Team Team Team's Project Phase 2 Report

Andreas Alexander, alexa376

Felix Indrawan, indrawa1

Hansel Ernst Ferari

Longyu Li, lilongy1

Jimmy Yu, yujimmy1

Saad Syed Ali, alisaad2

CSCC10

Naureen Nizam. PhD

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Persona(s), Scenario(s), HTA, and User Details

The following are three personas, two scenarios and a HTA that describe tasks based on problem/solutions from phase 1.
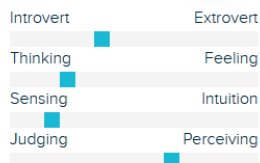
Mary Lam

"A good business has good business"

Age: 62
Work: Podcast host
Family: Married and has grandkids
Location: Markham, ON

Personality

Introvert	Extrovert
Thinking	Feeling
Sensing	Intuition
Judging	Perceiving

Goals

- Looking to review business sites like Costco
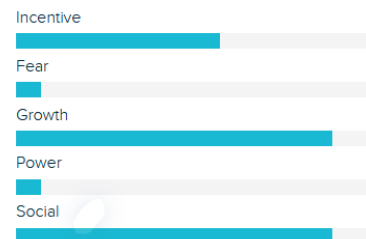
Frustrations

- Cataract
- Age-related Macular Degeneration
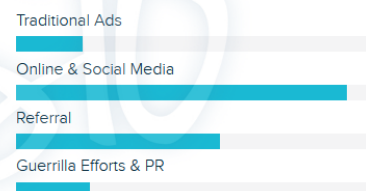- Websites with visual clutters

Bio

Being a business genius, Mary is a host of a popular business podcast at 62. On her podcast, she discusses various business practices that companies do. Recently, she chose to discuss Costco for one of her podcast episodes, and for one of the segments, she reviewed Costco's online site.

Due to her old age, she has developed age related vision problems like Cataract and Age-related Macular Degeneration (AMD). Though her computer literacy is high, she still has trouble dealing with sites that has visual clutters. She often uses online services mostly just to communicate with her fans, and family through online communication sites, and also to review those business sites for her podcast.

Motivation

Incentive	
Fear	
Growth	
Power	
Social	

Preferred Channels

Traditional Ads	
Online & Social Media	
Referral	
Guerrilla Efforts & PR	

Mark Davis

"Leading a family is the hardest job a man can ever have."

Age: 34
Work: Teacher
Family: Married, with 4 kids
Location: Toronto, ON

Personality

Introvert —————— Extrovert
Thinking —————— Feeling
Sensing —————— Intuition
Judging —————— Perceiving
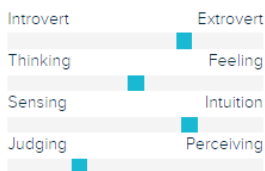
Professional   **Passionate**   **Disciplined**

Goals

- Spend more time with his family.
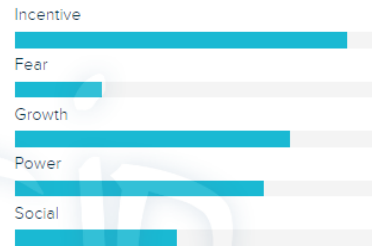- Make his classroom an enjoyable learning environment

Frustrations

- Online teaching. Prefers to be in front of a board talking to students face to face.
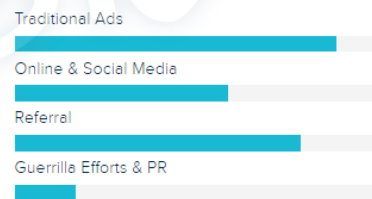- Crowded spaces

Bio

Mark Davis is a teacher at Riverdale Collegiate Institute, which is a high school in the Greater Toronto Area. Riverdale is undergoing online schooling due to covid-19, and here Mark teaches grade 12 functions and calculus to his students. In his free time, Mark loves spending time and taking care of his 4 kids. Mark hates crowded areas, and with the huge lines in store at Costco due to the pandemic, he typically avoids this place. With his high computer literacy, he frequently purchases groceries for his family from Costco, at their website costco.ca. Mark is a regular at Costco, so much so, as to have his own an executive membership for the perks it includes.

Motivation

Incentive
Fear
Growth
Power
Social

Preferred Channels

Traditional Ads
Online & Social Media
Referral
Guerrilla Efforts & PR

Quinn Hills

"Computer science student, living aalone off-campus"

Age: 20
Work: SW Developer Co-Op
Family: Single
Location: Toronto, ON

Personality

Introvert —————— Extrovert
Thinking —————— Feeling
Sensing —————— Intuition
Judging —————— Perceiving
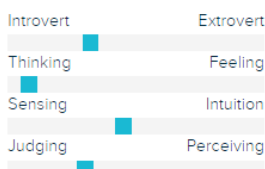
Timid   **Intelligent**   **Independent**

Goals

- 4.0 his current online semester.
- Create cool, interesting programs as an undergrad.
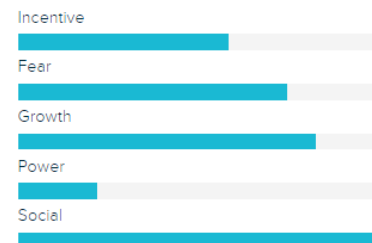- Get-by living alone, off-campus.

