

Ex post evaluation - Liszki District, Krakow

Deliverable 6.3

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1 Introduction

1.1 Background

The SmartMove project addresses key action on energy-efficient transport of the Intelligent Energy Europe programme (STEER). In line with the Transport White Paper it focuses on passenger transport and gives particular emphasis to the reduction of transport energy use.

1.2 The SmartMove project

The delivery of public transport (PT) services in rural areas is faced with tremendous challenges: On the one hand the demographic dynamics of ageing and shrinking societies have particular impacts on the PT revenues depending on the (decreasing) transport demand. On the other hand, PT stops density and the level of service frequency are often of insufficient quality. Thus, there is a need for the development of effective feeder systems to PT stops and for the adaptation of the scarce PT resources to user needs. For the SmartMove project, feeder systems are the different ways of linking a specific region with the back bone PT system, usually a bus or train network or a combination of both. This can be done by improving the walking and cycling facilities to and around the stations, by implementing flexible bus systems or by promoting carpooling or car sharing etc.. However, even if sufficient rural PT systems are available, large parts of the population face diverse subjective barriers to use PT. This is even more relevant for PT feeder systems: in many cases citizens are not even aware of their existence or, if they are aware of them, there exist subjective barriers to their use.

These problems are addressed within SmartMove project by implementing “Active Mobility Consultancy” (AMC) campaigns for PT lines and their feeder systems in eight rural and peripheral areas. The objective of the AMC campaigns within the project aims at promoting the use of PT via personalised travel marketing approach. The word ‘active’ in the term “active mobility consultancy” has a twofold meaning. On the one hand, it refers to the active process of informing people on PT: it is not PT users, who have to inform themselves about PT services; rather the PT operators that have to inform their (current and potential) customers according to their individual needs. For this purpose, current and potential PT users are contacted to provide them with demand based information via different communication channels. The second meaning refers to several active measures aimed at decreasing subjective barriers such as overestimating prize and travel time whereas underestimating the supply and options to the use of rural PT systems.

The AMC campaigns are more than purely the provision of information: active measures will be offered in addition to the written information and the consultancy talks that are usually applied in similar campaigns. This might include actions like practical traveller training, citizen participation in planning or guided tours for PT feeder schemes. Additionally, information and feedback on user needs can be

collected within the AMC campaign. This supports the adjustment of PT offers in line with users' requirements.

The AMC concept used in SmartMove builds on existing approaches, which will be further developed through SmartMove based on the exchange of experience and mutual learning. In particular, we will develop existing AMC approaches along 4 lines:

- (i) the adaptation of the existing approach to recent developments,
- (ii) the consideration and inclusion of feeder systems into the AMC campaign,
- (iii) the development and application of a common monitoring and evaluation method and,
- (iv) the adaptation of the AMC concept to specific requirements of the implementing regions.

The result is an easy to use AMC concept that can be applied by PT operators all over Europe. The aim is to solve the specific, significant challenges of PT schemes in rural areas.

A main pillar of the concept is the extension of the AMC concept to PT feeder systems as they are crucial factors for rural PT systems. Better knowledge gained on this subject helps to improve public transport in rural areas. From a scientific point of view, the information attained about a feeder system based AMC campaign makes an important contribution to the further development of personalized travel marketing approaches. Even more important, by implementing a large range of dissemination activities, such as webinars and take-up seminars, not only the SmartMove partners, but also a broad range of stakeholders are informed about the manifold possibilities and advantages of an AMC campaign.

Eight rural and peripheral regions in Europe prepare, implement and evaluate a local Active Mobility Consultancy campaign. PT operators achieve insight into the demands of both current PT users and those who do not currently use PT systems, by applying the AMC campaign. If the non-use of PT is caused by hard facts – e.g. the location of the PT stops or schedule organization – PT operators can adapt their services to the demand of potential users. This will increase opportunities to make PT systems attractive for new passengers. Each of the AMC campaigns to be conducted through SmartMove will be based on a shared methodological approach which will then be tuned in practice to the needs of the local specific situation. These include the specific target groups, the specific cultural barriers, barriers and enablers, the type of PT feeder system (a possibility to reach PT stops by individual or public means), the spatial aspect (e.g. compactness vs spread, topography and geography, environment), the socio political aspects at the appropriate decision making level, the administrative aspects, the economic aspect and the planning aspects. Within each region, we have defined targets of several hundreds of households to be contacted. As a result, we expect a substantial mode shift to public transport, which in turn will lead to a substantial increase on energy efficiency, a decrease of resources consumed and a reduction of the greenhouse gas emissions caused by road traffic.

1.3 Content of this Deliverable

The impacts of the AMC campaigns are evaluated in a process- and output evaluation. Output evaluation refers to the measurement of the direct quantitative effects of the campaigns, e.g. the number of additional public transport passengers. This information is used as input to calculate secondary effects of the campaigns, e. g. the reduction of CO₂ emissions. Statistical figures of the process are collected at each stage of the campaign, e. g. number of people contacted, response rate, figures about materials ordered etc., in order to identify factors of success or failure of the AMC campaigns (process evaluation). Interviews with current and potential public transport users give additionally information to public transport operators about customer satisfaction and the needs of improvement.

The aim of this deliverable is to present and evaluate key figures that had been collected during and after the AMC campaign. There are six aspects, which are analysed for this matter:

- (1) Significant changes of the framework conditions during the AMC campaign, if any (e. g. modifications in the public transport supply), need to be documented.
- (2) The experiences made with the implementation process, the participation and the cost of the AMC campaign. These data were collected by the staff responsible for the implementation of the campaign.
- (3) Any changes in behaviour, information level and attitude of the participants of the AMC campaign. These data were collected in personal interviews with the participants after the AMC campaign. In the course of the ex-post analysis, some questions were repeated to see, if changes occurred before and after the AMC campaign. Additional questions were included to be able to understand the perception of or experience made during participating in the AMC campaign.
- (4) Requested and delivered information material and other items in the course of the AMC campaign. This was recorded by the staff responsible for the implementation of the campaign.
- (5) Comparison with external data. In parallel to the campaign, bus passenger counting took place before and after the implementation of the AMC campaign, which allows a plausibility check, if results are in line with the statements of the participants.
- (6) IEE indicators as impact of the AMC campaign. These data were calculated based on the information collected above. Additionally, these results were compared with the targets defined in the beginning of the project.

2 Framework conditions during the implementation of the AMC campaign

In the Liszki District, Krakow, some changes of the framework conditions during the implementation of the AMC campaign were observed. The public transport supply remained basically unchanged during AMC campaign, with one exception.

