ANALYSIS OF MARKET SHARE FOR OPENING LENTRHAKA NEW BRANCH IN WEST JAVA PROVINCE WITH CUSTOMER RELATIONSHIP MANAGEMENT APPROACH

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ABSTRACT

LENTRHAKA is a company engaged in the field of trade and services. Services provided LENTRHAKA that is serving the health consultation and treatment of bioenergy therapy for all kinds of diseases, While at the trading LENTRHAKA sells products herbal remedies especially for disorders of the kidneys, heart, stroke and other diseases. In the year 2017 LENTRHAKA expand business ventures by opening another branch in the city of Denpasar but did not go well because it did not achieve the sales target set. Because the current Manager of Marketing does not know the areas that have a high market share and potentially for the opening of new branches, resulting in the closure of branches of Denpasar. Based on these problems then the need for an analysis of market share and market segmentation LENTRHAKA customers against using the approach of Customer Relationship Management (CRM), and methods that will be used to determine the area of the city in the opening of a new branch is using a Simple Additive Weight (SAW). The result of the test can be concluded that the system is already helping Manager Marketing determine which areas have a high market share and potentially to open a new branch in the province of West Java.

Keywords : LENTRHAKA, Market Share, Customer Relationship Management, Simple Additive Weight

1. INTRODUCTION

LENTRHAKA is a company engaged in the field of trade and services. Services provided LENTRHAKA that is serving the health consultation and treatment of bioenergy therapy for all kinds of diseases, while at the LENTRHAKA trade selling herbal medicine primarily for disorders of the kidneys, heart, stroke, and diseases others. LENTRHAKA dating back to the year 2012, to date LENTRHAKA has 6 branches in several cities in Indonesia, namely in the town of Serang, Cikarang, Bukittinggi, and Pekanbaru, 2 branches in Bandung. LENTRHAKA customers are buyers products herbal drugs and patients who consult and treatment in LENTRHAKA. Most of the customers LENTRHAKA comes from city and regency of the province of West Java.

Based on the results of the interview to Mr. Heri Heryanto as the Manager of Marketing, stated that in the year 2017 LENTRHAKA ever expanding business venture by opening another branch in the city of Denpasar, but did not go well because it does not achieve the sales target set. If seen from basic health Research data (Riskesdas) Bali province from the Central Bureau of statistics (BPS) as it turns out, the habits of households in Denpasar that store and use traditional medicine is very low only 2% versus the habit households are saving hard drugs amounted to 33.7%, drug free of 91.7%, 23.3% of antibiotic drugs, and unidentified drugs amounted to 10.6% it is likely to cause the branch of Denpasar did not reach sales targets, because the company LENTRHAKA that sell traditional medicines or herbal, as manager of marketing do not know the areas that have a high market share and potentially for the opening of the new branch, resulting in no achievement of business targets set and the Denpasar branch closed.

Customer Relationship Management is a core business strategy combines process and internal functions, the external network for creating and delivering value to customers for profit. Process on the Customer Relationship Management carries out analysis of customers and markets. [2]

Based on the existing problems in current LENTRHAKA, then it needs a system that can analyze the market share for the opening of a new branch of LENTRHAKA in West Java province with its approach to Customer Relationship Management (CRM).

2. RESEARCH CONTENTS

2.1 Theoritical Basic

The theoritical basic can be used as the reference in drafting the analysis of market share for the opening of a new branch of LENTRHAKA.

2.1.1 Market Share

Market share is part of actual sales (either the quantity or volume of the currency) for a product or

service in a certain period and in a specific geographic area. [1]

2.1.2 Customer Relationship Management

Customer Relationship Management is a core business strategy combines process and internal functions, the external network for creating and delivering value to customers for profit. Customer Relationship Management based on data quality and potential customers with information technology. [2]

2.1.3 Stages of CRM

Implementation of the concept of good CRM is CRM process organized around member and not only on the internal functions of the company. There are three stages in CRM, namely: [3]

1. Acquire new customers (**Acquisition**), by promoting the excellence of a product or service in terms of innovation and ease because the value of a product or service to the customer is a better product and supported by outstanding service.
2. Increase profits gained from existing customers (**Retention**) by encouraging the creation of complaining products or services and the sale of a product or service that is better than the product or service that is owned by the customer.
3. Maintain customer (**Expansion**) which gives an advantage, offering what is needed by specific customers is not required by the customers of the market.

