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## Communication strategies of Czestochowa City and transport problems of people with additional requirements

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### ABSTRACT

In accordance with the vision of the National Urban Policy, in 2023 Polish cities are to be efficient and coherent as well as competitive, and in the aspect of transport and urban mobility - compact and balanced. One of the basic objectives of the National Urban Policy is to achieve sustainable mobility in the functional area of the city. Activities related to the adaptation of cities to the needs of people with special needs are treated as a priority due to the constantly increasing number of people with this type of requirements. Czestochowa trying to meet the requirements of all its inhabitants, introduces numerous local programs to identify the needs of residents. The purpose of the article is to present the social policy of Czestochowa City in relation to people with special transport needs and to assess the degree of adaptation of the urban transport fleet to the needs of these social groups. The data analysis was possible thanks to the use of the Desk Research method. The work is of a review nature and will allow to illustrate deficiencies in the mentioned scope.

**Keywords:** elderly people, disabled people, management, urban logistics, public transport, Czestochowa

### 1. STATE OF PUBLIC TRANSPORT IN CZESTOCHOWA

The beginnings of the history of public transport in Czestochowa date back to 1903, they were difficult and encountered many failures. In fact, it was not until the 80's and 90's that MPK

could be one of the best and the most ecological and economic forms of public transport in the city. Currently, the organizer of public mass transport in Czestochowa is the Miejski Zarząd Dróg i Transportu (MZDiT). And, Miejskie Przedsiębiorstwo Komunikacyjne (MPK) in Czestochowa is an operator of public mass transport. In the city about 39% of all residents' travels take place using public transport based on 3 tram lines and 32 bus lines (Sustainable Urban Mobility Plan for the City of Czestochowa, PDF [access on: 16.03.2019] <https://bip.czystochowa.pl/> (...)).

In Czestochowa there are 246.5 km of public roads with hard surface (powiat and commune), along the city roads there are 479 passenger cars for every 1000 population and this indicator is systematically increasing (Analysis of transport behaviors in the commune of Czestochowa City - Analysis of the existing state [access on: 20.03.2019]; <https://mzd.czyst.pl/images/transport/> (...)).

The increase in the number of vehicles traveling on the roads was also noticed by the city authorities who adopted specific guidelines aimed at increasing the efficiency of public mass transport. In connection with such a significant increase in vehicles on the city roads, various types of investments and conversions are planned to reduce congestion of streets in critical locations, while taking into account the improvement of conditions for non-motorized traffic. As a result of the adopted guidelines, the plans included modernization of the technical condition of transport infrastructure and more efficient use of it. Solutions implemented in the city are consistent with the sustainable development strategy. The result of the implemented projects will primarily be to reduce negative impacts on the natural environment and to minimize many problems in the city's transport system. As part of the adopted strategy, it was assumed to promote public transport in key areas of the city, pedestrian and bicycle traffic, create more parking spaces and modernize public transport connections with the city center.

"Sustainable development plan of public mass transport" recommends striving for maximum improvement of public transport buses, introduction of short bus passes before bus stops, or setting anti-collisions to facilitate the buses joining traffic, launching additional bus connections on market days towards the Zawodzie district, improving transport availability public for pilgrims, and determining routes of pilgrimages in a way that does not collide with bus routes.

Among many recommendations there are also guidelines for the modernization of collective transport fleet, which should be low-floor or low-entry, i.e. adapted to the needs of people with special needs and meet emission standards. Guidelines on public transport and people with disabilities also include increasing the surface of stops to the first level of the vehicle. These suggestions are considered as one of the important elements of infrastructure modernization for the needs of people with reduced mobility.

