



Self Checkout UX Design

TEAM #1 Fundamentals of UX

Discovery

Ideate

Evaluate

Implement

Refine

Observation & Interviews



Interview Questions:

How often do you use self-checkout?

What prompted you to choose self-checkout?

What do you like about this?

What do you dislike?

What would you change about this experience?

Takeaways:

Self-Checkout used only when shopper has a few items.

When they want to skip the regular line believing the transaction process will be faster.

Interface isn't always intuitive.

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Affinity Diagram

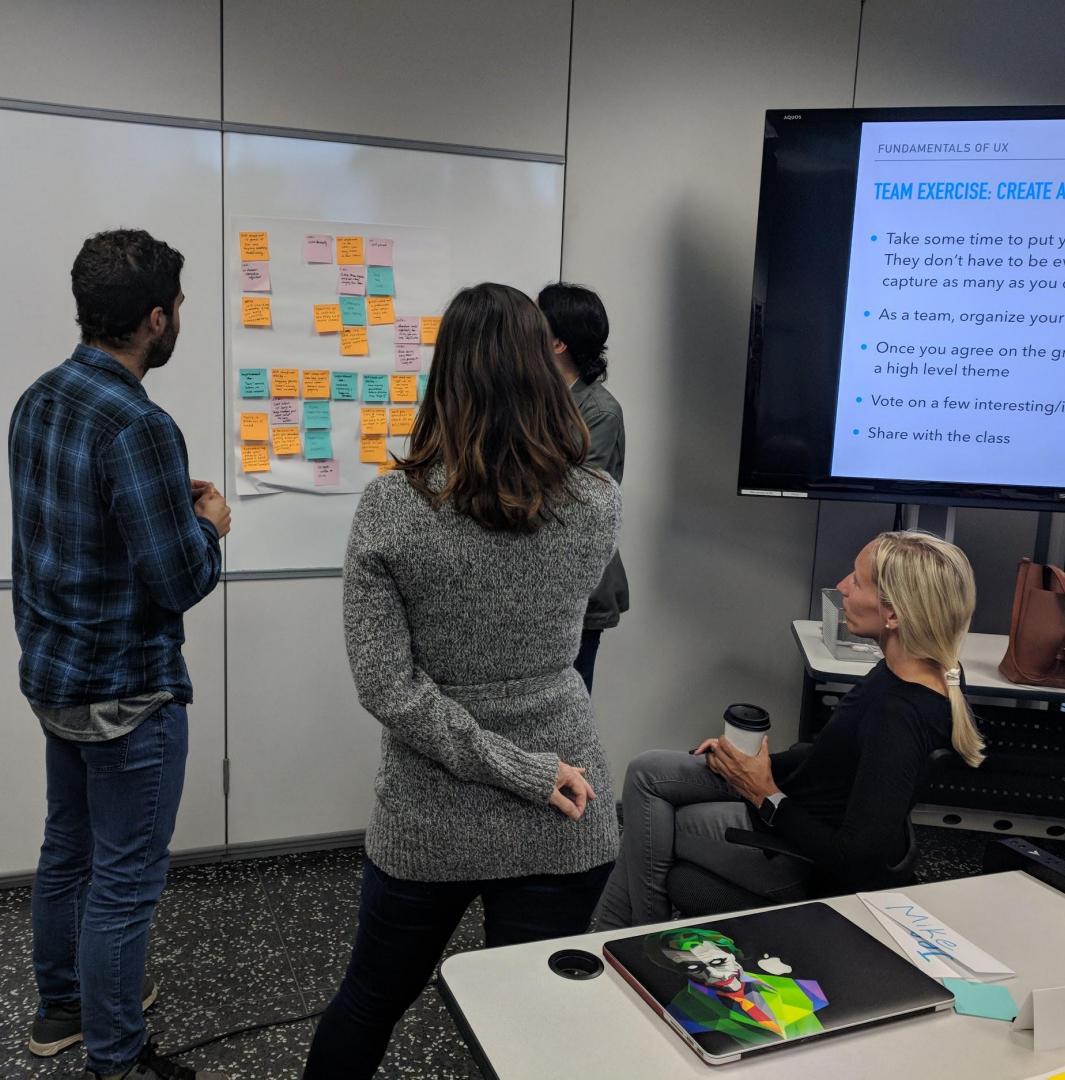


Diagram Categories:

1. Motivations for Use
 - o No human interaction
 - o Faster for just a few items
2. Pain Points
 - o Produce
 - o Alcohol
 - o Bagging
 - o Noise
 - o Lines
 - o Touch Screen
 - o Maintenance