2.1.4 Types of CRM

Types of Customer Relationship Management (CRM) is the operational CRM, collaborative CRM and analytical CRM. [4]

1. Operational CRM is known as the front office of the company. This CRM component plays a role in interactions with customers. Operational CRM includes integrated automation process of the whole business process, such as marketing automation, and service.
2. Analytical known as back office CRM company. This CRM component plays a role in understanding the needs of customers. Analytical CRM was instrumental in carrying out the analysis of the market and customers, such as market trend analysis and analysis of the needs and behavior of customers.
3. Components of Collaborative CRM covers e-mail, personalized publishing, ecommunities, and others designed for interaction between customers with the company. Its main purpose is to provide added value and expand customer loyalty to other customers who still have not been on the level of customer loyalty.

2.1.5 Framework Dynamic CRM

This framework describes a series of stages in the development/implementation of CRM. [5]

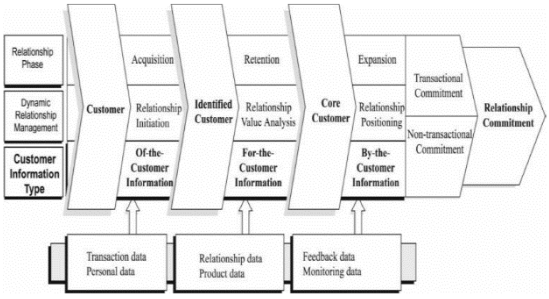


Figure 1. Framework Dynamic CRM

2.1.6 Market Target Customer

Marketing should be directed to the intended target market, so as to successfully achieve the goals expected. [6]



Figure 2. Phase of Target Marketing

1. Market Segmentation

Market segmentation is the process of dividing an overall market of goods and services into the groups that are smaller and more homogenous internally. [7]

a Geographic segmentation, a marketing activity conducted with market share in several different geographical units such as country, State, region, district, city, or neighborhood.

b Demographic segmentation, a marketing activity conducted with market share in some group with base-base variables such as age, family size, family life cycle, gender, income, employment, education, family size, family life cycle, generation, race, religion, citizenship, nationality and social class.

c Segmentation psychographic, a marketing activity is done by dividing the consumer over some of the different groups on the basis of lifestyle and personality variables.

d Behavioral segmentation, a marketing activity is done by dividing the consumers over the different groups based on knowledge, attitude, use of, or response to a product [8]

2. Market Targeting

After the market segment is evaluated, the next step is to select the target segment or target market. [9]

3. Positioning

Determination of the position is the Act of designing the Organization's image and bid so that occupies a different position (between competitors) in the minds of their target customers. [10]

2.1.7 Simple Additive Weighting (SAW)

The SAW method is often also known as the weighted summing method. The basic concept of the SAW method is to find the weighted sum of performance ratings on each alternative on all attributes. [11]

The completion step in using it is :

1. Determine the alternative that is Ai.
2. Determining the criteria that will be used as a reference in decision making, namely Cj.
3. Provide an alternative match rating rating on each criterion.
4. Determine the weight of preferences or importance level (W) of each criterion.
   $W= [W_1\ W_2\ W_3\ ..W_j]$ (1)
5. Create a match rating table of each alternative on each criteria.
6. Create a X decision mat formed from the match rating table of each alternative on each criterion. The value of X of each alternative (Ai) on each criterion (Cj) has been determined, where, i = 1,2, ... m and j = 1,2, ... n..

$$X = \begin{bmatrix} x_{11} & x_{12} & \cdots & x_{1j} \\ \vdots & & & \vdots \\ x_{i1} & x_{i2} & \cdots & x_{ij} \end{bmatrix} \quad (2)$$

7. Perform normalized decision matrix X by calculating the value of the rated performance rating (rij) of the alternative Ai on criterion Cj.

$$r_{ij} = \begin{cases} \dfrac{X_{ij}}{Max\ X_{ij}} & \text{Jika j adalah atribut keuntungan } (benefit) \\ \dfrac{Min\ X_{ij}}{X_{ij}} & \text{Jika j adalah atribut biaya } (cost) \end{cases} \quad (3)$$

Information :

a. It says the profit criteria if the value X_{ij} provides benefits for decision makers, Otherwise the cost criteria when X_{ij} incurring costs for decision makers.
b. If in the form of profit criteria then the value X_{ij} divided by value (X_{ij}) Of each column, while for cost criteria, value (X_{ij}) Of each column divided by value X_{ij}.

