

# Design Success Factor Customer Relationship Management (CRM) for Rental and Sales Heavy Equipment Company

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## Abstract

**Objectives:** Calculate the success factor of Customer Relationship Management (CRM) and select recommendation of CRM program as priority in rental and sales of heavy equipment. **Methods:** This study used four experts who give opinion, which then creates criteria and sub-criteria and develop questionnaires. The created criteria are alternatively developed the second questionnaires. The Analytical Hierarchy Process (AHP) methods are used to calculate the weights between criteria and CRM program priorities which are to be run. **Findings:** There are 7 factors of CRM will be implemented for rental and sales of heavy equipment. The priority programs are used for assessing customers. **Application/Improvement:** Following heavy equipment rental exhibition, twice a year can increase customer loyalty, as part of the CRM program.

**Keywords:** AHP, Customer Relationship Management, Heavy Equipment, Operations Management

## 1. Introduction

The ineffective of Customer Relationship Management implementation in many organization has led to failure on implementing CRM which are mostly concentrated on technology, markets and online system. The CRM initiatives improved company sales and rental, deliver integrated services more efficient to the support business growth. The service center or contact center and delivery of products on demand were build to facilitate the needs of customers in obtaining current pricing, availability of spare parts and track shipments for disposal to support heavy equipment, those were supported by advanced technology on web.

CRM is considering critical factors of success on application of Customer Relationship Management system and ranked them. The statistical sample are 32 experts of CRM system customers, the data collection using Delphi method. The data collection of t-student

statistical test, Friedman and Wilcoxon also been used. Usually, questionnaire consisted of questions using a paired comparison with a range of nine options and by the researcher, academic and industry experts to assess the validity and approval.

The result showed the critical factors of success are: Support of organization's top manager of CRM project, business plan of CRM project and goals in an organization, with technological factors support<sup>1</sup>.

CRM technology has integrated latest information technology; e-commerce, data warehouse and artificial intelligence. CRM has spread in many East Asian countries, such as: Japan, Korean, China and etc<sup>2</sup>.

The AHP technique was used for data analysis and are necessary to implement access information experts, due to the limited sample, all community members are included. The process of analyzing information of Expert Choice software is used Critical Success Factors (CSFs) which are closely related to the type of business of company or strategy<sup>3</sup>.

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Previously research also summarized the organizations must focus on operations management, such as delivering the highest value to customers through communication, delivery, personalized products or services. The large percentages of customer interactions on internet, so the technology must always improve. Organizations with CRM and e-business get the greatest gains. The future of CRM is e-relationship management or e-CRM that will synchronize cross-channel relationships. It is also envisioned as an e-partnering ecosystem with complex network of partners that operates as an interconnected whole, spanning entire markets and industries<sup>4</sup>

Many studies about CRM are failed from different perspectives<sup>5</sup>. Based on research found, CRM conceptual framework for the Hotel Industry based on Critical Success Factors from management commitment, information technology, strategy, change management, people, structure and business process. CRM was only an IT-enabled sales and service function while for others. Many CRM implementation projects fail to live up to expectations, this can overcome by identify and emphasize the key success factors which ensure successful of CRM implementation<sup>6</sup>. Previous reseach about successful implementation of CRM from different process perspective of organization with operations in different segments<sup>7</sup>. The CRM must be conceived as a strategy. According to research founding, based on Critical Success Factors (CSFs) and the way companies implementating and diagnosis CRM strategy. This research has found 13 CSF factors from 55 corresponding metrics, which covered three key aspects of every CRM strategy (human factor, business processes and Technology)<sup>8</sup>. Research done at 8 copper industry executives. In the process, analyzing information of expert choice software. This research utilizes previous research to found factors the willingness of employees to entrepreneurship by AHP method to prioritize<sup>9</sup>. Research about CRM in the telecommunication companies with innovation factors are viewed by various of product, service, use of technology and marketing innovation. Quality of service factors are being viewed by wide of network, coverage area, voice limpidity, data transfer speed rate and customer service quality. Customer loyalty is composed of several antecedents, namely customer expectation, customer perceived quality, perceived value, corporate reputation, perceived ease of use, customer satisfaction, customer trust, customer commitment, customer complaint and loyalty of customer<sup>10</sup>.

The aim of this study is to calculate success factor for Customer Relationship Management (CRM) and select recommendation of CRM program as priority in rental and sales of heavy equipment.

## 2. Methodology

The research methodology consists of determining research topics, data collection, created criteria and sub-criteria to develop questionnaire 1, created criteria and alternative to develop questionnaire 2, collecting internal data for CRM program was implemented in several company, data processing of questionnaire 1 and 2. AHP calculated the priority based on weighted between the of the criteria and sub-criteria. The last stage is conduct conclusions are derived from the processing and analysis, and provide suggestions for future research.

## 3. Discussion and Data Analysis

The first step acquired the CRM success factor of several previous journals, with 9 main factors.

