

## **IMPLEMENTATION OF ELECTRONIC CUSTOMER RELATIONSHIP MANAGEMENT IN THE DONATION SERVICE INFORMATION SYSTEM**

**Ali Ibrahim<sup>1\*</sup>), Beriadi Agung Nur Rezqe<sup>2</sup>**

<sup>1,2</sup>Department of Information Systems Faculty of Computer Science, Universitas Sriwijaya, Indonesia  
<sup>1,2</sup>Management of Information Systems and Business (MISaB) Research Group, Faculty of Computer

Universitas Sriwijaya, Indonesia.

<sup>1,2</sup>Multimedia and Game Programming Laboratory Faculty of Computer Universitas Sriwijaya, Indonesia  
<https://unsri.ac.id/>

aliibrahim@unsri.ac.id<sup>1</sup>, beriadiberlix@gmail.com<sup>2</sup>

(\*)Corresponding Author

### **Abstrak**

LAZNAS LMI Kanwil Sumsel merupakan lembaga yang bergerak di bidang agama dan kemanusiaan. Salah satu layanan yang diberikan oleh Kanwil LMI Sumsel adalah layanan donasi. Namun, pelayanan tersebut masih belum efektif dan efisien. Berdasarkan hasil kuisioner pelayanan donasi pada LMI Kanwil Sumsel didapatkan hasil perhitungan. diperoleh Net Promoter Score1 sebesar -61,6% yang menunjukkan nilai negatif. Hal ini menunjukkan perlunya peningkatan pelayanan donasi agar tercipta loyalitas. Konsep E-CRM bertujuan untuk memberikan kepuasan dan meningkatkan loyalitas. Oleh karena itu diperlukan suatu sistem informasi pelayanan donasi yang dapat mempermudah baik LMI maupun donatur. Serta pengukuran yang mengukur loyalitas donatur dengan menggunakan metode perhitungan Net Promoter Score dan metode pengembangan sistem FAST. Dari hasil pengukuran Net Promoter Score2 didapatkan hasil perhitungan sebesar 77 % hal ini menunjukkan bahwa loyalitas donatur mengalami peningkatan terhadap peningkatan pelayanan donasi di LMI Kanwil Sumsel.

**Keywords:** *Dona, E-CRM, Fast, LMI, Net Promoter Score*

### **Abstract**

*LAZNAS LMI Regional Office of South Sumatra is an institution engaged in the field of religion and humanity. One of the services provided by the LMI Regional Office of South Sumatra is a donation service. However, the service is still not effective and efficient. Based on the results of the questionnaire on donation services at the LMI Regional Office of South Sumatra, the calculation results. obtained Net Promoter Score1 of -61.6% which indicates a negative value. This shows the need to improve donation services in order to create loyalty. The E-CRM concept aims to provide satisfaction and increase loyalty. Therefore we need a donation service information system that can make it easier for both LMI and donors. As well as a measurement that measures the loyalty of donors using the Net Promoter Score calculation method and the FAST system development method. From the measurement results of Net Promoter Score2, the calculation results are 77%, this shows that the loyalty of donors has increased towards the improvement of donation services at LMI Regional Office of South Sumatra.*

**Keywords:** *Donation, E-CRM, Fast, LMI, Net Promoter Score*

### **INTRODUCTION**

Donation or donation or charity is a gift that is generally physical in nature by individuals or legal entities. This giving has a voluntary nature without any benefit in nature, although the donation can be in the form of food, goods, clothing, toys or vehicles but this is not always the case, in the event of a disaster emergency or in certain other circumstances (Dewantary, Budiwati, & Sanjaya, 2015). Donation activities are generally found around roads and places where natural disasters

are occurring. The results of the donation are given to someone or to an agency that needs the donation.

Someone who donates is also called a donor. In a national zakat institution, donation is one of the programs contained in the national zakat institution. Like in LMI, BAZNAS, Dompet Dhuafa and others. Almost in every city in Indonesia there are branches or representative offices respectively. Where each branch or representative office of zakat institutions has a donation program that must be carried out and achieved every year. Like one of them in South Sumatra, namely the Infaq



Management Institute (LMI), LMI has one of the programs, namely donation, in which the donation focuses on the South Sumatra region.