8. The result of normalized performance rating (rij) values form a normalized matrix (R)

$$R = \begin{bmatrix} r_{11} & r_{12} & \cdots & r_{1j} \\ \vdots & & & \vdots \\ r_{i1} & r_{i2} & \cdots & r_{ij} \end{bmatrix} \quad (4)$$

9. The final result of the preference value (Vi) is derived from the sum of the matrix elements of the normalized matrix row (R) with the corresponding weight of preference (W) of the matrix column element W.

$$V_i = \sum_{j=1}^{n} w_j r_{ij} \quad (5)$$

A larger value if Vi indicates the the alternative Ai is alternative.

2.2 Problem Analysis

From the analysis done by mobilizing a problem namely, the Marketing Manager has yet to find out areas that have a high market share and potentially for the opening of a new branch in the province of West Java.

2.2.1 Framework CRM Analysis

CRM framework used in the system analysis of the market share for the opening of a new branch of LENTRHAKA is Dynamic CRM. Described that phase of CRM in a framework in the form of a series of processes of Acquisition-Retention-Expansion. Can be seen in Figure 3. Dynamic CRM Framework LENTRHAKA.

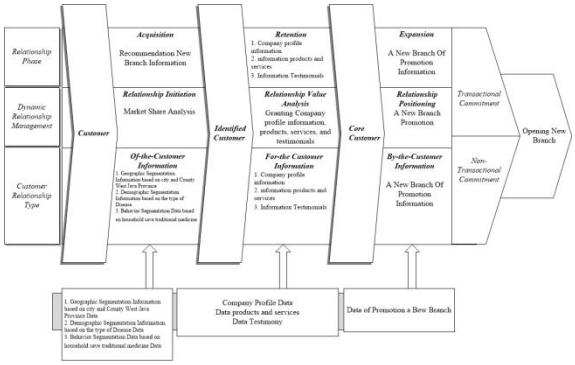


Figure 3. Framework Dynamic *CRM* LENTRHAKA

2.2.1.1 Stages Of Acquisition

This acquisition at this stage of this phase will be conducted the process to get new customers. the facility was built by the LENTRHAKA to attract new customers is the new branch recommendations show information. With the results of the new branch of the recommendation then the opening of the new branch companies do so after the new branch, the company will gain new customers.

At this stage, it needs further analysis to determine potential areas of opening a new branch that is accurate. Here are the stages of the analysis of the market share for the opening of the new branch:

2.2.1.1.1 Analysis of Market Share

The purpose of the analysis of the market share to know potential markets/customers in every area of product and services offered by LENTRHAKA. To find out the market share, then

do the 3 stages of analysis, namely market segmentation, Targeting (determination of the Target market) and Positioning (determination of the position of the market) :

1. Market Segmentation

On the segmentation is done will be divided into three geographical market segmentation that is segmentation, market segmentation, market segmentation and demographic behavior.

a. Geographical Market Segmentation Analysis

Geographical market segmentation at LENTRHAKA, will be made into a geographical area subdivisions throughout the City and Regency in West Java province. Geographic Segmentation results conducted will be used for demographic segmentation and behavior based on the city and County that will be processed at the stage of determination of the target market.

b. Demographic Market Segmentation Analysis

Demographic segmentation at LENTRHAKA, the Division will be done based on the type of disease. From a demographic market segmentation is done from LENTRHA customer data,obtained the 3 highest disease to be the criteria that will be used in the target markets are :

1. The Number Of Heart Disease Sufferers
2. The Number Of Stroke Sufferers
3. The Number Of Diabetes Sufferers

Data from the criteria used are taken from the Health Research data Base (Riskesdas) Bali province from the Central Bureau of statistics (BPS).

c. Behavior Of Market Segmentation Analysis

Based on the problems of closed Denpasar branch of LENTRHAKA because of the level of the use of traditional medicine are low, companies also need to know the behaviour of prospective customers against the company's products that sell drugs, therefore segmenting the market behavior on LENTRHAKA criteria used, i.e. based on the type of medicine that saved by households in the city and district of West Java province. Data from the criteria used are taken from the Health Research database (Riskesdas) Bali province from the Central Bureau of Statistics (BPS).

