

University of Arkansas, Fayetteville

ScholarWorks@UARK

---

Supply Chain Management Undergraduate  
Honors Theses

Supply Chain Management, J. B. Hunt Transport  
Department of

---

12-2018

## Business Innovation: The Online Cookbook

Gregory Watson

*University of Arkansas, Fayetteville*

Follow this and additional works at: <https://scholarworks.uark.edu/scmtuht>



Part of the [Operations and Supply Chain Management Commons](#), and the [Other Business Commons](#)

---

### Citation

Watson, G. (2018). Business Innovation: The Online Cookbook. *Supply Chain Management Undergraduate Honors Theses* Retrieved from <https://scholarworks.uark.edu/scmtuht/12>

This Thesis is brought to you for free and open access by the Supply Chain Management, J. B. Hunt Transport Department of at ScholarWorks@UARK. It has been accepted for inclusion in Supply Chain Management Undergraduate Honors Theses by an authorized administrator of ScholarWorks@UARK. For more information, please contact [scholar@uark.edu](mailto:scholar@uark.edu), [uarepos@uark.edu](mailto:uarepos@uark.edu).

**Business Innovation: The Online Cookbook**

**By**

**Gregory James Watson**

**Advisor: Jessica Salmon**

**An Honors Thesis in partial fulfillment of the requirements  
for the degree Bachelor of  
Science in Business Administration in Supply Chain  
Management.**

**Sam M. Walton College of Business  
University of Arkansas  
Fayetteville, Arkansas**

**December 15, 2018**

## Table of Contents

Executive Summary.....	3
The Idea.....	3
The Online Cookbook.....	7
Market Overview and Competitive Angle.....	9
Strategic Alliance.....	10
Start-up costs.....	11
Financial Analysis.....	12
Growth Opportunity.....	13
Appendix.....	14



## **Business Plan and Innovation Process**

### **Executive Summary**

There is a common trend across most of the world we live in today of innovation and adaptation. Recently a lot of this change had come from the technological front, and this is no different for the largest brick and mortar retailer in the United States, Walmart. Walmart has put a substantial amount of focus on keeping up with the ever changing digital commerce business environment. Walmart projects that out of the 324 million people that live across the country 140 million of them visit their store either in person or through their website each week. This traffic brings in about \$5.4 billion dollars per week and is second only to the online shopping platform Amazon. (Byrum 1)

One of the many implementations that Walmart has brought in over the past few years is their online grocery pickup program (OGP). This is a service offered that gives the shopper the ability to shop online through their website or the Walmart grocery mobile application. The consumer builds their shopping cart online and pays through the app or website. They then choose a time that works for them to pick up their order from the local Walmart of their choosing. When making the actual pick up the customer pulls into a designated grocery pick up parking spot and a Walmart employee simply brings out their order, loads the products into the car, and the shopper just pulls out and is on their way. In a world of convenience and ease of process this a program that many people take advantage of and see as an extremely helpful option to have for their grocery shopping experience.

With all this information in mind I decided to build on the success of this platform, and think differently about how to grow sales and additional customers. The main goal I set was to increase the dollar amount per transaction, as well as number of items in the cart. A new idea focused on these metrics would help offset the high cost and high labor-intensive model currently deployed with OGP.

### **The Idea**

The first step I had to take was to identify the target consumers I wanted to impact with my idea. Empathy maps are a great way to be able to identify consumers as well as target specific thoughts and feelings for each type of customer I wanted to affect. An empathy map is a format identifying what a consumer does, how they feel, what they think and what they say in a

certain scenario. This is all used to formulate a list of personal pains and gains for each specific target consumer. By thinking of the online grocery pickup process as a whole and who I felt would benefit from the platform most I settled on three main consumer demographics, they were: (1) single households/young professionals, (2) elderly community, and (3) young families. Below are the empathy maps I was able to construct.

