

CRM Implementation in SMEs Management Processes: The Role of e-CRM and s-CRM

Daniel Cárdenas Yactayo
Facultad de Ingeniería
Universidad de Lima
Lima, Perú
20162924@aloe.ulima.edu.pe

Jean Piert Espinoza Castro
Facultad de Ingeniería
Universidad de Lima
Lima, Perú
20172111@aloe.ulima.edu.pe

Rafael Chavez-Ugaz
Facultad de Ingeniería
Universidad de Lima
Lima, Perú
Rchavez@ulima.edu.pe

Abstract

In recent years, small and medium-sized enterprises (SMEs) have not implemented Customer Relationship Management (CRM) because they consider it a high cost in which they should not invest, or if they are implemented it is done without respecting the necessary procedures. In addition to highlighting that the pandemic has encouraged SMEs to use technologies at their disposal to be closer to customers. The objective of this research is to identify what are the appropriate procedures for the implementation of CRM tools in SMEs. The study population was 70 articles which were selected through filters and criteria. The results support the role of Electronic CRM (e-CRM) and Social CRM (s-CRM) into the SMEs effectiveness for the business processes. It should be noted that the benefits obtained are broad, for example in the e-CRM, an efficient database will be obtained to attract new clients and retain them. While in s-CRM, it covers engagement achievements, customer satisfaction and increasing brand visibility (branding). The value of this work may be applied to obtain greater efficiency in its use, as well as to identify critical factors of these tools for managing improvement.

Keywords

CRM, s-CRM, e-CRM, SMEs, Implementation

1. Introduction

According to Ruíz-Velásquez et al. (2020), the strategies and activities related to CRM marketing sought and found in participating companies in Colombia were few due to limitations of time, people resources and money. In addition, many companies do not have the marketing area for better customer management. (p.7).

In studies carried out on SMEs, it is known that it was possible to specify and apply CRM strategies which did not have positive results because there were high costs for their application hoping to compensate with the benefits they could bring. However, due to lack of information and knowledge about a management area, it was decided to stop applying these strategies (Ruíz-Velásquez et al., 2020).

Therefore, based on research, it was possible to discover other alternatives implemented for independent variables as strategies for SMEs, which are: free software adaptability, accessibility of social media use strategies, accessibility of Sophisticated attention model strategies and organizational structure. To cover these variables, electronic tools and social media of CRM are available as an option.

According to Wen et al. (2020), the Covid-19 pandemic has negatively influenced companies (as cited in Chi, 2021). Therefore, according to Singh et al. (2020), companies in various sectors must innovate their commercial operations (as cited in Chi, 2021). Furthermore, according to Chi (2021), the neglect in technological innovation was mostly in the perception of risk, because many companies were not trained to cope with remote work.

According to Arana et al. (2022), SMEs have greater deficiencies in the management of their operational processes, in technological, digital aspects, etc. Therefore, it is necessary to publicize a successful implementation of e-CRM through technological tools.

According to Videla et al. (2019), for the implementation of e-CRM, a large economic investment is not needed, since just having a smartphone and access to the internet can begin the implementation strategy.

Today, technology has significantly changed business processes. According to Safari et al. (2016), customer relationship management is a comprehensive marketing and business strategy where customer-related technologies, processes and activities are implemented to obtain greater trust and commitment (p.2).

Today's customers have higher expectations than before and services are provided to them through various communication channels such as telephone, email and the web. With these capabilities, CRM develops and evolves with e-CRM and s-CRM.

Various research articles (Hernández et al., 2016; Espinoza et al., 2016; Orengo & Sánchez, 2021; Duke et al., 2016) highlight that the lack of application of CRM tools is due to limited information on the benefits that these tools may have. Furthermore, various microenterprises and small businesses consider that the application of these tools is expensive and that the benefits that they may bring do not support their implementation.

On the other hand, there is a lack of CRM focus on SMEs, because different variables, which will be mentioned below, that can be applied, are not considered. That is, more adaptable strategies towards SMEs to increase their competitiveness in the sector.

Therefore, by reviewing different literature on a greater vision of CRM towards SMEs, considering the variables adaptable to them, it was possible to obtain information about the existence of e-CRM and s-CRM for the management of your processes.

With the aforementioned, the following research question arises: What are the critical factors, as well as the appropriate procedures for the implementation of e-CRM and s-CRM?

The main objective of the research is: Identify the impact of the proper implementation of CRM tools in SMEs. In which the specific objectives can be evidenced, which are:

- Identify which procedures are appropriate for the implementation of the e-CRM. In addition to identifying the critical factors of s-CRM
- Publicize the benefits that these s-CRM and e-CRM tools bring to SMEs. And how they cover the proposed dependent variables.
- Analyze e-CRM and s-CRM tools that are adaptable for use in SMEs, which leads to better utility.
- to improve and maintain the number of clients in SMEs, as well as optimize the process of interaction with clients.
- To evaluate and apply the appropriate e-CRM and s-CRM tools for SMEs to maintain and increase customers and optimize processes.

2. Framework

E-CRM: According to Safari et al. (2016), e-CRM is an electronic marketing, sales and services strategy in which it plays a very important role in the identification, acquisition and retention of customers, which are the greatest capital of a company. e-CRM is the fundamental change in beliefs and paradigms in companies and is also the transformation of organizational approaches, that is, from a general and massive view of the relationship with a large number of clients to an individual relationship in a virtual way with each of the clients through information and communication technologies (ICT). In another way we can say that e-CRM is a business strategy that aims to increase a company's commercial transactions, that is, that e-CRM is the result of Internet and web technology to facilitate, implement and have more effectiveness in ration management systems with clients (p.3).

