

# A model for establishing and developing relationships with visitors of the Kopački rit Nature Park based on mobile technologies

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# A MODEL FOR ESTABLISHING AND DEVELOPING RELATIONSHIPS WITH VISITORS OF THE KOPAČKI RIT NATURE PARK BASED ON MOBILE TECHNOLOGIES

## ABSTRACT

Kopački rit as a nature park is a great tourist attractor in northeastern Croatia. Its flora and fauna used to attract people for economic reasons, whereas today people mostly visit it for educational and tourism purposes. Visitor loyalty is increasingly important in tourism development today. One-time visitors cannot be the basis of tourist demand. Such guests often visit a particular destination motivated by global political trends, and not by the need to visit the destination itself. For example, the increased number of guests in Croatia in the past few years is a result of political events in Greece and North Africa. Once the political situation in their primary choice is stabilised, such guests will be lost. Therefore, among many guests of Kopački rit one must recognise those, for whom it was their primary destination, and establish a relationship with them. To achieve a targeted tourist offer, the Nature Park must implement relationship marketing by means of Customer Relationship Management (CRM). The aim of this research is to explore and define an optimum model of the CRM system that would offer a long-term solution to the problem of customer relationship development with visitors to Kopački rit. The research will be carried out deductively, and the methods used to realize the research aim are to be systematic analysis, causal reasoning, descriptive modelling, and logical experiment. The result is a framework model of a marketing database and a descriptive conceptual model of the CRM system for Kopački rit, both of which will use the potentials of mobile and information and communication technologies.

**Keywords:** Kopački rit Nature Park, tourism, marketing, relationship marketing, CRM, mobile phone devices

## 1. Introduction

The Nature Park Kopački rit is a non-profit organisation whose primary task is managing one of the biggest ornithological reserves in Europe. In addition, it is well known for its flora and fauna diversity, especially the species characteristic for the marshland ecosystem. It is not surprising that Kopački rit used to be exploited in the past like any other piece of land or forest, whereas today it draws visitors from all around the world. As a protected area with unique features, the Nature Park Kopački rit is a significant tourist attractor.

At the current tourism development level in the Nature Park Kopački rit, the majority of visitors are organised groups that come by buses to the Nature Park and take a standard tour through the Park, which generally includes a short presentation of the Nature Park in the admission centre, a boat tour across the largest lake in the Nature Park, a Tikveš Castle tour, as well as a walk along the educational trail in the forest. On the other hand, the Nature Park management understands that, in order to keep the present visitor numbers or even achieve growth, it is necessary to make the effort to increase the number of individual guests and prolong their visits, which presupposes a richer range of content, as well as to provide adequate conditions for work with smaller groups of visitors. Quality enhancement and expanding the scope of contents should result in guest retention and repeat visits to the Park, which should ultimately ensure the economic survival of the Nature Park Kopački rit, especially considering the factors of sustainable development. To meet the needs of visitors to the Nature Park in the best possible way, and to make a differentiated and dynamic offer, it seems necessary to design a system for recording information on visitors, in the form of a CRM system of the Nature Park Kopački Rit. Such a CRM system should keep the records on visits, but also provide additional information on visitors' behaviour, their needs, preferences, habits, satisfaction, etc. This research will attempt to solve one segment of this issue, namely it will construct a model of relationship establishment/development aimed at visitors of the Nature Park Kopački rit, which will work by means of mobile technologies.

## 2. Research methodology

Global tendencies in tourism are characterised by travelling individualisation, i.e. travelling in smaller groups, as well as last minute travelling. Furthermore, more and more people expect to have an active vacation and to feel useful during their vacation. These assumptions benefit the development of tourism in protected areas, such as nature parks, since they enable sustainable development, i.e. they represent a decrease in the number of guests, while at the same time increasing the quality of service, which should ensure better financial results. As in many other areas of human activities, the importance of relationship marketing and customer relationship management, a derivative of relationship marketing, is recognised. Namely, it is not possible to develop high-quality tourism without identifying and logging consumers, monitoring their behaviour and establishing relationships with them. Thus, it would be necessary to devise and construct an adequate model for establishing and developing the relationship with visitors to the Nature Park Kopački rit. The use of mobile telephone devices, instead of the usual magnetic stripe cards or chip cards, has been selected to identify them and to monitor their behaviour. Mobile telephone devices can be used not only as a means of identification and monitoring of a single customer. Rather, they represent complex computing machines that can be used in multiple ways to meet consumer needs. Related to this and according to the aforementioned, we postulate the following thesis:

*Modern information and communication technology, in particular its mobile aspect, makes it possible to design an applicative model of efficient information gathering on the behaviour of visitors to the Nature park Kopački rit, and to establish and develop relationships with such visitors by using a CRM concept.*

This paper will present only a part of the complex research that is being carried out for developing a model of the CRM system in the Nature Park Kopački rit. Since the final solution is complex, the model has been generalised. This paper presents the structure of the CRM system of the Nature Park Kopački rit, as well as the concept of a CRM system database. The aim of the research was to define the data structure in the marketing database based on information needs of the CRM system, and to define the processes in which such data is collected.

