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## Measure Evaluation Results

### GDA 4.2 Mobility Management – Education

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Date: February 2013



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## Executive Summary

The measure “Mobility Management – Education” aimed to encourage more sustainable transport behaviour by schoolchildren by two combined approaches. The first one was related to smaller educational actions and games on sustainable transport for pupils at their schools. The second one, which was the most important for the measure realization, was the pilot implementation of so-called ‘Walking Buses’ (WB). The WB is a group of children walking to school on foot with escort of one parent. Through this measure, it is expected to reduce the car use for school-home trips. This measure enabled the police and Gdansk people associated with education to collect information about innovative approaches related to sustainable transport promotion.

The measure comprised four main stages:

### **Stage 1: Preparation and distribution of promotional materials and gadgets for pupils**

(September 2011 - June 2012) A wide variety of gadgets associated with WB implementation for partner schools, who agreed to take part in the measure during a meeting with the Gdansk educational department, were prepared. Among those were pedometers, personal weather stations, high-visibility accessories, keyrings, T-shirts with logos, fleece jackets, rainproof jackets, mascots with the WB logo, baseball caps etc.

**Stage 2: Media actions** (September 2011) Two main actions were organised to raise childrens' and parents' awareness to adopt safe behaviours on the way to the school and to promote the WB initiative: Newspaper articles were published and 1000 educational brochures were distributed.

**Stage 3: Educational activities** (September 2011) 300 children from primary schools in Gdansk took part in art competition "Wise Transport - Better Life", organized by the Faculty Development Program of the Municipality. Besides workshops on mobility with a focus on active promotion of cycling took place with 170 children.

**Stage 4: Preparation for the implementation of the Walking Bus at schools** (June 2012).

The preparation of WB as a time-consuming process comprised public consultations through meetings at six schools to encourage parents to take part, the purchase of equipment the pilot action WB and finally, the Walking Week campaign realised at the same time as the last surveys. WB took place as a pilot action with 50 pupils at three schools between March and June 2012 for a period of about 3.5 months.

The **evaluation approach** was mainly focused on the WB pilot programme. In the participating six school environments, on-site questionnaire surveys were conducted among 1-3 class pupils, their parents and teachers, concerning their transport behaviours and their perceived opportunities and threats for WB initiative. The evaluation strategy of this measure sought to focus on a number of indicators from the area of Society (awareness and acceptance), which were measured by ex-ante and ex post surveys. Furthermore the survey conducted also allowed statements about the whole measure's activities.

The implementation of the WB initiative required a long process of persuading the schools and parents to take part in this pilot.

In total, the ex-ante survey comprised more than 700 and the ex-post survey more than 1000 completed questionnaires. To evaluate the results of this measure, MIMOSA City Evaluation Team compared ex-ante data (baseline) with the Walking Bus user group and with the rest of children and parents who did not take part in this campaign at the participating schools.

**Key-results**, extracted from the evaluation between January 2012 and June 2012 were:

- The reduction of school-home trips by cars was over 20% decrease of children driven to school and about 12% decrease of children driven from school five times a week.
- More than 95% parents who took part in WB considered this a good idea and were satisfied with their children's participation. This result means that this group of parents will be ready to recommend and popularise Walking Bus.
- The increase of teachers ready to support Walking Buses initiative was +3%. The baseline data showed that more than 70% of teachers believe that WB is a good or very good idea.

The evaluation of the measure shows that the three main barriers of walking to school from the view of the parents were:

- danger on the roads,
- perceived public danger and
- excessively heavy backpack of the pupils.

These main causes have been indicated by all the groups (ex-ante, ex-post-WB group, ex-ante no WB group). The same respondent groups thought children should not use the public transport on their way to school because the children were too young, public space or the roads in particular were dangerous.

The results showed positive outcomes on the city scale. This report shows some very good results, but the factor which restricts the data is weather and climate conditions, because the ex-post data were collected during winter and the ex-ante data during spring season. To improve the quality of results, it would have been better to organise surveys in the same period of the year. Therefore the favourable appearance of the impact should be interpreted with caution, considering the short interval between the two measurements (ex-post and ex-ante). The reduced use of the car when travelling to work in favour of sustainable modalities may have also partly resulted from the extensive road-works in many parts of the city which took place during the studies.

The **main barriers** which hampered the measure's process were the WB conditions in Gdansk and the institutional procedures. The Gdansk conurbation, due to its stage of development and urban character and relatively close distances to primary schools, does not offer favourable conditions for the implementation of the WB initiative. Furthermore the organization of any event and action takes a lot of time due to long official procedures in the Municipality. The support of people from Gdansk Education Department helped to contact school directors and with realization of WB and Walking Week which constituted an **important driver** for the measure.

The WB was implemented as a pilot action only within MIMOSA. However, the schools which took part in WB agreed to realise the initiative during the next school year. Moreover, further two schools have applied for accession to WB. In Gdansk, it was very difficult to organise WB. It proved to be essential to have the approval of the cities Department of Education. The survey results recommended changing of one element in the implementation of WB. According to the parents, it would be more convenient and allow more free time at home, if one parent picked up the children one by one (not from the "walking bus stops") – this would work especially in cities and small districts.

## A Introduction

### A1 Objectives

The measure objectives are:

#### High level objectives:

- To increase modal split in favour of sustainable travel modes.

#### Strategic level objective:

- Mobility Management, Marketing, Communication and Education

#### Specific Measure objectives:

- **Objective 1** To encourage the use of sustainable transport by schoolchildren through the use of educational programs and games in schools including walking-buses activities,
- **Objective 2** To achieve a reduction of **10%** in car use on school home trips,
- **Objective 3** More positive attitudes towards in the WB in the test sites for the total sample size (**10%** attitude shift).

### A2 Description

In its general objective, measure 4.2 is regarding the wide social education which is an important component of many current actions, taken in frames of other Measures (5.1, 4.1, 4.3, 5.2) to achieve a higher level of awareness of sustainable transport issues, health, safety, carbon footprint, congestion and pollution among young people and their parents. The measure "Mobility Management – Education" aimed to encourage more sustainable transport behaviour by schoolchildren by two approaches. The first one was related to smaller educational actions and games on sustainable transport for pupils at their schools. The second one, which was the most important for the measure realization, was the implementation of so-called 'Walking Buses' (WB). The WB is a group of children walking to school on foot with parent escort. Through this measure, it is expected to reduce the car use for school-home trips.

CIVITAS MIMOSA team carried out a few occasional educational events, referred to both adults and children. Preparing the full process of the implementation 4.2 along with educational materials for recipients from school environments exceeded the maximum phase of preliminary consultation, diagnosis and organizational arrangements. The educational action associated with the initiative Walking Bus was implemented in spring 2012. It was preceded by a promotional campaign in the local media at the beginning of the school year (September 2011). In spring 2012 there were a series of educational meetings held to dedicate to children and parents, in order to present the benefits from using PT and the issues associated with the environmental protection. The main activities performed within measure 4.2 were:

1. Preparing implementing the initiative "Walking Buses" by an informational campaign about Walking Buses in local media (radio and articles in the press).

2. Realization of educational actions, such as: lesson for school children (on safety and security, on sustainable transport and cycling), painting competitions, media action “Children Safe on Road”

3. Realization 2 evaluation studies - before and after implementing educational meetings with parents and children in 6 schools, which declared to participate in the project.

## B Measure Implementation

### B1 Innovative Aspects

The innovative aspects of the measure were:

- **Innovative aspect 1 – New conceptual approach** - ensuring the influence on processes of the change of modal split through wide social education and the forming of transport behaviours in the school environment, is a new approach in the transportation problem solving in Poland. Noticing the weight of the social aspect in the development of the public transport, that means forming the attitudes, the awareness of the joint responsibility and the preference of PT users - is totally ahead of its time in Gdańsk and the country.
- **Innovative aspect 2 – New organizational arrangements or relationships** – Implementing the initiative "Walking Buses" requires a permanent cooperation of many key partners: the Department of Education of Gdańsk, Voivodeship Police (regional/land Police) , PR specialists, experts in the field of education, local media, the management of schools, voluntary engagement of parents and children. Breaking barriers and gaining motivations for making an attempt to change the current protective and transport habits, in conditions of the large urban agglomeration, can easily raise opposition of parents despite the motivation and commitment of the school.

### B2 Research and Technology Development

Until now, no systematic study has been conducted in Gdańsk that would investigate the residents' awareness level, resulting from widespread social education leading to wiser and more sustainable transport mode choices. There is a shortage of such studies particularly in the target group of Measure 4.2 (school environments). In the time before MIMOSA schools organized only held classes of traffic education in which children learn how to deal with traffic rules. Sustainable transport mainly related to cycling has been promoted in schools, especially for the older than WB group children. At present, educational activities related to transport issues are carried out in the form of actions in different schools. However, we do not know how these actions contribute to changes in transport habits and behaviours. Studies in the scope of modal split for Gdańsk dating from 2005 and 2009 suggest that, since 2005, the modal split has been constantly dominated by private transport. We can make an assumption that the modal split constitutes a certain indicator of the transport culture in Gdańsk, and this modal split suggests that the share of private transport in the daily journeys of the residents of Gdańsk has not been reduced. It means that measure 4.2 has had little effect on the general behaviour of residents.

**FIGURE B2.1: Mobility of citizens of Gdańsk [modal split] - proxy indicator% of the daily journeys for 2009.**

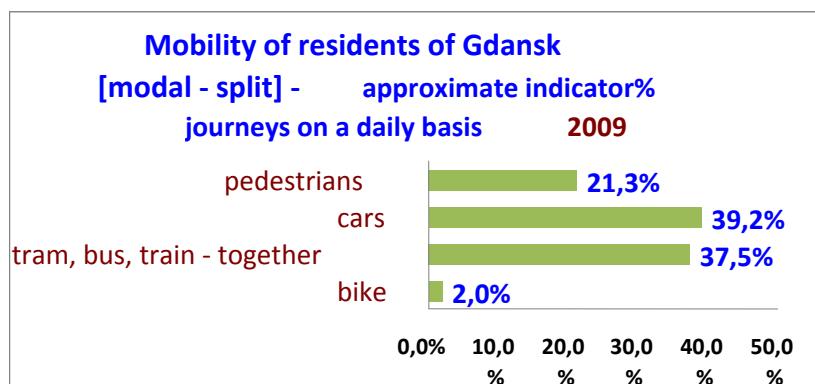


FIGURE B2.1 shows the modal split in Gdańsk. A change of this trend should be the subject of programs and strategies based on cooperation of many public and community partners. The CIVITAS MIMOSA project creates the opportunity to initiate a social change, but the project does not form a part of any local mechanisms on the local policy level that would promote introduction of changes. This is a difficult beginning of this long-term process towards an increased acceptance of sustainable options in everyday journeys.

