



# How to assess organizational and strategic impacts of customer relationship management: A multi-perspective performance evaluation method

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## ARTICLE INFO

### Keywords:

Customer Relationship Management  
CRM scorecard  
CRM implementation  
Evaluation criteria  
Performance measurement

## ABSTRACT

Despite the awareness of academics and managers of the impact that Customer Relationship Management (CRM) can have on firm's performance, contributions on methods to measure CRM performance, other than economic and financial ones, are neither well developed nor well communicated. Academics and practitioners call for new empirical models and performance metrics to testify and measure the overall contribution of a CRM project to firm performance, as traditional methods of evaluating the return on investment do not capture the multi-functional and complex nature of CRM. Thus, this study aims to develop a CRM performance evaluation method that helps companies to evaluate the organizational and strategic impacts of CRM. To this end, first, based on an in-depth review of the literature and experts' opinions, we develop an original method that overcomes the prevalent shortcomings of previous studies. Second, we validate its accuracy and meaningfulness. Third, we test its feasibility and utility within a sample of companies. The proposed method is based on multiple perspectives and conditional factors and includes objective and perceptual measures, accounting for the opinion of key informants and CRM users. The method monitors the organizational and strategic performance of CRM over time, thus allowing for a clearer decision-making process and an orientation towards the future.

## 1. Introduction

Over the past two decades, Customer Relationship Management has attracted significant consideration from both academics and professionals as a performance facilitator (Chang, Park & Chaib, 2010; Reinartz, Krafft & Hoyer, 2004; Ryals, 2005), paying greater attention to aspects related to financial and economic factors (Buttle, 2009; Li, Huang & Song, 2019), such as growth in sales and revenue (Meena & Sahu, 2021), rather than strategic and organizational ones (Steel et al., 2013).

Although CRM is significantly correlated with corporate performance, companies cannot improve them simply by implementing it (Kim & Kim, 2009). CRM's objectives must be linked to appropriate evaluation criteria to monitor CRM performance, and thus support the decision-making process, quantify investment success, improve customer-centric organizational systems, and strengthen CRM skills (Khashab et al., 2020; Richards & Jones, 2008; Wang et al., 2004). However, according to Grabner-Kraeuter et al. (2007), more than 40% of companies that have adopted a CRM do not measure the results. Indeed, CRM projects are often launched without a performance

measurement method (Venturini & Benito, 2015), relying only on the belief that an action will bring benefits. Therefore, a large part of CRM projects fail due to the lack of clear objectives and relative performance measurement (Dalla Pozza et al., 2018; Foss et al., 2008).

The first obstacle to CRM performance measurement is the lack of a univocal and clear definition of CRM (Richards & Jones, 2008). In this study, the authors consider CRM as a *strategic approach to create improved shareholder value through the development of appropriate relationships with key customers* (Payne & Frow, 2005). According to this definition, CRM should not be simply seen as a technological solution but should be positioned in a strategic and organizational context. However, when and why should a CRM project be considered successful? What is the strategic value of a CRM project? According to which performance measurement system?

Another obstacle is related to the lack of understanding of the mechanisms through which CRM enhances performance (Dalla Pozza et al., 2018). Although many studies have been conducted on a range of CRM results, contributions on methods to measure, evaluate, and monitor performance, other than financial ones, are neither well developed nor well communicated (Payne & Frow, 2005; Venturini &

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Benito, 2015). On the same line, Li, Huang, & Song, (2019) call for new performance metrics to testify and measure the overall contribution of a CRM project to firm's performance.

All in all, academics and practitioners suffer from the lack of an effective and robust CRM performance evaluation method (Richards & Jones, 2008), necessary for a successful CRM implementation (Keramati & Shapouri, 2016).

Answering this call, our study aims at developing and validating an innovative CRM performance evaluation method that can support managers in assessing the organizational and strategic impacts behind the financial ones within a holistic view.

The contributions of our study are fourfold. First, based on an in-depth review of the literature combined with expert opinions, an original CRM performance evaluation method has been developed. The accuracy and meaningfulness of the method were then validated within two companies that successfully implemented a CRM project. Finally, differently from previous studies (Kim & Kim, 2009; Lehmann et al., 2013), the stability, utility, and feasibility of the proposed method were tested in a larger sample of companies.

Second, the findings of this study contribute to the determination of feasible and reliable multidimensional evaluation criteria that eventually influence CRM results. To the best of our knowledge, the proposed method is the first approach based on a CRM scorecard that prioritizes conditional factors, paving the way to the creation of new improved measures for creating thorough and lasting CRM systems.

Third, our study highlights the seminal role played by some evaluation criteria compared to others, such as organizational capital and human capital rather than information capital, or customer perceived value rather than customer satisfaction or customer loyalty, and customer retention and expansion rather than customer acquisition.

Fourth, differently from previous studies (Keramati & Shapouri, 2016; Li et al., 2019; Oztaysi et al., 2011b), our method outlines multiple objective and perceptual measures that account for the opinions not only of key informants, but also of CRM users (i.e., end users who interact with the CRM interface to acquire information) to reduce the gap between the perception of executives and reality, thus better identifying the root causes of user adoption problems.

The paper is organized as follows. In Section 2, after presenting the theoretical background, the main published contributions on CRM performance evaluation are reviewed, highlighting new needs and shortcomings. In particular, the structure underlying the proposed method is introduced. Section 3 illustrates the methodology, followed by the results of the validation and testing of the method (Section 4). Finally, in Section 5 a discussion of both academic and managerial contributions is provided, with limitations and avenues for further research.

## 2. CRM performance evaluation: Theoretical background

Since the 2000s, large consulting firms have recognized the importance of presenting successful CRM investment cases and providing evidence that CRM initiatives lead to higher profits and shareholder value (Buttle, 2002). Since then, financial measures, such as profitability (Hendricks et al., 2007; Krasnikov et al., 2009) and cost savings (Coltman et al., 2011; Krasnikov et al., 2009), dominated CRM performance evaluation methods (Oztaysi et al., 2011a). Over time, these traditional methods have been progressively replaced by integrated approaches that monitor non-financial measures of the business to better support decision making and strengthen CRM skills and processes (Panno, 2020). Therefore, the need to focus on customer-centered measures has emerged (Rust, 2019), as they can effectively contribute to enable profitable management of customer relationships and rational managerial decisions (Fotiadis & Vassiliadis, 2017). Thus, over the years, the increasing need to monitor CRM performance in terms of quantitative and qualitative measures has led to the development of different approaches and methods that could better support strategic decision-

making. Table 1 summarizes the results of the previous studies in this field based on the classification of Oztaysi et al. (2011a), who have clustered them into four main groups: approaches based on indirect measures and operational indicators, self-assessment tools and scales, benchmarking with best practices, and CRM scorecards.

Indirect measures assess performance by indicators such as customer equity (Richards & Jones, 2008), profitability, and market valuation, while operational indicators detect information about the efficiency of activities related to customers, such as revenue per employee and customer satisfaction index (Li, Huang & Song, 2019).

Self-assessment tools and scales aim to evaluate behavioral and perceptual dimensions using statistical methods (Oztaysi et al., 2011a).

Regarding the CRM performance evaluation based on benchmarking with best practice, the only example in the literature, to the best of our knowledge, is the Customer Management Assessment Tool (CMAT) developed by QCi Ltd. (Oztaysi et al., 2011b). It is a useful example of evidence-based measurement: the assessment is done by interviews, and each question is associated with a score, trying to give a quantitative value on a subjective performance assessment area (Starkey, Williams, & Stone, 2002). However, this approach can only be applied with the help of experts, and it cannot be used by all companies that implement a CRM.

Finally, CRM scorecards are a review from a CRM perspective of the Balanced Scorecard (BSC), a strategic management technique and performance measurement tool developed by Kaplan and Norton (Kaplan & Norton, 1996). The BSC takes into account four perspectives interrelated in a cause-effect relationship, starting with the learning perspective, passing through the processes and customer perspectives, and ending with the financial perspective.

To develop an innovative CRM performance evaluation method, we started from the opinion of Kim & Kim (2009), according to whom a performance evaluation method should have the following characteristics: a) present *multiple perspectives*, b) focus on *conditional factors*, and c) consider *perceptual factors*. For each of these characteristics, we have analyzed and compared the best practices among those proposed in the literature to find the most appropriate structure for a CRM performance evaluation method.

### 2.1. Multiple perspectives

Due to the multifunctional nature of a CRM project, its implementation should be evaluated from a global perspective that integrates processes, people, capabilities, and functions (Becker, Greve, & Albers, 2009; Payne & Frow, 2005). Hence, a performance measurement with multiple perspectives provides an opportunity to interpret situations from various angles (Kim & Kim, 2009), and it helps to shift attention from the limited technological definition of CRM towards its strategic and organizational benefits (Payne & Frow, 2005). However, the literature lacks effective metrics to evaluate the overall contribution of a CRM project to firm's performance (Li, Huang, & Song, 2019), especially from the perspective of the customer and the organization (Steel, Dubelaar, & Ewing, 2013).

Self-assessment tools are mainly focused on internal factors, analysing only key informants' perception to represent the firm' improvement due to CRM (e.g., Guerola-Navarro et al., 2021; Heidemann et al., 2013; Oztaysi et al., 2011b). However, CRM performance should be assessed not only by internal factors, but also by external factors (see Krizanova et al., 2018), which reveal customer perceptions in response to CRM implementation (Sin, Tse, & Yim, 2005; Venturini and Benito, 2015). Although offering higher value to customers has become fundamental to building and maintaining competitive advantage, the key dimensions of customer value within CRM are unclear, and related studies are still divergent (Khan, Kadir & Hong, 2013; Wang, Po Lo, Chi, & Yang, 2004).