The paper is globally deductive, because it starts from the hypothesis that is being proven on a specific descriptive model. In addition to the deduction method, some other scientific methods were used, for example: system analysis, causal reasoning, analogy, and descriptive modelling. The system analysis method was used to determine the needs for information within the concept of customer relationship management, related to the Nature Park Kopački rit; the causal reasoning method was used to establish logical connections between the visitor-related processes taking place in the Nature Park Kopački rit and information that should be included in the marketing database on which the CRM system of the Nature Park Kopački rit is based. The analogy method was used to model the database by establishing the analogy between the real world and the database as its model. The marketing database of the CRM system of the Nature Park Kopački rit itself is a model of the real world segment. However, in addition to this structural model, the paper also presents a descriptive model of the processes related to the management of relationship with visitors to the Nature Park Kopački rit. Accordingly, in terms of methodology, the methods used in this research are the methods for deriving the scientific contribution.

### 3. Research results

Nature Park Kopački rit is one of the biggest ornithological reserves in Europe, and as such is well known outside Croatia. It is famous for its flora and fauna diversity, especially the species characteristic for the marshland ecosystem. It is no wonder then that the Park draws visitors from all around the world. The tourism offer of Kopački rit is attracts interest beyond local borders and can be viewed as the backbone of tourism in north-eastern Croatia.

#### 3.1. Nature Park as part of the nonprofit sector

According to positive legal provisions of the Republic of Croatia, the Nature Park Kopački rit is defined as a nonprofit organisation owned or founded by the state or units of local self-government, and such organisations are financed with public funds (budget funds), based on special provisions. In addition to the source of financing, what classifies the Nature Park Kopački rit as a nonprofit organisation

owned or founded by the state or units of local self-government is that it performs some of the functions of the state or units of local self-government, which are defined by special provisions of the Republic of Croatia. Financing of public institutions similar to the Nature Park Kopački rit is complex, combining the funds from the state budget, funds from local units, funds from income generated from own activities, funds from donations, international and local projects, etc. However, in general, nature parks are organisations that are predominantly funded from the state budget. According to Vašiček, "Examples of the state budget beneficiaries include ministries, government offices, administrations, agencies, directorates, funds, state institutes, universities, polytechnics, faculties and business schools, institutes, national parks and nature parks, the state archive, museums, collections and galleries, rehabilitation centres, sick care homes, social care centres, care and education homes for children and young people, clinical hospitals, prisons and penitentiaries, court bodies, state attorney's offices, various government committees" (Vašiček, 2014).

For both profit and nonprofit organisations, the key goal of the business is to survive. Survival of profit organisations is based on generating profit by satisfying the needs of their consumers. On the other hand, survival of nonprofit organisations is based on satisfying the needs of society, and for this reason the community is willing to provide support for their survival. In both cases the needs of certain consumer groups have to be met, which is at the core of marketing. However, there are differences between marketing of profit-oriented and nonprofit organisations. Meler provides the following definition of the nonprofit, i.e. social marketing: "Social marketing can be most simply defined as the application of marketing in the process of realisation of social goals whose primary basic or derived starting point is not to generate profit, but to satisfy the needs of a general social nature" (Meler, 2003). Accordingly, the survival of the Nature Park Kopački rit as a nonprofit organisation in modern conditions is based on social, i.e. nonprofit marketing.

Through evolution, marketing has reached its sixth development version – relationship marketing. According to Meler and Dukić, "Namely, marketing of relationships and cooperation (relationship marketing) is a new marketing paradigm, through which marketing as a business philosophy returns to its roots, where the focus of attention of economic operators is on the consumer, and where retention, i.e.

keeping the real consumers, is the foundation for the long-term survival and sustainable competitive advantages" (Meler and Dukić, 2007). Dukić has a similar approach and description of the relation between relationship marketing and customer relationship management: "Considering the omnipresent information processes, marketing is becoming a global information phenomenon that induces the processes of creating information superiority through a communicational two-phase process of providing information: receiving information from consumers in presale, sale and post-sale processes, and providing information to consumers in presale, sale and post-sale processes. Considering the sale process mechanisms in a virtual environment, the consumer is personalised, and communication with that consumer is individualised. A partner relationship is developed with consumers, and the marketing supporting this process is called relationship marketing. The concept of taking care of consumers and trying to retain them and transform them into clients is known as Customer Relationship Management" (Dukić, 2012). Today, however, CRM cannot be observed through one dimension only: "The importance of how CRM is defined is not merely semantic. Its definition significantly affects the way an entire organization accepts and practices CRM. From a strategic viewpoint, CRM is not simply an IT solution that is used to acquire and grow a customer base; it involves a profound synthesis of strategic vision; a corporate understanding of the nature of customer value in a multichannel environment; the utilization of the appropriate information management and CRM applications; and high-quality operations, fulfilment, and service" (Payne & Frow, 2005). Although CRM first emerged in the profit sector, it soon became accepted in nonprofit organizations as well: "In the 1990s, vendors realized there was a burgeoning market for CRM systems specifically designed for NPOs. This led to a repurposing of for-profit CRM into that which would be used by nonprofits. Traditional Customer Relationship Management became Constituent Relationship Management as it migrated to the nonprofit sector. Soon there were many nonprofit-tailored systems on the market, giving NPOs of all sizes more sophisticated options for constituent management. Some vendors seeking new markets, such as salesforce, repurposed their more traditionally commercial systems for NPO use" (Grattan, 2012).

