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THE CIRCULATION OF INFORMATION IN YACHT PORTS

Review

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Abstract

The main aim of the article is to present the results of the analysis concerning the selected aspects of the circulation of information in yacht ports. It is very important issue for people who plan sailing cruises and also for yacht port operators. A particular attention has been paid to the problems in this field. In addition, it presents an overview of possible approaches to solving these difficulties. Completion of the goal determines research procedure and structure of the article. The tabular and graphical methods have been used in the presentation of the research results.

Keywords: nautical tourism, information, management

1. INTRODUCTION

Improving the functioning of the information circulation system in yacht ports in Poland has become necessary due to the increasingly developing nautical tourism in this region and the world. In the current situation, the processes are implemented in an inefficient manner, and the quality of their execution often leaves many doubts.

The information system can be defined as a multiple-level structure, thanks to which a person using it, with the help of appropriate models and actions, has the ability to convert incoming information into information that has the expected value and quality. As a result of receiving such information, the system user is able to make a specific decision that brings him or her closer to the desired goal or problem. For this reason, the information system can be analyzed as part of the decision chain (Kisielnicki, Sroka, 2005, p. 16).

One of the most important elements is the system user himself who downloads and enters information, which in turn is obtained from the environment. The information is being changed, therefore the tools and methods for the transformation of these data and their interrelationships are its inseparable part. Thanks to this construction and the work of individual components, the final result is created in the form of desired data (Kisielnicki, Chibowski, Sobolewska, 2006, p. 67).

According to another definition, an information system is a structure with multilevel characteristics, composed of many intentionally connected subsystems, the task of which is to

cooperate with each other and control decision processes. In addition, the system should be able to collect and store data so that they can be converted and interpreted, and finally made available (Stabryła, Wawak, 2014, p. 188).

The information and IT system (as a related concept and an element of the entire information system structure) is defined by many authors (Gospodarek, 2018; Kroenke, 2008, p. 203; Woźniak, 2012, p. 34; Kuraś, 2009, p. 264; Gupta, 2011, p. 18). However, one of the specific elements of the IT system is computer hardware and software, which was omitted in some previous considerations regarding systems.

Another issue closely related to the subject of the article is the yacht port. It is a set of port basins, hydrotechnical port buildings, land structures and technical devices, providing safe berthing and service of yachts and other recreational or tourist vessels and floating devices (Mazurkiewicz, 2003, p. 32). At the same time, yacht ports are facilities where services are provided to vessels, means of land transport, and people (Łapko, Hącia, 2017, p. 157).

The main aim of the article is to present the results of the analysis concerning the selected aspects of the circulation of information in yacht ports. Research was carried out in several yacht ports in Poland to identify the most important problems that inhibit both port development and nautical tourism in a given region.

2. TECHNOLOGICAL EQUIPMENT IN YACHT PORTS

Technology is a collection of such elements as various types of machines, computer software and information. A set of such components is used by given entities or organizations in order to offer services or other products more quickly and easily, thus increasing their quality (Mrowca, 2012, pp. 33-34). The use of machines and software opens up new possibilities for the entire system in which these elements will be applied.

Current technological capabilities are also used in yachting in the world. The reason why yacht ports decide to use computer programs is the excess of information that marina employees need to manage. In this case, the software allows faster and more effective handling of information, which translates into time and sometimes financial benefits.

One of the example software used in yacht ports in Poland is the eMKa Marine program (Information..., 2018). It is an electronic client service system that makes it easier to use the services that yacht ports offer their clients. The possibilities allowed by such software include the use of, among others: equipment to collect impurities from yachts, water supply points and electric energy, lighting devices, showers and toilets, accommodation.

The eMKa Marine program is a pre-paid system, which means that to use it, a boater must first set up an account at a given marina and make a payment of any sum of money, which is later charged when using selected devices. Fees are charged using a special card that every user registered in the system receives.

Each card has a built-in computer chip, which, after approaching a special device charges the appropriate fee and allows the use of the service. Devices reading card signals are placed in the vicinity of all elements that work with the eMKa Marine system.