Frustrations

- Living situation
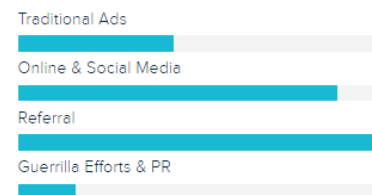- Work/school stress
- Time management

Bio

Quinn is a typical undergrad student at the University of Toronto. As a computer science student, he finds himself shopping online for tech, and school necessities frequently, on sites such as Amazon. He lives alone in an off-campus apartment, and frequents the nearby food basics for groceries. Due to covid-19, he finds himself online, and at home more often. Quinn is doing his part, being cautious and is looking for a new place to quickly purchase groceries. Though he has to buy a membership, his classmates who also live off-campus, recommended to him the site costo.ca where he can purchase a variety of goods.

Motivation

Incentive
Fear
Growth
Power
Social

Preferred Channels

Traditional Ads
Online & Social Media
Referral
Guerrilla Efforts & PR
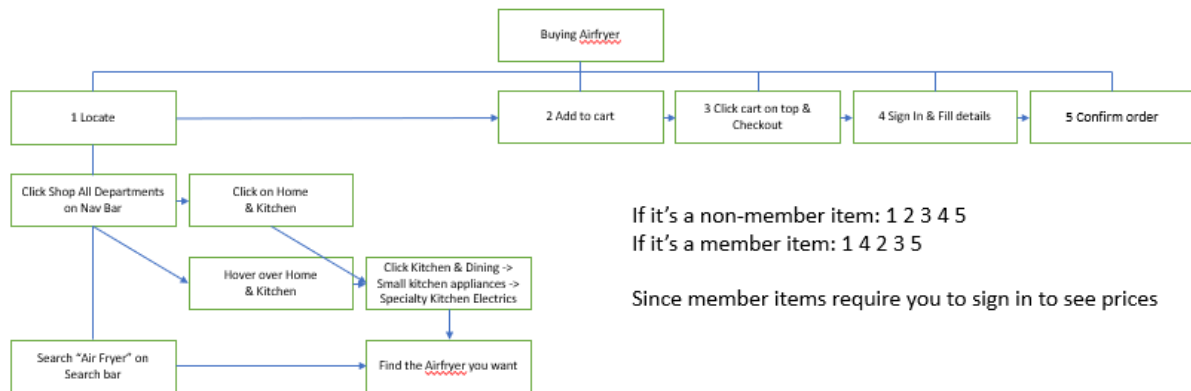
Scenario using old design of Costco.ca:

Jess is a mother of three kids, and due to quarantine and the ongoing pandemic, she wants to try her hand at grocery shopping online, rather than in person. She attempts to buy her usual groceries of essentials - bread, eggs, milk, meat, juice and snacks for her children. When she reaches the homepage of Costco.ca she finds the grocery tab, and looks for her first item, bread. The list of options given to her are not very helpful, and she can't decide whether bread is under 'Pantry', 'Gluten Free' or 'Kirkland Signature'. Jess is increasingly frustrated as she tabs back and forth between these categories unable to find her bread. She eventually tries the search bar for her item, where she is bombarded with a variety of bread items, such as bread makers, bread crumbs, bread flour, but finally finds her item. Jess begrudgingly finds the rest of her grocery items, and proceeds to checkout. Overall she is very unhappy, and will probably try a different grocery site due to her horrible experience.