Trust and ease of donation are the most important things that must be considered. The trust of donors has made the donation program continue to this day. Donor loyalty is a very important aspect as a place to manage these donations. Besides being able to make a donor a regular donor. Donor loyalty can strengthen the relationship between LMI and the donors themselves. For now, every donor who donates will be given a small magazine as a form of gratitude for donating at LMI. The continuation of the donation program depends on the perception of donors who trust the institution. Therefore, LMI must be able to create an effective and efficient donation service, so that donors will have a good perception of the institution that manages the donation, and later will be able to become loyal donors.

In the donation service process at LMI, there are currently three ways to donate. The first way donors must come directly to LMI's place, the second way donors must first fill in their bio in the Google Forms listed on the LMI website then donors can donate. The third way is that LMI will pick up donations. This process is less effective and efficient. Therefore, LMI must be able to provide effective and efficient services to donors in order to create a good relationship between donors and LMI.

For that we need the right way so that LMI becomes a place to donate that knows its donors very well, so that donors become loyal to donate at LMI. The best way to build relationships with donors is to build Customer Relationship Management (CRM). Customer Relationship Management (CRM) is a customer-oriented business strategy in which a company tries to increase customer satisfaction and loyalty by offering services through several specific programs to customers (Tanjungsewu Paribhasagita & Lisnawati, 2016). Electronic Customer Relationship Management (E-CRM) is a form of IT application in the CRM field of a company by utilizing internet technology. By using E-CRM, LMI can provide the best service to donors and can build better relationships with donors.

The method used to measure customer loyalty is the Net Promoter Score method. The Net Promoter Score method was developed by Fred Reichheld of Harvard. The Net Promoter Score (NPS) is a model. The measurement of loyalty is very simple. Based on the results of the questionnaire on donation services at the LMI Regional Office of South Sumatra, the calculation results are Net

Promoter Score1 of -61.6% which shows a negative value. This shows that there is a need for innovation and service improvement so as to create loyalty from donors

In a study conducted by Rahayu and Irawan, in this study researchers designed an E-CRM system to improve service and loyalty in Kumon educational institutions. This research produced an E-CRM prototype which has main features, namely promotion, registration, payment, score lists, learning evaluations, announcements, and complaint handling thereby increasing loyalty and customer service to Kumon educational institutions (Rahayu & Irawan, 2019). Other research Nikou (Nikou, Harihodin Bin Selamat, Yusoff, & Khiabani, 2016) how the role of E-CRM in increasing customer loyalty provides useful insights for service industry managers to implement E-CRM in its best form and adapt it to their organizational or industry culture to increase customer loyalty levels and get more profit and revenue for their own business. Other research by Huseynov and Amazhanova (Aldaihani & Ali, 2018) The impact of E-CRM features on customer satisfaction and perceived utility as a mediating variable in the Turkish e-commerce sector is investigated in this study. Quantitative research methodologies were used in this study. Self-managed Likert-type online surveys were used to obtain primary data from 210 respondents. Customer satisfaction is impacted directly and indirectly (through perceived usefulness characteristics) by the E-CRM elements studied in this study (complaint management, communication, information content, security, and privacy). (Aldaihani & Ali, 2018). In another study by Bezhovski (Bezovski & Hussain, 2016), which identifies and describes the benefits of using this advanced technology in the banking sector and helps banks make the right decisions regarding the implementation and / or further improvement of existing E-CRM. The results of the study found that E-CRM has reduced workload at branches, lowered administrative costs, increased cross selling, bank revenue and enabled bankers to analyze customer needs by having access to all past transactions. E-channels have improved information dissemination and allowed management to introduce new products and schemes more quickly (Bezovski & Hussain, 2016). other research conducted by Ali Ibrahim et al, (Ibrahim et al., 2019) The problems faced by the fasilkom canteen related to customers can be overcome with the Customer Relationship Management (CRM) model. The method used is the CRM Scorecard. The number of respondents to the questionnaire was 59 people consisting of Fasilkom

