Improving the ShopperKit Order Fulfillment Process for Giant Eagle & Other Participating Businesses

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Prepared for

Jack Record – Chief Executive Officer of ShopperKit

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Prepared By

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Memorandum of Transmittal

TO: Jack Record, Kappu Jaykumar

FROM: Gustav Spiker

DATE: August 13th, 2025

Subject: Potential Ways to Improve the ShopperKit Order Fulfillment Process

Dear Mr. Record and Mrs. Jaykumar,

This report details possible solutions to current issues regarding efficiency that I have discovered while utilizing ShopperKit's order fulfillment system while working at a Giant Eagle in the Curbside Pickup and Delivery department since November of 2022. While it works great, there are some potential problems I can see arising from it if we were to have a large influx of customers at any of our locations.

Essentially, I believe there are two core issues with ShopperKit's current order fulfillment system. The current way for a Curbside team member to communicate with a customer while completing an order is by texting them via SMS, which is an outdated messaging protocol, and many cellular service providers now offer RCS, which is significantly better. There is also the possibility of replacing the protocol with an in-house chat prompt within the Giant Eagle app that could be connected to ShopperKit's Command Center application. Furthermore, team members follow a pre-determined "pick-path" around the store when completing an order which can add on unnecessary time. This could be fixed with a dynamic pick-path that is determined by what the customers order.

The purpose of this analytical report is to provide potential solutions to efficiency issues that I have seen during my time at Giant Eagle while utilizing ShopperKit's systems. While this report is mainly geared towards Mr. Record and his team over at ShopperKit, I have experienced these issues while at Giant Eagle so that is why I have included Mrs. Jaykumar as well.

Sincerely,

Gustav Spiker

Table of Contents & List of Illustrations

Table of Contents

List of Illustrations

Executive Summary

The purpose of this report is to analyze inefficiency within the ShopperKit order fulfillment system and provide improvement to certain areas to resolve it.

The Main Problem: Inefficiency in the Workflow

While ShopperKit is efficient for the vast majority of the time, there are times where it is unusually busy in the Curbside Department and, in these cases, some of the current protocols used are simply just not sufficient for a good workflow.

Solution(s)

a. Analyze specific problems with ShopperKit and implement solutions for each of them.

Improvement Area 1: Customer Communication

Curbside team members fulfill orders they use SMS messaging to contact customers. SMS is an outdated protocol that is not only unsecure, but is also slow and cannot transmit high-quality photos which are pivotal for offering substitute items to customers.

Solution(s)

a. Implement RCS text messaging, which is a far newer messaging protocol that can send high-quality images.
b. Create an in-house chat system within the Giant Eagle app where team members can communicate with customers.

Improvement Area 2: The Pick-Path

There is a pre-determined “pick-path” that Curbside team members follow around the store when fulfilling an order at each location. While it is designed to increase efficiency, it often causes team members to take extra-long routes that are not necessary.

Solution(s)

a. Implement a dynamic pick-path that is created differently for each shop based on where the items are.

Introduction

Inefficiency is the main problem with ShopperKit's current implementations of certain protocols and applications. Customer communication and the pick-path are the biggest areas for improvement. Orders being completed in a timely matter is by far the most important task within Giant Eagle's Curbside department.

Currently, when Curbside team members are completing orders, they use SMS messaging on the company's Android devices. SMS is an outdated protocol and should be replaced with either RCS messaging which is much faster and can send high-quality images or with an in-house chat system that would be available on the Giant Eagle app and is tethered to ShopperKit.

When Curbside team members are shopping orders, they follow a pre-determined "pick-path" throughout the store which leads them aisle-to-aisle. While this may sound good on paper, in-practice it is very inefficient as it often leads to team members taking extra time to move around the store. The solution to this would be for a dynamic pick-path to be implemented where the path would change depending on what items the customer ordered.

The core problem here is truly just inefficiency. I think that with these proposed solutions, ShopperKit can be much better and Giant Eagle customers can be far more satisfied with their shopping experiences.