### B3 Situation before CIVITAS

The development of the TriCity/Gdańsk agglomeration and the rapid pace of an improvement in the standard of living (civilization/technological), results in the appearance of new problems and the increase in their scale in the public sphere, among others associated with transport. Cultural and civilization patterns, consumerism, cause dependence on the private transport option - car. Urban lifestyle is conditioning the need of undertaking the temporarily effective solutions concerning the way of moving around the city. But lack of afterthought and detailed research on inconvenience of these solutions in the scale of the individual (health aspect) or in the scale of group/ the community (the time and the availability of reaching travel destinations) has failed to become accepted. So far, before the implementation of the CIVITAS MIMOSA project, the issues associated with the public transport weren't an object of public campaigns for residents of Gdańsk. Admittedly for many years, some actions were carried out being supposed to increase the social awareness such as "Car-free day" which promotes using other modes than the own car, or the enterprises associated with the promotion of the bicycle. However these events had action character and were not a subject of strategic decisions made in long-term time horizons, based on made methodological assumptions. So neither wide education, profiled to all sorts of target groups, nor testing the tools of the influence, were not until now in a mainstream of the social policy or a transport development strategy of the City of Gdańsk. Department of Traffic Police in Gdańsk is the main organizer of educational communication, addressed to kindergartens and schools in the city. Most parents didn't know that good transport behaviours are important for pupils. Both parents and children thought that use of the car on the way to school is normal and good practice. We observed lack of action related with promotion of the sustainable options.

## B4 Actual Implementation of the Measure

The measure was implemented in the following stages:

### Stage 1: Preparation and distribution of promotional materials and gadgets for pupils

(September 2011 - June 2012) - preparation of a wide variety of gadgets associated with WB implementation for schools participating in Measure 4.2, such as pedometers, personal weather stations, high-visibility accessories, keyrings, T-shirts with logos, fleece jackets, rainproof jackets, mascots with the Walking Bus logo, baseball caps etc.

**Stage 2: Media actions** (September 2011) on the local scale were conducted and concerned childrens safe behaviour on the way to their schools and the promotion of the initiative Walking Bus.

### Stage 3: Educational activities (September 2011)

a/ September 2011 - Action “Children safe on road”, accompanied by the publication of the article promotes the idea of Walking Bus in the most popular newspaper "Dziennik Bałtycki" and production of a special educational brochure. (edition of 1000 items) attached to the newspaper as the attractive guide for children and parents titled "safe child on the road".

The publication was created with the thought about parents and pre-school and school children, considering other users of the movement - drivers, cyclists and pedestrians. There was also valuable information concerning the safety of road users, in the visual form attractive for the child.

**FIGURE B3.1: First site of the brochure “Children safe on the road” produced together with “Dziennik Bałtycki” daily newspaper and PORD.**



a/ in 21 September 2011 three educational actions in Gdańsk primary schools took place with 170 children in total: a workshop on mobility with particular emphasis on active promotion of cycling among children and distribution of promotional materials and promotion of the MIMOSA project.

b/ school children participation in art competitions in 2010, 300 children from primary schools in Gdańsk took part in art competition "Wise Transport - Better Life", organized by

the Faculty Development Program of the Municipal Office in Gdansk. In 2011, as in the previous year an art contest, was announced addressed to a similar target group, entitled "Transportation of the future". Its object was to prepare a draft of a sign banning vandalism. The decision and the issue of prize-winning entries took place during the Mobility Week 2011.

**c/ May - June 2012 - Organization of a competition with prizes**, aimed at Gdańsk primary school teachers, involving the development of a Bike Trip Itinerary. Prizes for schools were related to education in particular and contributed to the promotion of cycling as a healthy leisure activity. The organizers include Municipal Road Authority in conjunction with Centre for Driver Testing and Training in Gdańsk and CIVITAS MIMOSA. The aim of the competition was to teach the participants to cycle and improve their cycling skills, as well as familiarize the youngest pupils (classes 1 to 4) with traffic and road safety rules. The competition was designed to encourage participants to take up cycling as healthy leisure activity.

#### **4. Preparation for implementing "Walking Bus" at schools (June 2012)**

**FIGURE B3.2: (1 and 3 - Walking Bus, 2 - educational action in Walking Bus classroom)**



- Six schools were appointed for pilot implementation of "Walking Buses". At the community primary school No. 81 in district Gdansk- Osowa, parents' consent was got for implementing the initiative "Walking Bus". This housing estate is with the majority of detached houses and with the network of inside community roads.
- An outline on the evaluation of the study has been elaborated for schools, in which there was recognized readiness of school environment for implementing the initiative "walking minibus" only through educational meetings.
- A ceremony concluding the Walking Bus action in the 6 primary schools where the initiative was implemented. In the last week of the school year a 'walking to school' action was organized. The children were promised to receive pedometers as a reward for participation in the action. In each school, the classes where the pupils covered the greatest distance in steps on their way to school received personal weather stations for weather observations. A total of 1000 pedometers were given out.

### **B5 Inter-Relationships with Other Measures**

The measure was related to other measures as follows:

**Measure GDA 5.1 Safety and security – Anti vandalism** – The main aim is the promotion of use of Public Transport by overcoming the barriers imposed by actual risks in the means

of public transport and resulting from travellers' sense of security. Improving the safety stimulates the growth of demand for transport services. Competition for primary school children "Stop vandalism" - is a form of education and promotion of the PT, led to the rise awareness related with good behaviours of the youngest inhabitants of Gdansk.

**Measure GDA 4.4 Mobility Management – Advertising and Promotion – Tools** to influence through broad public education, are similar in both Measures (4.4 and 4.2), concentrating on promoting sustainable transport options, especially by the many actions and the campaign European Mobility Week. Social education of different groups of customers, favoured the implementation of a new urban culture influencing positively the change in transportation habits and affects on modal split.

**Measure GDA 4.3 Mobility Week – Actions and workshops for children organized as part of the campaign European Mobility Week,** were designed to change attitudes and transport behaviours of the inhabitants of Gdansk, which should bring long-term beneficial changes in the modal split - through a broad education.

#### **Other related events and actions:**

- on 9 June 2011 educational workshops for primary school children - for the total group of 60 pupils of primary schools in Gdansk, led by representatives of the MIMOSA team - for safety, healthy and active lifestyles, and promotion of sustainable transport options, including a bicycle. The children were instructed, how to deal with difficult situations in trams and buses, related to the manifestations of aggression and violence. During the workshop there were distributed promotional materials and gadgets (special DVD and project leaflet), and project presentation was held as well.
- 09.06.2011 - conducting lesson for school children on safety and security in bus depot.(bus hub) During this event children participated in the workshop of safety and security in Public Transport, good behaviours in PT and the cost of vandalism acts.
- September 2011\_- over one hundred pupils of the first classes took part in the inauguration of the consecutive edition of the action "*Safe road to the school*", organized by the Group of Lotos (fuel refinery company) and the Department of the road traffic of Headquarters of Provincial Police in Gdańsk. Officers taught the youngest among others how to cross lanes safely and to behave while getting into and getting out of the car. On the court by the school No. 61 in the district Przerobka, a mobile small town of the road traffic appeared (Police brought miniaturised traffic equipment), where pupils checked their abilities of the cycling, and station of games associated with the safety on the road. Also pupils from schools SP No. 29 and SP No. 59 arrived for the event. Everyone received educational sets in which among others there were graphic puzzles and fluorescent accessories as well as gadgets.
- 18.09.2011 MIMOSA Mobility Week - an annual festival organized this year on the Coal Market in Gdansk. During the event children participated in the art workshops of sustainable transport. The organizations distributed free educational materials related to the subject of public transport. In the event the winners of the art competition in schools, under the slogan "Anti Vandalism" sign were announced.

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- 12.09.2011- workshop *The Image of Public Transport*. Training on Quality in Public Transport for PT Providers, PT Management and NGOs (together 38 people) professionally associated with the area of PT. During workshop international experts pointed to the possibilities of change in public transport in Gdansk. Specialists exchanged experiences and shared the best practices to support building the image of the Gdansk PT.
  - every primary school from the Pomeranian province can win the room equipment for classes on transportation upbringing, including the modern slide projector and the board of traffic signs. With Pomeranian Centre of Road Traffic a competition for the best script of the lesson is organized on the topic “The day of the road safety”.

## C Impact Evaluation Findings

### C1 Measurement Methodology

Studies in the framework of Measure 4.2 - Walking Bus were carried out in selected primary schools on two occasions: in 2011 and in 2012. Each time, different tools were used for the three groups of respondents in a particular school environment:

- pupils with parents (2011 N=192, 2012 N=597),
- parents (2011 N=464, 2012 N=531),
- teachers (2011 N=46, 2012 N=60).

#### 1. Methodology and the implementation of studies in framework of the evaluation of measure 4.2

The evaluation team in 2011 elaborated and consulted tools (3 variants of surveys - parents, teachers and children) and planned the scheme of the research approach for the initiative "Walking Bus". Organizing and implementing at selected schools, approximately 2 actions of field researches (survey) led:

- a/ before implementing educational meetings for children and individually for parents,
- b/ examining as a result of earlier educational meetings for 2 types of recipients – parents and children.

Supplementary after the ex-post research termination, there will be conducted guided interviews with teachers /educators (IDI).

