

CUSTOMER SERVICE AND MAINTENANCE SYSTEM

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I dedicate this thesis to my beloved family.

*To my wife A Hafinaz, thank you for being together through-out our studies,
It has been one enjoyful journey. I Love You.*

To my precious son Daanish, you are the joy of my life.

*To Mama and Papa, thanks for being there when in need.
I give you all my success as appreciation for your undying love and care.*

*To Mak and Abah, thank you for your support and advice.
This success is because of your full spirit.*

*And lastly to all my brothers, thank you for your support you have given me through the
obstacles I have faced.*

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ABSTRACT

Customer Service and Maintenance System is believed to be found under one of many modules of a Customer Relationship Management. It is crucial that the system to be developed in line with company's business objectives. This is to ensure that the system is well developed, so that every part of the modules and functions will be fully utilized by the System Engineer, Managers, and Higher Management personnel. Apart from that, this project enables our participants to gather enormous amount of knowledge, not just in system development, but the whole process of managing every single phase of project development. This project is developed with the help of Unified Modeling Language as one of the development tool. The basic concept of this system is to promote the needs of catering the customer's breakdown calls, and logging it into a nice and well-defined database. It helps the company to be at much competitive with the other multi-national organizations in terms of much higher service quality.

ABSTRAK

Adalah dipercayai bahawa Customer Service and Maintenance Sistem adalah merupakan salah sebuah modul kecil didalam Customer Relationship Management. Untuk memastikan bahawa segala ciri-ciri dan modul-modul sistem yang telah dibangunkan dapat dipergunakan sepenuhnya oleh Jurutera-Jurutera Sistem, Pengurus, dan pihak pengurusan syarikat, proses pembangunan sistem perlu dilakukan dengan amat teliti supaya tidak mudah terpesong daripada objektif utama syarikat. Selain daripada itu, adalah diharapkan dengan adanya projek ini, dapat diterapkan unsur kerjasama dikalangan rakan sekerja, dan juga dapat menggalakkan penambahan ilmu pembangunan sistem dikalangan pekerja. Selain itu, projek ini akan dapat menunjukkan cara pengurusan yang baik bagi setiap fasa-fasa pembangunan projek. Projek ini dibangunkan dengan bantuan pendekatan Unified Modelling Language sebagai alat bantuan pembangunan. Konsep asas projek ini dibangunkan untuk memastikan bahawa kehendak dan masalah pelanggan dapat diselesaikan dengan cara yang lebih sistematik, dimana sistem akan menggunakan proses penyimpanan data-data pelanggan ke dalam pangkalan data yang lebih kemas. Akhirnya, data-data tersebut akan dapat dipaparkan dengan paparan yang lebih elok dan teratur untuk kegunaan audit.

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CHAPTER I

INTRODUCTION

1.1 Overview

Customer Care and Services management system had enormously gained recognition in the mid-1990s, primarily driven by its perception as information technology (IT). However, not enough attention has been given to the fundamental drivers of CRM success: strategy, metrics and the organization.

Successful Customer Care is about competing in the relationship dimension of customer, not as an alternative to having a competitive product or reasonable price, but also not as a differentiator. If other competitors are doing the same thing as selling the same products where prices, this definitely won't give them a long-term and sustainable competitive advantage. But if one can get an edge based on how customers feel about the company, it's a much solid and sustainable relationship over the long haul.

The customer care system would really benefit a service provider company which relies totally on consumers' satisfaction. With the system, it is foreseen that the enterprise could assure that the resources and services of the company are given to the

customer's of service at a relevant time but nevertheless it is done in a more efficient and effective way possible.

1.2 Problem Background

Continuous Network Services Sdn Bhd is an IT company that primarily provides supports and services to various types of customers. Products that are being supported by this company are ranging from network routers, switches, firewalls, which come in a form of modules and chassis. The product vendors that the company holds for solutions are such as Cisco, Lucent Technologies, Alcatel, Nokia, McAfee and etc.

Currently, when ever there is a breakdown call for a particular customer, the System Engineer will have to dig out all the relevant information that regards to the customer from an un-organized filling which were keyed-in by Engineers them selves. This is to ensure that they know what type of equipments that are being used by the customer and what kind of problems that they are facing with. By knowing it, apparently it will assist the Engineers to perform their support activities to a more efficient and effective way possible and in a timely manner. They could also identify what are the possible action and activities that they should take in rectifying the problems that arises with the customer.

After completing with the customer support, the next action for the System Engineers is to update the customer's information with the latest concern. Usually, the update would be to enter the actions taken during the onsite support. The Engineer would have to mention what were the findings or the actual problems occurred, and what were the actions being taken to resolve the problems. This is to ensure that the next Engineer who will be going for the same customer in the future, they will know what is the history of the equipments and the current situation of the customers itself.

Besides that, Manager would use the log files to identify which Engineers are attending breakdowns and which are not. In a way, it will help the Manager to organize the resources more appropriately that eventually will evolve to a more efficient resource usage. Resources are crucial to be organized properly since it is considered as an asset to the company's profit. The Engineers should be distributed wisely according to breakdown so that if there is a lot of breakdown happened at a time, there will be enough work force to supply the demand.

As for the higher managerial such as the Senior Managers and Directors, they require a breakdown log to assist them on decision making for their monthly management meetings. Currently, they have to compile them selves from a long list of breakdowns occurred in a month. This could eventually cost them so much time that the management could not bear.

1.3 Problem Statement

The productivity of all System Engineers and Managers in CNS is hampered due to the lack of organized procedures in delegating resources such as Engineers and Equipment parts, to the most effective and efficient way. On the other hand, the Managers are having a difficult time in creating a periodic audit report since there are no updated breakdown logs and product inventory. The process of receiving and attending breakdown calls is not sufficiently logged-in, in which would create a hassle for the Engineers to retrieve it back in the future.

1.4 Project Objectives

The objectives of this project is as follows:-

- a) To study the current process of receiving and attending customer's breakdown calls.
- b) To design and develop the Customer Service and Maintenance System which includes the following features: -
 - a. Initiate and Manage Breakdown Report
 - b. Resource Management
 - c. Generate Audit Reports
- c) To improve current procedures of customer breakdown support.
- d) To formulate a management strategy for the successful implementation of customer service and support.

1.5 Project Scope

The identified scope of this project is as follows:-

- a) To develop a web-based system in which it will be use by System Engineers, Technical Manager, Senior Manager and Managing Director of Continuous Network Services Sdn Bhd.
- e) To develop a web-based system that will help to improve the respond time in terms of breakdown call supports, services & maintenance, and decision making of Management Executives.
- f) A sample data will be used to run the system.

- b) The additional user of the system will be specific for Bursa Malaysia as a customer.
- c) The system will be able to generate a weekly, monthly, and yearly report of various audit reports to assist the managerial level in decision-making.

1.6 Project Importance

The benefits that Continuous Network Services could gain from this system are:-

1. The Engineer could perform the customer support well in terms of professionalism, skill, and more effective and efficient which it could help the customer to save more of expenses in the long run.
2. The management could save and make use of their productivity time to think more on how to improve the business procedures and increase the business marketing and sales yearly revenue.
3. Customer will be getting a highly rated service for their equipment, which usually will only be provided by major vendor companies.

1.7 Summary

The solution is to develop a centralized server that situates a database in it, which the client can access through a web. Besides the database, there will also be a web server that controls and manages the transition of data and the input and output of information through the network. The system will be a real-time and online which is accessible 24 hours.

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