According to Herman et al. (2021), e-CRM was initially only the use of email as a means of communication between companies and clients, currently it is a technique used by companies to improve their marketing skills since with new

devices such as Cell phones, tablets, laptops, among others, help the company in customer acquisition and retention with online systems.

According to Ardyan and Sugiyarti (2018), email is one of the tools in which it has the lowest response speed, which is why companies prefer to use websites in which they can interact in a better way.

According to Tariq et al. (2019), E-CRM is very useful in adding value to the buying and selling process of an SME, as it satisfies the needs of customers more efficiently than its competitors and, therefore, makes them happy and loyal to the organization.

S-CRM: According to Chau and Xu, social CRM is a strategic business philosophy, supported by technologies, business rules, processes, workflow and social features, that is designed to engage customers in a collaborative conversation which provides mutually beneficial value in an environment that is trustworthy. Furthermore, s-CRM is a tool that allows users to create, share or exchange information through news, photos, videos, etc., through social media. It is a new means by which companies interact with new customers or retain existing customers in an efficient way compared to other traditional tools. In addition, social media platforms such as YouTube, Twitter, Facebook, Instagram, TikTok, among others, have been chosen as s-CRM tools since this would increase brand visibility, provide faster responses to customers, improve brand loyalty and thus remain in the market (as cited in Siti et al., 2019, p. 286).

According to Harrigan and Choudhury, it is evident that the result of implementing s-CRM together with the customer participation model and technology in social media would help greater reliability, brand loyalty and growth in the market.

3. Methods

The research is a systematic review of literature with a critical paradigm, qualitative approach and an exploratory-descriptive scope; which covers as a population all the databases that were used to search for articles, which are: Google Scholar, Ebsco, Scopus and Proquest. Which can be considered as databases that provide reliable research sources since they offer articles evaluated by experts and with various filters to find the desired articles. As part of the filters we use keywords for a more advanced search, which are: CRM, e-CRM, s-CRM, SMEs and Implementation. After filtering the articles, a global sample of the indexed sources was found since these articles come from various countries.

On the other hand, the dependent and independent variables that we consider for this research, as well as the dimensions and indicators, will be shown in table 1.

Table 1. Description of the independent and dependent variables

	Variables	Dimensions	Indicators
Independent	Software adaptability	Functionality and usability	Quantitative assessment
	Accessibility of tool strategies	Interaction and communication with customers	Number of customer interactions on social media
	Quality of CRM tools services	Efficiency and effectiveness of use of CRM tools	% Satisfaction and performance
	Organization of processes	Procedure for implementing the tools	% Efficiency in implementation processes
Dependent	S-CRM	Tracking customers in social media with CRM	Response time to customers on social media
	E-CRM	Electronic customer satisfaction, electronic loyalty, quality of service on websites	% e-loyalty, website rating index

In the review of the articles, a categorization criterion of CRM dimensions has been applied, which have identified the most important ones for this research, which were:

- Software adaptability: According to Flores (2014), software is not only for large companies, these can be adapted to SMEs with lower costs or even free for their usability, the dimensions to be treated in this variable are functionality and usability. These two variables help to really see how this software have been adapted for small and medium-sized businesses.
- Accessibility of tool use strategies: According to Mang'anyi et al. (2018) the most important thing is the interaction with the client and that is why the means to have this accessibility is sought in technologies, which is why the dimension selected for this variable is interaction and communication with clients.
- Quality of services of CRM tools: According to Salem and Akgemci (2021), the tools must not only be applied, it must be verified if they have had results, which is why the efficiency and effectiveness of use of the tools has been implemented as a dimension. CRM tools
- Organization of processes: According to Moerti et al. (2014), to implement these tools, certain steps or procedures must be followed for their effective use, which is why the dimension of the tool implementation procedure was chosen.

Prisma matrix helps our review support how the research articles used were distributed and filtered. The development is explained in stages below:

- As a first stage, searches were carried out for research articles that have been evaluated by experts and using general keywords such as CRM, SCRM, ECRM, SMEs and Implementation. Total articles recruited was 1130.
- In the second stage, an analysis was carried out where articles were excluded due to duplication; there were 89, 1041 articles remaining.
- In the third stage, 439 articles were excluded based on selection criteria. We are left with 602 articles focused on e-CRM and S-CRM tools.
- As a last stage, feedback of articles was carried out, after reading each one of them, excluding them based on selection and analysis criteria. He was left with 70 articles included in the review.

The process of choosing research articles oversaw the two authors of this research, which is evident in Figure 1.

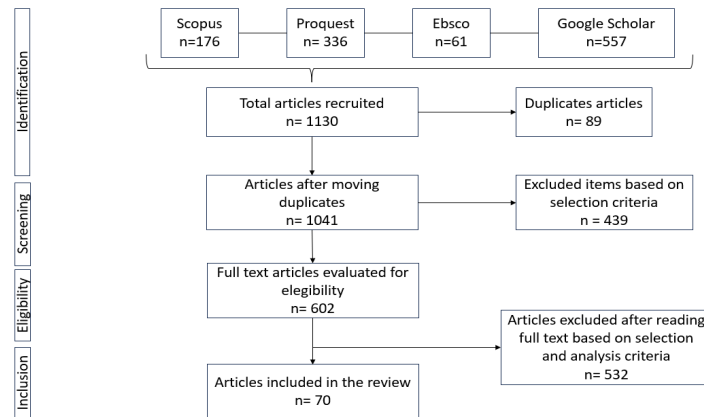


Figure 1. Prism matrix

4. Results

In the search for e-CRM and s-CRM, 285 and 80 were obtained respectively in the Scopus database, in addition to 108 and 284 in the Proquest database, with high growth in published research in 2020. in these databases. This is because in that year there was an increase in interest in the use of technologies that are accessible to everyone due to the global coronavirus situation. Various companies, both large and SMEs, had to close the doors of their businesses by government orders to protect people's health with strict biosafety protocols, with a quarantine being implemented in certain countries. For this reason, more studies related to virtual tools emerged to continue dealing with the pandemic with online business strategies and thus achieve focus on remote work.