students from the 2013-2016 class. These findings will provide future evaluations for the canteen facilitators in managing customers (Ibrahim et al., 2019). In the benefits of implementing CRM, the data validation process in social media is of concern. Because one of the important things in the implementation of social CRM is the data the objective of this study is to show the results of research on current social CRM together see the problem this time and provide a solution (Ibrahim, Ermaitita, Saparudin, & Adetya, 2018). And other research conducted by Asmara and Ratnasari (Asmara, 2016), this study measures visitor satisfaction and visitor loyalty in cave tourism by using the Net Promoter Score calculation. From the measurement results, the level of visitor loyalty is very low, which is -13%. That is, it is likely that visitors will move to other tourist attractions. Other research which is conducted Korneta (Korneta, 2018) Researchers verified the effect of NPS on growth and profitability of transport companies in Poland. This goal is achieved by using the Spearman rank correlation and linear regression. Other research conducted by Rajasekaran and dinesh (Rajasekaran & Dinesh, 2018) in this research, researchers research on how the Net Promoter Score and how the customers rate your company using the Net Promoter Score. Other research conducted by Dash (Dash, 2018) This study examines NPS in measuring customer loyalty. In another study by Stander (Stander, 2016), In order to assess the empirical accuracy of this indicator, NPS was assessed in the context of professional football customer behavior in South Africa. Measurement and structural models are evaluated with a defined direct path between NPS and consumer spending, as well as an indirect pathway with NPS postulated as a mediator to activate purchasing behavior in nomological networks that include consumption motives traditional sports, using the theoretical context of loyalty-based business models and relationship marketing as points of departure. The survey included 2465 adult fans from one of the most popular and well-known professional football clubs in the country. NPS is a direct predictor of consumer expenditure, according to the results of this study. It also shows that NPS can act as a buffer between sports consumption motivations and spending. The findings of the study are examined, and future suggestions are suggested. (Stander, 2016).

According to Buttelle (Buttelle, 2007) customer relationship management or Customer

Relationship Management (CRM) is a deep core strategy integrating internal processes and functions with the network external to create and deliver value for consumers profitable advice. Meanwhile, according to Brown and Rigby, Reinheld, Dawson in Vanessa (Gaffar, 2007) reveals CRM is the process of obtaining, sustaining, and developing profitable services, and it necessitates a laser-like concentration on the characteristics of a service that will generate client loyalty. (Gaffar, 2007).

E-CRM is an electronic CRM that uses a web browser, the internet, and other electronic media such as email, call centers, and personalization to deploy. E-CRM is often referred to as E-Service. (Turban, Chung, Lee, & Chung, 1999). The sustainability of the company depends on the company's ability to maintain its customers so that their customers can be loyal to the company and do not move with other companies. Having loyal customers is an important asset that must be maintained by the company so that the company can continue to compete with other competitors. According to Kotler and Keller (Kotler & Keller, 2007) The following is a definition of client loyalty: Despite situational variables and marketing efforts having the ability to trigger switching behavior, a strong desire to repurchase or repatronize a preferred product or service in the future. .

An information system is a collection of people, data, procedures, and information technology (IT) that work together to collect, process, store, and provide the information needed to run a business. (Whitten, Bentley, & Dittman, 2004). The information system receives data input and instructions, processes the data with instructions and produces results. The basic system model of input, processing and output is suitable for simple processing systems (B.Davis, 1992).

## RESEARCH METHODS

### A. Systems Development Method

This research system development method is the FAST (Framework for the Application of Systems Techniques) system development method because FAST has a good standard and a planned process. In addition, the FAST method is suitable for implementation in the scope of small and large projects (Whitten et al., 2004).



