



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?

Take Aways:

1. Self-Checkout used only when shopper has a few items.
2. When they want to skip the regular line believing the transaction process will be faster.
3. Interface isn't always intuitive.

Discovery

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Affinity Diagram

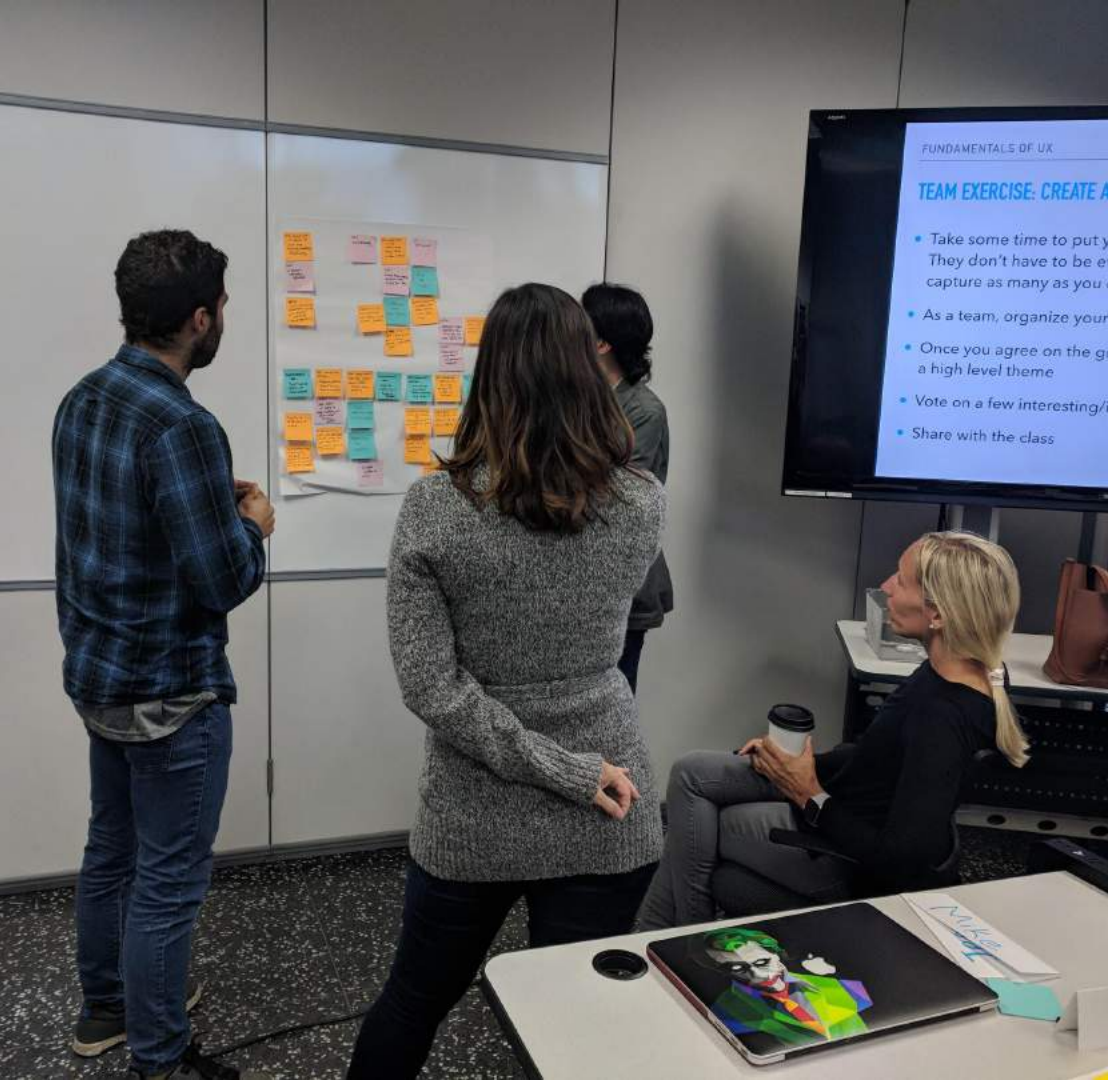


Diagram Categories:

1. Motivations for Use

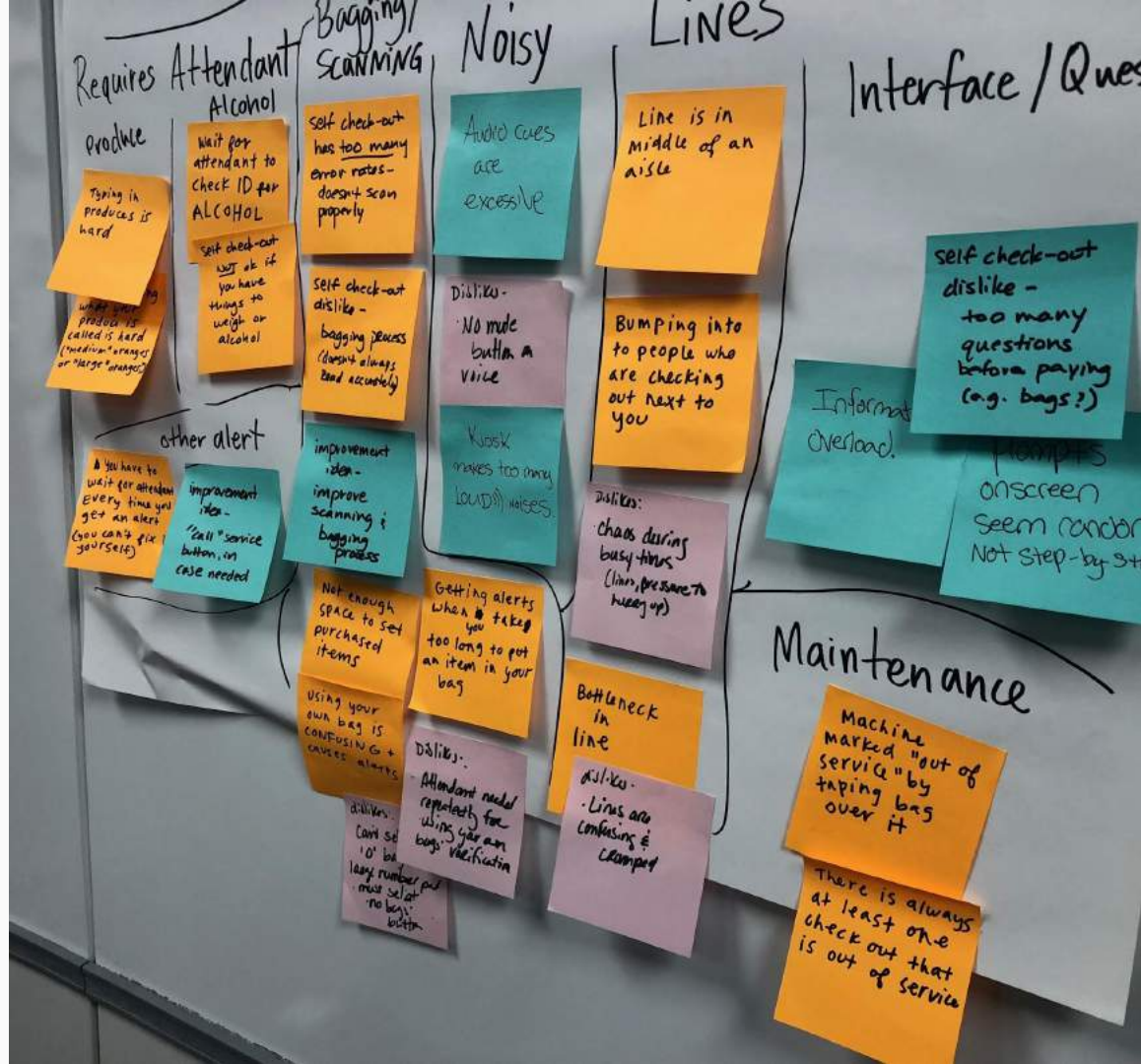
- No human interaction
- Faster for just a few items

2. Pain Points

- Produce
- Alcohol
- Bagging
- Noise
- Lines
- Touch Screen
- Maintenance

Take Aways:

1. Checking out produce is hard.
2. Bagging produces lots of errors.
3. Scanning items doesn't work well.
4. Kiosks are noisy.



