THE SERVICES DEVELOPMENT BASED ON THE AREA OF MARKETING USING THE APPROACH CUSTOMER RELATIONSHIP MANAGEMENT IN PT. BRC BERKAH INTERNASIONAL

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ABSTRACT

PT. BRC Berkah Internasional is a company engaged in therapeutic health services and herbal medicine or Islamic medicine clinics in the form of cupping, rukiah diagnosis, detox, kay, QRMA, full body / face, leech therapy, fitness massage therapy and various types of herbal medicines. Currently BRC has 43 service branch offices spread across West Java as many as 34 service branches, DKI Jakarta has 5 service branches and Banten has 4 service branches. The large number of service branches is found in West Java with 43 service branches. The company has difficulty in determining the development of services and adjusting them to the expectations of patients in the West Java region. So, from the problems that have been described it is necessary to have facilities that can help recommend the potential of each branch that will be developed, especially in the West Java region, as well as accommodate patient expectations of the services offered by BRC. Development was carried out by utilizing the geographical and demographic parameters of BRC patients, as well as distributing questionnaires to BRC service patients using theapproach Customer Relationship Management (CRM). The method that will be used to determine the city / district area for service development at the branch is theMethod Bayes and questionnaire processing using themethod Importance GAP. Results Blackbox test, user acceptance test (UAT) and interviews it can be concluded that this system can help General Managers and R & D Managers at PT. BRC Berkah Internasional in determining city / county areas that have the potential to develop services at branches that are in line with patient expectations, in order to maintain existing patients, as well as attract new patients.

Keywords : *Customer Relationship Management*, Service Development, *GAP Importance*

1. INTRODUCTION

PT. BRC Berkah Internasional is a company engaged in therapeutic health services and herbal medicine or Islamic medicine clinics in the form of cupping, rukiah diagnosis, detox, kay, QRMA, full body / face, leech therapy, fitness massage therapy and various types of herbal medicines . PT. BRC Berkah Internasional was established on June 29, 2004. Currently BRC has 43 service branches. Spread in the region of West Java as many as 34 service branches, DKI Jakarta as many as 5 service branches and Banten as many as 4 service branches.

Reviewing the number of service branches in the West Java region with a total of 34 service branches. The company has difficulty in determining service development and adjusting it to the expectations of patients in the West Java region. Based on an interview with Mr. Maman as the R & D Manager of PT. BRC Berkah Internasional, it can be concluded that the company implements service development by conducting deliberations in the company's internal environment, without paying attention to or accommodating patient expectations and the potential of each branch in the West Java region.

So with these problems the company needs facilities that can help recommend potential in each branch that will be developed especially in the West Java region, as well as accommodate patient expectations for the services offered by the BRC.

1.1 Customer Relationship Management

Customer relationship management or better known as customer relationship management, is a core strategy in business that integrates internal processes and functions with all external networks to create and realize profitable values for consumers [1].

1.2 Analytical CRM analytical CRM type

is a system in CRM that is able to empower customer, partner and internal information so that it can provide information that is important for decision makers and provide added value to the company and its customers and partners [1].

The analytical CRM concept, the more complete the availability of the database, the richer the analysis can be done by analytical CRM systems. History of

patient visits, transaction history, patient data information, sales partner visits, service availability, patient requests are some examples of internal data that can be analyzed for strategic business decision making of a company. The existence of internal data if it is equipped with external data such as the availability of services at the company's partners, can be combined with the company's internal data so that management can analyze more accurately and efficiently.

1.3 CRM Architecture

CRM architecture or framework is the perspective of customers and organizations in implementing CRM. CRM architecture design is not limited to dealing with work and communication issues, but also supports CRM focus. CRM architecture is divided into 2 types, namely Front CRM and Dynamic CRM [1].

1.4 Dynamic CRM

CRM architecture or framework is the perspective of customers and organizations in implementing CRM. CRM architecture design is not limited to dealing with work and communication issues, but also supports CRM focus. CRM architecture is divided into 2 types, namely Front CRM and Dynamic CRM [1].

