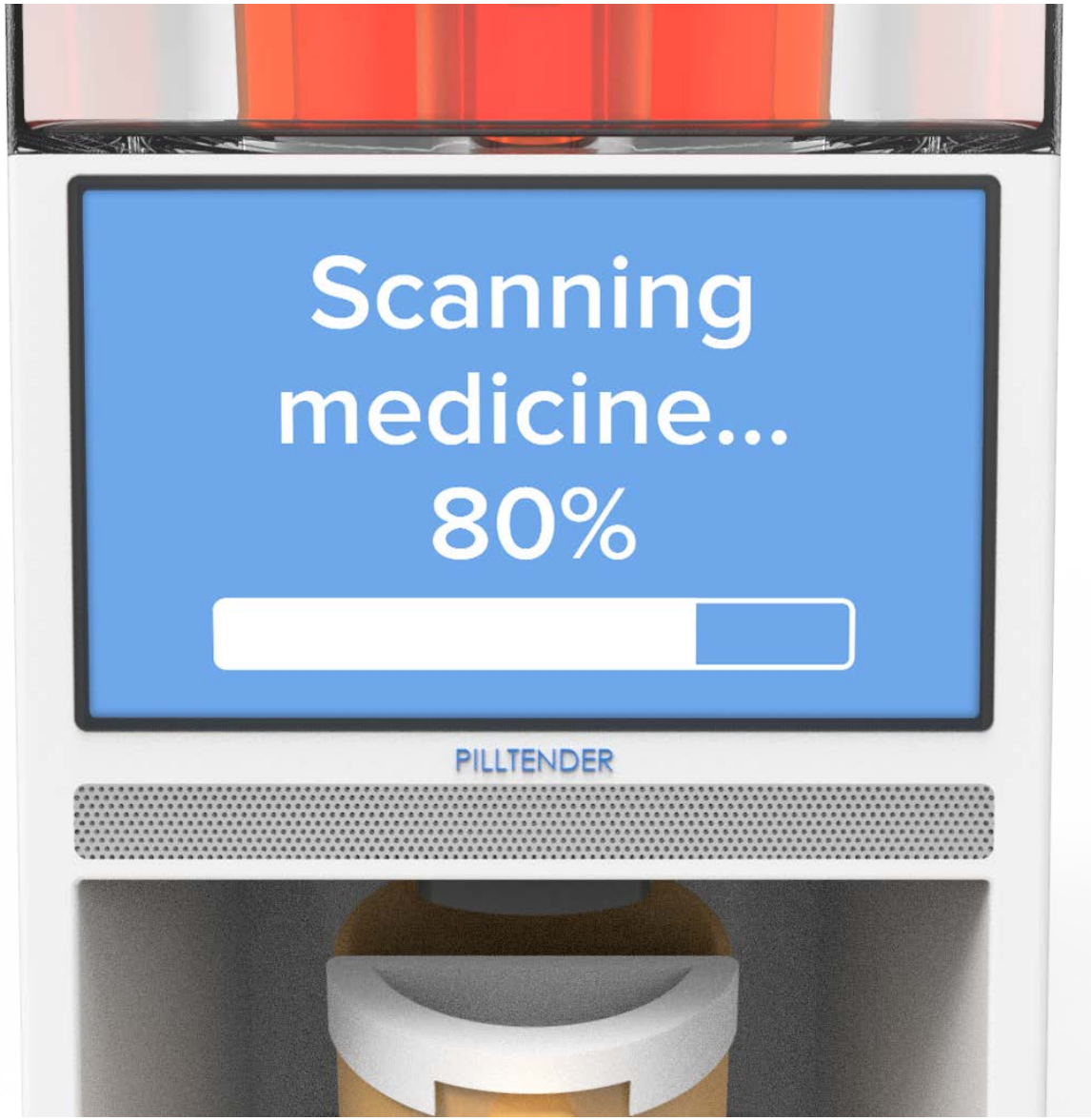

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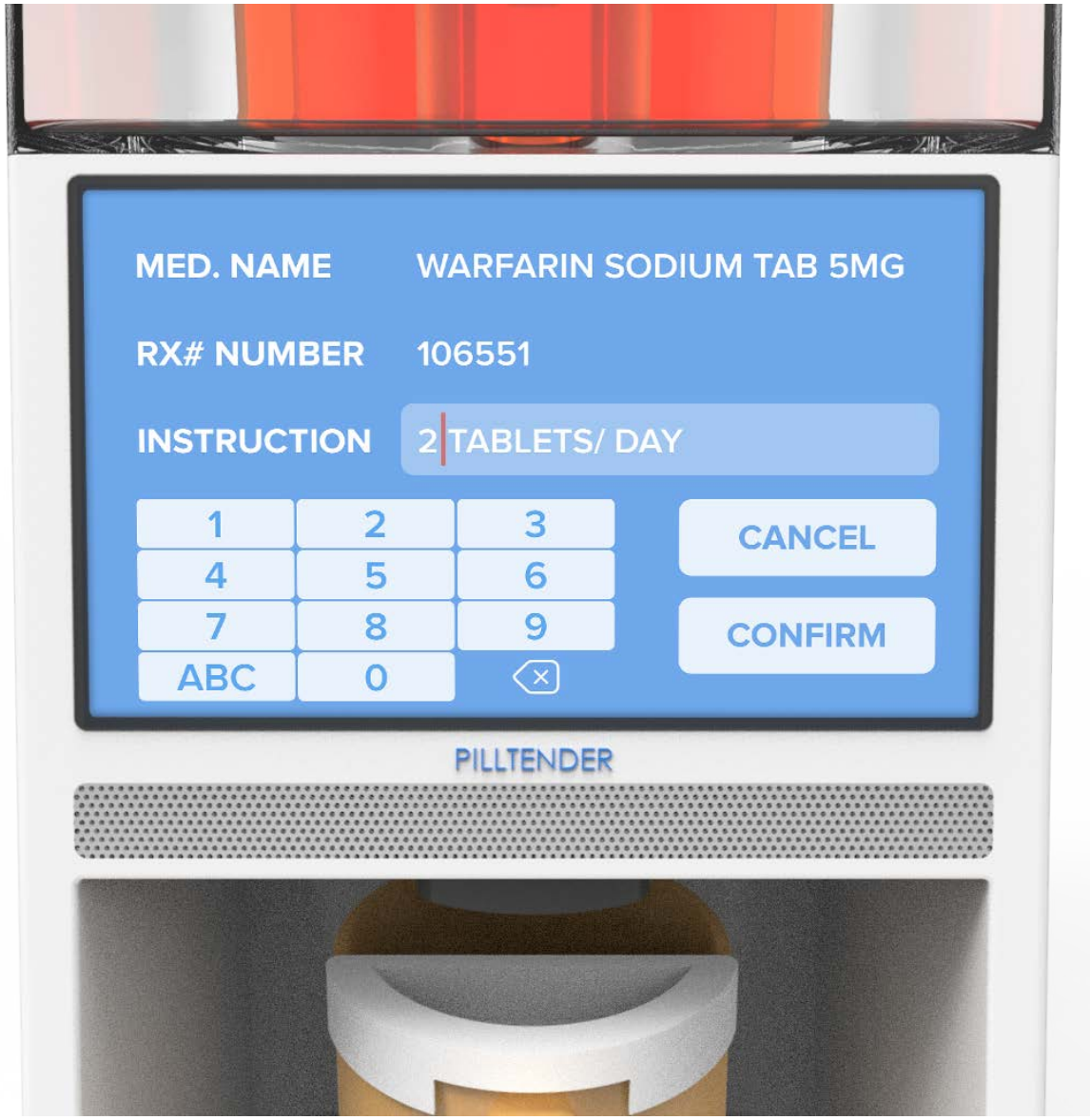

