

The welfare of local communities. Rzeszów as a smart city – case study

1. Introduction

The city as an urban entity is characterised by multidimensionality. The complexity of the research matter involves an infinity of interactions between the elements entering its area. The purpose of the study is to describe ventures undertaken by the local authorities of Rzeszów and its citizens who actively participate in civic initiatives. This city is unique due to its location, history, economic development, and the fact that it has become a centre for modern migration. For these reasons, Rzeszów is an interesting area for research, particularly in terms of the factors responsible for the proper functioning and development of the agglomeration. The study describes the changes Rzeszów underwent in the years 2002–2019, aiming at the improvement of the city's image and its citizens' well-being. The activities stimulating these changes have been subject to various comparative analyses presented herein. The study focuses not only on the growth of the urban population, which is a derivative of the increase in the quality of residents' lives, but, above all, on the activities conducive to the implementation of the smart city concept.

The city as a space, an urban object or a place where people function is the subject of scientific deliberations within numerous disciplines. Moreover, due to its complexity, providing an unambiguous definition of the term 'city' is impossible. According to the Polish law, a city is 'a settlement unit with a predominance of dense development and non-agricultural functions, holding urban rights, or the status of a city granted in accordance with the provisions of law' (Ustawa z dnia 29 sierpnia 2003 r. o urzędowych nazwach miejscowości i obiektów fizjograficznych, Eng. *Act from 29 August 2003 on administrative names of urban and rural settlements and*

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physiographic objects). For the purpose of this paper, everything which happens in and around the city is considered a specific social and economic system.

As mentioned before, Rzeszów proves an excellent object for research, especially with respect to the integrated factors responsible for the proper functioning and development of the city. Residents of Rzeszów, as any residents of urban areas, have both rights and obligations related to the activity of the city and its entities. In order for a settlement to be called a city, it has to fulfil a variety of criteria, i.e. those easily counted and verified, e.g. the density of the population or its employment structure, and those non-quantifiable, e.g. access to a specific type of infrastructure. An equally important element is the administrative status of a given location, including its precise powers and functions. Some cities develop much faster than others, sometimes at the expense of other settlements, but these processes are always accompanied by both social and cultural changes, illustrating how urban space responds to the needs and expectations of its inhabitants.

A city's image in the eyes of its residents and visitors is shaped by the success of the society that decided to live and work there. Urban populations are at present changing at a fast rate, and both their decline and growth pose a challenge to cities' authorities. Improving several aspects of the residents' quality of life is particularly important from the societal point of view. Communication facilities, friendly offices and their e-versions, as well as the increasing level of safety and cleanliness of the environment are challenges which city managers have to respond to. What is characteristic for the aforementioned issues is the fact that they are long-term projects, and when implemented consistently, they favour the development of the city and the improvement of the standard of living of the inhabitants. The article presents the results of research related to the implementation of the concept of smart city in Rzeszów in the years 2002–2019. The city itself can serve as an excellent illustration of initiatives carried out by local authorities in the framework of long-term projects. Rzeszów's authorities focused on adapting and transforming their activities so that they meet the expectations of the residents. The authorities' work involving the undertaking and development of new initiatives as well as changes in the administrative division of the city deserve particular attention here, as they were aimed at attracting new investors effectively and stimulating the city's development. The city as a social organism influences the behaviour of people and creates conditions for the development of the community, but, on the other hand, it determines the level of social stratification, thus contributing to the formation of pathologies (Szymańska, 2008, p. 10). In terms of the functionality, the city should be seen as a settlement unit with an urban function and as a place for the exchange of goods and services. Compared to rural areas, it is of a multifunctional character, not related to agricultural activity (Szymańska, 2009, p. 176).