As both profit and nonprofit organisations are increasingly focused on relationship-centric organizations, it is no wonder that also in the Nature Park Kopački rit there is a tendency toward building a CRM system that will allow the management of relationships with visitors to the nature park.

### 3.2. Analysis of the current tourism offer in the Nature Park Kopački rit

The current offer in the Public institution of the Kopački rit Nature Park can be generally divided into the following groups of products and services:

- Offering organised trips for groups and individual guests
- Offering tours around the Nature Park for groups and individual guests without a guide
- Offering accommodation for smaller groups and for individual guests
- Offering souvenirs and handicrafts typical of the area surrounding the park
- Offering printed material (maps of the area) and books
- Offering fishing permits for sale for those parts of the area where recreational fishing is allowed
- Offering to issue concessions for activities that are considered acceptable in the Nature Park
- Offering services for filming and taking photos for commercial purposes
- Providing transport services for research purposes for smaller groups and for individual guests
- Providing services of a professional guide at the request for groups and individual guests

Standard mass tours organised in the Public institution of the Kopački rit Nature Park include:

A trip: Panoramic view of Kopački rit. This trip includes the basic entrance fee for the Nature Park, a boat tour of the Special Zoological Reserve, a Tikveš Castle tour, a visit to the exhibition showing a selection of flora and fauna of Kopački rit at the Bio-ecological station, a presentation of a 10-minute promotional movie about Kopački rit, and a visit to the Chapel of Pope's Blessing. The Nature Park provides a professional guide during the trip. Duration of the programme: 3 hours.

A trip: Put dabrova (*Beavers' Trail*). This trip includes the basic entrance fee for the Nature Park, a tour of the Special Zoological Reserve on a small boat owned by the institution, with the

possibility of a tour of the Danube and the waterways in the floodplain, a Tikveš Castle tour, a visit to the exhibition showing a selection of flora and fauna of Kopački rit at the Bio-ecological station, a presentation of a 10-minute promotional movie about Kopački rit, and a visit to the Chapel of the Pope's Blessing. The Nature Park provides a professional guide/boat manager during the trip. A trip: Canoe adventures through Kopački rit. This trip includes the basic entrance fee for the Nature Park, canoe tours of the Special Zoological Reserve, with the possibility of a tour of the Danube and the waterways in the floodplain. The price includes a lunch packet for each person. The Nature Park provides a professional guide/canoe manager during the trip. The trip is organised for groups from minimum of two to a maximum fourteen people. It can be organised twice a day and it requires a reservation in advance. After finishing this part of the tour, according to their wishes and without additional charge, visitors can take a Tikveš Castle tour, visit the exhibition showing a selection of flora and fauna of Kopački rit at the Bio-ecological station, see a 10-minute promotional movie about Kopački rit, and visit the Chapel of the Pope's Blessing. Duration of the programme: 4 hours.

A bird watching programme: This programme includes a guide who is specially educated to recognise different bird species. Depending on weather conditions and other conditions in the area, the institution provides transport of visitors by off-road vehicles or boats, telescopes and binoculars and identification guides to bird species. A group can have up to four people, and a maximum of two groups a day can be organised. After finishing this part of the tour, according to their wishes and without additional charge, visitors can take a Tikveš Castle tour, visit the exhibition showing a selection of flora and fauna of Kopački rit at the Bio-ecological station, see a 10-minute promotional movie about Kopački rit, and visit the Chapel of the Pope's Blessing. Duration of the programme: 6 hours a day.

The Junior Ranger Programme: This programme includes fieldwork – collecting water samples in the wood area known as Venezia, taking the Stari brijest (*Old Elm*) educational trail, participating in a herbarium workshop, meteorological monitoring workshop, laboratory work, taking a test on the newly acquired knowledge, and obtaining a certificate of programme completion. The pro-

gramme is organised for groups ranging from 5 to a maximum of 60 people. It is conducted with professional guidance provided by an educator of the Nature Park.

The basic entrance fee for the Nature Park Kopački rit includes entrance to the Nature Park Kopački rit, educational trails of the Nature Park (Small and Large Sakadaš, Stari brijest (*Old Elm*), Vidrin put (*Otter's Trail*), cycling routes and visits to the Tikveš Castle, without a professional guide from the Nature Park.

Additional services and products offered by the Nature Park Kopački rit include:

- Professional guidance – available at request for HRK 150 per hour,
- Cycle renting (including the protective gear) - HRK 10 per hour,
- Fee for filming and taking photographs for commercial purposes – HRK 200 per day,
- Renting a congress hall at the Bio-ecological station – HRK 100 per hour
- Renting boats for transport of film makers and photographs for commercial purposes HRK 100 per hour (the boat is managed by an institution employee).
- Overnight stay (without breakfast) – HRK 160 per person (plus accommodation tax).

