Abstract: - With the advances in technology and the globalization of markets, the need for preservation and management of knowledge about clients, their needs and requirements is increasingly becoming a key to the successful development of a company. Various Customers Relationships Management (CRM) solutions are available on the market, however not always these products match the real needs of companies. In Bulgaria, small and medium companies (SMEs) require a CRM solution that is more flexible and easily adaptable to their demands than those provided by the world CRM leaders. They need a customized solution which offers opportunity for integration with the existing systems in their company and is at an affordable price. The paper presents a web-based CRM system that could be accessible from anywhere at any time and follows a number of security standards in order to ensure reliable access to information. At the same time, it can easily be adapted to the specific customer requirements in Bulgaria.

Key-Words: - CRM, web platform, SME

1 Introduction
In the last decades innovation and knowledge creation became important vehicles for economy and society worldwide. The subsequent development of a large variety of new products and services has resulted in better meeting customers’ demands. The increased complexity of business processes and business relations and the need for better use and preservation of available knowledge has resulted in the emergence of a new scientific discipline – knowledge management [6]. It supports organizations in better shaping their knowledge strategies and gaining maximum benefits of their internal and external knowledge. Here, customers take an important place, and each company is taking measures to better serve its customers, preserve them and attract new ones. At the same time, knowledge coming from customers, and more generally, from the crowd, is often used in an open innovation process. It is not surprising, therefore, that Customers Relationships Management (CRM) has become an important tool for effective and efficient management and better utilization of knowledge about and from customers. The key objective of each business is to identify customers’ needs, and develop fast new products accordingly, and thus, gain competitive benefits. The CRM is helping to ensure better communication with customers, better targeting specific groups, creating loyalty, and making timely decisions for meeting clients’ needs and future requirements [1].

In Bulgaria, CRM systems are still not widely used in companies, however, the market growth and global customers raise the need for automation of relations with the clients [4]. Although a big variety of CRM systems are offered worldwide, most of them are suitable for larger companies due to their high price. On Bulgarian market, are offered customized solutions of well-known CRM systems, however, still at very high price. Subsequently, many software developers are offering own CRM-type solutions providing in particular to small and medium companies (SMEs) the necessary CRM functionality at lower price.

This paper aims at presenting a CRM system which was developed according to the needs of Bulgarian SMEs [1]. It meets the customers’ criteria for functionality, interoperability with the available systems, and easy data migration and adaptation to the specific company activities. The paper provides in the beginning insight into CRM systems, and afterwards, presents the system developed for meeting Bulgarian market needs.
2 CRM systems

A large variety of Enterprise systems were developed recently with the aim to support business processes across any functional boundaries that exist within organizations, as well as to use web technology to integrate the internal information and that coming from external stakeholders such as customers, suppliers and partners [5].

CRM is a type of enterprise system that covers the whole process by which relationships with customers are built and maintained. It is designed to integrate the range of information technologies that contain information regarding the customer, e.g. customer details and preferences, sales order processing and sales force automation, etc. [5]. The overall objective for using CRM systems is to acquire customers, retain them and increase customers’ involvement with the organization.

CRM systems support the whole life-cycle of the work with customers – from gaining new clients, adding value to them and preserving them (Fig. 1) [1]:

![CRM life-cycle](image)

Common applications integrated in a CRM system include [5]:

- **Customer data collection.** Include personal details (e.g. age, sex and contact address), a record of purchase transactions undertaken (incl. location, date, time, quantity and price). This information can be used by call centre staff to improve and tailor their services to individual customers.

- **Customer data analysis.** The captured data allow the categorization and targeting of customers according to criteria set by the firm. This information can be used to improve the effectiveness of marketing campaigns.

- **Sales force automation.** The entire sales cycle from lead generation to close of sale and after-sales service can be facilitated using CRM.

2.1 CRM functions

The functions of CRM systems could be classified as operative, analytical and interactive (Fig. 2). Part of the functions is included in most CRM solutions, while some – only in more specialized systems [1].

![CRM systems’ functions](image)

**Operative functions** are found in almost all CRM solutions. They comprise the main modules that provide companies automated tools for managing trade and sales, marketing and services or products’ maintenance.

- **Trade and Sales Module** includes the management of contacts and potential clients, storage of the relevant information concerning them, management of the information of already existing clients, their orders and purchases, and integration with other sources of information about clients. It also allows tracking and analysis of the company sales via sales pipeline, graphics, statistics, forecasts on the trade cycle, as well as extraction of various inquiries.

- **Marketing Module** includes provision of different marketing analysis and questionnaires, competition tracking, supports the development, planning and management of marketing campaigns, the preparation of prognosis, assignment of personalized campaigns, tracking of the budget, as well as management of offers and price determination, processing of orders and contracts.

- **Maintenance and customer service Module** is targeted at tracking of the attendance to current/potential customers, of the detected defects, management of clients’ demands and potential problem escalations. It provides also information for generally encountered problems and procedures and their resolution, as well as support to communication portal related to clients’ demands.