On the other hand, in Italy's yacht ports, which are much more developed compared to the ports in Poland, all the described services are realized by means of a website or mobile application (www.marinadiportofino.com, [accessed 6.01.2019]). Their quality is adapted to the increasingly demanding tourists. They are often assessed using scientific methods according to a specially prepared methodology (Benevolo, Spinelli, 2018, pp. 229–241).

Ich jakość jest dostosowywana do coraz bardziej wymagających turystów. Często są oceniane z wykorzystaniem metod naukowych według specjalnie przygotowanej metodologii.

Another software that greatly facilitates the circulation of information in the context of location and reading information about specific yachts is KWCamping Pro (Information..., 2018). With the help of this software, it is possible to view the location of all yachts located throughout the port in real time. It was created for the individual needs of the yacht port in Świnoujście.

The operation of this system is based on the scheme of the whole port area, entered into the program database, where berths, wharfs and yachts as well as information about them are marked. The software operates in particular thanks to the database and special cameras located throughout the port, with built-in sensors that analyze the location of yachts on a regular basis and send them to the program. Examples of information displayed by the program are: date of arrival and planned date of departure, name and surname of the yacht owner, name of the yacht, wharf and the number of the position on which the yacht is berthing, the sum paid, yacht settlement status. The program enables fast and transparent reading of information, which allows for more efficient handling of available knowledge.

One of the important elements of the technological equipment used in yacht ports is also the CCTV system. Unfortunately, many marinas in Poland, due to the implementation costs, do not have their own specialized programs to monitor the entire area like the said KWCamping Pro. In this situation, standard cameras are used that allow a real-time preview (Information..., 2018). The role of CCTV monitoring systems is to provide comprehensive information (in the form of a picture) about the current status of the protected area to the appropriate facility protection system (Buczaj, 2011, p. 216). It also serves the protective function for the facility. The CCTV system is controlled by port employees using a program or a special controller.

The software becomes necessary when due to the size of the port or its location, the port administration office does not have a view of the approach path to the port. In this situation, a real CCTV view of the area is the only option to obtain information about the vessel arrival in the marina area and enforce payment for berthing.

The entire camera operation process is carried out in the port administration office, by authorized persons. Thanks to the cameras set up in the most critical places in the yacht port, employees have access to many useful information for operating the port. This system can accelerate the circulation of information, because they are available in real time and cameras show a view of all the most important places. Such a system allows for faster decision-making process.

3. THE ROLE OF PORT ADMINISTRATION OFFICE IN THE CIRCULATION OF INFORMATION IN THE YACHT PORT

Each enterprise has its own decision center, a place where the most important decisions concerning a given organization are made. A similar situation takes place also in nautical tourism. Each yacht port has its own administrative building called port administration office, in which most or even all organizational matters are carried out. Therefore, it is crucial for the information circulation system in yacht ports. Port administration office also has an informative function. Clients have the opportunity to obtain information about the area where the port is located, nearby tourist attractions and how to get to them.

All activities related to registering sailors are carried out in the port administration office. To obtain permission to use port services, each yacht owner must provide the following information: name of the yacht, master and owner, home port and destination port, number of crew, time of arrival and departure, length of yacht.

Most yacht ports in Poland, due to the relatively small number of yachts operated, do not use special programs to store such data (SCB, 2019). This is due to the fact that each software is an additional cost, and considering the low interest in the still developing nautical tourism, the implementation costs of such systems may be too high for port owners. Port administration

employees use special paper logs, to which they enter all the information provided by the sailors manually.

Unfortunately, despite the established requirements for entering the port, in Poland very often there is a situation in which yacht ports have no information about who and when intends to enter the marina. In such cases, the logs are filled only after the yacht has entered the port and moored at the berthing. In other cases, sailors contact ports in advance in time using mobile phones or VHF radio communication. Contact numbers to port administration offices are widely available on the websites of given ports, leaflets and locations (*Locja ...*, 2015, p. 12).