#### 2. Research areas:

##### 2.1 questionnaire survey for parents:

a/ Examining the level of approval of participants in the initiative "Walking Bus" for balanced options of the PT - in 2 target groups (parents, children) from 6 selected school environments:

- before educational meetings (pre-test),
- after holding educational meetings (post-test).

b/ Examining current transport habits and their causes as well as the readiness for their change by parents (provided with an influence of the project) for balanced options in the way of delivering children to and from the school. Approval for limiting the use of private transport,

c/ Searching the level of satisfaction concerning the PT service quality at the public transport,

d/ Examining the readiness of parents to create a "Walking Bus" for individual class teams,

e/ Measurement of the modal split in the use of PT/private transport - in taking children to school / from school (two-statement - declaration of parents).

##### 2.2 Evaluation of children from primary schools, 1-3 classes in 6 environments - survey auditorium:

- a/ evaluation of children's preferences as for the way of travelling to and coming from the school,
- b/ evaluation the attitude of children to using means of the public transport,
- c/ evaluation the relationship of children to private transport and to reduce car use,
- d/ evaluation the attitude of children to the cycling,
- e/ evaluation the of children's awareness concerning the environmental protection.

The study was conducted with the parents' support (each pupil answered the poll questions read out and then circled by the parent)

### 2.3 Evaluation of teachers of classes 1 - 3 in the primary education in 6 environments:

- a/ evaluation of the readiness of teachers to support parents in organizing duty within the framework of "Walking Bus",
- b/ evaluation of chances of success of the initiative walking minibus conducted by teachers,
- c/ evaluation of favourable factors and barriers for implementing and strengthening the initiative walking minibus conducted by teachers.

3. During project implementation, most of the questions contained in the own survey questionnaires were subjected to tests of the statistical significance of differences. Such an investigation was not feasible for all ranges of comparative studies because of the incomparability of some data. The statistical significance of differences between the mean values of answers provided was measured using the [Student's t-test](#), assuming the level of significance  $\alpha=0.05$ .

## C1.1 Impacts and Indicators

The impact measurements for Measure 4.2 are largely based on MIMOSA team's own studies. In the selected six school environments, on-site questionnaire surveys were conducted among 1-3 class pupils, their parents and teachers, concerning their transport behaviours and the opportunities and threats for the implementation of the walking-bus initiative. The measurements were made on two occasions: the first time - before the beginning of educational meetings in winter 2012 (ex-ante measurement), and the second time - at the end of the meetings, in May 2012 (ex-post measurement). The organizers of the initiative are the schools, but its actual implementation involves voluntary organizing of parents with the cooperation of form teachers of selected classes. Hence the need to measure the attitudes and opinions of three respondent groups: teachers, pupils and their parents.

We should emphasize the innovative character of the Walking Bus initiative for the inhabitants of Gdańsk. The acceptance of solutions of this type is associated with the lifestyle of individual families, including their transport behaviours/habits, as well as the attitudes of the entire school environment. On the one hand, this is about the parents' attitude to sustainable transport and environmental protection, on the other - about the day-to-day functioning of the family, protective behaviours of parents towards their children and the general level of trust (e.g. to neighbours, teachers, other residents, institutions and services responsible for security, etc.). Therefore, the selected indicators relate to two subject areas: ways of getting around the city, including the use of sustainable modalities and transport behaviours, and the

attitude to the Walking Bus initiative itself. At the same time, the selected indicators include two measurement categories — acceptance level and willingness to change one's behaviour. As a result, on the basis of the data collected, six main indicators and three sub indicators as it reflects the attitudes of three groups of respondents involved in the Walking Bus initiative: teachers, parents and children (primary school pupils).

**TABLE C1.1.1: Impact related evaluation**

Evaluation area	Evaluation category	Impact	Number and name of indicator, description	Source of data	Success quantification
Social	Acceptance	1. Acceptance level	<b>1.1.</b> Parents' acceptance level of the use of sustainable transport modalities during their children's journey to and from school <b>1.2.</b> Respondents' acceptance level for introducing the walking bus initiative <b>1.2.1.</b> teachers' acceptance level <b>1.2.2.</b> parents' acceptance level <b>1.2.3.</b> children's acceptance level <b>1.3</b> attitude towards walking-bus	MIMOSA team's own questionnaire surveys conducted in 6 selected environments. <u>Target groups:</u> - parents (ex-ante N=464; ex-post N=531) - teachers (ex-ante N=46; ex-post N=60) - children and parents (ex-ante N=192; ex-post N=597) - advantages and disadvantages (without graph)	More positive attitudes towards in the WB in the test sites for the total sample size ( <b>10%</b> attitude shift). Survey ex-ante carried out in 01.2012 Survey ex-post carried out in 06.2012.
	Awareness	2. Awareness level	<b>2.1.</b> Parents' willingness to get involved in the Walking Bus initiative <b>2.2.</b> Parents' willingness to limit driving their children to and from school <b>2.3</b> Frequency of use of the individual transport modalities	MIMOSA team's own questionnaire surveys conducted in 6 environments. <u>Target group:</u> - parents (ex-ante N=464; ex-post N=531).	To achieve a reduction of <b>10%</b> in car use on school home trips. Survey ex-ante carried out in 01.2012 Survey ex-post carried out in 06.2012.

### Indicator 1 (Acceptance level)

#### **1.1. Parents' acceptance level of the use of sustainable transport modalities during their children's journey to and from school.**

This indicator was derived from analysis of interviews conducted by the on-site questionnaire method by MIMOSA evaluators among class 1-3 class pupils (primary school) and their parents. The study was conducted in 6 selected environments prior to the educational

meetings concerning the Walking Bus initiative (at the beginning of 2012, ex-ante measurement) and after the meetings (in May 2012, ex-post measurement). The indicator was based on the parents' statements regarding driving their children to and from school.

### **1.2. Respondents' acceptance level for introducing the Walking Bus initiative.**

This set of indicators was derived from analysis of interviews conducted by the on-site questionnaire method by MIMOSA evaluators among parents, teachers, and 1-3 class pupils (primary school) and their parents. The study was conducted in 6 selected environments prior to the educational meetings concerning the Walking Bus initiative (at the beginning of 2012, ex-ante measurement) and after the meetings (in May 2012, ex-post measurement). The acceptance level of this initiative was analysed in the three most important groups of respondents: teachers, parents and children who might be involved in the initiative. Three partial indicators were obtained as a result:

#### **1.2.1. Teachers' acceptance level for introducing the Walking Bus initiative**

This indicator was measured on the basis of the teachers' declarations concerning their support for the Walking Bus initiative. In addition, the teachers' answers to the question about their attitude to this initiative and the chances of its implementation were analysed.

#### **1.2.2. Parents' acceptance level for introducing the Walking Bus initiative**

The indicator was based on parents' declarations concerning their acceptance of the initiative, with account taken of their answers about their approval level for the initiative.

#### **1.2.3. Children's acceptance level for introducing the Walking Bus initiative**

The indicator was based on the analysis of children's answers to the question about their willingness to participate in the Walking Bus. Additionally, the parents' answers concerning the reception of the initiative by their children were analysed.

### **1.3. Parents' attitude to the Walking Bus initiative**

The parents' attitude to the Walking Bus initiative in 6 school environments was investigated by means of 5 survey questions with a 5-point rating scale. The assessment was conducted in 2 ex-ante and ex-post measurement, setting apart the group of the parents involved in the initiative. The indicators investigated included the level of sympathy for the initiative, level of acceptance for the idea of launching the Walking Bus in the child's class/school, the parents' opinion as to the need to implement the initiative in the school, their willingness to become involved in the organization of the Walking Bus and the involvement in the Walking Bus initiative. For all the above indicators the statistical significance level was investigated.

### **Indicator 2 (Awareness level)**

All the indicators in this category were obtained from analysis of on-site questionnaires filled in by parents of pupils from classes 1-3 in 6 selected environments. The questionnaires were filled in twice: before the educational meetings (ex-ante) and after the meetings (ex-post) measurement.

## **2.1. Parents' willingness to become involved in the Walking Bus initiative**

The indicator was obtained on the basis of the parents' answers to the question about their willingness to become involved in the organisation of the Walking Bus initiative.

## **2.2. Parents' willingness to limit driving their children to and from school**

This indicator was based on analysis of the assessment of the respondents' 'willingness to give up driving children to school in favour of other transport modalities (including walking).

## **2.3. Frequency of use of the individual transport modalities by the parents surveyed**

The indicator was based above all on the statements concerning the transport modality most frequently used by the parents when commuting to work and children on their way to school. Additionally, the analysis included the respondents' answers concerning the frequency of public transport use and the frequency of walking or driving children to school.

**TABLE C1.1.2: List of potential effects that were not measured**

Impacts category and	impact indicator	How does it impact?	Why it was not assessed
Transport	Daily average walking distance covered by pupils	Promotion of educational activities generates more trips on foot	Communication problems between the schools and the Department of Education. It would have been too much effort to assess the pedometers.
Society/acceptance	Usage of web network by pupils	There is no impact on the current measure.	Changes from the original plan.
Transport/modal split	Average modal split vehicles	This indicator counts the vehicles in the school areas. It is intended to show a change in vehicle usage caused by implementation of WB.	No relevant impact expected.
Society/awareness	awareness level	This indicator would have shown the awareness level of the Walking Buses among the target groups.	Walking Buses implementation was delayed, there was no possibility to collect ex-post data.

Analysis of the importance of how to overcome the distance of the road to school

For a large proportion of the pupils the distance to cover on their way to school is no more than 4 km. Two thirds (66.4%) of the pupils cover up to 2 km, nearly a quarter (23.8%) live between 2 and 4 km from school. 5.6% cover a distance between 4 and 6 km, while the remaining 3.9% of the children live more than 6 km from school. Analyzing the results for the individual groups of pupils, it is possible to observe that the children participating in the Walking Bus live somewhat closer to school than their peers who do not take part in the initiative. In the first group, 84.1% of the pupils have to cover a distance up to 2km, and the remaining 13.6% of the pupils have a distance between 2 and 4 km to travel. Among the pupils not participating in the initiative, the proportions are, respectively 73.9% (up to 2 km) and 17.9% (2-4 km distance). Nevertheless, analysis of the above data leads to the conclusion that the distance to cover on the way to school does not have a great impact on the choice of the method of taking children to school.

