

BUSINESS CASE
BREGGHAN POINT OF SALE SYSTEM

AURORA

**PROJECT DOCUMENTATION SUBMITTED TO THE FACULTY OF THE
SCHOOL OF COMPUTING AND INFORMATION TECHNOLOGIES**

ASIA PACIFIC COLLEGE

**IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR
SYSTEM ANALYSIS AND DETAILED DESIGN FOR IT
PROJMAN**

**BREGGHAN STORE
60 MT. MAKILING ST.
POST PROPER SOUTHSIDE, MAKATI CITY**

DATE
12/04/2023



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1. EXECUTIVE SUMMARY

Bregghan Mini Grocery Store is a family-owned business that supplies retail, wholesale, and bulk products to residents and sari-sari stores in the area. The store's current system for tracking sales and stocks is manual, using pen and paper, which has led to difficulty in monitoring inventory and potential loss of sales due to items being out of stock.

To address these pain points, our team aims to develop a responsive webapp that digitizes the recording of stocks and sales, notifies the user when stocks are at a critical level, and automates the computation of sold items. The webapp will also produce a report that shows daily, weekly, monthly, and yearly records sold.

1.1. Issue

Manual inventory tracking:

The current system at Bregghan mini grocery store involves manual recording of stocks and sales on paper, which can be time-consuming and prone to errors. The lack of a proper inventory management system can result in out-of-stock items and missed sales opportunities.

Inefficient sales tracking:

The current sales tracking process relies on hand-written receipts, which can lead to errors in the computation of sold items and total sales. This can result in inaccurate sales data and hinder the store's ability to make informed business decisions.

Lack of real-time monitoring:

Without a digital system, the staff at Bregghan mini grocery store are unable to monitor stocks and sales in real-time. This can result in missed opportunities to replenish stock levels and can make it difficult for the store to keep up with customer demand.

1.2. Anticipated Outcomes

Improved inventory management:

The implementation of a digitized sales and stock tracking system will allow Bregghan mini grocery store to have accurate and real-time data on their inventory. This will enable them to make informed decisions on when to replenish stock, which products to order, and how much stock to order, leading to a reduction in stockouts and overstocking.

Increased sales:

With the implementation of a Point-of-Sale (POS) system, the checkout process will be faster and more efficient. Customers will have a better experience and may be more likely to return. The system will also be able to generate reports on the top-selling products, which can help the store to make informed decisions on product placement and marketing strategies.

Reduced errors:

The automated computation of items sold will significantly reduce the occurrence of human errors, which can lead to miscounting of inventory and discrepancies in sales records. This will result in more accurate sales and inventory data.

Increased productivity:

The implementation of a digitized sales and stock tracking system will reduce the workload of the staff, as they will no longer have to manually record sales and inventory. This will free up their time, allowing them to focus on other tasks that can improve the store's operations.

1.3. Recommendation

To address the identified business problem of inefficient stock and sales monitoring at Bregghan mini grocery store, the developers recommend developing a responsive web application that digitizes the recording of stocks and sales, automates computation of sold items, and produces reports. By implementing this solution, the staff and manager of Bregghan mini grocery store will be able to monitor stocks and sales in real-time, reducing workload and minimizing human error. This will lead to more efficient inventory management and faster checkouts, resulting in improved customer satisfaction and retention. The system will also provide alerts when stock levels reach a critical point, allowing the store to replenish inventory on time and avoid potential revenue loss due to out-of-stock items. Furthermore, the application's capability to produce detailed sales reports will provide useful insights to the business, allowing for data-driven decision-making to further optimize operations and profitability. To conclude, the developers believe that the proposed solution will address the identified business problem and provide significant benefits to Bregghan mini grocery store, its staff, and its customers.

1.4. Justification

Bregghan mini grocery store recognizes the need for improvement in its operational processes, particularly in sales and inventory tracking. The current manual system in place is time-consuming and prone to errors, hindering overall efficiency. To address these challenges, the store proposes implementing a digitized system that offers numerous benefits.

By adopting a digital system, the staff and managers at Bregghan can track sales and inventory in real-time, reducing the workload and improving efficiency. The proposed project will enable more accurate inventory tracking, ensuring timely restocking to avoid stockouts and potential sales losses. With better inventory management and automated sales tracking, the store can meet customer demands more effectively, leading to increased sales and greater customer satisfaction.

In addition to sales and inventory improvements, the implementation of a point-of-sale (POS)-like system will enhance the overall customer experience. Customers will benefit from faster checkouts and more accurate receipts, resulting in improved service quality. Furthermore, by embracing digitalization, Bregghan mini grocery store can remain competitive with other stores that have already implemented similar systems, maintaining its position in the market.

