

CURRENT ASPECTS OF THE PLANNING AND OPERATING CORPORATE INFO-COMMUNICATION AND CRM SYSTEMS

HENRIETTE FÁBIÁN¹–GÁBOR JUHÁSZ²

Abstract

The establishment of an up-to-date, modern corporate info-communication system means the development of an integrated system in which information is transmitted practically within a single network. The main advantage of this is less information loss and communication noise, and the system is also more cost-effective. If the information communication technologies used by companies are incomplete or outdated, there is a greater chance that so-called communication noise will occur, i.e. communication, the delivery of messages, and understanding between the communicating parties will become more difficult and complicated.

By the end of the nineties, a so-called network society has emerged that was active in virtual space. They have the ability to form smaller groups relatively easily and quickly, among which there is a continuous exchange of information. The members of this network society mostly belong to the so-called Generation Z (those born after the mid-1990s). Among other things, it is typical of this generation that they spend most of their time keeping contact online, therefore their communication, relationship-building and cognitive style also develops accordingly.

The technique of the written text, which has been used for centuries, has now been mostly replaced by networked communication, which creates a new kind of collectivity. Due to the linear organization of written and spoken language, it only allows for personal contact with a small group, thus resulting in a certain degree of isolation. The network-like structuring of multimedia seems to be a much more natural form of organization for the human brain, it allows people to keep in touch with a larger number of people. However, these relationships are role-based and less personal: these are the "weak" social ties that we like to rely on when looking for work and making deals. It can therefore be expected that technological changes will result in rapid transformations in our relationship management communication patterns, enabling the creation of a wider network of relationships.

Keywords: corporate info-communication system, network society, network communication, virtual communities, network of relationships, knowledge management, community CRM

Introduction

All organizational innovation takes place through communication (Hogard, 2007). As a result, innovation for effective communication can generate positive changes in

¹ PhD in Psychology, UP, Faculty of Humanities and Social Sciences, Research Center of Social Inclusion and Social Economy

² associate professor, UP, Faculty of Humanities and Social Sciences, Research Center of Social Inclusion and Social Economy

other areas of organizational activities as well. Proper communication is key to building trust and creating employee engagement (Thomas, Zolin, & Hartmann, 2009). Technological innovations promoting effective communication cannot be seen as a panacea that can eliminate all communication problems in the organization or all of the shortcomings of knowledge management: in addition to technology, organizational strategy and human resources should be considered as leading factors. However, it may be well argued that technological innovations significantly help the actors of the corporate world to make communication more effective and to make better use of organizational knowledge (Glibkowski et al., 2011).

A suitable info-communication system makes sales processes more efficient, accurate, reliable and flexible, including especially partner and customer relations, recruitment and selection processes, editing and updating of databases, data mining procedures developed for reviewing and evaluating large amounts of data, and it also provides a way to connect to social media for multilateral business purposes. In addition, it helps to objectively evaluate the performance of employees by introducing performance measures that, in addition to quantitative aspects, also apply qualitative ones. The introduction of the online information communication system can thus not only be useful for management, recruitment/selection and sales staff, but, to a different extent and in different ways, all employees of the organization can benefit from it.

In the following, we will first review the key basic concepts and relevant correlations related to the development, then we will cover the areas of application of CRM systems and also the SCRM (community CRM) systems, which are considered to be the latest development.

Information, communication, knowledge management

In the technical sense, information means an ordered sequence of signals that can be interpreted as a message. Information affects the dynamic system and environment that serves as its context: it shapes and to some extent transforms the condition of the given system. As Bateson puts it: *information is the difference that makes a difference* (Bateson, 1972).

The essence of human communication is an activity aimed at sharing, making available and renewing knowledge by using a special kind of signs and symbols, based on public agreement. The fundamental goal of creating a new communication scene and the increasingly sophisticated use of signs, sign systems and communication channels is always *to ensure better access to knowledge for the purpose of development*. Therefore, according to our understanding, communication is nothing else but all those activities, scenes, etc. which ensure the availability of knowledge necessary for problem solving (Horányi, 2007).

A communication audit is a comprehensive and thorough study of the philosophy, concepts, structure, flow and practice of communication within a given organization (Emmanuel, 1985, 50, cit. Hogard, 2007, 178). Through the audit, management can gain accurate knowledge of what is happening within the organization, instead of relying on previous assumptions, shared beliefs or possibly distorted feedback. The most important questions of the communication audit are the following:

- Does the knowledge essential for problem solving and supporting continuous development reach all stakeholders within the organization?

- What kind of communication network do the participants develop and what obstacles do they have to deal with and what are the barriers that cause continuous difficulties?
- Can the problem of misappropriation or unidirectionality of information be detected within the network, is it difficult to filter the relevant information from the flood of data?
- Are all stakeholders prepared for real participation, are they ready to record, interpret, integrate and share the information?
- Is it clear to everyone exactly what type of information should be handled and how within the organization?

The 134-item questionnaire of the ICA (International Communication Association) was created in the 1970s, but it still serves as the basis for similar studies today (Thomas, Zolin and Hartman, 2009; Hogard, 2007). This questionnaire examines 8 main areas and topics within the organization:

- How much information do we need to receive on a given topic, and how much is actually received?
- How much information do we need to pass on to others regarding a given topic, and how much do we actually send?
- How much follow-up is done and to what extent is it necessary in relation to the information sent to others?
- How much information do we receive from specific sources, and how much information do we need from these sources?
- How timely is the information received from key sources?
- How much information do we receive through specific channels and how much information do we need through these channels?
- How can human relations between communicators be characterized?
- How satisfied are the stakeholders with the most important organizational results?