To establish CRM features appropriately, as a basis for developing a Software Requirement Specification (SRS), a framework is needed as a reference. CH Park & YG Kim proposed a CRM Framework called "A framework of dynamic CRM". This framework describes a series of stages in the development / implementation of CRM. The most important substantive is the information obtained from the customer so that the output is in the form of Relationship Commitment, the model can be seen in Figure 1. Information that is the focus of attention is information about customers, information for customers and information by customers [2].

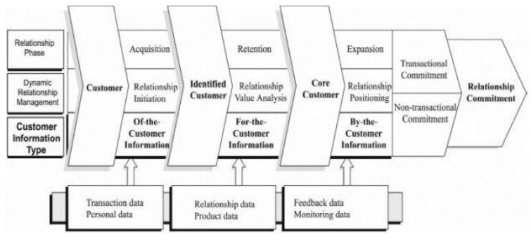


Figure 1. Dynamic CRMFramework

1.5 ConsumerTarget Target

consumers are certain groups in the target for the development of the intended service, so as to successfully achieve the expected goals. The target consumer is carried out with three main steps as shown in Figure 2 [3].

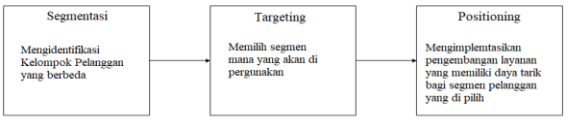


Figure 2. Consumer Stage Target of Consumer

1.6 Satisfaction Consumer

Satisfaction greatly influences the growth and development of a business entity. Therefore, companies must always pay attention to the satisfaction of their customers so that they have loyalty to the services offered and always make repeat visits.

Achieving customer satisfaction through service quality according to Kotler can be improved by the following approaches [4]:

1. Reducing gaps between management and customers.
2. The company builds a shared commitment to create a vision for improving service processes. Included in this are improving the way of thinking of behavior, abilities, and knowledge of all available human resources.
3. Providing opportunities for customers to submit complaints. By forming a complaint and suggestion system.
4. Develop and apply:
   a. Accountability, that is, the company contacts the customer after the service process occurs to determine customer satisfaction and expectations.
   b. Proactive, carried out by companies by contacting customers from time to time to find out the progress of their services.
   c. Partnership marketing is an approach where a company builds closeness with customers that is useful to enhance the image and position of the company in the market.

Good service will be able to create customer loyalty that is increasingly tightly attached and customers do not turn to other companies [5].

1.7 Consumer Satisfaction Measurement

Satisfaction survey is one of 4 methods of reducing customer satisfaction.

Customer satisfaction surveys are basically consumer satisfaction can be achieved if the needs, desires, and expectations of consumers are fulfilled. By knowing what is desired by consumers, it will be easier for the company to consume its products to its target customers [4].

1.8 Consumer Satisfaction Survey

Generally most of the research on customer satisfaction uses survey methods, either via post, telephone, e-mail, website, or direct interviews. Through surveys, companies will get feedback and feedback directly from customers and also provide a

positive signal that the company is paying attention to them [4].

1.9 Bayes Method Bayes

Method is one method of decision making that has been widely used. Decision making using the Bayes Method requires an information in the form of probability for each alternative that exists in the problem at hand and will later produce the value of hope as a basis for decision making. Bayes theorem is used as a tool to measure an opportunity from every decision taken [6]. Utilities are used in decision-making methods with the concept of obtaining expectation values and based on decision-making preferences for each alternative. Bayes theorem was proposed by Thomas Bayes in 1763. Bayes's theorem was used to calculate the probability or probability of an event occurring based on the influence obtained from observations [7]. The Bayes method is shown in the Bayes equation which is used to calculate each alternative value simplified to:

$$\text{Total Value i} = \sum_{j-i}^{m} \text{Value Value ij (krit j)} \quad (1)$$

Where:
Total value of i = total final value of alternative i;
Value ij = value of the alternative to the th at criteria j-;
Krit j = level of importance (weight) criteria for j; i = 1,2,3, .. n;
n = number of alternatives
j = 1,2,3, .. m;
m = number of criteria

