



Sales information system for sumba woven fabric with the customer relationship method

Yustina Rada¹, Arini Aha Pekuwali²

^{1,2} Teknik Informatika, Universitas Kristen Wira Wacana Sumba, NTT, Indonesia

ARTICLE INFO

Article history:

Received May 08, 2023

Revised May 25, 2023

Accepted May 31, 2023

Keywords:

Customer Relationship Management;
Sales System;
Web-based Woven Fabric.

ABSTRACT

This research is motivated by the increasing number of trading and service companies that are starting to use e-commerce systems as online sales media. In the current era of globalization and as time goes by, where the development of technology is increasingly rapid, it can be seen that the number of internet users is also increasing from year to year. In creating product marketing and sales to consumers, it is necessary to implement a strategy to increase market share. This research aims to create and implementation Web-based marketing system for Est Sumba Ikat woven fabrics. The method used in this research is Customer Relationship Management (CRM). The results of this research show that by utilizing CRM, it will make it easier for the East Sumba Ikat Gallery to find out what is expected and needed by its customers so that close and open business relationships will be created as well as good two-way communication. In this regard, the authors are interested in creating a loyalty system that can help the East Sumba Ikat Weaving Gallery in increasing the number of customers, increasing satisfaction and keeping customers from being tempted by various offers made by others competitors.

This is an open access article under the [CC BY-NC](https://creativecommons.org/licenses/by-nc/4.0/) license.



Corresponding Author:

Yustina Rada,

Program Studi Teknik Informatika,

Universitas Kristen Wira Wacana Sumba,

Jl. R. Suprpto no.35, Waingapu, Nusa Tenggara Timur, 87113, Indonesia.

Email: yustinarada@unkriswina.ac.id

1. INTRODUCTION

Business competition in Indonesia is now increasing, so many entrepreneurs or sellers are looking for ways to retain or acquire new customers (Erlangga, 2022; Kristiansen et al., 2003; Suyono et al., 2016). If observed, the real essence of competition today is more on how companies are fully aware of who their marketing targets are, how high the quality of their products is, and how to provide good service to customers (Kotler et al., 2019; Matzler & Hinterhuber, 1998; Vandermerwe & Rada, 1988). Therefore, as information technology develops, it is necessary to apply a better strategy by implementing an information communication technology product that can help this business become more effective in improving marketing services and can support better decision making for business owners (Belvedere et al., 2013; Berry & Parasuraman, 2004; Song & Song, 2010). The way to promote and sell East Sumba's woven woven cloth which is currently underway is still done manually, namely by using brochures and participating in cultural exhibition

activities. However, the manual method is less effective and has several drawbacks such as requiring time, money and effort for both customers who want to buy woven fabrics and for making and distributing brochures (Abernathy et al., 1999; C. Anderson, 2006; Von Hippel, 2009).

Implementation of the East Sumba woven textile marketing system using a website-based Customer Relationship Management (CRM) method in order to establish relationships with customers, especially such as finding data information about woven fabrics. One of the advantages in improving services is by applying the concept of Customer Relationship Management (CRM) (J. L. Anderson et al., 2007; Orenge-Roglá & Chalmeta, 2016; Sharp, 2002). Customer Relationship Management (CRM) is a business philosophy that describes a strategy for placing the client at the center of processes, activities and culture.

This system is a group of elements that are closely related to each other, which function together to achieve certain goals (Kozlowski & Ilgen, 2006; Marks et al., 2002). The system is also a collection of equipment components model requirements, functions and interfaces (Pritschow et al., 2001). The system is a group of integrated elements with the same intention to achieve a goal.

Sales activities consist of transactions of goods or services either on credit or services to obtain other resources such as cash or promises to pay (receivables). Sales is a major company activity in obtaining revenue, both for large companies and small companies. Sales is the ultimate goal of marketing activities, because in this section there are price fixing, negotiations and agreements for handing over of goods, as well as payment agreements agreed upon by both parties, so that a point of satisfaction is reached (Suzan, 2020).

The sales information system is defined as a sales statement, activities will be explained through procedures which include a sequence of activities from the time the order is received from the buyer, checking whether the goods exist or not and continuing with the delivery of goods accompanied by making invoices and keeping records of applicable sales (Cahyo & Candiwan, 2020; Pass et al., 2004; Syahputra, 2020).