Noise impairing the effectiveness of communication, i.e. communication disturbance can come from the physical environment; it can originate from some specific disability or special attitude of the communicators, the different interpretations by the communicators or the inappropriate segmentation of the message (noise of a syntactic nature). The source of the noise may also be the communication scene, as the institution or organization does not structure the message properly, and cultural differences can also emerge between the communicators. As can be observed, in organizational communication we can count on all the sources of noise listed above, so the communication disorder can be traced back to human resource management problems, management problems in a broader sense, the peculiarities of the company culture and the shortcomings of the infrastructure, especially information communication technologies.

Information is transformed into knowledge through *interpretive activity*, in a context that facilitates interpretation. This transformation is a key factor in knowledge management. During the formation of knowledge, we review the information: we evaluate and attribute meaning to it, as well as determine what new knowledge we have acquired based on all the incoming information. For this, we perform activities with the meta-data (data that characterize our data), select the

appropriate interpretation framework and context from the available contexts. Finally, we make *decisions* or make *suggestions* based on the new knowledge.

According to Stewart (2001), the transformation of information into knowledge is a critical step in value creation, a step that determines the competitive advantage of the modern enterprise. The knowledge generated on the basis of the information is retained by the company. As Willis (2005) points out, the most important rules for managing information are: transparency; accountability and reliability; proper process control; accurate compliance with laws and regulations; and the protection of personal and corporate information against unauthorized access.

Overall, *knowledge management* is the delivery of relevant knowledge to the right people at the right time, in order to improve the performance of the enterprise through the activities performed with the information (searching, recording, comparing, evaluating, distributing, transforming, etc.) (Stewart, 2001).

Today the world is characterized by the use and constant further development of so-called *capacity enhancers*, with which we expand the boundaries of our own knowledge and communication, and based on this, also our relationships (Horányi, 2007). The linguistic sign itself can be considered as such a capacity-enhancing tool (especially through its representative and relationship-regulating function), the linear written text that dissolves simultaneity (preserving, storing and retrieving knowledge) and also the two huge qualitative leaps of the 20th century: the computer and network communication, as well as the various software associated with them.

An important term of our age, *info-communication system* refers to a unified communication system in which telecommunication systems are integrated. This allows the user to create, access, store, send and share information and also to perform many other actions with it. The term is also used today in the sense that by the beginning of the 21st century, various audio-visual devices, telephone and computer networks could be connected in a single system. The advantages of this are considerable, since there is clearly less information loss and noise within a single network; this procedure can also be said to be more advantageous in terms of cost efficiency.

As long as we store the information in a properly structured and organized manner (as e.g. a CRM application enables this), we can run *targeted hierarchical searches* to base our decisions on the relevant and up-to-date data retrieved in this way. In the case of *automated searches*, it is also worth paying attention also to the context of the data coming up, in order to be able to properly interpret the information obtained in this way.

Knowledge management in the light of the information society, network society and knowledge society

In the 1980s, Lyotard (1984) stated that *knowledge has become the determining factor of production*. The last thirty years have supported and confirmed the validity of Lyotard's statement.

The term information society originates from McLuhan's (ed. Griffin, 2002) technological determinism: in this worldview, attention was primarily focused on technological innovations as a component determining the functioning of society and the economy. The network society, as a term, goes beyond the meaning of the information society: it includes the totality of socio-societal, political, economic and

cultural changes, which emerged together with the spread of network, digital information and new communication technologies.

Social networks are general, fundamental characteristics of human societies in any age, but literacy meant a different kind of, more limited networking than the e-world. A new development reshaping networking is the widespread use of new types of information technologies applicable for processing and sharing information. This new type of network changes the modes of production, power relations, culture and even the organization of human experience, i.e. the cognitive style. In such a society, the nature and experience of space (as a communication arena) changes, creating a "space of flows" (Nyíri, 1999).

Castells' network society theory is a continuation of McLuhan's idea cited earlier: technology is a decisive factor, but it is not a kind of "ultimate cause", it is rather a new medium of networking as a general attribute. The new type of networking and the new technologies are mutually interrelated. According to Castells, networking is the basic morphological-organizational characteristic of late modern societies. In such a society, key social structures and activities are organized based on electronically processed network information. Network communication and networking in other areas generate mutually reinforcing processes in society. Consequently, society is characterized by the globalization of strategically crucial economic activities, the flexibility and instability of work and the individualization of the workforce. This is the culture of real virtuality, which is constructed by a pervasive, mutually connected and diverse media system (Castells, id. Nyíri, 1999). Castells warns that no matter how we relate to the question of the network society, by the nineties this social formation has developed as the new social framework we live in and this process is irreversible. The integration of telecommunications (unified, digitized data) creates the world of multimedia, with an important new feature, namely interactivity. A remarkable and relevant business characteristic of the new type of media is that small groups can easily, quickly and flexibly form in the virtual space, exchanging information and goods with each other. This media allows more people to comment on the issues of the community, or even to the common affairs of the globalized world. Different types of communities are created than before, which are not only smaller, but more heterogeneous in terms of their composition, and in the virtual world their members can interact with each other in a less controlled way, without institutional mediation. This new kind of community – as it is an important element of knowledge sharing – will be decisive for the division of labour and production. A unique effect of networking is the unification of globalization and localities (the connection of the world and the creation and strengthening of small communities). This characteristic is called *glocalization* (Nyíri, 1998; Nyíri, 1999).

According to Hayek, the economist and philosopher, in modernity, even with the network-based nature of access, the available knowledge is typically *fragmented*, i.e. each person can only possess small pieces of the totality of knowledge. In addition, this knowledge is often tacit, practical and local, so it is not of a nature that can be easily transferred, organized and combined. Hayek considered the operation of the market to be the coordinating force for local knowledge, but according to Nyíri, Hayek did not take into account, although it is obvious, that the goods found on the market can be understood in themselves as carriers of unified, collective knowledge and networks (Nyíri, 2005).