## C1.2 Establishing a Baseline

The baseline data for Measure 4.2 indicator were obtained exclusively from CIVITAS MIMOSA team's own studies. To promote the Walking Bus idea, at the beginning of 2012 an on-site questionnaire survey was conducted among 1-3 class pupils and their parents and teachers in 6 selected school environments, concerning their transport behaviours and the opportunities and threats connected with the launching of the Walking Bus initiative (ex-ante measurement). Following a cycle of educational meetings, the measurement was repeated in May 2012, using slightly modified tools (ex-post measurement). Consequently, the results of ex-ante studies constitute a baseline for the assessment of the changes that occurred during the project for following indicators: 1.1, 1.2.1, 1.2.3 and 2.3.

Indicator 1.2.2 concerns the parents' acceptance level with regard to the launching of the Walking Bus initiative. The question connected to this indicator was not presented to the parents until the end of the educational meetings (ex-post measurement). Consequently, the baseline value was not obtained for this indicator (basically, the result of the ex-post study may serve as a baseline value for future measurements related to this initiative). Indicator 2.1 relates to the declared level of parents' involvement in the launching of the Walking Bus initiative in their child's class. For obvious reasons, this question was asked after the end of the educational meetings (ex-post measurement). Accordingly, the point of reference for analysis of the results obtained was the parents' acceptance level for the Walking Bus initiative (indicator 1.2.2). Indicator 2.2 relates to the parents' willingness to limit driving their children to and from school. This question was not asked at the stage of the first measurement (ex-ante). Hence the absence of the baseline value.

TABLE C1.2.1: Baseline for Measure GDA 4.2.

No. Ind i cat or	Name of the indicators	Data for the Baseline	Source of the data
1.1	<b>Acceptance level</b> • parents' acceptance level of the use of sustainable transport modalities during their children's journey to and from school.	<u>On-site questionnaire survey conducted among pupils and their parents, concerning:</u> -attitude to the initiative of the WB - willingness to change transport behaviours	Own site studies: - conducted at the beginning of 2012 - target group — 1-3 class pupils and their parents (N=192) - in 6 selected school environments
1.2	<b>Acceptance level</b> respondents' acceptance level for introducing the Walking Bus initiative	<u>On-site questionnaire survey conducted among pupils and their teachers, concerning:</u> attitude to the initiative of the WB	Own site studies: - conducted at the beginning of 2012 - target group — 1-3 class pupils (N=192) and their teachers (N=46) - in 6 selected school environments
1.3	<b>Acceptance level</b> attitude towards walking-bus	<u>On-site questionnaire survey conducted among pupils and their teachers, concerning:</u> attitude to the initiative of the WB	Own site studies: - conducted in May 2012 - target group — parents of 1-3 class pupils (N=531) - in 6 selected school environments
2.1	<b>Awareness level</b> parents' willingness to become involved in the Walking Bus initiative	<u>On-site questionnaire survey conducted among the parents concerning:</u> - attitude to the initiative of the Walking-Bus	Own site studies: - conducted in May 2012 - target group — parents of 1-3 class pupils (N=531) - in 6 selected school environments
2.2	<b>Awareness level</b> parents' willingness to limit driving their children to and from school	attitude to the initiative of the WB, willingness to change transport behaviours	Own site studies: - conducted in May 2012 - target group — parents of 1-3 class pupils (N=531) - in 6 selected school environments
2.3	<b>Awareness level</b> • frequency of use of the individual transport modalities	<u>On-site questionnaire survey conducted among the parents concerning:</u> - transport behaviours	Own site studies: - conducted at the beginning of 2012 - target group — 1-3 class pupils and their parents (N=597) - in 6 school environments

### C1.3 Building the Business-As-Usual Scenario

**TABLE C1.3.1: BAU assumptions for each indicator**

Indicator	BAU assumptions
1.1 Parents' acceptance level of the use of sustainable transport modalities during their children's journey to and from school	BAU is not possible to deduce due to character of evaluation survey. There are no comparable data to use to create a specific BAU. It's possible to assume that business as usual is the same or very similar to baseline.
1.2 Respondents' acceptance level for introducing the Walking Bus	It's possible to assume that business as usual is the same or very similar to baseline.
1.3 Attitude towards Walking Bus	It's possible to assume that business as usual is the same or very similar to baseline.
2.1 Parents' willingness to get involved in the Walking Bus	BAU is not applicable to these measure because there is no baseline (we are not in possession of the data to establish the base line)
2.2 Parents' willingness to limit driving their children to and from school	BAU is not applicable to these measure because there is no baseline (we are not in possession of the data to establish the base line)
2.3 Parents' willingness to get involved in the Walking Bus	

In its primary objective, Measure 4.2 is about society-wide education. A permanent change of attitudes requires changes in three areas: knowledge and beliefs, emotional attitude to a particular phenomenon and a change on the behaviour level. The educational activities undertaken as part of 4.2 have influenced both the respondents' beliefs and their behaviours with regard to the idea of sustainable transport. For some of the respondents this education experience may become a stimulus resulting in a permanent change of transport behaviours in the future towards an increased use of sustainable modalities. It may therefore be assumed that failure to undertake the planned educational activities in the framework of Measure 4.2 would have resulted in a lack of beneficial changes in the structure of transport behaviours in the target group or in a delay of these changes. The results of the evaluation indicate that a statistically significant change occurred in the respondents' awareness and attitudes, not translating, however, into their increased willingness to become involved in the Walking Bus initiative. Nevertheless, the initiative will be continued in at least 3 classes in the pilot primary schools beginning from the next school year (September). But for the project activities, it would not have been possible to change the awareness in the target group. The implementation would not have been continued, and 2 new schools, so far not participating in the pilot actions, would not have volunteered to launch the initiative. A total of 5 schools are now declaring their readiness to implement the walking- bus initiative.

## C2 Measure Results

The results are presented under sub headings corresponding to the areas used for indicators – economy, energy, environment, society and transport.

### C2.1 Economy

Not applicable

## C2.2 Energy

Not applicable

## C2.3 Environment

Not applicable

## C2.4 Transport

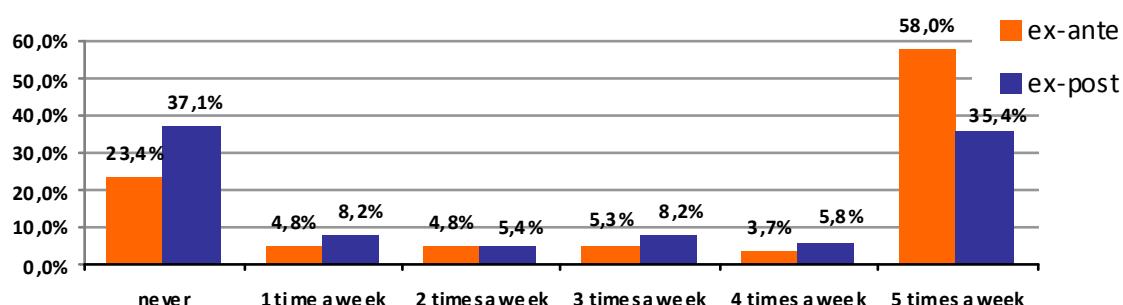
Not applicable

## C2.5 Society

### Indicator 1.1 Parents' acceptance level of the use of sustainable transport modalities during their children's journey to school.

The indicator related to the frequency of driving children to school served to illustrate the parents' attitude to sustainable transport modalities. Overall, during the project the frequency of driving children to and from school decreased. At the beginning of the year (ex-ante measurement) the parents drove their children to school slightly more than three times a week on average (3.35) and drove them home from school just under three times a week (2.74). At the end of the series of educational meetings (ex-post measurement) the children were driven to school less than three times a week on average (2.44) and driven back home slightly more than twice a week (2.13). The reductions observed are statistically significant. Between 2011 and 2012 the frequency of driving children **to school** by parents decreased (an average of 3.3 times a week in 2011 compared to 2.5 times a week in 2012); the difference is statistically significant ( $t=4.164$ ,  $p=0.000$ ). The frequency of driving children **from school** also fell between 2011 and 2012 (an average of 2.7 times a week in 2011 compared to 2.2 times a week in 2012); the difference is statistically significant ( $t=2.809$ ,  $p=0.005$ ). Precise data concerning the frequency of driving children to and from school are presented in Graphs 2, 3.

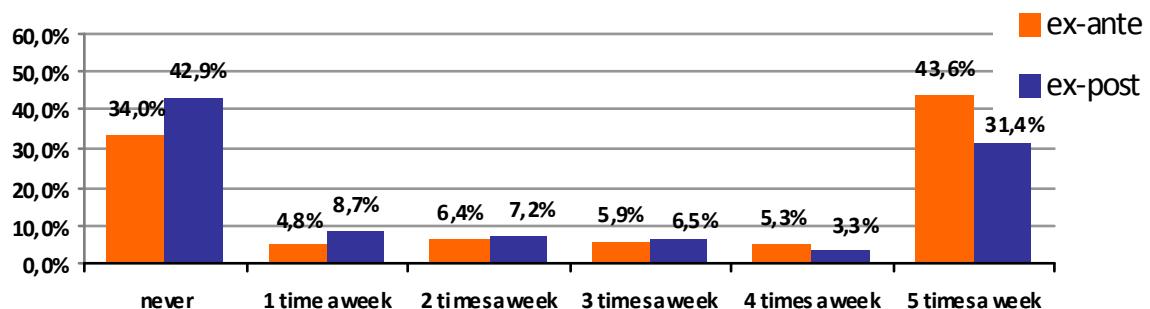
**FIGURE C2.5.1: Frequency of driving children to school (ex-ante N=192, 01.2012 ; ex-post N=597, 06.2012).**



We can observe an increase in the percentage of parents who 'never' drive their children to school (from 23.4% to 37.1%) and who never collect them from school in their car (from 34% to 42.9%). At the same time, the percentage of parents driving their children to or from school on a daily basis dropped (from 58% to 35.4% and from 43.6% to 31.4%, respectively).

We are concentrated on trips to school because it is more important for the traffic situation in the city. The distribution of the data "trips from schools" are very similar.

**FIGURE C2.5.2: Frequency of driving children from school (ex-ante N=192, 01.2012; ex-post N=597, 06.2012.).**



We are concentrated on trips to school because it is more important for the traffic situation in the city. The distribution of the data concerning "trips from school" is very similar. A marked improvement in the impact indicator in both measurements (ex-post compared to ex-ante) concerning the use of private transport in taking children to school reflects in:

- a 13.7 % increase in the proportion of parents declaring that they never drive their children to school.