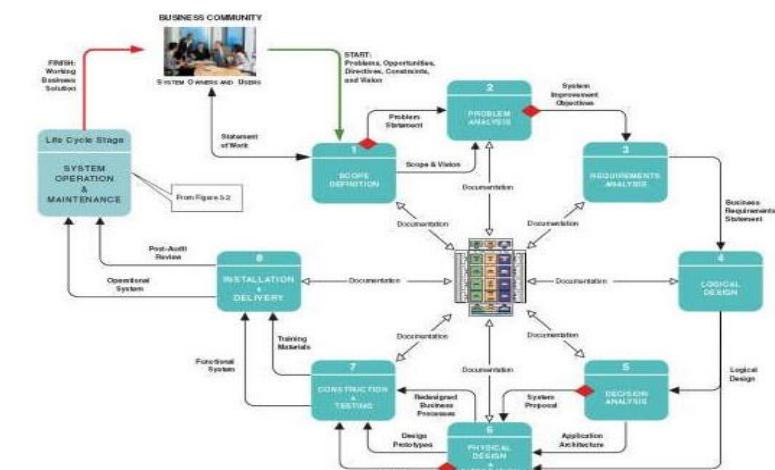


Fig 1. FAST System Development Method (Whitten et al., 2004)

in Fig 1. FAST defines the stages to identify and observe problems, opportunities, obstacles, and hopefully what is expected to happen repair repair. This development is lifecycle because after completion implementation of implementation and maintenance then the system will provide feedback to the system analysis that has been designed. So that the stages the development above is continuously carried out for the improvement of the system.

## B. Net Promoter Score

In this research method there is also a measurement of donor loyalty with the number of respondents who will be measured 10-15 respondents. Which of these respondents will be measured loyalty using a simple loyalty measurement net promoter score. The Net Promoter Score (NPS) method is a very simple but easy to understand and effective method for measuring the level of loyalty, so this method is widely used. Using a scale of 0-10 and then dividing the customers who took the survey into three groups based on their answers. NPS is the percentage of Promoters minus the percentage of Detractors presented in an easy to understand way, as well as the most effective short summary of how a company is doing (F. F. Reichheld & Covey, 2006). In NPS, the types of customers are divided into:

In NPS, the types of customers are divided into:

1. Promoters of customers who are enthusiastic about your product and will continue to buy. They will be happy to refer your product to others. Promoters are also defined as those who give a score of 9 or 10.
2. Passives customers who are satisfied with your product but not enthusiastic and may at any time move to another product if they find a more

attractive deal. Their passives that give them a 7 or 8.

3. Customer detractors who have had a bad experience with our products and if the opportunity arises they will spread negative news about our products (negative word of mouth). Customers usually give a value of only 0 to 6.

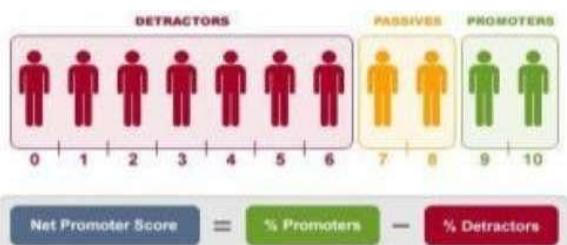


Fig. 2. Classification of Respondents Net Promoter Score (F. Reichheld, 2011)

Figure 2. explains the classification of Respondents and how to calculate the net promoter score.

### C. CRM Phase

According to Robinson and Kalakota (2001) there are three stages in the CRM phase, namely getting new customers (Acquire), improving customer relationships (enhance), and retaining customers (retain). Table 1 describes the three CRM phases that will be applied to the donation service system at Laznas LMI Regional Office of South Sumatra (Kalakota & Robinson, 2001).

Table 1. CRM Phase

No	CRM Phase	Solution Offered
1	Acquire phase (get new customers)	donation service information interesting and accurate that later will attract interest in donating. Ease of service process donations for donors User built systems friendly
2	Enhance phase (increase relationship with customers)	There is login access for each donor. There is customer service make it easy for donors to communicate with LMI. There is a means of conveying criticism and suggestions
3	Retain phase (maintain customer)	There is a response to criticism and suggestions which has been given. There is documentation of evidence donation distribution of donations There is a page for donors to see donations that have been made paid, unpaid donations