The institution also organises periodical special events, such as the Fairy Night in Kopački rit, Rhapsody in June, and European Bat Night.

The prices for these groups are defined either based on group size and specific requests of customers, or the entrance is free of charge.

Although it is obvious that the Nature Park Kopački rit offers a lot of attractions, individualisation and personalisation of guests would require the development of new and the reorganisation of the existing tourist content. However, the current rich offer indicates a great potential for regular revisiting of loyal guests, which justifies the need for a visitor monitoring system, i.e. the CRM system.

The data on visitor numbers to the Nature Park Kopački rit are given in Table 1.

Table 1 does not provide the more recent data for the years 2012 and 2013. Due to the change in management and recording methodology, comparative data for the years 2012 and 2013 are not available. Taking into account the methodology used in Table 1, the number of visitors can be estimated at 27,000 for 2013, whereas in 2012 there were around 30,000

**Table 1 Monthly visitor numbers from 2006 to 2011**

Month	2006	2007	2008	2009	2010	2011
I	0	0	1 025	0	23	28
II	94	0	2 061	0	12	56
III	380	1 041	588	524	840	880
IV	2 113	4 486	3 786	4 922	4 098	4 241
V	5 606	6 811	9 456	9 466	7 462	6 823
VI	2 862	6 586	6 247	6 199	4 733	6 961
VII	1 447	2 358	1 773	2 276	1 383	2 460
VIII	1 754	2 383	2 611	2 324	2 953	2 749
IX	3 433	3 821	3 611	3 631	3 449	3 894
X	4 283	3 898	4 805	4 857	4 179	3 685
XI	1 027	1 770	776	581	1 019	811
XII	10	53	75	70	44	29
<b>Total</b>	<b>23 009</b>	<b>33 207</b>	<b>36 814</b>	<b>34 850</b>	<b>30 195</b>	<b>32 599</b>

visits. Decreasing numbers are probably caused by global economic trends, in particular the economic crisis in the Republic of Croatia.

*Source: Public Institution Nature Park Kopački rit (2012). Report on the yearly execution of the programme for the protection, maintenance, preservation, promotion and use of the Nature Park Kopački rit in 2011 (Class: 001-02-11-01/6; Reg. no.: 2100/24-01/01-11-5).*

### 3.3. Relationship marketing and CRM in the function of enhancing the tourism offer of the Nature Park Kopački rit

Considering the level of market development and economic conditions in the middle of the 20th century, marketing studied the consumer population as a homogenous group, recognising maybe some basic biological differences among consumers, which led to the creation of standards such as standard clothing sizes. At the same time, marketing was also limited in its reach, because as a philosophy it only made sense in developed parts of the world, where demand was exceeding supply due to surplus of goods. Marketing philosophy at that time was not needed in undeveloped and underdeveloped economies, where there was still a great demand for all goods. This period in marketing development is known as mass marketing.

Following further technological evolution, marketing started narrowing down consumer focus groups, replacing the average features of the basic group in the process of exploring consumers' needs (market research) with average features of increasingly smaller population subgroups. Accordingly, in line with the evolution of marketing and narrowed focus, evolutionary cycles include periods of segmented marketing, marketing niches, micro-marketing, and relationship marketing. The latter is only the latest development form of marketing, and it is also an attempt of return to the original marketing principles through establishing, developing and retaining a relationship with consumers to keep them and transform them into clients. One of the definitions of relationship marketing says that "Relationship marketing (RM) marks a significant paradigm shift in marketing, a movement from thinking solely in terms of competition and conflict toward thinking in terms of mutual interdependence and cooperation. It recognizes the importance of various parties - suppliers, employees, distributors, dealers, retailers - cooperating to deliver the best value to the target customers" ("Relationship marketing: Kotler on marketing", n.d.).

Namely, in the 1980s, in the markets of developed countries, producers started to associate and merge through a smaller number of brands, which led to formation of oligopolies. In such conditions marketing managed to obtain a position of a separate department whose key function was to deal with pro-

motional activities, resulting in the situation that even today consumers associate the word “marketing” with promotion or even economic propaganda. In such conditions marketing departments within companies used large funds for the need of the advertising industry, which has become an important economic factor, without a clearly measurable return on investment in advertising. At that time, company managements often identified marketing with insensible and uncontrolled money spending, which resulted in marginalisation of marketing.

The 1990s were the years of marketing rehabilitation. Namely, the development of information and communication technology led to global market transparency, which resulted in improved product quality, but did not decrease product prices. Such conditions did not support winning new markets, so producers focused on retaining their own consumers and better utilisation of these consumers by transforming them into clients. Aspiration to retain consumers encouraged the return to the original principle and care of consumers’ needs. Considering the technological level, the tendency is to attempt to communicate with each identified and personalised consumer to repeatedly meet his or her needs. However, considering the number of consumers, their identification and personalisation is impossible without using information and communication technology. Operationalization of relationship marketing with support of information and communication technology, while accepting the management principles, generated a customer relationship management (CRM) system. CRM is usually defined as a strategy that makes it possible to: (“CRM - Customer Relationship Management”, n.d.)

