The Advantage of Modern Computer Technology in Many Businesses' Sectors: A Perspective of ERP Software on "Pizza T" for more Success of Productivity, Quality, Profitability, and Sustainability

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ABSTRACT

To survive in the market, the organization need to mange their data by acquire a proper information management to ensure a better analysis for the data process. It is difficult for the organization to collect integrate and correct data from different software application. In this situation the organization must employ ERP software. This research will discuss the impact of ERP system in Pizza T and how ERP guide the organization to success.

Keywords: Software, organization, Planning, Success, Business, Quality, Accurate, Profitable, Marketing, Financial, Impact, Implementation, Requirement, Productivity

INTRODUCTION

Overview

Pizza T is a chain of restaurants that provide different types of Pizza over its branches. Pizza T started as a sole proprietorship in 1999 with its first branch, one year later Pizza T decided to be as a partnership for some reason such as increase the capital and achieve a proper growth in the market. Since Pizza T became a partnership they open their second branch, now Pizza T has five branches over the city.

Pizza T provides different types of pizza such as super pizza, tuna pizza, vegetable pizza, others. Pizza T always tries to offer many types of pizza in its menu in order to give its customer many choices and to ensure the customer will be back and try something new. Pizza T strategy to offer a new pizza every three months that is mean Pizza T provide four new pizzas in the year. There are several competitors in the market such as Pizza hut and Baba Johns. Pizza T tries to gain competitive advantages over them such as provide Pizza with less price, delivery pizza to customer without extra charging, provide high quality of Pizza and provide a healthy pizza example of that less fat Pizza, less cloistral and less carbohydrate pizza. Pizza T focuses on serve different types of age such as senior people, women, man, teenager and children for some reasons as follow, focus on senior people because all products consist of less fat, less carbohydrates and less cloistral. Focus on women because it is delicious and women used to arrange party, in this situation Pizza T help women to provide different types of Pizza in her party. Focus on man because consists of some protean and vitamins that give him a proper energy in the entire day. Focus on teenager because it is delicious and serving with a suitable price. Focus on children because children like pizza and it consists of calcium and vitamins. Pizza T offers different types of Pizzas through its different branches.

Problem Background

While Pizza T has been in operations for the past years, and has a strong foothold in the industry, the company identifies some problems as follow. First of all, the company is recognizing that it is losing its market share to its competitors. Second, there is generally an overall dissatisfaction among the customers with the emerging new competitors in the market offering value added services with new and innovative methods using technology.

Last but not least, customer dissatisfaction according to the low quality of services.

This has worried the management of Pizza T to seek ways of improving the manner in which customers are served. A general preliminary survey conducted among walk-in customers revealed that customer's expectation is different from those five years ago.

Problem Statement

There are some problems require to be recognize before the team study start to develop the proposed system, the company identify problems as follow. Firstly, the main problem that Pizza T is facing with regards the assurance of the services quality. This matter will affect the customer satisfaction in a way that Pizza T will tend to lose customers. Secondly, the major problem or obstacle facing the Pizza T is issues related to data accuracy which might lead indirectly to fault decisions made by the management of the respective company. On top of that, speed is another issue to be considered here in Pizza T that the flow of information and data affected and might not reach on time which makes it unreliable and costly at the same time.

Objectives

The new ERP system has some objectives, through achieving these objectives Pizza T able to continue its growth in the market; the objectives are as follow. First, increase the market share of Pizza T by establishing a good relationship with customers and this relationship will be maintained through providing quality services. Second, increase customer satisfaction in order to achieved customer satisfaction and attract new customer.

Third, guarantee correct data collection to ensure a proper decision making by the top management. Next, increase the flow of data and information through Pizza T to make sure a proper decision will be making within reasonable time. Lastly, develop the communication channel between departments to facility sharing information and data.

Project Scope

The new system will maximize efficiency of customer service in the organization and conduct an analysis of complaints received by customers, this is will consider as external scope. As internal scope the new system will automated the flow on information within Pizza T and improve the communication between Pizza T's departments.

Project Constraints

When the project completes there are some limitations will come out and the new system couldn't cover it, first; any extension in the project development time will affect the project cost and lead to increase cost. Second; training will affect the project time because employee need to get enough training by the development team to avoid any errors. Finally; the new system did not propose any wireless connection provide to the customer to serving the internet within the branch, but after implement the new system the team study will set up a wireless connection.

Project stakeholder

Stakeholder refer to the people who involved in the project activities such as shareholder, supplier and IT specialist. For more details about project stakeholder refer to Appendix A.

Conclusion

This chapter started with overview of Pizza T by introduce Pizza T as a sole proprietorship that develop to be a partnership with five branches over the country, then this chapter come out with Pizza T problem background and problem statement. Objectives of Pizza T have listed above such as increase the market share by improves the relationship with customer and increase the flow of information within the organization and finally project scope was focused in this chapter to define the internal and external deliverable.