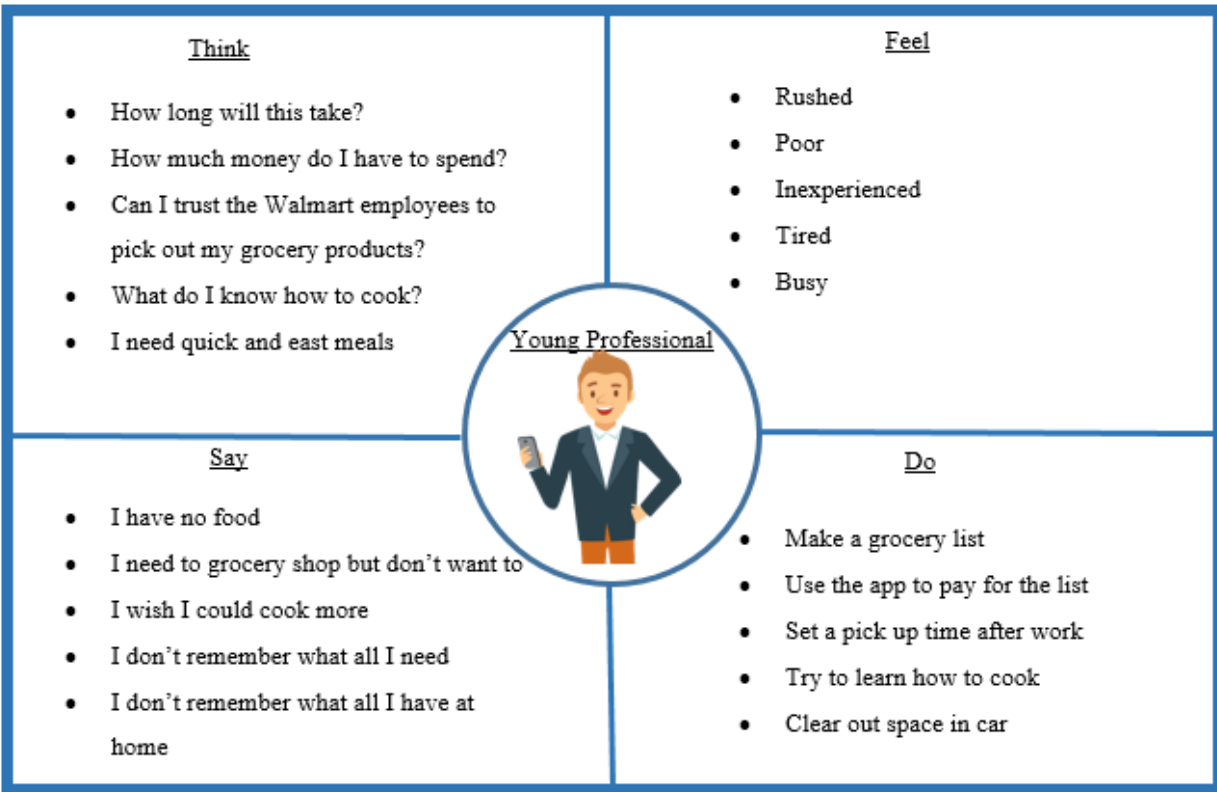


Figure 1: Empathy map created for young professional

Pains – Time spent leaving house, cleaning car, waiting time for groceries, spending money, & trying to learn to cook

Gains – Don't have to get out of car, I can do my shopping from my phone or computer, I can see my running total as I shop, & I don't have to spend time walking through store or waiting in check-out line

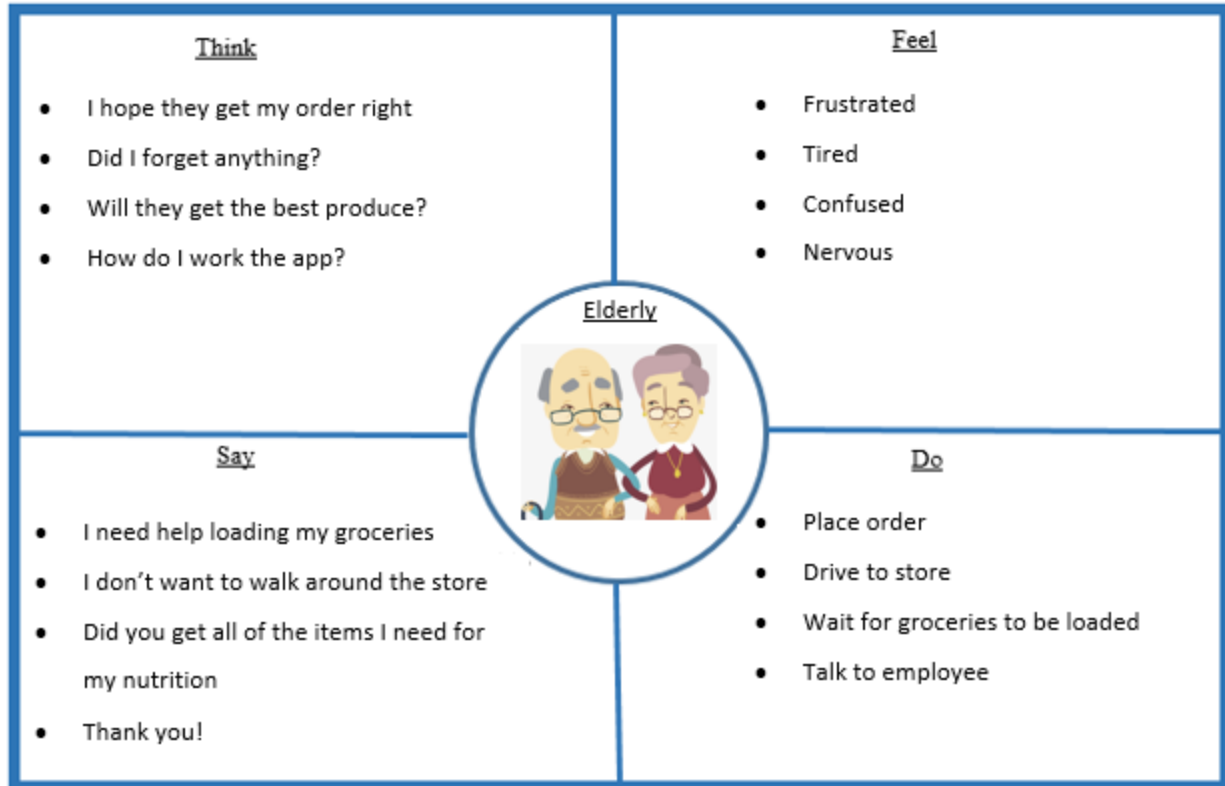


Figure 2: Empathy map created for Elderly

Pains – Trying to unload groceries, possibility of forgetting needed items, & confused trying to use technology

Gains – Don't have to walk around the store, get help loading groceries, & fast and convenient trip to store