According to Anita B. wandanaya, A website can be defined as a collection of pages displaying text data information, still or moving image data, animation data, sound, video, and or a combination of all of them, whether static or dynamic nature that forms a series of interrelated buildings where each is connected to a network of pages (Hyperlink) According to Alexander F.K. Sibero Web is a system related to documents used as a medium for displaying text, images, multimedia and others on the internet network. From the opinions stated above, it can be concluded that the Web is a service that can be connected to the Internet by computer users, whether in the form of interactive text, images, sound or video and has the advantage of linking one document to another (hypertext) that can accessed via a browser.

Utaminingsih (2015) states that since the early 1990s, what is called Customer Relationship Management (CRM) has begun to develop. Customer Relationship Management (CRM) bridges the gap between rapid technological developments and changes in the enterprise business ecosystem. Most of Indonesia includes small and medium size enterprises (SMEs). Small and medium size enterprises (SMEs) can also benefit from the role of CRM to grow their business.

Setiawan and Saputra (2015) state that Customer Relationship Management is a strategy that is widely implemented to manage relationships between companies and customers, and potential customers (Syahputra, 2020).

Customer Relationship Management is a business strategy consisting of software and services designed to increase profit, revenue and customer satisfaction. The trick is to help various forms of companies to identify their customers correctly, get more customers faster, and maintain customer loyalty (Chen, 2020).

The internet itself comes from the word Interconnection Networking, which means the connection of many computer networks of various types and types, using types of communication such as telephone, telephone, and others. In managing the integration and communication of this computer network using the protocol, namely TCP / IP. TCP (Transmission Control Protocol) is in charge of ensuring that all connections work properly, while IP (Internet Protocol) transmits data from one computer to another. TPC / IP in general functions to choose the best route for data transmission, choose an alternative route if a route cannot be used, organize and send data transmission packets

2. RESEARCH METHOD

Research procedures are a series of activities carried out by a researcher regularly and systematically to achieve research objectives starting from the beginning of data collection to conclusions. This research procedure applied as a research guide in conducting research in order to achieve the expected results. The flow of research procedures is shown in Figure below :

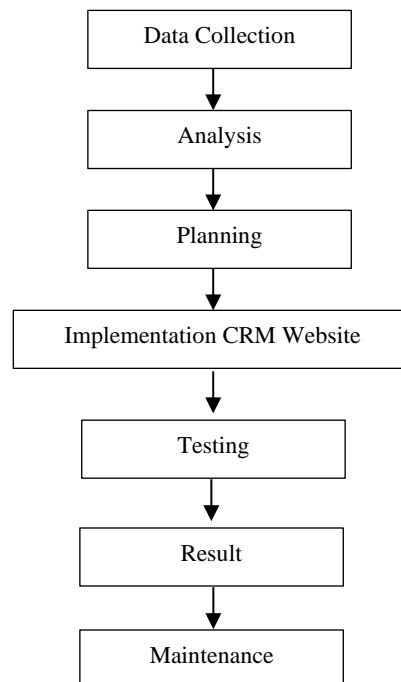


Figure 1. Based on the steps of the flow chart

Data collection, At this stage the collection of data or information related to the research is carried out. The collection of data and information is carried out by means of observation, interviews, and literature study.

Analysis, At this stage data processing is carried out into information related to data on East Sumba woven fabrics so that these characteristics can be understood and useful for solving problems, especially problems related to research on the marketing of East Sumba woven fabrics.

Design, At this stage it is made based on the needs analysis that will be carried out, and is used to build a system in marketing services for woven woven fabrics to get a clear picture of what is being done in system analysis, then proceed with thinking about how to form the system.

Implementation of Customer Relationship Management (CRM) websites, The implementation of this information system for woven motifs in the province of NTT uses

the PHP programming language and is connected to the MySQL relation database management system. To build an interface that fits the database. At this stage, the Implementation of a Website on Customer Relationship Management (CRM) is carried out which aims to make it easier for customers and the Weaving Gallery to build relationships between the two parties so that there are no gaps and facilitate information related to the marketing of woven fabrics. By implementing this application, it is hoped that customers will know more about synchronous woven fabrics and can make it easier to order woven fabrics at the East Sumba Ikat Weaving Gallery.

Testing, at this stage, testing is carried out again on the application, if the program has an error, it will return to the system design that will be made.

Results, the result of this study is that an application of Customer Relationship Management (CRM) in marketing services for East Sumba Ikat woven fabric based on the Web is able to increase the marketing reach of woven Ikat and make it easy for customers to obtain information about woven Ikat. If the results are as expected, this stage is declared successful.

