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# Towards an innovation-based model to support customer relationship management

Khaoula Fath El Khair*, LERSEM Laboratory, ENCG School, Chouaib Doukkali University, Morocco, fathelkhair.k@ucd.ac.ma
Mustapha El Hamzaoui, LERSEM Laboratory, ENCG School, Chouaib Doukkali University, Morocco, elhamzaoui.m@ucd.ac.ma
Miloudi Kobiyh, LERSEM Laboratory, ENCG School, Chouaib Doukkali University, Morocco, kobiyh.m@ucd.ac.ma

* Corresponding author: Khaoula Fath El Khair; fathelkhair.k@ucd.ac.ma

**Abstract**

This paper aims to develop an innovative theoretical model integrating key techniques from the philosophical, strategic, and technological perspectives of CRM. Based on a modeling approach grounded in a theoretical framework organizing these concepts, the proposed model relies on Lasswell's classic communication scheme, facilitating its understanding. It provides a practical framework to incorporate CRM innovations that support technological development, address customer needs, and adapt to market evolution. This work contributes to theory by synthesizing recent innovations within a unified framework and offers practitioners a structured tool to enhance CRM.
**Keywords:** CRM; CRM perspectives; CRM service; innovation; innovation model; modeling

## Introduction

Customer relationship management (CRM) plays a crucial role in companies. This practice has become more important in the digital age and requires innovative and developed tools for better management of relationships with customers.

In this sense, Rababah et al. (2011) defined CRM as a combination of three perspectives:

- The philosophical perspective lies in building a customer-oriented culture.
- The strategic perspective aims to develop a strategy for acquiring, improving profitability, and retaining customers.
- The technological perspective refers to acquiring appropriate technology to enable and achieve the CRM strategy.

In another context, innovation is defined by a qualitative study, which aimed to reach a consensual definition of innovation by examining 208 definitions from scientific sources, as the operationalization of creative potential with commercial and/or social motivation through the implementation of new adaptive solutions that create value, exploit new technologies or inventions, and contribute to competitive advantage and economic growth (Singh & Aggarwal, 2021).

In CRM, innovation generally means the introduction and integration of new methods, ideas, and techniques to improve CRM. Such as the integration of artificial intelligence (AI) and its technologies for sentiment analysis and prediction of customer behaviors, and the introduction of the concepts of sustainable CRM, social CRM, etc.

In this point, several scientific works have contributed to enriching the field of CRM innovation, through theoretical modeling, empirical studies, etc. (In our literature review, we will focus on modeling in the field of CRM innovation). These research works have dealt with innovative CRM techniques either in general or in a manner focused on a limited number of these techniques. This does not provide a global and precise vision of all the innovative techniques in the CRM framework.

For this reason, our present paper aims to provide a model based on the literature, which encompasses different techniques innovated according to each perspective of CRM. On the one hand, it enriches the scientific field and removes the lack in this sense. On the other hand, it proposes to the practitioners a recipe to carry out their missions in CRM innovation.

We structure our paper as follows: the related works, the adopted methodology, the proposed model, and the discussion.

## Literature Review

CRM innovation consists of introducing a set of new techniques and concepts into the CRM process. In this section, we will address a specific set of models that are already being implemented in the field, thereby positioning our work in relation to them.

First, we discuss the Payne model, developed in 2005 by Adrian Payne and Pennie Frow (see Figure 1) (Payne & Frow, 2005). It identifies five processes for effective CRM management.

