

CUSTOMER RELATIONSHIP MANAGEMENT INFORMATION SYSTEM DEVELOPMENT IN PT. CITRA VAN TITIPAN KILAT

Fransiskus Adikara, Ricky Fauzi

Teknik Informatika, Universitas Esa Unggul, Jakarta, Indonesia
E-mail : fransiskus.adikara@esaunggul.ac.id; fauzi.oziz@gmail.com

ABSTRACT

Customer Relationship Management (CRM) is an important factor in service-oriented business like goods and mail delivery service business (PT. Citra Van Titipan Kilat). The company needs information system to maximize their customer relationship management so they can have more competitive advantage than their competitor. This paper shows activities to design and develop the new CRM information system for PT. Citra Van Titipan Kilat. With the new information system, the company can manage their customer satisfaction with the new features provided by the system like delivery trackings and more reports than manual reports provided before.

Key words: *customer relationship management, deliver service business, CRM information system, customer satisfaction*

1. INTRODUCTION

Various surveys show that the key to the company's success is not solely lie in the quality of products or services offered but how far the company's efforts to satisfy the needs of its customers. Giving good service to ensure that customer become loyal customers. Nowadays a product-oriented business has become to be customer-oriented, many companies are now realizing that to serve existing customers is the main source of profit and revenue growth.

PT Citra Van Courier Express (TIKI) is a delivery service company. Satisfactory and trustworthy service are the things that make shipping industry business growth. Therefore, in developing a business TIKI always oriented to customer satisfaction. Implementing Customer Relationship Management (CRM) is effective and successful way to meet and satisfy the needs of it's customers.

More customer's demands occurs during this internet era, such as the desire to be served anytime, anywhere, and from anywhere, and also the desire for more personalized serviced. Currently TIKI still not able to meet delivery status information of the items to the customers in realtime with internet.

Moreover customers also feel less informed about delivery stage process.

2. LITERATURE REVIEW

2.1. CRM (Customer Relationship Management)

CRM is a company strategy to satisfy the customers so as not turnout to competitors. The company gives a personal customer care by treating the customer as king. CRM is a tirelessly effort for the company to always be customer-oriented or customer-centric (Buttle, 2007).

CRM manage detailed information about individual customers and the customers' "contact points" to maximize customer loyalty. The customers' contact points are those points of contact at which businesses interact directly with their customers. CRM enables companies provide real-time customer service perfectly through the use of effective personal account information (Kotler, 2009).

Relationships between IT and CRM is CRM unites the IT potential and relationship marketing strategies to deliver long-term profitability. Importantly, CRM use the data and information to improve opportunity level to understand and implement customer

relationship marketing strategies better. This process require cross-functional integration of people, operations, processes and marketing capabilities that is enabled through information, technology and applications (Payne, 2005).

The emergence of CRM as a management approach is a consequence of a number of important trends. These include (Payne, 2005) :

- a. Shift in business focus from transactional marketing to relationship marketing.
- b. The realization that the customer is a business asset and not just a commercial audience.
- c. Structuring the organization strategic transformation from function to process.
- d. Recognition to the benefits of using the information in a proactive rather than merely reactive
- e. Greater use of technology in managing and maximizing the value of information
- f. Acceptance of the need for a trade-off between giving and extracting customer value
- g. The development of one-to-one marketing approach

2.2. Customer Satisfaction

For customers satisfaction, company needs to understand what is important to them and try to at least meet their basic expectations. Achieving the highest level of customer satisfaction is the ultimate goal of marketing. When customers are satisfied with the services and the goods, mostly customer will be back again for another purchase and would recommend to friends and family about the company and its products (Barnes, 2003).

Customer satisfaction is the response in the form of feelings of satisfaction arising from the experience of consuming a product or service, or a small part of the experience (Buttle, 2007).

Customer satisfaction is a person's feelings of pleasure or disappointment arising from comparing the perceived performance of the product (or outcome) with their expectations. If performance fails to meet expectations, the customer is not satisfied. If performance

is in accordance with expectations, the customer will be satisfied. If performance exceeds expectations, the customer will be very satisfied and happy. Assessment of the customer's product performance depends on many factors, especially the type of relationship that customers have loyalty to a brand (Kotler, 2009).