Discovery

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Experience Mapping

Phase	Beginning Before	Driving to Store	Parking	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 • dazed • 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"> • diverting noisy people + other cars 	<ul style="list-style-type: none"> • pulling large or small cart • finding cart area 	<ul style="list-style-type: none"> • 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 • checking off list 	<ul style="list-style-type: none"> • standing waiting 	<ul style="list-style-type: none"> • Scanning items repetitively 	<ul style="list-style-type: none"> • none • placing items in checkout 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 vehicle • camera • rear view mirrors 	<ul style="list-style-type: none"> • signage or implied area for carts 	<ul style="list-style-type: none"> • scanning surrounding + signage 	<ul style="list-style-type: none"> • Signage is everywhere but with poor categorization many small labels + non-descript numbers. • Hard to read signage far away 	<ul style="list-style-type: none"> • Cart • labeling + navigation of store • unclear 	<ul style="list-style-type: none"> • Loss of carting if busy 	<ul style="list-style-type: none"> • User interface doesn't tell you to scan any items visually only audibly • lots of non-usable items frequently • scan to scan 	<ul style="list-style-type: none"> • No indication of where bagging area is with signage. • lots of audible alerts 	<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 company • Road + weather conditions • traffic / pedestrians • location 	<ul style="list-style-type: none"> • pedestrians • other cars • parking lines 	<ul style="list-style-type: none"> • pedestrians • Parking lot 	<ul style="list-style-type: none"> • open exit area • other shoppers • carts 	<ul style="list-style-type: none"> • Other people • Signage 	<ul style="list-style-type: none"> • rows of items • shelves • shelves 	<ul style="list-style-type: none"> • over shoppers • loud noises + movement 	<ul style="list-style-type: none"> • loud and frequent noise • many people + staff talking 	<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 parking • Easy access 	<ul style="list-style-type: none"> • ability to store items 	<ul style="list-style-type: none"> • general orientation access 	<ul style="list-style-type: none"> • ^{helps with} obtaining what they need or want 	<ul style="list-style-type: none"> • // 	<ul style="list-style-type: none"> • none 	<ul style="list-style-type: none"> • ability to purchase 	<ul style="list-style-type: none"> • ability to store items 	<ul style="list-style-type: none"> • Ease of use
Value to Organization		<ul style="list-style-type: none"> • Customer 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"> • // 	<ul style="list-style-type: none"> • organized flow of transactions in a queue 	<ul style="list-style-type: none"> • increase sales 	<ul style="list-style-type: none"> • // 	<ul style="list-style-type: none"> • Seaming payment / +

Take Aways:

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 ip" 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 pinpad 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 sometime
<ul style="list-style-type: none"> • Card on keypad • Touchscreen or pinpad • Swipe or scan 	<ul style="list-style-type: none"> • Touchscreen • 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 	<ul style="list-style-type: none"> • People waiting for you to finish 	<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 hire bagger 	<ul style="list-style-type: none"> • Keep ft stone
<ul style="list-style-type: none"> • Opportunity to get emails 	<ul style="list-style-type: none"> • I shouldn't be an option 	<ul style="list-style-type: none"> • Sometimes I don't bag till I'm 	

Discovery

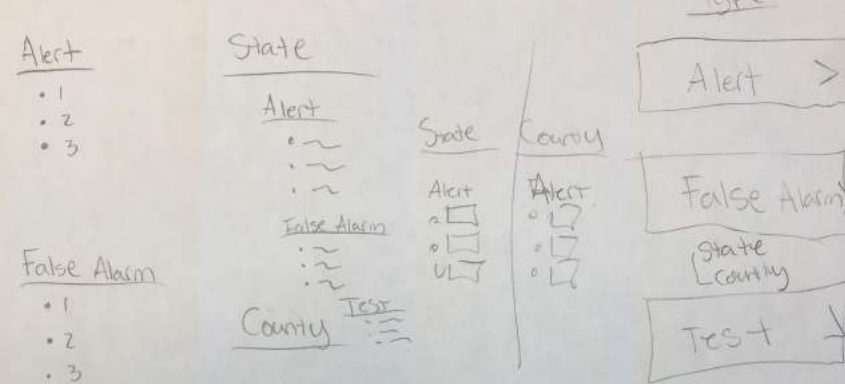
Ideate

Evaluate

Implement

Refine

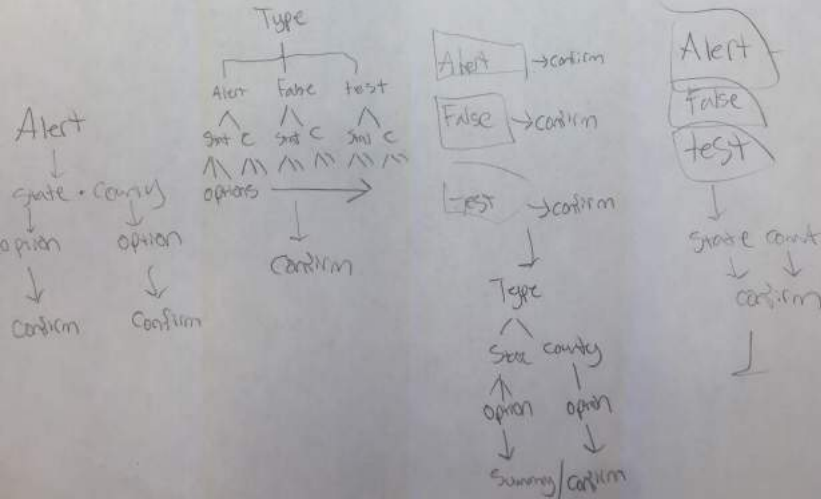
Crazy Eights



Take Aways:

1. Trust the process.

- It's awkward to come up with bad ideas, but that's what you need to do to get to the good ideas.