According to Figure 2, it shows the partial distribution of the articles in reference according to the study dimensions proposed in this research.

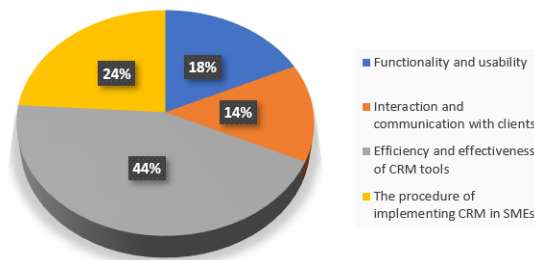


Figure 2. Distribution of articles according to dimensions

From the graph it is observed that the dimensions functionality and usability are present in a total of 9 articles in reference, with a percentage of 18%, as well as interaction and communication with customers with a total of 7 articles in reference, which corresponds to 14%. , the efficiency and effectiveness of the use of CRM tools, has a total of 22 articles that corresponds to 44% and as the last dimension, the procedure of implementing CRM in SMEs has a total of 12 articles that corresponds to 24%.

The main contributions made by each author according to the categories of this article are evident in Table 2.

Table 2. Author contributions according to categories

Applied Categories	Authors
Functionality and usability 9	Lalu et al. (2020); Haudi et al. (2022); Nagwan et al. (2020); Farmania et al. (2021); Moertini et al. (2014); Medjani & Barnes (2021); Alshourah et al (2021); Tito et al (2023); Kantorová & Bachmann (2018)
	Analysis: The articles in this category show the frequency of use of these tools in SMEs, most of which highlight the infrequency of use of these tools and how these tools can be used by applying certain strategies.
Interaction and communication with clients 7	Ardyan & Sugiyarti (2018); Moertini et al. (2014); Mang'unyi et al. (2018); Tian & Wang (2014); Hasnah et al. (2019); Marolt (2019); Arteaga et al. (2021)
	Analysis: Interaction with customers is a very important factor for companies, which is why these articles refer to the fact that technological help would improve interaction and communication with customers, since SMEs have mostly face-to-face and non-technological interaction (through websites or social networks)
Efficiency and effectiveness of use CRM tools 22	Inayatulloh et al. (2021); Mohammed et al. (2021); Roopchund (2019); Ngo et al (2021); Nguyen (2021); Salem & Akgemci (2021); Nurliza & Oktoriana (2021); Marlot et al. (2020); Houriyeh et al. (2020); Cheng & Shiu (2019); Harrigan et al. (2012); Feliks et al. (2021); Ahani et al (2017); Ardyan & Sugiyarti (2018); Tariq et al (2019); Evelina et al. (2023); Alaswad & Mohammed (2023); Pellegrino & Abe (2023); Nwankwo & Kanyangale (2023); Marolt et al (2022); Binsaeed et al (2023); Alghamdi, O. A. (2023)
	Analysis: The articles for this category focus on the results of the use of these tools, since the fact that they are used does not mean that it is of great help, which is why an inspection must be carried out on the use of the tools and on Your results
The procedure of implementing CRM in SMEs 12	Aini et al (2021); Moertini et al (2014); Torugsa et al. (2019); Guha et al. (2017); Capuccio et al. (2012); Harrigan & Miles (2014); Arana et al. (2022); Videla et al. (2019); Damanti et al. (2019); Vidila et al. (2017); Bruce et al (2023); Amoah et al (2023).
	Analysis: The articles for this category focus on the steps or procedures to use these tools and consequently have a better result in their uses.

The measurement of the variables referred to in the e-CRM and s-CRM tools with the purpose of recognizing whether these are adaptable for SMEs to have a better link with the client and thus have greater knowledge about its optimal implementation and organizational benefits.

For this, the factors that are important for both the e-CRM and the s-CRM have been established, which will be evident in tables 3 and 5.

Table 3. E-CRM factors

Factors	Indicators
Electronic CRM capability	Have a personalized online database, categorize important customers with the data obtained, Ability to provide efficient individual service and to build good online interaction with customers.
Customer knowledge	Exchange of information or services between the company and the customer, Satisfy the information needs of customers, Manage customer knowledge
Product innovation development	Offer the new product design, new product features, new product values based on local wisdom and creative products based on customer's desire.
Marketing performance	Number of sales units, Sales growth, Market share, Profitability

The table shown shows four important factors for the implementation of e-CRM. The capacity factor defines that customers are important to help achieve the company's objectives, in addition to the fact that the e-CRM helps in knowing customer preferences. In customer knowledge, 3 sub-factors can be identified: knowledge for customers,

about customers and of customers (as mentioned in Herman et al. 2021), which is why it is necessary to interact with the customer's desires. In the development of product innovation, it indicates that customers want innovative products that meet their needs, that is why creativity plays an important role in this factor. Finally, marketing performance indicates that with the use of this tool, decisions can be made in the marketing area in which it would reflect several main points in sales.

These factors have been carried out and analyzed through surveys through which the authors have done so in each of their articles, which are Mang'unyi et al. (2018), Chi (2021), Salem and Akgemci (2021), Farmania et al. (2021). For this reason, a comparative table of the authors will be made with their respective indicators in which they have been evidenced in their articles.