Furthermore, the evaluation methods available in the literature have mainly considered a single CRM perspective and its effect on

**Table 1**  
CRM performance evaluation methods and approaches: summary of the literature.

Authors	Aim	Performance evaluation approach	Contributions	Shortcomings	Factors		Measures		Factors	
					Final	Conditional	Perceptual	Objective	Internal	External
Guerola-Navarro et al., 2021	Develop a model that can be used to measure and evaluate the impact of CRM based on the degree of its introduction into the company.	<b>Self-assessment tools and scales:</b> CRM Practices, Innovation capability, Firm performance.	The model could be adapted and used in any sectoral and geographical context.	1) no empirical analysis. 2) performance measured based on the top-managers' perception of their performance	*	*	*		*	
Shahnavazi et al., 2020	Develop a balanced scorecard for customer relationship management evaluation.	<b>CRM scorecard:</b> customer, internal exchanges, innovation, learning, and finance.	33 criteria were identified to evaluate the success of e-Customer relationship management performance.	1) The model is primarily intended for companies covered by Parsian Data-Processors Group. 2) It did not provide a methodology for the application of the model. 3) Performance measured based on the top-managers' perception of their performance.	*	*	*		*	
Li et al., 2019	Propose a comprehensive CRM value creation two-stage model: operational/strategic benefits and firm performance.	<b>Indirect measures and Operational indicators:</b> operational benefits (revenue per employee); strategic benefits of CRM (customer satisfaction index).	1) Use process performance metrics. 2) Explain the contribution of CRM to indirect correlations: CRM usage can promote sales efficiency, which is reflected by high revenue per employee, and it can significantly improve the customer satisfaction index of the company.	1) Performance metrics are influenced by numerous factors and controlling variables cannot completely shield interferences. 2) Lack of detailed analyzes of the different types of CRM usage and their corresponding performance effect.	*	*		*	*	*
Karimi-Ghartemani et al., 2018	Propose a model for assessing CRM with network data envelopment analysis (NDEA) model and helps managers rank their companies in the customers' point of view.	<b>Self-assessment tools and scales:</b> input, intermediate, and output variables are service quality, customer satisfaction, and customer loyalty.	It shows the power of the NDEA model in the differentiation of banks.	Limit to Iranian banking sector.	*	*	*		*	
Krizanova et al., 2018	Create the CRM level and performance measurement model.	<b>Self-assessment tools and scales:</b> Offer management, Classic marketing, Sales activities, Service and support activities, Logistics operations, Internet activities, Complex indicators.	Evaluate the CRM level and performance not only as a current state indicator but also as a foresight.	The model is primarily intended for companies in the pharmaceutical sector in the B2B market in the Slovak Republic.	*	*	*		*	*
Authors	Aim	Performance evaluation approach	Contributions	Shortcomings	Factors		Measures		Factors	
					Final	Conditional	Perceptual	Objective	Internal	External
Keramati & Shapouri, 2016	Presents a comprehensive integrative framework for measuring the performance of CRM system.	<b>CRM scorecard:</b> customer, internal processes, learning and growth, and finance.	1) Crucial influential perspective that would influence the others: Learning and growth. 2) Organization capital, human capital, customer retention process, customer perceived value, and customer expansion process play an essential role in CRM success.	1) Limit to Iranian internet service provider sector. 2) Performance measured based on the top-managers' perception of their performance.	*	*	*		*	*
Venturini & Benito, 2015	Provide a performance measurement scale for CRM software.	<b>CRM scorecard:</b> customer life cycle (CLC), firm performance (FP),	Constructs to measure CRM performance: CLC (retention, loyalty, satisfaction); FP (market share, efficiency, product adaptation, new	Performance measured based on the top-managers' perception of their performance.	*		*		*	

(continued on next page)

Table 1 (continued)

Authors	Aim	Performance evaluation approach	Contributions	Shortcomings	Factors		Measures		Factors	
					Final	Conditional	Perceptual	Objective	Internal	External
		operational performance (OP).	product launch indicators); OP (improvement in sales performance, marketing campaigns, customer service, analysis of customer information).							
Heidemann et al., 2013	Provide a model that allows one to determine the optimal level of CRM IT investments considering the impact on the firm's customer equity.	<b>Self-assessment tools and scales:</b> Customer equity.	Cost estimation model: the required person months to conduct a project are forecasted based on the lines of code to be implemented. The approach does not require any context-specific characteristics.	1) Esteem of the input parameters based on historical data, experiences, and subjective values. 2) Assume that CRM investments are infinitely divisible. 3) Limit to the German financial sector.	*		*		*	
Lehmann et al., 2013	Developed a model to evaluate CRM effectiveness.	<b>CRM scorecard:</b> customer knowledge, customer interaction, customer value, and customer satisfaction.	This evaluation model is composed of four customer-centric perspectives identified by analyzing the cause and effect relationships of the CRM process.	Single case study for model's feasibility test.	*	*		*		*
Oztaysi et al., 2011b	Define the CRM processes within a company and propose a tool for CRM measurement.	<b>Self-assessment tools and scales:</b> CRM processes	Proposes a measurement tool that addresses seven main processes (targeting management, customer information management, production/service customization, expansion management, referrals management, termination management, and win back).	1) Focus on CRM processes. 2) performance measured based on the top-managers' perception of their performance.	*	*	*		*	
Kim & Kim, 2009	Propose a framework of CRM performance measurement which can diagnose and assess companies' CRM initiatives.	<b>CRM scorecard:</b> customer, process, infrastructure, organizational performance.	The CRM scorecard framework provides effective diagnostic perspectives and factors to identify the strengths and weaknesses of a company's CRM strategy that could be applicable to real situations.	Single case study for model's feasibility test.	*	*	*	*	*	*
Richards & Jones, 2008	Identify the core expected CRM benefits and establish a framework to measure CRM.	<b>Indirect measures and Operational indicators:</b> value equity, brand equity and relationship equity, which are components of customer equity.	Measuring changes in customers' perceptions of value, brand, and relationship equity and their subsequent impact to customer equity provides financial accountability for CRM initiatives.	1) No empirical analysis. 2) No test on propositions.	*		*	*		*

performance (Becker et al., 2009). For instance, Richards & Jones (2008) and Karimi-Ghartemani et al. (2018) focused only on customer perception, while Li et al. (2019) measured just the operational benefits of CRM in terms of revenue per employee and the strategic benefits in terms of customer satisfaction index. Compared to other methods, the CRM scorecard, with its cross-functional integration of multiple perspectives, better suits the multifunctional nature of a CRM project (Kim & Kim, 2009; Venturini & Benito, 2015).

## 2.2. Focus on conditional factors

The field of CRM performance measurement has been dominated by the so-called final factors, as they relate the benefits of CRM to the final desired results, such as financial factors (market value, profitability, cost-saving) and customer equity. However, the final factors provide little useful information for efficient strategic planning by managers (Panno, 2020).

Final factors can be improved by focusing on *conditional factors* (Kaplan & Norton, 1996; Payne & Frow, 2005): from the desired results, it is necessary to work backward to identify the actions necessary to achieve them. For example, companies can achieve higher results on profitability by improving knowledge management (Sin et al., 2005), on customer loyalty by improving user productivity (Heskett et al., 2008), and on market value by improving customer perceived value (Camarero Izquierdo et al., 2005). In recent times, the need to focus on conditional factors rather than on final ones has prevailed (Keramati & Shapouri, 2016; Kim & Kim, 2009). Since conditional factors are at the core of successful business strategies, monitoring them allows a more complete understanding of the multifunctional nature of a CRM project (Chen, Hsu, & Tzeng, 2011; Kim & Kim, 2009). Unlike the final ones, they work on a long-term vision (Rust, 2019), allowing to adopt a more effective perspective towards the future (Panno, 2020; Kim & Kim, 2009) and consider intangible factors (Oztaysi et al., 2011a), such as employees or customer satisfaction (Huang & Trusov, 2020; Kim & Kim, 2009; Venturini & Benito, 2015).

To this purpose, only the CRM performance evaluation based on CRM scorecard provides a good balance between final and conditional factors, short-term and long-term objectives, and tangible and intangible assets (Kaplan & Norton, 1996; Keramati & Shapouri, 2016; Venturini & Benito, 2015). However, previous empirical applications of a CRM scorecard that allows the monitoring of conditional factors are scant (Keramati & Shapouri, 2016; Kim & Kim, 2009; Lehmann et al., 2013; Shahnavazi et al., 2020), and most of them do not even consider all the features mentioned in Table 1.

## 2.3. Perceptual factors as critical characteristics

According to Kim and Kim (2009), organizations should take into account perceptual factors as critical features for any performance measurement, as they are at the heart of successful business strategies. Therefore, to strengthen its reliability, a CRM performance evaluation should combine objective measures, based on quantitative data, with perceptual ones, based on sensations and opinions (Li, Huang and Song, 2019; Reinartz, Krafft & Hoyer, 2004).

In this view, both self-assessment tools and scales and benchmarking with best practices are limited, as they do not provide objective measures to support companies monitoring their performance. In contrast, CRM scorecards are primarily built on perceptual measures and consider both internal factors and external factors. In addition, a CRM performance evaluation should involve a broad range of people, from key informants to end users, to assess their perceptions and reality (Woodcock, Stone, & Foss, 2003). Among CRM performance evaluation models based on CRM scorecard, only Kim and Kim (2009) consider the outlined aspects.

In conclusion, the CRM scorecard is the only approach that can suit all three characteristics of an appropriate CRM performance evaluation

method. Therefore, the innovative method proposed in this study has a CRM scorecard structure that prioritizes the three key perspectives, namely "Customers", "CRM process", and "Resources and Capabilities", considered conditional on the perspective "CRM results" (Keramati & Shapouri, 2016; Kim & Kim, 2009), and it is based on objective and perceptual measures.

In particular, our method advances and enriches the CRM scorecard approach developed by Kim and Kim (2009), adding new components and several new effective measures, both perceptual and objective, and it focuses only on conditional factors. Furthermore, while previous studies test the model with just a single case study or in one particular sector (see Table 1), our method is validated and tested in a sample of companies belonging to different sectors, to increase its external validity (Yin, 2014).