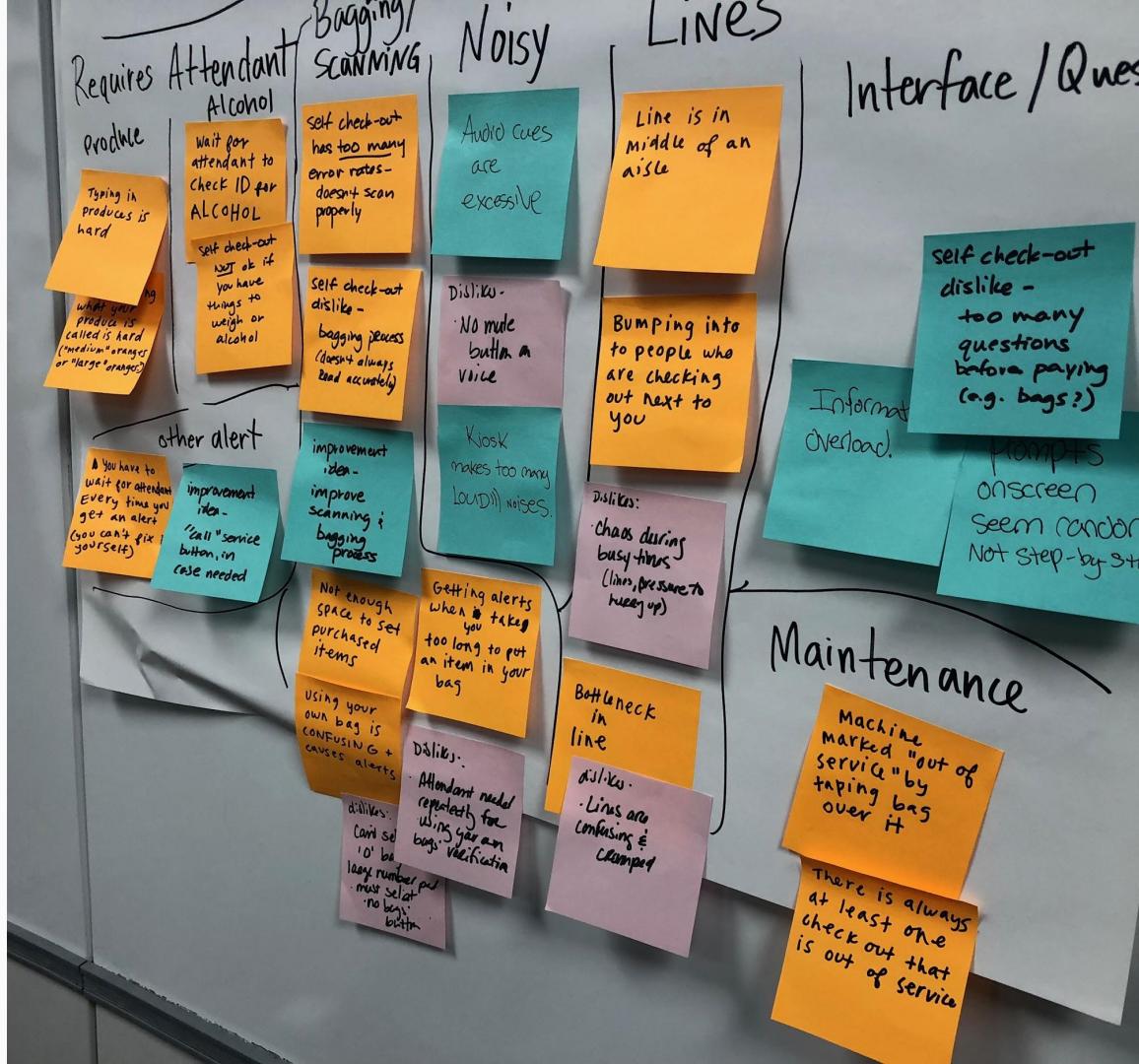
Takeaways:

Checking out produce is hard.

Bagging produces lots of errors.

Scanning items doesn't work well.

Kiosks are noisy.