Table 4. Comparison of factors between authors

Herman et al 2020	Mang'unyi et al 2018	Chi 2021	Salem & Akgemci 2021	Farmania et al. 2021
E-CRM capability	Problem resolution, Privacy and security, Ease-of-use	Technology	System quality, Use of system	System care, Community online, Security of site
Customer knowledge	Interactivity, Communication platforms	Knowledge Management, Customer orientation	Quality of customers	Interactivity
Product development	Customer satisfaction	Innovation capacity	-	Customization
Marketing performance	Brand preference, Personalized promotions	Long term relationships	User satisfaction	Rewards Loyalty
-	-	Covid 19 risk perception	-	-

As evident in table 4, the mentioned factors are essential for the implementation of e-CRM. Furthermore, it can be highlighted that in the article by Mand'ungi et al 2018, Chi 2021, Salem and Akgemci 2021 and Fermania et al. 2021 despite having more factors, these additional factors are related to the main factors, that is, it can be mentioned that they are subfactors that are part of a main factor, and finally we can add that Chi 2021 adds a different factor to the others which It would be the risk perception of covid19 that this implies, how this pandemic has impacted the radical change in the use of these tools for SMEs.

It can be mentioned that the articles not only show the factors mentioned above, but also the evolution of this tool. According to Ardyán and Suguiyarti (2018), it can be initially distinguished that the e-CRM in SMEs only used email as the only tool which, although it worked in attracting loyal customers, had a little of response speed and was not personalized. Furthermore.

To implement an e-CRM tool it is necessary to have a computer that has minimum capabilities, such as an Intel core i3 processor with 2 GB of memory, as mentioned by Damatanti et al. (2019). Furthermore, if they have these minimum requirements, you can implement applications such as the UML tool that would help attract new customers, as mentioned by Ayuninggati et al. (2021), and thus obtain the necessary information from customers that would help in decision-making in the company.

Other articles define stages for the implementation of e-CRM in SMEs. According to Inayatulloh et al (2021), there are 3 stages for the implementation of e-CRM which are: Researching potential customers, analyzing customers who have received the company's services or products and considering customer observations, advice and complaints. at the time of purchasing the product. or service

Culture helps in implementing technology for e-CRM and that is why it is more important than technology. Technology helps in obtaining and storing large amounts of data that are stored and used when necessary, therefore the main objective of technology is to provide the interface between the company and the client.

According to Vildila et al. (2019), For the implementation of e-CRM through the UML application to work, it must have the following characteristics: The language must be understood by the person who will use the application, The investment is in the purchase of a good device with the minimum requirements for the application to work, Ease of installation of the application, easy use and simple database To verify whether the implementation has been carried out successfully, indicators must be observed. For Merzthal (2015), the performance indicators of the implementation of e-CRM are: Retention rate and caution against loss of customers and return of business. investment (ROI) (cited in Arana et al., 2022)

Table 5. Critical factors of s-CRM

Factors	Harrigan & Miles (2014)	Guba et al. (2017)
Online communities	The goal of this factor is to build online communities to interact with new or potential customers.	The main uses of this factor are customer intervention, awareness and promotion of products and or services among SMEs.
Social media services	Collection of customer data through social networks to drive strategic decisions. This data is accessible and in real time. In this study, SMEs use these platforms for sales, planning and marketing areas.	Social networks are a support that drives CRM operations and decisions. Through surveys, the data obtained is taken into account for its introduction into a CRM system. Most of this data is obtained from LinkedIn.
Data collection	The results show that SMEs are collecting data from different sources to have a 360° view of the customer.	Compilation of information from different sites such as websites, social networks, etc.
Use of information	Encourage SMEs to carry out advanced indicators with the information obtained.	SMEs implement this information to obtain indicators that can be used.
Customer relationship orientation	Building relationships with customers is taken into account as a priority as part of loyalty, retention and acquisition of new customers.	Customer relationship orientation is described as a cultural orientation, viewing the customer as the most important asset.
Social media data	The large amount of data that SMEs access through social networks. In the past, these processes for SMEs were difficult.	On social media, SMEs do a lot of research about their competitors and obtain necessary information.
Communication with the customer	Building relationships with customers is taken into account as a priority as part of loyalty, retention and acquisition of new customers.	Currently, SMEs continue to depend on traditional forms of communication: telephone, emails, among others.

Regarding s-CRM and its adoption as a tool. According to Ali Ahani et al. (2017), it should be taken into account that at least one social media technology must be implemented. Diwivedi et al. (2009) concluded that technological and organizational factors for the adoption of s-CRM in SME have a greater impact than environmental factors.

Ali Ahani et al. (2017) pointed out that within each field there are essential elements that must be taken into account. Within the technological field, the following elements must be considered:

- Information capture: apply it as an effective influence to the database of potential customers, with this you can obtain an analysis of customer preferences with a segmentation strategy.
- Use of information allows you to have a relationship with the customer, using this data for the purposes of recognizing behaviors, requests, expectations and creating personalized services or products.

Within the environmental field:

- Customer pressure: Competitive pressure, in different companies this is an essential factor since they see it as a differentiating tool. Competition creates environmental ambiguity and increases s-CRM adoption.
- Government support: Since SMEs have little budget, government support would help an investment in the development of information technologies

Within the organizational field:

- Employee IT/IS knowledge: Studies in the context of CRM have also shown that staff IS/IT capabilities have a positive relationship with CRM adoption (Collado et al., 2010; Nguyen and Waring, 2013).
- Top management support: Employee opinions must be understood with new input.