## 3. Methodology

Since this research aims to develop a method that is both relevant for practitioners and rigorous for academia, its development process must be scientifically thorough on both dimensions (Phaal, Farrukh, & Probert, 2006). For this, a process of validation and testing in practical applications, supported by an appropriate theoretical structure well rooted, is recommended (Ebrahimi et al., 2016; Phaal et al., 2006; Schröder et al., 2011). Basing on Phaal, Farrukh, and Probert (2006) and Schröder et al. (2011), the methodology used to develop our method for CRM performance evaluation (see Fig. 1) is structured as follows:

- 1) *Development phase: developing a rigorous method.* To develop and validate a new theoretical method, a deep literature review and experts' opinions are needed (Ebrahimi, Fathi, & Irani, 2016; Schröder et al., 2011).
- 2) *Validation phase: validating and refining the method through real and practical applications.* In this step, the method is refined and improved in a sample of companies to validate its correctness and meaningfulness and thus obtain a valid final method (Phaal, Farrukh & Probert, 2006).
- 3) *Testing phase: evaluating the utility and feasibility of the method in a wide sample of companies at different CRM project stages.* Testing in a wider range of practical applications ensures that the final method is stable as well as useful (Phaal, Farrukh, & Probert, 2006).

### 3.1. Development phase

To set up the initial robust theoretical structure of our method, we started from a deep analysis of the relevant literature to identify all variables and outcomes empirically associated with successful CRM projects. The search for the development of the theoretical CRM performance evaluation method was carried out on the Web of Science, recognized by the academic community as the most influential (Hota et al., 2020; Schröder et al., 2021) and a widely accepted and utilized data base in the social science domain (e.g., Gurzki & Woisetschlager, 2017), in July 2021 (see Table 2). The selection of relevant articles has been based on five specific criteria, both during the abstract reading and in the subsequent full text reading (see Table 2). After abstract reading, 93 publications were selected for full-text reading and after that, 47 relevant articles were included in the analysis to set up the initial robust theoretical structure of our method. In addition, references cited in these papers were used as secondary sources. This led to the inclusion of seven additional relevant publications.

Once the theoretical structure of our method was set up, we further developed it with the help of CRM experts. Experts' opinions were gathered through periodic meetings with leading CRM experts of a first-class CRM consulting company from May to July 2019. The resulting structure of the CRM performance evaluation method is illustrated in Section 4.

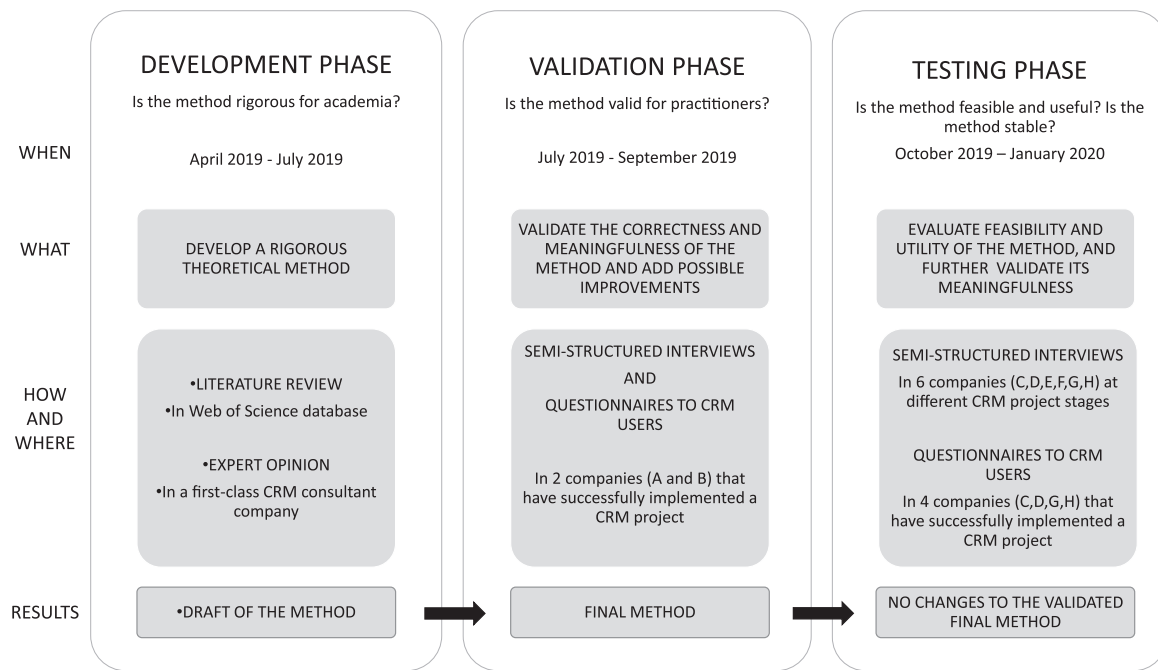


Fig. 1. Phases for developing the proposed method.

Table 2 Literature review process and results.

Initial search	Search with keywords* in the Web of Science database.* “customer relationship management”, “CRM”, “relationship management” and “customer-centric vision” (connected with the OR operator and searched in the Article Title), in combination with at least one of the following terms (connected with the OR operator and searched in Article Title, Abstract, and Keywords) : “outcome*”, “output*”, “return*”, “investment*”, “measure*”, “equit*”, “satisfaction*”, “gaug*”, “loyalty”, “retention*”, “benefit*”, “balanced scorecard” and “BSC”.	1092
	Refine by document types (Article) AND Web of Science categories (Management or Business or Operations research management science) AND Language (English).	278
	Delete duplicates	276
Abstract reading	Criterion 1 article deals with the relationship between the implementation of CRM’s projects and the firm’s performance, AND Criterion 2 article in which CRM has not a different meaning (e.g., cause-related marketing)	93
Full-text reading	, AND Criterion 3 Article deals with relationship management between a business and its customers (i. e., exclude article that deals with partner relationship management, supplier relationship management, etc.) , AND Criterion 4 article proposes a framework to evaluate (or measure) CRM impacts OR Criterion 5 article provides information about measurement methods of performance	47
Added secondary sources	Relevant article found in the references cited by the selected articles	7

### 3.2. Validation phase

Validation of the correctness and significance of a new method can be achieved by conducting interviews with experts to ask their opinion (Grieger & Ludwig, 2019; Rashvand et al., 2015; van Capelleveen et al., 2019). Hence, in this phase, we shared the draft of the method with the

managers of two companies asking them their thoughts about its applicability and correctness, and we used the feedback obtained to refine and improve it. Therefore, the method was validated through semi-structured interviews and meetings with 8 managers (see Table 3). Since we want our method to be meaningful irrespective of the specific CRM software, we chose companies that adopt different CRM software, that is, Salesforce and SugarCRM, both internationally recognized as best practices.

Moreover, within the two companies, we also involved 25 CRM users to further assess the validity of the method (see details in Section 4.2). This assessment was conducted through a questionnaire via Google forms. In this phase we pre-tested and piloted the questionnaire for CRM users to check its validity and consistency, identifying unclear questions

Table 3 Validation phase details.

	Manager’s roles * CRM project managers	Experience on CRM	Activities run and length (hours)
Company A (Automation sector; SME)	Sales manager*	26 years	Method presentation (2 h); Method analysis (2 h); Feedback analysis (2 h)
	IT Manager	26 years	Method analysis (2 h); Feedback analysis (1 h)
	Export Manager	12 years	Method analysis (2 h); Feedback analysis (1 h)
Company B (Equipment sector; SME)	Technical Director	18 years	Method analysis (2 h); Feedback analysis (1 h)
	CEO*	4 years	Method presentation (2 h); Method analysis (2 h); Feedback analysis (2 h)
	Sales Manager*	4 years	Method presentation (2 h); Method analysis (2 h); Feedback analysis (2 h)
	Technical Support Marketing Manager	4 years	Method analysis (2 h); Feedback analysis (1 h)
		4 years	Method analysis (2 h); Feedback analysis (1 h)

or problems that might lead to biased answers.

### 3.3. Testing phase

According to Phaal et al. (2006), testing the method in a wider range of contexts ensures its stability, utility, and feasibility. Thus, during this phase, we tested the model in a wider range of practical applications. The testing phase involved six more companies belonging to different sectors, of different sizes and in different stages of the CRM project (that is, analysis, development, implementation, and evaluation) (Steel et al., 2013) (see Table 4). Through semi-structured interviews, we asked 19 key informants (including a CRM project manager for each company) their thoughts on the utility, importance, and feasibility of the proposed method. Moreover, we submitted the questionnaire, pre-tested, and piloted in the validation phase, to other 139 CRM users within companies where the use of CRM was well established (Companies C, D, G, and H) to further validate the meaningfulness of the method (see details in Section 4.3).

All in all, the final testing phase made it possible to achieve a valid, useful, and feasible method for CRM performance evaluation.

## 4. Results and discussion

### 4.1. Development phase results

The first step was to identify, through the literature review, the most useful and proven evaluation criteria (Ebrahimi, Fathi, & Irani, 2016), within each key perspective (Customer, CRM process, and Resources and Capabilities) (see Table 5). Then the chosen evaluation criteria were split into different sub-criteria (Ebrahimi, Fathi, & Irani, 2016), also called components (Kim & Kim, 2009) or elements (Keramati & Shapouri, 2016). Four experts with more than 15 years of experience in CRM strategy and implementation agreed with the proposed criteria and sub-criteria classification. The experts were senior managers who have worked with different companies (in terms of size and industry) in CRM development and implementation. The variety and thoroughness of their experiences were fundamental for the initial assessment of our proposed criteria and sub-criteria.

The “CRM results” perspective includes the main final factors used to measure the expectations towards CRM projects (Oztaysi et al., 2011a), i.e., *profitability*, *cost-saving*, *customer equity*, and *market value*.

To achieve these desired results, companies need to acquire new customers, retain, and expand the relationship with them (Reinartz, Krafft, & Hoyer, 2004). This set of activities is considered when defining the evaluation criteria of the “CRM process” perspective, related to the customer’s lifecycle. In particular, the first customer relationship management process is the *acquisition* of new customers who are valuable to the company. Once a potential customer becomes effective, other products or services can be cross-sold, transforming the acquisition into a repeated purchase and, subsequently, into retention. The *customer retention* process aims to maintain long-term and continuous relationships (Ritter & Geersbro, 2018). Finally, the *customer expansion* process aims to increase the value of retained customers (Kim & Kim, 2009).

