

## USING SOCIAL NETWORK PARADIGM FOR DEVELOPING A CONCEPTUAL FRAMEWORK IN CRM

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### ABSTRACT

*This study develops a conceptual framework for applying social networks in usual CRM models. Recent changing in customer relationship theme and putting new media and network-based paradigm into practice makes it imperative to find how social networks affect CRMs. Accordingly, this study explains the role of social networks in customer relationship management by using its analysis, tools and aspects of this concepts based on CRM models. We have provided a SCRM framework that is based on usual CRM models and incorporates Social networks and its tools, methods and analysis. The framework is combination of Social networks concept and traditional CRM concepts.*

**Keywords:** CRM, Social CRM, Social network, Social network analysis.

### 1. INTRODUCTION

#### 1.1 CRM and Social CRM

Over the past decade or more, Customer Relationship Management (CRM) has been the strategic approach that most companies had taken in trying to figure out how to supervise their customers' behavior [1, 3, 7]. Typically, it was via technology and processes and analytic algorithms that were tied to an often amorphous management strategy. Gathering data about the customer and tracking all customer transactions were the way that CRM was used to ascertain the individual customer's thinking. Hopefully, the insight it provided about the customer and the effectiveness of the processes put into place led to some kind of increased level of purchasing or decreased costs [17]. Additionally, CRM was and is used for making some sales and service processes more effective and for sales and service management tracking the customer facing activities ranging from qualifying a lead to closing a deal to servicing an order to solving an issue [2,3,5].

Definitions about traditional CRM are abundant but some researchers believed that: "CRM is a philosophy and a strategy supported by a system and a technology, designed to improve human interactions in a business environment" [7, 9].

Traditional CRM was an operational-transactional approach to customer management that was focused around the customer facing departments, sales, marketing and customer service. In this condition, CRM could be outputted how do process modification, culture change, automation through technology and the use of data for customer insight support the management of customers? [3] Typically, the objectives for traditional CRM might be narrowed on increases in revenue or profitability, an increase in selling time, or campaign effectiveness, improved use of a sales process, or if you are into customer service in particular, reduction in call queuing time - as examples [3,8].

Based on Meta group definition which is one of the most referable definition of CRM three main parts of CRM are as below:

- ✓ Operational CRM which is defined as automation in processes which are related to customers and are divided as follow:
  - Marketing automation
  - Sales automation
  - Customer services

These parts are closely related to operational technological approaches.

- ✓ Collaborative CRM which includes all of the channels and ways that customers communicate with company like e-mail, fax, web site, call centers and so forth.
- ✓ Analytical CRM which includes Data Marts, Data warehouses, Customer data bases and other customer information systems. This data and information are analyzed by different algorithms and techniques like data mining and other methods for producing usable information and knowledge for having appropriate insight about customers and therefore creating proper strategy about customers [8].

Framework based on this approach which is proposed by Meta group is shown in figure 1:

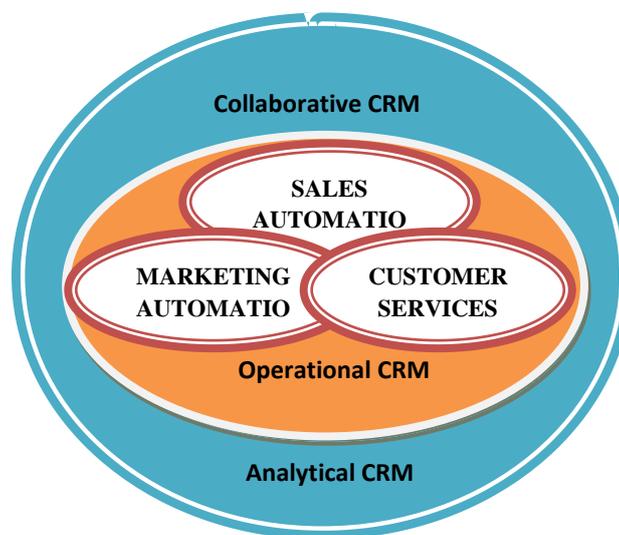


Figure 1: Traditional CRM

But that is traditional CRM. Since 2003, the impact of the social communications makeover has shifted ownership of the customer/company relationship to control in the hands of the customer - which changes how businesses must respond to that customer. Discussions of the value of the company moved outside the company's walls to the enclaves of the customer who publicly chatted about the company without participation of the company in any way. The customer's conversations were no longer in control of any company [4].

