Summary together with conclusions on the Analysis of the impact of transport projects implemented under the Operational Programme Infrastructure and Environment 2007-2013 on the mobility of people with disabilities and reduced mobility.

Nowadays, both in the world and in Poland, a lot of attention is paid to the issues of social exclusion, especially due to disability. A coherent and global policy for persons with disabilities or persons at risk of disability should aim, inter alia, at ensuring full citizenship, equal opportunities, independent living and active participation in all areas of community life. In order to implement this policy, countries should take steps to avoid and remove, wherever possible, all obstacles in the environment. It is also necessary to make those whose decisions affect the impact of the human-made environment on the quality of life of people with disabilities aware of this fact.

One of the symptoms of social exclusion is the inadequacy of the structural and transport infrastructure to the needs of people with disabilities. They are not willing to leave their place of residence as often as they would when faced with difficulties, rather than as if there were no such obstacles. Not all people with disabilities have the strength and determination to be able and willing to overcome the logistical and technical difficulties that arise from inadequate infrastructure. It is observed that people with disabilities, thanks to pro-social policies and a number of implemented investments (including transport projects implemented under the Operational Programme Infrastructure and Environment of the financial perspective 2007-2013 and currently implemented under the financial perspective 2014-2020) taking into account their needs, are increasingly active participants of professional and social life. Nevertheless, their level of activity is still not satisfactory and does not exhaust the potential of this social group.

In the years 2007-2013 the transport sector under the OPlaE benefited from the largest financial envelope. A number of investments were made to improve the Polish transport network with a view to applying the principles of equal opportunities and non-discrimination at each stage of the programme implementation. This analysis seeks to identify the impact of the transport projects implemented under the previous financial perspective on the quality of life of people with disabilities and reduced mobility.

- **Analytical assumptions**

In order to increase the effectiveness of the funds spent from the EU funds, a summary of transport projects implemented under OPlaE 2007-2013 was made, in terms of usefulness for people with disabilities and reduced mobility, as well as identification of the effectiveness
of the implemented projects in the context of the implementation of horizontal policies, including the impact on mobility among this social group. The analysis was carried out in the period August 2017 - February 2018. It assessed the effects of projects implemented within the scope of OPlaE 2007-2013 in three analytical perspectives:

- from a systemic perspective;
- from the perspective of transport project providers, who can relate the achieved results to the initial assumptions, indicate the reasons for possible deviations and assess whether the project has brought additional, unexpected results;
- from the perspective of users, including prospective ones of the support provided, who can indicate whether they detect tangible and long-term analyzed effects.

The analysis included people with physical, cognitive, sensory or mental disabilities, but also elderly people, people running prams, people with luggage or heavy, oversized packages.

A wide range of analytical methods and techniques was used in the works, including: analysis of existing data; in-depth interviews with representatives of the Managing Authority (MA) of the OPlaE, CEUTP employees (at present this institution acts as the Intermediate Body, in the previous perspective it was the Implementing Body), representatives of NGOs, persons with disabilities using public transport, experts; electronic surveys - CAWI with beneficiaries, local government units, NGOs; benchmarking; scenario-prognostic method; statistical analyses; interviews with accessibility experts; case studies; site inspections; participatory observation; expert panel. The analysis was mainly exploratory, i.e. it was aimed at obtaining conclusions describing the method of implementation of the principle of non-discrimination of people with disabilities in the OPlaE and at determining its impact on people's lives. It should be emphasized that the analysis was carried out at no cost, by CEUTP experts on their own. Therefore, not all analytical tools could be used on a full scale.

Nevertheless, the analytical work (qualitative and quantitative analyses) carried out, in particular, for the purpose of assessing the contribution of the OPlaE to the implementation of the EU principle of accessibility, enabled the creation of two simplified logical models for the implementation of the EU principle of accessibility by the OPlaE 2007-2013 and the OPlaE 2014-2020 (taking into account the logic of national strategic and programming documents and documents guiding the priorities for the support of the European Union).