Registration in the yacht ports of Croatia, which belong to the chain of Adriatic marinas looks slightly different, as they are ports of very high standard (an interesting study showing the differences between the yacht ports in Poland and Croatia is Luković, Łapko, Vuković, 2019). Sailors register using a website or application on the phone, where they choose the marina among the 22 covered by this system. The process of booking a place in each of these ports requires sailors to submit information about the yacht and the length of the planned stay. In addition, there is a possibility to make a special card (ACI) guaranteeing discounts and many additional port services (www.aci-marinas.com [accessed 3.01.2019]).

In port administration office, sailors also have the option of making eMka Marine card or making additional cash payments.

4. BASIC PROBLEMS RELATED TO THE CIRCULATION OF INFORMATION IN YACHT PORTS

The information circulation system is the interconnection of several cooperating elements. Their amount depends on the size of the organization in which such a system operates. This situation also occurs in the case of yacht ports, where more complex consists of a much larger number of elements than the smaller ones. The functioning of individual components plays a very important role in the whole structure, because the fault in even one of them can lead to a serious problem. Therefore, continuous surveillance and problem identification is a key aspect in the context of the proper functioning of yacht ports.

In many Polish ports in the South Baltic waters, nautical tourism is poorly developed (SCB, 2019). When analyzing this state of affairs can lead to the conclusion that the ports located in Poland do not provide services that would potentially encourage new sailors or the quality of their performance is insufficient.

Precise identification of problems that occur in ports is necessary to establish and implement appropriate concepts that will help streamline the circulation of information in yacht ports.

Many marinas in Poland do not have their own websites (Hącia, Łapko, 2018, pp. 72-80) and mobile applications that could provide sailors with a lot of information about ports and prices. In the present situation, sailors are forced to use the messages contained in leaflets, on unofficial websites or obtained from other people which may not be up to date. Having an official port website and a mobile application would undoubtedly increase the awareness of sailors and the comfort of their navigation. In addition, the website is also a great advertising tool and could increase the number of yachts using a particular port. The websites are platforms for promotion, sale and distribution (Benevolo, Spinelli, 2016). Marinas need to approach their target market with a proactive marketing and communication strategy (Luković, 2013).

Obsolete technology has a very large impact on the proper functioning of individual elements of the information circulation system in yacht ports. The use of outdated technology leads to many problems related to the processes of servicing sailors, and also reduces control over

the entire facility. The equipment used in the port administration office or mounted on many elements of the port infrastructure is nothing but technological equipment. The use of appropriate software and modern devices will undoubtedly increase the attractiveness of a given port, as the quality and speed of services offered will increase. Innovative solutions are also aimed at improving the comfort of sailors using port infrastructure as well as port workers.

Another problem worth noting is the way port and region advertising. In many Polish ports, the issue of marketing is neglected and needs improvement. Sailors who do not know the region where the port is located and nearby tourist attractions, are often reluctant to use port services besides the necessary refueling and using food and other supplies services. This is due to the lack or insufficient information. Implementation of solutions that will improve marketing and broaden sailors' knowledge about the region may increase the attractiveness of a given port. The introduction of a position or space where all possible information about the city, tourist attractions as well as nearby ports will be found, give sailors additional entertainment options and show them the potential directions of travel. Such a concept may encourage sailors to stay in the port and continue to use their services, and to some extent cause development and cooperation with other ports. A similar situation is with the manuals and rules for the use of port infrastructure. The biggest problem is encountered by people who are inexperienced in yachting, as well as by foreign sailors who do not know how to use the equipment available in the port area. Therefore, detailed description of the services offered and the presentation of manuals and instructions in the most understandable way may result in the sailors starting to use the given port more often.

