

STRATEGIC MANAGEMENT OF TRANSPORTATION IN THE CITY

MONIKA STRZELCZYK¹–WIOLETTA SKIBIŃSKA²

Abstract: For several years, a progressive evolution of the transport needs of society can be observed. In recent times, there has also been a dynamic development of information and communication technologies. These factors caused that it was necessary to update the strategic planning of urban development. Units of local government should aim primarily at long-term development plans in the area of transport. They will contribute to ease the burden for transport. This in turn will affect the perception of quality of life in the city. These plans can be an integral part of the urban development strategy or a separate policy document. The aim of the article is to present the issues of strategic management of the development of the transport system in the city. Particular attention has been focused on the specifications and describing of the stages of strategic development of this system.

Keywords: *strategic management, urban transport*

1. Introduction

Initially, the term *strategy* has found use in the field of science describing methods of warfare with the enemy. This term originally defined all activities related to the taking of practical and theoretical activities aimed at the preparation and execution of military operations [1]. As an economic term strategy was first defined in the early 70s. This concept was described by many foreign scholars. These included CHANDLER [2], GLUECK [3] OHMAEA [4] and RUMELTA [5]. Among Polish authors describing the issues of strategy and strategic management should KRUPSKI [6] PIERŚCIONEK [7] MOSZKOWICZ [8] and OBLÓJ [9, 10] be mentioned.

Over the years many schools of strategic management emerged. They have been described in details, among others, in the publication by MATYJAS [11]. Since then, the meaning of the concept of strategy has evolved considerably. Initially, the strategy accepted character of simple procedures. The task of the developed procedures was to identify and help to beat a path to the attainment of clearly defined objectives of the organization. The variability of the environment ultimately forced organizations to change the approach to management. In this case, the development of complex procedures (creative activities and execution processes) has become necessary. These procedures were not only were meant to lead to the achievement of the objectives of the organization, but also to allow it to survive in the stormy and full of changes environment [8]. The subject of interest of strategic management are issues crucial for the maintenance and development of the company, taking into account the impact of the external environment on the organization and its internal competitive potential [12, 13].

¹ PhD, Częstochowa University of Technology
monika.strzelczyk@wp.pl

² PhD, Częstochowa University of Technology
wskibinska@lco.pl
42-200 Częstochowa, ul. Armii Krajowej 19b, Poland

Properly developed strategy sets the direction of future operations and have a decisive influence on their success. Interdisciplinarity of strategic management makes its grounds are successfully used in long-term management of urban development.

2. Strategic management of the city

Considering strategic management in cities, the focus should be put on presenting an analogy in the definitions of the company and the city. According to the Act of 23 April 1964, Civil Code, “the company is an organized system of tangible and intangible assets designed to operate business activities” [14]. The city, like the company, operates through coexistence and cooperation of individual material and not material elements. Among the material elements of the city there are residents, entities engaged in manufacturing, trade and services in an urban area, real estate, infrastructure, logistics etc. “History, traditions, culture and art, the landscape, the religions, the ideas, the law, the plans and the visions [15]” are intangible elements of the city. Tangible and intangible elements decide mainly on the functions performed by the city and in many cases distinguish them from other cities. Thus, they determine the attractiveness of cities in terms of settlement or as a suitable place to do business.

The city can also be seen as a territorial social system, ecosystem or even a living organism [16]. Defining the city as a territorial social system is connected with the fact that it occupies a specific territory. This area is located in the legally established administrative borders, occupied by population forming social bonds, it is under the authority [16] elected in free elections. On the other hand, treating the city as an ecosystem, one should pay special attention to its relationship with the environment. Just as no living organism can survive without the inanimate environment, so the city is dependent on interactions coming from the external environment (closer or further environment). The most accurate of all the comparisons of the city to the system, is to describe the city as a living organism. This concept is presented in *Figure 1*.

Living organism	Urban organism
Circulatory system	Passenger and freight transport
Nutrition	Receiving information, stimuli from the environment, perception
Digestion	Management, knowledge, technology
Metabolism	The flow of information, communication
Nervous system	Metabolism (manufacture)
Brain	Utilization of energy and matter (products and services)
Senses	The supply of energy and matter (products and services)
Excretion	Waste manufacture, storage and disposal

Figure 1. Comparison of the city to a living organism [16, 17]

Figure 1 shows that the existence of the urban organism depends largely on the supply of products and services necessary for the proper functioning of society, as well as entities engaged in economic activities. There is no doubt that in this process urban transport system plays a significant role. Transport operations carried out in the cities, not only allow for the carriage of goods and passengers, but also contribute to the growth of the effectiveness of transport policy in the supply of media in the territory of the city and the collection and disposal of waste, both municipal and industrial ones. An essential element in the system of urban living organism is the exchange of information within the system and communicating of the city users with entities located in its vicinity.