2. The concept of the city – development policy

This study focuses not only on the increase of the urban population, which is the result of the improvement of the quality of life of the inhabitants, but, above all, on activities conducive to the implementation of the smart city idea, which involves long-term investments. The smart city concept is a response of city managers to the development needs of modern urban areas. The description of smart activities carried out in cities is based on six factors (areas), according to which a ranking of smart cities was created. The author decided to choose a ranking by the Vienna University of Technology, which is a scientific study that takes Polish cities into account, and can serve as a reference scale for the attainable results in comparison to several hundred cities in Europe. Rzeszów ranked the highest among all Polish cities in terms of meeting the outlined criteria, including the assessment of the level to which the smart city concept is implemented, as well as its impact on the city's development. The paper presents the *Implementation of the idea of Smart City in Rzeszów* project, whose agenda included the introduction of an innovative information and communication technologies (ICT) system (partially financed by the European Union) in the city, enabling the provision of administrative services via internet applications, the development of the public transport system, as well as a system identifying vehicles and their locations, which enhanced the quality of services provided by public transport. The implementation of this and other projects in the framework of the smart city concept enabled Rzeszów to win the title of the Capital of Innovation, as the investments of the municipal authorities have been appreciated by both Polish and international organisations. Rzeszów manages to effectively multiply resources, thanks to which it is able to provide attractive living conditions for its inhabitants, to foster culture, and to create principles and models of social life, as those described by Karwińska & Brzosko-Sermak (2014, p. 16). The study seeks to answer three questions. The first concerns whether Rzeszów meets the smart city criteria in the area of infrastructure investments, the second investigates if companies operating in Rzeszów are involved in building a smart society, and the third attempts to establish whether managers of Rzeszów incorporate smart city concepts in their investment plans. More specifically, the first question focuses on the analysis of the city authorities' activity with respect to the modernisation of the transport system and the enhancement of its functionality. The next one relates to the cooperation of business entities with local authorities and universities. The last question focuses on the introduction of e-services and investments in the sphere of renewable energy and revitalisation of green areas, and analyses whether they produced the expected sociological and economic effects.

3. Urban investments – the smart city strategy

The above-mentioned research questions were complemented by the analysis of whether the smart city concept can effectively counteract the negative aspects of the urbanisation process. A review of the available scientific literature unfortunately proved that there are not many studies examining this concept, and even fewer documenting the achievements of the Rzeszów authorities in implementing smart city projects. Therefore, the majority of the content herein comes from magazines and internet publications, including those available on the Rzeszów City Hall's website, as well as other studies which present a holistic approach to urban planning and therefore include the solutions applied within the smart city concept. The uniqueness of Rzeszów manifests itself in its multifacetedness, especially in terms of the spatial concentration and association of people, its historical shaping and changes in the social structure and the social system which illustrate the relations of the individual with the society and the administrative system. Here we can make an attempt at formulating an unambiguous definition of the city. If we assume that a city is an open system which has a characteristic demographic structure, performs various functions, its area is appropriately developed (in a way typical for urban 'spaces'), is granted specific urban rights, then such a 'space' is a city. The above definition encompasses all the demographic, administrative, sociological and economic aspects associated with cities (Sikora-Fernandez, 2011, p. 437). The city authorities take relevant action in an attempt to improve the quality and conditions of the residents' life, to preserve the natural environment, to make residents more conscious, and to introduce innovative solutions to numerous spheres of activity and life in the city. These concern mainly public transport, construction, the arrangement of green areas, and urban investments (Szymańska, 2009, p. 188).

The urban population creates its public 'space'. The greater the residents' involvement in adapting their urban 'space', the higher the satisfaction of their expectations relating to their living environment. Investments made by city authorities and the introduction of numerous amenities into the urban 'space' not only result in the improvement in quality of life, but first and foremost, in the increased awareness of the city's inhabitants. However, intense urbanisation sometimes entails problems which city authorities have to face. These are connected with inconveniences (even temporary ones) the inhabitants are exposed to, and they also involve a constant adjustment of their area of living to new social, economic and spatial conditions. The concept of smart city is believed to effectively eliminate the unfavourable aspects of city life. The idea involves the improvement of the management of the city jointly with its infrastructure, which are meant to serve the needs of the residents.

