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**DIGITALIZATION OF FUNERAL SERVICES**

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**Abstract**

Funeral business is one of the most popular industries in the world, but it is not appropriate to talk about. This is a very traditional and not flexible sphere, but even here there is a need for changes. The digitalization of the economy covers a lot of countries. The leaders are traditionally considered Asian countries (China, Singapore, Malaysia) and the European Union. In Russia, this direction is only gaining momentum. The article presents the author's concept of digitalization of the funeral business on the example of Russia. This concept is universal and can be replicated in other countries. The author, when developing the concept, is based on modern technologies of cloud storage, creation of digital doubles, digital interdepartmental interaction. The population evaluated the proposed concept by the method of a sociological survey. The implementation of the concept proposed by the author will solve a number of problems in the funeral industry and, first of all, will increase the transparency of the industry, which is the main problem, according to the society. This, in turn, will allow the introduction of market-based methods of price formation in the industry and reduce the cost of services for the population. In the future, based on changes in the burial procedure, it is planned to popularize cremation as a more environmentally friendly way of disposing of bodies.

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## 1. Introduction

More than 60 million people worldwide died from various causes in 2019 (Countrymeters, 2020). In Russia, about 1.8 million people died during the same period (Rosstat, 2020). In different countries, the issue of disposal of the dead is solved differently. In Russia, burial is traditionally used, or cremation. In 2020, due to the coronavirus pandemic, the problem of burying people has worsened. The exact number of cemeteries in Russia is unknown. There are 26 active crematoria, of which 14 are private and 12 are municipal.

In March 2019, the Institute of Public Opinion "Anketolog" (2019) conducted a sociological study. Its main results:

- 1.91% of Russians consider the sphere of funeral services as corrupt.
- 2.93% of Russians consider the help from the state in the organization of funerals as insufficient.
- 3.11% of Russians choose cremation for the burial of the loved ones.

This study shows that there are problems in the funeral services industry and it needs to be modernized. The main problem is the lack of transparency and the high level of corruption. The solution is the digitalization of the funeral business in Russia.

There has been a lot of talk about digitalization in recent years. The digital economy is a new modern sphere of today's economic life, completely changing the existing connections and existing system models and methods of economic management (Khalimon et al., 2019). In Russia, there is a large project "Smart city". Often, the term "smart city" is understood as a certain technology or set of tools. "Smart city" is an approach to solving urban problems, problems of citizens with the help of technology. The digital transformation of the city involves solving the problems of socio-economic development using information and communication technologies (Saldaeva et al., 2019). The innovative city uses advanced information and communication technologies to improve the standard of living of its citizens.

In 2018 the Ministry of construction of the Russian Federation is implementing the project "Smart city" in the framework of the national project "Housing and the urban environment" and national program "Digital economy" (Order of the Ministry of construction of the Russian Federation dated 31.10.2018 No. 695 / PR "On approval of the passport of the departmental project of Digitalization of urban economy" Smart city"). A key implementation tool is the widespread adoption of advanced solutions. A special feature of smart cities is the availability of many remote services for people. As part of the project, it is planned to create a digital twin of the city. This program involves, among other things, the digitalization of the funeral business. But, unfortunately, this issue is still under discussion. There are only individual solutions. It is necessary to develop a concept of digitalization of the funeral business.

In Russia, the service "loss of a loved one" works on the portal "Public services". With the help of this service, you can get the service "state registration of death", and get information about the funeral allowance, insurance for death due to an accident at production site or death as a result of an occupational disease. It is necessary to expand this service and include the ability to choose the method and place of burial. As a result, the population should receive a "single window" burial service. Digitalization of the funeral business begins with an inventory of existing burials. According to the current legislation, the inventory of cemeteries should be carried out by the municipality once every three years. In practice, this requirement is not met. To date, no department in Russia has accurate data on the number of cemeteries

and the number of burials. It is assumed that as a result of digitalization of the funeral business in Russia, the burial service will become transparent, corruption in the industry will be reduced, and a virtual cemetery service will be established.

