

## Tepper Technology Innovation Challenge

### Deliverable 2

#### Launch Strategy

Our primary consideration for a successful launch is the initial segment in which to start and the evaluation criteria needed to select this segment. We analyzed the income levels and food availability across our target market of the Food-Insecure and segmented by geography in the United States. After this analysis, Detroit became the best choice for our pilot market [See Figure 1]. As cited in our Market Sizing, 70% of Detroit residents are Food-Insecure, and 50% of Detroit neighborhoods benefit from the SNAP program. A tremendous need for this service and close proximity to the automobile industry, which has invested significantly in autonomous vehicle technology, benefits us greatly.

In order to be successful in such a revolutionary industry, we are taking strategic steps to ensure Ceres is welcomed into the community:

**Community** – Whether through local community or religious centers or neighborhood block parties, community is an essential social element for our target market. Outreach through promotional events to these different communities is vital to the success of Ceres.

**Referral Programs** – Ceres will naturally gain attention as the world’s first autonomous grocery delivery service. We will further incentivize users to spread the word with “Refer a Friend” referral program. When a customer refers a friend, they will each get \$10 Ceres credit. Since customers in our target market are price sensitive and since users are four times more likely to buy when referred by a friend<sup>4</sup>, this will substantially drive user growth.

**Ambassadors** – Through partnerships with local food banks, outreach programs, and civic engagement groups, we’ll seek out influential figures in Detroit to act as brand ambassadors for Ceres. This will engender trust in the community, making Ceres safe and approachable.

We will increase user adoption, not only through these promotional programs, but also through user-friendly grocery ordering. User can place orders through standard digital means such as online and through the Ceres app. However, we carefully considered our target market’s access to technology and are also providing text-messaging (SMS + chatbots) and over-the-phone (Interactive Voice Response or “IVR”) ordering using natural language processing. In addition to advanced ordering, customers can simply walk up to Ceres and, using her touch screen, place a traditional order just like they are talking to a cashier.

Once the Detroit pilot is successful and its effectiveness is proven by the market, a strategic expansion strategy will be set in motion. First, we’ll scale operations to other notable food deserts such as Chicago, New Orleans, and Atlanta<sup>5</sup>. Once there’s success in those markets, we’ll expand to other target markets, including college students and middle-class families.



## **Business Model**

Our business model consists of two primary revenue streams: consumer sales and advertising. In addition to providing advertising space on Ceres for our partner grocery chains, we will allow companies to have a brand-specific Ceres truck or Vector pod. Additionally, we will sell digital advertisements within our ordering app.

**Ceres Pricing Strategy** – We plan to partner with local large grocery chains to negotiate an agreement where we buy from stores with a 10% margin, rather than the typical 20% they charge retail customers. We believe they will be agreeable as Ceres is not cannibalizing their potential revenue, rather it's adding to their customer reach and supporting local neighborhoods.[See Figure 2].

We anticipate the estimated cost of operating Ceres will be equal to that of a traditional retail store, \$3.20 below operating an online ordering system for a traditional retail store, and \$5.50 below operating an online system via a satellite location. [See Figure 3]

Additionally, the program will work with the existing subsidy program called Double Up Food Bucks. Double Up matches the value of SNAP when spent on fruits and vegetables, allowing consumers to purchase twice the amount of fresh fruits and vegetables. [See Figure 5]

With our pricing strategy, we expect to create not only a cost savings for our consumers, but also an enhancement to the quality of food they're buying. By gaining access to fresh foods via Ceres, there is an opportunity to enhance our consumer's lives. Less income is spent on unhealthy foods, and they get more value from money spent on healthy foods. [See Figure 4]

## **Metrics**

To inform future decisions and the product roadmap, we have identified metrics from the following categories to inform the product roadmap and business growth.

### **Customer Satisfaction**

Customer satisfaction is our top concern. With a product that requires the adoption of a new technology and change in behaviors, it is critical that our initial customers have a seamless and pleasant experience. Specific metrics include:

**Customer Satisfaction Results** – After placing an order and prior to receiving a receipt, all customers are asked "How was your experience?". A simple three answer option (good, neutral, bad) allows customers to provide immediate and time-efficient feedback.

**Time/Order** – We monitor the total time to place an order to ensure the process is simple and effective. This can be recorded from the start screen until the purchase confirmation.

**Process/Delivery Time** – It is essential that our solution saves customers time and that the loading and delivery process is reasonable. Monitoring this metric will inform feature developments like recalling previous orders or recommendations based on past purchases.