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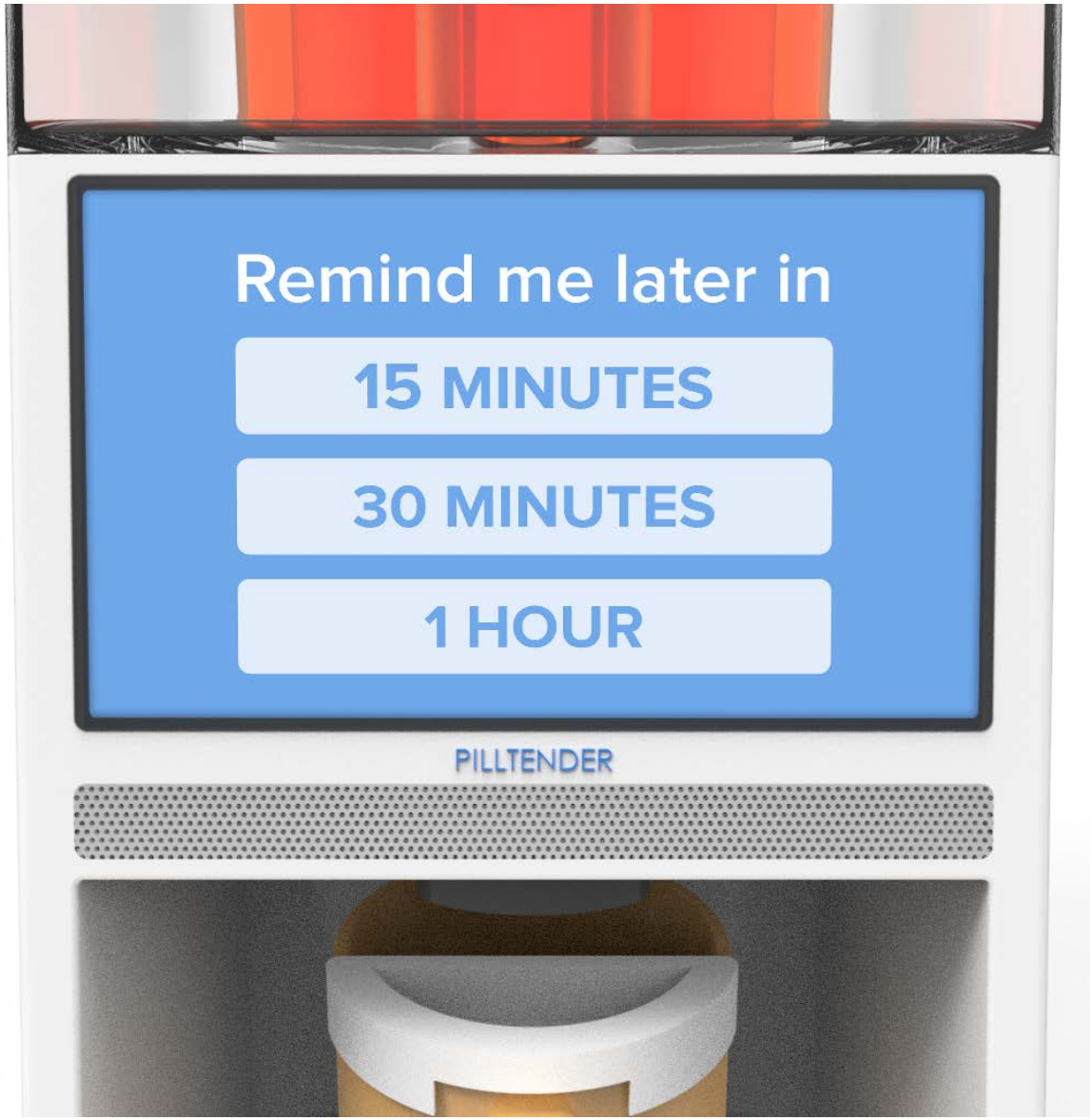