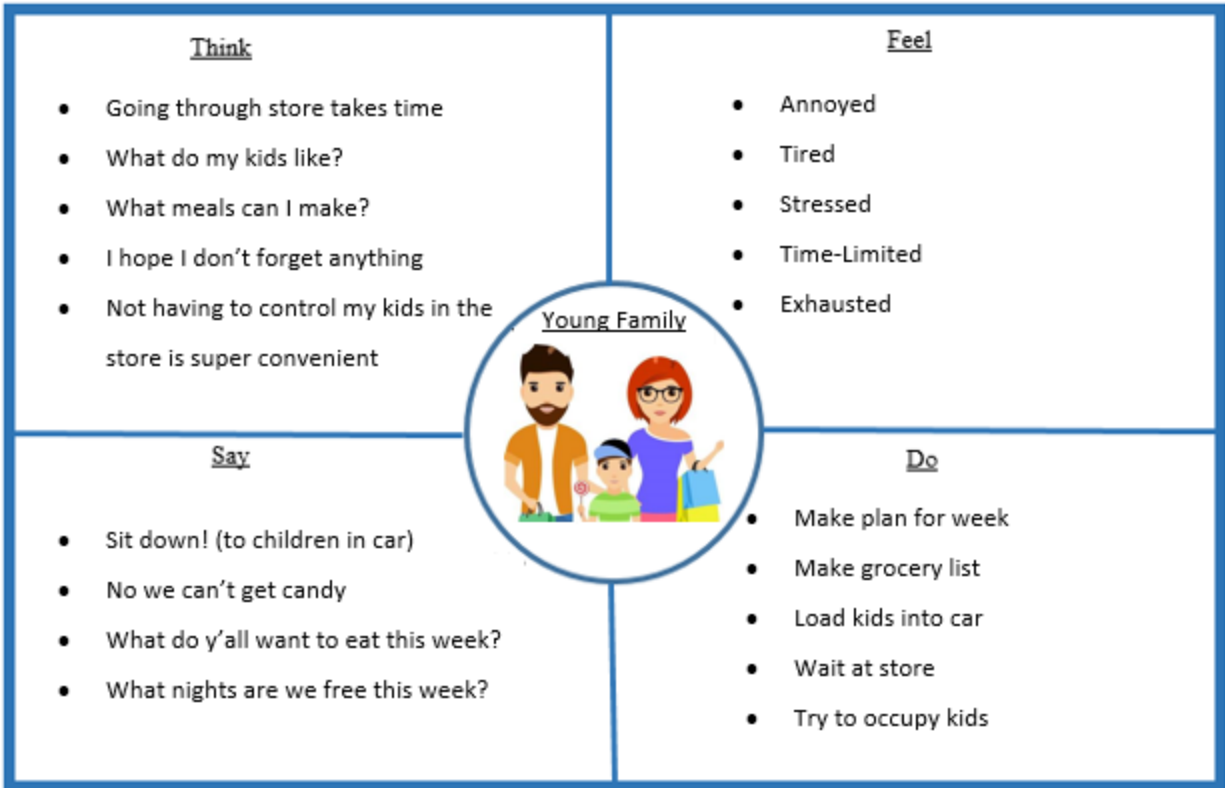


Figure 3: Empathy map created for young families

Pains – Coordinating family outing, carrying all the items to and from car, & trying to remember all the items you need for the week

Gains – Not having to take kids through store, gets rid of the incessant “can we get this” that parents deal with in stores, & saves time on shopping

By pinpointing these as my target market and the specific pain points each encountered, I was able to move on to the next step in my process, Ideation. I took the top pain points into consideration and came up with as many ideas as possible, focusing on quantity over quality. I was able to come up with 63 different ideas to innovate the online grocery pick up process spanning across four main categories of entertainment, service, advertisement, and speed. After going through each idea and thinking of business feasibility and impact, I narrowed down my ideas to four main options. The top ideas were:

1. Inclusion of prescription drug pick up with OGP
2. Online tutorials on how to go through the process
3. A rewards system of coupons and savings given for amount spent using OGP
4. An online cookbook application incorporated in the grocery pickup.

The next step was to bring my ideas to the customer segments and get feedback on which one prototype would be most beneficial. In person and online surveys were given with an option for feedback on the ideas. After going over the data collected from the surveys the most popular and widely supported idea was the online cookbook with 77% of people saying they would use a service such as this. Seeing this kind of support for the cookbook made me confident in choosing this as the idea to move forward with.

## The Online Cookbook

After deciding on this product I had to make it a complete idea and put together a well-rounded service that not only worked, but also accomplished my goals of increasing sales and items per transaction. To do this I had to make the cookbook unique and something that Walmart’s customers would actually want to use and would see value in.

The basics of the idea is to be a database of recipes that are chef inspired as well as family owned recipes that shoppers can navigate through by meal type, meal price, ingredients used, and many other differentiating factors and from this, customers decide what they want. To work with the OGP program the customer is able to click on a recipe and see all the ingredients as well as the steps it takes to make that dish. Once on the recipes page there will be a button with the option to “add all ingredients to cart” and this will automatically put everything you need for the meal in your grocery pickup order.

With this as the basic stripped down process for the cookbook. I wanted to amplify and build up additional processes to improve and make the platform better. The first piece I came up with is a smart algorithm that monitors your current cart and the amount of each ingredient you have and can suggest additional recipes that use the same ingredients so you only need to add a few additional items to be able to create an entire additional meal. This product not only saves the customer money with adding another meal, also each time they add a new meal it is increasing the items per cart that shopper is checking out with. If the customer ends up adding 2 additional meals through this algorithm that is 5 or more items they weren’t going to purchase intentionally that they are now buying. By

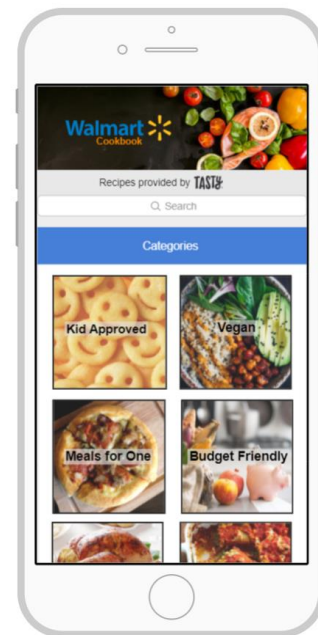


Figure 4: Prototype image for Cookbook’s homepage



adding this into the cookbook it makes it more marketable to a consumer because you add value to their process and they can use this process to try new meals and learn how to be a better cook meals for themselves and or their family.

