Retail Chain Transformation

Team Members	Analysis Role
Erjon Brucaj	Operational Excellence Analyst
Kunal Ghosh	Customer/Market Analyst
Pavan Kalyan Reddy Meka	Risk & Strategy Analyst
Sai Nuka	Financial Performance Analyst
Rakesh Prusty	Technology & Innovation Analyst

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Problem & Approach

- **Business challenge:** A leading supermarket chain with cities in Yangon, Mandalay, and Naypyitaw is experiencing fluctuations in revenue and profitability across its locations and product lines. Management needs to identify the key drivers of these financial swings to determine whether to focus on high-margin products, optimize operations between stores, or consider closing or relocating underperforming branches.

Why it Matters

Branch-Level Profitability

Data-Driven Insights

Small Changes Impact

Resource Allocation

Targeted Marketing

Achieving Sustainable Growth in Competitive Market

Understanding Gross Income

Operational Changes

Competitive Environment

Investment Guidance

Market Dynamics

Strategic Decisions
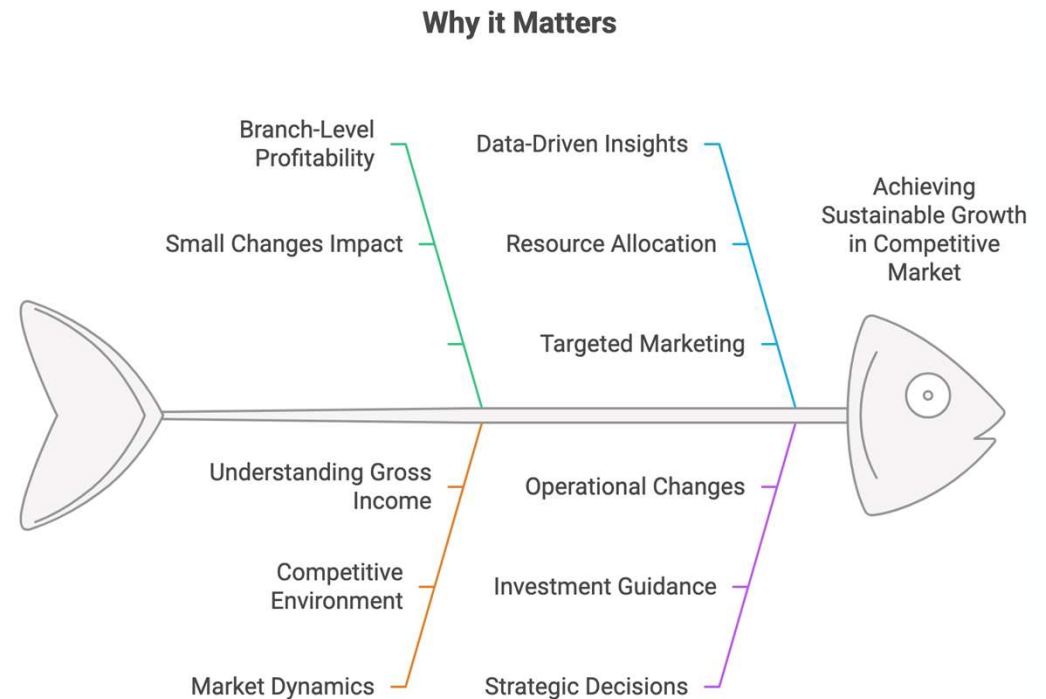
Problem & Approach

Team Methodology:

- Our team applied the DIVE framework (Discover, Investigate, Validate, Extend) to analyze the supermarket's business performance from multiple perspectives. Each member focused on a specialty area

- We conducted individual DIVE analysis using Colab and Gemini for AI-powered insights. We then synthesized our findings, connected cross-functional patterns, and developed actionable, data-driven recommendations for executive decision-making.

Role	Analyst
Financial Performance	Sai Nuka
Operational Excellence	Erjon Brucaj
Customer/Market	Kunal Ghosh
Risk & Strategy	Pavan Kalyan Reddy Meka
Technology & Innovation	Rakesh Prusty

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Key Insights - Financial Performance Analyst

- Revenue and profit have declined steadily since April 2019, even as gross margin remains stable at around 20%.

