

My Sheetz Pass

Table of Contents

Initial Scoping01
Phase 1: Research02
PEST	
SWOT	
Competitive Analysis	
Stakeholder Map	
Field Research	
Customer Journey Maps	
Service Blueprint	
Affinity Diagramming	
Insights	
Opportunities Highlighted	
Feedback and Next Steps	
Phase 2: Service Innovation Phase15
Reframing	
Identifying Target Segments	
Developing Personas	
3 Innovations their Customer Journeys, and Risks	
Plan to Prototype	
Feedback and Next Steps	
Phase 2a: Meeting with Sheetz34
4 Slide Presentation	
Feedback and Next Steps	
Phase 3: Concept Evaluation and Validation40
Concept Generation	
Storyboarding	
Speeddating	
Results	
Plans to Prototype	
Feedback and Next Steps	
Phase 4: Refinement50
Work Sessions	
Needs Targeted	
Final Solution	
Persona	
Prototype	
Servicescapes	
Risks	
Service Blueprint	
Reflection & Conclusion73

Initial Scoping

The objective.

The HCI Institute at Carnegie Mellon has partnered with a locally based corporation Sheetz in order to give students an opportunity to apply their knowledge to real world applications. As such, our team has been tasked with designing a service innovation for Sheetz.

Sheetz.

Our client Sheetz is a national gas station and convenience store chain primarily located in midwest and heavily concentrated in Pennsylvania. Fervently trying to stay ahead of their competitors, both old and new, Sheetz is looking for new innovations to make their brand stand out.

Co-creating value.

Our team identified this as our main goal. With our diverse academic backgrounds and skill sets, we hope to derive a creative yet feasible solution that will give Sheetz an edge in the gas station and convenience store industries.

Our Team.

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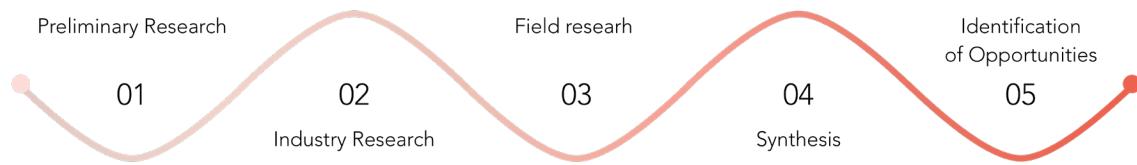
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Phase 1

Our Research Process



The Beginning.

Naturally, the first step our team took was conducting extensive research.

To familiarize ourselves with the *industry* we conducted a **PEST** and **SWOT** analysis. To familiarize ourselves specifically to *Sheetz'* *industry needs* we completed a **competitive analysis** and formulated a **stakeholder map**. Finally, to understand the *current customer experience* we conducted **field research**, interviewing customers and employees, analyzing the servicescape, and collecting field observations.

What we hoped to gain was an understanding of areas that *Sheetz'* services were currently lacking. By taking a closer look at these areas of focus, we hoped to introduce service innovations that could enhance the customer experience and benefit business needs, thereby **co-creating value**.

In the following pages you will see our **final presentation from this phase**, annotated with our **methodologies, insights, and important developments in our process**.

PEST

The PEST Analysis

Increased taxation on tobacco and lower demand on gasoline forces Sheetz to explore new avenues

POLITICAL

Unlikely that vehicle emissions standards will increase in strictness
Unlikely for Food and beverage restrictions will pass

ECONOMICAL

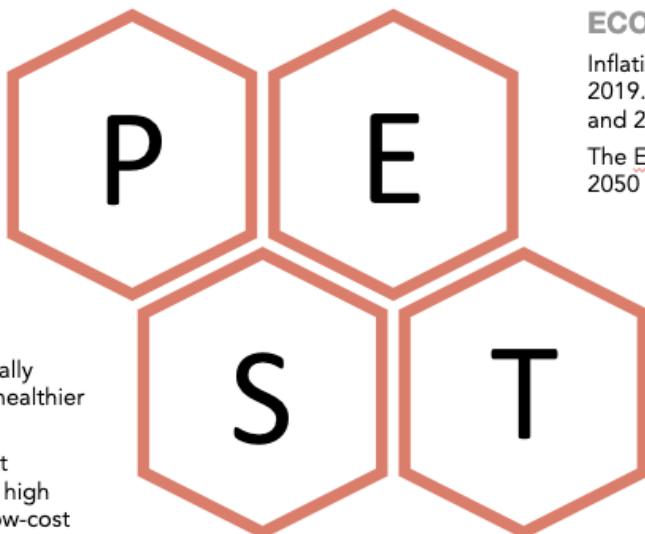
Inflation will average 1.5% in 2019. It will rise to 1.9% in 2020 and 2.0% in 2021.
The EIA's energy outlook through 2050 predicts rising oil prices.

SOCIAL

Consumers generally skewing towards healthier options
Consumers expect convenience over high touch service in low-cost scenarios

TECHNOLOGICAL

Electric/Hybrid/Fuel efficient cars could make Americans less reliant on gas
Rising trend of cashier less counters



We conducted a PEST analysis to gain an adequate **understanding of short term and long term external factors** that had the potential to affect Sheetz' service offerings.

This results of this PEST analysis, pictured above, help us visualize the larger perspective into which Sheetz' fits into and enables our team to **design our service innovation while also accounting for said external factors.**

SWOT

The SWOT Analysis

A major threat to Sheetz is from emerging competition

STRENGTHS

- Brand Image
- Variety of Products
- Tech Savvy
- Low prices
- MTO
- Loyalty programs

WEAKNESSES

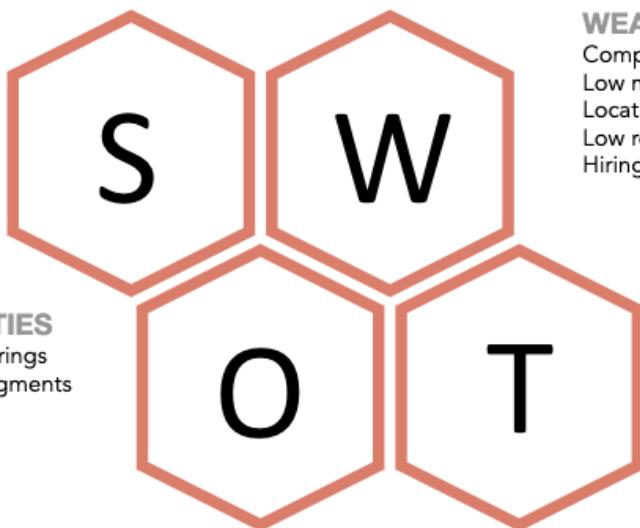
- Competition rising
- Low margins due to tax/inflation
- Location limited to suburbs
- Low reach to urban demo.
- Hiring and retention

OPPORTUNITIES

- New product offerings
- New customer segments
- New partnerships

THREATS

- Competitors
- Changing consumption habits



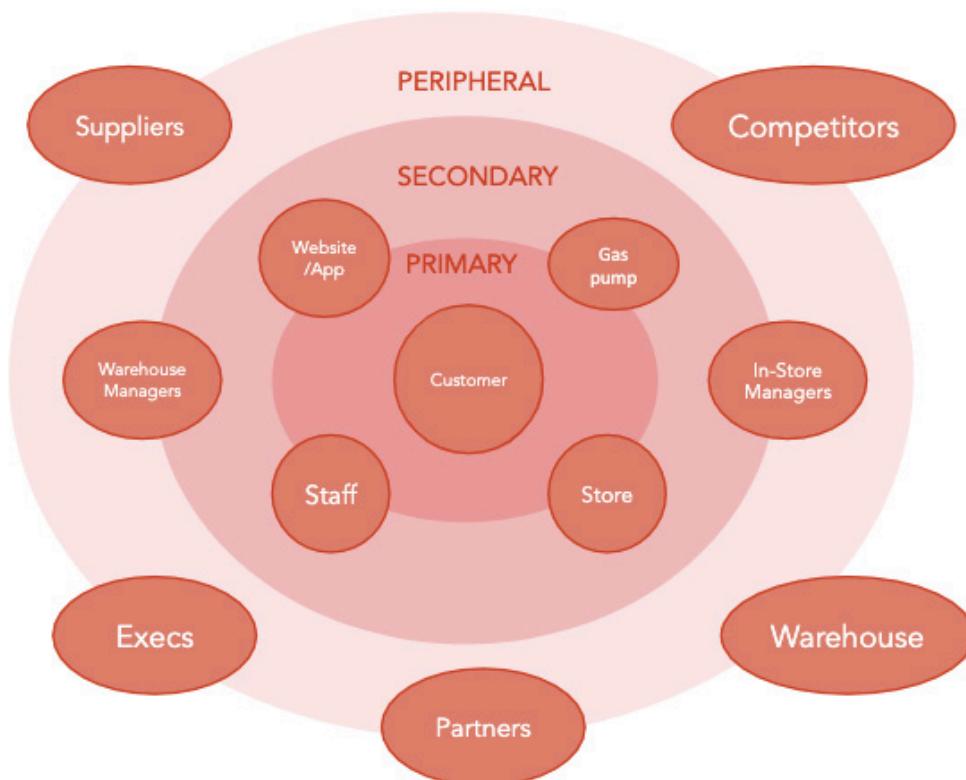
We conducted a SWOT analysis to gain a **deeper understanding of Sheetz' as a business**, a look at the internal factors' that affect Sheetz' service offerings.

Upon analyzing the above four components of Sheetz' we were able to conclude the following. Sheetz has **built a loyal brand following in the suburban geographic** through its made to order food and cheap pricing while emerging as **an industry leader in incorporating technology into its day to day business model**.

Sheetz' positioning as a primarily suburban and rural brand is **decreasing potential profits** and individual stores often have **difficulty with worker management and optimization**. In the face of increasing competitors and changing consumer consumption habits, Sheetz' can increase its competitive standing through engaging customers in more innovative ways which specifically **target new customer segments**.

Stakeholder Map

The Stakeholder Map



We drew out a stakeholder map for Sheetz' in order to identify who's needs we were serving besides simply the customers and Sheetz' as a whole organization. **Componetizing Sheetz' stakeholders provided a more holistic view of the different people involved in the Sheetz' organization.** It was these individuals or groups within the organization that our service innovation would need to cater to in addition to the customer. This includes everyone from administratives who's main objective is to maximize profit to Sheetz' staff who's main focus is having a smooth work day.

Competitive Analysis

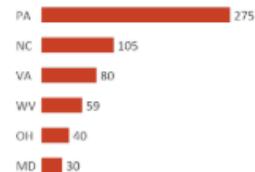
The Competitive Analysis

Rutter's is aggressively expanding in the Altoona region



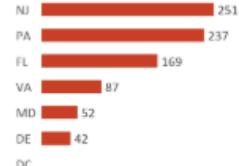
589 Stores **\$2.79** Avg. Unleaded PA Price

MTO, ATM, Kiosk



840 Stores **\$2.73** Avg. Unleaded PA Price

MTO, Healthy, Clean



72 Stores **\$2.75** Avg. Unleaded PA Price

Emerging, Arcades



We conducted a competitive analysis to familiarize ourselves with the current industry landscape. We looked at both direct competitors like Wawa and Rutters and also indirect competitors like Dunkin and Starbucks as well as CVS and Burger King. **In doing so, we found the specific space in the market that Sheetz occupies** and the two main competitors that occupy an almost entirely similar space, Wawa and Rutters. Specifically, we saw that **Rutters is on the rise as a competitor**, outpacing both Sheetz and Wawa in market share growth as a relatively late entrant.

Field Research

Our Trip to Sheetz



During our field trip we (1) interviewed customers (2) interviewed employees, including the manager (3) took inventory of convenience store offerings (4) observed the servicescape (4) proceeded through a made to order food customer journey ourselves.

