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SMART CITY TECHNOLOGY

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Abstract: The study of opinions about the components of the "smart city" allows us to assert the need for modern research of this phenomenon of reality. According to experts, Kazan is one of "the wonderful examples of a smart city where the old and the new are very unusually intertwined." Tourist resources of both Kazan and Tatarstan find their niche at international and Russian exhibitions. The Strategy for the Development of the Tourism Sector in the Republic of Tatarstan for 2016 - 2021 and for the Period until 2030 and the Strategy of the State Committee of the Republic of Tatarstan for Tourism "contains directions for the development of tourism in order to create a hospitable, high-tech, territorial, infrastructural, legal, organizational, managerial and economic environment favourable for the further development of the tourism industry in the Republic of Tatarstan". Today Kazan is not the only "smart city" in Tatarstan. In our opinion, it is important to focus on the fact that Smart technologies and other elements of the "smart city" are being actively used in the development of the tourism sector in our region.

Keywords: phenomenology, phenomenological reduction, lexical eidos, word meaning, multi-meaning.

INTRODUCTION

Today's tourists are a kind of socio-cultural phenomenon. They live comfortably in varying degrees of awareness in different fields of knowledge; they have the desire to experience new feelings; they have the emotions of dealing with the historical past and they know modern information technology, particularly in the field of communications

and development of territories.

This explains their desire to get a tourist product being at the junction of their own interests and, simply put, numbers. Such opportunities are undoubtedly associated with the implementation of the Smart City project signed (at 06.06.2018) by the Ministry of Construction, Housing and Communal Services of the Russian Federation and PJSC Rostelecom (18). Let us remind that "Smart City" is one of the practical directions of the State Program "Digital Economy of the Russian Federation" (hereinafter referred to as the Program) (21).

It is based on the Decree of the President of the Russian Federation "On the Strategy for the Development of the Information Society in the Russian Federation for 2017 - 2030" (2). Five basic directions have been identified to manage the Program: normative regulation; personnel and education; formation of research competencies and technical groundwork; information infrastructure; information (cyber) security.

The implementation of these projects is unthinkable without the development of five basic directions that represent the essence of the digital economy. The Smart City program will transform the urban economy and will create certain conditions for improving the level and quality of life of the population. The word combination "smart city" is often used associating the modification of the city with new technologies and trends that ensure a high quality of the urban environment. Considerable attention is paid to smart city technologies in the development of cities and the draft Concept of the Strategy for the spatial development of the Russian Federation for the period up to 2030 (6).

METHODS

The youngest city in Russia, Innopolis (in 2012 the capsule in its foundation was laid by D. Medvedev), on the territory of the Republic of Tatarstan can be called "smart city". For a number of reasons, the object of our research is the capital of Tatarstan - Kazan. Firstly, Innopolis was originally conceived as a city of high technologies and innovations (and as mentioned above, history is also important for a modern tourist). Secondly, Kazan is a city whose past goes back more than a thousand years. Thirdly, in 2017, Kazan was recognized by the National Institute of Technology and Communications (NIITS) as an effectively developing "smart city" (in third place after Moscow and St. Petersburg in the "Smart Cities Indicators" rating) (8). Impartial experts paid attention to everything: the number of ATMs and WI-FI points, the presence of "smart" traffic lights, the degree of development of the urban transport network, and many other characteristics of a "smart city". In a word, the following directions were considered: management, finance, infrastructure, economy, inhabitants, technologies, and environment. It is noteworthy that not only the criteria of indicators falling under the characteristic of "smart" were considered, but also the desire of the authorities and the citizens themselves to develop the latest technologies.

