FRESHWARE

FLIP - FILL - FRESH

Dry Food Storage:

Dry food storage can be unorganized, and refilling can be messy and time consuming. Typically dry goods take up two locations in the home. One out on the counter in storage jars, and another in the pantry with half used and mismatched containers. I want to clean up and simplify the dry goods system to allow for constantly filled jars therefore negating the need for the secondary location in the pantry.

2 storage locations

Unorganized

Difficult to refill

Market Research

There are many different canisters for dry food on the market. Through my research I was able to categorize them into three main groups: functional storage, labeled storage, and decorative. I then analyzed these three categories on traits that I think are important and found that they are overall lacking in many areas.

Product Name	OXO Airtight Storage	Rubbermaid Airtight Storage	Revolving Spice Rack	3- Piece Canister Set	Stainless Steel Storage	Glass Jar
Price	$49.99	$51.40	$49.99	$38.99	$19.99	$11.95
Easy to use	✓	✓	✓	✓	✓	✓
Customizable						
Air tight		✓	✓		✓	
Organized	✓	✓	✓	✓		✓
Easy to fill						
Stackable	✓	✓			✓	
Easily Stowed	✓	✓		✓	✓	
Dishwasher Safe		✓	✓			✓
Aesthetic			✓	✓	✓	✓
Easy Scoop	✓	✓				✓
Durable		✓	✓	✓		
Unique locking	✓				✓	

Functional Storage: Primarily found in the cabinet, is modular, and has air-tight lids

Labeled Storage: Can be found in cabinet or on counter-top, keeps organized labeled system to easily find item

Decorative Storage: Primarily found sitting out on the counter-top. Largely glass and aesthetically pleasing

In the Cabinet — On the Counter

User Personas

Persona one: The professional

Kay is a working mom as well as a caterer. She gets paid for her meals so its important she is able to cook in a clean and **organized** environment.

Because she is usually in a hurry making sure her meals are delivered on time, she needs to have her containers **full at all times** with **easy access** and ready to be used.

Persona Two: The family cook

Rose loves cooking for her family and loved ones. She is famous fer her great meals and often has to make a lot of food for large groups of people. So its important that any spices or dry goods can be a **less messy** process.

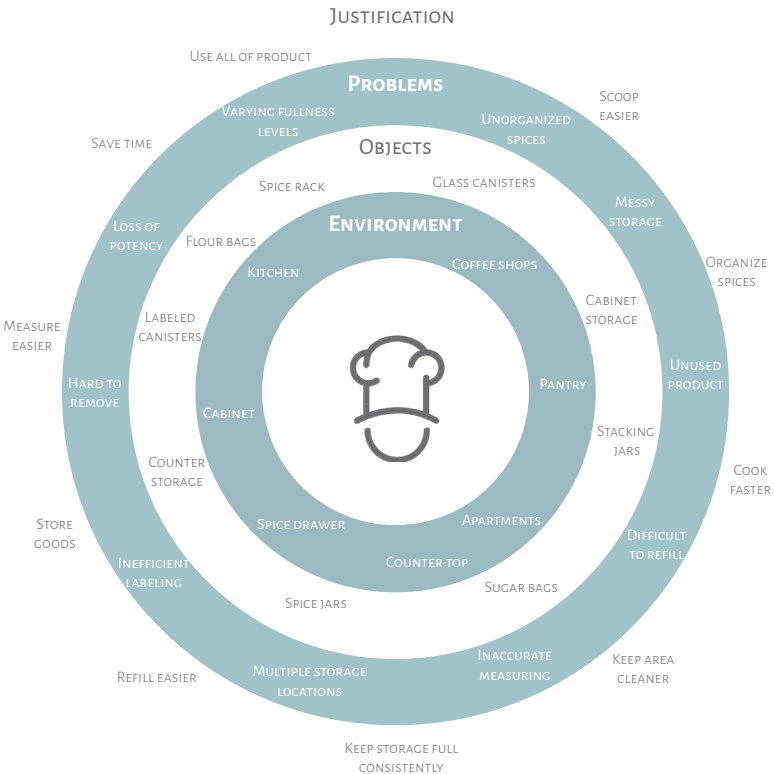
She prefers the look of the more traditional containers because they are more **aesthetically pleasing** to have out on a counter top.

Persona Three: The novice

Joseph is young engineer who likes to cook for himself, but is not very experienced. He still needs to measure ingredients out so **easy scooping and leveling** would be great for him.

Joseph also doesn't use all of the spices found in spice racks, he wishes there was a more **customizable** option.

User Experience/Environment



The professional

Age: 35-50
Gender: Female
Occupation: Caterer
Cooking skill level:

Bio:

Kay is a working mom as well as a caterer. She gets paid for her meals so its important she is able to cook in a clean and **organized** environment. Because she is usually in a hurry making sure her meals are delivered on time, she needs to have her containers **full at all times** with **easy access** and ready to be used.