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Experience Mapping

Phase	Beginning Before	Driving to Store	Packing	Finding a Cart	Entering the Store	Searching for Products	Finding Items	Standing in Line	Self Checkout Scanner	Self Checkout Bagging	Self Checkout Payment Screen
Thoughts and Feelings		<ul style="list-style-type: none"> • relaxed • excited 	<ul style="list-style-type: none"> • anxious • dread • annoyed 	<ul style="list-style-type: none"> • relaxed • briefly confused 	<ul style="list-style-type: none"> • excitement + relief 	<ul style="list-style-type: none"> • overwhelmed • confused • anxious 	<ul style="list-style-type: none"> • joy • relief 	<ul style="list-style-type: none"> • bored • anxious • impatient • happy 	<ul style="list-style-type: none"> • frustration • confusion 	<ul style="list-style-type: none"> • confusion • pressure 	<ul style="list-style-type: none"> • frustration • confusion
Customer Actions		<ul style="list-style-type: none"> • navigating traffic • listening to music • talking to friends 	<ul style="list-style-type: none"> • avoiding many people + other cars 	<ul style="list-style-type: none"> • pulling large or small cart • finding cart area 	Orientation	<ul style="list-style-type: none"> • Scanning lots of signage • navigating different aisles + areas of store 	<ul style="list-style-type: none"> • placing in cart • standing waiting • checking off list 	<ul style="list-style-type: none"> • Scanning items repetitively 	<ul style="list-style-type: none"> • none • placing items in adjacent area 		<ul style="list-style-type: none"> • Visual scanning of options + screens
Touchpoints and Devices		<ul style="list-style-type: none"> • operating a vehicle • nav system 	<ul style="list-style-type: none"> • operating a vehicle • camera • rearview mirrors 	<ul style="list-style-type: none"> • signage or implied area for carts. 	<ul style="list-style-type: none"> • start surrounding + signage 	<ul style="list-style-type: none"> • Signage is everywhere but with poor categorization many small labels + non-descr numbers. • Hard to read signage far away 	<ul style="list-style-type: none"> • cart • labeling + navigation of store visual. 	<ul style="list-style-type: none"> • lens or waiting if busy 	<ul style="list-style-type: none"> • User interface doesn't tell you to scan any items visually only auditory. 7 days of notifications + things frequently change to 5 days. 	<ul style="list-style-type: none"> • no indication of where bagging area is with signage. • lots of audible cues. 	<ul style="list-style-type: none"> • presented with too many options. • first screen asks for store debit transaction. • Clerk interrupts shopping experience.
People and Environment		<ul style="list-style-type: none"> • interior of car comfort • road + weather conditions • traffic + e/pedestrians • location 	<ul style="list-style-type: none"> • pedestrians • other cars • parking lot 	<ul style="list-style-type: none"> • pedestrians • parking lot 	<ul style="list-style-type: none"> • open exit area • other shoppers • cashiers 	<ul style="list-style-type: none"> • Other people • signage 	<ul style="list-style-type: none"> • crowds of people • shoppers 	<ul style="list-style-type: none"> • low end frequent notifications • many people + smart walking • movement 		<ul style="list-style-type: none"> • people standing behind you. • pressure 	<ul style="list-style-type: none"> • loud noises • lots of people • multitasking
Value to Customer		<ul style="list-style-type: none"> • Efficient way to reach store 	<ul style="list-style-type: none"> • more packing • easy access 	<ul style="list-style-type: none"> • ability to future items 	<ul style="list-style-type: none"> • general orientation access 	<ul style="list-style-type: none"> • Helps with what they need or what 	<ul style="list-style-type: none"> • 11 	<ul style="list-style-type: none"> • ride 	<ul style="list-style-type: none"> • Ability to purchase 	<ul style="list-style-type: none"> • ability to shop items 	<ul style="list-style-type: none"> • Ease of use
Value to Organization		<ul style="list-style-type: none"> • consumer access • sales 	<ul style="list-style-type: none"> • customer retention 	<ul style="list-style-type: none"> • ability for customers to shop for more. 	<ul style="list-style-type: none"> • access to customers 	<ul style="list-style-type: none"> • Helps shoppers buy more. 	<ul style="list-style-type: none"> • 11 	<ul style="list-style-type: none"> • organizes flow of transactions in queue 	<ul style="list-style-type: none"> • increase sales 	<ul style="list-style-type: none"> • 11 	<ul style="list-style-type: none"> • Securing payment /

Takeaways:

1. There's a lot of room for improvement
 - a. What seems like a simple, everyday experience is actually pretty complicated