Improvement Area 1: Customer Communication

The current text messaging system used by Giant Eagle Curbside team members when shopping an order while utilizing ShopperKit is SMS (Short Messaging Service). SMS was first rolled out in the 1990s and has been used for decades, but it is unsecure, outdated, inefficient, and slow. A report from a tech website known as MakeUseOf details multiple reasons for why SMS should no longer be used (1, MUO). It lacks end-to-end encryption which means any cybercriminal could easily intercept messages. The signaling protocols used (SS7) are from the 1970s and can be easily bypassed. While customers and team members may not be sending extremely sensitive data back and forth, it should still be best practice to have secure communication. Another tech website known as TechTarget published an article that stated that SMS has a 160-character limit, has no multimedia functionality aside from low-quality images, and has no ability to confirm messages sent, among other issues (2, TechTarget).

Over the past few weeks, I surveyed twelve fellow team members at the Waterfront Giant Eagle's Curbside Department to gather their views on ShopperKit's current customer communication system. The prompt displayed to the team members was, "Should there be improvements made to how we contact customers?" in the context of fulfilling orders. A majority of 58.3% (7) said "Yes," 33.3% (4) said "No," and 8.3% (1) said "Not Sure." This shows that Curbside team members believe that there needs to be changes made to how we communicate with customers when fulfilling orders.

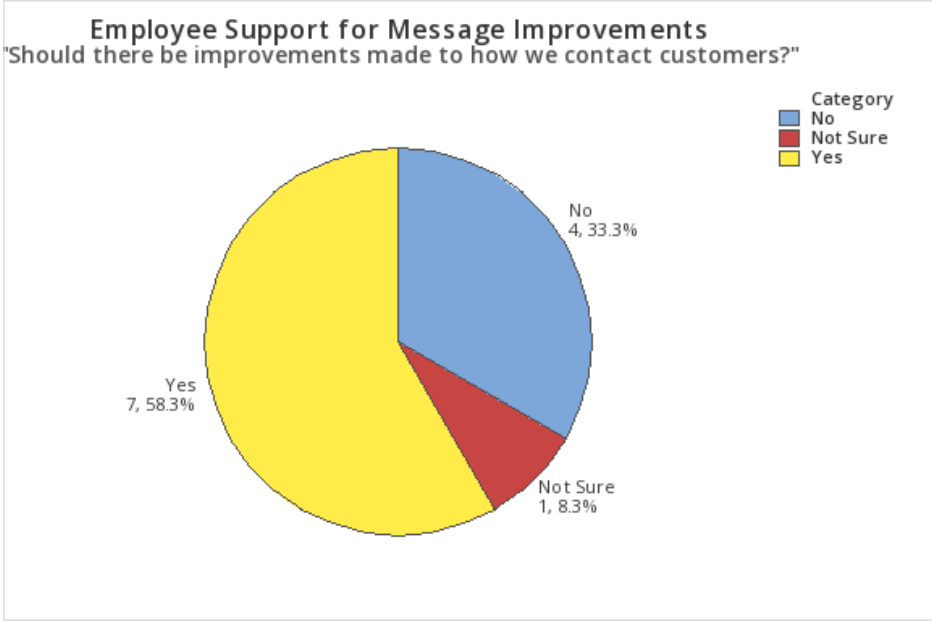

Figure 1 – "Employee Support for Message Improvements" - Minitab Statistical Software

Solution 1: Implement RCS Messaging

RCS (Rich Communication Services) is a newer text messaging protocol that is very efficient. TechTarget mentions in their article that it has no character limit, can send multiple forms of media, can show when the other user is typing, and has delivery receipts. Regarding security, it uses both TLS (Transport Layer Security) and SRTP (Secure Real-time Transport Protocol) which are modern encryption standards (2, TechTarget). The reasons for why RCS would be a great upgrade for ShopperKit is because it would allow team members to know if their messages have been successfully sent, it would allow them to send higher quality photos for item substitutions and possibly even videos or audio messages, and it would allow them to see when the customer is responding to them which could stop mistakenly substituting items that the customer did not want.