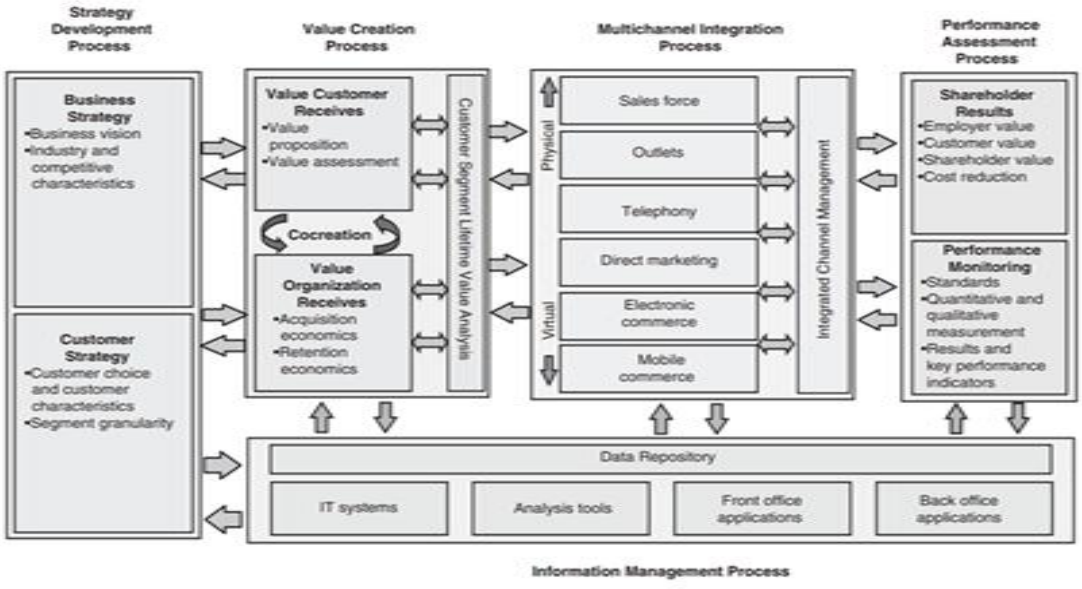


**Figure 1** Payne's Model of CRM.
*Source:* Payne and Frow (2005)

According to this model, the first process concerns strategy development. It combines the organization's business strategy and customer strategy, interacting to affect the strategic dimension of CRM. The second process is that of value creation. It transforms the results of the first process into programs that deliver value. It determines the value that the company can provide to its customers, and the value that the company can receive from its customers, and it successfully manages this exchange of value, which involves a process of Co-creation, maximizing the lifetime value of desirable customer segments. The third process is about multichannel integration. This focuses on decisions about the most appropriate combinations of channels to use; how to ensure that the customer experiences highly positive interactions within those channels; and how to create and present a single, unified view of the customer. The fourth process is the performance evaluation process. It depends on two main components; shareholder results, which provide a macro view of the overall relationships that drive performance, and performance monitoring, which provides a more detailed micro view of key performance measures and indicators. The last process is information management. It involves the collection, compilation, and use of customer data and information from all customer contact points.

In the second step, we present a model that focuses on sustainable CRM (Shukla & Pattnaik, 2019) (see Figure 2). Moreover, this concept can be defined as a CRM system, which maintains its effectiveness and preserves its characteristics, during its normal cycle. Even in the face of disruptions, it aims to create and preserve sustainable value for all stakeholders involved in the value exchange process (Shukla & Pattnaik, 2019).