To establish lasting relationships with customers and thus enhance corporate performance, it is necessary to influence customer attitudes towards the company, with the final aim of improving *customer perceived value*, which influences *customer satisfaction* and, consequently, *customer*

*loyalty* (Coltman, Devinney, & Midgley, 2011; Roy, S., & Bhatia, 2019). These represent the evaluation criteria of the “Customer” perspective. Indeed, satisfied customers are more likely to become loyal, and high levels of loyalty are associated with excellent corporate performance (Catalan-Matamoros, 2012). It suffices to say that a 5% increase in loyalty can increase profits by up to 85% (Heskett, Jones, Loveman, Sasser Jr., & Schlesinger, 2008).

Finally, to properly implement a CRM project, it is important to have the necessary “Resources and Capabilities”, interdependent and interconnected (Coltman, Devinney, & Midgley, 2011). This perspective can be divided into three evaluation criteria: *organizational capital*, *human capital*, and *information capital* (Keramati & Shapouri, 2016).

As we have already discussed, our method has a CRM scorecard structure that prioritizes to three key perspectives (i.e., “Customers”, “CRM process”, and “Resources and Capabilities”), which are conditional to the “CRM results” perspective.

We decide to focus only on some evaluation criteria and sub-criteria which are: *Customer retention process*, *Customer expansion process*, *Customer perceived value*, *Organizational capital*, and *Human capital* (see Fig. 2). The evidence that motivated this choice is the following.

Customer retention and expansion processes together aim to extend the lifecycle of high-value customers and maintain long-term relationships with them. Therefore, the consideration of customer retention and customer expansion processes as fundamental evaluation criteria reflects the need to guide the CRM strategy in terms of increasing profitability and competitive advantage (Kim & Kim, 2009). Scholars have long suggested that a strategy centered on developing lasting and high-value relationships with customers, rather than a strategy centered on establishing temporary relationships with many customers, is fundamental for competitive advantage (Reimann, Schilke, & Thomas, 2010). In this view, customer retention and customer expansion processes are increasingly considered more profitable and important than the customer acquisition process (Catalan-Matamoros, 2012; Gumpa, Lehmann, & Stuart, 2004; Kim & Kim, 2009). Indeed, as the customer’s lifecycle extends, the volume and value of purchases increase, customer management costs decrease, and customers become less price-sensitive (Buttle, 2009).

Many academic studies use customer satisfaction or customer loyalty as evaluation criteria of customer-related performance (Reimann, Schilke, & Thomas, 2010), while customer perceived value has not attracted much attention. However, some other studies highlight its importance, showing that customer perception positively affects organizational economic performance (Kim & Kim, 2009; Wang et al., 2004). While customer satisfaction measures what a supplier is doing with its current market offer, providing guidelines to improve current products and services, customer perceived value points towards future directions (Eggert & Ulaga, 2002). Furthermore, the perceived value can be considered as a pre or post-purchase construct and can, therefore, refer to previous, current, and potential customers, while satisfaction must be addressed to actual customers only (Eggert & Ulaga, 2002). Finally, the measurement of the customer perceived value explicitly compares the supplier’s offer with the competition, while customer satisfaction measurement is mainly oriented to the evaluation of the offer, but not necessarily to the integration of information related to the competition (Eggert & Ulaga, 2002). For these reasons, we prioritized the customer perceived value as the criteria to evaluate the customer-related performance.

**Table 4**

Testing phase details.

Company	C	D	E	F	G	H
Sector	Manufacturing	Service	Manufacturing	Manufacturing	Distribution	Electronic
Size	Small	Medium	Medium	Medium	Large	Medium
Software	Salesforce	Sugar CRM	Sugar CRM	Sugar CRM	Sugar CRM	Salesforce
CRM Project stage	Evaluation	Evaluation	Implementation	Analysis	Evaluation	Evaluation

**Table 5**  
Results of the literature review on the evaluation criteria of CRM.

Perspective	Evaluation criteria	Sub-criteria	References
CRM results	Profitability	ROI ROS ROA ROE	Garrido-Moreno & Padilla-Meléndez (2011), Kim & Kim (2009), Li et al. (2019), Reinartz et al. (2004).
	Cost-saving	Cost reduction Cost avoiding	Coltman et al. (2011), Garrido-Moreno and Padilla-Meléndez (2011), Payne & Frow (2005).
Customer	Customer equity Market value		Heidemann et al. (2013), Kim & Kim (2009), Richards & Jones (2008), Johnson et al. (2012) Li et al. (2019), Kim & Wang (2019), Venturini & Benito (2015).
	Customer perceived value		Kim & Kim (2009), Keramati & Shapouri (2016), Oztaysi et al. (2011a), Payne & Frow (2005), Wang et al. (2004).
	Customer Satisfaction		Chang et al. (2010), Garrido-Moreno & Padilla-Meléndez (2011), Gopalsamy & Gokulapadmanaban (2021), Jamali et al. (2017), Kim & Kim (2009), Mithas et al. (2005), Oztaysi et al. (2011a), Wang et al. (2004).
CRM process	Customer Loyalty		Chang et al. (2010), Garrido-Moreno & Padilla-Meléndez (2011), Gopalsamy & Gokulapadmanaban (2021), Kim & Kim (2009), Munandar et al. (2020), Oztaysi et al. (2011a), Wang et al. (2004).
	Customer Acquisition	Segmenting and targeting customers Campaign management Lead management	Kim & Kim (2009), Oztaysi et al. (2011a), Reinartz et al. (2004).
	Customer Retention	Customer Service Management Customer Complaints Management	Marolt et al. (2020), Garrido-Moreno and Padilla-Meléndez (2011), Kim & Kim (2009), Oztaysi et al. (2011a), Reinartz et al. (2004), Santouridis & Veraki (2017)
Resources and Capabilities	Customer expansion	Up-/Cross-Selling Customer Lifetime Value Referral Management	Marolt et al. (2020), Kim & Kim (2009), Oztaysi et al. (2011a), Reinartz et al. (2004).
	Organizational Capital	Customer-centric Culture Teamwork Innovation Management Attitude and Commitment Setting CRM Goals Knowledge Sharing Reward System and Training Program	Becker et al. (2009), Chang et al. (2010), Garrido-Moreno & Padilla-Meléndez (2011), Guerola-Navarro et al. (2021), Cambra-Fierro et al. (2017), Kim & Kim (2009), Oztaysi et al. (2011a), Rafiki et al. (2019), Sin et al. (2005).
	Human Capital	User Productivity User Behavior User Satisfaction User Knowledge and Skills	Aliyu & Nyadzayo (2018), AlQershi et al. (2020), Becker et al. (2009), Garrido-Moreno & Padilla-Meléndez (2011), Kareem et al. (2020), Kim & Kim (2009).
	Information Capital	Databases Information systems Analytical tools The front office and back office	Becker et al. (2009), Garrido-Moreno and Padilla-Meléndez (2011), Kim & Kim (2009), Oztaysi et al. (2011a), Payne & Frow (2005), Reinartz et al. (2004), Sin et al. (2005)

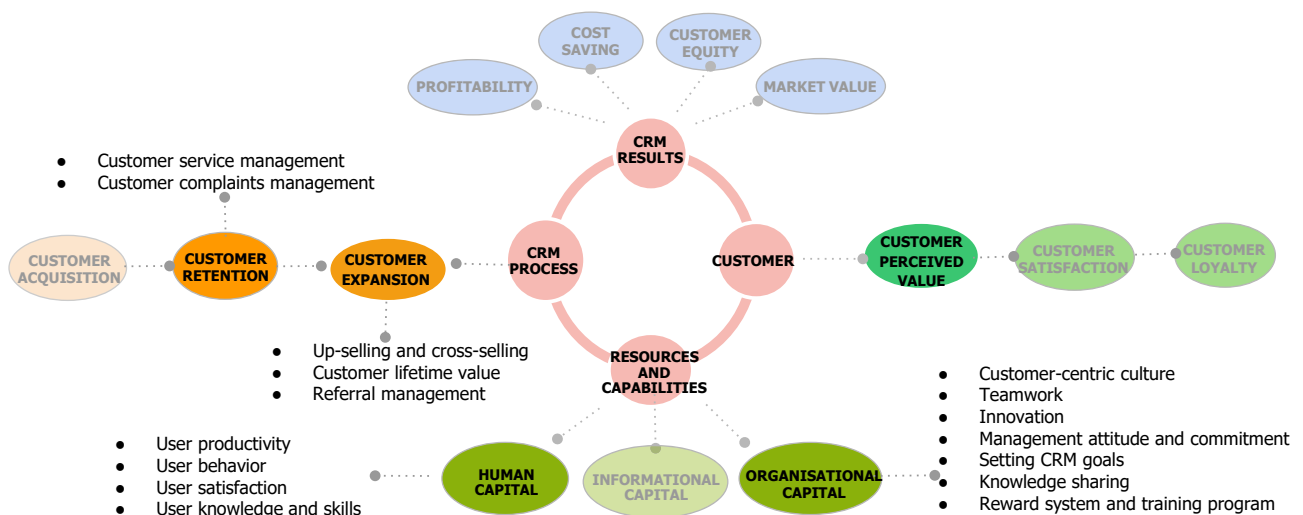


Fig. 2. The structure of the proposed CRM performance evaluation method.



According to Heskett et al. (2008), customer loyalty is largely influenced by the value of the external service. External service value is created by productive, satisfied, and loyal employees, who, in turn, depend on high-quality internal support services and policies (Heskett et al., 2008). Furthermore, employee productivity depends on their skills and abilities (Coltman, Devinney, & Midgley, 2011). Indeed, the success of a CRM project is strongly influenced by the productivity, satisfaction, behavior, and skills of CRM users (Becker, Greve, & Albers, 2009; Keramati & Shapouri, 2016), and the organizational context in which CRM users operate is decisive for overall performance (Coltman, Devinney, & Midgley, 2011). Conducting customer management activities without the full support of CRM users would not bring the desired effects (Becker et al., 2009). According to a study by Neochange, SandHill, and TSIA (2009), more than 70% of CRM project failures are related to user adoption problems. Besides, within a CRM project, analytical tools and databases can help CRM users manage large amounts of information. However, to give meaning to these data by converting them into customer knowledge, CRM users' judgment and skills are crucial (Coltman, Devinney, & Midgley, 2011), and managerial support and training investments are fundamental for developing them (Papadopoulos et al., 2012). Therefore, organizational and human capitals are essential for successful CRM (Papadopoulos et al., 2012; Rigby & Ledingham, 2004), while information capital seems to be not so discriminant in offering a significant competitive advantage (Becker, Greve, & Albers, 2009). This is also demonstrated by the fact that the main causes for the failure of a CRM project are unclear objectives (Foss et al., 2008), inadequate user training, participation, and support (Papadopoulos et al., 2012), inadequate project management (Becker, Greve, & Albers, 2009; Rigby & Ledingham, 2004), and lack of a customer-oriented vision (Rigby & Ledingham, 2004).