Methods of data collection with questionnaire instrument used to collect primary data in this study. The scale used in this experiment is the Likert scale. This scale inter-acting 1-5 with a choice from no (1) Strongly Disagree until no (5) Strongly Agree.

The questionnaire distributed to four (4) experts, as for the provisions in the determination of the experts has working period of more than 10 years as can be seen in Table 1.

To identify the factors influenced the success of CRM, using Geo Mean calculation with condition  $> 3,5$  would processed by AHP to determine priorities for success factor implementation Customer Relationship Management (CRM).

Data calculated by AHP, calculated global weights and local weight from the assessment matrix pairs, found that top priority was a senior management commitment in any implementation of CRM program, with the inconsistency of 0.05 where inconsistency factor  $< 0.01$  so that the results of the questionnaire accepted is shown in Figure 1.

Board of directors participated in CRM project, has contributed to the successful implementation of CRM with weight of 0.155 which is a sub-criterion from criteria of senior management's commitment with 0.259 of weight. Percentage of complaints related to the prod-

ucts or services sold has a weight of 0.099. Percentage of IS implemented relationships with customers with weight 0.085. Time to fix an operating problem with weights 0.081. The calculation results as been seen in Figure 2.

Next step, choosing CRM program is the priority based on the previous program. Many CRM programs continued to evolve according to the needs of the company's rental and selling of heavy equipment. This program is taken to represent 3 (three) construction company in Indonesia is shown in Table 2.

The result questionnaire from expert, then the data were processed using AHP and there was selected for Customers' Needs Assessment. The selected of CRM program needs support of management to determine the direction of the business by using field survey to customer or potential customer to get information in the company such as; how long the device is used for the project, where the project is located, how is the funding of the procurement, what is the brand selected for the project implementation as can be seen in Figure 3.

**Table 1.** List of expert

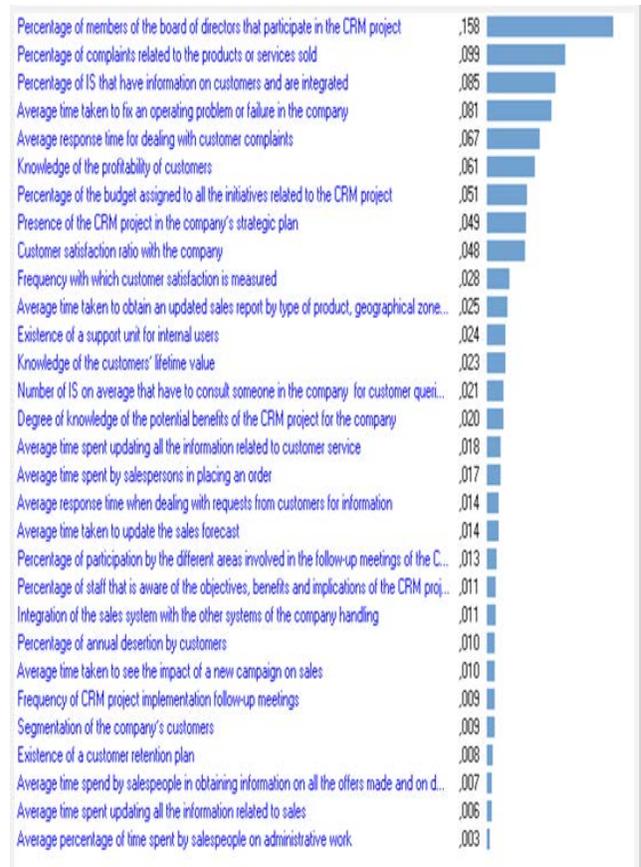
Title	Working Period	Location
President Director	2002 –Now	Indonesia
Director	2003 –Now	Indonesia
Director	2003 - Now	Indonesia
Manager	2000 - Now	Indonesia

**Table 2.** CRM program in rental and sales of heavy equipment company

No	Remarks
1	Management Sport Competition.
2	Held Exhibition Heavy Equipment Knowledge.
3	Implementation New Innovation for Integration System Information for Application CRM.
4	Linkage Mail for Catalog Product, Provide Available Stock, Unit Price and Location to All Customer or Potential Customer.
5	Assessments Customer Needs.
6	Delivery Time 1 Hour for Service Heavy Equipment to Customer Project Site.
7	Held e-Auction (Online) for Frequently Heavy Equipment which mostly need by customer.
8	Expand Help Desk for Complain Customer.



**Figure 1.** Weight of main criteria.



**Figure 2.** Global weight main criteria and sub criteria.



**Figure 3.** CRM priority.

## 4. Conclusion

Criteria Success Factors CRM in rental and sales heavy equipment company, for the highest priority is the senior management's commitment. Recommendations for Priorities in CRM program. In this research customer needs assessments which is in accordance with the business goals by rental and sales, which was expected to be a bridge between the customers desired from the company to keep continuous relationship.

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