2. Market Targeting

For this stage of segmentation is to select where to be on set as a target by LENTRHAKA. After a geographical market segmentation, demographics and behavior. will be on the analysis in the calculation using a decision support system with SAW method (Simple Additive Weight).

Following are the stages for the system with the method of calculation of the SAW (a Simple Additive Weighting) and 26 Cities and counties, and data segmentation results geographically, demographically, and behavior that is in the province of West Java.

a. Provides the data to be analyzed

The data used for the analysis of data is opening a new branch, as the calculation method applied to SAW (Simple Additive Weight) data is analyzed there are 26 Cities and counties of the province of West Java, the result of geographical, demographic segmentation and behavior.

Below is the data to be used in the calculation of the SAW method (Simple Additive Weight).

Table 1. The data to be analyzed

City/Regency	Sufferers Of Heart	Sufferers Of Stroke	Diabetics	Store traditio-nal medicine
Bogor Reg.	10.440	163.561	38.280	216.798
Sukabumi Reg.	9.906	69.341	11.557	80.629
Cianjur Reg.	6.005	54.044	15.012	78.115
Bandung Reg.	27.911	274.457	30.237	98.212
Garut Reg.	4.964	66.185	9.928	49.296
Tasikmalaya Reg.	6.016	81.822	9.626	112.062
Ciamis Reg.	8.934	111.677	13.401	65.733
Kuningan Reg.	5.936	38.583	11.872	39.833
Cirebon Reg.	5.946	57.977	14.866	71.071
Majalengka Reg.	5.917	88.756	13.525	67.762
Sumedang Reg.	7.325	72.436	8.139	26.691
Indramayu Reg.	1.204	116.746	16.850	100.615
Subang Reg.	6.476	130.600	17.269	63.939
Purwakarta Reg.	4.317	28.983	6.783	30.449
Karawang Reg.	3.157	99.438	12.627	105.160
Bekasi Reg.	6.285	50.276	31.423	158.263
Bandung Barat Reg.	5.462	86.294	8.739	53.583
Bogor City	5.811	55.931	7.990	50.127
Sukabumi City	2.466	15.691	3.362	13.102
Bandung City	7.272	59.992	27.269	172.203
Cirebon City	1.326	10.605	6.628	12.171
Bekasi City	11.253	106.907	50.640	148.985
Depok City	8.416	154.288	28.052	105.349
Cimahi City	3.730	47.245	6.631	27.481
Tasikmalaya City	1.839	43.682	4.598	39.307
Banjar City	915	13.333	2.484	7.818

b. Change the data from table 1 into the form of a matrix X order 26x4 can be seen in Figure 4. Matrix X

$$X = \begin{Bmatrix} 10440 & 163561 & 38280 & 216798 \\ 9906 & 69341 & 69341 & 80629 \\ 6005 & 54044 & 54044 & 78115 \\ 27911 & 274457 & 274457 & 98212 \\ 4964 & 66185 & 66185 & 49296 \\ 6016 & 81822 & 81822 & 112062 \\ 8934 & 111677 & 111677 & 65733 \\ 5936 & 38583 & 38583 & 39833 \\ 5946 & 57977 & 57977 & 71071 \\ 5917 & 88756 & 88756 & 67762 \\ 7325 & 72436 & 72436 & 26691 \\ 1204 & 116746 & 116746 & 100615 \\ 6476 & 130600 & 130600 & 63939 \\ 4317 & 28983 & 28983 & 30449 \\ 3157 & 99438 & 99438 & 105160 \\ 6285 & 50276 & 50276 & 158263 \\ 5462 & 86294 & 86894 & 53583 \\ 5811 & 55931 & 55931 & 50127 \\ 2466 & 15691 & 15691 & 13102 \\ 7272 & 59992 & 59992 & 172203 \\ 1326 & 10605 & 10605 & 12171 \\ 11253 & 106907 & 106907 & 148985 \\ 8416 & 154288 & 154288 & 105349 \\ 3730 & 47245 & 47245 & 27481 \\ 1839 & 43682 & 43682 & 39307 \\ 915 & 13333 & 13333 & 7818 \end{Bmatrix}$$