In November and December 2015, there was unplanned, emergency repair of the tram route from the Salwator to the city centre of Krakow, resulting from a significant deterioration of the tram track infrastructure. This tram route is very important for travellers from analysed area of Liszki District. Implemented bus substitute transport could not be received favourably by passengers. It was therefore decided to extend the 2 series of studies (after AMC-campaign) till the beginning of 2016. The effect of this decision was the drop in the number of trips by bicycle, resulting from changes in weather conditions. However, this did not influence to a greater extent on the results of the project - the share of travel by bicycle was not significant.

3 Process evaluation and cost of the AMC campaign

The process evaluation includes the response of the target groups for the dialogue marketing and the active measures part of the AMC campaign, including its costs and the experiences made in the course of the implementation of the AMC campaign.

3.1 Response towards the dialogue marketing part of the campaign

The process of the dialogue marketing campaign is evaluated by collecting information about the response of the people contacted according to the standardised list of variables below. The response illustrates the resources needed in order to receive the envisaged amount of participants (Table 3-1). In the Liszki District, all households were contacted by door-to-door approach.

Table 3-1: Variables for reporting the response towards the dialogue marketing

Category	Variable name	Number of households	Number of persons
Response	People contacted with the information (gross sample)	1950	7898 (4.05 prs/household)
	Persons to which communication could be established via door-to-door contact	508	2057 (4.05 prs/household)
	Persons, who refused to respond with no further information at all	1442	5841 (4.05 prs/household)
	<i>Persons reached, but not in the target group</i>	<i>All persons contacted are part of the target group</i>	
	Persons willing to participate in the campaign (26,1% of all contacted), of which:	508	2057
	Persons with no need for further information (pt-users)	69	279
	Persons with no need for further information (non pt-users)	181	733
	Persons with need for further information (pt-users)	179	725
	Persons with need for further information (non pt-users)	78	316
	Persons with need for further information (no information on pt use)	1	4

Information about the campaign was delivered to approx. 4100 households in which the population is of approx. 16.5 thousand inhabitants. Attempt to contact was made in 47.6% of these households. With the door-to-door approach, a total response rate of 26.1% was achieved (12.4% of total households in considered Liszki District).

Figure 3-1 shows the segmentation of the participants, distinguished between users and non-users of the public transport system in the region. As it can be seen, the majority of participants expressed their need for information. Much more interested in the information were existing PT-users – 84.5% of total PT-users (41.3% of all participants). For comparison, 72.0% of non PT-users have asked for such kind of information (36.6% of total participants).

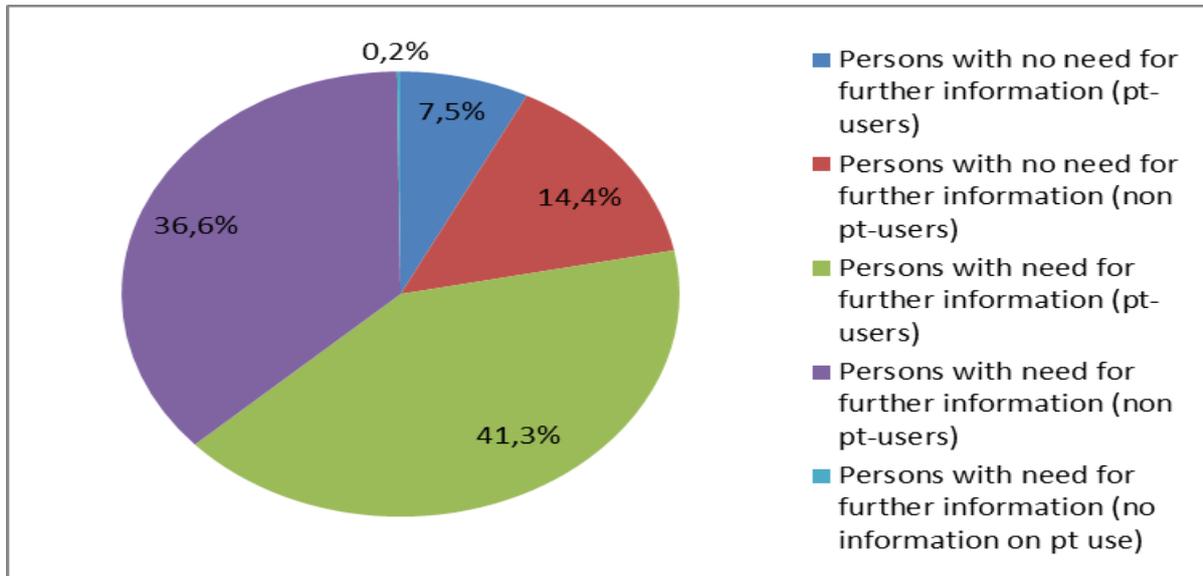


Figure 3-1: segmentation of participants of the AMC campaign in Liszki District, Krakow

3.2 Narrative description of the process of dialogue marketing

This section includes a short report on each step of the dialogue marketing reflecting on the implementation plan and answering the questions: What went well? Which problems occurred? Which strategies and action were taken to face these problems?

Preparation phase

Over all, the preparation phase was in line with the implementation plan. The cooperation with the local stakeholders (majors, church, bus operators, and public transport organizer) worked smoothly. Due to problems with the survey subcontractor - research were held two months later than expected (June - July instead of April - May).

Lessons learned:

- Refine clear and detailed requirements to subcontractors of the surveys
- Implement the preliminary questionnaire interviews
- Do not wait for the full survey results of the research, analyse the results on a regular basis.

General contact phase of target persons

The sending out of an announcement letter to the majors, church, schools and other influential institutions and organizations, followed by direct contact approach (door-to-

door) proved to be the most adequate contact methodology, since a good response rate was obtained. In Polish conditions, such high success rates do not happen.

Lessons learned:

- In the Liszki District, the direct contact was probably the best approach, since the response rate was very good
- The biggest impact on high responsiveness have information transmitted in the churches, after the Masses.
- Gifts for respondents are very important during the general contact phase.

Segmentation phase: Identifying the information needs

Segmentation was only made in households who responded to the questionnaire, with taking into account additional information about number of pupils, number of students in the household. The basic segmentation can be seen in Figure 3 1 above.

Lessons learned:

- Segmentation is more relevant to prepare the individualised order forms or for some statistical analysis and therefore is of less importance for the whole process.