4. Definition of smart city – an integrated city concept

The smart city concept lacks one explicit definition, as smart urban solutions can refer to both the way the city is managed and to the solutions to social and environmental problems. The problem with the definition of a smart city is that it combines different aspects of urban development. In Europe, it is mainly associated with activities aimed at reducing greenhouse gas emissions or with the efficient use of renewable energy in fulfilling the needs of a city. The development of the city within the concept of a smart city involves its management with the use of tools based on innovative technologies, in accordance with the principles of ecology and the optimal use of natural resources. ICTs enhance the functionality of the urban area and allow the needs of people living in urban areas to be addressed effectively. ‘Smart’ in the studied context is the ability to identify and solve problems, and to perceive dependencies; it requires flexibility in adapting urban space to changes, and continuous learning in order to plan actions and anticipate their consequences more efficiently (Stawasz & Sikora-Fernandez, 2015, p. 17). The smart city concept was analysed by Boyd Cohen, who stated that thriving cities are intelligent cities, indicating at the same time the lack of clear criteria and transparency in considering a city as *smart* (Szymańska, 2015, p. 67). According to Cohen, a smart city should be defined as an integrated being, emphasising the effectiveness of its functioning; it is a city that enhances the quality of life of its inhabitants and stimulates the local economy. The author also asserts that *smart* actions, based on a large-scale application of ICTs, is an insufficient description of this notion. He is the author of a conceptual model, showing the following elements a developing city should encompass in order to be labelled as smart (Szymańska, 2015, pp. 68–69):

- *Smart governance* – transparent management of the city and public participation, provision of high-quality services and implementation of development strategies. The system is based on the collaboration between authorities, residents and local economic entities. It applies modern technologies in communication and management;
- *Smart economy* – measurable entrepreneurship, innovation and productivity. The city should show flexibility both in terms of the labour market and the profile of its activities;
- *Smart environment* – rational management of natural resources. Care for the environment includes minimising pollutant emissions, optimising energy consumption, introducing sustainable land-use planning, and management based on the principles of sustainable development;
- *Smart people* – a society learning and initiating change, using ICTs prepared to improve the functionality of the city and optimise living conditions. A society with a high level of qualifications, openness and diversity;

- *Smart living* – measured by the existing cultural facilities and living conditions of residents, providing integrated access to public services, including health, safety and cultural life;
- *Smart mobility* (intelligent mobility/transport and communication system) – communication and information infrastructure available locally and off-site. It assumes an active development of a sustainable, modern and safe transport system and the introduction of integrated traffic management systems.

The smart city concepts, widely understood, are in some part the same solutions that lie at the core of intelligent cities, e.g. eco-cities, green cities, or innovative cities (Szymańska, 2015, p. 71). They are also linked to historical concepts of urban growth and development, as described in the theories of urban competitiveness, social capital, politics and public governance. Hence, the concept of a smart city goes beyond the use of innovative technologies in meeting energy needs and the reduction of greenhouse gas emissions, focusing on community life and a citizen-friendly functioning of public administration (Stawasz & Sikora-Fernandez, 2015, p. 20). Therefore, the definition of a smart city, besides intelligent transport systems, also needs a creative and eager society who participate in the formation of a city with a smart economy and preserves its environment and creates appropriate social and economic conditions through proper management. This can be done only using transparent and efficient communication systems based on the collaboration of authorities, residents and business entities.

