

# Exploring the SaaS CRM Software's Selection Complexity of Vertical E-Commerce Company due to COVID-19 Post-Pandemic era in Indonesia using Soft System Methodology

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## Abstract

Due to social distancing laws and crowd control as a means of avoiding the spread of COVID-19 since 2020 had required retail companies to adopt digital transformations in their business systems. Consumers who formerly shopped mostly offline at shopping malls are more likely to shop online at E-Commerce/Marketplaces because of these social restrictions. With the following fall of certain spending, businesses must engage in marketing operations to preserve income in times like these, whether it's prospecting for new potential customers, remarketing potential customers, or keeping relationships with existing customers. This opens a new opportunity for vertical e-commerce with narrow target audience's category to optimize their revenue growth using Customer Relationship Management (CRM) technology. However, with direct impact to operational cost, retail companies could face a complex challenge to choose the CRM software that best fits their needs and consider. Therefore, this study tries to explore the complexity to help them choose the best CRM software solution during and after the COVID-19 pandemic, particularly in Indonesia. Soft system methodology approach that includes system diagram and multi-actor analysis will be used in this research to give clear understanding on the problem and criteria to help the decision-making process by the E-commerce company.

## Keywords

Soft System Methodology (SSM), SaaS CRM Software, Post-Pandemic COVID-19, AHP-TOPSIS, E-Commerce

## 1. Introduction

The COVID-19 pandemic that began in 2020 has had a significant impact on business conditions and consumer behavior on e-commerce platforms, both horizontal e-commerce that sells products from various categories and for various market segmentations, and vertical e-commerce that is focused on selling category products to a more specific market segmentation. Digital-based start-up businesses and companies continue to analyze various marketing efforts during and after the COVID-19 pandemic and have found that digital-based marketing platforms are useful tools to reach target audiences (P. Patel et al. 2020). In this regard, e-commerce combines the internet network and the development of communication technology to change the way business connects, interacts, and communicates persuasively to the target audience to purchase products sold on the platform. (Abdul Khan 2016) (P. Patel et al. 2020). This refers to the term known as e-marketing or digital marketing, which is digital-based marketing.

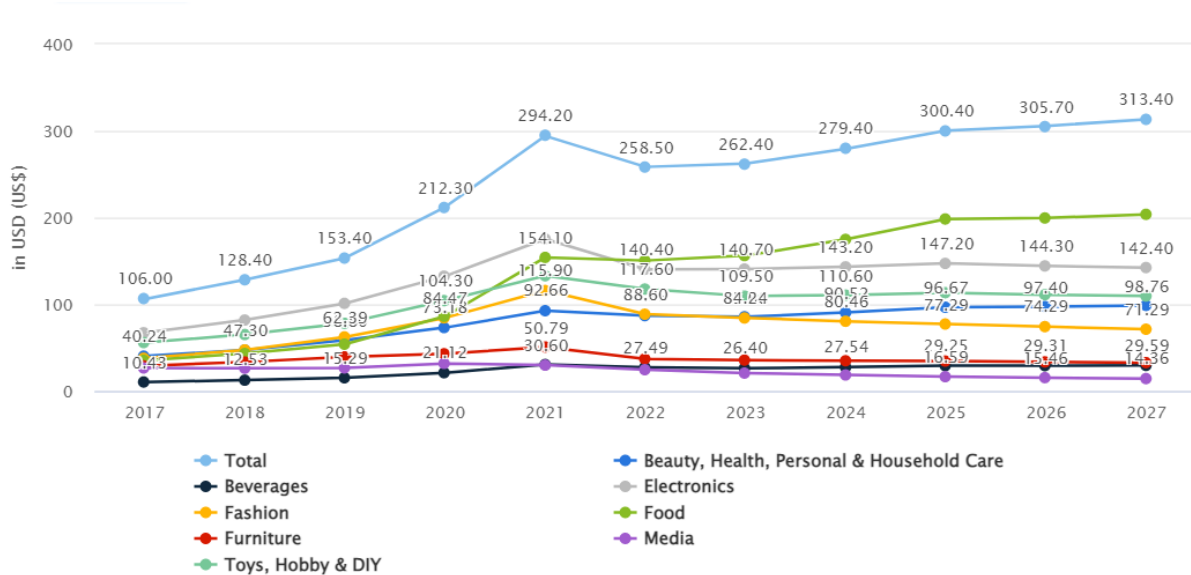


Figure 1. Average e-commerce revenue per user in Indonesia, Source: statista.com, 2023