The fragmented nature of knowledge is not only the quality of computer-mediated communication, the same applies to the often mosaic-like world of radio,

television and daily newspapers, which bring some knowledge to the surface, embed it in a system of contexts and suppress other information, relegating it to the background. However, "keeping in the mainstream" is less typical of communication on the Internet, since here there are more alternatives and comparable sources (Griffin, 2002; Nyíri, 2005). Through cross-cultural relations, the consumer of the Internet is forced to make constant comparisons, therefore his willingness to think critically may be greater. The partiality and fragmentation of knowledge can result in a strong inclination to cooperate, especially if this co-operation is motivated by some kind of key interest.

A considerable part of the knowledge and skills is not something that we acquire within the framework of formal training and education, but in the production environment (Thurow, id. Nyíri, 1998). The process of globalization requires flexibility and advanced networking. In this environment, any place or locality can be grasped "conceptually as a meeting point, an intersection of activity spaces, relationships, influences and movements" (Nyíri, 1998). Instead of territoriality, the network of ties dominates as an essential element. This process generates a new kind of community existence, where physical distance is no longer an obstacle for communicators and new acquaintances can be made. "Every experience proves that persistent virtual activity goes hand in hand with committed real-life activity" (Nyíri, 1998). With the help of the Internet, new and lively communities can be created, which is of great importance in business life from the very beginning.

It is true, though, that the cohesive power of virtual communities is lower, since becoming a member of such a community usually means less commitment. It is an important experience that virtual network participation can strengthen internal community cohesion: on the one hand, through more direct connections between the wider world and local organizations, and on the other hand, through various knowledge that requires constant comparison. According to certain researches, in contrast to previous concerns, isolation is not typical among Internet users, and their political activity is also greater than that of other groups. The development of networking entails the development of participation (Nyíri, 1998).

However, it is important to note that network communication is not only an excellent tool for sharing knowledge and cooperation, but also for competition. The sharing of certain knowledge can be limited to a specific group of recipients, while other potential users can be excluded (Nyíri, 2005). In such cases, knowledge becomes a monopoly of the selected group, which is a natural part of business life.

Network of ties

The question arises, how can these new types of communication communities, which are significant from a business point of view, be interpreted according to our previous/more general knowledge of social networks?

The network of ideas (Nyíri, 2005) is not randomly distributed, just like the networks of human ties, or - consequently - the world of the Internet. Network researcher László Barabási-Albert (2002) identified three basic organizational patterns, of which the random one, where every node has an equal chance to connect with another node, is not found in a natural environment, as a naturally developing pattern, but only exists as a theoretical model. One of the naturally occurring patterns of organization is the centralized network: in this case, resources in any sense (e.g. information, money, power) are concentrated in a single, well-defined centre, and the

distribution or retention of resources is the "competence" of this node. If this centre becomes dysfunctional due to some external or internal factor, it leads to the collapse of the entire network. However, such networks occur less often in natural conditions than the so-called *decentralized networks*. It is most typical of a decentralized network that there are several smaller centres in the network that control the distribution (decentres). As a result of the peculiarities of the networks, if one of these centres fails, the neighbouring centre can take over its work. Such a network is highly resistant to both intentional destruction and accidental problems.

In the case of human relationship networks, it is noteworthy that natural relationship networks mostly function as decentralized networks, i.e. there are "popular" and less popular elements in the network (Barabási-Albert, 2002; Csermely, 2005). The distance between two "elements", i.e. persons, is remarkably small. A creative experiment by Milgram proved that the contact distance between any two people in the USA was approximately five, i.e. five people were needed for a letter from a randomly selected sender to reach a randomly selected recipient where the entire chain is connected by personal acquaintance. The network society has also had an impact on Milgram's number: the Internet has brought people closer to each other to such an extent that the average number of necessary connections has decreased to 4.6 according to the latest research, the citizens of what was originally called a rather "small world" have become even closer to each other (Nyíri, 2005).

In a study, Granovetter (1983) drew attention to the fact that certain types of problems are usually not solved with the help of the people closest to us, the so-called strong ties (close relatives and friends). This was a strange finding in the age when sociobiological ideas based on kin selection were highly emphasized in the social sciences. Granovetter's argument projected the functioning of the information-network- or knowledge society, and focused on the distribution and availability of the information necessary for problem solving. The people closest to us obviously live in the same social environment and typically have similar knowledge and resources as ourselves. If the goal is to find a new job or even establish a new business relationship, we do not necessarily make good use of this type of knowledge and resources. Instead, we rely on our so-called "weak social ties" (WST), or acquaintances. These relationships function as bridges connecting social networks characterized by different resources and knowledge. These bridges are of enormous importance not only from a social but also an economic point of view: *there is no business growth without the proper use of weak social ties*. Since they have a particularly important role in the field of work and business, more emphasis should be placed on those initiatives that are based on social media relying on weak ties in the recruitment and selection process.

Since then, Granovetter's theory has been subjected to thorough empirical testing by many people, including the author himself. The results can be applicable when implementing a new system of recruitment and selection. Granovetter's own research confirmed that in intellectual careers, among managers, and in the case of technical staff, weak ties had a greater role when looking for a new job (27.8%) than strong ties (16.7); 55.6% used a mixed strategy, i.e. they used both types of relationships. In another large sample study, 42.7% of 2,553 individuals used their personal connections to find a new job. In this case too, weak ties proved decisive (35.5%), strong ties were used by 15.8%. Weak ties came to the fore in intellectual careers and among office employees, but compared to managers, they still relied more strongly on strong ties.

However, people with a lower socioeconomic status – as in other life situations – rely more on their strong ties when looking for a job. Since strong ties provide the necessary resources to overcome personal crisis situations, these bonds play a greater role in all areas of life for these individuals. In addition, maintaining and nurturing weak social ties requires resources of a nature that disadvantaged groups generally do not have, or have only to a very limited extent (Granovetter, 1983).