Fulfilment of transport functions by the city requires activities aimed at, among others, reduction of the phenomenon of transport congestion, contributing to a longer travel time both by cars and public transport [18]. Equally important is the desire to reduce the scale of the impact of transport on the environment [19]. Necessary in this case is the implementation of solutions enabling mobility management [20] and controlling the flow of goods in the city. Managing the flow of people and goods in urban areas requires disposal of the transport infrastructure. It is also necessary to implement process, technological and environmental innovation affecting the functioning of the city and affecting the perception of the level of development of an urban center [21]. For this reason, construction, modernization of individual elements of infrastructure and introduction of innovative solutions should become an integral part of the strategic plans developed for cities.

3. Transport management in the city

Strategic management of the development of urban transport proceeds in stages and it is quite a complicated process. The difficulties stem from the continuous economic and social changes. Stages of strategic management can be identified with the individual phases of the process of business management and logistics management. As shown in Figure 2, the stages of business management include actions taken in the direction of tasks planning, their design, implementation and controlling the results.

Stages of management	Stages of logistics management in the enterprise	Stages of transport management in the city
Planning	Supply planning	Planning the transport of freight and passenger transport in the city
Organization	Organizing supplies of raw materials and semi-finished products	Organizing transport in urban areas
Implementation	The flow control of goods in the production process	Controlling the flow of people and cargo in the city
Controlling	The flow control of cargo to the warehouse and/or client	The flow control
	The flow control	

Figure 2. The process of strategic management of urban logistics/logistics of the city against the stages of enterprise management and logistics management [22, 23]

Similarly, the stages of logistics management in a company are focused on the planning, design and controlling the flow of cargo [24], from the processes related to supply the company with the necessary raw materials, goods, materials and semi-finished products, optional storage of products and distribution of finished products to customers.

Considering the presented stages of business management and logistics management in the enterprise, it can be said that the process of strategic management in the city transport should also take place in four steps. After analysing the publications in the field of strategic management and project management, stages of strategic management have been indicated for the development of the transport system in the city. Within each of the steps actions to perform have been indicated. Also persons, entities responsible for the implementation of individual activities were specified. This is all presented in *Table 1*.

Table 1
Stages of strategic management in the development of the transport system in cities detailing the action plan and the persons (entities) responsible for their execution

Stages of strategic management	Tasks to be performed	Participants of the stage
Strategic planning of development activities	Reporting transportation needs in the field of: <ul style="list-style-type: none"> – modernization and/or construction elements of linear infrastructure of transportation; – modernization and/or construction of point infrastructure of transport; – the purchase and / or improvement of public transport. 	City users: <ul style="list-style-type: none"> – city government; – inhabitants; – persons temporarily residing in the city; – manufacturers, retailers, and service; – transport companies.
	Strategic planning: <ul style="list-style-type: none"> – preparation of strategic analysis; – development of a strategy for the development of urban logistics. 	Local Government Units
Organizing the implementation of the strategy	Management of the design implementation of the development strategy: <ol style="list-style-type: none"> a) the appointment of a project manager (PM); b) formulation of project objectives; c) preparation of project schedule: <ul style="list-style-type: none"> – determining the start and end dates of the project; – specification of the resources needed to carry out specific tasks; – estimation of the project budget; – determining of the so-called milestones of the project; d) risk management in the project. 	Entities managing development projects in the city Beneficiary of the project
	Obtaining funds for the implementation of project tasks: <ul style="list-style-type: none"> – qualifying for a repayable grant; – applying for a non-refundable co-financing from the EU. 	

