

INFORMATION SYSTEM DEVELOPMENT PLAN FOR KIAN GENERAL MERCHANDISE

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ABSTRACT

One in close proximity is a store that sells reasonably priced items that many buyers use on a regular basis. Not just the average shopper, but even dealers. Sales, marketing, reports, capital management, customer support, supply, distribution, and other transactions were all part of the business processes that helped operate a business for years. Moreover, every aspect of reports and transactions, including those involving customers and supply was handled manually causing the company to run much slower and earn a much smaller profit when it came to sales. Many issues have arisen over the course of a business's long history, such as a lack of consumers and stocks, maintenance, sales ranking, and inconsistency. A response would be the proposed Customer Relationship Management (CRM) framework and Supply Chain Management (SCM), which would provide reliability and better performance in business problems. These information systems aid companies in improving profitability by improving customer service, supply management that cause increasing efficiency. The importance of effective customer relationships as a key to customer value and hence shareholder value is widely emphasized. In order to enhance these relationships, the application of IT to marketing through customer relationship management (CRM) software, e-commerce and other initiatives is growing rapidly [1]. Modern Supply Chain Management (SCM) begins with the premise that supply chain participants are primarily interested in optimizing their own goals, and this self-serving emphasis typically results in inferior performance. Another way of thinking about this by considering a sequence of optimum regional policies does not yield a maximum response worldwide [2].

Keywords: Business Processes, Capital Management, Customer Relationship Management (CRM), Customer Support, Supply Chain Management (SCM).

INTRODUCTION

1.1 Background of the Company

Mr. and Mrs. Velaire, who work as a contractor and a housewife, founded Kian General Merchandise on January 19, 1999 in Carmen, Davao del Norte, and began by selling hardware parts. Due to a lack of supplies and finance, they chose to shift their business into plastic ware and other items. It provides users with delivery services and sells a variety of products ranging from groceries to plastic wares. Kian General Merchandise, on the other hand, controls inventory and reports, deliveries, customer support, and retailer distribution as part of their process.

1.2 Current Routines and Business Processes

1.2.1 Current Routines

The daily routine of a person in charge is cleaning before opening the store. Checking records every day and also having an inventory every month checking on the product that needs to be filled up. They also ensure that the product is delivered to the customer.

Table 1. Event Tables of Kian General Merchandise

Start time	End Time	Task	Duration
7:00 AM	9:00 AM	Cleaning	2 Hours
9:00 AM	9:30 AM	Opening	30 Minutes
9:30 AM	12:00 PM	Working Time	2 Hours and 30 Minutes
12:00 PM	12:30 PM	Lunch Break	30 Minutes
12:30 PM	3:00 PM	Resume of Work	2 Hours and 30 Minutes
3:00 PM	4:00 PM	Closing Time	1 Hour

1.2.2 Business Process

It is owned and operated by a family, and the buying process allows customers to select what they want to purchase while being guided by the person in charge. They keep track of inventory, sales, and deliveries, and they order from their suppliers on a monthly basis.

1.3 Existing Technologies

They don't have existing technologies in place to meet customer demands

1.4 Problem Found

- **Few buyers and few stocks.** As we learned from the interview, their supply is limited, and consumers are hard to come by.
- **Maintenance.** The store is in disarray due to poor maintenance and insufficient resources.
- **Sales Rating.** Based on our observation, the store is standing apart from the competitors, and doesn't lend information technology.
- **Inconsistency.** As we observed, the store can't provide the needs of the customer, its supply isn't full. It harms the store by lowering profits from new and returning customers who are dissatisfied with their experiences.

1.5 Goal and Objectives

Researcher's aims to:

General Objective

Propose an IT Infrastructure, the computer operations, Information System, Customer Relationship Management (CRM), Supply Chain Management (SCM) for efficient, effective and solve the problem of the Company's processing method.

Specific Objectives

- To enhance the manual processing method of the company.
- To implement an Information system that will provide a lot of stocks in the company.
- To promote an Information system that has a good relationship between customer and owner.

