

## Article

# The Concept of Urban Freight Transport Projects Durability and Its Assessment within the Framework of a Freight Quality Partnership

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Received: 6 May 2018; Accepted: 26 June 2018; Published: 28 June 2018



**Abstract:** This article focuses on the role of Urban Freight Transport (UFT) projects in improving the life quality of city inhabitants. The main focus of the deliberations is the aspect of UFT projects' durability. The authors take an original approach to the definition of UFT project durability and also provide the results of a research study carried out in 2018. This made it possible to furnish an answer to the research questions that boiled down to the analysis of the current status of the relevant academic literature, to attempt to define the total durability of a UFT project, and to indicate the critical gaps in perception among the key stakeholders of the projects. In this study, particular attention is paid to the terminological synthesis and the conclusion resulting from adopting induction and deduction as the methods of solving research study problems. A novelty is the approach adopted in the project evaluation emphasising the mentioned durability aspect as one of the major success factors. This is particularly important for implementation of a Freight Quality Partnership as a solution enabling development of sustainable systems of urban logistics. The solution was treated as a specific implementation project for which the issue of key importance is the identification of success factors in the context of satisfying the needs of diverse groups of UFT stakeholders. It should be stressed that durability of projects in the area of UFT is critically important, even though there is a significant conceptual gap in that regard. The research study involved the originally developed concept of the Pyramid of Stakeholders Survey. By means of this concept, FQP durability was analysed on the example of the experience gained in the course of the solution functioning in Szczecin.

**Keywords:** logistics; urban freight transport; Freight Quality Partnership; project durability

## 1. Introduction

An Urban Freight Transport (UFT) system may be characterised as a sociotechnical system consisting of a compilation of infrastructural (technical, social) systems and interdependence networks of stakeholders. It includes elements such as e.g., technologies—vehicles, ICT solutions, logistics infrastructure, legal regulations or market factors—supply and demand for the distributed goods [1–5]. In a holistic perspective, in accordance with the idea of sustainable development, it should also account for social and environmental aspects recommended by the European Commission (the concept of zero-emission urban logistics by 2030).

In the academic literature, urban logistics (in the social logistics dimension—this concept was introduced among others in [6]) is often perceived as conflicting with the activities connected with goods deliveries, passenger transport and the life quality of city inhabitants [7–11]. Logistics as an area of knowledge is perceived in three aspects: business, military, and social [6]. In view of the challenges of sustainable development, it is the social aspect that becomes the key challenge for

contemporary logistics systems. The goals set for contemporary logistics systems, and in particular for transport subsystems, even force a pro-social approach. This results from the need to reduce negative environmental impacts on the one hand and the need to ensure logistics systems users a high level of satisfaction with received service on the other hand. Therefore, the logistic approach should be treated as a specific kind of art of managing conflicting connections. This gains particular importance in the context of urban logistics systems. This is because the often raised issues, being the consequence of a given freight transport system functioning in a city, include phenomena such as congestion, road accidents, noise or environmental pollution [5,12–16]. Delivery vehicles are responsible for ca. 50% pollutant emissions, even though their share in the city road traffic is only from 20% to 30% [17]. However, due to delays in planned trips or deliveries as a result of congestion or lack of parking spaces, delivery vehicles often stop in traffic lanes, blocking them and consequently decreasing the effectiveness of logistic operations performed within the city. Therefore, as already mentioned, recent years have seen an increased interest in comprehensive streamlining of goods deliveries in city areas [18]. Still, increasing the logistic efficiency of a city, while mitigating the negative environmental impacts of the logistics, is a challenging task [19,20]. Additionally, the growing number of UFT stakeholders who are mostly characterised by diversity in terms of the structure of their needs, objectives and expectations, leads to a critical lack of “common operational picture” or even lack of “shared situational awareness” [4,21].

This is because the implemented initiatives often solve the problems of one group of stakeholders, while significantly infringing on the interests of others. This discrepancy results mainly from planning the solutions implementation without taking into account e.g., the city characteristics or opinions of all the stakeholders of urban freight transport [20]. What is more, observations made over recent years prove that many solutions, though positive for the society, cannot function on the fully commercial principles, and most often after the pilot phase, they must be subsidised by local authorities (which can be exemplified by e.g., urban consolidation centres) [22].

In European countries, the concept of involving possibly all UFT stakeholders in the decision-making process has been in place since the 1990s. This is done via associations taking the form of Freight Quality Partnerships (FQP) [23]. The main task of FQP is to involve the interested parties—in a conscious and equal manner—in the process of managing cargo flows in a city. In 2010, there were 38 Freight Quality Partnerships in Great Britain, and their activities contributed to increasing the interactions between private stakeholders of freight transport [24,25]. It turns out, however, that the necessary condition to avoid implementations that are not economically viable, have a low level of acceptability or are unsuitable due to the specific nature of the city, is their systematic evaluation that takes into account the complexity of the city and also expectations of senders, recipients, shippers, local and regional authorities, and citizens [26].

The research studies carried out in research units [27,28] prove that the process of establishing and successful functioning of FQP is a complex and long-lasting process consisting of

- appointing a team to lead the FQP activities;
- indicating groups of UFT stakeholders in a selected area;
- convincing the stakeholders of the need to establish a FQP and to actively participate in meetings;
- developing some solutions to support UFT streamlining, which are tailored to the specificity of the area where they are to function;
- implementing the solutions;
- monitoring of the implemented solutions.

Unfortunately, while it is relatively easy to specify the expected usefulness of a given project, to identify its structure and the sources of potential conflicts, the area of the greatest research potential is monitoring the effects of implemented solutions, especially in the aspect of long-term durability of their effects.

In view of the above, it is legitimate to formulate a definition of the very term “FQP project durability”, to search for its praxeological sources, to distinguish durability phases and to conduct empirical studies involving the key stakeholders of UFT projects, which specify subjective and generalised perception of project durability. The article attempts at filling the conceptual gap within the scope specified above. The proposed methodology may constitute a significant tool for FQP evaluation as a solution aimed at combining the interests of various stakeholder groups. The presented research study is a summary of an experiment regarding FQP functioning in the city of Szczecin.