Stages of strategic management	Tasks to be performed	Participants of the stage
Implementation of the strategy	Implementation of ongoing tasks: <ul style="list-style-type: none"> – implementation of the main tasks and sub-tasks; – consumption of resources through the implementation of tasks; – ongoing monitoring of the project; – management of the critical issues of the project. 	Entities managing the development projects in the city
	The preparation of the final report on the implementation of tasks	Entities managing the development projects in the city
Control of the implementation of strategy	Control of the goals of project	Entities managing development projects in the city Beneficiary of the project
	Control of the implementation of EU projects: <ul style="list-style-type: none"> – control of the completion of the project; – control of project sustainability. 	Entities implementing the project Certification bodies (eg. The Minister of Regional Development, governors) Audit authorities (Chief Tax Inspector) European Commission

(Source: Own)

The first phase of strategic management of transport in the city should involve planning the direction of development activities. These directions can be identified through the use of strategic analysis of the city. Comprehensively carried out strategic analysis allows to know the needs of city users and to verify the capabilities to satisfy them, due to the presence of the strengths and weaknesses of internal and external forces acting on the city. These factors may in fact help or interfere with the process of strategic management of the urban area. The development strategy of the transport system in the city should therefore be designed so that, using available knowledge, human and financial resources, to achieve the objective of development of infrastructural, and thus improving the quality of individual urban logistic subsystems. Long-term strategic activities in the field of development of the urban transport system should therefore be related to the construction and/or reconstruction of the individual elements of the transport infrastructure in the city (linear and point). Important measure contributing to the development of urban infrastructure is also a process of purchase and/or improvement of public transport.

Honestly developed strategic plan determines the success of future operations, forming the basis for the next stage of strategic development of the transport system in the city – i.e. the process of organizing the implementation of the strategy. The process of organizing the

implementation of the strategy begins with the execution of activities related to the preparation of schedule of project tasks. Directions of planned activities contained in the schedule of the project, set goals for development. Organizing the strategic management process also requires the determination of the consumption of human, financial, material and information resources necessary for the implementation of the project and for determining their availability. Priority action in this case is to assess the project's budget. The budget of the project can be financed from own resources of City Offices and returnable and non-returnable subsidies. Polish accession to the European Union resulted in an ability to obtain non-repayable grants from the EU budget. In this case, however, the schedule of design tasks must take into account the tasks associated with preparing and submitting an application for funding of the planned investment.

Implementation of the designed schedule, belongs to the third stage of strategic development of the transport system in the city. This stage is to manage the flow of goods, energy, heat, waste, information in the city and mobility of passengers. The difficulty in the implementation of the strategy is due to the long time interval for which it is designed. Constant changes in the business of proximal and distal cities environment, introduction of new technologies and changes in the behaviour of inhabitants of urban areas, make it is necessary to continuously monitor the status of implementation of the strategic tasks. This allows for the observation of the severity of the old or new problems related to the implementation of the transport processes in the machined administrative boundaries of cities and beyond. Control of the tasks implemented and any deviation in their implementation should be systematically corrected.

In the last stage of strategic management of logistics system in the city, it is necessary to implement monitoring of the objectives, the tasks and purpose of design resource consumption. At this stage, the confrontation of the scope of the planned work and their actually implemented tasks and measurable effects is made. It becomes necessary also in this case, to carry out the justification of spending funds connected with the implementation of the project (i.e. financial control). Such controls are carried out by entities authorized to do it. If a non-repayable grant from the EU is received, beneficiaries of the projects after the physical and financial implementation of the project, must also reckon with controlling the sustainability of project results.

4. Summary

The entities responsible for the strategic planning of urban development of the transport system, are units of local governments [25]. The theoretical presentation of the stages of the strategic management of urban transport systems in the article has a significant influence on the implementation of urban logistics activities by local governments. At present, local governments are developing strategic development plans, but in many cases, strategic activities related to the logistic development of urban areas are not emphasized in them. These constitute only a minor element of the development strategy. On the other hand, the recognition of particular stages of the strategic management of the development of transport systems and the management of those should become a basis for the preparation of development strategies. Further practical research in this area conducted by the Authors will be based on an analysis of existing data, i.e. the development strategies of particular cities in terms of the recognition of contents related to the implementation of long-term activities influencing urban logistics systems.

Currently noticeable is the large share of EU funds in the implementation of investments in the development of the transport system in the cities. Therefore, the basis for developing the strategic plans should represent not only the content included in the national strategic documents, but also the circumstances described in the EU. In the process of designing a strategy, the opinions of city users should be taken into account. The city users indicate the priority directions of development of transport infrastructure. One of the methods to know the position of the citizens on this subject is public consultation.

Omissions in this regard may lead to a number of negative phenomena. One of them is the emergence and intensification of the phenomenon of transport congestion in the city. There is no clearly developed plan with methods to resolve this phenomenon, which can lead to serious consequences. Firstly, the situation may result in limited or total unavailability of goods and/or services. This, on the other hand, contributes significantly to the reduction of the mobility of society. This in turn contributes to a negative assessment of the quality of life in the city.