2. Remember "I am not the user"
 - a. It's hard to not incorporate your own feelings and experiences to the map

CUSTOMER ID	FINISH & PAY	PACK UP	EX
<ul style="list-style-type: none"> • Stress trying to find card • Satisfied when scan and savings pop up in green 	<ul style="list-style-type: none"> • Content/surprised/stressed when final \$ amount appears • Feel rushed • Confused by bag options 	<ul style="list-style-type: none"> • Rushed getting stuff in bag properly • What do I do with my basket or cart? • I don't want receipt 	<ul style="list-style-type: none"> • Relief
<ul style="list-style-type: none"> • Enter alternate ID or pull card out + scan or swipe it 	<ul style="list-style-type: none"> • Select "Finish + Pay" • Enter # bags used (0-9 or NO BAGS) • Select payment type • Use pin pad for cards • Coupons to attendant 	<ul style="list-style-type: none"> • Take receipts (sometimes not) • Make sure everything is bagged properly • Make sure fragile stuff is on top 	<ul style="list-style-type: none"> • Walk out • Throw re. trash on sometimes
<ul style="list-style-type: none"> • Card or key card • Touch screen or pin pad • Swipe or scan 	<ul style="list-style-type: none"> • Touch screen • Credit card • SNAP card • Cash • Pin Pad 	<ul style="list-style-type: none"> • Your bags • Paper bags • Receipt • Coupons • Carts/baskets 	<ul style="list-style-type: none"> • Trash • Doors • Place for baskets
<ul style="list-style-type: none"> • Same ✓ 	<p>people waiting for you to finish</p>	<ul style="list-style-type: none"> • Open up checkout for next person • Walk out doors to outside 	<ul style="list-style-type: none"> • More space
<ul style="list-style-type: none"> • Save money • See discounts on screen, feel frugal 	<ul style="list-style-type: none"> • Almost done! 	<ul style="list-style-type: none"> • Get organized for walk/drive home 	<ul style="list-style-type: none"> • I'm done
<ul style="list-style-type: none"> • Track what customers are buying 	<ul style="list-style-type: none"> • Get \$ 	<ul style="list-style-type: none"> • Don't have to like bagger 	<ul style="list-style-type: none"> • Keep fl. stone g
<ul style="list-style-type: none"> • Opportunity to get emails 	<ul style="list-style-type: none"> • Shouldn't be an option 	<ul style="list-style-type: none"> • Sometimes! don't bag till I'm 	

Discovery

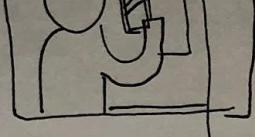
Ideate

Evaluate

Implement

Refine

Brainstorming & Sketching Solutions



Phone app for
customer ID
coupons
+ option for
apple pay

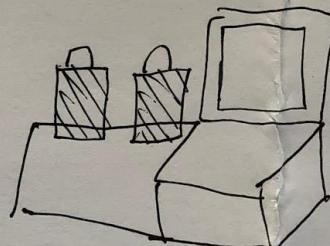
(so don't need to search
through wallet for
anything)



provide user's ability to
correct errors



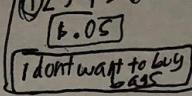
more byo bag-
friendly scale



put paper
bags in a standard,
intentional place so
I can grab one if I need it
(not in middle of checkout aisle
in boxes)

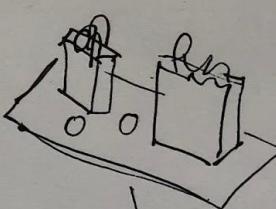


Let me scan my
ID when I buy



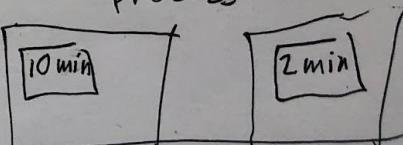
(sometimes you byo bag
AND you need a paper
bag.)