Maintenance, at this stage maintenance is carried out on the application and aims so that the existing system can run properly so that it is in accordance with functional standards and system quality.

System Analysis and Design

The East Sumba Ikat Weaving website is an information presentation service that uses the concept of a hyperlink (link), which was created to help the public be able to view and access the network directly through browsing on the internet, to place orders or access information about East Sumba Ikat Weaving. This website requires an internet connection, because the information accessed is sent via a mysql database whose admin is directly from the manager of the East Sumba Ikat Weaving cloth gallery. To view information or to place an order for East Sumba Ikat woven fabrics, you can browse the internet. Meanwhile, to update information, the admin will interact with the information update website page. This website is made with a simple Blog or Blogger so that it can make it easier for users to access the internet. Users can access information on East Sumba Ikat woven fabrics using the internet. The user can determine the information that has been selected and the system will process it according to the results selected by the user. Website services are implemented on laptops or PCs to update information and view lists of woven fabric orders. All devices must be connected to the internet. Web service connects between mobile and web applications.

3. RESULTS AND DISCUSSIONS

Implementation

The East Sumba Ikat marketing website was created to produce a website that is able to market woven fabrics and provide information about woven fabrics in East Sumba. This website makes it easy for the public to access information on East Sumba woven fabrics. The implementation stage is the stage after conducting system analysis and design, where on this website you can find out or access it through browsing. The process of implementing this woven fabric marketing website can be seen in Figure below:



Figure 2. Implementation of the East Sumba Ikat Woven Website Application

The implementation of the application in Figure 2 consists of 3 components, the admin manages information, marketing and customer data stored on the website server, the public or visitors as users can access information about the marketing of East Sumba woven fabrics through the website.

Use Case Diagrams

In the use case image of this application, the user directly interacts with the system. Users are free to view information through browsing. In the information selection menu, woven fabrics are presented, namely information on the profile of East Sumba woven fabrics. The information menu is used to view information related to woven fabrics. For admin actors, they will manage information data and order through the website. For a more detailed explanation of the website, you can see the use case in the following figure:

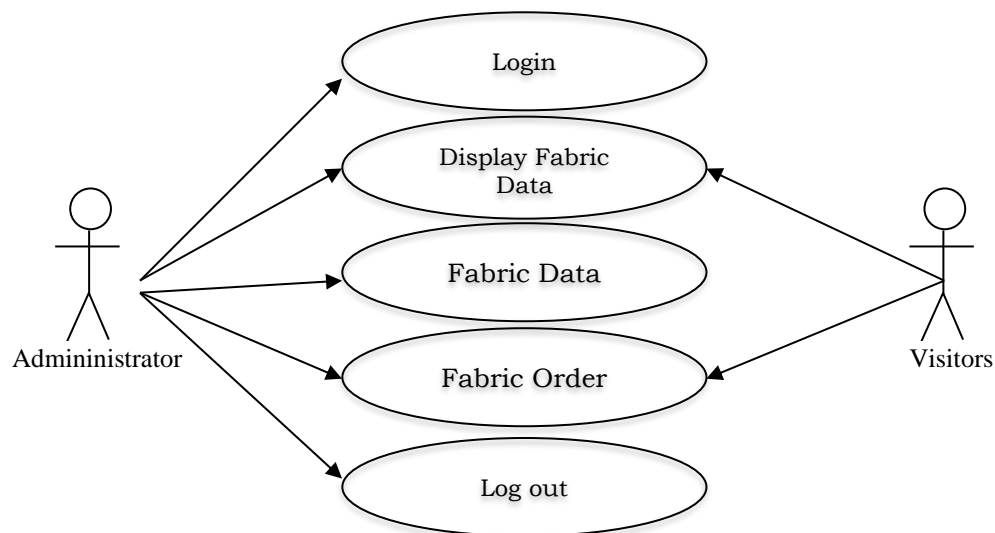


Figure 3. Use case diagram of East Sumba Woven Cloth

Graphical User Interface (GUI)

The following is the login page of the admin, the admin login page is the administrator page for managing East Sumba Woven Fabric data can be seen in the picture