**Number of Returns/Complaints** – With all service based industries there is a level of customer complaints that is come to be expected. We will track and respond to customer concerns via our app and IVR.

### **Product/Operational Effectiveness**

To properly measure the inventory quantity, process efficiency, and revenue, Ceres uses an inventory scanning and weight system. The inventory loaded into the truck is scanned, measured, and recorded via a digital inventory system. This system records inventory that Ceres has left, as well as measures time on truck. Key product and operational metrics include:

**Average Order Value** – This is used to identify if customers are using Ceres for all their shopping needs or just purchasing a few items.

**Number of Unique Shoppers** – This will inform the expansion strategy and route optimization and can be identified when shoppers create an account with us. This is recorded because each shopper is required to create an account.

**Inventory Turn** – This allows for route optimization and to effectively determine and optimize the time between orders and our order quantity with suppliers.

**Shrinkage** – With fresh products, spoiled inventory is a major concern. Inventory can be measured by time on truck and correlated with average shelf life.

### **Advertising Success**

In our Launch Strategy, we identify advertising from consumer package goods brands and groceries as a major source of revenue for Ceres. Thus, it is critical that advertisers can understand their return on ad spend. Specific metrics we can include are:

**Daily Effective Circulation** – The average amount of vehicles or persons exposed to the ads on Ceres and the vectors during daylight hours.

**Impressions** – The amount of impressions per ad on the app allows advertisers to understand the total viewership.

**Click Through Rate/Click Through Conversion** – Measuring the ROAS will also inform advertisers which advertisements are most successful in driving purchases.

### **Solution Requirements**

For Ceres to be a success, we will partner with local grocery stores to provide inventory and warehouse space. Additionally, we will ensure compliance with government regulations to allow Ceres Delivery to be an approved SNAP retailer and accept SNAP payments, credit cards, and cash. Current regulations require SNAP retailers to include three of the following: bread and cereal, vegetables and fruits, and dairy products. Ceres will comply with the requirements and supply food from all the above groups as well as poultry and fish.

Risks involved with our business model include:

**Technology Adoption** – Introducing a completely novel, technology focused way to buy groceries could be met with skepticism from local communities. To mitigate this risk, we are offering our consumers multiple ways to interact with Ceres and order their groceries, including a touchscreen on Ceres, an app, SMS messaging, and by voice messaging. This change management strategy is crucial to implement such a disruptive change.

**Grocery Theft** – Ceres and her Vectors are vulnerable to theft. To keep this risk as low as possible, state-of-the-art materials and locking mechanisms will be used when building Ceres and the Vectors. Our facial recognition technology, paired with a pin code alternative, will ensure the right customer safely receives their purchase.

**Cash Payment** – Ceres is equipped to handle cash transactions. Because of this, she will face the risks that any ATM does. The imaging technology already including in Ceres' automated driving hardware will monitor the payment process and flag any irregularities.

**Safety** – Food deserts traditionally have increased crime rates. Ceres will be equipped with security lighting to make sure transactions take place in a well-lit, monitored environment.

**Changing Political Landscape** – The ever-changing political landscape could affect the SNAP and Double Buck programs. While this would change how our customers pay for their groceries, it will now deter us from providing healthy options to communities. Ceres is equipped to handle multiple forms of payment and provide affordable, fresh groceries.

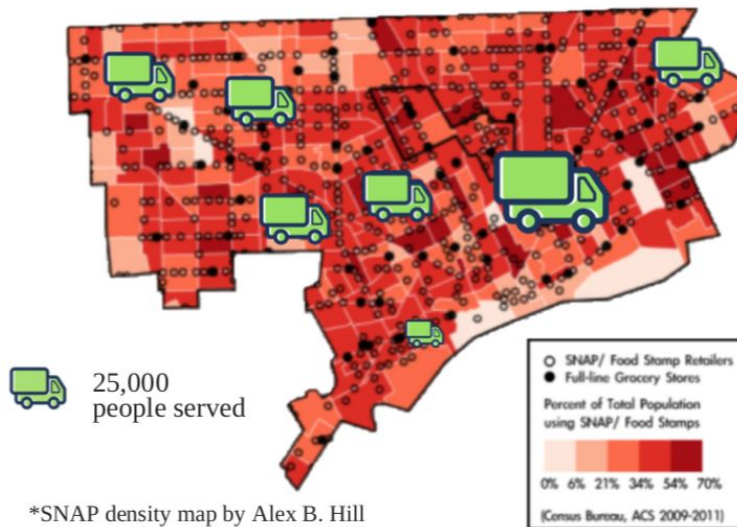
**Public Relations** – As we expand outside of the food desert landscape, our brand could be potentially seen as only serving low-income families. To mitigate this, we will promote Ceres as a family-friendly, convenient alternative to grocery shopping.

