

# MOBILITY – A CHALLENGE FOR CITIES

**Jacek Szoltysek, Prof.**

szoltysek@ue.katowice.pl

University of Economics in Katowice, Poland

## Abstract

Mobility conditioning both the level of citizens' life and cities' development opportunities is the problem discussed in this paper. Conditions and challenges that cities experience in order to meet the requirements of the growing mobility have been discussed on the basis of the above.

**Key words:** benchmarking, congestion, a city logistics, a city, mobility

## Introduction

The mobility of people is increasing very rapidly. In 2005 about 7,5 billion trips were conducted in urban areas. In 2050 we expect the 3 to 4 – fold increase of the number of trip kilometers per a passenger in urban areas in comparison to the year 2000 (Pourbaix, 2012: 8-10). Regardless of this, the accessibility to the urban areas appropriate services or other activities is getting complicated. This causes that not only the citizens' living standards are getting worse but also the number of external effects in cities are influenced negatively. This aspect also influences the urbanization pace affecting the city mobility systems. The conclusion of the mentioned facts is such that virtually every city, sooner or later, will face the necessity of revising its attitude towards the problems of citizens' mobility and creating or modifying the mobility plan as well as systems aiming at these plans implementation.

## 1. Essence of mobility

Practically, every activity of a man is connected with the necessity of mobility – hence, the mobility limitation is harmful for people<sup>1</sup>. Freedom

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<sup>1</sup> One of the most vexatious penalties is the deprivation of liberty – it means the impossibility to dislocate according to the prisoner's will. The imprisonment penalty has been used in legal systems for many years. The penalty was executed in the form of casing into a dungeon or closing sb. in a tower. Nowadays the penalty is executed in specialized guarded complexes – penal institutions (Szoltysek, 2011: 14).

of mobility is the inseparable attribute of a man's freedom. Therefore, this refers to the right of mobility. Peoples' mobility, according to the popular definitions, is the tendency to change the place of residence or work. This tendency is connected with a dislocation, so it means: the distances covering. In those considerations the mobility refers to all types of dislocations – those that are routine and ordinary, those that are more important for the reorganization of a personal life, for example, the change of a place of residence as well as those of which a journey itself is the main goal (Szołtysek, 2011: 14). The first dislocations are obligatory, the second ones are facultative. If we are to look for help in some concepts, it is presumably done in order to reduce problems in frequently occurring mobility – obligatory dislocations. According to a big number of authors, mobility is inseparably connected with transport. "Mobility understood as potential «distance overcoming» is realized in the form of the road, rail and air transport i.e. with the implementation of various communication means as the response to the emerging and changing needs in this scope" (Blaik, 2010: 87). It is worth paying attention to another aspect of mobility. First, mobility appears as an idea, a kind of a plan, maybe not very well specified. Sometimes it is a supervened opportunity. This stage can be an initiator of the next efforts leading to the distance overcoming but it can also be finished at the stage of thinking. It does not mean that in this case people do not experience the journey excitation. Therefore, mobility, in my opinion, is the state of mind whose astonishing potential causes that people can travel in time and space, even to the unrealistic lives. Our senses let us construct new sceneries and create scenarios, reproduce images that have been seen only one time – it is the aspect of our non-material mobility. "In order to travel, it is enough to exist. I travel from day to day in a train of my body or my destiny looking at streets and squares, gestures and faces, always the same and always different, so they are in fact as landscapes. When I imagine I see. What I do more, do I travel? Only the extreme weakness of imagination could justify the need of a place of residence change in order to feel" (Melberg, 2006). Finally, the thing that is often ignored in considerations on mobility, this is the mobility objective. Availability is the overriding objective of mobility. We dislocate, in fact, in order to take advantage of something that is not available in the place of our primary residence. When we are able to invalidate space as a barrier that separates us from the place of meeting the needs, then the mobility will lose its importance. Barriers in mobility very often (i.e. nuisances in dislocating) influence the change of a value of those goods or services that are attractive during dislocations.

