

# Web 2.0 in the CRM domain: defining Social CRM

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## Abstract

Businesses are becoming more customer-centric and see a need to address customers individually. An opportunity is identified in Web 2.0 technologies. Both Customer Relationship Management (CRM) and Web 2.0 have been researched broadly in the past years, but not their potentially successful combination, which we call 'Social CRM'. Social CRM depicts six main advantages. It is a CRM strategy that creates a two-way interaction between the customer and the firm. It is about going from traditional customer management to more personal customer engagement, which encourages customer collaboration and involvement. Web 2.0 services add value in every domain of the CRM environment, depending on the type of service at hand. Most value is added in the marketing domain of CRM. Social Networks, Blogs, and Multimedia Sharing add most value across all domains. This research defines Social CRM and presents a new model that depicts the fundamental aspects of Social CRM in four layers. Furthermore, we present a roadmap for setting up Social CRM. We conclude with suggestions for further research in this emerging research domain.

*Keywords:* Social CRM, Web 2.0, Customer Relationship Management, Roadmap

## 1. Introduction

Retaining good relationships with customers is vital to attracting future purchases. Especially in economic downturns, it is increasingly important to be knowledgeable about the customers in order to address them better and to maintain profitable relationships. Customer Relationship Management (CRM) changes the customer strategy from customer acquisition to customer retention. In the past years, many authors researched CRM (e.g. Bose, 2002; Verhoef, 2003; Payne & Frow, 2005). According to Winer (2001), the ultimate goal of CRM is to *"transform these [customer] relationships into greater profitability by increasing repeat purchase rates and reducing customer acquisition costs"*. CRM supports marketing, sales and customer care effectiveness and efficiency (Kim et al., 2003). However, recent web technology developments have changed the static online society into an interactive society that can foster customer involvement through online interaction, rather than just retention. The aforementioned authors describe how CRM is capable of creating a more personal interaction with the customer. However, this interaction is only one-way (company-to-customer) and the 'personal' touch comes from the selling organization that is more knowledgeable about specific customers and can therefore address them more effectively. Wood (2008) acknowledges this by saying that CRM often only goes one direction – company-to-customer. None of the articles describe a two-way interaction with the customer, as would be the case in for example a Social Network such as Facebook. In two-way interactions, communication goes back and forth between the company and the customer. Web 2.0 can enable this, but until now scientific literature omits the integration of new web technologies in CRM strategies.

Frontrunners on the Web start to pick up on this new concept and discuss ideas, developments, and new services made available by Web 2.0. *"Web 2.0 is a set of economic, social, and technology trends that collectively form the basis for the next generation of the Internet—a more mature, distinctive medium characterized by user participation, openness, and network effects"* (Musser &

O'Reilly, 2006). There are new innovative examples of Web 2.0 usage in the CRM domain already. Salesforce.com offers CRM solutions as a service, meaning that it is fully accessible online. They announced a mash-up solution with Twitter, the fastest growing Web 2.0 service of 2008 (McGiboney, 2009). They have already integrated with Facebook by creating Faceconnector, which lets users search their social network through Salesforce.com CRM. Popular networking websites such as MySpace, YouTube, Facebook, and LinkedIn draw millions of users. MySpace has over 150 million users on its website, with over 35 billion page views a month (Arrington, 2009). YouTube serves 100 million videos each day and Facebook has approximately 150 million active users (Yadav, 2007). People use these websites to network, share knowledge and thoughts, but also to be part of a community. Sharing content (e.g. photos or thoughts) with the group can be rewarding because it is a form of self-expression. Web 2.0 makes good use of this, especially in a time when people use the computer for work, to communicate with friends, look up contact information, and so forth.

Web 2.0 is gaining an increasing impact on businesses (Högg, Meckel, Stanoevska-Slabeva, & Martignoni, 2006) and there is a rise in scientific articles covering the topic. Surprisingly enough, none of these articles link Web 2.0 to CRM. Mohan, Choi, and Min (2008) appear to have made one of the first scientific attempts that cover the combination of Web 2.0 and CRM, calling it a 'Social CRM system'. There are also a growing number of authors on the Web who describe the same concept in blogs and web articles (e.g. Wood, 2008; Greenberg, 2009a).

This research defines Social CRM and aims to create an understanding of the concept, rather than to create yet another buzzword. The main research question that this research answers is: *What is the added value of Web 2.0 in the CRM domain?*

In order to determine the added value, we had to define the two underlying concepts of Social CRM, Web 2.0 and CRM. In sections 2.1 and 2.2, we present the fundamental aspects of Web 2.0 and CRM. In section 2.3, we create an

Table 1  
Deductive comparison approach: Web 2.0 definition elements and fundamental domains

O'Reilly (2007)	Knol et al. (2008)	Anderson (2007)	Ullrich et al. (2008)	This research
	User generated content	Individual production and user generated content	Individual creativity	User generated content
	Network effects	Network effects, powers laws and the Long Tail		Harnessing the power of the crowd
Harnessing collective intelligence	Collective intelligence	Harness the power of the crowd	Harnessing the power of the crowd	
	Unbounded collaboration	Architecture of participation		Architecture of participation
Rich user experiences	Intuitive usability			
Data is the next 'Intel inside'		Data on an epic scale	Diverse data on an epic scale	Data on an epic scale
End of software release cycle	Enabling services		Perpetual beta	Enabling services
			Architecture of assembly	
Lightweight programming models	Lightweight models		Lightweight models	Lightweight models
Software above the level of a single device			Independent access to data	Open platform
The Web as platform	Open platform	Openness		

understanding of Social CRM by presenting a definition and a model that depicts the fundamental aspects of Social CRM in four layers. Section 3 explains the methodology. Section 4 shows the results, in which we also address the added value of Social CRM in the business environment by presenting a list of key advantages. Section 5 explains the Social CRM environment by presenting a landscape model that visualizes Social CRM entities and relationships and a quadrant that assists in choosing the appropriate services to use in the Social CRM environment. Finally, section 6 presents the conclusions.

## 2. Defining Social CRM

Before we define Social CRM, we have to create an understanding of Web 2.0 and CRM. Sections 2.1 and 2.2 describe the fundamentals of Web 2.0 and CRM respectively, which later serve as building blocks for the Social CRM model that is introduced in section 2.3.

### 2.1. Web 2.0 fundamentals

Web 2.0 shows a variety of definitions, descriptions and principles in scientific literature and across the Web. The web has always been about connecting people in an interactive space, but the pattern of usage has changed because new possibilities have emerged. In the year 2004, Web 2.0 as it is known now, was identified. Dale Dougherty (vice-president of O'Reilly Media Inc.) coined the term in a team discussion to give a name to the new developments that were happening right after the dotcom-crash (Anderson, 2007). Before we describe the fundamentals of Web 2.0, we elaborate more upon its context.

Web 2.0 does not have a hard boundary like Web 1.0 (e.g. online vs. offline accessibility). It makes use of technologies that behave in non-traditional ways, making traditional security technologies inadequate. Applications now run on the Web as well, instead of just on the desktop.

Sometimes there is an overlap between the two. Furthermore, there are also boundary shifts in the producer-consumer relationship. The consumer has moved towards the producer side. Reinhard (2009) argues that before the rise of Web 2.0, the Web was not seen as a competitor (or threat) to broadcasting, because Web 1.0 was just an information and transaction medium, whereas now it is used as an advertising and entertainment medium. The boundary shifts also have a cause and effect relationship with privacy, because more personal information may be publicly available on the Web.