Cognitive limitations, cognitive style

Nyíri discusses network personality and network individual, and argues that network communication, which replaced the separating-individualizing communication technology of the written text, created new forms of integration, a new kind of collectivity. The question may arise whether the opportunities created through the development of technology are not limited by the incomparably slower scale of biological evolution, i.e. is our cognitive development able to keep up with the new opportunities offered by multimedia technologies, especially the Internet?

Robin Dunbar (1997; 2002) dealt with this question in depth. According to Dunbar, the function of language itself as a communication channel is above all to maintain and shape social relationships. With the help of language as a means of regulating social relations, people could increase the circle of their acquaintances which they can handle well *simultaneously* to around 150-200 people ("our little village"). Although we are able to live in nation-states or, more recently, in megalopolises, according to Dunbar, due to our limitations resulting from our evolution, we cannot bring personal content into more relationships than this, even if this were theoretically possible. In the business world, where customers typically respond positively to the appropriate level of respectful personal tone in the context of highly regulated, role-based communication, this fact has its own significance.

Nyíri, taking into account the previously described decrease in Milgram's number, reckons that technological changes will result in rapid transformations in our relationship management communication patterns and loosen these cognitive limits to a certain extent, so the human brain responds with flexible adaptation to fundamental changes in the information communication environment (Nyíri, 2005). Furthermore, according to him, the hypertext structuring of multimedia is a much more natural form of organization for the human brain than the linearly organized, unidirectional written text that limits our thoughts, excludes simultaneity and is usually limited to only one visual channel. Nyíri associates the alienation and isolation of knowledge with the written text, while computers and networking are expected to overcome this isolation. Hypermediality, the linking of multimedia documents, is a much more natural form, though it is more unusual for older people.

Generational differences

Depending on their age and cognitive style, the organization's employees and customers may have very different attitudes towards newly introduced information communication technologies or changes in existing technologies. The following brief overview makes it clear that there are large differences that can be particularly challenging for software developers to manage.

Long before the large-scale changes brought about by the digital revolution, McLuhan predicted with considerable accuracy the transformations that can deepen the digital divide between generations today (Griffin, 2002).

The majority of employees in most workplaces belong to the so-called generation X: i.e. those born after 1962 but before 1979. In addition to the new requirements imposed by the digital revolution, they also had to adapt to the fundamental changes brought about by the change of regime in our country. The advantages of the generation X employees include accurate work, loyalty to the workplace, and they are also often characterized by respect for authority and adherence to safe and predictable frameworks. People born in the "Gutenberg galaxy" are usually successful in tasks that require a strong concentration, and it is not necessary to switch suddenly between individual tasks, but they can take the time they think is necessary for thorough work. These people generally prefer to get information from written text rather than images.

Generation Y (usually familiar with internet and multitasking, online generation) is the generation born after 1979. The use of modern information communication tools is not a challenge for them. Some of them have learnt the use of these tools in their childhood, so they are able to integrate the developments of information communication technologies into their work in a natural way, without any particular difficulties. However, this generation is not homogeneous: its members did not have an equal chance to access network and multimedia communication technologies.

The members of Generation Z (those born after the mid-1990s) will be employed within a few years: they already live most of their lives "always online", and these channels dominate their communication. Their communication, relationship-building and cognitive style also developed accordingly. In general, the members of the generations Y and Z prefer the visual modality and they are accustomed to using and consuming several information communication devices simultaneously – for the members of generation X this is a challenge that they cannot and usually do not want to meet. However, this kind of "multitasking" that requires divided attention – even if it is a normal situation for the person – usually leads to a decrease in performance in individual tasks.

Generations Y and Z need immediate access to information they consider relevant. They take speed and interactivity for granted, since the information communication environment they were socialized in essentially provided them with these.

It is clear that the generations emerging according to the pace of the digital revolution have different cognitive styles, their preferences are not the same when they have to judge the relevance of the knowledge needed to complete the task, their work styles and attitudes towards work and performance are also diverse. (Tari, 2010; 2011; Pálvölgyi, 2011). They have a different attitude to the renewal of an information communication system, and they can face dissimilar problems during its application.

Communication, trust and performance

In a study published in 2009, Thomas, Zolin and Hartmann point out that although the relationship between communication and trust has been investigated by many authors, researchers have generally not focused, until now, on components such as the correlation between the quality and quantity of information and the openness of the organization, as well as the development of employee involvement and performance. Communication related to performance measurement is a particularly

important area, because employees, on the basis of Lerner's "belief in a just world", shape their performance depending on the results of the evaluation. When performance is undervalued, employees tend to respond to this by reducing the quantity or quality of performance, depending on whether they work on an hourly or performance-based basis. If this kind of behavioural response is not possible, then they try cognitive rehabilitation and the formation of a different kind of attitude, which in turn deteriorates the ability to cooperate within the organization in the long term (Mikula, 1999).

Research examining the topic of trust has linked it with managerial and organizational effectiveness, performance, job satisfaction, commitment to the organization and cooperation. Trust increases social capital because it promotes the sharing of knowledge among employees. Communication is the way to build and maintain trust. In their theoretical model, the authors illustrate the relationship as follows (Table 1).

Trust develops in the course of the relationship and enables the parties to be accepting and cooperative even in risky situations. Employees will trust their supervisor if they believe that they can expect fair treatment, the employer provides them with the opportunities for professional development, they have access to tools and resources for efficient work and they can also count on proper management. If the employees' trust is shaken, they will concentrate on "defending" themselves – i.e. investing valuable time and energy in that, or wasting, from the company's point of view – identifying possible points of attack, questioning the boss's instructions. In the last case, they can even be forced to look for another job.

Table 1. The Central Role of Communication in Developing Trust and Its Effect on Employee Involvement

Quality of information	→	TRUST	→	ORGANIZATIONAL OPENNESS	→	EMPLOYEE INVOLVEMENT
Enough information	→					

Source: Thomas, Zolin and Hartman, 2009.