1.10 GAP

Analysis Gap analysis is a measurement method to determine the gap (gap) between the performance of a variable with the expectations of consumers towards these variables. Gap Analysis itself is part of the IPA (Importance-Peformance Analysis) method [8].
A positive (+) gap will be obtained if the perception score is greater than the expectation score, whereas if the expectation score is greater than the perception score, a negative (-) gap will be obtained. The higher the expectation score and the lower the perception score, meaning the gap gets bigger. If the total gap is positive then the customer is considered very satisfied with the service of the company. Conversely, if not, the gap is negative, so the customer is less / dissatisfied with the service. The smaller the gap the better. Usually a company with a good level of service, will have a smaller gap [8]. As for calculating the score importance GAP average analysis and satisfaction score is to use an average formula.

$$\bar{x} = \frac{\sum_{i=1}^{k} f_i x_i}{\sum_{i=1}^{k} f_i} \quad (2)$$

Where:

xi = Level of importance / interest level

Fi = Frequency Respondents

GAP = Score Satisfaction - Score Importance (3)

2. CONTENT

2.1 Analysis *Framework* CRM

Framework CRMused in customer relationship management information system in PT. BRC Berkah Internasional are Dynamic CRM. Described that the CRM phase in a framework is a series of Acquisition-Enhance-Retain processes. As an integrated CRM framework based on the types of information about customers that are arranged in stages in accordance with the development of customer relationships, the stages in dynamic CRM can be seen in Figure 3.

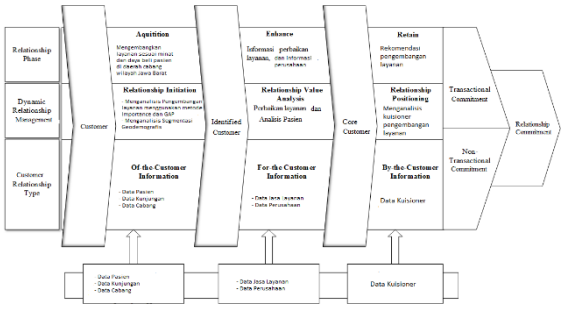


Figure 3. *Dynamic CRM Framework* PT. BRC

2.11 Acquisition Phase

At this stage there is a relationship initiation or Relationship Initiation, which is thestage
firstfor the analysis of the Dynamic CRM Framework, at this stage PT. BRC Berkah Internasional get the required data from patient visits (of) to see patients from which areas use PT. BRC Berkah Internasional, to be used as an indicator in patient segmentation for service development and analyzing which branch areas have high patient visits and the potential for service development based on patient analysis.
Facilities built in the acquisition phase are facilities for determining the area of service development carried out by the R & D Manager. With the development of services at branch offices in certain regions. This is the initial stage of the dynamic CRM

framework itself. The area determination facility for service development aims to obtain information on regional service branch recommendations that have the potential and in accordance with the criteria desired by the company to be developed.

2.1.1.1 Patient Analysis The

Purpose of patient analysis is to find out the potential of patients / service users in each region to the services offered by PT. BRC Berkah Internasional. To find out the potential of patients / BRC service users, the stages of analysis are segmentation, Targeting and Positioning:

1. Geographic Segmentation Analysis and Patient Demographics

The patient's geographical and demographic segmentation is to divide patients into different geographical and demographic units, such as the country, region, province, district, city, or neighborhood, and per capita expenditure. At this stage the geographical and demographic segmentation process is carried out to see the interest and ability of the patient's purchasing power, in areas that use BRC services so that later it will be made as an indicator to see which geographical and demographic location has potential for service development at the PT. BRC Berkah Internasional. In geographical and demographic segmentation, it is carried out based on the region where the city / regency BRC service branch is located in West Java Province.