## 1.2 Social Networks and Social CRM

Social networks are nodes of individuals, groups, organizations, and related systems that tie in one or more types of interdependencies: these include shared values, visions, and ideas; social contacts; kinship; conflict; financial exchanges; trade; joint membership in organizations; and group participation in events, among numerous other aspects of human relationships [12]

Social networking at a high level is described as the convergence of technologies that make it possible for individuals to easily communicate, share information, and form new communities online [10,11]. While social networks began as the province of individuals, businesses are now trying to capitalize on this trend as they search for specific strategies and tactics to derive value from it. In fact, Gartner Research shows a large increase in investment in social networking by businesses. But the big question today is not what social networking is, but rather what it means for businesses.

If this were 2003, you could easily make the case that the enterprise has already owned the customer experience. The company remained the center of the business ecosystem. But in 2005, something changed. That year, in contrast to 2003, "a person like me" rose to 56% of the respondents - taking a dramatic leap into a more dramatic lead as the most trusted source. Outside experts and corporate leaders fell precipitously [4]. What did

all that mean? More importantly, people who had similar ideas and interests adhered to each other in ways that created what is now an unshakeable bond. The “go to” source for trust became a peer [6, 10].

Unlike other communication mediums, social networking sites not only provide the ability for users to communicate with each other but also enable users to find like-minded individuals. Once they discover each other, members can form ad hoc communities based on their mutual interests. Multiplied many times over, these individuals become the new power behind the old saying, “power of the masses”. Thus social networking sites help shift power from the company to the consumer as the masses are able to channel and exert their influence [4, 11]. It is all about connecting and engaging in new ways with customers [13]. Customers using social networks want meaningful engagement with companies and businesses want a way to manage and measure their forays in social networking. When social networks and CRM work together well, businesses gain the ability to better listen to customer conversations and engage social customers on their own terms while managing and measuring their efforts to do so. Social networks, by bringing in otherwise untapped and unmanaged online conversations, also help organizations get closer to a true 360-degree view of the customer so they can further optimize their marketing, sales, and customer service efforts [10, 13].

By harnessing this social networking, information organizations can use it to help identify their most influential consumers, drive participation in product development, and improve brand sentiment. Social networks should be viewed as a channel that organizations need to monitor and engage in.[10] This combination of factors transformed the way that the customer thought about doing business - not just how they did business and causes social customer.

Who is this “social customer”? What strategies and tools does the new breed of CRM provide to do something about this? These social customers did not have to rely on corporate literature and self-interested sales people any longer. They could rely on the web and each other for information on their potential purchases and for deeper knowledge about their common interests - work or play.

Take a review site such as Yelp, Facebook, twitter as examples. These sites are easily available to the users of products, services, or visitors to institutions and they provided a means for those who wanted to participate to rate, usually 1 to 5 stars and comment on the products that they used so that there was all in all an unvarnished idea of:

- How good was the product?
- Did it meet the expectations the buyers had of it?
- What did it do right? Wrong?
- Did the manufacturer or retailer product provide appropriate service around the product?
- How did the company handle the order, shipping and, if need be customer service?

These are not formal reviews with rigid specifications or review criteria. But when taken as a whole and read granularly, each of the product reviews and the picture painted of the product affects whether or not someone reading the review would purchase the product.

What enterprises see is that social networks that are primarily review sites like Yelp or are customer feedback and action sites like Planet feedback have become a primary source for the conversations among customer - out of the hands of the company.

