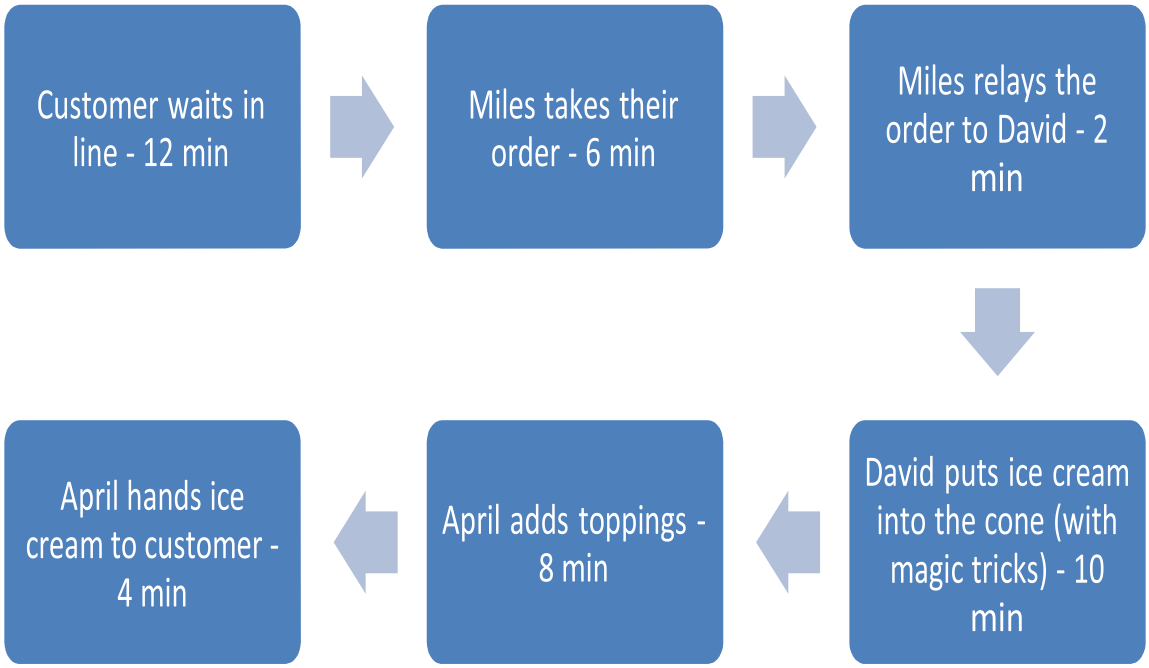
i. Introduction of the Situation:

Eric Stillwell wants to take over his grandfather Miles Stillwell's ice cream stand, which has been in operation for the past 20 years. Miles opened the stand as a small summer business and it has been successful due to its customer service and local community touch. However, the two employees of the stand, David and April, are approaching their 80s and are considering retiring. Eric wants to keep the business going and is hoping to purchase it from his grandfather.

ii. Analysis on a Current Service Process:

a. Linear Map:



b. Calculation of Time and Costs:

i. Total Value Added Time: 22 minutes
ii. Total Non-Value Added Time: 20 minutes
iii. Total Time: 42 minutes
iv. Total Added Costs: $0 (as Miles did not receive any pay)
v. Total Non-Value Added Cost: $13.33 (David and April's hourly wage divided by 60 minutes per hour multiplied by 20 minutes of non-value added time per customer)
vi. Total Cost: $13.33

c. Written Summary: The current service process takes 42 minutes to serve one customer, with only 22 minutes of value-added time. The non-value added time is 20 minutes, which consists of waiting in line and adding toppings. The added cost is $0 as Miles does not receive any pay, while the non-value added cost is $13.33 due to David and April's hourly wage during non-valueadded time. This process is time-consuming and may lead to customer dissatisfaction due to long

waiting times. The non-value added time is concerning, as it is costly and may lead to reduced profitability in the long term.

