

Field Study Report

District Market Shopping Experience

Heidi Wang 24/10/20 HCDE 313

Table of Contents

Goal and Context.....	3
Motivation.....	3
Design Question.....	3
Research Questions.....	3
Methods.....	3
Approach.....	3
Participants.....	4
Areas of Focus.....	4
Data Recording and Analysis.....	4
Results and Recommendations.....	4
Finding 1.....	4
Finding 2.....	5
Finding 3.....	6
Prioritization.....	6
Discussion.....	7
Summary.....	7
Future Work.....	7
Reflection.....	8
Appendices.....	8
References.....	8
Appendix 1. Planning materials.....	8
Fig. 1.....	9
Appendix 2. Field notes.....	9
Observation 1.....	9
Observation 2.....	12
Observation 3.....	15
Appendix 3. Data analysis materials.....	18
Fig. 2.....	18
Fig. 3.....	18

Goal and Context

Motivation

The University of Washington (UW) made 6,571 million dollars of total operating revenues in 2022 [1]. The UW operates the District Market (DM), a store with one branch on west campus, DM Alder, and one on north campus, DM Oak. The DM primarily serves “the nearly 10,000 students living on campus” [2], but some aspects of their business face much criticism, including their pricing [2][3][4] and sustainability [5] practices.

The DM offers many different types of foods and products for different purposes. People can go there to buy groceries, prepared meals, including hot, fresh, and frozen meals, snacks, household products, etc.

This wide variety of items may be able to be better optimized to match customers’ needs. Especially during peak hours, such as lunch, long lines often form at the register and extend through the store, partially obstructing walkways for other patrons. Workers are often stocking shelves with carts of boxes that can also obstruct access.

As one of the places where students living on campus can spend their limited dining money [3], the DM is a central location on campus and addressing user pain points is impactful.

Design Question

The above observations motivate the design question.

How can the District Market shopping experience on campus be improved?

Research Questions

To help structure the field research to answer the design question, the following research questions are posed.

- When is the DM more or less busy?
- Who purchases products from the DM?
- What do people buy at the DM?
- Where do people spend the most time in the DM?
- What are people doing at the places where they spend the most time in the DM?
- Do people spend more time actively, or passively waiting to be able to take an action?

Methods

Approach

Three observations were done in total. The former two were of DM Oak and the latter one was of DM Alder. Each field observation session was half an hour long. During each session, I focused on research questions centering around the focal points. I also collected other data that was unexpected or unordinary as it arose. I followed individuals’ journeys throughout the store, and

also took in the general atmosphere and flow of people in the store. At the end of each session, I wrote concluding notes about the overall findings learned from the session and noted the actual runtime of the study. After each session, I cleaned up my notes and processed them as necessary to make the notes more informational when referenced later on during analysis.

Participants

The typical participants observed were customers who entered the store, whether or not they made purchases, who were observed walking around the customer-facing areas of the store. A customer was most often an undergraduate student in the early 20s range and often a first year student. There were also other customers of different years and ages. Participants also included people working in the store, including cashiers, shelf stockers, and kitchen workers, at the cash registers, in the aisles, and in the visible areas of the kitchen, respectively.

Areas of Focus

To structure the field research, research questions were formed for each of a set of focal points. The use of focal points ensured coverage of a range of different aspects of the data. The focal points and corresponding research questions can be found in Appendix 1, Fig. 1.

Data Recording and Analysis

Observations were done at various points in the store where the main flow of customers could be well observed without obstructing their actions. This included the corners of the store, as well as at non-occupied points within the aisles. Notes were taken on a mobile device, which was also used to keep track of time.

Field notes for each of the three observations can be found in Appendix 2. Observation data was analyzed through affinity diagramming, conducted through a digital note board. Key observations, numbering 18 in total, were selected from the field notes, as shown in Appendix 3, Fig. 2. Key observations were grouped into five clusters, as shown in Appendix 3, Fig. 3: 1: Fresh food popularity, 2: Customer tendencies - items, 3: Customer tendencies - rhythm, 4: Store setup - positive, 5: Store setup - negative.

Findings were then extracted based on the data and recommendations were created and prioritized.

Results and Recommendations

Finding 1

Label: Popularity of fresh food

Description

Fresh food is the most popular category of items at the DM. This category includes the hot bar, soup bar, sushi and salad bar, fresh packaged foods, fresh vegetarian and vegan foods, and baked goods.