Port administration office is an important facility of the yacht port. In the majority of Polish ports, the way it is located and furnished is unique. Its location in the port area is not so important, but the appropriate marking as well as the construction of the interior can play an important role in the circulation of information. The port administration office is servicing sailors; therefore it is worth implementing a concept that will help people entering the port to find this building. The best solution is to place this office in the center of the port. However, in many cases, due to the location of the port, this is not possible, so every effort should be made to ensure that the way to such a building is best marked. Dividing the interior of the port administration office into appropriate zones is very important in the context of work organization and elimination of chaos. In the current situation, many Polish ports have one workstation - better or worse equipped - for the implementation of processes related to the service of sailors. Such a situation often leads to many errors related to the excess of documents and duties performed at one station, or possibly slows down the work process. The implementation of a concept to introduce a similar look of a port administration office in each port may result in an increase in the quality of service and comfort of work.

Man is another important element of correct information circulation in ports. Sailors expect an individual approach from the employees of the marinas. Each sailor has individual requirements, that is why it is necessary to ensure proper training of the employees so that they are able to meet them.

Another problem that occurs in the information circulation system is poorly developed interport communication. The proper functioning of such a circulation consists not only of the processes carried out inside the port, but also those that take place in its vicinity. In the current situation, Polish marinas contact each other by phone or via e-mail. Some ports also cooperate through participation in various projects. Although the communication system between ports is present, but it is used very rarely, and it is worth improving. Port workers often have information about the intended direction of a given sailor, but they do not provide it to that particular port. For smaller yacht marinas, this information can be very important, as they will be able to prepare for the arrival of an additional yacht. Knowing the size of the yacht, you can prepare an appropriate parking stand. In the case of larger ports, such information is not necessarily important, but such an approach strengthens cooperation and develops sailing tourism in a given region. However, one of the better solutions that will improve communication is mutual advertising and increasing the

awareness of the environment about the attractiveness of nautical tourism, because only the joint encouragement of new sailors will lead to the development of all Polish marinas. Another solution that can improve communication between ports is joint organization and participation in projects. A joint analysis of current port problems and ways of solving them would lead to better cooperation, which would translate into a better-functioning system of information circulation.

It is also worth noting the lack of experience of owners in the management of ports (SCB, 2019). Undoubtedly, this is due to the current situation of nautical tourism in the waters of the South Baltic, which is not as developed in places as in other regions. Therefore, to improve the information circulation system in Polish ports, the innovations used by, for example, Croatian or Italian ports should be applied and modified to individual requirements as they are characterized by a high standard of services.

5. CONCEPT OF INFORMATION CIRCULATION SYSTEM IN YACHT PORTS

Acceptance of sailors, their handling and processing of related information can be a key aspect in the information circulation system in yacht ports.

To date, most of the yacht ports in Poland do not use specialized computer programs to store information about sailors, crew and their yachts. Paper logs and manual entering of data work because in the current situation in Poland the possibilities of ports are not being used to the maximum. However, taking into account the continuous development of nautical tourism, the increasing number of yachts, or the development of tourism in port cities, one should expect an increase in the intensity of influencing new or permanent clients to marinas. Undoubtedly, this will result in the necessity of effective information handling. In this situation, paper data logs, and more specifically the speed of finding specific information about a sailor or yacht in order to handle it, will become more burdensome and definitely slower.

The problem with the paper log is definitely the way in which data is stored. In this situation, it does not matter whether the client was already registered in the port or visited it for the first time. In both cases, the data is entered into a new column, because even if the client is already in the log, due to the paper form, it is not possible to copy this information. The employee finds details about the sailor or yacht in order to facilitate their re-entering (it is more important in the case of complicated foreign names), while when the data is not current, they are simply corrected by him. By analyzing such a system, one can come to the conclusion that the process of entering new data can be much faster and facilitate client service.

Attention should also be paid to the form of a paper log, which additionally has several other disadvantages. One of them is certainly the limited number of places to enter data. Even if searching for information about clients makes it a little easier to re-enter information, a problem arises when managing more of such data. There may be a situation in which the information about a particular sailor who enters the port not for the first time was in a log that is no longer used due to lack of places and has been archived.

