

## **Miro Link (Task analysis, GOMS, etc)**

[https://miro.com/app/board/uXjVLTdsStM=](https://miro.com/app/board/uXjVLTdsStM=/)

## **Possible Ideas**

- Free Popcorn
- Punchcard
- Daily promos (other freebies)
- Free samples

## **Research**

- Shoppers of all ages tend to shop in-person more frequently than shop online
  - Convenience is the leading factor in preference, with senses such as seeing and feeling objects coming after
  - Long lines and crowds discourage shoppers from going in-person
  - Food is the most shopped-for item in person, with furniture being most shopped-for online
  - <https://www.furnituretoday.com/research-and-analysis/in-store-or-online-consumers-crave-convenience/>
- More than 50% of shoppers use their phone to buy/research items in-store
  - Some stores are allowing customers to scan items as they shop
    - This allows shoppers to make purchases without a checkout as well as receive real-time discounts while making decisions
  - Some stores are using radio chips to simply scan customers' items in one go with radio chips
  - Gen Z and gen Alpha actually prefer in-person shopping to online shopping
  - <https://www.newsnationnow.com/business/your-money/retailers-stores-prepare-future/>
- While people prefer in-person shopping, there are lots of mixed feelings about the actual experience today
  - 38% of shoppers said they were most likely to have an unpleasant shopping experience at supermarkets, followed by department stores at 34% and convenience stores at 30%
  - Social aspects play a large role in shoppers' experience
    - Customers like being able to ask questions from staff
    - However, some customers' biggest complaints are about the amount/quality of staff, as well as amount of other shoppers
  - The percentage of people who have groceries delivered is not far from the amount bought in person
    - In January of 2022, about 58% of groceries were bought in-person
  - <https://www.supermarketnews.com/foodservice-retail/which-way-is-the-pendulum-swinging-with-in-store-vs-online-grocery-shopping->

- Providing food in addition to an existing experience entices consumers to participate in-person
  - “Free Popcorn!” *Retail Traffic*, vol. 36, no. 5, May 2007, p. 140. *EBSCOhost*, [research.ebsco.com/linkprocessor/plink?id=2cf2cca6-d53c-309c-93dd-c8055a254b22](https://research.ebsco.com/linkprocessor/plink?id=2cf2cca6-d53c-309c-93dd-c8055a254b22).
- Providing free stuff, such as popcorn, can be an effective method of promoting consumer interaction
  - Doherty, Katherine, and Matt Turner. “AMC Embraces Retail Traders With Free Popcorn After 1,400% Rally.” *Bloomberg.Com*, June 2021, p. N.PAG. *EBSCOhost*, [research.ebsco.com/linkprocessor/plink?id=2d234a66-873e-3432-9e34-d87edd20f9e2](https://research.ebsco.com/linkprocessor/plink?id=2d234a66-873e-3432-9e34-d87edd20f9e2).
- Popcorn machines may cost around \$150-250 as a one-time cost (practically irrelevant)
  - [https://www.amazon.com/s?k=popcorn+popcorn+machine&adgrpid=1330409640897872&hvadid=83150946003682&hvbm=bb&hvdev=c&hvlocphy=49240&hvnetw=o&hvqmt=p&hvtargid=kwd:83150961033526%3Aloc-190&hydadcr=13960\\_13473430&msclkid=fd5c83e77f5713b645e2e4e8bc0dc9f3&tag=mh0b-20&ref=pd\\_sl\\_1st8vfrpgx\\_b](https://www.amazon.com/s?k=popcorn+popcorn+machine&adgrpid=1330409640897872&hvadid=83150946003682&hvbm=bb&hvdev=c&hvlocphy=49240&hvnetw=o&hvqmt=p&hvtargid=kwd:83150961033526%3Aloc-190&hydadcr=13960_13473430&msclkid=fd5c83e77f5713b645e2e4e8bc0dc9f3&tag=mh0b-20&ref=pd_sl_1st8vfrpgx_b)
- Popcorn kernels may cost around \$30-45 per 50lb bag (60-90¢ per pound)
  - [https://www.webstaurantstore.com/reist-popcorn-50-lb-hi-pop-mushroom-popcorn-kernels/380HIPOPMUSH.html?utm\\_source=bing&utm\\_medium=cpc&utm\\_campaign=DSA%20%7C%20TEXT%20%7C%20Non%20Purchasers&utm\\_term=Food%20%26%20Beverage&utm\\_content=Food%20%26%20Beverage](https://www.webstaurantstore.com/reist-popcorn-50-lb-hi-pop-mushroom-popcorn-kernels/380HIPOPMUSH.html?utm_source=bing&utm_medium=cpc&utm_campaign=DSA%20%7C%20TEXT%20%7C%20Non%20Purchasers&utm_term=Food%20%26%20Beverage&utm_content=Food%20%26%20Beverage)
- Walmart serves around 37 mil. people each day
  - <https://www.demandsage.com/walmart-statistics/#:~:text=Walmart%20serves%20nearly%2037%20million,255%20million%20customers%20every%20week>.
- Average serving size of popcorn is 2.5 cups or .04 lbs
  - <https://nikkispopcorn.com/blogs/news/how-much-popcorn-do-i-need-for-my-event#:~:text=The%20typical%20popcorn%20serving%20is,your%20estimate%20up%20or%20down>.
  - [https://www.aqua-calc.com/calculate/food-volume-to-weight#google\\_vignette](https://www.aqua-calc.com/calculate/food-volume-to-weight#google_vignette)
- Works out to about \$888k or \$1.332 mil per day = \$324.12 mil or \$486.18 mil per year
- Walmart makes ~ \$148 Bil. per year
  - <https://247wallst.com/investing/2024/01/28/this-is-how-much-money-walmart-makes-every-year/#:~:text=Walmart%20reported%20a%20gross%20profit,producing%20and%20distributing%20goods%2C%20however>.
- Works out to 0.22% or 0.33% decrease in profit assuming everyone eats popcorn & there is no increase in revenue from popcorn