② put your own bags down

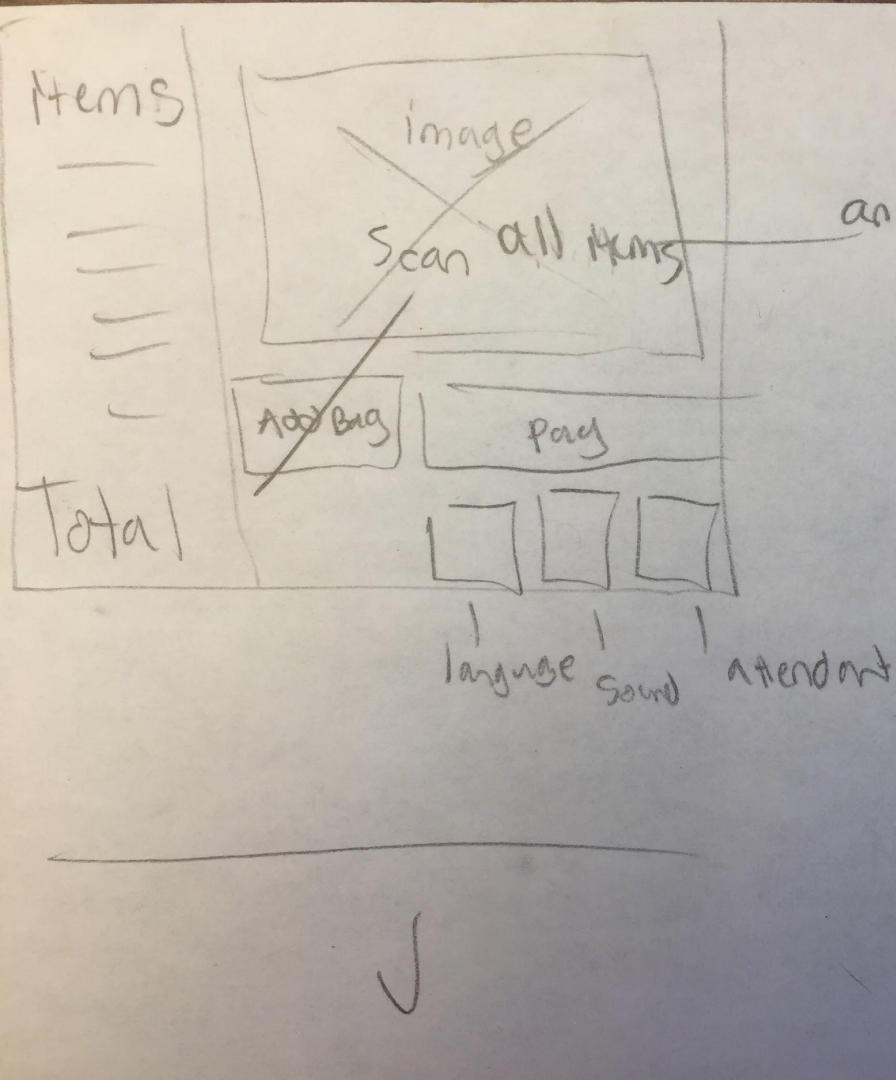


"I'm gonna put
my bag down now"

Make it more clear/
easier to put my
bags down whenever
I want during checkout
process



wait times above self
checkout + cashier aisles



Hypotheses:

People will be more likely to self checkout if:

- They get rewards
- Wait times are displayed

The experience can be improved by:

- Ditching the scale in bagging area
- Integrating pinpad with touch screen
- Adding option to turn off audio
- Making it easy to add produce
- Automatically track # of bags used

Discovery

Ideate

Evaluate

Implement

Refine

Prototypes & Testing



Thursday, June 12th
09:41 AM

Item Name	Quantity	Each	Total
Kelly's Garden Romaine Lettuce	1	\$0.99	\$0.99
Hunt's Tomatoe Ketchup	1	\$2.99	\$2.99
Stonyfield Lowfat Berry Yogurt	1	\$0.75	\$0.75
Oranges 0.45 lb @ \$0.25/lb	3.75 lbs	\$0.25 x 3.75lbs	\$8.75
Stacy's Pita Chips	1	\$1.99	\$1.99

[Add New Item](#) Subtotal: \$20.58

[Use Discount Coupon](#) Discounts: \$0.00 Tax: \$2.34 Total: \$22.89

Scan or Add Your Next Item

Barcode: 010-921234-007826-278121-739

Enter Barcode No Barcode?

[Pay](#)

Language Mute Sound Attendant

Point of Sale

The main point of sale screen was redesigned with the goal of ease of use and priority for having the ability to easily add new produce items that lacked barcodes.



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09:41 AM

Item Name	Quantity	Each	Total
Kelly's Garden Romaine Lettuce	1	\$0.99	\$0.99
Hunt's Tomatoe Ketchup	1	\$2.99	\$2.99
Stonyfield Lowfat Berry Yogurt	1	\$0.75	\$0.75
Oranges 0.45 lb @ \$0.25/lb	3.75 lbs	\$0.25 x 3.75lbs	\$8.75

Add New Item Subtotal: \$20.58

Use Discount Coupon Discounts: \$0.00 Tax: \$2.34 Total: \$22.89

Scan or Add Your Next Item

Barcode

Enter Barcode No Barcode?

Pay

Language Mute Sound Attendant

Item Scanning (1 of 4):

When a user scans an item there is a visual cue notifying them that it has been added to their grocery list.



Thursday, June 12th
09:41 AM

Item Name	Quantity	Each	Total
Kelly's Garden Romaine Lettuce	- 1 +	\$0.99	\$0.99
Hunt's Tomatoe Ketchup	- 1 +	\$2.99	\$2.99
Stonyfield Lowfat Berry Yogurt	- 1 +	\$0.75	\$0.75
Oranges 0.46 lb @ \$0.25/lb	3.75 lbs	\$0.25 x 3.75lbs	\$8.75

[Add New Item](#) Subtotal: \$20.58

[Use Discount Coupon](#) Discounts: \$0.00 Tax: \$2.34 Total: \$22.89

Scan or Add Your Next Item

Barcode: 910 91210 007016 57312 738

Enter Barcode No Barcode?

