

# IMPLEMENTING ONLINE CUSTOMER RELATIONSHIP MANAGEMENT IN SMALL AND MEDIUM SIZE ENTERPRISE (SME): CASES BALI HANDICRAFT SMALL INDUSTRY

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## ABSTRACT

*Online customer relationship management (CRM) implementation is becoming such terrifying activity for most firms, especially those which are categorized as SME (Small and Medium size Enterprise). Since that SME often lack of technical expertise and they really care for cost spending especially in internet connection cost. However, those barriers actually can be released when its implementation is being done with proper technology that can reduce cost while it will not reduce customer satisfaction in using online CRM. This paper tries to explain online CRM implementation in SME that will break all worries of SME's management. On the other hand, brief literature review can bring clear explanation for importance of online CRM implementation in many level of industry.*

**Keywords:** *Customer Relationship Management, Small and Medium Sized Enterprise*

## 1. INTRODUCTION

Customer Relationship Management (CRM) is a business approach that seeks to create, develop and enhance relationships with carefully targeted customers in order to improve customer value and corporate profitability and thereby maximize shareholder value [1]. Thus, CRM should really increase customer profit-ability as most customers are only profitable in the second year that they do business [2].

Keeping customer to be loyal is not easy job to do. Some of them seek ex-celence service from their supplier and intangible satisfaction in its exchange pro-cess. That is why many suppliers try to find out how to please their customer in their own ways. However, CRM concept that usually associated in information technology to implement its strategies [1] rarely applicable for small in-dustry.

SME or Small and Medium Sized Enterprise seldom offer CRM implemen-tation in modern ways just because of simple reason: they cannot afford information technology investment and they do not have capable person to manage it. Surely this assumption is not true all the way, since that CRM implementation (especially using information technology) can be done in simple way and cheap investment.

In this paper, we took sample case for small handicraft industry that located in Denpasar city, at Bali – Indonesia. As we know that Bali is famously known as heaven of tourism industry and great handicraft industry. However, handicraft in-dustry in

Bali often comes from home industry that implement hit and run market-ing strategy. So, foreign tourist that actually want to order handicraft at second time (from their own country) rarely can be serviced just because distance and trust bar-rier.

Especially for exclusive handmade handicraft that needs long time to finish, the home industry is losing trust from their customer because foreign customer (formerly tourist that already come and buy their product at Bali) cannot see their working process and also they have difficulty in payment process.

In order to solve this problem, we tried to solve it with building CRM appli-cation that can make foreign customer to control their order process, steps of handi-craft work. It also can handle other process such payment and shipping control after handicraft is finished. CRM application that has been already built is not high class application that needs expensive investment, however it already fulfill both sides need to interact one another.

On the other hand, the CRM application that builds on web based applica-tion is also become such alert system for the manager of handicraft industry for cus-tomer responses and new order. So, in the future it should improve small handicraft industry performance, especially for increasing customer trust that lives far away from them.

## 2. LITERATURE REVIEW AND BACKGROUND

### 2.1 Customer Relationship Management

CRM or Customer Relationship Management, also more recently called 'customer management', is a business approach that seeks to create, develop and enhance relationships with carefully targeted customers in order to improve customer value and corporate profitability and thereby maximize shareholder value [1]. CRM also defined as Customer Relationship Management is a comprehensive approach for creating, maintaining and expanding customer relationships [2].

As customer loyalty is only source profit for any business [3], then it is obliged for every firm to maintain their customer relationship. One of the ways to maintain good customer relationship is to fulfill their need and give satisfaction so they will back again and again. It is also stressed that customer loyalty actually a journey not a destination for organization, thus there will not be a finish in creating activity to maintain customer loyalty[3].

In technological view, there are three structures of CRM which are [4]:

1. Analytical CRM

CRM systems that help a firm to analyze the huge amount of customer data in order to detect valuable patterns of customer's purchasing behavior.

2. Operational CRM

CRM technology refers to the systems that start from ordering and go up to the step of delivering the product to the customers.

3. Collaborative CRM

Collaborative CRM systems refer to any CRM function that provides a point of interaction between the customer and the channel itself.

