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Sustainable urban mobility planning: Gdynia city case study

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Abstract

Motivation: Sustainable urban development is the current global priority; however, most cities lack the capacity and resources to ensure that the city develops in a sustainable manner. Mobility is one of the most difficult topics to face in metropolitan large areas. It involves both environmental and economic aspects, and needs both high technologies and virtuous people behaviours. Dynamical urban development and inhabitants lifestyle changes, especially in the heavy congested port agglomerations, result in a continuous increase of their transport needs. As transport behaviours change, the number of vehicles on streets grows resulting in congestion, an increased number of accidents, exhaust and noise emissions and, consequently, a lowered quality of life. Thus a sustainable approach to urban mobility and transport planning is becoming increasingly common in all EU countries. The study is based on the literature sources analysis and survey research results obtained with a questionnaire for stakeholders to assess particular areas and activities related to mobility issues.

Aim: The aim of the paper is to present the urban sustainable development challenges, taking as a case study the Sustainable Urban Mobility Plan (SUMP) elaboration process selected issues in the city of Gdynia within the CIVITAS DYN@MO being a European project implemented under the CIVITAS II PLUS initiative (funded from the 7th Framework Programme of the European Commission).

Results: It is quite a challenge to ensure a sustainable urban mobility pattern which requires a high level of stakeholders' participation and establishing a detailed complex planning process. Key stakeholders of Gdynia, representing the public administration sector, the transport market and university researchers (including the author), included in the planning process earlier, invited to the assessment gave the highest priority to the tariff and ticket integration in the Metropolitan Area, parking issues, the inclusion

of pedestrian traffic in project planning and public spaces. The promotion among inhabitants and students or city bicycle system were given a medium priority and the lowest was given to carpooling, environmental-friendly vehicules and such mobility management tools as Mobility centre or the Officer for Mobility.

Keywords: mobility planning; urban sustainable development; city of Gdynia
JEL: O18

1. Introduction

The idea of sustainable development makes the basis for a new thinking about civilization and strikes fundamental aspects of to-date human activity. It assumes the rejection of the present model of development chiefly focused on pursuing infinite economic growth; therefore it requires a transformation of consciousness in the direction of perceiving the relationship and harmony between economic, human and social values and their interdependence with nature. Mobility is one of the most difficult topics to face in metropolitan large areas. It involves both environmental and economic aspects, and needs both high technologies and virtuous people behaviours. Dynamical urban development and inhabitants lifestyle changes result in a continuous increase of their transport needs. As transport behaviours change, the number of vehicles on streets grows resulting in congestion, an increased number of accidents, exhaust and noise emissions and, consequently, a lowered quality of life. Thus, a sustainable approach to urban mobility and transport planning is becoming increasingly common in all EU countries The purpose of the article is to present the urban sustainable development challenges, taking as a case study the Sustainable Urban Mobility Plan (SUMP) elaboration process in the port city of Gdynia within the CIVITAS DYN@MO project.

2. Literature review

The sustainable development of the cities represents a major challenge for the future of the planet in the 21st century, relatively to the contribution and adaptation to climate change, natural resources consumption, energetic transition (the 'after oil' transition), population mobility, welfare and security, pollution, the global economic growth (Ducruet, 2011). Within the United Nations Human Settlements Programme works on a new development model under the slogan 'The city we need' are being carried out. Urban centres should: integrate their community, close the material and energy flow, stimulate the economy and involve citizens in it, strengthen the identity and sense of belonging, provide security, health, be inexpensive in everyday use and provide a just access to its resources, and be governed at metropolitan level (UN-Habitat, 2017).

For historical reasons, a great part of the cities, are located on a coast or on a river, thus including a port and playing a special and major role in the national and the global economy (nodes of logistic chain, concentration of popu-

lation, touristic attractiveness). The integrated planning for cities development has to consider the passengers' mobility and the transport of goods as priorities to reach a sustainable growth (Morel, 2013). "Cities are evolving faster than ever and encountering unprecedented demographic, environmental, economic and social challenges. Sustainable urban development is the current global priority; however, most cities lack the capacity and resources to ensure that the city develops in a sustainable manner (Schubert, 2011, pp. 54–69). Multistakeholder cooperation is essential to fill this gap and build transformation strategies to better shape urbanization outcomes and lead cities towards growth, well-being and prosperity for all (Zopf, 2017).