Evidence

- many customers bought food from the hot bar
 - Obsv 1, time 11:36; time 11:46; Obsv 3, time 11:16
 - The hot bar was often out of stock on some items.
 - Obsv 1, time 12:06, Obsv 2, time 16:39
- the baked goods display was also relatively popular
 - Obsv 1, time 11:36; time 11:51; Obsv 2, time 16:07
- the fresh foods sections overall received a lot of traffic
 - Obsv 2, time 16:17; time 16:29; Obsv 3, time 11:05; time 11:10

Recommendation

- Offer a greater variety of fresh foods. This may include both foods from a wider range of regional cuisines and a wider variety of foods from each cuisine.
- Expand the size of the fresh food sections. Stock more items each time.
- Restock fresh food more frequently, especially hot foods.
- Place all the fresh food sections near each other so that customers can more easily cross reference between their options for fresh food. Particularly, place the baked goods section near the rest of the fresh food sections, instead of across the store from them. The same applies to a lesser extent to the fresh vegetarian and vegan foods section.

Finding 2

Label: Layout of fresh food

Description

The layout of the fresh food sections have aspects that negatively impact customers' experiences. This is especially applicable to the hot bar, but also applicable to the other fresh food sections.

Evidence

- the hot bar had some cross contamination
 - Obsv 1, time 11:57; Obsv 2, time 16:31
- the hot bar did not have much space to close the box after filling it
 - Obsv 1, time 12:06; Obsv 2, time 16:12
- some utensils were located by the food, some to get at checkout
 - Paper napkins are provided at the hot bar, but not utensils.
 - Chopsticks are provided at the sushi and salad bar, but no utensils are offered at other fresh food sections.
 - Obsv 1, time 11:57; time 12:06, Obsv 2, time 16:39

Recommendation

- Expand the counter space of the hot bar. Leave more space between each bin of hot food. Place all bins directly at the counter, instead of having some bins behind others, to reduce

cross contamination. Dedicate empty counter space for customers to close their boxes after getting their items.

- Provide all utensils in one place.

One option is to provide all utensils at the place where customers pick up their desired food items. This is where customers are selecting items, as opposed to the register, where they are simply providing all of the items they already chose to the cashier. This would also reduce mandatory interpersonal interaction for customers who prefer that.

Another option is to provide all utensils at the register. This would allow customers to have their hands free to pick up more items while shopping, and they can get their utensils and bag their items at the register.

Finding 3

Label: Shopping baskets

Description

The DM provides shopping baskets and carts to its customers, but customers do not use them, even when they may find them useful.

Evidence

- the shopping baskets and carts were usually not used
 - No customers were observed with shopping baskets in Obsv 1.
 - Only 2 customers were observed with shopping baskets in Obsv 2, and 3 in Obsv 3.
 - Obsv 1; Obsv 2; Obsv 3
- some customers had many items in their hands while shopping
 - Obsv 1, time 11:59, Obsv 2, time 16:31
- the shopping baskets and carts are black, located between two racks
 - Obsv 2, time 16:17

Recommendation

- Place a sign near the entrance of the store indicating where the baskets are stored. This is a low investment change that can directly let customers know about the baskets.
- Place the shopping baskets and carts in a more noticeable area. In the location they are currently placed, customers may miss them. Consider a placement that avoids obscuring their view by other racks.
- Provide shopping baskets that are a more noticeable color. Black is a color that blends into the background very easily.

Prioritization

Finding 1 would have the greatest impact on the usability of the DM. Findings 2 and 3 are about accessory items, not the items which customers are directly purchasing. Food items can be considered the most important category of items which the DM provides to students, its largest

body of customers. Therefore, being able to provide more of the food items that are in the highest demand would be an important improvement.

Finding 2 affects both food safety and user experience. Improper food safety can affect who is able to use the services, and also decreases the quality of the service provided.

Finding 3 could improve the experience of some customers, but often customers are not purchasing large enough volumes of items to necessitate the use of such provisions. However, for those who do need it, it would be greatly beneficial if they knew that was an option.

Discussion

Summary

Many of the field notes were centered around food. Given that many customers of the DM would be students living on campus who are seeking to spend their dining money, this makes sense within the context.

The field study also indicated a greater importance of the hot bar than expected. It also informed the realization that DM Oak did have shopping baskets and carts, a fact that was not within the awareness before the study.