Trust is based on the impressions that emerge and are reshaped again and again during communication with the other. *The quantity and quality of information* can be crucial. Quality can be defined as accuracy, timeliness and relevance. Such information reduces uncertainty. The amount of information is a more difficult issue, the literature on this topic is diverse. However, according to recent research, the amount of information that reduces uncertainty also increases trust. In their empirical investigation, Thomas and his colleagues found that the quality of information is of great importance horizontally, i.e. creating an atmosphere of trust in relationships between colleagues. The quantity and quality of information are both significant factors for superiors and management.

The ability to communicate openly within the organization is important because it protects against the so-called "collective dumbing down" (Janis, cit. Griffin, 2002). In the case of collective dumbing down, in a highly censored work environment, no one dares to confront the stereotypical opinion that is considered

official or approved by the majority, regardless of whether it is based on mere beliefs or real facts and whether it leads to the development or the decline and destruction of the organization.

Openness can be increased by using advanced information communication technologies, since a lot of relevant information can be shared with colleagues with a high degree of efficiency. As a result, commitment to decisions based on such information increases. Because the information is retrievable and the system is structured, performance evaluation is much more accurate. Thus, it can be observed in all areas that employees rely less on beliefs and opinions, and this favours the introduction of evidence-based management (more on this in the next section discussing the development of CRM).

CRM systems

In modern business life, CRM has become an integrated, sophisticated and highly informative software-based business tool that is used by most organizations as a basis for strategic planning (Glibkowski et al., 2011). The creation and rapid development of CRM systems was based on the fact, which was discovered relatively early on, that with the systematic and efficient management of sales relationships, a company using a modern CRM can gain a significant competitive advantage over other market participants. Although there are systems for small and medium-sized enterprises, CRM systems have not yet been generally implemented at these levels (Leavitt, 2010, cit. Glibkowski et al., 2011).

The three main pillars of CRM are people, strategy and technology. Technology alone is not enough for success: according to the data of an evaluation study, it accounts for only 20% of business success. The rest depends on strategy and human resources (Goldenberg, 2008; Glibkowski et al., 2011). Consequently, for the sake of a successful CRM application, the correlations of these three factors must be prioritized during planning and modelling. Thus, a modern application helps the user employees to clearly see and constantly keep in mind the company's strategic aspects and takes into account the needs and competencies of the available human resources, i.e. the users (Glibkowski et al., 2011).

The modern applications thus not only facilitate the management of customer relations, but also contain general and innovative procedures related to recruitment and selection processes (e.g. ones applicable on the basis of human information technology), and also incorporate a management information system that offers a variety of options. CRM, as it enables the sharing of knowledge and accurate, relevant, adequate information, supports and encourages teamwork within the company. Automated processes can be incorporated to prevent customer service staff and the entire business from the annoyance and damage of forgotten tasks, as well as help to make further sales to existing customers. One of the most important requirements for CRM systems is the protection and security of data in every possible ways. The follow-up and related performance evaluation becomes more reliable and transparent.

In terms of managing customer relationships, CRM offers many options: it allows the registration of customers according to various aspects, provides the optimal algorithm for contacting and prepares offers/contracts. Documents and presentation materials used in sales can be easily stored, recalled, modified and forwarded. The CRM helps to track orders and measure satisfaction (e.g. by editing and automatically evaluating questionnaires). CRM can be used to request offers from

partner companies, and orders and requests for offers can be accurately tracked (Figure 1).

Figure 1. Cost-effective CRM applications



Source: <http://www.phoenixonesales.com/crmandyou.html>

In this diagram above, showing the operation of the CRM system, you can see the most important areas and functions of the application: customer service management; marketing automation; sales automation; management relationships; reporting and analytics; work processes; and customer service (contact, scheduling). Below the figure, the English caption aptly describes the CRM philosophy: "Close the gap with your customers – expand the gap with your competitors."

The practice of human resource management is a key factor in the success of CRM. The planning of the strategy and the implementation of the individual steps are the responsibility of the employees. One of the applications proven in practice is CRM 3.00. Based on previous research, its developers (Gliblowski et al., 2011) identified the most important factors of successful human resource management.

CRM applications allow employees to receive constructive feedback that encourages performance without feeling threatened. One of the special features of CRM 3 is that it also orients salespeople towards teamwork and innovation in performance evaluation. On the one hand, it uses traditional performance measures (how many deals are successfully concluded, what value of orders the company gets), but on the other hand, it introduces new aspects, e.g. which salesperson has measurably successfully contributed to the *further development* of the sales process. With the extension of applications, CRM thus becomes an important tool for knowledge management, where shared knowledge benefits the entire organization.

During job analysis and planning, we strive for an objective review of the work process, as a result of which we can even redesign individual jobs. The three most important areas are: recruitment and selection (selecting the most suitable candidate for the job); management of employee performance (is the employee

effective in his role?), as well as employee training and development (knowledge, skills, abilities).

Prior to the introduction of training and development programs, the company consciously plans how to develop knowledge, skills and abilities in connection with the jobs. CRM can help to define the target areas of training/development more precisely, because it can be used, for example, to clearly identify individual phases of the sales process and it becomes clear in which areas the sales staff have blockages and deficiencies.

Recruitment and selection; the acquisition of suitable human resources and the employment of individual persons in the most suitable positions are the basis of the success of the enterprise. A modern CRM application is suitable for receiving the registration of future employees, uploading CVs, storing the candidate's detailed data, receiving any type of document, and promotes the safe handling of these data (data protection, protection against data loss). On the employer's side, job advertisements and applications can be published, searches can be run, and the application process can be managed. A special, new option in recruitment is the connection with social media (e.g. publishing job advertisements among Facebook users). The CRM algorithm helps with the selection, the organization of interviews, the appointment with the future employee, the sending of notifications and the recording of results.