## 2. Urban Freight Transport Project Durability

The concept of Sustainable Urban Freight Transport has become a permanent element of the broader idea of sustainable development. According to [29], it can be defined as a set of logistics and freight transport activities of the city area that are economically viable and contribute to the improvement of environment, quality of life and social issues, conform to the logic of the “four As” and have a vision of continuous improvement, take into account the interactions between the different stakeholders concerned and proposed solutions that are appropriate to the different stakeholders, and in which sustainability, in terms of earning relative to a certain benchmark, must be quantifiable and qualifiable. More and more often cities notice that it is necessary to take more intensive measures in that regard, so as to find the fine balance between the residents’ life quality (in terms of, *inter alia*, the need to ensure deliveries to shops, hotels, restaurants and service outlets) and the simultaneously incurred external costs resulting from e.g., pollution, noise, congestion, which are negative environmental impacts specifically caused by organised transport. However, based on more than 20 years of experiences in the development of Sustainable Urban Logistics projects, it should be stated that many achievements and results are abandoned after the project period (some examples can be found in [5,10,27,29]). Accordingly, the research perspective adopted by the Authors focuses on the proposal to strive to maintain and protect, for as long as possible, each of the achieved individual effects as well as their bundles via project initiatives taken up by cities in order to optimise the solutions regarding freight transport in the city. This is because, on the one hand, there is a discernible problem of inertia affecting every solution, but on the other hand, it is possible to notice a too instrumental approach to maintaining the effects, which is a result of a need to meet the institutional requirements connected with financing the project rather than actual strategic thinking focused on permanent improvement of the city inhabitants’ holistic well-being. Following the above, the difference between the sustainability and the durability of urban logistics activities should be emphasized.

The sustainability of urban logistics is related to the realization of the freight flows inner the city area. It is directly and mostly connected with the functioning of the supply chains, especially taking to the account the interdependencies between them and the city attractiveness [30]. In the result, the idea of Sustainable Supply Chain Management (SuSCM) has been established. This concept is based on the environmental and societal influences of supply chains [31]. The durability of urban logistics activities is related to their specificity as projects. It is the crucial challenge in terms of the functioning of urban logistics measures during and (most importantly) after the project period. This issues is related to the all spheres of sustainability (environment, society, economics). However, it is critically important from the economic point of view [29].

As found in the literature, the term “project” is most often defined as a unique undertaking limited in terms of time, scope, costs, and customer satisfaction [32]. An important aspect that should be noted here: so far, the key issue in project evaluation was first and foremost its performance [33]. However, according to T. Kotarbiński [34], performance of each action in the universal sense is expressed by its effectiveness, profitability, and cost efficiency. These are the three explicit practical merits of this universal measure of performance of each action, which can be expressed in a synthetic and quantified form.

Therefore, each action is the most “effective” if it makes it possible to achieve (in whole or to some extent) the intended purpose or at least enables its implementation in a specific future. The second

aspect, i.e., “profitability”, is always a feature that describes an action assessed positively due to the prevalence of received results (E) compared to the incurred outlays (N), where  $(E-N > 0)$ . However, it is mostly the third merit, i.e., the “cost efficiency” aspect, that verifies the achieved effect of each project (E) in relation to the outlays incurred for that purpose (N), and the ratio should always be greater than one ( $N/E > 1$ ).

Yet, in the academic literature, according to the traditional approach, the measures of a project success are only limited to the scope of performed tasks, their costs, or implementation time [35–38]. Thus, so far, not enough heed was paid to the durability of effects of a given project after its completion. Currently, evaluation of so-called “project success” also involves the durability of its outcomes, which is mainly decided by the stakeholders, i.e., the contractors, sponsors, and users [39]. Nevertheless, the meaning of project durability is more often than not understood too narrowly: as ensuring the functioning of the outcomes after the project completion, thus meeting its business goals [36], which in a sense is understandable due to the specific relevance of this aspect in implementing any ideas (projects) co-financed with the EU funds. For that reason, a contractor is obliged (usually in the guidelines regarding the project implementation) to ensure the functioning/making use of the results after the project completion and for a specified period of time. The duty to maintain project durability is stipulated in Art. 71 of the Regulation (EU) No. 1303/2013 of the European Parliament and of the Council dated 17 December 2013.

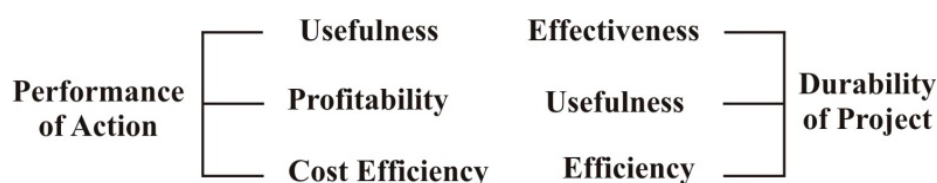
To sum up, in the context of studies of the relevant literature, it is currently possible to specify three major factors that, in the Authors’ opinion, have an impact on project durability, and which are relevant from the point of view of the project specificity in the scope of deliveries performed in an urban area [35–43]. Thus, from a perspective of “practical values” of effectiveness of any actions, these mainly include: “usefulness” (understood as the extent to which the stakeholders’ expectations were met and the extent to which the problems they had voiced were solved), “effectiveness” (which boils down to the extent to which the assumed objective was met as a result of the project implementation), and “efficiency” (as an indicator of utilizing all the possessed resources in the project, within a specific normative time), in view of the solutions being the result of the actions taken so far to deliver goods in the city area.

Unfortunately, it seems that the concept of “UFT project durability” as such, analysed in economic terms, still poses considerable problems of academic nature. From the point of view of praxeology, and therefore in the dogma of systematics of the three aforementioned dimensions of performance, it turns out that, first, each project should be required, understood and accepted by possibly maximally extensive circle of stakeholders, which will ensure its fullest “usefulness” function. Second, if the assumed effects have been achieved in full and, additionally, are maintained over the assumed period of time after the project completion, the UFT project may be considered fully “effective”. Third, the normative time required for specifying the “efficiency” is always connected with two aspects, i.e., the project itself (its duration and the required period of maintaining the project), and the time of protecting the structure and minimal amounts of its effects after the project has been formally completed and accounted for.

It turns out, therefore, that with respect to a project in the area of urban freight transport (UFT), when discussing its durability it is reasonable to mention the universal and synthetic measures of the action, relevant from the point of view of praxeology, due to their mutual terminological convergence (Figure 1). Thus, the specified usefulness of UFT project effects from the point of view of stakeholders is a manifestation of profitability of such an action, and efficiency is based on the effectiveness of the action taken for the project itself and its maintaining.