Statista.com stated a significant incremental in average e-commerce revenue per user in Indonesia in 2020-2021 from US \$153.4 in 2019 to US \$294.2 in 2021 that indicated a significant customer behavior switch during the COVID-19 period era in Indonesia, especially when social distancing and home confinement has enforced by the government. The number has been down to US \$258.5 in 2022, the year when social distancing and home confinement were loosened, became less strict, and people gradually start their offline activities

ORAMI is one of the digital-based start-up companies that operate in the e-commerce field and also utilizes digital marketing in its marketing activities, including retention marketing that utilizes subscription-based CRM software (software as a service, or SaaS). By utilizing customer and transactional data, ORAMI implements the distribution of relevant marketing content to the target audience in the form of email broadcasts, SMS broadcasts, push notifications, and others. Many companies have experienced the benefits of utilizing the CRM system. On the other hand, the difficulty in determining which CRM software is the most suitable to meet their needs at an appropriate cost (Oyekola O et al. 2020), including ORAMI.

## 1.1. Objectives

The objective of this study is to explore the complexity to help them choose the best CRM software solution during and after the COVID-19 pandemic, particularly in Indonesia. A soft system methodology approach that includes a system diagram and multi-actor analysis will be used in this research to give a clear understanding of the problem and criteria to help the decision-making process of the E-commerce company.

## 2. Literature Review

### 2.1. Customer Relationship Management

Customer Relationship Management (CRM) refers to an information industry term for the methodology, software, and internet capabilities that help businesses manage their relationships with customers in an organized manner. This includes creating a database of customer information and detailing relationships in detail, such as shopping behavior, transaction details, affinities, personal information, and others (Cuthbertson R, et al., 2004). CRM is also commonly referred to as a comprehensive marketing strategy for acquiring, retaining, and partnering with customers to create superior value for the company and customer (Parvatiyar dan Sheth 2001).

There are various methods that can be applied to implement CRM, such as email-based marketing, SMS, push notifications, loyalty programs, remarketing, digital ads, and others. These capabilities are available in a systematic solution platform known as CRM software or CRM system. Currently, there are CRM software with pre-built features

and modules that are ready for use with a subscription contract cost (known as Software as a Service or SaaS), or open-source CRM software that is free and customizable but requires technical expertise to configure.

Compared to traditional CRM, which is typically implemented by large companies with strong financial capabilities, CRM software vendors currently prioritize SaaS CRM products to reach businesses of various sizes. The adoption of subscription-based products is supported by customer support facilities and increased investment efficiency. Factors such as lower costs, more flexible contracts, faster implementation, minimal technical expertise required, and a wider market scope are some of the driving forces behind the acceptance of SaaS as a viable option.

## **2.2. The Digital Transition During the COVID-19 Pandemic for Business**

The COVID-19 pandemic has led to the widespread use of terms such as "social distancing" and "home confinement", resulting in an increase in online shopping activity (Patel et al., 2020). In response, Indonesia implemented the "Large-scale Social Restrictions (PSBB)" and "Community Activity Restrictions (PPKM)" from 2020 to the end of 2022. The e-commerce industry in Indonesia was affected by these restrictions, as consumer behavior changed and technology became more readily available, leading to increased innovation and experience in the field of information technology (Rahayu et al. 2015). This change in consumer behavior motivated business owners, both small and large, to adopt e-commerce models in order to maintain their revenue during the pandemic.

On the other hand, the COVID-19 pandemic has created new challenges, such as reduced consumer purchasing power, reallocation of secondary and tertiary spending to cover basic household and health needs, fluctuations in supply and demand, disruptions in the supply chain, and more (Patel et al. 2020). In 2022, the VUCA (volatility, uncertainty, complexity, and ambiguity) situation was further impacted by the pandemic and the potential for a global economic recession.