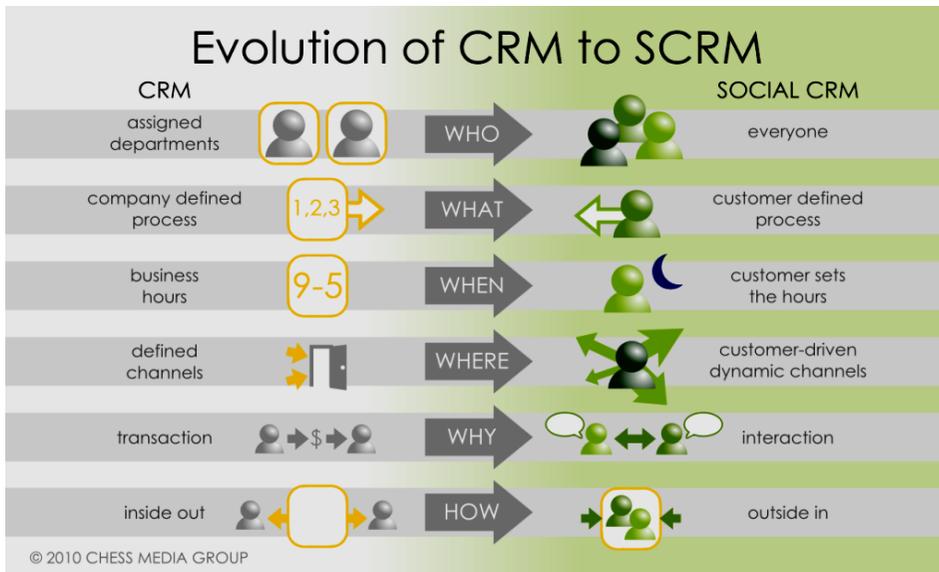
In addition, it is also important that the application of CRM makes it clearer exactly what work processes the future employees must perform, what expectations they must meet and how their performance will be evaluated. Clear frameworks and correct information, as we saw in the previous analysis, create trust, and this trust makes the organization attractive to the best and most suitable candidates, thus ensuring the company's competitive advantage.

Social CRM (SCRM)

Communication on the Internet is almost free, instant and often anonymous. Anonymity and other characteristics of the communication medium (e.g. the lack of nonverbal communication feedback that affects the closeness of the relationship; the almost complete absence of censorship) together create a disinhibition effect. Due to the disinhibition effect and the fact that with the help of this medium, any communication can be realized quickly and cheaply, the message can be delivered to larger groups, even masses, and the participants can very quickly organize a community based on common interests, we can hardly underestimate the importance of the Internet in shaping customer relations, and indirectly in creating and preserving competitiveness. The Internet is the source of a mass of constructive and destructive criticism, a medium on which prospective customers will be informed. The inquiring customers do not always take into account in their interpretation that a dissatisfied, frustrated, angry customer is much more willing to publish his opinion than the one who did not have a problem with the product or service. (http://www.consumeraffairs.com/computers/dell_svc.html) Obviously, criticism from customers can cause serious damage to a business in the short term. It cannot be avoided, but the company can also treat them as valuable sources of feedback. Most of the errors described above could possibly be eliminated with a well-functioning CRM and the general development of customer service (elimination of stuck or duplicate orders; customizable solutions instead of fully automated sales processes, etc.), although there will always be dissatisfied customers. In addition to negative reviews, there is also a good number of positive feedback on the Internet, which can

orient former or future customers and partners. However, the relatively frequent negative or positive criticism is only one of the factors that make the business pay serious attention to social media.

Figure 2. Evolution of CRM to SCRM system



Source: <http://thesocialcustomer.com/leighdow/36230/what-social-crm>

The business can benefit from the community organizing potential of the Internet. The transformation of the CRM system into SCRM provides a suitable technological background for this important strategic endeavour. SCRM is social CRM. Here we must interpret the term "social" in the same way as in the case of "social media" (Twitter, Facebook, etc.).

In the figure above, we can observe what this development includes: while in CRM the relationship is limited to specific departments, in SCRM everyone becomes a potential participant (Figure 2).

CRM processes are defined by the company, while SCRM processes are mostly defined by the customer. In the case of CRM, the time of contact is decided on the basis of the company's opening hours, while with the application of SCRM, customers set the time that is convenient for them. In CRM, the communication channels are fixed and limited, in the case of SCRM, the customer's decision and preference is the guiding principle. CRM is based on transaction (transmission of predetermined content and goals), SCRM is based on interaction (content and goals are defined during the dialogue, through the joint activity of the parties). CRM moves from the inside out, SCRM reverses this direction and lets the relationship be initiated from the outside.

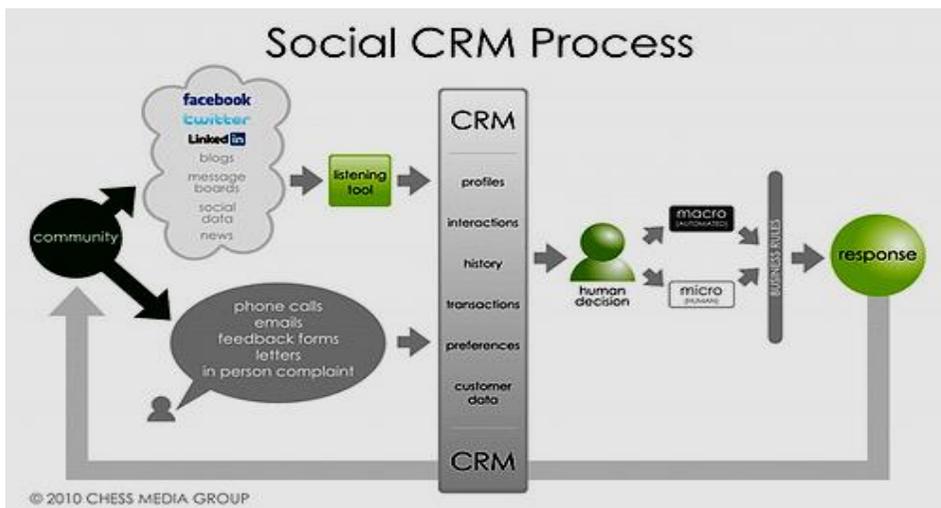
Social media is one of the most suitable spaces for establishing and nurturing the "weak social ties" discussed in the introduction, and for expanding the network of relationships. According to one of the experts in the field, Greenberg, the essence of SCRM is as follows: "(the system) is designed to involve the customer in a