Smart cities are not necessarily those built on a ‘raw root’ basis, but most importantly, they are existing cities that are transforming and developing according to the smart city concept. A smart city is therefore a place where renewable energy sources are used efficiently, noise and air pollution are effectively reduced, waste and water resources are managed sustainably, and where transport systems are adapted to the city. Smart cities are green cities, using green transport and digital technologies in public transport, devoted to improving the quality of the environment through the creation of green spaces. Intelligent management encourages the society to participate consciously and actively in public life, clearly communicating its needs and expectations. In consequence, a smart city stands a greater chance of raising the quality and comfort of life of its inhabitants. Its concept, which is in some way a response to the problems resulting from urbanisation, requires permanent development. Consistent collaboration of the city authorities, their inhabitants, scientists, non-governmental organisations (NGOs) and business entities is likely to minimise the problems resulting from the rapid growth of city populations. It can also be a determinant of global solutions. Unfortunately, in Poland there is not much data on smart system implementation. This situation has started to change, though. The first symptom of this change is the increased amount of data on the implementation of comprehensive transport systems, which significantly improve passenger comfort,

punctuality and the adaptation of public transport timetables to the needs of residents (Korolko, 2015, pp. 101–102). Increasingly more information about smart city implementations is being published worldwide; these include rankings focusing on the most sensitive areas determining the effectiveness of the introduced changes. These rankings assess the comprehensiveness and effectiveness of the implemented solutions, analysing such areas as: the use of advanced IT, the applied technology, transport, security, or even telecommunication-related resolutions. An example of such research (and rankings) can be found in Stawasz and Sikora-Fernandez (2015, pp. 55–68):

- IDC: Smart Cities Index – developed by the IDC Energy Insights in cooperation with the International Data Corporation; it analyses the most characteristic, basic areas. They are called ‘urban intelligence dimensions’, examining the projects carried out and strategies implemented in the areas of management, housing, mobility, services and energy savings, i.e. 93 indicators in 23 areas;
- Forbes: World’s Smartest Cities – an analysis prepared by Joel Kotkin; it focuses not only on sustainable development, but also on the promotion of vertical mobility and the pursuit of economic progress. A city meeting the criteria of the smart city is one of a compact structure, performing more effectively compared to other cities;
- European Smart Cities – a study carried out by the Centre of Regional Science at the Vienna University of Technology in cooperation with the Delft University of Technology, examining medium-sized cities in six main areas: smart economy, smart governance, smart environment, smart people, smart living, and smart mobility.

5. Rzeszów smart city, effects of actions

Rzeszów is the leader of the European Smart Cities ranking. Cities surveyed in its framework were metropolises, large cities and also those of medium size, with sufficient financial and human resources to implement the smart city idea. The three editions of the Vienna University of Technology (TUWIEN) research carried out for 2007, 2013 and 2014 focused on the evaluation of medium-sized cities. The study covered urban areas meeting several criteria, including the following:

- the city population was between 100,000 and 500,000 (medium-sized city);
- there was at least one university within the city (in order to exclude cities without scientific background);
- there were no more than 1.5 million people living in the area around the city (in order to exclude localities influenced by larger cities).

Rzeszów met the above criteria. The ranking recognised Rzeszów as the most important aviation and IT centre, offering the largest shopping malls in the region; it was also appreciated for its urban investments and development activities, which will most probably secure Rzeszów the role of the metropolitan centre of south-eastern Poland (PwC, 2015). Rzeszów, as the slogan of the city suggests – the capital of innovation (Serwis informacyjny Urzędu Miasta Rzeszowa, n.d. e; Rzeszów – stolica innowacji, n.d.) – is the indisputable leader in the implementation of modern solutions in the area of technology, infrastructure, education, and social and economic life. Being recognised as a smart city in these six areas, i.e. smart economy, smart people, smart governance, smart mobility, smart environment, and smart living, allows an in-depth analysis of the tasks performed by the authorities in terms of their nature and the impact they have on particular factors shaping the idea of a smart city.

