

# Public Relations of Complementary Micro-enterprises in the Maintenance of Construction Facilities

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**Abstract:** The subject of this paper is the possibilities of developing relations with the public of micro-enterprises from the activity of building maintenance. Given that micro and small businesses do not have large financial opportunities for marketing activities, it is logical to join a cluster in order to reduce costs, and for the purpose of developing strategic activities through public relations. In this paper, a hypothesis is put forward about the association into a cluster of complementary construction micro-enterprises that deal with the maintenance of construction facilities for the sake of public relations efficiency. The development of IT technologies has created the conditions for public relations to be organized online, which increases efficiency, but also reduces costs. In addition, information technologies enable the development of a number of other types of cooperation through the development of activities, market research, exchange of experience and other things of common interest. A model of public relations management was established in order to prove the hypothesis and objectives of this paper.

**Keywords:** cluster; communication; information; micro enterprise; public relations

## 1 INTRODUCTION

Construction is an economic branch that, with its dynamics, can stimulate the overall development of any economy. In addition, the increase in construction activities is one of the signs of positive developments in the economy and society as a whole. That is why the subject of research on this topic is exactly construction, that is, the maintenance of construction facilities. Various construction and complementary activities usually participate in this process (Examples: construction works, electrical and other energy and information technologies (IT) installations and finishing works in construction). In addition, the maintenance of construction facilities involves mostly smaller companies, but exceptional efficiency is required. The fact that smaller companies have a number of advantages, but also one fundamental problem, can be particularly emphasized. Namely, every small company has to invest funds in development as well as marketing activities, where compared to larger companies, they have fewer financial opportunities.

In this paper, some suggestions to the problem of public relations in micro and small enterprises in construction are proposed by joining a cluster. In this way, all participants retain their autonomy, and the subject of association is common interests. In this sense, market research, determination of the market segment and the position of the cluster can be highlighted. In this literature review research, the special goal of the association is joint activity on public relations. The main reason for this is the fact that public relations is not only a marketing, but also a long-term strategic activity of everyone, even small companies in maintenance activities. That is why complementary types of micro-enterprises should be determined and the goals and process of public relations activities should be defined.

In the modern conditions of technical and technological development, especially informatics, there is a new opportunity to perform certain activities of common interest, but with minimal costs. In this sense, several complementary

smaller companies in the field should join together in a cluster and then use information technologies (IT) to define the goals, process and functioning model. This is exactly the main goal of this paper, with the hypothesis that companies, due to complementarity, are deprived of mutual competition, and informatics makes it possible to conduct relations with the public online, thus with minimal costs. The activity process is carried out using a functioning model that, in addition to public relations, also enables other marketing activities, especially the development of products or services and companies. The content analysis method was used in the paper in order to determine the complementarity of companies and essential elements of the cluster. In addition, the activity of public relations that is adapted to smaller companies was investigated. Finally, the development of IT enables the setting up of process and functioning models, which is particularly emphasized in the discussion.

The dynamics and development of construction, as well as information technology, guarantees the successful continuation of research on this topic.

## 2 PARTICIPANTS IN BUILDING MAINTENANCE

Building maintenance is described as a set of permanent activities that contain technical and associated administrative activities in order to ensure the level of easement within the available (satisfactory) limits of the building as a whole and all its parts during the entire life of use. [1] In addition, maintenance implies ensuring the reliable function of a residential building as well as other buildings, regardless of purpose. [2] According to the Construction Act strictly formally, maintenance is defined (Article 3, paragraph 1) as follows: "Building maintenance is the performance of construction and other works on an existing building in order to preserve the basic requirements for the building during its life, which it does not change the compliance of the building with the location conditions according to which it was built. [3] In addition to the Construction Act, other by-laws have

determined the method of financing or covering costs for certain types of works, such as the following [4]:

- regular maintenance and improvement of common parts and devices of the building
- urgent repairs of common parts of the building and devices
- replacement of existing and installation of new common parts and devices of the building.

The object of this topic is a cluster of companies that deal with the maintenance of construction facilities. Clusters can be defined as a modern model of business networking, by forming cooperation chains based on production cooperation, transport and service provision, in which the development of small and medium-sized enterprises is initiated in a flexible way. [5] In this case, it is an example where the cluster consists of four basic types of construction works. The carrier of the activity is a construction company that combines basic types of work such as: masonry, reinforcement, roofing, etc. The rest refers to all mechanical installations (water supply, sewage, other energy sources and air conditioning). The third group are companies that perform all types of electrical and IT installations. Other participants in the maintenance cluster are finishing works (installation of floors and ceilings, painting, etc.). In addition, the maintenance of construction facilities usually involves works of lesser value than the construction of new facilities. [6] That is why maintenance works are usually efficiently carried out by smaller companies known as micro-enterprises. These are economic entities, natural and legal persons that employ less than 10 workers on average per year, generate a total annual income of up to EUR 2,000,000.00, or have total assets of up to EUR 2,000,000.00. [7] In addition, small and micro enterprises have certain advantages such as: "greater business flexibility, universality of employees, greater level of innovation, greater networking opportunities, etc." [8]