The second improvement to the cookbook came from looking at current trends in the diet and health realm on the popular online journal Health.com. One thing I found growing in popularity is meal planning and meal prepping. A lot of people have started planning out their meals for the week before it starts, even going as far as cooking all meals and prepackaging them to be reheated and eaten later. Talking with customers and seeing this as an opportunity I added a calendar option was added to the cookbook. This can be used to map and plan out meals for the week or month for yourself and even the whole family.

Adding this feature captures a much larger market because those that already meal plan can work this into their already established routine, and people wanting to get into this habit now have an easy platform to do it on. Health concerns can also be addressed with this sort of addition giving an individual the ability to track and plan their calories, proteins, and other nutrients that they may want to monitor with their dietary habits.

The third and last improvement made to the program was specific to targeting the budget friendly shopper that already makes up a huge part of the Walmart shopper community. Many people today are not only time starved but they also have many monetary constraints as well. To capture this market potential, I added a budgeting tool to the cookbook that gives the shopper an option to put their budget in for the week or month and then be notified when this value is reached. It also brings in the option of suggesting some lower cost options to fill more meals to get the shopper through the allotted time period. This helps all three of our target consumers because young professionals are early in their career and budgeting is a large part of their lives, a

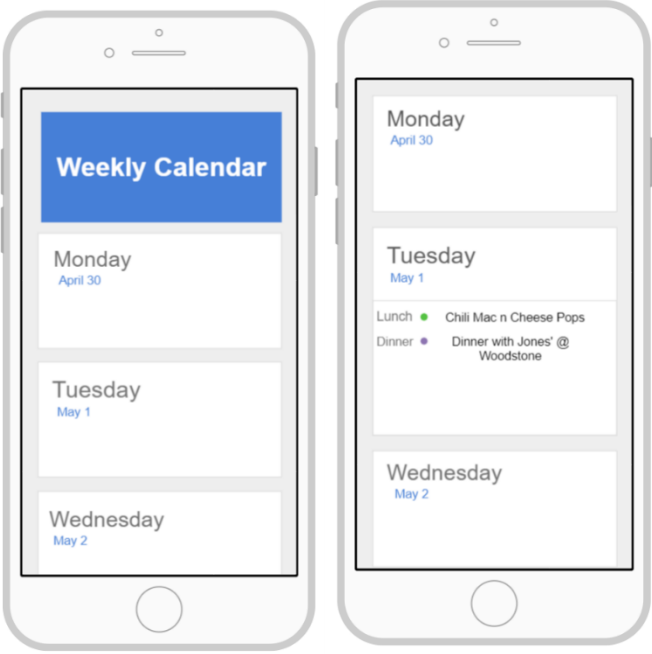


Figure 5: Prototype image for Cookbook’s calendar

family usually has a lot of expenses and groceries can really add up and mess up finances, and lastly many elderly are living on a specific retirement budget that they need to adhere to.

After a lot of time spent brainstorming, surveying, and improving I was able to create several iterations of “The Online Cookbook” prototype. Through continuous improvement and listening to customer feedback, a simple idea was made into a complete service. This, however, is not the end in the process of creating a business plan. Once a solid product is created additional research and planning on the market as a whole is necessary. There is always competition in business and knowing who you’re up against is vital to executing a successful and efficient business innovation.

### **Market Overview and Competitive Angle**

Benchmarking The Online Cookbook industry gave me the ability to find the void in the market and identify how a competitive angle can be created. With Walmart in mind as the final retailer for the application of the cookbook I looked at other top grocers and any current processes or applications similar to my current idea. For this I narrowed down on Kroger, HEB, and Whole Foods as the top market competitors.

**Kroger** – Kroger is a large grocery specific retailer with presence across the US and very high brand recognition. Kroger currently has a newly released grocery pickup program very similar to that of Walmart’s. They do also have collection of recipes online in database for people to look through. However, where my idea creates an advantage is that Walmart would be the first to combine these processes into one complete idea. Walmart just like Kroger has both of these already in existence it is simply connecting the two to gain that new market advantage and improve on their already superior grocery pickup option.

**HEB** – HEB is included in this list of competitors because it was been using a grocery pickup system for longer than the other competitors. This has given them time to improve their service and gain an established pool of users. This makes them a threat because having a well-established system gives them the opportunity to create this same idea, but just like Kroger HEB has yet to think of combining their two processes into one cohesive unit. If Walmart is able to be first to market on this idea it would give them a substantial leg up on any companies that try to replicate The Online Cookbook.

**Whole Foods** – Whole Foods has probably the most interesting angle. They have recently been bought out by previously mentioned online shopping powerhouse Amazon. Having a company

with the financial backing like this make them easily a top priority when it comes to creating new innovation. One area they lack in is the actual grocery pick up process. Their curbside grocery program is currently only available to its members through their \$120 a year membership package. Having this program cost money puts them at a disadvantage behind Walmart's whose is free. The second disadvantage is they have is having a smaller selection of product in store and adhering to a healthier product focus limits the amount of recipes that could be included in their cookbook, as seen by the already slim collection of recipes on their website now.