1.6 Organizational Structure

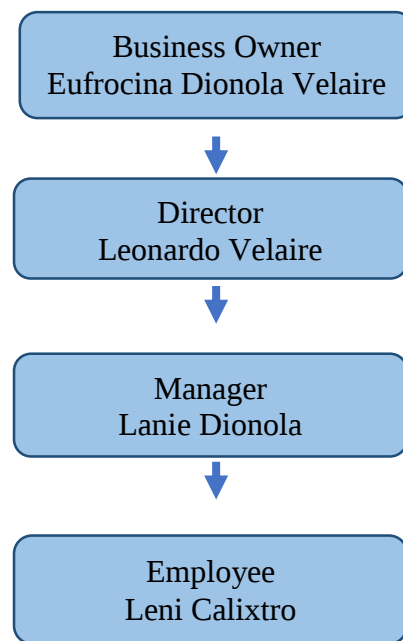


Figure 1: Organizational Structure of Kian General Merchandise

1.7 Stakeholders

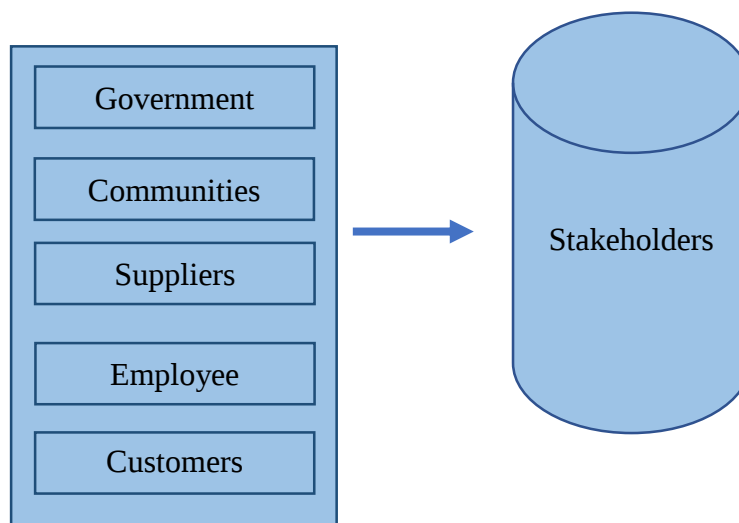


Figure 2: Stakeholders of Kian General Merchandise

2. PROPOSED INFORMATION SYSTEMS

The researcher's proposed Customer Relationship Management in conjunction with the Supply Chain Management for the reliability and growth of the business. This Information System aids the difficulty of the business towards its improvement.

2.2 Name of Information System

Customer Relationship Management (CRM)-personalizing and meaningfully interacting with each customer. It helps to improve the business through reaching a potential customer, acquisition, conversion, retention and loyalty. It also aids in the growth of their company's profit margins. The CRM information collected at the customer level was being used tactically to help improve sales and manage the accounts to win new business and provide superior customer service [3]. Customer relationship management (CRM) is a term that refers to practices, strategies and technologies that companies use to manage and analyze

customer interactions and data throughout the customer lifecycle, with the goal of improving business relationships with customers, assisting in customer retention and driving sales growth. CRM systems are designed to compile information on customers across different channels or points of contact between the customer and the company -which could include the company's website, telephone, live chat, direct mail, marketing materials and social media. CRM systems can also give customer-facing staff detailed information on customers' personal information, purchase history, buying preferences and concerns. [4]

Supply Chain Management (SCM)-identifies the most effective way to meet the demand plan's requirements. The goal is to meet the enterprise's financial and service goals by balancing supply and demand. Integrating of critical business processes from end user to original suppliers, resulting in products, services, and information that bring value to customers and other stakeholders. Supply Chain Management is the management of a network of interconnected businesses involved in the ultimate provision of products and services, a package required by the end consumers (SCM).[5]

2.2.1 Review of the Related Study

In every business, the customer should be aware of the products, how it will be essential and effective to every customer who did buy that certain product. The effect of customer relationship management (CRM) on customer knowledge and customer satisfaction [6]. Companies that successfully implement CRM will reap the rewards in customer loyalty and long run profitability [7], when applying this kind of system, the business will surely increase their profit and it can keep their relationship closer to their consumer and to develop their relationship between firms and customers and among regular customers. Also it can caught people's attention if the business itself is rapidly increasing in sales and their products is very effective and essential to every customer. Also when the business itself has every things that people needed the most and is very affordable. Also to improve the customer's satisfaction when they use the product. The impact of Customer Relationship Management (CRM) dimensions (complaint resolution, customer knowledge, customer empowerment and customer orientation) on customer loyalty [8]. When customer complain about the products or stock, it is inevitable. Also every customer knows about the products or stock or has knowledge in it. But, it's good to share your knowledge and guide them how to successfully use the product as a staff or manager about the products that you sell in your business. With that the customer or the consumer will not face difficulty anymore.