Figure 4. Matriks X

b. Determine the criteria and weight (W)

Before doing the calculations specified in advance the criteria and weights that will be used in the calculation of the ranking. Appropriate interview with Director and Marketing Manager LENTRHAKA, after consideration, the value of the weights on the criteria are as follows:

Table 2. Criteria and Weight

No	Criteria	Weight
1	The Number Of Heart Disease Sufferers	20%
2	The Number Of Stroke Sufferers	20%
3	The Number Of Diabetes Sufferers	20%
4	The number of households that hold traditional medicine	40%

From table 2 and obtained the following results:

W = [0,20 0,20 0,20 0,40]

Information :

W = Weight

W = 0,20 for weighting the number of sufferers of heart disease

W = 0,20 for weighting the number of sufferers of stroke

W = 0,20 for weighting the number of diabetes sufferers

W = 0,40 for weighting the number of households that hold traditional medicine

c. Determine the Cost or Benefit

At this stage do the determination of Cost and Benefit. Cost is the variable which means have to pay costs or it will be a loss for the company, while the benefit is that variable mean profit for the company. The determination of the Cost/Benefit criteria has been used can be seen in table 3 determination of Cost/Benefit.

Table 3. The Determination Of The Cost/Benefit

No	Criteria	Cost	Benefit
1	The Number Of Heart Disease Sufferers	-	√
2	The Number Of Stroke Sufferers	-	√
3	The Number Of Diabetes Sufferers	-	√
4	The number of households that hold traditional medicine	-	√

d. Normalize matrix X being the matrix R based on the number of equations formulas (3)

The process of normalizing the decision matrix using the data in Figure 4 to do the calculation and the value will form a matrix that is already normalized. The following is a sample calculation based on predetermined criteria.

1. To sum the number of residents who have heart disease contains the attributes of the advantages (benefit), as the greater value is then deemed the better.

So :

R_{11}=

$$\frac{10440}{Max\ (10440;9906;6005;27911;4964;6016;8934;5936;5946;5917;73251204;6476;4317;3157;6285;5462;5811;2466;7272;1326;11253;8416;3730;1839;915)} = \frac{10440}{27911} = 0{,}374$$

The value for the calculation of the Bogor regency is 0.374

2. To sum the number of residents who have stroke contains the attributes of the advantages (benefit), as the greater value is then deemed the better.

So :

Jadi :

R_{12}=

$$\frac{163561}{Max(163561;69341;54044;274457;66185;81822;111677;38583;57977;88756;72436;116746;130600;28983;99438;50276;86294;55931;15691;59992;10605;106907;154288;47245;43682;13333)} = \frac{163561}{274457} = 0{,}596$$

The value for the calculation of the Bogor regency is 0.596

3. To sum the number of residents who have diabetes contains the attributes of the advantages (benefit), as the greater value is then deemed the better.

So :

R_{13}=

$$\frac{38280}{Max(38280;11557;15012;30237;9928;9626;13401;11872;14866;13525;8139;1685017269;6783;12627;31423;8739;7990;3362;27269;6628;50640;28052;6631;4598;2484)} = \frac{38280}{50640} = 0{,}756$$

The value for the calculation of the Bogor regency is 0.756

4. To sum the number of households that hold traditional medicine included in the attributes of the advantages (benefit), as the greater value is then deemed the better.