Here, green industrial activities, able to decouple economic wealth production from ecological losses, should be grounded while considering the model of living systems (Boulos, 2016). Port city, which serves as a link between the local economy and the global economy, is an interaction of both urban and port systems, giving rise to its complex and dynamic nature (Hein, 2011). While the development of a port city is an aspect that requires continual research and monitoring, the current literature addressing the issue of sustainable development in port cities is rather limited (Girard, 2013). In addition, empirical studies often analyse the port system and the urban system separately, with little research attempting to integrate the two systems.

The growing number of usage disputes over increasingly coveted coastal areas is prompting local managers to incorporate urban and port-related issues in overarching planning programs (Xiao & Siu Lee Lam, 2017, pp. 255–262). For example, planning of the sea front and the buffer zone between the port and the city must contribute decisively to the deployment of more effective, cleaner transport services for the port city as a whole (Boulos, 2016). In general, one of the key global challenges for planners and decision-makers consists in integrating sustainable development goals (environmental and social components, as well as the stimulation of industrial competitiveness) into urban planning (Przybylowski, 2017).

Thus, a new approach to management of city investments is needed. It has been established including the principles of sustainable smart development, triad of creativity — circularisation — synergy, stakeholder theory, and the idea of social-business responsibility. The approach primarily elevates the concept of the public governance which is characterised by a de-centralisation, participation, constructivist and a win-win approach. These attributes increasingly refer to the decision-making process and subsequent implementation. The city development/re-development management relates to use of scares resources and transformation of the existing state to desired one (Wojewnik-Filipkowska, 2017, pp. 79–90). The management relates to economic, social, technological, and natural systems. The city development and investment management means space management as city is both a physical place of paths and buildings, and also a space of values, beliefs, and relations. The general aim of the city development management is to ensure sustainable development which is man-

ifested by an increase in national income, qualitative changes in the structure of the economy, availability of goods and services for citizens, better standard of living. But translating this concept into action is a challenge. On the strategic level the management means outlining goals at future requirements. It is master planning on the tactical level, and finally, planning, implementation, and evaluation of urban development project on the operational level (Girard, 2010).

It is noteworthy that the urbanisation is to be an area of significant civilizational changes, as the future of humankind is linked with cities. No more than 5% of the world population lived in the cities in 18th century, while today it is more than 50%, and United Nations forecasts that more than 80% of the population will live in urban area by the end of this century (United Nations, 2014). In the European Union more than 60% of the population lives in urban areas. Almost 85% of European Union GDP is generated there. Cities boost the economy, attract investors, new jobs are established there; that is why cities play an important role in the economy. Transport produces 40% of CO_2 emission and 70% of other pollution emissions in cities (Brdulak & Brdulak, 2017). Because of this phenomenon the European economy incurs losses, nearly EUR 100 billion, which translates into about 1% of GDP. The data confirms the assumptions that contemporary cities are facing a challenge related to keeping the balance of resources and strengthening development which would improve security and the quality of life for citizens.

Also, in contemporary cities the quality of life greatly depends on the efficient transport system (The City of Copenhagen, 2015). The efficiency of goods and people mobility in urban traffic is not only determined by reliable services but most of all by time and mobility efficiency which today determine the way many users of urban traffic live. The constantly changing lifestyle of people living in cities, the need for increased mobility and efficient mobility of goods caused that current transport systems are not able to counter issues such as congestion, noise, pollution or accidents involving pedestrians (Burns, 2013). Urban mobility, in accordance with the principles of sustainable development, is important not only for the city but also for its citizens (Banister, 2008). It influences the development of the global society, which is being increasingly concentrated in urban agglomerations (Studzieniecki, 2016, pp. 235–241). Due to the depleting natural resources of cheap fossil fuels, it seems natural to seek alternative, non-motorised means of transport across urban areas (Kim, & Dumitrescu, 2010).

Some scientists (Jason Chang & Hsu, 2014) identify seven most important factors in achieving greener and more sustainable mobility, and chart their relationship in the eco-mobility equation (1):

$$EM = [(TD + AM + TM + GT + IP) \cdot S] \cdot L. \quad (1)$$

EM, or the effectiveness of implementing eco-mobility, may be manifested as the reduction of travel delays, emissions, and accident rates. Equation (1) identifies a horizontal relationship between five key eco-mobility strategies, while

recognising the exponential potential of both stakeholders (*S*) and leadership (*L*). The five key eco-mobility strategies are:

- *TD* — transit-oriented development;
- *AM* — active mobility (non-motorized transportation);
- *TM* — transport management;
- *GT* — green transport (BBMW policy);
- *IT* — integrated pricing schemes.

