



# **BUYING AND MERCHANDISING OPERATIONS RESEARCH**




**APRIL 8, 2025**



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# I. EXECUTIVE SUMMARY

## A. BUSINESS OVERVIEW


Kroger is one of the largest supermarket chains in the United States, and has built its reputation on quality and innovation since its founding in 1883 by Barney Kroger. Kroger's regional brand in the Rocky Mountain region is King Soopers. For the purposes of our research, King Soopers will serve as our pilot brand with our initial implementations focused on two locations in Castle Rock, Colorado. King Soopers is comprised of departments including produce, merchandise, pharmacy, and fuel centers, with each store grossing on average \$52.5M in revenue per year. Its local competitors are Walmart, Sam's Club, Target, Whole Foods, and Safeway.

## B. CORE OBJECTIVE

Our goal is to develop a new and improved AI system within Kroger to enhance both **customer experience** and **operational efficiency**. By implementing new AI innovations, we will address key customer pain points and improving overall store performance. Ultimately, this initiative will strengthen Kroger's market position, giving it a competitive advantage in the grocery industry.

## C. RESEARCH METHODS

Our team employed a comprehensive mix of both primary and secondary research methods to gather valuable insights and data. By combining these approaches, we are able to ensure a thorough understanding of the issues at hand, allowing us to create actionable solutions that are well-informed and tailored to effectively address the needs of our target audience.



**FRED THE FAMILY MAN**  
MILLENNIAL - GEN X

**PROFILE**

GENDER		MALE
AGE		35-54
LOCATION		CASTLE ROCK, CO.
INCOME		\$139,459

**BACKGROUND**

Fred is a thoughtful, family-oriented shopper who values quality, tradition, and personal connections with the stores and products he chooses. He is adaptable but appreciates simplicity and convenience, particularly as he navigates the changes that come with aging.

**VALUES**

Health	Family	Quality
Simplicity	Budgeting	

**PAIN POINTS**

Fred is frustrated by rising grocery prices. He's noticed that many items have gone up in cost, which means he has to be more strategic with his purchases. As he ages, Fred is more conscious about his diet.

**PURCHASE HISTORY**

Coca-Cola	Kroger
simple truth	PRIVATE SELECTION



OCT - FEB 2025

PRIMARY RESEARCH



OCT - DEC 2024

SECONDARY RESEARCH



SURVEY



SECRET SHOPPER



FOCUS GROUP



INTERNET



MOBILE APP



FINANCIALS

## D. FINDINGS AND CONCLUSIONS

Based on our research, our team identified five core weaknesses in the King Soopers brand. These weaknesses lead to lost revenue, diminished customer loyalty, and competitor preference.

### 1. ONLINE ORDERING ISSUES

Our research highlights issues with Boost, King Soopers' delivery service, including poor substitutions and late orders. With Walmart offering a top-tier delivery experience, failing to improve these issues risks driving customers to competitors, leading to lost revenue.

### 2. HARD TO FIND ITEMS

Our research reveals frustration over out-of-stock or hard-to-find items. This often pushes customers to competitors, leading to lost sales and weakened loyalty.

### 3. PRODUCT SHRINK

Product shrink is the loss from damage, theft, or product spoilage. This accounts for an estimated 1.74% of Kroger's sales. CFO Todd Foley noted theft is at a historical high (Q2 2024 earnings call). This not only impacts revenue, but also frustrates customers, making it a critical issue to address.

### 4. LONG LINES

Our research highlights the demand for a faster, more convenient shopping experience. Many Yelp reviews mention long lines and wait times, leading to frustration and negative brand perception. Addressing this issue will improve retention and build customer loyalty.

### 5. HIGH PRICES

Our research reveals growing frustration over rising grocery prices. This has led to customers buying less, abandoning items, and seeking cheaper alternatives, resulting in lost sales and declining loyalty for King Soopers.

## E. STRATEGIC PLAN

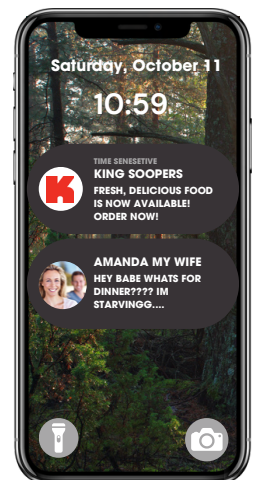
Based on our findings, we have created the **S.H.O.P.** initiative to integrate into the King Soopers/Kroger app focused on enhancing operations and customer experience. Our objectives are to **Streamline ordering and delivery services, Highlight product availability and locations, Optimize checkout and store flow, and Prioritize price perception and promotions.**

### SCAN-AND-GO TECHNOLOGY

**Scan-and-Go** enables customers to scan and pay in-app, bypassing checkout lines. An AI exit archway ensures all items are purchased, while automatic digital coupon integration simplifies savings, creating a seamless, efficient shopping experience, while also reducing theft.

### AUTOMATIONS

Customers will electronically receive **alerts** within the app when products are back in stock, prompting users for in-store visits, delivery, or pick-up. The app will prompt users to complete a survey about preferences and offer tailored coupons based on purchase history.



1.1 AUTOMATED ALERT EX:

## IN-STORE PRODUCT NAVIGATION

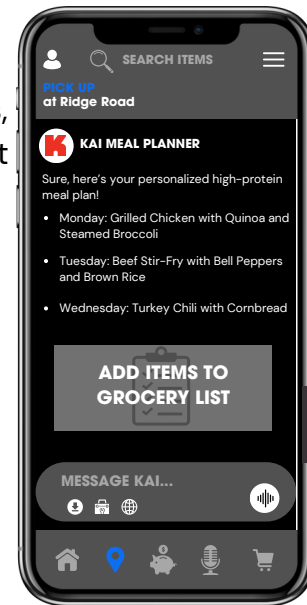
The King Soopers app's AI-powered navigation maps store layouts in real time, guiding shoppers to exact locations and optimizing store organization. KAI (Kroger AI) answers product questions, while smart routing enhances efficiency across devices.

## KAI MEAL PLANNER

The **KAI Meal Planner** creates personalized meal plans, recipes, and shopping lists based on dietary needs and lifestyle goals. It integrates trending recipes, reduces waste by using existing ingredients, and pairs with Scan-and-Go to suggest complementary items for a smarter, more efficient shopping experience.