Scenario using new design of Costco.ca:
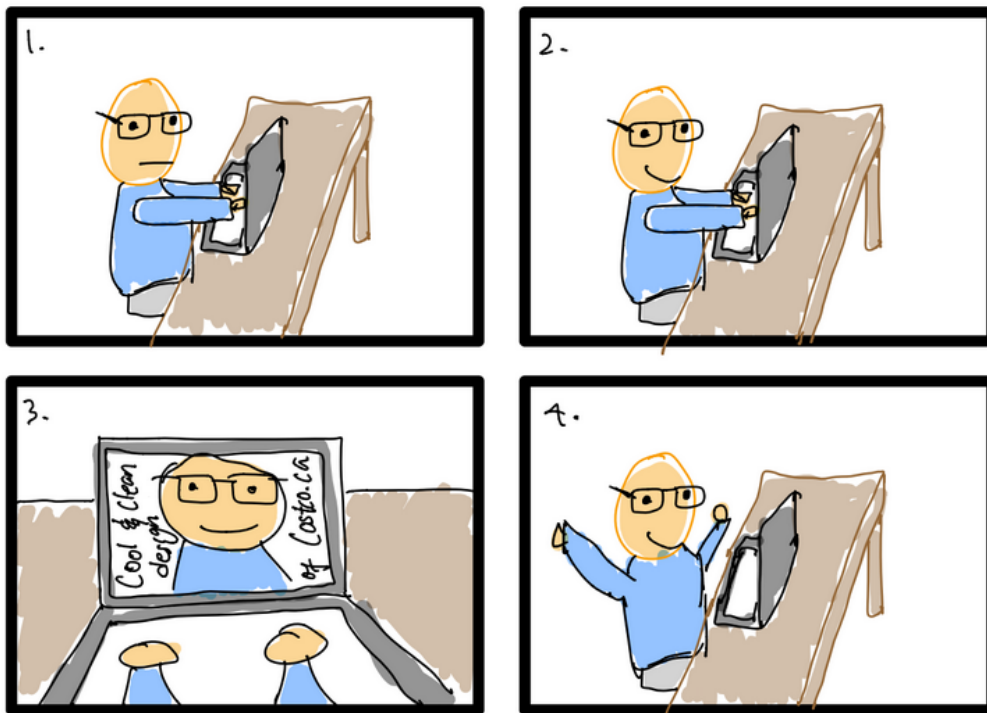
1. John is a 24 year old software engineer who loves to cook in his free time. He loves to buy groceries at Costco as he believes that buying in bulk will save him time from more frequent grocery shopping. Though he usually buys it in person at his local Costco, he wanted to truth the new online functionality of Costco.ca due to Covid-19.
2. John is happy because it only took him one click to go to the groceries page, and an average of 2 seconds to find the item he wants to add to his cart.
3. TEXT: Cool & clean design of Costco.ca
   Afterwards, John just needs to log in to his member account to buy his groceries and pay for shipping. This process took him around 30 seconds.
4. John is really happy because he is done with his groceries for the month in just less than 10 minutes.

HTA of using old design of Costco.ca to buy an airfryer:

Buying Airfryer

1 Locate

2 Add to cart

3 Click cart on top & Checkout

4 Sign In & Fill details

5 Confirm order

Click Shop All Departments on Nav Bar

Click on Home & Kitchen

Hover over Home & Kitchen

Click Kitchen & Dining -> Small kitchen appliances -> Specialty Kitchen Electrics

Search "Air Fryer" on Search bar

Find the Airfryer you want

If it's a non-member item: 1 2 3 4 5
If it's a member item: 1 4 2 3 5

Since member items require you to sign in to see prices

User Data Summary

The main tool that we used to gather our user data was a 14-question Google Forms survey, sent to friends, family members, fellow students, and posted on online forums in order to gather the maximal amount of responses.

The survey was designed to be quick and easy to access and fill out. We used Google Forms, which allows the sharing of the survey through a single link, allowing it to be easily accessed by anyone with a computer or mobile device, even without a google account. The number of questions was limited so that it would take approximately two minutes to complete, reducing the risk of participants leaving the survey early or half-heartedly filling out the survey. Also, any information that the participants needed, such as images or access to the Costco.ca website, were provided in the survey question, so that users could see and access any information they needed with as much ease as possible.

The actual questions in the survey were divided into three sections, with each section having their own unique focus:

Basic Data

The survey starts by asking and gathering basic information about the user, such as their age, the number of people in their household, and how regularly they use online shopping websites to order groceries for themselves and their households.

This data is significantly important. It defines the significant demographics of our users, helps us to understand their habits and general site usage, and allows us to know which users have more experience using online shopping tools. Knowing this information can help us to weigh more highly the opinions of frequent online shopping users, as not only are they likely to be more representative of our actual user base, but their experience with online shopping websites give them better insight into what the average user may actually want changed and improved in the Costco.ca website.