We identified seven principles, or fundamental aspects, which account for Web 2.0, see Table 1. In determining this list, we used the deductive comparison approach of Doorewaard and Verschuren (2000). They describe deductive comparison as an approach to compare different elements of definitions to each other. Each column contains the fundamental aspects for Web 2.0 as researched by different authors. Aspects by different authors are compared and placed in the same row when they show similarities. The authors are chosen based on their well-known knowledge in the field (e.g. because they are referred to often). The findings of different authors are compared to each other and can then be "merged" into a new set of fundamental ideas. The seven fundamental aspects are elaborated upon below:

Typical for Web 2.0 is (1) User Generated Content (UGC). UGC stands for self-publishing, self expression, and individual creativity (Anderson, 2007; Ullrich, Borau, Luo, Tan, Shen, & Shen, 2008). In other words, more Web content is generated by users. Web 2.0 also makes use of (2) group strength (Harnessing the Power of the Crowd); because a group has more knowledge than a single individual does. Harnessing the Power of the Crowd is not the same as UGC, because UGC is about individuals and the other is about taking advantage of group-knowledge. A Wiki makes good use of group knowledge because its users provide all content. One user would not be able to fill an

Table 2  
Mapping Web 2.0 fundamentals to Web 2.0 service types

	User Generated Content	Harnessing the Power of the Crowd	Architecture of Participation	Data on an Epic Scale	Enabling Services	Lightweight Models	Open Platform
Blogs	X			X	X	X	X
Wikis	X	X	X	X	X	X	X
Social Tagging	X	X	X	X	X	X	X
Multimedia Sharing	X	X	X	X	X	X	X
Syndication (RSS)				X	X	X	X
Social Networking	X	X	X	X	X	X	X

encyclopaedia such as Wikipedia.org because of limited knowledge and time, where-as mass-scale user input made it possible. This is strongly related to network effects, as mentioned by Knol, Spruit, and Scheper (2008) and Anderson (2007). Network effects describe the increase in value of a service when more people start to use it (Anderson, 2007). Current members of a social network will benefit from new users joining in because they can now network with people they could not network with before, thereby increasing their social capital. This is facilitated by the (3) Architecture of Participation. Web 2.0 offers the possibility to create networks and to connect with friends by creating an architecture in which every user is participating (e.g. an Apple fan-page on Facebook). Low barriers of usage of Web 2.0 services also assist in greater participation. The rich user experiences on the Web are also enforced by the architecture of participation and Web 2.0 services that learn from its users (O'Reilly, 2007). O'Reilly and Knol et al. (2008) describe how rich user experiences are enabled with Web 2.0. Knol et al. (2008) call it intuitive usability, which means the ease-of-use that the Web 2.0 services offer, enforced by the architecture of participation. Next, (4) Data on an Epic Scale is a term used to acknowledge the vast amounts of data (UGC) that continues to grow on the Web. Control over data can be the main source of competitive advantage in the information-era (O'Reilly, 2007). A part of data on an epic scale is the long tail. The long tail is about having no barriers and unlimited 'shelf space' on the Internet to store data and find people, as opposed to having artificial barriers in real life (e.g. shelf-space in a music store) (Anderson, 2007). We want to control data, even in the long-tail. The next fundamental is (5) Enabling Services. Services are "enabling in that in their essence they are compatible and interchangeable with other services" (Knol et al., 2008). The re-use of Web 2.0 services can result in successful new services (e.g. creating a mash-up of Google Maps and Craigslist.org, which results in a new service). These services are 'stored' on the servers of the delivering companies, guaranteeing that each user is using the same updated version. Ullrich et al. (2008) call this the architecture of assembly. (6) Lightweight Programming models refer to the agile and lean nature of web 2.0 services that facilitate easy adapting to a changing environment (Knol et al., 2008). It allows for loosely coupled systems (O'Reilly, 2007), supporting therewith the re-use of services. The business- and programming models

of Gmail and Google Docs make it possible to provide continuous updates because of their lightweight programming models. Finally, the (7) Open Platform offers desktop-like functionalities (e.g. creating online backups) and portable accessibility. We can also access Web 2.0 services on portable devices through the open platform (Ullrich et al., 2008). Services can replace standard software applications. The "software" is above the level of a single device meaning that connections span multiple devices. For example, a connection between the web back-end through a PC to a handheld device is made possible through iTunes (O'Reilly, 2007).

The seven fundamentals apply to, but are not limited to, the following major Web 2.0 services that we identified: *Blogs*, *Wikis*, *Social Tagging*, *Multimedia Sharing*, *Syndication (RSS)*, and *Social Networking*. A (1) blog is comparable with an online shared diary. People add new blog entries daily, monthly, or even hourly. The most recent blog-entry is listed first and each blog-entry usually gives the possibility to post comments. Part of blogging is Microblogging, of which Twitter is a well-known example. (2) Wikis are basically web pages that anyone can edit or add content to (Anderson, 2007). Not the actual website will change, but the content, as is the case with Wikipedia.org. (3) Social Tagging is used to describe digital objects such as websites, pictures, videos, and podcasts using keywords. Users tag websites (e.g. MTV.com can be tagged with 'Music' and 'Clips') and other people that search on a social bookmarking website (e.g. <http://del.icio.us/>) using those keywords will find music-related links such as MTV.com. Next, (4) Multimedia Sharing websites include YouTube (video), Google Video (video), Flickr (photos), and podcasting (audio) sites. They make it easy for people to capture and publish media. Furthermore, (5) Syndication (RSS) is used to send summarized updates to subscribers about new things that are published on a particular website. RSS is most often translated as "Really Simple Syndication". Users get automatic updates through 'feed-readers' that automatically acquire 'news-feeds' that the user subscribed for. Finally, the (6) Social Networking services include successful examples such as Facebook and LinkedIn. There are both professional and personal social networking sites available that facilitate meeting people and sharing content (Anderson, 2007).

We mapped the six key Web 2.0 services to the seven fundamental aspects of Web 2.0 to judge their

relationships. Table 2 shows the results of our observations. An 'X' is given to show that there is a relationship between a specific Web 2.0 service and fundamental aspect. A blog for example is dependent upon user input (User Generated Content). Syndication (RSS) however, does not allow for User Generated Content and therefore the field is empty, because the fundamental aspect is not applicable for this service. Another example shows that a blog for example is not dependent on crowds because it can be run by a single individual, where-as a wiki (e.g. Wikipedia.org) is only possible because of the input of vast amounts of users (i.e. harnessing the power of the crowd). We used and monitored services such as Twitter, Wikipedia, Del.icio.us, YouTube, RSS-feeds, and Facebook to confirm the first three columns. Subsequently, data on an epic scale (fourth column), enabling services (fifth column), lightweight models (sixth column), and open platform (seventh column), apply to each Web 2.0 service. Each service is about sharing data on the web, re-usability of services through lightweight models, and portable accessibility made available through the open platform. For example, O'Reilly (2007) mentions that complex web services do not achieve wide deployment, as does RSS, which is widely deployed because of its simplicity through lightweight programming models, which on its turn facilitate enabling services. Furthermore, the open platform fundamental also applied to every web 2.0 service, because every service had portable accessibility and new applications (e.g. iTunes and Twittrific) span multiple devices to report information, rather than consuming data (O'Reilly, 2007).

Based on previous findings, we defined Web 2.0 as follows: *Web 2.0 is the social web that lets users interactively publish and share content via various devices on an open platform that enables service mash-ups.*

## 2.2 CRM fundamentals

In as early as 1850, businesses only needed to focus on the production of their goods because of unsaturated markets, where-as in the 1900s competition had already become stronger and customers had to be convinced to buy the product, and in the 1950s companies started to produce and sell what customers requested (Bose, 2002). Consequently, these days companies need to manage a customer with its unique preferences rather than a market based on average preferences (Kim, Suh, & Hwang, 2003). *"A customer-centric firm is capable of treating every customer individually and uniquely, depending on the customer's preference"* (Bose, 2002). The customer-centric orientation is about creating value for the customer and the firm, which is called the dual creation of value (Boulding, Staelin, Ehret, & Johnston, 2005). Creating value for the customer increases the value for the firm, because satisfied customers can be more easily retained by the company. Before we describe the fundamentals of CRM, we elaborate more upon its context.

The GartnerGroup defines CRM as follows: *"CRM is an enterprise-wide business strategy designed to optimize profitability, revenue and customer satisfaction by organizing an enterprise around customer segments, fostering customer-satisfying behaviours and linking processes from customers through suppliers"*. Another definition by Bose (2002) includes some technology aspects: *"At the core, CRM is an integration of technologies and business processes used to satisfy the needs of a customer during any given interaction. More specifically, CRM involves acquisition, analysis and use of knowledge about customers in order to sell more goods or services and to do it more efficiently"*. According to Boulding et al. (2005), CRM activities contribute to firm performance. However, only companies that accumulate data about their customers will benefit from CRM (e.g. customer data analysis can lead to the recognition of buying patterns). Furthermore, when companies know the needs and wants of their customers (e.g. through analysis), they can address them more effectively. However, firms having customers with short lifetime value (i.e. non-returning customers) will benefit less from CRM because customer analysis is less interesting when customers do not return. A company can still create customer profiles based on all non-returning customers, but more effective customer-specific interaction (i.e. based on needs and wants) is impossible. In addition, firms with marketers that are not in direct customer contact may not really benefit from CRM either.