Discovery

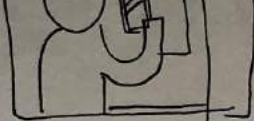
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Brainstorming & Sketching Solutions



Phone app for
customer ID
coupons
+ option for
apple pay
(so don't need to search
through wallet for
anything)



provide expert
users ability to
correct errors



more bgo bag-
friendly scale

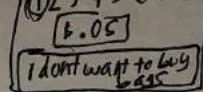


put paper
bags in a standard,
intentional place so
I can grab one if I need it
(not in middle of checkout aisle
in boxes)



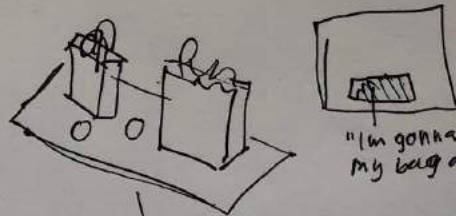
SCAN ID

let me scan my
ID when I buy

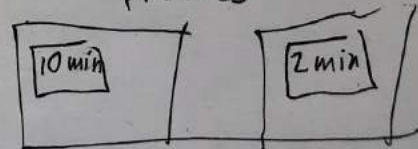


(sometimes you buy bag
AND you need a paper
bag.)

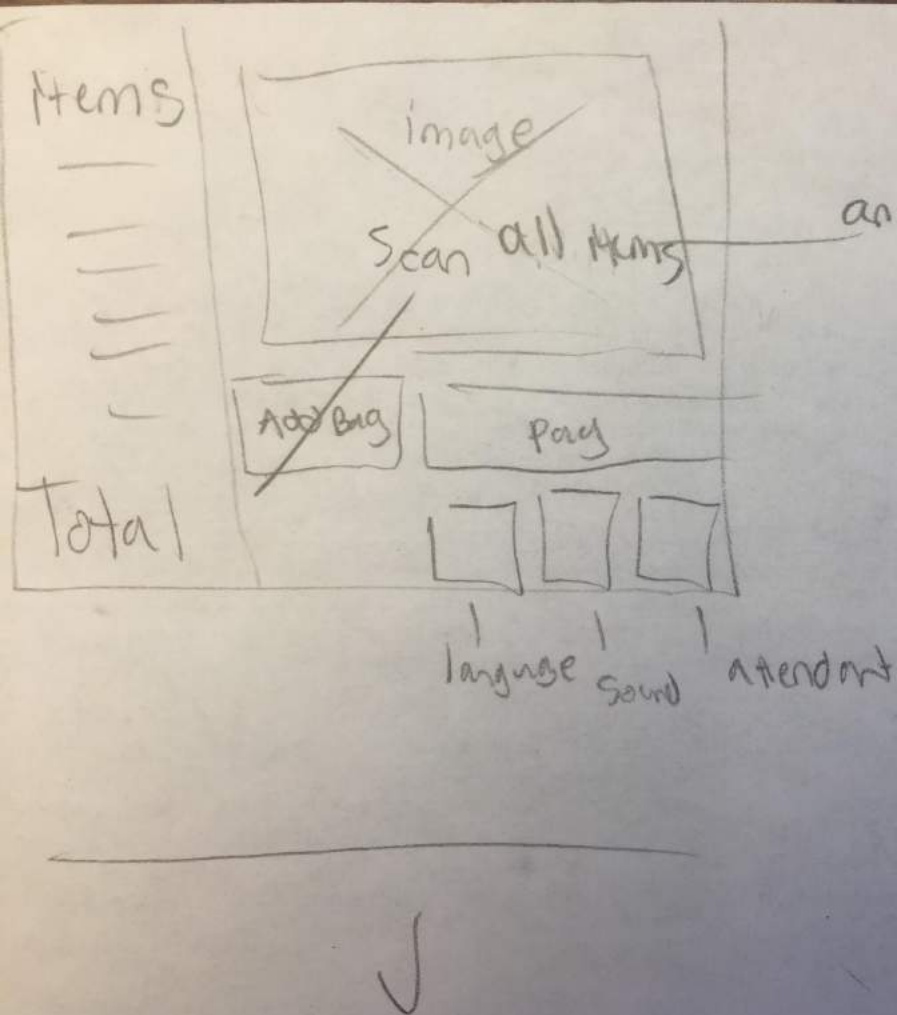
put your own bag down



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 **SARAH**
- Wait times are displayed **EMILY**