- Results of the analysis

The analysis confirmed that the participation of people with disabilities in society depends on a number of factors. It is commonly pointed out that it is necessary to undertake actions aimed at eliminating architectural, urban and transport barriers. In the context of CEUTP activities, equality of people with disabilities is first of all a matter of ensuring access to the transport infrastructure (also the structural infrastructure in the context of railway stations) on equal terms.
The development of transport infrastructure financed from the OPlaE 2007-2013 can be considered as an example of programming interventions with a thematic scope, having a definitely positive impact on the elimination of architectural and transport barriers. Moreover, under some priority axes, the presence of criteria for project selection was ensured, which reward solutions with a positive impact on improving accessibility for people with disabilities or those at risk of physical disadvantages.

The positive impact of transport projects supported within the frames of OPlaE on the principles of equal opportunities and non-discrimination concerned first of all the improvement of accessibility of transport for people with mobility impairments or sensory disabilities and potentially disadvantaged travellers due to taking care of dependent persons, including children. Types of projects worth mentioning in view of their positive impact in the area in question include the purchase or modernization of rolling stock for urban or rail transport and support for transport infrastructure facilities (railway stations, airports, passenger service points or "park&ride" facilities).

**A huge contribution of transport projects from OPlaE  2007-2013 to the improvement of travel comfort for people with disabilities and reduced mobility was identified.**

### Public transport in cities

Improvement of accessibility of public transport was a result of implementation of OPlaE projects, among others through:

- the rolling stock available, but not enough and not always adapted to the needs of the social group concerned;
- in many public transport buses, reading the messages concerning the bus number and the direction in which it is moving is extremely useful for people with visual impairments. However, the lack of understanding on the part of other travellers who wish to travel by bus in complete silence and ask for messages to be switched off, sometimes remains a problem. Another problem is technical errors and incorrect messages on buses, which nobody, including the driver, pays attention to;
- voice announcements, which can also be heard on trains, metros and sometimes newer trams, but the same problems arise as described above;
- devices reading the timetable at public transport stops - however, this is not yet a very common solution in our country;
at many public transport stops, the so-called leading lines - serving people, especially the blind, leading to the point at which the driver should stop the bus. The question remains, however, whether these guide lines are cleared of snow, whether drivers are complying with this principle and whether other passengers are obstructing these places;

- signs for the blind and visually impaired on platforms, stations, railway stations, etc. For example, the first and last steps of a staircase, the edge of a platform or the entrance to a lift are glued in yellow, but there are still many places without such warning elements (edge and staircases marking, etc. helps people with visual impairments locate the contours of a door, the first and the last step. When they are missing, people with visual impairments standing in front of stairs, e.g. leading downwards, see only the great gray chasm and do not know where it ends and where it begins; bright colors, such as yellow or green, are chosen, because those who lose their eyesight stop seeing these shades last);

- bus platforms that allow wheelchair users to enter the vehicle - however, the question is how often they use it, whether drivers are trained to help wheelchair users.

**Air transport**

The implemented projects contributed to the reduction of accessibility barriers by, among others,

- reducing architectural barriers in the foreground of the terminal, which make it difficult for people with disabilities to move to the necessary minimum;

- no architectural barriers in the passageways;

- separation of independent service stations for people with disabilities in check-in areas for tickets and luggage, security checks, outbound and inbound passports controls;

- the closest possible location to the entrances to the passenger terminal for disabled people in the parking areas;

- installation of lifts adapted to people with disabilities (Braille buttons);

- provision of accessible toilets for people with disabilities in public toilets;

- installation of a paging system in toilets for people with disabilities (the operator is called upon to do so when the pull button is released);

- implementation of the SOS information system. It enables a person in need of assistance to be connected to the airport by means of an Intercom station built into the SOS columns, located at the main entrances to the terminal.

**Road infrastructure**
Activities carried out within the frames of OPIaE 2007-2013 within the scope of improving road traffic safety were not directed specifically at improving the safety of people with disabilities and with reduced mobility. They have affected the whole of society.