A short video covering our trip can be found here:
<https://m.youtube.com/watch?v=QNzWAVQxveE&feature=youtu.be>

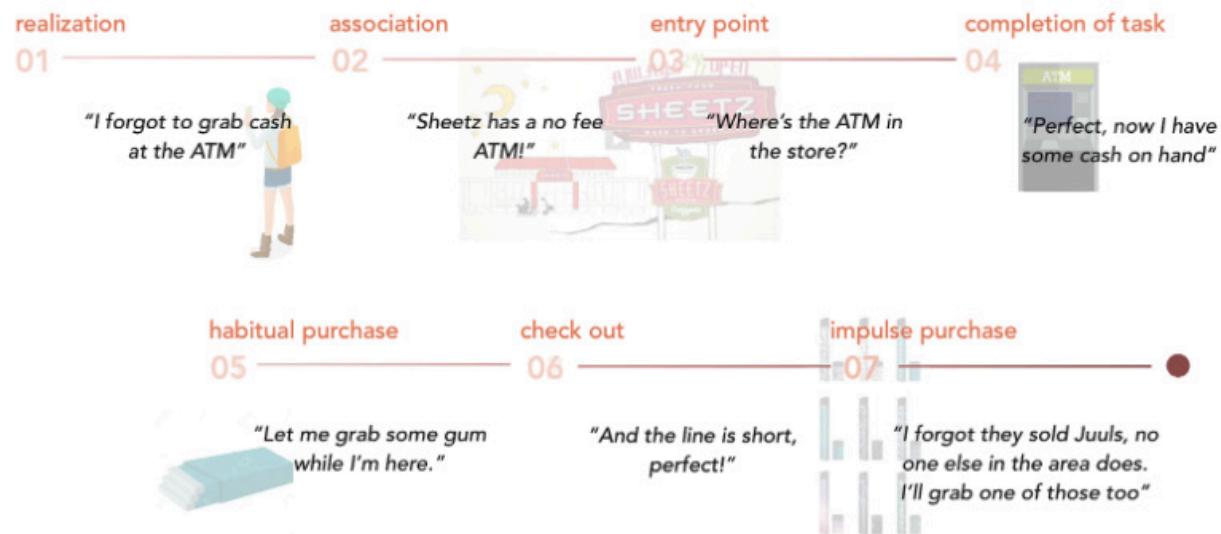
We synthesized the findings from our trip into two customer journey maps (pg 8-9) and four main insights (pg 11).

Customer Journey Maps

Customer Journey Map 1

Grab N' Go

How students experience Sheetz



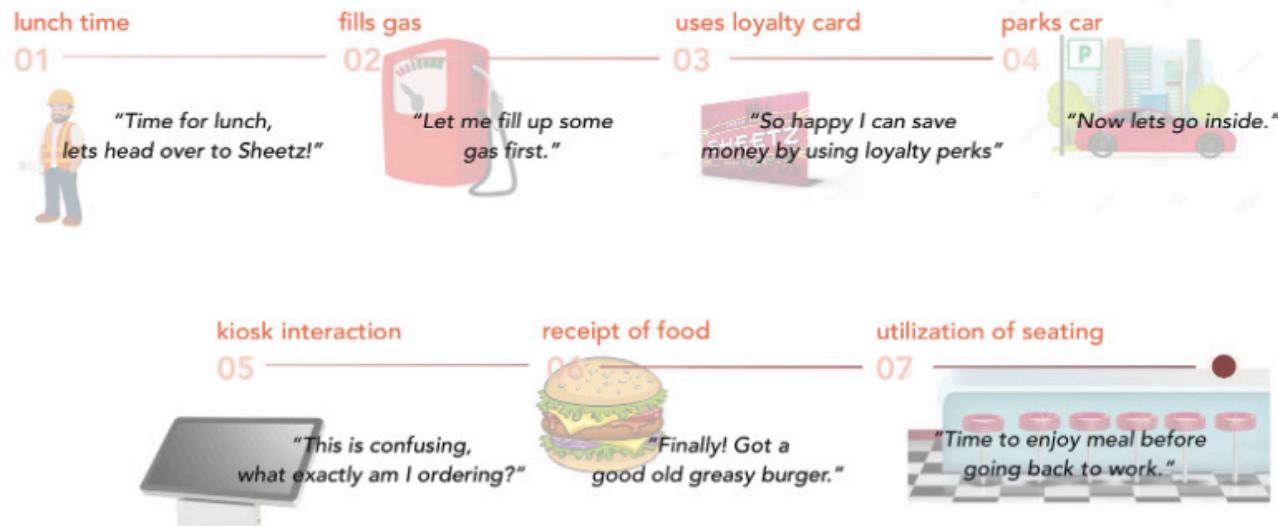
This particular customer journey was based off of interviews collected in the field directly from and about the high school student and younger millennial demographics. As demonstrated above, the journey starts with a realization that leads to a need for an item of convenience, an ATM. After having completed the task, the individual engages in an habitual purchase, that is gum, and impulse buys a Juul because they're aware that Sheetz' in one of the few places that sells them.

Important highlights here are that people in these demographics **don't religiously come to Sheetz but choose to do so when it is a matter of convenience**. While their entry point is typically out of necessity for a typical convenience store offering, such as the ATM, **they often end up buying more items because of the need they feel when they see a particular item such as gum or candy**, two of the most restocked items in the store. Most importantly, the ability to purchase a Juul is a unique offering provided to this demographic that many other convenience stores don't offer. It is in fact a big draw into the store, seeing as how Juuls are their biggest selling merchandise.

Customer Journey Maps

Customer Journey Map 2

Good, Cheap, Fast Food How blue collar workers experience Sheetz



This particular customer journey was based off of interviews collected in the field directly from and about the blue collar demographic. As demonstrated above, the customer journey begins because of an outside trigger or cue, such as it being lunch time. The first step upon entering Sheetz' is to fill up on gas often using a member loyalty card to save money on future purchase. After parking the car, the worker goes inside to the kiosk to order his made to order lunch and upon getting his lunch sits down in the seating area to finish his meal and then continue on to work.

The first point of importance is the regularity of the customer's Sheetz' visits. Unlike the customer journey before, this customer has a set day and time where he comes to Sheetz. It's also important to note that price is a much higher priority for this customer than the previous customer, hence the usage of the loyalty card and the purchase of made to order food as lunch.

Work Sessions

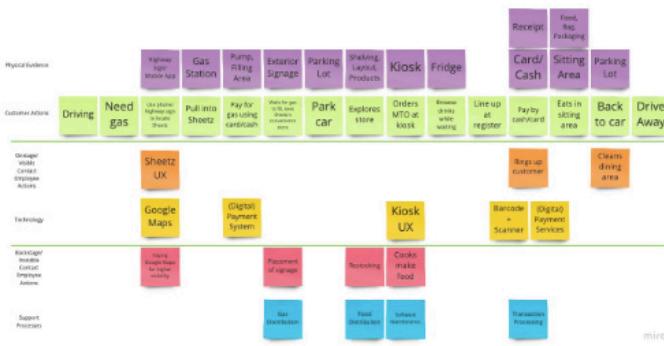
Work sessions

Concept Map



Work sessions

Service Blueprint



We used a similar process of group ideation and creation to construct our Service Blueprint



Insights

Insights

Our interviews on the field had given us insight as to purchasing habits, customer hierarchy of needs, and customer loyalty tendencies. We were also able to first hand observe Sheetz' variety of offering and talk to employees to get a better sense of overall purchasing trends. Following our work sessions we were able to synthesize all the information we had collected from our research processes to identify 4 main insights displayed below.

Insight 1: Significantly different purchasing behavior amongst customer segments

- Millennials tend to buy Juul Pods, late-night meals
- Blue collar workers tend to buy food and gas

Insight 2: Customers are high frequency and "low-touch"

- Most customers visit several time a week, even 2-3x per day
- However, the seating area is commonly empty
- Customers expect a quick transaction: "The first thing I notice is the line."

Insight 3: High degree of loyalty

- Regulars respond well to perks and rewards programs
- Further encourages regulars to stay within the ecosystem

Insight 4: Something for everyone, but there's room to deliver more

- Health food/drink options
- Vegetarian options

Opportunities

Opportunity 1 | Increase engagement to boost sales

Higher customer engagement of segments -(Millennials) for example using New product offerings, Millennial focused innovations etc

Why?

1. We feel this consumer segment is under leveraged.
2. The association with Sheetz needs to be designed.
3. Increase sales for private labels (High profit margins)

Risks?

1. Impact on other high frequency customers
2. Learning new consumer habits may take time



Based off of our research that millenials often only entered the store when they needed something of convenience, we wanted to focus on increasing customer engagement in this area. **How can we draw millenials into Sheetz for Sheetz and not for anything else?** This was our goal with this particular focus area and our definition of millenials in this case ranged from 16 year olds to 27 year olds.

Opportunities

Opportunity 2 | New customer acquisition and retention

Customer Acquisition and retention - Awareness and stickiness

Why?

1. Sheetz has been predominantly located in Suburbs. Can it increase its customer base in the weekend traffic?
2. Investigate the expansion to the city. Convenience only store?

Risks?

1. Can take a lot of time to learn new landscape
2. Viability can be a challenge



Based off of our research that indicated **most Sheetz' customers are regulars who mainly visit the store during meal time hours on weekdays**, we developed this particular focus area. We saw that there was an opportunity to acquire new demographic within the Sheetz' fold outside of loyal blue collar workers and passerbys. Specifically, we saw that Sheetz' had an **opportunity to acquire new demographics of customers through expanding their presence in urban centers** and wanted to highlight this in our presentation as well.

Feedback & Next Steps

Feedback

Good research. Narrow your scope. What SPECIFICALLY does customer acquisition and retention entail or increasing engagement entail? Both of our highlighted opportunities were deemed a good starting point, but too broad to result in an effective service innovation.

Reflection

In spite of the extensive research we had conducted, we weren't fully able to come to a conclusion regarding a focus area. The large amounts of qualitative and quantitative data we had synthesized had led us to a vague conclusion. It's at this point we realized we needed to take a step back and look at the bigger picture in order to narrow down our scope, **co-creation of value**.

Next Steps

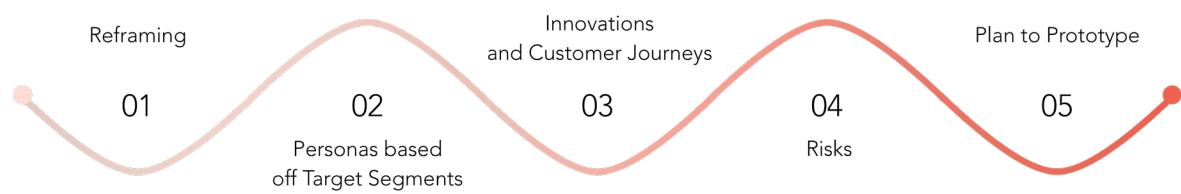
We knew our next step would be to start ideation processes that helped us narrow our scope. Based off of our research, we needed to generate ideas and plan to test them.



Our team presenting phase 1

Entering Phase 2: Service Innovation

Our Ideation Process



Co-Creating Value.

The first step our team took before beginning to ideate was a reframing activity. We wanted to challenge everything we knew in order to validate our assumptions.

Therafter, we embarked on a journey of ideation. After identifying **target segments**, we began creating **personas**. We identified specific **service innovations** that would cater to the identified user needs and drew out how **customer journeys** for each innovation would look like.

Having fleshed out the ideal service innovation, we then took a step back and looked at how the **risks** for each innovation would manifest themselves. Finally we drew out a **plan to prototype and test** each of these innovations.

In the following pages you will see our **final presentation from this phase**, annotated with our **methodologies, insights, and important developments in our process**.