Individualised contact phase: Send the service form

In the case of Liszki District, this phase was realised simultaneously with the initial, general contact phase. Service forms were filled after interviews before AMC-campaign in all participating households. Individualised information was then prepared for each participant during one week time and delivered while next visit the household. All material was also available until the end of the project.

Lessons learned:

- Preparation of a large number of information packets during only one week is very difficult.
- It is highly preferred to use the same people who were preparing and planning the survey - these persons better feel inhabitants' needs.

Delivering phase: Hand over the service packages and thank you presents

The information packages were delivered to the target area during three weeks. The materials were stored at the Cracow University of Technology (PK) office, where the packages were also prepared and packed. Distribution was performed by PK students. All information packages were delivered personally.

Lessons learned:

- All information packages could be delivered personally. There is no need for delivery via surface mail.

3.3 Implementation process and response of accompanying active measures

Based on discussion with local stakeholders in the beginning of the project, it was fixed, which events the SmartMove project should participate with its active

measures. Table 3 2 describes two kinds of events, done in Liszki District. First event was an information provision for the church communities. Second one –visits in three primary schools located in analysed Liszki District.

Table 3-2: Variables for reporting the process of the accompanying active measures in Liszki District, Krakow.

Category	Variable label	
Type of event 1	description of event	Information provision for the church communities
	type of event (presentation, discussion, demonstration, interactive demonstration) according to active measures guidelines	Leaflets distribution and information given by the priests
	Alone standing event/event in combination with	Alone standing event
	Dates and duration of event	June 2015 (one Sunday)
	People invited	Not known
	People participated	300
	People personally contacted at event	300
	People within the target group	300
	People recruited for AMC (if foreseen)	Not known
	Description of implementation process (story of success, problems occurred, strategies to overcome problems etc.)	The event was successful. At first the meetings with the representatives of the church communities were organised. Then priests informed inhabitants about the AMC-campaign, its aims and scope. Inhabitants were asked to take part in surveys and were informed about the chance to get personalized information. General information about public transport operation were provided after a Mass (leaflets, brochures).
Type of event 2	description of event	School visits
	type of event (presentation, discussion, demonstration, interactive demonstration) according to active measures guidelines	presentation, discussion, interactive demonstration
	Alone standing event/event in combination with	Alone standing event
	Dates and duration of event	The meetings at schools : <ul style="list-style-type: none"> • Primary School in Piekary – June 2, • Primary School in Kryspinów – June 9, • Primary School in Liszki – June 16. The Family Festival – June 20
	People invited	500

	People participated	180 children and 12 teachers took part in 3 meetings at schools There were approx. 200 – 220 participants of the Family Festival and about half of them were adults.
	People personally contacted at event	49
	People within the target group	49
	People recruited for AMC (if foreseen)	Not known
	Description of implementation process (story of success, problems occurred, strategies to overcome problems etc.)	At first the meetings with the representatives of schools were organised to get them “on board”. Then, in cooperation with them, 3 meetings were organised at local schools. The SmartMove team gave presentation about sustainable mobility and discussed the most important issues. Pupils were taught how to plan a public transport journey, buy a ticket and make a safe bicycle trip. They also received some green transport related gadgets such as bike lights and fluorescent elements to be visible on the road. The SmartMove team was even invited by the director of the one of the schools to participate in the Family Festival. The SmartMove stand was launched and leaflets about the public transport and bikes were distributed among children and their parents. At the same time some information about transport operation was also provided. Directors also expressed their wish to support any similar actions in the future.

3.4 Costs of AMC campaign

Costs for the dialogue marketing campaign as well as for all accompanying events (active measures) are reported in this chapter. Table 3- presents the full cost for the campaign, assuming all material need to be printed for the campaign and all labour resources are extra costs. The staff costs for the development of the process as well as for the implementation of the campaign form a substantial part of the total cost. For the concrete campaign in Krakow staff cost, design and production of materials, the individual documents printed on request and the giveaway items were additional costs within the campaign.

Table 3-3: Costs of dialog marketing campaign (full cost calculation) in Liszki District, Krakow

Cost item	Quantity	Unit price	Total [€]
Developing the process: composing announcement letters and order list, preparing, collecting and printing of information material and give away items, preparing survey			
Staff costs [person-hours]	301 hours	21.51 €	6474.51 €
Obtaining data of inhabitants of the implementation area (addresses)			
No costs associated	N/A	N/A	N/A
Conducting the campaign: creating and compiling the required information material, conducting ex-ante-interviews, distribution of the materials, ex-post - interviews			
Staff costs	440 hours	21.65 €	9526.00 €
Designer	N/A	N/A	N/A
External help with data processing	N/A	N/A	N/A
External survey company (ex-ante interviews)	1	4303.82 €	4303.82 €
External survey company (ex-post interviews)	1	4303.82 €	4303.82 €
Costs for announcement letters			
Announcement letters to school directors, local authority, churches and inhabitants	520	0.10 €	52.00 €
Costs of informational material			
Order forms	508	0.10 €	50.80 €
SmartMove brochure	508	0.00 €	0.00 €
Brochure "Zapraszamy na pokład!"	508	1.19€	604.52 €
Brochure "Rowerem do centrum Krakowa"	508	0.20 €	101.60 €
Brochure "Zaplanuj swoją podróż w domu!"	508	0.20 €	101.60 €
Timetable	164	0.10 €	16.40 €
Map	243	0.10 €	24.30 €
Personalized travel information and cost comparison PT-car	248	0.10 €	24.80 €
Information for Students	22	0.20 €	4.40 €
Information for Seniors	63	0.20 €	12.60 €
Leaflets about bike travelling benefits	508	0.00 €	0.00 €
Leaflets about PT information system in Krakow	508	0.00 €	0.00 €
Give away items			
Fluorescent elements for pedestrians	1016	0.61 €	619.76 €
Fluorescent elements for bikers	1016	0.29 €	294.64 €
Pen	508	0.34 €	172.72 €
Bag for material distribution	1300	0.19 €	247.00 €
Bag no. 2 for material distribution	224	0.00 €	0.00 €
Notebook	300	0.31 €	93.00 €

USB stick	300	3.23 €	969.00 €
Pocket light	500	1.26 €	630.00 €
Sweets	1016	1.08 €	1097.28 €
Mouse mat	500	1.24 €	620.00 €
Cover for PT ticket	500	0.66 €	330.00 €
Total sum of costs			30674.57 €

Table 3.4 shows the costs of active measures in Liszki District.