Preferences

The next page of the survey presents two different designs of the Costco.ca website, one of which is the current, original design, and the other being a prototype of our design. Participants of the survey are asked to separately rate both designs on a scale from 1-7, with 1 being the lowest, worst opinion, and 7 being the highest. There was no mention of which design was our prototype or that it was a prototype at all to reduce bias, Both of the images of the designs shown in the survey are displayed below:

Current Design	Our Mockup
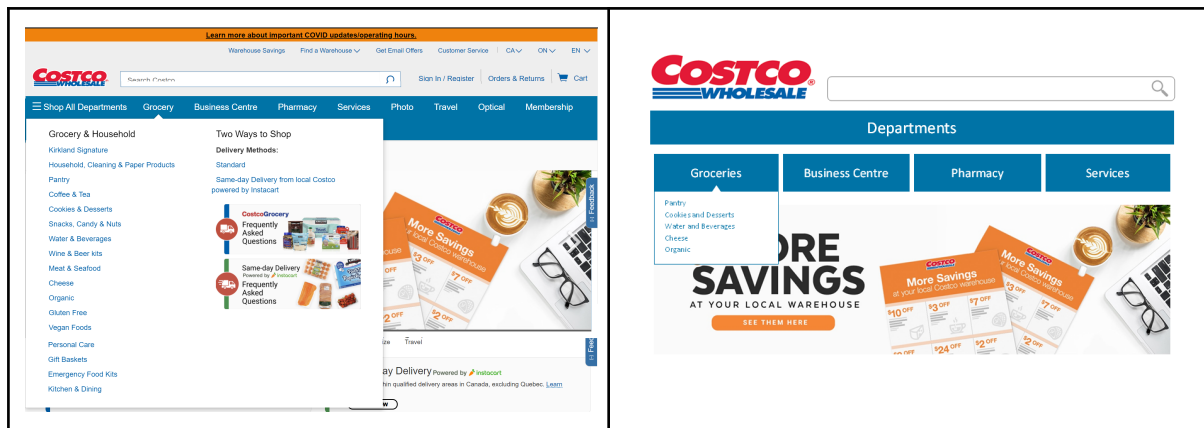
The prototype was made with the goals of our project in mind. It focuses on reducing clutter and cognitive load on the user by removing unnecessary elements and organizing remaining elements into more clear, defined sections, such as the white-bordered button beneath the heading.

The prototype was also designed to be very similar to the original design, using the same elements, colors, and even advertisements as the original design. While this may not be representative of the final product, this focus on similarity was done so that opinions of participants would not be biased by more superfluous design improvements, such as brighter colors or nicer shapes. Instead, thanks to the tight similarities of each design, users can instead focus on the main aspects that the prototype tries to improve upon: reduction of clutter and ease of use.

Walk-through

Finally, to close off the survey, we asked participants to do a quick walkthrough of a basic task using the Costco.ca website, and report back the ease or difficulty of the task into the survey.

The task we decided on was asking users to find "bananas" as a product on the website. We considered it a simple task on the surface, but from our own personal experience and testing, knew it would put the users directly into contact with the more confusing and cluttered elements of the site. By putting users in this situation, we hoped that we would be getting a more honest and accurate review of the site, especially in regards to the features that we wish to improve upon with our redesign.

Data Gathering

Through the magic of Google Forms, all the answers that users input into the survey for our questions will be automatically entered into a Google Sheets document. By the design of Google Forms, the document will display the results of every answer a participant gave as their own value for us to see. Google Forms automatically creates a well-defined summary of the results in the back-end, which allows us to immediately gain an idea of the trends and experiences our users had with the survey and the Costco.ca website. Additionally, the Google Sheet document organizes the data by each answerer and category, allowing us to look deeper into the data should we feel a need to do so, such as by finding relationships

between data points or analyzing the distributions of certain responses within participants of the survey.

Privacy

No information other than answers to the questions are collected and all answers are collected anonymously to ensure privacy.

Types of Users Selected

Demographics

While creating the survey to determine a user's experience with regards to Costco.ca, we wanted to target a specific demographic of Costcos consumers. Costco's primary demographic of consumers are young to middle aged adults with medium to large sized families, with a need to buy groceries in bulk. Although this is Costco's main audience, we surveyed a range of age groups to better understand and gather data on Costco's online users. Additionally, with regards to demographics, we asked about household size as this piece of data may factor into how often they purchase groceries from Costco, either online or in person. Demographics also takes into consideration, nationality, ethnicity, religion, sex, which we did not analyze in our survey. These aspects of demographics do not particularly factor into the need of purchasing groceries, so it was not included in our survey. Furthermore, due to limitations of using online surveys, we were not sure of the population size we would sample, as we distributed our survey to friends, family, reddit and discussion boards. Consequently, we gathered a total of 63 responses.

Online Users

One type of user we selected to sample were typical online consumers. We gathered data from this type of user by asking how frequently they purchase goods in general online, how often they purchase groceries online and the frequency that they use Costco.ca. This type of user can be someone who frequently shops online at Costco.ca in which, this user can give informed insight on improvements to the site after using it for an extensive period of time. Furthermore, an online user can also be someone who has purchased goods on competitive or similar sites to Costco, such as amazon or loblaws.ca. This user provides information on how other online sites compare to Costco.ca, and can suggest improvements after a first glance and interaction with the system. This type of user also includes an online consumer which has never seen or heard of Costco.ca. Responses from this user provide understanding of the system from an open-minded perspective, and also provide opinions after a first impression. Overall, sampling these types of users provide crucial knowledge on how the new system should behave, look, and function.