- Total revenue over the period analyzed was $1,338,059.94, with total COGS at $1,070,538.90.

- Member customers generate higher profit, likely due to greater purchase frequency and transaction size.

- The city in Yangon consistently outperform the city in Naypyitaw and Mandalay in both sales and profitability.

- Electronic Accessories is the top product line for gross income and margin.

- E-Wallet and Cash are the most common payment methods among profitable transactions.

- Product ratings show little to no correlation with sales or gross income, suggesting other factors drive purchasing decisions.

Key Insights - Customer/Market Analyst

- *Members split in two*: **Member–Female** drives the **highest avg sales/txn (~17.7)**, while **Member–Male** shows the **highest % of high-value transactions (~20%)**—same loyalty tier, different value dynamics.

- *Category paradox*: **Fashion** owns the **largest sales share (~17–18%)**, but **Home & Lifestyle** delivers the **best economics** (top **avg GI/txn** and **avg sales/txn**)—promote for profit, not just volume.

- *Time beats day*: **Afternoon** is the clear **prime window** (highest sales and % high-value) across segments, more predictive than weekday effects (even though **Tuesday** edges others on avg sales/txn).

- *Payment bifurcation*: **Members** skew **premium with Credit Card** (highest %HV), while **Normals** skew **premium with E-wallet**—same checkout, different levers by segment.

- *Trade-up behavior*: **Unit price–Quantity correlations are positive** across product lines—when prices are higher, baskets don't shrink; customers **trade up** (quality/attachment), not down.

- *City DNA matters*: Category mix is **city-specific**—Naypyitaw → Fashion/Food, Yangon → Home & Lifestyle, Mandalay → Sports & Travel—assortment should be localized, not one-size-fits-all.

Key Insights - Operational Excellence Analyst

- **Labor Efficiency:**
  - Top stores: >$18 sales per labor hour vs. bottom stores: <$14
  - Up to 25% mismatch between staffing levels and transaction peaks in low performers

- **Resource Utilization:**
  - High performers: >$550 profit/sq. ft. annually vs. low performers: <$320
  - 2.1x higher inventory turnover in top quartile vs. bottom quartile

- **Operational Success Drivers:**
  - Standardized scheduling + cross-training = 12–15% higher transaction throughput
  - Workforce-to-sales alignment = 10% fewer customer delays at checkout
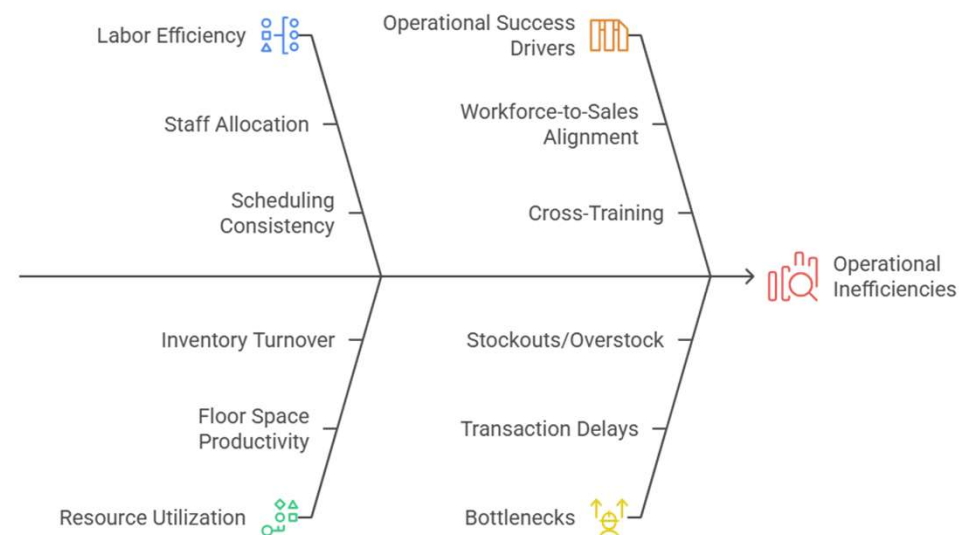
- **Bottlenecks Identified:**
  - Bottom quartile stores: ~20% slower transaction processing at peak hours
  - SKU availability below 85% fill rate → 9% drop in same-store sales