**2.2 Online CRM**

Customer commitment to and trust in a business relationship are the main reasons for him or her to stay with a business "relational" view considers online buyer-seller relationships as personalized, interpersonal social and psychological exchanges and emphasizes the effects of social and psychological factors (such as commitment and trust) on customer retention. Most previous e-commerce literature has investigated the significant role of trust and has started to examine commitment [5].

Empirical study also shows that online system that applied web sticky process will have customer inclination toward loyalty [5]. However, web stickiness will also need appropriate implementation in order to maintain continuous interaction from supplier to customer.

Web implementation is one of important factor in CRM especially in mass scale [1]. Payne [1] also stated that integrated channel of marketing (from direct sales to e-commerce implementation) will

create maximum value and outstanding customer experience.

**2.3 SME**

SME sometimes defined as Small and Medium sized Enterprise [6], but it also defined as Small to Medium Enterprise [7]. While the abbreviation defined differently, the definition of SME itself also vary in every country. Since that each country has its own quantitative measure for enterprise size.

Since that this case is applied to Indonesia, then definition of SME is refer to how Indonesian government categorize enterprise. In this manner, SME in Indonesia is defined as enterprise that has employee less than 20 [7].

Other quantitative measure of SME is about management range that lack of trained staff and also has small management team [7]. SME also has difficulties in IT literature knowledge that makes it limited contribution in e-commerce area [6].

Empirical study already showed that SME, especially in developing country, having so many barrier in implementing online CRM [6, 7]. However, some of SME can implement it even though they must struggle to survive. While theoretical view said that implementing internet technology should not be a big problem to implement in many kind of industry [8].

**2.4 Case Study: Fa. Ari Handicraft**

Fa. Ari Handicraft is one of SME handicraft business that located Ubud, Gianyar – Bali. This firm has showroom along with its small factory that produce wooden handicraft, iron craft, jewelry and bamboo craft. Many tourists have already bought their product directly at showroom. However, some of them tried to buy another handicraft while they already at their own country. This situation brought the handicraft industry to build such CRM web based application to maintain their relationship as well as their e-commerce representation.

Handicraft product from the firm is made by order and it can relatively have unique design. Thus, processing order until finishing term is take time at least two weeks. Therefore, customer would like to see their handicraft, from order process until finishing term even they just watch it via web application.

**3. MODELING AND IMPLEMENTATION**

Model of CRM implementation in this research involved two core application which consists of desktop application for handicraft industry and web application that being built for customer (and also for supplier for administering web data).