Information:

-Likes to keep products stocked

-Likes to use the old before fresh

-Likes tidy storage

- Hates having to store an inch of something just waiting to refill

- Doesn't like the need for double the amount of storage needed

- Likes to have containers out

Insights:

- It is important to have a way for goods to be refilled in a way that allows the old to be used first

-Make refilling easier and quicker so that containers can be full

- Eliminate the need for second storage location

- Needs to be aesthetically pleasing for all styles

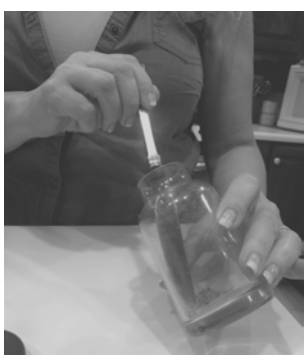
Usage:

Cooking:

Baking:

Spices:

Dry goods:



Breaking up Old Spice

Refilling New

Dry Goods Storage

Running Low

Scooping Old Out

Trying to Empty

The family cook

Age: 55-75
Gender: Female
Occupation: House Wife
Cooking skill Level:

Bio:

Rose loves cooking for her family and loved ones. She is famous fer her great meals and often has to make a lot of food for large groups of people. So its important that any spices or dry goods can be a **less messy** process. She prefers the look of the more traditional containers because they are more **aesthetically pleasing** to have out on a counter top.

Information:

-Just fills sugar on top of old, if she runs completely out then she washes it before refilling

- Has gotten weavels in flour

- When she cooks for a lot of people she wishes the system worked better because she needs more of everything

- Uses sugar and four the most

Insights:

- Refilling can be tedious and not conducive to using all of the product before refilling it

- Using product in a timely manner is important

- Different cooks need different systems based on their cooking and usage of different items

Usage:

Cooking:

Baking:

Spices:

Dry goods:

Primary Storage

Secondary Storage

Spice Drawers

Difficulty measuring

Multiple scoops

The novice

Age: 20-35
Gender: Male
Occupation: Engineer
Cooking skill Level:

Bio:

Joseph is young engineer who likes to cook for himself, but is not very experienced. He still needs to measure ingredients out so **easy scooping and leveling** would be great for him. Joseph also doesn't use all of the spices found in spice racks, he wishes there was a more **customizable** option.

Frustrations:

- Filling up teaspoons is difficult because of top
- Storage has a lot of spices that aren't used and can't be changed because they are labeled.
- They are hard to refill because the normal cap and the shaker has to be removed
- Takes a lot of counter-space

Insights:

- An easy scoop method would work better for measuring
- A more customizable approach would be beneficial so people can choose what spices they want
- If the shaker stays intact, an easier removal would be nice so you have the option to take it off
- Something smaller is better

Usage:

Cooking:

Baking:

Spices:

Dry goods:

Near Empty Containers

Difficulty Opening to Fill

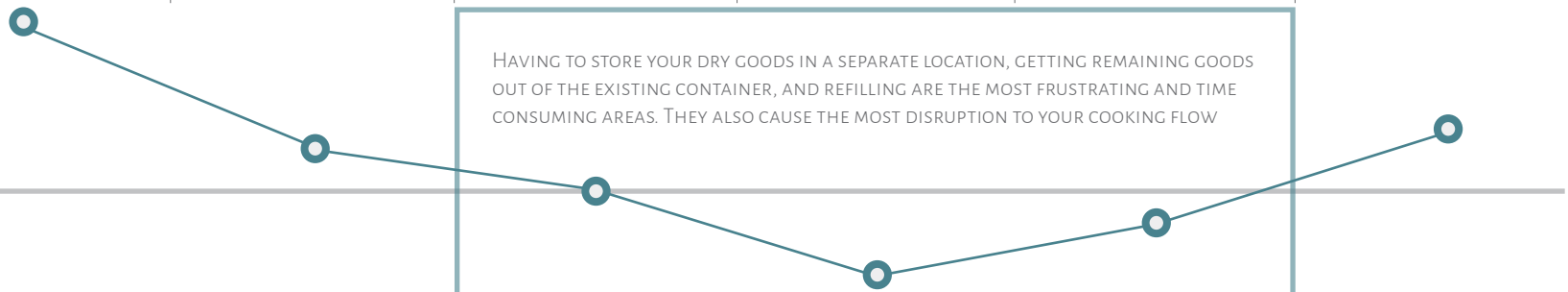
Difficult to Measure

Messing Measuring

Never Used Spices

Unopened Pre-labeled

Experience Map

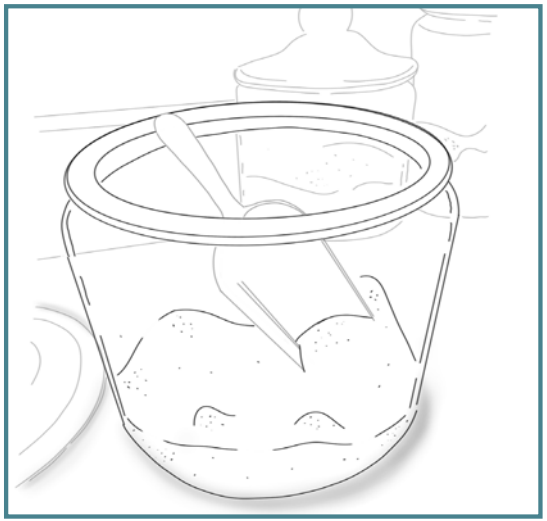
Steps	Start cooking/baking	See jar is empty	Get refill material	Remove all of old	Refill container	Resume cooking/baking
Actions	-Get out ingredients -Get our measuring cups and spoons -Get out pots and pans -Get recipe card	-Have half of ingredient already in -Realize there is not enough material	-Go to pantry/cabinet -Remove half jar or bag of needed good	-Try to dump/scoop out last bit of dry good -Leave small amount in bottom to refill on top of	-Dump or scoop dry good into container -Spill some amount on counter-top	-Clean up mess made by refilling jar -Return to recipe -Put remaining amount called for into meal
Thinking	- "I am excited to cook this food" - "Let me get set up so I can go fast"	- "Ugh, I thought there was enough" - "I hope I have enough" - "Remember what you already put in so far"	- "Where is that?" - "Found it"	- "I don't want this last bit to never get used" - "This is taking forever, I can't get it all, oh well"	- "This is making a mess" - "Great, now there is flour all over my counter" - "What a waste of product"	- "Okay, now I just have to clean this up" - "Back to the recipe - "Wait, how much did I already put in?"
Feeling	-Excited to cook	-Annoyed with the disruption of cooking	-Frustrated by search for product	- Agitated by trying to remove all of old product	- Anxious about mess being made	- Relieved to be back on task
Emotional Response						
Neutral						
Opportunities	- Combining measuring cups/spoons with storage - Make storage more customizable	- Having levels on container to show amount left in jar	- Reduce need for second storage location - Make spices/goods easier to locate	- Make goods easier/ quicker to remove - Keeping containers full at all times	- Make goods easier to refill without mess - Improve speed and accuracy of refilling goods	- Allow for easier use of goods/ spices - Make more accurate measuring for recipes

Having to store your dry goods in a separate location, getting remaining goods out of the existing container, and refilling are the most frustrating and time consuming areas. They also cause the most disruption to your cooking flow

Areas of Focus

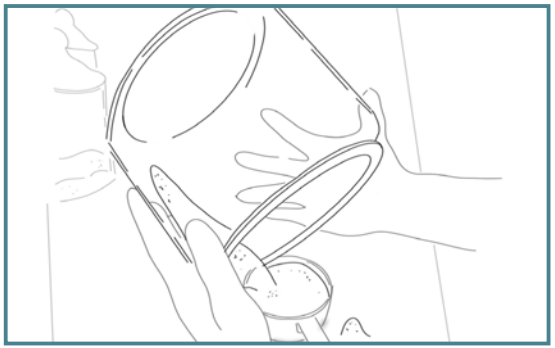
Storyboard

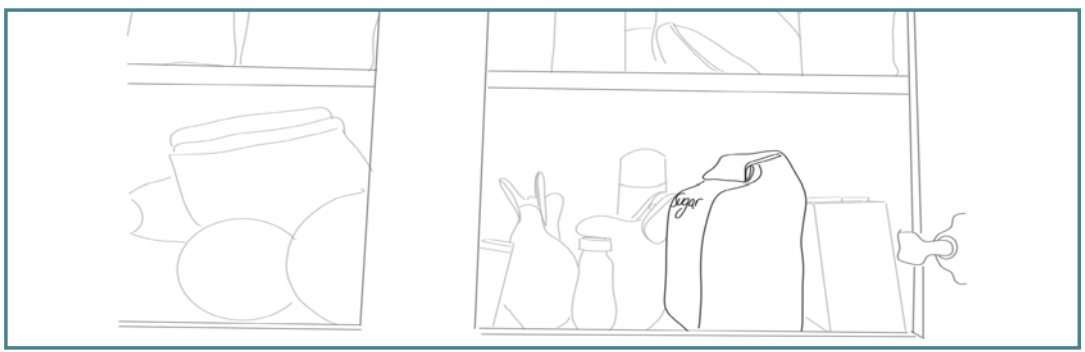
1. Dry good is almost gone. Most of the time people wait until they have used all of the product to refill which leads to lags in cook time.



