

**INFORMATION SYSTEM STRATEGIC PLAN FOR THE
MUNICIPALITY OF PILAR, ABRA**

**KRIZEL JOY P. APOLINAR
JHOERILYN J. SILLERO
MARIEL MAE S. REYES**

**A CAPSTONE PROJECT PRESENTED TO THE FACULTY OF
ILOCOS SUR POLYTECHNIC STATE COLLEGE
INSTITUTE OF COMPUTING STUDIES**

**BACHELOR OF SCIENCE IN INFORMATION SYSTEM
(MAJOR IN INFORMATION MANAGEMENT)**

MARCH 2016



TABLE OF CONTENTS

	Page
TITLE PAGE	<i>i</i>
APPROVAL SHEET	<i>ii</i>
DEDICATION	<i>iii</i>
ACKNOWLEDGEMENT	<i>vi</i>
EXECUTIVE SUMMARY	<i>viii</i>
TABLE OF CONTENTS	<i>x</i>
LIST OF TABLES	<i>xi</i>
LIST OF FIGURES	<i>xii</i>
CHAPTER	
I INTRODUCTION	
Project Context	1
Objectives	5
Purpose and Description	6
Scope and Limitation	6
II REVIEW OF RELATED LITERATURE	
Review of Literature	8
III TECHNICAL BACKGROUND	
Investigate Analyze Design Implement Maintain (IADIM)	12

**IV METHODOLOGY**

Project	14
Gantt Chart	14
Team Assignments	15
Data Gathering Procedures	16
Instrumentation	16

V RESULTS AND DISCUSSION

Results and Discussion	18
------------------------	----

VI SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

Summary	59
Conclusions	60
Recommendations	61

REFERENCES	62
-------------------	----

APPENDICES	63
-------------------	----

CURRICULUM VITAE	82
-------------------------	----



Chapter I

INTRODUCTION

Project Context

Over the past two decades, information technology had greatly influenced the government in amending relationships with clients. Through the use of technology, government have improved the delivery of services to constituents and increased the efficiency of their own work processes. These improvements have led to greater client's satisfaction, increased government transparency and significant reductions in operating costs.

The usage of modern information technologies in the organization management will be successful only if information system development is aligned with the organization system development strategy. This regarded as the strategic information systems planning (SISP), Brumec, J., Vrcek, N., (2002). The nature of Information Systems in today's organizations coupled with raised pressure to leverage technology assets has raised the importance of SISP. It is a key concern facing top organizations and information systems executives.

According to Lederer, A. and Sethi, V., SISP is a process used by organizations to integrate long-range use of applications to further their purposes, has become the most critical issue facing executives today. And it is also the process of identifying a portfolio of computer-based applications



to assist an organization in executing its business plans and realizing its business goals.

Effective SISP can help organizations to use information systems to reach their goals and objectives. It can also enable organizations to use information systems to significantly affect their strategies. However, the failure of SISP can result both in lost opportunities and the waste of expensive information systems resources.

A strategic plan is a prudent scheme or tactic used to achieve goals. Its consistency includes objectives to focus to and cooperation among the people concerned just like the government officials and others. Each of them is required to do his part and evaluate it later to be able to see the advantages and disadvantages of the plan presented.

Information system strategic plan refers to the infrastructure of the flow communication within the vicinity of a municipality. It is a method designed for a good and organized flow of information. It plays a significant role in managing the input or information gathered in a system, efficiently. The implementation of this plan results to a good improvement of the system. It makes office works easier and trouble-free job. It also aids in acquiring necessary and updated information needed for the development of the municipal system.

Wireless communication is a type of data communication that is performed and delivered wirelessly. This is a broad term that incorporates



all procedures and forms of connecting and communicating between two or more devices using a wireless signal through wireless communication technologies and devices. Wireless communication generally works through electromagnetic signals that are broadcast by an enabled device within the air, physical environment or atmosphere. The sending device can be a sender or an intermediate device with the ability to propagate wireless signals. The communication between two devices occurs when the destination or receiving intermediate device captures these signals, creates a wireless communication bridge between the sender and receiver device.