Chapter two will illustrate Enterprise Resources Planning (ERP) as a solution to improve the workflow within the organization, chapter three will consider about the project methodology, chapter four will built up the project design, chapter five will discuss the project implementation and finally chapter six will discuss and summaries the impact of entire project in the organization and how will affect Pizza T.

LITERATURE REVIEW

Introduction

The management will try to create a new system to improve the workflow through many branches and to reduce the limitation of the existing system (manual system). The management will turnover from the manual system to automation system which can gain the company a leadership in the market, create a competitive advantage over its competitors and improve the workflow within the organization.
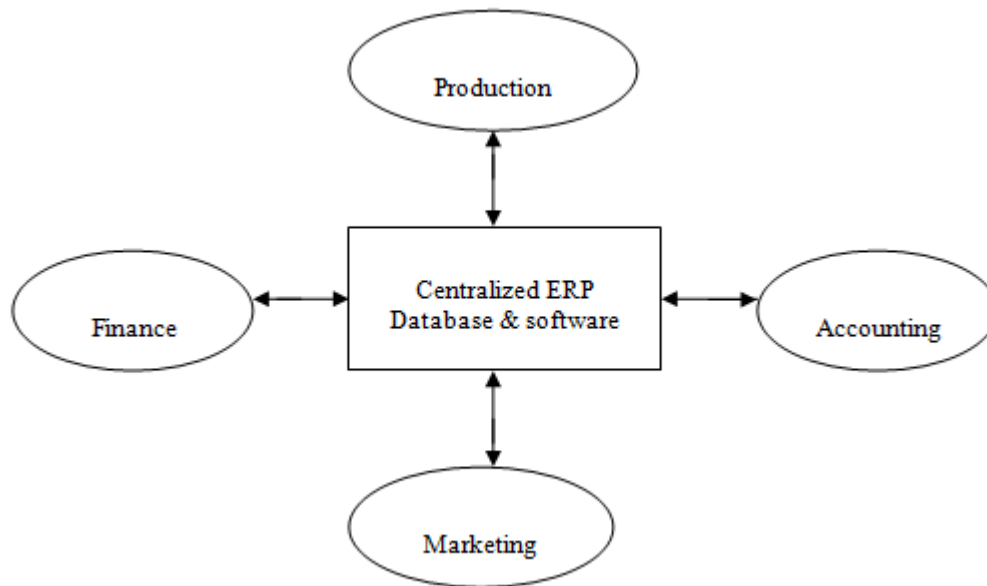
Overview of Automated System

Workflow technology able to serve the company the whole day without getting tired, perform job perfect without errors, delivering order on time, reduce the time of process and reduce overall cost. Epicor(2019). Workflow is about how to computerize or automated of business process. Developing an automated business process requires tools and materials. The workflow system is the tool that is used to easily collect an automated business process. Company rules, determined tasks and data from the enterprise resource planning system are the materials which are uses in integrate business process Christopher Koch (2015).

Based on the research that conducted above, automated system able to improve the organization services that will lead to increase customer loyalty (retention), and increase customer satisfaction.

Outline of ERP Solution

Based on Christopher Koch (2022) Enterprise Resources Planning is integrate all the departments in the company such as Production department, Marketing department and finance department to a single computer system department which function to serve all the department needs as it shows in Figure (2-1) below. According to the Center for Virtual Organization and Commerce (n,d) ERP help the organization to provide better customer services, reduce of organization's operating cost and integrate all the departments in the company to increase the efficiency of operation.

Source: Christopher Koch (2022)

Figure (2-1): Example of ERP architecture

Based on the research conduct above the main purpose of ERP system to allow the organization to sharing information that will result to increase the organization efficiency, improve the process of decision making and increase data accuracy.

Benefits of ERP

According to Christopher Koch (2021) there are some factors should be consider to ensure a successful implementation of ERP system such as avoiding the high cost of system implementation and consider the time taking to implement the ERP system. Based on analysis conduct by Epicor (2019) ERP system can improve the work flow within the organization that will lead to improve the quality of services, develop the process of decision making and improve the accuracy of data.

Based on analysis conduct by Marlene Piturro (2018) ERP able to provide timely and appropriate information For instance, the marketing department at Pizza T currently uses manual customer records and hence this will change when the ERP system is introduced. Customer records and sales records will be stored in electronic format. Contacts in client companies will also be stored accordingly and will be available to customer staff with just a click of the system.

Based on research that conducted above there are many benefits of ERP system identify, these benefits will lead the organization able to gain competitive advantages over its competitors in the market, increase the market share and improve the services quality.