#### E. DFD Level 0 New System

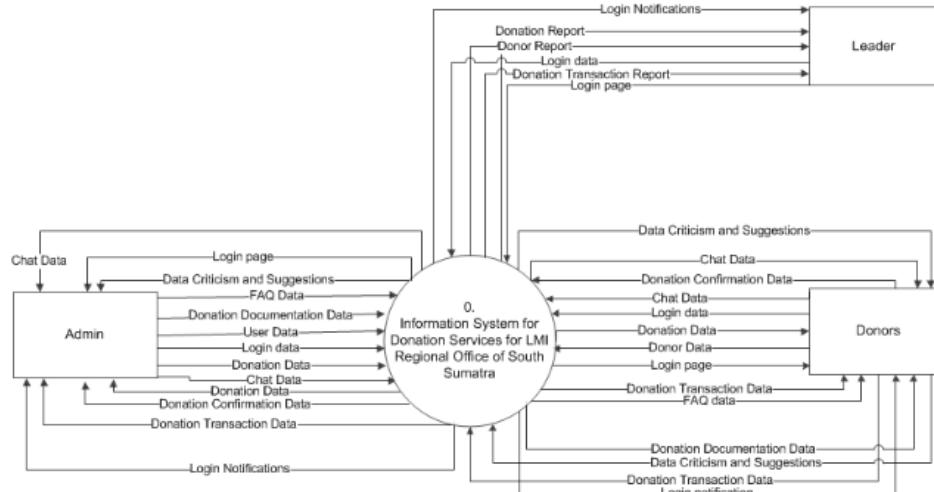


Fig 4. DFD Level 0 New System

Figure 4. describes the flow of the proposed system. There are 3 entities that use the system, namely Admin, Donors, and Leader. Admin can login to enter the system and manage user data, donation data, data donation transactions, FAQ data, criticism and suggestions data, documentation data

donations and chat online. Donors can view donation data and FAQ as well as processing donation transactions, donation confirmation, criticism and suggestions, as well as online chat. Leaders can come inside system and view donor

data, donation data, and donation transaction data and print reports.

As for DFD Level 1 in the new system, there are 5 processes of registration, login, donation, customer service and also print reports.

## **F. DFD Level 1**

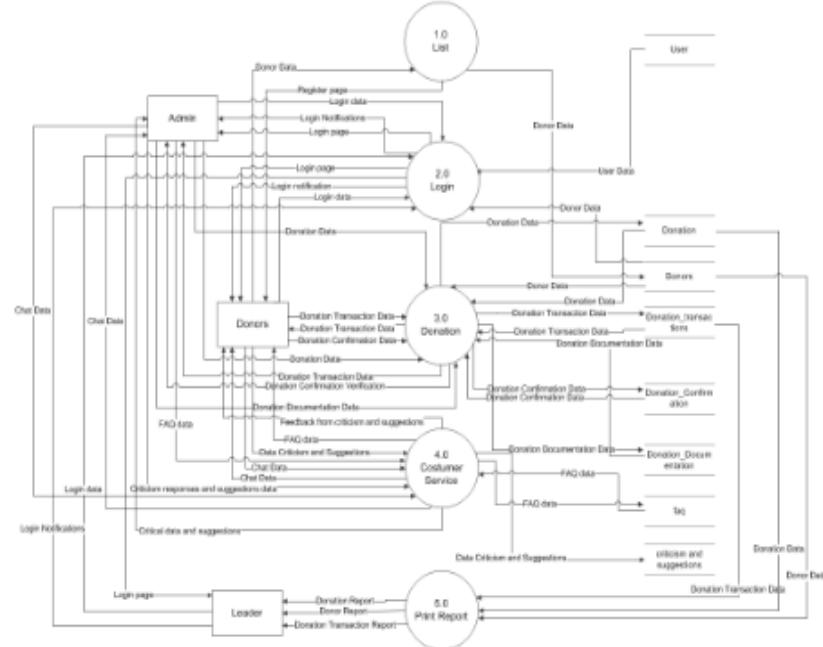


Fig. 5 DFD Level 1

Figure 5. describes the process for the donation service. In the donation service, there are 5 processes, namely the list process, the login process, the donation process, customer service and print reports.