The just outlined importance of the five evaluation criteria (i.e., Organizational and Human capital, Customer retention and Customer expansion processes, and Customer perceived value) has been recently demonstrated by a study of Keramati and Shapouri (2016) that shows that these five main evaluation criteria influence CRM performances, thus eventually leading to better performance. Furthermore, the four CRM experts involved in the development phase have confirmed their high and seminal importance.

These five main evaluation criteria respect the characteristics of an appropriate CRM performance evaluation: they are all conditional factors belonging to different perspectives, and they imply both perceptual and objective measures.

For the main evaluation criteria and relative sub-criteria identified, based on the literature review and with the support of the two experts with more than 20 years of experience in CRM project development, we determined specific KPIs (Key Performance Indicators), as objectives measures and variables, as perceptual measures (Kim & Kim, 2009) (See Tables 6.1 and 6.2).

#### 4.2. Validation phase results

Although some criticisms and suggestions on the evaluation criteria of organizational capital have emerged during the interviews with the two companies, no significant recommendations have arisen for customer retention and customer expansion. It emerged that, for company A managers, the CRM is not fully associated with an increase in *collaboration and trust inside the firm*, even though they are essential variables for the project success. The *level of teamwork* is considered a valid criterion for identifying critical areas, however, its variation over time is not seen as an indicator closely related to investments in CRM. Besides, while the level of *innovation* within the company is considered a valid evaluation sub-criterion of the effects of CRM on organizational skills, not everyone attributes to a CRM project an increase in the *attention to technological developments*. Therefore, we further investigated the meaningfulness of teamwork and innovation sub-criteria in the testing phase.

**Table 6.1**

The proposed method for evaluating CRM performance: objective measures.

(\*) = Added during the Validation phase; (\*\*) = Removed during the Validation phase

Main evaluation criteria and sub-criteria		Objective Measures	
		KPIs	References
Organizational capital	Customer-centric Culture	Frequency of customer survey	Kim & Kim (2009)
	Reward System and Training Program	Training per user	Kim & Kim (2009)
Human capital	User Productivity	Profit per user	Kim & Kim (2009)
		Transactional time reduction rate (*)	Expert opinion
		User activity with respect to a target value (*)	Expert opinion
	User Behavior	Job efficiency	Kim & Kim (2009)
		Customer-service satisfaction rate	Expert opinion
	User Satisfaction	Key user turnover	Kim & Kim (2009)
Customer retention	User Knowledge and Skills	Staff cost reduction rate	Expert opinion
		Training-time reduction rate	Expert opinion
	Customer Service Management	Retention rate or churn rate	Kim & Kim (2009)
		Response time or delivery time	Kim & Kim (2009)
Customer expansion	Customer Complaints Management	Customer care program rate	Expert opinion
		Trouble tickets cleared	Kim & Kim (2009)
	Up/Cross-Selling	Complaint resolution time reduction rate	Expert opinion
		Up-/Cross-selling rate	Kim & Kim (2009)
Customer Lifetime Value	SOW; RFM value		Kim & Kim (2009)
			Fotiadis & Vassiliadis (2017), Kim & Kim (2009)
Customer perceived value		Net promoter score	Tong et al. (2017)

Besides, during the interviews, managers highlighted the need to integrate with new measures the evaluation criteria of human capital and customer perceived value. Eventually, new objective measures were developed with the help of CRM experts, while new perceptual measures were added based on previous literature (see Tables 6.1 and 6.2).

Regarding the Human capital evaluation criterion, Kim and Kim (2009) have already used *profits per user* as a measure of the benefits of using CRM in terms of sales productivity and efficiency (Li, Huang, & Song, 2019). However, profits per user are not seen by the sampled managers as a valid measure of user productivity because they can depend on many variables and are not always easily correlated with CRM. For this, we added other objective measures as an alternative to the profit per user. With the help of experts, we added *transactional time reduction rate* (e.g., communication, research, or analysis times) and *user activity with respect to a target value* (e.g., opportunities won on lost, activities in the period on prospect account) as objective measures for user productivity. Besides, the *key user turnover rate* is used to objectively measure whether CRM has contributed to reducing user dissatisfaction (Kim & Kim, 2009). However, for some sampled managers, it can be difficult to associate it with CRM adoption. Moreover, the need to evaluate the user's satisfaction towards their job, tasks, and resources emerged. Thus, we improved the variables for the perceptual measurement of user satisfaction. In addition to *user satisfaction towards the firm*,

**Table 6.2**  
The proposed method for evaluating CRM performance: perceptual measures.

(\*) = Added during the Validation phase; (\*\*) = Removed during the Validation phase

Main evaluation criteria and sub-criteria		Perceptual Measures			
		Variables	Adapted from		
Organizational capital	Customer-centric Culture	User involvement; Functionality and usability discussion with users; Consideration and understanding of customer needs; Long-term customer relationships	Mithas et al. (2005), Chang & Ku (2009), Papadopoulos et al. (2012), Ullah et al. (2020)		
		Teamwork	Collaboration inside the firm; Trust inside the firm	Chang & Ku (2009), Zvireliene et al. (2009)	
		Innovation	Innovation and attention to technological developments	Battor & Battor (2010), Chang & Ku (2009), Guerola-Navarro et al. (2021), Reinartz et al. (2004), Ullah et al. (2020)	
		Management Attitude and Commitment	Management support and attitude; CRM as an organization priority	Chang & Ku (2009), Kim & Kim (2009), Papadopoulos et al. (2012)	
		Setting CRM Goals	Understanding of CRM business objectives; Understanding of customer management process's structure	Becker et al. (2009), Chang & Ku (2009), Kim & Kim (2009), Papadopoulos et al. (2012), Ullah et al. (2020)	
	Knowledge Sharing		Knowledge sharing activities; Ease of information access	Battor & Battor (2010), Chang & Ku (2009), Lin et al. (2006), Papadopoulos et al. (2012)	
		Reward System and Training Program	Commitment to learning; User training; Reward systems	Chang & Ku (2009), Coltman et al. (2011), Kim & Kim (2009), Reinartz et al. (2004), Papadopoulos et al. (2012)	
		Human capital	User Productivity	Time management; Customer's data management	Chang (2007), Chang & Ku (2009), Coltman et al. (2011), Ullah et al. (2020)
			User Behavior	User behavior	Chang & Ku (2009), Papadopoulos et al. (2012)
			User Satisfaction	User satisfaction towards the firm; User satisfaction with his training (**); User satisfaction with his job, tasks, and resources (*)	Chang & Ku (2009), Papadopoulos et al. (2012)
Customer retention	User Knowledge and Skills	User ability and knowledge	Chang & Ku (2009), Papadopoulos et al. (2012)		
	Customer Service Management	Customer service management success	Lebdaoui & Chetoui (2020), Chang & Ku (2009), Reinartz et al. (2004)		
	Customer Complaints Management	Customer complaint management success	Chang & Ku (2009), Reinartz et al. (2004)		

**Table 6.2 (continued)**

(\*) = Added during the Validation phase; (\*\*) = Removed during the Validation phase

Main evaluation criteria and sub-criteria		Perceptual Measures	
		Variables	Adapted from
Customer expansion	Up/Cross-Selling Customer Lifetime Value Referral Management	Up/Cross-selling success	Reinartz et al. (2004)
		Customer lifetime value consideration	Reinartz et al. (2004)
Customer perceived value		Referral management success	Reinartz et al. (2004)
		User perceived value (*)	Tong et al. (2017)

we added *user satisfaction with his job, tasks, and resources*, and we incorporated the variable *user satisfaction with his training* into *user training* (see the sub-criterion “Reward System and Training Program” within the Organizational capital).

Regarding the customer perceived value evaluation criterion, interviews maintained the need to evaluate the perceived value of the user. Considering that users are “internal” customers, it can be a good practice to evaluate also their perceived value since their satisfaction affects that of “external” customers (Heskett, Jones, Loveman, Sasser, & Schlesinger, 2008). Thus, we added the *user-perceived value* variable as perceptual measures of the customer perceived value.

After all these improvements, we have reached the final version of our validated method (See Tables 6.1 and 6.2).

Ideally, a company should implement our method in each of the four stages of a CRM project (see Fig. 3) to understand, since the early Analysis and Development stages, if it has the right skills and resources to implement it, and subsequently to monitor the alignment with the set objectives, the execution of the customer relationship management process and the customer’s attitudes towards the company. The evaluation criteria should also be monitored after the final evaluation stage, with the idea to continuously improve its performance. In addition to objective measures, our method also includes perceptual measures that should be evaluated considering both the opinions of key informants and the opinions of CRM users, thus having a better picture of the impact of CRM.

To better validate the proposed perceptual measures, we asked, through a questionnaire, the CRM users of both Company A and Company B if the sub-criteria evidenced by the method were significant (see Appendix B). We intended to understand the perception of CRM users about the impact that CRM adoption had on organizational capital, human capital, and user-perceived value through Likert scales. In general, the results of the questionnaires showed that the chosen variables are relevant and meaningful, strengthening the validity of the perceptual measures of our method.

#### 4.3. Testing phase results

During the testing phase, key informants’ thoughts about the feasibility and utility of the objective measures were examined through semi-structured interviews (see Appendix A.1). In general, the objective measures were all judged useful, and all six companies believed they could implement them. Regarding perceptual measures, key informants were asked whether the chosen variables might be relevant and useful during the development of the CRM project to monitor its performance (see Appendix A.2). During the interviews, all CRM project managers maintained that having this method available since the beginning of the project would have been useful and helpful. It emerged that ‘keeping the proposed measures under control would have helped monitor performance over time’ (CRM project managers, Company A), and that ‘the method would have given additional guidelines and made it clear the criteria to consider’ (CRM project managers, Company E).