Rollout Plan of Solution 1

- Guarantee RCS Functionality on current Android Devices
- Plan for Change with Software Development Team
- Get Approval for Change
- Begin Change
- Notify Affected Departments before Final Change
- Change Completed

Solution 2: Implement in-house Chat System

Another way to improve customer communication would be to create an in-house chat system within the Giant Eagle app that would be tethered to ShopperKit. Here, Curbside team members and customers would be able to communicate within the Giant Eagle app. Instead of regular photos being sent for item substitutions, there could be a prompt shown with “Accept or Deny” options which would make things much faster and more efficient instead of just texting.

Rollout Plan of Solution 2

- Plan for Change with Software Development Team at ShopperKit and Giant Eagle
- Get Approval for Change
- Begin Change
- Notify Affected Departments before Final Change
- Change Completed

Figure 2 – “Prototype In-House Chat Example” - PicsArt Software

Improvement Area 2: The Pick-Path

When Curbside team members are shopping orders, they follow a pre-determined "pick-path." As an example, the path at the Waterfront Giant Eagle goes from the frozen aisles (back), to the regular ambient aisles, to the produce section (front), to the bakery, to the meat section, to the dairy aisle, and then finally to the health and beauty section (back). As you can see, the shopper essentially goes across the entire store twice. This causes massive problems with efficiency. For example, the pick-path would lead to a team member making a round-trip around the store twice if a customer ordered a frozen meal, soup, lettuce, and milk as the pick-path does not change even if there are only four items that could be quickly collected.

During the survey I completed over the past few weeks with the twelve fellow Curbside team members, I also collected their views on the efficiency of the pick-path. The prompt presented to them was, "Is the current pre-determined pick-path efficient?". A majority of 66.7% (8) said "No," 16.7% (2) said "Yes," and another 16.7% (2) said "Not Sure." This shows that by a 2-1 margin, Curbside team members do not believe that the pick-path is efficient.

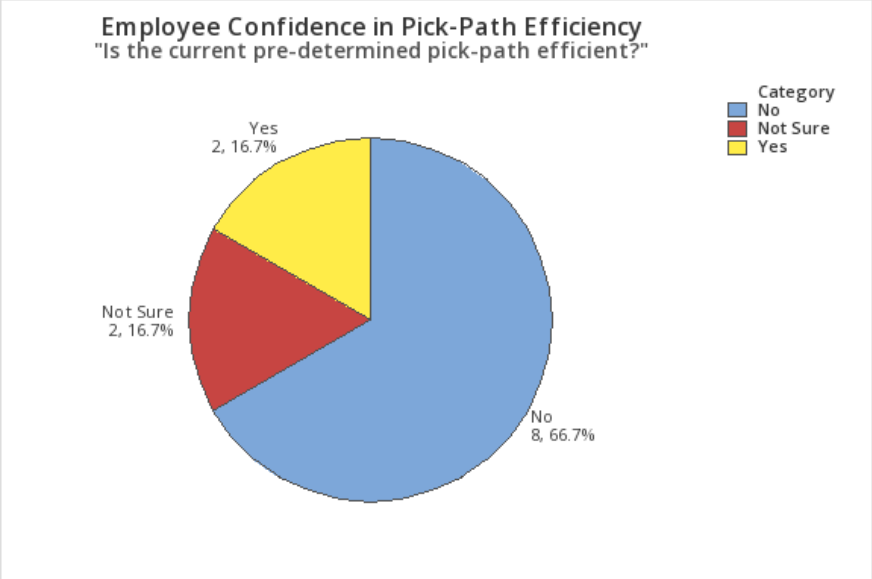

Figure 3 – "Employee Confidence in Pick-Path Efficiency" - Minitab Statistical Software

Solution: Implement a Dynamic Pick-Path

The best solution to this problem would be to develop a dynamic pick-path that changes the path that the Curbside team member would follow throughout the store depending on what items the customer orders. Building on the previous example with the four-item order, the team member would first get the lettuce from the produce section, then the soup from one of the ambient aisles, then the frozen meal from the frozen aisles, and then finally the milk from the dairy aisle. This would stop them from making an extra round trip across the store.