Grocery Buyers

Though they sell all kinds of products and electronics online, Costco is most famous as a wholesaler for groceries. With COVID-19 and the lockdown orders, a lot of grocery shoppers were looking into alternatives from in-store purchase. Costco.ca allows online grocery shopping for customers all around Canada for either delivery or in-store pickups, as long as you're a member. Given the user base of Costco.ca has increased for online purchases, we decided to also seek grocery buyers on their experience using Costco.ca to compare with their own experience of buying in person. Grocery shoppers also would use Costco.ca to scout on available items in certain store locations, and deals or promotions that are ongoing on that specific store location chosen by the user. The feedback we receive from this user group would provide knowledge on people who would compare their experience of finding an item in real life compared to their experience finding their groceries online.

Visually Impaired

Visual impairs can come from either genetics, old age, or unfortunate events on some people. According to the CNIB Foundation, there are 1.5 Million Canadians that has sight

loss, and 5.59 million more that self identify for having eye diseases that leads into visual impairment (https://cnib.ca/en/sight-loss-info/blindness/blindness-canada?region=on). As a major site with heavy traffic, Costco.ca should create accommodations for people with visual impairments. To cater to this user group the best we could for our redesign, receiving feedback on what was bad on the current Costco.ca design, and what could be better will be very helpful in our prototyping and redesign of the site.

Summary of Results

Attached are sample questions included in the survey we used and distributed online to our target audience of people who are experienced in buying grocery online. We asked participants of the study to rate the looks and the cleanliness of the current design and redesign of the Home Page using the following questions:
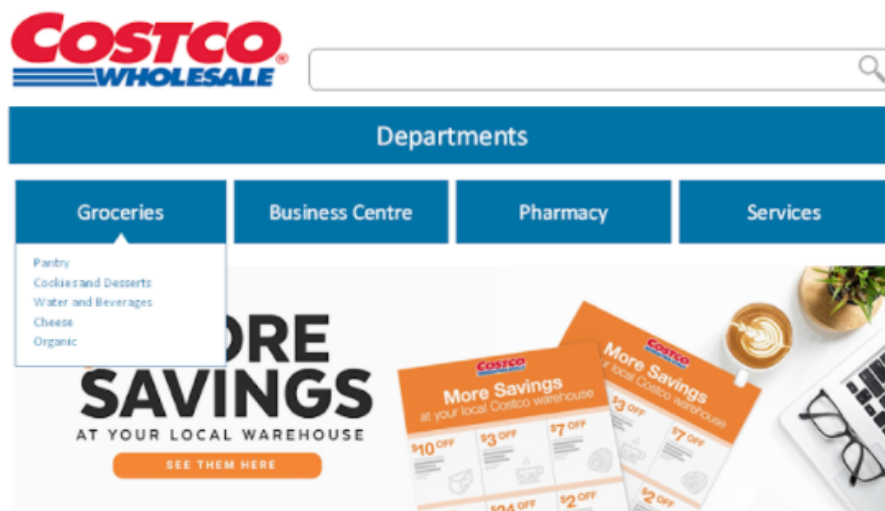
1. *How would you rate the look of this webpage?*
2. *How would you rate the clutter vs. cleanliness of this webpage?*

applied to the following different designs:

1. The current design, captured as a screenshot from *Costco.ca* homepage
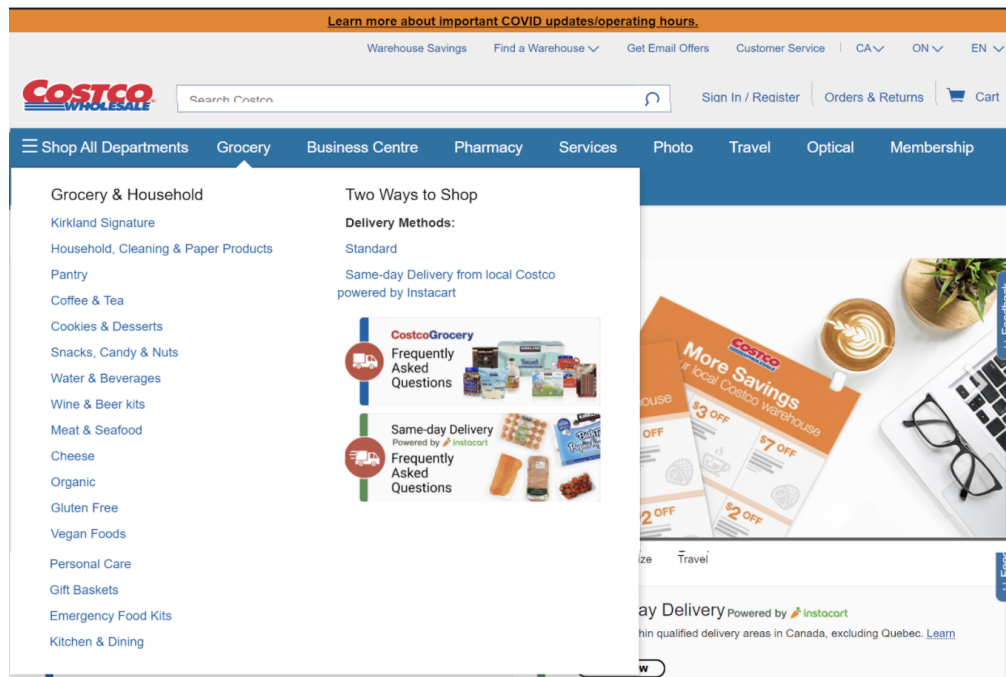
2. The redesign of *Costco*'s homepage