Reframing

Reframing Activity: Reverse Assumptions

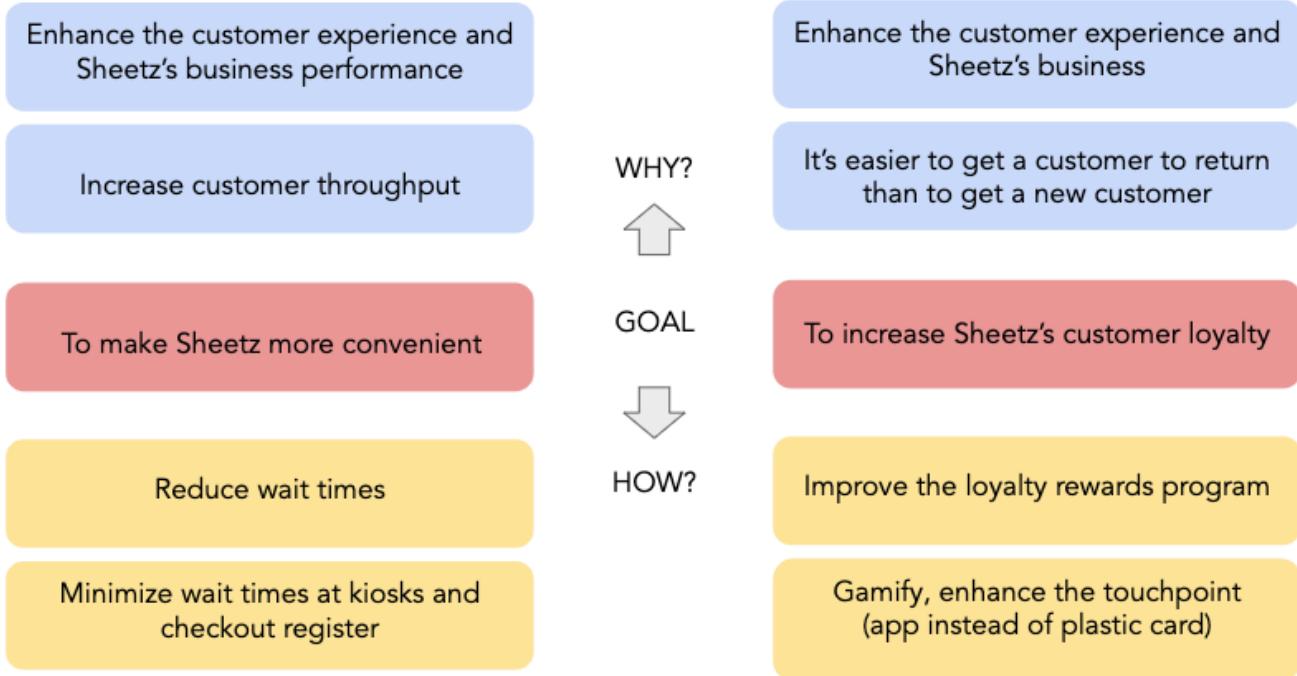
Assumption	Reverse Assumption	Potential Solutions; How Might We?
Customers come to Sheetz wanting to purchase either food, gas, or gas and food	Customers don't know exactly what they want and can be convinced to purchase other items	How might we cross-sell food to gas customers? How might we cross-sell gas to food customers?
Sheetz customers are wasting 2-5 minutes of their time when waiting for their tank to fill.	Customers want to be productive when their tank is filling but don't have a way to work or complete a task.	How might we use the gas kiosk to help customers accomplish a goal?
The Sheetz loyalty program is working well for regulars	The Sheetz loyalty program is encouraging loyalty for a small segment of their total market that could be expanded.	How might we expand the new member acquisition beyond Sheetz's current base?
Customers seeking gasoline also know about Sheetz's convenience store offerings.	Travelers passing through, even locals do not know about Sheetz's convenience store offerings	How might we better advertise the food that Sheetz has to offer?

Challenging our assumptions to generate creative solutions.

By reversing our assumptions, we were able to look at each focus area from a two-sided perspective. For example, in terms of purchasing habits we were able to view it from the perspective of customers know what they want and customers don't know what they want. Each of these perspectives yields a different outcome although they're framed similarly. The first perspective would result in designing specifically for customers who come in knowing what they want and the second perspective would result in designing ways to persuade customers to buy something they might not come in wanting. This activity helped us to broaden the scope of solutions we were considering.

Reframing

Reframing Activity: Abstraction Laddering



Dissecting our goals to better understand the objective.

By abstract laddering, we were able to consider the broader objective that helped construct our goals. We had identified increasing convenience and loyalty as the goals our design innovations should satisfy, but deconstructing the how and why helped us identify key elements to achieving our goal. We were able to pinpoint in how our solution would manifest itself at a broad level. In addition, determining the “why” of our goals assisted in identifying how our goals served the larger goals of our stakeholders.

Target Segments

Who are Sheetz Customers?

After a quick revisit to our research synthesis, we identified the three segments pictured below as target segments for Sheetz primarily due to high growth potential.

The Target Segments We Identified



Frequent gas users



Young suburban high schoolers



Students in urban centers

Market segment has high growth potential

Gain: provide more points of contact to increase loyalty and sales

Market segment has high growth potential

Gain: grow the appeal of sheets to younger students, increase sales through building loyalty

Market segment is untapped

Gain: brand recognition in urban areas and profit

Personas

Persona 1

Persona 1 resonates with **Target Segment 1** reflects insights captured through our interviews of **blue collared workers** as well as loyal Sheetz customers that visit the store multiple times a week if not a day.



Chris

The story: Chris is a construction worker for many PA based commercial sites. He doesn't make too much money as a construction worker but his company provides good benefits and it's a steady job. Most of his close friends are in his construction crew and during lunch they'll sometimes grab a bit to eat. He can't stay after work too often because he has 3 kids and him and his wife have their hands full when the kids get out of school in the afternoon.

A quote: "Sometimes I skip lunch or dinner because I'm so busy between my job and the kids, now a days I don't have time for anything."

Needs: fast and cheap lunch/dinner, steady income, ways to save money

Characteristics: Hard worker but likes a nice meal outside of the home and a break from the hustle and bustle of raising 3 kids

Personas

Persona 2

Persona 2 resonates with **target segment 2, suburban high schoolers** and reflects insights captured through interviews with Sheetz employees and data points provided by Sheetz to our team.



Gabe

The story: Gabe is a freshman in highschool. He loves to play games, especially virtual ones. He recently just beat Fortnite and is looking for something more challenging. As a teenager, he's also trying to become more independent, and get his parents to trust him.

A quote: "I wish my parents let me spend more money, I never get to buy what I want."

Needs: entertainment and allowance

Notable Characteristics: In an angsty rebellious teenage phase, often plays video games for hours at a time much to the chagrin of his parents, whenever he's given allowance spends it on video games or candy.

Personas

Persona 3

Persona 3 resonates with **target segment 3, millennial urban populations** and reflects insights captured through interviews with Sheetz customers, employees, and college students.



Kelly

The story: Kelly is a junior in college. She's currently double majoring and often finds herself too caught up in her work. For a nice break she likes grabbing good comfort food with her friends. She's also an avid dancer, so even though she likes comfort food, she likes to have healthy options.

A quote: "My favorite part of the day is when it's time to eat, because I can take a break from my work and just relax."

Needs: cheap food on a college student budget, comforting meals, time to work on her extensive course load.

Characteristics: Spends a lot of time in the library, is often up late and has a weird schedule, doesn't like walking far from her dorm when it's cold outside

Innovation 1

Innovation 1: Food flexibility - Bringing the Store to the Gas Pump

- First point of interaction for most Sheetz customers is the Gas Pump.
- Our innovation proposal is to provide access to all Sheetz at customer fingertips - this may be in the form of a kiosk
 - Customer can order food
 - Customer can search for products in convenience store - Even find their location inside
 - Communication can take advantage of Promotions and deals



Reduced wait
time for
regulars



Increased foot traffic
/New customer
acquisition



Aids customer
loyalty and
retention



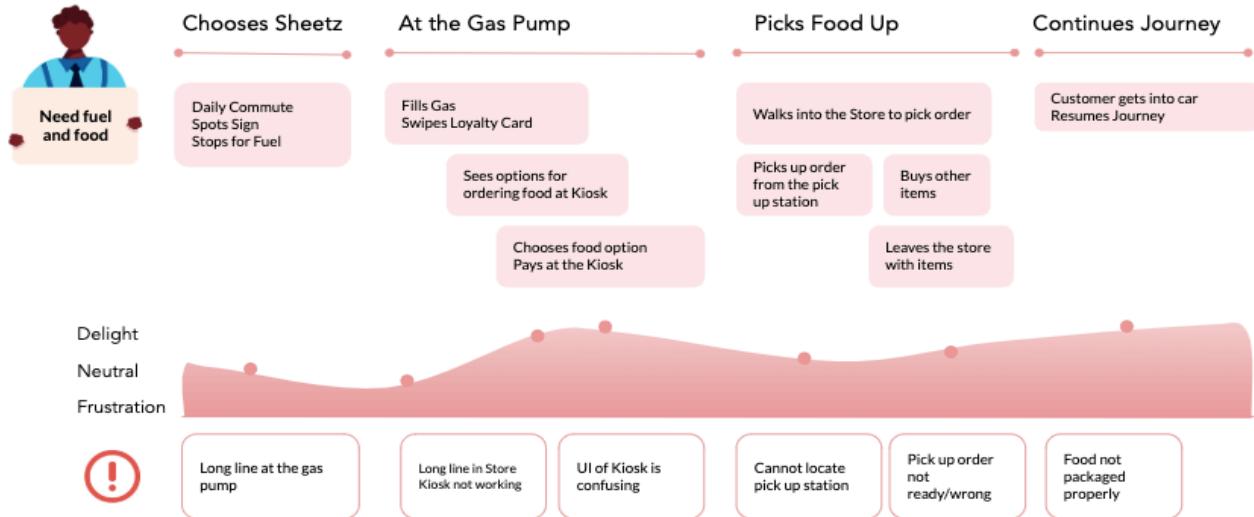
Some Notes

Innovation is catered towards **target segment 1, loyal customers.**

The addition of the kiosk **serves as an entry point to get customers into the store.** When presenting innovation 1, an interesting point that arose was "what happens when gas becomes less prevalent?" **The kiosk serves as a way to transition gas only customers to gas + store customers,** so eventually when gas becomes less prevalent, customers are using Sheetz more for

Customer Journey 1

Customer Journey Map



An example of how the first innovation might exemplify in a customer journey

Risks 1

Risks and Plan against Risk- Bringing the Store to the Gas Pump

S no	Risk	Plan
1	Does it prevent the potential customers from walking inside the store?	We will need to do a sample analysis
2	Does it impact the gas business? Having a larger line can potentially drive away customers coming in to draw gas	We plan to understand peak hour traffic and see how this can be avoided.
3	In providing the visibility of search for products in convenience store, can the present store resources handle the inventory management of available stock	We plan to understand the present inventory management process and and the manual effort involved
4	What is the impact of non-availability of products?	Can this be prevented in the first place? (forecast) What is the stop gap arrangement that can be put in place? Customer behavior needs to be explored.
5	Can the outside panel survive all weather and temperatures?	Research for availability of such interfaces and their pricing

Our risk mitigation preliminary plan is displayed above.

Innovation 2

Innovation 2: Promoting App usage by Gamifying purchases

- Enhancing the physical touchpoints of the gas pump, kiosk and card to the app
- Gamifying Store Purchases on the App promotes app usage and drives customer loyalty



Adds a new touch point



Caters to new user segments (millennials)



Aids customer loyalty



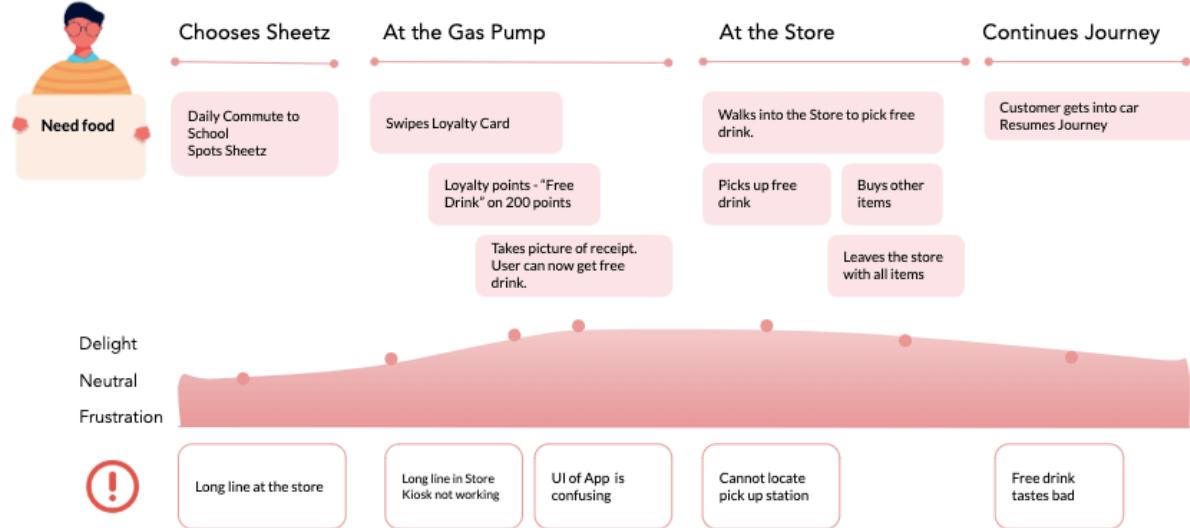
Some Notes

Innovation is catered towards **target segment 2, suburban highschoolers**.

This innovation is **low cost to high benefit ratio**. The relatively low cost of the app implementation versus the relatively high benefit of being able to get customers addicted to making purchases as part of the loyalty game is as appealing from a business perspective as it is from a customer engagement one.