In the projects implemented by the General Directorate for National Roads and Motorways from OPIaE 2007-2013 the following facilities for people with disabilities were applied:

- pavements with a slope of up to 6%,
- positioning of equipment, such as road sign supports and lighting columns, in such a way as to eliminate obstacles to movement on sidewalks,
- use of specially marked parking areas close to entrances, e.g. to toilets located at PSPs,
- use, at PSPs, of separate rooms for people with disabilities - toilets and shower rooms - equipped with facilities for barrier-free bathrooms (handrails, seats, etc.),
- use of embedded kerbstones,
- provision of stepping ramps between the pavement and the road,
- use of collision-free pedestrian crossings (tunnel or footbridge) with ramps, some of the footbridges are equipped with elevators due to terrain conditions.

Most of the passenger service points existing along the national roads have been constructed or the area and infrastructure for the PSPs have been prepared within the framework of projects co-financed within the framework of OPIaE 2007-2013. These investments were reported in the output indicators of the individual projects in the payment claims.

Undoubtedly, OPIaE projects contributed to some extent to the improvement of the situation of the analyzed social group. However, there is still much to be done in the area of facilitation. In addition, it is extremely important to consult on projects with people with disabilities. There are many aspects in public space that are not noticed by people without dysfunctions. Poorly designed kerbstones, etc., are often the result of designers' ignorance and not of their bad will.

**Rail transport**

Rail transport is by far the most controversial branch of transport. Changes are noticeable here, but among many positive aspects, there is no shortage of elements that still provide scope for further improvement and work to ensure accessibility for people with disabilities. The main effects should be indicated:

- availability of rolling stock (places, toilets, voice announcements, wheelchair user access and egress facilities), but it is still insufficient and not always adapted to the
expectations of the social group concerned (e.g. not enough wheelchair space) or is in a state of emergency (e.g. platforms/ramps);

- adaptation of platforms and stations, thanks to the OPIaE investments, to the needs of people with various disabilities - car parks for people with reduced mobility, provision of obstacle-free routes, adaptation of doors and entrances to people with disabilities, anti-slip floors with unevenness of less than 5 mm, marking of transparent partitions, adaptation of toilets to people with disabilities, lowering of tops and induction loops at cash windows, lifts and escalators, labeling of railings and doors with Braille inscriptions, railway station models with Braille inscriptions, paths for blind people with walking sticks and warning fields, marking of platform ends with balustrades, warning signs, including signs sensed with feet, color coding of stair steps, use of visual markings within the station to facilitate movement around the building, absence of architectural barriers such as thresholds and steps (however, there is no uniform standard, e.g. for the platform’s height, what makes it difficult to adjust the rolling stock properly or there is no uniform standard for the installation of a system of textual markings on pedestrian routes, which vary from station to station);

- training of staff supporting travelers with disabilities (very highly valued by people with disabilities);

- facilities for purchasing tickets.

### Conclusions

Analyses conducted and the collected analytical material confirmed that reducing transport and architectural barriers undoubtedly has an impact on the mobility of people with disabilities, which translates into both private and professional life, as well as social and cultural life.

The availability of transport can certainly facilitate access to the workplace by directly translating into the employability and mobility of people with disabilities.

CSO surveys also show that people with disabilities are statistically less educated than those with disabilities. Improving access to transport can have a positive impact on access to education and, in the long term, increase the competitiveness of these people in the labour market.

Removing barriers is a result of a combination of many activities, including organizational and awareness activities. This does not change the fact that projects involving the construction/modernization of a line or purchase of rolling stock available for all of the inhabitants are a prerequisite for the increased usage of public transport in cities and agglomerations.
Main barriers identified

- **Systemic barriers:**

  A detailed diagnosis included in programme documents for OPlaE 2007-2013 did not address the issue of non-discrimination and accessibility as an objective of intervention in itself. Nevertheless, all OPlaE projects, implemented from the EU funds, should be compliant with the horizontal policy, i.e. strategic objectives and development priorities set out in regulations and strategic documents of the EU and the country. To this end, mechanisms should be put in place at every stage of implementation to combat all forms of discrimination.