These five horizontal elements can be understood as the 'push and pull' factors between motorized vehicles, public transport and non-motorized transport modes. However, the successful fulfilment of these eco-mobility strategies is exponentially influenced by the involved stakeholders and leadership. Therefore, the behaviour of stakeholders, *S*, in the proposed equation indicates the importance of how the interests between different stakeholders are coordinated, as eco-mobility related projects usually involve certain levels of Public-Private Partnership (PPP). The private sector is generally considered more efficient and flexible in attaining project objectives that are not necessarily consistent with public interests. The behaviour of stakeholders has to be shaped based on well-defined objectives of *EM* implementation, which maximize the benefits of both sectors, thereby motivating reasonable efforts to pursue common and respective interests (Jason Chang & Hsu, 2014).

Above all, leadership, *L*, is the key factor, albeit abstract, for how an eco-mobility related project can be implemented, especially for many developing countries that are currently undergoing different stages of social development and reformation. Both the government and citizens may still be learning to balance the conflicts between various aspects of social development. Studies from theoretical and practical perspectives have extensively discussed the traits required for a leader. In the context of eco-mobility in developing cities, leadership may translate into holistic vision, systematic thinking, inspiring resolution, and a willing heart to listen to and understand the needs from different perspectives of a society (Jason Chang & Hsu, 2014). Both *S* and *L* are located as the exponents in the proposed equation, which specifies their decisive effects. Leadership and a well-coordinated relationship between stakeholders can trigger strong momentum in changing traveller behaviour towards greener transportation and social development, resulting in an effective implementation of eco-mobility beyond expectation. Only based on an understanding of traveller behaviour in response to the implemented strategies, is it possible to evaluate and adapt eco-mobility strategies to improve their effective implementation and to further educate travellers. Moreover, the investigation of an eco-mobility cannot be separated from the context of land-use modelling — which represents local features — or without knowing the city's historical course of development.

The need for more sustainable and integrative planning processes as a way of dealing with the complexity of urban mobility has been widely recognised. New approaches to urban mobility planning are emerging as local authorities

seek to develop strategies that can stimulate a shift towards cleaner and more sustainable transport modes (table 1).

Typical stakeholder groups involved in transport projects have been presented on table 2. Identifying urban mobility stakeholders and understanding their potential role and position in the process is important to achieve the overall goals of sustainable urban mobility planning.

3. Methods

The study is based on the literature sources analysis and survey research results obtained with a questionnaire for stakeholders. To determine the most desirable directions of activity in the field of mobility in Gdynia, a questionnaire was addressed to the stakeholders in order to assess particular areas and activities. Key stakeholders of Gdynia, related to mobility issues, involved in the planning process earlier, representing primarily the public administration sector, the transport market and university researchers (including the author) were invited to the assessment. Every activity was subject to assessment in a C–A++ scale.

4. Results

The Sustainable Urban Mobility Plan (SUMP) is a concept which contributes to achieving EU objectives on climate and energy. The new European Commission's planning concept proposals treats challenges related to transport in a more sustainable, integrate and comprehensive way (Wefering et al., 2013). It focuses on involving stakeholders, coordinating the vision between social and economic sectors (land management, transport, social policy, safety, health, etc.) as well as between authorities. It requires a sustainable, long-term vision of urban area, taking into account broader costs and social benefits. Its aim is to meet the mobility needs of people and companies. It proposes actions improving the quality of life.

The 2013 Urban Mobility Package sets out a concept for Sustainable Urban Mobility Plans (SUMPs) that has emerged from a broad exchange between stakeholders and planning experts across the European Union. The concept describes the main features of a modern and sustainable urban mobility and transport plan. All over Europe, cities are engaging in bringing such a plan together (Polis Network, 2016). Ten main arguments for this approach are (Wefering et al., 2013):

- improving quality of life;
- saving costs — creating economic benefits;
- contributing to better health and environment;
- making mobility seamless and improving access;
- making more effective use of limited resources;
- winning public support;

– preparing better plans;
– fulfilling legal obligations effectively;
– using synergies, increasing relevance;
– moving towards a new mobility culture.