At the same time there was a large, 22.6% decrease in the proportion of parents declaring the highest frequency of driving their children to school. The strikingly favourable impact indicator should be interpreted bearing in mind the differences between the weather conditions during the winter measurement (ex-ante) and the summer measurement (ex-post). The effect shown may be attributed to the project impact to a lesser degree.

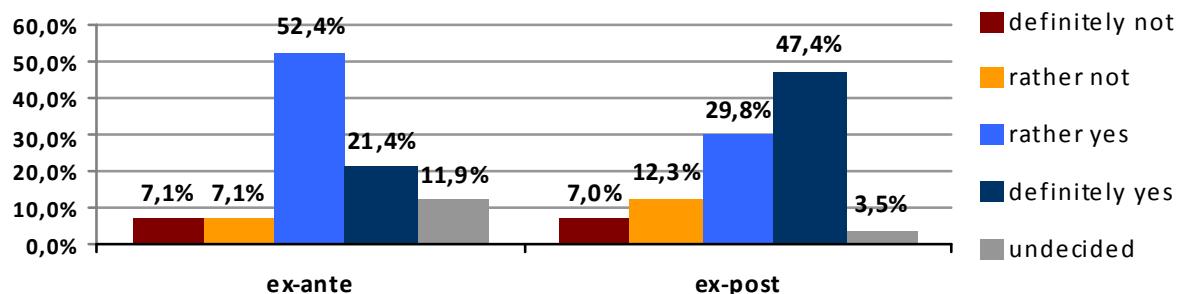
## Indicator 1.2. Respondents' acceptance level for introducing the Walking Bus initiative.

This indicator has a composite character and reflects the level of acceptance of this initiative in the three groups of respondents: teachers, parents and children.

### 1.2.1. Teachers' acceptance level for introducing the Walking Bus initiative

Nearly a half of the teachers participating in the study strongly supports the Walking Bus initiative. As a consequence of the educational meetings held, this percentage doubled from 21.4% (ex-ante measurement) to 47.4% (ex-post measurement). Another 29.8% of teachers expressed their moderate support for the idea, whereas 19.3% of the teachers oppose it (answering "definitely not" and "rather not"). The results presented in the graph below (graph 4) show that the basic effect of the educational meetings was dispelling the teachers' doubts as to the Walking Bus initiative and, consequently, a marked decrease in the percentage of those undecided. The average support rating for the initiative on a scale from 1 (strongly negative) to 4 (strongly positive) increased from 3.0 to 3.22. However, this difference is not statistically significant.

**FIGURE C2.5.3: Teachers' support for the Walking Bus initiative (ex-ante N=46, 01.2012; ex-post N=60, 06.2012.)**



Similar results were obtained in the case of the question about the approval for the Walking Bus initiative (*Do you like the Walking Bus initiative?*). The percentage of teachers who strongly approve of the idea increased from 21.4% to 40.4%. The percentage of those undecided dropped from 9.5% to 3.5%. The average rating (on a scale from 1 "definitely not" to 4 "definitely yes") increased from 3.05 to 3.15, but the change is not statistically significant. It is worth emphasising here that the Walking Bus initiative has been introduced in 10% of the classes surveyed, and for another 16.7% of the study participants the chances of starting the initiative are strong or very strong, according to their teachers.

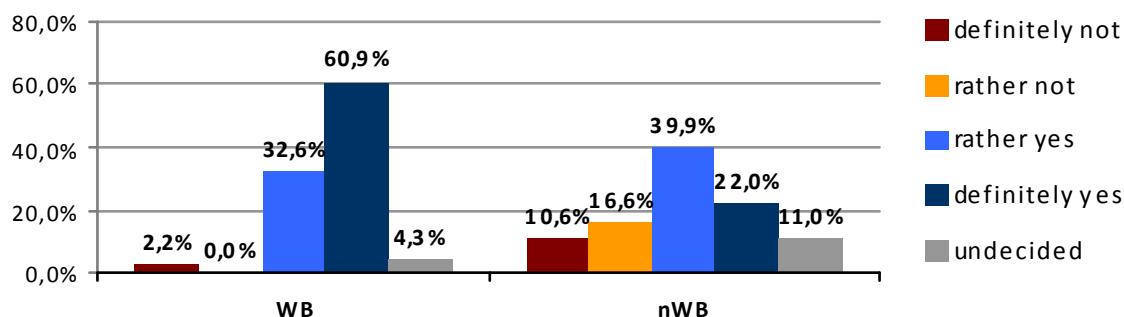
The comparison of average indications of teachers surveyed in 2011 and 2012 did not show statistically significant differences with regard to most of the questions. The only exception was in the case of one of the barriers to children's travelling to school on foot identified by teachers ("the necessity of carrying a heavy backpack").

## 1.2.2. Parents' acceptance level for introducing the Walking Bus initiative

We asked the question: "***Do you accept the idea of launching the 'Walking Bus' in your child's class?***" Answers given on the scale between 1 — "definitely not" to 4 — "definitely yes" were taken into consideration. Nearly two thirds of the parents who participated in the educational meetings concerning the initiative expressed their approval of its launching in their child's class. Graph 5 (below) illustrates the expected differences in attitudes expressed by the parents of children participating in the Walking Bus (WB) and the parents of children not participating in the initiative (nWB). In the first group, a vast majority of parents approve the initiative (a total of 93.5% of "yes, definitely" and "rather yes" answers). Among the parents whose children do not take part in the Walking Bus, opinions are divided: nearly two thirds of those surveyed (61.9%) accept the launching of the initiative (22% are strongly in favour, and 39.9% rather support the idea). The opposite view is held by 27.2% (10.6% are strongly against, and 16.6% is rather against). On average, every ninth parent (11%) from this group does not have an opinion on the usefulness of launching the Walking Bus idea in their child's class. The differences between levels of acceptance for the Walking Bus expressed by the two groups of parents are statistically significant. The parents whose children have participated in the Walking Bus initiative express a greater approval of this initiative than parents of the other children (the average acceptance level for WB was 3.59 compared to the average of 2.82 for nWB; the difference is statistically significant —  $t=5.31$ ,  $p=0.000$ ).

The parents' level of acceptance for launching the innovative Walking Bus is the key factor, but the acceptance alone is not sufficient to ensure child/parent participation in the initiative.

**FIGURE C2.5.4: Parents' acceptance of launching the Walking Bus initiative (WB N=46, 01.2012, nWB N=464, 06.2012).**



When asked the next question concerning the parents' attitude: "**Do you like the idea of the Walking Bus?**", nearly two thirds (65.2%) of the parents participating in the initiative (WB) said that they "really like it", whereas the remaining 34.8% stated that they "quite like it". Parents not participating in the Walking Bus give the initiative ratings that are statistically significantly lower. Ca. a third of the parents (nWB) — 29.1% "really like it", more than two thirds "like it" and 37.9% "quite like it". On average, every fifth respondent in the non-involved group expressed the opposite view: 12.9% of the parents said that they "rather dislike" the solution and 9.5% "really dislike it".

The data presented above suggest that the level of sympathy for the Walking Bus initiative is significantly higher in the participating group (WB) than in the non-involved group (nWB). However, the result is not directly reflected in the scale of actual participation in this initiative.

### 1.2.3. Children's acceptance level for introducing the Walking Bus initiative

The level of acceptance of this initiative among the children did not change during the series of educational meetings. Before the commencement of the meetings, 41.4% of the children declared that they were willing to travel to school that way. After the meetings the percentage was 38%, but another 3.4% of the children had already started taking part in Walking Bus. Similar results were obtained based on the parents' opinions. According to them:

- 51.8% of the children like the Walking Bus initiative,
- 46.5% of the children would like the initiative to be launched in their school,
- 45% of the children accept the idea of starting the Walking Bus in their class.

### Indicator 1.3. Attitude of parents to Walking Bus initiative

Parents' declarations and opinions as to their attitude to the Walking Bus initiative were investigated with the use of 5 survey questions with a 5-point rating scale, where 1 meant 'definitely not', and 5 — 'definitely yes'.

The answers related to this issue (given by involved and non-involved parents) are generally positive. However, what most diversified the answers in both groups of parents was the level of involvement and participation reflected in the questions asked. It turned out that the more the questions related to the parents' involvement in the Walking Bus, the lower the percentage of parents answering in the affirmative ("definitely yes" and "rather yes").

This conclusion is illustrated by the following summary of results for indicator 1.3:

- 70% of the parents like the Walking Bus initiative, while 20.4% are of the opposite view;
- 64.7% of the parents accept the idea of launching the Walking Bus in their child's class, while 24.9% are of the opposite view;
- 50.6% of the parents believe that the Walking Bus is necessary in their child's school, while 30.3% are of the opposite view;
- 22.9% of the parents have become involved in organizing the Walking Bus in their child's class, while 68.6% have remained non-involved;
- 9% of the parents stated that their children were participating in the Walking Bus initiative.

In the first group the percentages of positive answers are higher. Detailed distributions of the answers for these two groups (WB and nWB) are presented in the section concerned with analysis of the other impact indicators.

The graphs presented below (6 and 7) are intended to illustrate the main barriers to children's travelling to school on foot and by means of PT, as perceived by parents. For this purpose, the indications for two groups of the surveyed parents were compared — the basic sample (WB) and the control sample (nWB).

Among the major barriers against children's walking to school (graph 6) or travelling to school by public transport (graph 7) named by the parents were:

- the unsuitable age of the child,
- the lack of traffic safety,
- the lack of safety in public places with potential threat from other persons.