For the sake of fairness, we note that Kazan, like the Republic of Tatarstan as a whole, did not come up with the achievements in the digital economy and the creation of "smart cities" overnight. The basic infrastructure has already been set up here. For example, at the beginning of the implementation of the Program "Digital Economy of the Russian Federation", WI-FI points were installed on the territories of 676 settlements of the republic and provided with fibre optic communication lines, which significantly accelerated the implementation of the project (8). According to the Federal State

Statistics Service (Rosstat) statistics, the Republic of Tatarstan remains the leader in the Volga Federal District over the past three years in terms of the number of fixed high-speed Internet access and there are more than 1 million of them in this constituent entity of the Russian Federation (17). In the "Rating of Innovative Regions 2017" of the Association of Innovative Regions of Russia (AIRR), the republic is in third place after Moscow and St. Petersburg. The experts of the Higher School of Economics (HSE) in the same 2017 placed the Republic of Tatarstan in the first place in the "Rating of innovative development of the constituent entities of the Russian Federation".

The concept of a "smart city" is gaining more and more supporters from among researchers of the space of territories, politicians and officials, but there is no consensus on its interpretation. An attempt to formulate the scientific definition as accurately as possible was made, for example, by the international conference "Smart City - Safe City" (13-14 July, 2017 Astana, Republic of Kazakhstan) (10). The collection of materials following the conference suggests the following wording: "A smart city is a complex of organizational measures and software and technical conditions for a comfortable stay in a city, and also for comfortable living, and doing business (16)".

In our opinion, it is important to focus on the fact that it is realized with the help of data that cover the areas of transport, security, improvement, and so on. The data itself can be obtained using information systems, various types of sensors, transmitters and other technologies that help to quickly solve emerging problems. The ability to competently dispose of data, that is, to manage them, is a guarantee of improving the quality of life of citizens, respectively, of comfortable conditions for the development of tourism.

The incessant development of technology makes it possible to question the possibility of the only correct formulation of the "smart city". Nevertheless, let us emphasize that all its technical components are only a means to achieve the goal: the creation of a comfortable urban environment. In the first half of 2014, 1 million 800 thousand tourists arrived Kazan. Tourist traffic has almost quadrupled! Along with this, urban tourism increased to 38% (3).

RESULTS AND DISCUSSION

Transport services. The city has an open data portal. This start-up was put into operation in 2014, being one of the first in the Russian Federation. Start-ups allow us to quickly enter information about the movement of public transport and make the necessary adjustments in the same mode. During the FIFA World Cup in Kazan, the first unmanned electric buses based on the 5G pilot zone in the 3.4 - 3.8 GHz frequency bands left the city routes. In the near future, not only passenger cars, but also unmanned cargo vehicles will appear in Tatarstan (13). A year later, according to the statement of the Chairman of the State Council in the Republic of Tatarstan F. Kh. Mukhametshin, a draft law on unmanned vehicles will work in Tatarstan (13). We add that at the end of August 2018, Yandex and the Government of the Republic of Tatarstan entered into an agreement on the development of unmanned vehicles in Tatarstan in the city of Innopolis, which, according to the document, is "designated" as a test zone.

Ecology and Habitat. For October - November 2018, the results of a joint study of the Centre for Information Communications "Rating" and the Financial University were published (4). The experts considered that Kazan is the leader in the rating of the quality of life among Russian cities, as well as an international competition aimed at creating a

modern eco-district was held here. Recall that a "smart city" is not only digitalization and technical innovations, but also an area in which urbanized solutions and social infrastructure facilities must be balanced (9).

Tourist resources of the Republic of Tatarstan find their niche at international and Russian exhibitions. Within the framework of the State program "Development of the tourism and hospitality sector in the Republic for 2014 - 2020" (Program), work was launched on the development of the tourist destination "Visit Tatarstan" (23). Among the main objectives of the Program are: formation of a favourable tourist image of the Republic of Tatarstan; increasing the volume and variety of tourist services provided to the population; development of the tourist and recreational complex of the Republic of Tatarstan; the formation of a competitive tourist product and its promotion in promising tourist markets; improving the quality of the republican tourist product, and the level of hospitality when serving tourists at the facilities of the tourism industry, taking into account the current domestic and international standards (7). Tourist opportunities in Kazan continue to expand. A diversified approach to tourism development is presented in the form of the following tourism products: international business tourism, medical, educational, and urban tourism.



Млн.чел. – million people.

Динамика роста туристического потока в г. Казани - Dynamics of the tourist flow growth in the city of Kazan.