2. Targeting (Determining Service Development Targets)

At this stage, choosing which segment will be targeted by PT. BRC Berkah Internasional. After looking at the data of visits of BRC City / District patients in West Java Province, the services with the most patient visits, and the level of per capita expenditure of residents in the vicinity of the available service branches, became the target of PT. BRC. After geographic segmentation of patients with data obtained from visits from BRC West Java patients and Human Development Index data from BPS 2015-2016 census year, then the data will be analyzed, so that selected 3 cities / regencies in West Java Province with service branches BRC, by seeing the highest number of service visits and spending per capita in West Java.

A. Table of Target Determination Results The target determination

Table results from the determination of targets by looking at the highest visiting data in each region that has a BRC service branch in the West Java region. The following are selected cities / districts to be targeted. Results targeting can be seen in Table 1.

	Interest Most services visit			
the City / County	**Cupping**	**Massage Relaxation**	**Tambah Titik**	**Expenditure/ Capita**
Bandung	23 650	22 779	18 738	15 805
CityBekasi	8,237 24,238 15,236			8,459
Regency. Bekasi	5,139	5,066	16,759	10,435

Table 1.Determination of Target

3. Positioning (Determination of Patient Position)

At this stage the determination of the patient's position is done to determine the development of PT. BRC Berkah Internasional by looking at the data that has been collected, from the stages of geographical segmentation to determining the target of the patient then obtaining data from BRC patient visits in West Java Province with 29 BRC service branches, with 3 cities / districts selected with the most visits, accompanied by spending per capita in the area. Bandung City, Bekasi City and Kab. Bekasi is the third region with the most visits in West Java.

4. Assumption of the Case for Determining Position

Assumption determination cases explain the process of determining district / city ranking and the decision to be taken to be made as a recommendation for the area of service development to the company. To facilitate the company in considering service development decisions in the area, it is necessary to establish a decision-making system. The method used in making this decision is the Bayes method. The district / city ranking process is as follows.

1. Bayes Equation Calculation TheBayes assumption of data from 3 City / Kab branch recommendations was analyzed usingmethod. Following is the calculation of Bayes' peaks from branch recommendation data.

A. The results of the Bayes equation from an alternative area with the highest visit in West Java.

Value Distric of Bekasi :

5.066 (0.15) + 5.139 (0.20) + 16.759 (0.30) + 10.379 (0,35) = 10.467

Value City of Bandung :

23.650 (0,15) + 23.650 (0.20) + 18.738 (0.30) +15.805 (0,35) = 14.193

Value City of Bekasi :

8.237 (0.15) + 8.459 (0.20) + 24.238 (0.30) + 15.236 (0,35) = 15.531

Table 2.Analysis Bayes methods

Daerah	Kriteria				Nilai Alternatif	Peringkat
Kota /Kabupaten	Pijat Relaksasi	Bekam	Tamabah titik	Pengeluaran / Kapita		
Kota Bandung	22.779	23.650	18.738	15.805	14.193	1
Kota Bekasi	8.237	8.459	24.238	15.236	10.874	2
Kab. Bekasi	5.066	5.139	16.759	10.435	10.467	3
Bobot Bayes	0,15	0,20	0,30	0.35		

5. Conclusion Determining Position to Determine the Development Area

Based on the calculation phase with method to determine the development area of the 3 districts / cities analyzed including Bandung City, Bekasi City Bekasi Distric. So based on the results of the calculation, the recommendation for the development area is the city of Bandung has a value of 14,193 as the 1st rank with recommendations for the development of cupping and relaxation massage services, the city of Bekasi has a value of 10,874 as the second rank with the recommendation of developing services added point, Distric of Bekasi has a value of 6,560 as the 3rd rank with the recommendation of developing services added point. Ranking of recommendations for determining the area for service development sorted by rank can be seen in Table 2.

2.1.2 Stage *Enhance*

Phase in the dynamic CRM framework aims to improve good relations between the company and existing patients, through the provision of optimal services and more good to its customers. The following is a description of the features contained in the enhance:

a. Service Repair Information The service repair information feature functions so that patients can find out what type of service is being developed and which branch has done it. So that patients easily get information on updating service improvement information. At this stage there is a Relationship Value Analysis, which is the second stage for the analysis of Dynamic CRM Framework, in this phase with company information, service information, PT. BRC Berkah Internasional can establish good relations.