**Analytical functionalities** are offered, generally, only in more advanced CRM systems utilized in larger companies due to their higher price.

- **Specialized analyses Module** includes dashboards, scorecards, clients’ data analyses, segmentation upon different criteria, sales analyses of
certain products or services, prognosis based on the analyses and research made.

- **Business Intelligence (BI) tools** include data warehouse, data mining, real-time analysis, as well as combination of BI and analytical tools.

Interactive capabilities can also be found only in some CRM systems. They include special channels for communication and interaction with clients, so that they can take an active part in the communication process by making suggestions, and thus indirectly influencing the ongoing processes within the company. The interactive functionalities include feedback and client interaction systems, web sites and portals, e-mails, call centers, etc.

The synergy of all these modules into a single CRM system allows for the following possibilities [1]:
1. Identifying the company’s most important clients and developing the most accurate approach for keeping them, as well as finding potential clients and defining the correct strategy for winning them over via appropriate marketing campaigns.
2. Improvement of client and sales data management by maintaining a unified database, accessible by multiple employees and allowing them to work with the same customer, without the need of unnecessary internal communication concerning previous interactions with the given customer.
3. Possibility of developing an individual approach to clients aimed at increasing their satisfaction, and thus, company profits.

### 2.2 Types of CRM systems

Generally, CRM solutions fall within one of the following categories [2]:

- **Integrated Business CRM Systems** – This is a single integrated solution comprising both the front-office and back-office operations of the company. This CRM software includes management of sales, marketing, customer service and maintenance and it consolidates the repeating processes. With this type of CRM systems all employees from sales, marketing, customer service and maintenance departments gain access to a unified database with current client information, which facilitates building strong beneficial relationships with clients.

- **Hosting CRM systems** – This is simple, easy to adopt and affordable CRM solution. The hardware and software components are bought, installed, tested and maintained from an external supplier. The whole client database is also stored and managed externally. Generally, these are web-based solutions appropriate for companies lacking own infrastructure and looking for a fast solution. In order to access the CRM system and its functionality they need only a web-browser.

Such CRM systems provide a good solution for companies oriented towards e-commerce.

- **CRM systems with own installation** – The CRM software is installed in the organization units and is maintained by its own employees. Internal staff is responsible for data storage, installation of hardware and software components, integration of new solution with the existent technologies. Systematic administration, version updates, as well as routine maintenance of the system is performed in-house.

- **Mobile CRM systems** are completely functional solutions, which allow employees access to the system at a distance. The mobile software is accessible through mobile phones, Blackberry devices, palm computers, and other devices via Internet. Mobile CRM users may download and revise client information, track orders and employees progress, as if they were at the office.

CRM systems may be also classified as **global**, oriented towards the global market or **local**, oriented towards the local market; and as systems targeted at larger companies, normally more expensive, or systems oriented towards SMEs, usually offered at lower price. Some CRM suppliers offer systems with a monthly or annual subscription, while others determine the price according to the number of users.

CRM systems may also be classified as **open or closed** code technologies. The first ones are provided usually free with lowered functionality, which can be extended upon payment.

Another categorization of CRM systems is based on their orientation – **horizontal or vertical**. The horizontal ones offer general solutions, which respond to the needs of companies from different industries, whereas the vertical ones normally provide specialized solutions for firms in a given sector (e.g. niche suppliers of CRM systems).

In general, the different types of CRM solutions may be very useful for one company, but not so much for another, depending on its particular needs. Therefore, each company should individually assess which CRM software is most appropriate for its specific needs.

### 3 CRM system concept

#### 3.1 System description

Omeks CRM is a system that aims to facilitate the management of relationship with clients by automating processes associated with these activities. The system is designed to meet the needs of SMEs in Bulgaria, responding to the peculiarities of the local market. Therefore, Omeks CRM is designed as a platform, where various subsystems can be easily integrated. Some basic concepts of the CRM system are:
Accessibility - Be accessible from any computer with Web Browser without having to install additional software. The only condition is the availability of network connectivity and login rights.

Adaptability - The functionality is not fixed. The system allows to change functionality, screens, reports and data. This would allow organizations to quickly adapt the product according to the characteristics of their business and to add functionality beyond the scope of the system.

Security - The CRM system is based on a number of industrial safety standards which ensures information protection from unauthorized access.

The core functionality of Omeks CRM is organized around the management and conservation of records of present and potential customers. For each client a set of data is stored (addresses, contacts, products and services, etc.). The system offers tools for monitoring of events occurring during the operation of the contracting parties, leading to information accumulation that can subsequently be used to analyze the processes in the organization and planning. The tasks that realize the targets set to the system are classified into three main modules - Sales, Marketing and Support, offering various options to facilitate and optimize the processes for managing relationships with the customers.