So :

R_{14}=

$$\frac{216798}{Max(216798;80629;78115;98212;49296;112062;65733;39833;7107167762;26691;100615;63939;30449;105160;158263;53583;5012713102;172203;12171;148985;105349;27481;39307;7818)} = \frac{216798}{216798} = 1$$

The value for the calculation of the Bogor regency is 1

After the calculation is performed with the normalized decision matrix X, then it will get matrix R to be used in the process of ranking. Below is a Matrix R can be seen in Figure 5.

$$R = \begin{Bmatrix} 0{,}374 & 0{,}596 & 0{,}756 & 1{,}000 \\ 0{,}355 & 0{,}253 & 0{,}228 & 0{,}372 \\ 0{,}215 & 0{,}197 & 0{,}296 & 0{,}360 \\ 1{,}000 & 1{,}000 & 0{,}597 & 0{,}453 \\ 0{,}178 & 0{,}241 & 0{,}196 & 0{,}227 \\ 0{,}216 & 0{,}298 & 0{,}190 & 0{,}517 \\ 0{,}320 & 0{,}407 & 0{,}265 & 0{,}303 \\ 0{,}213 & 0{,}141 & 0{,}234 & 0{,}184 \\ 0{,}213 & 0{,}211 & 0{,}294 & 0{,}328 \\ 0{,}212 & 0{,}323 & 0{,}267 & 0{,}313 \\ 0{,}262 & 0{,}264 & 0{,}161 & 0{,}123 \\ 0{,}043 & 0{,}425 & 0{,}333 & 0{,}464 \\ 0{,}232 & 0{,}476 & 0{,}341 & 0{,}295 \\ 0{,}155 & 0{,}106 & 0{,}134 & 0{,}140 \\ 0{,}113 & 0{,}362 & 0{,}249 & 0{,}485 \\ 0{,}225 & 0{,}183 & 0{,}621 & 0{,}730 \\ 0{,}196 & 0{,}314 & 0{,}173 & 0{,}247 \\ 0{,}208 & 0{,}204 & 0{,}158 & 0{,}231 \\ 0{,}088 & 0{,}057 & 0{,}066 & 0{,}060 \\ 0{,}261 & 0{,}219 & 1{,}538 & 0{,}794 \\ 0{,}047 & 0{,}039 & 0{,}131 & 0{,}056 \\ 0{,}403 & 0{,}390 & 1{,}000 & 0{,}687 \\ 0{,}302 & 0{,}562 & 0{,}554 & 0{,}486 \\ 0{,}134 & 0{,}172 & 0{,}131 & 0{,}127 \\ 0{,}066 & 0{,}159 & 0{,}094 & 0{,}181 \\ 0{,}033 & 0{,}049 & 0{,}049 & 0{,}036 \end{Bmatrix}$$

Figure 5. Mariks R

e. Ranking process

The ranking process is done the calculations from the data contained in figure 5 and the weights specified in table 2 the process of calculation using the formula based on the number of equations formulas (5)

The following is a sample calculation 5 are taken from a total of 26 samples calculations are performed :

V_1=(0,20)(0,374)+(0,20)(0,596)+(0,20)(0,756)+(0,40)(1) = **0,75**

V_2=(0,20)(0,355)+(0,20)(0,253)+(0,20)(0,228)+(0,40)(0,372) = **0,32**

V_3=(0,20)(0,215)+(0,20)(0,197)+(0,20)(0,296)+(0,40)(0,360) = **0,29**

V_4=(0,20)(1)+(0,20)(1)+(0,20)(0,597)+(0,40)(0,453) = **0,70**

V_5=(0,20)(0,178)+(0,20)(0,241)+(0,20)(0,196)+(0,40)(0,227) = **0,21**

f. Conclusion

Based on stage calculation method with SAW (Simple Additive Weight), for the determination of the new branch of the 26 Cities and counties in West Java province were analyzed. Then the calculation results, recommendations for opening a new branch is the location of the **Bogor regency on the position of the first rank** with the acquisition value of **0.75**, below is a table after sorted by rank to recommendations preamble the new branch can be seen in table 4.

Table 4. Results Of Recommendations

Order	City/Regency	Final Result
V1	Bogor Regency	0,75
V2	Sukabumi Regency	0,70
V3	Cianjur Regency	0,63
V4	Bandung Regency	0,52
V5	Garut Regency	0,50
V6	Tasikmalaya Regency	0,48
V7	Ciamis Regency	0,35
V8	Kuningan Regency	0,35
V9	Cirebon Regency	0,34
V10	Majalengka Regency	0,33
V11	Sumedang Regency	0,32
V12	Indramayu Regency	0,32
V13	Subang Regency	0,29
V14	Purwakarta Regency	0,29
V15	Karawang Regency	0,27
V16	Bekasi Regency	0,24
V17	Bandung Barat Regency	0,21
V18	Bogor City	0,21
V19	Sukabumi City	0,19
V20	Bandung City	0,19
V21	Cirebon City	0,14
V22	Bekasi City	0,14
V23	Depok City	0,14
V24	Cimahi City	0,07
V25	Tasikmalaya City	0,07
V26	Banjar City	0,04