2.1.3 Stage of *Retain*

Phase in dynamic CRM frame. The features found in the retain stage are the development of services through an online questionnaire. This information feature has a function so that patients can convey their expectations from the services offered by BRC, as well as one of the media for developing services that are in line with the interests of patients.

2.1.3.1 Service Development Analysis

At this stage, the service development process for types of services will experience a decrease in visits as well as types of services that are less attractive to patients, by distributing questionnaires to patients who have used BRC services in certain areas, up to the calculation stage of the questionnaire results. online to BRC patient respondents. The results of filling out the questionnaire can be seen in table 3.

Table 3. Results of Questionnaire Filling

Pernyataan Kebutuhan	Tingkat importance				Tingkat Kepuasan & Minat			
	1	2	3	4	1	2	3	4
Alat yang digunkan aman dan nyaman	12	10	8			11	7	12
Alat yang digunakan sudah optimal dan sterill	1	9	8	12	2	11	7	10
Perlu perubahan alat yang lebih moderen		11	7	12		8	11	11
Pelayanan sesuai prosedur BRC		6	11	13	3	8	11	8
Terapis handal dan profesional	1	10	7	12	3	8	11	8
Pelayanan tersedia untuk segala jenis terapi dan produk herbal	2	3	8	17	3	2	16	9
Obat herbal yang lebih spesifik terhadap diagnosa / keluhan yg di derita pasien		8	13	9	3	7	8	12
Sajian minuman gratis. (minuman sesuai dengan kekhasan daerah masing – masing cabang)	1	8	10	11	3	6	11	10
Pelayanan mencakup semua wilayah Indonesia	3	9	7	11	4	9	7	10
Tersedianya informasi alamat dan nomor telepon kantor pusat dan kantor cabang		10	8	12	3	7	13	7
Tersedianya saran dan keluhan pasca pengobatan	1	3	10	17	3	6	12	9
Tersedianya bundling (kombinasi antara layanan terapi A dengan B, C dengan D dll.)	3	7	8	12	2	8	13	7
Tersedianya bundling (kombinasi layanan terapi dengan obat Herbal)		10	8	12	2	9	8	11
Kecocokan antara keluhan pasien dengan layanan terapi dan obat herbal yang di berikan oleh BRC	1	9	9	11		5	11	14
Layanan yang diberikan BRC sesuai kebutuhan Pasien		8	12	10		9	12	9
Kejelasan informasi mengenai jenis-jenis layanan baik melalui website, facebook, dan *twitter*		7	10	13		6	14	10
Harga jasa layanan BRC terjangkau oleh pasien.		10	8	12		9	13	8
Harga jasa layanan BRC sesuai dengan fasilitas dan layanan yang diberikan	2	18	7	3	4	6	15	5

The results of the questionnaire in table 3 will then be given a calculation of theanalysis *importance* and GAP calculation of each statement item. Where average importance scores are used to determine the importance of the factors concerned for patients. to calculate the mean importance score, and satisfaction score, is to use an average formula as in formula (2). Then GAP analysis to identify PFI (Priorities for Improvement), namely the greatest potential for improving patient satisfaction. The bigger the gap, the bigger the problem. Calculating GAP is by reducing the importance score on satisfaction score. The following are the results of the calculation ofanalysis *Importance* and GAPcan be seen in table 4.