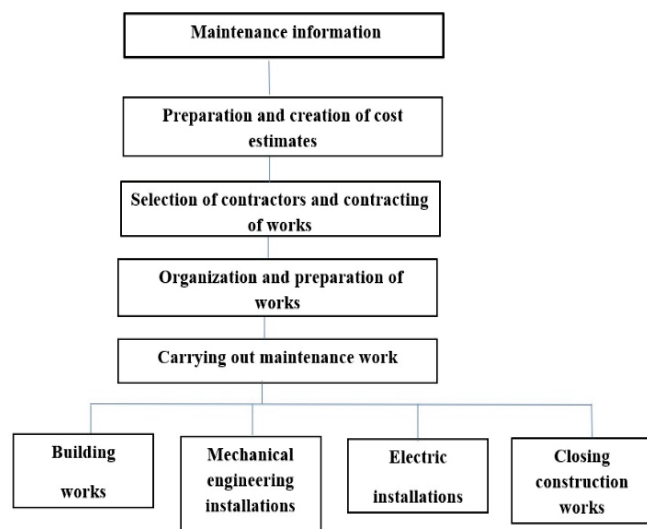


Figure 1 The process of building maintenance [6]

Fig. 1 shows a representation of the common maintenance procedures where a company specializing in building maintenance receives information or an order for intervention due to the occurrence of damage or a defect in

the building or the need for regular maintenance. Every well-organized company must carry out certain activities for the preparation and execution of maintenance work. In addition, it should be borne in mind that these are usually jobs that need to be completed as soon as possible, so in addition to quality, price and deadline, efficiency is also an important factor. Process efficiency can be achieved if several complementary construction micro-enterprises join together in a cluster. In terms of organization, the participants in the cluster choose the person responsible for the information and communication process who leads the maintenance process according to the type and quantity of individual works. By agreement between the members of the cluster, other jobs can be combined, especially commercial or marketing jobs and public relations. In addition to marketing, public relations activity is becoming more and more strategic, both for large and small business entities and groups. That is why the starting point of consideration is precisely the joint organization of relations with the public in order to achieve maximum efficiency and minimum costs.

### 3 PUBLIC RELATIONS AS AN IMPORTANT STRATEGIC ACTIVITY

Public relations, often abbreviated as PR, is an important strategic, communication and marketing tool that takes on an increasingly important strategic role in the business operations of both larger and smaller economic entities. There are numerous definitions of the concept of public relations, from which the activities and functions of public relations derive. One of the basic definitions is that "public relations is a strategic communication process that builds mutually beneficial relationships between organizations and their publics." [9] Public means all stakeholders in the environment, which can be: media, market, local self-government, investors, suppliers, non-profit organizations, financial institutions, employees, and others. It is necessary to communicate effectively with the public, and this requires leadership competencies. That is why the emphasis is on the managerial function of public relations, whereby public relations "is a management function that classically focuses on long-term patterns of interaction between an organization and all of its various publics" [9]

From the aspect of small entrepreneurship, public relations represent communication between a business entity and its public with the aim of achieving mutual understanding and achieving common interests, ensuring the realization of long-term goals of creating a good image. For more successful operations and achieving a competitive advantage, strategic planning and measurement of achieved goals by monitoring defined indicators of business success are necessary. Success can be measured through non-financial and qualitative indicators, and in this sense, the function of public relations is reflected in strategic planning that brings the company into balance with the needs of its public. In doing so, it is necessary to choose the appropriate and most functional communication channels and tools for clearly communicating set business goals with the public, as well as for implementing feedback into strategic decisions.

There are two types of communication channels. They can be personal and indirect [10] and it is important to adapt the communication channels to the content of the communication, the stakeholders and the goal of the communication. In business practice, integrated marketing and communication tools are used, aligned with the manager's managerial and marketing competencies. The above is more acceptable for larger and more financially stable organizations, while for smaller companies, especially for micro-companies, such models are not financially acceptable. In support of the strategic application of public relations in micro and small companies is the development of IT technologies and the information revolution, which enables faster, more frequent, targeted, more accessible and differentiated communication with the public. Modern means of communication, availability of information, greater education of the public and openness of the market are also in favor [11].