## 2. Mobility in a city

A city means social organizations. Bartnik claims that: “a city is the overpassing of distances among people, space-time, barriers and finally severe bad luck. It is a life rock, a foothold, a constant element of the universal transience” (Bartnik, 1993: 53), but according to Mumford “a city is a place of the maximum concentration of this what provides for a given community power and culture. (...) In a city people’s experiences are transformed into signs and symbols, into patterns of behavior as well as models of order” (Mumford, 1996: 5-7). A city, apart from its social sphere, possesses the material base. Wallis, who observes this relationship, defines a city in the following way: “A city is a complex system consisting of two autonomous urban and social subsystems that are organically linked, that cooperate on the bases of feedbacks” (Wallis, 1967: 138) treating the urban subsystem as a set of material elements that have been created by a man and a set of natural elements that construct the city space structure. Therefore, it should be considered that the geographical space (physical), which is occupied by people, is the physical environment (mainly transformed by people), where all processes connected with the creation of urbanity, are implemented. Cities cannot function without people or in isolation from them. It is difficult to imagine the future and construct the development scenarios without cities. According to some prognostics, the deepened European integration or even increasing the role of Europe in the world will let maintain the polycentric nature of the European space, where the well-linked by means of transport nets medium-sized cities, are and will play the key role. Such cities will develop in a sustainable way (especially in the context of the energy or the waste) and the residents’ mobility will be supported by smart solutions in the scope of the transport infrastructure (Žuber, 2013: 69). In many considerations on cities I quote a definition that seems to be a quintessence of a city and urbanity: “A city is a *common space* that *belongs to* a residing *society* that *has the right* to guarantee a society the appropriate conditions of political, social, ecological fulfillment, taking into consideration the obligation of solidarity at the same time”<sup>2</sup>. These designates written in italics will be mentioned later.

Mobility is the indication of the social life, and in fact, it is the element that changes this life. A car occupies the specific place while talking about dislocations in modern cities. Urry claims that the modern social life analysis without researching the importance of motoring, which is “the complex of linked together machines, social practices and methods of living not in

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<sup>2</sup> Definition mentioned by The European Charter for the Safeguarding of Human Rights in the City adopting the stance of the European Charter of Local Autonomy.

a real estate house but in a mobile semi private capsule, is not possible. (...) Many journeys include many functions that are mixed and require control. Instantaneous time and new types of space, which are introduced by motoring, become central elements for the social life configuration. People live and cooperate through their cars moving here and there. A car is not a simple extension to an individual because it, in a given way, reconfigures forms of socializing. Social life usually was connected with different forms of mobility but a car transforms the social life in a characteristic connection of flexibility and compulsion” (Urry, 2009: 260). In 2010 825 million of cars, 70% of which belong to the developed countries, were used in the world. By 2035 the number of light cars (cars, SUV, minivans and vans) will have increased to 1,6 billion and by 2050 till 2,1 billion vehicles. Annually about 63 million of new cars (2012) are sold in the world. (Scotiabank, 2013). Modern cities in developed countries are becoming the victims of motorization. In Poland at the end of 2012, there were 580 registered cars for 1000 Warsaw residents. The number of registered cars in Poland has increased 3.5 times to 18,7 million since 1990. It is 486 cars for 1000 residents. If we take into consideration the fact that 1,3 million Poles live and work out of Poland, the number increases to 503,8. Such a result places us in the European top leaders (KPMG, 2012). Cars availability in cities is not the same in the world. Its diversity refers to a sex, an age, a level of disability or the amount of income. In the developing countries travelling by private cars is accessible for the small group of people, who possess high income (mainly men) (Peters, 2011). Such a situation is being changed slowly, especially in emerging economy countries like China, India and Brazil, where women possessing average incomes, drive and dispose cars in great extent. The number of women who drive cars in Russia, where possessing an own car is the indicator of the social status, increased by 50% in the period of 2000-2006 (Rodgers, 2006). Similar trends are observed in Mumbai (a capital of Maharashtra in India), where in the community dominated by men, the change of the way of making decisions about the purchase and the use of a car by women possessing higher incomes occurs. This way the image of the motorized mobility as a binder of the urban essence appears. It stamps its influence not only on the quality of the urban society, its cohesion and the level of city life satisfaction but also the city structure in the tangible dimension.

