

CHAPTER I

INTRODUCTION

1.1 Background

In this digital Era people have grown more and more reliant on employing mobile applications for their own advantage, these days, mobile applications are more user friendly and perform faster while retrieving data or looking for services online. All businesses have seen that as a result, their working methods have shifted away from using their personal computers/laptops and towards using mobile devices to access web based apps. A successful mobile app maintains user's attention with a superb user interface, mobile applications are useful in many fields, including business, banking, education, reading, the food industry, and others. Customers may get fair priced goods and services delivered right to their home without having to go far or wait a long time. The usefulness of services might be further improved by creating additional mobile applications for specific uses. Companies that specialize in mobile app development would provide the most modern, user friendly app. (Quade, n.d.)

The Internet has permeated every aspect of our everyday lives and has a significant influence on how we interact with one another, traveling to the bank to perform cash transactions or withdraw money, as well as going to the market to buy products and essentials, all has grown more and more challenging every day due to a lack of time and people's over-preoccupation with their work. In these conditions, online transactions have become a more significant part of our society. The internet economy is expanding quickly, e-commerce sales are growing between 20 and 25 percent annually, signaling a significant change in peoples' buying habits. (E-Commerce in Agriculture: New Business Models for Smallholders' Inclusion into the Formal Economy, 2019). According to the Food and Agriculture Organization (FAO) approximately one third of all food produced for human consumption is wasted. Lower post-harvest waste results from the increased market efficiency brought on by agricultural e-commerce services, due to the availability of online platforms, farmers are no longer forced to choose between accepting subpar pricing offered by intermediaries and looking for a last minute buyer, which increases the danger of post-harvest losses, but through agricultural e-commerce platforms, farmers may sell to customers directly, this would reduce the amount of time it takes for produce to reach the client, resulting in less post-

harvest wastage and fresher, more nutritious produce. Farmers benefit from greater transparency and visibility of market prices provided by online platforms, resulting in more evenhanded rates than those offered by a traditional middleman. This is frequently accomplished by eliminating intermediaries in the value chain and boosting the distribution system's efficiency. (Zeng et al., 2017)

Vanuatu is a nation in the southwest Pacific Ocean made up of 13 main and minor islands, it is located north east of New Caledonia, east of Australia, and west of Fiji. The 400-mile-long islands are arranged in an amorphous Y pattern. One of the best vacation spots for scuba divers looking to explore the stunning coral reefs of the South Pacific is often Vanuatu. The economic base of Vanuatu is agriculture, 80 percent of the workforce is employed in the agricultural industry, which includes small farms and production of cash crops like coconuts and other crops. (Bourke, n.d.).

There are several ways for farmers to market their harvests. Customers may purchase it directly from them, or they may sell it to nearby shops, market and eateries. Larger farms use an intermediary to sell their products, like a "middle man", a person who acts as a middleman to transport farmer's goods to marketplaces, retailers, and restaurants. They choose this method since they have a lot of items to distribute and don't have time to do it all personally and are more use to this method or can be referred as the traditional way of farmers to market their products. Farmers struggle with the traditional method of selling their products, which causes them to incur greater costs for doing so and, occasionally, spend more money than they make/profit from the sales of their products. There are plenty of benefits if the farmers of Vanuatu use online platform as an Intermediaries System to market their products. Here are a few of them. (Banerjee et al., 2019)

- Reach more Customers

It will be easier for farmers to contact more people if they start or expand their online product sales company. Online courier services for groceries and agricultural products are already in high demand.

- Enhance Marketing of their products

Farmers can use banner advertisements or the top search results on internet marketplaces to advertise their products online.

- Reduce Expenses

Because the company needs less staff to operate, having an online farmer marketplace reduces a farmer's day-to-day operational expenses. Keeping track of their daily sales and orders is made much easier with the use of such tools and APIs made available to both the admin and merchants connected with the online farmer marketplace.

- Mobile App

The most practical way to make an online purchase, according to customer feedback, is through a smartphone app. Making a smartphone app to make it easier for clients to place, track, and pay for online orders.

- Convenience and Variety

From the perspective of the customer, convenience and variety are two benefits of online farm marketplaces. What makes it popular among homeowners is the ease of not having to leave your house and having the ability to select from a large selection of locally grown fresh items before having them delivered to your door.

