

THE DEVELOPMENT OF THE CUSTOMER RELATION MANAGEMENT SYSTEM

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ABSTRACT

The research had the objective to develop the information system for customer relation management. Such system included the customer database in terms of personal data, products details and service supporting the operation of service counters and production lines. By this system, the customers could access the services or follow-up the pending tasks via online database. In addition, the organization could manage the production lines and services efficiently whereas the customers were satisfied. The samples of this research consisted of 9 supervisors and 36 related employees; all were the personnel of the Center of Information Technology and Communication Service. By this study, questionnaire asking the requirements for information technology system development related to customer relation management and tools used for the development of information technology system were applied as the research instruments. The research procedures consisted of the following steps: (1) Study of related data (2) Study of customer relation management process of the organization (3) Determination of requirements on information technology system for customer relation management (4) Design and installation of the information technology system for customer relation management (5) Development of the information technology system for customer relation management (6) Test and installation of the established system and (7) Actual implementation in the organization with system maintenance. The research results indicated that the Center of Information Technology and Communication Service has distinctly established its vision, missions, objectives and development strategies. Additionally, the Center provided full-option products and services related to information technology with the exact target to increase the customers' satisfaction. The customer relation management composed 3 steps, namely, receiving product and service orders received, commencing the production and product delivery, and preparing payment. Concerning the requirements on information technology system for customer relation management, the following systems were ranked based on highest priority: CITCOMS shop, Counter Service, Multimedia Borrowing and Returning, Information database and Assessment. After the development of the information technology system for customer relation management, the system was actually installed and implemented in the organization.

KEYWORDS: Customer Relation Management, CRM.

INTRODUCTION

The CRM approach has received increased attention as a marketing concept during the last decades, both amongst practitioners and in academia (Osarenkhoe & Bennani, 2007). CRM and forced impeding its success are both growing up. Companies are increasingly getting the business alignment and technology issues right, but many must still tackle the hardest challenge of all motivating organizations and making them accountable for results (Mitsui, 2004). The IT department needs extensive infrastructure and resources to implement CRM databases successfully. Executives must be willing to support the CRM implementation process forever because CRM never ends (Gray & Byun, 2001). Center for Information and Communication Service (CITCOMS) is the organization providing full-optioned services in regard with information technology. Currently, the customers of CITCOMS include general people, students and university staffs. However, CITCOMS has encountered some problems related to the services such as the data of customers, procurement/order procedures, order procedures with the production line and service department including delivery procedures. These problems were resulted from the lack of appropriate facilitating system. This study therefore had the objective to develop the customer relation management system, namely, the program supporting the customer services, communications between CITCOMS and customers, follow-up of working progress, access of online database, collection of customers' data and requirements for further implications including easy and simple access to updated data. In other words, it could be cited that the system would encourage CITCOMS to manage the production and

services more efficiently in satisfying the customers. The CRM system success model that consists of CRM initiatives: process fit, customer information quality, and system support; intrinsic success: efficiency and customer satisfaction; and extrinsic success: profitability (Roha, Ahnb, & Han, 2005).

METHODOLOGY

The data related to the organization such as service policies, strategies and marketing plans, satisfactions of customers on the services of CITCOMS, concepts and theories concerning this research project were compiled and analyzed through the studying of textbooks, documents, journals, websites, relevant researches, literature reviews of theses, term papers, dissertations, academic documents including online data. The customer relation management procedures, that is, the current counter services of CITCOMS were studied in terms of the direct communication and coordination with the customers. In addition, all communication procedures among the customers, production line and service staffs were analyzed. The requirements on information technology and the customer relation management were studied. In this context, the production procedures and counter services were considered. Additionally, the related data, for example, the functions and activities, the relation between the organization and data, the flow of data or data structure, the scope of system operation, the concepts and demands on new system of users etc. were also studied. The current system procedures and demands of users were analyzed in details for the development of model. The components considered here included the work flow, use case diagram, class diagram

and so on. To develop the customer relation management system, the data derived from the analysis and design were converted as the program or command series to obtain the output, which could be used in the decision making in regard with the customer relation and program documentation. The system was tested to verify the operation so that any mistake detected could be remedied completely. The system was implemented and actually run in the organization. In addition, the documents, program manuals and trainings were concurrently prepared and provided for the stakeholders. And the system was maintained in the ready condition all the times. Besides, the system was improved regularly to support the changed technology.

The samples of the study and analysis on the services of CITCOMS, requirements, customer relation system and demand on program consisted of the staffs of CITCOMS from 9 divisions, namely, 9 division heads and 27 staffs; totally, 36 persons. Concerning the research instruments used in the development of customer relation management system, the computer resources of Naresuan University were used. Such resources included the software and system languages like MySQL, HTML, SQL, Windows XP Professional and Browser Internet Explorer etc.