According to Harrigan & Miles (2014), within each of these factors there are components, as seen in table 5, which shows that there is correlation through a rotated matrix of components.

According to Jack et al., 2010; O'Dwyer et al., (2009), online communities are the main factor since, in addition to presenting an almost perfect correlation, the greatest change from e-CRM to s-CRM is highlighted; the emergence of customer engagement, through their own communities for greater customer interaction (as cited in Harrigan and Miles 2014, p. 100). SMEs tend to maintain a higher level of face-to-face contact with customers than larger organizations. This does not mean that they do not implement various resources or means to reach an audience, what better way than social media. The results of the analysis table of factors present in the research by (Harrigan & Miles, 2014) show us that they are important for CRM activities in general for SMEs around the management and supervision of interaction with customers. Own online communities are used to obtain data, track and promote products/services through marketing strategies.

Regarding the factors of s-CRM, Sushmita Guh et al. (2017): These factors require further qualitative research to understand them. Therefore, he added three more factors: commitment, dynamic marketing and IT infrastructure capacity. For the engagement factor, he subdivided it into four customer engagement behaviors (CEB): escalation behavior, co-development behavior, influence behavior, and mobilization behavior.

Likewise, Wang, Hu and Hu (2013), the mentioned factors of s-CRM are complemented by two more factors: dynamic marketing and IT infrastructure capacity (as cited in Guha et al. 2017, p. 2).

According to Marolt et al (2022), social media as part of customer relationship management harness the power of the Internet to foster networked communities to connect and collaborate socially, while e-commerce supports customer decision-making. customers and encourages repeat purchases. The combination of these unique features allows companies to strengthen their relationships with their customers and increase performance.

It should be noted that the implementation of s-CRM in an SME involves the use of tools and strategies to manage relationships with customers through social media and other online platforms, as already mentioned. previously. Therefore, a step-by-step guide will be defined here, according to a compilation of what was investigated, to implement an s-CRM optimally and obtain positive effects in an SME:

Define your s-CRM objectives: Before you begin, set clear goals for your s-CRM strategy. Do you want to improve customer satisfaction, increase your brand's visibility on social media, generate sales through social media, or other goals?

Select the right social media: Identify the social media where your target audience is most active. It is not necessary to be in all of them, but in those that are relevant to your business.

Choose social media management tools: Research and select a social media management tool that allows you to schedule posts, monitor brand mentions, track statistics, and manage multiple social media profiles from one place.

Build your business potential: Establish a voice and a way to be able to identify your brand or the name of your SME commercially above others for your interactions on social networks. This will help your business communicate consistently and build a strong brand identity online.

Create relevant content: Develop a content strategy that is relevant to your audience on social media.

Respond to customer interactions: Constantly monitor your business social profiles to respond in a timely manner to customer comments, questions and complaints.

P

ersonalize and segment communication: Use information collected from social media to personalize and segment your messages and offers to different customer segments.

Measure and analyze performance: Use social media metrics to measure the performance of your s-CRM efforts. Evaluate your KPIs such as follower growth, engagement (interaction), web traffic generated from social networks and conversions.

Adjust and improve: Based on the data collected, adjust your s-CRM strategy as necessary to achieve your goals. Experiment with different types of content, posting times, and engagement approaches.

Staff training: Ensure your team is trained in s-CRM best practices and has the necessary skills to manage social media effectively.

Constant maintenance: s-CRM is a constantly evolving strategy. Keep your social media presence up to date and adjust your tactics as trends and your audience's needs change.

5 Discussion

To create an adequate and innovative product, good efficiency in the use of e-CRM tools is essential. Since, according to Herman et al. (2020), to achieve an innovative product or service, a good capacity of the e-CRM tool is needed, as well as having a good capacity for exchange with the client and thus having greater commercial performance, this is already being done in some countries, such as Indonesia, but there are still weaknesses in implementing this type of tool (mainly in the implementation of individual services).

However, in some articles it is defined that the implementation of e-CRM tools in SMEs does not help at all, as indicated by Harrigan et al. (2008), that e-CRM tools do not influence the performance of SMEs since by using this type of tool they have not generated a relationship with customers. (as cited in Hernan et al. 2020). This is due to the poor application of the tool, since the SMEs do not have the knowledge of how to implement these tools, therefore, it is necessary to follow several procedures for the implementation of the e-CRM as indicated by Moertini et al. (2014), that for the proper implementation of the e-CRM, the objectives and scope of the e-CRM must be defined, analyze the existing e-CRM system, redesign the electronic system to overcome the limitations of SMEs (in which focuses mainly on the evaluation, implementation and development of the customer database), data aggregation for the e-CRM, development of subsystems (statistical modules) and integrating the module into the electronic commerce system and thus you will have better efficiency in the implementation of the e-CRM.

In connection with the s-CRM, we are based on the results that were obtained regarding the implementation process, everything indicates that new contributions will be made from different authors, as time goes by, towards the critical factors of the s-CRM and its components.

According to Siarhei Yasiukovich et al (2021), within the adoption decision phase, the rapid technological advance in social networks has significantly changed the way in which SMEs manage business relationships. Unlike traditional CRM, s-CRM expands the scope of digital marketing tools. Likewise, said author cites that within the acquisition phase the s-CRM has the necessary tools and functionality, according to the compilation of different authors and the contribution of our research in grouping the categories of these same authors, there is agreement on the importance of functionality and usability.

The appearance of new critical factors is due to understanding customers in different fields or environments. This can be explained by the increase in customer requirements for a product/service and technological changes. With this, we must be clear that it is necessary to know the way of thinking of customers to obtain positive results in preferences and loyalty. The best way to achieve these results is with the correct adoption of social CRM.