After considering the current market conditions and comparing that up against the product I have developed there is a clear strategic advantage. This comes not only in the form of the product, but also in how easy and seamless implementation would be for a company with the current system like Walmart. The components of The Online Cookbook are already out there and possessed by the competition, but where a leg up is gained is being able to come out with the idea first, and grab market share. As the first ones to release a new idea you are automatically the front runner and the standard that others are going to follow. This gives you the ability to be able to innovate while others are trying to play catch up, and once they get to where you are you are already 10 steps beyond that. This is a strategy seen used by companies like Apple today. They will already be planning their next release before bringing their new one to market, and because of that they have remained a forerunner in the technology industry because smaller firms simply can't keep up with this kind of fast moving improvement cycle.

### **Strategic Alliance**

With any new product or emerging idea one of the very first hurdles you run into is establishing credibility and giving the consumers a reason to believe your product is worth using. We heard that this might be a barrier to entry from consumers, because of the lack of credibility of Walmart's Fresh products. However, by leveraging the partnership it has with companies like Tasty, this could easily become highly credible.

Tasty has become a widely recognized name and logo because of multiple reasons. Most



people were introduced to this company through its countless viral videos on their Facebook page that currently has over 95 million people followers (Facebook). They gained a huge following through producing easy to follow and extremely entertaining videos showing people step by step instructions

on how to cook various interesting and unique meals, desserts, and other culinary options.

Walmart already having a history with this company puts them in a perfect position to

Figure 6: Tasty's logo via their website <http://tasty.co?>

leverage their brand recognition with the new Online Cookbook idea. This gives them an

already huge database of recipes to choose from and add to their cookbook as well as fun and entertaining videos that can be added to the various recipes to give the customers another reason to use the product. Having a partnership like this covers that “need to believe” issue previously mentioned and would give the entire Cookbook another avenue of advertisement if news of its introduction could be included in the already popular social media videos that Tasty makes.

### **Start-up costs**

For the analysis of the cost of implementation for this kind of application I took the view point of Walmart. The main course of action for The Online Cookbook will be adding a mobile format to their application with an altered version made for their website. I take this route because expanding mobile technologies has been a trend in recent years and is the direction the world is going. Optimizing The Online Cookbook to work with iPhones and other smartphones will give it the best shot at being widely used across many demographics.

Based on studies done by large app development company Savvy Apps, the cost to develop an app varies widely on the scope and size of the application. Prices go from \$50,000 for a basic small firm built application all the way up to \$500,000-\$1,000,000 for the top of the line “big boys” apps. Going off of this analysis and the knowledge I have of Walmart’s business and initial development cost of \$750,000 was settled upon. Walmart is a multinational corporation which automatically puts them in the realm of needing a “big boy” app development company to undertake the venture. With the sheer traffic that a company like Walmart already does on their

website and current application having a top of the line Online Cookbook application is going to be expected. However, since the platform is a pretty basic system at its core and isn't going to be a huge megabyte complex gaming application I did not see the need to quote the development all the way up at the \$1,000,000 price point.

Also, on top of the initial development side it is also vital for the app to be regularly maintained and upgraded to keep it relevant and continuously improving. The industry norm for this sort of work comes to about 15-20% of the apps original development price. Using this logic and making a conservative estimation erroring on the costly side, the regular maintenance of The Online Cookbook would be about \$150,000 annually. To put this in perspective for a 10 year plan the total cost of implementing The Online cookbook would total out to \$2.25 million, which seems like a high number but isn't really when you take into consideration the \$280 billion that Walmart makes annually. This \$2.25 million should also take into consideration the additional profit incurred from the new services and additional customers.

### **Financial Analysis**

As I mentioned in the previous section the cost of implementation and up keep would be worth it because of the increased revenue generated through the cookbook and its features. Without access to Walmart's private data the financial analysis is based off of the information received from talking with store associate Daniel who fills OGP orders. The primary sources of sales will come from the capturing of new customers and the purchases generated by them as well as the additional items per cart gained through current OGP users.

Having a new service like this is bound to bring in new users for Walmart that previously didn't think the value of OGP was worth it. Shoppers that previously would just buy the bare minimum on the day or night that they needed it are now purchasing much larger baskets and planning out their meals. The associate I spoke with said that he rarely ever saw a pickup order that was less than \$100, stating the average in between \$180-\$200 with some outliers much higher or much lower.

Using these numbers calculating the additional revenue generated by current customers came out to show drastically improved numbers. The main feature adding dollars per cart comes from the smart algorithm that suggests additional meals that can be made by adding a few additional products. Doing analysis on these numbers based on a growth from 1 use per store per day to 6 by the 10<sup>th</sup> year this would grow national sales by \$6,132,000 in year one and growing

to an increased \$36,792,000 by year 10. If you look at these values compounded over the entire lifetime of this period that brings in an additional \$257,544,000 to Walmart on additional item per cart alone. This doesn't take into account the number of customers brought in by this new process.

This number is theoretical but comes from a realistic less than 7% usage rate, and it does show the potential of adding just a few extra items per cart has on total sales. With Walmart's already established credibility and large customer pool being able to capture this kind of feature usage is very possible. Especially since it is customers that already use the online grocery program and would be able to add this into their process quite easily.