The implementation of the transport strategy for Czestochowa focuses mainly on such activities as (Sustainable Urban Mobility Plan for the City of Czestochowa):

- "stimulating the concentration of jobs, services, housing in the center and areas well communicated by collective transport,
- limiting the need to travel over long distances,
- taking into account the needs of walking and cycling,
- protection of roads and streets of the basic layout from the function of handling adjacent areas,
- enforcement of a parking standard that is different for Śródmieście and other regions,

- reservation of land for necessary road investments, adaptation of areas at PKP railway stations to fulfill the function of integration nodes,
- increasing the attractiveness, efficiency and effectiveness of public transport,
- stopping the degradation of existing road infrastructure,
- modernization of the traffic management system,
- implementation of road investments and small upgrades on the basic road system,
- alleviating problems caused by truck traffic,
- extension of the use of pedestrian traffic areas, traffic calming zones, car-free zones,
- intensified activities of the police and municipal guard,
- actions to promote road safety,
- actions eliminating pedestrian traffic obstructions by cars,
- basing investment programs and preparing projects based on technical and economic analyzes and environmental impact assessments,
- separation of decision-making functions from executive in collective transport,
- the use of competition mechanisms in collective transport,
- coordination of economic and spatial development plans for the city and neighboring municipalities,
- implementation of long-term financial planning of transport investments,
- rationalization of public spending on subsidizing transport services in collective transport,
- allocation of revenues from the transport sector to maintenance and modernization of roads, parking lots, public transport supply".

The adopted transport policy of the city is the basis for further work. The most important activities include: improvement of the transport system in the city, improvement of conditions for cycling in the city, increase in the number of parking spaces and development of parking rules in densely developed areas.

In 2016, the document "Analysis of transport behaviors in the commune of Czestochowa" was published, in which the results of surveys conducted among 1200 Czestochowa were presented. The aim of the study was to determine the communication preferences of the city's residents. As a result of the study, it was found that 35% of the respondents assessed the public transport system as good and 20% as sufficient. At the same time, 80% of respondents believe that MPK's fleet is outdated [1-28].

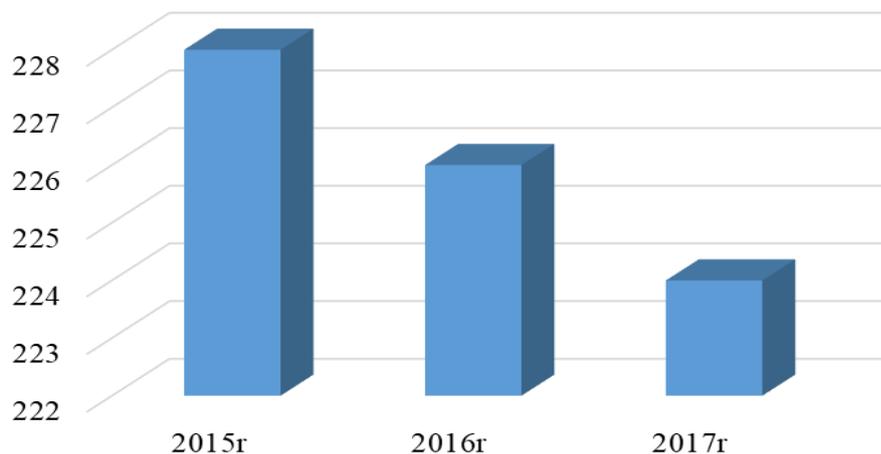
## **2. POPULATION OF CZESTOCHOWA RESIDENTS WITH ADDITIONAL NEEDS**

Disability is defined in a variety of ways, however, it is usually referred to as a long-term condition in which individuals have certain limitations in their proper functioning. The restrictions referred to are the result of a decrease in the efficiency of various physical or mental functions of the body. Disability is also damage or loss or mental defect as well as physiological and anatomical structure of the body.

The loss or damage in question may be total, partial, permanent or periodic, congenital or acquired, stabilized or progressive (Karta Praw Osób Niepełnosprawnych, <http://www.niepelnosprawni.gov.pl/>) [1-2].

A disabled person is an individual who, for physical, somatic, mental or psychological reasons, has encountered serious difficulties in his personal, family, school, professional and leisure life.

Czestochowa is a city with powiat rights, which is part of the Silesian Voivodship, located on the area of 160 km<sup>2</sup>. According to data published by the Central Statistical Office in Demographic Year 2018, the number of inhabitants of Czestochowa until 2014 increased, while from 2015 it has a downward trend, around 280,000. In 2016, the number of residents is already 226 225 people, as at 31/06/2017 amounted to 225 313 people, and as at 31/12/2017, according to the data of the Central Statistical Office, this number is 224,376 inhabitants [3]. (Fig. 1).