The experience can be improved by:

- Ditching the scale
- Integrating pinpad with touch screen **AMY**
- Adding option to turn off audio **AMY**
- Making it easy to add produce **DWAYNE**
- Using a bag dispenser to automatically track # of bags used **EMILY**

Discovery

Ideate

Evaluate

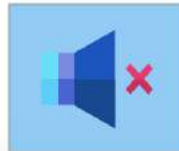
Implement

Refine

Prototypes & Testing



Start





Thursday, June 12th
09:41 AM

Item Name	Quantity	Each	Total
Kelly's Garden Romaine Lettuce	<div>−</div> 1 <div>+</div>	\$0.99	\$0.99
Hunt's Tomatoe Ketchup	<div>−</div> 1 <div>+</div>	\$2.99	\$2.99
Stonyfield Lowfat Berry Yogurt	<div>−</div> 1 <div>+</div>	\$0.75	\$0.75
Oranges 0.45 lb @ \$0.25/lb	3.75 lbs	\$0.25 x 3.75/lb	\$0.75
Stacy's Pita Chips	<div>−</div> 1 <div>+</div>	\$1.99	\$1.99
<div>Add New Item</div>			Subtotal: \$20.58

Use Discount Coupon

Discounts: \$0.00

Tax: \$2.34
Total: \$22.89

Pay

Scan or Add Your Next Item

✓

or

Enter Barcode

No Barcode?

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.



Thursday, June 12th
09:41 AM

Item Name	Quantity	Each	Total
Kelly's Garden Romaine Lettuce	<div><div>-</div><div>1</div><div>+</div></div>	\$0.99	\$0.99
Hunt's Tomatoe Ketchup	<div><div>-</div><div>1</div><div>+</div></div>	\$2.99	\$2.99
Stonyfield Lowfat Berry Yogurt	<div><div>-</div><div>1</div><div>+</div></div>	\$0.75	\$0.75
Oranges 5.45 lb @ \$0.25/lb	3.75 lbs	\$0.25 x 3.75lb =	\$8.75
<div><div>Add New Item</div></div>			
Subtotal:			\$20.88

Scan or Add Your Next Item



or

Enter Barcode

[No Barcode?](#)

Pay

[Use Discount Coupon](#) Discounts: \$0.00

Tax: \$2.34
Total: \$22.89

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	<input type="button" value="−"/> <input type="text" value="1"/> <input type="button" value="+"/>	\$0.99	\$0.99
Hue's Tomato Ketchup	<input type="button" value="−"/> <input type="text" value="1"/> <input type="button" value="+"/>	\$2.99	\$2.99
Stonyfield Lowfat Berry Yogurt	<input type="button" value="−"/> <input type="text" value="1"/> <input type="button" value="+"/>	\$0.75	\$0.75
Oranges 0.45 lb @ \$0.25/lb	<input type="text" value="3.75 lbs"/>	\$0.25 x 3.75lbs	\$6.75
<input type="button" value="Add New Item"/>			
Subtotal:			\$20.58

Discounts: \$0.00

Tax: \$2.34

Total: **\$22.89**

Scan or Add Your Next Item



or

No Barcode?

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	<input type="button" value="−"/> <input type="text" value="1"/> <input type="button" value="+"/>	\$0.99	\$0.99
Hunt's Tomato Ketchup	<input type="button" value="−"/> <input type="text" value="1"/> <input type="button" value="+"/>	\$2.99	\$2.99
Stonyfield Lowfat Berry Yogurt	<input type="button" value="−"/> <input type="text" value="1"/> <input type="button" value="+"/>	\$0.75	\$0.75
Oranges 0.48 lb (\$0.25/lb)	<input type="text" value="3.75 lbs"/>	\$0.25 x 3.75/lb	\$8.75
<input type="button" value="−"/> <input type="text" value="1"/> <input type="button" value="+"/>	<input type="text" value="\$1.99"/>	<input type="text" value="\$1.99"/>	

Subtotal: \$20.08

Discounts: \$0.00

Tax: \$2.34
Total: \$22.89

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	<input type="button" value="−"/> <input type="text" value="1"/> <input type="button" value="+"/>	\$0.99	\$0.99
Hunt's Tomato Ketchup	<input type="button" value="−"/> <input type="text" value="1"/> <input type="button" value="+"/>	\$2.99	\$2.99
Stonyfield Lowfat Berry Yogurt	<input type="button" value="−"/> <input type="text" value="1"/> <input type="button" value="+"/>	\$0.75	\$0.75
Oranges 0.45 lb @ \$0.25/lb	<input type="text" value="3.75 lbs"/>	\$0.25 x 3.75/lb	\$8.75
Stacy's Pita Chips	<input type="button" value="−"/> <input type="text" value="1"/> <input type="button" value="+"/>	\$1.99	\$1.99

Subtotal: \$20.58

Discounts: \$0.00

Tax: \$2.34
Total: \$22.89

Scan or Add Your Next Item



or

[No Barcode?](#)

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

Search

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.