Preliminary research indicated that the DM does value feedback from its customers and use it in updating the services they provide [2][3]. This context is important for understanding the ways the DM already evaluates their services. The field observations noted that things such as inventory and placement within the store did evolve, an indication of the DM's continuous adjustments.

This field study had the limitation of observations being conducted over a short time frame of half a business week near but not at the beginning of the school year. This meant that larger trends of customer behavior across the year cannot be observed within this scope. Each observation was also limited in when they could be conducted and their duration and quantity, so the full range of customer behavior across the week and across each business day also cannot be observed.

This field study had the strength of being conducted by someone who is very familiar with the system that is being studied. This means that some things could be noticed more readily, because when fewer things are novel, it is easier not to get overwhelmed by everything that can be noted down. At the same time, this selectivity can be both a strength and a limitation. It is important to understand that the results and observations of the field study are noted with this perspective.

Future Work

The results of this field study suggest that the topics of fresh food from the DM, in a variety of capacities, and regarding shopping baskets can be worthy of further exploration through interview research. To narrow the scope of interview research, the topic of fresh food has

substantial range and can be the sole topic to focus on. Aspects such as how often the interviewee purchases fresh food from the DM, what kinds of fresh food they usually purchase, and following their user stories regarding particular situations or pain points they remember are all relevant future interview questions.

Reflection

For future field research studies, more structured observation may be beneficial. More frequent time stamps, a more defined notation format, and a convenient method for encoding each note, eg as an observation or an inference, could be useful for analysis after the observation session.

Conducting this field research study was an opportunity to practice concurrent observation and note taking skills, as well as prioritization.

Appendices

References

- [1] “2022 Financial Report | UW Finance”, UW Finance, Nov 2022, finance.uw.edu/uwar/annualreport2022.pdf.
- [2] Ashley Ingalsbe, “Unpacking District Market prices”, The Daily, 17 Oct 2024, https://www.dailyuw.com/news/unpacking-district-market-prices/article_5f554010-8c37-11ef-9935-ef20ac494e0b.html.
- [3] Maeve Glackin-Coley, “How to make the District Market a true student grocery store”, The Daily, 7 Mar 2024, https://www.dailyuw.com/opinion/how-to-make-the-district-market-a-true-student-grocery-store/article_97197518-dc54-11ee-9e42-e70e72c303b2.html.
- [4] “District Market Tax : r/udub”, Reddit, 22 May 2024, https://www.reddit.com/r/udub/comments/1cyidg2/district_market_tax/.
- [5] Daimon Eklund, “Tote Bag or No Bag at District Market”, UW Sustainability, 9 Feb 2017, <https://sustainability.uw.edu/blog/2017-02/tote-bag-or-no-bag-district-market>.

Appendix 1. Planning materials

Focal Point	Example Research Questions
Family and Kids	Do any families come into the store? How do their behaviors differ from other patrons?
Food and drinks	What proportion of people are buying food items? What food items do they tend to buy? How much?

Built environment	How wide are the aisles? compared to the carts the staff use to stock the shelves? How many paths can customers take from one point of the store to another?
Possessions	Are people carrying bags, or shopping empty-handed?
Media Consumption	Are people wearing headphones while shopping? on their phones?
Tools and Technology	How are people's interactions with the POS system?
Demographics	Are there patrons who are not within the most common demographic?
Traffic	How long do people spend in the store? How quickly do they walk through? Do they browse the shelves or head directly to items they plan to purchase?
Information and Communication access	Are there prices posted for every item? Do people read the prices, or do they just grab what they would like to purchase?
Overall experience	Do people seem to be more or less positively affected when leaving the store, compared to when they entered?

Fig. 1.

Areas of focus.

The ten focal points and their corresponding research questions.

Appendix 2. Field notes

Observation 1

241011 Fri 11:36 dm oak

walking about the store

lunch time

energetic pop music playing

many people buying the hot foods

line of around 20 ppl

many people with backpacks

one person with a crutch

two people at the register

people chatting in pairs
many of them just staring and waiting
one with headphones, two on their phones

line of 10 people for the hot food

people stop by the fresh foods, spend a long time considering options, on the scale of a minute or two, going between the center fridge, the one to the side of the room, and the hot food section behind the center fridge

one person looks at the baked goods display

the meals section is located furthest in the store, all patrons going there travel through the entire store

one person stops by the dairy fridge

the checkout line forms in a narrow aisle between the freezers and the angled shelves

the hot foods line has cleared up quickly

the hot foods line consists of ten dishes, largely fried dishes, a rice section on the other side

there is a section where workers are cooking, one is ladling fruits

one person goes there and gets soup

another worker is packing fresh salad type foods

1146 the hot foods line picks up again, 5 ppl, three turn away

patrons generally seem very accustomed to using the hot foods section

two people spend some time looking, one turns away but stays by the area

1148 a worker carts out a refill for some of the dishes

the person who turned away joins the line

1150 the checkout line is shorter, 10 ppl, the two registers have changed, one cashier changed out

people are not rushing through the store

1151 one person looks at the instant rice and noodle section, then the frozen food section, drinks section, fruits, baked goods, picks out something from there