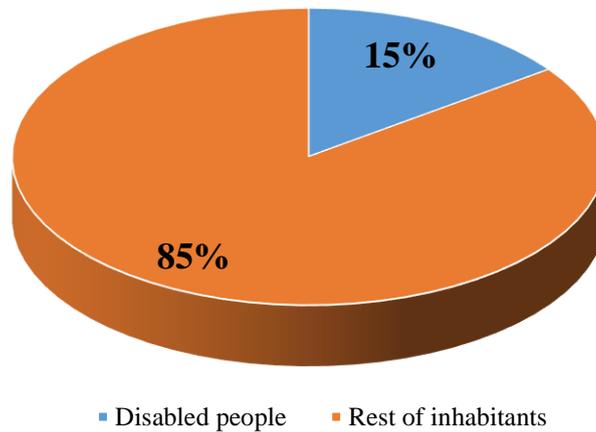
**Figure 1. Population of Czestochowa**

Source: data of Central Statistical Office

When analyzing data related to the population of Czestochowa, different criteria of division can be adopted. Due to the subject matter of this article, during the verification of data, particular emphasis will be put on social groups such as the elderly and people with disabilities (Fig. 2). As a result of the 2011 National Census, it was established that there are 35,603 (15%) people living in Czestochowa in various ages, of which 15 263 are men and 20 340 women [4-6].

The analysis of data included in the Program of activities for the benefit of seniors for the years 2014-2020 "Czestochowa for seniors" and Central Statistical Office data show that the population of Czestochowa is constantly decreasing. In addition, it was noticed that there are fewer and fewer children in the city, the natural increase is negative (- 1098), people of working age are migrating and the number of people in the post-working age, i.e. above the age of 65, is increasing.

In addition, it was noticed that there are fewer and fewer children in the city, people of working age are migrating, while the number of people in the post-working age, i.e. over 65, increases. Similar tendencies, such as extending the age of life and reducing the fertility rate, have long been recognized in EU countries (Eurostat – Statistical Books, Active aging and solidarity between generations. A statistical portrait of the European Union 2012) [7-9].



**Figure 2.** People with disabilities in Czestochowa in the light of National Census from 2002-2011

Source: data of Central Statistical Office

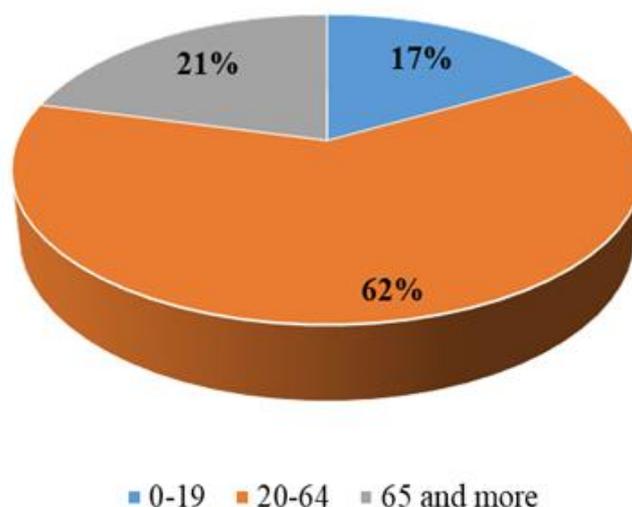
**Table 1.** Czestochowa population by the age.

Age	n	%
0-19	38033	17
20-64	140118	62
65 and more	46225	21
Total	224376	100

Source: data of Central Statistical Office

The condition of Czestochowa inhabitants for 2014 is as follows (Table 1): people aged 0-19 years 38033 (17%), people aged 20-64 140118 (62%), and people aged 65 and more 46225 (21%). The cited report established a steady increase in the number of older people aged over 65 years. The mentioned age group is 21% of the entire population of Czestochowa (Fig. 3) (Strategy for Solving Social Problems of the City of Czestochowa for the years 2014-2020, Annex to the Resolution No. 695 / LIII / 2014 of the City Council of Czestochowa of 26 June 2014) [10-12].

