Project Scoping Document

For Walmart Inc.

Date: 10/3/2025

From: Vraj Deriya, Project Manager

To: Mr. Yoo-Seong Song, Representative of Walmart Inc.

1. Background

Walmart has accelerated its transformation with strong growth in e-commerce, advertising, and apparel. In fiscal year 2024, the company generated 648 billion dollars in revenue, with Walmart Connect surpassing 3 billion in ad sales. E-commerce penetration reached 15.9 percent of U.S. retail sales in 2024, nearly three times pre-pandemic levels. Beyond groceries, Walmart has expanded into apparel, generating over 10 billion dollars online to become the nation's second-largest online apparel retailer after Amazon, while also extending into B2B commerce alongside Amazon and Alibaba.

Yet these advances come with rising pressures. Retail theft and shrinkage caused 112 billion dollars in U.S. losses in 2022–23, while inflation has driven 66 percent of consumers to trade down to lower-cost goods and boosted demand for private labels. Persistent supply chain and labor challenges continue to weigh on operations, while competition from Amazon and Shein intensifies. At the same time, customer expectations are shifting: 88 percent of U.S. shoppers now demand personalized experiences, and 61 percent are open to AI-powered retail tools. Analysts further identify AI as a top strategic priority for retail, with applications in demand forecasting, inventory optimization, fraud detection, and personalization.

Against this backdrop, scaling AI is no longer a long-term option but a near-term priority. Mounting cost pressures, intensifying competition, and evolving customer expectations have prompted this project to examine how Walmart can leverage AI to address these challenges and capture new growth opportunities.

2. Problem Statement

Walmart continues to face recurring customer issues despite its scale. Empty shelves, long checkout times, and a less personalized online experience reduce satisfaction and loyalty. Walmart's score in customer satisfaction is about 70, compared to Costco and Target, both of which are closer to 80. With competitors improving their service and new quick-commerce options raising expectations for speed and convenience. Walmart can address these gaps using Artificial Intelligence.

The central question for this project is: How can Walmart utilize AI to enhance customer experience and maintain competitiveness in the U.S. market?

3. Objectives

Our team will:

- Identify customer pain points and explore how AI can make shopping easier and more personal.

- Assess weaknesses in Walmart's current systems, such as checkout, forecasting, and replenishment, and recommend practical AI solutions.

- Benchmark Walmart against Amazon, Target, Costco, and quick-commerce players, and highlight where Walmart can use its strengths to compete more effectively.

4. Methodology and Approach

The project will follow a structured approach combining both primary and secondary research, reinforced with analytical frameworks that ensure findings are comprehensive, evidence-based, and actionable. This methodology is designed to directly address Walmart's recurring challenges in customer satisfaction and loyalty.

Research Design

- Primary research will involve surveys and interviews with Walmart customers. Surveys will measure perceptions of satisfaction, checkout speed, personalization, and loyalty drivers, using Walmart's current satisfaction score of 70 as a baseline. Interviews and observational data from stores will provide additional context on operational pain points such as long lines, stock-outs, and inconsistent service quality.

- Secondary research will include analysis of industry reports, Walmart's annual and sustainability filings, and competitor strategies. This will help the team identify how Amazon, Costco, and quick-commerce players address customer experience and retention, and how these practices can inform Walmart's AI adoption.

Analytical Frameworks

- An issue tree will guide the breakdown of the central question into three domains: Users/Customers, AI Technologies, and the Competitive Landscape, ensuring that both satisfaction and loyalty are examined systematically.

- Benchmarking will compare Walmart's customer experience and loyalty programs against Amazon Prime, Costco's membership model, and emerging quick-commerce options, highlighting best practices Walmart can adapt.

- An AI feasibility analysis will evaluate the practicality and impact of implementing AI in areas such as checkout optimization, demand forecasting, replenishment, and personalization, with a specific focus on initiatives that can measurably improve customer satisfaction and increase loyalty retention rates.

Team–Client Communication

- Weekly updates will be provided every Monday to summarize progress, share emerging insights, and highlight early trends in customer sentiment and loyalty data.

- Milestone reviews will be scheduled after the completion of the issue tree validation, midpoint analysis, and draft recommendations. These reviews will serve as checkpoints to confirm alignment with client expectations and incorporate feedback before moving forward.

- A final debrief will consolidate findings, quantify the potential impact of AI initiatives on satisfaction scores and loyalty measures, and ensure that the final recommendations are practical and aligned with Walmart's strategic priorities.

5. Deliverables

Our consulting team, from the University of Illinois Urbana-Champaign, will present the following deliverables:

- Approaches for embedding AI to enhance and optimize Walmart's core business operations and value proposition.

- Competitive analysis of Walmart against leading U.S. and global retailers.

- Midpoint presentation.

- Final presentation.

6. Key Milestones

Event	Schedule
Project Kickoff	09/26/2025
Bi-weekly client call/meeting	TBD
Mid-Point presentation	TBD
Final Presentation	12/01/2025

7. Expectations and Constraints

- We as a consultant team will provide Walmart with all necessary information, unless it is deemed confidential or irrelevant to the project.

- The project must be finished by the first week of December 2025. The limited timeline for project completion may limit the team's ability to fully study all aspects of AI integration.

- Reliance on secondary/public data, with no proprietary access.

- It is assumed that AI trends and case studies from comparable retailers (Amazon, Target, Costco, etc.) can be applied to Walmart's context with reasonable validity.

8. Communications

Our Consulting Team:

- Vraj Deriya [Project Manager] –vderiya2@illinois.edu

- Riyazul Ansari [Consultant] – rza2@illinois.edu

- Sai Kiran Billa [Consultant] – sbilla2@illinois.edu

- Yvonne Yang [Consultant] – yuweny4@illinois.edu

- Mihika Bodke [Consultant] – mbodke2@illinois.edu

9. Signature

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Vraj Deriya, Project Manager

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Mr. Yoo-Seong Song, Walmart Inc.

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