1152 checkout has only 1 person waiting
cashiers are efficient

1154 one person carries food items from another store in, makes a round, leaves

there are signs like menus posted on the sides of the kitchen window area, small, no bigger than individual item price labels

each hot food bin has a serving utensil

the labels for each food item in the "self serve hot bar" are placed in a single row behind all the bins, which are in a 2x5 formation

the stack of boxes to the side, 3 stacks of larger boxes, 3 of smaller ones, paper boxes

1157 a pair of people walk up, one takes a box, then puts it back and they leave

no utensils around the area, checkout can offer utensils

no covers on the food, they are placed in a heating mantle

food has fallen outside of some bins, some more saucy food also has sauce on the edges, some cross contamination

1159 one person carries a bowl of instant ramen to purchase under their arm while getting a small box of hot food, with their keys hanging on their hand holding the box as well

1200 a party of 3 older people ~40 comes in and talks while looking about the store at the prepared food items, one gets soup

another person ~30 buys a soup

1202 someone is adjusting the chips display, not wearing any attire identifiable as a hfs worker, but with a radio pack on his belt, black shirt, tan shorts

1203 the party of older people has each gotten food, one says let's go pay for [the food], they move more slowly through the store and are more interested in each section, stopping by the yogurt for a duration

a youth walks in quickly and grabs a yogurt reaching around them
 they each picked up a yogurt as well
 they move as a unit, while most other patrons move less cohesively

12:06 end observation

hot food is sold by the pound, weighed at the register, cashier asks whether you need a utensil
 soup is sold by the unit based on the container size
 two vegetable items, some potato, some meat items, some carbs
 broccolini, rainbow carrots, baked beans, macaroni and cheese, turkey corn dogs, chicken
 tenders, potato wedges, chicken samosas, bbq chicken, vegetarian nuggets
 three-4 items were out at the time, a worker came to restock
 there is no space / shelf to close up your box
 1213

Observation 2

241014 Mon 16:07 dm oak

walking about the store

before dinner time

energetic pop music playing

1607 one girl looks into the baked goods display

one dm worker pulls a cart carrying several cardboard box trays with items in it

the cart is waist level, narrow, with three layers

he is looking for the correct place to shelve the items on his cart, he looked on three different
 shelves before finding the spot

the store is quite empty, only around 10 ppl milling about

they are all generally walking in a quite leisurely manner

the sushi and salad bar is still full, the boxed foods are mostly still in stock, wrapped sandwiches
 have been mostly sold

the hot food bar has almost all items in stock

1612 one patron uses the edge of the counter to close their hot food box

the kitchen workers are not in the front of the window, but sounds of work are audible coming from the back

1613 the worker has come back out from the back with more items on his cart to stock

one girl comes in with a cross bag, grabs a drink and heads to checkout, very decisive

two workers at the register, a 3rd goes to a register across the aisle, they chat among each other

store playing disney frozen let it go

the last three observed patrons all had headphones on

1616 several people enter the store

all patrons have looked like standard college students

one person has a shopping basket

1617 two people stand for a minute at the sushi bar

all patrons have been individual shoppers

looking very preoccupied

prices are marked on the items or on the shelves holding them

no one has bought non food items yet

there are signs "Line begins here" and "Please form line queue this way [arrow left]" on a short above waist level shelf to the right of the area where patrons line up, not clearly in view /readily noticed

stack of shopping baskets, two carts, one stepping stool at the entrance of the store between two racks, not easily noticeable