## FOOD PREFERENCE OPTIMIZATION

The **Food Preference Optimization** feature personalizes shopping by learning user preferences through a swipe system, offering tailored recommendations and smart substitutions. It also adapts to regional demographics, ensuring a convenient and customized grocery experience.



"HIGH PROTEIN MEALS...FAMILY OF 4... NO DAIRY, NO SEAFOOD"



1.2 MEAL PLANNER EX:

## F. PROPOSED BUDGET

The budget for our strategic plan is split across the 5 phases with the cumulative cost of **\$2.14M** and an recurring maintenance and upgrade cost of **\$428k**. The return on investment of **S.H.O.P.** after 2 years of implementation is 387.88%.

2 YEAR TOTAL COST

**\$2,568,000**

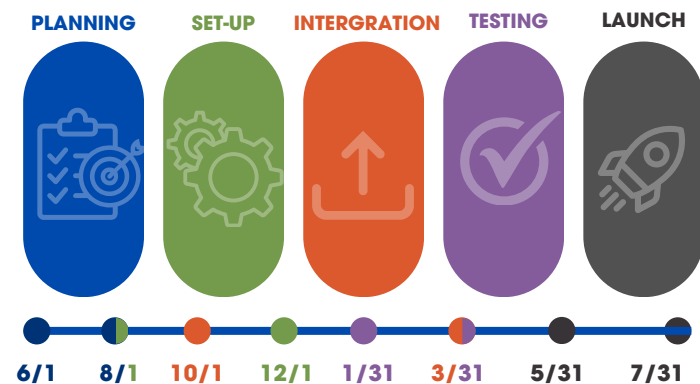
REVENUE

**\$9,960,771**

ROI

**387.88%**

## G. PROPOSED TIMELINE



## H. DESIRED METRICS

**8%**

### INCREASE SALES

Increase the two stores' \$52.5M in sales by 8%

ADDITIONAL REVENUE: \$9,183,242.86

**1%**

### PRODUCT SHRINKAGE

Decrease % of sales lost to shrinkage from 1.78% to 1%

ADDITIONAL REVENUE : \$777,528.57

**3.5**

### YELP REVIEWS

Increase stores' 2.8 and 2.4 average reviews to 3.5

AVERAGE A 3.5 STAR REVIEW

**50%**

### USER-ADOPTION RATES

Achieve a greater than 50% adoption rate of AI features

ACHIEVE A 50% ADOPTION RATE

# II. INTRODUCTION

## A. DESCRIPTION OF BUSINESS

The Kroger Co. was founded in 1883 by Barney Kroger, who invested his life savings of \$372 to open a single grocery store at 66 Pearl Street in downtown Cincinnati, Ohio. From this humble beginning, the company has grown into one of the largest supermarket chains in the United States. Today, Kroger operates nearly 2,800 stores across 35 states under 28 different store banners ensuring that fresh, affordable food is always within reach. One of Kroger’s regional brands, King Soopers, operates in the Rocky Mountain region of the United States. Originally founded as an independent brand, King Soopers is now a proud subsidiary of Kroger. Kings Soopers is comprised of departments including produce, merchandise, pharmacy, and fuel centers.

For the purpose of our research, King Soopers will serve as our pilot brand, specifically the two stores in Castle Rock, Colorado located on 750 N Ridge Rd and 5544 Promenade Pkwy. Their regional competitors consist of Walmart, Target, Sam's Club and Whole Foods. King Soopers is set apart from its competitors through its loyalty program, The Supercard, driving personalized deals, digital coupons, and fuel rewards. It is also differentiated through the Boost subscription program, which gives free delivery, 2x fuel points, streaming options, and exclusive offers. King Soopers offers strong private labels unique to their store allowing customers to shop for high quality products at a lower price point than name brands. They also continue to adapt to consumer needs, by expanding their online ordering systems through in store pickup and at home delivery options.



FIGURE 2.1: KING SOOPERS STORE

## B. DESCRIPTION OF TARGET MARKET GEOGRAPHIC:

King Soopers serves the **Denver metropolitan area**, the Front Range, and cities such as Colorado Springs, Boulder, Fort Collins, and Aurora. Kroger has positioned King Soopers in these specific areas due to the concentration of population, economic activity, and the demand for grocery service. Within these areas, Kroger aims to serve a **diverse customer base**, from city dwellers to suburban families, all while maintaining their regional identity.



FIGURE 2.2: K.S.STORES & COMPETITORS IN CASTLE ROCK

DEMOGRAPHICS:

Kroger caters to a broad customer base, whose target demographics are adults aged 25–54, families with children, health-conscious individuals, seniors, and both urban and suburban residents. Its typical shopper is a married, suburban Millennial or Gen X with some college education and an annual income over \$80,000. By offering a wide range of products and competitive pricing, Kroger provides a convenient shopping experience that meets the needs of its customers.

PSYCHOGRAPHICS:

The psychographics of King Soopers shoppers reflect a group that prioritizes value, while also being health-conscious. They are driven by convenience and efficiency. Many are routine shoppers, sticking to familiar products and stores for consistency. Additionally, they value community, supporting initiatives that sell local produce, highlighting a preference for supporting their local economy and sustainable practices.

C. OVERVIEW OF THE BUSINESS'S CURRENT AI STRATEGIES AND USAGE

CUSTOMER EXPERIENCE:

Kroger uses AI to improve the customer experience in multiple ways. One key area is reducing wait times—through dynamic batching and routing, they now offer two-hour lead times for pickup orders at all stores. AI also enhances personalization, analyzing both purchasing and browsing habits from the 95% of transactions made through Kroger’s loyalty card. This allows for a seamless, customized shopping experience. These AI-driven improvements align with Kroger’s four-pillar marketing strategy, making their business more efficient and customer-friendly by optimizing both in-store and online interactions.