5.1. Smart economy

In 2018, almost 26,500 enterprises were registered in Rzeszów (Serwis informacyjny Urzędu Miasta Rzeszowa, n.d. d). Most of the employed found jobs in industry – as many as 35.2%, 11.9% in building construction, and 24.6% in trade or repair of motor vehicles. A very low unemployment rate of only 5.7% placed Rzeszów among the most attractive cities in terms of employment. The applied methods of reducing unemployment and the efficient vocational activation of the inhabitants were implemented on the basis of the *Idea – Self-employment* project, co-financed by the European Union, the aim of which was the development of entrepreneurship by supporting the self-employed.¹ Moreover, due to the presence of such companies as Assecco, Borg Warner Poland, G2A.com, ML-System, MTU Aero Engines Polska, or Pratt&Whitney Rzeszów on the Rzeszów economic scene, the city has become a business-friendly place. The Podkarpackie Science and Technology Park *Aeropolis* project has been providing support for entrepreneurs, secured by large companies, since 2006 (Serwis informacyjny Urzędu Miasta Rzeszowa, n.d. f). Such undertakings enable successful economic development of the region and the promotion of modern entrepreneurship. The solutions adopted through the Technology Incubator, included in the *Aeropolis* programme, constitute a part of the operating *Academic Pre-incubator* project, whose aim is to promote activities related to increasing the competitiveness of the economy and the implementation of modern technological solutions (Serwis informacyjny Urzędu Miasta Rzeszowa, n.d. f). There is also the

¹ *Idea – self-employment* under Priority Axis VII Regional Labor Market, Measure 7.3 Support for entrepreneurship development of the Regional Operational Program of the Podkarpackie Voivodeship for 2014–2020; the following was offered in the framework of the project: non-returnable PLN 24,000 for setting up an own business, financial bridge support in the amount of PLN 21,000, free training and consulting support before starting a business, assistance after starting a business, reimbursement of travel expenses for training, reimbursement of childcare costs.

Rzeszów-Dworzysko Special Economic Zone, whose mission is to foster the development of an economic centre based on industry and modern technologies. The zone attracts investors willing to operate in the field of aviation, providing an opportunity for the cooperation of this sector with universities and colleges, which offer support in terms of research and development (R&D). There are numerous business clusters operating in Rzeszów whose aim is to use their competences and research and development potential to elaborate and implement innovative solutions. The training of specialists and the collaboration between universities and business is the basic activity performed by the clusters, which provides the opportunity to accelerate the social and economic development of Rzeszów and increase the awareness of the local community in the field of environmental protection (Serwis informacyjny Urzędu Miasta Rzeszowa, n.d. a).

5.2. Smart people

The smart people indicator shows the involvement of universities in building human capital in urban areas. There are four higher education institutions in Rzeszów. The largest is the Rzeszów University of Technology, whose graduates become specialists in various fields, including such unique ones as piloting. The city is also the site of several R&D centres which conduct advanced research and develop technologies within its commercial activity for the needs of regional clients representing mainly the IT, aviation and automotive sectors. The second largest higher education institution in the city is the University of Rzeszów, which offers innovative fields of study in its Centre for Innovation and Transfer of Technical and Natural Knowledge and its Centre for Microelectronics and Nanotechnology. The third school, WSPiA Rzeszow Higher School, is equipped with the most modern forensic laboratory in Poland. Finally, the University of Information Technology and Management is the second in Europe and the only university in Poland offering courses in English, including studies in the field of airport traffic management (Serwis informacyjny Urzędu Miasta Rzeszowa, n.d. f).

5.3. Smart governance

Intelligent management is another key area in the process of implementing the smart city idea, which relates to the transparency of the activity of the city authorities. It moreover involves the collaboration of residents in creating local plans which have a significant impact on the Rzeszów Civic Budget. Since 2014, Rzeszów citizens have been taking part in the decision-making process regarding the city budget. In result, the residents have had the opportunity to submit ideas for investments as well as to vote for projects put forward by other entities (Rzeszowski Budżet Obywatelski, n.d.). *A Modern Official-Competent Official* is a project completed in 2013, which also