### **3. Mobility in cities and a city as an idea of common existence**

Dislocations in cities create the complicated enough net of connections implemented in various ways. The denser the net is, the bigger mobility of

cities users occurs. The bigger level of mobility can be evaluated in various dimensions. At first it is freedom (freedom of dislocation). The greatness of a man comes from their freedom, referring it to the idea that freedom is the basic privilege of a man and a society's objective is this freedom warranty. Therefore, the level of people's life consists of many libertarian elements. The principle of liberty is usually considered in two aspects – positive and negative. The positive meaning refers to the freedom of doing everything that is not forbidden by the law<sup>3</sup>. In the negative meaning, the principle of freedom indicates that the injunction of a given activity for an individual can happen only when it is in connection with the law<sup>4</sup>. In both cases freedom must be related to mobility – implementation of many aspects of freedom requires dislocation. Cities must guarantee liberty by strengthening the liberty execution through the mobility warranty. At second – in the aspect of individual mobility limitation, the bigger the number of dislocations is, and as a matter of fact, the bigger the density of dislocations is, the higher probability of mutual dislocation impediment occurs. Then the city congestions called “traffic jams” happen. Every city user observing changes in his environment can state that the number of traffic jams increases year by year, that the dislocation is more difficult and that the time devoted for travelling is extended. This phenomenon is called congestion. Vehicles and pedestrians can feel the congestion when the transport infrastructure efficiency is exceeded, what means that the demand for taking advantage of an infrastructure object exceeds the object's capacity and the object is fully occupied (Szołtysek, 2009: 135). The congestion is defined as a mutual obstruction of the traffic caused by vehicles in connection with the existing objective dependence between the speed of vehicles and the volume of vehicles flow in such conditions when the level of the transport system utilization capacity comes up to its exhaustion (Dargay, Goodwin, 1999: 160). The essence of the transport congestion is therefore the mutual reaction between the transport infrastructure and vehicle users. It causes the negative economic and exploitation results that are indicated by the increasing number of users (Ciesielski et al. 1992: 88). The congestion influences the reality, the way the cities and their users function as well as the development opportunities (it decreases the opportunities of competition among other cities), cities' budgets, city entities and finally the residents' life quality (including also the financial sphere). For example, the costs of

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<sup>3</sup> A man does not have to indicate the legal bases of their actions (such a legal base must be (any actions of the public authority bodies must be undertaken on the basis of such legal bases), on the contrary-in order to stop man's actions, it is necessary to indicate the law regulation, which constitutes the appropriate injunction.

<sup>4</sup> Always this person, who appeals to the existence of such an injunction, must indicate the legal bases.

congestion in Canada reach 4,5 billion USD annually and they occur in three big urbanized centers (Toronto – 43%, Montreal – 21% and Vancouver – 17%) (Urban Transportation Task Force, 2012). In the USA the congestion enlarges the Americans' journey time in cities by the additional 11 billion hours annually and it increases the fuel purchases by 11 billion liters more. It creates the congestion costs of 121 billion dollars in 2022 (Schrang et al. 2012). The crucial influence of congestion on the developing countries' economics can be exemplified by Cairo, whose congestion costs for Egypt are 4% of the Gross Domestic Product (World Bank, 2012). In Sao Paulo in Brazil the part of the richest residents is forced to use helicopters regularly in order to omit traffic jams (Aziakou, 2013). The implementation of defined development goals is the objective of the city management. At third, finally, - in the aspect of the efficiency processes (city co-management), we deal with the complex phenomena that are linked with mobility. It results from the idea of the local government that the city governance is a specific combination of three dependent forms: management, leadership and administration. Therefore, the city management can be defined as "influencing the hierarchy, the system of values, interests, aspirations, attitudes and the local government entity's organizational behavior (a community residing in a city – author's case) (Brol (pub.) 2004: 168-169):

- managing the resources or only disposing them in the framework of the economic autonomy specified scope,
- legal bases appropriate for the state authority in the framework of conferred entitlements and the commune provisions,
- personal authority of people who belong to the management bodies; the main objective (city management policy) is shaping the efficient social and economic systems serving the city community.