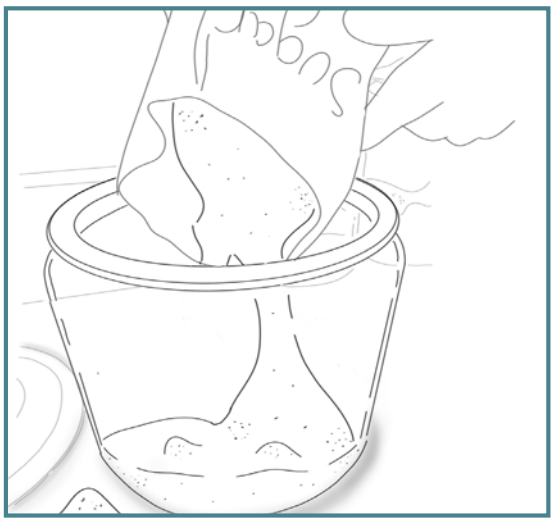
2. Get out as much as possible. Problems arise when trying to completely empty the container because the scoops can't get into the small corners.

3. Dump out remaining goods. To remove completely, often people have to tip the container over leading to a mess.





4. Find replacement dry goods in cupboard. The back-up storage for these goods is often messy and difficult to navigate through, particularly for spices.



5. Refill dry goods. The best way is to dump the bag over into the container leading to spills and mess, especially if the container isn't big enough.

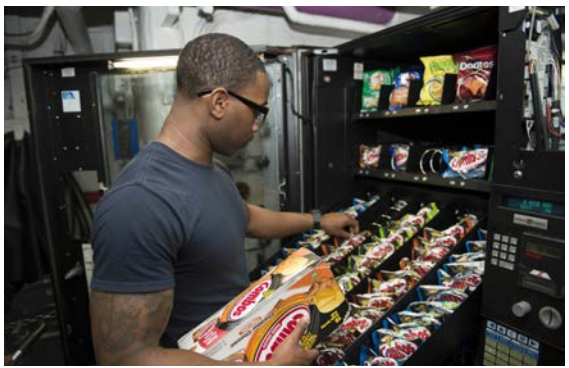
Cross Industry Innovation

What can be used?

All three of these industries use rotational stocking to ensure that their oldest material is used first. I want to incorporate this practice into my design by having what is oldest be presented to the user first.