With this, we also would like to implement Supply chain management (SCM) this can help the business supplies to keep and manage their products. Supply chain management techniques deal with the planning and control of total materials flow from suppliers through end-users [9]. This also proves that they are concern to their customer who needs the product the most. The business itself will not tolerate shortages because surely the customer will need the products who used it for their daily lives. The manager will keep the supplies in tact so that the products are not out-of-stock. And identifies the most effective way to meet the demand plan's requirements. As the twenty-first century begins, supply chain management has become a significant strategic tool for firms striving to improve quality, customer service and competitive success [10]. One of the most important thing is the stocks and products who increase the sales in the business.

2.2.2 System Functionality

- It is easier to save data in one place
- Getting details on customers and for the buying history
- Access behavior and customer interest.
- Help the company for planning and management.
- A company's efficient practices
- Build good communication of suppliers and customers

2.2.3 System Architecture

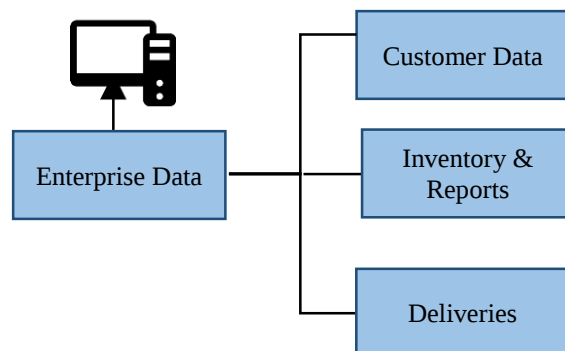


Figure 3. System Architecture of Kian General Merchandise

2.2.4 Cost Structure

Table 2. Cost Structure

Concise Overview	Value
Product	Php68,713.38
Maintenance	Php8,000
Development	Php10,000
Service	Php5,000
Total Cost: Php91,713.38	

3. PROPOSED IT INFRASTRUCTURE AND PEOPLEWARE

3.1 Proposed Computer Hardware

Technology is a need in today's world since we live in advanced periods. We want to increase performance and effectiveness, therefore we'll need a fast-paced functioning processor to keep a record of all the information, documents, as well as other items we need to keep track of.

Table 3. Computer Hardware

Computer Hardware	Specification	Unit Cost	Quantity	Total Cost
Processor	AMD Ryzen 5 1600 65W AM4 Processor with Wraith Stealth Cooler	Php7,550	1	Php7,550
Motherboard	GIGABYTE B365M DS3H (LGA 1151/Intel/Micro ATX/USB 3.1 GEN 1(USB3.0) Type A/DDR4/Motherboard	Php3,450	1	Php3,450
Memory	Corsair Vengeance LPX 16GB (2x8G) DDR4 DRAM 3200MHz C16 Desktop Memory Kit	4,450	1	4,450
Storage	Inch SATA 6Gb/s 7200 RPM 256 MB Cache 3.5 (ST2000DM008/ST2000DMZ08)	Php2,750	1	Php2,750
Power Supply	EVGA 750 N1, 750W, Power Supply 100-N1-0750-L1	Php2,450	1	Php2,450
PC case	NZXT H510-CA-H510B-W1- Compact ATX Mid-Tower PC Case- Front I/O Type C port- Tempered Glass Side Panel-Cable Management System- Water Cooling Ready	Php3,300	1	Php3,300
Overall Cost: Php24,150				

We need to use hardware peripherals to be exact the computer won't work fully if we have no monitor

Table 4. Hardware Peripherals

Hardware Peripherals	Specification	Unit Cost	Quantity	Total Cost
Monitor	Sceptre 20 1600x900 75Hz Ultra Thin LED Monitor 2x HDMI VGA Built-in Speaker, Machine Black Wide Viewing Angle 170° (Horizontal) / 160° (Vertical)	Php4,450	1	Php4,450
Overall Cost: Php4,450				

3.2 Proposed Operating System Platforms

The researchers proposed an operating system that is convenient to utilize, familiar, and easy to use. Support software applications and secure files transactions.