Table 3-4: The cost of active measures in Liszki District, Krakow

Cost item	Quantity	Unit price	Total [€]
Preparation and execution of the event			
Staff costs for 3 persons [person-hours]	15 hours	21,65 €	974.25 €
Information material			
Leaflets about bike travelling benefits	392	0.00 €	0.00 €
Brochure "Rowerem do centrum Krakowa"	300	0.20 €	60.00 €
Brochure "Zaplanuj swoją podróż w domu!"	300	0.20 €	60.00 €
Give away items			
Pencils	300	0.39 €	117.00 €
Fluorescent elements for pedestrians	284	0.61 €	173.24 €
Fluorescent elements for bikers	284	0.29 €	82.36 €
Pen	292	0.34 €	99.28 €
Sweets	284	1.08 €	306.72 €
T-shirt	100	0.00 €	0.00 €
Light for bike	50	0.00 €	0.00 €
CD	100	1.83 €	183.00 €
Total sum of costs			2055.85 €

4 The impact towards the participants

In this chapter the results of the follow-up interviews which were conducted after the active mobility campaign had been carried out are presented and - in case - compared with the ex-ante situation. These interviews included questions which were already raised before the campaign to illustrate the impact of the AMC campaign.

A great success was to obtain a group of 421 respondents participated in both stages of surveys: before and after the AMC-campaign (out of 508 participants in the first stage). This means that we managed to keep in touch with 83% of total respondents.

4.1 Respondents of the campaign

Table 4-1 shows the key parameter of the impact of the AMC campaign carried out in the Liszki District. 94.2% of the participants received information within the campaign, 75.3% feel better informed. As many as 58% are motivated to reduce car use, but only 4.5% really increased the usage of public transport. 94.5% of the participants talked with other people about the campaign, which means some multiplier effect outside of the households can be expected as well. But only 20% respondents want to participate in such campaigns in the future.

Table 4-1: Variables for reporting situation after AMC campaign in Liszki District, Krakow – specific questions (421 interviews)

Category	Variable name	Value
Specific questions after AMC campaign	People who feel better informed	75.3%
	People who feel motivated to reduce car use	58.0%
	People who increased the usage of pt	4.5%
	Average number of trips shifted from car to pt per person and week (for people increased pt usage)	0.3 trips per week per one person
	People who have talked about the campaign within the household	94.5%
	Have other household members made any changes in mobility?	61.8%
	People who more often use Internet trip planners	2.6%
	People who bought a season ticket during the campaign	1.2%
	People who agree to an extension of the campaign	20.0%

Figure 3-1 shows the percentage of people who knows bus lines operating in analysed area. On average, 32.3% of respondents recognise the bus lines, which previously did not know.

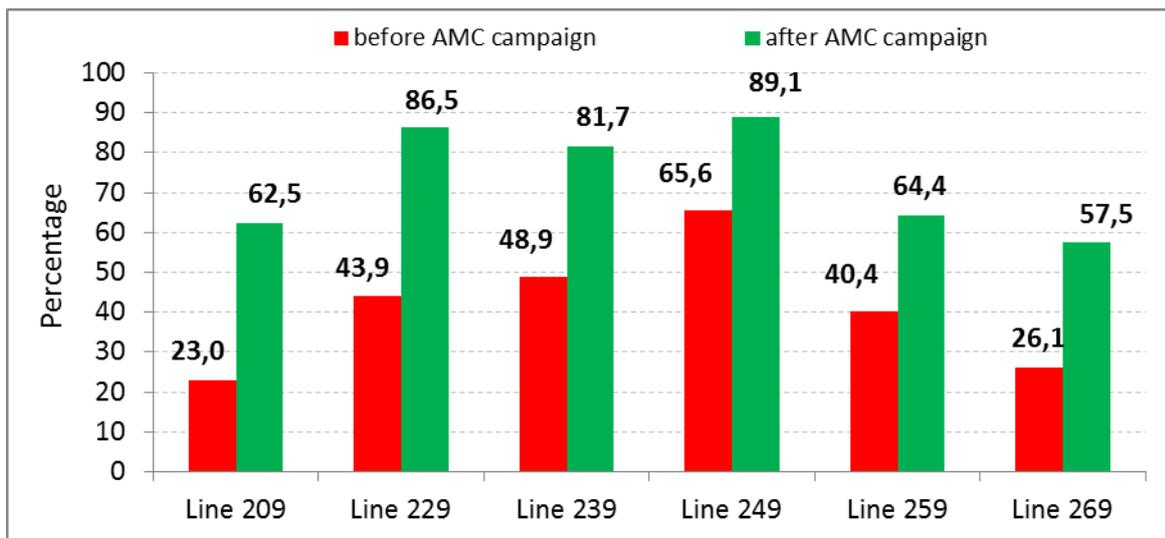


Figure 4-1: share of people who knows bus lines operating in analysed area

Table 4-2 shows the concrete reaction on the bus usage. Those people, who never used the lines, reacted on a smaller extent in comparison to the users, who only infrequently used the bus before the AMC campaign was launched. The average rating of the bus line was increased by obviously more frequent bus use.

Table 4-2: Variables for reporting situation after AMC campaign – bus line usage of respondents (421 interviews)

Category	Variable name	Before	After
Usage of line of respondents	People, who never use bus line 209, 229, 239, 249, 259 or 269	31.1%	29.0%
	People, use line 209, 229, 239, 249, 259 or 269 less than once a month	25.2%	21.6%
	People, use line 209, 229, 239, 249, 259 or 269 less than once a week	11.9%	14.0%
	People, use line 209, 229, 239, 249, 259 or 269 at least once a week	31.8%	35.4%
	Average rating of performance of line 209, 229, 239, 249, 259 or 269	7.61 out of 10 ¹⁾	8.11 out of 10 ¹⁾

¹⁾ Where 1 equals poor and 10 equals best performance

Figure 3-1 shows the ratings of considered bus lines in analysed area. On average, 32.3% of respondents recognise the bus lines, which previously did not know.