The mere fact of occupying the space gives a man the right to co-share this space, so to say, to obtain specific benefits. The bigger the extent of benefits meeting the specific man's needs is or the greater satisfaction the benefits provided to a man is or the bigger the extent of a man's happiness is, the the bigger the advantages resulting from the possession are. Any number of people create any number of subjective valuations. But co-sharing a space (but not only) requires to reach a compromise with the rest of the co-owners. This compromise is possible to reach not by means of management but through common relations and high level of tolerance (Szołtysek, Otręba, 2012: 120-121). What compromise do the city users reach in the area of mobility? It is about searching for a compromise between an individual comfort being the result of a dislocation by individual transport means and the public transport characterized by „the lack of comfort“. Cities undertake attempts of shaping transport behaviors of their users (mainly

residents). City users make decisions on dislocations not always in the rational way. In most cases these decisions are made by the users themselves. They do not share the general recommendations, especially when they have to decide on the journey lower standard. Cities' authorities' appealing to the users transport awareness in connection with threats related to the increase of the individual urban dislocations can influence the rationalization of travelling methods (Szołtysek, 2011: 149). Herein, the secondary but ideologically important problem appears. It is the problem of this freedom limitation through the reduction of dislocations realized by means of individual vehicles in the cities space. Authentic freedom is a responsible freedom. It is also *the ability to choose the appropriate value*. A man, thanks to freedom, is able to undertake the self targeting, the self limiting, the internal and external development. Moreover, responsible freedom is the pro-social freedom that has regard to the common good, that is the result of self-control and self-subordination to the social life postulates. Earlier in this paper I mentioned the city definition that included the solidarity problems of those people who choose a city as the arena of their self-realization. It is one of the most important principles that constitutes a city as an idea of the common living. The realization of the common good is the city initiation. The center of such a good is a good of an individual as well as a set of values that condition the individual's comprehensive development. Three huge areas – social, political and environmental are the city determinants. The common good must be implemented through the efforts of all society members who are able to cooperate consistently. It means that striving for the democratization of dislocation methods is a good political choice<sup>5</sup>. This concept is connected with the equal availability to the transport infrastructure – the most democratic mean of transport is a bicycle. This principle possesses also the nature of a legal norm. Its role is the common goods security differentiating the man's rights and obligations. The principle of solidarity coordinates the social life functioning because it paves the range of community members' subjective entitlements and commitments. The principle of solidarity meshes with the idea of justice. Authentic solidarity can be mentioned only when justice requirements are respected. Is the dislocation „forcing“, which is not acceptable by any groups, the personal freedom limitation? Freedom of an individual should be the responsible freedom. Freedom requires understanding and a situation acceptance. Hence, it is necessary to be aware of the travelling method variants as well as the consequences of social and

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<sup>5</sup> I consciously use the concept of „democratization „, referring to the term of Mirsky who claims that democracy is: „not [...] a competition or participation system but a definition of a good political system which is honest, egalitarian, stable and fair. What legitimizes the government is the morality and fulfilling the administrative obligations, not a pluralism and membership” (Nathan, 1998: 28).

personal choices. A man should not select anything without taking into consideration the intellectual situation discernment. Shaping the mobility awareness is also crucial. Authentic freedom requires rooting in values and it must take into account the requirements of the social common good.