According to Ali Ahani et al. (2017), SMEs considered compatibility and information capture to be the most important factors for social CRM adoption.

However, Medjani & Barnes (2021), in North Africa, it was found that compatibility as a technological factor is not significant. Considering that different studies stated that compatibility is a necessary variable for the use of e-business (Zhu et al, 2006), e-CRM (Sophonthummapharn et al, 2009) and adoption of s-CRM (Ahani et al, 2017) , its impact was not tested for the use of s-CRM technology. One of the possible reasons is that in North Africa the various companies do not populate the systems and manage each IS individually. With this assumption, the compatibility of s-CRM with existing processes will not be a problem for its implementation, since it can be managed separately from other systems. With this approach, this result can be implemented in countries where the ecosystem is fragmented, where each IS is used independently.

On the other hand, Sushmita Guha (2017) states that online communities are essential for SMEs to attract customers and create awareness. Likewise, this author cited that SEMSS tend not to depend on social media data to make strategic

marketing decisions. On the other hand, Harrigan & Miles (2014) mention that s-CRM advocates the use of customer data, easily available on social networks, to drive strategic decisions. Data being the “engine” that drives CRM. This is why Siti Hasnah et al. (2018), is coupled with Harrigan & Miles' approach regarding the importance of the customer database since the quality of customer communication through s-CRM depends on the quality of customer management processes. information and connection with customers. SME managers are recommended to use simple databases to record customer data obtained through transactions or continuous dialogue through social networks. After analyzing the aforementioned articles and comparing them with our findings, it turns out that a successful adoption of s-CRM in SMEs requires the consideration of social networking technologies, organizational aspects, the business environment, and open-source technologies.

e-CRM and s-CRM allow SMEs and industries in general to improve processes within industrial operations because every company or organization ensures a successful relationship with its clients and workers to increase profitability through labor productivity. The collection of data from emails, web pages (e-CRM) as well as data from social networks (s-CRM) can be complemented with business intelligence tools, such as Power BI for SMEs, since it is a technology implemented by Microsoft for data analysis with a dynamic and analytical approach.

6. Conclusion

- Due to the COVID-19 pandemic, implementing e-CRM in SMEs became important. This allows for better customer interaction and the collection of valuable customer data for product innovation. Additionally, s-CRM has gained importance as SMEs use social media platforms such as Facebook to sell products, thereby expanding their reach and offering personalized customer service.
- The proper implementation of the e-CRM is very important since, if the indicated steps are not followed, this tool will not have any benefit for the SME.
- The use of technology is important for the implementation of this tool, it is not necessary to make a large investment in technology to start the implementation of the tool since just a smartphone or a laptop (in which it is within reach of the SME) can be started with the deployment.

7. Recommendations

- Adequate control is needed both in the implementation of the e-CRM and in the security of the customer database since in this way customer loyalty will be promoted.
- Great support from the State is needed for the growth of the SME, which involves e-CRM and s-CRM tools so that people are not afraid to invest in their own business.
- Email marketing tools, such as Mailchimp, are being added as new free access tools. Also, there are free access tools for social media management which are: Buffer, Hootsuite or Sprout social.
- It is crucial that before adopting the s-CRM, the critical factors mentioned in this work were considered. In addition to focusing on the determining factor of the company to implement. As well as in what dimension they want to stand out to seek greater customer satisfaction and loyalty.

References

- Alghamdi, O. A. (2023). The Relationship Between Social CRM Adoption and Competitive Advantage: A Study During the COVID-19 Outbreak. *International Journal of Customer Relationship Marketing and Management (IJCRMM)*, 14(1), 1-21. <https://doi.org/10.106/j.procs.2021.01.200>
- Ahani, A., Rahim, N. Z. A., & Nilashi, M. (2017). Forecasting social CRM adoption in SMEs: A combined SEM-neural network method. *Computers in Human Behavior*, 75, 560-578. <https://doi.org/10.1016/j.chb.2017.05.032>
- Alshourah, S., Jodeh, I., Swiety, I., & Ismail, A. (2022) SOCIAL CUSTOMER RELATIONSHIP MANAGEMENT CAPABILITIES AND PERFORMANCE: MODERATING SOCIAL MEDIA USAGE AMONG SMES JORDANIAN. *Decision Sciences*, 25(S2), 1-8.
- Amoah, J., Bruce, E., Shurong, Z., Sulemana, B. E., & Kwarteng, K. (2023). Social media adoption in smes sustainability: evidence from an emerging economy. *Cogent Business & Management*, 10(1) <https://doi.org/10.1080/23311975.2023.2183573>
- Ardyan, E., & Sugiyarti, G. (2018). The influence of e-CRM capability and co-information sharing activity on product competitiveness and marketing performance of small and medium-sized enterprises. *International Journal of Electronic Customer Relationship Management*, 11(2), 158-178. <https://doi.org/10.1504/IJECRM.2018.090208>