## RESULTS AND DISCUSSION

## A. Results

The final stage of this research is to produce a donation service information system by implementing E-CRM and measuring the loyalty of donors using the Net Promoter Score calculation method. In this system there are 3 system users, namely admin, leadership and also donors.

## B. Discussion

This discussion section will discuss the results of the system software that has been developed. The discussion will be divided based on the use of a system where there are admins, leaders and donors. Here's the discussion system software in detail.

Admin page is a page for admins who are logged in and have entered the system. Pages displayed according to rights admin access that is able to manage donations, donors, donation transactions,

donation confirmation, donation documentation, FAQ, criticism and suggestions, and users.

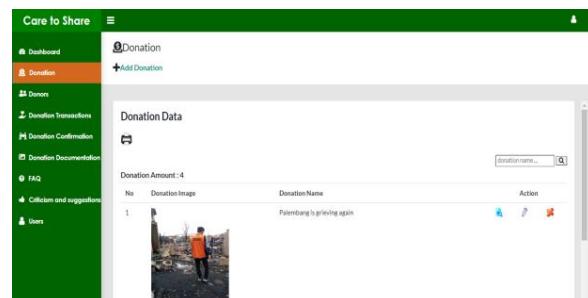


Fig. 6 Admin Page

Figure 6. describes the admin page contained in the donation service system.

This leadership page is a page for leaders who are logged in and have entered the system. The page displayed corresponds to management access rights, namely being able to view donation data and print it, view donor data and print it, view donation transaction data and print it out.

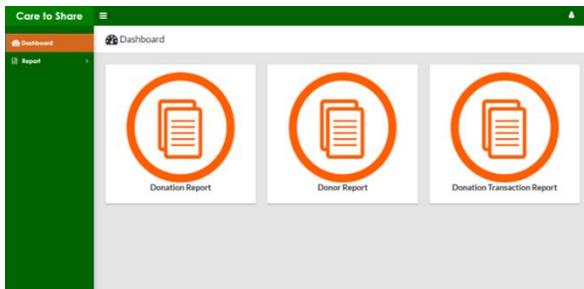


Fig. 7 describes the leader's page contained in the donation service system

This donor page is a page for donors to interact with the donation service system. The pages on the donor are dashboard, list of donors, homepage, about, faq, donation, donation details, continue donating, continue payment and confirm donations.

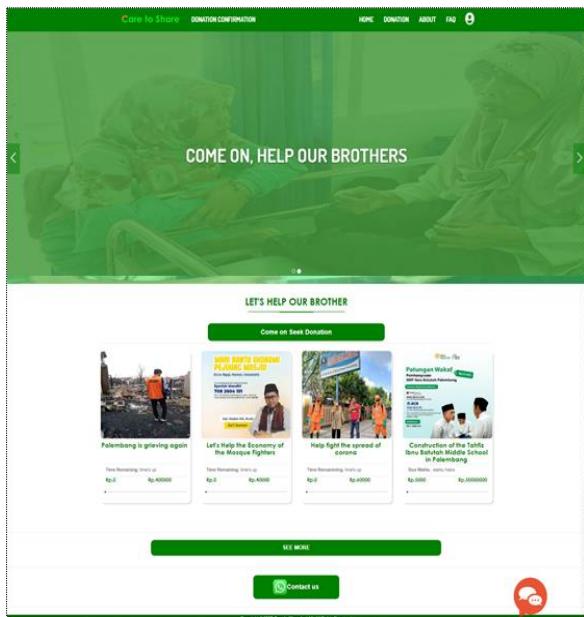


Fig 8. Donors Page

Figure 8. describes the donor page contained in the donation service system.