The mentioned functions and activities of public relations and communication with the environment can be extremely useful for micro-enterprises. But their problem is the lack of financial and professional opportunities for organizing such activities. That is why the solution to this problem lies in association, and in this case, it is exactly a cluster. In this way, even small or micro companies, especially with the help of IT, can successfully organize public relations. Bearing in mind that public relations, according to the definitions, is not only a marketing but also a very important strategic managerial activity and small companies, especially in maintenance activities, should pay special attention to it. Given the great possibilities offered by information technology today, joint public relations activities can be organized very efficiently and with minimal costs.

#### 4 A PUBLIC RELATIONS MODEL OF A CLUSTER OF CONSTRUCTION COMPANIES FOR MAINTENANCE IN ONLINE CONDITIONS

By establishing a cluster of reflection of construction facilities, conditions were created for effective cooperation, but also for other development and commercial activities of common interest. In maintenance activities, it is extremely important to have contact with the environment, because the maintenance of construction facilities is essential for the functioning of the living space of the population and the infrastructure. In addition, joining a cluster creates greater opportunities for business development and covering various commercial costs. Given the increasing importance of public relations, these costs can be more easily financed by pooling. The development of IT, especially the Internet, enables public relations activities to be carried out in a very efficient manner with minimal involvement of all resources.

Fig. 2 shows an example of the cooperation of participants in the cluster for the maintenance of construction facilities with the aim of effective relations with the public. In this example, all four basic types of construction work are included, with the inclusion of construction supervision. This is important because supervision enables the detection of various problems during the execution of works.

Construction supervision is an independent professional activity that is not a participant in the cluster and ensures quality and efficient execution of works. It is also a source of information on the basis of which actions are taken to increase the quality of future works. The activity system should usually be managed by the construction company as the holder of all other maintenance work.

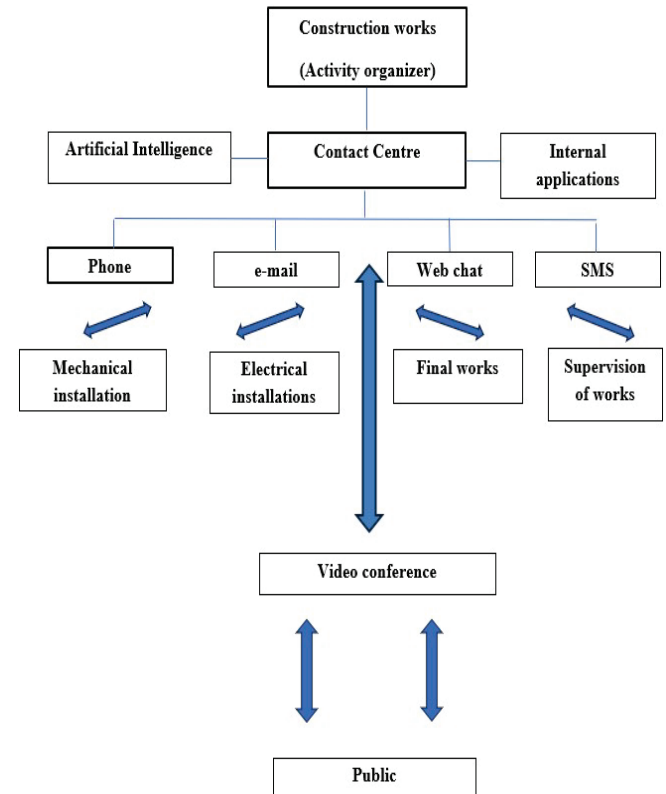


Figure 2 Public relations model of a cluster of construction companies for maintenance in online conditions

An effective public relations activity can be enabled by a combined system shown in Fig. 2. It can be seen that the participants in the public relations activity are all types of construction and subcontracting works, including supervision works with the formal management of the construction company. This is made possible with the help of IT, and in this case, it is CRM (Customer Relationship Management). [12] The basic configuration of this model consists of: a contact centre, internal applications and artificial intelligence, all of which can function virtually. The contact centre is a hardware-software module with which the activity leader can communicate with other members of the cluster, as well as all together via video conferences with the public. This complex communication is made possible by internal applications as special software, and special support can be provided by artificial intelligence. This software support is a novelty in modern IT systems. An intelligent system is considered to be any system that shows adaptive behaviour, learns based on experience, uses large amounts of knowledge, shows properties of awareness, communicates with humans in natural language and speech, but allows mistakes and ambiguities in communication, etc. [13]. Apart

from that, and in a number of other definitions, there is an opinion that artificial intelligence includes the following IT systems that:

- think rationally,
- behave rationally,
- have all the appearance of intelligence (rational or human),
- with their internal functions, they try to be in harmony with a human being, that is, a rational being,
- have adaptability, where work ability is improved by learning from experience and independence and the ability to perform tasks in complex environments without someone's help and constant guidance [14].