- Binsaeed, R.H.; Yousaf, Z.; Grigorescu, A.; Chitescu, R.I.; Nassani, A.A.; Samoila, A. (2023) Customer Engagement and Customer Relationship Management Capabilities' Effects on Innovation Performance and Customer Distrust's Moderating Role. *Sustainability* 2023, 15, 9475. <https://doi.org/10.3390/su15129475>
- Bruce, E., Keelson, S., Amoah, J., & Sulemana, B. E. (2023). Social media integration: An opportunity for SMEs sustainability. *Cogent Business & Management*, 10(1) <https://doi.org/10.1080/23311975.2023.2173859>
- Cheng, C. C., & Shiu, E. C. (2019). How to enhance SMEs customer involvement using social media: The role of Social CRM. *International Small Business Journal*, 37(1), 22-42. <https://doi.org/10.1177/0266242618774831>
- Chi, N. T. K. (2021). Innovation capability: the impact of e-CRM and COVID-19 risk perception. *Technology in Society*, 67, 101725. <https://doi.org/10.1016/j.techsoc.2021.101725>
- Duke, V. O., Navarro, M., Díaz, G., Pérez, Y., & Vargas-Lombardo, M. (2016). Exploración en los sistemas CRM/ERP como estrategia en el sector PYMES. *Revista de Iniciación Científica*, 2(2), 86-94. <https://revistas.utp.ac.pa/index.php/ric/article/view/1251>
- Espinoza, O., Sánchez, J., Motoya, D., (2016). Estrategias de CRM para el incremento de la competitividad en las PYMES en la Industria Mueblera de la ZMG. *Repositorio de la Red Internacional de Investigadores en Competitividad*, 10. <https://riico.net/index.php/riico/article/view/1316>
- Farmania, A., Elsyah, R. D., & Tuori, M. A. (2021). Transformation of CRM Activities into e-CRM: The Generating e-Loyalty and Open Innovation. *Journal of Open Innovation: Technology, Market, and Complexity*, 7(2), 109. <https://doi.org/10.3390/joitmc7020109>
- Flores Ayala, I. G. (2014). Estudio comparativo de soluciones E-CRM con SOFTWARE libre e implementación de la más eficiente en la empresa (Bachelor's thesis). <http://repositorio.utn.edu.ec/handle/123456789/3783>
- Guha, S., Harrigan, P., & Soutar, G. (2018). Linking social media to customer relationship management (CRM): A qualitative study on SMEs. *Journal of Small Business & Entrepreneurship*, 30(3), 193-214. <https://doi.org/10.1080/08276331.2017.1399628>
- Harrigan, P., & Miles, M. (2014). From e-CRM to s-CRM. Critical factors underpinning the social CRM activities of SMEs. *Small Enterprise Research*, 21(1), 99-116. <https://doi.org/10.1080/13215906.2014.11082079>
- Harrigan, P., Ramsey, E., & Ibbotson, P. (2012). Exploring and explaining SME marketing: investigating e-CRM using a mixed methods approach. *Journal of Strategic Marketing*, 20(2), 127-163. <https://doi.org/10.1080/0965254X.2011.606911>
- Harrigan, P., Ramsey, E., & Ibbotson, P. (2012). Entrepreneurial marketing in SMEs: the key capabilities of e-CRM. *Journal of Research in Marketing and Entrepreneurship*. <https://doi.org/10.1108/14715201211246760>
- Haudi, H., Rahadjeng, E., Santamoko, R., Putra, R., Purwoko, D., Nurjannah, D., ... & Purwanto, A. (2022). The role of e-marketing and e-CRM on e-loyalty of Indonesian companies during Covid pandemic and digital era. *Uncertain Supply Chain Management*, 10(1), 217-224. <https://doi.org/10.5267/j.uscm.2021.9.006>
- Herman, L. et al. (2021). Electronic customer relationship management and company performance: Exploring the product innovativeness development. *Journal of Relationship Marketing*, 20(1), 1-19. <https://doi.org/10.1080/15332667.2019.1688600>
- Hernández, A., Gándara, M., Cornejo, J., (2016). Factores estratégicos del CRM en las PYMES de la ZMG que mejoren su posición competitiva en la industria mueblera. *Repositorio de la Red Internacional de Investigadores en Competitividad*, 6(1). <https://www.riico.net/index.php/riico/article/view/428>
- Kantorová, K., & Bachmann, P. (2018). Social customer relationship management and organizational characteristics. *Information*, 9(12), 306. <https://doi.org/10.3390/info9120306>
- Marolt, M. (2018). Social CRM adoption and its influence on customer relationship performance-SMEs perspective (Doctoral dissertation, Univerza v Mariboru (Slovenia)). <https://www.proquest.com/openview/824345db1e79383d9f22ef0a57b1829a/1?pq-origsite=gscholar&cbl=2026366&diss=y>
- Marolt, M., Zimmermann, H., & Pucihar, A. (2022). Social Media Use and Business Performance in SMEs: The Mediating Roles of Relational Social Commerce Capability and Competitive Advantage. *Sustainability*, 14(22), 15029. <https://doi.org/10.3390/su142215029>
- Marolt, M., Zimmermann, H. D., Žnidaršič, A., & Pucihar, A. (2020). Exploring social customer relationship management adoption in micro, small and medium-sized enterprises. *Journal of theoretical and applied electronic commerce research*, 15(2), 38-58. <https://doi.org/10.4067/S0718-18762020000200104>
- Mang'anyi, E. E., Khabala, O. T., & Govender, K. K. (2018). Bank customer loyalty and satisfaction: the influence of virtual e-CRM. *African Journal of Economic and Management Studies*. <https://doi.org/10.1108/AJEMS-08-2017-0183>