Limitation of ERP

There are some limitations of implementation an ERP system as follow; according to Christopher Koch (2022) ERP systems will enforce the organization to re-engineer current practices to fit within the processes described by the ERP components. Selecting the wrong software could result in an unwilling commitment to applications that do not fit with the

organization's strategic goals. Many companies try to cut costs by reducing training budgets. Success depends on the experience and skill of the employees, including training about how to make the system work correctly. Mostly small enterprises are often undercapitalized, meaning their ERP system is often operated by personnel with insufficient education in ERP in general. The high cost of implementation ERP system in the organization consider as a limitation Wikipedia (n,d).
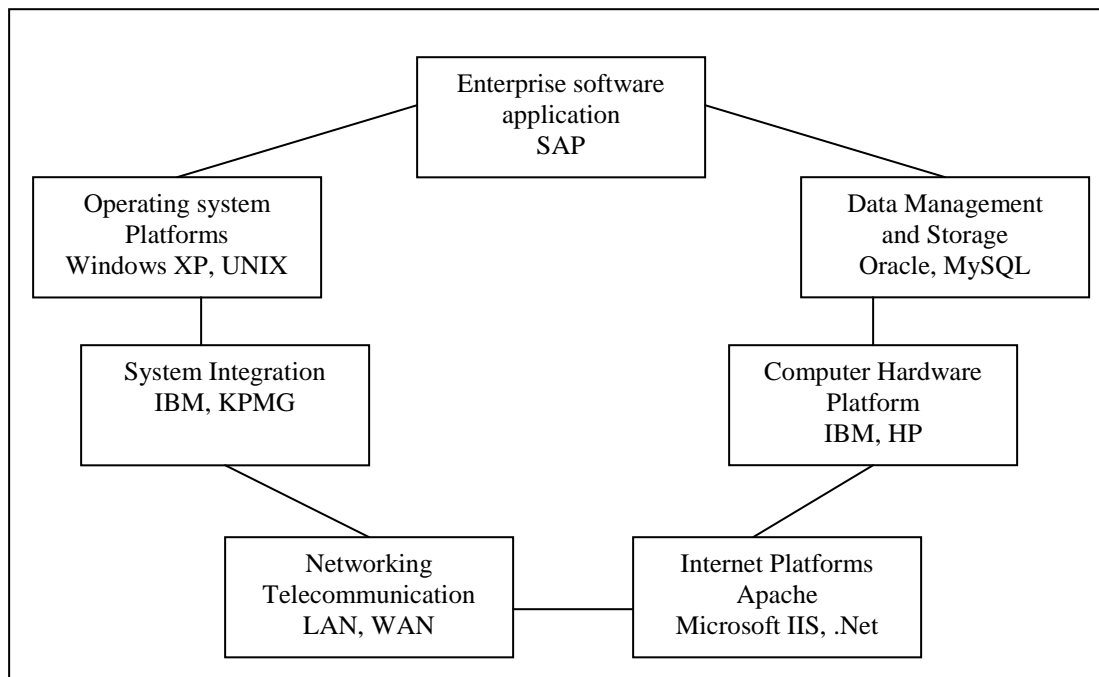
Based on the research that conducted above the organization cloud avoids the ERP system limitations by re-engineering the business process and enforces the entire organization to change their habits but change organization habits will be a critical challenge for Pizza T.

Critical Successful Factors of ERP Implementation
According to Business united (2017) there are some factors will guide to the successful of ERP implementation as follow; Strategic planning involves setting project goals and objectives, identifying high level business requirements, preparing project teams and high level project estimate and setting the priority of modules to be implemented incrementally. The study also stresses on the need to have accurate information to facilitate the project implementation to ensure that any bottleneck that hampers implementation is eliminated. Based on Mike (2020) analysis it is important to divide the ERP project down into manageable parts by setting up pilot programs and short term objectives.

Based on analysis that conducted above, each factor above should be measurable and associated with project goals and objectives. Primary measures that should be listed include critical success levels; in case if specific measurements are more difficult, general goals should be specified.

System Infrastructure

Source: Loudon. Loudon (2019)

Figure (2-2): System Infrastructure

The figure (2-2) above describe the proposed system infrastructure in the organization which consists of seven components as follow Enterprise software application, data management and storage, computer hardware platform, internet platforms, networking telecommunication, system integration and operating system platforms.

The enterprise software application will be providing by SAP because it considers as a large provider for enterprise application in the market, and its application able to work with any operating system and hardware. Organization's data will be managing and organize by Oracle or MySQL because data can efficiently use and accessed by the organization staff. The computer hardware will be IBM, HP or Dell because they consider as a top firms produce computers hardware in

the market. Most Firms will use local area network and wide area network as the networking telecommunication to link the organization branches together in order to sharing data and information. Some firms will use IBM or KPMG as system integration. Most Firms will use Windows XP as operating system because it provides by graphical user interface Loudon. Loudon (2019).

Solutions for Small-Medium Company

There are few firms in the market provide a finance solution, through this research the team study highlighted two companies provide the solution and comparing different areas such as price, quality and system support. The team study has been selected MYOB Premier and QuickBooks Premier. With MYOB Premier and QuickBooks Premier, user can organize his time more efficiently. When the company purchases MYOB Premier or QuickBooks Premier, user has a license that allows numbers of users to work on company data file at the same time. For example, one person can be entering invoices, while two others are depositing customer payments. If user needs more than three people in at once, or as you add employees, you can easily add them to the workflow myob.com (2016), intuit.com (2016).