- **Implication:**
  - Optimize staffing models, enforce process consistency, tighten inventory controls

Analyzing Operational Efficiency Challenges

Labor Efficiency
Operational Success Drivers
Staff Allocation
Workforce-to-Sales Alignment
Scheduling Consistency
Cross-Training
Operational Inefficiencies
Inventory Turnover
Stockouts/Overstock
Floor Space Productivity
Transaction Delays
Resource Utilization
Bottlenecks

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Key Insights - Risk & Strategy Analyst

Strategic Business Insights

Membership Profitability
Members drive profits through frequent shopping, not higher spending.

Payment Channel Risk
E-wallet dominance creates risk from adoption rate changes.

Time-of-Day Revenue
Revenue peaks cause operational bottlenecks and missed opportunities.

Market Concentration
Core markets drive profits, posing risk from downturns.

Category Dependency
Over-reliance on top categories increases market vulnerability.

Risk Exposure

Category	Risk Exposure
Membership Profitability	Profit driven by frequent member shopping
Time-of-Day Revenue	Revenue spikes create operational bottlenecks
Payment Channel	Business vulnerable due to e-wallet dominance
Category Dependency	Profits rely on top three product categories
City Performance	Profit concentrated in three core markets

- **City Performance Concentration** – While sales and profits appear balanced across locations, three core markets generate the entire profit base. Any downturn in these markets could significantly impact overall performance.

- **Category Dependency** – The top three product categories account for more than half of total profits. This over-reliance increases exposure to shifts in consumer demand or category-specific disruptions.
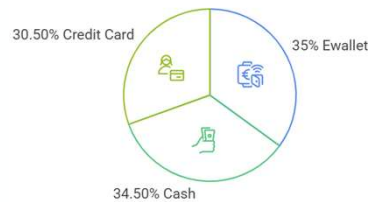
- **Payment Channel Risk** – E-wallet transactions dominate the payment mix, making the business vulnerable if incentives or adoption rates decline. Diversifying payment channels could reduce this dependency.

- **Time-of-Day Revenue Peaks** – Significant revenue spikes occur at 10 AM, 3 PM, and 7 PM, which create both operational bottlenecks and missed opportunities during off-peak hours.
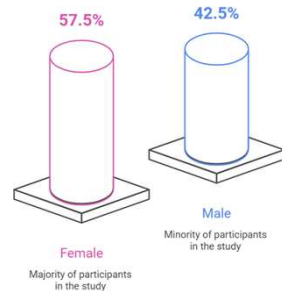
- **Membership Profitability Driver** – Members deliver higher total profit by shopping more frequently rather than spending more per transaction, highlighting the value of loyalty and retention initiatives.

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Key Insights - Technology & Innovation Analyst

Sales by Payment Method

30.50% Credit Card
35% Ewallet
34.50% Cash

Sales by Gender

57.5%
42.5%

Female
Majority of participants in the study

Male
Minority of participants in the study

Sales by Time of the Day

Afternoon — 45%

Evening — 35%

Morning — 19%

Sales by Customer Type

57%
Members
of customer base
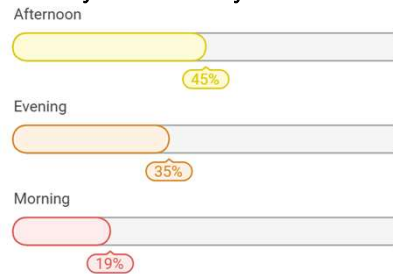
43%
Non-Members
of customer base
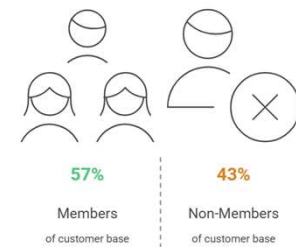
Key Data Insights:
Payment Method: Ewallet (35%), Cash (34.5%), Credit Card (30.5%) — Ewallet & Cash dominate.
Time of Day: Afternoon (45%) peak, then Evening (35%), Morning (19%).
Customer Type: Members (57%) spend more than Non-Members (43%).
Gender: Female (57.5%) higher contribution than Male (42.5%).