Thursday, June 12th
09:41 AM

Red Delicious Apples

\$0.75/lb

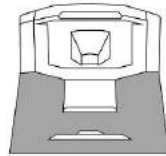


These red delicious apples were sourced from Medford, OR where they were grown organically. Apple's are a good source of vitamin C and are the key to a healthy heart.

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

1.

Weigh Apples on Scale



Tare

2.

Total Cost

@ \$0.75 per lb

4.25 lbs x \$0.75/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

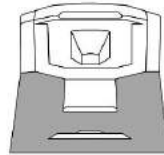


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For more information on where Kelly's Natural Market source's our produce, please visit www.kellysnaturalmarket.com/about.



Weigh Apples on Scale



4.25 lbs

Tare



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.

Thank you for shopping with us today!
Please select your self-check-out reward

5% off today's purchase (\$2.10)

10% off your next visit (\$4.20)

100 Kelly Reward Points

Donate 5% of today's purchase to Charity

Thank you for donating your savings to charity today.
Please select which charity you would like to benefit:

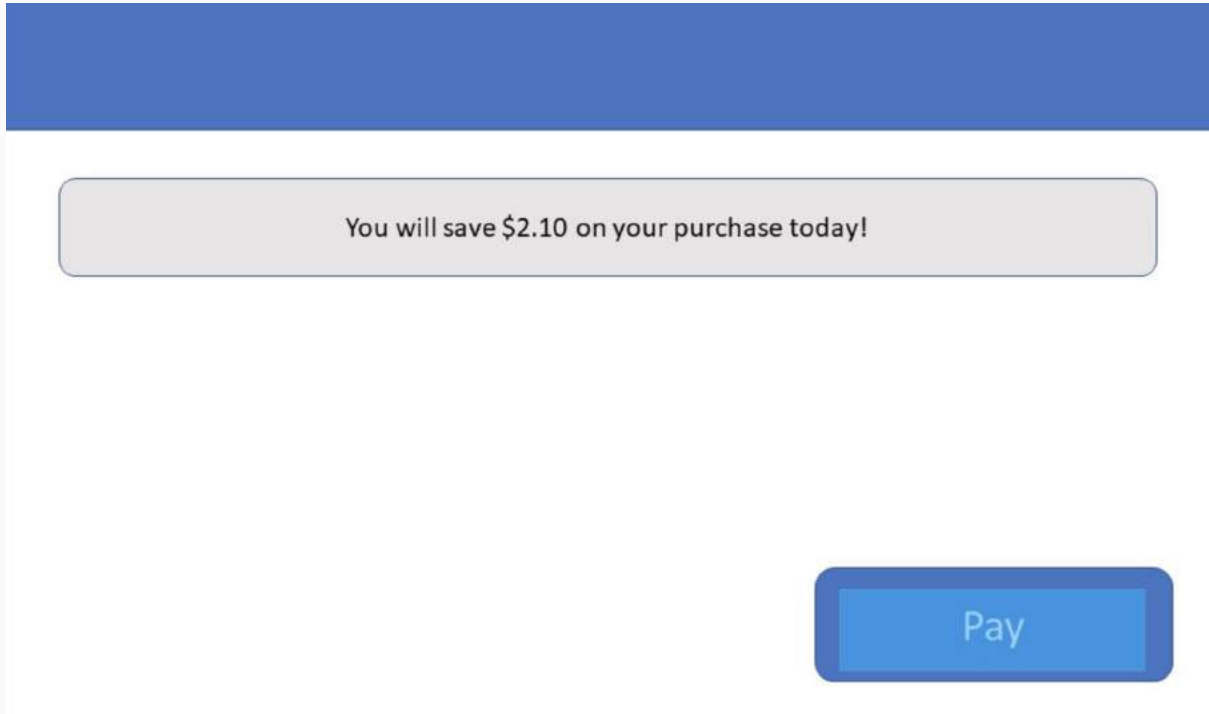
UNICEF

Sierra Club

Doctors without Borders

American Red Cross

Pay



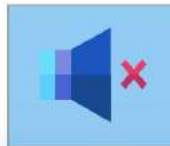
Total Amount Due:

\$50

Select Payment Type:



Pay







Self Checkout

1

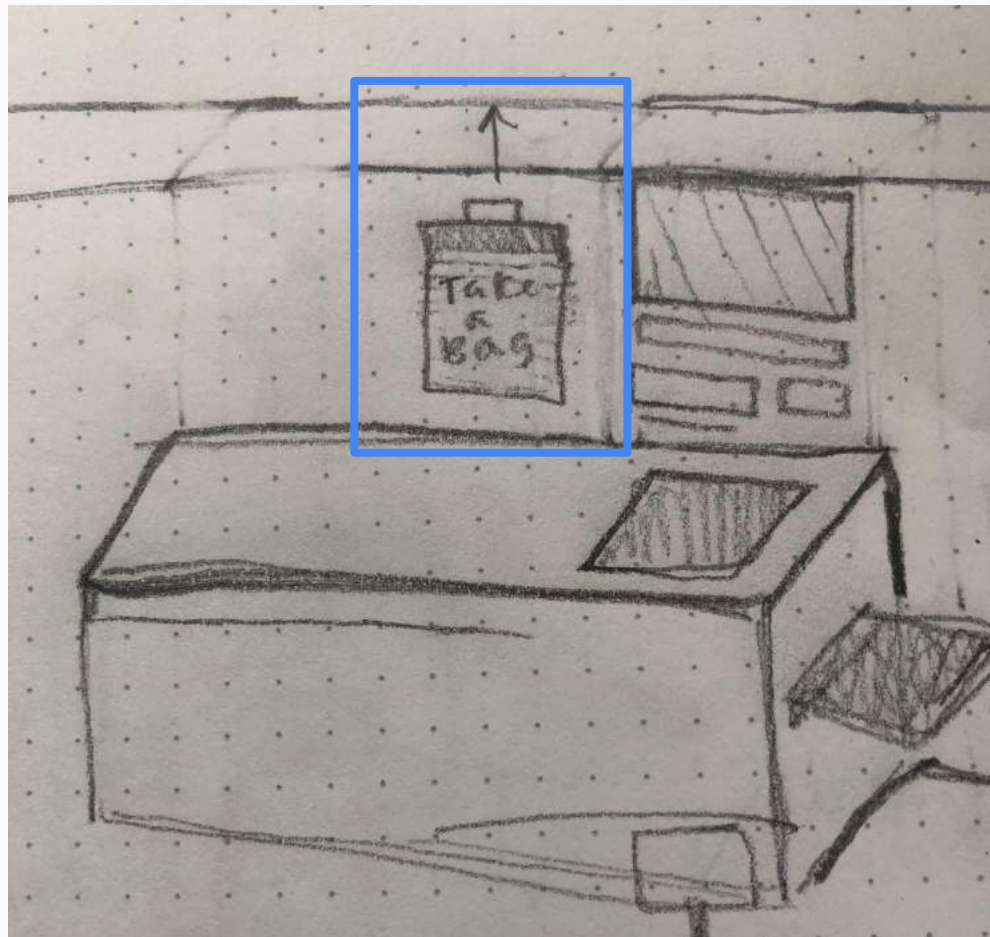
minute wait

SAVE
5%

Cashier

3

minute wait





Takeaways:

1. Test with lower-fidelity prototypes.
2. Prepare questions to get the feedback you need.
3. Ask “How can I test this?” while designing.
4. 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