Consequently, SUMP is a document that covers the urban and suburban areas (the functional area), defines the passenger public transport, non-motorised transport, intermodality, road transport, mobility management, use of Intelligent Transportation Systems (ITS), urban logistics, city road traffic safety, implementation of new use patterns or promotion of clean and energy-saving vehicles (clean fuels and vehicles), considering the related needs identified in the given area.

The European Commission indicates certain stages of preparation of the Sustainable Urban Mobility Plan (SUMP), namely (Wefering at al., 2013):

– definition of potential, i.e. a verification to what extent sustainable development principles are in accordance with current political priorities and to what extent they are already part of the city development policy;
– definition of the scope of the plan, i.e. on the one hand the definition the territory, for which it is developed, and on the other hand, of the appropriate authorities and institutions to make decisions, also financial, and approve activities;
– situation analysis and scenario development to support a transparent and rational establishment of the objectives to pursue;
– definition of a common vision, which constitutes a qualitative description of the desired future of the city and must place transport and mobility in the wider context of economic and social development;
– definition of priorities and measurable objectives (as the vision is an important qualitative description of the desired future, so the nature of the expected changes must be described through specific, measurable objectives to be defined in detail before the activities begin — as methods of achieving the objectives);
– preparation of effective sets of actions is fundamental to sustainable mobility planning, because only if properly selected and efficiently implemented, they can ensure the fulfilment of the assumed objectives (the selection of activities must be consulted with main stakeholders, cost effective and aligned with the good practices of other cities);
– definition of the scope of responsibilities and budget allocation — strictly connected with the selection of activities;
– monitoring and assessment, both during the planning process and activity implementation, are essential to the implementation of the activities included in the Plan;
– adoption of the Sustainable Urban Mobility Plan — as another stage, confirming the political will to complete the objectives included therein;

– the implementation phase — begins upon the Plan acceptance (at this stage the working plan performance should be enforced, e.g. through various agreed and unified reporting forms);
– monitoring and conclusions from assessment — allowing regular plan updates.

The main idea behind sustainable urban mobility plans is to work towards the creation of a sustainable urban transport system through the achievement of objectives like: transport safety improvement, transport environmental impact reduction, passenger and goods transport efficiency and effectiveness improvement, urban area attractiveness and quality improvement and improvement of transport services accessibility for inhabitants. The scope of mobility planning covers all types and forms of transport in the city, including public and private transport, passenger and goods transport, as well as motorised and non-motorised transport. The Plan preparation and implementation process involves various groups of entities, characterised by e.g. a participative approach, a long-term vision and a clear action plan, aimed at a sustainable and integrated development of all forms of transport, as well as a regular monitoring of Plan implementation (Lopez-Ruiz et al., 2013).

Under the European project entitled CIVITAS DYN@MO (DYNamic citizens @ctive for sustainable MObility) within the CIVITAS II PLUS initiative, funded from the 7th Framework Programme of the European Commission, the Sustainable Urban Mobility Plan (SUMP) has been elaborated and adopted by the Gdynia city authorities. The plan takes into account the principles of participation, integration and assessment as well as be based on current practices of urban mobility planning.

Gdynia is an important European transport node with maritime connections to ports in Europe and worldwide. It is an important component of the Gdańsk–Gdynia–Sopot Metropolitan Area (GGS MA) being the most important metropolitan in North Poland and simultaneously in the South Baltic Sea with a regional yet international influence. Gdynia is a city with a population of almost 250,000 and the area of 135 km^2 in the Pomorskie Voivodeship. Some objectives of sustainable transport development cannot be achieved without clearly setting Gdynia in the metropolitan area and in the Pomorskie Voivodeship. This is related to the numerous metropolitan functions and the role of the port and the shipbuilding industry located in the city. In the urban area, complex relations are formed at the interface of environment, society and economy. A dynamic development of seaports (in particular container terminals) has become an important factor stimulating the economic development. The dynamic development of Gdynia and the accompanying changes in spatial development, connected with the intensification of suburbanisation processes create transport problems that have an impact on the public space, inhabitants quality of life and environment. The most important problems include increasing congestion, resulting in a reduced travel speed, domination of passenger cars in trips, negative transport patterns and behaviours among the inhabitants, strengthened by

uncontrolled suburbanisation processes and settlement development in neighbouring communes.