- Understand the customer
- Retain customers through better customer experience
- Attract new customer
- Win new clients and contracts
- Increase profitably
- Decrease customer management costs

CRM strategies are used as a base for creating specific computer software applications. These are systems whose primary task is to establish and maintain communication with consumers within pre-sale, sale and post-sale activities to permanently explore the consumers’ needs, satisfy these needs through market exchange, and monitor consumer

satisfaction as well as provide support to consumers to ensure their satisfaction.

According to its tasks, CRM usually consists of three subsystems: (“CRM Classifications: Operational, Analytical and Collaborative”, 2013)

- Operational CRM
- Analytical CRM
- Collaborative CRM

Collaborative CRM interacts with consumers in pre-sale and post-sale activities; operational CRM interacts with consumers in sale activities, whereas analytical CRM collects data from collaborative and operational CRM, and processes the data into management information needed for both further customer relationship management and overall management of the entire business entity. Considering the above, a conclusion can be made that the existence of collaborative and operational CRM without analytical CRM makes no sense and vice versa. However, the value of analytical CRM does not depend only on the quality of collaborative and operational CRM, but also on the available methods of data processing, as data validity is in correlation with data quality on the one hand and data processing methods on the other hand.

#### 3.4. Data structure and the system of developing a relationship with visitors to the Nature Park Kopački rit

Monitoring behaviour of the visitors to the Nature Park Kopački rit by means of collaborative CRM provides database feedback for good business decision making related to interaction of the Nature Park Kopački rit with each individual visitor who should be transformed into a client. To ensure a good database for good decision making in business, the following data groups are collected:

Customer Profiling:	Customer demographics & preferences Customer segmentation Logging customer Communications
Service:	Logging Service requests Tracking your inventory base and serial numbers Warranties & Contracts Repairs
Sales:	Product database / price



	Lists / configurator
	Logging of sales leads / opportunities
	Sales team workflow and calendaring
	Quotation and Ordering
	Telemarketing
Marketing:	Doing campaigns (SMS, email, letter, phone) with structured follow up
Operations	Timesheet management
	Process workflow

By categorising the above information groups into specific entities and attributes, a very complex conceptual model of a database of the CRM conceptual model in the Nature Park Kopački rit is built. Figure 1 shows a small segment of a possible solution to a relational model of a database. Due to limited space, it is not possible to show the entire data model.

### 3.5. *Mobile phones in the function of the Nature Park Kopački rit loyalty programme*

One of the big issues of the modern collaborative CRM system in the real-world environment is the method of consumer identification. Among various plastic cards, each additional card is a nuisance for a consumer and he or she carries it around unwillingly. This is particularly true if the card is related to an economic operator with which the consumer rarely interacts. However, a mobile phone, i.e. phone number associated with that phone by means of a SIM card is something completely different, as people tend to be inseparable from their communication devices, i.e. mobile phones. Therefore mobile phones can be an excellent device for identification of visitors. In addition to identification, mobile technology can also be used to provide additional services.

The following should be made possible from the beginning:

1. Providing information via mobile phone
2. Positioning via mobile telephone device
3. Virtual tours via mobile telephone device
4. Live streaming on user request
5. Purchasing additional services via mobile telephone device
6. Product reservation via mobile telephone device
7. Book of visitor's impressions via mobile telephone device
8. Service and/or product assessment

9. Virtual inbox for suggestions concerning improvements in the Nature Park Kopački rit offer.

Considering the potential offered by mobile phones and by mobile technology itself, four services can be used:

1. SMS
2. Web adjusted for display on a mobile phone,
3. E-mail, and
4. GPS, depending on the system supported by a mobile phone.

To ensure optimum utilisation of the potential offered by mobile phones, adequate free applications in the function of collaborative CRM should be developed. Every user who wishes to use the potential offered by mobile phones to obtain more detailed information about the Nature Park will have to become a member of the free virtual Nature Park Kopački rit Enthusiasts' Club.

When it comes to providing information via mobile telephone devices, it was primarily envisaged as assistance panel boards on educational trails. These panels along educational trails, due to limited space, often contain rather short texts that cover only basic information on single inhabitants or certain habitats in Kopački rit. Therefore, by sending a text message with the panel number, a user can obtain additional items of information or store the existing information on their mobile device. The same effect can be achieved by developing suitable Web applications that allow users to connect to protected Web sites with a one-time password, digitally obtained on request from Kopački rit, either by SMS or e-mail. Except on educational trails, information, i.e. the recognition of certain objects by a corresponding number is obtainable in other parts of Nature Park Kopački rit while on tour. It is important to mention that these, as well as other services are intended for the members of Nature Park Kopački rit Enthusiasts' Club and can therefore be used only by authorised SIM cards of the mobile devices registered by the members of the Enthusiasts' Club. For these reasons, it is important to instruct the members of the Club to notify any phone number change, i.e. new SIM cards, as these services would no longer be available. Furthermore, it is important to mention that info-numbers for sending certain messages and getting certain answers are free for the members of the Club, i.e. they will be reimbursed through memberships and discounted entrance fees. Bonuses for the members of the Nature Park Enthusiasts' Club will be formed according to the number of visits,

