Social Aspects of Smart Urban Mobility

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There is a growing interest in sustainable urban transport solutions in cities around the world. These changes, known as “smart urban mobility”, aim to reduce the negative effects of transport on the natural environment and enhance the standard of living for urban dwellers. It should be noted that in addition to this transformation’s technological aspects, modifying the city’s structure and architecture also has a social dimension. The transformation of urban mobility has a significant impact on social relations. Introducing new modes of transport, such as city bikes and electric scooters, creates new ways of moving around the city and can impact social interactions. This can increase social integration and a community’s sense of belonging. At the same time, it is necessary to consider the differences between social groups to ensure equal access to the benefits of these changes in addition to deeper social elements, such as changing the habits and expectations of residents and adapting solutions to the specific needs of each city. This paper aims to look at the social aspects of smart urban mobility, including the impact of these changes on the lives and relationships of city residents.

urban mobility smart mobility social transformation innovative mobility sustainable mobility

Society’s functions are changing as technology progresses and the world’s population increases. These changes are particularly visible in the character of dynamically developing cities.

It can be said that cities are becoming one of the primary elements in the functioning of countries, economies and societies. It is significant that with the increase in population and urbanization, meeting citizens’ expectations and ensuring a comfortable and dignified life has become more problematic and demanding.

Nowadays, the relationship between society and technology and the economy is becoming closer, and cities play a key role in this field, which is why the idea of what is commonly referred to as “smart cities” has become extremely popular over the last few years [1]. These challenges also apply to mobility.

Smart urban mobility is a key element of the transformation (including greening) of cities toward a more sustainable, effective and friendly space for residents. Thanks to the use of modern technologies, data and innovative solutions, cities have the opportunity to create a better and more future-proof transport system that will respond to the needs of modern travelers, reduce the negative impact on the environment, and contribute to improving the quality of life in the city [2,3].

Research on changes in the spatial and economic structure of cities increasingly points to new development factors, such as advanced technologies that save time and energy, as well as human capital and social capital,

which play extremely important roles in the development of cities. A modern city is not only its physical structure but also a huge network of cyber connections that strive to optimize the use of city resources and prevent negative effects resulting from its functioning, in accordance with the principle of sustainable development [4]. At the same time, all changes should aim to introduce zero or low-emission solutions and technologies to eliminate the negative effects of human activity on the natural environment.

At the same time, it should be noted that these changes (related to smart urban mobility) should be consistent with the idea of green transformation, which can be defined as a wide range of activities aimed at reducing greenhouse gas emissions (including achieving climate neutrality), improving energy efficiency, focusing on renewable energy sources, introducing the concept of closed loop, as well as conducting research and development activities in this area.