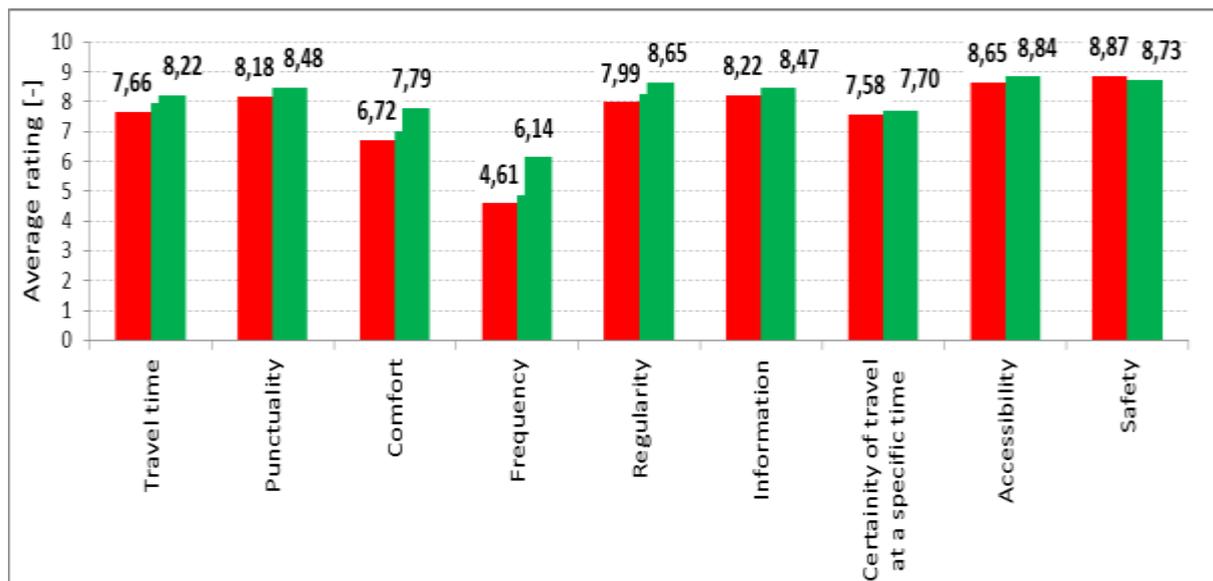


Figure 4-2: ratings of considered bus lines

Table 4-3 shows the distribution of reasons for not using the bus lines of those participants of the campaign, they have stated still not to use the public transport service in the region but receiving information about the bus lines. Most important barrier is higher level of convenience and higher speed of private car in comparison to the public transport.

Table 4-3: Classification of open answers - reasons for not using (less than 1 day in month) line 209, 229, 239, 249, 259 or 269

Reasons	n=409 responds from 287 people	[%] - of people have named this reason
Low quality of PT (punctuality, overcrowding)	5	1,2
No direct connection by PT	42	10,3
Buses are too rare (low frequency)	22	5,4
Expensive monthly tickets	4	1,0
Expensive single tickets	14	3,4
Unfavorable conditions to come to the bus stop	3	0,7
The nature of work requires the use of a car	42	10,3
Car / motorcycle is much more convenient	134	32,8
Car / motorcycle is much faster	121	29,6
Most often I use the bike	2	0,5
Other	20	4,9

Figure 4- shows the changes in the before and after situation of this group. Results are very similar in situations: before and after AMC-campaign. The biggest increase (5%) is only in case of the answer “car or motorcycle is much more convenient”.

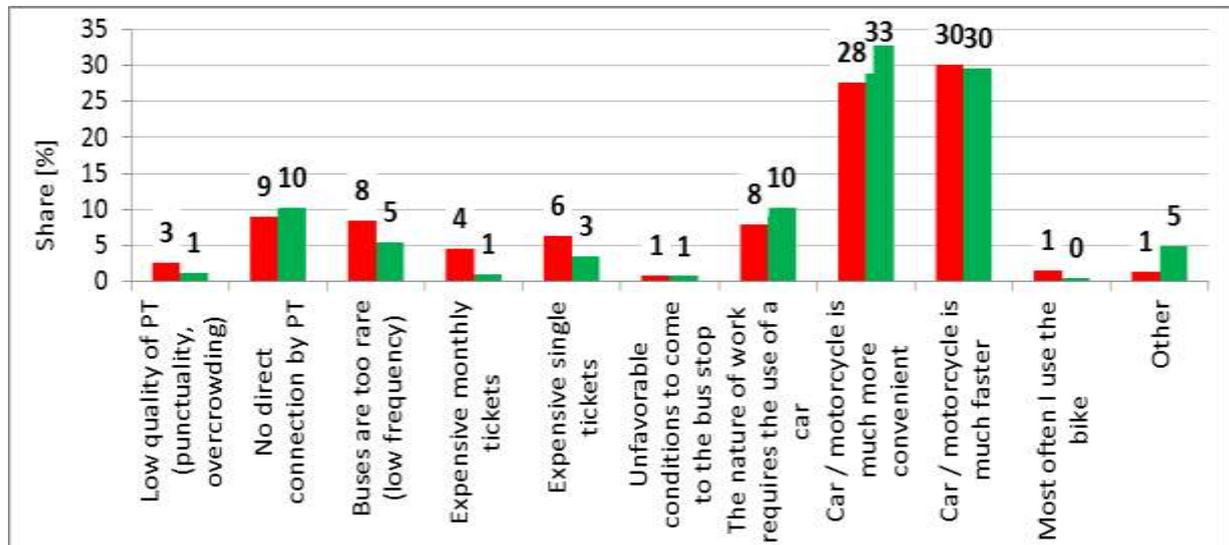


Figure 4-3: Reasons for not using (less than 1 day in month) bus line 209, 229, 239, 249, 259 or 269

Contrary to the figure above, the share of bus users were asked for their arguments for using the bus, which is shown in Table 4-4.

Table 4-4: Classification of open answers - reasons for using line after AMC line 209, 229, 239, 249, 259 or 269

Reasons	n=489 entries from 134 people	[%]- of people have named this reason
Sufficient frequency of buses	30	6,1
High punctuality	19	3,9
Attractive travel time	30	6,1
Direct connection	45	9,2
Attractive transfer time and conditions	26	5,3
High comfort	22	4,5
Close and/or good conditions for coming to the bus stop	31	6,3
Saving travel costs - cheap monthly tickets	54	11,0
Saving travel costs - cheap single tickets	25	5,1
I do not have access to a car	126	25,8
Expensive parking in the city or lack of parking options	42	8,6
Other	39	8,0

Most important reason of public transport using is very symptomatic: “I do not have access to a car” – this is almost 26% of answers. Second is more optimistic: “Saving travel costs - cheap monthly tickets” (11%). Figure 4- shows the changes in the before and after situation of this group. The most important reason for using the bus was confirmed (from 22% to 26%). In general, during second stage of surveys, people gave less number of answers than in first stage.