CRM is supported by CRM systems. These systems are a complex integration of hardware and software applications. Therefore, its development requires a thorough analysis of business processes (Bose, 2002). Additionally, employee engagement and change management are of critical importance in CRM implementations (Payne & Frow, 2005). These developments will become more difficult in the future because it is expected that CRM will be extended to partners and maybe even customers (Bose, 2002). However, we think that Software as a Service (SaaS) solutions such as Salesforce.com will make CRM implementations easier because they only require an Internet connection. Nevertheless, they may introduce additional complications. Social CRM may require non-traditional work practices, settings, and locations. This is described as the 'alternative workplace' by Apgar (1998). We suggest further research in this area. Bean and Hamilton (2006) also suggest the necessity of further research to understand the influence of alternative workplaces on the patterns of behavior and human processes.

Now that we have described the context of CRM, we will briefly explain the four fundamental domains that account for CRM. Again, we used the deductive comparison approach to compare different definition elements of various (often-cited) authors to each other. Table 3 shows the results of this analysis.

Table 3  
Deductive comparison approach: CRM definition elements and fundamental domains

Kim et al. (2003)	Batenburg & Versendaal (2004)	Bose (2002)	Payne & Frow (2005)	Ryals & Knox (2001)	This Research
Customer knowledge	Customer insight	Consumer behaviour	Understanding customers	Gathering and integrating information on customers	Customer behavior
Customer interaction	Customer contact	Personal interaction with customer			Customer Interaction
	Marketing	Marketing	Relationship marketing	Micro segmentation of markets to customers' needs and wants	Marketing
Customer value	CRM strategy	Customer's lifetime value	Co-create value with customers (shareholder value)	Customer retention and Lifetime value (creation). Also segmentation by expected customer lifetime value	Customer lifetime value
Customer satisfaction					

CRM begins with the analysis of (1) Customer Behavior (Bose, 2002) with which we gain an understanding of the customers' needs and wants (Batenburg & Versendaal, 2004). This domain is about the continuous gathering and analysis of information about the customer so that in the future customers can be approached more directly – which may lead to increased profitability. Information Technology (IT) is used to gather data that will be used to develop information that is required to create a more personal (2) Interaction with the customer, which is the second domain. Customer interaction is about having contact with the customer (e.g. to discuss products and asking about preferences and opinions) using various devices ranging from phone, email, a Web forum, and so forth. In CRM, interaction can be either company-to-customer or customer-to-company. Next, (3) Marketing is about the micro-segmentation of markets according to customers' needs and wants (Ryals & Knox, 2001). Based on segmentation, marketing messages can be put together and communicated in such ways that every customer feels as if they are treated individually. The final fundamental domain is (4) Customer Lifetime Value. Part of CRM is to keep customers involved and interested in the company in order to increase their lifetime value. A way of doing this is by offering regular news updates so customers stay up to date on the developments of a company. Due to good relationships, customers can remain profitable in the future too because they are more involved and satisfied with the company and its products.

As can be seen in Table 3, Customer Satisfaction is specified on a separate row. But we consider it a part of the customer lifetime value domain because we think that customer satisfaction is closely related to the concept of customer loyalty. We think that the loyalty of a customer increases when they are more satisfied with the company.

Based on the previous, we have chosen to determine our own definition that is consistent with the fundamental aspects we set up. We defined CRM as follows: *Customer Relationship Management (CRM) creates an understanding of the market and customer behavior and aims to improve the customers' lifetime value through customer interaction.*

### 2.3 Social CRM fundamentals

According to Mohan et al. (2008), a Social CRM system combines “*the features of Web 2.0 and Social Networking with the current CRM System*”. They apply a system-view approach, where-as in our opinion it should be seen as a concept or business strategy, just like CRM is a concept or business strategy and a CRM system is an information system. Social CRM is not just a set of technologies that can be implemented, but rather a company-specific strategy for creating customer involvement and building stronger customer relationships. Therefore, in our view, Social CRM is a CRM strategy that uses Web 2.0 services to create engagement between the customer and the firm, which results in mutually beneficial value. Engagement is about offering new points-of-contact (or monitoring existing ones) on which there is interaction with the customer. Previous research learned that customers are interested in engaging with the companies they do business with (Shimp, 2009).

Social CRM creates a two-way interaction between parties and gives customers ownership over the conversation with the firm (Greenberg, 2009a; Shimp, 2009). The strategy behind Social CRM is to be open with the customer, to be visible to them, and to give them the space and information to make intelligent decisions for themselves on how to interact with the firm (Greenberg, 2009a). By following this strategy, the company can learn from its customers because they are given more freedom in interaction with the company and other customers. This is also acknowledged by Wood (2008), who also identifies the importance of self-servicing of customers that will lead to better relationships on the long run. Companies can also search their brand or products (e.g. by using Twitter search) and learn from customers by listening to what they are saying about the company or its products. Marketing and Sales need to think “2.0” because that is what the customers do. Greenberg (2009b) says that customers are looking for “*a bond with the company, not just the salesperson*”, and that therefore salespeople have to think differently to meet customer expectations.

Social CRM does more than just monitoring Web 2.0 services on which customers are active to gain more knowledge about them. Social CRM aims at the integration

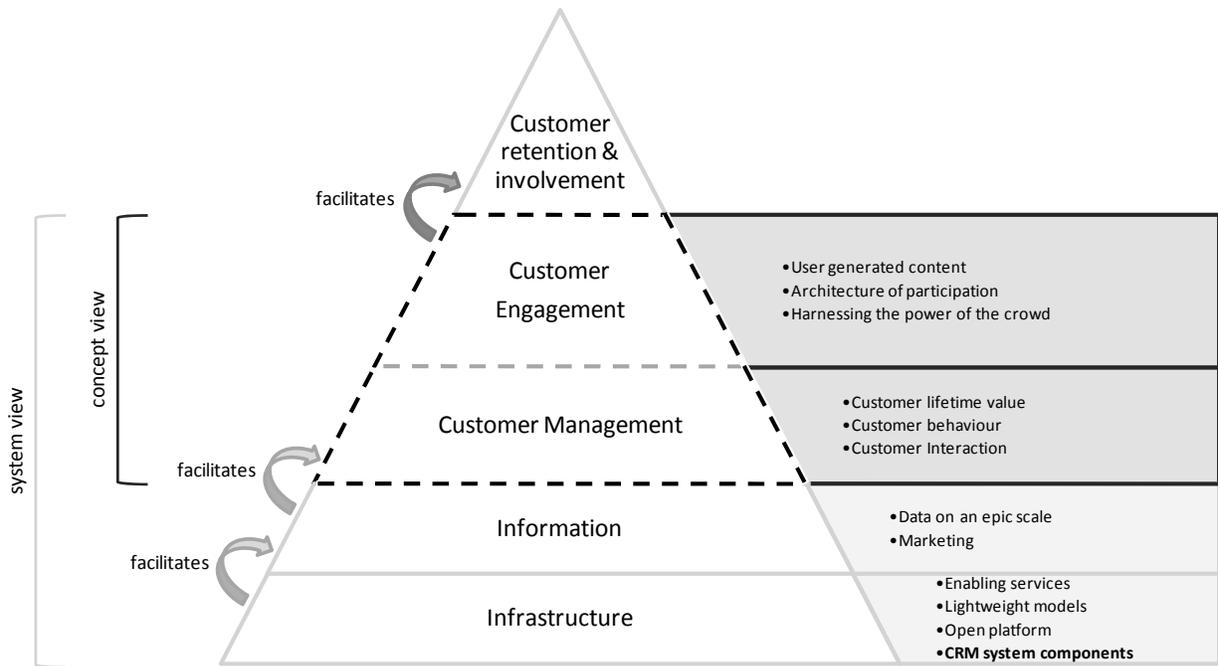


Fig. 1. Social CRM model

of Web 2.0 services in CRM where a two-way interaction between the customer and the firm is created that stimulates the involvement of all parties. Social CRM can bring the customer closer to the firm. Unfortunately, there is no single product available that one could call a 'Social CRM' solution. Social CRM is a mash-up of (existing) Web 2.0 services, or Web 2.0 mashups, in a(n) (open) CRM environment. In addition, web 2.0 services do not replace other sales 'tools', but rather complement them. This means that a part of the Social CRM strategy is adding the appropriate Web 2.0 services (e.g. Facebook, Helpstream, or GetSatisfaction) to the CRM system, in order to transform to a Social CRM environment. Mohan et al. (2008) say that with the use of web-based mash-up technologies (e.g. Google Maps), data from multiple sources are combined in an online-platform that gives various entities (e.g. Sales and customers) the possibility to acquire all information in one easy-to-access place.