Factors affecting the level of customer satisfaction (Barnes, 2003) : Product or service core; system and support services; technical Performance; elements of interaction with customers; and emotional-affective dimension elements of service. To achieve customer satisfaction, CRM must be run, because with CRM the system can improve the performance of the company's business by increasing customer satisfaction and in turn foster brand loyalty.

2.3. Web Database Application

An application is a program or a group of programs designed for use by an end user. If the end user interacts with the application via a Web browser, the application is a Web based or Web application, and if the Web application requires the long-term storage of information using a database, it is a Web database application (Nugroho, 2008).

The database is the long-term memory of your web database application. The application can't fulfill its purpose without the database. However, the database alone is not enough. And the application piece is the program or group of programs that performs the tasks. Programs create the display that the user sees in the browser window; they make your application interactive by accepting and processing information that the user types in the browser window; and they store information in the database and get information out of the database (The database is useless unless you can move data in and out.)

3. RESEARCH METHODOLOGY

The methods of analysis and design to build a system of web-based CRM can be described as follows:

1. Data Collection Methods
 - a. Field studies (Field Research)

At this stage, we collect written data and interview stakeholders in PT Citra Van Courier Express, about the topic and the subject matter, scope, objectives and benefits, the most critical issues, and the proposed resolution to the problem.

b. Literature study (Library Research)

Literature study with source obtained from books, articles, the Internet, and other scientific literature related to this study, especially those related to web-based CRM application.

2. Analysis Method

a. The analysis of business processes.

b. Analysis of the required customer information needs and the results will be applied to the application of e-CRM systems.

c. Compare analysis: Observe other shipping company's website as a comparison against the website that will be created.

3. Iterative methods

a. CRM application database design.

b. Designing menus and specification process.

c. Designing screens.

4. COMPANY BACKGROUND

PT. Citra Van Courier Express (TIKI) formerly known as CV. Titipan Kilat was founded in 1970 in Jakarta, with the founders and shareholders Soeprapto and Nuraini Soeprapto. In 2 years period, the TIKI business has expanded and reached Kuala Pinang city, Semarang and Surabaya. There was management changes in 1972. The company have new shareholder consists of Irawan Saputra (deceased), Gideon Raphael Wiraseputra and Rusmadi. With the change of management and increasing economic growth, TIKI activities business become more improve and expand. Within one and a half years, TIKI has spread to reach and serve all Indonesia regions and start to service abroad delivery.

Currently TIKI can be found in more than 500 services and reaching delivery destinations throughout Indonesia and abroad. With the support of a reliable hundreds of fleet and thousands of skilled

personnel scattered throughout the country, TIKI become the largest company among delivery services industry via air express courier in Indonesia.

5. PROBLEMS ANALYSIS

The analysis is done by conducting surveys and analyzing the current system to obtain information or data from the system. After that, we do requirements elicitation by conducting interviews with Titipan Kilat. Also we conducted a comparative analysis to support design process, with features provided by competing companies to its customers. All analyzes were performed to identify the problem in terms of customer service at Titipan Kilat. There are three founding consist of :

1. Customers have difficulty in obtaining a delivery status information.

2. The website of the company is still a general nature and static, while the company's competitors also have a website already provides several features important to the customer.

3. Customer complaints are handled properly. Only staff who receive complaints through telephone involved, the staff themselves had difficulty in tracking customer complaints, with the exception of customers who filed the complaint itself.

6. INFORMATION SYSTEM DESIGN

Information System developes by using PHP, jQuery, and MySQL as database. This is because the system will be used by more than one person (Multi User), and MySQL is Open Source.

Designing CRM WEB application development will be covered by using UML diagrams. UML diagrams that will be used are Use Case Diagram, Class Diagram, Statechart Diagram, Activity Diagram, Sequence Diagram, Collaboration Diagram, Component Diagram, Deployment Diagram and Package Diagram. For this paper are only shown two diagrams Use Case Diagram and Class diagram.

6.1. Use Case Diagram

Use case diagrams will illustrate the expected function of a system, so by looking at the use case diagram will know "what" is done the system and the relationship between actor and use case.

1. Actor

Actor contained in the web applications are CRM is a Customer and Administrator.

2. Use Case

To describe any use case and actor who is involved in it.

6.2. Class Diagram

Class describes the state (attribute/property) of a system, while offering services to manipulate the situation (method/function). Here is a class diagram that authors of CRM designed for web applications can be seen in Figure 3.