These challenges pose a threat to the stability of both business-to-business and business-to-consumer sales revenue and profitability. This presents an opportunity for businesses to change their direction and marketing strategies, leveraging customer relationship management (CRM) and retention marketing to turn challenges into new opportunities. This is particularly relevant for e-commerce businesses that have access to customer and transaction data.

## **2.3. CRM Software Selection with AHP-TOPSIS**

In the process of selecting software, multi-criteria decision-making methods such as AHP-TOPSIS can be applied to analyze CRM software options based on the criteria and weighting of each decision-making aspect (Hanine et al. 2016).

As explained by Estiani in her 2020 research, the AHP method developed by Thomas L. Saaty is a decision-analyzing method that selects alternatives based on specific criteria utilizing functional hierarchy to solve complex and unstructured problems with many aspects. AHP is helpful in situations with minimal statistical data and decision-making in uncertain situations.

The Technique for Ordering Preferences by Similarity to Ideal Solution (TOPSIS) introduced by Yoon and Hwang in 1981 is a MCDM method that determines a positive ideal solution by maximizing the criteria that are advantageous and minimizing the criteria that are cost-oriented. TOPSIS also determines an inverse ideal negative solution (Olson 2004) (Estiani 2020).

## **2.4. Soft System Methodology**

Soft Systems Methodology (SSM) is a qualitative research method based on systems thinking and action research (Aryee 2022). It uses models of human activity to understand the problem situation and the actors' perceptions, judgments and values. SSM is a cyclic learning system where the problem situation is transformed into a system framework through rich pictures and constructs such as CATWOE (customer, actor, transformation, worldview, owner, environment) and PQR. Conceptual models are then developed based on real-world conditions. In this paper, the SSM's processes is used to develop the map of the problems as a conceptual model map. We also adding multi actor analysis as part of the process to clarify the perceptions of all the actors involved in the selection system.

### 3. Methodology

In this study, four stages of SSM process are applied to understand the problem related to CRM software selection. Stages one and two aim to understand the problem from all perspectives using a rich picture diagram. Stage three creates a root definition of the system using CATWOE analysis, and stage four develops a conceptual model of the system. Both the root definition and conceptual model are based on real-world conditions and will be compared to the company's existing conditions.

## 4. Result and Discussion

### 4.1. Problem Situation and Descriptions

With various SaaS CRM solution vendors to choose from based on their goals, configurations, and subscription costs, business enthusiasts have the need and time to evaluate their options and be cautious in making decisions so as not to choose an option that is not optimal due to having an impact on the wrong strategic decisions and affecting the financial condition of the company.

The unique and complex criteria of the features and characteristics of CRM software make the selection of CRM software a critical decision as the VUCA (volatility, uncertainty, complexity, and ambiguity) condition, starting from the COVID-19 pandemic, has a direct and indirect effect on the investment capabilities of the company, including CRM technology. Companies need to consider the benefits obtained compared to the costs incurred. (Jafa 2020)