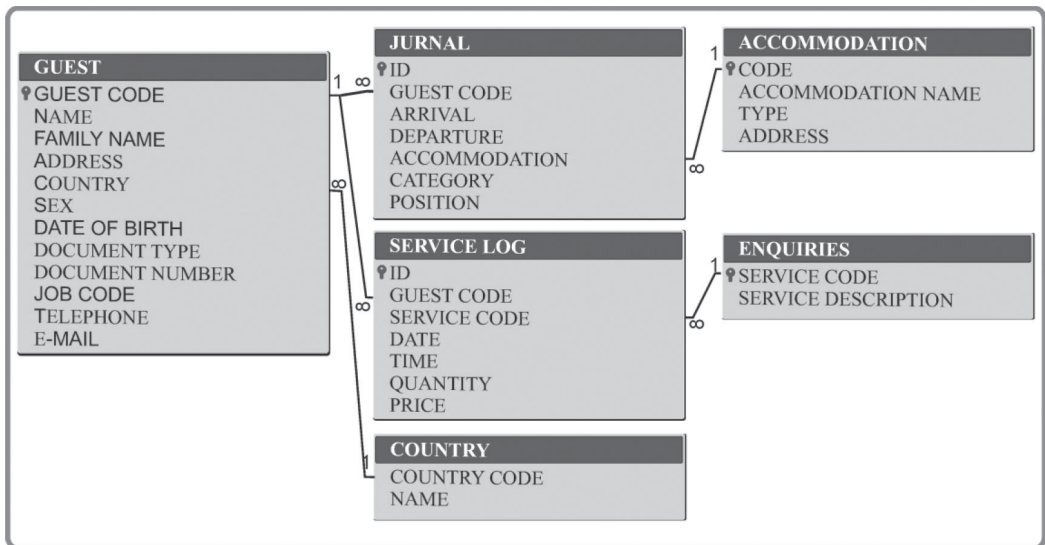
which means that persons who often visit the Nature Park will be given corresponding discounts on products and services of the Nature Park Kopački rit.

The second service relates to positioning via a mobile telephone device and it will partly depend on global positioning systems, such as Latitude. It will enable its users to find out what their current location is and what and who can be found in their vicinity. This feature should encourage networking and socializing between Club members, thus promoting exchange of experiences and return visits to the Nature Park. The members of the Nature Park Kopački rit Enthusiasts' Club will thus become a sort of ambassadors, as well as local guides through the Nature Park for the members with less experience. Therefore, this positioning system will become a useful tool for encouraging their mutual contacts in the field. Moreover, such a system will enable the introduction of new services, i.e. products that will be shown on a map, so that individuals, the members of the Enthusiasts' Club, will be able to find them without the help of professional local tourist guides. With the increase of individual visitors, the need for more professional local tourist guides will also grow in the Nature Park Kopački rit.

Nevertheless, theory shows that there is a threshold in the number of guests, below which it is not profitable to engage a tourist guide. Therefore, a virtual guide is planned to be developed, which would enable a virtual tour for a mobile telephone device by means of an SMS service or Web technology. The development of audio guidance is also under consideration, but at this stage is not included into this project. Similar to the information system, a user would type in a route number, if such a virtual tour is used, and send an empty SMS at each checkpoint, which would be answered with a text with basic information of an object in front of which the user is located. When it comes to Web technology, users would be shown a map which they could use to find an object and receive the corresponding text about the chosen object. Furthermore, an iPhone and iPad application is envisaged, which would use GPS and automatically open certain contents related to the position the user is at. Being the most advanced type of virtual guidance today, it will be further developed, since it is expected that, in the near future, most mobile devices will have the features currently possessed by iPhones and iPads.

When in the field, users often do not have the opportunity to see, at least up close, interesting details of animal and plant species in Kopački rit, nor interesting events in habitats of these species.

**Figure 1** Initial relational model of a CRM transaction database



Source: Author

Therefore, users will be able to choose, via Web technology, from a series of short films, those they wish to see and thus make a comparison with the real events in nature. As with the aforementioned services, this one is only intended for the members of the Nature Park Kopački rit Enthusiasts' Club.

The next service relates to a virtual voucher, i.e. the possibility of purchasing via a mobile telephone device. In the pragmatic conditions, visitors-members of the Nature Park Kopački rit Enthusiasts' Club may want to use a certain service that was not paid for in the admission centre. Under realistic conditions, this would mean that they have to go through the Nature Park, come back to the admission centre, wait in line, buy a ticket and try to go back to the desired location. This means a huge waste of time and additional expense for visitors. Therefore, it is to be expected that a visitor would decline a possible additional service. It is thus necessary to provide a purchase system via a voucher, which would allow users to acquire up to five services by using a mobile telephone device. The actual payment will be done on leaving the Nature Park, in the admission centre. The payment can be done by SMS or a Web application. Since user identification will be carried out by means of a mobile phone number, i.e. SIM card and the corresponding PIN issued for purchasing purposes, this service is reserved only for the members of the Nature Park Kopački rit Enthusiasts' Club. The PIN will protect the user from the possible loss of a mobile telephone device or a SIM card, as well as from possible abuse. The electronic voucher will function only during working hours of the Nature Park. Moreover, the purchase will be possible only immediately before using the service and in the area of the Nature Park itself.