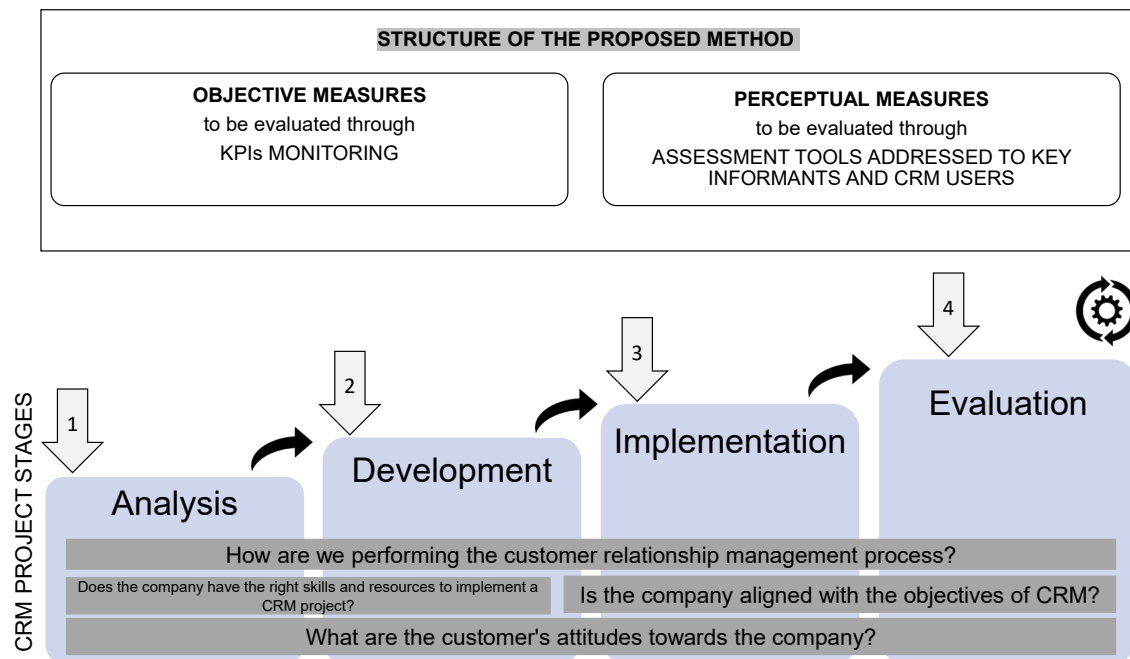


Fig. 3. Application of the method.

Furthermore, we conducted the same examination with CRM users that we did in the validation phase, evaluating their perception about the impact that CRM adoption might have on organizational capital, human capital, and user-perceived value through questionnaires (see Appendix B for the results of the questionnaires). In this way, we wanted to further demonstrate the meaningfulness and usefulness of the perceptual measures in assessing CRM performance.

In the following subsections, for each main evaluation criterion, the results of the test for both the objective and the perceptual measures are discussed.

#### 4.3.1. Organizational capital

Regarding the 'Customer-oriented culture' sub-criterion, key informants claimed that *user participation* and *functionality and usability discussion with users* are fundamental to understanding the requirements that CRM must have. According to key informants, CRM can allow the user to be more involved, thanks to a richer flow of information between the user and management, and it can increase the desire to encourage users' feedback.

Besides, for all the key informant's *consideration and understanding of customers' needs*, and the desire to form *long-term customer relationships* are also fundamental. Indeed, before CRM adoption, all the companies analyzed had a short-term view of customer relationships, or even, as in the case of Company D, did not have a vision of customer relations. Furthermore, in each company surveyed, more than 65% of users have declared to have a long-term view of the relationship with the customer since the adoption of CRM (see Appendix B).

In addition to these perceptual measures, all key informants agreed that it is useful to measure customer-oriented culture through the *frequency of customer surveys*. Wanting to know customers' opinions and using the data to obtain useful information to implement improvement strategies is a sign of a customer-oriented corporate culture.

For some respondents, CRM is not related to teamwork and trust. Instead, for many others, CRM can make people more involved in making team decisions and increase the level of collaboration and trust inside the firm. For instance, in Company G, before CRM adoption, managing customers created unhealthy competitiveness between branches, but now that everything is traced, trust has increased. Besides,

some pointed out that teamwork does not depend totally on tools. In fact, to effectively execute a customer-centered strategy, an inter-departmental connection is needed, which is possible only with an organizational philosophy oriented to the development of internal relations and solid trust (Catalan-Matamoros, 2012; Zvireliene et al., 2009). Therefore, our method highlights the importance of assessing the *level of collaboration and trust* within the firm philosophy and among people before and after the adoption of the CRM.

According to the CRM project manager of Company F, *innovation*, and *attention to technological developments* ("Innovation" sub-criterion) are not priorities strictly related to CRM. Instead, for all other key informants, attention to technological development is fundamental in understanding the requirements that CRM must have, and it can increase with CRM adoption, especially if there was not a strong propensity before. In fact, "*innovation passes through the sharing of ideas and CRM is a tool for sharing information, monitoring the present and looking toward the future, so CRM is the basis for future technological developments*" (CRM project manager, Company E). As a further proof of the importance of innovation, more than 50% of users have declared that, since the adoption of CRM, the level of innovation in their workplace has improved (see Appendix B).

The method also underlines the importance of monitoring 'Management Attitudes and Commitment', and all key informants declared that executive management support and attitude are fundamental to the success of the CRM project and that CRM must be considered a priority of an organization during all stages of the project. Management attitudes and commitment also have an impact on performance, especially in terms of retaining customer relationships (Becker, Greve, & Albers, 2009). In each company surveyed, more than 50% of users agreed that, after the adoption of CRM, the management attitude has helped them to improve the ability to fulfil their role (see Appendix B).

Positive management support is reflected in commitment to user training. In the proposed method, the adequacy of training programs is measured through *training per user* rate and by analyzing perceptions on *commitment to learning* (i.e., the level of investment in training and other resources) and *user training*, in which the level of user satisfaction of the training received is also analyzed. These measurements were deemed useful by all key informants since they allow them to understand

whether a company pays the right attention to training courses or overestimates them. Despite all the key informants saying that investments in training and other resources to support CRM initiatives are fundamental, some companies have underestimated the importance of training courses, by implementing them too late or only when problems of user adoption appeared. This is evident even from the fact that on average 45% of the 164 users surveyed declared they had not received the right information to use the CRM before its adoption (see Appendix B). Thus, since inadequate training can be an implementation barrier, often underestimated, a training program (“Reward system and training program” sub-criterion) is a fundamental criterion in a CRM performance evaluation method. CRM can even “make the company more aware of the importance of investing in training” (sales manager, Company G). For example, in the last 3 years, company G has heavily increased sales staff training with courses and training events.

Furthermore, the method also takes into account reward systems, which are not considered a control instrument but “an aid to perform differently and therefore obtain satisfactory results beyond the company, and therefore are fundamental” (CRM project manager, Company E). In some cases, they can even improve user adoption. As in the case of Company G, where some users refused to use CRM, the company achieved positive adoption results by measuring users’ performance through indicators connected to reward systems.

Another important evaluation sub-criterion regarding the managerial actions is “Setting CRM Goals”. With the proposed method, measuring the level of *understanding of the CRM business objectives* will prevent dissatisfaction among users and disuse of the CRM platform. All key informants confirmed that, for the success of a CRM project, it is essential to clearly and immediately define the business objectives and always keep them in consideration.

Furthermore, by measuring the level of *understanding of the structure of the customer management process*, the method allows managers to evaluate whether CRM has improved the traceability of the customer management process. Before CRM, “the customer management process is clear, but, without a real mapping, the process structure is unclear” (CRM project manager, Company F). “CRM, by tracking the processes, made the ‘how’ clear” (marketing manager, Company C), allowing us to understand the structure of the customer management process. As a further proof, in each company surveyed, more than 65% of users declared that since the CRM adoption, the structure of the customer management process is clear (see Appendix B).

Finally, the proposed method assesses the level of *knowledge sharing activities* (“Knowledge sharing” sub-criterion), measuring the quantity and quality of resources and activities (such as the documentation of activities and digitization). Besides, the proposed method monitors the *level of information access* to understand if CRM has improved the ease of access and sharing of information. All key informants declared that, after the implementation of CRM, knowledge sharing and ease of access to information increase. In addition, in each company surveyed, more than 60% of users (100% in some cases) have declared having easier access to information since the adoption of CRM (see Appendix B). Knowledge sharing is an expected benefit, since “information is not always shared and not easily accessible” (CRM project manager, Company E).

**4.3.1.1. Human capital.** In our method, *time management and customer data management* (‘user productivity’ sub-criterion) support companies in understanding if they are managing processes efficiently and to what extent CRM allows users’ ability and productivity to improve. Most of the key informants agree that after the implementation of CRM, the process’ time management can improve, and users can have more skills and experience at converting data to customer knowledge. Besides, within the companies surveyed, more than 65% of users maintained that CRM has allowed a greater ability to convert data into customer knowledge, and more than 55% that CRM has improved time

management (see Appendix B). Furthermore, all key informants agreed that *profit per user, transactional time reduction rate, and user’s activity with respect to a target value* can be used as objective measures to support perceptual ones.

In addition to user productivity, the method highlights the importance of measuring the “User behavior” and “User satisfaction” sub-criteria. However, how meaningful are user behavior and user satisfaction and their impact on productivity?