We measure our participants' ratings on a 7-point Likert scale where higher numbers represent higher preference for the first questions and better cleanliness for the second question.

In addition to rating the current and redesigned user interface of the homepage, we also ask users whether they think that there are too many unnecessary elements on the homepage to measure clutter.

Do you think that there are too many unnecessary elements on the homepage? *

○ Yes

○ No

We also asked our participants to measure their understanding of the elements on *Costco*'s homepage by asking the following question:

Look at the homepage and slowly scroll to the bottom. How easy is it to understand what you are looking at? *

	1	2	3	4	5	6	7	
Not easy at all	○	○	○	○	○	○	○	Very easy

Finally, we measure ease of navigation throughout the website by challenging participants of our study to find a specific item, namely a banana, and report their time and difficulty.

Try to find bananas. Were you able to find it? If so, did it take a long time? *

○ Found it very quickly and easily

○ Found it reasonably quickly

○ Found it but took some time

○ Could not find it

We asked our participants these questions to get their opinions on the things we believe to be a major issue on the website's design, mainly the clutter caused by the layout and amount of elements in a single page as well as the navigational aspect of the entire website.

Results and Analyses

Below is a bar graph showing the frequency of each rating in the Likert scale to rate the look of the current design and the redesign of the *Costco* home page:
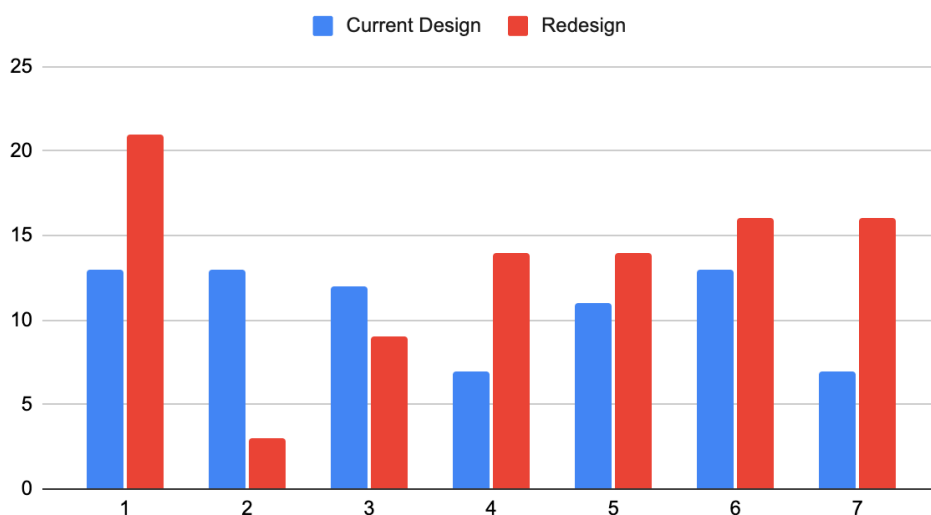

Ratings
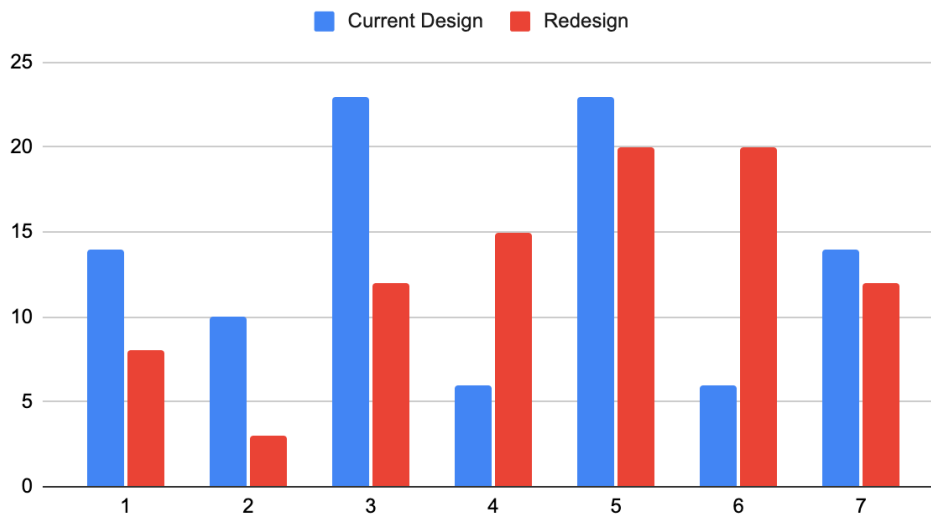
Mean: **4.30** for Current Design and **4.97** for Redesign
Median: **5** for Current Design and **5** for Redesign