References

- [1] KACZMAREK, A.: Strategies of small and medium – sized enterprises (in Polish). *Zeszyty Naukowe Małopolskiej Wyższej Szkoły Ekonomicznej w Tarnowie*, Vol. 2, No. 2 (13), 2009.
- [2] CHANDLER, A. D.: *Strategy and Structure. Chapters in the History of the American Industrial Enterprise*. The MIT Press, Cambridge Mass, 1962.
- [3] GLUECK, W. F.: *Strategic Management and Business Policy*. McGraw-Hill Book Co., New York, 1980.
- [4] OHMAE, K.: *The Mind of the Strategist. The Art of Japanese Business*. McGraw-Hill Inc., New York, 1982.
- [5] RUMELT, R. P.: *Evaluating business strategy*. 1993.
- [6] KRUPSKI, R.: *Strategic management. Concepts, methods (in Polish)*. Wydawnictwo Akademii Ekonomicznej im. Oskara Langego, Wrocław, 1999.
- [7] PIERŚCIONEK, Z.: *Competitive strategies and business development (in Polish)*. Wydawnictwo Naukowe PWN, Warszawa, 2003.
- [8] MOSZKOWICZ, M.: *Strategic management. System business concept (in Polish)*. Polskie Wydawnictwo Ekonomiczne, Warszawa, 2005.
- [9] OBLÓJ, K.: *Passion and discipline strategies. As with dreams and the decision to build the company's success (in Polish)*. Wydawnictwo Poltext, Warszawa, 2010.
- [10] OBLÓJ, K.: *The strategy of the organization. In the search for sustainable competitive advantage (in Polish)*. Polskie Wydawnictwo Ekonomiczne, Warszawa, 2007.
- [11] MATYJAS, Z.: Economics of industrial organization in strategic management (in Polish). *Acta Universitatis Lodzensis. Folia Oeconomica*, No. 261, 2011.
- [12] Sopińska, A.–Mierzejewska, W.: *Evolution of strategic management in terms of research Polish and international (in Polish)*. Zarządzanie strategiczne. Rozwój koncepcji i metod. 2014.
- [13] STABRYŁA, A.: *Strategic management theory and practice of company (in Polish)*. Wydawnictwo Naukowe PWN. Warszawa, 2000.
- [14] Dz.U.2014.0.121 – The Act of 23 April 1964. *The Civil Code*, art. 55.

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- [15] SZTANDO, A.: *Urban Marketing and promotion of the city (in Polish)*. http://www.sztando.com/nowosci/images/upimages/Wyklad_6.pdf
- [16] PARYSEK, J. J.: City in terms of system (in Polish). *Ruch Prawniczy, Ekonomiczny I Socjologiczny*, zeszyt No. 1, 2015.
- [17] PARYSEK, J. J.–MIERZEJEWSKA, L.: *City life. Study Poznan. The city and its inhabitants (in Polish)*. Bogucki Wydawnictwo Naukowe, Poznań, 2013.
- [18] HAYWOOD, L.–KONING, M.: *Estimating crowding costs in public transport*. Deutsches Institut für Wirtschaftsforschung. Discussion Papers, 2013.
- [19] NOWAKOWSKA-GRUNT, J.–STRZELCZYK, M.: Influence of road transport on the environment – Poland against the European Union. *XXVIII. microCAD International Multidisciplinary Scientific Conference*, Miskolc, 2014.
- [20] NOWAKOWSKA-GRUNT, J.–CHŁAD, M.: Mobility as part of city management (in Polish). *Zeszyty Naukowe Politechniki Częstochowskiej*, No. 10, 2015.
- [21] HERBUŚ, I.: Innovations in the cities as a determinant of the success of modern governments (in Polish). *Zeszyty Naukowe Politechniki Częstochowskiej*, No. 19, 2015.
- [22] ABT, S.: *Logistics Management in the enterprise (in Polish)*. Polskie Wydawnictwo Ekonomiczne, Warszawa, 1998.
- [23] WITKOWSKI, K.: Aspect of urban logistics in the management of transport infrastructure of the city (in Polish). *Prace Instytutu Prawa i Administracji Państwowej Wyższej Szkoły Zawodowej w Sulechowie*, No. 3, 2007.
- [24] ŚWIERCZEK, A.: The theoretical basis of the concept of logistics management – an attempt synthesis (in Polish). *Logistyka*, No. 4, 2006.
- [25] CHŁAD, M.–JAROSZYŃSKI, J. W.: Performance management in local government units – community (in Polish). *Zeszyty Naukowe Politechniki Częstochowskiej*, No. 20, 2015.