In company G, when the CRM project started, meticulous planning was made only in the administrative area, while sales were overlooked. This caused non-acceptance by salesmen, and the company spent a year and a half implementing adjustments to change perceptions. Thus, underestimating user’s perceptions, attitudes, and propensities can cause user adoption problems. For most of the key informants, taking users’ behavior and satisfaction into full consideration is fundamental because “if users are not happy to use it, CRM will not work” (CRM project manager, Company F). In addition, in cases where ‘there is confusion in defining roles and resources are scattered and complicated... CRM is essential to define roles and reduce dissatisfaction’ (CRM project manager, Company E). For this, *user behavior and user satisfaction towards the firm and with his job, tasks, and resources* are fundamental perceptual measures to monitor. Furthermore, our method, besides considering *job efficiency* (e.g., number of calls handled per hour or time spent on a task), examines the customer-oriented behavior using the *customer-service satisfaction rate and the key user turnover rate*.

Finally, almost every key informant agreed that understanding the needs and shortcomings of users is fundamental for the success of the project and thus it is important to evaluate the level of *user ability and knowledge* regarding CRM, to develop suitable training programs, and improve performances. Furthermore, all key informants agreed that the *staff cost reduction rate and the training-time reduction rate* are feasible and useful objective measures to monitor improvement in the sub-criterion of evaluation ‘user knowledge and skills’.

**4.3.1.2. Customer retention.** In our method, the evaluation of perceptions about *customer service management success and complaint management success* aims to measure changes in the management of the retention process and are considered CRM goals by most key informants, although not a project priority. Managers expect improvements in making contact and retention activities systematic, developing commercial strategies, and managing “dormant” customers. Regarding the objective measures, most managers considered the proposed KPIs (Customer retention rate, response time, and customer care program rate) useful to better quantify customer service management improvements and the efficiency of the complaint management process.

**4.3.1.3. Customer expansion.** The Customer expansion process aims to increase a customer’s lifetime value. Measuring the customer’s lifetime value helps companies to ‘differentiate the actions to be taken’ (CRM project manager, Company F) and ‘understand new business opportunities’ (CRM project manager, Company H). In the proposed method, the ‘customer lifetime value’ sub-criterion can be measured by evaluating the *Share of Wallet (SoW)* or the *Recency Frequency Monetary Value (RFM) value*. SoW and RFM values are simple to measure and very useful to make predictions on the future value of a customer’s lifetime (A.K. Fotiadis & Vassiliadis, 2017; Zhou et al., 2020).

To improve the customer’s lifetime value, it is essential to build more profitable relationships with customers by performing up-selling and cross-selling, and by managing referrals (Oztaysi et al., 2011a). Managing referrals correctly means keeping customers loyal and encouraging physical or virtual word of mouth. Improving up- and cross-selling techniques is considered a CRM goal, except for the CRM project manager of Company F, who declared that “it is not a project goal, maybe it will be in the future”.

Even the referral management process is not seen by every manager

interviewed as a CRM goal. However, even when customer expansion or customer retention activities are not seen as goals or priorities of a CRM project, the proposed method provides clear guidelines on how to monitor them in the future.

In assessing the performance of the customer expansion process through perceptual measures, it is important to understand if a company has formalized procedures for up-selling and cross-selling and if customer's lifetime value and referrals are systematically monitored. Furthermore, it is important to understand whether a company provides personalized incentives for customers who intensify their activity or for positive word of mouth (Reinartz, Krafft, & Hoyer, 2004). Finally, *up-selling and cross-selling rates* are considered useful objective measures to monitor the state of these processes.

**4.3.1.4. Customer perceived value.** For many key informants, customer perceived value is a useful evaluation criterion for measuring benefits related to customer loyalty and can be measured through the *Net Promoter Score*, which can be easily monitored and compared with that of competitors.

Furthermore, during the testing phase, companies found it feasible and useful to analyze the value perceived by the CRM, as well. As shown in Appendix B, CRM has a positive impact on users' perceptions of their companies.

However, some key informants do not yet consider the customer perceived value as a fundamental factor in success. Economic returns and organizational benefits are still considered more significant than returns in terms of value for customers.

## 5. Conclusions

This study, based on the results of the literature review and expert opinion feedbacks, designs and builds a multi-perspective performance evaluation method aimed at measuring the performance of a CRM behind the economic and financial components and supporting managers in assessing the organizational and strategic impact of a CRM project. The proposed method has then been validated and tested in a sample of companies that have outlined its utility and meaningfulness along all the different stages that characterize a CRM project.

### 5.1. Academic and managerial implications

The proposed method fits into the literature that develops tools for performance evaluation within a holistic view, which can be used by any organization, regardless of its sector and size (Venturini & Benito, 2015). The proposed method includes useful and feasible objective measures, as well as meaningful perceptual measures, to grasp the multidimensional concept of a successful CRM implementation.

Taking the perspective of expert systems, our tool, validated by companies and managers, can also be applied to prioritize CRM performance evaluation criteria (see e.g., Oztaysi et al., 2011a) or to calculate the relative importance of some criteria (see e.g., Ebrahimi, Fathi, & Irani, 2016) using multiple criteria decision making approaches.

All in all, it could also offer insights into the development of a prototype of a CRM assessment expert system, and, thus, eventually, make the CRM assessment process more systematic.

Unlike previous studies, our study highlights the importance of evaluation criteria like organizational capital and human capital, customer perceived value, and customer retention and customer expansion. Furthermore, it is the first measurement method based on a CRM scorecard that prioritizes conditional factors, allowing for a clearer decision-making process and an orientation towards the future. Finally, unlike previous CRM performance evaluations, our method outlines the importance of assessing perceptual measures through questionnaires that account for the opinions not only of managers, but also of CRM

users. As an alternative to questionnaires, focus groups can also be used to evaluate CRM performance in the organization. However, since focus groups are more time consuming, we suggest using them in a subsequent (later) step. For instance, they can be a useful tool for root cause analysis of scarce performance.

From a practical point of view, our method can serve as a management tool that supports companies at each stage of the CRM project. In the analysis phase, the method supports managers in planning, defining objectives, and recognizing needed business changes. Thanks to its multidimensionality, managers can obtain a clearer and deeper understanding, paying more attention to the strategic and organizational impacts of CRM to be considered. Even when Customer retention or Customer expansion activities are not project priorities, the method makes it possible to have clear guidelines on how to monitor them in the future, allowing managers to better plan future implementation. Then, in the development stage, the method can help justify and evaluate investments, giving a clearer vision of the necessary efforts. Finally, after the implementation stage, the method can be employed to quantify the investment success and monitor the CRM effectiveness. Since CRM evolves continuously, companies can use it as a guide to support the decision-making process and monitor progress in a coherent, aligned, and supportive way for the future business strategy. A culture of performance monitoring to improve future decisions is often missing, and this method can support companies on the path to increasing their awareness of this issue.

### 5.2. Limitations and avenues for future research

The results of the study are also subject to some limitations that could represent avenues for future research. First, selecting Italy as the research context may affect the generalizability of the results to other countries. Future research might explore the applicability of our findings to specific industries, dimensions, contexts, and settings. Second, the validity, utility, and feasibility of the method were evaluated through interviews and questionnaires with managers and users. Hence, the selection of companies and interviewees could influence the research results. Third, this study does not test the value of the method in bringing an effective improvement on CRM performance over time. Future developments could analyze whether, thanks to the method, CRM effects are better monitored, bringing about a more efficient, visible, and supportive decision-making strategy. In this perspective, it would be interesting to apply the method starting from the analysis stage, following a longitudinal approach.

In addition, our model might also represent a starting point for developing a social CRM performance evaluation method. Indeed, academics raised the issue of how to measure the performance of social CRM (Jalal et al., 2019). Considering social CRM as an extension of traditional CRM, our model could be reviewed from a social media perspective.

#### CRedit authorship contribution statement

**Cristina Ledro:** Conceptualization, Methodology, Investigation, Writing – original draft. **Anna Nosella:** Methodology, Visualization, Writing – review & editing. **Andrea Vinelli:** Supervision, Visualization, Writing – review & editing.

#### Formatting of funding sources

This research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

#### Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence

the work reported in this paper.

**Acknowledgements**

We thank the CRM consulting company OpenSymbol Srl with sole

shareholder, part of Impresoft Group, that contributed to the research, and we gratefully acknowledge companies that participated in the study. This paper is linked to the fund cod. VERB\_SID19\_01 of the University of Padova.

**Appendix**

A.1 – Testing phase: feasibility and utility evaluation through semi-structured interviews with key informants of the objective measures proposed in the method.

Results are summarized according to the following categories: (4) = Already measured; (3) = Feasible and useful; (2) = Not feasible now but useful; (1) = Not useful.

Results show the 6 companies involved in the testing phase.

Main evaluation criteria and sub-criteria		KPIs	C	D	E	F	G	H
Organizational capital	Customer-centric Culture	Frequency of customer survey	3	3	3	2	4	3
	Reward System and Training Program	Training per user	3	4	4	3	2	3
Human capital	User Productivity	Profit per user	3	3	2	3	3	3
		The transactional time reduction rate	2	3	3	3	3	3
Customer retention	User Behavior	User activity with respect to a target value	3	3	2	3	4	4
		Job efficiency	3	3	3	2	4	4
		Customer-service satisfaction rate	2	3	4	3	4	3
	User Satisfaction	Key user turnover	3	3	4	3	3	3
		Staff cost reduction rate	2	3	3	3	3	3
	User Knowledge and Skills	Training-time reduction rate	3	3	3	3	3	3
Retention rate or churn rate		3	3	3	2	4	4	
Customer expansion	Customer Service Management	Response time or delivery time	4	3	3	2	2	4
		Customer care program rate	2	3	3	2	3	3
	Customer Complaints Management	Trouble tickets cleared	3	4	3	2	4	3
		Complaint resolution time reduction rate	4	2	3	3	4	4
Customer perceived value	Up/Cross-Selling	Up/Cross-selling rate	3	3	3	2	4	2
	Customer Lifetime Value	SOW, RFM value	3	3	3	3	3	3
		Net promoter score	2	3	2	3	3	4

**A.2 – Testing phase: Utility and importance evaluation through semi-structured interviews with key informants of the perceptual measures proposed in the method**

Results are summarized according to the following categories: (3) = Important and Useful; (2) = Useful but not considered important; (1) = Not Useful.

Where empty spaces were left, it means that the key informants were unable to respond because the conditions were too premature to give an adequate assessment.