Customer Journey 2

Customer Journey Map



An example of how the second innovation might exemplify in a customer journey

Risks 2

Risks and Plan against Risk- Gamifying purchases to promote app usage

S no	Risk	Plan
1	Need to establish target segment - Adults/Children	We plan to start with the adult segment
2	The existing customer segments might not be tech savvy	We will need to study the customers around Sheetz, we can try to understand what kind of Apps they presently use
3	The number of Daily Average Users(DAUs) of the App/loyalty program might be low	We plan to obtain this number from Sheetz, if this number is low then we have another problem on our hand. How to increase the traffic towards the App?
4	The aim of gamification is to cause a change in behavior. We need to understand how to integrate this into American culture	We plan to test our prototype against a smaller part of the problem like tweaking the way payment happens/points can be collected and understand the feedback

Our risk mitigation preliminary plan is displayed above.

Innovation 3

Innovation 3: Late Night Food Truck

- The profits from a store without the cost of a physical store
- Increasing brand recognition in urban centers among various demographics
- Building a new set of followers, catering to a high demand



Adds a new income source



Caters to new user segments (students)



Aids customer loyalty



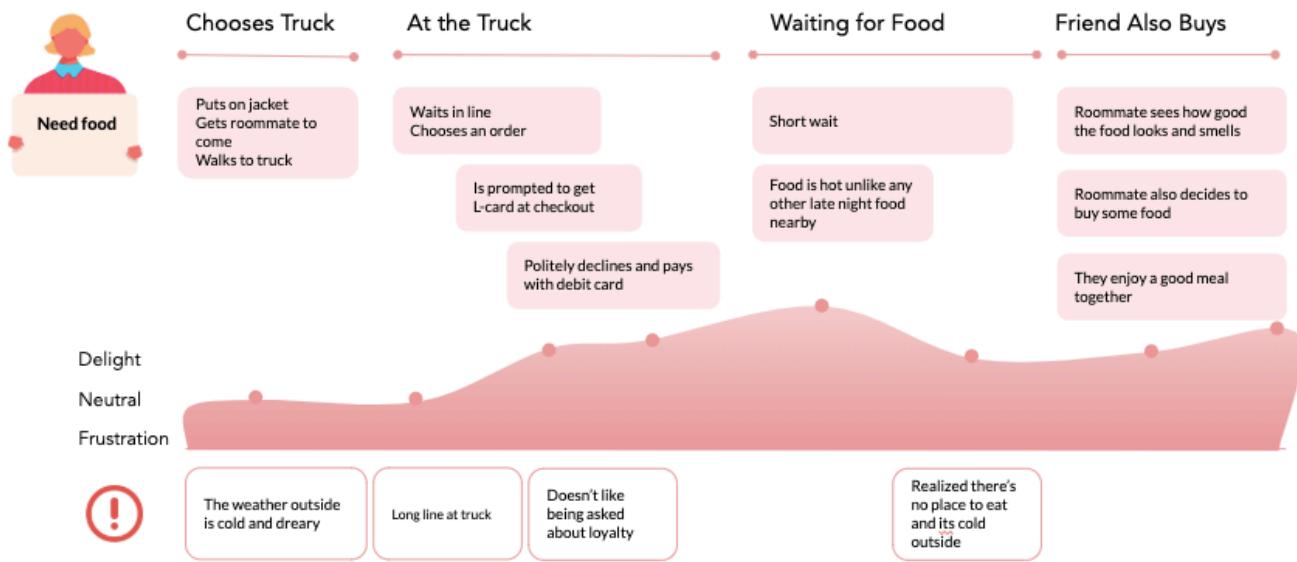
Some Notes

Innovation is catered towards **target segment 3, millennial urban populations.**

This innovation has significant long term benefits of **increasing brand reach, geographically.** Increased brand recognition leads to increased customer throughput, which ultimately results in greater profits.

Customer Journey 3

Customer Journey Map



An example of how the third innovation might exemplify in a customer journey

Risks 3

Risks and Plan against Risk- Late night food truck

S no	Risk	Plan
1	Regulations around food trucks (Parking, Timing regulations)	Research on PA laws around food trucks
2	Considerable investment for food trucks and establishing logistics	Do a feasibility analysis
3	Competition with other food trucks and late night delivery services	Is it more feasible to partner with a delivery service?
4	Change in attitude - Sheetz may not be viewed as a food forward service	Difficult to influence behavior, prototype with multiple customer segments

Our risk mitigation preliminary plan is displayed above.

Prototyping

Plan to Prototype



Speed Dating



Physical modeling at the scene



LEGO modeling



Co-creation workshop with users

Prototyping Specifically for Each Innovation

Gas Kiosk

Tester: blue collar workers/ gas-only customers/ first-time customers

Prototype: Storyboards + Speed dating

End goal: To collect qualitative data on user's reaction to the concept and to validate hypothesis that gas pump kiosk is a pleasant addition

Mobile App

Tester: Central Catholic High School students [specifically the Pittsburgh high school around the corner] at starbucks after school lets out, they swarm the place

Prototype: Push the gamification + loyalty screens using paper prototypes

End goal: To gauge initial interest and addictive capabilities of the gamification

Food Truck

Tester: College students and young working professionals in the city

Prototype: Set up a food stand in urban areas and serve Sheetz food. Have similar signage as would be appropriate for a food truck; this avoids the need to purchase a food truck

End goal: To spread the brand awareness of Sheetz in urban areas; see awareness of Sheetz brand

Feedback & Next Steps

Feedback

Strong ideation. Narrow your scope. The general commentary reflected that while our innovations were well developed, it was time to narrow the scope down to one idea. The suggestions centered around validating the underlying need behind each idea and proceeding with the one that seemed

Reflection

Our team has intensely focused on ways to co-create value. In the process, we were able to solidify three innovations that we felt confidently about. However, we knew that we needed to narrow it down to one. We could no longer remain open to pursuing all three, it was time to pick.

Next Steps

In order to narrow it down to one idea, we decided to first, get feedback from Sheetz executives during our client meeting, and second, conduct speeddating via storyboards to validate the underlying hypothesis behind each one of these three innovations.



Our team presenting phase 2

Phase 2A: Client Meeting

Our Preparation



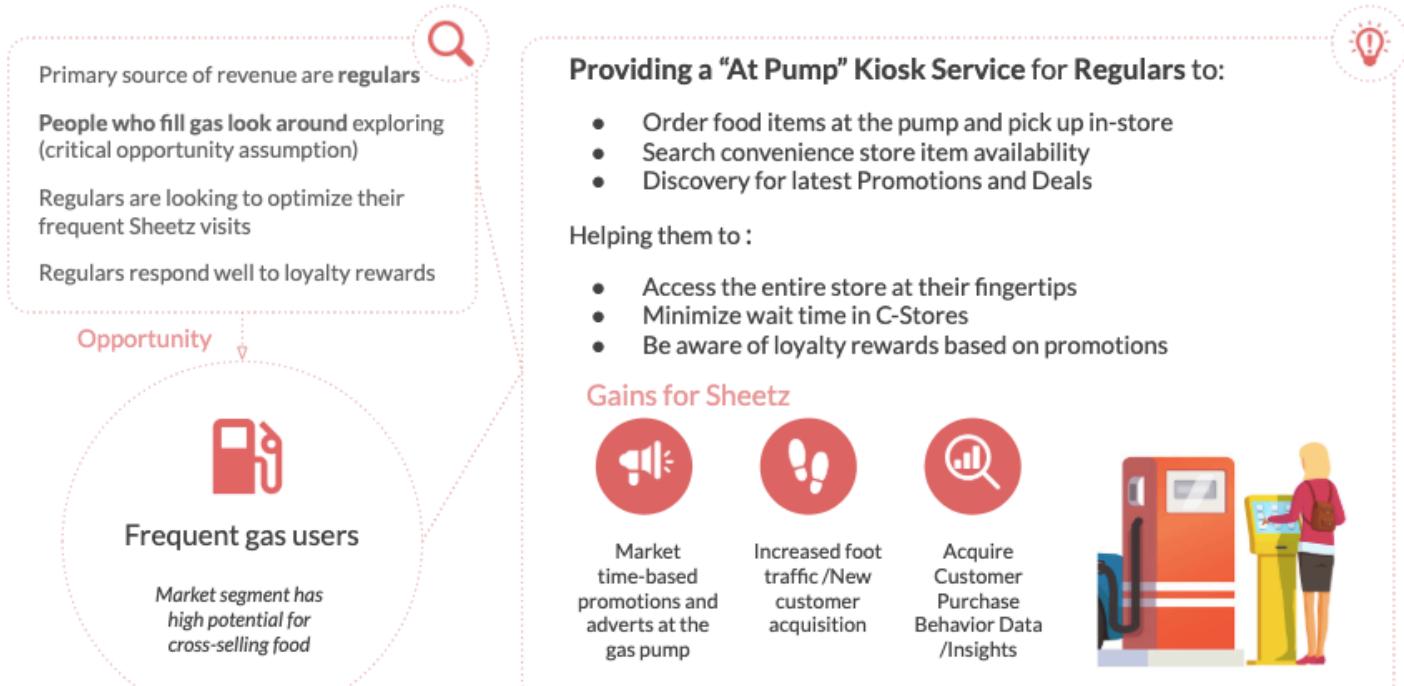
Demonstrating Value to the Client.

Given ten minutes time with our client, we condensed our slide decks into 3 main slides covering our three service innovation proposals and rounded the deck out with a slide that channeled feedback into specific areas we had hoped to gain more insight into.

In the following pages you will see our **the slide deck we presented to our client** followed by our **review of the feedback received**.