[Pay](#)

Language Mute Sound Attendant

Item Scanning (2 of 4):

Red scan laser runs down the barcode.



Thursday, June 12th
09:41 AM

Item Name	Quantity	Each	Total
Kelly's Garden Romaine Lettuce	- 1 +	\$0.99	\$0.99
Hunt's Tomatoe Ketchup	- 1 +	\$2.99	\$2.99
Stonyfield Lowfat Berry Yogurt	- 1 +	\$0.75	\$0.75
Oranges 0.45 lb @ \$0.25/lb	3.75 lbs	\$0.25 x 3.75lbs	\$0.75
	- 1 +	\$1.99	\$1.99

Add New Item

Subtotal: \$20.58

Use Discount Coupon

Discounts: \$0.00

Tax: \$2.34

Total: \$22.89

Scan or Add Your Next Item

Barcode

Enter Barcode

No Barcode?

Pay

Language

Mute Sound

Attendant

Item Scanning (3 of 4):

Once scan animation is complete, the new item slides in from the left of the list completing the transaction.



Thursday, June 12th
09:41 AM

Item Name	Quantity	Each	Total
Kelly's Garden Romaine Lettuce	- 1 +	\$0.99	\$0.99
Hunt's Tomatoe Ketchup	- 1 +	\$2.99	\$2.99
Stonyfield Lowfat Berry Yogurt	- 1 +	\$0.75	\$0.75
Oranges 0.45 lb @ \$0.25/lb	3.75 lbs	\$0.25 x 3.75lbs	\$8.75
Stacy's Pita Chips	- 1 +	\$1.99	\$1.99

Add New Item Subtotal: \$20.58

Use Discount Coupon Discounts: \$0.00 Tax: \$2.34 Total: \$22.89

Scan or Add Your Next Item

Barcode with checkmark

Enter Barcode No Barcode?

Pay

Language Mute Sound Attendant

Item Scanning (4 of 4):

A completed transaction is identified with a checkmark and the screen resets to being blank, awaiting the next scan or for user to add a new item to their list.



Thursday, June 12th

09:41 AM

Choose Item Type



Fresh Produce



Meat



Dairy



Frozen Food



Bread



Cereal



Rice



Pasta

Adding a New Item:

When clicking the green add new item button, the user would be taken to another screen full of sub categories of items.



Thursday, June 12th
09:41 AM

Choose Produce

Type for Quick Search

Item	Price
Apple	\$1.99/lb
Apricot	\$0.75/lb

Searching Specific Items:

Searching produce would alphabetize all the available produce and also allow a text search which auto-suggests based on keywords typed.



Red Delicious Apples

\$0.75/lb



These red delicious apples were sourced from Medford, OR where they were grown organically. Apples are a good source of vitamin C and are the key to a healthy heart.

For more information on where Kelly's Natural Market source's our produce, please visit www.kellysnaturalmarket.com/about.

Thursday, June 12th
09:41 AM

1. Weigh Apples on Scale

2. Total Cost
@ \$0.75 per lb
 $4.25 \text{ lbs} \times \$0.75/\text{lb}$
= **\$3.18**

Add to Cart or **Cancel**

Weighing an Apple:

Users would have to weigh their apples by placing them on the physical kiosk scale and then press a button to calculate the weight.



Thursday, June 12th
09:41 AM

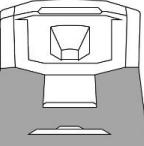
Red Delicious Apples
\$0.75/lb



These red delicious apples were sourced from Medford, OR where they were grown organically. Apples are a good source of vitamin C and are the key to a healthy heart.

For more information on where Kelly's Natural Market source's our produce, please visit www.kellysnaturalmarket.com/about.