Based on analysis that conduced above there some advantages of using QuickBooks over MYOB that are QuickBooks comes with over 120 pre-designed customizable business reports and a Report Navigator while MYBO come out with several design. When the company purchases MYOB Premier, it has a license up to three users while QuickBooks premier, it has a license up to five users. Cost of purchasing QuickBooks less than MYOB. MYOB Premier comes with 30 days of free technical support through phone, fax and email while in QuickBooks member has the benefits of unlimited technical support whenever user need it.

Overview of QuickBooks

It is a comprehensive financial management and business planning tools. In addition to helping the organization with its usual accounting tasks, also includes specialized tools and reports to help the organization manage its complete financial picture. QuickBooks able to organizes and tracks the organization information in one easily accessible place. Better still, it tracks that information automatically as you create the checks, receipts, invoices, and other documents you already use. With QuickBooks reports, user always know where the organization will always know where business stands intuit.com (2016).

Success of QuickBooks

There are some advantages of using QuickBooks as follow; QuickBooks comes with over 120 pre-designed, customizable business reports and a Report Navigator that makes it easy to choose the right one. Record bills in QuickBooks, and get automatic reminders when they're due create checks to pay your outstanding bills in one step, QuickBooks tracks expenses and job costs automatically as you pay bills, saving you hours of manually collecting and calculating data for taxes and invoicing. Duplicate and edit previous estimates to create new ones without rewriting all the details. When it's time to bill customers, turn any estimate into an invoice with one click choose from dozens of pre-designed QuickBooks templates to give invoices a professional look, for businesses that don't use standard invoices to bill customers intuit.com (2016).

Failure of QuickBooks

According to Basil TeslerBy (n,d) QuickBooks can also establish to be a threat to the security and confidentiality of issues to the organization. If the organization uses QuickBooks such as payroll system, some confidential information for example salary perhaps will be known to the QuickBooks service provider. Based on analysis conduct by Steve Skidmore using QuickBooks in business process, lead Pizza T tend to loose the managerial control, this happens because it is harder to manage the QuickBooks service provider as compare to managing one's own employees. QuickBooks may also result into the possible loss of flexibility in reacting to changing business conditions, lack of internal and external customer focus and sharing cost savings, loss of internally generated talent is yet another problem associated with the outsourcing as it may slow down the growth of an employee by depriving him from the experience he would have gained by handling the business issue himself then by passing it over to some other external party intuit.com (2016).

METHODOLOGY REVIEW

Introduction

According to Roshmi Choudhury (2022) Managing data help the organization to survive and growth in the market. Nowadays ERP system has become popular and plays an important role inside the organization which support activities that manage the main functions for the organization such as production, marketing, human resources and finance.

The research will focus on the impact of ERP in the Pizza T. The research will discuss some area as follow: Firstly, the analysis of the new system Enterprise Resources Planning. Secondly, the design of the new system Enterprise Resources Planning.

Thirdly, implementation of the new system Enterprise Resources Planning. Finally, discussion and summary of the entire new system.
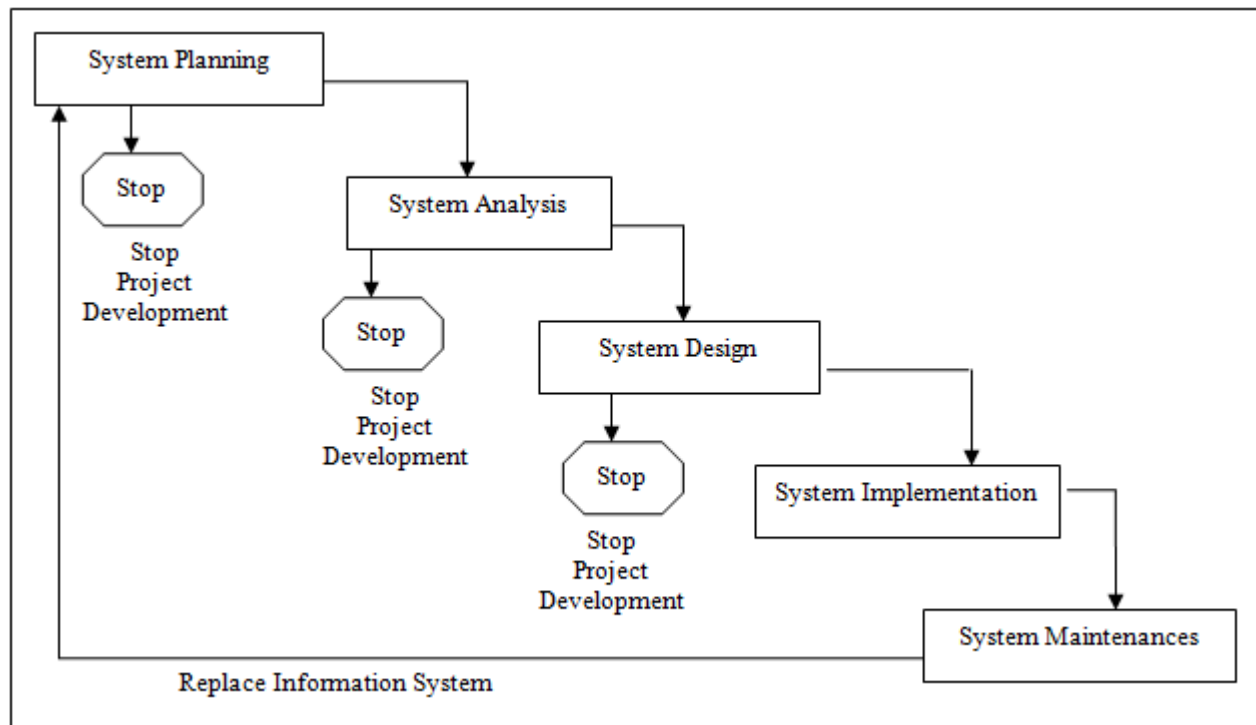
Primary Data
Research was conducted on the organization through the means of interview with the director and through sampling of questionnaires in the organization among the employees. The team study will create some questions and try to breakdown the questions into some analysis point it calls analysis one. Analysis one will try to describe the current problem starting from the macro to more details (micro). From analysis one the research must find the last solution for the current problem by creating analysis two. Analysis two will be provide the last solution for the current problem found in the research. Analysis two will be a collection of more than analysis one or mix form the literature review and in the last of analysis two the research will come out the last solution William G. Zikmund (2004).