It should be noted that the project phase duration which covers implementation of planned effects of a UFT project and maintaining them over the project accounting period is only an element of a broader understanding of such project durability. The authors are of the opinion that in order to grasp the overall meaning of the term “UFT project durability” it is necessary to take into account the

post-project phase and predominantly the aspect of “protecting”, for as long as possible, the effects already achieved (and sustained) in the course of the project duration.



**Figure 1.** The convergence of terminology.

Therefore, the specific (the main and the auxiliary) goals of a UFT project are achieved with a specific effectiveness within the framework adopted for its implementing, maintaining and protecting the project effects, with a possibly maximal use of (mainly material, personnel, and information) resources assigned to it in the particular phases (Figure 2).

Phase		
Project		Post-Project
Implementing the Project	Maintaining the Project	Consolidation Effects of the Project
Building the Effects	Maintainig the Effects	Protecting the Project Effects

**Figure 2.** The phases of project durability.

Therefore, in order to better grasp the concept of “UFT project durability”, it is necessary to interpret it as “preserving, over the longest time possible, the obtained effect, in terms of both its total size and the structure of effects obtained as the final outcome, and also maintaining the minimal representation of each of the single elements of the final effect”. Only such a synergistic approach makes it possible to notice the frequent phenomenon of project effects “fading out” over a long term (after the project has been formally completed and accounted for), as due to its nature it is not capable of self-regulating, especially when financial leverage does not apply any more (which usually requires continuing the financing with funds other than those related to the project). Additionally, this highlights the need to preserve “the system of the original structure of effects” (in particular with regard to the individual elements of the system) and “the minimum values” adopted for each of such specialised elements of the original structure of effects. This is because the shrinking size of the effects is followed by the “transposition” phenomenon or—to put it in simple terms—the rule of “substitutability versus complementarity” of the project effects. The higher the durability of effects, the greater their complementarity, and the lower the durability, the more important the substitutability of the effects. Therefore, the problem lies with the relations between the expected substitutability and complementarity of a UFT project, which may, in an extreme situation, take the form of “the cannibalism of effects” (Figure 3).

As the graph shows, an increase in Complementarity is accompanied by a decrease in Substitutability, and vice versa. Consequently, in the situation when the Substitutability grows, the Instability of UFT project effects grows, too. An increase in the level of Complementarity, in turn, is accompanied by an increase in UFT project Durability. Therefore, the most desirable situation is the one where an increase in Complementarity of UFT project effects leads to enhancing the synergy



effect which translates directly into an increase in project effects Durability, via their protection in the post-project phase.

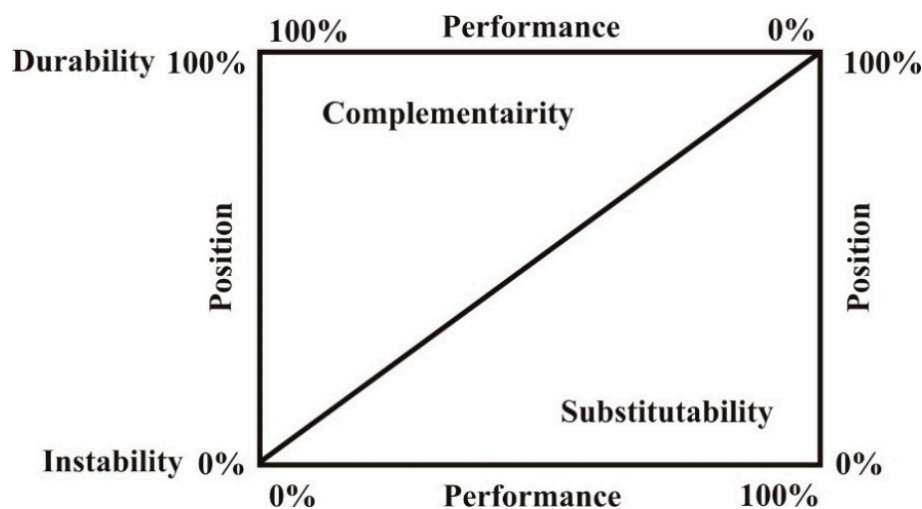


Figure 3. Complementarity vs. Substitutability principle.

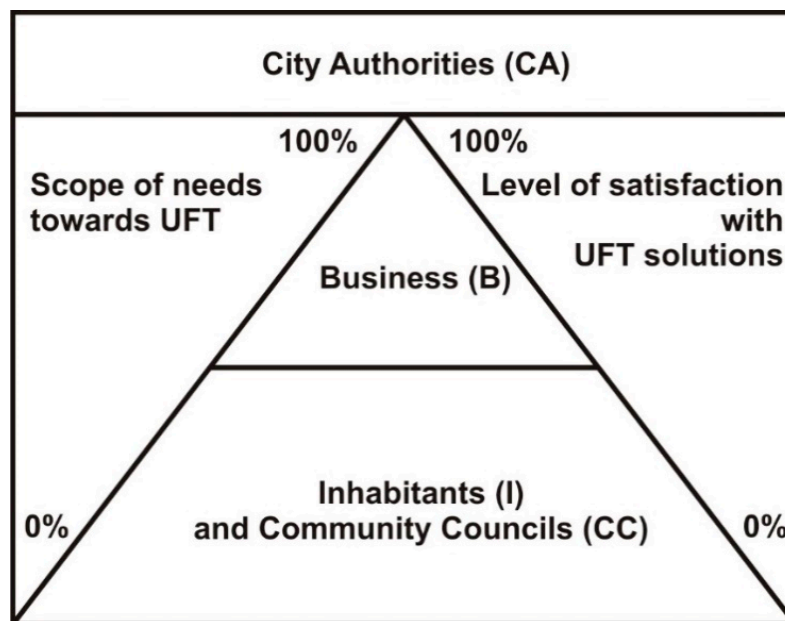
To conclude, from this perspective, “durability of a UFT project effects” should be considered as “the strategy for improving the life quality of city inhabitants within the limits determined by the permitted volumes of the major partial effects that make up the total effect of a given project”, because only this approach represents the synergistic perspective. Additionally, a UFT project evaluation under an FQP in terms of durability should be based on assessing the aforementioned factors by the stakeholders, i.e., the city authorities, inhabitants, and representatives of the businesses operating in the area of interest of the FQP.