Social CRM’s customer strategy and associated business models are those defined by customer engagement, not customer management. Social CRM, that often is called CRM 2.0, grew from the changes in the empowerment of the customer. What it means is that each customer has the products, tools, services, and experiences he or she needs to sculpt an individual interactive relationship with the company in a way that satisfies each of their personal agendas. It means that the company is willing to be transparent enough and honest enough (goes by the term “authentic” nowadays) to be trusted by that customer. So the company becomes a “company like me.” The experience that the customer has with the company is positive enough to make that customer into at least loyal and at best, an advocate. [4, 13]

When a customer engagement strategy is effective, with the successful support of social CRM tools and processes, there is a mutually derived benefit planned from the beginning. That success is characterized by a fundamental shift in the relationship between the company and the customer from producer-client to partners. This is not a small effort. This is a major cultural and behavioral change in how the customers interact with a company. If they see themselves as partners, they feel that they have a stake in the success of the company. They commit to the company in ways that go well beyond customer satisfaction. They become advocates for the company.[6, 13]

Typically there are three or possibly four pieces to gaining the level of insight needed to deal with the contemporary customer successfully: [12, 1 4]

- i. **Data:** This includes the now standard information that the company can gather through the transactions of the customer with the company. That means purchase histories, returns, visits to ecommerce or website and time spent on different pages; marketing response to campaigns and customer service inquiries and problems, among many others.
- ii. **Profiles:** This is the “personal” information that is now so important in gaining customer insights into how a customer wants to interact with the company. This could be their movie and literary interests, their hobbies, their “style” likes and dislikes. It means their unstructured text comments in a community or social network e.g. Yelp for a restaurant or a geographically based retailer.
- iii. **Social Network Analysis:** Which was explained in proposed framework and is the most important pieces in social CRM.
- iv. **User Generated Content:** UGC is perhaps the newest piece in the insight puzzle. The deep store of comments, ratings, rankings and even rich media content that gives you further knowledge about your prospect or opportunity has been one of the untapped founts of invaluable wisdom that supports the other required components for insight.

Social CRM tools provide the means to capture the data, the profiles and to create the experience maps which in turn help develop the real insights into customers that provide what is a genuinely personalized and delineable experience for individual customers. Historically, CRM couldn’t do this. It could gather all the transactional data - but the emotional and behavioral knowledge of the customer that the profiles and the experience maps supply weren’t part of CRM’s value proposition until now.

Enhanced insight is only one of the two active improvements that social CRM provides. Aside from its value, it plays a valuable role in the propagation of the other improvement - customer/company interaction. Enhanced insight leads to trust which leads to the customer’s desire for either further or deeper (or both) interaction.

Thus, it differs with traditional CRM:

“Social CRM is a philosophy & a business strategy, supported by a technology platform, business rules, processes and social characteristics, designed to engage the customer in a collaborative conversation in order to provide mutually beneficial value in a trusted & transparent business environment. It's the company's response to the customer's ownership of the conversation.” [4, 10]

The need for a revamped CRM, Social CRM, implies the existence of a fundamentally different customer paradigm. The combination of social networking and CRM provides an enormous opportunity to enrich customer interactions and give businesses a way to manage and measure how they use social networking while successfully engaging social customers.[10, 11].There are some basic strategies that can help organizations better leverage social networking as part of their overall customer management strategy:

- **Treat social networking as a new channel within CRM.** Many companies already use CRM solutions to manage customers, contacts, interactions, and communications, so it makes sense to continue to use customer management tools when these activities move into social networking channels.
- **Enhance and extend CRM through social networking.** While social networking activities can be considered as an additional channel in CRM, they also extend and enhance the capabilities of CRM with new ways of engaging customers and managing conversations.
- **Play to the strengths of both CRM and social networks.** Use CRM and social networking sites together to better listen to customers, analyze information, and respond to customers in a way that is meaningful to them.

Traditional CRM Features/Functions	Social CRM Features/Functions
Definition: CRM is a philosophy & a business strategy, supported by a system and a technology, designed to improve human interactions in a business environment.	Definition: Social CRM is a philosophy & a business strategy, supported by a system and a technology, designed to engage the customer in a collaborative interaction that provides mutually beneficial value in a trusted & transparent business environment.
Tactical and operational: Customer strategy is part of corporate Strategy.	Strategic: Customer strategy IS corporate strategy.