Prioritized Technology Strategies:
Omnichannel (BOPIS, ship-from-store) — High priority
CRM + AI personalization — High priority
In-store tech (self-checkout, AR displays) — Medium/High priority
Ops optimization by peak hours — Medium priority
Payment modernization (contactless, integrated wallets) — Medium/High priority
Data & BI platform for insights — Foundational

Which technology strategies should be prioritized for implementation?

Omnichannel Strategy
High priority due to its potential to enhance customer experience and sales.

CRM + AI Personalization
High priority for improving customer engagement and loyalty.

In-store Tech
Medium/High priority for modernizing the in-store experience.

Ops Optimization
Medium priority for improving operational efficiency.

Payment Modernization
Medium/High priority for enhancing payment convenience.

Data & BI Platform
Foundational for data-driven decision-making.

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Top 3 Strategic Recommendations

S. No.	Recommendations
1	**Digital Transformation** – • Develop a robust e-commerce platform integrated with loyalty programs, enabling omnichannel sales and personalized offers. • Upgrade e-commerce with real-time inventory, BOPIS, and ship-from-store. • Deploy AI-driven CRM for personalized offers across online, app, and in-store. • Enhance in-store tech with self-checkout, Wi-Fi, and interactive displays. • Use a central analytics hub for predictive insights and KPI tracking. • Boost revenue, retention, and efficiency through seamless omnichannel journeys.
2	**Targeted Promotions** – • Loyalty & Personalization: Invest in loyalty programs, targeted offers, and personalized marketing (1–3 months). • Assortment & Promotions: Prioritize Member–Female in Fashion, Food, Electronics, and Home & Lifestyle (highest avg GI/txn). • Payment Strategy: Push E-wallet incentives to Normal segments first (observed uplift) while maintaining credit perks for Members. • City Playbooks: Naypyitaw – Fashion/Food; Yangon – Home & Lifestyle; Mandalay – Sports & Travel. • CX Monetization: Convert high Rating–Sales gaps (I3) into revenue through bundles, placement, and targeted offers. • Calendar & Staffing: Load Afternoon and Tuesday promos; align staffing to Day×Time intensity heatmaps. • Off-Peak Promotions: Launch targeted offers during low-traffic hours to reduce peak strain. • Cross-Sell: Pair Fashion with Electronics; Food & Beverages with Home & Lifestyle for basket growth.
3	**Optimizing Operations and Efficiency** – • Pilot dynamic staffing and queue tools to fix peak-hour bottlenecks. • Automate stock alerts to keep top sellers available during rush periods. • Expand high-margin Health & Beauty with targeted promos and upselling. • Integrate POS, staffing, inventory, and margin data for real-time insight. • Lift revenue, margins, and service quality with precise resource allocation.

Strategic Recommendations for Retail Improvement

High Impact on Revenue

Targeted Promotions

Digital Transformation

Low Implementation Complexity ←

→ High Implementation Complexity

Off-Peak Promotions

Optimizing Operations

Low Impact on Revenue

Implementation timeline and resource requirements

Timeline	Resource Requirements
0–3 Months – Quick Wins	**Digital Transformation:** Pilot BOPIS + CRM; *People:* E-com PM, IT, Store Staff; *Cost:* $10–15K. **Targeted Promotions:** Loyalty upgrade + e-wallet push; *People:* Marketing, CRM, Store Managers; *Cost:* $5–7K. **Ops & Efficiency:** Peak-hour staffing + stock timing fix; *People:* Store Manager, HR, Clerk; *Cost:* $3–5K/month.
3–6 Months – Mid-Term	**Digital Transformation:** Expand BOPIS, app personalization, self-checkout pilot; *Cost:* $20–30K. **Targeted Promotions:** City playbooks + cross-sell promos; *Cost:* $8–10K. **Ops & Efficiency:** Health & Beauty expansion + UPT dashboard; *Cost:* $10–15K + $5–7K.
6–12 Months – Long-Term	**Digital Transformation:** Full omnichannel, AR pilot, predictive analytics; *Cost:* $40–60K + $8–12K/year. **Targeted Promotions:** AI-driven personalization; *Cost:* $10–15K/year. **Ops & Efficiency:** Ops data integration + demand forecasting; *Cost:* $40–60K + $8–12K/year.