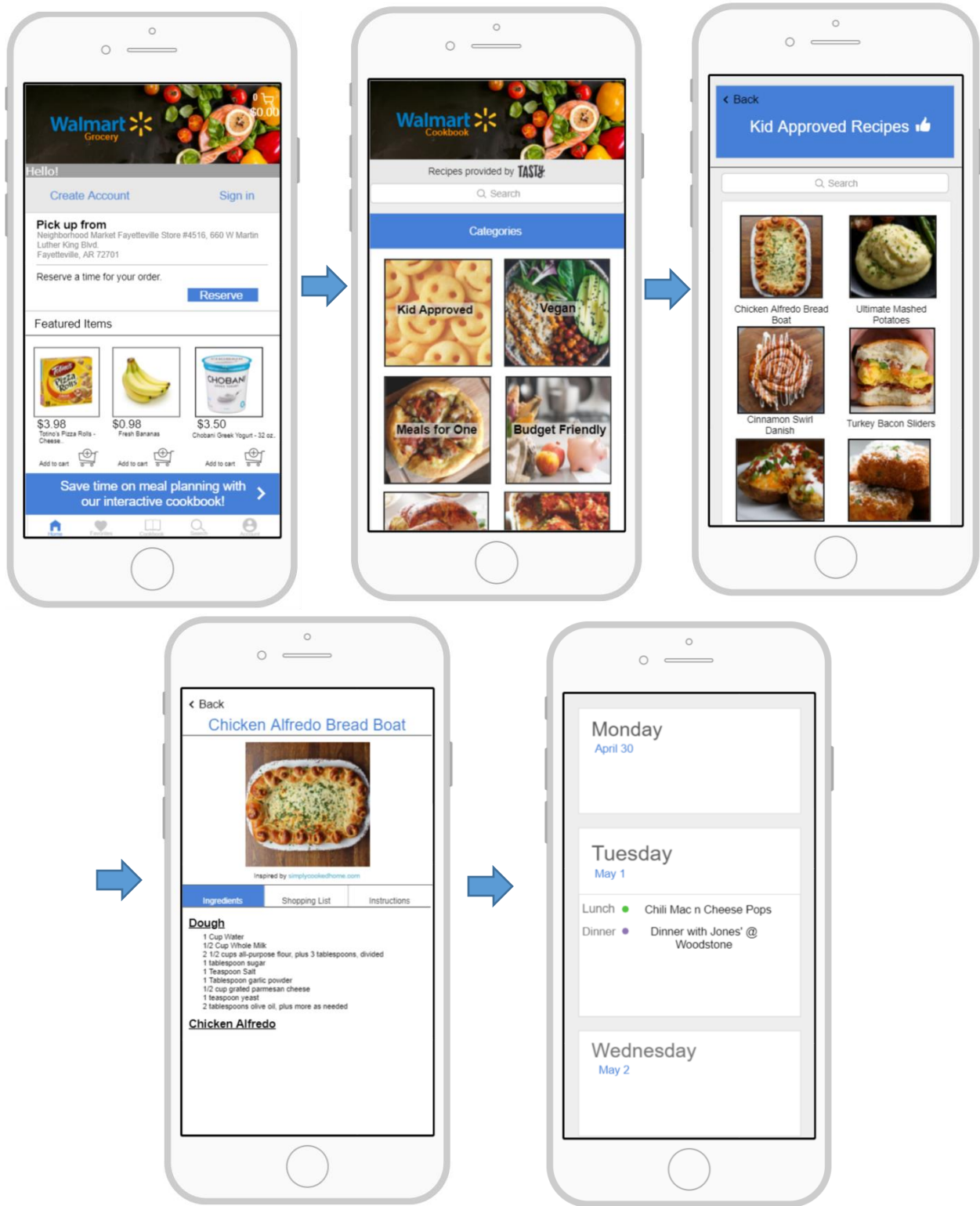
### **Growth Opportunity**

Another interesting topic to be considered with adding an Online Cookbook is where this could be applied in the future. Online Grocery Pickup was a huge innovation for Walmart, but like any competitive market further innovation has already started. There are a lot of companies starting to offer a last leg delivery system that brings the groceries directly to your door and Walmart has taken notice. They have already rolled out a Grocery Delivery system in a few markets and plan to expand in the near future.

This is an obvious route that a cookbook could be applied to. Once established in the OGP process simply incorporating it into a grocery delivery service would be essentially no effort at all. With a world always moving toward convenience and ease of process having systems and features that can translate across multiple functions gives a retailers an extreme advantage in competing for space in emerging markets. The Online Cookbook is just one way that Walmart can innovate their process and drive profit and sales through the roof. Through the innovation process and well-rounded idea and business model for the cookbook was made possible and actionable steps could be taken to implement this product into their Online Grocery Pickup Service.