(Dale and Cory Janssen, 2008)

Wired Networks provide users with plenty of security and the ability to move lots of data very quickly. Wired networks are typically faster than wireless networks, and they can be very affordable. However, the cost of Ethernet cable can add up. The more computers on your network and the farther apart they are, the more expensive your network would be. In addition, unless you're building a new house and installing Ethernet cable in the walls, you'll be able to see the cables running from place to place around are home, and wires can greatly limit your mobility.(Fuller,2001)

Wireless Networks are often used for offices and even at your own home. Many offices had set-up wireless or wired networks on offices. Taking advantage of wireless networks can be rewarding. Computer networks allow users to create and manipulate information. Information is that which informs takes of its own on a network. The network provides both a place to



store and share the information with other network users. Every individual that has a computer, laptop or any devices that are compatible with the network can do research, discovery, study, entertainment and learning. Administrators, employees and even guests can be connected using the network.

It's very important that Municipal Staff and Clerks can also join the Internet in an office or building and in their rooms or offices as well. Administrators, employees and even guests can begin an activity in their offices and save part of it on a public access area of the network. Offices with the Wi-Fi access on their computer can connect to the Internet from almost anywhere in the building as long as they range of the wireless or wired networks. It's also very easy to send files or share files and software packages to other people on the networks. Office networks allow staff, Administrators, employees and even guests to access their information from connected devices throughout the building and offices. Administrators and employees can also work cooperatively through the network.



Objectives of the Project

The capstone aims to develop Information System Strategic Plan for the Municipality of Pilar, Abra.

Specific Objectives

1. To identify the intended use of ICT of the Municipality of Pilar, Abra in terms of:
 - a. computer hardware;
 - b. computer software;
 - c. people ware;
 - d. operating system;
 - e. automation system;
 - f. network.
2. To design a network infrastructure plan for the Municipality of Pilar, Abra.
3. To determine the validity of 3-year Information System Strategic Plan for the Municipality of Pilar, Abra.
 - a. content;
 - b. usability; and
 - c. functionality.



Purpose and Description

This study aimed to develop an Information System Strategic Plan for Municipality Of Pilar, Abra. At present, the municipality of Pilar, Abra is using a paper-based assessment and annual verification while the researchers proposed a system that can help all the employees in the said Municipality. Its advantages include enhanced assessment of bills, upgraded records and fast service to clients. It is very useful to the entire staffs and others to make their works faster and consistent.

Employees specifically Administrator. This study may assist the employees in their network resources. It may facilitate in the finance and budgeting of networks resources in terms of affordable network devices.

Researchers and Future Researchers. This study will enhance their skills and improve their exploration in conducting Information System Strategic Plan. This will serves as a basis or foundation in order to make and improve such research for the future researchers.

Residents of Pilar, Abra. This study will help the people who residence in the said municipality, so that they will not wait for a long time. Specially, for the clients that live far from the municipal.



Scope and Limitation

This study aimed to propose an Information System Strategic Plan for the Municipality of Pilar, Abra. The researchers proposed a network connection that could connect through all the offices inside the building using Network Bridge.

Although this study imparts network signal strength through the offices within the municipal hall, the employees are the one who are only allowed to access the internet. Guests with the permission could also access yet inside the offices are not permissible. And also in electronic records used only for client's record and in the income monitoring system is for treasury only.



Chapter II

REVIEW OF LITERATURE

Computer Hardware

According to Barnatt (2014) hardware refers to all of the physical parts of a computer system. For a typical desktop computer this comprises the main system unit, a display screen, a keyboard, a mouse, a router/modem (for connection to the Internet), and usually a printer. Speakers, a webcam and an external hard disk for back-up storage are often also included. Many of these items are integrated into a single unit on a laptop or other form of mobile computer.

Openprojects.org defined hardware as a comprehensive term for all of the physical parts of a computer, as distinguished from the data it contains or operates on, and the software that provides instructions for the hardware to accomplish tasks. The boundary between hardware and software is slightly blurry - firmware is software that is "built-in" to the hardware, but such firmware is usually the province of computer programmers and computer engineers in any case and not an issue that computer users need to concern themselves with.

In addition, according to Emberton (2016) hardware is best described as any physical component of a computer system that contains a circuit board, ICs, or other electronics. A perfect example of hardware is the screen



on which you are viewing this page. Whether it be a computer monitor, tablet or smartphone; it's hardware.

Without any hardware, your computer would not exist, and software could not be used.