Unlike the electronic voucher, the reservation system via mobile technology should provide the possibility of booking a service in advance. Namely, there are certain services that are limited by the number of visitors, duration and the time of their provision. For instance, there is the traditional "European Bat Night" or "The Fairy Night in Kopački rit", boat tours through Kopački rit and bird watching in smaller groups with professional guidance by an ornithologist, etc. Therefore, it is to be expected that visitors, members of the Club, would prefer to book the desired services in advance. The reservation itself will be free of charge; however, there will be a fine for those who book a service and do not show up. The reservation system will use the SMS technology, as well as Web technology.

SMS reservation is constructed in a simple manner and means sending an SMS for a specific service and accepting the service by the use of purchasing a PIN. On the other hand, a Web application will allow not only booking and cancelling the reservation, but also users will be able to find out who made the reservation and make a reservation for people who are not members of The Nature Park Kopački rit Enthusiasts' Club. The Web interface is envisaged in such a way as to be available via a classic desktop computer as well.

Kopački rit is extremely proud of its Visitor's Book, for now used by a smaller number of guests. It is our desire to enable all members, after using a service, to write something in the virtual Visitor's Book that would be available to the public over the Internet. It will also be possible to sign the Book via SMS and a corresponding Web interface. To ensure that the Book is not misused, as with purchases and reservations via a mobile telephone device, a PIN and SIM card identification will be used to prove that a certain user has sent a message for the virtual Book of Impressions. In the case of the Web interface via a mobile telephone device, it will be possible to add a photograph along with the text. As in the reservation system, this interface can also be accessed by a classic desktop computer.

The key factor for creating a partnership with the customer is feedback, which allows the product and service providers to gain insight into their consumers' satisfaction level. Contact centres are organised for these purposes. With respect to available funds for this initiative, a development of a virtual contact centre is planned. Each member of the Nature Park Kopački rit Enthusiasts' Club will be asked to fill in a questionnaire and evaluate the quality of service. This questionnaire will be a virtual one, to be found at a certain Web address. The request for filling in the questionnaire will be sent to a user by SMS or E-mail two days after the consumption of the product or service, in order to allow the user to savour the impressions and realistically answer the questions. This Web questionnaire will represent a basis for the improvement of the service, although it is not compulsory. Finally, the members of the club will gain certain points that will have an impact on the price of services.

In addition to the virtual contact centre, the Nature Park Kopački rit plans to introduce a virtual inbox for collecting suggestions about quality improvement and expanding the existing range of products of the Nature Park. The virtual inbox will at first be

reserved only for the members of the Nature Park Kopački rit Enthusiasts' Club, however, if there is a positive response, it will become publicly available. The suggestions themselves will be sent by SMS, as well as Web interface for mobile telephones. Since this is primarily one-way communication, those who send an SMS or fill in the Web form will receive a thank-you note for participating in the project for enhancing the tourism offer in the Nature Park Kopački rit.

The use of mobile telephones is planned for all described services, which will serve both to identify users and to enable their collaboration with the CRM system of the Nature Park Kopački rit. The mobility of this collaborative system is a key advantage over classic CRM systems that use desktop computers in the collaborative part and the usual identification cards.

#### 4. Conclusion

Over the past year, the Republic of Croatia has been in deep recession. We have been witnesses to an increasing number of redundancies, growing dependence on imports, and dwindling export potential of the Croatian economy. In view of overall macroeconomic conditions and the history of the past half century, it would be less than realistic to expect that the Republic of Croatia will solve all its problems within a short time and become a globally competitive economy in terms of manufacturing industry. As for those crucial competitiveness factors, most products of the primary and secondary sector in the Republic of Croatia fail on all counts: the globally required quality, adequate pricing or the necessary quantities.

On the other hand, the Republic of Croatia has an excellent geographic position and boasts many attractions. Owing to this, summer tourism has developed in the Republic of Croatia over the past forty years, especially along the coast. The time has come for Croatia to start making better use of the potentials of its inland tourism. The good side to tourism is that it virtually creates an export market on a country's own territory and in this way gives an opportunity to the Croatian economy to market also those products which are not competitive on a global scale. The eastern part of the country should use tourism as a driver of development. In these efforts, the Nature Park Kopački rit, being the natural tourist attractor in this part of Croatia, could play a key role.

Contemporary mobile technology has allowed individuals a higher level of mobility. Nowadays it is not necessary for individuals to seek information. On the contrary, due to technological developments, information comes to them. Technology not only ensures mobility, it enables identification and personalisation of the relationship between product and service provider and consumer, and as such allows the creation of partnerships, which results in consumer retention and sales growth through cross sales and similar activities.

Economic survival in contemporary business conditions – and Nature Park Kopački rit is no exception here – is closely connected to being able to develop relationship marketing, i.e. to create partnerships with one's consumers. Moreover, the obstacles imposed by the concept of sustainable development prevent the infinite growth of visitor numbers. It is of utmost importance to get the maximum from the existing visitors by keeping them longer. For these purposes, it is necessary to develop a suitable CRM system that will enable partnership with consumers and sales growth.