FIGURE 2.3: KING SOOPERS TARGET PERSONA

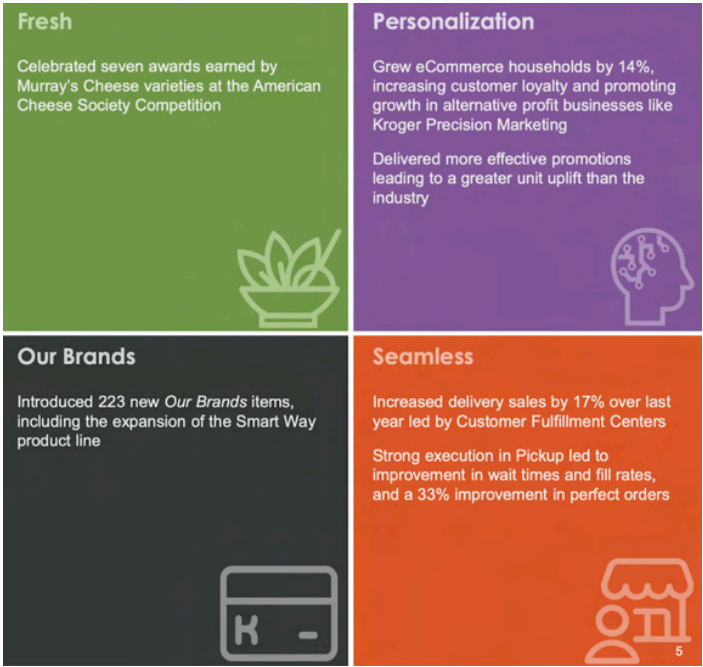


FIGURE 2.4 4 PILLAR MARKETING STRATEGY

**OPERATIONS:**

Kroger has implemented advanced technologies to optimize its operations and enhance customer experience. Through dynamic batching and routing, their systems group online orders and create the most efficient in-store picking routes, reducing order fulfillment and customer wait times. To maintain high freshness standards, Kroger uses Computer Visualization Aid to monitor produce, ensuring that any signs of bruising, spoilage, or imperfections are quickly identified. Their last-mile delivery system further optimizes logistics by taking the most efficient routes, reducing transit times, and minimizing product loss. Additionally, Kroger employs the Lenovo Edge AI Camera system at checkout to detect scanning errors, prevent potential theft, and provide assistance to customers when necessary, ensuring smooth and secure transactions.

**III. RESEARCH METHODS USED IN THE STUDY**

**A. DESCRIPTION AND RATIONALE OF RESEARCH METHODOLOGIES SELECTED TO CONDUCT THE RESEARCH STUDY**

**OBJECTIVES:**

Identify King Soopers current usage of AI in their day to day operations and customer relations using primary and secondary research methods


Focus on utilizing customer input, market research and diving deeper into competitor apps and the King Soopers app

Utilize research to pinpoint areas for improvement



**PRIMARY RESEARCH**



RESEARCH METHOD	DESCRIPTION	RATIONALE
 <b>SURVEYS</b>	<p><b>Customer Survey</b></p> <p>In order to discover how the target market feels about King Soopers, we utilized a stratified sampling plan surveying 261 customers, focusing on their priorities and their current pain points.</p>	<p>Customer surveys offer valuable insights into the King Soopers experience, highlighting pain points, preferences, and reasons for choosing competitors. These findings will guide future solutions and AI implementation, addressing current shortcomings.</p>


RESEARCH METHOD	DESCRIPTION	RATIONALE
 <b>FOCUS GROUP</b>	<b>Focus Group</b> Our focus group was comprised of five participants who took our survey, who volunteered for the focus group which allowed us to gain a qualitative insight on our survey.	Customer focus groups offer in-depth insights into the current experience at King Soopers, analyzing habits and preferences in more detail than surveys. They complement survey data by providing valuable feedback to inform proposed solutions.
 <b>SECRET SHOPPER</b>	<b>Secret Shopper</b> Our team conducted a secret shopper evaluation to experience first-hand issues highlighted by customers. This allowed us to gain a new perspective, acting as a customer reinforcing collected data.	Becoming a shopper allows us to experience the typical King Soopers customer journey, identifying operational strengths, service gaps, and customer pain points. This insight helps our team develop solutions to improve store operations.



## SECONDARY RESEARCH



RESEARCH METHOD	DESCRIPTION	RATIONALE
 <b>INTERNET RESEARCH</b>	<b>Websites and Reviews:</b> We conducted internet research from websites such as Forbes, Statista, and Kroger's website to gather data such as industry insights. Additionally, we analysed review websites such as Yelp to understand customer pain points, and the most prevalent struggles of customers.	Our research on AI implementation costs, industry trends, and customer feedback (e.g., Yelp) helped identify key pain points and opportunities for AI-driven solutions that align with both customer needs and industry trends.
 <b>FINANCIAL REPORTS</b>	<b>Kroger Financial Reports</b> We analyzed Kroger's 2023 fiscal year 10-K Financial Report (ended 2/3/24), the 2024 Q2-Q4 Earnings Releases, and the 2024 Q2 Earnings call transcript. This helped us understand the current financial health and priorities of Kroger.	Analyzing Kroger's financial reports provided insights into its AI strategies and go-to-market approach. Executive statements highlighted key challenges and priorities, helping identify where AI can align with Kroger's long-term goals.

RESEARCH METHOD	DESCRIPTION	RATIONALE
 <b>COMPETITOR APPS</b>	<b>Competitor Apps</b> Our team conducted an analysis of competitor mobile applications, including Sam’s Club, Walmart, Target, and Safeway, to compare their features, functionality, and user experience against the King Soopers app.	Analyzing competitor apps reveals how top retailers use AI to improve customer experience. By evaluating successful features, we identified opportunities for King Soopers to adopt similar AI enhancements, aligning with industry trends and customer needs.

We used diverse research methods—surveys, focus groups, secret shoppers, internet research, financial reports, and competitor analysis—to gain key insights. Surveys revealed customer frustrations, while focus groups and secret shoppers provided firsthand experiences. Analyzing Kroger’s vision and budget ensured feasibility and competitor research identified areas for improvement. Face-to-face conversations uncovered deeper issues, guiding AI-driven solutions tailored to customer needs and business goals.