Relationship between the company and the customer was seen as enterprise managing customer - parent to child to a large extent.	Relationship between the company and the customer are seen as a collaborative effort. And yet, the company must still be an enterprise in all other aspects.
Focus on Company <> Customer Relationship.	Focus on all iterations of the relationships (among company, business partners, customers) and specifically focus on identifying, engaging and enabling the "influential" nodes
The company seeks to lead and shape customer opinions about products, services, and the company-customer relationship.	The customer is seen as a partner from the beginning in the development and improvement of products, services, and the company-customer relationship.
Business focus on products and services that satisfy customers	Business focus on environments & experiences that engage customer.
Customer facing features - sales, marketing & support.	Customer facing both features and the people who's in charge of developing and delivering those features.
Marketing focused on processes that sent improved, targeted, highly specific corporate messages to customer.	Marketing focused on building relationship with customer - engaging customer in activity and discussion, observing and re-directing conversations and activities among customers.
Intellectual Property protected with all legal might available.	Intellectual property created and owned together with the customer, partner, supplier, problem solver.
Insights and effectiveness were optimally achieved by the single view of the customer (data) across all channels by those who needed to know. Based on "complete" customer record and data integration.	Insights are a considerably more dynamic issue and are based on 1) customer data 2) customer personal profiles on the web and the social characteristics associated with them 3) customer participation in the activity acquisition of those insights.
Resided in a customer-focused business ecosystem.	Resides in a customer ecosystem
Tools are associated with automating Functions.	Integrates social media tools into apps/services: blogs, wikis, podcasts, social networking tools, content sharing tools, user communities.

Table 1, a comparative between traditional CRM and Social CRM (Source: CRM 2.0 Wiki).

CRM's traditional tools do not really provide the functionality to handle customer engagement in ways beneficial to the company but the addition of social functionality gives CRM a powerful new incarnation - Social CRM. It is Social CRM that provides the enterprises with what they need to intersect all this independent activity.

**2. RESEARCH QUESTION**

What does social networking mean for business today and CRM?  
 How Social Networking can be used in CRM models and approaches?

**3. PROPOSAL FRAMEWORK**

As it was explained in previous part with this new paradigm (Social networks, social technologies and tools and their important influence and effects on business) we need integrate and develop traditional CRM models, frameworks, definitions, tools according to this social change and follow and consider this as new paradigm not even in business also in most of the social phenomenon.

We consider Meta group Traditional CRM definition and three main parts of this as our basic components in our framework. We integrate and develop it (which is showed in figure 2) according to social paradigm and it's concept and tools [4, 6, 10]:

- ✓ **Social Operational CRM:** In combination of social CRM and Traditional CRM, Operational CRM is defined based on this new paradigm as below:

- Social Marketing
- Social Sales
- Customer services
- Social Marketing

Social Marketing tools are still in their early incarnations. But social marketing is marketing concept in combination with social tools, technologies and networks and change the role of customers. Some of the tools that are used and helpful in social marketing are:

1. **Outreach** - These tools are designed to interact with Facebook or MySpace and similar huge membership, high activity volume social networks. The tools are focused on offer optimization that is based on how they interpret not just the activity of the individual on the social network, but the data in his or her profile.
2. **Mobility** - this is the one with incredible promise. Imagine giving your prospective customers access to the catalog of goods and services offered by your retail operation via their iPhone or Blackberry or whichever phone they use (anytime, anywhere on any device). Not only will they have access to the comments and ratings of other customers for each item and can add theirs, but their real time activity is tracked and an optimized offer is texted to them, based on their histories and their real time activity. This all takes place on a mobile device

- **Social Sales**

The traditional sales force automation tool has been a tracking tool. Typically, it track accounts, contacts, opportunity and gave sales management a view of each and all of the sales pipelines that were out there, and depending on the sales methodology used, the chances of success. But these were pat formulas that were built into the methodology as often as not - and based on what steps you had achieved. Social sales tools far exceed that. They are designed to optimize the rate of success for deal closure by doing a number of things that will give you a better "best guess" than ever before. So they involve for example:

- 1- Rather than the more traditional guesswork involved in identifying which presentations and which documents are best when dealing with a particular client, a combination of algorithms and user generated content - meaning the rankings, ratings and comments from the other internal sales professional - and perhaps the marketing staff, give a much better idea of the appropriate choice of presentation or document.
- 2- Collaboration via wiki on a response to a request for proposal (RFP) and then the generation of that RFP response once the final result is signed off on, so that it is ready for delivery.