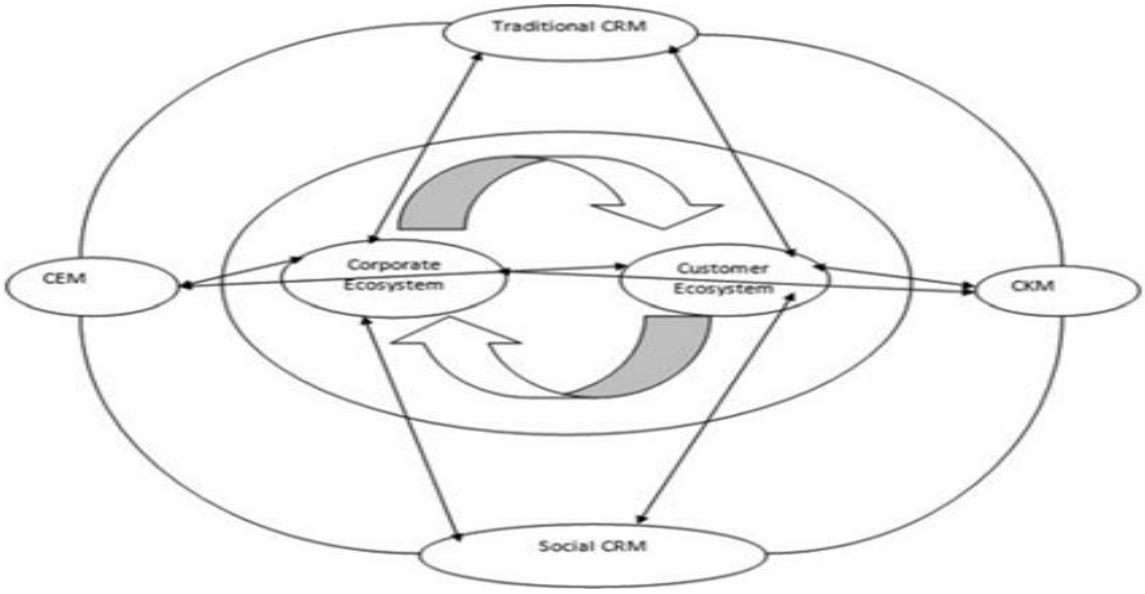


**Figure 2** Sustainable CRM model.
*Source:* Shukla & Pattnaik (2019)

According to the figure above, the model consists of two main entities:

- The company's ecosystem: includes all stakeholders of the company (functional department, employees, business units, suppliers of goods and services, competitors, government, non-profit organizations, intermediaries, customers, and social media). Managing relationships with stakeholders enables the sustainability of the links between the company and these customers.
- Customer ecosystem: includes customer, community, friends, family, institution, workplace, etc. The company must aim not only at managing customer relationships but also it must take into account the social environment of its customers.

This model combines several concepts, which are traditional CRM, Customer Experience Management CEM, Customer Knowledge Management CKM and social CRM. It shows that the interaction between these concepts is understood in the environment of modern companies.

From a technical perspective, a model is proposed to manifest the role of AI in CRM optimization (Hopkinson et al., 2018) (see Figure 3).

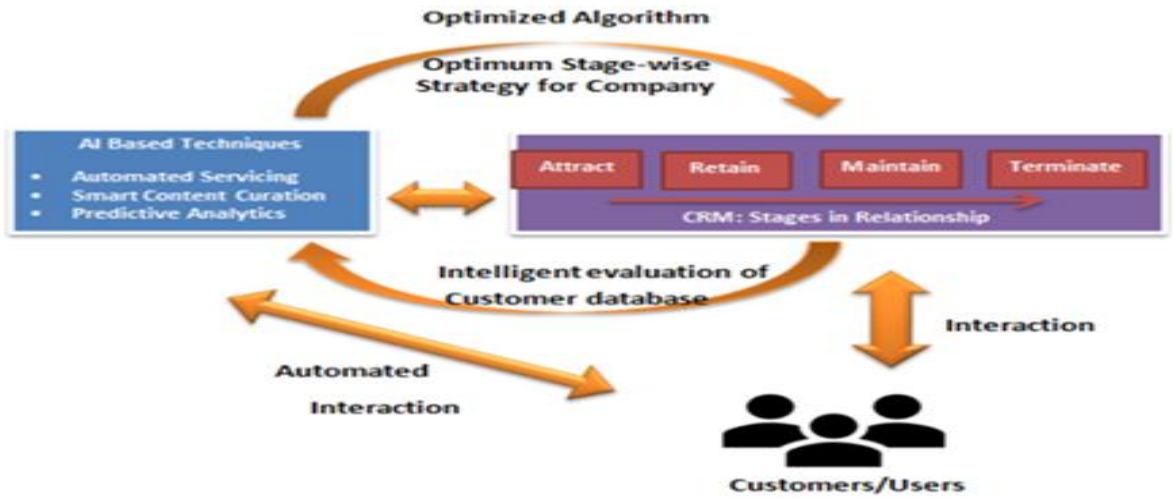


**Figure 3** Optimized AI-CRM model.
*Source:* Hopkinson et al. (2018)

According to this model, the CRM process consists of four essential stages (attract, retain, maintain, and terminate). In this stage, the integration of AI techniques in each stage of CRM enables the automation of services, the personalization of content, and the anticipation of customer needs and behaviors through data. These techniques enable an advanced evaluation of customer databases and facilitate personalized and effective interactions (Hopkinson et al., 2018).