The collaborative distances between customers and firms become less significant. Mashing up Web 2.0 services in the CRM environment can assist in creating this intimacy. A part of the Social CRM strategy could be a blog operated by the CEO of a company to inform customers and to keep them involved (e.g. the blog by Jonathan Schwartz, CEO of Sun Microsystems: <http://blogs.sun.com/jonathan/>). In that case, the CEO can inform the customer and discuss issues with them. This provides the customer with information, but also vice versa. Another part of the Social CRM strategy is to use internal and external Web 2.0 services to foster collaboration amongst colleagues, customers, and partners to improve knowledge sharing. As a result, the firm is more knowledgeable about the customer and the customer feels more involved in the firm. Additionally, greater internal collaboration and knowledge sharing improves the overall efficiency.

Now that we have described Social CRM we will focus on its fundamentals. Because Social CRM is a combination of Web 2.0 and CRM, we merged the fundamental aspects of Web 2.0 and CRM. This resulted in a combined list of eleven fundamentals. Some fundamentals appeared to be more visible (e.g. UGC) than others (e.g. Lightweight Models). We ordered the fundamentals from visible to less visible and clustered them as follows: *Infrastructure*, *Information*, *Customer Management*, and *Customer Engagement*, with Infrastructure containing the least visible fundamentals and Customer Engagement containing the most visible fundamentals. For each layer, 2 or 3 fundamentals are responsible. Each layer supports to the one above, i.e. infrastructure facilitates information, information facilitates customer management and customer engagement and this ultimately leads to customer retention and involvement. Customer retention is CRM-related (Customer Management) because CRM is traditionally about retaining the customer. Customer involvement is Web 2.0 related (Customer Engagement), because Web 2.0 is about interactivity that can lead to involvement through Web 2.0. This way of thinking led to a model for Social CRM, as can be seen in Fig. 1. The pyramid shape is chosen to illustrate that each progressive layer is another step up in the development of (social) CRM. In the model we made a distinction between a 'Concept View' and a 'System View'. The concept view acknowledges the idea that Web 2.0 (engagement) is something to be added on top of the pre-existing CRM environment. There is a sense of maturity in this (i.e. customer engagement through Web 2.0 is only possible when there is already customer management through CRM). The system view acknowledges technological fundamentals that facilitate the Social CRM concept. The outcome of Social CRM is shown in the top (customer retention and involvement).

Next, we give more detailed explanations about the stages and their contents:

- The Infrastructure layer is the fundamental system layer of Social CRM. Infrastructure includes the technical architecture of Social CRM: it includes the standard CRM system components (e.g. a database and data retrieval/analysis software) and three less visible technical fundamentals that belong to Web 2.0: Enabling Services, Lightweight Models, and Open Platform. As explained before, these fundamentals apply to each Web 2.0 service (see section 2.1).
- The Information layer is responsible for customer information that is stored in the CRM system and gathered from Web 2.0 services controlled or monitored by the company. The information layer is also responsible for a one-way interaction of informational and promotional materials and such.
- Customer Management is about building relationships and retaining the customer based on the acquired knowledge, this is traditional CRM.
- Customer Engagement is about establishing a two-way interaction by offering new points-of-contact using Web 2.0. The three most visible Web 2.0 fundamentals are responsible for this are: User Generated Content, Architecture of Participation, and Harnessing the Power of the Crowd. There is a thin line between the customer engagement and customer management layers.

The top of the pyramid resembles the goal of Social CRM. Social CRM is about customer retention (this especially comes forth from the Customer Management layer) and fostering customer input through Web 2.0 (involvement). Involvement is about getting actual input from the customer and having them involved in whatever it is the company is doing. Organizations can use the Social CRM model to help determine the current CRM situation.

Based on the previous, we defined Social CRM as follows: *Social CRM is about creating a two-way interaction between the customer and the firm. It is a CRM strategy that uses Web 2.0 services to encourage active customer engagement and involvement.*

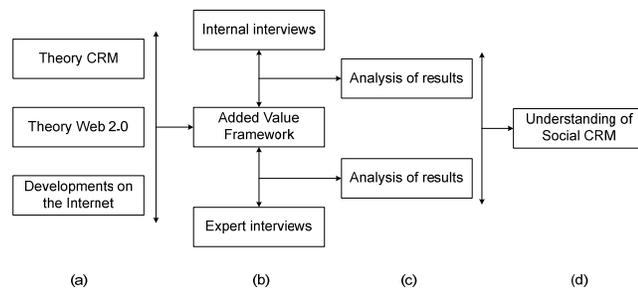


Fig. 2. Research model

### 3. Research Method

The main goal of the research is to investigate the added value of Web 2.0 in the CRM domain. This field is also known as Social CRM and is rather unexplored territory.

Therefore, it was decided to apply a qualitative research approach as qualitative research is typically used to create a better understanding of a particular phenomenon (Strauss & Corbin, 1990). Consequently, the research aims to provide new insights and models to define the Social CRM rather than universal laws or theories.

The overview in Fig. 2 shows the most important steps of the research project (reading from left to right), including inputs and outputs that will grant access to the next phase. This way of depicting a research overview is based on Verschuren and Doorewaard (2000). The first step (a), in Figure 2, concerns an exploration of the literature that is relevant to this research. After exploring the fields of Web 2.0 and CRM and describing their fundamentals, both fields are combined, resulting in the definition and the creation of a model of a rather new and explored field of research: Social CRM.

Step (b) of the model is the core of the research. First, it concerns the creation of an Added Value Framework. This framework consists of a matrix in which web 2.0 technologies are matched with CRM domains. The cells of framework are initially empty but should indicate the added value of a specific web 2.0 technology for a particular CRM domain. The interviews in step (b) are used to validate the dimensions of the framework and to fill the empty cells of the framework. The interviews were also used to validate the web 2.0 and CRM fundamentals and the Social CRM model.

To collect data for validation and filling the framework, both internal and external interviews have been conducted (see Table 4 for all respondents). The internal interviews refer to interviews at the company that sponsored the research. However, this company was applying web 2.0, but not actively for CRM. Therefore, the internal interviews mainly focus on the perceived added value of

Table 4  
Internal and external respondents

#	Function	Industry	Employees
1	Management Consultant		
2	Software Architect		
3	Information Architect	Business Intelligence department of a global	40.000
4	Software Architect		
5	Practice Manager	IT and Management	
6	Software Engineer	Consultancy company	
7	Information Architect		
8	Software Architect		
9	Principal IT Consultant		
10	Information Architect		
1	Media Relations Manager	Communications	9.000
2	Sales Manager	Software development	90.000
3	CIO of Europe	Communications and Networking	66.000

web 2.0 for CRM. For these interviews, ten employees of the Business Intelligence department of a global IT and Management Consultancy (employing over 40.000 employees, 2008 estimate) company were approached. We chose the Business Intelligence department because they were most interested in Social CRM research. We addressed every function of the BI department to reach a variety of respondents with various interests.

To measure the ‘real’ added value we also searched for companies that were applying web 2.0 for CRM. Ten companies have been approached and three companies positively responded to the invitation to participate in the research. These companies are operating in Europe or globally and their number of employees ranges from 9.000 to 90.000 employees. It was difficult to find companies that are pursuing a Social CRM- or Web 2.0 strategy. In fact, not even the expert companies pursue a real Social CRM strategy, as none has existed until now. The expert companies were very knowledgeable about Web 2.0 and its use in the CRM domain, but many of their initiatives appeared to be experimental. The interviews at these companies are referred to as the external interviews. All interviews lasted between 60 and 120 minutes. During the interviews we made accurate notes using the same words that the interviewees used in their explanations. All interviews were in the native language of the respondents, which is Dutch. Shortly after each interview, the Dutch notes were given their most accurate translation and rewritten thoroughly. The resulting minutes were sent back to the interviewees and were asked to provide comments or remarks.

In step c) all the collected data needed to be analyzed. First, all interviewees were asked to fill out the Added Value Framework. The interviewees could place up to 24 marks (four times six) across the matrix (1 per field). The interviewees were told that they were free to set as few or as many marks as they felt were necessary. By aggregating the results in one matrix it becomes possible to see which Web 2.0 technologies add the most value to a particular

CRM domain. Secondly, data was collected in the interviews to validate the Web 2.0 and CRM fundamentals and the Social CRM model and to explore Social CRM advantages. It was decided to create a big table using Microsoft Excel representing interview questions and results in separate columns. The columns were categorized as follows: Analysis Web 2.0 activities, Web 2.0 fundamentals, CRM fundamentals, Social CRM advantages, and general uncategorized results. Three A3-sized papers were needed to print the entire table with results. Fig. 3 shows an excerpt of the entire table. For example, when analyzing Web 2.0 usage, instances of Web 2.0 services mentioned by the interviewees were counted by hand and added up in order to be analyzed in the text.

Finally, in step (d) conclusions were drawn based on the analysis of the data, which contributed to our understanding of Social CRM.