Grocery Store

Vending machine

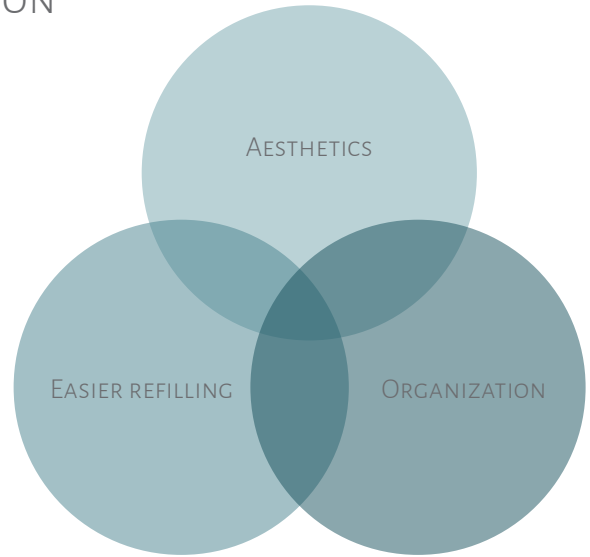


Restaurant

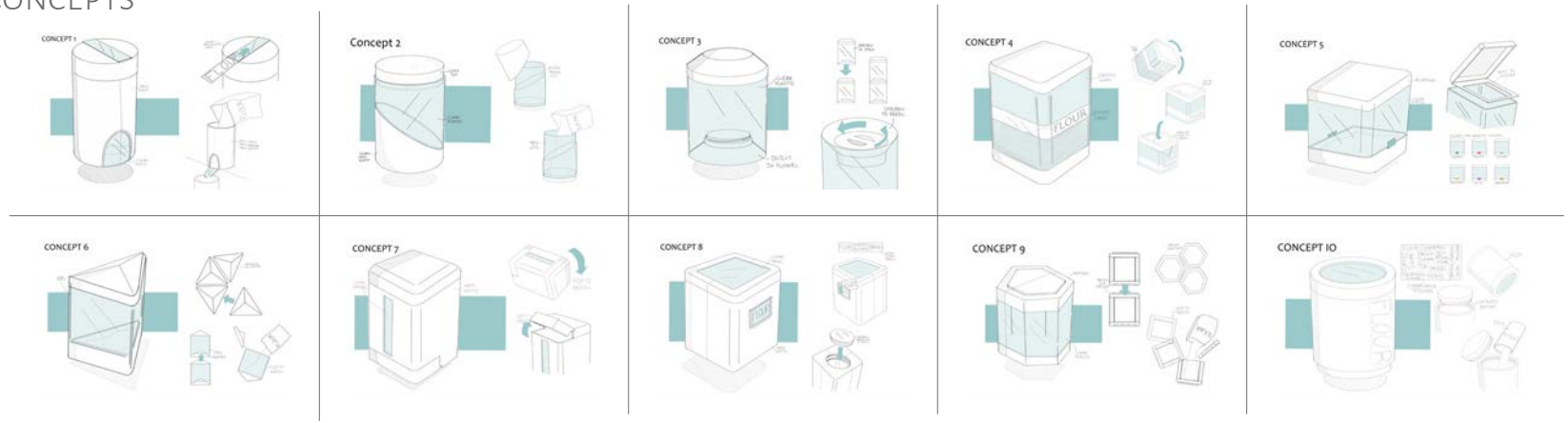
What can be improved?

While the idea of pushing older material forward it sound, all of these industries do this by unloading the old out, putting the new in, and then reloading the old on top, what I want to achieve is filling in a way that you don't have to remove the old material first. This will improve ease and speed of refilling while keeping the idea of rotating stock relevant.

Ideation



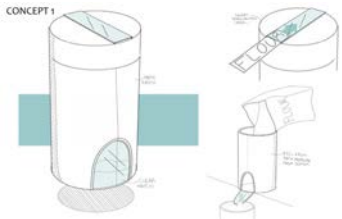
Concepts

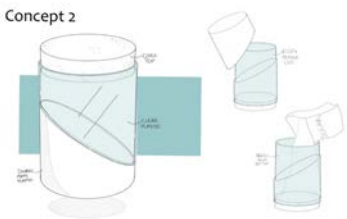


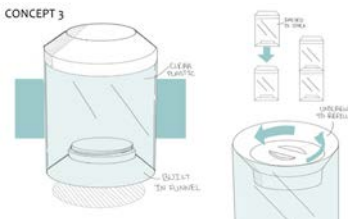
Concept Exploration

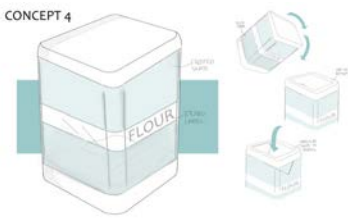
Ideation:

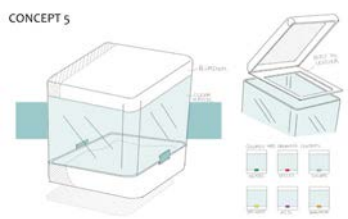
Concepts:



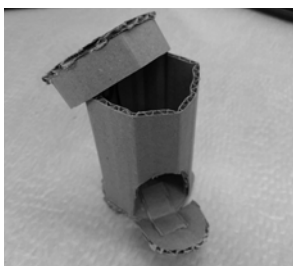


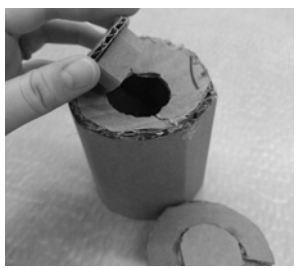


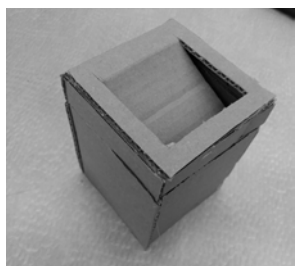


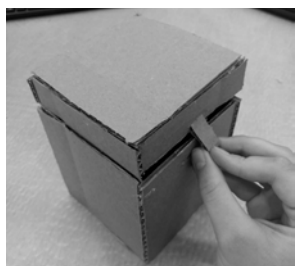


Mock-ups:









User Feedback

"I like the name insert, and that you don't have to flip it, but I don't think the concept would work technically."

"I like the labeling, but the mechanism isn't as good. I don't think I'd handle it well."

"I like the labeling system, maybe the set could come with a marker to write them."

"The angle might be too harsh, but it's a great idea, and it looks cool. It might be tough to get the tension fit to work."

"I like this, and how it's a little different from the others. "

"I don't like this as much, it's too modern, and I think product might get stuck."

"The funnel might sell better as an added feature. The stacking is nice, but it might make it hard to balance."

"This makes since, and I like that there is a place to grip to unscrew the bottom."

"I like this one, but I think it is a little contemporary looking for my taste."

"I like how the outside is flush and smooth. The cube would be good to maximize space, but it doesn't look as nice."