The guidelines adopted by the EU on the direction of development of member states have significantly influenced the growing interest in older members of society and the problems of people with disabilities. Currently, special emphasis is placed on the fact that disabled and elderly people have the same rights as other citizens. Unfortunately, both elderly people and people with disabilities can not always enjoy their rights and independent functioning, because, apart from other obstacles, transport barriers to a large extent block their independence [13-15].



**Figure 3.** Czestochowa population by the age  
Source: data of Central Statistical Office

### 3. BARRIERS IN URBAN PUBLIC TRANSPORT

Czestochowa is a city that tries to take into account the needs of its residents, to get to know their expectations in the city, social consultations and various types of research are regularly conducted. In order to get to know the opinions of older people about the problems they most often face and the offers of local government institutions.

The Research, Analysis and Development Strategy for Education of the Local Government Improvement Center in Czestochowa, conducted surveys among seniors in the city of Czestochowa [16].

**Table 2.** Problems to be solved to improve the quality of life of older people in Czestochowa.

Activities	%
increase pensions	23,3
access to medical care	40,6
access to the labor market	59,4
senior club	3,5
communication	2,6
possibilities of getting social assistance	22,9

Source: data from qualitative and quantitative research in the field of social affairs in Czestochowa carried out in 2013.

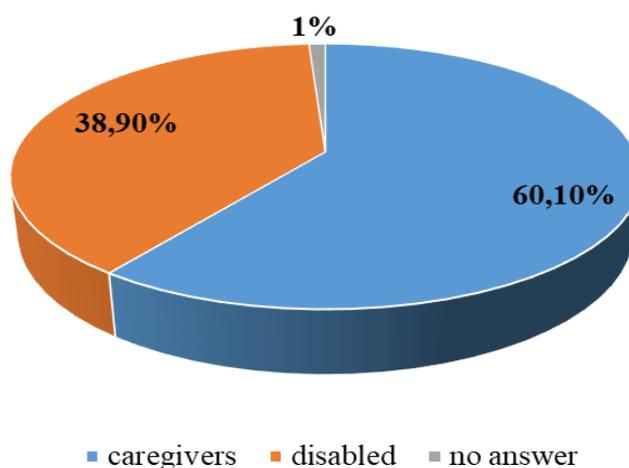
As a result of the study, it was established that seniors negatively assess access to the labor market (59.4%), medical care (40.7%) and social assistance (22.9%) and are not satisfied with the amount of their pensions (23.3%) and access to the senior club (3.5%). The state of public transport was negatively assessed only by 2.6% of the respondents.

In 2010, the City Hall of Czestochowa together with the Municipal Social Welfare Center organized a study among people with disabilities n = 190 and their guardians n = 123 titled "Blue survey". The aim of the study was to identify barriers in Czestochowa that hamper the functioning of people with disabilities in everyday life. The results of the study allowed to determine how disabled people assess the availability of such services and facilities as: public transport, medical and social care, and accessibility to public and other public facilities. In addition, all respondents were able to suggest their own suggestions regarding possible changes in order to better adapt the city to the needs of people with disabilities. The survey was conducted using paper (48.4%), and Internet (51.6%) surveys [17-19].

**Table 3.** Characteristics of people participating in the "Blue poll" survey.

Respondents	n	%
caregivers	190	60,1
disabled	123	38,9
no answer	3	1,0
Total	316	100

Source: data from the report - A city friendlier to the disabled - "Blue survey" [access on: 22.03.2019]  
[http://www.czestochowa.pl/niepelnosprawni/blekitna-ankieta-wyniki/at\\_download/file](http://www.czestochowa.pl/niepelnosprawni/blekitna-ankieta-wyniki/at_download/file)