#### 4. Results and discussion

In this section, we validate the fundamental aspects of Web 2.0 and CRM (sections 4.1 and 4.2). Section 4.3 evaluates the Social CRM model. Next, we can move on to the analysis of the results from the Added Value Framework in section 4.4 that will assist in answering our main research question. In section 4.5, we present the six key advantages of Social CRM.

##### 4.1 Evaluating Web 2.0 fundamentals

In this section we will analyze the input and feedback that the respondents gave when asked about the fundamentals that account for Web 2.0. According to one external respondent, ‘Ease of use’ was the only fundamental missing. No reason was given to alter the fundamental aspects except for expanding it with ‘ease of use’. However, as we have seen in section 2.1, ease-of-use is part of the architecture of participation fundamental.

Several respondents said that there is a lot of data on the Web and “2.0” can reuse that information in various ways.

Web 2.0 fundamentals					
Web 2.0 definition	Web 1.0 vs Web 2.0	Advantages usage	Work performance increase?	Social CRM model (including fund.)	CRM definition
Web 2.0 is about the two-way interaction. It's not just presenting information but can really add value	Web 1.0 was transaction based, Web 2.0 is interaction based	Information sharing, knowledge sharing. Makes things more easy	Individual: productivity up Company: we measure performance difference, Web 1.0 AND Web 2.0 usage makes a difference of 691 million (see mail)	Usefull! It can show different variants of what Social CRM delivers. The model can show who and how you should address your customers individually - making them feel as if they are treated uniquely. It can also give an answer to 'what to do' as a company.	Agreed upon, only one-to-one interaction may be incorrect.
"Web 2.0 is more about the reuse of information that is already there". So, about reuse information and Web 2.0 often consists of mashups. Services come in different forms/types (not contentwise but representations)	Dynamic (Web 2.0) vs Static (Web 1.0). Web 1.0 is like a shopping display	Difficult to say as the whole Web 2.0 adoption was so steadily. Take it away and it will hurt because it is used in such regularity.	Can't tell, however, SharePoint (which contain Micro blogs, Wiki's, etc) is the cornerstone of the Microsoft work environment	-	Agreed upon. Maybe define the customer.
How would you translate mashups to Dutch? Also, better to translate long-tail to 'to others'. Additionally, 'user' may be changed to 'individual'. Found to be a definition between company and individual	Web 1.0 is about 'printing books' where Web 2.0 is about online media. Web 1.0 is static, web 2.0 is dynamic. Web 2.0 is shorter, more powerful and makes use of the consumer influence. More interaction and includes moving images (video's).	Communication with the client, recognize the tone of voice and knowing how we are doing (positive, negative, good, bad?)	Individual: difficult to tell Company: UPC knows that customers' appreciate it and it is part of image improvement	Recognized the difference between 'engagement' and 'involvement' and said that we should look for a crossover between both. Engagement' is appreciation of the product and its usage, where-as input is actually getting real input from the customers'.	about 'crm supports one-to-one customer interaction'. CRM so far is just informing the client (also to move them to buy products) - but this is no interaction yet*

Fig. 3. Microsoft Excel data analysis table excerpt

This is in line with the Data on an Epic Scale fundamental. Furthermore, services come in different forms and representative types and they can be mashed up to form new services, some interviewees confirmed. This is due to the Enabling Services principle. In addition, a Business Intelligence manager from one of the internal interviews explained that AJAX and other new techniques enable new functionalities. These techniques are responsible for the Lightweight Models. Next, Web 2.0 helps to decrease unnecessary travel time because there are many digital alternatives that still offer the required collaborative functionalities at any place. This is due to the Open Platform and the Architecture of Participation. Multiple internal respondents specifically mentioned that the Social Web cultivates participation. Of the external interviewees, one (Expert #1) said that “Web 1.0 is static and that it is about ‘printing books’, where-as Web 2.0 is about online media, it is dynamic, shorter, and more powerful and it makes use of the consumer influence”. The latter one is a combination of the fundamentals UGC and Harnessing the Power of the Crowd. Another internal interviewee explained UGC by saying that users provide the information, where-as with Web 1.0 information is provided by the owners of websites.

Often, fundamental aspects could be identified in the definitions and ideas that both internal interviewees and experts presented concerning Social CRM. Hence, confirming our list of fundamentals. Next, mostly brought in relation to Web 2.0 were the UGC (seven times) and Architecture of Participation (eleven times), and Harnessing the Power of the Crowd (seven times) fundamentals. We think that this is because they are most visible, see Fig. 4. However, three more technical interviewees had more focus on the less visible and more technical layers of Web 2.0, such as Lightweight Models and Enabling Services. Data on an Epic Scale was only mentioned once, but seven interviewees mentioned how Web 2.0 makes it easy to quickly find information, which is due to data on an epic scale. However, none of the

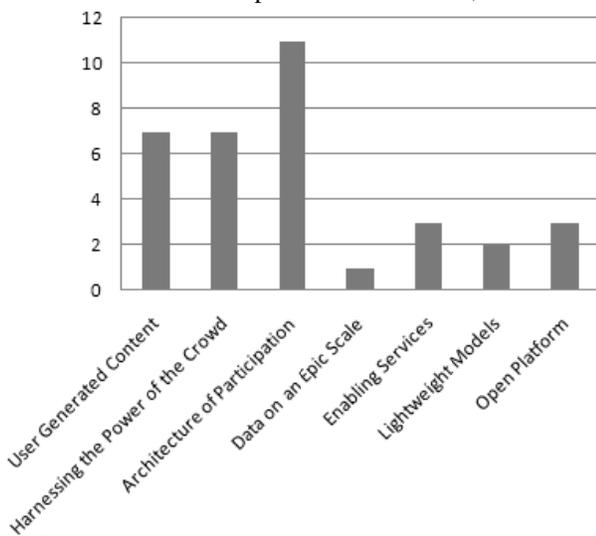


Fig. 4. Web 2.0 fundamental instances in 13 interviews

respondents recognized all fundamentals. This gave no reason to alter the list and it confirms how underdeveloped the knowledge about Web 2.0 really is. The internal interviewees had an especially difficult time coming up with fundamentals that apply to Web 2.0, and provided practical examples of actual websites that carried out the fundamental aspects (e.g. ideastorm.com) as the experts mentioned them. This is explained by the fact that they do not use Web 2.0 yet within the company.

#### 4.2 Evaluating CRM fundamentals

The internal respondents gave no reason to alter the fundamental CRM domains. The same was the case for the external experts. They were more knowledgeable about CRM, but saw no reason to alter the fundamental aspects of CRM either. The internal interviews confirmed all fundamentals and introduced no new ones. Also, respondents related CRM fundamentals to Web 2.0 activities, such as interaction and collaboration. This confirms that the seven Web 2.0 fundamentals and the four CRM fundamentals share attributes and can be combined.

Expert #1 recognized ‘Interaction’ as one of the CRM fundamentals, but said that CRM is not yet capable of establishing ‘one-on-one’ interactions. One-on-one interactions may take place in a Social CRM strategy, “because this may finally help to address customers individually and to make them feel as if they are really treated uniquely” (Expert #1). The same expert also says that their strategy defined exactly which information is required (Customer Behavior analysis) for interacting with the customer. The same company also extensively measures customer loyalty (Customer Lifetime Value) and segments customers accordingly (Marketing). Interestingly, the expert claimed the importance of recognizing the fundamentals in the CRM situation in order to understand the process of relationship management. Expert #3 says that CRM so far is mainly just about informing the customer and moving them to buy products, but this is not true interaction yet. We do however think that CRM fosters customer interaction to some extent as is shown in our definition (mostly from company to customer – e.g. for Marketing).

#### 4.3 Evaluating the Social CRM model

Finally, all respondents were shown the Social CRM model because it contains all Web 2.0 and CRM fundamentals. The experts found the model to be very useful. One external respondent said that maybe (especially in the future) the customer engagement area should be (much) bigger. This implies that the Web 2.0 fundamentals are more important than CRM fundamentals. Everything underneath the ‘customer engagement’ layer is rather a commodity, says the expert. There will be more focus on customer engagement in the future. The three most mentioned fundamentals also happen to be responsible for the ‘Engagement’ layer in the Social CRM model. This may be because people cannot actually see the system-

Table 5  
Added Value Framework containing the aggregated results of internal and external respondents

	Customer Behavior	Customer Interaction	Customer Lifetime Value	Marketing	
<b>Blog</b>	9	10	8	10	<b>37</b>
<b>Wiki's</b>	8	5	5	9	<b>27</b>
<b>Social Tagging</b>	8	7	7	10	<b>32</b>
<b>Multimedia Sharing</b>	9	8	7	12	<b>36</b>
<b>Syndication (RSS)</b>	10	3	7	10	<b>30</b>
<b>Social Networks</b>	11	11	9	11	<b>42</b>
	<b>55</b>	<b>44</b>	<b>43</b>	<b>62</b>	

related 'Infrastructure' and 'Information' layers for which the less mentioned fundamentals are responsible.

