Process Reengineering Using Data Analytics – Starbucks Coffee Serving Setup

Course: Business Process Reengineering
Name: _____
Section: _____

1. Introduction

This report analyzes and reengineers Starbucks' coffee-serving process with the goal of minimizing operational costs and human resource requirements. The proposed TO-BE process leverages a digital app to streamline ordering, payment, and inventory updates, thus reducing the dependency on cashiers and simplifying workflow for baristas.

2. AS-IS Process

The existing Starbucks process primarily depends on in-store human interaction. Customers place orders at the counter with the cashier, who then transmits the order to the barista. The process involves multiple human touchpoints, increasing service time and HR costs.

Actor / Time(mm:ss)	0:00	0:20	1:00	2:00	3:00	4:00	5:00	6:00
Customer	Enters store	Waits in queue	Places order at cashier	Pays cashier	Receives receipt	Waits for order	Picks up drink	Leaves store
Cashier	—	Takes order	Enters order into POS	Processes payment	Prints receipt	Sends order to barista	—	—
Barista	—	—	Receives order details	Prepares beverage	Completes beverage	Places order on pickup counter	—	—
Inventory System	—	—	Logs ingredient use	Updates manually at day end	—	—	—	—

3. TO-BE Process

The reengineered TO-BE process introduces a mobile application and automated backend integration. Customers can browse, customize, and pay directly through the app. Orders are sent digitally to baristas and the inventory system in real time. This eliminates the need for cashiers and reduces barista workload by providing pre-validated digital instructions.

Actor / Time(mm:ss)	0:00	0:30	2:00	2:30	3:00	4:00	4:10	6:20	6:30	6:35

Customer	Opens Starbucks App	Browses menu, selects drink	Customizes order	Reviews order	Pays in-app	Receives confirmation	Heads to store / waits	—	Heads to pickup counter	Picks up order
Digital App	Loads personalized menu	Displays real-time menu	Processes customization	Calculates total	Handles payment	Sends order to barista & inventory	Displays pickup time	Shows order ready	—	—
Barista	—	—	—	—	—	Receives order details	Starts preparing	Completes beverage	Places order at counter	—
Inventory System	Syncs stock	Logs ingredient use	—	—	Deducts inventory	Updates logs	Reconciles totals	Auto-adjusts reorder levels	—	—

4. Analysis and Technology Impact

The digital app integration significantly reduces operational costs by minimizing the need for cashiers. Baristas focus only on beverage preparation while the app automates order taking, payment processing, and communication with inventory systems. Additionally, this process reduces customer wait times, improves accuracy, and enables better data collection for analytics-driven decisions.

5. Recommendations

To further optimize cost and efficiency:
- Introduce semi-automated drink preparation stations to assist baristas.
- Integrate predictive analytics to manage inventory more effectively.
- Utilize order kiosks in addition to the mobile app for customers without smartphones.
- Enable digital loyalty programs to improve customer retention.