"This is simple, but workable."

"I like the square shape the best. I feel it would stack neatly and fit better."

"I like the scraper, but I don't like the way the tabs look, and having to remember what each of the colors mean."

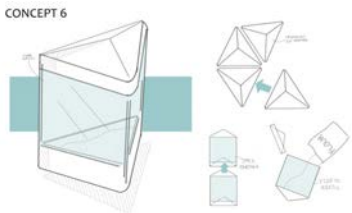
"I like the scraping tool, I would be worried about remembering what color is which though."

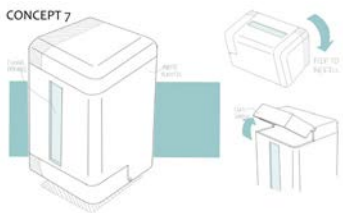
"I like the scraper, but I don't like the colored tabs. I prefer more subtle things."

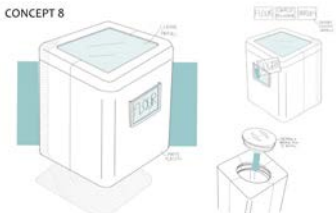
Concept Exploration

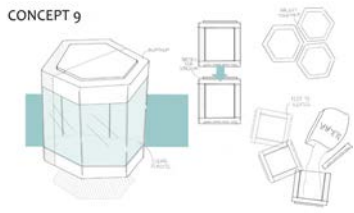
Ideation:

Concepts:









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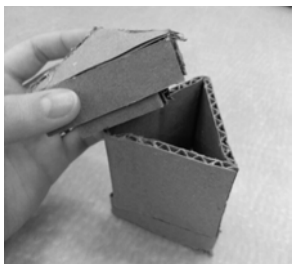
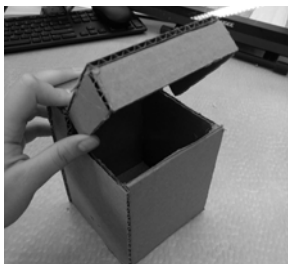
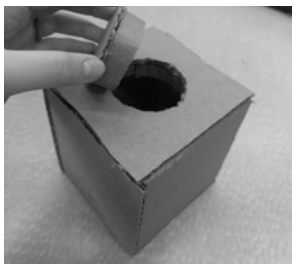
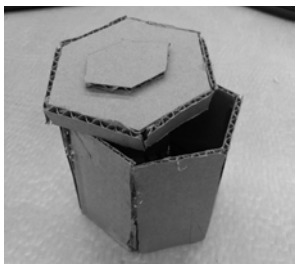








User Feedback

"Refilling wouldn't work with the bottom being pointed, also the tension fit wouldn't look as good through the glass."

"This is different, but I like the shape. Triangles fit in things."

"This is too contemporary."

"I'm not sure how the latch would work. I don't like the line it gives on the side, maybe you could smooth that ."

"I like the panel so you can see what's in there."

"I prefer the clear, and I like the ones that open straight up and down better."

"I like that the screw in is completely hidden until you need it. That is my favorite part of this design."

"I like the open top window, and the security of the screw in on the bottom."

"I love the slip in labeling for any of them, and the funnel."

"This might be better for spices, but it would be impossible to see what was in a jar in the middle because of how they fit."

"I like the unique shape, but I'm concerned about how the lid will stay on."

"Honeycombs and nature patterns are in right now, but personally its not my favorite."

"I don't like the two materials on the lid, but I like the small bottom. It's a nice detail. The stickers seem wasteful."

"I would not pick this one, I think it would get dirty around the lid."

"I like the wide opening on the top and the bottom."

User Input

Favorite shape: Circular

Favorite labeling: Slot of number one

Favorite way to refill: Screw in of concepts three and eight

Favorite overall: Number two

Least favorite: Four or seven

What do you wish you could combine:

-Clear body of two
-Flush look of four
-Security of screw in lid

Favorite shape: Square

Favorite labeling: Slide in of concept eight

Favorite way to refill: Screw in of number three for the added security

Favorite overall: Number eight

Least favorite: Concept one

What do you wish you could combine:

-The look of eight
-Swinging lid of number seven

Favorite shape: Square

Favorite labeling: Slide in of concept eight

Favorite way to refill: Number four allows for the biggest refill space

Favorite overall: Number four

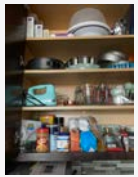
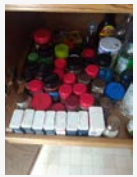
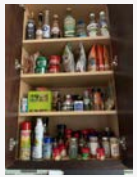
Least favorite: Concept one

What do you wish you could combine:

-Shape and large refill area of four
-Slide in label from number eight
-Tension fit of number two

