

ME310 Team Hitachi: Benchmarking Progress Report

We split the food procurement process into three phases: before shopping, during shopping, and after shopping, and looked into each of them. As a combined result of needfinding, researching, and communicating with the Tokyo team, we decided to focus on storage and transportation (how to bring it home) for our benchmarking at this point.

Storage - (Smart) home appliance

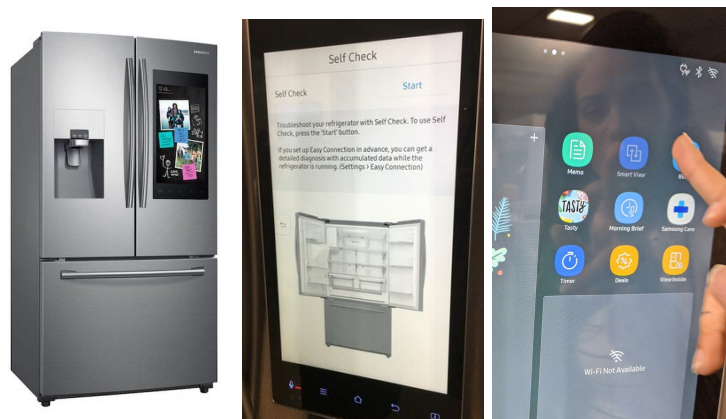
We went to Airport Home Appliances to investigate the available refrigerators on the market.

Ease of access: Most of the refrigerators had sections that were hard to reach.

Strength needed to pull the doors open: Some refrigerator doors were more difficult to open than others. In particular for handles on lower compartments it was more difficult to apply the needed force



Smart features: We investigated a Samsung refrigerator equipped with “Family Hub” (i.e. touch interface). Most of the functions appeared to be that of an Android tablet, with the capability to play music, browse the internet for recipes and write notes. However the only apparent food-related function was the ability to control the temperature, run self-diagnostics and remind you to clean the filter through your phone. There was also a camera to look inside the fridge. Additionally, despite the large screen size some of the text appeared quite small. The voice control feature required the use of a smartphone and did not work by itself.



Transportation - shopping cart

The first and obvious issues that both we and the Tokyo team discovered was with the shopping cart. We decided to investigate various designs of shopping carts at local markets. Shown below are two different shopping carts available at a nearby Whole Foods Market:



	Large cart	Small cart
Mobility	Difficult to maneuver, takes some effort to get around people and turn around between shelves	Easy to push/pull around, can make a 180 degree turn easily between shelves
Accessibility	User must bend or stretch to put stuff in the cart	Very easy to put stuff in to the upper basket
Stability	Not very stable with large loads, especially if placed at the front of the cart	More stable; people usually put heavier items on the lower basket
Capacity	Very large capacity, good for family shopping or shopping a lot of items	Smaller capacity, good for purchase with small quantities
Handle	Same width, the handle of the large cart is slightly higher	

Transportation - grocery carrying cart (next step)

From our meeting with the Tokyo team, we realized that elderly people in Japan usually walk or bike home after shopping. Two common things they use to carry the grocery are: trolley cart and Mama chari. We plan to do further benchmarking on these two products.