## **2. Problem Statement**

In Russia, there are several serious problems in the field of burial:

1. The legal framework in the field of funeral business is outdated or absent.
2. There are no available places for burial in sufficient quantity. In large cities, this problem is most acute.
3. Most cemeteries are illegal or have no legal owner.
4. Corruption in the industry.
5. The funeral market is closed to new businesses. There are no market mechanisms.
6. There is no transparency in the execution of public services in the field of burial.
7. Russians are traditional in matters of burial. It is difficult to change the system. Great influence of the church.

Digitalization of the funeral business in Russia will make the industry more transparent. This will have a positive impact on the quality of services provided and will lead to a reduction in the cost of services.

## **3. Research Questions**

The research questions for this paper were: What are the main problems in the field of burial? What are the goals and objectives of digitalization of the funeral business? What is the current concept of funeral digitalization? That will include a digital service for the burial? How does the population feel about the current state of the funeral business? Is the population ready to use the new format of burial? What are the preferences of the population in terms of disposal of bodies?

## **4. Purpose of the Study**

The author proposes the concept of digitalization of the funeral business. As a result of the implementation, the transparency of the provision of burial services will increase. The goal of digitalization of the funeral business is to change the logic of processes and introduce digital technologies in the field of funeral business.

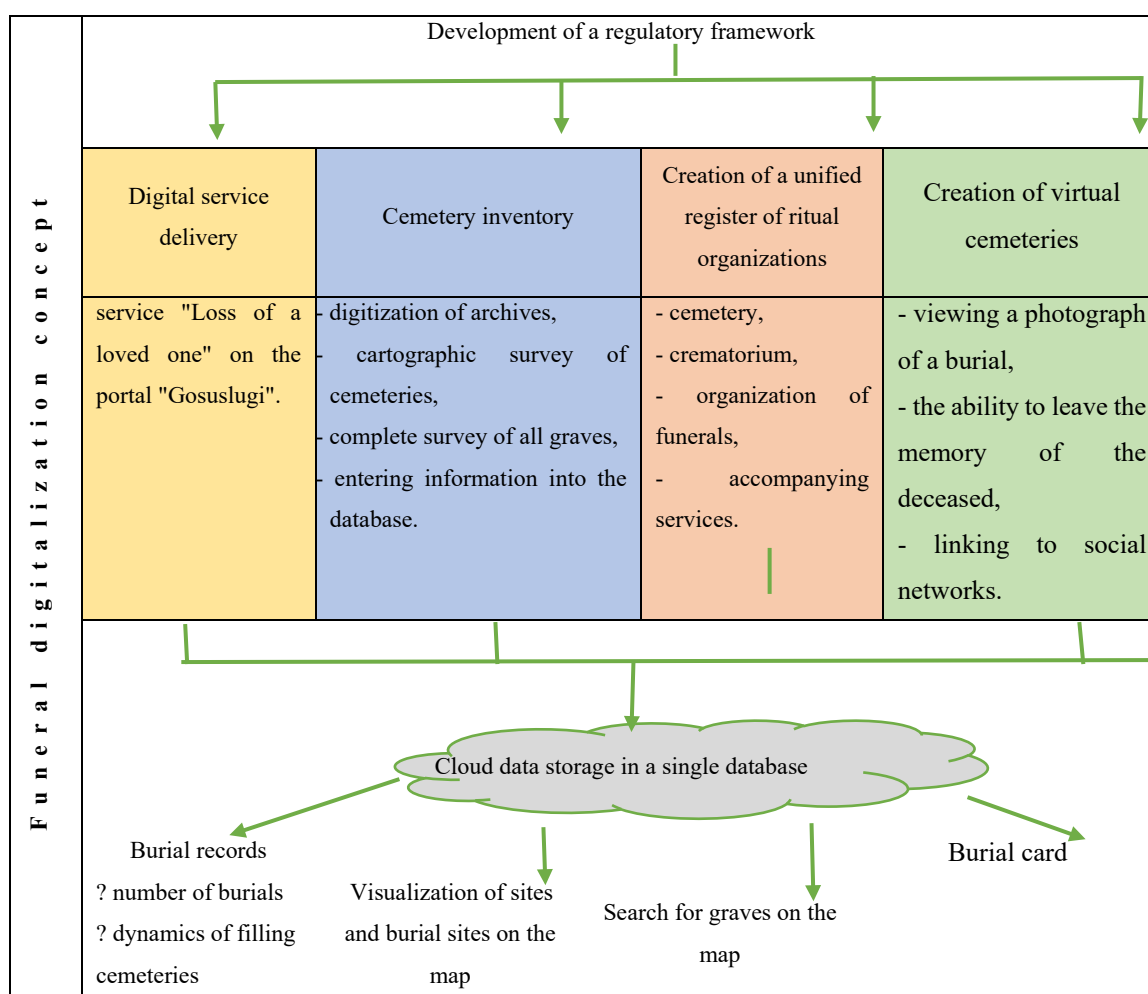
Tasks of digitalization of funeral business:

- transition to digital provision of public services in the field of funeral business: simplification of the burial procedure, use of the "single window" system, electronic document management with interdepartmental interaction and interaction with all participants in the process;
- inventory of cemeteries;
- creation of a unified register of ritual organizations;
- creating virtual cemeteries;
- cloud storage of data in a single database.

“The expansion of the use of digital technologies ... will increase the effectiveness of government programs in all sectors: science, healthcare, public sector management, minimize face-to-face contact of the population and business with government bodies” (Trubetskaya, 2020, p. 279). Digital transformation of the funeral business will improve the reliability, quality, and availability of burial services, create a new infrastructure for the most convenient burial process, and develop competitive markets for related services.

## 5. Research Methods

The concept of digitalization of the funeral business (Figure 1) presents the target model and current vision, taking into account the current technologies.



**Figure 1.** The concept of digitalization of the funeral business

Source: author

Digitalization of the funeral business should begin with updating the regulatory framework. Experts agree that modern legislation is outdated and does not meet the realities. Figure 1 shows 4 main directions in the framework of digitalization of the funeral business:

1. Digital service of the burial. The service "loss of a loved one" on the portal "Public services" partially corresponds to this direction. It is supposed to expand this direction by adding the following functions:

- selection of the method and place of burial, including the choice of location on the interactive map of cemeteries;
- electronic recording for cremation/burial;
- obtaining the necessary documents and certificates, including an electronic death certificate and a medical report;
- possibility to choose additional services from the register of licensed funeral enterprises;
- opening an inheritance case and receiving an inheritance.

To implement the above functions, a detailed study of the service and the establishment of interdepartmental interaction will be required.

2. Inventory of cemeteries. The inventory consists of four steps:

- digitization of archives;
- mapping of cemeteries;
- full survey of all burials;
- entering information into the database.

An inventory has already been carried out in a number of Russian cities. These are Magnitogorsk (2013), Nizhny Tagil (2016), Kamensk-Uralsky (2019), Kazan (partially, 2019) and others.

3. Introduction of a unified register of ritual organizations. In Russia, there is a national standard "Specialist in the field of funeral business" and until 2003, licensing of organizations working in the field of funeral business was carried out (to date, licensing has been canceled). Creation of a single register, which will include organizations that meet certain requirements, including the availability of a material and legal base and trained personnel. The register will reflect not only funeral services offices, but also cemeteries and crematoriums, as well as organizations that provide related services.

4. Creating a virtual cemetery. The cemetery digitalization service involves two directions:

- creating a virtual cemetery, where photos of the deceased's grave are placed, a burial card is created (full name, dates of life, special marks, for example, a participant in a war or a merit), geolocation is linked. Such services exist, but they are not centralized.

- development of the interface of interaction with the deceased. A promising market for IT startups. For this purpose, as a rule, social networks are used, with the help of which a virtual copy of the deceased is modeled. There are projects to create chatbots based on the digital profile of the deceased. Memorialization of pages in social networks is possible. Popular social networks already have a mechanism for working with pages of deceased users. There are a number of mobile services that allows to be active after death. "In the context of digitalization, a person will sooner or later become involved in the process of creating digital memory" (Cherkasova et al., 2020, p. 543).