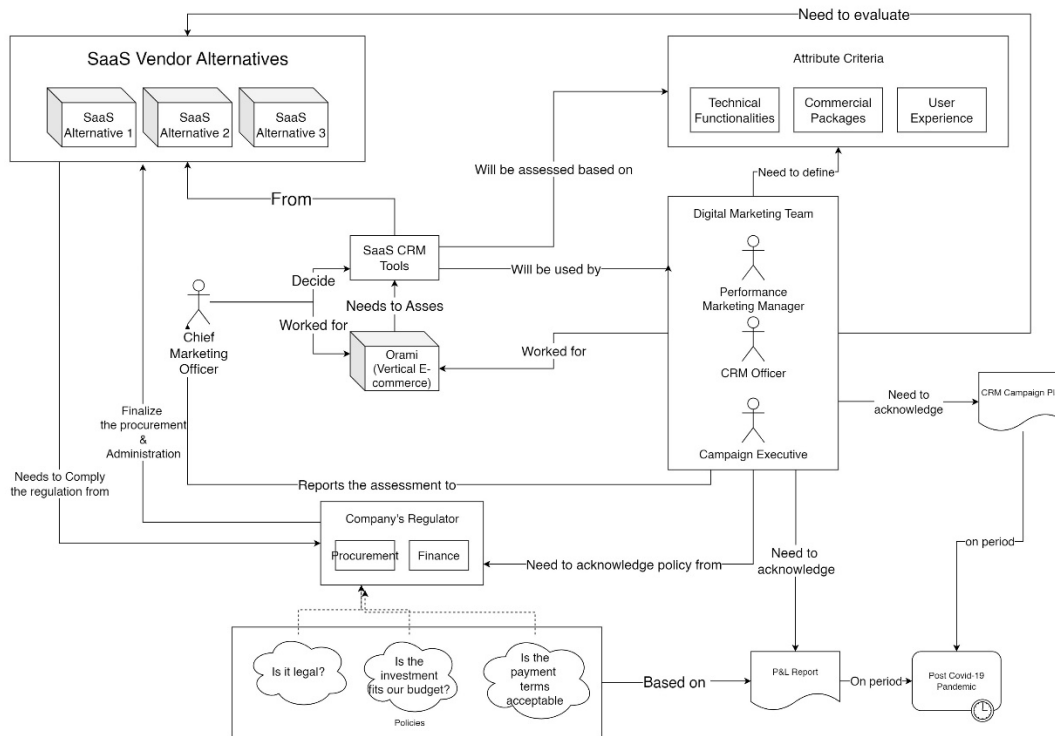


Figure 1. Rich Picture Diagram of CRM Software Selection

In this case, ORAMI's Digital Marketing team needs a CRM Software for their marketing activities. The selection process needs to comply company's regulation from procurement and finance team in terms of pitch mechanism and investment capabilities. All of the alternative needs to be evaluated based on the software selection criteria, including but not limited to technical functionalities, commercial package, and user experience. The result of the evaluation will be act as the basis of the decision-making process by the Chief of Marketing (The head of digital marketing team)

### 4.2. Defining System's Problem

The main problem is that stakeholders need scoring system to decide on selecting the best fit CRM Platform. The CATWOE analysis developed from the root definition of the system can be seen in Table 1.

Table 1. CATWOE Analysis of CRM Software Selection

Root Definition	CATWOE	Elements
A system by the digital marketing team to select a SaaS CRM Software that fit business needs by defining criteria of the software selection with AHP-TOPSIS that comply company's regulation, given the constraints of company's investment capabilities and regulation to satisfy Chief Marketing Officer as the final decision-maker of the CRM software selection	Customer	Chief Marketing Officer (Head of Digital Marketing Team) as the final decision maker of CRM Software Selection
	Actors	<ol style="list-style-type: none"> <li>Digital Marketing Team that consists of, Performance Marketing Manager, CRM Officer, Campaign Management</li> <li>Procurement team that organizes the selection process</li> <li>Finance team who had the information of company spending investment</li> </ol>
	Transformation	Defining criteria of the Software Selection with AHP-TOPSIS that comply company's regulation
	Worldview	E-commerce CRM business needs that reflect to the functional features requirement
	Owner	The digital marketing team
	Environment	Company's investment capabilities and regulation

Analysis of the roles of the actors in the transformation process is presented in Table 2. The analysis of decision-making actor shows the perspective of a problem perception, objective(s), interest(s), causes of the problem(s), resources(s), and position of each actor.

Table 2. The Analysis of Decision-Making Actors

	Actor(s)		
	Digital Marketing Team	Procurement Team	Finance Team
<b>Problem Perception</b>	Use CRM Software for marketing activity	In charge in software selection mechanism and understand the pitch regulation	Understand the company's investment capabilities
<b>Objective(s)</b>	Assess CRM software for The Digital Marketing Team	Find the software alternatives and make sure the criteria of the software selection are well defined and scored properly	Set the company investment capabilities as cost restriction
<b>Interest(s)</b>	Best fit CRM software	Systematic software selection pitch process	CRM Platform cost that fit company's budget
<b>Causes of Problem(s)</b>	The need for finding the best CRM Software that fit marketing needs	The need for finding software alternatives and supervise the criteria scoring mechanism	The need to set maximum budget for the subscription
<b>Resource(s)</b>	Digital marketing acumen, experience, and sales channel	Procurement Regulation	Finance Regulation
<b>Position</b>	The policymakers and evaluator for the decision makers	The policymakers	The policymakers

### 4.3. Conceptual Model of System's Problem

From the CATWOE framework, the conceptual model of an ideal system is described in the system diagram in Figure 3.