### 3. The “Pyramid of Stakeholders” Survey

One of the key issues in FQP functioning is appropriate selection of stakeholders who will be cooperating to initiate effective measures in the area of sustainable development of urban freight transport. The stakeholders are grouped in accordance with various criteria. The classical breakdown suggested by E. Taniguchi includes shippers, freight carriers, residents, and city administrators [44]. Under the CityMove and CityLog projects, an additional category was proposed—truck and vehicle manufacturers [45]. However, in order to evaluate FQP functioning, the matter of key importance is focusing on the goals which the individual stakeholder groups want to achieve [1,46,47]. Taking into account the expectations and objectives of the UFT stakeholder groups, following [30], two major areas of interest should be emphasized: public sphere and private sphere. Both are directly connected but their major aims and point of views are different. In this context, as proposed in [3], it is necessary to emphasise three points of reference: private interest, public interest, and inhabitants’ expectations. Accordingly, in view of the proposed methodology, it is reasonable to break down the stakeholders into groups that represent the three points of reference: “Inhabitants and Community Councils” to represent the residents’ interests, “Business” to represent the private interest, and “City Authorities” to represent the public interest. It should be stressed that the stakeholder group that represents Business covers any and all entities engaged in urban freight transport functioning, i.e., carriers, commercial entities, production plants, HoReCa sector, etc.

In contemporary cities, there are three key groups of UFT stakeholders making up the so-called “Pyramid of Stakeholders” (Figure 4). The first group includes Inhabitants (I) who represent specific consumer needs with regard to goods and services—the demand side—but also represent a specific level of maturity in terms of accepting the adopted principles of sustainable development. The second group is Business (B) which is the market response to the inhabitants’ demand by offering the supply

of specific goods and services. Finally, the third group is City Authorities (CA) that implement the specific municipal strategy by, *inter alia*, the logistic policy (e.g., shaping the urban logistic infrastructure) or implementing initiatives such as “Smart City” (e.g., introducing modern logistic solutions), while seeing to a stable and economically reasonable balance between the reported needs and the corresponding supply.



**Figure 4.** The pyramid of stakeholders.

It turns out, therefore, that the scope of needs in relation to UFT projects is the resultant of the needs of the Inhabitants (I) and Business (B). The problem, however, is to identify any “discrepancies (gaps)” and to assign them appropriate weights.

In order to find out the FQP stakeholders’ opinions, in the period from January to March 2018 the Authors carried out a survey based on a questionnaire made up of 28 questions. Three questionnaires were applied, which included mainly closed-ended and semi-open questions and one additional open question, for each of the three studied groups of stakeholders. The research process was based on the direct interview method. The questions were addressed to all the Community Councils existing within the central part of the city of Szczecin, and to three departments of the Municipal Office of Szczecin, which were involved in the FQP functioning in Szczecin. In the case of Inhabitants and Business groups, the survey was carried out on a random sample. The survey involved 215 representatives (including 105 women and 110 men) representing Inhabitants (I) and 10 organisational units of Community Councils (CC) who represent the first group of Stakeholders, 150 entities from the second group being Business (B), and three organisational units representing the third group, i.e., City Authorities (CA). The structure of the aforementioned groups of respondents is presented in Figure 5.

It should be stressed that in view of the specific nature of the research, it was not reasonable to single out any individual groups of stakeholders from within the Business category. The analysis presented further on shows the aggregated values of the results obtained for the subgroups.

The results of the survey, presented and discussed further on in this article, were focused on three areas, i.e., evaluation of the quality of living in the city, managing the information on handled projects, and evaluation of durability (described in terms of fading out of effects) of completed projects (Figure 6).

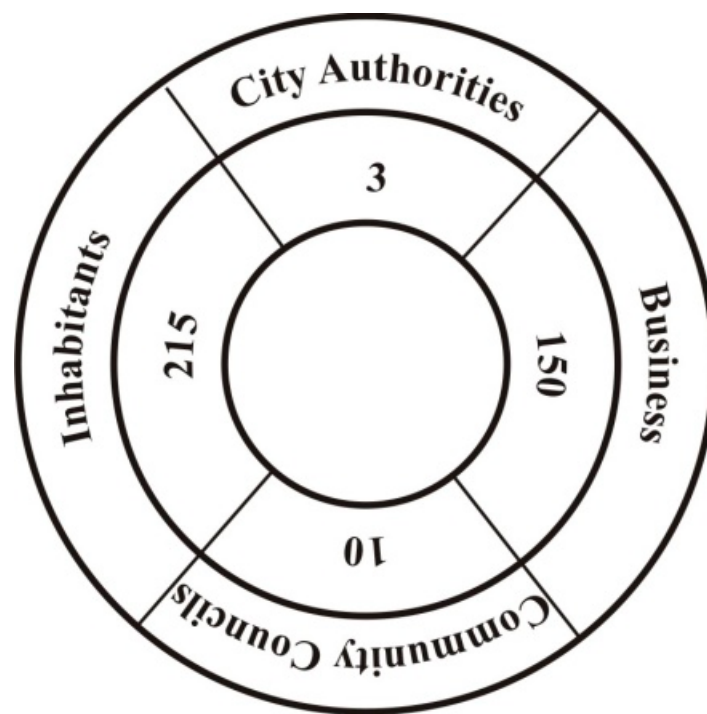


Figure 5. The structure of respondents.

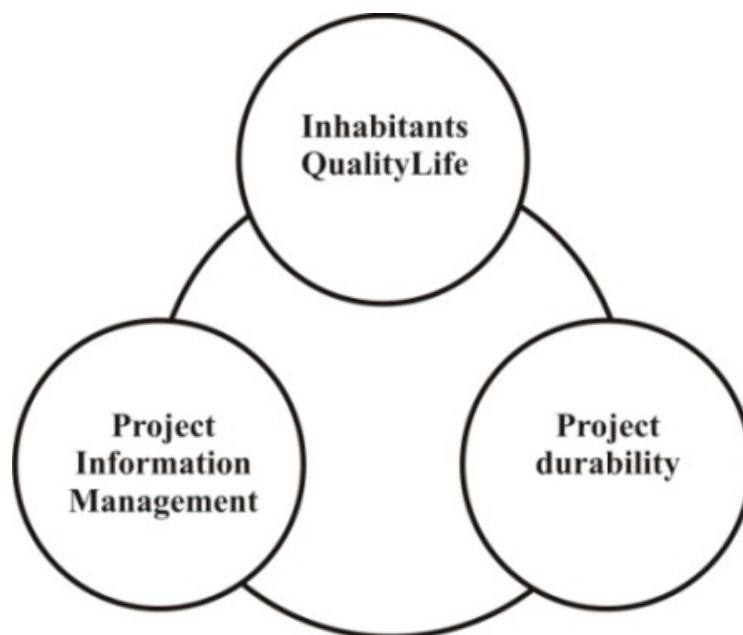
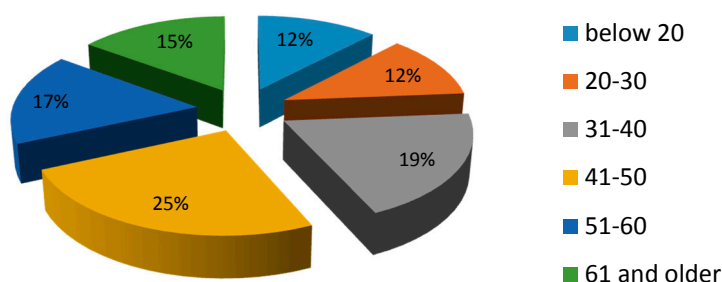