  As the analyses show, taking into account the perspective of universal design is much cheaper at the stage of planning solutions than at the stage of modernization of the already existing ones. Therefore, the key role is played by project providers - beneficiaries at the stage of investment planning, as well as by the beneficiaries themselves and the Intermediate Body (CEUTP) at the stage of monitoring its implementation. Monitoring is a process carried out both by Beneficiaries (project providers) and the Managing Authority (Ministry of Investment and Development) and the Intermediary Authority of OPlaE. In the area of project implementation, there are no uniform separate tools for monitoring the implementation of the principle of equal opportunities. In order to ensure the consistency of the monitoring process, uniform indicators for the implementation of the principle of equal opportunities should be available to all. This will allow for the diagnosis of areas that can be adjusted in the scope of the implementation of this principle. The starting point could be to analyze accessibility for specific groups of passengers at the design stage, which should result in an assessment of the technical solutions adopted in terms of their accessibility for specific groups of passengers and possible recommendations for changes. It is good practice to set up a team of accessibility consultants for the project to monitor and analyze solutions designed to be accessible to people with disabilities and reduced mobility. Ultimately, it is desirable to develop and implement a procedure to verify design solutions for accessibility for people with disabilities and reduced mobility, e.g. in the form of a checklist for the implementation of the principle of equal opportunities, which could be used both by the IP during monitoring and control visits, and by project providers.

- **Legal barriers:**

  - There is no indication in the legislation what is meant by 'reduced mobility'.
  - It would be advisable to introduce a single definition of a person with disabilities in the legislation. According to NGO representatives, the terminology should preferably be in line with the UN Convention on the Rights of Persons with Disabilities.
There are no normalization standards for accessibility of public spaces, including transport and transport routes, for people with different types of disabilities. Accessibility issues addressed in national planning documents and strategic documents should refer to the need of taking into account the national normalization standards (once they have been developed).

It is also important to indicate a definition of "universal design" or to present a document where such a definition can be found. Another issue is the understanding of the term "rational improvements" - it is worth paying attention to the economic rationality of the implemented solutions in guidelines and instructions for beneficiaries (i.e. rolling stock may be purchased partially or fully low-floor - in both cases costs of such investment are completely different).

The decision to adapt a product/project to the needs of people with disabilities should be preceded each time by an analysis of the accessibility to the needs of potential users of the product/project and the possibility of including people with disabilities.

Awareness barriers:

- Awareness and knowledge of the differences between the different user groups and of the needs of the different groups is a prerequisite for the proper adaptation of facilities (including station infrastructure, interchanges). It is important to note that the construction law does not define the specific needs of different groups of users of construction works.

- It is necessary not only to create conditions for reducing barriers, but also to increase awareness of the needs of people with disabilities, especially in smaller towns.

Barriers concerning coherence and complementarity of activities in the area of accessibility:

- Improving infrastructure, especially in terms of the coherence and complementarity of individual linear and point transport investments implemented with the use of various financial sources, is also an important factor in improving the accessibility of public transport.

- Only all investments, both point and linear investments, including interchanges, jointly constitute a comprehensive approach to the implementation of the policy of equal treatment and non-discrimination in transport projects. Therefore, the surroundings of station buildings, for example, are an important element of accessibility, as even the best adapted space cannot be used if paths and access roads are not available either.
Summary

The analysis carried out showed that the changes in the accessibility of transport for people with disabilities are heading in the right direction thanks to the OPIaE. Their effects in terms of increasing the mobility of people with disabilities are reflected in the number of tickets purchased or reservations made. However, there is still much to be done, and not only in terms of infrastructural changes - technical or legislative changes. Last but not least, it is absolutely essential to raise public awareness and sensitization of the needs of people with disabilities. In addition, NGOs and experts have pointed out huge disparities in the availability of transport between large cities and medium, small and rural towns. Efficient and accessible public transport in these areas is a necessary (albeit insufficient) condition for increasing the activity. Nevertheless, the qualitative leap that has taken place in recent years would not have been possible without EU funds and the European Commission's requirements for the implementation of horizontal policies.