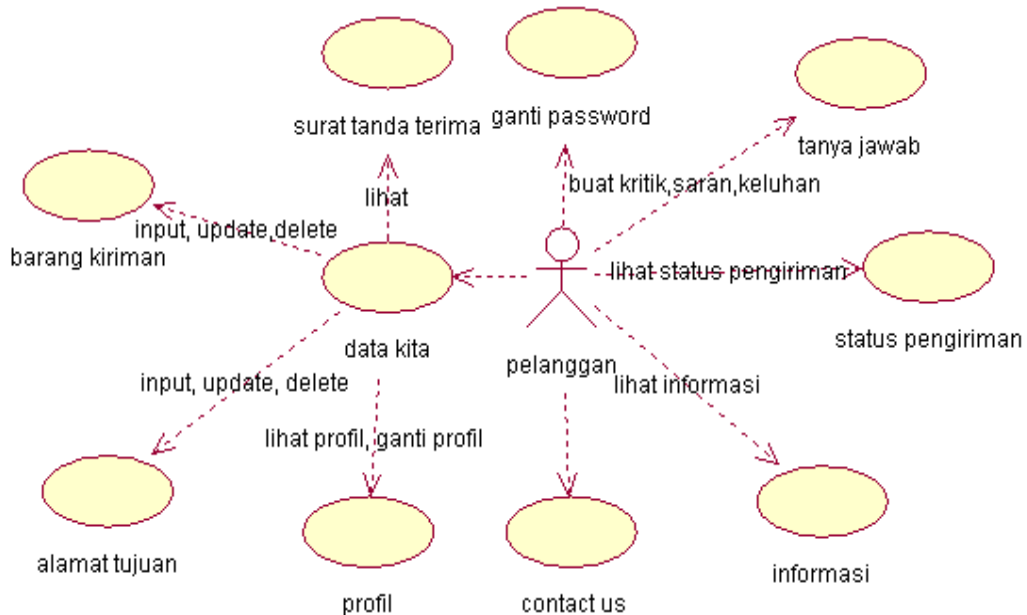


Figure 1. Use Case Diagram for Customer

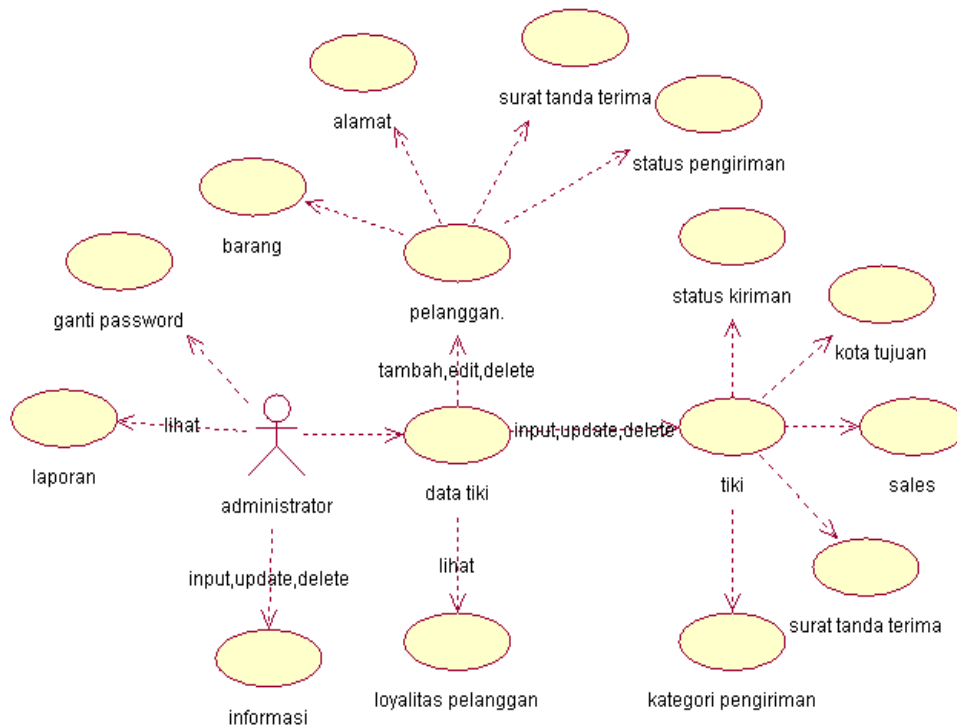


Figure 2. Use Case Diagram for Administrator

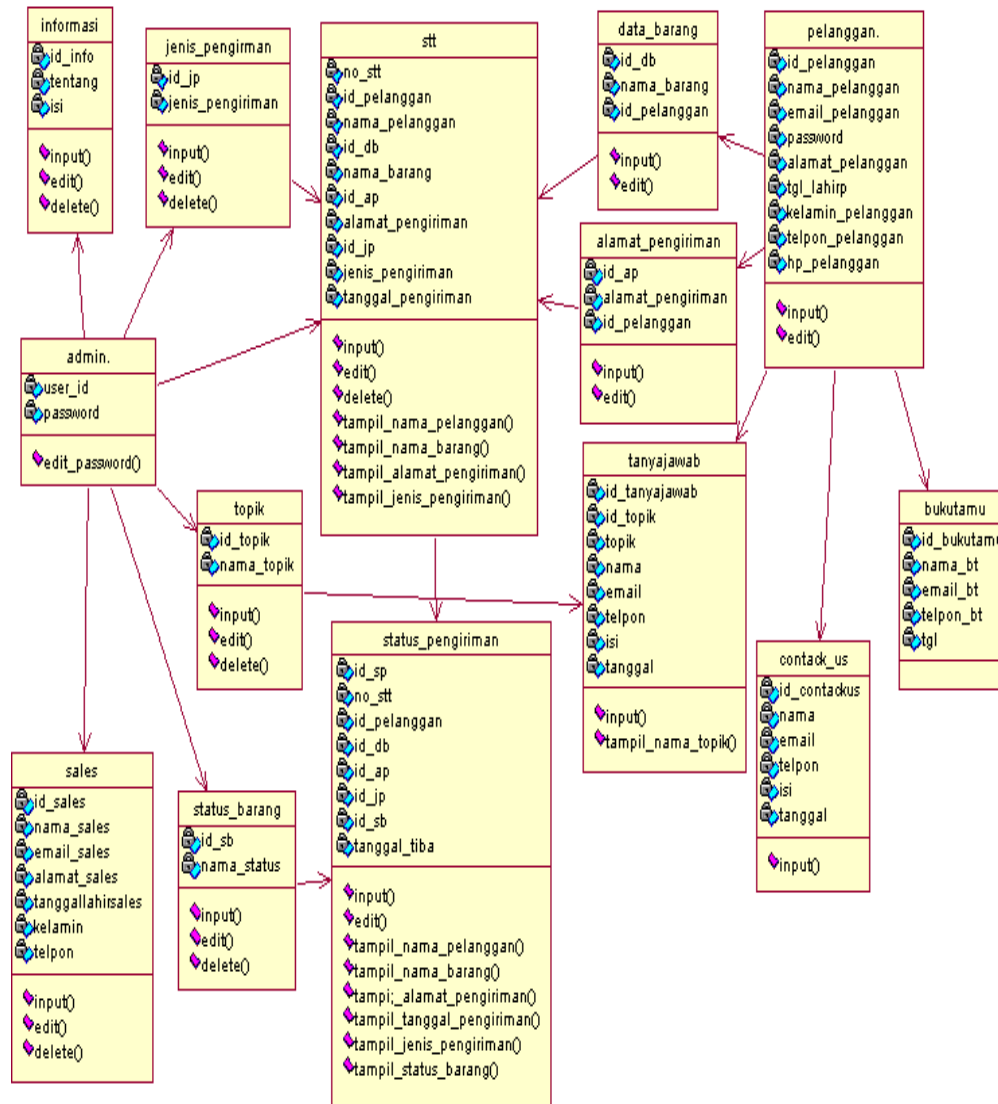


Figure 3. Class Diagram

7. RESULT AND DISCUSSION

Result from information design is a new CRM information system for TIKI business. Homepage in Figure 4 shows mission of the company and login form for registered customer. New customer also register from this homepage. The main menu of this application also show in the head of the page for navigation through out all function.

Customer's items delivery status page show item's status, as shown in Figure 5. This status will always updated when the items move from one process to another process, so customer can track their items movements. This function really help company to make customer satisfy, because items tracking will increase customer's trust in delivery service.