1. Weigh Apples on Scale



4.25 lbs

Tare

2. Total Cost
@ \$0.75 per lb

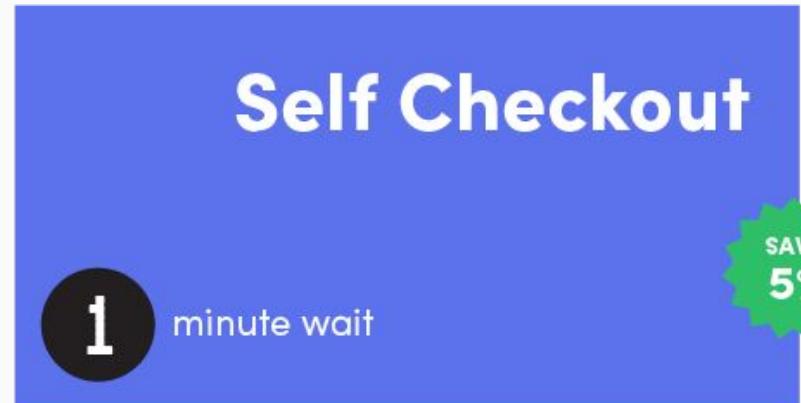
4.25 lbs x \$0.75/lb
=

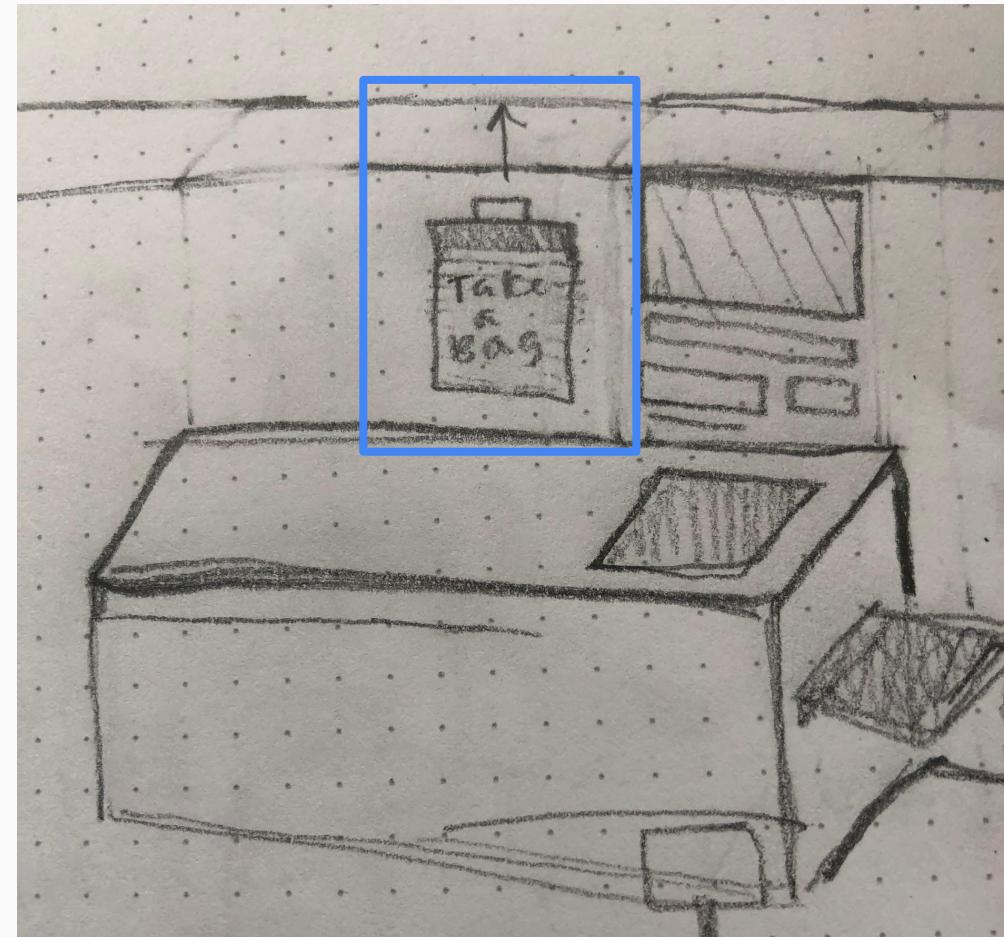
\$3.18

Add to Cart
or
Cancel

Adding an Apple to the Cart:

Upon a successful weigh, the total cost based on the weight would automatically be calculated and the user would have the option of adding to their cart or canceling their transaction.







Takeaways:

Test with lower-fidelity prototypes.

Prepare questions to get the feedback you need.

Ask “How can I test this?” while designing.

Integrate team member’s designs into testable product.

QUOTES FROM INTERVIEWEES

“I don’t like choices”

“Deals now”

“What does ‘tare’ mean?”