While supermarkets are opening up everywhere, small farmers are fighting for survival, farmers may be able to stay afloat by selling fresh goods online, but companies are having trouble sustaining their online presence. Agriculture on the internet has a bright future. It has the potential to help farmers obtain access to a much larger market and prevent the closure of their business.

Go Market is an e-commerce application that will work in the Vanuatu's agriculture sector. It will be created in response to the hardships of local farmers in order to offer the best possible customer service and product selection to its target market. The only items to be sold in Go Market are foods, these can range from prepared meals to root crops. This e-commerce software is more akin to an online intermediary which farmers can utilize to sell their products / foods. This application will be primarily created for the Pacific region's agriculturally rich nations. Only a few major markets exist in Vanuatu where farmers may travel to sell their finished goods, and by traveling costs money, more than they gain or profit from selling those products.

All human based tasks that are often performed may be made simpler and quicker using this application. Using Go Market in Vanuatu's agriculture sector can lead to better market access, access to financial services, and capacity building among rural communities, all of which result in better price information for producers and lower transaction costs. It can also increase efficiency in disaster risk management, early warning systems, and agricultural extension.

1.2 Identification of Problem

Based on the background of this report, it can be clearly seen that the main problem that the author is trying to solve is the traditional way of farmers selling their goods, which resulting in more expenses done by the farmer for selling those goods of theirs, sometime spending more money than they get by profiting from the sold goods. The problems can be simplified as the following:

- Farmer's traditional way of selling their good cost too much
- Loads of farmer products, crops are going to waste
- High cost from the middleman / Intermediaries which farmers use to sell their goods
- No online intermediaries for farmers to sell their goods

1.3 Related Work

In this era the internet has made it easier and more convenient for buyers and sellers to interact, which has increased understanding of the global supply chain. Nowadays, most customer interactions in these fields begin online using search engines, recommendations from social media, online reviews, or digital advertisements. One of the few industries still in existence, agriculture, it has not yet been significantly impacted by e-commerce (agri-e-commerce). Online farm marketplaces are becoming more and more well liked among communities as a result of the ongoing demand for fresh, locally produced food. Thanks to markets that generates profits year after year, online farm markets offer fresh produce to families at a moderate cost.

Most of the time, online agricultural marketplaces function as a community. There are websites that make it simple for local residents to collaborate with a nearby farm to sell and deliver fresh food/crops to others who are interested. Nevertheless, these online markets are only accessible to citizens in nearby communities because doing business is constrained by location.

Farmers may circumvent middlemen by selling their produce through internet channels, resulting in more earnings, fewer waste, and fresher fruit for consumers. Mobile applications have already been used in most industries across the world and are beginning to be applied in the agriculture business. In developing nations, where agriculture employs more than 97 percent of the workforce and contributes double digits to GDP, these benefits are especially important. The majority of the people in the South Pacific nation of Vanuatu work as farmers, and the sector contributes significantly to the nation's economy. Despite this, the farmers in the nation continue to sell their goods in the traditional manner on high priced markets. GoMarket is an online intermediary in the form of a smartphone application that allows farmers of Vanuatu to sell their goods directly to consumers without using middlemen or intermediaries. This leads to more profits, fewer waste, and fresher produce. However, if GoMarket were to be compared to a previously existing app, it would be connected to TaniHub since the two apps employ some comparable functionality and features. As of right now, there are no mobile apps from the country of Vanuatu that may be associated to Go Market. TaniHub is an app and web based e-commerce platform that promises to make it simpler for everyone, including homes and businesses to purchase their fruits, vegetables, and seafood directly from Indonesian farmers as well as other necessary goods, (Rahmah, 2021), complete all of your family's or company's daily needs without delay, including fresh goods, frozen foods, cooking spices, cake toppings, and basic necessities. It is supported by a speedy delivery procedure and a secure payment system.

Objective of Study

Based on the background information and problem identification provided in the aforementioned section, it is clear that the goal of this study is to find a solution to the issue of farmers of Vanuatu in selling their goods in the conventional manner by finding a way to make doing so significantly less expensive. The study's specific goals are as follows:

- Develop an online intermediaries called Go Market, in the form of an application were farmers can use to sell their goods, resulting in a much lesser cost by eliminating the middle man and saving their goods from going to waste.
- A solution that can help farmers not waste their goods and products.
- Limiting the middleman / traditional intermediaries.
- Find a solution to the high cost demand of the traditional way of farmers selling their goods.