**Figure 4.** Characteristics of people participating in the "Blue poll" survey.

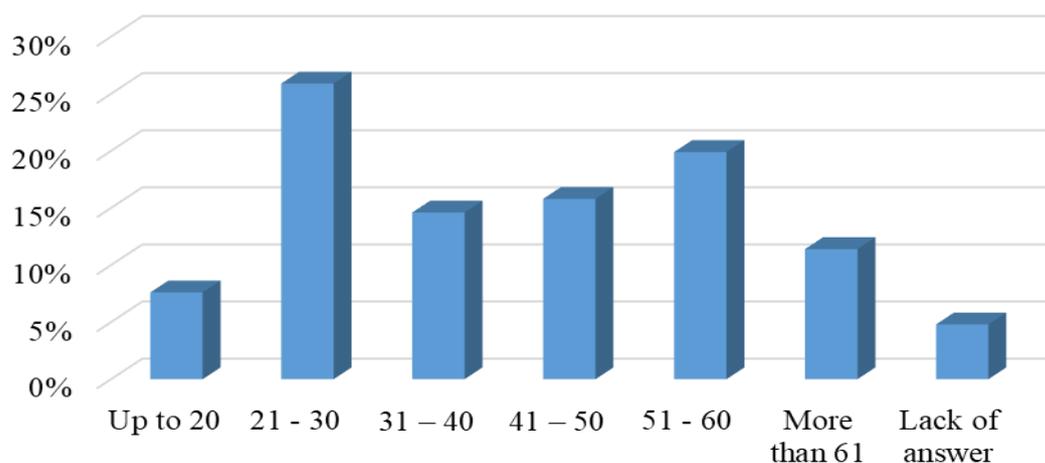
Source: data from the report - A city friendlier to the disabled - "Blue survey" [access on: 22.03.2019]  
[http://www.czestochowa.pl/niepelnosprawni/blekitna-ankieta-wyniki/at\\_download/file](http://www.czestochowa.pl/niepelnosprawni/blekitna-ankieta-wyniki/at_download/file)

**Table 4.** Sex structure.

	n	%
Women	173	54,7
Men	141	44,6
Lack of answer	2	1,0
Total	316	100

Source: data from the report - A city friendlier to the disabled - "Blue survey" [access on: 22.03.2019]  
[http://www.czestochowa.pl/niepelnosprawni/blekitna-ankieta-wyniki/at\\_download/file](http://www.czestochowa.pl/niepelnosprawni/blekitna-ankieta-wyniki/at_download/file)

316 people participated in the project, of which (54.7%) were women, and (44.6%) were men (Table 4).



**Figure 5.** Age structure

Source: data from the report - A city friendlier to the disabled - "Blue survey" [access on: 22.03.2019]  
[http://www.czestochowa.pl/niepelnosprawni/blekitna-ankieta-wyniki/at\\_download/file](http://www.czestochowa.pl/niepelnosprawni/blekitna-ankieta-wyniki/at_download/file)

**Table 5.** Age structure.

	n	%
Up to 20	24	7,6
21 - 30	82	25,9
31 - 40	46	14,6
41 - 50	50	15,8

51 - 60	63	19,9
More than 61	36	11,4
Lack of answer	15	4,8
Total	316	100

Source: data from the report - A city friendlier to the disabled - "Blue survey" [access on: 22.03.2019]  
[http://www.czestochowa.pl/niepelnosprawni/blekitna-ankieta-wyniki/at\\_download/file](http://www.czestochowa.pl/niepelnosprawni/blekitna-ankieta-wyniki/at_download/file)

Taking into account the age of the respondents, the largest group (25.9%) were persons in the range of 21-30 years (Table 5). A small group was composed of respondents aged 51-60 (19.9%). The ability of disabled people to move decides whether to integrate them into society or not. The main transport barriers usually include:

- a) non-adaptation of buses and trams to transport disabled persons (high levels and tight entries),
- b) significant distances between stops and between the stop and the place where the disabled person wants to reach,
- c) high curbs,
- d) underground and over-ground transitions,
- e) obstacles on sidewalks and pavements.