**B. PROCESS USED TO CONDUCT THE SELECTED RESEARCH METHODS**

RESEARCH METHOD	DATE CONDUCTED	PROCESS
INTERNET RESEARCH	OCTOBER 4, 2024	1. Conduct internet research on credible sites, in order to learn industry trends and AI costs, to create benchmarks for future innovations. 2. Categorized Yelp Reviews into key themes (customer satisfaction, pain points) to detect patterns. 3. Generate AI-driven improvements that solve these pain points.
FINANCIAL REPORTS	OCTOBER 4, 2024	1. Analyze Kroger 2023 Fiscal year 10-K report, 2024 Q2 - Q4 earnings releases, and 2024 Q2 earnings call transcript. 2. Research on how Kroger uses AI, and current marketing strategy, to learn processes. 3. Use statements in reports as a key point for how AI is used, and areas it can effectively be implemented.
COMPETITOR APPS	NOVEMBER 13, 2024	1. Download the King Soopers, Sam's club, Walmart, Safeway, and Target grocery store apps. 2. Imitate a user and find strengths within features of the app. 3. Compare apps usability and features to the King Soopers app.

## CUSTOMER SURVEY

**DECEMBER 1, 2024**

1. Prepare surveys with fixed choice, and likert scale questions about customer preferences, priorities and pain points.
2. Select regional groups on Facebook and Nextdoor, that reflect our target market, prompting them to complete our survey.
3. Analyze customer response data to guide future solutions.

## FOCUS GROUP

**DECEMBER 16, 2024**

1. Gather emails from survey respondents who were willing to participate in a focus group.
2. Analyze data from the survey to generate questions to find qualitative data.
3. Record and analyze results of the focus group once completed.

## SECRET SHOPPER

**DECEMBER 17, 2024**

1. Generate a shopping list, reflecting King Soopers target market.
2. Select a time to shop around the store.
3. With this information, Identify pain points in the shopping experience to implement solutions

## IV. FINDINGS AND CONCLUSIONS OF THE STUDY

### A. FINDINGS OF THE RESEARCH

#### CUSTOMER SURVEY

Our survey of 261 participants revealed key customer concerns and priorities. The majority of shoppers prioritize affordability, with 79.7% rating product value as highly important. Additionally, 74.3% of respondents believe grocery prices are too high and say lower prices would improve their experience. Shopping efficiency is also a major factor, as 70.1% value quick in-and-out trips, while 56.3% want more discounts and promotions to enhance their shopping experience. When evaluating our proposed AI-driven features, 64.8% of respondents found coupon recommendations useful, highlighting the demand for personalized savings. 58.6% rated in-store navigation as helpful, reinforcing the need for a more seamless shopping experience. Additionally, 50.0% saw value in the AI meal planner, showing interest in tools that simplify meal preparation and grocery planning. These insights emphasize the importance of focusing on affordability, efficiency, and AI-driven features that enhance savings and convenience. By addressing these priorities, we can improve customer satisfaction and drive business success.

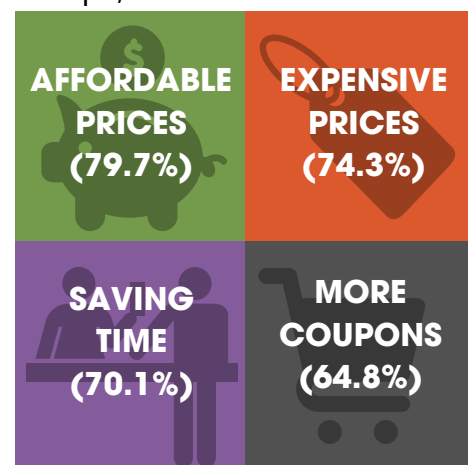


FIGURE 4.1: KEY FINDINGS FROM CUSTOMER SURVEY

SECRET SHOPPING

Our secret shopping research resulted in several key takeaways. In the store, it took us 18 minutes to locate all of our items and checkout. On average, five minutes were spent looking for items which were on our AI shopping list, which we couldn't locate. The checkout line was short, and it was simple to get out of the store. In the store, the food was in good condition, and the store was clean. Our key takeaway was the length of time it took to shop was unnecessary, with many trips down aisles which could have been avoided with our proposed AI implementations.



KROGER FINANCIAL REPORTS

The financial reports we reviewed from Kroger allowed us an insight on the current uses of AI in Kroger, and gave us a visualization of areas which our implementation will succeed. From **Item 7 of the 2023 fiscal year 10-K report (ended 2/3/24)** along with the **2024 Q2- Q4 Earnings Releases**, we identified Kroger’s go-to-market strategy. This current go-to-market strategy, which Kroger has implemented into their business, focuses on four pillars: fresh, personalization, our brands, and seamless.

In our AI implementation, we look to build upon the **seamless** and **personalization** pillars of the current go-to-market strategy. Our AI implementation will further two of the four pillars, to improve the customer experience, and expand on our go-to-market strategy. **CFO Todd Foley** stated in the **Q2 2024 Earnings Call**, “While we are pleased with the result this quarter, shrink related to theft remains high on a historical basis and we still have work to do to further mitigate the financial impact.” This statement reveals that King Soopers can increase revenue by mitigating theft utilizing AI.



FIGURE 4.2: STRATEGIC INSIGHTS AND AI INTEGRATION OVERVIEW

## YELP REVIEWS

Our analysis of the latest **30** customer reviews split between the two Castle Rock King Soopers locations revealed several recurring issues with the in-store experience. One of the most frequently mentioned problems was **customer service**, particularly in the self-checkout areas. Many customers reported issues with items not scanning properly or requiring age verification for certain products, and they expressed frustration over employees being unwilling to assist when these problems occurred. Self-checkout lines were consistently highlighted as a source of frustration, with long wait times and difficulties applying digital coupons, leading to higher grocery costs. Additionally, multiple customers raised concerns about the quality of products, particularly in the meat and produce sections, with some items being close to or past their expiration date. Customers also found the store layout confusing, with disorganized product placement hindering their shopping efficiency.

“

This store keeps getting worse. Shelves are empty, and there's always one long line. We're done shopping here and will go to North Castle Pines or Walmart instead.

—Ron M, Castle Rock CO

“

My delivery was delayed from 7–8 a.m. to 3–4 p.m. without notice, and I've been overcharged for promotions. Service has worsened since renewing Boost, and I likely won't renew.

