

Sustainable Transport of Supplies in the City Centre as a Part of the Concept of Good Neighbourliness

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Abstract Each city is possible to perceive as a space where people live and work. Any city cannot function without supply of goods for commerce, services and industry. City logistics, it is a comprehensive strategy to rationalization of the spatial and functional urban agglomeration system to meet the needs of residents and visitors, implemented by coordinating all activities in the area of the city and its surroundings for long-term development goals of the city and the region. In this paper presents the key assumptions of the idea of good neighbourliness for delivery in the city centre.

Keywords City logistics · Delivery · Sustainable transport in urban areas · The concept of good neighbourliness

Introduction

Every city is seen as a space where people live and work. No city can function without supplies for trade, services and industry.

Supply is understood as the movement of goods to a specific customer at a specified time [1]. A network of organizations participates in the process of handling the goods (production, transport, distribution) participates, through linkages with suppliers and customers, in a variety of processes and activities, creating value in the form of products and services supplied to end consumers [2].

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Stakeholders of Supplies in a City

In a city, there are different stakeholders who are directly or indirectly involved in the supply process at each parking or place for stopping on the street in the city [3, 4]. The criteria for their interest can be classified as follows [5]:

- for residents—the following aspects are important: time of supplies, the frequency of supplies and noise at a supply (in relation to nuisance of activities of the trader and in relation to the competitive occupation of a parking place),
- for merchants—the following aspects are of importance: the time of supplies, the frequency of supplies, reliability of supplies, cost of the supply and terms of supplies,
- for suppliers is the time, frequency, reliability, cost and terms of supplies are also important,
- for drivers—it is the time and frequency of supplies that matters (in relation to the competitive occupation of a parking place),
- for tourists—the time of supplies is important (in relation to the competitive occupation of a parking place),
- for the city authorities—the time and frequency of supplies are important (with respect to the good image of the city centre not blocked by delivery vehicles, enabling visits by tourists and occupation of space for parking the car).

The Costs of Supplies for Stakeholders in the City

In order to develop a rational solution for the system of supplies, it is justified to identify the costs incurred by stakeholders.

The cost is a purposeful expenditure of money and an employee's working time, but the cost can be produced by an external activity of some entity. In this context, we can talk about accounting costs [6] and external costs [7].

Stakeholders of supplies in the city bear direct, indirect and external costs, which can be classified as follows:

- residents—bear the direct costs of the nuisance of supplies as a noise at a supply, manifested by mental fatigue, irritation, etc.
- merchants—have a direct cost of supplies, as the price of ordered goods, the cost of losing potential profits due to the failure to meet the assumed time of supplies and frequency of supplies,
- suppliers—bear the direct cost of supplies, as the price of ordered goods and labour costs of technical equipment—fuel, lubricants, insurance, etc., the costs of losing potential profits—contractual penalties due to the failure to meet the assumed time of supplies and frequency of supplies,

- drivers—bear the direct costs of labour of their own technical equipment—fuel, lubricants, insurance, etc., due to the fact that the time of supplies and frequency of supplies coincide with their arrival time at a specific place and forces them to search for other, distant places for parking their car,
- tourists—bear the direct costs of labour of their own technical equipment—fuel, lubricants, insurance, etc., due to the fact that the time of supplies and frequency of supplies coincide with their arrival time at a specific place and forces them to search for other, distant places for parking their car,
- the city authorities—bear the direct costs, for the same time of supplies and frequency of supplies to many traders in the city centre, when it is blocked by delivery vehicles, it affects the good image of the city, because it does not promote visits by tourists by blocking the limited number of parking spaces.

For each stakeholder, the listed costs are direct. But when they assess their impact on the others, the costs of their actions are direct, indirect or external. Therefore, the classification depends on the reference point.

Indirect costs can be expressed as a cash equivalent [8], if there is no data directly from another stakeholder. External costs are the costs that are moved to the surroundings without compensation [9].

The Principle of Cost Reduction in Supplies in the City Centre

The identified costs of supplies in the city centre indicate that stakeholders have a common subject of interest, but with different intentions.

The objective of symbiosis requires compromise of each party. One should not treat the subject of interest in this matter as a field of conflict, but as the area of cooperation for the common benefit.

The starting point is to determine the demand for goods in the region of the city. May be helpful here the, so-called, logistic map of the city, i.e. an illustration of the scale of the goods and the days and time of supplies.

Data for its development can only be obtained through field research and with the voluntary participation of all entities in the particular region of the city.

The next step is to determine among the stakeholders places for unloading goods. It is the city authorities who may be the initiator or the coordinator of the agreed grass-root initiatives for the implementation from the civil fund.

A given area of the city is divided into catchment areas. Business operators must agree among themselves on the location of points in order to minimize the road to that entity, for example: restaurants, grocery stores. The selected point is specifically marked for the use of suppliers. One point of supplies should serve for approx. 50 m of the route in each direction on which stakeholders from business entities are present.

The next action involves establishing the conditions of supplies. Residents make their comments regarding the time of supplies. Representatives of business operators have to agree with them on such hours that do not interfere with night time or do not block the exit from the property/yard, etc.

At the next stage, the city authorities prepare a new regulation of traffic in that area of the city. It includes special horizontal and vertical marking in places of supplies and construction of information boards at the entrances to the zone covered by this regulation. Special points of supplies are designated.

Planning costs are included in the normal labour costs of the city officials, and the construction of road signs and markings is included in intentional expenses which fall within the responsibilities of the local government contained in the statutes.