The main requirement of the concept of digitalization of the funeral business is cloud storage. All registries, interagency interaction and convenient services are possible only if cloud storage is available. "... the World Wide Web acts as a space for the formation of such a memory, and at the same time as a way to preserve it" (Cherkasova et al., 2020, p. 544). In addition, it should be noted that for the modernization of the market of funeral services, it is necessary to:

- create comprehensive funeral centers;
- promote cremation as an economical and eco-friendly way of burial;

- ensure the inflow of private investment in the industry;
- build non-state cemeteries and crematoriums, use public-private partnership mechanisms.

The existing complex of funeral business in Russia has a significant potential for development due to the introduction of modern technical solutions along with changes in organizational models of activity.

## 6. Findings

Evaluation of the concept of digitalization of the funeral business is based on the method of applied sociological research. The author conducted a sociological study in which 304 people aged 16 to 87 years took part. The questionnaire contains 3 blocks:

- data about the respondent: age, gender, place of residence, religion, level of education, income level, whether the respondent personally or through acquaintances encountered the field of funeral business;
- assessment of the current state of the funeral industry: respondents who responded positively to the question about getting acquainted with the field personally or through friends, asked to identify the main problems of the industry, assess the level of corruption in the funeral industry, the quality of services provided in the field of burial and related services, the cost of burial, the quality of cemetery maintenance, the level of assistance from the state;
- evaluation of the concept of funeral case digitalization: does the respondent a subject to the entry portal of "Public services", whether it is ready to use e-services in the sphere of funeral business, what is its relevance to the virtual cemeteries, the creation of a registry and the introduction of licensing organizations working in the field of funeral services, the priority of the method of bodies disposal.

Results of the survey:

- of the 304 respondents, 285 people (94%) experienced the funeral industry personally or through acquaintances, which formed the basis of the sample;
- gender, age, income level, and religion did not have a significant impact on the respondents' answers. The survey involved 27% of young people (16-35 years), 56% of middle-aged people (36-59) and 17% of third-aged people (60-87 years); 121 men (40%) and 183 women (60%) were interviewed. The answers were more influenced by the level of education (people with higher education are more loyal to the concept of digitalization of the funeral business), the place of residence (in large cities, respondents more often chose electronic services and expressed approval to the creation of virtual cemeteries);
- 96% of respondents included in the sample believe that the support of families who have lost a loved one from the state is insufficient, 92% would prefer increased state participation in the industry, 91% pointed to corruption in the funeral business, 82% consider burial services too expensive, 73% pointed to extortion and imposition of additional services, 68% consider the funeral service of poor quality. 40% of respondents rated the quality of cemetery maintenance as low, 45% - sufficient, and 15% - high.
- 98% of respondents have a confirmed entry on the "Public services" portal, 62% are ready to use the extended electronic service "loss of a loved one", 64% expressed approval of the creation of virtual cemeteries, 73% believe that licensing can contribute to the legalization of the industry.
- 63% of respondents would prefer cremation to traditional burial, 89% of respondents are loyal to cremation as a method of bodies disposal. In general, after the survey, it can be concluded that respondents

positively perceive the upcoming changes and support the suggested concept of digitalization of the funeral business.

## 7. Conclusion

The modern concept of digitalization of the funeral business involves, on the basis of changes in legislation, the introduction of electronic burial services, inventory of cemeteries, the introduction of a single register of funeral organizations, the creation of a virtual cemetery, followed by cloud storage of data. As the main problems of funeral business, the respondents identified the high cost of services in burial, corruption, opacity of the industry, extortion and the imposition of additional services, poor maintenance of places of burial places (cemeteries), bad service, tax evasion by organizations of ritual services (work in the informal sector). Lack of state intervention in meaningful to the society industry and lack of support for families who have lost a loved one. The majority of respondents positively assessed the concept of funeral business: 62% are ready to use electronic services in the field of funeral business, 64% expressed approval of the creation of virtual cemeteries, 73% believe that licensing can contribute to the legalization of the industry. Further research may be conducted to explore opinions about burial methods and factors that hinder the development of cremation in Russia as a more environmentally friendly way of remains disposing. The results of the study can become the basis for the early adoption of new legislation in the field of funeral business. In the near future, it is necessary to introduce the proposed concept into Russian practice. The regulatory framework should be brought in line with the needs of the society. In addition, the results of the survey will help in assessing the readiness for digitalization of other areas.

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