### C. Calculation of the Net Promoter Score

Researchers have distributed questionnaires that were filled in by 13 donors. From the results of this questionnaire, the score for the NPS1 questions was obtained. From the results of the NPS questions on the first questionnaire, the Promoters, Passives and detractors were grouped below.

$$\begin{aligned} \text{NPS1} &= \% \text{Promoters} - \% \text{Detractors} \\ &= 15.4\% - 77\% \\ &= -61.6\% \end{aligned}$$

After the new system was implemented, the second questionnaire was distributed. From the results of the NPS questions on the second questionnaire, the

Promoters, Passives, and Detractors were grouped below.

$$\begin{aligned} \text{NPS2} &= \% \text{Promoters} - \% \text{Detractors} \\ &= 77\% - 0\% = 77\% \end{aligned}$$

From the results of the calculation of NPS2 there is an increase from the first negative and the second result is positive. From the results of NPS2 it can be concluded that the donors are loyal to the improvement of the donation service system for Laznas Kanwil South Sumatra.

In terms of arrangement and content, the results section and the subsequent discussion part provide the most flexibility. In general, the unadulterated, uninterpreted results should be presented first. The raw data or the findings after applying the strategies indicated in the methods section should be presented in these results. The outcomes are just that: outcomes; they don't draw any conclusions.

The major goal of the results section is to offer the study's data so that other researchers can form their own conclusions and fully comprehend the reasoning behind them. A popular approach for the results section is to offer a series of figures followed by a detailed description of the figures in the text. A well-written results section includes clear figures and concise language. The numbers should substantiate the claims made in the paper or provide new insights. Results should be presented in terms of non-dimensional variables whenever possible.

### CONCLUSIONS

Based on the results of the research conducted and the results of the discussion previously described, the following conclusions can be drawn: With an increase in donation services at LAZNAS LMI Regional Office of South Sumatra, it can make it easier for LMI parties and also donors donate. By implementing E-CRM in this donation service information system, donors will be more loyal to LMI. From the results of the distribution of the first questionnaire, it was found that NPS1 showed a calculation result of -61.6%, this indicates that donors were not loyal to the donation services provided. After developing new systems and innovations, the second questionnaire was distributed, it was found that NPS2 showed a 77% calculation. It can be concluded that the donors were very loyal with the increase in donation services at LAZNAS LMI Regional Office of South Sumatra.

### REFERENCES

Aldaihani, F. M. F., & Ali, N. A. Bin. (2018). Impact of

Electronic Customer Relationship Management on customers satisfaction of the five stars hotels in Kuwait. *Global Journal of Management And Business Research*, 18(5-E), 1–11. Retrieved from <https://journalofbusiness.org/index.php/GJMBR/article/view/2564/>

Asmara, Y. (2016). *Analisis Kepuasan Dan Loyalitas Pengunjung Terhadap Pelayanan Di Kawasan Wisata Goa Selomangleng Kota Kediri Dengan Pendekatan Structural Equation Modeling* (Institut Teknologi Sepuluh Nopember). Institut Teknologi Sepuluh Nopember. Retrieved from <https://repository.its.ac.id/62744/1/1312100097-Undergraduate Thesis.pdf>

B.Davis, G. (1992). *Sistem Informasi Manajemen : Kerangka Dasar* (A. S. Adiwardana & B. Widyahartono, Eds.). Jakarta: PT Pustaka Binaman Pressindo.

Bezovski, Z., & Hussain, F. (2016). The Benefits of the Electronic Customer Relationship Management to the Banks and their Customers. *Research Journal of Finance and Accounting*, 7(4), 112–116. Retrieved from <https://iiste.org/Journals/index.php/RJFA/article/view/28978>

Buttle, F. (2007). *Customer Relationship Management Concepts and Tools* (1st ed.). Malang: Bayumedia Publishing.

Dash, S. K. (2018). Net Promoter Score-A Metrics Must for Marketers. *International Journal of Management, Technology And Engineering*, 8(78), 78–83.

Dewantry, Z. W., Budiwati, S. D., & Sanjaya, M. B. (2015). Aplikasi Pengelolaan Dana Donasi Untuk Penderita Kanker (studi Kasus: Yayasan Kanker Indonesia). *EProceedings of Applied Science*, 1(3), 1786–1793. Retrieved from <https://openlibrarypublications.telkomuniversity.ac.id/index.php/appliedscience/article/view/4282>

Gaffar, V. (2007). *CRM dan MPR Hotel (Customer Relationship Management and Marketing Public Relations)*. Bandung: Alfabeta.