4.4 Determining the added value of Social CRM

All internal interviewees apply at least one Web 2.0 service to their work (all respondents use LinkedIn). All were also eager to adopt new services, as five out of ten internal respondents became a member on Yammer after we invited them (nine out of ten are currently member). Moreover, half of all internal and external interviewees claimed to have gained work performance (e.g. in efficiency and collaboration) because of Web 2.0. Furthermore, many needs (and expected advantages) mentioned by the internal respondents were confirmed to have been realized in the 'Social CRM' approach of the experts.

We used the Added Value Framework to determine the added value of Web 2.0 in the CRM domain. The amount of marks set by the interviewees throughout the Framework were counted and compared to each other to determine where Web 2.0 services add value in the CRM domain. As previously mentioned, each interviewee could place up to 24 marks across the matrix (six for each CRM domain). This means that the ten internal interviewees together could set a maximum of 60 marks per CRM domain (six Web 2.0 services times 10 interviewees). Most expected advantages from the ten internal interviews reside in the Marketing (48 marks out of 60 possible) and Customer Behavior (41 marks) domains, followed by Customer Interaction (33 marks) and Customer Lifetime Value (31 marks). Of the Web 2.0 services, Social Networks (32 marks) are expected to add most value across all CRM domains, followed by Blogs (28 marks), Multimedia Sharing (27 marks), Social Tagging (25 marks), Syndication (21 marks), and lastly Wiki's (20 marks). It is not surprising that Social Network has most counts, because LinkedIn (a social network) is the only Web 2.0 service used by everyone. In total there have been 153 marks placed (which is an average of 15 marks per interviewee) where a maximum of 240 marks would have been possible. When a field is darker, it means that there is a stronger relationship between the Web 2.0 service and the corresponding fundamental because more people have marked the same field. Lighter fields show no to weak relations.

The external interviews showed similar results in the Added Value Framework, but were often using a greater variety of Web 2.0 services. The experts identified that Web 2.0 adds most value in the Marketing (14 marks) and Customer Behavior (14 marks) domains, followed by Customer Lifetime Value (12 marks) and Customer Interaction (11 marks). They also identified that Social Networks (10 marks) add most value across all CRM domains, closely followed by Blogs (9 marks), Multimedia Sharing (9 marks), Syndication (9 marks), Social Tagging (7 marks), and Wiki's (7 marks). In total 51 marks were placed by the three interviewees where 72 marks would have been possible. On average, each interviewee marked 17 added value links. Noteworthy is that one of the marks setting the relationship between Syndication (RSS) and Customer Interaction comes from an expert, because RSS shows no customer interaction. Two internal interviewees also marked this added value link. The link was seen as an interaction of updates (RSS news-feed) to the customer.

Table 5 shows the Added Value Framework with the aggregated results of both aforementioned internal and external respondents. Marketing (62 marks) and Customer Behavior (55 marks) achieve most value from Web 2.0 services, with Social Networks (42 marks), 'Blogs' (37 marks), and Multimedia Sharing (36 marks) being most favored.

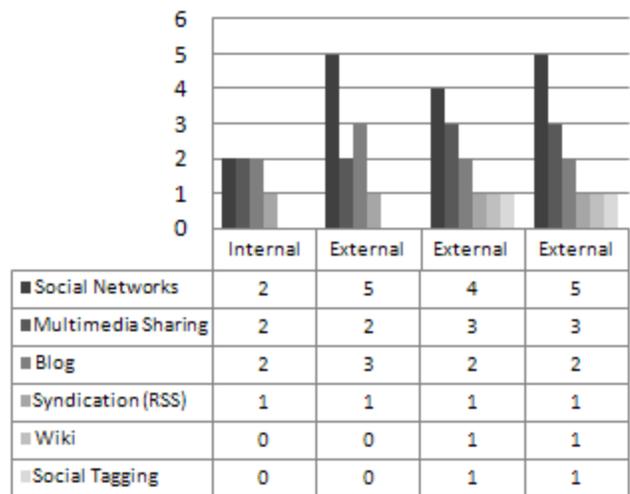


Fig. 5 Comparison of Web 2.0 behavior

Table 6  
Key advantages of Social CRM and respondent confirmations

#	Advantages	Internal respondents	Expert 1	Expert 2	Expert 3
1	Establish a two-way interaction with the customer (engagement)	Yes (5x)	Yes		Yes
2	Foster customer input through Web 2.0 (involvement)	Yes (4x)	Yes		
3	Create a better understanding of customer behavior	Yes (5x)	Yes	Yes	Yes
4	Improve collaboration, networking and firm performance	Yes (3x)		Yes	Yes
5	Improve knowledge management and knowledge sharing	Yes (5x)		Yes	Yes
6	Increase customer satisfaction and lifetime value (retention)	Yes (5x)		Yes	Yes

However, despite the common results in the Added Value Framework, the three expert companies applied many more Web 2.0 services in the CRM domain, both internally and externally. Fig. 5 compares the usage of Web 2.0 services (categorized by service type) by all four companies, with the latter three columns representing the expert companies. The numbers in the attached table underneath the diagram represent the quantity of a specific Web 2.0 service used by a company. The results clearly show that the expert companies use more Web 2.0 services to reach out to their (potential) customers. When investigating its usage further, we concluded that two expert companies mainly use Web 2.0 for one-way Marketing communications, where-as one expert company was more actively servicing (potential) customers on numerous blogs and social networks that are often not even operated by them. Despite the fact that each of the expert companies applies a similar set of Web 2.0 services to interact with (potential) customers, observation showed that actual usage differentiated from one-way marketing communication to two-way interactions. We based this on observing the usage of Web 2.0 services by the companies on the Web. However, none of the companies appeared to apply an actual Social CRM strategy yet. There is no integration between services or actual customer data retrieval to understand customer behavior better. Most services appear to be used to communicate to the outside world, rather than to communicate with specific customers.

#### 4.5 Social CRM: key advantages

In this section, we will look at the advantages of using Social CRM. One of the expert companies that we spoke with quantified their benefits of the adoption of their so-called 'collaborative communication solutions' (Social CRM). A combination of Web 1.0 (benefits: \$3.7 Billion) and Web 2.0 (benefits: \$691 million) account for an estimated impact of 10% on the yearly revenues (approximately \$40 Billion in 2008). Being able to see these figures is very interesting because it shows financial advantages. However, we were not given more information to validate this information. Another expert did not quantify their Social CRM attempts, but spoke about the definite need for more customer engagement, specifically customer involvement, because involvement leads to input and input is useful for the company. Their company, a communications company, acted upon negative discussions about them that appeared on Social Networks, Blogs, and

such. They noticed that the impact of negative communication about their company on the Web was so influential that they had to act upon it. They established a webteam consisting of a handful full-time employee to engage in customer discussions across the Web, and to help them. They say that Web 2.0 helped them to improve their image and to sustain a two-way interaction with the customer.

A variety of advantages were mentioned by the internal interviewees and confirmed by the experts. Social Tagging will be very interesting for Social CRM, one expert said. He states that people can give tags to information or to themselves and/or other people so that we are able to see what another person knows (based on given tags). That way, it will be easier to find colleagues with specific knowledge about a product or another company because someone may already have experience. Another expert found it difficult to say what the actual advantages of the aforementioned Web 2.0 services are, as the whole Web 2.0 adoption happened so steadily for them. He said that when taken away, it probably hurts because they use it in such regularity. The same expert identified another advantage in the collaborative function of Social CRM that makes it possible to interact with customers or colleagues without physically being in the same place. The third expert said that getting more input from the customer would be ideal because then the customer is really thinking along with the company, providing valuable input.

These advantages, amongst many others mentioned throughout the thirteen interviews, reside in six main key advantages of Social CRM. Table 6 shows which key advantages the respondents agreed with. Not all internal respondents identified each key advantage, but altogether they recognized the advantages.