**“There is information about this apple,
which I don’t care about.”**

Discovery

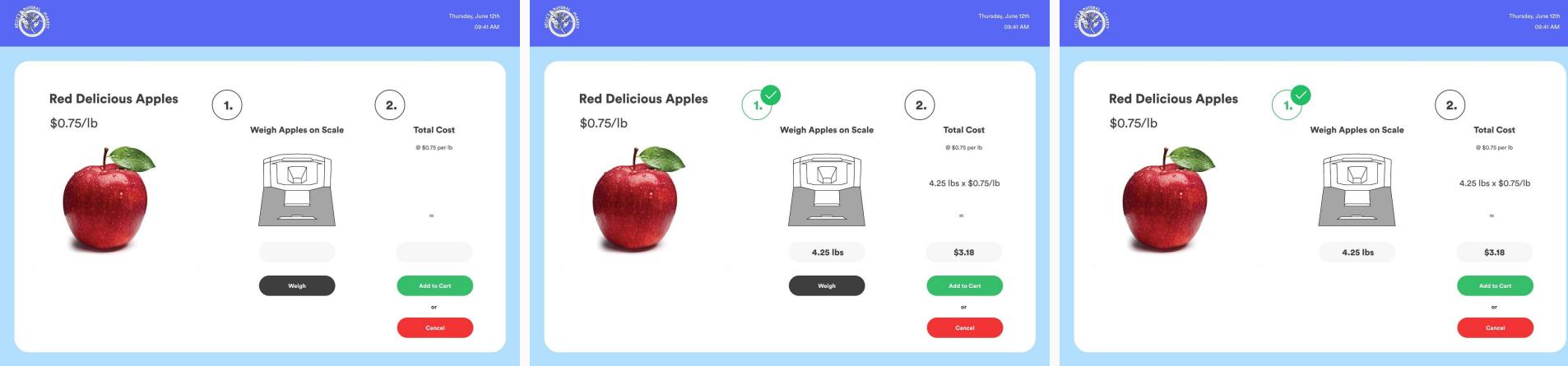
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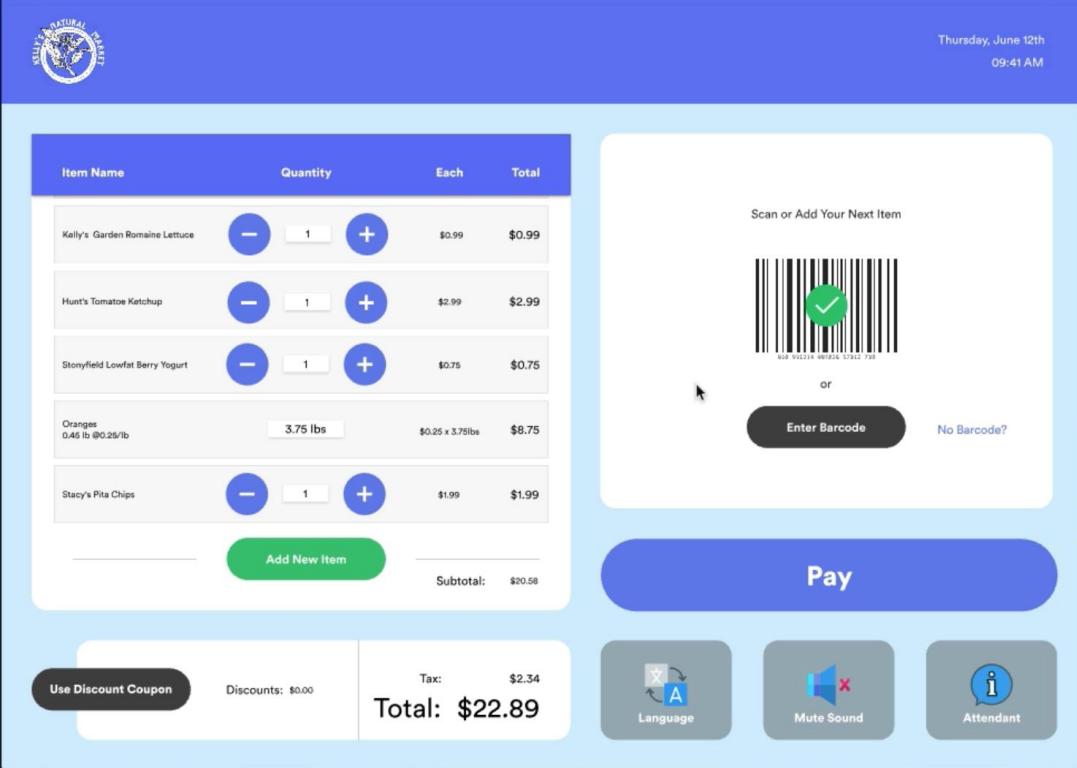
Final Designs



- “Tare” CTA changed to “Weigh”
- Apple Info Removed.

- Total Cost adds after weigh in.

- Weigh Button Removed.



Takeaways:

- UX copy is important.
 - “Tare” vs “Weigh” on a button confused users
- Less is more.
 - Some copy just isn’t necessary
- Make everything interactive related to your goals.
 - “No Barcode?” text

Discovery

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Evaluate

Implement

Refine

Questions? Feedback?