- ✓ **Collaborative CRM:** which is all of the channels and ways that customers communicate with company like E-mail, fax, web site, call centers and... More over the traditional tools whatever new way and technology which empower customer for group interactions and communications and make it possible for customer to be in touch with each other and company has great importance for getting data and information about customer and their relationships. Indeed channels are not only the ways and tools which are used by customers for communication whit company rather ways and social tools that are used for their interactions.

For example use of blogs, text messaging, participation in threaded discussions on forums, comments on the social sites, even videos, are part of the mix of tools they use to communicate their thinking - about those very same businesses. But a smart company, using similar tools, can use all this as a valuable place to learn from and engage with those same active customers.

Two studies that came out in mid and late 2008 confirm this seemingly peculiar notion. a study on "Business in Social Media" found that 34% of Americans think that companies should have a social media presence. Even more telling, 56% of the total respondents felt a stronger connection to the

company and its brand when they could use social media tools to interact with that company and 57% of them felt “better served.” [10, 11]

✓ **Social Analytical CRM:**

- **Traditional Analytical CRM:** This includes Data Marts, Data warehouses, Customer data bases and other customer information systems. This data and information are analyzed by different algorithms and techniques like data mining and other methods for producing usable information and knowledge for having deep insight about customers and therefore creating smart strategy about customers.
- **Social Network Analysis:** This is the breakdown of who is in a decision making position and who is influential and how they interact. A look at the interactions among social groups and individuals sometimes reveals influencers who otherwise wouldn't be obvious, yet may be key to closing a deal. The visualization of this is called the social graph. This is particularly valuable in B2B environments.[11]

Our analysis is based on a series of newly emerged methods for social network analysis, such as group detecting, group evolution tracking and group life-cycle modeling. We should analyze the relationships between social groups and propose a method to find potential customers in these groups. [11]

We have a short view to some of these methods:

### **Customer Segmentation**

Customer segmentation is the practice of dividing customers into groups of individuals which are similar in specific ways relevant to marketing. Group detecting is the first step in SCRM by exploiting customer interaction data. Traditional customer segmentation methods focus on identifying customer groups only based on demographics and attributes, such as age, gender, interests and spending habits, etc. However, SCRM takes another natural way to segment customers into social groups by using community detection algorithms in SNA. Being in a group, customers are prone to attract new ones, retain old ones and accept a new product or service through leveraging mutual influences within a group. [12, 13]

### **Group Analysis**

One of the most important properties of the social network is its community (group) structure which stands for a dense connected user groups in the nature of some family-like, colleague-like or interest-like relationships. There has been extensive research work on group detection by means of statistics and heuristics. [11, 15]

The goal of community detecting in social network analysis is to divide large data set of social networks into a number of sub-sets, called clusters or communities. We are only interested in the groups of some target customers, and it is convenient to explore the communities in the sub graph of certain target customers [15]. By exploring the egocentric networks of a given set of target customers, we can get more clear knowledge on how these customers are linked to neighbors and how the neighbors communicate with each other. Egocentric network helps users to learn about how people correspond with their social networks [14]

### **Group Profile and Role Analysis**

In many cases, communities have been found to correspond to behavioral or functional units within networks [15]. In the research field of social networks there is a long tradition of developing quantitative methods to get the importance of actors. A variety of measures have been proposed to determine the “centrality” of an actor in a social network [16]. Based on the result of community detecting, there are some work try to classify nodes into different roles according to their intra- and intercommunity connections [15].

### **Group Evolution Tracking and Life-Cycle Modeling**

Understanding the evolution of social network is helpful in inferring trends and patterns of social contracts in particular social context [12]. To understand the life-cycles of groups, we must first track the evolutionary processes of them and then get better understanding of their communication patterns. Group evolution is a critical issue to supply business insights for designing strategies, such as the early-warning of group churn and finding the potential groups. By tracking the evolutionary processes of groups, people can get better understanding of the life-circle of different social groups and we can manage them more efficiently. [12, 15]

One of the primary functions of CRM is to collect information about customers to track life-cycle revenues, costs, margins, and interactions between individual customers [15]. However, traditional methods or tools mainly focus on the profile of individuals that may be reflected in the business process.