1. Establish a two-way interaction with the customer (engagement)
2. Foster customer input through Web 2.0 (involvement)
3. Create a better understanding of customer behavior
4. Improve collaboration, networking and firm performance
5. Improve knowledge management and knowledge sharing
6. Increase customer satisfaction and lifetime value (retention)

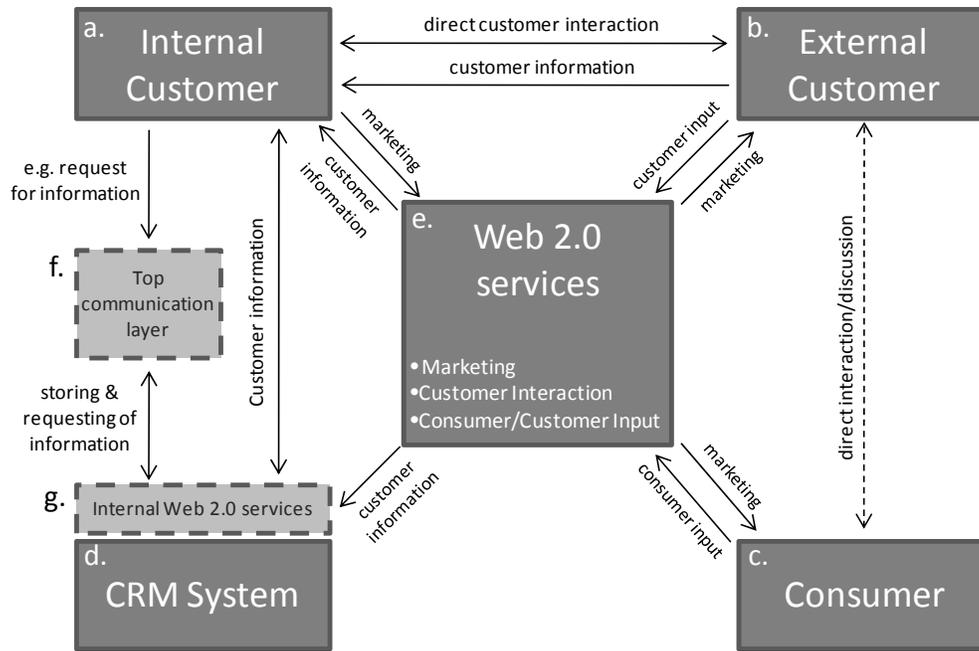


Fig. 6. Social CRM landscape model

## 5. Architecting the Social CRM environment

In this section we will introduce two models that assist in architecting a Social CRM environment. This is useful for businesses that have interest in setting up a Social CRM environment.

### 5.1 Social CRM landscape model

The input from the reviews also resulted in an additional model for Social CRM, the landscape model. Respondents regularly asked how Social CRM is structured and based on observation we were able to set up a model that visualizes the Social CRM entities and their relationships in the simplest form. We named the resulting model the Social CRM landscape model. This model adds value to companies who are interested in finding out how to set up their Social CRM environment. Therefore, it serves more or less as an architecture next to the Social CRM model, which already explains the fundamental aspects and layers of Social CRM.

The landscape model consists of five main entities shown in a star-shape. All have been given characters to easily identify them in the text. We also added two additional entities that are not mandatory in a Social CRM environment, but are advisable and often unavoidable. In the observations, we recognized the CRM system, Web 2.0, the company employee, and the customer. However, in some case the company employee was also a customer and therefore the company employee is named to an (a) Internal Customer. The (b) external customer was referred to as being an actual customer or just a (c) consumer that can become a customer in the future. Furthermore, companies seem to apply other Web 2.0 services internally than they apply externally to reach out to the customer or consumer. Companies can have internal management blogs, wiki's, social networks, podcasts, and so forth that are only

accessible within the internal company domain because they may contain sensitive information or because they are not relevant for the external customer. However, this is not always the case. Nevertheless, most companies will want to create an overlap with Web 2.0 services meant for (g) internal and (e) external use. Both are linked to the (d) CRM system for information storage and requests. Additionally, we included a (f) top communication layer. This is a layer on top of the internal Web 2.0 services that only has basic communication features (e.g. a Microblog such as Yammer). Fig. 6 shows the landscape model. Next, more detailed explanations about the entities and relationships are given.

The internal customer is the company employee. This can be anyone within the company (e.g. a manager, a project group, or a business unit). It is important to consider the company employee as a customer in the Social CRM environment, because one department can be the customer for another department within the same organization (e.g. Marketing can have several customers throughout an organization). Furthermore, it is the external client that has already made a purchase at a company and is known in the CRM system. The external customer can be a person, a company, a group, and so forth. An external customer is in direct contact with an internal customer or via Web 2.0 services. They also provide valuable customer information that can be used in other domains, for example marketing. The consumer is not yet a customer, but by viewing the company website and its Web 2.0 efforts, they start to become involved in the company/product which could potentially lead them to become a customer in the future. They are potential customers. The consumer can give input and this can be used for marketing purposes that may eventually improve marketing efforts to convince the consumer to make a purchase and become a customer. Web

2.0 is the central entity of the landscape model. In the end this is a customer-centric approach, but Web 2.0 connects all, using web-based mash-up technologies as described by Mohan et al. (2008). Web 2.0 services can receive input or customer information and pass this on to the internal customer or store it in the CRM system. Web 2.0 can also serve as a Marketing channel. The CRM system stores all customer information and this can be requested through the internal Web 2.0 services or directly by the internal customer (possibly through the top communication layer). The CRM system may be a traditional CRM system or a SaaS solution. Interview results also showed that people are resistant against services that are forced upon them. The results showed that the odds of adoption are greater when people are free to make their own choices in regards to Web 2.0 usage. However, if a company aims to increase the chances of adoption, there should be a top communication layer (e.g. Yammer). The layer offers the minimum number of functionalities that enables interaction, communication, and information sharing without actual required input. The idea is to have a tool that does not replace all other tools but rather serves as a spider in the web and can create links.

The model was also shown to two expert companies, who agreed upon the model and specifically said that the landscape model seems to cover all entities involved in Social CRM.

### 5.2 Web 2.0 services Quadrant

For setting up a Social CRM strategy, it is important to choose the appropriate services to mash up in the CRM environment. As a part of this research, we suggest the Web 2.0 Services Quadrant in Fig. 7 that shows some of the major services that can be mashed up in the CRM environment.

The quadrant makes a distinction between Web 2.0 services that are useful in business-to-business (B2B)

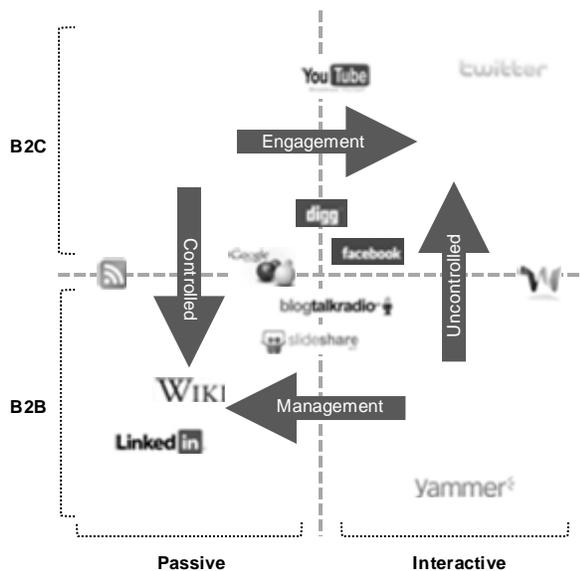


Fig. 7. Web 2.0 Services Quadrant

strategies (e.g. Yammer) versus business-to-customer (B2C) strategies (e.g. YouTube). We omit the customer-to-customer (C2C) area because all is from a CRM point-of-view. The actual strategic use of Web 2.0 services may change over time. YouTube for example started out being very C2C, and is now present in the B2C and B2B domains as well because companies use it for advertising and communication. We also make a distinction between services that are more passive (e.g. RSS) versus interactive (e.g. Twitter). We considered including other dimensions such as synchronous versus asynchronous, but instead expanded the model with arrows in the body section that explain the nature of communication: engaging versus managing and controlled versus uncontrolled communication. These arrows are important assistants in choosing the appropriate Web 2.0 services. Some companies may wish for engaging with potential customers on the Web where-as other companies (or in other situations at the same company) management of current customers is favored. Another important factor is control over communication and information. Not all company information is public information. Engaging discussions may be favored, but control is essential as well. Engaging services such as Twitter and YouTube generally offer little control over communication concerning the company or its products, where-as a Wiki for example offers more control because restrictions can be given to those who have access to editing articles. Companies with specific B2B strategies may not want the interference of other non-involved individuals (users) on Twitter. In (costly) B2B projects, businesses will prefer to have control over the conversation without unexpected interference of other (web) users. Furthermore, B2B strategies usually involve a greater number of people and higher costs, making control more important.