Failure to implement the proposed project would have negative consequences for the store. The current manual system would continue to hinder efficiency and accuracy, resulting in wasted time and potential revenue loss. Inaccurate inventory tracking could lead to stockouts, lost sales, and dissatisfied customers. Furthermore, without keeping pace with competitors who have already embraced digital systems, Bregghan mini grocery store risks losing customers to these technologically advanced stores. Therefore, it is imperative for the store to proceed with the implementation of the proposed project to drive efficiency, sales growth, customer satisfaction, and maintain a competitive edge in the market.

2. BUSINESS CASE ANALYSIS TEAM

The roles and responsibilities of the team members involved in the plan development are illustrated in Table 1.

Designation	Name
Project Manager:	Ramon Benedict V. Elloso
Project Team Leader:	Carlos C. Ligligen Jr.
Team Member:	Andrei Gabriel B. Palma
Team Member:	Donne Paolo Y. Tarinay

Table 1. Responsibilities of Team Members

3. PROBLEM DEFINITION

3.1. Problem Statement

Bregghan mini grocery store is currently facing several issues in their daily operations, which are mainly caused by their manual recording and tracking system. Specifically, the store experiences difficulty in monitoring their inventory, which can result in insufficient stocks or overstocking. Additionally, the manual computation of sold items often leads to errors, which affects the accuracy of their sales records. As a result, the store loses potential customers due to a lack of available items, leading to decreased profits. Furthermore, the current process of tracking sales and stocks is time-consuming, which can lead to slower checkouts and longer queues. Overall, the business problem is the need for a more efficient and accurate system to monitor inventory and sales to improve the overall customer experience and increase revenue.

3.2. Organizational Impact

The implementation of the proposed project will have a significant impact on the organizational processes, tools, hardware, and software of Bregghan mini grocery store. It will require the adoption of new technology and the implementation of new processes to manage sales and inventory in a digitized and automated way. The system will replace the traditional pen-and-paper method of tracking sales and inventory, which will require staff to be trained in the use of the new technology.

New roles will be created to manage the system and ensure its proper functioning. The system will also require the creation of a database of products that the store offers, and this will need to be updated and maintained regularly.

The proposed project will bring a positive impact to the organizational processes, increasing the efficiency and accuracy of sales and inventory tracking. The store staff will be able to manage the stock level in real-time, making restocking more efficient and reducing the risk of stockouts.

3.3. Technology Migration

The plan for the Bregghan POS System involves the creation of a website and mobile application that will be powered by Amazon Web Services (AWS) for the database. AWS is a type of cloud service that allows businesses to rent computing resources like servers, storage, and databases. The developers chose AWS for the mini grocery store due to its scalability, allowing the store to scale up or down easily to meet changing demands in the future without worrying about managing their infrastructure. AWS is also highly reliable and can handle large volumes of traffic and data without slowing down. The data migration process will ensure that all necessary data is transferred to the new system, and the new system will undergo thorough testing to ensure reliability, efficiency, and security.

4. PROJECT OVERVIEW

This section provides a broad overview of the Bregghan POS System, which encompasses a description, its goals and objectives, performance criteria, assumptions, constraints, and major milestones.

4.1. Project Description

The project will develop a sales and stock tracing system to address the business problem of Bregghan mini grocery store which is the lack of efficient monitoring of their stocks and sales. The purpose of the project is to develop a digital application that will provide the staff and manager of the store with an efficient way of monitoring their stocks and sales in real time, reducing the workload and potential for human errors. The project will consist of developing a POS-like system where users can monitor the items that go in and out of the store and can compute the total prices, and a system for generating and storing digital copies of receipts. The system will be developed using modern software development practices and technologies. The project will be

executed in three terms, with clear milestones and deliverables to ensure that it stays on track and within scope.

4.2. Goals and Objectives

General Objectives

- To develop a responsive webapp that tracks sales and stocks for Bregghan mini grocery store.
- Decreases the number of steps that the user can do in the whole transaction for faster checkouts.

The group plans to further address the general objective of the project to:

Inventory:

- Digitize 100% the recording of stocks and sales.
- Notifies the user that the stocks are at a critical level.

Sales:

- Computation of items that are sold are automated.

Reports:

- Produce a report that will show the records sold daily, weekly, monthly, and yearly.

4.3. Project Performance

The project team will assess the performance of the project by examining and analyzing the following forms, completed during testing by both the developers and the client:

- Test Cases

This document is where the development team tests each feature of the system and assigns a "PASS" or "FAIL" status to each feature. They also document all possible scenarios to thoroughly test each feature.

The project's performance will be measured through the following metrics:

- Schedule adherence: comparing actual project completion dates to planned dates
- Budget adherence: comparing actual project expenditures to planned budget
- Quality assurance: monitoring adherence to project quality standards
- Stakeholder satisfaction: conducting surveys or interviews to gauge satisfaction with project outcomes
- Risk management: monitoring and addressing potential risks and issues throughout the project lifecycle

- Change management: tracking changes made to the project scope or plan and assessing their impact on project performance.