#### **4. Methods of mobility implementation in cities**

In cities people dislocate on foot, by individual transport means or by the public transport. The share of the particular methods of dislocation within urban trips depends on many factors such as: demographic aspects, urban structure, citizens' mobility, impact of dislocation methods on the city environment. Every trip consists of the chain of primary dislocations that are performed on foot or by the transport means but the city trips consist of one or many dislocations creating the chain of dislocations (Szołtysek, 2009: 61). The idea of a chain, which is close to real dislocations and realized in cities, which brings to mind the known for many centuries mechanism of a goods chain. This is a situation, where every subsequent couple of transport connections is conducted on the basis of independent from other couples rules. It requires the separate organizational efforts and unnecessary (from the network point of view) energy input. Chain dislocations – dislocations of these connected into one totality couples through any integration mechanism, are desirable city trips. Nowadays peoples' dislocations in cities are conducted in the following groups:

1. Non-motorized dislocations – any dislocations which are run with the application of a human or animal power- dislocations by bicycles, rickshaws, carriages pulled by a bicycle, animals or finally dislocations on foot;
2. Public transport dislocations – consciously paid services that are publically accessible, realized on defined routes in connection with time schedules. Public or private organizations involved in all types of public transport are operators – dislocations by buses, trams, trolleybuses, subway, water transport or light aircrafts;
3. Informal motorized transport – private cars functioning on the formal and informal basis. The cars do not possess permissions; they do not comply with formal requirements (i.e. in the scope of technical norms, safety, insurance or categorized driver's licenses). Even in cases when such carriers possess transport licenses, they very often omit scheduled routes, charge fees illegally and do not give receipts, etc.;
4. Private motorized transport – engine vehicles used by individuals or companies to transport people.



Such a division is known from the cities functioning practice. Although within theoretical considerations, the third mentioned group of vehicles that meet the requirements of this group to groups 1, 2 or 4 is often omitted. The division of transport duties in cities is perfectly defined in theory. The attitude to this division depends on the scientific discipline represented by the particular author. Some differences are explicit, especially in the transporters' and logisticians' attitudes. These differences go beyond the scope of discussions that is why I consciously omit them. Some development conditions of individual groups in modern cities are worth mentioning. Not motorized transport, but in fact dislocations, is the substantial method of travelling in cities of developing countries. For example, in Dakar (Senegal) travelling on foot and by bicycles constitute 71% of all city dislocations, in Doula (Cameroon) – 60%, about 65% in Chinese cities but in India cities (Ahmedabad, Bangalore, Delhi, Mumbai) these dislocations constitute about 1/3 of all trips. In the Latin America countries the journeys on foot and by bicycles constitute about 1/3 of dislocations in Santiago (Chile), Rio de Janeiro (Brazil) and Guadalajara (Mexico). In richer cities this division is much more lower – Buenos Aires (Argentina) – 9%, La Paz (Bolivia) - 10% or Caracas (Venezuela) – 18% (Hidalgo, Huizenga 2013). In these countries a car is an indicator of a social position. Hence, the upward trend in the scope of not limited usage of private cars together with the increase of the population income should be taken into consideration. In the developed countries the increase of travels on foot and by bicycles share as the result of the life style changes as well as the propaganda actions occurs. So, this share in the case of the Australian cities equals 6%, USA and Canada – 12%, France, Austria – 25%, Norway– 26%, Finland – 31%, Germany and Denmark –34%, a Holland 51% (Buehler, Pucher 2012a). Here the mechanism is reversed referring to the cities of developing countries. The advantages of this dislocation method are popular, both from the point of view of these advantages for the travelers themselves (comfort, satisfaction, health improvement, lowering journey costs etc.) and for the city (the decrease of congestion, the decrease of number of parking spaces, saving of energy, the natural environment and city space, protection, the increase of goods and services accessibility). Public transport dislocations meet numerous problems generally connected with the decrease of popularity. In developing countries this type of dislocations is organized at an insufficient level. Small or medium enterprises are operators that invest inadequate financial means devoted to the development of the stock. The customer service level is rather low, public subventions are minimal. Some actions supporting this group of transport have been noted in Dakar (Senegal), Johannesburg

(South Africa) and in Lagos (Nigeria). Some warranties for the credit lines to purchase the stock have been suggested (UIPT, 2010; Allen, 2011a).