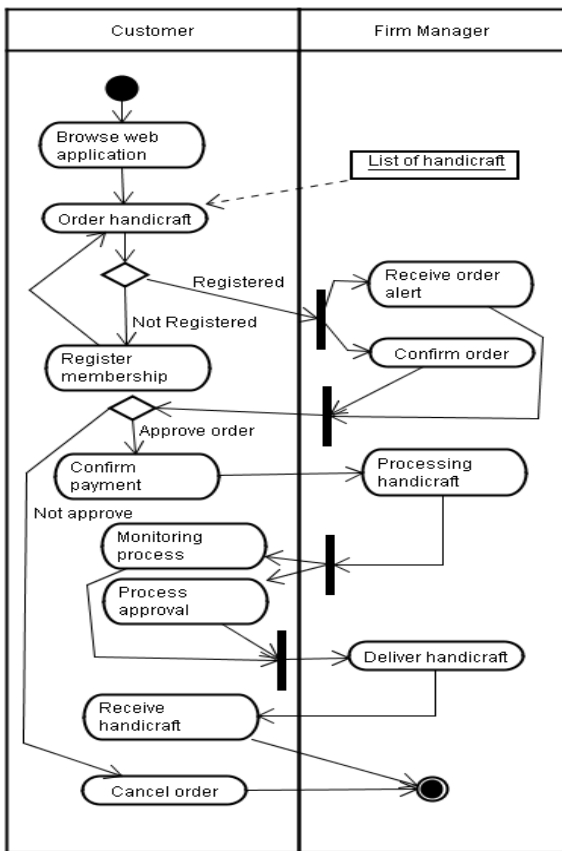


Figure 1. Activity Diagram

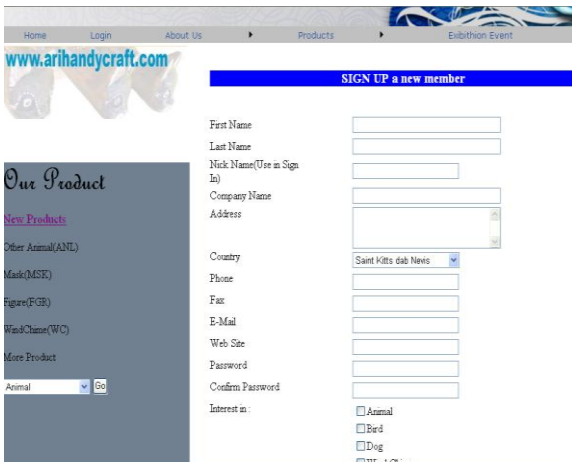


Figure 2. Sign up Page

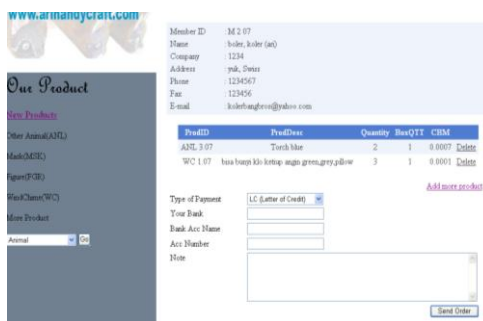


Figure 3. Cart Page

Desktop application use XML Web Service technology in order to implement disconnected concept. This desktop application will exclusively used by firm manager. This kind of application will run at startup and applying TSR (Terminate and Stay Resident) model. Thus, firm manager will have alert system that display balloon tips whenever there are new transaction happen in web application.

Desktop application also synchronize data in web server when firm manager try to update data in servicing customer need such as: updating catalog, confirming order and update working progress of handicraft production. Since that desktop application is merely use to have temporary data, so it does not need big resource for computer. Thus, the firm does not need expensive investment to implement this application.

Web application is actually intended to customer application. Its layout was made as simple as possible to simplify access for customer. It means that only registered user can see all picture in catalog if they want it. When it comes to unregistered visitor web layout only shows partial catalog so access time will be faster.

Web application does not apply online transaction since that the firm is small one and time of transaction is not instantly done. That is why payment process is using LC (Letter of Credit) or bank transfer that considering safe for the firm at this time. Big picture of activity diagram for implementation is stated Figure 1.

At first, customer (whether it new customer or customer that already know handicraft industry from their last visit to Bali) browse for catalogue of products. Later, when they need to order specific handicraft, they must register to web system.

After registration process succeeded, customer then can order handicraft to firm. In order process, payment process between customer and firm use LC, thus both customer and firm will reach final deal (firm can receive full payment and customer can release their payment) only when handicraft is completely received by customer. Registration or sign up process took place at sign up page as shown in Figure 2.

Before ordering process, customer can customize their handicraft specification, including size, weight, raw material (wood, iron or bamboo) in web application. This step hopefully will give freedom for customer to order their own wants. On the other hand, this will keep customer back to order to the firm and make firm understand what customer really want in their order.

Ordering process in this application is not similar to common e-commerce shopping cart that allow multiple goods in one cart. Since that handicraft is an art-work that needs long time to see and customizing handicraft process is not easy at all,

so web page that display cart system is really concern at customizability rather than quantity matter. Figure 3 shows a cart page.

When ordering processing is finished, firm manager will have alert in their desktop application. This desktop application using XML Web Service technology, thus it use disconnected concept. It means that internet connection only needed when alert system receive new data transfer process.

Disconnected concept that brought by XML web Service is an effort for cheaper cost to the firm. It will reduce internet connection cost since that firm man-ager does not have to connect to internet all the time. However, application will alert the manager when a new order is arrived. Alert system is displayed as Figure 4.