Table 4. Calculation Results *Importance* and GAP

Pernyataan Kebutuhan	Hasil		
	Skor Importance	Skor Kepuasan	GAP
Alat yang digunkan aman dan nyaman	2.5	3.0	-0.5
Alat yang digunakan sudah optimal dan sterill	3.5	2.9	0.6
Perlu perubahan alat yang lebih modern	3.0	3.1	-0.1
Pelayanan sesuai prosedur BRC	3.2	2.8	0.4
Terapis handal dan professional	2.9	2.8	0.1
Pelayanan tersedia untuk segala jenis terapi dan produk herbal	3.3	3.0	0.3
Obat herbal yang lebih spesifik terhadap diagnosa / keluhan yg di derita pasien	3.0	3.0	0
Pernyataan Kebutuhan	**Skor Importance**	**Skor Kepuasan**	**GAP**
Sajian minuman gratis. (minuman sesuai dengan kekhasan daerah masing – masing cabang)	3.0	2.9	0.1
Pelayanan mencakup semua wilayah Indonesia	2.9	2.8	0.1
Tersedianya informasi alamat dan nomor telepon kantor pusat dan kantor cabang	3.1	2.8	0.3
Tersedianya saran dan keluhan pasca pengobatan	3.0	2.8	0.2
Tersedianya bundling (kombinasi antara layanan terapi A dengan B, C dengan D dll.)	3.0	2.8	0.2
Tersedianya bundling (kombinasi layanan terapi dengan obat Herbal)	3.1	2.9	0.2
Kecocokan antara keluhan pasien dengan layanan terapi dan obat herbal yang di berikan oleh BRC	3.0	3.3	-0.3
Layanan yang diberikan BRC sesuai kebutuhan Pasien	3.1	3.0	0.1
Kejelasan informasi mengenai jenis-jenis layanan baik melalui *website*, *facebook*, dan *twitter*	3.2	3.1	0.1
Harga jasa layanan BRC terjangkau oleh pasien.	3.1	3.0	0.1
Harga jasa layanan BRC sesuai dengan fasilitas dan layanan yang diberikan	2.4	2.7	-0.3

Based on the results of the questionnaire calculations that have been processed usinganalysis *Importance* and GAP, it can be concluded that some aspects of services at PT. BRC Berkah Internasional such as, the security of equipment used, changes in modern tools, and the compatibility between complaints with therapeutic services that are needed require a focus to be developed to increase patient interest and satisfaction.

2.2 System Testing System

Testing at PT. BRC Berkah Internasional uses black box testing. Black box testing focuses on the functional requirements of software. Then User Acceptance Test (UAT) and end user acceptance.

2.2.1 Functional Testing Scenarios

Testing scenarios on CRM information systems at PT. BRC Berkah Internasional is implemented so that the input and output of the system is in accordance with what has been expected. Tests can be seen in table 5.

Table 5. Testing Scenarios

ClassTest	TestTest Items	Type
Login	*login* User	*Black Box*
Forgot Password	Forgot user password	*Black Box*

2.2.2 Scenario Testing *User Acceptence Test*

Application testing process will involve a representative of prospective users conducted by the R & D Manager at PT. BRC Berkah Internasional. The test scenario can be seen in Table 6.

Table 6. UAT Testing Scenario

No.	Test Case	
1	**Name ofTest**	Data Appearance TestingDevelopment Area
	Test Procedure	General Manager or R & D Manager presses Data Development Area menu.
	Expected Results The	system will display the data display of the development area.

2.2.3 User Acceptance Testing

In this testing phase, the software is left to the user to find out whether this software can meet the expectations of the user and operate as expected. Tests can be seen in table 7.

Table 7. User Acceptance Testing

Questions	Answers
How do you think about the appearance of this CRM information system?	The appearance is good, in line with the color of the company logo
What do you think about the use of the language used in this CRM information system?	Language is very easy to understand

3. CLOSING

3.1 Conclusions

After doing all the research series. Then obtained the following conclusion:

ThisSystem *Customer Relationship Management* can help General Managers and R & D Managers at PT. BRC Berkah Internasional in determining city / district areas that have the potential for service development and can adapt it to the development of services expected by patients. To be able to maintain existing patients and attract new patients.

3.2 Suggestions

In order for the system to be built to operate more optimally, additional things should be done as follows:

The addition of questionnaire menu facilities in more detail from each type of service available at PT. BRC Berkah Internasional. Online questionnaires are implemented in all branches of services owned by BRC and questionnaires are not only applied in the West Java region. There is an increase in more detailed analysis of services with the Customer Relationship Management approach at PT. BRC Berkah Internasional.

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