EXPERIMENTAL RESULTS

Customer Relationship Management emerged in the last decade to reflect the central role of the customer for the strategic positioning of a company. It encompasses all measures for understanding the customers and for exploiting this knowledge to design and implement marketing activities (Srivastava, 2010). That the

philosophy of CITCOMS is to “Provide standardized information technology services and communication,” CITCOMS will select, allocate and develop the information technology in supporting the education, research and academic services provided for the public. Furthermore, CITCOMS will support the activities of Naresuan University to promote the university as the academic leader, using the IT as the main strategic device in creating and developing the academy. All operations must be standardized internationally. Thus, the 6 dimensions of mission were determined, the services of computer network, the services of information system development, the services of information media production, the academic services, the service of information sources and the service of meeting and seminar rooms. Each dimension was established with distinct strategies and key performance indicators. The customer strategies of CITCOMS were established with the customer satisfaction indicator of 15%. This research obviously aimed also to develop the tool to support the satisfaction of customers.

It can be concluded, according to the study of the customer relation management system, that there were still no distinct customer relation management procedures for the counter services. It could be noted that the existing procedures consisted of 3 steps: (1) Receiving the production/service orders; (2) Ordering the production and delivering the goods; and (3) Making payments. Since the documentation of the counter service was still manually prepared, the operation might be delayed resulting in the inconvenience. The procedures of counter service could be divided into three sub-procedures. Therefore, the demands on the information system had to be studied and understood so that the system with easy access could be developed to solve the cited problems, provide quick

services and enhance the satisfaction of customers.

In regard with the demand on the customer relation management system, one system of front office, namely, CITCOMS Shop and 8 systems of back office were totally required. The 8 systems of back office included the counter service system, the information and image system, the raw materials management system, the printing media production system, the supplies system, the multimedia circulation system, the research project management system, the project management system and the personal performance assessment system. In the context of the analysis and design of customer relation management system, the work flow, the use case diagram and the class diagram were used to describe the details of the system. The 9 systems were designed to be connected each another to support the future system development; such systems were CITCOMS Shop, Counter Service, Multimedia Circulation System, Information and Image System, and Personal Performance Assessment System.

In terms of the development of the customer relation management system, Following the review and analysis of process, strategy, philosophy, capability, and technology-based CRM perspectives for the purpose of

building and maintaining a profit-maximizing portfolio of customer relationships (Zablah, Bellenger, & Johnston, 2004).

Based on the study of demands and necessity, analytical reports and designing of information system, the 5 main information systems related to the CRM should be developed: CITCOMS Shop, Counter Service, Multimedia Circulation System, Information and Image System and Performance Assessment System:

CITCOMS Shop: This module is not only involved with the direct contact to the users or customers but it also supports the connection with the counter service and production system. The web page of CITCOMS Shop thus should present the details of products and services of CITCOMS; for instance, the specifications of products and services, prices and order procedures etc. The main pages should contain the contents of lists of products and services, sales promotions, web board, public relation news, subscription, tips for selection of products and services, contact channels, payment, recommended products and calculator. This module should store the data of customers and act as the communicative medium between CITCOMS and customers.

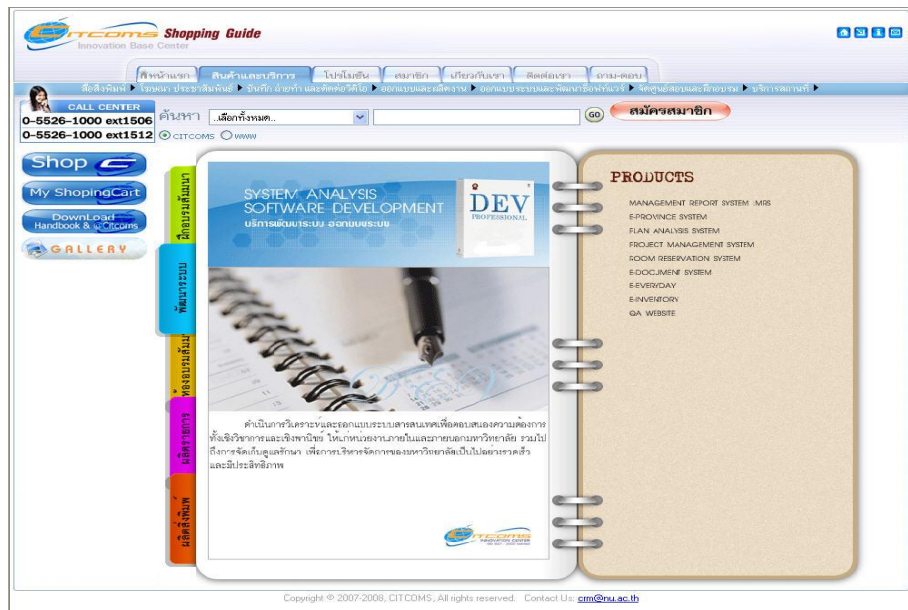


Figure 1 CITCOMS shop system

Counter Service: This module is about the orders and production of products. The staffs can retrieve the data of products and services including the customers' details from the customer database. Moreover, the staffs can prepare the daily, monthly and yearly reports while the data of customers and statistics of services can be recorded in the system. The forms and reports such as the requirement forms, delivery notes, invoices, quotations, orders, slips and