To assess transport operation and the aspects of transport planning in the city, the assessment form was used, which was developed under the ADVANCE EU project (a three-year project co-financed from the Intelligent Energy — Europe programme and implemented by 11 partners in 8 European cities in 2011–2014). The ADVANCE project assessment form contains a set of questions in the area of mission and activity. The mission area relates to the process of planning (e.g. co-operation issues, inhabitants inclusion, use of evaluation), while the activity area concentrates on eight subject areas, such as parking policy, urban spatial development, pedestrian traffic, bicycle traffic, goods transport, car traffic, mobility management and goods transport.

The self-assessment process included stakeholders representing primarily the public administration sector (City Hall, police, public transport authority, etc.) and the transport market (transport operators, etc.) and NGO's. The overall result of the city in a 1–4 scale (corresponding to activity levels) was 2.06, which means that in a general assessment Gdynia's transport policy implementation is process-oriented, while systemic activities are implemented to a small or medium extent. The detailed self-assessment results are available in the self-assessment report for the purposes of preparing the SUMP for Gdynia (Mobilna Gdynia, 2017).

To determine the most desirable directions of activity in the field of mobility in Gdynia, a questionnaire was addressed for stakeholders to assess particular areas and activities (Wolek, 2016). Key stakeholders of Gdynia, related to mobility issues, involved in the planning process earlier, representing primarily the public administration sector, the transport market and university researchers (including the author) were invited to the assessment. Every activity was subject to assessment in a C–A++ scale:

- C — these activities should not be in focus — they are unnecessary or already implemented to a sufficient extent in Gdynia;
- B — it is not necessary at the moment, but to be considered for implementation in the future (after 2025);
- A — it is necessary to concentrate on the completion of this activity, however the A, A+ and A++ symbols determine the priority (where A++ is the highest possible extent).

Prioritisation results are shown in table 3. The highest priority was given to the tariff and ticket integration in the Metropolitan Area, parking issues, the inclusion of pedestrian traffic in project planning and public spaces.

The lowest priority was given to carpooling, environmental-friendly vehicules and such mobility management tools as Mobility centre or the Officer for Mobility. The promotion among inhabitants and students or city bicycle system were given a medium priority. Based on the obtained survey results and the direct consultation meetings with key stakeholders, strategic objectives of the SUMP for Gdynia and political challenges have been elaborated (table

4). Those 4 strategic objectives have been defined to enable implementation of the sustainable mobility vision until 2025.

5. Conclusion

As growing economies heavily rely on fossil fuels and unconstrained emission, it is critical to begin adopting strategies that balance this skewed development and return to a more sustainable course. Mobility planning in modern agglomerations, in particular for port cities with huge traffic density and congestion problems, is a complicated task because of complex and contradictory factors and needs in this process. Political and financial issues pose additional difficulty. Current modal split, the inability of most coastal cities to absorb rapidly expanding port developments and population growth, may compound both environmental and health problems for the inhabitants. Also, it is quite a challenge to ensure a sustainable urban mobility pattern which requires a high level of stakeholders' participation and establishing a detailed complex planning process.

Based on the strategic framework for the development of port city Gdynia, the Sustainable Urban Mobility Plan (SUMP) has been elaborated stating the vision of the transport system and mobility improvement till 2025. Practically from the beginning, the SUMP preparation process included stakeholders — the institutions, units, companies and education sector (schools and universities) of Gdańsk. The main work group included the representatives of: Zarząd Dróg i Zieleni in Gdynia, the University of Gdańsk, the Gdańsk University of Technology and Public Transport Authority of Gdynia. The remaining stakeholders were included through direct meetings, email correspondence, workshops, marketing surveys, direct interviews, electronic surveys and consultations, related both to the SUMP and to the individual potential activities (e.g. pedestrian zones, the vision of the plan, transport behaviour and preference of the inhabitants of Gdynia).

Key stakeholders of Gdynia, included in the planning process earlier, invited to the assessment gave the highest priority to the tariff and ticket integration in the Metropolitan Area, parking issues, the inclusion of pedestrian traffic in project planning and public spaces. The lowest priority was given to carpooling, environmental-friendly vehicles and such mobility management tools as Mobility centre or the Officer for Mobility.