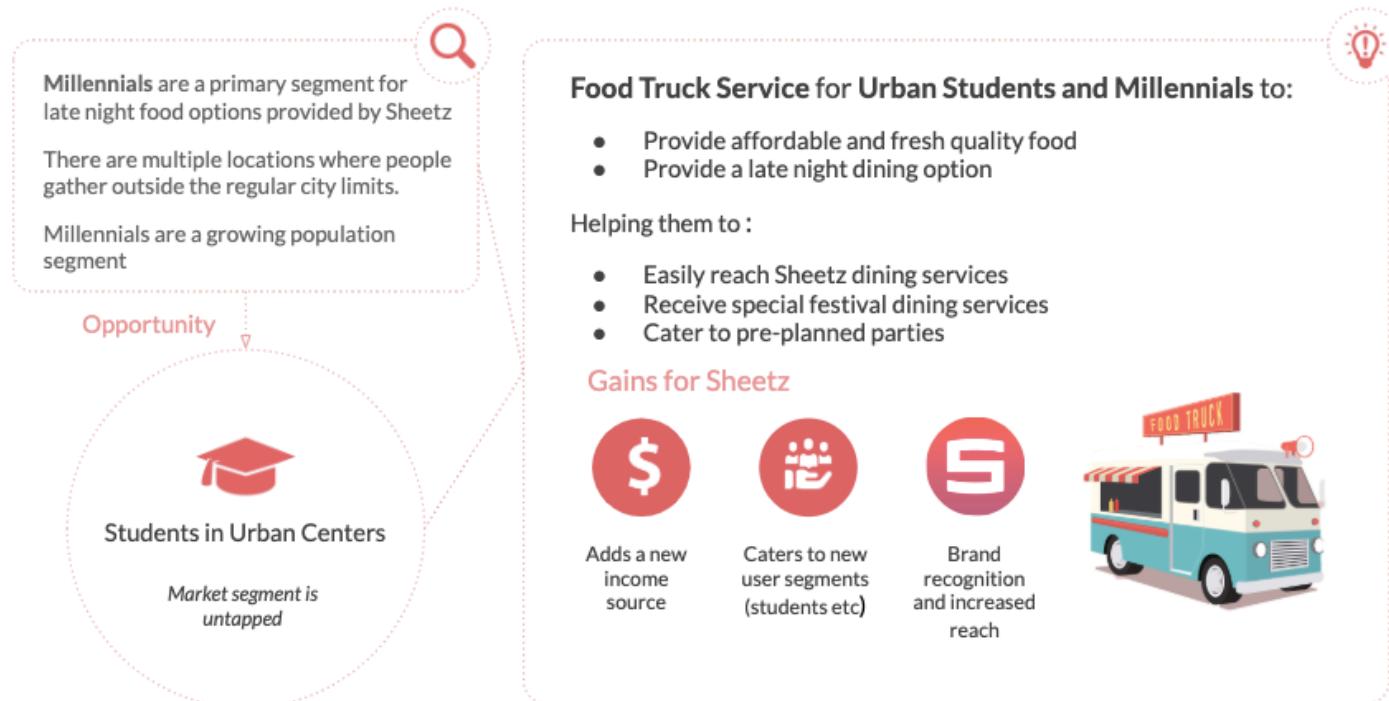
Slide Deck 1/4

Concept 1: Bringing the Store to the Gas Pump



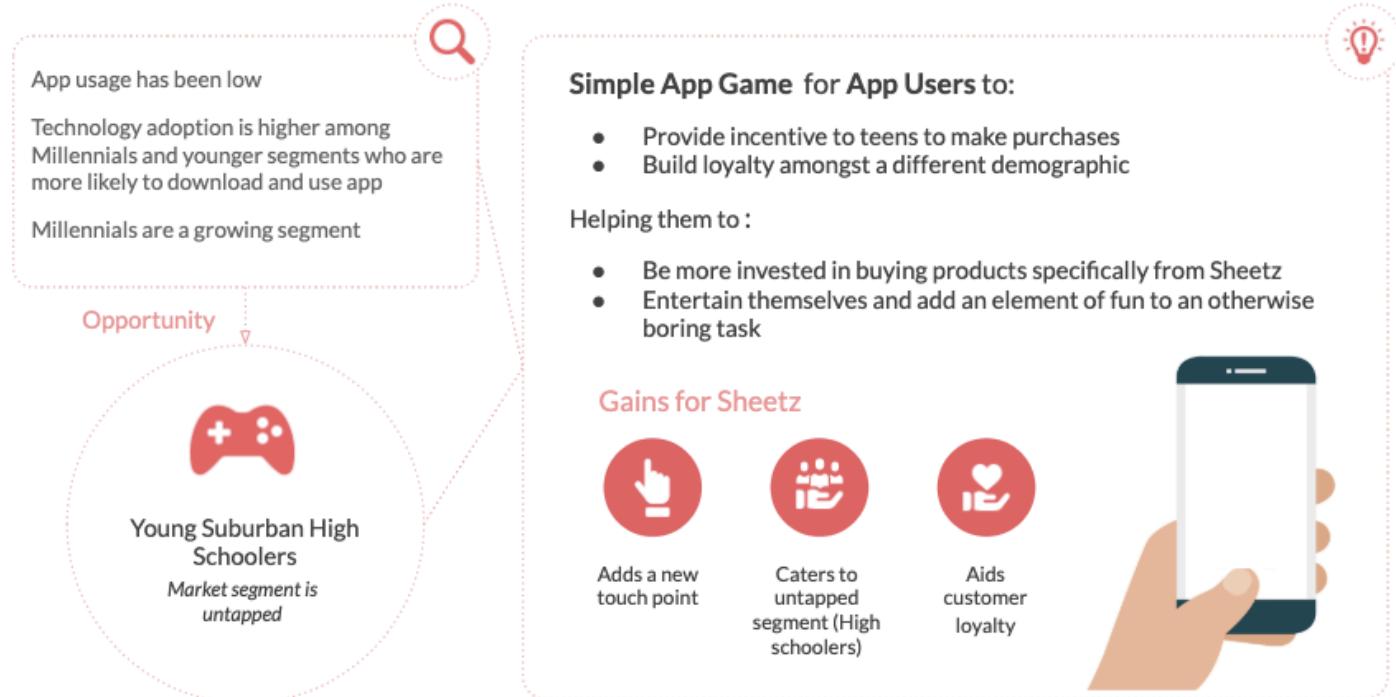
Slide Deck 2/4

Concept 2: Late Night Sheetz Food Truck



Slide Deck 3/4

Concept 3: Promoting App Usage by Gamifying Purchases



Slide Deck 4/4

Areas of Focus for Emily Sheetz

Concept 1: Bringing the Store (Restaurant+Convenience) to the Gas Pump

- We found evidence that ordering at a kiosk has been implemented in limited locations: Why was it discontinued/not rolled out to more stores?
- What lessons did you learn from test run?
- How do you currently communicate promotions/deals?

Concept 2: Food Truck

- Is there evidence of demand for healthy, convenient food offerings for Sheetz's target demographic?
- Has Sheetz experimented with rotating food options?
- Is this topic within the scope of Sheetz's overall strategy to lean into its c-store offerings?

Concept 3: Increasing App adoption by Gamifying Purchases

- Why does Sheetz's App have relatively low market penetration?
- What demographic does the loyalty program attract? Are there segments that don't have much traction?

Feedback & Next Steps

Feedback

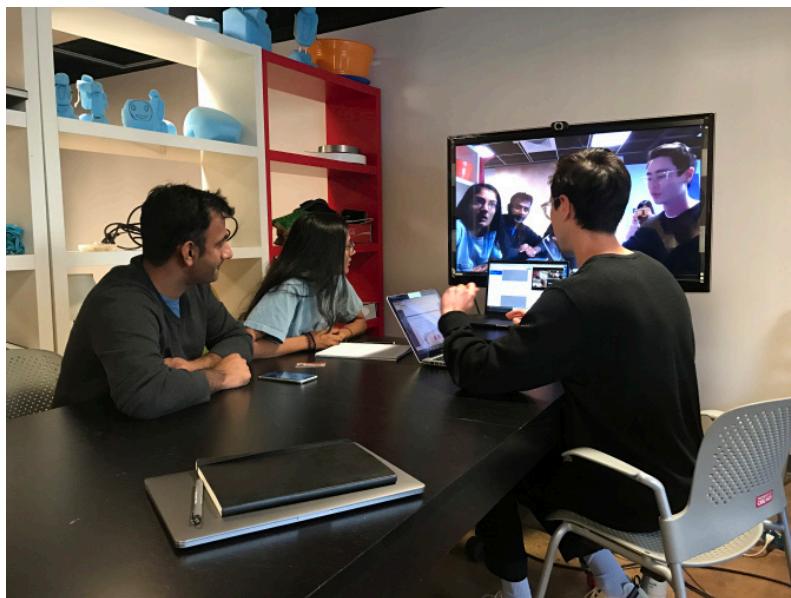
Enthusiasm towards food truck and increasing app usage, hesitancy towards kiosk due to previous implementation issues. While our clients resonated with the intentions behind each innovation, there was hesitancy towards implementing a kiosk due to hardware malfunction issues. They also highlighted that a priority for them was **increasing app usage**.

Reflection

Our team till that point had been very keen on kiosk at the pump idea, but then realized we would need to find a way to reframe the solution so that it was more appealing to our clients.

Next Steps

As a team, we knew the needs that the needs targeted by the kiosk solution were the highest priorities out of those we identified through our research. As such, we decided to develop iterations of the solution in order to derive an innovation that would satisfy our client and meet the needs of the business and customer. We did so through storyboarding and testing.



Our team presenting to the clients

Phase 3: Iteration & Testing

Our Innovation Development Process



Building from the ground up, putting Sheetz' needs first.

Using our feedback from the client meeting, we knew we had to rethink our solution to make Sheetz' more comfortable. We wanted to do so without sacrificing the quality of the solution. To tackle this we started from square one and used **concept generation methods** to think of ideas that solves the same needs we were solving before.

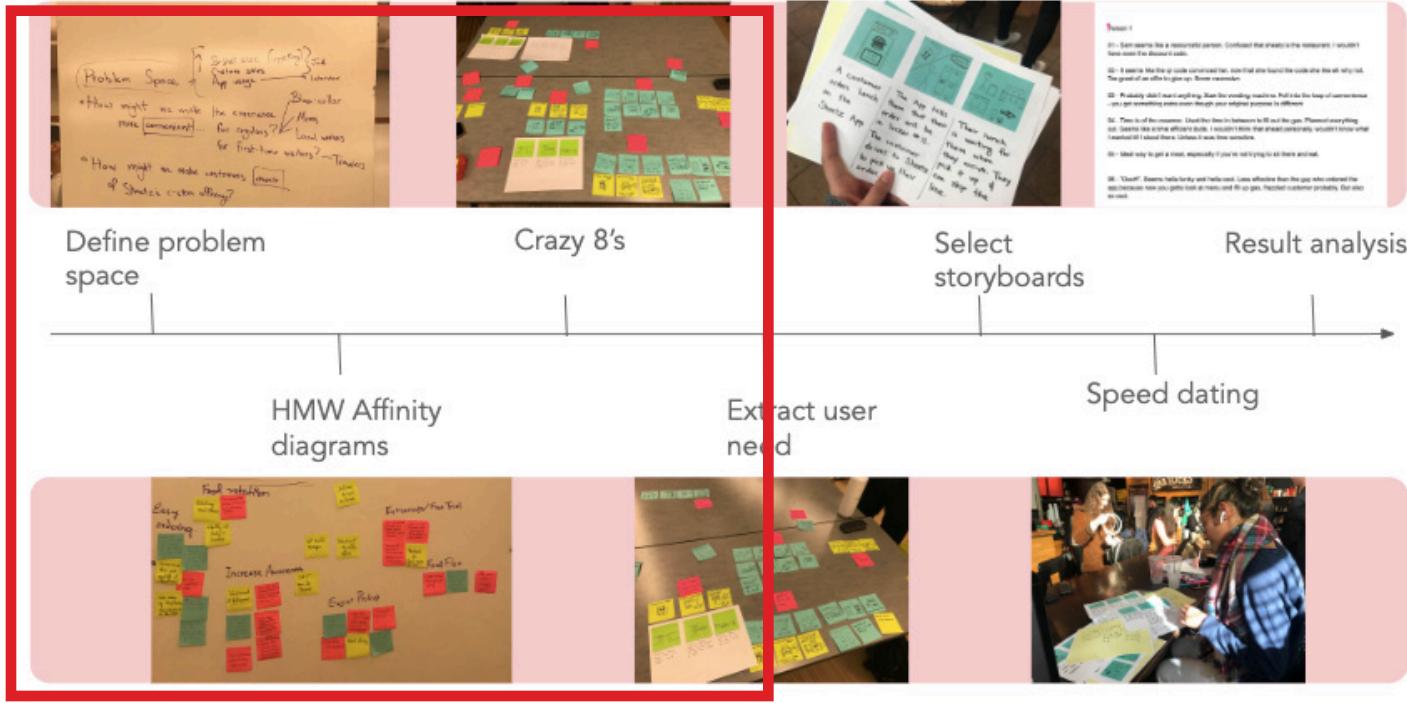
We then synthesized these results into three main user needs and conducted **hypothesis testing** for each need. We conducted testing through **creating storyboards and speed dating using the storyboards**.

We then analyzed the results of our speed dating sessions, along with all the information we had collected in the process thus far, and **proposed a preliminary final solution**

In the following pages you will see our **final presentation for Phase 3**, annotated with our **methodologies, insights, and important developments in our process**.

Coming up with new ideas

Concept Generation: Crazy 8's & Affinity Diagram



Our process for coming up with new ideas. (Outlined in red)

We defined the problem space, used affinity diagramming, and the crazy 8's method to create new ideas.

Synthesis

After affinity diagramming at the end of our concept generation, we were able to extract the following high level commonalities between the ideas we had come up with.

Identified Themes

- 1) **Pump-Side Convenience** - Eliminate extra steps to ordering food
 - a) Vending Machine
 - b) Projector
- 2) **Faster transactions** - Skip the line (easier payments, easier pickups)
 - a) Designated lockers
 - b) Drive through pick-up
- 3) **Discounts/Perks** - Increasing loyalty and driving app usage
 - a) QR Code Discount
 - b) Loyalty Visualization in the Sheetz App

Hypothesis Testing

Based on the 3 main themes we had synthesized from our concept generation, we developed 6 specific storyboards, two to test each need.

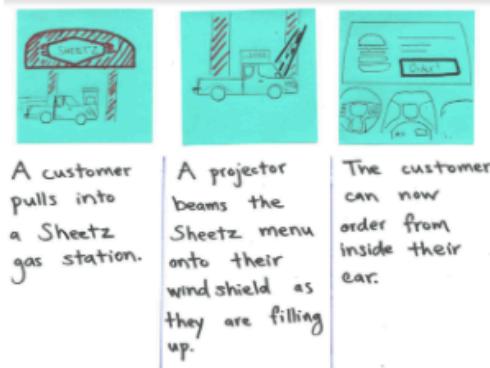
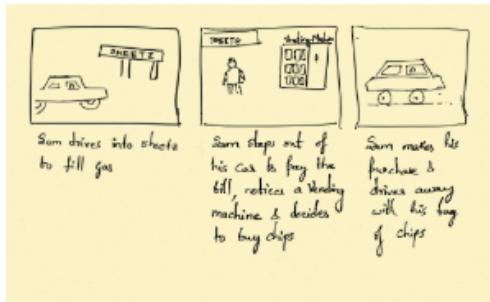
Different hypothesis we tested

#	Touch Point	Concept description	Hypothesis
1	Gas Pump	Vending machine	Quick access: People will prefer buying items at the vending machine at gas pump.
2	Gas Pump	Projector	Convenience: People will prefer to order food at the gas pump.
3	Pickup/Store	Pick up Station/Locker	Time: People want to avoid standing in line and minimize interactions inside the c-store.
4	Pickup/Store	Pick up Drive Through	Time: People want to pick up their orders on the go.
5	App	Loyalty on App	Awareness: People are more likely to use the app if perks are tied to it.
6	App	QR Code	Awareness: App promotion will drive people to the convenience store.