In the Latin America cities the system of dislocations is quite well organized. The private sector importance is increasing - Montevideo (Uruguay), Bogota (Columbia) or Rio de Janeiro (Brazil). In the developed countries most of the cities conduct remedial works or actions diversifying the public transport systems. The level of the public transport usage differs – starting from 237 trips per 1 citizen in Switzerland annually to 24 trips per 1 citizen in the USA annually. Despite the investments in the public transport development in the North America countries – especially railway or comfort busses connections; the share of people who dislocate choosing these types of transport is still low. For example, the percentage of public transport daily travels was 6% in 2001 in Melbourne, 9,4% in Manchester, 14,7% in Amsterdam, 18,8% in London, 21,6% in Stockholm, 24,6% in Berlin, 34% in Vienna, 43,3% in Prague, 49,3% in Moscow or 51,6% in Warsaw (UIPP, 2006). Using the public transport to travel in cities has various premises that have been mentioned in many theses. The informal transport is broadly applied in many developing countries but the smaller the GDP is, the bigger the number of smaller entrepreneurs' transport offers is. In Africa this type of activities is dominating in cities. I am talking about the minibuses or the co-shared taxies that drive according to the time schedules and stop on demand and about prices that depend on the demand. In Nairobi (Kenia) the biggest usage of the informal transport was noted – 662 trips per 1 citizen annually,  $\frac{3}{4}$  of the whole public transport and 36% of the transport labor. In Harare (Zimbabwe) the minibuses serve about 90% of the passenger transport market in cities (Pirie, 2011). In Alger (Algeria) the share of transport by taxies and minibuses, and generally motorized dislocations in cities, equals 56%. In Cairo (Egypt) the share of the informal transport increased from 6% in 1978 to 37% in 2001 and next it increased more. (Huzayyin, Salem, 2013). In Lagos (Nigeria) the public transport became a bankrupt as a result of a lost competition with the informal transport which offered low prices, was overloaded and applied the aggressive method of driving (Pirie 2011). In many Asian cities the public transport does not exist. Minibuses and microbuses serve about 5-10% of all trips in Thailand and Indonesia and about 50% in Philippines (Kirby et al. 1972; Cervero, 1997). In the developed countries this type of tenderers who fulfill the market niches also functions. Usually cars owners, who possess low incomes, treat such services as a way of the household budget supplement. They offer their services near airports or railway stations. In the 90's of the last century in Eastern Europe the informal transport started to play the important role occupying those market parts which were fired by the weakening bus or tram transport

companies. Nowadays these carriers' actions are involved in the process of "civilizing". Finally – private motorized transport. The mechanism of shaping the usage of these types of vehicles has been described earlier. In this scope, in order to present the situation in cities, the following Table 1 data are worth studying.

Table 1. Number of vehicles in cities

	Motor vehicles			Cars			Cars as % of motor vehicles
	Total	Per 1000 inhabitants (million)	% of total	Total	Per 1000 inhabitants (million)	% of total	
TOTAL	1047	159	100	825	125	100	79
Developed countries	604	656	58	492	535	60	81
Transitional countries	98	303	9	83	259	10	85
Developing countries	345	64	33	249	47	30	72
Africa	35	40	3	26	29	3	74
Asia and Pacific	213	54	20	150	38	18	70
Latin America and Carribean	96	180	9	73	137	9	76

Source: World Bank, 2013

In cities this way of dislocations is not a good solution when it is about the caused by them congestion. Therefore, the city logistics offers some ideas i.e. the integrated city travel created from the chain of individual dislocations. The city logistics' task is to integrate dislocations in order to cause that a complicated (at the first glance) journey is organized by the internal factors that are independent of a traveler. Discomfort connected with the dislocation intervals (change of connections and waiting, access to information, exposure to environmental impact etc.) has to be the least severe. Rules tested within the multi-modal cargo transport<sup>6</sup>, which thanks to the application of the internal integration philosophy, let increase the cargo effectiveness and which unload the transport parties from the perplexing legal and organization actions, can be applied (Szołtysek, 2011: 101). An organized journey with the usage of at least two means of transport, integrated by one organizer on the basis of the uniform price and one document, with one unified responsibility, presents a target of an urban trip. It also should