Our proposed chart captures a clear increase in tourist flows over five years. The fact of tourism growth in Kazan in 2014 is indicative. According to experts, the period from 2005 to 2014 was marked by the growth of the tourism industry worldwide. In the capital of Tatarstan, it grew by 14.3% (in 2013 the city was visited by 1.5 million people) (On the results of tourism development in Kazan in 2017 and plans for 2018. 01/29/2018). The following years are also characterized by an increase in tourist flow:

in 2015 it was 20% higher than in 2014; 2015 was 20% higher than in 2014, 2016 was 16% higher than in 2015. Tourist traffic power slightly decreased in 2017. However, there is an increase of 10% compared to 2016 (7). From January to August 2018, 2.65 million guests have already visited Kazan (21). At the World Cup alone, about 300 thousand people from 36 countries arrived in the capital of Tatarstan.

Today Kazan is not a single "smart city" in Tatarstan. Smart technologies and other elements of the "smart city" find living application in the tourism sector, for example, in Almetyevsk which is the winner in the "Smart strategy - smart city" nomination of the 5th All-Russian competition of municipal strategies in 2018. It is widely known as a powerful industrial centre, but the city has a history full of amazing events. The first written mentions of it are in the historical documents of the 18th century. The potential for the development of the balanced tourism model in Almetyevsk is seen precisely in the reliance on manufacturability and historical heritage. The financial and economic opportunities of the oil capital of the Republic of Tatarstan contribute to the creation of an eco-sphere in the territories not only of the city, but also of other settlements in the southeast of the region.

Another example is the city of Yelabuga known in the Tatarstan tourism industry as the Yelabuga State memorial estate. The city is one of those that are subject to the least technogenic load in the Kama economic region of the republic. Yelabuga has considerable infrastructure and environmental prospects. Additional advantages are seen in the inclusion of it by the Ministry of Construction of the Russian Federation (in spring 2018) in the list of 20 pilot Russian cities under the Smart City program. This presupposes the transformation in the near future of the entire life support complex of Yelabuga: security systems, garbage processing, transport infrastructure, landscaping and improvement.

SUMMARY

Elements of the "smart city" are found in other settlements of Tatarstan: the cities of Arsk, Nizhnekamsk, Naberezhnye Chelny, Zelenodolsk, and others. The tourism industry is moving forward in accordance with the Strategy of Social and Economic Development of the Republic of Tatarstan for the period up to 2030 (22) (9). Along with many other positions, including the "Smart City", it provided for the formation of a new technological environment, and spatial environment (eco zone, transport infrastructure, etc.).

Tourism is presented as a separate cluster of Tatarstan, a balanced ecosystem that contributes to "the formation of a competitive and viable core of creative industries, the creation of an attractive cultural environment that ensures the preservation of heritage and traditions, opportunities for participation in cultural life and creative self-realization of each person" (23). All these and other important provisions of the Strategy 2030 explain the main position of the Strategy for the Development of the Tourism Sector in the Republic of Tatarstan for 2016 - 2021 and for the period up to 2030 (7).

The Strategy of the State Committee of the Republic of Tatarstan on Tourism "contains directions for the development of tourism in order to create a hospitable, high-tech, territorial, infrastructural, legal, organizational, managerial and economic environment favourable for the further development of the tourism industry in the Republic of Tatarstan (12)." With the publication of the Program "Digital Development of the Russian Federation", the Tatarstan document was corrected with the introduction

of the section "Digital transformation and participation of Tatarstan in national projects" (12).

The example of Kazan, as well as of the Republic of Tatarstan as a whole, is evidence of the need for "smart cities" being the drivers of the national development. Of course, the implementation of this project within the framework of the State Program "Digital Economy of the Russian Federation" is not without difficulties in such a technologically developed subject of the Federation as Tatarstan.

CONCLUSIONS

Smart city technologies implemented in the spheres of transport, public safety, etc., are aimed at a complex of digital solutions in achieving this goal, therefore, today Tatarstan has made a bold commitment already in the form of a project "Smart Region" (within the framework of digital transformation of economic sectors and social sphere).

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