The concept of improving the above-described storage and information circulation system assumes the creation of a computer program with a database to which all data on sailors and their yachts could be entered. The only problem when implementing such a concept can be the cost of the software. Creating a specialized program tailored to the individual needs of a given marina is very expensive. However, there are also solutions that do not require large financial outlays and should not burden budgets. Smaller marinas, the capacity of which will never exceed a certain level, can take advantage of the opportunities offered by programs such as Microsoft Access or Microsoft Excel, which are often already used in ports and do not require employees to have a high level of computer skills.

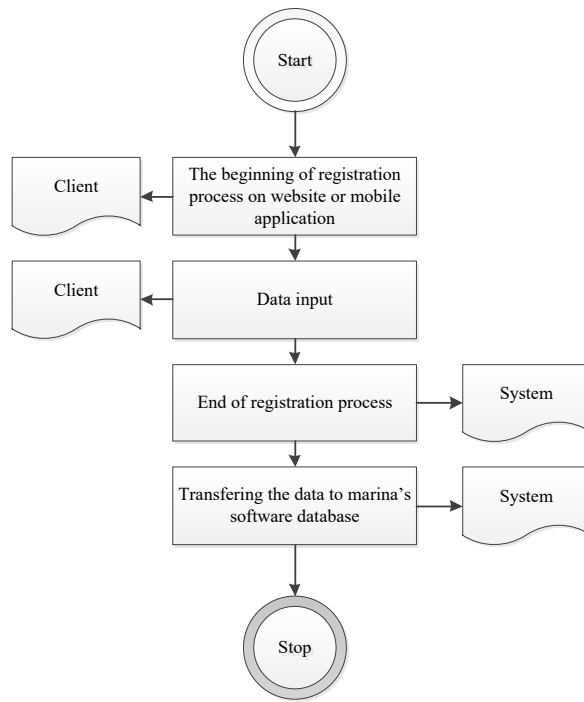
In the case of much larger yacht ports, where the number of yachts operated is large and can still increase, specialized software tailored to the requirements of such marinas as well as their individual needs should be used. The advantage of such a program would undoubtedly be the possibility of saving more information about one yacht, as well as storing photos, which is impossible in the case of paper journals. Increasing the number of stored information will not significantly slow down the service process, but it will facilitate possible identification of the yacht in problem situations.

In a model using special software, registering and handling a client that already exists in the database will become much more effective. The ability to copy information or update the data in existing files will speed up and facilitate the work of port employees. However, the registration process of a new client will not be significantly slowed down, as manual input will be replaced by entering information using a computer. This will allow more information to be stored.

Computer programs for storing information can be additionally connected to the eMKA Marine system or other systems used in the port. This will give the opportunity to implement several or even all of the services offered by ports using only one software.

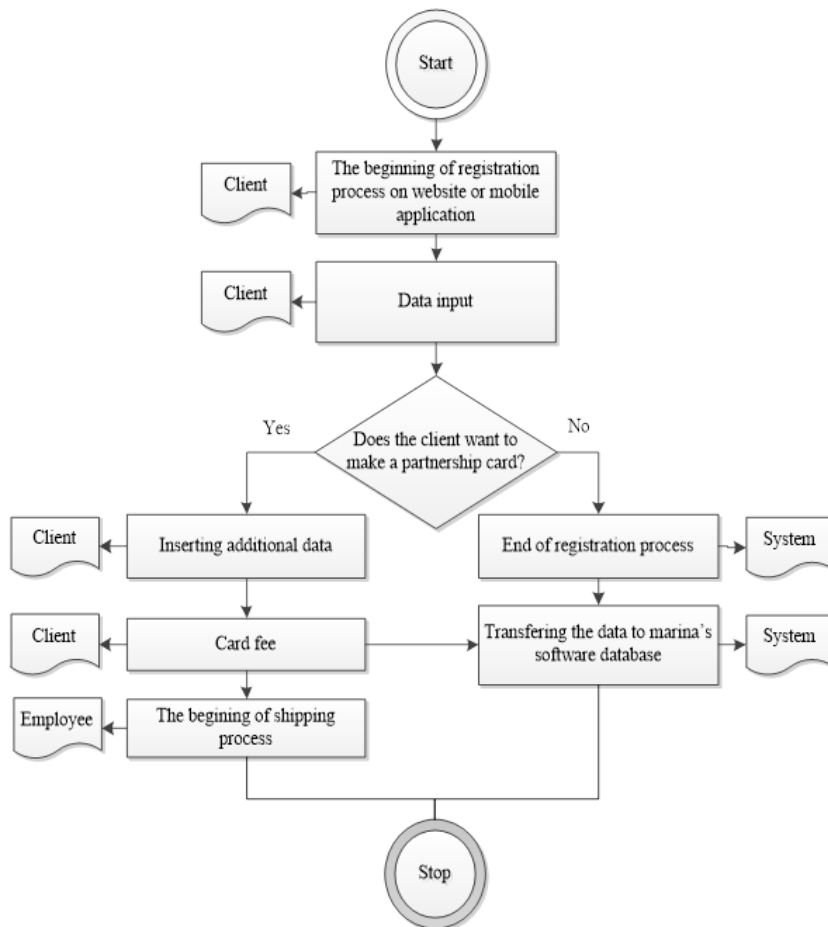
The current technological advancement in the world gives the yacht ports additional development opportunities. This program can be enlarged with additional elements that would improve its functioning. One of such elements may be the introduction of reservation of berths by means of a website or a telephone application. During the registration process, sailors would be required to submit some important information about the yacht, which will be sent to the software database immediately after registration. The application of such a solution would allow employees to use data on the sailor before entering the yacht port area. The described process is shown in Figure 1.