The three models mentioned above address CRM from different perspectives: the first provides a general and foundational view of CRM processes; the second focuses on sustainable CRM; and the third deals exclusively with the application of artificial intelligence. Despite their contributions, these models fail to capture the broader scope of innovation within this field. Specifically, they do not integrate the diverse range of techniques and innovative concepts that could enhance CRM practices. This limitation underscores the need to develop a dedicated theoretical framework aimed at clarifying the concept of CRM innovation and identifying the main techniques, approaches, and innovative tools applicable to this context.

## Methodology

Through this paper, we aim to develop a theoretical model based on innovation to support CRM. To do this, we adopted a theoretical framework that addresses the different concepts and techniques innovated in CRM. This is through their categorization according to the three perspectives of CRM, and it is arranged in accordance with Lasswell's communication scheme.

*Theoretical framework*

After reviewing a range of scientific articles addressing innovation in CRM, we selected four key studies. Each of these articles highlights major innovations and trends in CRM, as summarized in the table below:

**Table 1** Selected Articles.

| Article title | Authors | Publication date | Innovation and new trends in CRM |
|---|---|---|---|
| Next-Generation CRM: AI, IoT, and the Future of Customer Relationship Management | Sathyavan et al | 2025 | AI<br>IoT |
| The Next Wave of CRM Innovation: Implications for Research, Teaching, and Practice | Lokuge et al | 2020 | IoT<br>AI |
| Innovation and Trends in CRM Customer Relationship Management | Nicuta et al | 2018 | AI<br>Personalisation<br>Multichannel<br>Gamification |

| Article title | Authors | Publication date | Innovation and new trends in CRM |
|---|---|---|---|
| New trends in innovation and customer relationship management: a challenge for market researchers | Maklan et al | 2008 | Co-Creation of Value Action Research |

*Source:* Made by the authors.

After identifying the innovative tools and the trends discussed in each selected paper, the next step is to classify these tools according to the different CRM perspectives, as illustrated in Figure 4.

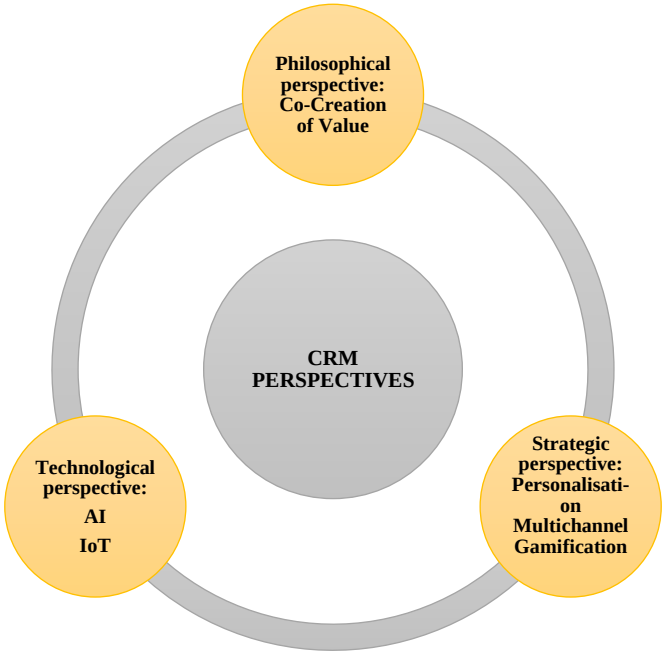


**Figure 4** Classification of CRM Innovations by Perspective.
*Source:* Made by the authors.

As we have already mentioned, CRM is a combination of three perspectives (Rababah et al., 2011): The philosophical perspective, the strategic perspective, and the technological perspective. When we discuss CRM innovation, we mean innovation from each CRM perspective.