Results

The following were our insights from testing the need for pump side convenience.

Customer Touch Point: Gas Pump



Insights:

1. People are open to having convenience items at the gas pump.
2. People are skeptical about the quality of fresh food ordered at pump
3. People are receptive to ideas which involve not getting outside the car. "Minimal interaction"
4. People are hesitant about multitasking at the gas pump.

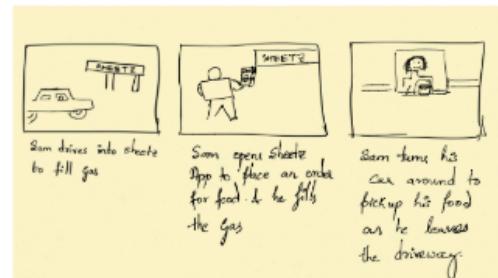
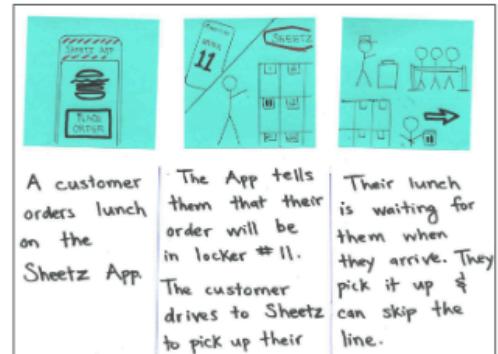
Results

The following were our insights from testing the need for easier pick ups

Customer Touch Point: Easier Pickups

Insights:

1. People are open to a food pickup which does not involve waiting in line or interacting with an attendant.
2. People are concerned about freshness of food and access to the locker.
3. People are open to drive through pick ups. Concern for any waiting at the drive through window.



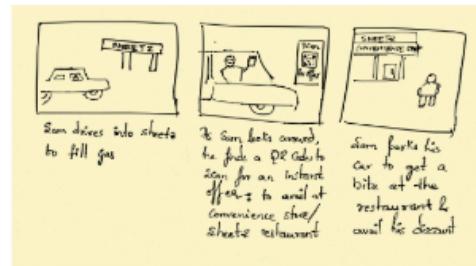
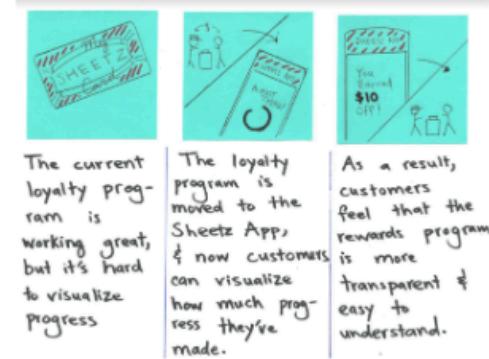
Results

The following were our insights from testing the need for the app.

Customer Touch Point: App

Insights:

1. People like the idea of loyalty purchases with the app. "No need to carry card"
2. However, people are more likely to ignore QR codes.
3. People are likely to walk in if the discount is very appealing. Otherwise they will ignore.
4. People decide whether to work in based on if they really need that product.



Conclusion

Based off the user needs we validated and our analysis of user reactions to the storyboards we arrived at this final solution and preliminarily proposed the following service.

Proposed Service

We're proposing an RFID-like technology that identifies loyalty members as they drive into the Sheetz lot. The following services are made available to the customer:

- Automatic gas payment
- Convenience store delivery in a designated lot
- Increased adoption and integration with the app
- Increased personalization

Looking Ahead

Plans to Prototype

1. Experience prototyping
 - a. Step 1 - determine script
 - b. Step 2 - recruit participants representative of target customer
 - c. Step 3 - convert a studio space into mock gas pump plus station, imitating cars with chairs with wheels, etc.
 - d. Step 4 - conduct session, ask participant to think out loud during the session and probe participant with necessary questions
2. Low fi movie & semi - structured interviews
 - a. Step 1 - determine script, draw out scenes
 - b. Step 2 - identify goals and questions to be asked
 - c. Step 3 - conduct interview
3. Synthesize results + Iterate

Feedback & Next Steps

Feedback

Great idea. Refine it. The gist of the feedback our team got were that there were kinks that needed to be worked out. Suggestions were made to flesh out the solution through multiple storyboards and test them with users.

Reflection

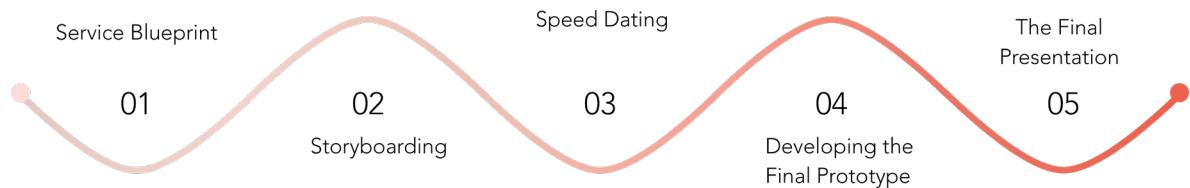
At this point, our team felt that the foundation of our solution had been finalized, and our primary goal from now onwards would be to refine the solution till near perfect.

Next Steps

Our team decided to move forward by creating a fully fleshed out service blueprint of our idea. Then we decided to test specific parts of the customer journey once again through storyboarding and speed dating in order to gain insights that would help us refine our idea.

Phase 4: Refinement

Our Journey through the Final Stretch



The Final Touches.

RFID sensors to assist in customer identification in order to provide customers with personalized perks including delivery of food to your car, automatic payments and personalized display screens.

It all sounds great, but what are the specifics?

In this phase we detailed out the specifics of our solution using a **service blueprint**, we validated each part of the customer journey through **storyboarding and speed dating**, we developed a final prototype in the form a **lo-fi video** to help visualize the customer journey, and we put together a **final presentation for the client**.

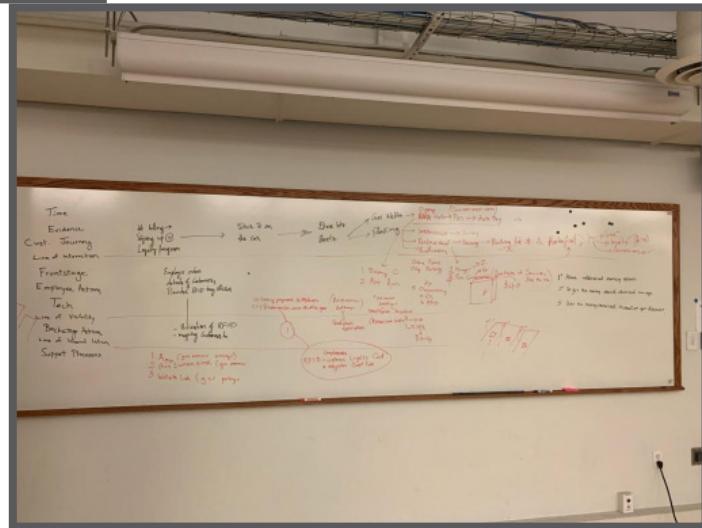
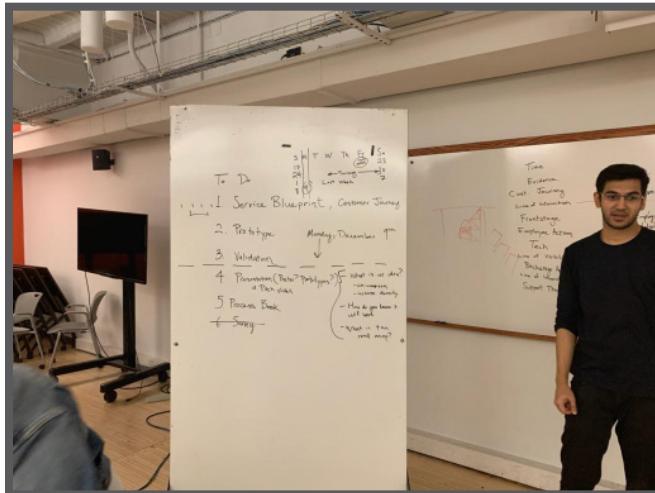
In the following pages you will see the **final service blueprint**, our work to validate and refine our final solution and the final presentation from this phase, annotated with our **methodologies, insights, and important developments in our process**.

Work Sessions

(1) We created a timeline that included developing a service blueprint, prototyping, testing, and building our final presentation.

(2) We created a draft of the service blueprint pictured below in the right bottom corner and then refined this draft to compromise the final service blueprint (pictured on the next page)

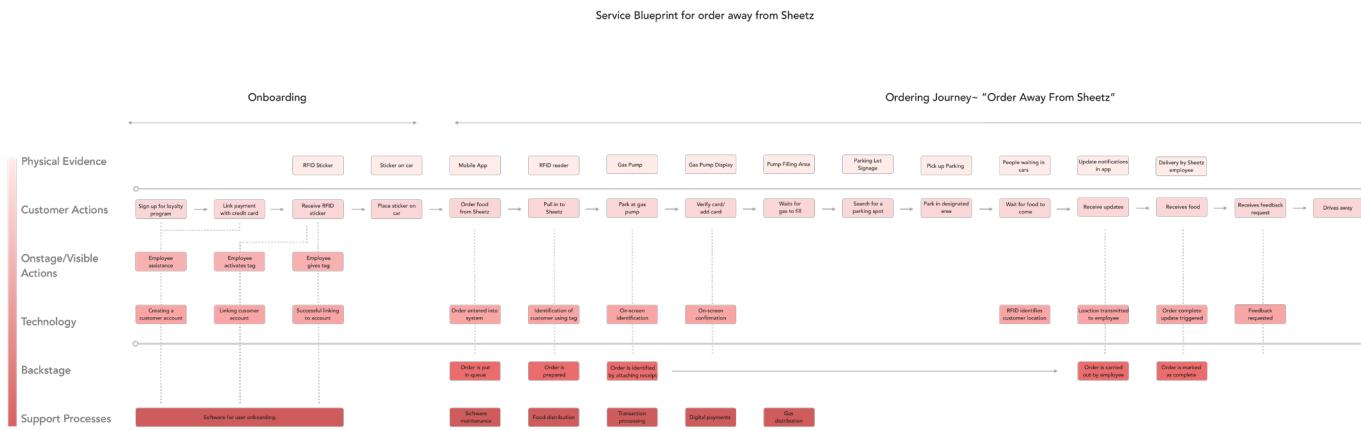
(3) We created storyboards of specific parts of the customer journey and then tested those storyboards with users at a local gas station. The testing session and results are displayed on pages 52-54.



Service Blueprint

Below is our refined and final service blue print, a higher quality version can be found at this link:

https://invis.io/DBV88D153G7#/397408336_Artboard



Testing our Storyboards

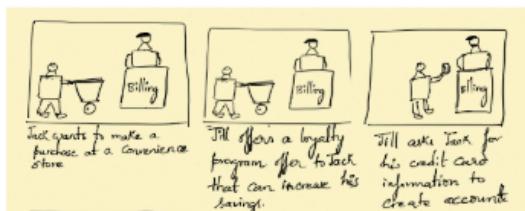
Pictures of our team user testing at a local gas station and convenience store!



Results 1

The first part of the customer journey we tested was the onboarding and linking payment options. Would customers want to link their payment and is this a useful feature?