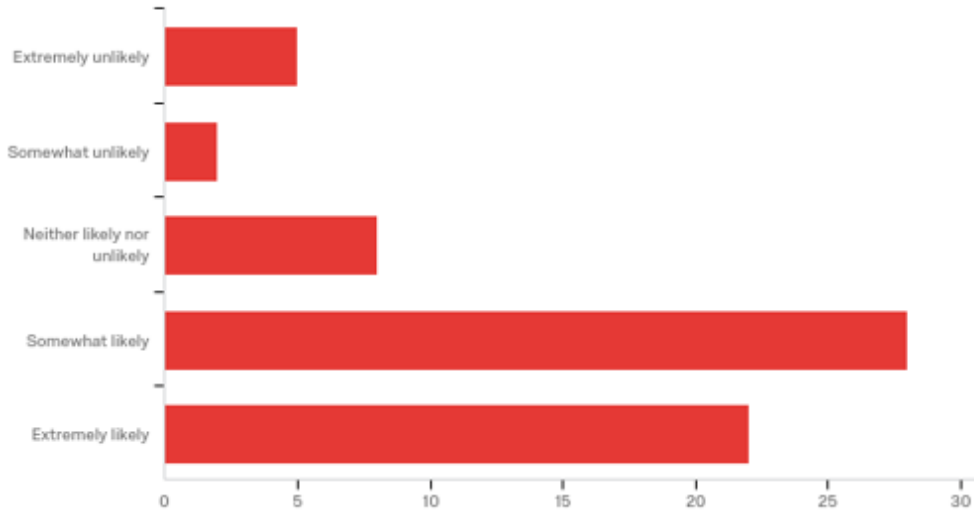
# Appendix

## Figure 1: Application Concept Screenshots



**Figure 2: Survey Question Results**

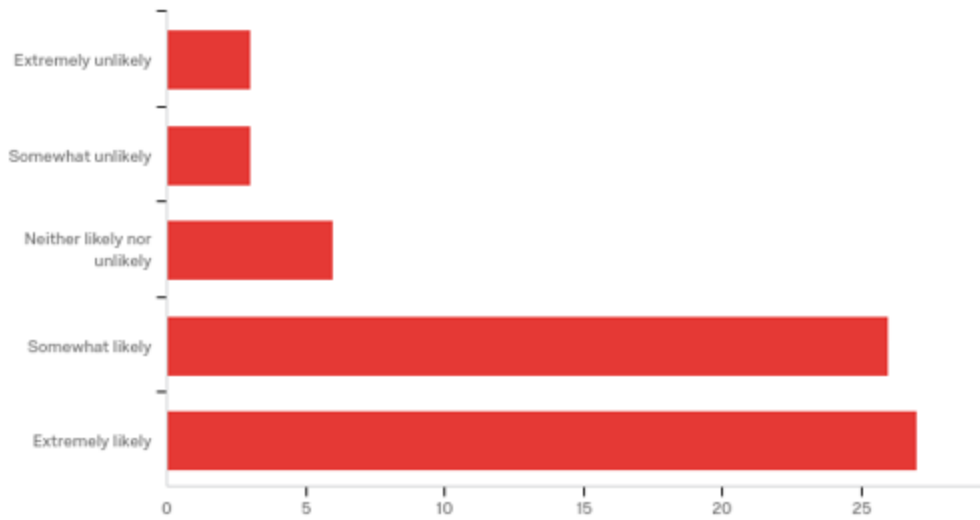
**Q2 - How likely would you be to use this service?**



#	Answer	%	Count
1	Extremely unlikely	7.69%	5
2	Somewhat unlikely	3.08%	2
3	Neither likely nor unlikely	12.31%	8
4	Somewhat likely	43.08%	28
5	Extremely likely	33.85%	22
	Total	100%	65