3. Determination of Market Positioning (Positioining)

At this stage the market positioning is done to determine a new branch of LENTRHAKA based on the conclusion of the results of the analysis that has been performed on the stage of the target market (targeting) in table 4, then recommendations for defining the opening of the new branch, based on the results of the assessment has been performed, wrote an excellent potential to do opening new branch is the location of the **Bogor regency on the position of the first rank** with the acquisition value of **0.75**.



Figure 6. The Opening Of The New Branch Recommendation Map

2.2.1.2 Retention Stage

Stage of retention on the framework dynamic CRM has the goal to provide information from the customer to the company in order to build a sense of trust from the customer to the company. The

following is a description of the features that are on the stage of retention:

1. Company profile information
2. The company's products and services information
3. Testimonials Information

2.2.1.3 Expansion Stage

Expansion stage is the last phase in the phase of dynamic CRM, which is used to maintain customer loyalty to LENTRHAKA. The facilities will be built in stages expansion do promotional LENTRHAKA new branch information to customers.

2.3 Database Analysis

Analysis of the database built using Entity Relationship Diagram (ERD). As for the diagrams can be seen in figure 7,

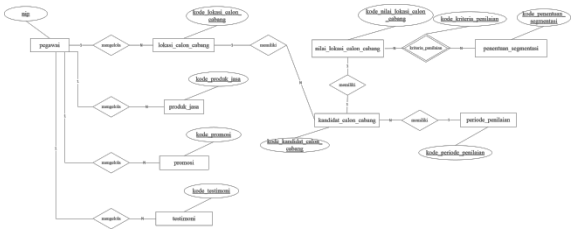


Figure 7. Entity Relationship Diagram LENTRHAKA Market Share Analysis System

2.4 Context Diagram

Context diagram to explain how the data will be used to process in the form of data flow into and out of the system. System context diagrams can be seen in Figure 8.

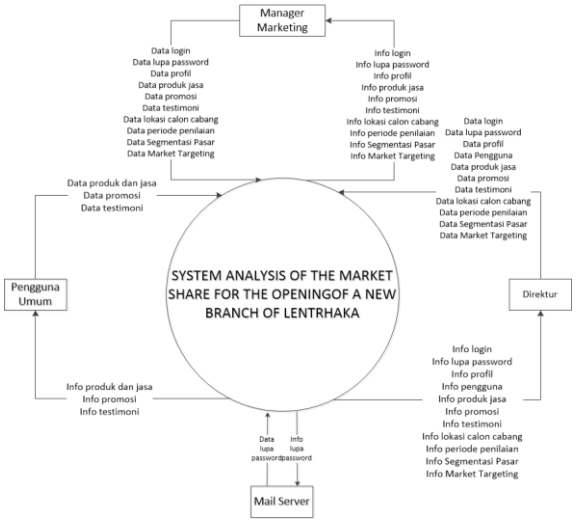


Figure 8. Context Diagram Market Share Analysis System

2.5 Data Flow Diagram (DFD)

Data flow diagrams describing how data flow outlines the processes that occur in the system until the process in more detail. From context diagram in Figure 8, described a couple of DFD, can be seen in Figure 9.