Software

Mark Allen (2004) stated that the term software describes the programs that run on your system. This includes your computer operating system and other computer programs which run. Software is written in a computer language (such as Basic, C, Java, or others) by programmers. The computer language is in a text format and can be read by a person although if you do not understand the structure and rules of the language you may not understand it very well. Once a program is written, an operation is performed on it which is called compiling. Compiling is the process of changing the textual written language into a binary language which can be understood by the computer.

Writing these text files and converting them to computer readable files is the way operating systems and most application programs are created.

According to Barnatt (2013), software refers to the programs that run on a computer, and which make the hardware useful. Software comes in two basic forms known as operating systems and applications programs.

Operating systems are the software that configure and present computer hardware to the user, and which in doing so co-ordinate basic activities such as memory management, capturing data from the keyboard



and mouse, generating an image on the display screen, printing, and networking. In one of their early PC manuals, IBM once described a computer's operating system as like a policeman that directs the traffic (of computer activity) at a busy intersection.

Sometimes a third category of software is labelled as "utilities". Where used, this term refers to more "minor" applications programs that enable effective computer management and/or security. Falling into category would be software such as virus checkers and firewalls (both as discussed in the security section).

Brandon (2006) further states that vast amount of software is available today in a wide variety of capabilities, applicability, platform requirements and prices. These software products significantly enhance the managers of managing an organization in almost all aspects, including selection, planning, scheduling, execution, control, risk and communications. Managers should therefore be aware of the types of tools available and the features and applicability of those tools.

Peopleware

According to Cory and Dale Janssen (2016) peopleware refers to the human role in an IT system. In many cases, peopleware forms a kind of "conceptual triangle" with hardware and software. The term refers to human talent as a kind of commodified piece of an IT process and a key part of providing various technical business models and other planning resources.



Examples of peopleware include various job roles that are commonly understood as parts of an IT process. These include computer engineers, website designers, technicians and other IT specialists, such as database administrators or networking specialists. Those who are classified under the broad umbrella of peopleware typically hold key certifications in these and other areas of IT specialization.

The use of the term peopleware has led to a vibrant debate about how companies view human talent. Many individual IT specialists, bloggers and others see this type of classification as demeaning, and argue that human workers are not resources but independent parts of a team structure. As such, classifying professionals as peopleware promotes a simplification that can be harmful to corporate relationships. This issue is likely to become more prevalent in IT as corporate cultures often clash with the interests of independent knowledge workers who hold the kinds of talent that businesses need to achieve their goals.

Peopleware according to Vcelloho (2011) refer to anything which has something to do with the role of people in the development or use of computer software and hardware systems and also knowledgeable or skill of people who manages hardware, software and network infrastructure. People or users greatly affect the performance of a system.

**REFERENCES****Unpublished Material**

Mendoza, Zues Vincent B., (2014), "Five- Year Information System Strategic Plan of North Luzon Philippines State College". Thesis.DMMMSU, Agoo, La Union.

Sunico, Rye Derek O., et. al.,(2015), " Narvacan Municipal Wireless Network Plan". Thesis.ISPSC,Sta.Maria, Ilocos Sur.

Online References:

Retrieved from www.techopedia.com. 2016. Biometric System

Retrieved from <http://www.computerhope.com>. 2016. Printer

Retrieved from <http://pcsupport.about.com>. 2016. UPS

Retrieved from <http://www.pc当地.com>. 2016. UPS

Retrieved from www.techopedia.com. 2016. Faceplate

Retrieved from <http://www.scribd.com>. 2016. Attendance Monitoring System

Retrieved from <http://www.nas.gov.uk/>. 2016. Record Keeping/ER Guidance/ERM Systems

Retrieved from <http://wwwaiselaisnetorg/abouthtml/vol12/is53/6/>

Retrieved from <http://www.technopedia.com>. 2016. Wireless Communications

Retrieved from <http://explainingcomputers.com>. 2016. Hardware

Retrieved from <http://www.openprojects.org>. 2016. Hardware

Retrieved from <http://www.comptechdo.org>. 2016. Software

Retrieved from <http://www.explainingcomputers.com>. 2016. Software

Retrieved from <http://en.m.wikipedia.org>. 2016. Operating System

Retrieved from <http://www.techopedia.com>. 2016. Peopleware

Retrieved from <http://en.m.wikipedia.org>. 2016. Peopleware