Windows 10 Home

A Microsoft operating system has built-in security to help keep you safe, and protect against viruses, phishing and malware.

Table 5. Operating System

OS Platform	Specification	Unit Cost	Quantity	Total Cost
Windows 10	-IA-32,x8664, ARMv7, ARM64, 64-bit -Kernel type Hybrid	Php5,953	1	Php5,953
Overall Cost: Php5,953				

3.3 Proposed Enterprise Software Applications

Enterprise can help the business growth also it is very effective and efficient to every business.

Table 6. Enterprise Software Applications

Enterprise Software	Specification	Unit Cost	Quantity	Total Cost
Customer Relationship Management System	- Deliver support across email, phone, chat - Manage contacts - Track emails and meetings automatically	Php1,573	1	Php1,573
Overall Cost: Php1,573				

3.4 Proposed Data Management

Table 7. Data Management

Proposed Data Management	Specification	Unit Cost	Quantity	Total Cost
Microsoft Office	- Access - Excel - Lync - OneNote - Outlook - PowerPoint - Project - Publisher - Visio - Word	Php7,287.38	1	Php7,287.38
Overall Cost: Php7,287.38				

3.5 Proposed Network & Telecommunications

This type of communication system and broadcasting was offered by the researcher as a useful tool for accessing data information and for speeding up internet connections.

Table 8. Network & Telecommunications

Proposed Network & Telecommunications	Specification	Unit Cost	Quantity	Total Cost
Internet	Focus on Security , Shorter Installation Timelines, Accessible Support, Timely Troubleshooting Response, Future-Oriented Mindset, Offer Business Phone Service, Reliable Upload and Download Speeds, Routing	Php20, 000	1	Php20, 000
UTP Cable	Cord with RJ45, UTP Cable Patch, CAT6 10m LAN Cable	Php300	10 meters	Php300
Overall Cost: Php20,300				

3.6 Proposed Internet Platforms

Online platforms bring customers and producers together, allowing exchanges that would not have happened otherwise.

E-commerce

An e-commerce platform is a piece of software that allows you to buy and sell products over the internet. Customers require a search feature to find a specific product, a cart tool to manage their order, and a payment option in order to use an e-commerce platform.

Table 9. Internet Platform

Proposed Internet Platforms	Specification	Unit Cost	Quantity	Total Cost
E-commerce	Content management capabilities. An easy-to use checkout.	Free	1	Free
Overall Cost: Free				

3.7 Proposed IT Manpower

The researcher offered IT specialists who can assist and do tasks to solve a problem that already exists. Preventive maintenance, on the other hand, refers to undertaking proactive maintenance in order to avoid system failures.

Table 10. IT Manpower

Proposed IT Manpower	Specification	Unit Cost	Quantity	Total Cost
Troubleshooting & Diagnostic or Corrective Maintenance	Identify the problem. Establish a theory of probable cause. Test probable cause theory to determine actual cause. Establish an action plan and execute the plan. Verify full system functionality.	Php2,500 per repair	2	Php5, 000
Overall Cost: Php5, 000				

4 CONCLUSION AND RECOMMENDATION

4.1 Conclusions

In conclusions, as running a business is not an easy thing, there are problems that you've encountered in every phase of it. A company's operations would be slowed as a result of the difficulties discovered. Though one factor is certain, the developed scheme would be the solution to the problems in the phases of supply monitoring, keeping the link or connection with consumers, and efficiently monitoring inventory and reports.

4.2 Recommendations

We recommend this in our proposal to increase efficiency and improve the existing business:

- The researchers aim to develop and recommending the proposed method as a valuable tool for corporate management.
- The recommended proposal aids in the management of supply inventories and reporting, as well as customer and company data. The designed methodology will aid in the improvement of the management of all concepts and phases of the current business.
- In determining a person in control, they should receive training in learning how to cope with their materials and services.
- They should have external consultants to modernize and basic diagnostics in terms of technical control.

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