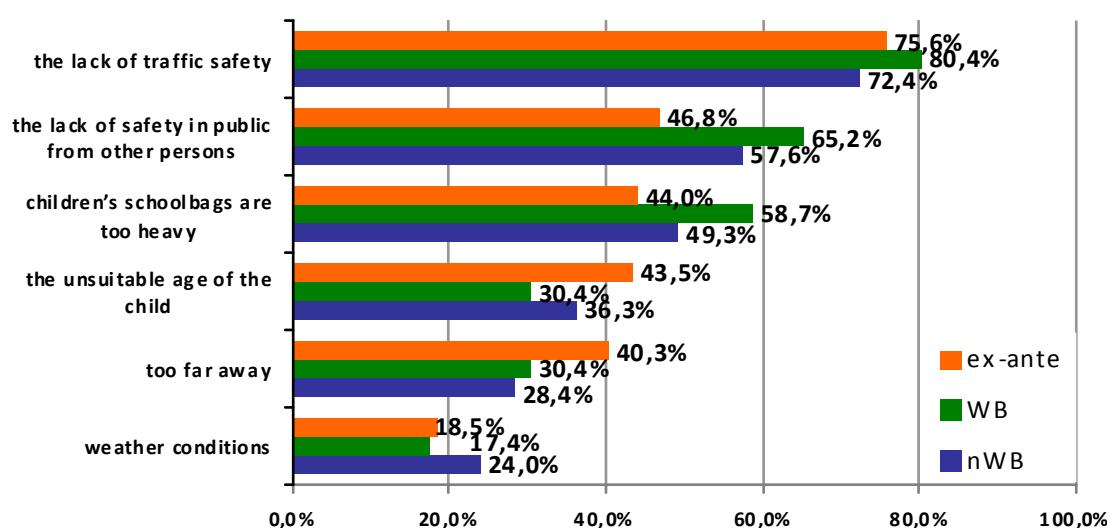
Other barriers, named by parents as less important, were:

- the prolonged time of journey,
- excessive prices of tickets,
- the need to change means of transport on the way.

The percentage indicators are somewhat different in the individual measurements. Above all, the significance of 2 factors — concerning walking to school — increased between the ex-ante and ex-post measurement (in groups WB and nWB):

- the lack of safety in public places and
- the opinion that children's schoolbags are too heavy.

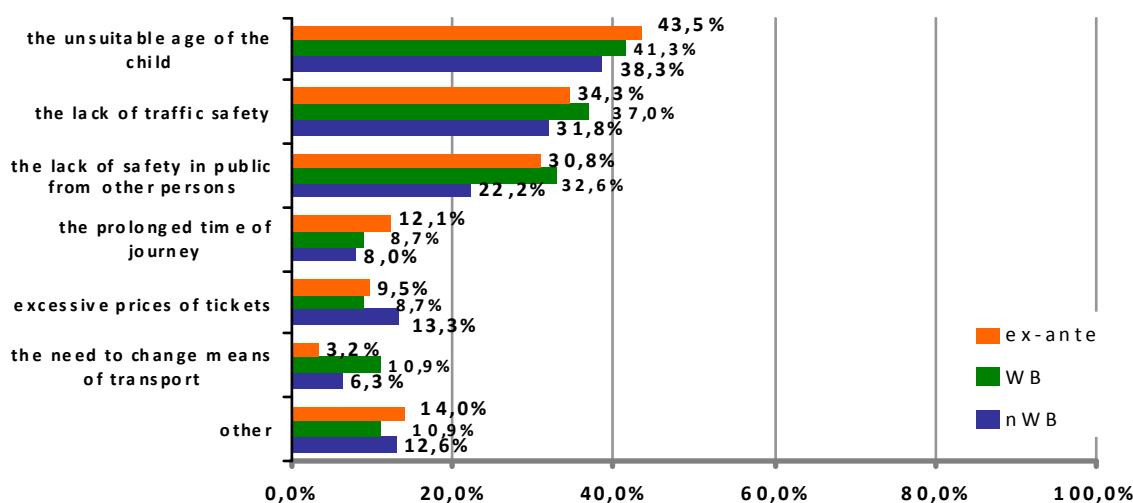
**FIGURE C2.5.5: Identified the main barriers to overcome road home-school children on foot (ex-ante N=464,01.2012; WB N=46, nWB N=479, 06.2012.)**



The mean values concerning the factors preventing pupils from getting to and from school on foot indicated by parents proved to be statistically significant in the case of:

- excessive distance between home and school,  
 {between 2011 and 2012 there was a decrease in the frequency of indicating an excessive distance between home and school as an obstacle to walking to school (an average of 0.40 in 2011 compared to an average of 0.28 in 2012; the difference is statistically significant –  $t=3.978, p=0.000$ )}.
- unsuitable age of the child,  
 {between 2011 and 2012 there was a decrease in the frequency of indicating the child's age as an obstacle to walking to school (an average of 0.44 in 2011 compared to 0.36 in 2012; the difference is statistically significant –  $t=2.486, p=0.013$ )}.
- danger in public places (associated with the threat presented by strangers),  
 {between 2011 and 2012 there was an increase in the frequency of indicating the danger in public places as an obstacle to walking to school (an average of 0.47 in 2011 compared to 0.58 in 2012; the difference is statistically significant –  $t=-3.642, p=0.000$ )}.

**FIGURE C2.5.6: Identified the main barriers to overcome road home-school public transport for children (ex-post N=464 01.2012; WB N=46, nWB N=475, 06.2012.).**



The following barriers indicated by parents, concerning the use of means of PT in getting to school, show statistically significant differences between mean values:

- trips to/from school take too long,

{between 2011 and 2012 there was a decrease in the frequency of indicating the time taken to get to to/from school as a barrier to travelling to school by public transport (an average of 0.12 in 2011 compared to 0.08 in 2012; the difference is statistically significant –  $t=2.100$ ,  $p=0.036$ )}.

- danger in public transport vehicles.

{between 2011 and 2012 there was a decrease in the frequency of indicating danger in public places as a barrier to travelling to school by public transport (an average of 0.31 in 2011 compared to 0.23 in 2012; the difference is statistically significant –  $t=2.747$ ,  $p=0.006$ )}.

- the necessity of using several means of transport,

{between 2011 and 2012 there was an increase in the frequency of indicating the necessity of using several means of transport as a barrier to travelling to school by public transport (an average of 0.03 in 2011 compared to 0.07 in 2012; the difference is statistically significant –  $t=-2.493$ ,  $p=0.013$ )}.

- lack of necessity of using means of transport on the way to school,

{between 2011 and 2012 there was an increase in the frequency of indicating the lack of necessity of using means of transport on the way to school as the main reason for not using public transport in getting to/from school (an average of 0.12 in 2011 compared to 0.08 in 2012; the difference is statistically significant –  $t=-3.206$ ,  $p=0.001$ )}.

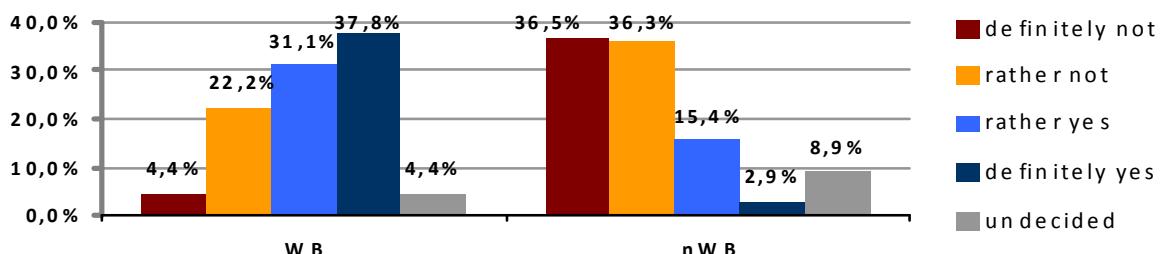
#### Indicator 2.1 Parents' willingness to become involved in the Walking Bus initiative

**Have you become involved in the organization of the Walking Bus initiative in your child's class?** Answers given on the scale between 1 — "definitely not" to 4 — "definitely yes" were taken into consideration.

The parents' level of readiness to become involved in the organization of the Walking Bus initiative in their children's classes (Graph 8) is lower than the level of acceptance of the initiative. A little over one fifth of the parents declared their involvement in the project (a total

of 22.9% of "definitely yes" and "rather yes" answers). Over two thirds admit their reluctance (68.8% of "definitely yes" and "rather yes" answers altogether).

**FIGURE C2.5.7: Parents' willingness to become involved in the organization of the Walking Bus initiative in their child's class N=45, 01.2012, nWB N=449, 06.2012.)**

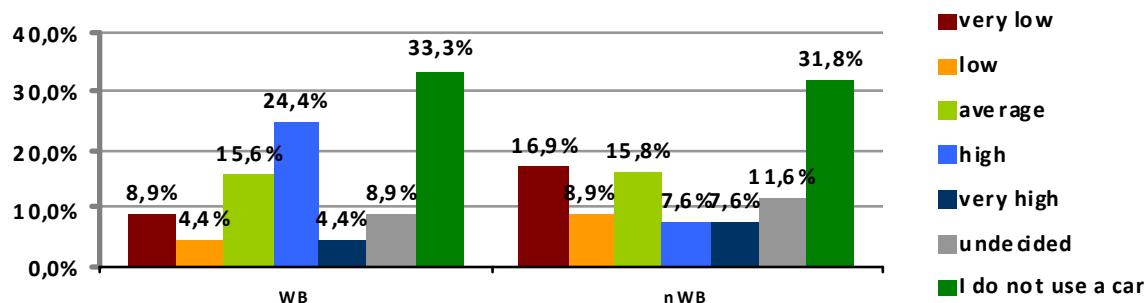


There are marked (graph 8) difference between the indications for parents whose children take part in the Walking Bus (WB) and parents of non-participating children (nWB), and these differences are statistically significant. In the first group more than two thirds of the parents became involved in the organization of the initiative – 37.8% were very involved, and 31.1% chose the "rather yes" answer. 26.6% of the parents from the first group remained inactive. Among the parents whose children do not participate in the Walking Bus, 18.3% declared their involvement in the initiative, but a great majority (72.8%) of the parents from the nWB group remained indifferent to it (*definitely not +rather not*). The parents whose children have not participated in the Walking Bus initiative are less inclined to become involved in the organization of this initiative than the parents whose children are using the Walking Bus (the average declared involvement of parents in nWB is 1.83 compared to 3.07 for parents in WB; the difference is statistically significant –  $t=8.57$ ,  $p=0.000$ ).