10 racks of cold drinks, homogenous rows on does

some cleaning items have been stocked on the end of the first angled row, by the bread

the granola have been moved from their old location

similar shuffling is not uncommon

1623 hot food bar has 3 people at it, still the most popular area in the store /where people spend the most time and thus are most concentrated

soup station is empty

amount of people in the store has continued to remain similar

no one seen stopping by the produce section, frozen sweets section

the dispensers for loose snacks have been removed since last year

1626 a sign indicating "flatbread case is closed" is on the fridge for the food by pound

one girl gets soup, she has a backpack on, a friend comes up to her and they chat

more people come in, it is a few minutes past the start of a passing period

1627 a pair of people buy a loaf of bread

another person has a basket, with toilet paper in it, tissue paper, a can of chips

the angled aisles are taller than the average patron and completely obstruct the view, the fridge setups are shorter than eye level but often stacked with items on top

the stationery section is untouched

1629 another patron gets soup

there are 7 people at the hot food bar

the toilet paper guy is still looking at the household goods section

three other people also look at items from there, only one takes an item

1631 the hot food bar is running low on a small half of its items

one person is holding a drink from one of the campus cafes as they shop

there are still three cashiers, perhaps the third was added preemptively for the passing period and approaching dinner hour

there are food items on the floor around the hot food bar and on the counter

1634 the store is more empty than ever

stocking guy is still stocking

one cashier is squatting, all registers are empty of patrons

1635 many of the patrons have backpacks, basically all of them, one has sports gear, a racket
there is a remix of a popular pop song on the store radio 'since you've been gone'

1636 one patron has a box of chocolate nuts and a bell pepper, from the produce and snack nuts
section, stops and peruses the breads section across the aisle from it for a minute before selecting
a whole wheat five grain loaf, continues deliberating, walks further into the store

16:37 end observation

1639 five people walking opposite directions

the bell pepper person walks in a full loop around the whole store

there is a bag of ramen on the floor

pauses at the vegetarian prepared foods section, goes to checkout

the vegetarian fresh foods section is still full stocked, the other fresh foods sections stay as
stocked as they were at the start of observation, hot foods has not been restocked, half of them
are low

sometimes you have to ask the cashier for a utensil, they do not always offer, generally based on
what you purchase but not always

1641

Observation 3

241015 Tue 10:50 dm alder

walking about the store

before lunch time

energetic pop music playing

1050 waist level cart and ladder, workers stocking items

1052 one person with a badge walks by busily

tall green tiered cart with many boxes on it by the island of water bottles, unattended

1054 one person with a backpack and shopping basket, jacket on his arm, earbuds

store relatively empty, 10 15 people

kitchen workers busy, around 7-10 ppl actively working all around the kitchen

1055 one person leaning against a pillar on her phone holding a drink against her
people buying snacks

1056 a pair of people have been inspecting the snacks section since i arrived, unclear whether they are stocking, apron, but not in attire - standard worker vibe tho true

1057 two people have been in the produce section

one person walks through it, circles to the other side for a bag of tangerines

another person with a shopping basket

everyone has bags, mostly backpacks

1059 the girl waiting leaning on the pillar has left, the hot food bar has opened

it's a serving bar, the worker gets your food for you

the items are the same as the oak dm, but less range

they use different terminology - jojos

this store is subject to the same thing with items being moved around, generally the meat of the aisles stays the same though

the aisles are also angled, even taller than the oak ones

they have a tall fridge for drinks, the wall fridge is for dairy and meat products

also some wall fridges for frozen sweets and prepared frozen foods, wider range than dm oak

the vegetarian fresh foods are a whole fridge section away from the sushi bar, and both are across the store from the other fresh foods

1105 2 people wait at the deli case

the soup bar is in the middle of the store, perpendicular to the deli case but far away

there is a raw meat section by the sushi bar

1109 another person ordering at the deli case, many back and forths, checking quantity, changing selections, asking about the next type of food item

1110 one person walks briskly up to the fresh food fridge, grabs a pasta after a little deliberation

1111 the person gets their order, grabs a drink from the fridge across the way, goes to checkout, stands behind the checkout line entrance sign on their phone for a moment before going forward

despite the hot case being a serving system, it still is a popular part of the store /possibly the most popular

1116 two more people at the hot case, some spend more time along the counter rather than at the case itself

traffic has been pretty consistent

a worker is in the produce section looking at the fruits, they went to the fridge section