—Vanessa C, Castle Rock CO

FIGURE 4.3: KING SOOPERS CASTLE ROCK YELP REVIEWS

Complaints about King Soopers' **delivery service** and **online ordering** were also prevalent in customer reviews. Several customers reported issues with **delivery delays**, **incorrect charges**, and **poor product substitutions**. One reviewer noted receiving items close to or past their expiration date, raising concerns about the freshness of online orders. Some customers suggested that King Soopers might be offloading older or expired stock through its delivery service. The delivery system was also criticized for **inconsistent service**, with several customers noting frustrations over not receiving the correct items or experiencing **significant delays** in receiving their orders. Additionally, concerns were raised about higher prices, with some reviewers likening King Soopers' pricing to cruise ship convenience stores, adding to the overall dissatisfaction with the online ordering experience.

## COMPETITOR APPS

While researching the **Target**, **Walmart**, **Sam's Club**, **Safeway**, and **King Soopers** apps, we found common features like easy access to deals and the ability to create shopping lists. However, King Soopers lacked a **scanning feature** available in the Walmart and Sam's Club apps, which enables quick checkout by scanning items in-store and bypassing lines—a feature that could greatly improve the King Soopers experience. Another missing feature in all apps was an **item identifier**, which would help customers easily locate products. Additionally, the King Soopers app could benefit from a more prominent rewards system, like the one in the Target app, to attract more users and improve customer engagement.

## FOCUS GROUP

Shoppers have a mix of planned and spontaneous habits, often making multiple trips per week due to forgotten items or cravings. Meal planning and cooking styles vary, with some relying on digital tools, but frustrations with grocery store apps—**especially digital coupons**—are widespread. Privacy concerns and usability issues hinder adoption, particularly among older shoppers.

Food waste remains a common problem, with AI-driven meal planning and inventory tracking seen as potential solutions. Customers express interest in AI-powered personalization, from shopping recommendations to meal planning, but skepticism remains due to past app issues and data privacy worries. Enhancing store navigation, improving stocking transparency, and automating discounts could streamline the shopping experience. Features like voice-to-text list creation, in-store navigation, and real-time inventory updates could help, but user control and simplicity will be key to adoption. Additionally, customers emphasized the importance of store safety and familiarity, influencing their choice of store and how comfortable they feel while shopping. Making the store layout more intuitive and transparent could also significantly improve the shopping experience, helping shoppers save time and reduce frustration.

## FORGETFULNESS



## PRIVACY



## IMPULSE



## WASTE



## NAVIGATION



## B. CONCLUSIONS BASED ON THE FINDINGS

Based on our research, our team identified five core weaknesses in the King Soopers brand. These weaknesses lead to lost revenue, diminished customer loyalty, and competitor preference.

### 1. ONLINE ORDERING ISSUES

Customer surveys, Yelp reviews, and focus groups revealed consistent complaints about Boost, King Soopers' subscription delivery service. Customers cited poor substitutions, late deliveries, and delayed orders. This is critical for King Soopers to address, as Walmart — a key competitor — offers a highly regarded delivery service. If these issues continue, customers will turn to competitors who get it right on time every time, resulting in lost revenue.

### 2. HARD TO FIND ITEMS

Customer surveys, Yelp reviews, focus groups, and secret shopping feedback show that customers get frustrated when their favorite items aren't on the shelf or are hard to find. This frustration often drives them to competitors, resulting in lost sales and diminished customer loyalty.

### PRODUCT SHRINK

3. Product shrink is the loss of inventory due to damage, theft, or product spoilage. Through research of Kroger financial reports, online websites, and Yelp reviews, we have found that Kroger lost an estimated 1.74% of sales to shrink. Stated by Kroger CFO Todd Foley, "Shrink related to theft is at a high historical rate" (Q2 2024 earnings call). On the customer end, product shrink leads to customer dissatisfaction, and lost revenue, highlighting a pressing matter.

4.

## LONG LINES

Customer surveys, Yelp reviews, competitor apps and focus groups show that customers want a quick and convenient shopping experience. Many Yelp reviews stated issues with long lines, and wait times, which led to frustration, and a negative association to our brand. Fixing this problem will allow for a high customer retention rate, and a loyal customer base.

5.

## HIGH PRICES

Customer surveys, Yelp reviews, focus groups, and online research has indicated a high spike in prices at the grocery store as of late. This has caused customers to leave items behind, shop less, have a disappointing experience, and leave disgruntled. This causes King Soopers to lose sales with customers shopping less, and lose customers to cheaper alternative stores.

All these issues are integral to resolve to hold a better position against our competitors. With these issues in mind, our AI implementation will be aimed at resolving these, and bettering the customer experience.

# V. PROPOSED STRATEGIC PLAN

## A. OBJECTIVES AND RATIONALE OF PROPOSED STRATEGIC PLAN

Objectives are essential to the success of our strategic plan. Based on our findings, we have created a S.H.O.P. initiative integrated into the King Soopers/Kroger app focused on areas that enhance both operations and customer experience.



## S.H.O.P. INITIATIVE



### OBJECTIVE 1. STREAMLINE ORDERING & DELIVERY SERVICES

In order to address ordering issues and product shrink, **Streamlining Ordering and Delivery Services** will enhance the reliability of the ordering process. AI improves substitution accuracy and provides proactive communication about orders. Real-time tracking and a customer feedback loop within the app ensures that bad substitutions are logged and influence future orders. Benchmarking against leaders like Walmart+ will help identify service gaps. Reliable delivery is crucial, as competitors like Walmart and Amazon set high standards, and failure to improve will lead to customer loss.

### OBJECTIVE 2. HIGHLIGHT PRODUCT AVAILABILITY & LOCATIONS

**Highlighting Product Availability & Locations** focuses on providing customers with real-time product locations via the app. If an item is out of stock, the app will suggest nearby substitutes or provide restock timelines to keep customers informed. Digital shelf tags will be used to update instantly, ensuring customers know exactly what's available. This approach enhances transparency, allowing customers to feel more in control of their shopping experience.

## OBJECTIVE 3. OPTIMIZE CHECKOUT & STORE FLOW

**Optimize Checkout & Store Flow** aims to reduce long lines and improve the overall shopping experience. By introducing scan-and-go technology as customers shop, checkout speed will be significantly enhanced. Faster checkout improves customer satisfaction, encourages more frequent visits, and creates a positive brand association, making it crucial for retaining loyal shoppers.