Displacement of persons with disabilities can also take place by means of passenger cars, however, in order to adapt the vehicle to the needs of people with various types of restrictions, attention should be paid to on: possibility of controlling upper or lower limbs, ease of getting in and out and adjustment of the vehicle to transport a wheelchair. Special vehicles are a great chance for people who have mobility problems to move without problems. However, a large obstacle in the purchase of this type of vehicle for people with disabilities is the very high price, which is undoubtedly a significant factor for the fact that the most disabled people use public transport, which should be the best adapted to their needs.

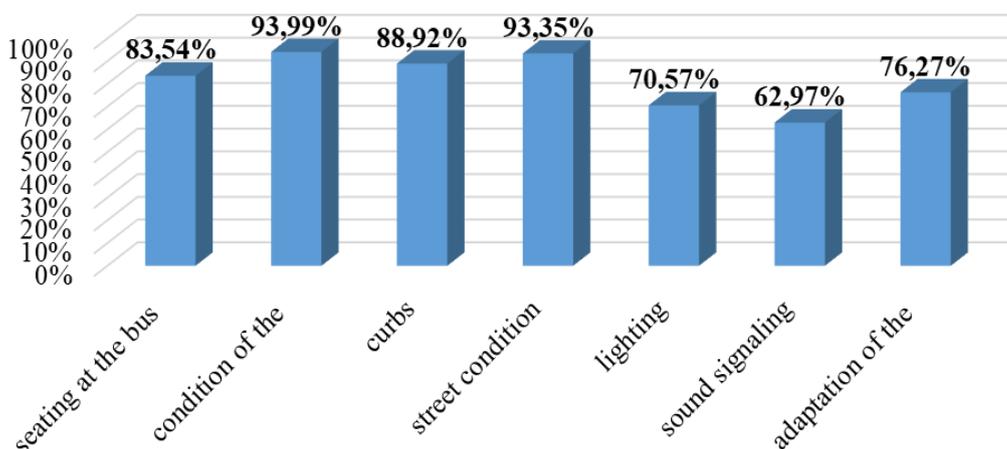
Thanks to the results it was possible to determine, among other things, which of the communication barriers, respondents mentioned most often and which elements of urban transport they rate as bad, rather bad or medium [20-22].

**Table 6.** Communication barriers.

	bad		rather bad		medium		total	
	n	%	n	%	n	%	n	%
seating at the bus stop	89	28,2	75	23,7	100	31,6	264	83,54
condition of the pavement	175	55,4	81	25,6	41	13,0	297	93,99

curbs	173	54,8	72	22,8	36	11,4	281	88,92
street condition	177	56,0	78	24,7	40	12,7	295	93,35
lighting	45	14,2	41	13,0	137	43,5	223	70,57
sound signaling	41	13,0	46	14,6	112	35,4	199	62,97
adaptation of the means of transport	62	19,6	80	25,3	99	31,3	241	76,27

Source: data from the report - A city friendlier to the disabled - "Blue survey" [access on: 22.03.2019]  
[http://www.czestochowa.pl/niepelnosprawni/blekitna-ankieta-wyniki/at\\_download/file](http://www.czestochowa.pl/niepelnosprawni/blekitna-ankieta-wyniki/at_download/file)



**Figure 6.** Communication barriers.

Source: data from the report - A city friendlier to the disabled - "Blue survey" [access on: 22.03.2019]

Disabled people and their caregivers were the most dissatisfied with the state of pavements (93.99%), streets (93.35%), and curbs (88.92%), and the lack of seating at bus stops (83.54%). Subsequently, the respondents as the communication barriers mentioned bad adaptation of means of transport (76.27%), lighting (70.57%), and sound signaling (62.97%) (Table 6). The results of the study described indicate that both the disabled and their caregivers assessed the communication possibilities as unsatisfactory. As a result of the project, it was also determined that places where people with disabilities are the most difficult to navigate are: Aleje Najświętszej Maryny Panny (10.7%) [23-25].