The philosophical perspective refers to the company's response to the increase in customer and society demands and vigilance through the adoption of ethical behavior and moral values (Kushwaha et al., 2020). Innovating this perspective refers to the integration of new concepts or tools that meet its objectives, such as:

- Co-creation of value: is a cooperation and engagement between the company and the customer. They work together to design products, services, or experiences that bring mutual value (Sheth, 2020).
- From a strategic point of view, CRM is a process that aims to implement a customer-centric approach and create value for shareholders (Kumar & Reinartz, 2018). At this stage, several techniques are adapted to meet these latter objectives, such as:
- Gamification: aims to integrate game mechanics to increase customer engagement and enthusiasm (Hosseini & Haddara, 2020).
- Personalization: is a strategy that depends on advanced technologies and data analysis to create unique individual experiences (Rane et al., 2023).
- Multichannel: refers to a strategy in which an organization uses multiple, separate channels to interact with customers, without necessarily integrating them into a unified customer experience (Payne & Frow, 2004).
- From a technological perspective, it aims at the integration of tools and technological innovations to optimize CRM (Croteau & Li, 2003), such as:
- AI: This aims to develop programs that imitate human intelligence in terms of analysis, prediction, etc. It mainly uses the two famous AI approaches, namely Machine Learning (ML) and Deep Learning (DL) (Wang & Zhang, 2021). AI algorithms can sift through large volumes of data to identify customer patterns, preferences, and behaviors (Amarasinghe, 2023). This tool enables task automation (Chatbot, virtual assistants, etc.), predictive analysis, offers customization, customer satisfaction improvement, etc. (Amarasinghe, 2023).
- IoT (Internet of Things) is a tool dependent on physical objects integrated into the information network. These objects can self-organize, share information, data, and resources, and react and act to environmental situations and changes (Yerpude & Singhal, 2018; Abu Ghazaleh & Zabadi, 2020). It enables personalized customer experiences and data-driven decisions for businesses (Sanodia, 2019).

To conclude this theoretical framework, we note that these different CRM perspectives are complementary and interconnected. That is to say, the objectives of a given perspective are achieved through the contribution of techniques from another perspective.

*Structure of our proposed model*

To structure our model, we adopted the classic communication scheme, invented by Lasswell (Lasswell, 1948), and composed of a transmitter, a message, a channel, a receiver, and the effect of this communication on the public. For our model, we have organized it according to five modalities, explained as follows:

- Sender: This is the company's CRM service.
- Message: maybe advertisements, announcements, offers, information about the company itself or its offers, etc.
- Channel: this is a digital interface used by the CRM Service to share its messages; it can be a web or mobile application.
- Receiver: This is the customer.
- Feedback: These are messages sent from customers to the CRM service, which can be complaints, orders, opinions (positive, negative, or neutral), etc.

In our model, the concept of effect refers to the analysis of the impact of messages sent to customers. This analysis is done through feedback. This is why we have replaced the concept of effect with the concept of feedback.

The techniques and concepts of CRM innovation covered in the theoretical framework are presented in our model to explain how our approach works.

## Results

*Proposed model*

Given the importance of CRM within companies, we have created an innovation-based model to support CRM. This model aims to provide a practical framework for CRM services that want to improve and support development in several aspects (technological, market development, customer requirements, etc.) (See Figure 5).