## OBJECTIVE 4. PRIORITIZE PRICE PERCEPTION & PROMOTIONS

**Prioritize Price Perception & Promotions** focuses on addressing customer concerns about high prices. By offering personalized digital coupons based on purchase history and increasing visibility of weekly deals and price drops, customers will feel they are getting better value. Highlighting value-focused brands, such as Kroger's private label, will show affordable options. This is crucial to ensure customers don't feel they are overpaying, which will cause them to switch to our competitors.

## B. PROPOSED ACTIVITIES AND TIMELINES

### SCAN-AND-GO TECHNOLOGY

King Soopers currently lacks a seamless checkout process, as highlighted by customer complaints. Implementing **Scan-and-Go** will allow customers to scan and pay for items within the app, bypassing checkout lines. As they exit, an AI archway will match items in their cart to the receipt, helping prevent theft by ensuring all items are purchased. Additionally, due to frequent customer complaints about the coupon system, digital coupons can be automatically applied when scanning an item's barcode—if the coupon is selected—making savings effortless. This encourages users to take advantage of digital discounts while also reducing in-store lines. By combining scan-and-go technology with exit verification and seamless coupon integration, we'll create a smooth, no-friction, no-stopping shopping experience.

### AUTOMATIONS

Customer surveys and Yelp reviews highlight concerns about high prices, poor substitutes for out-of-stock items, and freshness. With automations, customers will be alerted when products arrive and are stocked, with suggestions for in-store visits or delivery/pick-up options. The app will prompt users to fill out a survey about preferences, and AI will offer personalized coupons based on purchase history and preferences. This will improve the customer experience and provide a tailored shopping list unique to Kroger.

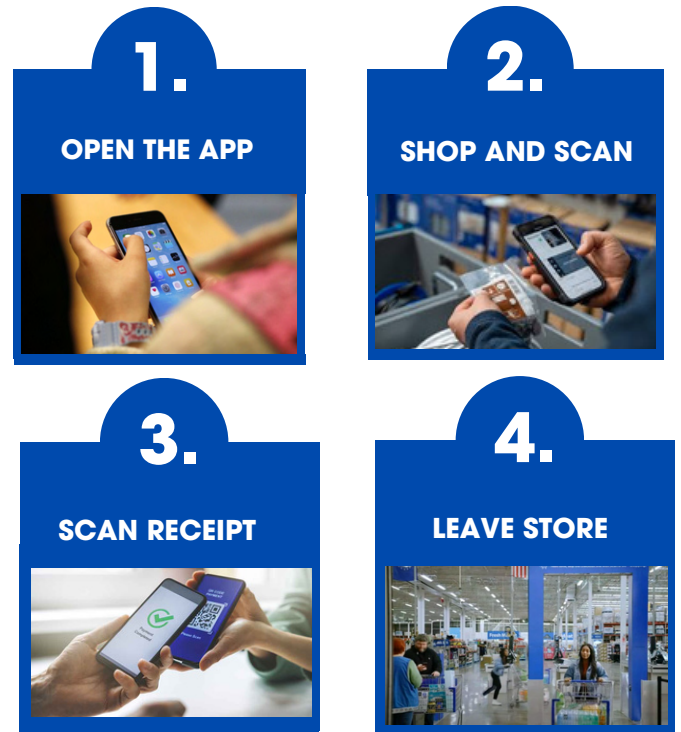


FIGURE 5.1 SCAN-AND-GO

### NOTIFICATIONS



FIGURE 5.2 AUTOMATIONS

## IN-STORE PRODUCT NAVIGATION

Customer feedback reveals that many shoppers struggle to find items and navigate the store efficiently. The **In-Store Product Navigation** feature will provide a dynamic digital map through the King Soopers app, syncing with each store's unique layout to highlight exact aisle and shelf locations. AI integration will ensure the map updates in real time based on store-specific product placement, including discount aisles. Additionally, AI will analyze shopping patterns to recommend optimal product placements, helping stores predict buying behavior and maximize revenue. Shoppers can also get instant assistance from KAI (Kroger AI), an AI-powered assistant, to ask product-specific questions like, "Is item XYZ gluten-free?" or get real-time aisle clarification. The app will also generate the most efficient shopping route and sync with Apple Watches or other digital devices for a seamless experience.

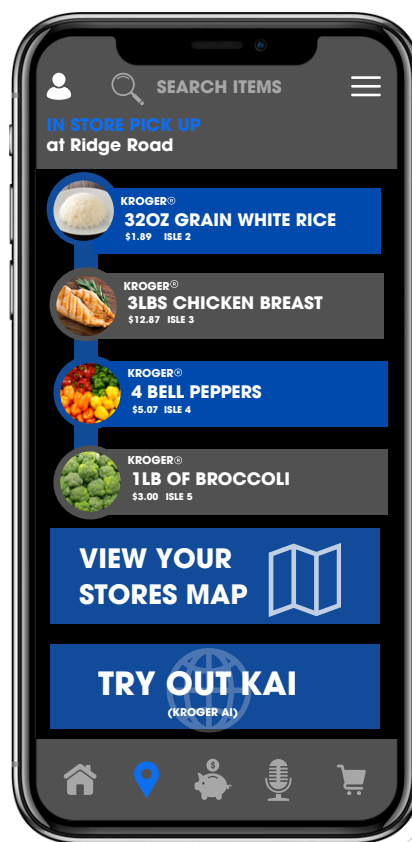


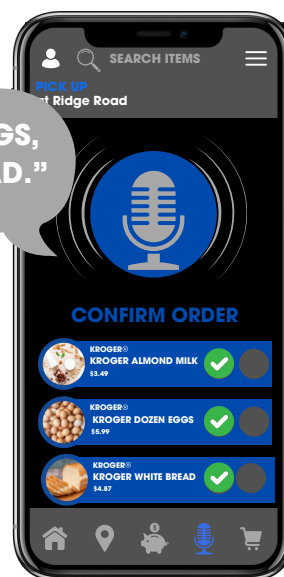
FIGURE 5.3 IN-STORE PRODUCT NAVIGATION

## SPEECH-TO-TEXT

To streamline the shopping process, the Optimized Shopping Experience will include an **AI-powered speech-to-text** feature, allowing users to create shopping lists by speaking into the app. The AI will quickly compile the list, saving time and ensuring accuracy. Users will also be able to sync with AI assistants like Alexa, to further enhance convenience and improve the shopping experience. Additionally, voice-to-text functionality can be used with KAI—if users prefer to talk to KAI via microphone for in-store assistance, placing orders, or other app features, further simplifying the shopping experience.