## Interview Questions

- Do you usually prefer to shop online or in person? Why?
- Do you find it more difficult to find the products you want to buy online or in person?
  - When shopping in person, how much time do you spend looking for parking, standing in lines, etc...?
  - When shopping in person, how would you describe your experience with customer service?
  - Do you have anything to complain about shopping in person?

- Would you be more willing to shop in person if there were some kind of reward system in place (ex. Coupons, promo items, etc)
- How often do you take advantage of in store promotions?
- Do you feel that in store promotions are usually catered towards your interests?
  - If not, then what kind of in store promos would interest you?
- Would you eat free popcorn if a store offered it?

## Interview Data (Major Trends)

- Easier to ensure the quality of products in person
  - Lack of misleading photos, easier to inspect item
- Customer service better in person
- Online is more convenient/efficient
  - No travel or wait times (parking/lines) to order
  - Easier to find products/prices
- Online makes up for lack of product in person
  - Out of stock/not locally stocked

Overall data below:



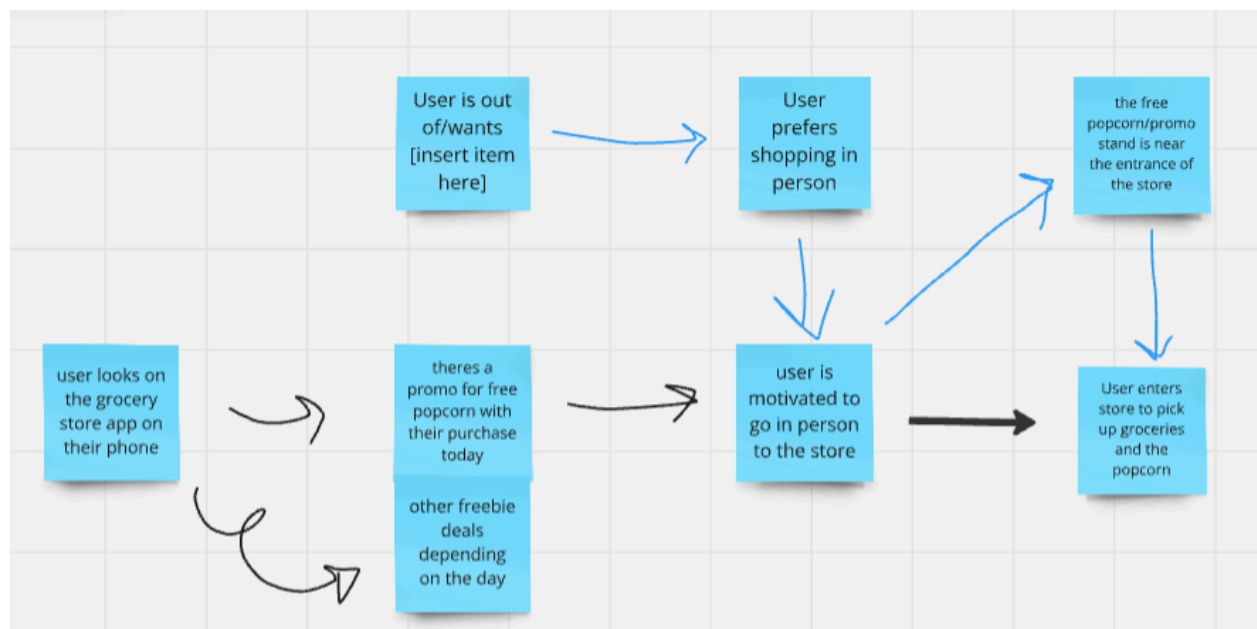
## **Grocery Store Systems & Socio-technical implications**