1118 a patron who looks older has a shopping basket, a bag in her other hand, and two bags on her shoulders

she goes to the meat section and gets some meat

11:20 end observation

checkout counter has registers on all sides, two /one facing the rest of the store are manned

two people line up

1122 now one on the far side and the nearest one to the line instead

traffic feels like it's picking up, it's also passing period

1124 the samosas are vegetable and by unit, corn dogs are full sized and also by unit, only 5 items samosas, corn dogs, steamed vegetable -broccoli, chicken tenders, jojos

different names for the same items at the two stores in the same system

Appendix 3. Data analysis materials

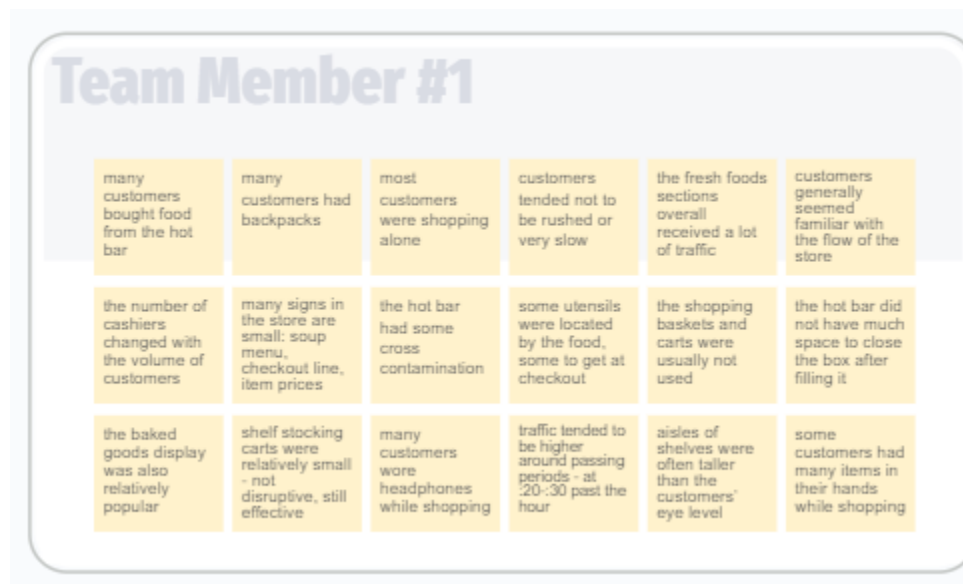


Fig. 2.

Key observations, numbering 18 in total, selected from field notes.

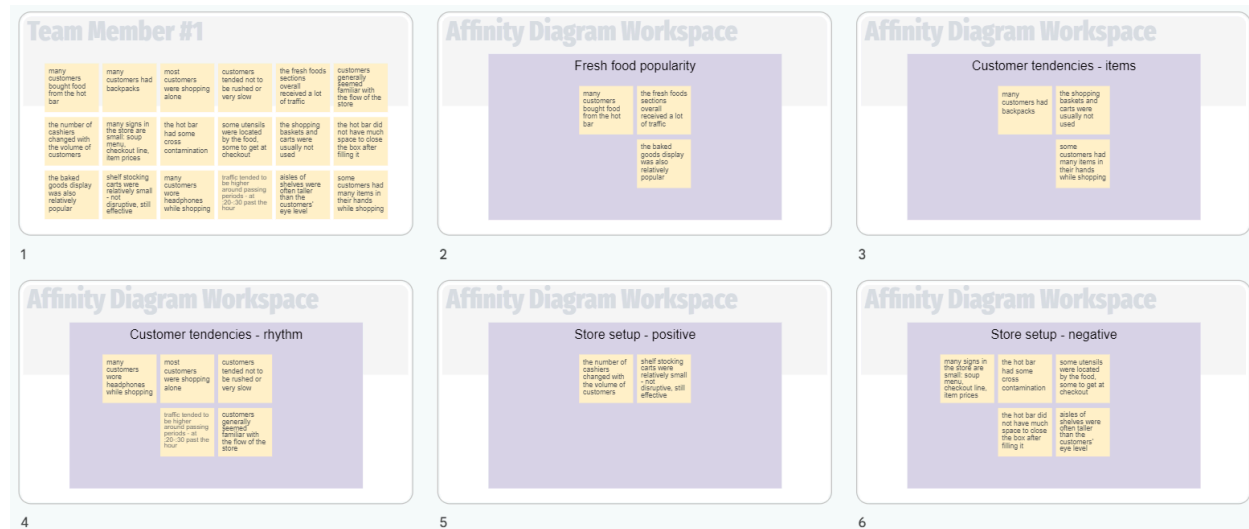


Fig. 3.

Affinity diagramming.

Slide 1: Key observations, shown in detail in Fig 1.

Slides 2-6: groupings of key observations into five clusters.