Successful implementation of our launch strategy and business model will ensure our business is profitable and that Ceres creates a convenient, accessible, and healthy grocery shopping experience.

## Appendix

Figure 1:

# PILOT MARKET - DETROIT



\*SNAP density map by Alex B. Hill

Figure 2:

## Revenue Streams

### Direct Consumer Sales

Estimate of Average Transaction	\$ 35
Estimate of Daily Houses (1 Truck)	200
<b>Total Daily Revenue</b>	<b>\$ 7,000</b>

### Advertising on Ceres

Annual Advertising on Ceres	\$ 250,000
Annual Advertising on Vectors	\$ 50,000
Annual Advertising on Digital Platforms	\$ 50,000
<b>Total Annual Advertising Revenue</b>	<b>\$ 350,000</b>

<b>Daily Advertising Estimate</b>	<b>\$ 959</b>
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### Daily Profitability Opportunity Per Truck

Total Daily Revenue	\$ 7,959
Estimated Costs Per Day for 200 Houses	\$ (6,600)
<b>Daily Profit</b>	<b>\$ 1,359</b>

Annualized Revenue	\$ 2,905,000
Annualized Costs	\$ (2,409,000)
<b>Estimated Annual Profit</b>	<b>\$ 496,000</b>
<b>Profit Margin</b>	<b>17.07%</b>

**Figure 3:**

### Estimated Costs

Activity	Traditional Retail	Online From Store	Online via Satellite	Via Ceres
Warehouse Overhead	\$ 1.20	\$ 1.20	\$ 6.00	\$ -
WH Receiving & Storage	\$ 0.50	\$ 0.50	\$ 0.50	\$ -
WH Orderpicking	\$ 2.20	\$ 2.20	\$ 7.50	\$ -
Transport WH to store	\$ 0.90	\$ 0.90	\$ 0.80	\$ -
Store OH	\$ 2.40	\$ 2.40	\$ -	\$ 1.00
Store Receiving and Storage	\$ 1.50	\$ 1.50	\$ -	\$ 2.00
Store shelf filling	\$ 3.00	\$ 3.00	\$ -	\$ -
Consumer Order	\$ -	\$ 3.20	\$ 3.40	\$ 1.60
Store Orderpicking	\$ -	\$ 5.00	\$ -	\$ 2.50
Point of Sale	\$ 1.20	\$ 1.20	\$ 1.50	\$ 1.30
Transport to Home	\$ -	\$ 5.00	\$ 5.50	\$ 3.00
Returnables	\$ 1.20	\$ 1.20	\$ 2.30	\$ 0.60
Customer Service	\$ 0.90	\$ 0.90	\$ 3.00	\$ 3.00
<b>Variable Grocery Costs</b>	<b>\$ 15.00</b>	<b>\$ 28.20</b>	<b>\$ 30.50</b>	<b>\$ 15.00</b>
Cost to Charge (Per Truck Per Day)				\$ 12.00
Maintenance costs (Per Truck Per Day)				\$ 6.00
<b>Costs of Vehicle</b>				<b>\$ 18.00</b>

**Figure 4:**

Unit Price Analysis				
Item Description	Grocery Store (20%)	Convenience (40%)	Online Delivery	Ceres (10%)
1 Gallon Milk	\$2.59	\$2.50	\$2.99	\$2.33
1 Carton Eggs	\$2.29	\$2.56	\$1.39	\$2.06
Unit Price - Apples	\$0.50	\$0.56	\$1.99	\$0.45
Unit Price - Banana	\$0.28	\$0.50	\$0.45	\$0.25
Yogurt	\$0.60	n/a	\$0.79	\$0.54
Unit Price - Broccoli	\$1.37	n/a	\$1.99	\$1.23
Unit Price - Cucumbers	\$0.59	n/a	\$0.99	\$0.53
Unit Price - Tomatoes	\$0.24	n/a	\$0.39	\$0.22
Bread	\$1.59	\$1.78	\$1.99	\$1.43
Cereal	\$2.50	\$2.80	\$3.69	\$2.25
Chicken Breast	\$4.73	n/a	\$4.99	\$4.26
Turkey Lunch Meat	\$2.79	\$3.12	\$3.49	\$2.51
Doritos	\$2.50	\$2.80	\$4.29	n/a
Frozen Chicken Fingers	\$1.00	\$1.12	\$1.29	n/a
Frozen Pizza	\$3.99	\$4.47	\$4.99	n/a



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