Figure 6. Three focuses of the analysis and survey results assessment.

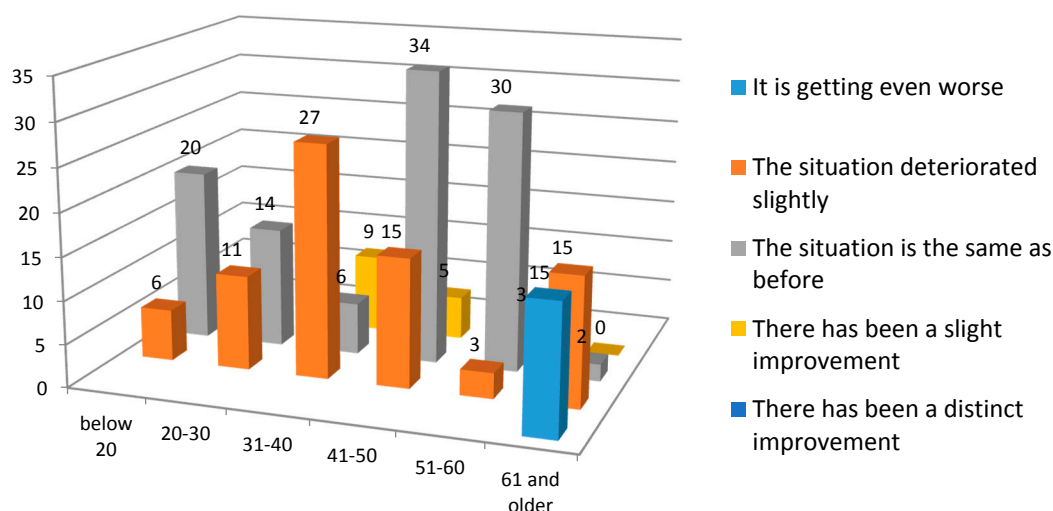
Taking up the analysis of the survey results it should be noted that the respondent group from the first group of stakeholders was dominated by middle-aged people (54% of them fell within the range from 41 to 50 years of age, whereas 42% of them were from 31 to 40 years old). The full age structure is presented in Figure 7.





**Figure 7.** The age structure of the respondents from the “Inhabitants” group.

Analysing the responses concerning the first area, i.e., the answers to the question regarding the Inhabitants’ (I) perception of quality of life in the city over the past five years (Figure 8), explicit scepticism was shown by the inhabitants aged 31–40 years (15 per cent), 41–50 years (8 per cent), and the seniors, i.e., people aged over 61 (8 per cent), who pointed out that the situation was worse.

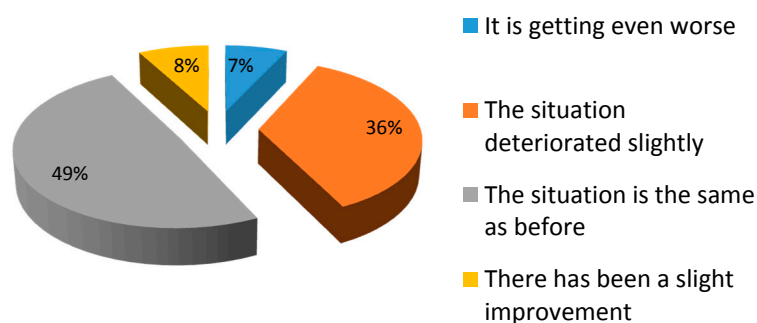


**Figure 8.** Quality of life in the city perceived by the Inhabitants (I), broken down into age groups.

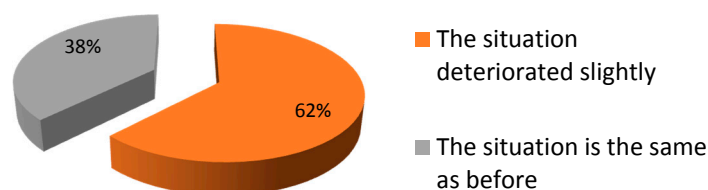
Summing up the city inhabitants’ perception of quality of life in the city (Figure 9), it turned out that seven per cent of them thought it was worse, 36 per cent thought it deteriorated slightly, and 49 per cent did not notice any changes in the five-year perspective. Only eight per cent of the respondents were of the opinion that there was a slight improvement.

Much more sceptical opinions were expressed by the Community Councils: as many as 62 per cent asserted that the situation deteriorated slightly, whereas 38 per cent did not perceive any positive changes and thought it was the same as before (Figure 10).

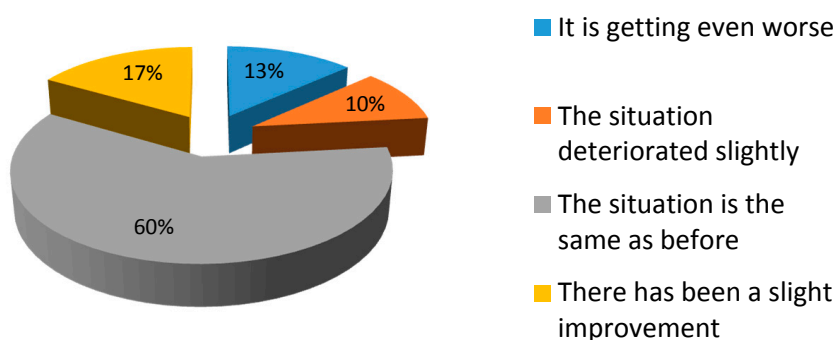
The Business (B) group representatives, in turn, stressed that any positive changes were imperceptible (60 per cent of the respondents), while the others thought that the situation deteriorated slightly (10 per cent) or it was getting even worse (13 per cent). An indiscernible improvement was observed by merely 17 per cent of the respondents (Figure 11).