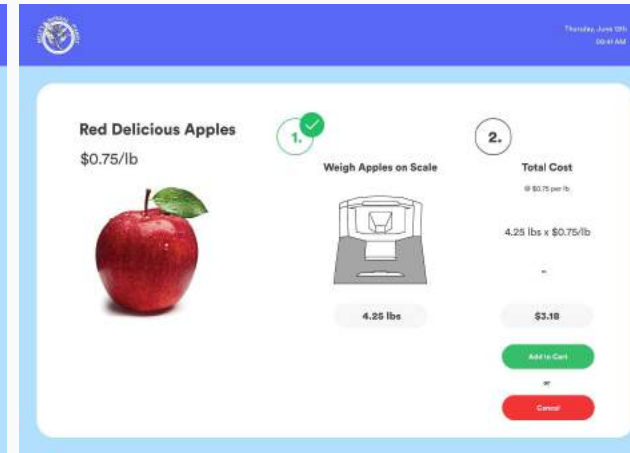
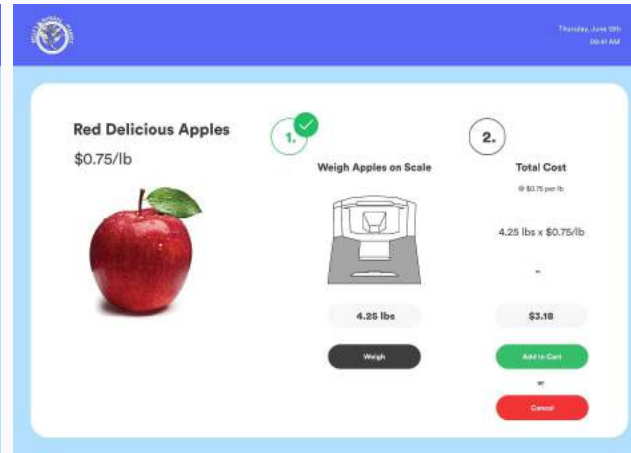
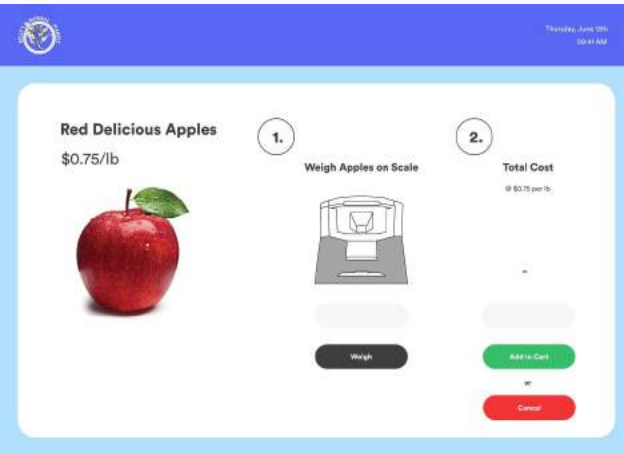
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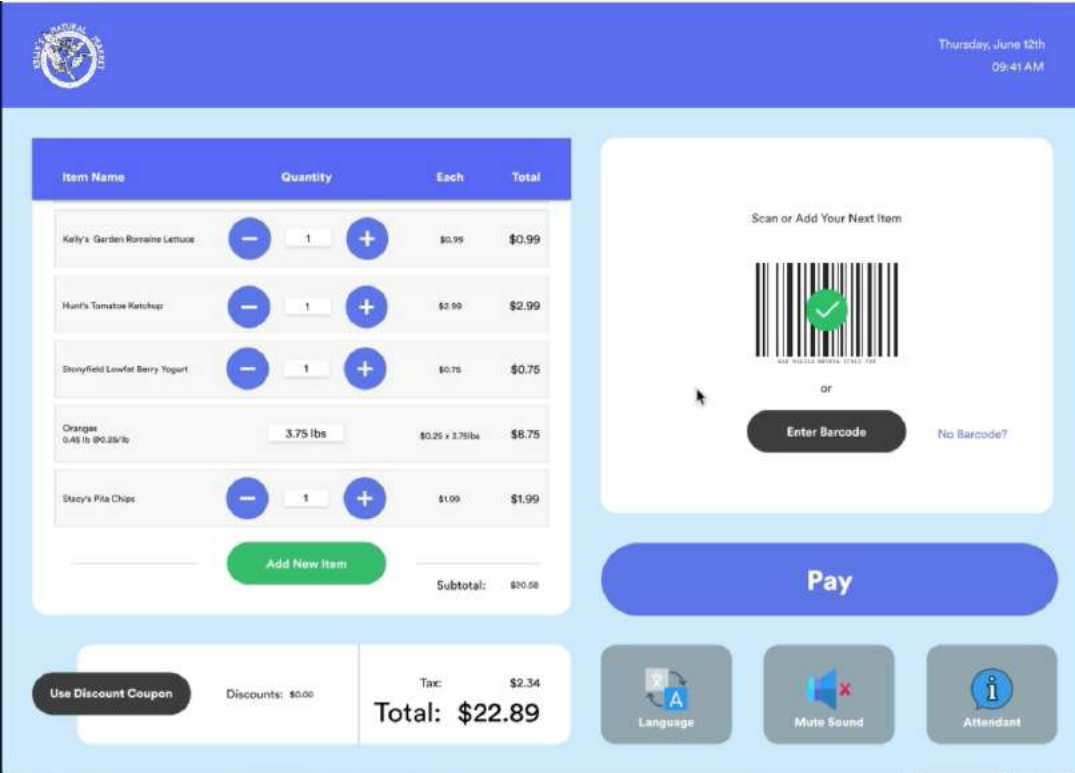
Final Designs



- “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

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Questions? Feedback?