### Indicator 2.2 Parents' willingness to limit driving their children to and from school

The following graph (9) may be interpreted in favour of the thesis that the habits connected with children's trips to school are possible to change. 28.8% of the parents participating in the Walking Bus and 15.2% of those not involved in it state that they might give up driving their children to school in favour of other means of transport. The opposite view is held by 13.3% of the parents whose children participate in the initiative and 25.8% of the parents of non-participating pupils. The proportion of parents reluctant to give up using the car are not very high considering that as many as 37.8% of the parents drive their children to school on their way to another destination, e.g. their workplace (as suggested by the results of the questionnaire survey for parents and children). It should be noted that nearly a third (1/3) of the parents surveyed do not use the car, which means that their children travel to school using other transport modalities. Slightly more parents of WB group compared to the NWB group does not use the car on the way to school your child (difference 1.5%).

**FIGURE C2.5.8: Parents' willingness to give up driving their children to school in favour of other means of transport (including walking) (WB N=45, 01.2012; nWB ex-post N=486, 06.2012.).**



### Indicator 2.3 Frequency of use of the individual transport modalities

In the light of the evaluation graph nr 9 shows that most of respondents chose the answer: i don't use a car. But fact is still obvious that the means of transport most frequently used by the parents travelling to work is the car. Nearly a half get to work this way — 45.5% as drivers and 4.3% as passengers.

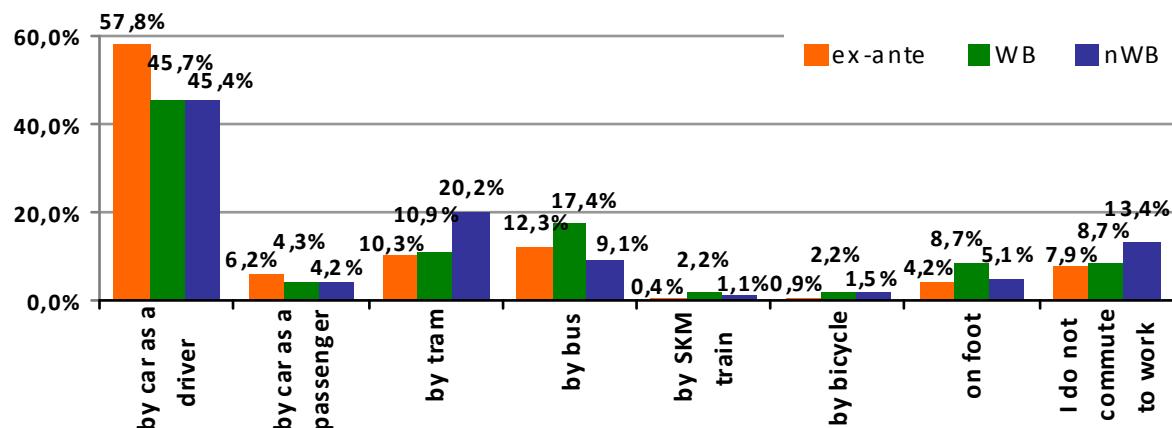
The second most popular means of transport is the tram, used by 19.3% of those surveyed (10.9% of WB parents and 20.2% of nWB parents). 9.9% of the parents take the bus to work (including 17.4% WB and 9.1% nWB). Among the parents whose children participate in the Walking Bus, 8.7% walk and 2.2% cycle to work. Among the parents whose children do not participate in the Walking Bus, these percentages are lower and amount to 5.1% (walking to work) and 1.5% (cycling to work).

The following graph 10 illustrates the changes in the modal split between the first (ex-ante) and the second measurement (ex-post). There is a marked reduction in the use of private transport – the percentage of parents travelling by car as drivers fell from 57.8% to ca. 45.5%, and the proportion of those travelling as passengers decreased from 6.2% to ca. 4.3%. Meanwhile, there was an increase in the use of means of PT while commuting to work, above all, the tram — a 10.1 % increase (for parents not participating in the Walking Bus) and an increase in the use of the bus by 5.1% (for parents not participating in the Walking Bus).

There was also a slight increase in the use of other sustainable transport modalities in the group of parents getting to work on foot, by bicycle and by the SKM city train.

The data presented suggest one more regularity: the parents whose children participate in the Walking Bus initiative travel to work by bus, SKM train, bicycle or on foot slightly more often than the others (nWB), but use the tram less often. In both groups, the percentages of those travelling to work by car are similar.

**FIGURE C2.5.9: Means of transport most frequently used by parents for travelling to work (ex-ante N=192, WB N=46 01.2012; nWB N=473, 06.2012).**

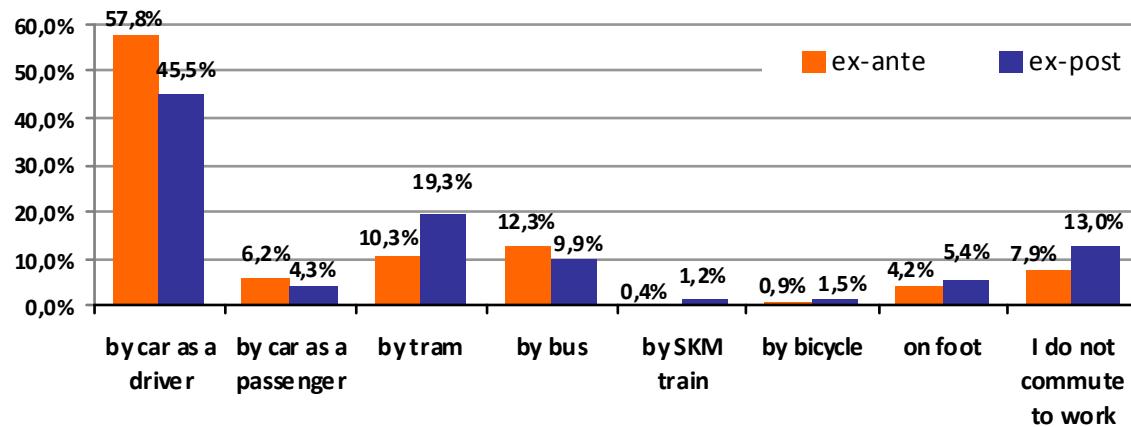


Graph 11 below, shows the changes in the use of transport modalities between the two measurements. First of all, there is a visible decrease in the rate of car use, as the percentage of people travelling as drivers dropped from 57.8% to 45.5% and the percentage of passengers — from 6.2% to 4.3%. There was a change in favour of tram transport, as the percentage of people in the group surveyed travelling to work by tram increased nearly twice — from 10.3% to 19.3%. There was also a slight increase in the use of other sustainable transport modalities (apart from the bus), with regard to:

- walking — from 4.2% to 5.4%.
- cycling — from 0.9% to 1.5%.
- travelling by SKM city train — from 0.4% to 1.2%

The percentage of people not travelling to work also increased — from 7.9% to 13%.

**FIGURE C2.5.10: Means of transport most frequently used by parents for travelling to work (ex-ante N=192, 01.2012; ex-post N=597 06.2012.)**



The favorable appearance of the impact should be interpreted with great caution, considering the short interval between the two measurements (ex-post and ex-ante). The reduced use of the car when travelling to work in favour of sustainable modalities may have resulted from the extensive road-works (construction and reconstruction of roads) in many parts of the city in the duration of the studies conducted in the framework of Measure 4.2.

## C3 Achievement of Quantifiable Targets and Objectives

No.	Target	Rating
1	More positive attitudes towards in the WB in the test sites for the total sample size (10% attitude shift).	**
2	To encourage the use of sustainable transport by schoolchildren through the use of educational programs and games in schools including walking-buses activities.	**
3	To achieve a reduction of 10% in car use on school home trips.	**
4	Usage of web network by pupils (increase by 20%)	NA
5	To reduce road traffic accidents in the region of schools	NA
6	To determine the balance of influence between parental or child choice of mode to and from school and if required introduce greater integration of the in-school programme with parents and the wider community.	NA
7	To develop appropriate educational tools , communications and campaign materials	NA
<b>NA = Not Assessed   O = Not Achieved   □ = Substantially achieved (at least 50%)</b>		
<b>□□ = Achieved in full      □□□ = Exceeded</b>		

## C4 Up-Scaling of Results

Of the new school year (September 2012) 2 elementary schools declare the launch of the WB in its branches (not the beneficiary of the project). Some of school director and teachers are very interested to implement WB initiative, because it is new way of transport. And it is gives a good example to the other parents and pupils. It is very hard to implement first Walking Bus, after this some of people are interested to join the idea. .

## C5 Appraisal of Evaluation Approach

Object of evaluation in the Measure 4.2 was mainly focused on the study of willingness to become involved in the walking- bus (to implement the initiative in the 6 selected school environments), and to a lesser extent was based on document for GDA LEP 4.2. Research areas planned in this evaluation are also useful from the standpoint of the study changes in other measures. Implementation of the walking-bus initiative required a long process of engagement in 6 school environments, in terms of potential interest and readiness for its launch. Gdansk agglomeration due to its stage of development and urban character, does not have favourable conditions for the implementation of the walking-bus initiative, according to the present findings.

The originally planned study design with the inclusion of a control group. Since we carried out two measurements on the same group of respondents — before (ex-ante) and after (ex-post) the educational meetings, within a relatively short time span (4-5 months), inclusion of the control group measurement was no possible (time and organizational considerations). In this situation, the evaluation team came to the conclusion that two measurements would be sufficient to determine the magnitude and direction of the changes. A certain weakness of this approach is the absence of ex-ante measurement data for some indicators. These methodological inconsistencies led to the decision to adopt a different approach.

During the ex-post study with the use of a questionnaire for parents, a group (N=46 and), was identified by means of a question setting apart a group of respondents participating in the Walking Bus initiative (WB). The remaining majority of the respondents (90%) informed of their lack of involvement in this initiative (nWB). The designation of the individual groups of respondents given in brackets was used in the presentation of the study results (graphs), including the indicators for both groups. During the evaluation, the parents' attitude to the Walking Bus initiative was investigated in both groups of parents (those participating and not participating in the initiative).

## C6 Summary of Evaluation Results

The key results are as follows:

**Key result 1 – for objective 1** - To encourage the use of sustainable transport by schoolchildren through the use of educational programs and games in schools including walking-buses activities.