**Figure 9.** Quality of life in the city perceived by the Inhabitants (I)—the synthesis.



**Figure 10.** Quality of life in the city perceived by the Community Councils (CC).



**Figure 11.** Quality of life in the city perceived by the Business (B).

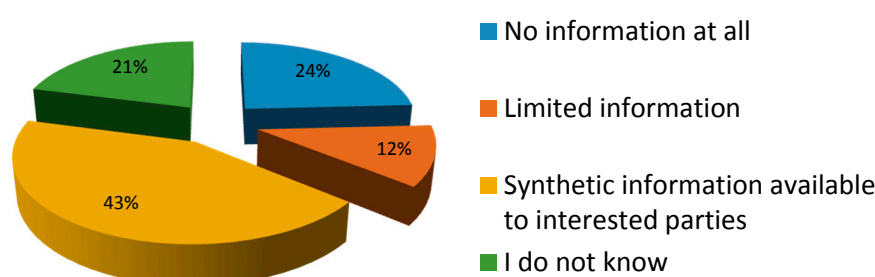
Summing up, there is a discernible gap between the perception of the situation by the City Authorities (CA). Namely, 100 per cent of CA representatives asserted that the situation improved slightly ( $\nearrow$ ), while among the representatives of the Inhabitants (I) and the Business (B), no-one felt an improvement, and only 49 and 60 per cent of them, respectively, thought that the situation was unchanged ( $\rightarrow$ ), whereas 36 and 10 per cent thought it deteriorated slightly ( $\searrow$ ), while 7 and 13 per cent respectively expressed an opinion that it was getting even worse ( $\downarrow$ ). The aggregated opinions are presented in Table 1.

Analysing the second area, i.e., the answers to the question regarding the perception of the information policy by the City Authorities (CA), i.e., the communications on commencing, continuing or completing projects taken up in the area of deliveries of goods in the city of Szczecin, which were adopted in order to contribute to increasing the perception of increased quality of life by the Inhabitants (I) of Szczecin over the past five years (Figure 12), it turned out that nearly one quarter of the respondents (24 per cent) thought that there was no information at all, 12 per cent assessed that the information was limited, and nearly one half (43 per cent) reckoned that communications were available only to interested parties.

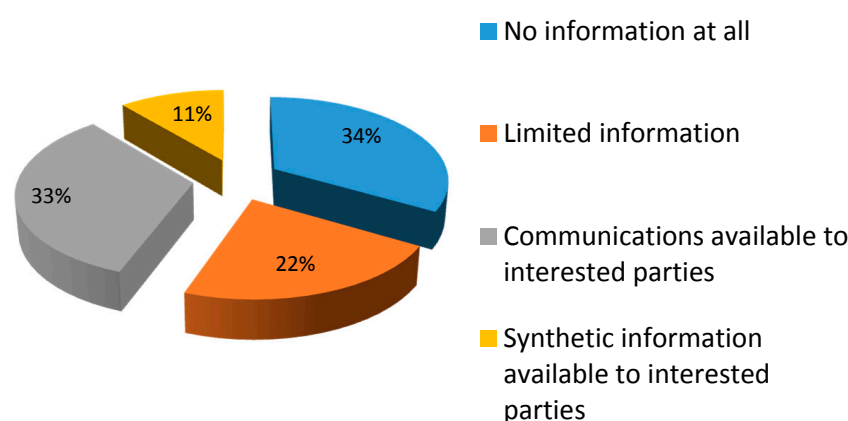
**Table 1.** Quality of life in the city perceived by the stakeholders—the synthesis [%].

City Authorities (CA)					
100				100	
		↗			
		Inhabitants (I)		Business (B)	
92	49	→		←	60
	36	↘		↙	10
	7	↓		↓	13
				83	

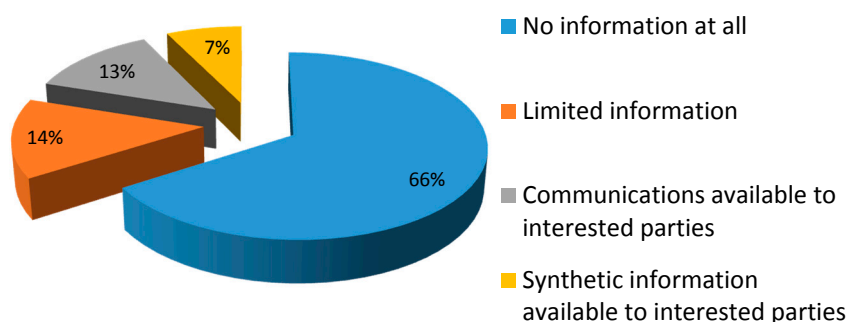
Legend: → The situation was unchanged; ↘ The situation has deteriorated slightly; ↓ The situation was getting even worse.

**Figure 12.** The evaluation of the City Authorities' (CA) communications on commencing, continuing or completing projects taken up in the area of deliveries of goods in the city of Szczecin—the opinions of the Inhabitants (I).

Similar opinions were voiced by the respondents from the Community Councils (CC), as 34 per cent agreed that there was a complete lack of information, and 22 per cent thought the adopted system of providing information was limited. Similarly, they also indicated that communications or their synthetic forms were available only to interested parties (33 and 11 per cent, respectively). The structure of the opinions is presented in Figure 13.

**Figure 13.** The evaluation of the City Authorities' (CA) communications on commencing, continuing or completing projects taken up in the area of deliveries of goods in the city of Szczecin—the opinion of the Community Councils (CC).

As for the opinions of the Business (B), pursuant to Figure 14 they are even more critical when it comes to evaluation of the information policy run by the City Authorities (CA). As many as 66 per cent of the respondents believed that such a policy did not exist, and only 14 per cent of them indicated that it was there, though they found it very limited. Thirteen and 7 per cent of the surveyed entrepreneurs, respectively, were sure that communications and/or synthetic information were available.



**Figure 14.** The evaluation of the City Authorities' (CA) communications on commencing, continuing or completing projects taken up in the area of deliveries of goods in the city of Szczecin—the opinion of the Business (B).