4.4. Project Assumptions

- All necessary funding and resources will be secured and available for the duration of the project.
- All stakeholders will be available and able to provide input as needed throughout the project lifecycle.
- There will be no major technological or market disruptions that would impact the project's success.
- The project team will have the necessary expertise and skill sets to complete the project successfully.
- All regulatory and legal requirements will be met and any necessary permits or approvals will be obtained.
- The project will be completed within the proposed timeline and budget.
- The project scope will remain consistent throughout the project lifecycle, and any changes will be managed through a formal change control process.
- The project team will be able to effectively communicate and collaborate throughout the project lifecycle.
- The project will not have a significant negative impact on the environment, community, or stakeholders.
- The project will result in the anticipated benefits and outcomes as described in the business case.

4.5. Project Constraints

- Budget constraints: The project cannot exceed a certain budget, which may limit the scope or timeline of the project.
- Time constraints: The project must be completed within the designated timestamp.
- Resource constraints: The project team may have limited staff, expertise, or technology available to complete the project.

4.6. Major Project Milestones

Milestone 1: MNTSDEV Deliverables	<ul style="list-style-type: none">- The group has identified a client, a project advisor, and the client's problem. Additionally, they have conducted the necessary research and developed problem statements to propose a solution.
Milestone 2: MSYADD1	<ul style="list-style-type: none">- The team has created all the required diagrams for the proposed solution's processes.
Milestone 3: MCSPROJ	<p>The group has successfully finished the following:</p> <ul style="list-style-type: none">- Login- Admin/Cashier dashboard- Inventory Page- Reports Page- Printing of receipt- Scanning of item- Updating information of item- Automatically computes the total items bought.
Milestone 4: PROJMAN	Finish the documentation and deliverables for the Project Management Course.
Milestone 5: SOFTDEV	Receive feedback from stakeholders and conduct comprehensive testing.

5. STRATEGIC ALIGNMENT

- Strategic Plan: Increase Efficiency and Effectiveness

The strategic plan calls for improving efficiency and effectiveness of organizational processes and systems to better serve customers and stakeholders. The proposed project will introduce a new software system that will streamline and automate key business processes, resulting in increased efficiency and effectiveness.

- **Strategic Plan: Enhance Customer Experience**
The strategic plan calls for enhancing the customer experience through improved products and services. The proposed project will enable the organization to better track and respond to customer needs, resulting in improved customer satisfaction.
- **Strategic Plan: Achieve Financial Sustainability**
The strategic plan calls for achieving financial sustainability through improved financial management and revenue generation. The proposed project will enable the organization to more accurately track and analyze financial data, resulting in improved financial management and potential revenue generation opportunities.

6. COST BENEFIT ANALYSIS

The following section in the document provides a detailed examination of the costs and benefits of the Bregghan POS System project. The aim of this analysis is to assess the financial viability of the project, taking into account the expenses as well as the projected advantages of the suggested system. The findings of the analysis will assist in determining if the project is a valuable investment for the client.

Benefits:

A well-designed and properly implemented POS system can provide benefits such as improved inventory management, faster transaction processing, better customer tracking, and more accurate sales reporting. These benefits can lead to more efficient operations, better customer service, and potentially increased sales. The actual impact on sales will depend on various factors, including the specific features and capabilities of the POS system, the business processes and strategies, and the overall market conditions.

Costs

The costs related to the Bregghan POS System project are outlined as follows:

- The cost estimate for using a tablet for the cashier in the Bregghan POS System project is ₱ 15,000.00.
- The cost estimate for using a barcode scanner is ₱ 2,000.00.
- The cost estimate for using a printer is ₱ 1,000.00.

- The estimated cost for hosting the system at AWS is up to ₱ 1,595.00.
- The estimated cost for the client's internet service provider through Converge ICT Solutions is up to ₱ 2,500.00.
- All other costs associated with running Bregghan Store, including expenses for the project system, electricity, water, and other operational expenses, will add up to ₱ 22,095.00.

7. ALTERNATIVES ANALYSIS

Status Quo: The first alternative considered was to maintain the current process and not implement any changes.

Manual Process Improvement: The second alternative considered was to improve the existing manual process by introducing new tools and technologies, such as automation software.

Outsourcing: The third alternative considered was to outsource the process to a third-party vendor. However, this option was rejected due to the lack of control over the process and potential security risks associated with sharing confidential company information with external parties.

8. APPROVALS

The approval of the project should be obtained from the main stakeholder, Ms. Devilyn C. Ligligen, who is the owner of the business.