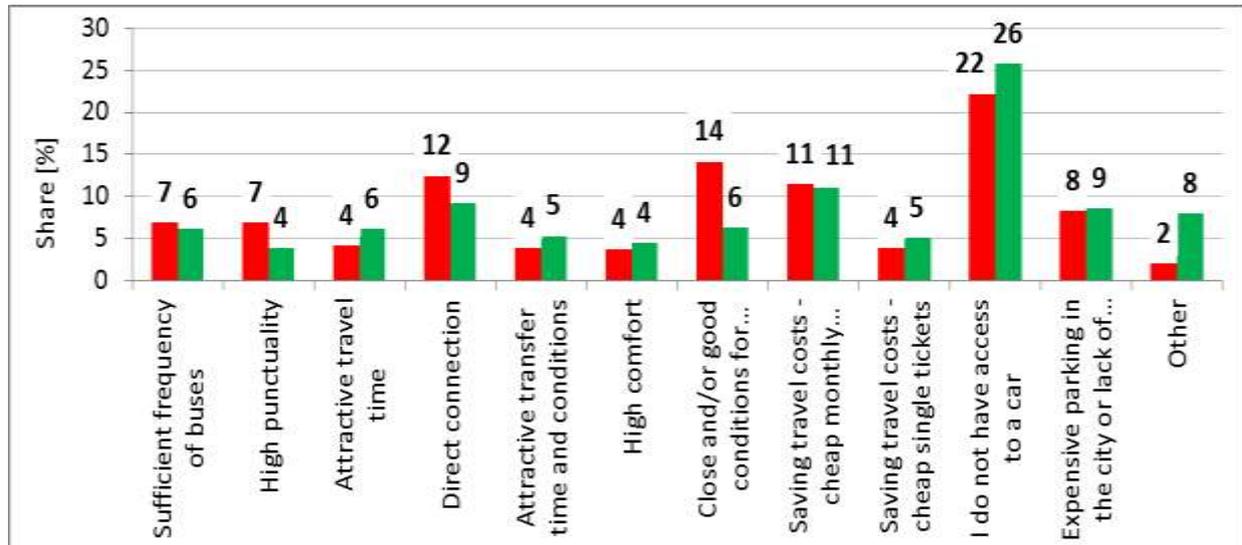


Figure 4-4: Reasons for using line 209, 229, 239, 249, 259 or 269

Table 4-5 shows the distribution of the suggestions for improvements of the service – in a group of non PT-users. Answers were very divided, the biggest number of them states “I will not use PT” (42%).

Table 4-5: Classification of open answers - improvement suggestions for the PT services after AMC (non PT-users)

Improvement suggestions	n=409 responds from 287 people	[%]- of people have named this reason
I will not use PT	144	42,0
More courses (higher frequency)	29	8,5
Higher punctuality	4	1,2
Shorter travel time	6	1,7
More direct PT connections	25	7,3
Greater comfort inside PT vehicle	13	3,8
Shortening the length or improve the conditions for coming to the bus stop	0	0,0
Better infrastructure of bus stops	1	0,3
Cheaper monthly tickets	16	4,7
Cheaper single tickets	28	8,2
Difficult parking in the city	4	1,2
More expensive parking in the city	4	1,2
"Park and Ride" opening	14	4,1
"Bike and Ride" opening	1	0,3
Other	54	15,7

Higher frequency and cheaper single tickets would be also desired. The comparison with the situation before as shown in Figure 4-

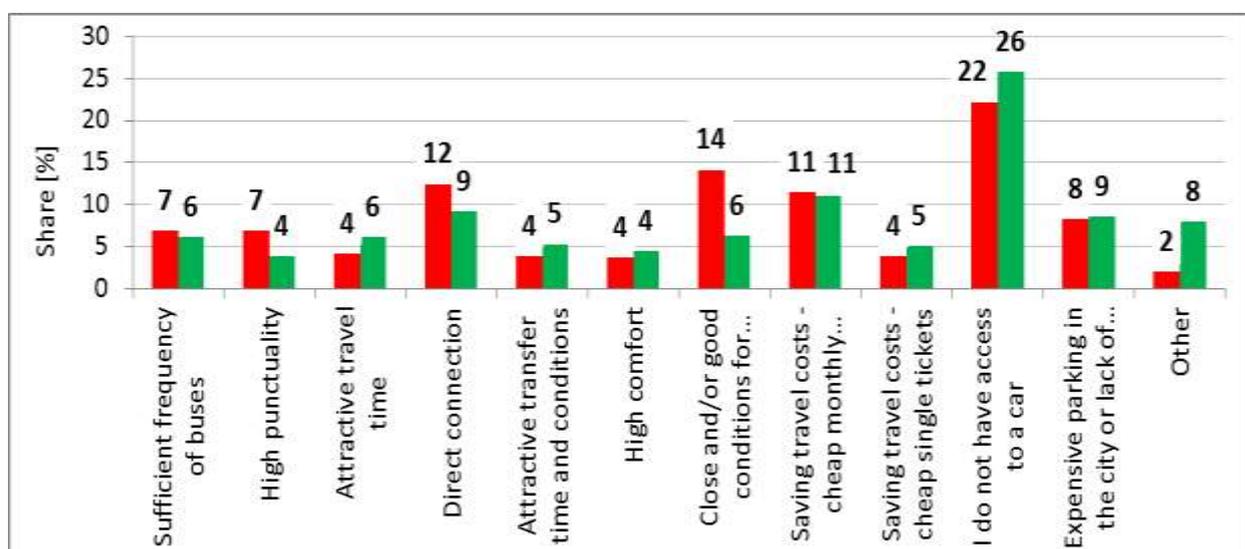


Figure 4-5: Improvement suggestions (PT non-users)

About similar possibilities of PT improvement, were also asked frequent PT-users. The results are shown in **Error! Reference source not found.** and **Error! Reference source not found.**

Table 4-6: Classification of open answers - improvement suggestions for the PT services after AMC (current PT-users)

Improvement suggestions	n=489 entries from 134 people	[%]- of people have named this reason
I will not use PT	144	42,0
More courses (higher frequency)	29	8,5
Higher punctuality	4	1,2
Shorter travel time	6	1,7
More direct PT connections	25	7,3
Greater comfort inside PT vehicle	13	3,8
Shortening the length or improve the conditions for coming to the bus stop	0	0,0
Better infrastructure of bus stops	1	0,3
Cheaper monthly tickets	16	4,7
Cheaper single tickets	28	8,2
Difficult parking in the city	4	1,2
More expensive parking in the city	4	1,2
"Park and Ride" opening	14	4,1
"Bike and Ride" opening	1	0,3
Other	54	15,7