3.2. Development a CRM system for Bulgarian market

Omeks CRM is developed as a web-based system in order to satisfy the requirements of accessibility, adaptability and security. The technology chosen for the development of the system is .NET framework, due to its flexibility and various possibilities for design of a rich user-friendly interface. The user interface of the system is built around the following conceptions:

The main advantage of the CRM system concerning adaptability is achieved through the creation of a mechanism for configuring and starting of mini-workflow processes (called TASKS), completing certain activities. A task consists of one or more steps, which the user has to pass in order to complete the activity. Every step may be associated with a VIEW. The view defines what the user sees on the screen when he/she reaches the given step. Upon the initiation of a certain task, the screen shows the view of the first step of the task. From every step a given amount of transitions could be made towards other steps. These transitions are depicted on the user’s screen as buttons. Depending on the button the user clicks on, the transition is made to another step and the screen shows the view of that step. When the last step is completed the task ends (Fig. 3).

Each task has a descriptive name and a unique identifier. The tasks are started from a so-called box of tasks, into which the user has to write the name and the unique identifier of the task in order to start its completion.

![Fig. 3 Task implementation scheme, source [1]](image)

The main tasks that the CRM system performs are related with the possibility of reviewing, modifying and processing of data of the main subjects of the system – Clients, Potential Clients and Contacts.

The possibility of automation of activities, which Omeks CRM offers, could be generally categorized into the following areas:

- **Client and contact management** – This functionality includes creation and work with an unlimited number of clients (firms) and contacts (individuals), the possibility for classification of clients and contacts, work separately or as a whole.
- **Sales management** – This module offers the ability to define products and services offered to the clients, a tracking system for the sold number of products/services to each individual client, the status of the sale itself and the client’s payment status. The Sales Module also includes the possibility to follow-through the development of transactions with clients, by defining the steps, which every transaction must pass.
- **Maintenance management** – This module supports automating the maintenance activities by creating cases (case management) manually by a user or automatically through an e-mail to a given address. The cases have to be directed to a team that responds to a certain client. E-mail notification/ information board, escalation and classification of cases is maintained.
- **Marketing** – This functionality offers the possibility for clients segmentation according to different characteristics (industry, type, sources, customer fields), as well as for launching and managing marketing campaigns.
Omeks CRM offers the functionality to create tabular references in 5 different formats (XLS, CSV, PDF, TIFF, RTF) directly from the web browser.

Administration – The CRM system has an operating access control based on users and roles. Control can be maintained over the access to functionalities, to types and fields of objects. Each role can have a separate web page, which offers functionalities and data specific to the given role.

Other functionalities – Omeks CRM has built-in abilities to track e-mail billing directly from the setting of the web browser (e-mail client), to manage documents (upload, download), to define filters for all types of objects, to group objects into lists, to manage accounts (timesheet), to import data from text files, to export data to Excel, to integrate with Asterisk-based phone exchanges, and to adapt client-specific functionalities (references, screens, algorithms).

3.3. Main results of CRM system implementation

The Omeks CRM system was implemented within a Bulgarian software company whose main function is consultant services. Significant improvement in the employees’ performance and a process optimization were achieved with the introduction of the new system in the company:

First, the previous clients’ data fragmentation was improved by creating a single source of clients’ information, and subsequently, the additional communication among employees was no more needed. Second, associating relationships to a specific customer with a team stimulated greater responsibilities and resulted in better serving the clients. In addition, the separation of work amongst teams and the role-based division of access to information, ensured isolation of data, on the one side, and filtering of information, on the other side, so that every employee was able to work only on the essential for his work data.

Third, the availability of notifications in incident cases made the communication among employees and the announcement in the case of uprising events much easier.

Finally, the system facilitated enquiries among customers about their satisfaction from company services. The possibility to analyze customers’ feedback, as well as monitor the productivity of employees, resulted in availability of more precise management information for company performance and meeting its business goals. Subsequently, an improvement of decision making process was achieved.

4 Conclusion

In present-day economic reality the proper customer relationship of organizations and adequate knowledge of market trends and customers’ demands become essential for competitiveness and growth of each company. The ability of the organization to adapt its policy to the particular needs of its clients results in improvement of its image. Subsequently, CRM gained high popularity and utilization as this technology provides the necessary tools to monitor individual clients and their demands, analyze own and competitors’ performance and market behavior. However, the CRM solution should be chosen to meet the particular company needs and support its specific business processes. The successful application of any CRM system requires strong leadership involvement and targeted training of employees at all levels, as well as follow-up support.

The CRM solution described in this paper supports most of the functions of large CRM solutions (like those of Oracle and SAP), however, meets much better local SMEs’ needs and provides a good balance of performance and price. To sum up, the practical implementation of CRM could bring the following advantages for the organization:

• Higher productivity of employees
• Better tracking of marketing campaigns and the related profits
• More effectively winning new clients
• Faster and more efficiently serving customers and solving their problems.

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