- Free popcorn (& other possible promos)
  - Free food
    - People like free things, including food
  - Some people don't like popcorn
    - Others really enjoy popcorn
      - Would probably average out to people like popcorn or they would like it if it were given out for free
  - Encourages use of technology in the form of popcorn popping machines
  - Encourages interaction with people taking their freebies
  - Discourages use of technology by enticing people to shop in-person rather than online
  - Potentially encourages interpersonal interaction if popcorn is distributed by store employee
- Inventory
  - Keeps track of how much free + not free popcorn is available + how much is taken
    - Also other foods/items
  - Encourages use of technology through digital management systems (spreadsheets, automated inventory tallying, etc)
- Facilitation facilitators
  - Facilitate the facilitation of popcorn related facilities (cleaning/refilling popcorn maker, etc)

## **GOMS**



## Example Scenario



## Video Ideas/Script

Final Video Link: <https://youtu.be/I4vz6FKSqS8>

Required length: 2:00 - 2:30 (minutes)

Required style: Paper cut-out/popsicle stick puppet show (animated or live performance)

### Roles

- Narrator: (Carlton)
- Online Shopper (OS): (Amelia)
- In-person Shopper (IS): (Mason)
- Employee: (Emma)

### Script:

#### (Intro)

**Narrator:** People today are leaning more toward convenient ways to purchase what they need. Online shopping platforms have become a top choice for many consumers, as it offers a more convenient and efficient way for customers to purchase. Yet, one important factor remains: the experience.

Our goal is to create an environment in physical stores that is not only comfortable and convenient but also engaging and enjoyable. Here we see two roommates discussing the best method of buying groceries: ordering them online, or buying them in person.

#### (Scene)

**OS:** Hey, do we need anything? I'm going to order some groceries.

**IS:** Order them? Why not just go into the store to buy them?

**OS:** Why would I do that? Then I'd have to drive to the store, walk around, and I don't even get anything to show for my effort.

**IS:** So you adventure out of the house, get some exercise, and even get some free popcorn for your extra effort.

**OS:** Free popcorn?

**IS:** Well, yeah! Granted, it might not be popcorn. It might be a candy bar, a drink, or even a keychain!

**OS:** Wait, what are you talking about? Stores don't just give stuff away.

**IS:** They do now!

**Narrator:** It's true! In order to incentivize in person shopping, some stores may offer promotional deals, such as free snacks.

(Scene 2)

**Narrator:** Now we see our two roommates at the store, talking with an employee.

**Employee:** Welcome to the grocery store! Here, grab a bag of popcorn, on the house!

**OS:** Wow, you were right! But won't giving away all this free food hurt their profits?

**IS:** Nope! Take popcorn as an example: If you look around for bulk popcorn, you'll find you can buy it for around 60 cents a pound. Couple that with businesses' ability to buy bulk for extra cheap, and the average serving size of popcorn being one-twentieth of a pound, and stores are definitely going to attract more money than they'll be losing!

**Employee:** Giving out freebies can also incentivise customers to try new products that they may end up liking, so they'll end up buying more in the future.

**OS:** That's pretty cool! I think I'll come back in person whenever I need groceries again.

**Narrator:** And just like that, physical stores get another win over online shopping.

## Works Cited

Amazon. (n.d.). Popcorn machine. *Amazon*.