By adding or removing services, one can alter the relative positions because of new influences of each service. In addition, current 'hot' Web 2.0 services may be obsolete in a year from now.

### 6. Conclusions

One of the aims of this research is to actually understand Social CRM in its fundamentals and not to create yet another vague buzzword. There proved to be hardly any scientific literature available on Social CRM. With this research we hope to fill an empty space in CRM research. We confirmed that a lot of the CRM fundamentals relate directly to Web 2.0 activities because they share attributes. This resulted in the idea to develop a pyramid shaped model that includes all fundamental aspects divided over four distinctive layers.

The main research question is answered by concluding that Web 2.0 adds value in every domain of the CRM environment, depending on the type of Web 2.0 service at hand. Therefore, it is important to set detailed requirements for selecting the appropriate services. Web 2.0 adds most

value in the marketing domain, but can also be very beneficial for understanding customer behavior, establishing a two-way interaction with the customer, and to improving the lifetime value of the customer for the company. Social networks, blogs, and multimedia sharing add most value across all CRM domains and should be considered to mash up in the CRM environment first.

Consequently, to get a true understanding of what Social CRM can do for a company and how it all links together; this research introduces a Social CRM definition, a pyramid model, a landscape model, an Added Value Framework, and a Web 2.0 Services Quadrant. Combined, this resulted in a generic Social CRM roadmap. The roadmap components should be seen as abstract guidance elements for setting up a Social CRM environment:

1. Use the Social CRM model to determine the current CRM situation. At what stage in the pyramid is the business currently and what are the requirements for evolving to the next stage?
2. Use the Social CRM Landscape model to identify and/or establish the basic structure of Social CRM's entities and relationships.
3. Use the Web 2.0 Services Quadrant and the Added Value Framework to determine the appropriate services to mash up with the CRM system in the Social CRM environment.

As mentioned before, there is hardly any scientific literature available on Social CRM. We have a number of interesting suggestions for further research that builds off this research. The most significant shortcoming in the results, or limitation, is the number of companies that participated which limits the external validity of the results. Additional case studies of companies that actually apply Web 2.0 for CRM could further increase the external validity in the future. Another interesting area for further research is developing an instrument to measure the Social CRM of companies, which also takes into account the differences between organizations, i.e. situationality. It may also be interesting to cluster results by organization type. We could not do this in this research due to the low number of respondents. As for the Social CRM roadmap, it will be very interesting to investigate how well this works for different types of companies. We suggest that the various components of the roadmap (e.g. the Social CRM model) are applicable for any type of organization, and that therefore the combined roadmap is also applicable for any type of organization. This may not be the case. In fact, the resulting roadmap has not been tested and may prove not to be valid for setting up a Social CRM environment, even in its basic form. Questions to ask are; (a) does the roadmap work for setting up a Social CRM environment and (b) is the roadmap applicable for any organization type (e.g. servicing versus manufacturing companies)? Another suggestion is to enrich the roadmap and give more detail to the steps that are required for setting up a Social CRM environment. Furthermore, expand the roadmap with a model that can map Social CRM to a company's business

processes. Business processes were out of the scope in this research. Another suggestion is to determine the situational factors for setting up Social CRM. Finally, we suggest further research in setting up a maturity model for Social CRM. Our early conclusions however, based on research, were that this is not possible because one cannot say that a company should use different Web 2.0 services when they matured to another phase.

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### References

- Apgar, M. (1998). The alternative workplace: Changing where and how people work. *Harvard Business Review*, 121-136
- Anderson, P. (2007). What is Web 2.0? Ideas, technologies and implications for education. *JISC Technology and Standards Watch*, Feb, 2007
- Arrington, M. (2009, May 18). MySpace Is In Real Trouble If These Page View Declines Don't Reverse. Retrieved September 2, 2009 from TechCrunch: <http://www.techcrunch.com/2009/05/18/myspace-is-in-real-trouble-if-these-page-view-declines-dont-reverse/>
- Batenburg, R.S., & Versendaal, J.M. (2004). Business alignment in the CRM Domain: Predicting CRM performance. In t leino, t saarinen & s klein (Eds.), *Proceedings of the 12th European Conference on Information Systems*. Turku: Turku School of economics and business Administration
- Bean, C.J., & Hamilton, F.E. (2006). Leader framing and follower sensemaking: Response to downsizing in the brave new workplace. *Human Relations*, 59(3), 321-349
- Bose, R. (2002). Customer relationship management: key components for IT success. *Industrial Management & Data Systems*, 102(2), 89-97
- Boulding, W., Staelin, R., Ehret, M., Johnston, W.J. (2005). A Customer Relationship Management Roadmap: What Is Known, Potential Pitfalls, and Where to Go. *Journal of Marketing*, 69, 155-166
- Doorewaard, H, Verschuren, P., (2000). *Het ontwerpen van een onderzoek*. Utrecht: Lemma
- Greenberg, P. (2009a, March 6). Do We Really NEED CRM 2.0? Retrieved April 27, 2009 from ZDNET: <http://blogs.zdnet.com/crm/?cat=5>
- Greenberg, P. (2009b, April 8). Study Says Social Media Not Useful to Close Sales. Duh. Retrieved April 27, 2009 from ZDNET: <http://blogs.zdnet.com/crm/?cat=5>
- Högg, R., Meckel, M., Stanoevska-Slabeva, K., & Martignoni, R. (2006). Overview of business models for Web 2.0 communities, *Proceedings of GeNeMe 2006*, p. 23--37, Dresden, 2006
- Kim, J., Suh, E., & Hwang, H. (2003). A model for evaluating the effectiveness of CRM using the balanced scorecard. *Journal of Interactive Marketing*, 17(2), 5-19
- Knol, P., Spruit, M., Scheper, W. (2008). Web 2.0 Revealed - Business Model Innovation through Social Computing. *Proceedings of the Seventh*

AIS SIGeBIZ Workshop on e-business (WeB 2008), Paris, France, December 13, 2008

McGiboney, M. (2009, March 18). Twitter's Tweet Smell Of Success. Retrieved March 31, 2009 from Nielsen Online: [http://blog.nielsen.com/nielsenwire/online\\_mobile/twitters-tweet-smell-of-success](http://blog.nielsen.com/nielsenwire/online_mobile/twitters-tweet-smell-of-success)

Mohan, S., & Choi, E., Min, D. (2008). Conceptual Modeling of Enterprise Application System Using Social Networking and Web 2.0 "Social CRM System". Proceedings of the 2008 International Conference on Convergence and Hybrid Information Technology, 0, 237-244

Musser, J. & O'Reilly, T. (2006). Web 2.0 Principles and Best Practices. *O'Reilly Media, Inc.*

O'Reilly, T. (2007). What is Web 2.0: Design Patterns and Business Models for the Next Generation of Software. *Communications & Strategies*, 65(1), 17-37

Payne, A., & Frow, P. (2005). A Strategic Framework for Customer Relationship Management. *Journal of Marketing*, 69, 167-176

Reinhard, C.D. (2009). Discourse swings in understanding audiences: Case studies on Hollywood's cooptation of audience activity(s) as emergent discourse. Paper fremlagt ved International Communication Association, Chicago, USA

Ryals, L., & Knox, S. (2001). Cross-functional issues in the implementation of relationship marketing through customer relationship management. *European Management Journal*, 19(5), 534-542

Shimp, B. (2009, May 18). Social CRM. Say What? Retrieved May 19, 2009 from ALLbizANSWERS: <http://allbizanswers.com/2009/05/social-crm-say-what/>

Strauss, A., & Corbin, J. (1990). Basics of qualitative research: Grounded theory procedures and techniques. Newbury Park, CA: Sage Publications, Inc.

Ullrich, C., Borau, K., Luo, H., Tan, X., Shen, L. & Shen, R., (2008). Why web 2.0 is good for learning and for research: principles and prototypes. Proceeding of the 17th international conference on World Wide Web, 705-714

Verhoef, P.C. (2003). Understanding the Effect of Customer Relationship Management Efforts on Customer Retention and Customer Share Development. *Journal of Marketing*, 67, 30-45

Winer, R.S. (2001). Customer Relationship Management: A Framework, Research Directions, and the Future

Wood, D. (2008, July 23). Avoiding Anti-Social CRM. Retrieved April 27, 2009 from MYCUSTOMER: <http://www.mycustomer.com/cgi-bin/item.cgi?id=133837>

Yadav, S. (2007, April 14). 10 Most Successful Web 2.0 Startups To Date. Retrieved from April 2, 2009 from Rev2: <http://www.rev2.org/2007/04/14/10-most-successful-web-20-startups-to-date/>