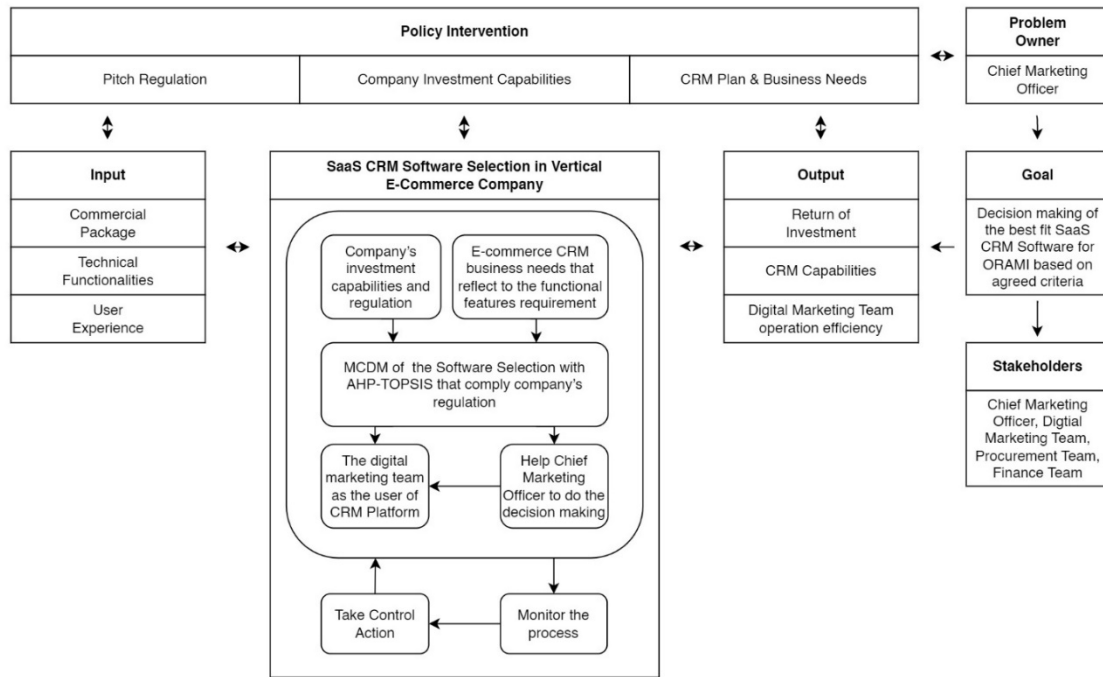


Figure 3. System Diagram in the CRM Software Selection

The chief marketing officer as the owner of the problem will make the decision within the area of the policy intervention: pitch regulation, company’s investment capabilities, and CRM plan and business needs. Digital marketing team will help define the criteria and evaluate all the alternatives based on those criteria. Finance team will decide how much budget that can be utilize as a cost budget and procurement team will foresee the pitch process from find the alternatives, scoring process, until the final decision-making process.

The system’s objective is to decide the best fit CRM platform for ORAMI. Inputs to the system are commercial package, technical functionalities, and user experience. The outputs generated by the system are return of investment (ROI), CRM capabilities, and digital marketing team operation efficiency.

## 5. Conclusion

The decision making process for selecting the best fit CRM software for ORAMI needs to be conducted to help for the stakeholder, namely the chief marketing officer, the digital marketing team, the procurement team, and the finance team as it will help the process selecting the best alternative.

The result of this study have identified stakeholders and their relationships as actors who need a decision-making process. The systemic framework analysis using the SSM has provided benefits in this study. The use of SSM could clarify the essential aspect that must be considered in conducting a decision making mechanism following the multi-actor mapping and other variables. In future research, it is necessary to conduct multi-criteria decision making process to obtain analysis an indicators of the best fit CRM software by considering the VUCA situation on e-commerce sector at post-pandemic era.

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