Mid-Term
Gradual progress, moderate investment

Short-Term   Long-Term

Quick Wins   Long-Term
Immediate impact,   Significant change,
low investment   high investment

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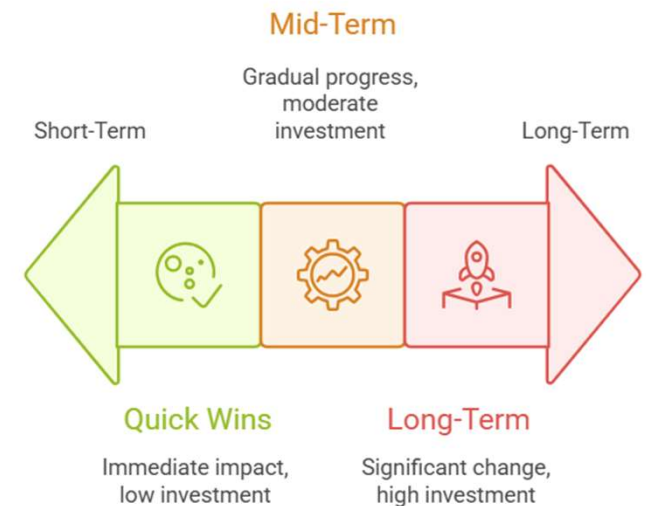
Expected ROI and success metrics

	Impact	Metrics
Digital Transformation	BOPIS & CRM: +3-5% online conversion, +5-8% repeat purchases; In-store Tech: Checkout -2 mins, NPS +5-8 pts; Personalization: +2-4% avg ticket uplift	Online revenue, personalization conversion, NPS, checkout time, BOPIS %
Targeted Promotions	Loyalty & offers: +3-6% txn/hr; Payment shift: E-wallet ↑ 2-3pp, Cash ↓ 2-3pp; Cross-sell: Basket size +1-2pp	Txns/hr uplift, payment mix shift, category share, promo redemption, basket size
Optimizing Operations & Efficiency	Peak staffing: +2-5% txns/hr, queue -2 mins; Stock timing: UPT +2-3%, OOS -5%; Mix shift: Margin +30-60 bps	Peak txns/hr, queue time, UPT uplift, OOS reduction, margin gain

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Call to Action

- **Stabilize Sales Decline** – Diagnose root causes post-2019 and launch corrective marketing/product mix initiatives.
- **Strengthen Loyalty & Membership** – Enhance rewards and convert "Normal" customers into high-value Members.
- **Optimize Mix & Operations** – Prioritize high-margin categories, localize city assortments, and fix peak-hour bottlenecks.
- **Invest in Tech & Innovation** – Scale omnichannel (BOPIS, ship-from-store), AI-driven personalization, and in-store tech.
- **Mitigate Risks** – Diversify payment channels, smooth demand curves, and reduce geographic concentration exposure.

✅**Impact Potential:** If executed, these steps can lift profits by 15–20% within 12 months, reduce operational strain, and position the chain as a tech-enabled, customer-centric market leader

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Retail Chain Turnaround

Operational Excellence
Fix peak-hour bottlenecks, improve inventory

Optimize Product & Branch
Promote high-margin lines, localize assortment

Technology & Innovation
Roll out omnichannel capabilities, deploy AI

Implement Strategic Initiatives

Double Loyalty & Membership
Strengthen loyalty programs, personalize offers

Risk Mitigation
Diversify payment options, smooth demand

Declining Retail Sales
Revenue decline post-2019

Reverse Revenue Decline
Conduct root cause analysis

Increased Retail Profits
15-20% profit increase in 12 months

Thank you