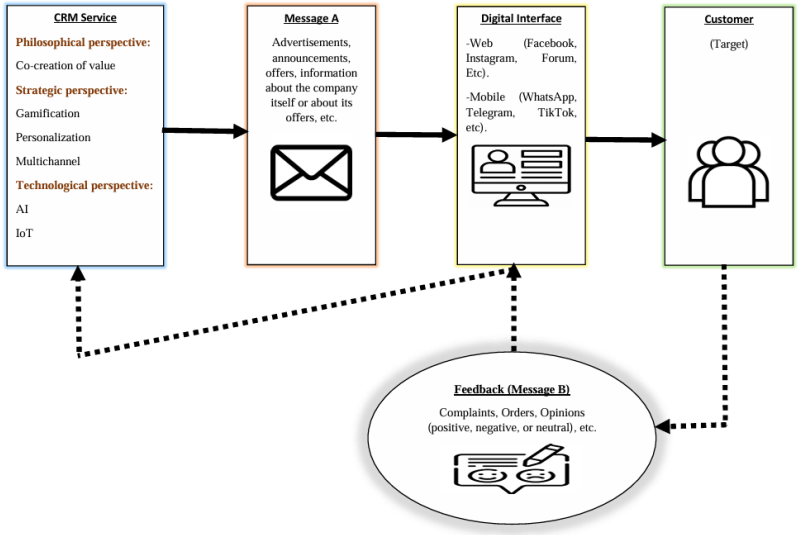


**Figure 5** Overview of our model based on innovation for supporting CRM.
*Source:* Made by the authors.

According to our model, the CRM service sends messages (advertisements, announcements, offers, etc.) according to its perspective (philosophical, strategic, and/or technological), using the appropriate innovation techniques and concepts.

The message is sent via a digital interface (web or mobile applications) to the customer. The latter reacts by sending their feedback (messages that can be complaints, orders, opinions, etc.) through the digital interface to the CRM service. The latter made available the various tools from the technological perspective, including AI to collect, analyze, and process messages (comments, reactions, direct messages, etc.) left by customers on the digital interface. This collected data is subject to several analyses (predictive analysis, emotional analysis, etc.). This helps the CRM service to know its customers, understand their behavior, and then build and choose the techniques, concepts, or appropriate strategies to meet customer requirements, satisfy them, build loyalty, and engage them.

## Discussion

This research aimed to develop a theoretical model based on new trends in technologies and to support CRM services by enabling them to integrate into global development. We explored the shortcomings of existing models and proposed a conceptual framework integrating automation, personalization, customer engagement, etc.

Compared with the CRM models presented in the literature review section, our model allows a clear and understandable vision, given its inspiration from Lasswell's communication scheme (Lasswell, 1948). Moreover, it depends on an exhaustive theoretical framework organized according to the three perspectives of CRM. Also, it integrates recent concepts and techniques, which makes it more innovative. In addition, it allows CRM services to keep pace with development and progress in several aspects (technological, market development, customer requirements, etc.).

All of these features distinguish our model from that of Payne and Frow (2005), whose general approach covers various CRM processes and techniques, but remains limited by the lack of integration of emerging technologies such as AI. The models proposed by Shukla and Pattnaik (2019) as well as Hopkinson et al. (2018) each focus on a specific concept or technique (sustainable CRM and AI, respectively), which limits their scope.

By combining several innovative approaches from the literature, our model helps fill this theoretical gap while providing practitioners with an operational framework to optimize CRM. This model demonstrates that AI profoundly transforms CRM, including customer data analysis (customer behavior prediction). However, this research remains theoretical and requires empirical validation of our proposed model. Future work could test our model through an empirical study based on company data, examining the impact of our model on CRM service performance and company profitability.

## Conclusion

This research proposed a theoretical model that redefines CRM through the integration of emerging technologies and innovative concepts. Inspired by Lasswell's communication framework, the model offers a coherent vision that connects strategic, operational, and technological perspectives of CRM. It overcomes the limitations of existing approaches by incorporating elements such as AI, IoT, and Co-creation of value, thus aligning CRM practices with current global and digital developments.

Beyond its theoretical contribution, the model provides practitioners with a flexible framework for enhancing automation, personalization, and customer engagement. Nevertheless, as a conceptual study, its validation requires empirical investigation. Future research should test its applicability and assess its impact on CRM performance and organizational profitability.

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