Rollout Plan of the Solution

- Plan for Change with Software Development Team at ShopperKit
- Get Approval for Change
- Begin Change
- Notify Affected Departments before Final Change
- Change Completed

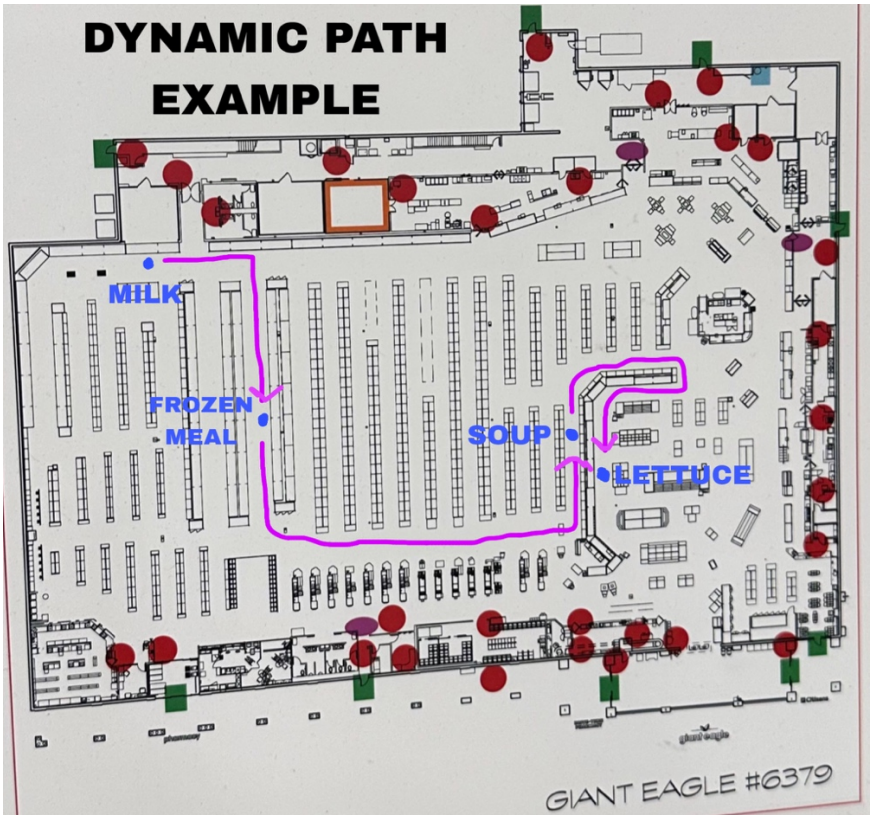

Figure 4 – "Prototype Dynamic Pick-Path Example" – PicsArt Software

Conclusion

ShopperKit has developed a fantastic product, and these proposed solutions will no doubt increase the efficiency of their order fulfillment system. Giant Eagle and other businesses would be more than satisfied with these changes as well. Implementing a newer messaging protocol, whether it is RCS text messaging or an in-house chat system, will decrease downtime and increase productivity, efficiency, and security, as well has deliver a better experience for the customer. The dynamic pick-path will further increase productivity and efficiency as team members will be able to complete orders much faster.

I sincerely hope you take my proposed solutions into consideration. ShopperKit and Giant Eagle have worked together for one simple goal, to help customers get their groceries faster, and I believe this report details ways to make that goal more than achievable.

Best Regards,

Gustav Spiker

References and Appendix

References

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2. Froehlich, Andrew. “RCS vs. SMS: What’s the Difference?: TechTarget.” *TechTarget - Search Unified Communications*, TechTarget, 6 Dec. 2024, www.techtarget.com/searchunifiedcommunications/answer/What-is-the-difference-between-RCS-and-SMS.

Appendix

1. ShopperKit Logo: https://www.linkedin.com/company/shopperkit-inc-

2. Giant Eagle Website: https://www.gianteagle.com/

3. PicsArt Software: https://picsart.com/

4. Minitab Statistical Software: https://www.minitab.com/en-us/