debtors' control list etc. can be printed simply. The main pages should comprise the order acceptance, requirement form preparation, coordination with production line and services based on the customers' demands, monitoring and follow-up of production and services, delivery of products and services, payment, financial reports, customer support, sales and debtors including the connection of customer database with CITCOMS Shop module.

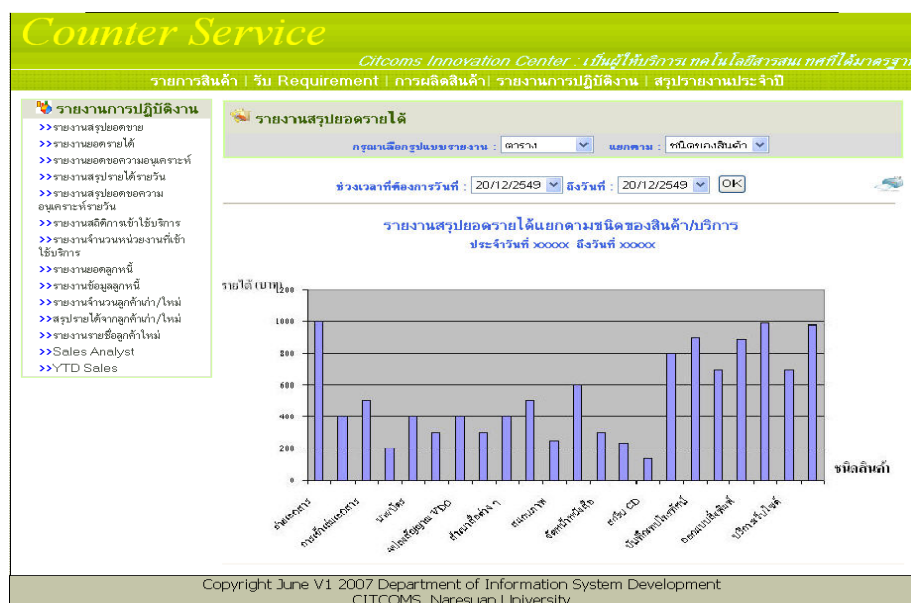


Figure 2 Counter Service system

Multimedia Circulation System: This module enhances the efficiency and convenience of multimedia circulation since the VCD data can be added, modified, updated and recorded from times to times. In addition, the system can make an alert on the fine payment as the module is connected with the Counter Service. The users, who do not return the VCDs, will be alerted on the outstanding multimedia items

at the entrance. The data of multimedia can be searched whereas the reports of circulation, fine etc. can be printed. The main pages of this module hence should present the multimedia (i.e. VCD) search service. Visiting the computer rooms of CITCOMS, the students can search information, borrow and return multimedia through the system since the system can trace, detect and record all multimedia items.

Figure 3 Multimedia Circulation System

Information and Image System: This module stores the information and images, which can be shared among the staffs. The report of information and images can be prepared since the system is connected with the public relation data, production line and services. In general, the main pages of this module should comprise the data storage

system for information, news, images of news and activities including all kinds of public relation media of CITCOMS. All stakeholders like the public relation officers can store and use the information and images in preparing the press release, yearly reports, references and other similar implications.