Additionally, for the needs of the proposed concept, it is possible to create a special partnership card for all Polish ports, thanks to which the sailors who have it will gain further amenities in using port services. With such a solution, the possibility of purchasing such a card should be included in the registration process. The card could be made at every marina. A sailor who registers on a website or application would be able to buy a card in such a situation, or only to book a position at a selected marina. If a client uses the option to purchase a card, he would be obliged to make prepayment and provide his address for the purpose of sending the card. The above process is shown in Figure 2.



Source: own study

Figure 1 The proposed client registration process



Source: own study

Figure 2 Improving the proposed client registration process

The introduction of such a card would create a common database in all ports in Poland, which would certainly improve the cooperation between them. This would be also comfortable for sailors who will be able to make reservations online or through the application. In such systems, it is also possible to add the option of online fees for port services. It will be a benefit both Polish and foreign sailors as well as port workers whose work comfort will undoubtedly increase. Foreign sailors will not have to worry about whether the currency they have will be accepted, or where they can possibly exchange it, and Polish sailors will receive an additional form of payment. However, the cash system should not be completely eliminated, as many people still use this form of payment.

6. CONCLUSIONS

The developing nautical tourism in Poland and the increase in the number of yachts sailing in the South Baltic waters forces the owners of marinas to constantly develop and expand the services offered. For this purpose, it is necessary to constantly identify problems and implement concepts that will improve the functioning of ports.

Observing the situation of nautical tourism in Italy or Croatia, where there is a high standard of marinas, it can be concluded that the use of innovative solutions has a positive impact not only on the information circulation system, but also on the development of tourism in the region and encouragement for new people to start yachting.

In every yacht port, new technological solutions should be used, which will ensure continuous development and help eliminate problems arising. Computer equipment and specialized software will allow for greater automation of certain processes implemented in ports and will undoubtedly increase the comfort of work of the staff. Thanks to the use of modern systems, the safety of people staying at the marina will also increase and the entire information circulation system will be improved.

The proper functioning of the port administration offices and the proper use of technological equipment also positively affects the process of accepting sailors. Registration via a website or a mobile application becomes incomparably more comfortable and allows more boaters to be accepted at the same time. For the purposes of further development yachts in Poland should follow the example of Italian and Croatian ports, where the use of state-of-the-art solutions has led to the creation of an efficient information flow system.

Based on the analysis carried out on the current situation in yacht ports in Poland, it can be noticed that currently used technology needs improvement. Implementation of the proposed concepts will allow for the elimination of many errors, thus improving the information circulation system in ports.

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