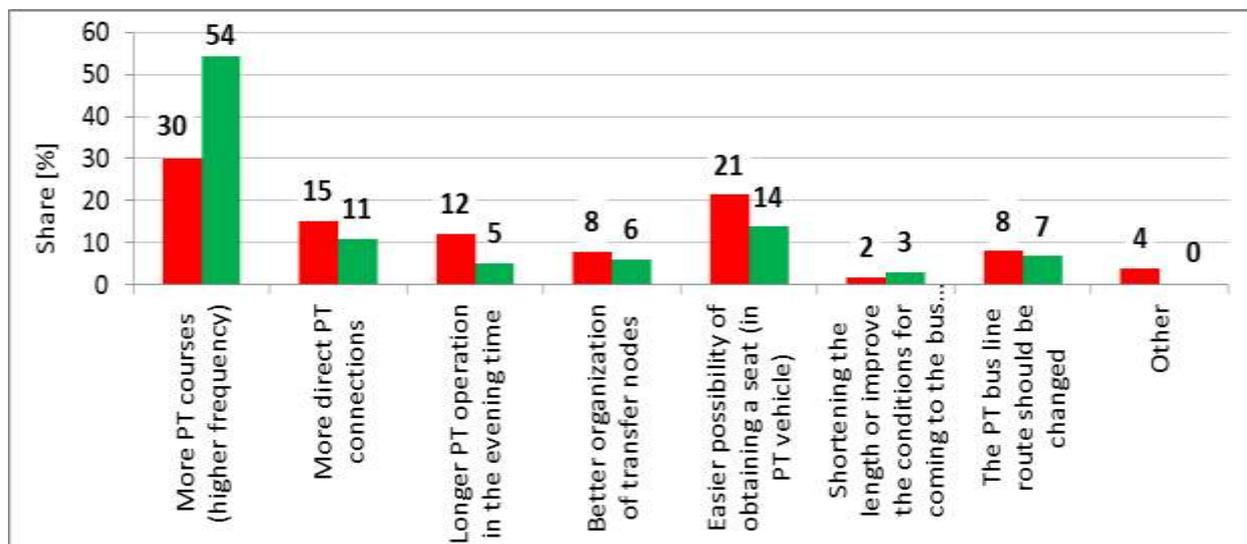


Figure 4-6: Improvement suggestions (current PT non-users)

5 Requested material by the participants

Table 5-1 illustrates the requests for the proposed information items, both standardised and individualised as well as for the giveaway items (according to the order form).

Table 5-1: Variables for reporting requests of participants

Category	Name	Description	Number of distributed items
Information material	Order forms		508
	SmartMove brochure		508
	Brochure "Zapraszamy na pokład!"	General information about transportation system in Krakow: bus and tram lines, ticket prizes, maps, etc.	508
	Brochure "Rowerem do centrum Krakowa"	Information about the bike usage in analysed area	808
	Brochure "Zaplanuj swoją podróż w domu!"	Information about the "Jak dojadę?" – Internet tool for trip planning	808
	Timetable	Personal timetable of the Bus services	164
	Map	Map with places of interest in surrounding area and PT stops	243
	Personalized travel information and cost comparison PT-car	Personalized travel information and cost comparison PT-car	248
	Information for Students	Information for Students about night bus lines and ways to get students' places	22
	Information for Seniors		63
	Leaflets about bike travelling benefits		900
	Leaflets about PT information system in Krakow		508
Giveaway items			
	Fluorescent elements for pedestrians		1300
	Fluorescent elements for bikers		1300
	Pen		800
	Bag for material distribution	SmartMove bag	1300
	Bag no. 2 for material distribution	University bag	224
	Notebook		300
	USB stick		300
Pocket light		500	

	Mouse mat	Mouse mat with feeder system network	500
	Sweets		1300
	pencils		300
	Cover for PT ticket		500
	T-shirt	T-shirt with tram transport elements	100
	Light for bike		50
	CD	CD with educational fairy tale for kids about the sustainable mobility	100

The most ordered documents are leaflets about bike travelling and the brochures with the information about the bike usage in analysed area and about the “Jak dojadę?” – Internet tool for trip planning. There were delivered significantly more leaflets and brochures than project participants. Personal travel information was delivered to nearly 50% participants (248 persons).

6 Public transport demand data

Besides the interviews with the participants the demand (and any changes) is evaluated by measuring the performance of the particular bus line in comparison to reference values. This approach allows to cross-check the data generated from the participants. Measurements of bus occupancies were carried out only on the sections located in implementation area in time period: 06:00-11:00. Obtained passengers' streams were recalculated for whole days, with taking into account the results from official measurements led by the PT organizer in 2014. It is important, that in this case – passenger streams are equal to the numbers of boarding passengers in the analysed area. Comparison of measurement results (situations: before and after AMC-campaign) is shown in Table 6-1.

Table 6-1: Variables for reporting the public transport demand and supply

Category	Variable label	Before	After	Unit
Average characteristics of line 209 (Morawica – Salwator)	average travel time (terminal to terminal)	33	33	[min]
	average travel time (Kryspinów - Salwator)	16	16	[min]
	average length of bus line (terminal to terminal)			[km]
	average number of stops (terminal to terminal)	28	28	[number]
	total number of links per workday, both directions	30	30	[number of links]
	average passengers per day (both ways)	518	562	[pass.]
Average characteristics of line 229 (Kamień – Salwator)	average travel time (terminal to terminal)	54	54	[min]
	average travel time (Liszki - Salwator)	19	19	[min]
	average length of bus line (terminal to terminal)			[km]
	average number of stops (terminal to terminal)	39	39	[number]
	total number of links per workday, both directions	54	54	[number of links]
	average passengers per day (both ways)	907	860	[pass.]
Average characteristics of line 239 (Jeziorzany – Salwator)	average travel time (terminal to terminal)	35	35	[min]
	average travel time (Liszki - Salwator)	19	19	[min]
	average length of bus line (terminal to terminal)			[km]
	average number of stops (terminal to terminal)	27	27	[number]
	total number of links per workday, both directions	50	50	[number of links]
	average passengers per day (both ways)	1058	1213	[pass.]
Average characteristics of line 249 (Czernichów –	average travel time (terminal to terminal)	52	52	[min]
	average travel time (Piekary - Salwator)	22	22	[min]
	average length of bus line (terminal to terminal)			[km]

Salwator)	average number of stops (terminal to terminal)	39	39	[number]
	total number of links per workday, both directions	54	54	[number of links]
	average passengers per day (both ways)	1134	983	[pass.]
Average characteristics of line 259 (Czernichów – Salwator)	average travel time (terminal to terminal)	48	48	[min]
	average travel time (Piekary - Salwator)	15	15	[min]
	average length of bus line (terminal to terminal)			[km]
	average number of stops (terminal to terminal)	37	37	[number]
	total number of links per workday, both directions	24	24	[number of links]
	average passengers per day (both ways)	259	393	[pass.]
Average characteristics of line 269 (Czułówek – Salwator)	average travel time (terminal to terminal)	51	51	[min]
	average travel time (Kryspinów - Salwator)	16	16	[min]
	average length of bus line (terminal to terminal)			[km]
	average number of stops (terminal to terminal)	37	37	[number]
	total number of links per workday, both directions	50	50	[number of links]
	average passengers per day (both ways)	295	324	[pass.]