MILK, EGGS,  
AND BREAD."



### 1. ACTIVATE VOICE-TEXT 2. GENERATE LIST

FIGURE 5.4 VOICE TO TEXT

## KAI MEAL PLANNER

The **KAI Meal Planner** feature simplifies meal planning by using customers' dietary preferences, lifestyle goals, and family size to create personalized meal plans, recipes, and shopping lists. For instance, users planning for a week of high-protein meals will receive cost-effective ingredient recommendations and corresponding recipes. The KAI Meal planner syncs with social media platforms like TikTok to incorporate trending recipes and suggests meals based on items customers already have. Users can also ask KAI to generate meals with only 1-2 ingredients that customers typically have hidden in their fridge, helping reduce product waste. This feature ensures customers can efficiently plan their meals, save time, money, and reduce waste. To increase impulse purchases, the Scan-and-Go feature will prompt the meal planner to recommend complementary items as customers scan their products. For example, if a customer buys a brand of chips, the app might suggest salsa on sale (buy 1, get 1 free) or jalapeños and tomatoes to make their own salsa. This encourages additional purchases while enhancing the shopping experience with personalized, convenient suggestions.

## FOOD PREFERENCE OPTIMIZATION

The **Food Optimization** feature allows users to refine their tastes and preferences through an interactive swipe right (like) or swipe left (dislike) system. As users engage with this feature, the app learns what foods and recipes they enjoy and provides personalized recommendations and shopping lists. The AI will also analyze regional demographics, offering products that cater to the local market's preferences. For example, in a more Hispanic area, the app will prioritize **Latinx Cuisine** products and suggest items based on market demand, anticipating customer needs. When a preferred item is out of stock that was included in an online order or part of a recipe, the app will flag it for substitution. These substitutes will be hyper-personalized based on the user's swipe preferences, past purchases, and dietary habits, ensuring the replacements align with their tastes. This personalized approach encourages users to select recommended substitutes, creating a more convenient shopping experience while reducing the need to visit other stores.

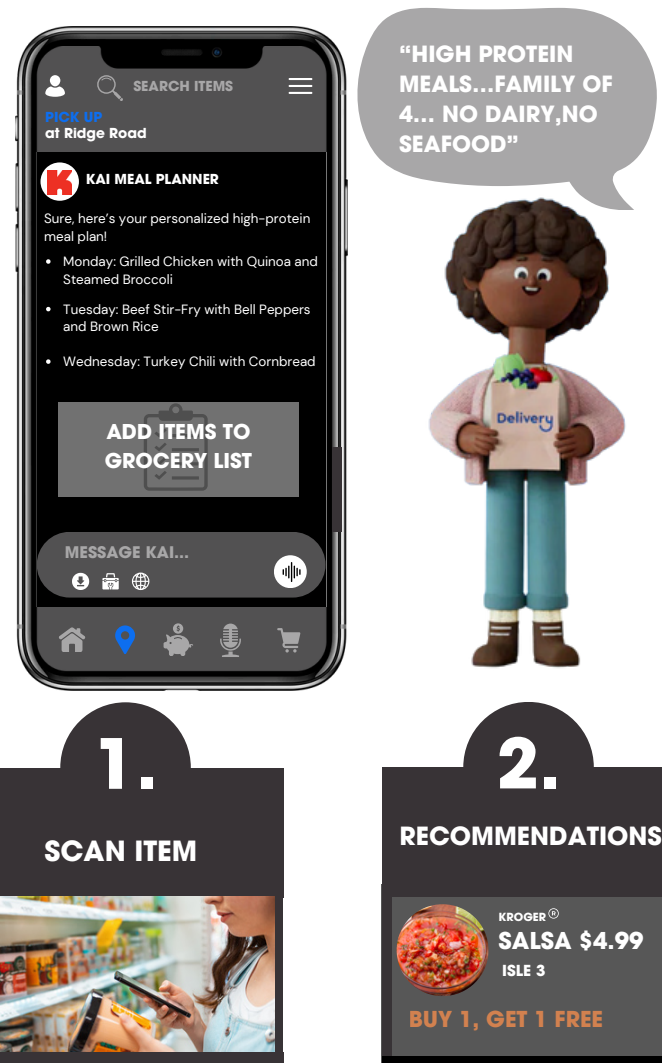


FIGURE 5.5 MEAL PLANNER



FIGURE 5.6 LEFT-RIGHT ITEM OPTIMIZATION FEATURE

## PRIVACY AND ETHICS

The proposed solutions take into account the privacy and safety of all users. All data collected and stored is solely intended to enhance the customer experience and is kept secure within the database. There is no sharing or selling of this data to third parties. It is recommended that users take advantage of the **SHOP** features to enjoy the best possible shopping experience.



## GANNT GRAPH



- 1. PHASE 1: PLANNING AND VENDOR SELECTION**  
This phase focuses on defining the project scope, selecting contractors for hardware and specialized AI work, and ensuring the right resources are in place for successful development.
- 2. PHASE 2: TEAM SETUP & INITIAL DEVELOPMENT**  
In this phase, an in-house team will be assembled for app and AI development, while external contractors will handle hardware and IoT setup, laying the foundation for the integration.
- 3. PHASE 3: HARDWARE SETUP & SOFTWARE INTEGRATION**  
The hardware will be integrated with the app and backend systems, while testing will begin on core features to ensure smooth functionality across all platforms.
- 4. PHASE 4: BETA TESTING & USER FEEDBACK**  
A beta version of the app will be released to select stores, gathering valuable user feedback to refine the AI algorithms and enhance overall usability before the full launch.
- 5. PHASE 5: FULL TESTING, REFINING, AND LAUNCH**  
Final testing and optimization will take place, followed by the full rollout of the app, complete with all features and integrations, beginning with pilot stores.

## C. METRICS AND KEY PERFORMANCE INDICATORS TO MEASURE PLAN EFFECTIVENESS

To measure the effectiveness of our plan, we will track **sales generated** by participating stores, an increase in favorable **store reviews**, a **shrink** in **theft**, and the **adoption rate** of King Soopers' AI features.