Regrettably, this perception of the Inhabitants (I), Community Councils (CC) and Business (B) is confirmed by the responses obtained from the City Authorities (CA) admitting that they supplied information to a limited extent (33 per cent) or none at all (33 per cent) to the Inhabitants (I), Community Councils (CC) and Business (B) with regard to commencing, continuing or completing projects taken up in the area of deliveries of goods in the city of Szczecin, and only synthetic information was available to interested parties. Therefore, summing up, 33 per cent of the City Authorities' (CA) representatives asserted that they did not inform (↓) the Inhabitants (I) at all, and other 33 per cent did it only to a limited extent (↘). Lack of information (↓) was found by as many as 60 per cent of the Business (B) representatives and 30 per cent of the Inhabitants (I), and limited information—by 14 per cent of the Business (B) and 12 per cent of the Inhabitants (I), respectively. A much bigger percentage of the Inhabitants (I)—as many as 30 per cent—found that the communication was limited (→), whereas in the case of the Business (B) this view was shared by as few as 13 per cent, but the latter saw the possibility of accessing the communications (↗) (though for seven per cent of the respondents—B). The synthesised opinions are presented in Table 2, and the data shown in it confirm the need to prioritise the information policy with regard to UFT projects.

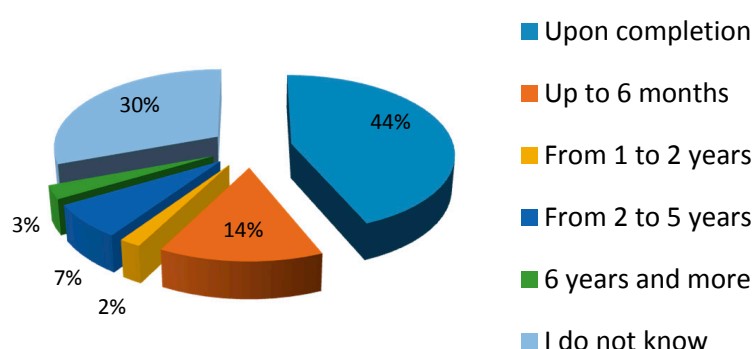
**Table 2.** Synthesised evaluation of the City Authorities' information policy by the stakeholders [%].

		City Authorities (CA)			
33		↓	↘	33	
		Inhabitants (I)	Business (B)		
72	0	↗	↖	7	100
	30	→	←	13	
	12	↘	↙	14	
	30	↓	↓	66	

Legend: ↗ Possibility of accessing the information; → Communication was limited; ↘ Limited scope of information; ↓ No communication.

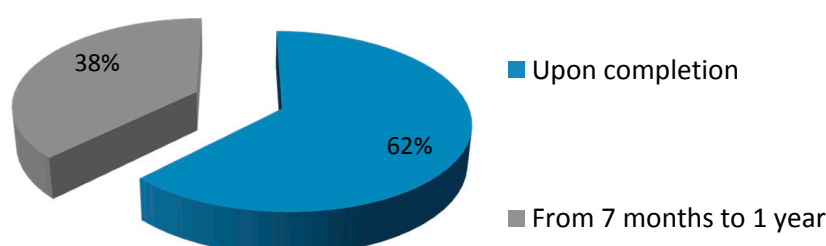
Finally, analysing the third aspect, the representatives of the City Authorities (CA) estimated that effects of each project are preserved for a period of up to one year, as after a period of one to two years, nobody will remember any initiatives taken up in the city in order to improve the organisation of goods deliveries. However, according to the responses of the Inhabitants (I), as many as 44 per cent of them thought that the effects would fade away as soon as the project is completed, whereas 14 per cent of them believed that would happen within half a year at the latest. So, the optimistic view of the City Authorities (CA) was shared by merely two per cent of the surveyed Inhabitants (I). Regrettably, almost one third of them (30 per cent) were unable to provide any time estimates for the project durability. Nevertheless, there is some potential for trust among the Inhabitants (I), as seven per cent of them believed the time horizon from two to five years should be regarded as the basis for the

decision-makers' purposefulness and far-sightedness in relation to any projects to be implemented, and three per cent of them thought the time horizon should exceed six years (Figure 15).



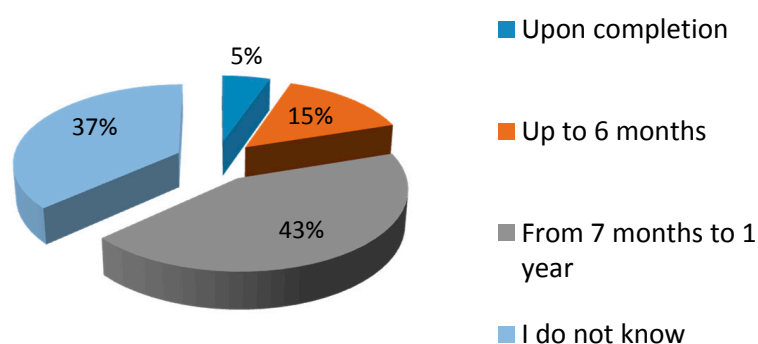
**Figure 15.** The estimated time of fading away of effects of initiatives implemented in the city in order to improve the organisation of goods deliveries—I.

However, the Community Councils (CC) represented definitely more pessimistic views, as 62 per cent of them asserted that the project “dies” as soon as it is completed, while 38 per cent estimated the survivability of its effects for the period from seven months to one year (Figure 16).



**Figure 16.** The estimated time of fading away of effects of initiatives implemented in the city in order to improve the organisation of goods deliveries—(CC).

Similarly, 43 per cent of the Business (B) representatives estimated the project longevity to be from seven months to one year, but only five per cent of this group thought the effects would disappear right after the project completion. According to 15 per cent of them, the effects would be maintained for up to six months, but unfortunately 37 per cent of respondents from this group were unable to specify even approximate time horizons (Figure 17).



**Figure 17.** The estimated time of fading away of effects of initiatives implemented in the city in order to improve the organisation of goods deliveries—(B).



To synthesise the results presented in Table 3: the Inhabitants (I) were more reluctant to estimate the time of fading away UFT project effects compared to the representatives of the Community Councils (CC) and the Business (B), whereas the most optimistic views were shared by the City Authorities (CA).