A marked improvement in the impact indicator - for frequency of driving children from school – in both measurements (ex-post compared to ex-ante) reflects in:

- a 13.7 % increase in the proportion of parents declaring that they never drive their children to school,
- a large - 22.6% decrease in the proportion of parents declaring the highest frequency of driving their children to school.

The strikingly favourable impact indicator should be interpreted bearing in mind the differences between the weather conditions during the winter measurement (ex-ante) and the summer measurement (ex-post). The effect shown may be attributed to the project impact to a lesser degree.

**Key result 2 – for objective 2** - To achieve a reduction of 10% in car use on school home trips.

The pupils most frequently get to school on foot or are driven there by their cars. We can observe certain positive changes between the two measurements (ex-ante/ ex-post): the percentage of pupils usually driven to school dropped from 47% to 36.2% (about 10%), whereas the percentage of those walking to school increased from 46.3% to 50.8%. Although cycling to work to school is still quite unpopular among the inhabitants of Gdańsk, it is noteworthy that the percentage of children travelling to school this way nearly doubled — from 0.9% to 1.7%.

The above data may suggest that there is a certain trend, not very marked or rapid, towards a change in the way of day-to-day travelling to work and school. It should be stressed, however, that the general frequency of travelling by public transport is significantly changing. Before the beginning of the Walking Bus action, the average rate of use of the public transport was 2.80, and after its end it rose to 3.13. The increase is statistically significant.

The habits connected with children's trips to school are possible to change. 28.8% of the parents participating in the Walking Bus and 15.2% of those not involved in it state that they might give up driving their children to school in favour of other means of transport.

However the favourable appearance of the impact in this indicator should be interpretive with great caution, considering the short interval between the two measurements (ex-post and ex-ante) in the framework of evaluation of Measure 4.2. The reduced use of the car in favour of sustainable modalities may have resulted from the extensive road-works (construction and reconstruction of roads) in many parts of the city in the duration of the studies.

**Key result 3 - for objective 3** More positive attitudes towards in the WB in the test sites for the total sample size (10% attitude shift).

More than a fifth of the parents (22.9%) declare their participation in the implementation of Walking Bus in their children's classes. This percentage is significantly lower than that of the parents accepting the implementation of Walking Bus in their children's classes (64.7%).

The habits connected with children's trips to school are possible to change. 28.8% of the parents participating in the Walking Bus and 15.2% of those not involved in it state that they might give up driving their children to school in favour of other means of transport. The level of sympathy for the Walking Bus initiative is significantly higher in the participating group (WB) than in the non-involved group (nWB). However, the result is not directly reflected in the scale of actual participation in this initiative.

However, we must bear in mind the relatively low level of Poles' involvement in community activities (especially considering the fact that the matter concerns state schools). It should also be stressed that joining the Walking Bus often involves a change in the family's transport habits and may interfere with the area of protective behaviour towards the children and the issue of monitoring their safety. These complex factors make up the so-called social culture, strongly influencing transport attitudes and behaviours.

## C7 Future Activities Relating to the Measure

Two primary schools in Gdańsk (not participating in the pilot implementation) have come forward to the MIMOSA Project team with the request for assistance in launching the Walking Bus initiative starting from September 2012. The schools that have participated in the pilot Walking Bus action express their intention to continue the Walking Bus action in the coming years, and the initiative will be continued in 3 pilot classes from September of this year.

## D Process Evaluation Findings

### D1 Deviations from the Original Plan

The deviations from the original plan comprised:

- **1: Delays** – Due to delays the MIMOSA project in Gdansk Walking Buses" action was postponed to the end of the project. The project has been started one year later than initially planned. Problems with organisation and with co-operation with schools postponed Walking Buses implementation to the beginning of 2012.
- **2: Changes compared to the original assumptions in the Local evaluation Plan** – LEP and Description of Work contain some of unreal Measure specific objectives like e.g.: To achieve 20% of children using web network regularly. Counting cars next to the schools also doesn't make sense because in 'Walking Buses' involved about 40 schoolchildren and some parents. To make report clear Evaluation team decided to change measure specific objectives to more actual and clear to understand. There was decision to delete objectives: "To increase modal split in favour of sustainable travel modes".
- **3: Web based platform** – there wasn't possibility to create well working web based platform. Institutional barrier associated with limiting access to the network caused problems of operation of the Internet portal during working in City Hall of Gdańsk. It is very difficult to create new useful website because local regional portal has got monopoly in Gdansk, what is more there is no problem to find an information related with education activity.
- **4: Lack of final results of Walking week action** – CIVITAS MIMOSA Team in Gdansk didn't received summary from schools about statistics of the final activity. In the reporting time we have holidays in Poland so schools are closed and there is no possibility to get this data.
- **5 Control Group was cancelled:** due to problems with organization we decided to change approach and show ex-ante data compare with ex-post data divided into two groups. One groups contain the answers of people who take part in Walking Buses and the second group contain the answers of other parents and children( non Walking Buses group).

### D2 Barriers and Drivers

Some of barriers and drivers has got on-going character, so it is necessary to report them during two or three phases. This is problem of the most measures from Gdansk. The biggest problem was caused by the institutional barrier related to City Hall procedures. Organization of any events takes a lot of time due to formalities. MIMOSA team members wasted time because of waiting for the signatures or any other regulations. Many employees in City Hall of Gdańsk do not understand the idea of European projects and the ways of realization.

## D2.1 Barriers

On-going barriers during preparation, implementation and operation phase,

- **Institutional (overall barrier)** - Impeding administrative structures, procedures and routines which slow down measure realization. CIVITAS MIMOSA team members wasted a lot of time because to organize any event it is necessary to collect a lot of official signatures – what isn't easy and quick.
- **Barrier 2 – Organisational** - Organisational problems related to long and demanding employment procedures in the city hall of Gdansk. Delays in project have been also caused by organisational problems. Project in Gdansk lost one year before getting the acceptance to create a project team.
- **Barrier 3 – Financial** - Too much dependency on public funds (including CIVITAS funding), At the beginning of the project it was very difficult to organize any action because partners and stakeholders haven't funds to support any action.
- **Cultural (on-going)** - life style patterns commuting with own car perceived as an important element of social status. In Poland in general people still thinking that the car is the best and the safest transport mode for children to get to school. There is no trend to walk to school. Using a car shows how high is material status.

## D2.2 Drivers

### Preparation phase

Due to the fact that the measure realization was in a preparation phase no drivers have been indicated yet.

### On going drivers during Operation and preparation phase

- **Driver 1 – Strategic** - presence of sustainable development agenda in the City Hall of Gdansk, which make easier to achieve commitment among the civil servants involved in the measure implementation
- **Driver 2 – Financial** - willingness of the business community to contribute financially. Cooperation with public transport organizations helps us to organize some interesting events for schoolchildren. The organization was ready to find time and support our activities,
- **Driver 3 – Spatial** - already designed experimental zones, where children can learn how to ride safely in traffic during extra initial workshops. Areas next to school were dramatically changed. The new signs and cycle racks next to the schools makes that schools look more modern and more safety.

### Operation phase

- **Support of Department of education.** It was very hard to organize Walking Buses without support of superior government. People from "Education" help us to contact with schools directors and with Walking Buses and Walking Week realization.

## D2.3 Activities

### Preparation phase

- **Activities 1** – The measure leader has been appointed by the Mayor's Regulation of 14<sup>th</sup> October 2009.

### Implementation phase

- **Activities 1** – Release of a special DVD called "Cyclist's Handbook", an interactive computer program which helps in learning the principles and regulations in cycling.
- **Activities 2** – Organization of workshops on safety in public transport for children during "MIMOSA Mobility Weekend".
- **Activities 3** - Organization of a painting competition for primary school children: 'Smart transport – better life'.

### Operation phase

- **Activities 1** - "Walking Buses" promotion - six schools has been appointed for pilot implementation of „Walking Buses".
- **Activities 2** - Lesson for school children on safety and security in bus depot.
- **Activities 3** - Activities during Mobility Week 2011: Lesson for school children on sustainable transport and cycling, painting competition for "Anti Vandalism" sign.
- **Activities 4** – "walking to school" – action which closed activity related with the measure and Walking Buses.

## D3 Participation

### D3.1 Measure Partners

- **Measure partner 1** – City Hall of Gdansk (at the beginning Department of Community Facilities Management) – leading role, project beneficent,
- **Measure partner 2** – Schools – Principle participant,
- **Measure partner 3** – Voivodeship Police (regional Police) – Principle participant,
- **Measure partner 4** – Education Department (City Hall of Gdansk)– Principle participant.

### D3.2 Stakeholders

- The process of implementation of the measure will involve the Police, education department, selected schools, children and parents. At the beginning of project there was a lot of problems with communication, but during realization phase the situation was improving. This measure was nice lesson for the police and people associated with education. They have got a lot of information about innovative approach related with sustainable transport promotion.

## D4 Recommendations

### D4.1 Recommendations: Measure Replication

- **Recommendation 1** – Walking Busses is honestly recommended to implement in other cities or in a villages in Poland and in Europe. It is very cheap, easy and modern conception which can be useful to promote sustainable options. Walking Buses gives also a lot of fun for children. Our experience show that it can be success in rural area and in modern residential districts.
- **Recommendation 2** – Measure 4.2 is transferable, but a lot of people claim that car is the best, the fastest and safe etc. The polish government should create a bigger campaign related with education and problems which include the idea of measure 4.2. It is very important because Walking Buses in Poland are still funny and stupid for many people.

### D4.2 Recommendations: Process (Related to Barrier-, Driver- and Action Fields)

- **Recommendation 1** – It is strongly recommended to change one thing in Walking Buses realisation. Parents says that it is better and easier for them when one parent “collect” Walking Bus one pupil by one (not from the “Walking Buses stop”) – it works especially in cities and small districts. Parents arguments the changes, saying that in this case they have got more free time in home.
- **Recommendation 2** – It is very important to have support of the organization or governments responsible for education. In Poland is much more easy to realize some activities when a superior is ready to help during implementation process.
- **Recommendation 3** – Walking Buses can be use throughout all the year. There is no mandatory to walking day by day. Parents can chose the days and seasons. Walking Busses it is kind of idea which could be adopted to own needs.