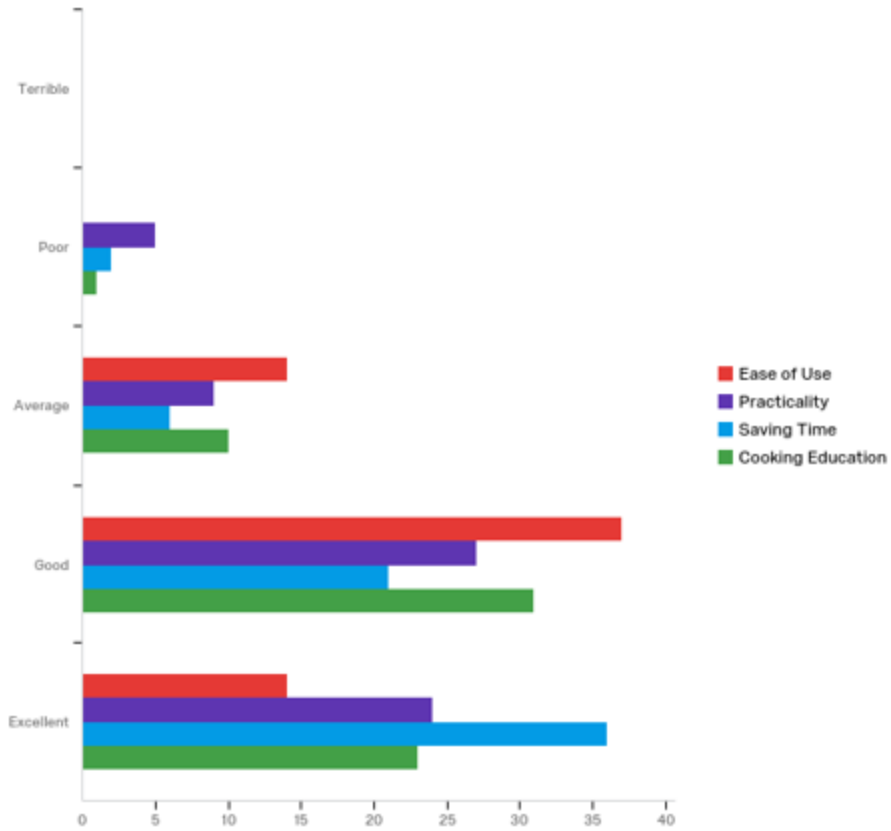


**Q3 - How likely would you be to tell your friends about this service?**



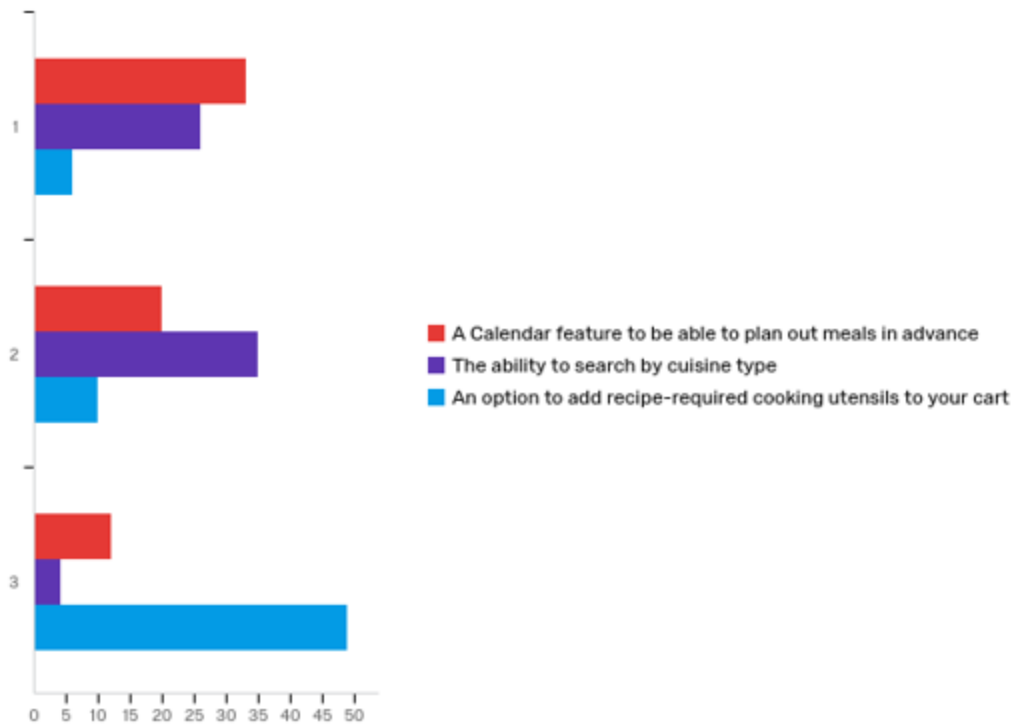
#	Answer	%	Count
1	Extremely unlikely	4.62%	3
2	Somewhat unlikely	4.62%	3
3	Neither likely nor unlikely	9.23%	6
4	Somewhat likely	40.00%	26
5	Extremely likely	41.54%	27
	Total	100%	65

**Q4 - Please rate the service on how you believe it would perform in each of the following areas.**



#	Question	Terrible		Poor		Average		Good		Excellent		Total
1	Ease of Use	0.00%	0	0.00%	0	21.54%	14	56.92%	37	21.54%	14	65
2	Practicality	0.00%	0	7.69%	5	13.85%	9	41.54%	27	36.92%	24	65
3	Saving Time	0.00%	0	3.08%	2	9.23%	6	32.31%	21	55.38%	36	65
4	Cooking Education	0.00%	0	1.54%	1	15.38%	10	47.69%	31	35.38%	23	65

**Q6 - Please rank the following features in order of which you would like to see added to this service.**



#	Question	1		2		3		Total
1	A Calendar feature to be able to plan out meals in advance	50.77%	33	30.77%	20	18.46%	12	65
2	The ability to search by cuisine type	40.00%	26	53.85%	35	6.15%	4	65
3	An option to add recipe-required cooking utensils to your cart	9.23%	6	15.38%	10	75.38%	49	65

**Figure 3: 10 Year Start Up and Maintenance Cost**

Service	Initial Cost	Incremental Cost	Installments	Cost
App Development	\$750,000	\$0	1	\$750,000
App Maintenance	\$0	\$150,000	10	\$1,500,000
<b>Total Cost</b>				<b>\$2,250,000</b>

**Figure 3: 10 Year Sales Estimates**

**The Online Cookbook**  
Sales Estimates  
10 Years (2019-2029)

	Uses per Store per Day	Dollars Added per Store per Day	National Revenue per Day (2,100 Stores)	Annual Incremental Revenue Generated	Total Incremental Revenue
2019	1	8	\$16,800	\$6,132,000	
2020	2	16	\$33,600	\$12,264,000	\$18,396,000
2021	3	24	\$50,400	\$18,396,000	\$36,792,000
2022	3	24	\$50,400	\$18,396,000	\$55,188,000
2023	4	32	\$67,500	\$24,528,000	\$79,716,000
2024	4	32	\$67,500	\$24,528,000	\$104,244,000
2025	4	32	\$67,500	\$24,528,000	\$128,772,000
2026	5	40	\$84,000	\$30,660,000	\$159,432,000
2027	5	40	\$84,000	\$30,660,000	\$190,092,000
2028	5	40	\$84,000	\$30,660,000	\$220,752,000
2029	6	48	\$100,800	\$36,792,000	<b>\$257,544,000</b>

## Works Cited

Bakkila, Blake. "9 Meal Prep Ideas for the Week That Are Super Popular on Pinterest." *Health.com*, 1 Mar. 2018, [www.health.com/food/meal-prep-ideas](http://www.health.com/food/meal-prep-ideas).

Byrum, J.D. "The Grocery List: Why 140 Million Americans Choose Walmart." *Walmart Today*, Walmart, 2016, [blog.walmart.com/business/20161003/the-grocery-list-why-140-million-americans-choose-walmart](http://blog.walmart.com/business/20161003/the-grocery-list-why-140-million-americans-choose-walmart).