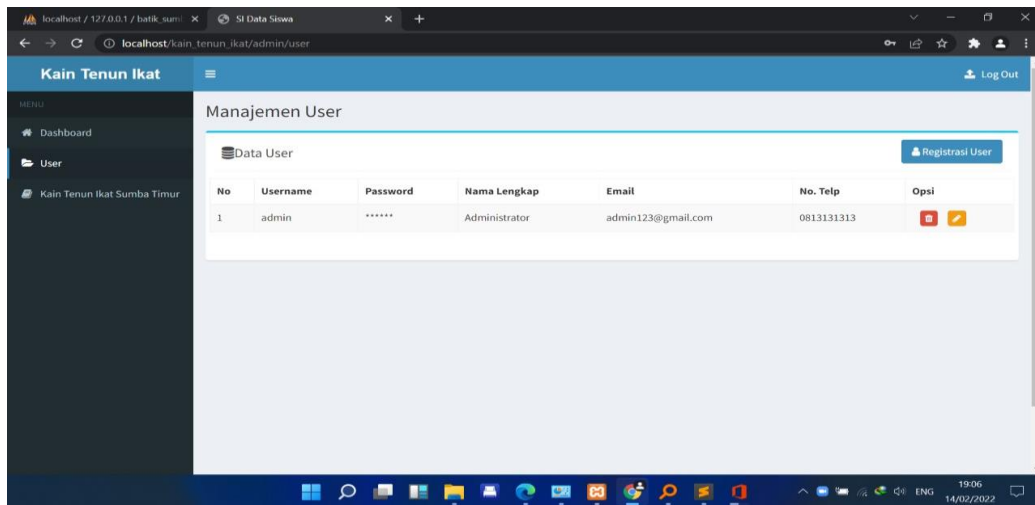


Figure 4. User Management

Fabric data page where users access the East Sumba Woven Fabric Promotion Information System, and view fabric data consisting of fabric descriptions, fabric prices, and fabric sizes.

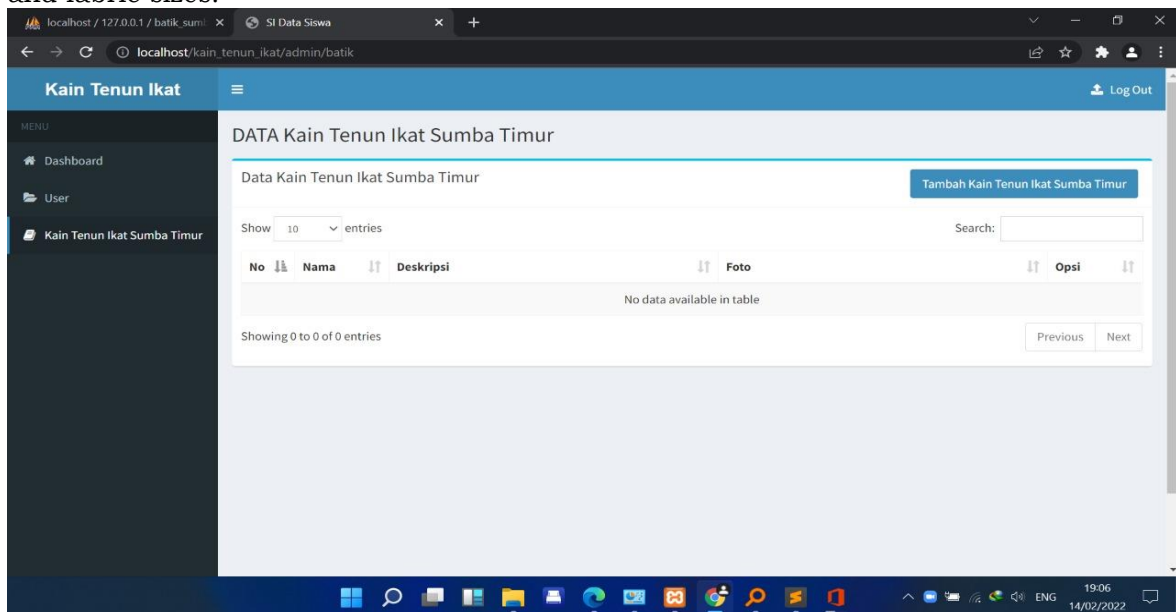


Figure 5: Fabric Data Management Page

4. CONCLUSION

Based on the results of the research and discussion on the implementation of Customer Relationship Management on the marketing website for East Sumba woven fabrics, it can be concluded that the East Sumba woven fabric website is a website that can provide or present information regarding the marketing of East Sumba woven fabrics. Marketing of East Sumba Ikat by utilizing Customer Relationship Management on this Ikat website has increased the marketing reach of Ikat and makes it easy for consumers to get information about East Sumba Ikat, development suggestions that can be considered are personalization of Customer Experience, use of Interactive Platforms, development of Engaging Content, enhancement of Data Analytics, Partnerships and Collaborations.