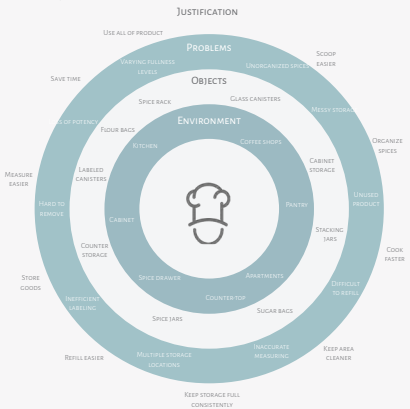
Discovery Map

Discover

Dry goods and spices are something that everyone has, but often have very disorganized storage space for. Leading to confusion and difficulty cooking.

Where is the problem?



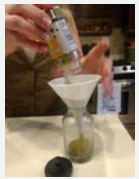
Current types of storage:

Functional Storage

Labeled Storage

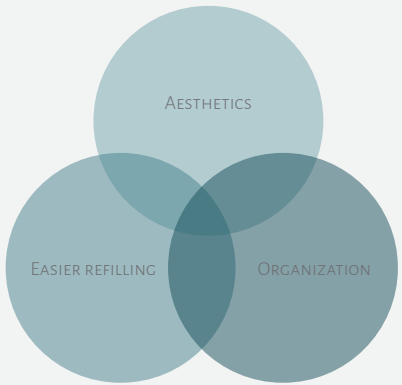
Decorative Storage

Define



The reason there are often two storage locations is because the product itself is difficult to refill. In addition, it is often filled on top of old, leading to waste or non-use of product.

What is most important?



User Wants:

Customization

Easier Refilling

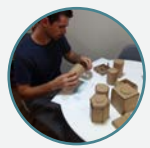
Constant Fullness

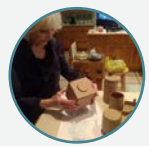
Design

In large stocking situations such as grocery stores, vending machines, and restaurants a rotational storage system is used to ensure that the oldest material is used first.

What are possible solutions?

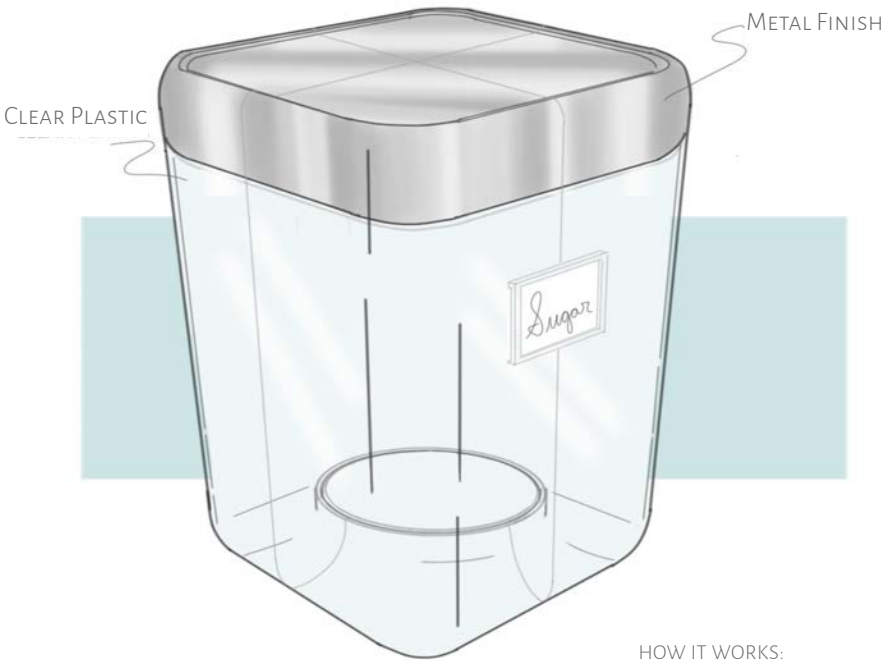
User Feedback:

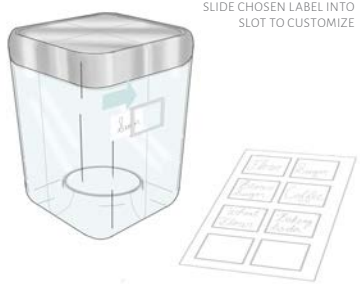

Manufacturing


Usability

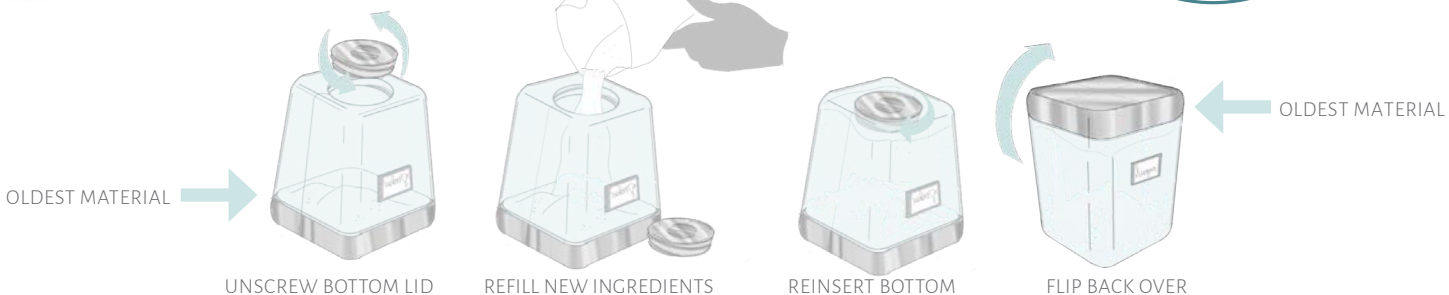
Aesthetic

Final Direction





How it works:



FRESHWARE

FLIP – FILL – FRESH

Freshware is a unique and innovative dry food storage that helps to keep your cabinets and counter-tops organized while also allowing you to make the best usage of your product by refilling from the bottom and pushing the oldest material to the top to be used first.

Specifications

- Indented lid for easy stacking
- Gasket for air-tight seal
- Clear body to assess fullness
- Label slot to name contents
- Concave bottom to funnel material in
- Threaded cap to ensure tightness of closure

FRESHWARE

FLIP - FILL - FRESH

How it Works

1. Write label and slot it into container

2. When contents get low, flip container over

3. Unscrew threaded bottom piece

4. Refill new dry good on top of the old material

5. Re-screw in bottom to ensure secure hold

6. Flip container right side up and continue usage

Sizing

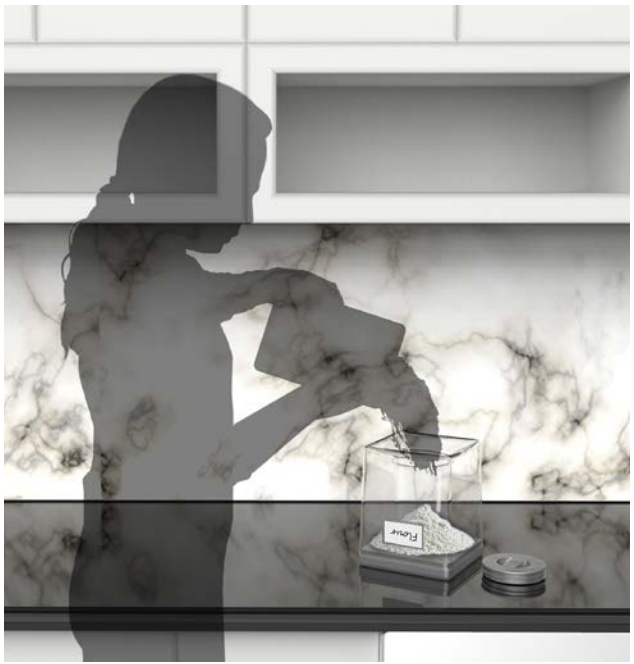
These containers would come in three different footprint sizes to accommodate any usage that may be needed for organizing and storing dry goods. The largest would be kept on the counter for every day items such as flour. The medium size would be kept in the cabinet or pantry for things such as rice or beans. Finally the smallest would be for spices. All containers refill from the bottom to ensure that your oldest material is being used first, and so you don't have to scoop out any old before refilling the new.

Chocolate Chips
Rice
Oats
Macaroni
Granola
Coffee
Beans
Almonds
Oregano
Paprika
Thyme
Pepper
Cinnamon
Basil
Cumin
Curry
Mint
Nutmeg
Salt
Rosemary
Garlic Powder
Chili Powder
Brown Sugar
Powdered Sugar
Flour
Sugar
FRESHWARE
FLIP - FILL - FRESH

FRESHWARE

Flip

Flipping Freshware over allows the oldest material to fall to the top of the container to be used first and lets the user easily keep their canisters full constantly.



Fill

Filling Freshware from the bottom is easy with the funneled bottom and tight seal threaded cap. When you're done simply flip it back over.

Fresh

Products stay fresh and organized in Freshware by using the oldest first and staying constantly full therefore negating the need for a second storage location.

COLOR STUDY

Proof of Concept

1.Contents are running low

2. Flip Freshware over

3. Unscrew bottom closure

4. Refill new contents

5. Re-screw bottom closure

6. re-flip container to put old on top

FRESHWARE

FLIP - FILL - FRESH

Thank You