Main evaluation criteria and sub-criteria		Variables (number of items)	C	D	E	F	G	H	
Organizational capital	Customer-centric Culture	User involvement (2)	3	3	3	3	3	3	
		Functionality and usability discussion with users (2)	3	3	3	3	3	3	
		Consideration and understanding of customer needs (2)	3	3	3	1	3	3	
	Teamwork	Long-term customer relationships (2)	3	3	3	3	3	3	
		Collaboration inside the firm (1)	3	3			3	3	
		Trust inside the firm (2)	3	3	3	3	3	3	
	Innovation	Innovation and attention to technological developments (2)	3	3	3	3	3	3	
		Management support and attitude (2)	3	3	3	3	3	3	
	Management Attitude and Commitment	CRM as an organization priority (2)	3	3	3	3	3	3	
		Setting CRM Goals	Understanding of CRM business objectives (3)	3	3	3	3	3	3
	Knowledge Sharing	Reward System and Training Program	Understanding of customer management process's structure (1)	3	3			3	3
			Knowledge sharing activities (1)	3	3			3	3
Ease of information access (1)			3	3			3	3	
Human capital	User Productivity	Commitment to learning (1)	3	3	3		3	3	
		User training (2)	3	3			3	3	
		Reward systems (1)	2	1	1		2	3	
	User Behavior	Time management (2)	3	3	3	3	3	3	
		Customer's data management (1)	3	3			3	3	
		User behavior (2)	3	3			3	3	
Customer retention	User Satisfaction	User satisfaction with his job, tasks, and resources (1)	2	3	2	3	2	3	
		User ability and knowledge (1)	2	3	3	3	3	3	
	Customer Service Management	Customer service management success (2)	3	3	3	3	3	3	
Customer Complaints Management	Customer complaints management success (2)	3	2	3		3	2		

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Main evaluation criteria and sub-criteria		Variables (number of items)	C	D	E	F	G	H
Customer expansion	Up-/Cross-Selling	Up/Cross-selling success (2)	3	3	3	2	2	3
	Customer Lifetime Value	Customer lifetime value consideration (1)	2	3	3	3	3	3
	Referral Management	Referrals management success (2)	2	2	2	2	2	2

**B – CRM users’ questionnaire answers**

Answers are shown for each of the 6 companies where the questionnaire was submitted.

The answers are based on a Likert scale from 1 to 7, where 1 is “completely disagree” and 7 “completely agree”.

The numbers refer to the percentages of the answers.

For reasons of space, the percentages for the answers 4 “neither agree nor disagree” are omitted.

Main evaluation criteria and sub-criteria	Variables	Items	Validation phase					
			A		B			
			1-3 Likert scale	5-7 Likert scale	1-3 Likert scale	5-7 Likert scale		
Organizational capital	Customer-centric Culture	User involvement	Since the CRM adoption, I feel more involved in the organizational choices	6,25	50,00	11,11	55,56	
		Functionality and usability discussion with users	Since the CRM adoption, I feel more encouraged to give feedback	6,25	75,00	0,00	88,89	
		Consideration and understanding of customer needs	Since the CRM adoption, I have more consideration and understanding of customer needs	12,50	56,25	22,22	55,56	
	Teamwork	Long-term customer relationships	Since the CRM adoption, I have a long-term view of the customer relationship	7,69	84,62	0,00	83,33	
		Collaboration inside the firm	Since the CRM adoption, I am more involved in making decisions with my team	20,00	46,67	0,00	80,00	
		Trust inside the firm	Since the CRM adoption, the level of trust between departments has improved	6,25	56,25	14,29	71,43	
	Innovation	Innovation and attention to technological developments	Since the CRM adoption, the level of innovation in the workplace has improved	0,00	75,00	0,00	62,50	
			Since the CRM adoption, I pay more attention to external developments and changes	18,75	56,25	22,22	55,56	
	Human Capital	Management Attitude and Commitment	Management support and attitude	After the adoption of CRM, the management attitude has helped me to improve the ability to fulfill my role	6,25	50,00	0,00	100,00
		Setting CRM Goals	Understanding of CRM business objectives	To date, I do understand the business objectives of CRM	22,22	55,56	14,29	71,43
Understanding of customer management process's structure			Since the CRM adoption, it is clear to me the structure of the customer management process	0,00	69,23	11,11	77,78	
Knowledge Sharing		Ease of information access	Since the CRM adoption, I have easier access to information	0,00	100,00	0,00	100,00	
Reward System and Training Program		User training	Before starting the use of CRM, the firm provides me the right information to use it	31,25	68,75	0,00	100,00	
		User Productivity	Time management	CRM has allowed me to improve time management	6,25	81,25	33,33	55,56
User Behavior		Customer's data management	Since the CRM adoption, I have a greater ability to convert data into customer knowledge	6,25	75,00	0,00	100,00	
			Since the CRM adoption, I feel calmer	0,00	45,45	0,00	25,00	
		User Satisfaction	User satisfaction with his job, tasks, and resources	Since the CRM adoption, I feel more collaborative	0,00	54,55	0,00	25,00
				Since the CRM adoption, I am more satisfied with my job	0,00	71,43	0,00	66,67
	User Knowledge and Skills	User ability and knowledge	Since the CRM adoption, I am more satisfied with my tasks	0,00	71,43	0,00	66,67	
			Since the CRM adoption, I am more satisfied with the resources and tools at my disposal	0,00	71,43	0,00	66,67	
		The training has helped overcome my fears about CRM	31,25	68,75	11,11	88,89		
		To date, I have all the knowledge and skills to use CRM	37,5	50	0,00	77,78		

Main evaluation criteria and sub-criteria	Variables	Items	Testing phase								
			C		D		G		H		
			1-3 Likert scale	5-7 Likert scale	1-3 Likert scale	5-7 Likert scale	1-3 Likert scale	5-7 Likert scale	1-3 Likert scale	5-7 Likert scale	
Organizational capital	Customer-centric Culture	User involvement	Since the CRM adoption, I feel more involved in the organizational choices	18,75	68,75	20,59	58,82	26,67	43,33	29,63	55,56
		Functionality and usability	Since the CRM adoption, I feel more encouraged to give feedback	18,75	68,75	11,76	70,59	10,00	66,67	26,92	53,85
		discussion with users	Since the CRM adoption, I have more consideration and understanding of customer needs	25,00	62,50	20,59	64,71	32,14	41,07	26,92	57,69
		Consideration and understanding of customer needs	Since the CRM adoption, I have a long-term view of the customer relationship	6,25	75,00	11,43	65,71	2,04	75,51	16,00	72,00
	Teamwork	Collaboration inside the firm	Since the CRM adoption, I am more involved in taking decisions with my team	12,50	81,25	30,30	51,52	7,50	65,00	30,77	42,31
		Trust inside the firm	Since the CRM adoption, the level of trust between departments has improved	18,75	62,50	19,35	48,39	16,67	51,85	45,83	20,83
	Innovation	Innovation and attention to technological developments	Since the CRM adoption, the level of innovation in the workplace has improved	6,25	75,00	12,50	68,75	7,02	77,19	25,00	50,00
			Since the CRM adoption, I pay more attention to external developments and changes	12,50	68,75	14,29	62,86	35,00	38,33	33,33	41,67
	Management Attitude and Commitment	Management support and attitude	After the adoption of CRM, the management attitude has helped me to improve the ability to fulfill my role	18,75	75,00	25,00	62,50	11,67	61,67	20,00	60,00
			To date, I do understand the business objectives of CRM	29,41	58,82	25,71	51,43	13,89	75,00	25,93	59,26
	Setting CRM Goals	Understanding of CRM business objectives	Since the CRM adoption, it is clear to me the structure of the customer management process	6,25	87,50	23,53	70,59	5,00	65,00	18,52	66,67
			Since the CRM adoption, I have easier access to information	0,00	100,00	15,15	60,61	0,00	92,73	26,92	61,54
	Knowledge Sharing	Ease of information access	Before starting the use of CRM, the firm provides me the right information to use it	35,29	64,71	57,14	42,86	50,00	50,00	46,43	53,57
			CRM has allowed me to improve time management	25,00	68,75	20,59	64,71	17,86	62,50	38,46	46,15
Human Capital	User Productivity	Since the CRM adoption, I have a greater ability to convert data into customer knowledge	6,25	93,75	17,65	67,65	3,57	78,57	26,92	69,23	
		User behavior	Since the CRM adoption, I feel calmer	31,25	50,00	12,12	69,70	5,88	67,65	37,50	33,33
	User Behavior	User behavior	Since the CRM adoption, I feel more collaborative	6,25	87,50	6,06	72,73	14,71	70,59	30,77	50,00

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Main evaluation criteria and sub-criteria	Variables	Items	Testing phase							
			C		D		G		H	
			1-3 Likert scale	5-7 Likert scale	1-3 Likert scale	5-7 Likert scale	1-3 Likert scale	5-7 Likert scale	1-3 Likert scale	5-7 Likert scale
User Satisfaction	User satisfaction with his job, tasks, and resources	Since the CRM adoption, I am more satisfied with my job	6,25	75,00	17,14	68,5	20,00	48,33	38,46	46,15
		Since the CRM adoption, I am more satisfied with my tasks	12,50	62,50	17,14	68,57	8,33	61,67	40,74	40,74
		Since the CRM adoption, I am more satisfied with the resources and tools at my disposal	12,50	75,00	17,14	68,57	10,00	75,00	30,77	61,54
User Knowledge and Skills	User ability and knowledge	The training has helped overcome my fears about CRM	35,29	64,71	57,14	42,86	50,00	50,00	46,43	53,57
		To date, I have all the knowledge and skills to use CRM	11,76	76,77	22,86	45,71	24,07	64,81	28,57	57,14

Users were also asked an additional question to analyze the user-perceived value and the usefulness of considering this variable in the method. Companies A and B are excluded since this variable was added after the Validation phase.

Main evaluation criteria	Variable	Item	C		D		G		H	
			worst (1-5)	better (6-10)	worst (1-5)	better (6-10)	worst (1-5)	better (6-10)	worst (1-5)	better (6-10)
CPV	User perceived value	Since I use CRM the perception, I have of my company is	11,76	88,24	20	80	18,33	81,67	28,57	71,43

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