Cities, striving to reduce traffic in the city centre and restrict free parking, must remember that the prohibition of entry and stopping of delivery vehicles result in a decreasing influence of business operators in this region, and thus a reduction in taxes paid to the town treasury.

The final step is to publicize the new traffic regulations in the area of the city, which is a prerequisite for reducing the cost of other stakeholders. It has to be made public at least 30 calendar days prior to the entry into force of this regulation.

The known examples of the many cities indicate that any of the authorities' actions not supported by the grass roots lead to new, unsolved conflicts between stakeholders in the centre.

Synergy in the City Centre

Through the identification and classification of supply costs for stakeholders in the city, it can be noticed that the separate activity of each of them in their own interest causes an adverse effect on the activities of other stakeholders. It is reasonable to change this situation by undertaking actions that integrate. The key is to progressively eliminate and cross the barriers that have so far limited the cooperation in supplies in the city, by integrating stakeholders. This can be compared to obtaining a synergistic effect through the evolution of integrating activities.

Therefore, first of all, they must achieve the effect of symbiosis, i.e. strict coexistence for common benefits [10]. Then they can get the synergy effect through the integration of many operators who create a common goal (product), which reduces the cost of its preparation and promotion, and also increases the chances of market success. A joint action allows to obtain a greater effect than the sum of individual actions [11].

The city, as a place where over many centuries have formed various non-farming professions, changed along with the available technology given at the time. The idea of city management has evolved from treating it as a place of settlement to the place which brings together residents of different personal characteristics and professions. If we want to achieve synergy in city management, as the first we must

achieve the symbiosis, well known from the biology, as the close and often long-term interaction between two different biological species. The symbiosis in city management means close and long-term cooperation of two different stakeholders of supplies in the city, for example residents and supplies for use one place for parking in night hours for residents and delivery processes at the day hours for suppliers.

If we know that synergy is the creation of a whole that is greater than the simple sum of its parts. In city management, it means reductions of the conflicts in different aspects of life in the city. One of them is usage of one the parking or place for stopping on the street in the city. Achieving synergy for freight deliveries in the city centre, where there is a continuous conflict for space for cars, allows minimizing the impact on the surroundings, i.e. good neighbourliness.

The Idea of Good Neighbourliness

A well-known Polish song begins with these words:
How good it is to have a neighbour.. [12].

What do we mean by the concept of a good neighbour?

Commonly it is understood that a good neighbour is characterized by:

- friendliness,
- tactfulness,
- respect for another neighbour,
- is not indifferent to wrongdoing,
- is not invasive in their activity in the surrounding area.

How to formulate the idea of good neighbourliness in the management of the city?

It can be assumed that urban logistics is a comprehensive strategy to rationalize the spatial and functional urban agglomeration system to meet the needs of residents and visitors, implemented by coordination of all activities in the area of the city and its surroundings for long-term development goals of the city and the region.

Thus, one can identify the main assumptions of the idea of good neighbourliness for supplies in the city centre as:

- In the sphere of people working in the city, activities cover legal regulations on the supplies in the city.
- In the sphere of resources occurring within the city, they include nuisance of the selected modes of passenger and goods transportation because of good neighbourliness, mutual respect and not disturbing each other accidentally or out of spite.
- In the sphere of planning new activities in the city, they include examination of the mutual influence on the perception of good neighbourliness.

- In the sphere of marketing of activities in the city, it includes determination of places of supplies for trade and services as a way of eliminating competition for a place for cars in the city centre.

However, the idea of good neighbourliness is not only associated with the implementation of supplies, but also with the management of the city. This means that the scope of its application can be extended.

If we know that the city is an area combining the functions of housing, services, entertainment, education, leisure and manufacturing, we can immediately notice that the idea of good neighbourliness must be general enough to be able to cover all the features focusing life in the city.

Therefore, the idea of good neighbourliness in the city logistics may be formulated as follows:

The element of strategic long-term management of the city is the idea of good neighbourliness, which protects the interests of all parties, not favouring or rejecting, by taking actions that integrate all of the parties in terms of sustainability with a particular focus on ensuring the mobility of the population with public transport and the supply of trade and manufacturers in the city, in order to minimize the external costs of transport, so that all these activities are allowed to obtain mutual friendliness and respect of all parties.

This fits in with the idea of urban logistics that can be defined as follows:

Urban logistics is a comprehensive strategy of development and management of the city to meet the needs of residents and visitors, by coordination of all activities in the area of the city and its surroundings for long-term economic development goals of the city and the region.

Discussion

The problem of defining the purpose of the concept of good neighbourliness in urban logistics is undertaken to expand the scope of interest of urban logistics with the approach of social impact. The subject of attitudes and social relations is located in sociology in the field of research about society. The element of social interaction in the logistics management of the city arises from the fact that it concerns not only economic, technical and legal matters, but also above all the human being understood as a social being.

The presented proposal of the concept of good neighbourliness in urban logistics is debatable, and it is aimed at provoking a debate. The idea itself is a framework, not a definition. Therefore, it is reasonable to indicate a different opinion about it, to which I invite you.

Summary

This article presents the problem of sustainable transport of supplies in the city centre, which has been shown in a broader perspective than before. The analysis of problems for all stakeholders of supplies in the city showed the need for firstly symbiosis and then the synergy in order to obtain the disappearance of unsolved conflicts between stakeholders in the centre. This indicated that there is a need to add an additional objective in city logistics—the idea of good neighbourliness.

Thus, it is reasonable to undertake interdisciplinary research to specify its principles.

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