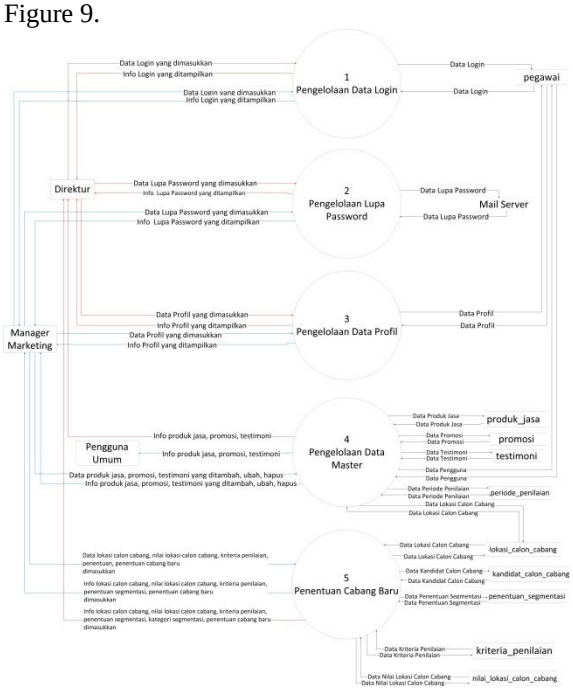


Figure 9. DFD Level 1 LENTRHAKA Market Share Analysis System

2.6 Relation Scheme

The relation schema is a series of relationships between multiple tables in the database in Figure 7. Scheme relation system can be seen in Figure 10.

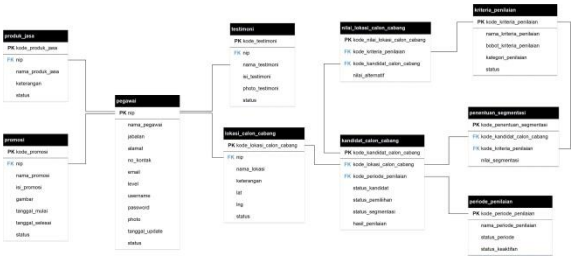


Figure 10. DFD Level 1 LENTRHAKA Market Share Analysis System

2.7 Interface Design

The design of the interface used to describe the appearance of the software to be used by the user, the interface design is based on the design of the system being built. The following is an example of interface design main page manager marketing encompasses seen in Figure 11.

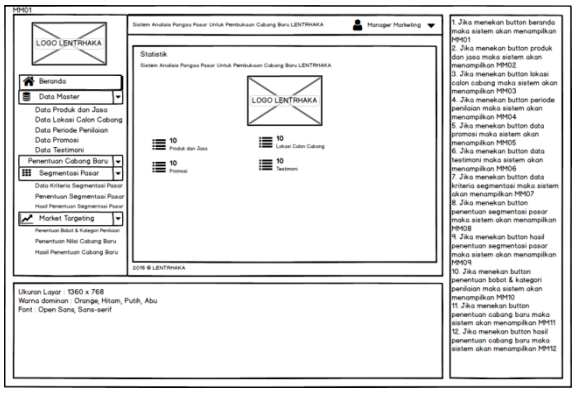


Figure 11. Marketing Manager Home Page Interface Design

2.8 System Testing

System testing is conducted to know the performance of the system has been made in accordance with the objectives of the design of the system. Testing the system using functional testing, UAT, testing, and beta testing.

2.8.1 Fungtional Testing

Functional testing is done using a black box is focused on the functional requirements of the software being built. Based on the results of the functional testing that has been done to the market share analysis system for the opening of a new branch of LENTRHAKA, it can be inferred that functionally the system is in compliance with the initial design and has been meeting the needs of the system as expected.

2.8.2 UAT Testing (User Acceptence Test*)*

Based on the results of testing a user acceptance test has been done against, it can be concluded that the procedures being performed are in compliance with the process that tested and expected by prospective users.

2.8.3 Beta Testing

Beta testing is done by way of doing testing using interview techniques addressed to users i.e. Director, manager, and marketing LENTRHAKA. Based on the user's answers regarding the testing of the system, can be drawn the conclusion that the system that has been built:

Can help Manager Marketing at LENTRHAKA in determining which areas that have a high market share and potentially to open the new branch in the province of West Java.

3. CLOSING

In this chapter, presented the conclusions that can be derived from the deliberations of the previous chapters, as well as suggestions for improvement and development of the system.

3.1 Conclusion

Based on the analysis and the testing that has been done, then it can be taken a conclusion as follows:

System analysis of the market share for the opening of a new branch of LENTRHAKA this can help Manager Marketing at LENTRHAKA in determining which areas that have a high market share and potentially to open a new branch in the province of West Java.

3.2 Suggestion

In order for the system to be built can work even better, should be done the addition:

An increase in market share against competitor analysis on the system analysis of the market share for the opening of a new branch of LENTRHAKA.

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