Secondary Data
Research was also conducted in the form or journals and academics to gain knowledge on the field of the company and to gather data on ERP system available in the market. The main objective of the preliminary research was to identify clearly the nature and scope of the business opportunity or problem and this was a critical in the sense that it will affect the entire development process William G. Zikmund (2014).

Software Process Model Justification
The proposed system for Pizza T will be developed using the waterfall model because the requirements of Pizza T is clearly known thus the waterfall model facilitates in providing a systematic step by step stages towards completing this project. It also demands that appropriate documentation be produced as the outcome of each phase unlike the evolutionary model which focuses on combining all the phases together without producing a documentation. This theory in adopting the waterfall model for Pizza T is also supported by Wikipedia(n.d.).

Sours: Shelly, Cashman, 2021

Figure (3-1) Waterfall Model

According to Shelly, Cashman (2021), in reliance to Figure (3-1) above, the stages in the waterfall model is evaluated above, In system planning the system project commences with a request from the management of Pizza T concerning the current problems and the management willingness to evaluate other options to address the problems of the existing systems using a new information system, the process of this stage to produce a preliminary research basic on understanding user requirement, but if the team study could not produce the preliminary investigation by the end of this phase they can stop the project development. The systems analysis would incorporate the scopes of business opportunity in addition to dealing with problems identified in the preliminary investigation and the qualification of the project feasibility in a feasibility study, if the team study could not produce the system requirement document and the feasibility study they can stop the project development. The purpose of system design to design the internal and external control including computer based and manual features to guarantee the system will be accurate, secure and timely also the process of this phase to produce the blueprint for the new system, but if the team study could not produce the system design specification they can stop the project development. The system implementation responsible to creates a working system from the design specification that recommended in the design phase, in case the team study could not come out with a system in this phase they can move to the maintenance phase. The system operation and maintenance will ensure the system will be free from errors and able to adapt any new changes made by Pizza T in the system.

SYSTEM ARCHITECTURE AND DESIGN

User Requirements
Functional Requirement
The user shall be able to search and modify items in the system. The new system shall be able to find customers data when the customer services receive a call from a customer. The new system shall be able to store all the business transaction in database. The new system shall be able to register the daily sales records. The new system shall provide reports that describe the daily sales in graphics or bar charts. The system shall be able to link the organization to the supplier in order to request raw materials. The new system shall be able to add, delete and record customer data. The new system shall improve the process of decision making. The new system shall increase the speed of business process. The new system shall be able to improve the quality of services such as reduce the process time to prepare order and reduce the delivering time.

Non Functional Requirement
The new ERP system has some functions which are not related to the system functions but it related to the emergent system properties such as reliability, availability, and security. Reliability refers to the ability of the proposed ERP system to record the daily sales transaction as it expected by the user. Availability refer to the ability of the ERP system to deliver customer data when it requested by the user. Security refer to the ability of the ERP system to protect the system from unauthorized users to access data mostly there is a user name and password will be providing to the user.