conversation based on cooperation, so that in this way mutual benefits and values are created in a trusting and transparent business environment. This is how the business responds to the fact that the customer owns the relationship" (Greenberg, cit. Dow, 2011). According to another definition, SCRM offers tools and implements processes through which communication with customers becomes more effective, the collective wisdom of the wider community of customers is used, and the relationship between the organization and customers becomes more intimate. In essence, a public ecosystem is being built, where the clients' goals and the way in which they interact with the various organizational units can be more clearly understood. Simplifying these approaches, Dow emphasizes that SCRM enables us to engage with customers in a competent manner through the channel of their choice. Control is a highly respected central value of modern and late modern societies (Deetz, 1972). SCRM partially transfers control to the customer and thereby attains their cooperation. However, this does not at all mean that contact is not regulated and that the customer has total control over the process.

However, in order for SCRM to become a truly effective tool for development, we should have a strategy for how we want to interact with customers and how to integrate the existing CRM application with social media. The persons suitable for operating the system and the exact framework of the activity, as well as the possible processes and channels must be determined. It is advisable to adapt to the customer's choice in this matter. The application of SCRM requires both controlled processes and spontaneity of dialogue. The automation of CRM application often works against the latter. When joining the online dialogue, the goal of the employee in contact with the customers is to gradually take control of the conversation: from the initial observer to become an increasingly active member of the conversation, contributing to the process with a lot of relevant and well-timed information.

In a well-designed SCRM system, it is essential to evaluate the interactions: what is the cost of each form of contact: phone, e-mail, web, social media, and, compared to this, what is the benefit of these contacts for the business?

Figure 3. The SCRM process



Source: <http://thesocialcustomer.com/leighdow/36230/what-social-crm>

In summary, social CRM is a new opportunity that takes into account the impact of communication technology on the development of social relations. In addition to enhancing customer relations, its application creates favourable opportunities for young employees in the field of recruitment and selection (Dow, 2011). Customer feedback via social media can significantly influence sales performance. SCRМ enables sales staff and customers to become a community who, keeping each other's interests in mind and communicating more effectively, enter into a mutually beneficial, long-term business relationship.

Summary

Overall, the introduction of an effective CRM system can be one of the most important innovations for an organization in the current economic and social environment. A CRM application is much more than a system for automating certain work processes and storing information. A properly designed application integrates organizational strategy, human resources and technology into a single system in such a way that the resulting system inspires the entire enterprise to continuously innovate and increase performance. CRM can therefore be used for strategic planning and continuous innovation. Through info-communication development, the efficiency of communication improves, as well as the quality and quantity of information that can be shared, and the social capital of the enterprise grows. With the increase of trust and fairer (evidence-based) evaluation of employee performance, employee engagement and performance improve.

Community CRM helps the organization to integrate into the modern network society, offers new contact opportunities with partners, customers and future employees, and promotes the nurturing and development of existing relationships. With the application of community CRM (SCRМ), the services provided by the company and the quality of the products sold can be continuously improved, the difficulties arising from possible negative feedback can be creatively turned into development opportunities by the employees. A well-organized online community of the organization, customers, partners and potential employees can generate immediate and significant improvement for the business. The introduction of a modern CRM, as a basic information communication innovation of the 21st century, brings sustainable competitive advantages to the company.

References

Barabási, Albert-László, *Linked: How Everything Is Connected to Everything Else and What it Means for Business, Science, and Everyday Life*, 2002. Cambridge MA: Perseus Publishing

Bateson, G. (1972): *Steps to an Ecology of Mind: Collected Essays in Anthropology, Psychiatry, Evolution, and Epistemology*. Chicago: University of Chicago Press.

Bizonyítékokon alapuló menedzsment. www.evidence-basedmanagement.com

Csermely, P. (2005): A rejtett hálózatok ereje. Hogyan stabilizálják a gyenge kapcsolatok a világot? *Természet Világa* 4. 146-150.

Deetz, Stanley A. (1992): *Democracy in an Age of Corporate Colonization*. New York: State University of New York Press.

Dell customer complaints.

http://www.consumeraffairs.com/computers/dell_svc.html.

Dow, L. (2011): *The Social Customer*.

<http://thesocialcustomer.com/leighdow/36230/what-social-crm>

Dunbar, R (2002): Vannak-e kognitív korlátai az e-világnak? In: Nyíri, K. (szerk.): *Mobilközösség, mobilmegismerés. Tanulmányok*. MTA Filozófiai Kutatóintézete. Budapest. 55-66.

Dunbar, R. (1997): *Grooming, Gossip, and the Evolution of Language*. Cambridge University Press, Cambridge.

Glibkowski, B.j., Paul Quaranto, Jr., James J. Gillespie, Lee P. McGinnis (2011): *CRM 3.0 The bridge to the future of customer relations*. Technical Report | © Copyright 2011, Semplar

<http://semplar.com/Documents/CRM%203%200%20-%20Technical%20Report.pdf>

Granovetter, M. (1983): The strength of weak ties. A network theory revisited. *Sociological Theory*, Vol. 1. 201-233. <https://doi.org/10.2307/202051>

Griffin, E.(2001): *Bevezetés a kommunikációelméletbe*. Harmat, Budapest.