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Appendix

Table 1.
A new way of planning urban mobility

Traditional transport planning	Sustainable urban mobility planning
focus on traffic	focus on people
primary objectives: traffic flow capacity and speed	primary objectives: accessibility and life quality
planning by experts	planning with the involvement of stakeholders using a transparent and participatory approach
domain of traffic engineers	interdisciplinary planning teams
infrastructure focus	integrated set of actions to achieve cost-effective solutions
related to administrative area	related to functioning area based on travel-to-work patterns
sectorial planning document	sectorial planning document consistent and complementary to related policy areas (land use and spatial planning, social services, health, enforcement and policing, etc.)
limited impact assessment	regular monitoring and evaluation of impacts to inform a structured learning and improvement process

Source: Wefering et al. (2013).

Table 2.
Typical stakeholder groups involved in transport projects

Government/authorities	Businesses/operators	Communities/local neighbourhoods	Others
local authorities	transport operators/providers	national environmental NGOs	research institutions
neighbouring cities	transport consultants	motorist associations	universities
local transport authority	car sharing companies	trade unions	training institutions
traffic police	bicycle rental operators	media	experts from other cities
other local transport bodies	other mobility providers	local authority forums	foundations
other local authority bodies	national business associations	local community organisations	
politicians	major employers	local interest groups	
other decision-makers	private financiers	cycle/walking groups	
partnering organisations	international/national business	public transport user groups	
project managers	regional/local business	transport users	
professional staff	local business associations	citizens	
emergency services	small businesses	visitors	–
health & safety executives	retailers	citizens in neighbouring cities	
European Union	utility services (e.g. electric, telecoms)	disabled people	
ministry of transport	engineers/contractors	landowners	
other national ministries		transport staff	
regional government	–	parents/children	
		older people	

Source: GUIDEMAPS (2004).

Table 3.
ADVANCE method prioritisation selected results

Mobility areas and activities	Result
ticket integration of public transport	4.45
city car park	4.21
inclusion of the pedestrian traffic in project planning	4.14
public spaces	4.03
building density and public transport stops	3.97
park & ride car parks	3.79
restrictions on lorries entering the city centre	3.79
cyclist safety in crossroads	3.69
passenger information	3.69
road traffic safety system	3.69
safe trip to school	3.62
'green' vehicles in public transport	3.59
bike & ride parking areas	3.48
free public transport zone	3.43
public transport safety	3.38
sustainable mobility promotion among students	3.31
re-allocation of space to the bicycle traffic	3.28
calmed traffic zones in housing estates	3.21
sustainable mobility promotion among inhabitants	3.14
city bicycle system	3.14
rationalisation of business trips	3.07
speed control and road traffic law enforcement	3.07
super-regional connections in the bicycle system	2.97
electrical vehicle charging points	2.96
parking space monitoring system	2.90
integration of bicycle transport with public transport	2.83
standards for goods transport and deliveries	2.83
restricted pollution emissions zones	2.76
electrical vehicles for businesses	2.45
bicycles in bus lanes	2.41
city carpooling concept development	2.34
preference for environmental vehicles	2.31
mobility centre or the officer for mobility	2.21

Source: Own preparation based on Polis Network (2016).

Table 4.
Strategic objectives of the Sustainable Urban Mobility Plan for Gdynia and political challenges

Political challenges/strategic objectives	Objective 1. attractive and safe urban space	Objective 2. safe and effective transport system	Objective 3. rational transport choices	Objective 4. effective cargo transport in the city
health: how to create a health-friendly environment for inhabitants?	XXX	XXX	XXX	X
congestion: how to create an economically efficient and accessible city?	XXX	XXX	XXX	XX
safety: how to ensure a safe and reliable urban environment and mobility?	XXX	XXX	XX	XX
participation: how to engage citizens and other urban mobility stakeholders?	XX	X	XXX	X
strategic planning: how to attain political objectives, while ensuring that mobility needs of the society are met?	XXX	XXX	X	XXX
climate change: how to reduce climate change connected with transport emissions in the city and contribute to the fulfilment of local, national and global climate change objectives?	XXX	XX	XX	XXX

Note:

X — low importance of the strategic objective to the given political challenge;

XX — moderate importance of the strategic objective to the given political challenge;

XXX — high importance of the strategic objective to the given political challenge.

Source: Wolek (2016).