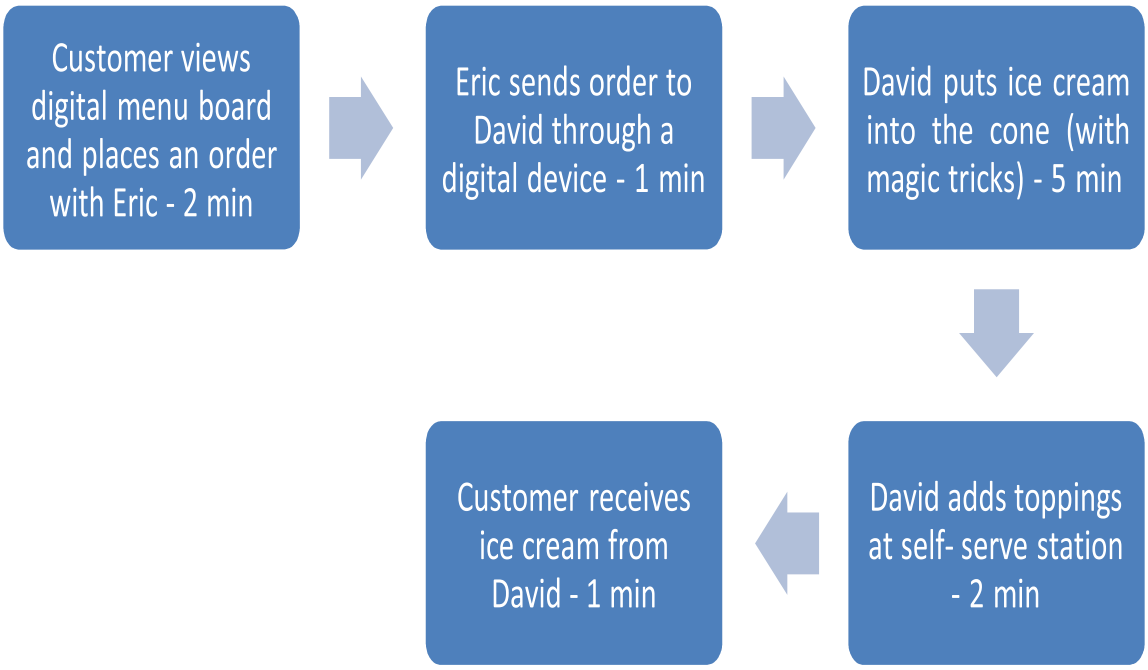
iii. Proposed Changes:

- Implement an online ordering system so that customers can pre-order and avoid waiting in line.

- Train Eric to take orders and use a tablet or digital device to send orders to David.
- Eliminate the need for April to add toppings by providing a self-serve topping station for customers.
- Implement an online ordering system for customers to pre-order and skip the line.

iv. Analysis on Proposed New Service Process:

a. Linear Map:



Please answer the following questions. Each question has a value of 5 points for a total of 25 points.

Question #1 Please Calculate the revised Time and Costs:

i. Total Value Added
ii. Total Non-Value Added
iii. Total Time:
iv. Total Added Costs: $0 (as Miles does not receive any pay)
v. Total Non-Value Added Cost
vi. Total Cost: $3.33
vii. Percent Reduction in Time:
viii. Percent Reduction in Cost:

Question #2 Please provide a written Summary of the revised Process : (1 Paragraph)

The new service process would involve the following steps:

1. A reduction of Customers wait time in line
2. A digital menu board displays available ice cream options and customers place their order
3. The order is sent to the kitchen where a single worker scoops the ice cream and adds toppings
4. The worker hands the ice cream to the customer

Question #3 Based on the proposed changes, please make the following Calculations,

Total value-added time:
Total non-value-added time: 5 minutes
Total time: 9 minutes (reduced from 40 minutes)
Total added costs
Total non-value-added cost
Total cost
Percent reduction in time
Percent reduction in cost:

Question #4 Capacity - Please calculate the following:

a. The original capacity prior to the proposed changes was approximately (Insert # Here) orders per hour.
b. The capacity after the proposed changes is approximately (Insert # Here) orders per hour.
c. The percentage increase resulting from the changes is (Insert % Here)

Briefly describe how the proposed changes will affect capacity

Question #5 Defend your recommendations (1 Paragraph)