[https://www.amazon.com/s?k=popcorn+popcorn+machine&adgrpid=1330409640897872&hvadid=83150946003682&hvbmt=bb&hvdev=c&hvlocphy=49240&hvnetw=o&hvqmt=p&hvtargid=kwd-83150961033526%3Aloc-190&hydacr=13960\\_13473430&msclkid=fd5c83e77f5713b645e2e4e8bc0dc9f3&tag=mh0b-20&ref=pd\\_sl\\_1st8vfrpgx\\_b](https://www.amazon.com/s?k=popcorn+popcorn+machine&adgrpid=1330409640897872&hvadid=83150946003682&hvbmt=bb&hvdev=c&hvlocphy=49240&hvnetw=o&hvqmt=p&hvtargid=kwd-83150961033526%3Aloc-190&hydacr=13960_13473430&msclkid=fd5c83e77f5713b645e2e4e8bc0dc9f3&tag=mh0b-20&ref=pd_sl_1st8vfrpgx_b)

This source contains listings for multiple popcorn machines, and was used to create an estimate of how much a high-quality popcorn machine would cost.

Aqua-Calc. (n.d.). Calculate food volume to weight. *Aqua-Calc*.

[https://www.aqua-calc.com/calculate/food-volume-to-weight#google\\_vignette](https://www.aqua-calc.com/calculate/food-volume-to-weight#google_vignette)

This source calculates food volume to weight conversions, which we used to calculate the average serving size/weight of popcorn.

Dorn, A. (2024, February 20). Retailers, stores prepare for the future. *NewsNation*.

<https://www.newsnationnow.com/business/your-money/retailers-stores-prepare-future/>

This source was used to explore possible ideas and opportunities for stores to implement new technology to the shopping experience. There was also additional data on peoples' opinions and preferences when it comes to shopping in-person.

Friedrick, J. (2024, October 14). In-store or online? Consumers crave convenience. *Furniture Today*.

<https://www.furnituretoday.com/research-and-analysis/in-store-or-online-consumers-crave-convenience/>

This source was used to get a general idea of where people stand on in-person vs. online shopping, as well as the factors that go into people's preferences.

Maxwell, C. (2024, January 28). This is how much money Walmart makes every year. *24/7 Wall St*.

<https://247wallst.com/investing/2024/01/28/this-is-how-much-money-walmart-makes-every-year/#:~:text=Walmart%20reported%20a%20gross%20profit,producing%20and%20distributing%20goods%2C%20however>

This source was used to gather information on Walmart's annual sales in order for us to then evaluate the amount of profit the chain would lose if it implemented something such as free popcorn for customers.

Nikki's Popcorn Company. (n.d.). How much popcorn do I need for my event? *Nikki's Popcorn*.

<https://nikkispopcorn.com/blogs/news/how-much-popcorn-do-i-need-for-my-event#:~:text=The%20typical%20popcorn%20serving%20is,your%20estimate%20up%20or%20down.>



This source was used to get an idea of how much popcorn stores would need to make for incoming customers, as well as how large the portions should be.

Redman, R. (2023, February 7). Which way is the pendulum swinging with in-store vs. online grocery shopping? *Supermarket News*.

<https://www.supermarketnews.com/foodservice-retail/which-way-is-the-pendulum-swinging-with-in-store-vs-online-grocery-shopping->

This source provides more detailed reasoning as to why people choose to shop online versus in-person. There is also data from recent years that sums up the amount of profit being made with each option.

Shewale, R. (2024, April 11). Walmart statistics. *Demand Sage*.

<https://www.demandsage.com/walmart-statistics/#:~:text=Walmart%20serves%20nearly%2037%20million,255%20million%20customers%20every%20week.>

This source provides detailed numbers for information about Walmart such as average number of customers per day, number of locations in the US, yearly profit, etc..

WebstaurantStore. (n.d.). Reist popcorn 50 lb hi-pop mushroom popcorn kernels.

*WebstaurantStore*.

[https://www.webstaurantstore.com/reist-popcorn-50-lb-hi-pop-mushroom-popcorn-kernels/380HIPOPMUSH.html?utm\\_source=bing&utm\\_medium=cpc&utm\\_campaign=DSA%20%7C%20EXT%20%7C%20Non%20Purchasers&utm\\_term=Food%20%26%20Beverage&utm\\_content=Food%20%26%20Beverage](https://www.webstaurantstore.com/reist-popcorn-50-lb-hi-pop-mushroom-popcorn-kernels/380HIPOPMUSH.html?utm_source=bing&utm_medium=cpc&utm_campaign=DSA%20%7C%20EXT%20%7C%20Non%20Purchasers&utm_term=Food%20%26%20Beverage&utm_content=Food%20%26%20Beverage)

This source is an example of how much an average pound of popcorn would cost, which we were able to use to compare this to a chain's daily spendings (such as Walmart).