Feasibility Study
Feasibility study can be defined as a set of tests and criteria that a system request must meet to determine whether it's worthwhile to proceed further. The series of data used is called feasibility study and it's a vital part of every software development project. Feasibility study can be divided into operational feasibility, economic feasibility, technical feasibility and schedule feasibility to measure and predict a systems success

Operational Feasibility
As part of the operational feasibility, further tests will be conducted in form of user acceptance test, integration testing, and systems testing by feeding dummy data. As for the current moment, more focus is on reliability of information, control and procedures

Reliable Information
The ERP system will have a centralized database that will contain all necessary information on customers and corporate clients readily available to the staff of Pizza T thus they will see the ERP business model an interactive, during which a Pizza T learns more from customers during every interaction and uses this learning's to better meet their needs. Customers data used to record manually at the current manual system that result to took long time to search for data or update customer data.

Control
Control refers to the level of accuracy and the security of information in the ERP system. By no doubt, the system will have security measures to restrict unauthorized access. Measures will also be taken in terms of validation and authentication so as to prompt as extra security measures for the system hence providing a safe, malicious free environment

for the employees to work on and for the customers to rely on. During used the manual system there is no security of information because anyone can get customer data.

Procedures

The ERP system will also have an affect on the day to day procedures of the organization hence it will be necessary to ensure that these processes are further smothered straightforwardness of use. For instance, the marketing department at Pizza T currently uses manual customer records and hence this will change when the ERP system is introduced. All customer records and all sales record will be stored in electronic format. Contacts in client companies will also be stored accordingly and will be available to customer staff with just a click of the system.

Performance and Efficiency

The ERP system will increase efficiency through automation in the operations of Pizza T. Customers will be able to get good services and less of paper flow within the organization. This performance measure will ensure that organization related processes are automated and efficiency is achieved. At the current system delivering order inefficient because the process of preparing order goes through many stages.

Economical Feasibility

Economic feasibility is often referred to as the Cost Benefit Analysis where we have to analyses the cost of development against the benefits associated after implementation (Jeffrey A. Hoffer 2000, p.198). Kendall & Kendall suggested that there are two types of costs and benefits that are associated and must be taken into consideration in any given software development project. These are tangible costs and intangible costs.

Anticipated Benefits

The proposed Enterprise Resources Planning system is assumed to provide various benefits in terms of tangible and intangible. These benefits will give Pizza T a competitive edge from its competitors in the market because of the consistency it will promote in the organization. Tangible benefits will refer to items that can be measured in monetary terms and intangible on the other hand will include items that cannot be measured in monetary terms, some of the benefits derived from the system include improved work performance that can improve the morale of the employees, increase speed of activity regarding customer related processes and increased flexibility among customer staff in the organization (Lederer and Prasad 2000) refer to appendix D and E.

Anticipated Development Cost and Recurring Cost

Similar to the project benefits, the information system will also incur anticipated costs during the development lifecycle. These costs will further be divided into tangible and intangible and furthermore into development cost (initial cost) and recurring costs. From the development perspective, some of the tangible costs will include hardware costs, operational costs, employee training and maintenance and some of the intangible costs may include loss of customer goodwill, employee morale and inefficiency incurred during the development process. However, it's important to estimate the costs involved in the project because both underestimating and over estimating costs is a problem that must be avoided (Lederer and Prasad 2000). As Pizza T already have operating computers, the development cost of the ERP application is assumed not to be very high but Pizza T will require additional hardware. On the other hand, the recurring cost may be a hindering factor such as application software maintenance and consultants cost. Refer to appendix B and C.

Technical Feasibility

Technical feasibility is important in determining the technical features of system development and for this case the Enterprise Resources Planning system. The prime purpose for conducting a technical feasibility is to asses and gain understanding of the organizations ability to construct the proposed system (Jeffrey A. Hoffer 2000, p.206).

However, for this project, the team study will use QuickBooks software, there are many advantages of using QuickBooks software such as QuickBooks tracks expenses and job costs automatically as you pay bills, saving you hours of manually collecting and calculating data for taxes and invoicing. Duplicate and edit previous estimates to create new ones without rewriting all the details. (To get more details about QuickBooks refer to chapter two 2.9).

Schedule Feasibility

The team study realized the specific project cannot be finished on time because there is always an aspect of adding further and enhancing the end product. For that case, the project scope has been defined and hopefully the project can be finished in time except for the technical parts of the project for more details refer to Appendix G.

Based on the feasibility study conducted above, the team study must come out with a final decision whether the new system feasible or not feasible to be develop, as a final result the team study decided the new ERP system feasible to be develop based on the analysis conduct above.

System Requirements
Technical requirements can be defined as a description for implementation environment that includes hardware and software.

TECHNICAL HARDWARE REQUIREMENTS

For clients using the system

- Windows-based operating system
- Computers with at least 166 MHz processing power.
- Memory stands of 128 MB SDRAM.
- Keyboard and mouse.
- Modem with minimum speed of 14.4 kbps and an internet connection.