Taking into account only direction to Salwator (more interesting during morning peak period, when there are more much trips from Liszki District to Krakow than in the second direction), average occupancy of a bus increases from 39 to 46 passengers (20%). But lot of additional passengers were started trips on the previous sections, outside analysed area. Number of passengers in the section common for all analysed bus lanes increases about 3.8%.

7 Data processing and reporting

7.1 Common IEE performance indicators

The information about changes in travel behaviour based on the before and after survey and the average trip length per person, average fuel consumption per vehicle and average CO₂-emission per vehicle form the basis for calculating changes in fuel-consumption and CO₂-emissions:

$$\text{saved fuel consumption} \left[\frac{l}{a} \right] = \text{travel milage saved [km]} \times \text{average fuel consumption per km} \left[\frac{l}{km} \right]$$

and

$$\text{saved CO}_2 \text{ emission} \left[\frac{t}{a} \right] = \text{travel milage saved} \left[\frac{km}{a} \right] \times \text{average CO}_2 \text{ per km} \left[\frac{t}{km} \right]$$

and

$$\text{Travel mileage saved} \left[\frac{km}{a} \right] = \text{average trip length per person} \left[\frac{km}{a} \right] \times \text{number of saved trips per year [-]}$$

and

$$\begin{aligned} \text{saved trips per year [-]} = \\ (\text{number of car trips per week before} - \text{number of car trips per week after}) \times 52 \end{aligned}$$

Four scenarios are calculated (Table 7-1):

- (1) The saved trips of the participants of the AMC campaign
- (2) Crossing up, if all contacted persons would participate
- (3) Crossing up, if the whole population of the implementation area would participate
- (4) Crossing up, if the whole population of the region would participate

Table 7-1: Table IEE performance indicators in Liszki District, Krakow

Scenario	Persons	Number of saved car trips per week	Number of saved car trips per year	Average trip length [km]	Travel mileage saved per year [km]	average fuel consumption per kilometre [l/km]	average CO ₂ -emission per kilometre [t/km]	Saved fuel-consumption [l/a]	Saved CO ₂ -emissions [t/a]
(1) participants	421	126	7085	13,2	93528	0,074	175	6921	16,37
(2) All contacted	1950	585	32819	13,2	433204	0,074	175	32057	75,81
(3) Whole population of the implementation area (Liszki District)	16500	4950	277695	13,2	3665574	0,074	175	271252	641,48

The direct effect because of the AMC campaign in Krakow is a saving of 16 tons of CO₂ per year – done only by AMC-campaign participants. In case of all inhabitants of Liszki District – it is about 641 tons.

7.2 Evaluation of individual targets at local implementation area level

Additionally to the common evaluation procedure described above, each region defined strategic objectives, key output and quantifiable performance indicators of the individual AMC campaigns (see Table 7-2 and Table 7-3).

Table 7-2: Implementation area specific objectives and key outputs – Liszki District, Krakow

Specific objectives proposed according to description of work	AMC campaign achievements	Method of evaluation
To decrease road traffic induced CO ₂ -emissions	On average 0.3 trips were shifted by average participant	Interviews, traffic volumes and passenger counts
Increase the number of trips with PT using	4.5% of participants which are using the bus more often	Interviews, passenger counts
Building of an effective Internet system for passenger information	Adaptation of the existing system, 49% of inhabitants is using Internet planning trip system	Interviews
Specific key outputs proposed according to description of work	AMC campaign achievements	Method of evaluation
AMC-campaign conducted with at least 500 participants	508 participants (from 508 households) took part in AMC-campaign, 421 persons were interviewed before and after campaign	Recording at data base
Accompanying active measure packages conducted with at least 200 participants	508 visitors in total were directly contacted by SmartMove project staff in all active measures	Counting of visitors

Table 7-3: Impacts, performance indicators and quantified targets

Impacts, performance indicators and quantified targets	AMC campaign achievements	Method of evaluation
Increase of PT users: at least 10 % of the advised persons use PT more often	12.8% participants stated to have increased their PT use (4.5% of additional PT trips)	Interviews
Increased number of passengers satisfied with the PT operation: at least 5%	46% participants are more satisfied, 43% evaluate PT services for minimum 8/10	Interviews
Increase the number of trips with PT use: at least 3%	4.5% additional PT trips	Interviews, measurements
Increase the number of people planning travels with dynamic information on the Internet: at least 7%	7.1% of people planning travels with dynamic information on the Internet	Interviews

Generally, the envisaged objectives and the quantified targets are reached within the AMC campaign.

8 Summary and conclusion

The ex post report on the Krakow implementation region (Liszki District, Krakow) gives an overview on the process, the costs and the impact of the AMC campaign implemented.

The response of the dialogue marketing part of the campaign was 26% of all contacted households. Of the 508 participants recruited in first stage of surveys (before AMC-campaign) – 421 took part also in the last stage of the AMC-campaign. This is a very big success in the Polish conditions

After AMC-campaign, 75.3% of inhabitants feel better informed, 49% of people use Internet tools for planning trips (7.1% new Internet planning trips users).

The impact of the campaign on the number of trips undertaken PT is not impressive (only 4.5% PT additional trips and 12.8% people declared more often use of PT services), but the declared results of the project have been achieved.

However, since the length of the trip from the area to the city centre is significant (average distance: 13.2 km), achieved a significant reduction in emissions: saved fuel consumption on the level of 6921 l/year and 16.4 tons of saved CO₂ emissions – only in group of AMC-campaign participants. The extension of the results onto whole Liszki District area gives much better effects: 271 thousands of litres saved fuel consumption and 641,5 tons of saved CO₂ emissions.

9 References

Klementschnitz R., Roider O. (2015): Increasing peoples' awareness and use of public transport through active mobility consultancy with focus on feeder systems (SmartMove): Instruction for Local Evaluation Plans - Deliverable D6.1. Funded by: Intelligent Energy Europe Programme by the European Union, 31 pages