1.4 Benefits of Study

The complete resolution of the issues raised in the problem identification sections, namely, the high cost of farmer's traditional methods of selling their goods and the massive amounts of farmer's goods that are wasted, will result from this research, according to the background and above-mentioned points in this research report. In the short term, the benefits of this research are as follows:

- Go Market will be the intermediaries for farmers to sell their goods.
- Lesser cost for farmer to sell their goods.
- The solution to the traditional way of selling goods.
- Opens up opportunity for local farmers.
- Easier to attract new customer.
- Convenience and variety meaning, the idea of not leaving your house and getting to pick from a varied variety of local fresh items and have them shipped to the customer without having to select all random local fresh items not knowing if there is high demand for them which then might result to waste of farmer product.

1.5 Limitation of Problem

These are few limitations of this application:

- A. This application is only available on smartphones with android OS version 5.0.
- B. This application requires internet.

1.6 Research Methodology

1.6.1 Data Collection Model

To learn about the crops and merchants in Vanuatu, the information was acquired through a number of resources, including books, journals, and articles pertinent to Android mobile programming as well as journals connected to Vanuatu agriculture. Additionally, interviewing local Vanuatu natives will yield more precise information. The following table might serve as a straightforward illustration of the data collecting model:

| Interview | Study Literature | Observation |
|---|---|--|
| <ul style="list-style-type: none">• Conducted interview with target audience, namely farmers and consumers.• Interview consists of 10 or less than 10 questions, all questions were about the traditional way of selling farmer products and goods, the struggle they face, the high cost of | <ul style="list-style-type: none">• The researcher reads journal mainly about Vanuatu agriculture, e commerce in agriculture, benefits of an online platform for farmers and the development of mobile applications | <ul style="list-style-type: none">• The researcher observes the traditional way of how farmers are selling their goods and products.• The struggle they face, high cost demand.• The Researcher done all of the observation through social media since he is not |

| | | |
|--|--|----------------------------------|
| <p>demand for the middleman and how would it be by having an online platform for farmers to use.</p> | | <p>currently at his country.</p> |
|--|--|----------------------------------|

Table 3.1 Data Collection Model

1.6.2 Waterfall Methodology

In this study, the author applied the Waterfall Methodology to make the software development procedures more simple and organized. The analysis, design, development, and testing phases of a project are in sequence developed using the Waterfall technique, also known as the Waterfall model. Each phase is completed before moving on to the next in a waterfall like fashion. The model is based on specified dates, needs, and outputs and operates sequentially. Under this arrangement, individual execution teams are not needed to communicate constantly with one another and are often self-contained unless specific integrations are required. Additionally, team members are more likely to work independently and are less constantly obliged to provide progress reports as they would in other models such as an agile model. Most of the time, one phase doesn't start until the one before it is finished. (Naga et al., 2018).

- Requirements
- Design
- Implementation
- Testing
- Deployment & Maintenance

This procedure is linked to a number of models, each of which includes a different set of duties and activities.

1.7 Writing Systematic

The systematic writing is conducted to make the final project report writing easier. As a result, the methodical composition of this thesis has been separated into six chapters, with the following explanations for each chapter:

CHAPTER 1 INTRODUCTION

This chapter contains background, problem identification, final project objectives, the benefits of the final project, the scope of the final project, the automatic task writing system end.

CHAPTER 2 THEORITICAL BASIS

This chapter discusses the theories and also explains the point's important basis which is the basis and relates to the main topic will be discussed.

CHAPTER 3 ANALYSIS AND DESIGN

The system's analysis and design are discussed in this chapter. Analysis of the current system, problem analysis, methodology implementation, problem solving with system needs analysis, and system design to develop a new system.

CHAPTER 4 IMPLEMENTATION AND TESTING

This chapter describes how to turn the results of the analysis and design into code to create a working application, as well as how to test it to see if it's working or if it still needs to be improved.

CHAPTER 5 CONCLUSION

This chapter contains conclusions, suggestions and Reference