Ibrahim, A., Ermatita, Saparudin, & Adetya, Z. (2018). Analysis of weakness of data validation from social CRM. *Proceedings of 2017 International Conference on Data and Software Engineering, ICODSE 2017, 2018-January*, 1–5. <https://doi.org/10.1109/ICODSE.2017.8285849>

Ibrahim, A., Pratiwi, A., Meytri, D. I., Madri, Kurniawan, M. A., & Yuniarti, N. (2019). Measuring Customer Satisfaction Using CRM Scorecard in Canteen FASILKOM UNSRI. *Proceedings of 2018 International Conference on Electrical Engineering and Computer Science, ICECOS 2018*, 403–408. <https://doi.org/10.1109/ICECOS.2018.8605253>

Kalakota, R., & Robinson, M. (2001). *E-business 2.0: Roadmap for Success*. Boston, MA: Addison-Wesley Professional.

Korneta, P. (2018). Net promoter score, growth, and profitability of transportation companies. *International Journal of Management and Economics*, 54(2), 136–148. <https://doi.org/10.2478/IJME-2018-0013>

Kotler, P., & Keller, K. L. (2007). *Manajemen Pemasaran*. Jakarta: Index.

Nikou, S. H., Harihodin Bin Selamat, Yusoff, R. C. M., & Khiabani, M. M. (2016). Electronic Customer Relationship Management, Customer Satisfaction, and Customer Loyalty: A Comprehensive Review Study. *Economics, International Journal of Management and Invention*, 2(12), 1133–1144. Retrieved from <http://www.rajournals.in/index.php/ijmei/article/view/190>

Rahayu, F., & Irawan, H. (2019). Perancangan Sistem Electronic Customer Relationship Management (E-Crm) Guna Membantu Meningkatkan Pelayanan Dan Loyalitas Pelanggan Studi Kasus: Lembaga Pendidikan Kumon. *IDEALIS: InDonEsiA Journal Information System*, 2(4), 205–212. Retrieved from <https://jom.fti.budiluhur.ac.id/index.php/IDEALIS/article/view/1351>

Rajasekaran, M. N., & Dinesh, M. N. (2018). How Net Promoter Score Relates To Organizational Growth. *International Journal of Creative Research Thoughts*, 6(2), 2320–2882. Retrieved from [www.ijcrt.org/www.ijcrt.org](http://www.ijcrt.org/www.ijcrt.org)

Reichheld, F. (2011). *The Ultimate Question 2.0 (Revised and Expanded Edition): How Net Promoter Companies Thrive in a Customer-Driven World (Revised)*. Boston, MA: Harvard Business Review Press.

Reichheld, F. F., & Covey, S. R. (2006). *The ultimate question: Driving good profits and true growth* (1st ed.). Boston, MA: Boston: Harvard Business School Press. Retrieved from 978-1591397830

Stander, F. W. (2016). A case for loyalty-based relational business models : Assessing direct – and mediating effects of the Net Promoter

Score ( NPS ) metric in commercial football consumption decisions. *African Journal of Hospitality, Tourism and Leisure*, 5(4), 1–16.

Tanjungsewu Paribhasagita, & Lisnawati, L. (2016).

Pengaruh Customer Relationship Management Terhadap Loyalitas (Survei pada Nasabah Asuransi Jiwa Prudential NASABAH Cabang Kota Bandung). *Journal of Business Management Education (JBME)*, 1(1), 39–55. <https://doi.org/10.17509/JBME.V1I1.2277>

Turban, E., Chung, H. M., Lee, J. K., & Chung, M. (1999). *Electronic Commerce: A Managerial Perspective* (1, Ed.). Hoboken: Prentice Hall.

Whitten, J. L., Bentley, L. D., & Dittman, K. C. (2004). *Metode Desain & Analisis Sistem* (6th ed.). Yogyakarta: Penerbit Andi.