served a similar purpose. It was a training programme for local government employees of the Rzeszów City Hall, within the framework of which they were trained in the field of the public procurement law, internal audit, electronic document circulation, and project management.² According to the inhabitants, the quality of services provided by the employees of the Rzeszów City Hall improved significantly following the training. Decisions were issued faster, the scope of knowledge, also in terms of the application of legal regulations among the employees of the City Hall increased, and the level of customer satisfaction became monitored. The purchase of specialised software, greater control over the timeliness and correctness of the issued decisions, and the employees' newly-acquired qualifications additionally prove that the project's goals have been achieved to a satisfactory degree. In the framework of the *Implementation of the Smart City in Rzeszów* project, carried out in December 2018, the city provided residents with a comprehensive set of e-services meant to improve both communication with offices as well as to increase the transparency and quality of customer services. The city also implemented the Podkarpackie Spatial Information System (PSIS) project. Its aim was to increase the competitiveness of the region through the creation of an open digital platform, designed as a spatial information base. Publications and e-services related to the PSIS are meant to be universally available and addressed to all citizens. The implementation of online services is expected to facilitate the communication between the customers and the City Hall and to simplify the necessary procedures. The employed system aims at improving the services delivered to residents and entrepreneurs interested in using the data contained therein, ultimately increasing the competitiveness of the region (Serwis informacyjny Urzędu Miasta Rzeszowa, n.d. b).

5.4. Smart mobility

Activities in this area include investments in public transport – both urban and sub-urban. The support provided by the European Union in the form of funds coming from the Community budget enabled Rzeszów to join projects aimed at improving the quality of urban transport. In accordance with the Smart Mobility guidelines, a project called *Development of the intelligent road transport system in the city of Rzeszów* was carried out in the years 2010–2015. *The Dynamic Passenger Information*

² Priority axis II: Digital Podkarpackie, Measure 2.1: Increasing the efficiency and availability of e-services; managing authority: Podkarpackie Voivodship Board; beneficiary: municipality of the City of Rzeszów; total project value: PLN 6,093,714.23, co-financing amount from the EU: PLN 5,066,547.39, implementation date: August 2016 – December 2018. The main goal of the project was the development of the information society in the Municipality of the City of Rzeszów, by providing residents and economic entities with modern e-services of local administration. The subject of the project was the introduction and commissioning of a modern ICT and administrative system in the Municipality of the City of Rzeszów enabling the provision of services. The material scope of the project included: the modernisation of hardware resources, installation and the launch of domain software, and the delivery, installation and implementation of common modules and their integration with domain systems.

System was also modernised – within its framework passenger information boards and e-kiosks were introduced, along with the e-Ticket system. Such undertakings increased the attractiveness of the public transport services, which led to the growth of the popularity of public transport. As a part of the *Dynamic Vehicle Weighing System*, the effectiveness of truck traffic supervision was increased and the conditions and safety of road traffic within the city improved, which led to the enhancement of the air quality in the city. Another interesting project, *Improving the functioning of public transport in the centre of Rzeszów by reducing transit traffic and introducing a paid parking zone*, was implemented in the years 2011–2015. Its aim was to improve the functioning of public transport. Transit traffic was directed to the city's ring road and a system of paid parking was implemented in the city. Since 2014, several transport projects have been completed in Rzeszów, including the *Development of the public transport system in Rzeszów* that created a unique 'Rzeszów Intelligent Transport System'. This system is the result of the development of such initiatives as e.g. the *Public Transport Management System* programme which enables the identification of vehicle locations, the monitoring of the number of transport passengers, as well as monitoring the service standards. Another undertaking is the *Passenger Information System (e-Info)*, which integrates extended systems, including the Teleinformatic Platform. *Expansion of the public transport system in Rzeszów*, planned to be carried out between 2015 and 2022, includes the introduction of a hybrid bus fleet, the reconstruction of bus bays, building bicycle paths, and the extension of the Parking Zone Service System. The third project, having the same purpose as the two above, is the *Integration of various forms of public transport in Rzeszów*, which is planned to be finalised in 2021, and its aim is to link public transport with individual transport, improve the mobility of people with disabilities, and to increase the energy efficiency of urban transport.