In Figure 6 show page that make customer can contact TIKI 24 hours and 7 days about any question in delivery, service or anything related about TIKI business. This increase company personal care to their customers.

With customer list report in Figure 7, TIKI can analyze customer information and behavior especially related with customer "contact points". From this reports, TIKI can also analyze what customers really needs in their service. Business and operational improvement can be drive from this reports. The result can improve customer satisfaction because customer expectation can be record from this data.



Figure 4. Homepage



Figure 5. Customer's Items Delivery Status



Figure 6. TIKI Contact Form from Customer



Figure 7. Customer List Report for TIKI

8. CONCLUSION AND FUTURE WORK

Conclusion from this paper are :

1. Customer service strategy that is designed to be web-based makes it

easy for your prospects and customers Quick Courier Services in obtaining the required information clearly. Also no longer limited distance, time, and

contact lines Forwarding Services Express.

2. Database integrated online service to store data from a contact so as to facilitate the headquarters and branch offices Express Courier Services in serving customers and prospective customers as well as to establish a more close and personal.
3. Express Courier Services to improve response to customer requests for information desired by the selection of the topic questions so that customer inquiries can be processed by the company

Future work to make all new information system operate well are :

1. The existence of specialized staff in the central office and each branch Express Courier Services at least one person responsible for managing the service over the web.
2. Complete the application with e-mail facilities and contacts made through e-mail can also be stored in the database.
3. Adding a poll on screen display module common to get feedback from visitors and also web poll on screen display module customers to conduct a customer satisfaction survey online

9. REFERENCES

- (a) Barker, G dan Harrison, D. (2000). *MCSE Windows 2000 Profesional Training Guide*. USA: New Riders.
- (b) Barnes, J.G. (2003). *Secrets og Customer Relationship Management*. Terj. Andreas Winardi. Edisi Bahasa Indonesia. Yogyakarta: Andi.
- (c) Berson, A., Smith, S., and Thearling, K. (2000). *Building Data Mining Application for CRM*. New York: The McGraw-Hill Companies, Inc.
- (d) Buttle, Francis. (2007). *Customer Relationship Management*. Bayumedia. Malang.
- (e) Fatta, Hanif Al. (2007). *Analisis dan Perancangan Sistem Informasi*. Andi. Yogyakarta.
- (f) Kadir, Abdul. (2010). *Mudah Mempelajari Database Access*. Andi. Yogyakarta.
- (g) Kalakota, R and Marcia, R. (2001). *E-Bussiness 2.0 : Roadmap for Success*. Massachusetts : Addison-Wesley Longman, Inc.
- (h) Kotler, Philip and Armstrong, Gary. (2001). *Dasar-Dasar Pemasaran. Edisi kesembilan*. Prentice Hall. New Jersey.
- (i) Kotler, Philip dan Keller, Kevin Lane. (2009). *Manajemen Pemasaran*. ERLANGGA. Jakarta.
- (j) Munawar. (2005). *Pemodelan Visual dengan UML*. Graha Ilmu. Yogyakarta.
- (k) Nugroho, Adi. (2009). *Rekayasa Perangkat Lunak Menggunakan UML dan Java*. ANDI. Yogyakarta.
- (l) Nugroho, Bunafit. (2008). *Membuat Sistem Informasi Penjualan Berbasiskan WEB dengan PHP dan MySQL*. GAVA MEDIA. Yogyakarta.
- (m) Payne, Adrian. (2005). *Handbook of CRM*. ELSEVIER.
- (n) Prasetyo, Ristiyanti and Ihalauw, John. (2004). *Perilaku Konsumen*. Andi.Yogyakarta.
- (o) Rob, Peter and Coronel, Carlos. (2009). *DATABASE SYSTEMS*. Thomson Course Technology. United States.

AUTHOR BIOGRAPHIES

Fransiskus Adikara is a lecture in Informatics Technology, Faculty of Computer Science, Esa Unggul University, Jakarta. He received his Bachelor Degree in Informatics in 2001 and Magister Management in Information System in 2003, both from Bina Nusantara University. His research interest are in the area of software engineering, balanced scorecards, and IT Governance. His email address is (adikara@students.itb.ac.id)

Ricky Fauzi is a IT developer in the private company. He received his Bachelor Degree in Informatics in 2012 from Esa Unggul University. His research interest are in the area of software engineering and management information system. His email address is (fauzi.oziz@gmail.com)