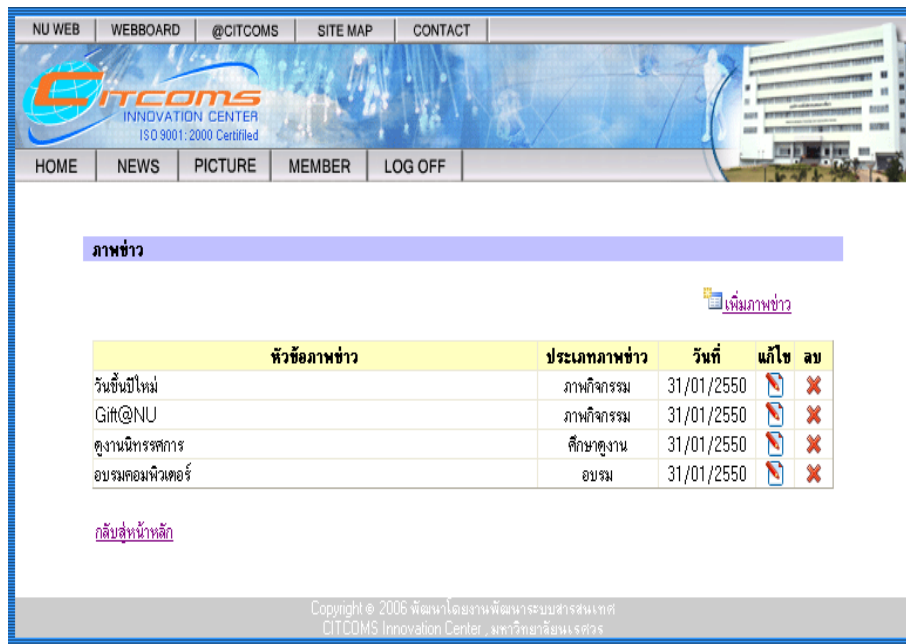


Figure 4 Information and Image System

Performance Assessment System:
This system stores the data related to the performance of the staffs in production line and service division. The progress of performance or production and services can be traced whereas the personal performance can be individually evaluated. The main pages of this module should contain the

contents of personal data, performance scores, competency-based assessment, alert system for assessment schedule and automatic calculation of final scores. So, the staffs can verify the assessment outcomes or search for the staffs passing or failing the evaluation criteria.

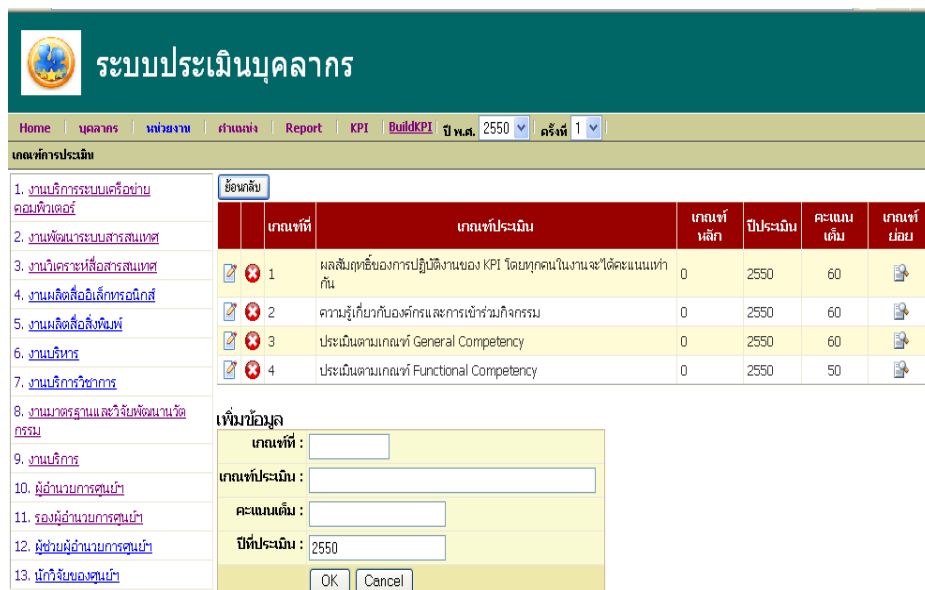


Figure 5 Performance Assessment System

CONCLUSIONS

CRM and operational CRM are integrated closely by design, analytical results can be applied within operational CRM as well as forwarded as success measurements for closed-loop marketing, sales, and service (Systems Applications and Products in Data Processing [SAP], 2001) This research, the customer relation management system can enhance the efficiency of production and services of CITCOMS since it can improve and accelerate the procedures of order acceptance and production requests. The automatic information system will provide communicative convenience for customers whereas CITCOMS can record the service behaviors of customers, which can be used in the improvement of efficiency of production and services including customers' satisfaction. The CRM evaluation calls for a pre-phase giving to the idea that the CRM strategy needs to be synchronized with the overall strategy of the company as well as the IT strategy Ina Friedrich, (Friedrich, Sprenger, & Breitner, 2010). The evaluations can support overall strategy of CITCOMS. The CRM system sales activities and sales promotions through its automatic system. The data of customers can be recorded in the database for further searching. Besides, the information related to the products and services can be delivered to the customers within a short time. This system can enhance the satisfaction of customers. It also provides convenience, quick services and good relationship between CITCOMS and its customers. CRM is the demand-side management using the information technology to support the operation. Thus, the business procedures are improved with the emphasis on the interaction between CITCOMS and its customers. Since CRM aims to support, develop and improve the management of supply chain and value chain, CITCOMS can, therefore, satisfy

all requirements of customers rapidly. CRM was developed to be used in supporting the procedures of CITCOMS. The system can be also applied to other working units or organizations; however, it should be adapted in accordance with the procedures and reports, case by case.

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