- Medjani, F., & Barnes, S. J. (2021). Understanding the Implementation of Social Customer Relationship Management in the North African Context: An Integrated Theory Perspective. *Journal of Global Information Technology Management*, 24(4), 299-318. <https://doi.org/10.1080/1097198X.2021.1993726>
- Moertini, V. S., & Ibrahim, N. (2014, August). E-CRM development method for e-commerce system owned by small medium enterprises. In 2014 2nd International Conference on Technology, Informatics, Management, Engineering & Environment (pp. 46-51). IEEE. <https://doi.org/10.1109/TIME-E.2014.7011590>
- Mohammed, F., Hassan, S.B., Ahmad, R.B., Fazea, Y. (2021). An integrated model for investigating the impact of social crm on performance of smes in developing countries: Instrument development. *Journal of System and Management Sciences* 11(3), pp. 140-162. <https://doi.org/10.33168/JSMS.2021.0308>
- Ngo, V. M., Phan, Q. P. T., & Vu, H. M. (2021). Implementing Social Customer Relationship Management in Turbulent Environments: A Dynamic Capabilities Perspective. *Webology*, 18(Special issue on Management and Social Media), 49-70. <https://doi.org/10.14704/WEB/V18SI03/WEB18020>
- Nwankwo, C. A., & Kanyangale, M. I. (2023). Customer Relationship Management and Survival of Manufacturing Small and Medium Enterprises in Nigeria. *Journal of Economic and Social Development*, 10(2), 30-40. <https://ezproxy.ulima.edu.pe/login?url=https://www.proquest.com/scholarly-journals/customer-relationship-management-survival/docview/2856538686/se-2>
- Oktoriana, S. (2021). PERCEIVED BENEFITS OF SOCIAL MEDIA NETWORKS'IMPACT ON THE COMPETITIVE BEHAVIOR OF INDONESIAN SMES IN FOOD AND BEVERAGE SECTOR. *Economics & Sociology*, 14(3), 146-162. <https://doi.org/10.14254/2071-789X.2021/14-3/8>
- Orengo-Serra, K. L., & Sánchez-Jauregui, M. (2021). Afrontando terremotos y COVID-19: una perspectiva de gestión de la relación con el cliente. *Estudios Gerenciales*, 37(159), 318-331. <https://doi.org/10.18046/j.estger.2021.159.4435>
- Pellegrino, A., & Abe, M. (2023). Leveraging Social Media for SMEs: Findings from a Bibliometric Review. *Sustainability*, 15(8), 7007. <https://doi.org/10.3390/su15087007>
- Rosalina, V., & Triayudi, A. (2019). Electronic Customer Relationship Management (E-CRM) Application as Efforts to Increase Customer Retention of Micro Small and Medium Enterprises (MSMEs) in Banten Indonesia. <https://doi.org/10.31227/osf.io/p9rsm>
- Rosalina, V., & Malik, A. (2017). Electronic Customer Relationship Management (E-CRM) Modeling on Micro, Small & Medium Enterprises (MSMEs) Banten. *International Journal of Computer Applications*, 975, 8887.
- Ruíz-Velásquez, M. A., Ceballos, L. M., & Londoño-Vélez, N. (2020). El Mercadeo Relacional y CRM en las Pymes del Sector Textil y de la Confección de Antioquia. *Estudios de Administración*, 27(2). <http://dx.doi.org/10.5354/0719-0816.2020.57695>
- Roopchund, R. (2019). Exploring Social CRM for development of SMEs in Mauritius. *Journal of Enterprising Culture*, 27(01), 93-109. <https://doi.org/10.1142/S0218495819500043>
- Safari, M., Forouzandeh, M., & Safahani, N. (2016). An Empirical Model to Explain the Effects of Electronic Customer Relationship Management on Customer e-Satisfaction and e-Loyalty: Evidence from Iranian Service Shopping Websites. *Journal of Internet Banking and Commerce*, 21, 1-11. http://fresno.ulima.edu.pe/ss_bd00102.nsf/RecursoReferido?OpenForm&id=PROQUEST-41716&url=https://www.proquest.com/scholarly-journals/empirical-model-explain-effects-electronic/docview/1799378244/se-2?accountid=45277
- Salem, S., & Akgemci, T. E-CRM Success Factors as Determinants of Organizational Performance in The Telecommunications Sector in Gaza Strip.
- Siti, H. H., Noor Mohamed, M. H., & Ahmad, N. H. (2019). Social customer relationship management (s-CRM) among small- and medium-sized enterprises (SMEs) in Malaysia. *International Journal of Ethics and Systems*, 35(2), 284-302. <http://dx.doi.org/10.1108/IJOES-11-2017-0192>
- Tariq, M., Jamil, A., Ahmad, M. S., & Ramayah, T. (2019). Modeling the effectiveness of electronic customer relationship management (E-CRM) systems: empirical evidence from Pakistan. *Revista Gestão & Tecnologia*, 77-100. <https://doi.org/10.20397/2177-6652/0.v0i0.1747>
- Tian, J., & Wang, S. (2017). Signaling service quality via website e-CRM features: More gains for smaller and lesser known hotels. *Journal of Hospitality & Tourism Research*, 41(2), 211-245. <https://doi.org/10.1177/1096348014525634>
- Torugsa, N. A., Yawised, K., & O'Donohue, W. (2019). Social customer relationship management in small and medium enterprises: Overcoming barriers to success. In *Management Science* (pp. 157-181). Springer, Cham. https://doi.org/10.1007/978-3-030-13229-3_7
- Yasiukovich, S., & Haddara, M. (2021). Social CRM in SMEs: A Systematic Literature Review. *Procedia Computer Science*, 181, 535-544. <https://doi.org/10.1016/j.procs.2021.01.200>

Biographies

Daniel Anthony Cárdenas Yactayo has a bachelor's degree in industrial engineering from Universidad de Lima, Peru. He has two years of experience in the commercial area and is currently working as commercial analyst at Cardenas Corporation.

Jean Piert Espinoza Castro has a bachelor's degree in industrial engineering from Universidad de Lima, Peru. He has years of experience in the production area and currently works as a logistics manager.