Digital Mockup Task 2: Taking Medicine



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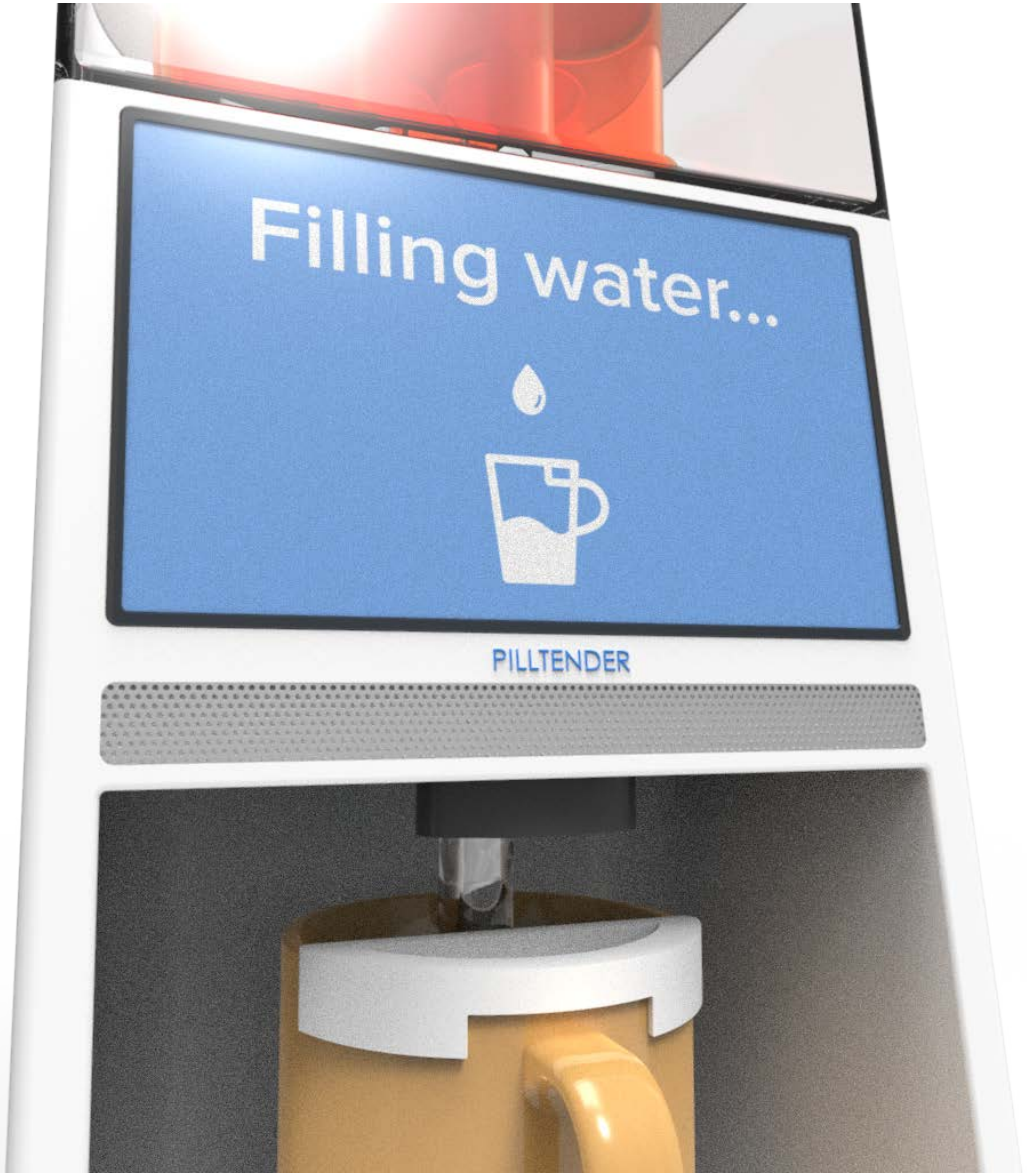

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Key Takeaways

- 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