5.5. Smart environment

Particular care for the natural environment is demonstrated through the activities undertaken by local authorities in connection to the rational use of natural resources with the simultaneous attempts at minimising pollution and the optimisation of energy consumption, all of which affect the quality of life of the inhabitants. Rzeszów has over 1,000 ha of green areas, including city parks, on the revitalisation of which the city has spent in the recent years over PLN 10 million (Serwis informacyjny Urzędu Miasta Rzeszowa, n.d. g). Since 2008, the quality of water provided by the city network has been fit for consumption without the need of prior boiling. In 2017, the *Rzeszów Acoustic Map* was updated, which serves the purpose of better land-use

planning, which, in turn, allows the identification of noisy areas and take actions aimed at reducing noise factors (Bohatkiewicz et al., 2017). The *Redevelopment of the Rzeszów district heating network* was a project completed in 2015, in the framework of which effective energy infrastructure was constructed in order to reduce greenhouse gas emissions in the urban area; the project was additionally supported by another programme called *Comprehensive energy efficiency improvement through thermal upgrading of municipal residential buildings in Rzeszów*. In consequence, the energy efficiency of buildings has been boosted, the heating-related costs have been reduced through rational energy consumption, and, in turn, the emissions of harmful gases has decreased. The next project called *Reorganisation of the water and sewage management in the city of Rzeszów by constructing a rainwater drainage system*, involves the reconstruction of the rainwater drainage system and the expansion of retention reservoirs. Last but not least, the *Increasing the share of energy from renewable sources in the ROF* (Rzeszów Functional Area – RFA) project, launched in 2017, is designed to increase the amount of energy generated from renewable sources (photovoltaic installations) located within the RFA.

5.6. Smart living

Quality of life tends to be reflected in the number of the available cultural facilities, the level of living conditions and the sense of security of the inhabitants, all improved through the activity aimed at supporting the local tourism and access to public services. There are nine public and private theatres in the city, which organise various festivals and exhibitions, engaging the local community. As part of the *Visit Rzeszów* project, in 2015 a bus service was introduced to offer free-of-charge rides around the city, available to both the local community and tourists (Serwis informacyjny Urzędu Miasta Rzeszowa, n.d. f). Rzeszów is perceived as an attractive tourist destination, visited by over 58,000 tourists in 2018. The city offers a wide range of cultural activities, several of which are part of the *Cultural Heritage Preservation Programme*. In the framework of the programme, in 2018 the city received financial support for cultural institutions in the RFA, enabling the range of its culture-connected services to be adapted to the needs and expectations of the inhabitants. The *Rzeszow Cellars – an interactive cultural institution* is another interesting project, which is meant not only to increase the attractiveness of the city's tourist offer, but also to develop tourist traffic and raise cultural awareness of the local community (Serwis informacyjny Urzędu Miasta Rzeszowa, n.d. c).

6. Conclusions

Urban development planning should be done in a way which fulfils the needs of the society to the greatest possible extent. Urban authorities have a variety of tools at their disposal to implement projects aiming to improve the quality of life of the citizens. Quality of life of local communities is determined by the level of the ensured safety, a user-friendly transport system, official services showing a high level of understanding the needs of the applicants, and finally, by the comfort of life. In order for the ongoing process of urbanisation to be successful, it must be based on the collaboration of the city authorities and the residents, which is the only method leading to the satisfaction of the residents' desires and expectations (involving the improvement of the quality of life and the condition of the natural environment). It is the smart city idea that guides the the Rzeszów authorities in their effort to improve the quality of life of the city's residents by means of the available technological and related solutions. The smart city concept also involves investments in areas which significantly improve the competitiveness of the spheres the city authorities are responsible for, thus influencing the implementation of all smart city elements, especially the smart economy. The city's openness to collaboration with the residents in the form of joint management (e.g. of the civic budget) has been recognised by international rankings, many of which placed Rzeszów in the top position among Polish cities. Rzeszów has been successful in the implementation of the smart city concept, not only in terms of the applied technological and organisational enhancements which increase the welfare of local communities, but, most importantly, in terms of developing a civil society.

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