Operating system

- Windows XP Professional Edition

For the server computer

- Computer with at least 1 GHz processing power.
- Primary memory of 256 SDRAM or 128 RDRAM.
- 10 GB of secondary memory.
- Keyboard and mouse.
- Modem with minimum speed of 56 kbps and an internet connection

IMPLEMENTATION

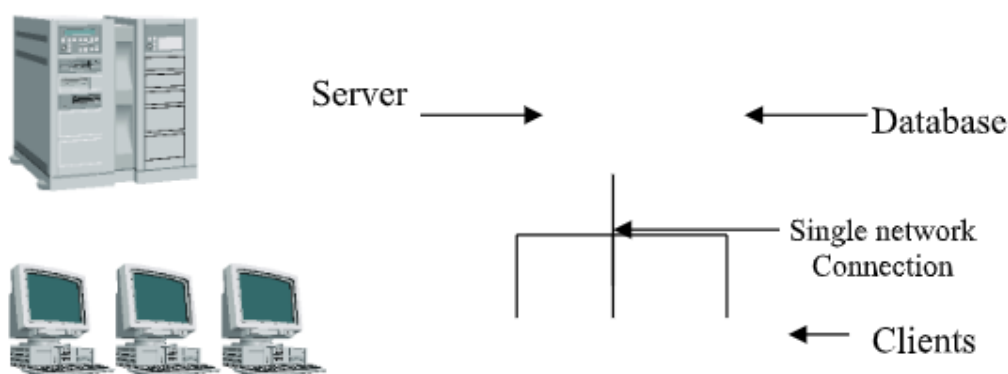**Implementation of the System**

Table (5-1) implementation of the new system

Requirement	Input	Process	Output	Responsible
Company name	Insert company name	Create company name	Company name	Processor owner
Fiscal year	select fiscal year	Setting fiscal year	Fiscal year	Processor owner
Number of users access the system	Select the number of users	Enter a user name and password	User name and password for each user	Processor owner
Sales tax	Select sales tax option	-Sales tax collect from customer. -Not collect from customer.	Sales tax not collect from customer	Processor owner
Invoice format	Select invoice format	Invoice format selected	Invoice designed	Processor owner
Bills and payments	Select the way to handle payment and bills	-checks directly -Enter the bills first and then enter the payments	Checks directly	Processor owner
The reminders window	Select the option to view reminders window	▪ -When start up the system. - When user ask for it. -Rarely.	Reminders window display when system start up	Processor owner
Cash based reports,	Select report method.	-Cash based reports.	Accrual based reports.	Processor owner

accrual based reports.		-Accrual based reports.		
Income accounts	Identify income accounts	-Sales -Foods	Income account statement	Processor owner
Expense accounts	Identify expenses account	-Salary and wages, tax, etc.	Expenses account statement	Processor owner

Source: Quick Books Premier

Site Preparation
Site preparation will involve setting up the necessary hardware, software, operating system, network and preparation of necessary equipment for configuration of the ERP system. In typical two-tier architecture, the server handles both ERP system and database function. Clients responsible to enters data and send it to the server to manipulation data in order to receive information. While there may be several servers and the clients may be distributed across several types of local and wide area links, this delivery of processing responsibilities remains the same erpassist.com. The figure 1-1 below provides a simple example of a two-tier implementation

Source: http://www.erpassist.com

Figure (5-2) example of two-tire implementation

Training of the New System
Preliminary training is important during the implementation of the new ERP system. This is due to the reason that at first instance, the users will not be aware of the system functionality and navigation, however this training time will be like few hours or perhaps just one day. When the ERP system configured the team study will arrange three intensive classes per week for the first month, the duration for the class three hours, during the class the team study will train users to use the new ERP system such as add new customer, take order, print report, etc. After the first month of configured the new ERP system the team study will reduce the classes to one class per week, the purpose of this class to provide the user with any future enhancement.

Justification of Installing Methodology
For the propose ERP system the most applicable conversion strategy would be Pilot conversion, this is because Pizza T does not has any previous ERP system, and the proposed system will be something new to them, the risk associated with the proposed system may be high, to minimize the extent of risk the pilot conversion strategy would be the preferred choice and in this case Pizza T can still be manually operating their records with the use of default applications like excel and word and at the same time use the system as well and judge whether the new ERP system can be fully implemented. Another advantage of this approach is the mean time of partially using the ERP system, the employees will also familiarize themselves with the ERP application and hence once they are used to it, they will be less resistant to change. In case of failures, the company can just roll back to the previous manual system without any hassle Sommerville (2014).

Test Strategy
The test strategy consists of series different tests that fully exercised the Enterprise Resources Planning. The primary purpose of these tests is to discover the systems limitations and measure its full capabilities. The team study conducted some tests to the ERP system such as system functionality test, quality assurance test, security test, user acceptance test and usability test. A list of the various planned tests and a brief explanation follows below

System Functionality Test

The team study focused on the behavior of the ERP system. User scenarios to be executed against the system as well as screen mapping and error message testing. After the team study conducted the functionality test they come out with the system was overall functioned as expected

Quality Assurance Test

The team study conducted quality assurance test to ensure that the ERP system's response time meets the user expectations and does not exceed the specified performance criteria. The team study tested few quality attribute and they come out with the final result as the system was satisfactory to most users in terms of quality (refer to the appendix N).