Below is a bar graph showing the frequency of each rating in the Likert scale to rate the cleanliness (vs. clutter) of the current design and the redesign of the *Costco* home page:


Cleanliness Rating

Mean: **3.81** for Current Design and **5.65** for Redesign
Median: **4** for Current Design and **6** for Redesign

Our survey shows that participants rate the redesign of *Costco*'s home page higher on looks than the current design (Mean: 4.97 vs. 4.30). They also rate the redesign as cleaner and less cluttered (Mean: 5.65 vs. 3.81). The ratings on the Likert scale also show that there seems to be a strong correlation between users' perception of the looks of the webpage with the cleanliness of the webpage. Users who perceive the webpage as more cluttered tend to rate the quality of the webpage's looks lower, showing a preference for cleaner designs with neat layouts and less elements. The result of the questions support our hypothesis that the amount of clutter in *Costco*'s website decreases the users' perception of the quality of the website. This result guides our future design to focus on reducing clutter and building cleaner user interfaces with organized layouts and less elements.

Correlation between Rating and Cleanliness
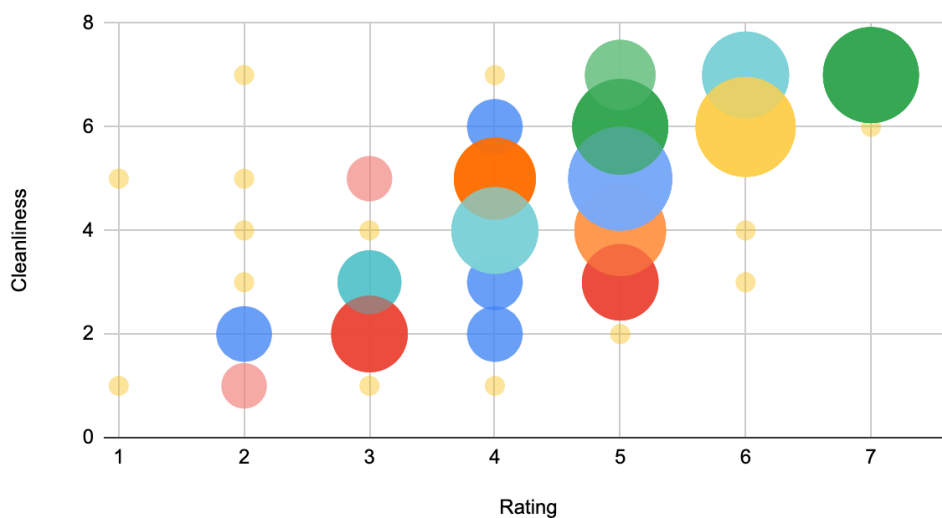
Below is a pie chart showing the binary answer to whether participants feel there are too many unnecessary elements in *Costco*'s home page:

"There are too many unnecessary elements in the Home Page"

No
36.5%

Yes
63.5%
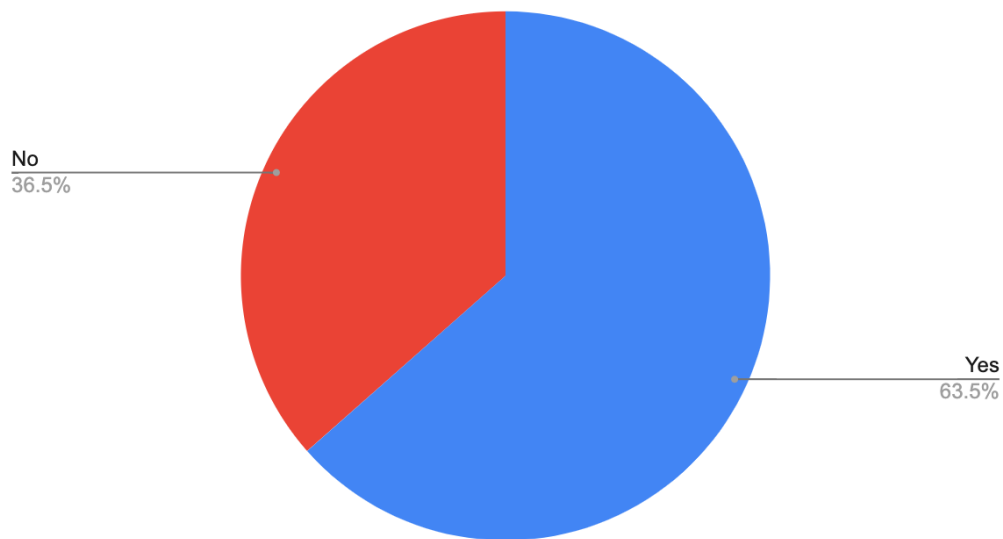
Result: **40** "Yes", **23** "No"