REFERENCES

- Abernathy, F. H., Dunlop, J. T., Hammond, J. H., & Weil, D. (1999). *A stitch in time: Lean retailing and the transformation of manufacturing—lessons from the apparel and textile industries*. Oxford University Press.
- Anderson, C. (2006). *The long tail: Why the future of business is selling less of more*. Hachette UK.
- Anderson, J. L., Jolly, L. D., & Fairhurst, A. E. (2007). Customer relationship management in retailing: A content analysis of retail trade journals. *Journal of Retailing and Consumer Services*, 14(6), 394–399.
- Belvedere, V., Grando, A., & Bielli, P. (2013). A quantitative investigation of the role of information and communication technologies in the implementation of a product-service system. *International Journal of Production Research*, 51(2), 410–426.
- Berry, L. L., & Parasuraman, A. (2004). *Marketing services: Competing through quality*. Simon and Schuster.
- Cahyo, M. R. D., & Candiwan, C. (2020). Analysis and Design of Sales Information System on Web-Based E-Commerce in Yoga Farm Catfish Breeding Business Using UML. *Jurnal Media Informatika Budidarma*, 4(3), 683–692.
- Chen, C. H. (2020). Development of Experimental Techniques for Parameterization of Multi-scale Lithium-ion Battery Models. *Journal of the Electrochemical Society*, 167(8). <https://doi.org/10.1149/1945-7111/ab9050>
- Erlangga, H. (2022). Pharmaceutical Business Competition in Indonesia: A Review. *Sys Rev Pharm* 2020, 11(10), 617–623.
- Kotler, P., Kartajaya, H., & Setiawan, I. (2019). *Marketing 3.0: From products to customers to the human spirit*. Springer.
- Kozlowski, S. W. J., & Ilgen, D. R. (2006). Enhancing the effectiveness of work groups and teams. *Psychological Science in the Public Interest*, 7(3), 77–124.
- Kristiansen, S., Furuholt, B., & Wahid, F. (2003). Internet cafe entrepreneurs: pioneers in information dissemination in Indonesia. *The International Journal of Entrepreneurship and Innovation*, 4(4), 251–263.
- Marks, M. A., Sabella, M. J., Burke, C. S., & Zaccaro, S. J. (2002). The impact of cross-training on team effectiveness. *Journal of Applied Psychology*, 87(1), 3.
- Matzler, K., & Hinterhuber, H. H. (1998). How to make product development projects more successful by integrating Kano's model of customer satisfaction into quality function deployment. *Technovation*, 18(1), 25–38.
- Orenga-Roglá, S., & Chalmeta, R. (2016). Social customer relationship management: taking advantage of Web 2.0 and Big Data technologies. *SpringerPlus*, 5(1), 1462.
- Pass, M. W., Evans, K. R., & Schlacter, J. L. (2004). Sales force involvement in CRM information systems: Participation, support, and focus. *Journal of Personal Selling & Sales Management*, 24(3), 229–234.
- Pritschow, G., Altintas, Y., Jovane, F., Koren, Y., Mitsuiishi, M., Takata, S., Van Brussel, H., Weck, M., & Yamazaki, K. (2001). Open controller architecture—past, present and future. *CIRP Annals*, 50(2), 463–470.
- Sharp, D. E. (2002). *Customer relationship management systems handbook*. CRC press.
- Song, L. Z., & Song, M. (2010). The role of information technologies in enhancing R&D–marketing integration: An empirical investigation. *Journal of Product Innovation Management*, 27(3), 382–401.
- Suyono, E., Farooque, O. Al, & Riswan, R. (2016). Toward a model of traditional retailers and sellers empowerment in improving competitiveness against modern markets in Banyumas region, Indonesia. *DLSU Business and Economics Review*, 25(2), 147–165.
- Suzan, L. (2020). Effect of production Costs and Sales on the Company's Net Profit. *Jurnal Akuntansi*, 24(2), 169–186.
- Syahputra, Z. (2020). Website Based Sales Information System With The Concept Of Mvc (Model View Controller): Website Based Sales Information System With The Concept Of Mvc (Model View Controller). *Jurnal Mantik*, 4(2), 1133–1137.
- Vandermerwe, S., & Rada, J. (1988). Servitization of business: adding value by adding services. *European Management Journal*, 6(4), 314–324.
- Von Hippel, E. (2009). Democratizing innovation: the evolving phenomenon of user innovation. *International Journal of Innovation Science*, 1(1), 29–40.