Onboarding and Link Payment Option



Hypothesis: customers may be hesitant to link their payment information to their Sheetz E-Tag, but they will want a smooth onboarding process if they proceed to sign-up for a loyalty program



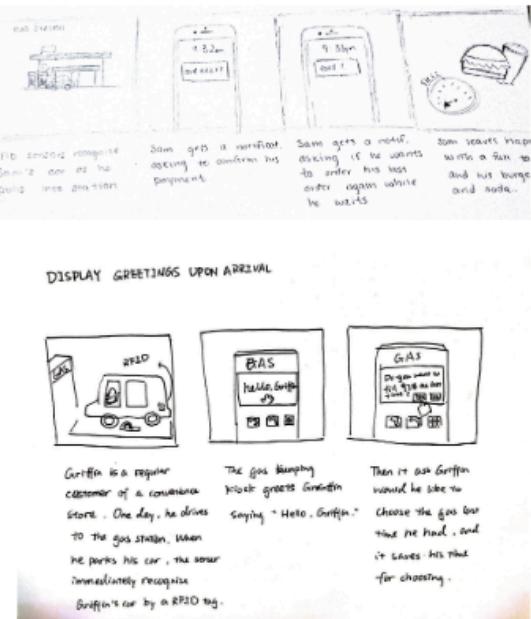
Insights:

1. Customers were comfortable linking their payment information to a Sheetz loyalty card upon sign-up
2. Customers liked the idea of a step-by-step onboarding kit

Results 2

The second part of the customer journey we tested was personalization using automatic payments notifications and custom display screens at the gas pump. How would customers respond to seeing their name pop up on the gas pump screen? Do they need automatic payments for gas?

Easy Payments and Personalisation at Gas Pump



Hypothesis: The customers will enjoy the additional convenience that the E-tag provides: streamlining the gas payment system and the food ordering system at the gas pump

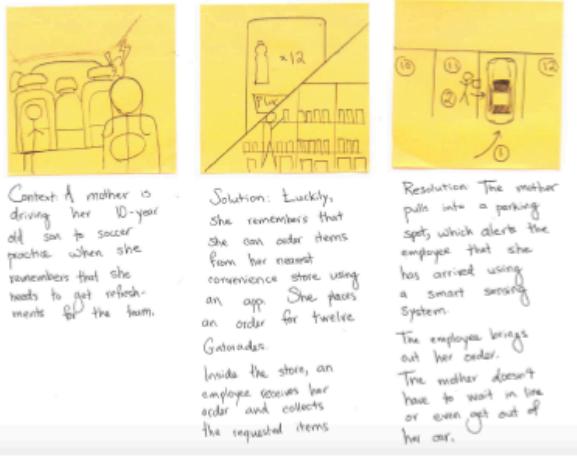
Insights:

1. Customers positively reacted to the benefits that come from the E-tag

Results 3

The third part of the customer journey we tested was "stay-in-car" food pick up. Do customers prefer the comfort of remaining in their car?

Easy "Stay-In-Car" Food Pick Up



Hypothesis: Customers will react positively to the convenience of having their food delivered to them without their having to step outside their car

Insights:

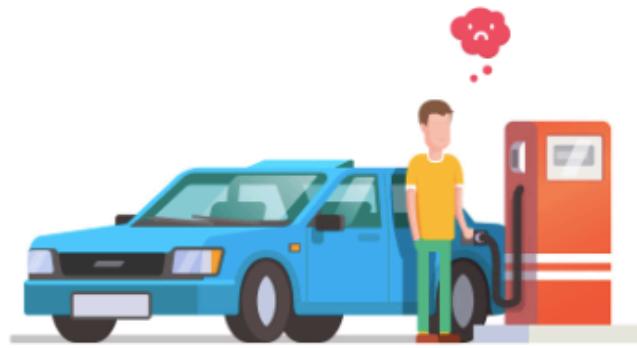
1. While some customers saw this as excessive, stating that they could simply walk into the Sheetz, others saw it as potentially useful for the winter time or if you were preoccupied with small children in your car

The Final Presentation

The Need

Users want to optimize the time spent at the gas pump

 “ I wish there was a way to fill up gas and go faster ”



The Need

Users don't want to wait in line for too long

“
 Sometimes I need to wait in line for 15 minutes
”



The Need

People with kids/pets or disabilities need to leave car to buy/order food

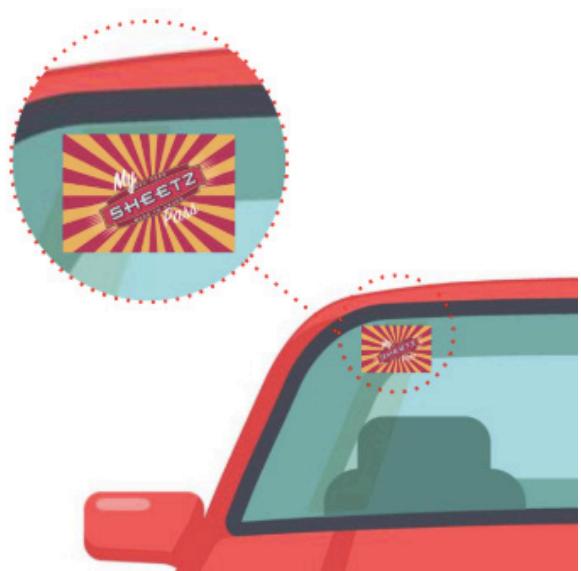


“
 I cannot leave my
baby in the car
”

The Solution



RFID enabled Sheetz Pass
integrated with MySheetz
Loyalty Program



Persona

We then introduced the following persona, Jane, to the audience in order to help them understand the users better.



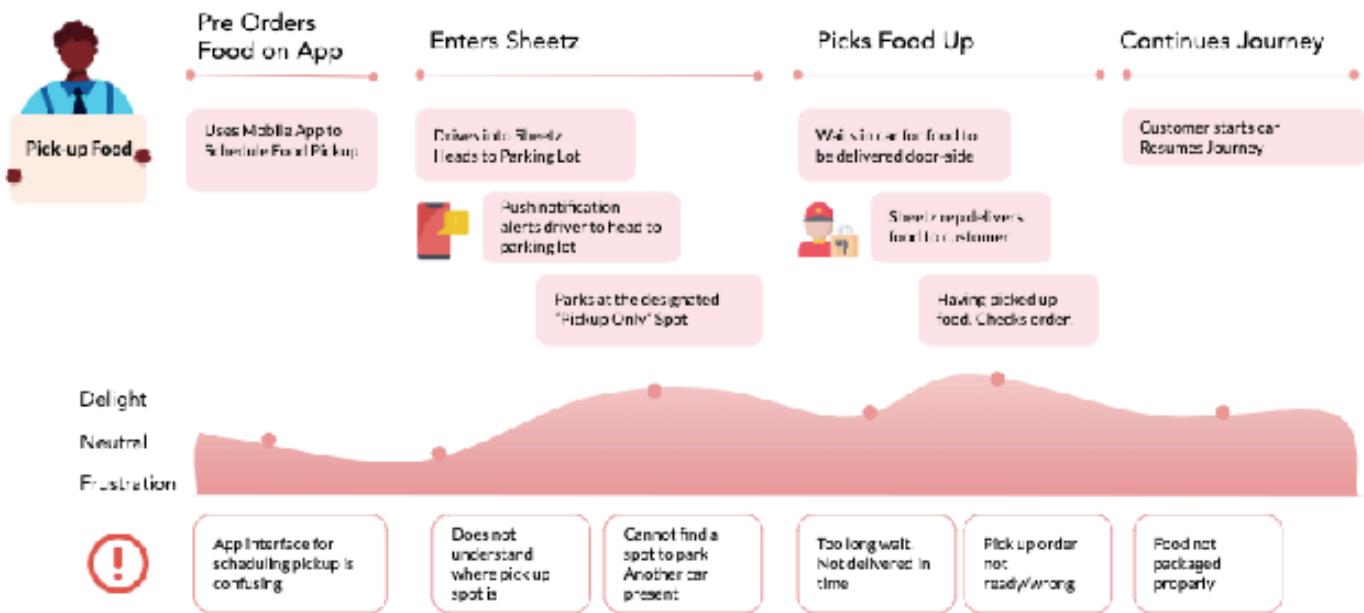
Meet Jane.

Jane is a working mom who has a 6 year old daughter. She's a financial analyst at PNC and lives with her family around 30 minutes outside of Pittsburgh. In a few months, she and her husband are expecting another baby.

Needs: Working full time and taking care of her family, she's always on the go. A couple times a week, Jane stops at the gas station on her way home from work to **fill up on gas**. While she's there she also **stocks up on gum** and **gets a treat** to satisfy whatever craving she might have on that day. Sometimes, she even picks up a **to go snack** for her daughter and her friends or a **couple of beers** for her husband. She also likes to **take it as easy as possible** due to the pregnancy.

Customer Journey

Customer Journey Map



Movie Prototype

Using Jane as a way to frame the customer journey we created a video that would help our audience visualize how this customer experience woul look in real life

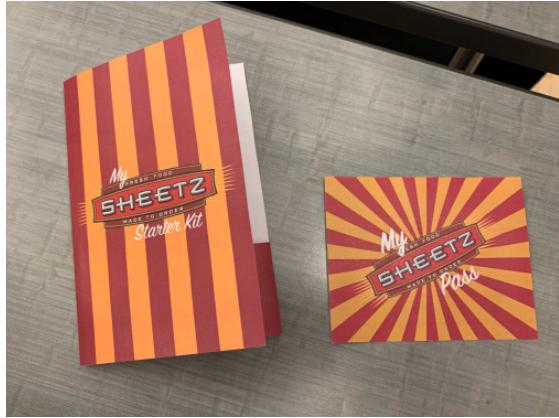
The customer journey portrayed in the video walks the audience through the onboarding process and the three main benefits provided, personalization, payment linking, and in-car delivery.

The vide can be found at the following link:

<https://www.youtube.com/watch?v=s8QGMYaO6Ds&feature=youtu.be>

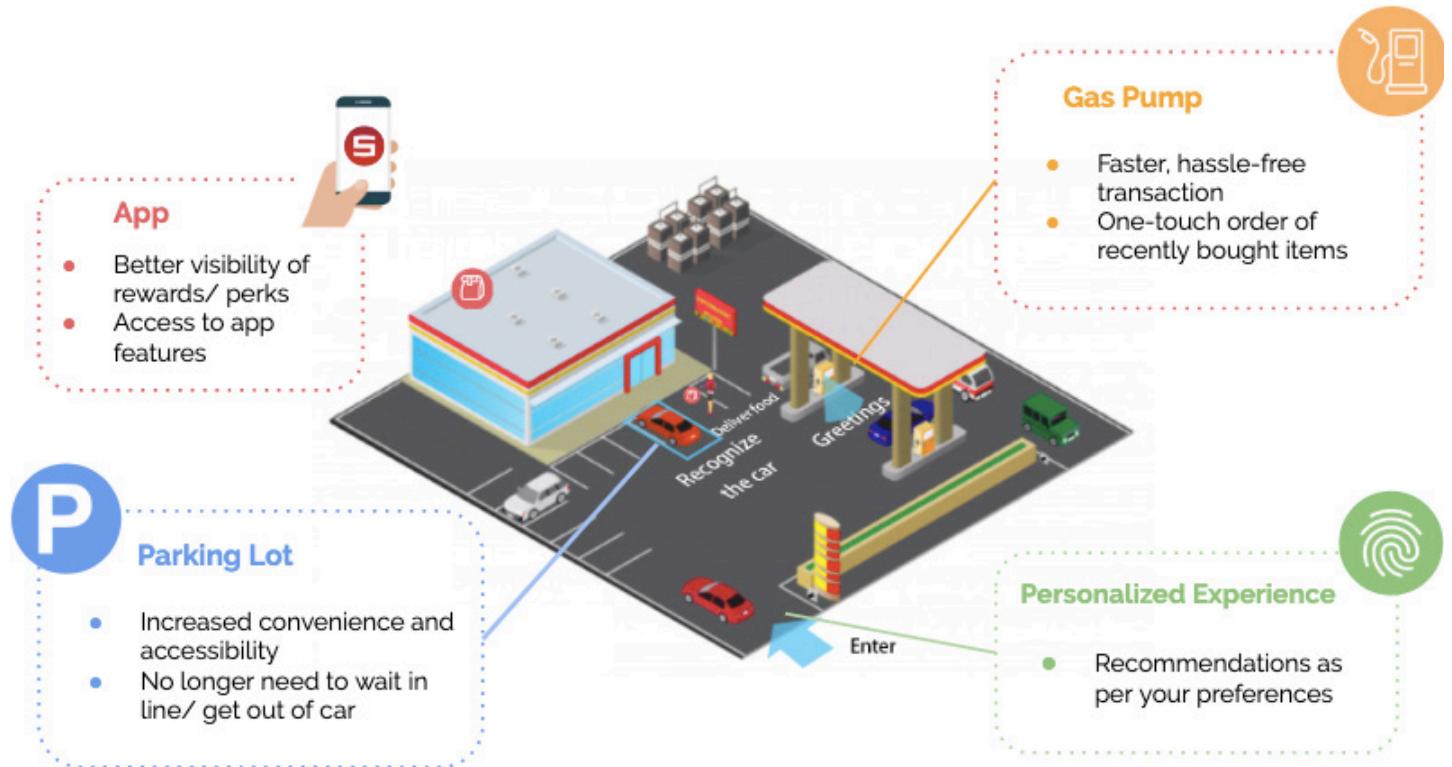


Paper Prototype



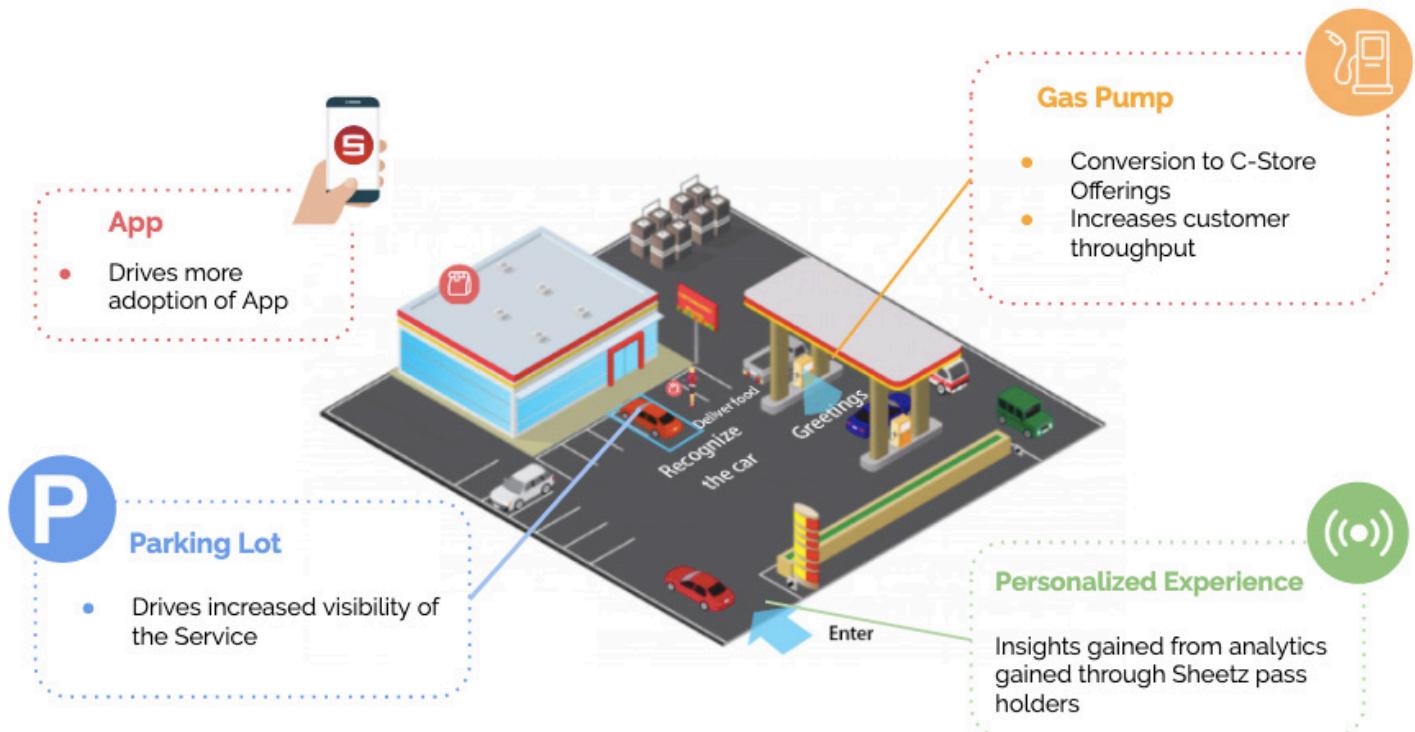
The Servicescape

Value created at different points in the servicescape for the customer.



The Servicescape

Value created at different points in the servicescape for the business.



The Risks

We presented 2 of the risks we identified in the presentation, below is the first.

Customer Adoption: Identified Risks

RISKS

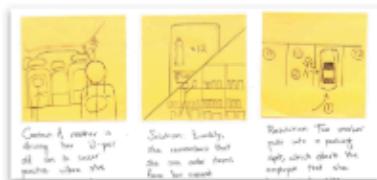
Pasting a Sheetz sticker

Providing credit card details

Use App/m-site near Sheetz

PLAN AGAINST RISK

Validated by storyboarding



App/m-site access enabled by QR Code



The Risks

We presented 2 of the risks we identified in the presentation, below is the second.

Business Viability: Identified Risks

RISKS

Cost of RFID technology
Cost of implementation
Returns on Investment



PLAN AGAINST RISK

- Cost: RFID tag - (15-50) cents and reader is (400 - 1000\$)
- Estimate for cost of enhancing the app and launching in 5 locations ~\$225,000 (6 months)
- This should have a 7-10% increase in restaurant business and a minor increase in gas sales

The Risks (Full Plan)

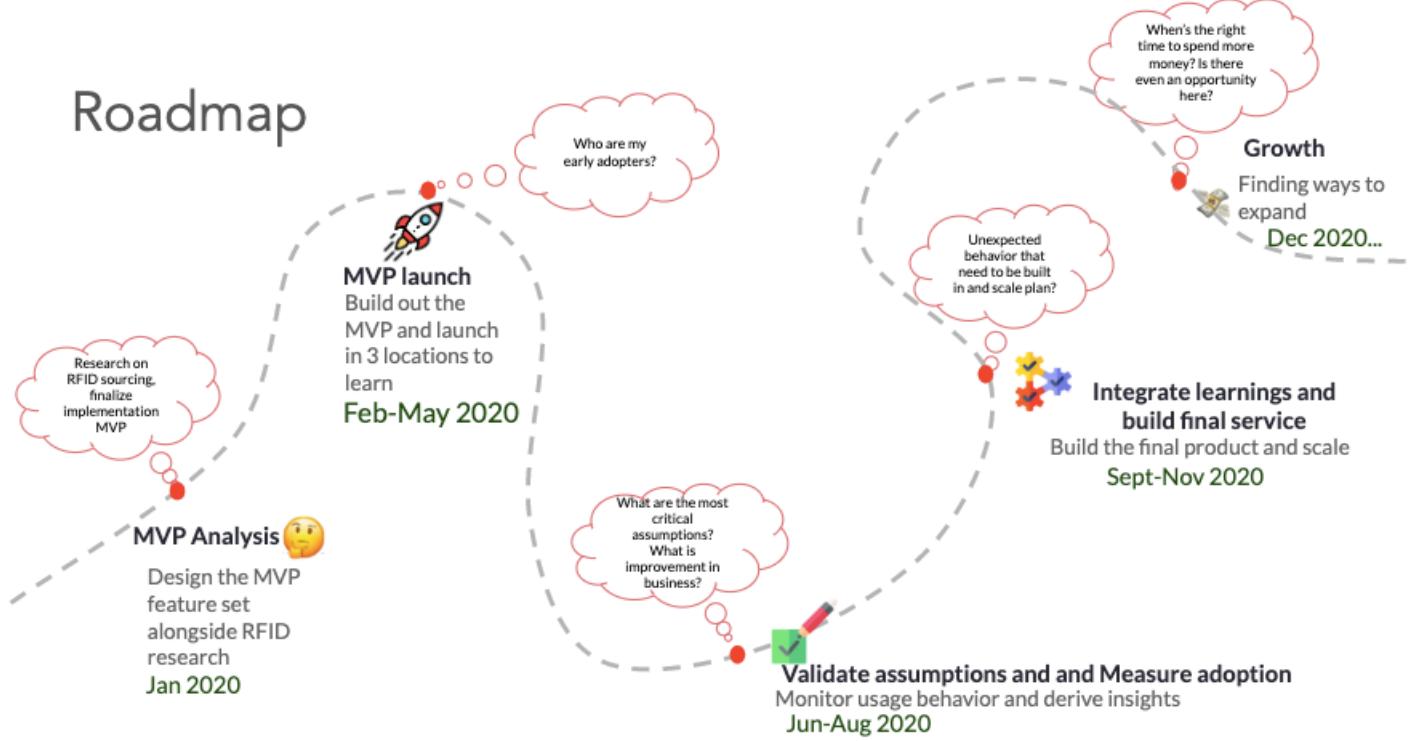
Below is the full risk mitigation plan.

Risk mitigation into prototype plan

Risk	Description	Plan against risk
Customer Adoption	Customer adoption concerns: <ul style="list-style-type: none">• paste a Sheetz sticker• Providing credit card details• Use App/m-site near Sheetz	<ul style="list-style-type: none">• Validated by storyboarding:<ul style="list-style-type: none">✓ sticking Sheetz sticker✓ providing both credit card details• App/m-site access enabled by:<ul style="list-style-type: none">✓ QR code on Sheetz sticker✓ Message at location with link to Sheetz m-site
Technology feasibility	Identification of gaps in technology <ul style="list-style-type: none">• RFID technology• Integration with existing technology	<ul style="list-style-type: none">• Implementation details specific to avoid lapse in technology:<ul style="list-style-type: none">◦ Alternate parking for pickup◦ RFID reader close to car at Gas station
Business viability	Business concerns of implementing the solution <ul style="list-style-type: none">• Cost of RFID technology• Cost of implementation	<ul style="list-style-type: none">• RFID tag costs around 15 cents• Estimate for cost of enhancing the app and launching in 10 locations ~\$225,000 (6 months)• This should have a 5% increase in restaurant business and a minor increase in gas sales
Other challenges	Operational and maintenance challenges: <ul style="list-style-type: none">• Training of employees• Wear and tear	<ul style="list-style-type: none">• Trainable as adopted in retail business• All weather RFID tags are available• Free replacement tags

Looking Ahead

We created a road map for implementation to help our client imagine a future with our innovation, the My Sheetz Pass.



Appendix: Co-creating value

the creation of value for the CUSTOMER

A more personalized experience with better perks



Reduces number of steps required
to make final purchase



Smoother payment
processes



Keep track of past
purchasing behavior, use it to
enable quicker pick-ups for
online orders



Appendix: Co-creating Value

the benefit to the BUSINESS

Increased profits through more purchases



Uniquely identify your car within
the premises of the lot for a
personalised experience



Link Payment to Loyalty
Card and E-TAG



Enable quicker pickups for
online orders



Overview

Phase 1: Research

Stakeholder Map
Competitive Landscape
PEST
SWOT
Field Observations
User Interviews
Research Synthesis
Highlighting Opportunities

Phase 2: Ideation

Refining Activities
Target Segments
Persons
Innovations
Customer Journeys
Risk
Plans Against Risk

Phase 3: Iteration

Concept Generation
Storyboarding
Scaled Drafting
Synthesis
Final Solution Development

Phase 4: Refinement

Service Blueprint
Testing the Proposed Customer Journey
Extracting Needs
Rewriting the Solution
Prototyping the Solution
Building a lo-fi movie prototype
The Final Presentation
Co-Creation of Value

Reflection

Reflection

From the beginning, it was always about co-creating value, balancing the needs of the stakeholders with the needs of the customers. Imagining an innovation that would propel customer satisfaction, while driving business upwards.

Throughout this process we learned many things.

It's about a fluid way of thinking.

Service design isn't unique because of the innovation produced, but because of the process used to get there. Through our own application of the service design process we saw that at multiple points in our journey we pivoted ideas completely. Reframing activities and affinity diagramming were often part of our process. We learned to embrace the fluidity of the process, and sometimes just go with the flow.

It's never just about the customer

One thing that became apparent to us quite early on is that as designers we tend to focus on the customer journey but overlook whether the business needs are being met. The benefit to the business became an afterthought as opposed to an innovation driver. As we continued on throughout the process, we made a more conscious effort to balance business needs and customer needs.

Always look to improve the innovation

A perpetually iterative process is the ideal for developing a truly innovative service. This is something we realized as three or four iterations into the process, around phase 3. We knew that we wouldn't have had as many nuanced details in our final service innovation if not for the multiple rounds of prototyping and testing we had gone through.

As a team, we grew to learn each other's strengths and weaknesses and complement them. When we presented our final presentation, we left everything on the floor (or screen in this case), proud of our final deliverable.

Signing off

- Amrutha, Abhinav, Zahid, Griffin, and Channing.