Since technological trends are constantly changing and mobile business has become an unavoidable step in technological development, it is optimal for the Nature Park Kopački rit to use the potentials of this technology to design a collaborative part of a CRM system. As stated above, mobile technology is not used solely for visitor/customer identification; rather, it helps to solve a number of tasks from the domain of collaborative CRM. Given the potentials offered by mobile communication technology, it is a realistic option that this type of interaction with consumers might become a primary means of communication in the Nature Park Kopački rit. The described initial concepts represent the introductory phase in the development of a complex integral CRM system of the Nature Park Kopački rit.

## REFERENCES

1. CRM - Customer Relationship Management (n.d.). Available at: <http://www.webopedia.com/TERM/C/CRM.html>. (Accessed on: 29 March 2014)
2. CRM Classifications: Operational, Analytical and Collaborative (2013). Available at: <http://blog.oasis-ky.com/crm-classifications-operational-analytical-and-collaborative/>. (Accessed on: 28 March 2014)
3. Dukić, S. (2012). E-Marketing humanitarnih i vjerskih organizacija. Doktorska disertacija. Osijek.
4. Grattan, E. (2012). CRM Implementation in Nonprofits: An Analysis of the Success Factors. Dissertation: Indiana University of Pennsylvania. p. 5 Available at: <https://dspace.iup.edu/bitstream/handle/2069/735/Kelly%20E.%20Grattan.pdf?sequence=1> (Accessed on: 28 March 2014)
5. Meler, M. (2013). Nefitni marketing. Osijek: Ekonomski fakultet u Osijeku.
6. Meler, M., Dukić, B. (2007). Upravljanje odnosima – od potrošača do klijenta (CRM). Osijek: Ekonomski fakultet u Osijeku.
7. Payne, A., Frow, P. (2005), "A Strategic Framework for Customer Relationship Management", *Journal of Marketing*, Vol. 69, No. 4, pp. 167-176.
8. Relationship marketing: Kotler on marketing (n.d.). Available at: <http://www.marsdd.com/articles/relationship-marketing-kotler-on-marketing> (Accessed on: 28 March 2014)
9. Vašiček, V. (2014). Računovodstvo neprofitnih organizacija. Available at: <http://web.efzg.hr/dok/RAC/definicija%20obilje%20C5%BEja%20i%20vrste%20NGO%202013.pdf>. (Accessed on: 25 March 2014)

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## **MODEL USPOSTAVE I RAZVIJANJA ODNOSA S POSJETITELJIMA PARKA PRIRODE KOPAČKI RIT TEMELJEN NA MOBILNIM TEHNOLOGIJAMA**

### **SAŽETAK**

Kopački rit je mjesto koje privlači turiste u sjeveroistočnom dijelu Republike Hrvatske. Bogatstvo njegove flore i faune u prošlosti je privlačilo ljude iz gospodarskih razloga dok su u današnje vrijeme ključni motivi dolaska u Kopački rit edukativno-turističke prirode. Za razvoj turizma u današnje vrijeme sve važniju ulogu ima vjernost gosta. Oni gosti koji posjete određenu destinaciju jednom i nikada se više ne vrate u tu destinaciju ne mogu biti nosioci turističke potražnje. Takav se gost često pojavljuje u nekoj destinaciji motiviran globalnim političkim kretanjima, a ne potrebom da posjeti destinaciju. Tako npr. porast broja gostiju u Republici Hrvatskoj u posljednjih nekoliko godina više je posljedica političkih zbivanja u Grčkoj i Sjevernoj Africi, nego stvarne želje i potrebe gostiju da posjete Republiku Hrvatsku. To u naravi znači da će se takvi gosti izgubiti onoga trenutka kada se smiri politička situacija u destinacijama koje su im bile primarni odabir. Zbog toga je, kada je u pitanju Park prirode Kopački rit, potrebno u masi gostiju prepoznati one goste kojima je to bilo primarno odredište i s njima uspostaviti odnos. Za postizanje ciljane turističke ponude, potrebno je u Javnoj ustanovi Park prirode Kopački rit, unijeti marketinške odnose kroz odgovarajući sustav upravljanja odnosa s potrošačima (CRM). Cilj je istraživanja istražiti i definirati optimalan model CRM sustava koji bi dugoročno riješio problem razvijanja odnosa s potrošačima gostima Parka prirode Kopački rit. Istraživanje će biti provedeno deduktivno, a glavne metode istraživanja kojima će se realizirati cilj istraživanja bit će sustavna analiza, metoda kauzalnog zaključivanja, deskriptivnog modeliranja te logički eksperiment. Rezultat istraživanja čini načelni model marketinške baze podataka, kao i deskriptivni konceptualni model CRM sustava Kopačkog rita koji će se koristiti potencijalima mobilnih informacijsko-komunikacijskih tehnologija.

**Ključne riječi:** Park prirode Kopački rit, turizam, marketing, marketing odnosa, CRM, mobilni telefonski uređaji