Security Test

The team study conducted the security test to determine how secure the new ERP system is. The team study used to verify that unauthorized user access to confidential data is prevented. By the end of the test the team study come out with the security module was intact as expected (refer to the appendix N).

User Acceptance Test

After implemented the ERP system the team study conducted user acceptance test. The purpose of these tests is to confirm that the system is developed according to the specified user requirements and ready for operational use (refer to the appendix N).

Usability Testing

The team study conducted the systems usability to ensure the proposed system is highly usable to the organization in terms of functionality and understanding and they come out with the system was usable by the end user in terms of design (refer to the appendix N).

Maintenance

Maintenance is perhaps considered the largest system development expenditure after the system has been implemented. Although there is no single reason for system to be maintained but any information system does evolve over time and user requirements keep changing because of the dynamic business environment that we live in. For the proposed Enterprise Resources Planning System, maintenance is compulsory because of the changing attitudes of user. The most preferred time interval for ERP maintenance should be once or twice a year to ensure the integrity of the system and functionality. The prime advantage from maintaining the ERP system will be vendor support with which the company can expect the expertise of industry developers Shelly, Cashman (2021).

Adaptive Maintenance

This will involve making changes to the proposed system to evolve its functionality to changing business needs. This method of maintenance is chosen because it is usually less urgent than corrective maintenance and thus business and technical changes usually occur within a certain period of time. This method also involved less maintenance effort compared to other methods like corrective and perfective Shelly, Cashman (2021).

SUMMARY AND DISCUSSION

Introduction

This chapter will be discus some areas after the entire system implementation and the affect of the new system in Pizza T. Points that will be discuses such as project objectives overview and whether the new system able to achieve Pizza T objective, strength of the new system and weakness in the organization internal environment and opportunity and threat of the system in the external environment.

Project Objectives Review

The ultimate objective of this project was to develop an Enterprise Resources Planning System for Pizza T to solve some of the common problems that are faced by their staff such as losing of market share to competitors, customer dissatisfaction according to the low quality of services and slow process to make a decision. The proposed system does not only solve the problem but also enhances efficiency within the organization and provides opportunity for improvement. The Enterprise Resources Planning System is supposed to store customer records, identify the best product sells, manage the services process, identify product that have most returns, automate customer service, and manage complaints, provide interaction channels with the customer, automated business process and improve the process of decision making.

User Feedback and Testing

From the user feedback and the tests conducted in chapter five, most of the deliverables of the proposed system were met and hence from there it can be concluded that the project has been a success. The quality assurance test indicated excellent results with an average score of 4 out of 5. Individual modules were also tested and the results were considered satisfactory by the user. Emphasis was also put on the design of the proposed system and with usability testing conducted in chapter five, it was concluded that the system is considered very usable. With such positive feedback from the user, it can be concluded that the project was a success.

Limitation of the ERP System

When the project completes there are some limitations will be discovering and the final project couldn't cover it, that limitations are, according to move from the manual system to the new system employees need for long time training because the team study discovered most of the staff did not have basic computer knowledge. There is a critical trouble when employee facing any problems in the system such as network shutdown, most of the time they couldn't deal with it and they have to call an IT specialist.

FUTURE ENHANCING

Date Mining and Data Warehouse

From the user feedback and the tests conducted in the earlier chapter, most of the deliverables of the proposed system were met and hence from there it can be concluded that the project has been a success. The quality assurance test indicated average results. Individual modules were also tested and the results were considered satisfactory by the user. Emphasis was also put on the design of the proposed system and with usability testing conducted in the earlier chapter, it was concluded that the system is considered very usable. With such positive feedback from the user, it can be concluded that the project was a success.

Information Technology & Business Element

At the end of the project the team study understood and realized that IT plays a competitive advantage of a business in any organization. However, in implementing the system the organization must ensure the business goals are meet and if not it may become detrimental for the company. The IT strategy should be aligned with the business strategy for maximum benefit. The impact of IT towards an organization can be either perceived positively or negatively depending on the analysis and management of project. For instance, if the staff and members of the company find difficult to use the system, this would eventually affect the management. This is because the management has spent fortune of money in order to improve its operations and also provide sufficient training to the user in order to accommodate to the changes.

SWOT Analysis

The SWOT acronym is derived from organizational strengths and weaknesses and environmental opportunities and threats. The organization strengths will be improving the quality of services, reduce the process time, reduce overall cost, improve the delivery system, and able to report daily sales report that will improve a decision making process. There are some weaknesses to used the new proposed system such as provide long time training because most of the staff lack to the basic computer knowledge, installation the new system will be costly at the first time and staff lack to the experience to deal with any problems in the system. The environmental opportunities will be reducing the new entrants in the industry now days' new firms will not able to enter the market because of the high competition, and serve the specific market better than competitors. The environmental threaten will be increase the hardware and software price in the market, and if the competitors serve the specific market better than Pizza T.

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