#### 4. CONCLUSIONS

Free movement is the basis of every human functioning, and for people who have special needs in the aspect of transport, this is a particularly important problem. Creating friendly

operating conditions for all participants of urban life from the point of view of efficiency and safety is one of the main goals and challenges of urban logistics, which affects the development of the entire city, bringing a number of benefits to both disabled people and the local community. It should be remembered that poor adaptation of the city strikes many social groups not only disabled people, but also elderly people, pregnant women or obese people and mothers with small children in wheelchairs. Everyone has the right to participate fully in social life, and public transport is an element affecting the ability to move within the city. Therefore, it is so important that the transformations of urban space take into account the needs of all city users.

After analyzing the results of surveys and surveys, it can be noticed that there is a huge challenge before the authorities of Czestochowa and probably many other cities. The most urgent problem is the quality of roads and pavements, poor adaptation of public space and broadly understood transport. Both Czestochowa and other cities are increasingly and more often cooperating with environments representing people with disabilities. That results with tangible benefits for both sides.

The research results quoted in this article show that in Czestochowa many activities are carried out to adapt the city to the needs of people with special needs. Authorities are trying to implement many projects to reduce the number of transport and architectural barriers, however, in some aspects the residents still do not feel satisfaction. Older people living in Czestochowa are struggling with many problems, however, they are not transport problems, because a very small group of respondents drew attention to this aspect. Generally, the inhabitants of Czestochowa are satisfied with the services provided by MPK, however, most of the respondents indicated the need to replace the rolling stock with a new one.

Although in Czestochowa renovation works are regularly carried out to repair the surface, modernize streets, adjust curbs at pedestrian crossings, people with disabilities and their caregivers most often mention barriers related to the road and pavement.

Traffic lights and street lighting were also badly assessed by the respondents, although in the period from 2011 to 2013, 1,000 such signals were modernized.

The disabled inhabitants of Czestochowa are also not satisfied with the number of adapted means of transport. In the city, 50% of the trains support low-floor buses, produced by the Polish company Solaris Bus & Coach S.A. Vehicles produced by this company have equipment adapted to the needs of the visually impaired, blind and mobility disabled, that is: the lack of steps in the vehicle, reduced the level that can be adjusted to the height of the pavement, the possibility of "kneeling" - lowering one side of the vehicle, ramp to enter the trolley manually or mechanically operated loudspeaker system, a speaker system to provide information to passengers about the current and next stops, buttons marked in Braille. In addition, all buses and trams have at least two places marked for mothers with children and disabled people. In addition, people with disabilities and their caregivers have the right to use a travel concession or a full exemption from fees.

The city authorities undoubtedly undertake a number of activities aimed at improving the quality of life and functioning of people with special transport needs, however, analyzing the results of research it can be concluded that this area still requires raising the level of service quality and further modernization. An important fact to pay attention to is that now people are living longer and longer, which is interesting now in the world around 140,000 people who have reached or even exceeded the age of 100 years. Forecasts for 2050 indicate that then the number of centenarians and older people may exceed one million. Therefore, today we must take action that will allow us to function efficiently in a slightly different reality [26-28].