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<sup>6</sup> Transportation also called in the course literature as the „broken” individual and public communication in the range of one trip constitute the evidence of complementarity of two types of transport in the realization of a specific trip.

be added that the public transport share in the whole chain of dislocations (from the city interests' point of view) must have the increasing tendency. The concept of multimodality creates conditions where the transport service is realized in the most efficient method. These requirements perfectly fit the needs of a city, which is interested in increasing the city users' satisfaction. Therefore, a city which is experienced enough in organizing the public transport should enlarge its spectrum of obligations connected with delivering the efficient communication within the whole chain of dislocations (including the individual means). A city should adopt the role as an organizer and an integrator. Offered solutions are described in the literature (e.g. Szoltysek, 2009; Szoltysek, 2011).

### **Conclusions – Does searching for benchmarks in cities make sense?**

The cursory analysis of this text indicates that cities in their organization differ from each other significantly. These differences result, first of all, from the development level of a given country as well as the citizens' wealth. Other cultural, legal and other conditions belong to the above. Hence, the choice of benchmarks should take into consideration these differences. Looking for benchmarks in the geographical proximity can be risky in the situation when macroeconomic indicators significantly differentiate these standards. In the case, especially, when the socioeconomic past is considerably different, the adoption of such a benchmark is relatively burdened with a big risk of rejecting solutions, which would require the behavior modifications (i.e. transport behavior). The change of such behaviors is a long lasting process requiring the individual approach. The European Union implements many pilot projects, which aspire to become benchmarks. Such benchmarks are worth using, especially when taking into account not only the method of solving a substantial problem but also the implementation methods, including obtaining the social compromise in connection with the implemented or planned projects. It is worth using the researched phenomenon criteria evaluation list while choosing a benchmark. For example, for the public transport it is possible to take into consideration the criteria mentioned in the Table 2.

Table 2. Criteria for the cities' benchmarking needs

Criteria	Description
<b>General criteria</b>	
City area	City area within administrative borders
Population	City population within administrative borders

Demographic specificity	Characteristic elements that influence the transport functioning, population spatial distribution, migration balance among the city parts or a wider metropolitan area.
<b>Individual transport</b>	
Individual transport	Number of registered vehicles and motorcycles
Average speed	Average speed of individual vehicles in chosen intervals
park&ride	Number of seats in the P&R system
Speed limits	Length of streets where special speed limit to 30km/h is in force
<b>Public transport</b>	
Lines of public transport	Length of public transport lines (buses, trolleybuses, trams, subway, rail way, urban rail way, water tram)
Priority for the public transport	Length of separate lines for buses, length of separate tramways, number of crossroads with the priority system for the public transport
Average speed	Average speed of public transport vehicles in chosen intervals
Nodal points	Number of stops for every type of transport
Stock	Number of vehicles (branch-division) that serve the administrative area of a given city
Accessibility for users with special needs	Percentage of the public transport low-floor vehicles (various types)
<b>Transport behavior and the level of the public transport integration</b>	
Branch structure	participation (as well as the changes dynamics) of the particular methods of dislocation, including pedestrians routes and cycling roads, participation of all forms of dislocation with the application of transport means (vehicles) of the particular branches
Cycling roads and pedestrian routes	Length of cycling roads and pedestrian routes excluding the vehicular traffic
Single trip cost	Cost divided into types of public transport, number of single tickets that are possible to purchase for the same price as a parking fee in a center (1h)
Network ticket cost	Cost and range of a purchased service
Tariff and fare integration	Number of carriers operating in given areas and a description of applied tariff and fare systems, functioning of a transport union that organizes transport in a metropolitan area, accessibility of the e-ticket and various forms of the electronic urban card.

Source: Kaszubowski, 2011: 1077-1078.

The ultimate usefulness of an adopted standard in new conditions will be possible to check after the defined period of time. It should be remembered that the newly implemented program can finally present different from the adopted standard results. By skillful city management, we should be prepared to neutralize the negative results, not discourage users in the scope of undertaking the next initiatives, which lead to the modification of transport behaviors. Shaping the behaviors requires the detailed understanding of the broad context of the city mobility.

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