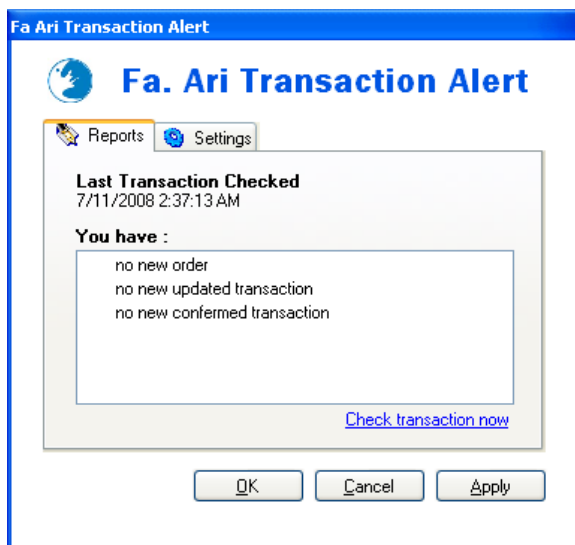


Figure 4. Desktop Alert

TrxID	Status	PaymentType	BankName	AccName	AccNum	TrxDate
INV-1/M 2 07	Conformed	LC	tes	tes	12343	5/20/2008 6:54:39 PM
INV-2/M 2 07	Conformed	DP	TES	tes	12234	5/20/2008 8:31:13 PM
INV-3/M 2 07	Conformed	LC	qwq	qw	ww	5/21/2008 7:11:55 AM
INV-4/M 2 07	Conformed	CS	tes	123	123	5/27/2008 9:48:22 AM
INV-5/M 2 07	Pending	LC	tes	tes	123	6/6/2008 2:14:27 PM
INV-6/M 2 07	Pending	LC	TES	tes	2222	6/9/2008 10:53:09 AM

TrxID	ProdID	ProdDesc	Quantity	BoxQTT	CBM	Price
INV-1/M 2 07	ANL 2.07		99	5	0.0000	9.00
INV-1/M 2 07	ANL 6.07	tes Black	33	2	0.0000	8.00
INV-1/M 2 07	ANL 76.07	uhu uhu	55	3	0.0000	23.00

NoProg	ProgressName	Done	Total	Percent	Est	Note
1	Reserving material	99	99	100.0	5/20/2008 7:09 PM	
2	Wood carving	81	99	81.81	5/26/2008 7:10 PM	
3	Dry kalin	33	99	33.33	5/22/2008 7:14 PM	

Figure 5. Progress Report

Similar process will also goes to payment process from customer to the firm. Manager will get alert from desktop application that will connect automatically to internet when payment is made by customer. In this manner, manager then updates order status (whether it is still in process, finishing or delivery term) via desktop application. This updating process can take offline, so it will not cost the firm too many internet connection. When all data is ready then desktop application will connect to web application and synchronize data in web server.

Core difference of this application than others is in monitoring process that allow customer to monitor their order process remotely. While firm finishing their product, customer will stay alert at web application, how far their order is being produced. In this process, firm really try to reach customer satisfaction. Thus, hopefully, customer will be back in the future to order another product. A progress report page is shown in Figure 5.

#### 4. CONCLUSION AND FUTURE DEVELOPMENT

- CRM application that is implemented in this case is categorized as operational CRM since that it will start form ordering process through delivery term. On the other hand, this application is open to develop it into analytical or collaborative CRM.
- Emphasizing in simple process for customer will help customer to access web application easily, whether they are novice or advanced users.
- Using XML Web Service technology that implement disconnected concept can reduce internet cost for the firm. Since that most of SME is really worry about internet cost in online CRM implementation, this technology can exceed the problem.
- While web application of this CRM is emphasizing its custom order, it will make each customer feel very personal in their own order. It also gives personal interaction between each customer and firm when they try to monitor handicraft production process via web.
- Even though this CRM has already implemented some of theoretical concept of CRM, it also has some weaknesses that must be fixed in the future development. For example is payment gateway that must more secure and using standard se-cure payment gateway such as PayPal. Other weakness is about security process that runs through the web application. Since that many internet crime happen every day, thus it should implement many security features such as captcha fea-ture in login area and better cookies management.

- f. Seeing this CRM implementation case study, it means there is no more reason to say that online CRM implementation is too expensive for SME. Since that online CRM can be cheap and still can fulfill all aspect of CRM theoretical concept, and first of all, it can still satisfy customer wherever they are. And last but not least, customers' satisfaction is hopefully can bring them back to order again and again.

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