The result of this question shows an overwhelming negative response in the audience's opinions regarding the homepage display. This supports our proposal to redesign the look of the homepage to reduce clutter and improve overall cleanliness of the website look. With 63.5% of the respondents agreeing that there are too many unnecessary elements in the Home Page, our proposed redesigned website will try to solve this issue with ideas such as reducing the amount of overall information presented to the users, which is a big issue of information overload, that will reduce the overall user experience as a whole.

Below is a pie chart showing the binary answer to how long participants took to find a particular item ("Banana") by navigating from the *Costco*'s home page:

Find a "Banana" Item

Very Quick
7.9%

Reasonably Quick
19.0%

Slow
19.0%
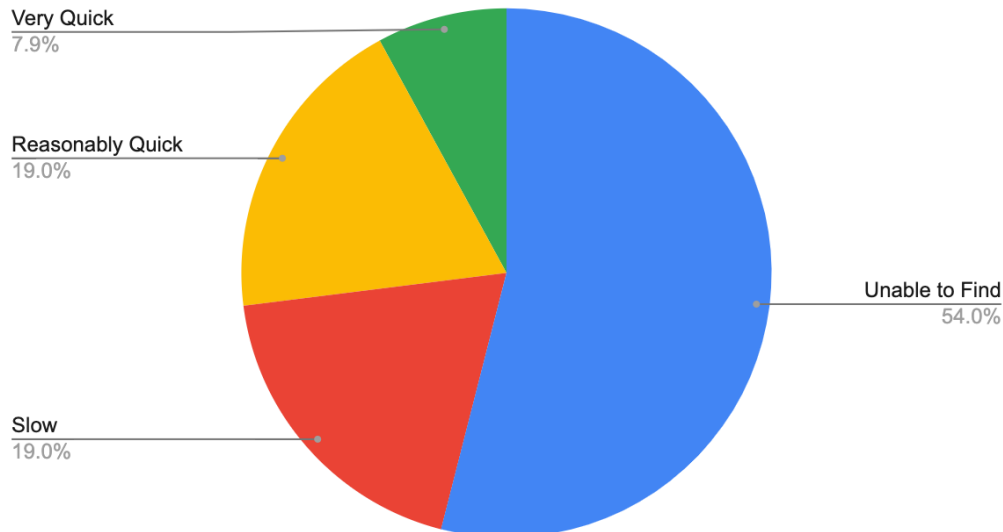
Unable to Find
54.0%

Result: **5** "Very Quick", **12** "Reasonably Quick", **12** "Slow", **34** "Unable to Find",

The above graph has the results of the question where we asked users to navigate the website and try to find a simple item (i.e banana) in an effort to purchase them. The result shows an overwhelming negative experience for users when trying to navigate the website. A massive 54% of the audience were not even able to find such a simple item like the banana, and another 19% took a lot of time before being able to locate the item. This finding supports the need to improve the navigation system of the website overall in order to better the user experience when shopping at *Costco*.

Conclusion

The overall result of our survey and data gathering supports our proposed idea of redesigning the current website interface for *Costco*. Data gathered from our survey participants reaffirms our project hypothesis regarding the importance of reducing clutter caused by the overwhelming information presented in the current design of the *Costco* homepage, as compared with our redesigned version intended to make it more attractive and effective for users.

With the data we gathered, our group project will focus on improving the home page design and effectiveness, as well as focusing our efforts on improving the overall navigation system of the website. A simple low-fidelity prototype we currently have will be the basis of our project moving forward, with more improvements to be made on it in further phases as well.

COSTCO WHOLESALE

Groceries	Business Centre	Pharmacy	Services

- Pantry
- Cookies and Desserts
- Water and Beverages
- Cheese
- Organic

ORE SAVINGS
AT YOUR LOCAL WAREHOUSE

SEE THEM HERE

More Savings
at your local Costco warehouse

$10 OFF $3 OFF $7 OFF

$24 OFF $2 OFF