In SCRM framework, we should use a life-cycle model to illustrate the evolutionary processes of different communities. After tracking the evolutionary groups, we will first clustering the communities based on their evolutionary patterns. After clustering, we will zoom into the group clusters to explore their evolution patterns in more details and try to description their different evolutionary trends.

Group customer life-cycle modeling is a crucial step in SCRM. If a group life-cycle can be understood and predicted, a lot of other important questions for group management will be answered, including: how to compare the long-term effects on group customer value of different advertising approaches and product selections or pricing? who is a leader that has the most influence in a group? what is the lifetime value of a group compared with other groups and how to increase the group value effectively

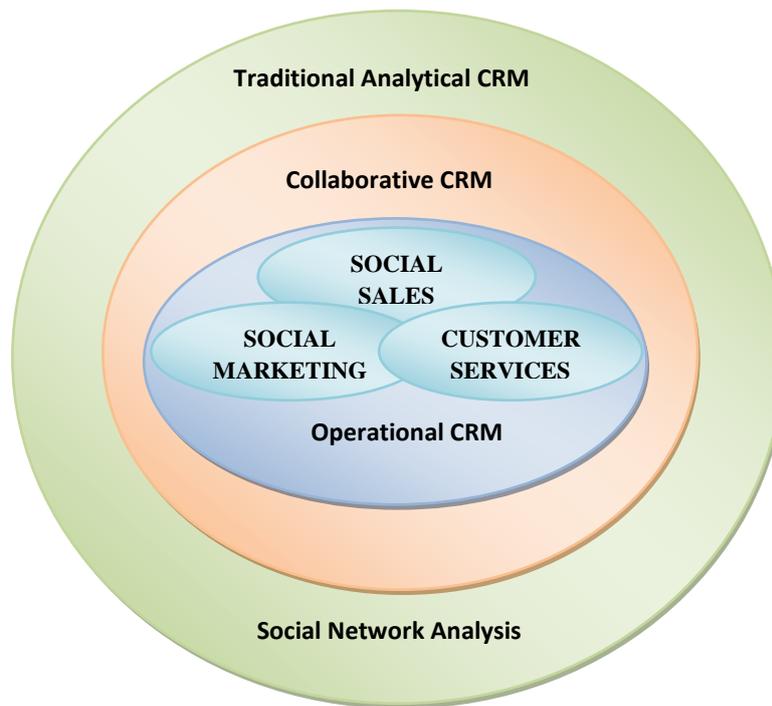


Figure 2: Social CRM Framework

#### 4. CONCLUSIONS

Social CRM does not substitute for traditional CRM - it extends traditional CRM. Businesses still need to use technology, run processes, develop operational strategies, apply business rules, assign roles and responsibilities for those roles and develop the appropriate routing and workflow for their particular efforts. That hasn't and will not change. Social CRM takes that traditional CRM set of functions and capabilities applicable to sales, marketing and customer support and services and extends it by integrating the social tools for communication with the customers and to allow you to capture even richer knowledge of that particular customer or that deal opportunity. This additional capability not only provides the means to deeper customer insights but allows the customer to participate in the life of the company in ways that are mutually beneficial.

Social CRM provides you with the tools for true insight into customers that can be used to facilitate successful sales and better relationships with customers. It also provides the capabilities for the customer to interact with you in a more effective way which transforms how the customer sees you and what the customer wants to do with you.

But because there is so much more than just brand commitment and even customer loyalty that a business has to consider, the combination of traditional CRM and integrated social tools is where the real benefits begin to show themselves. Therefore we should know the types of tools that we need for social CRM and the infrastructure and technology platform that it needs to sit on and their applications and influences on customers. In social CRM we combine the operational strengths of traditional CRM tools with the power to reach out and capture external customer interaction and directly connect with customers. But Social CRM tools add an additional strength and knowledge and insight about customers.

According to the proposal framework in combination of social network tools with traditional CRM concept we should have right knowledge about appropriate and suitable role of social tools and analysis each business and industry. It is obvious that each tool and concept should be used in right situation and for having this knowledge contingent research and study in each industry should be considered.

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