### SALES

#### INCREASE STORE SALES 8%

We aim to boost King Soopers' sales by **8%** in a year, starting with the two Castle Rock locations. AI-driven features will recommend more products, encouraging additional purchases. With retailers seeing over 8% annual revenue growth from AI (Statista), and each King Soopers location averaging **\$52.5M** in annual sales, this could generate **\$9.2M** in additional sales (minus expenses), at the **two locations** paving the way for chain-wide success.



### SHRINK

#### SHRINK THEFT FROM 1.74% OF SALES TO 1%

With our strategic plan, based on research and data from the Supermarket News Blog, we aim to reduce King Soopers' average theft shrinkage from **1.74%** to **1%** of sales. With each store averaging **\$52.5M** annually, this reduction would yield a gain of **\$388,764** per store per year, resulting in a total revenue increase of **\$777,528** per year.



### YELP

#### AVERAGE A 3.5-STAR REVIEW ON YELP

With our strategic plan, we aim to raise the Yelp ratings for the two Castle Rock stores (**2.8 and 2.4 stars**). Customer feedback highlights various concerns, and by addressing these issues with tailored solutions, we strive to enhance the shopping experience and foster greater customer satisfaction, and aim to reach an average review of **3.5 stars** post implementation.



### ADOPTION RATE

#### 50% OF USERS UTILIZE AI TOOLS WITHIN THE FIRST YEAR

Our user adoption rate measures the percentage of King Soopers shoppers who actively use and benefit from the AI features introduced in our strategic plan. Our goal is to achieve a **50%** adoption rate, reflecting frequent use by customers. This metric is crucial in evaluating how effectively our solutions address customer needs and resolve pain points.

**EXPECTED** = **\$9,960,771.43**  
**GROSS PROFIT PER YEAR**

# VI. PROPOSED BUDGET

## A. COSTS ASSOCIATED WITH PROPOSED STRATEGIES

After thoroughly analyzing customer needs and strategically designing Operation **S.H.O.P.**, we have prepared a budget of **\$2.14M** focusing on implementing new technology, app redesign, and AI solutions at King Soopers' Castle Rock, Colorado, locations as pilot stores. Major costs include hardware setup, AI integration, and personnel, with **\$428,000** in annual recurring expenses for maintenance and upgrades. Key metrics will guide progress, and contingency funds will ensure the success of Operation **S.H.O.P.**. Following positive results, the technology will expand to all King Soopers and Kroger locations nationwide.

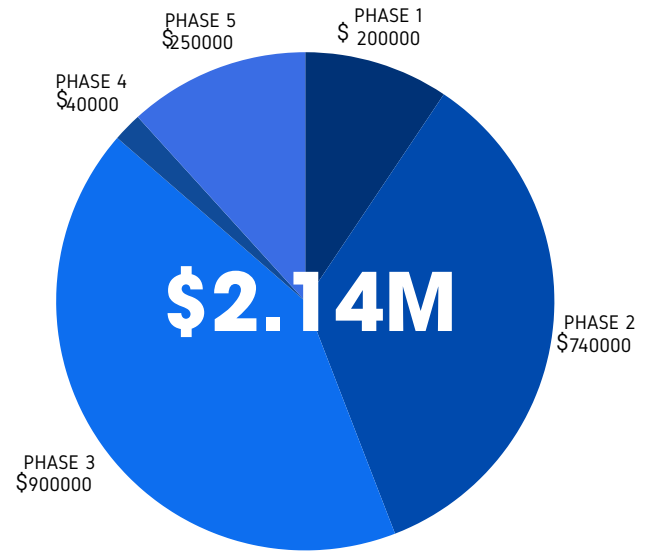


FIGURE 6.1 FIRST YEAR PROJECTED COSTS

## BUDGET TABLE

STAGE	PROJECT COST TYPE	LIST PRICE	QUANTITY	SUBTOTAL
Phase 1: Planning	Project Manager Salary	\$150,000 annually	1	\$150,000
	Contractor Fees (Vendor Selection)	\$50,000.00	1	\$50,000
Phase 2: Team Setup	AI/ML Engineer	\$180,000.00	3	\$540,000
	UI/UX Designer	\$100,000.00	2	\$200,000
Phase 3: Hardware Implementation	Hardware Implementation	\$500,000.00	1	\$500,000
	AI/ML Intergration Fees	\$400,000.00	1	\$400,000
Phase 4: Bata Testing	Operational Expenses (Testing)	\$50,000 annually	1	\$50,000
Phase 5: Full Rollout	Marketing & Optimization	\$100,000.00	1	\$100,000
Opertaional expenses	Office Space, Software Licenses	\$150,000.00	1	\$150,000
Total	-	-	-	\$2,140,000

CATEGORY	RATIONALE
Project Manager Salary	To ensure consistent oversight and alignment across all phases of the project.
AI/ML Engineer Salaries	To develop and implement AI features essential for app functionality and customer engagement.
UI/UX Designer Salarys	To create a user-friendly and appealing interface for the app.
Contractor Fees	To expedite setup for hardware and specialized integrations.
Hardware Implementation	To deploy Scan-and-Go and RFID technology across pilot stores.
AI Intergration Fees	To build a robust backend system for AI-driven customer interactions.
Operational Expenses	To cover tools, office needs, and ongoing software licensing costs.

## RETURN ON INVESTMENT

Successfully executing the implementation of our S.H.O.P. initiative has is projected to generate a gross profit of **\$9.96M**. With a total expenditure of **\$2.57M**—including costs for app technology setup, redesign, and recurring payments for data storage—King Soopers will achieve a net profit of **\$7.39M**. This results in an impressive ROI of **387.88%**, underscoring the financial viability and long-term value of the initiative.

## PROOF OF AFFORDABILITY

From the 2023 fiscal year 10-K report, we see the feasibility of our budget necessary to implement the AI advancements into Kroger. The Company's advertising costs are recognized in the periods the related expenses are incurred and are included in the "Merchandise costs" line item of the Consolidated Statements of Operations. The Company's advertising costs totaled **\$1.09B** in 2023. By allocating 1% of this budget, we will utilize **\$10.08M** towards the budget for AI implementation into Kroger, luckily we only need **20%** of that. Ultimately providing a project which we have the resources for, which will allow Kroger to boost revenue, and increase market share in a competitive market.

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