In the last 10 years, artificial intelligence has brought enormous changes to the world market and the operations of business entities. The changes are reflected in faster analysis of user data, in personalized advertising, automated communication with the larger public, faster forecasting of trends and generation of content for the needs of more successful business. The ability of artificial intelligence to collect, analyse and interpret data, in addition to its other features, enables its contribution in improving public relations in micro-enterprises. Artificial intelligence is a memory that contains various information from concrete practice and the latest theoretical knowledge, and the management part can enable quick and efficient management of public relations activities. Some of the activities of applying the public relations strategy in the described cluster can go in the direction of: educating the public about the importance of maintenance; sharing stories about successful projects; displaying positive reviews from satisfied clients, and socially responsible activities and care for the local environment and community. This is important because maintenance activities also need to monitor the development of their activities in order to be able to effectively inform and understand clients and the rest of the public.

## 5 DISCUSSION

Research on this topic shows, first of all, the topicality of the research subject of this paper, which is public relations at construction maintenance companies. In particular, the association in a cluster can be highlighted due to their complementarity, i.e. synergy where their activities complement each other. This creates the conditions for other forms of cooperation, especially regarding the exchange of experience, innovations and joint marketing activities. In this case, special attention is focused on public relations. Definitions and other information point to the fact that public relations is not only a marketing but an extremely important strategic activity. This is particularly evident in the maintenance of construction facilities. Namely, for these activities, all the mentioned participants, who in this case represent the public to this cluster, are very important. Some, such as clients, are interesting as users of services, while others are carriers of information, so that participants in the cluster are up-to-date on all events related to direct business or the image of the cluster. In addition, public relations can

be more effective with the use of information technology. The application of CRM as software for virtual communication ensures maximum efficiency with minimum costs. Everything can take place through joint video conferencing enabled by internal applications in the contact centre. In this case, artificial intelligence deserves special attention as additional software support for public relations activities. From the very definition and other features of artificial intelligence, new possibilities for increasing the quality of relations with the public can be seen. The current level of software enables quick access to a large amount of information, but also a certain level of creativity. This opens the possibility for the moderator of the activity to have a more varied and useful approach to communication. Lalić et al. [15] wrote about the importance of association and cooperative business. In the results of their research on the influence of mutual cooperation on the level of innovation, they indicated that manufacturing companies that cooperate with other organizations in product development and research and development activities are significantly more innovative, in terms of innovative products, from non-cooperating companies. A higher level of innovation, according to some authors, leads to a more successful business. So that association with the goal of joint relations with the public has the potential to lead to business improvement. These are all facts that arise from consideration of this contemporary topic and contribute to the realization of the research goal and hypothesis.

## 6 CONCLUSIONS

Several conclusions can be drawn from the previous considerations. First of all, it can be said that this topic deserves special attention due to its modernity and the needs of micro-enterprises. Research and consideration of the literature and proposed solutions is aimed at small or micro enterprises that deal with the maintenance of construction facilities. This activity is extremely important and useful both for the economy, infrastructure and citizens. The paper describes the process of building maintenance and public relations model of a cluster of construction companies for maintenance in online conditions. In addition, for micro-enterprises, a complementary association into a cluster is suggested for greater efficiency and quality, but also for lower costs. Participants of the proposed cluster can cooperate in the exchange of various technical, development and commercial information. On this occasion, the starting point of cooperation is a joint relationship with the public. The reason for this is the fact that public relations is a useful marketing tool, but in modern conditions an increasingly important strategic activity of every company. Given that everything takes place online, the effectiveness of this activity can be increased with the support of IT and the application of new IT systems, especially artificial intelligence. In this sense, a model of public relations of microenterprises in the activity of building maintenance with the support of hardware-software support, known as CRM, is proposed. This solution contains a contact centre for help, which, with the support of internal applications, allows the

manager to contact other participants of the cluster and together with representatives of the public. Special support can be provided by artificial intelligence, especially in terms of greater speed, quality and variety of information with the aim of better organizational solutions. The above conclusions point to the justification of research on this topic and the achievement of the goal of this paper. Proposals for future research are based on the market needs of micro-enterprises in the field of construction, and go in the direction of detecting key factors for improving communication within and outside these enterprises, and factors that influence the application of new technologies in business. By detecting the aforementioned factors, the possibility of faster and targeted directing of financial means and other resources to improve relations with the public of all stakeholders of that system would be opened.

The modernity and usefulness of this topic, as well as the technical and special IT development, are sufficient reason for continuing the research.

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