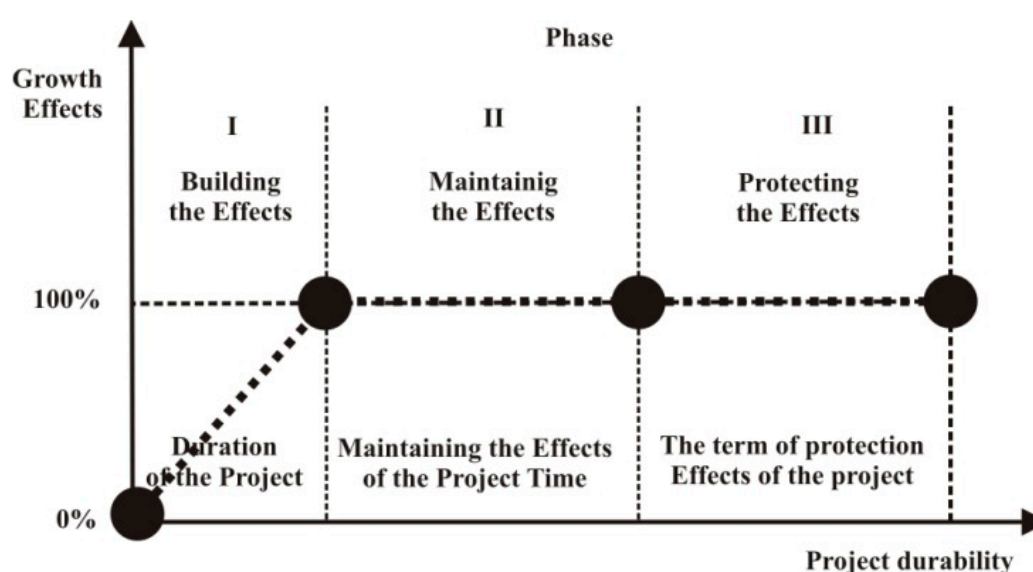
**Table 3.** Synthesised estimated time of fading away of effects of initiatives implemented in the city in order to improve the organisation of goods deliveries [%].

	Upon Completion	Up to 6 Months	Up to 1 Year	Up to 2 Years	Over 6 Years
Inhabitants (I)	44	14	-	2	3
Community Councils (CC)	62	-	38	-	-
Business (B)	5	15	43	-	-
City Authorities (CA)	-	-	-	66	-
UFT project effects durability	● ————— ● ————— ● ————— ● —————>				

It is easy to notice the “ladder of optimism” which indicate that Inhabitants evaluate the project durability as maximum one year, whereas Community Councils, and first and foremost Business, tend to extend the period up to two years. Definitely more optimistic attitude was shown by City Authorities that assumed the effects of each UFT project would be sustained for more than two years.

#### 4. Conclusions and Recommendations

The analysis of the relevant academic literature as well as the empirical studies have proved that, first, the issue of key importance is to correctly define the dimensions of “UFT project durability”, and second, for the purposes of a comprehensive analysis it is necessary to focus not only on phases I and II but also on phase III of the analysis, i.e., “protection of effects” of UFT projects (Figure 18). This is because it turned out that the traditional approach was based on “building the effects” in the course of the project implementation (phase I) and then “maintaining” them upon the project completion (phase II). A success of a project is when the whole structure of effects has been built and then the whole of it (100%) has been preserved over a specified period of time. But the “durability of project effects” and their profitability to all the stakeholders can only be attained when the structure and the minimum values of the effects are protected for the longest time possible.



**Figure 18.** The critical points of the three project phases.

Based on this approach, it becomes particularly important to exceed the “enchanted” boundary of one year after the project completion, which is visible in the results of the survey. Whereas the Inhabitants (I) were mostly (83.2 per cent) convinced that UFT projects are forgotten after 1 year, (while 20.13 per cent believed it was as early as after six months), the Business (B) was slightly more optimistic: even though 68 per cent of its representatives asserted that it was one year at the most, merely 0.22 per cent of them pointed out to the period of six months, which could be considered a slightly optimistic view.

Additionally, there is a discernible asymmetry between the perspective of the decision-makers (the City Authorities) and the beneficiaries (the Inhabitants, Community Councils and Business) with regard to the criteria of UFT projects durability. It is possible to notice certain optimism ( $\nearrow$ ) on the side of the decision-makers, and moderate pessimism ( $\searrow$ ) on the side of the stakeholders, which is synthesised in Table 4.

**Table 4.** Asymmetry between the perspective of the decision-makers (the City Authorities) and the beneficiaries (the Inhabitants, Community Councils and Business).

Durability Criterion	City Authorities	Inhabitants	Community Councils	Business
Usefulness	$\nearrow$	$\rightarrow/\searrow$	$\rightarrow$	$\rightarrow/\searrow$
Effectiveness	$\searrow$	$\searrow$	$\searrow$	$\searrow$
Efficiency	$\nearrow$	$\rightarrow/\searrow$	$\searrow$	$\rightarrow/\searrow$

Summing up,

- There is a distinct “gap” in the perception of the quality of life in the city as well as the durability of effects of UFT projects taken up so far in order to optimise goods deliveries in the city between the City Authorities (CA) and the Inhabitants (I) and their representatives, i.e., the Community Councils (CC), and the Business (B);
- To level it off, it is necessary to take coordinated and integrated measures, mainly in the area of information and communication, so that the knowledge on any completed and pending projects—and its effects—is easily accessible to all the Stakeholders;
- There is a considerable though so far neglected “trust potential” especially among the Inhabitants (I) regarding the purposefulness of initiatives aimed at improving the goods deliveries in the city, taken up by the City Authorities (CA);
- The opinions formulated by the Inhabitants (I) and Business (B) on improving the quality of life in the city undoubtedly constitute an objective verification of the practical usefulness of the initiatives (projects) taken up by the City Authorities (CA) with regard to urban freight transport (UFT) optimisation.

**Author Contributions:** K.K. contributed to the data collection process as well as the final edition of the paper. She is the author of Sections 1, 2 and 4. M.J. was responsible for assumptions for the analysis as well as the final edition of the paper. He is the author of Sections 2–4.

**Funding:** This paper has been founded under grant No 1/S/IZT/2018 “Analysis of logistic determinants of sustainable urban development” financed with a subsidy from the Ministry of Science and Higher Education for statutory activities.

**Acknowledgments:** This research outcome has been achieved under grant No 1/S/IZT/2018 “Analysis of logistic determinants of sustainable urban development” financed with a subsidy from the Ministry of Science and Higher Education for statutory activities.

**Conflicts of Interest:** The authors declare no conflict of interest.

## Abbreviations

UFT Urban Freight Transport  
FQP Freight Quality Partnership

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