Horányi, Ö. (2007): A kommunikáció participációra alapozott felfogásáról. In: Horányi, Ö. (szerk.) *A kommunikáció mint participáció*. Budapest: AKTI-Typotex. 246-264.

Hogard, E. (2007): Using Consultative Methods to Investigate Professional Client Interaction as an Aspect of Process Evaluation. *American Journal of Evaluation*, 28 304-317. <https://doi.org/10.1177/1098214007304741>

Lyotard J. F. (1984): *The Post-Modern Condition: A Report on Knowledge* Manchester: Manchester University Press.

Mikula, Gerald (1999): Social psychology of social justice. A review. Keynote address. 5th. Alps-Adria Psychology Conference. Pécs

Nyíri, K (2005): *The Networked Mind*. Talk given at the workshop THE MEDIATED MIND – RETHINKING REPRESENTATION, May 27–28, 2005, The London Knowledge Lab, Institute of Education, University of London.

http://www.hunfi.hu/nyiri/Nyiri_Networked_Mind_London_2005.pdf

Nyíri, K. (1994): Hálózat és tudásegész. Előadás, elhangzott a Networking in the Humanities c. konferencián (Elvetham Hall, Hampshire, Egyesült Királyság, 1994. ápr. 13-16). The Hungarian translation was published in „A század szellemi körképe” (Pécs: Jelenkor Kiadó, 1995).

Nyíri, K. (1998): Globális társadalom és lokális kultúra a hálózottság korában. Az Evangelische Akademie Tutzing által 1998. márc. 20. és 22. között Rothenburg o.d.Tauber-ban rendezett *Testestül-lelkestül hálózza: A kommunikációs technológiák nyújtotta új tapasztalatok* ("Leibhaft vernetzt: Neue Erfahrungen mit Kommunikationstechnologien") című konferencián tartott előadás szövege. <http://www.hunfi.hu/nyiri/tutzinghn.htm>

Nyíri, K. (1999): Castells: the Information Age. Könyvismertetés. http://www.hunfi.hu/nyiri/cast_hn.htm

Pálvölgyi, Á (2011): Y (Z, Zs) generáció (Kézirat, Pécsi Tudományegyetem)

Stewart, T (2001): *Wealth of Knowledge*. Doubleday, New York, NY, 379 p.

Tari, A (2010): *Y generáció*. Budapest: Jaffa Kiadó

Tari, A (2011): *Z generáció*. Budapest: Jaffa Kiadó

Thomas, G. F., Zolin, R., Hartman, J. L. (2009): The Central Role of Communication in Developing Trust and Its Effect on Employee Involvement. *Journal of Business Communication*. 46: 3. 286-310. <https://doi.org/10.1177/0021943609333522>

Willis, A. (2005): Corporate governance and management of information and record. *Records Management Journal*. Vol 15:2. 86-97. <https://doi.org/10.1108/09565690510614238>

VÁLLALATI INFOKOMMUNIKÁCIÓ ÉS CRM RENDSZEREK TERVEZÉSÉNEK ÉS MŰKÖDTETÉSÉNEK AKTUÁLIS JELLEGZETESSÉGEI

FÁBIÁN HENRIETTE – JUHÁSZ GÁBOR

Egy korszerű, modern vállalati infokommunikációs rendszer kialakítása egy olyan integrált rendszer létrehozását jelenti, amelyben az információ gyakorlatilag egyetlen hálózaton belül terjed. Ennek a legfőbb előnye az, hogy kevesebb az információvesztés és a kommunikációs zaj, valamint a szisztéma működtetése is költséghatékonyabb. Amennyiben hiányosak, elavultak a vállalatok által alkalmazott infokommunikációs technológiák, nagyobb az esélye, hogy úgynevezett kommunikációs zaj keletkezik, vagyis nehezebbé, körülményesebbé válik a kommunikáció, az üzenetek eljuttatása, a megértés a kommunikáló felek között.

A kilencvenes évek végére létrejött egy virtuális térben működő, úgynevezett hálózati társadalom, amelynek egyik alapvető jellemzője az, hogy viszonylag könnyen és gyorsan formálódó kisebb csoportok folyamatos információcseréje zajlik. Ennek a hálózati társadalomnak a tagjai javarészt az úgynevezett Z generáció (az 1990-es évek közepe után születettek) tagjai közül kerülnek ki. Ezt a generációt többek között az jellemzi, hogy idejük nagy részét online kommunikációval töltik, ennek megfelelően kommunikációs, kapcsolatépítő és kognitív stílusuk is ennek megfelelően alakul.

Az évszázadok óta használt írott szöveg technikáját mára gyakorlatilag lecserélte a hálózatos kommunikáció, amely újfajta kollektivitást teremt. Az írott és beszélt nyelv lineáris szerveződése miatt csak egy kisebb csoporttal való személyes kapcsolattartást tesz lehetővé - így egy bizonyos elszigeteltséget eredményez. A multimédia hálózatos szerveződése az emberi agy számára sokkal természetesebb szerveződési formának tűnik, lehetővé teszi, hogy az emberek nagyobb létszámú személlyel tartsanak kapcsolatot, amelyek azonban szerepalapúak, kevésbé személyesek - ezek azonban azok a „gyenge” kapcsolatok, amelyeket munkakereséskor, üzletkötéskor szeretünk használni. Várható tehát, hogy a technológiai változások gyors átalakulásokat eredményeznek a kapcsolatkezelő kommunikációs mintázatainkban, szélesebb körű kapcsolati háló kialakítását teszik lehetővé.

Kulcsszavak: vállalati infokommunikációs rendszer, hálózati társadalom, hálózatos kommunikáció, virtuális közösségek, kapcsolati hálózatok, tudásmenedzsment, közösségi CRM