## References

- [1] Schmöcker, J. D., Quddus, M. A., Noland, R. B., & Bell, M. G. (2005). Estimating trip generation of elderly and disabled people: analysis of London data. *Transportation Research Record*, 1924(1), 9-18
- [2] Soltani, S. H. K., Sham, M., Awang, M., & Yaman, R. (2012). Accessibility for disabled in public transportation terminal. *Procedia-Social and Behavioral Sciences*, 35, 89-96
- [3] Solvoll, G., & Hanssen, T. E. S. (2017). User satisfaction with specialised transport for disabled in Norway. *Journal of transport geography*, 62, 1-7
- [4] Yates, K. (2007). Understanding the experiences of mobility-disabled tourists. *International Journal of Tourism Policy* 1(2), 153-166
- [5] Waara, N. (2009). Older and disabled people's need and valuation of traveller information in public transport. *Proceeding of The Association for European Transport Conference* (pp. 1-21)
- [6] Lorenzo, T. (2008). We are also travellers: An action story about disabled women mobilising for an accessible public transport system in Khayelitsha and Nyanga, Cape Metropole, South Africa. *South African Journal of Occupational Therapy*, 38(1), 32-40
- [7] Hine, J., & Mitchell, F. (2001). Better for everyone? Travel experiences and transport exclusion. *Urban studies*, 38(2), 319-332
- [8] Shiau, T. A. (2012). Evaluating sustainable transport strategies with incomplete information for Taipei City. *Transportation research part D: transport and environment*, 17(6), 427-432
- [9] Soorenian, A. (2013). Housing and transport: access issues for disabled international students in British universities. *Disability & Society*, 28(8), 1118-1131
- [10] Barnes, C., & Mercer, G. (2005). Disability, work, and welfare: Challenging the social exclusion of disabled people. *Work, employment and society*, 19(3), 527-545
- [11] Petzäll, J. (1995). The design of entrances of taxis for elderly and disabled passengers: An experimental study. *Applied ergonomics*, 26(5), 343-352
- [12] Sirvastava, S., & Chamberlain, A. (2005). Factors determining job retention and return to work for disabled employees: A questionnaire study of opinions of disabled people's organizations in the UK. *Journal of rehabilitation medicine*, 37(1), 17-22
- [13] Delbosc, A., & Currie, G. (2011). Transport problems that matter—social and psychological links to transport disadvantage. *Journal of Transport Geography*, 19(1), 170-178
- [14] Taylor, Z., & Józefowicz, I. (2012). Intra-urban daily mobility of disabled people for recreational and leisure purposes. *Journal of Transport Geography*, 24, 155-172
- [15] Mageean, J., & Nelson, J. D. (2003). The evaluation of demand responsive transport services in Europe. *Journal of Transport Geography*, 11(4), 255-270

- [16] Nowakowska-Grunt, Joanna, and Judyta Kabus. Polish youth on the European labour market. *Polish Journal of Management Studies* 9 (2014) 190-196
- [17] Monika Strzelczyk, Assessment of the quality of public transport fleet on the example of the city of Częstochowa, *Zeszyty Naukowe Czestochowa University of Technology, Management* No. 28, volume 2 (2017)
- [18] Delbosc, A., & Currie, G. (2011). Exploring the relative influences of transport disadvantage and social exclusion on well-being. *Transport Policy*, 18(4), 555-562
- [19] Fouracre, P. R., Sohail, M., & Cavill, S. (2006). A participatory approach to urban transport planning in developing countries. *Transportation Planning and Technology*, 29(4), 313-330
- [20] Su, F., & Bell, M. G. (2009). Transport for older people: Characteristics and solutions. *Research in transportation economics*, 25(1), 46-55
- [21] Imrie, R. (2000). Responding to the design needs of disabled people. *Journal of Urban Design*, 5(2), 199-219
- [22] Sohail, M., Maunder, D. A. C., & Cavill, S. (2006). Effective regulation for sustainable public transport in developing countries. *Transport Policy*, 13(3), 177-190
- [23] Maart, S., Eide, A. H., Jelsma, J., Loeb, M. E., & Ka Toni, M. (2007). Environmental barriers experienced by urban and rural disabled people in South Africa. *Disability & Society*, 22(4), 357-369
- [24] Harris, J., & Roberts, K. (2003). Challenging barriers to participation in qualitative research: Involving disabled refugees. *International Journal of Qualitative Methods*, 2(2), 14-22
- [25] Stoeck, T. (2011). Evaluation of the carriage of disabled people by means of municipal transport in Szczecin. *Journal of KONES*, 18, 623-630
- [26] Murray, M., & Sproats, J. (1990). The disabled traveller: Tourism and disability in Australia. *Journal of tourism studies*, 1(1), 9-14
- [27] Hine, J. (2003). Transport disadvantage and social exclusion in urban Scotland. *Built Environment, Economics, Finance, Business & Industry, Geography, Social Sciences Built*, London, Imprint Routledge. DOI: <https://doi.org/10.4324/9781315235677>
- [28] Stoehl, A. (1991). Providing transportation for the elderly and disabled in Sweden. *Public Transport International* 40 (2/91)