

# Ex post evaluation - Area of Kreis Euskirchen

## Deliverable 6.3

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**April 2016**

Contract N°: IEE/12/970/S12.670555

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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 CO<sub>2</sub> 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 Kreis Euskirchen no significant changes of the framework conditions during the implementation of the AMC campaign were observed. The public transport supply remained basically unchanged between spring and autumn 2015. The only changes are based on typical seasonal transport, such as some bus routes mainly serving schools did not run during summer holidays. Unfortunately the service of Deutsche Bahn, which operates the two train lines in Kreis Euskirchen, had considerable limitations during spring, summer, and autumn 2015 which probably influenced the overall image of PT in the region.

As Kreis Euskirchen is a summer and autumn destination for external visitors especially for wanderers, this could result in a bigger number of bus passengers during this time, which could influence the results of the passenger counting. Typically these touristic visitors will arrive on weekends and the influence during weekdays will be smaller. To minimize these effects we compared counts of complete January 2015 and complete January 2016.

The prices for the public transport kept unchanged, but the price for fuel at petrol stations significantly decreased during the campaign. The road infrastructure for cars, cyclists and pedestrians remained unchanged in the region. The arrival of refugees in the region was of minor significance. Nevertheless, possible external effects can be expected which could cause an impact on the results of the AMC campaign, but these are of minor significance and will be discussed, when analysing the results of the AMC campaign in the relevant chapters of this document.

### 3 Process evaluation and cost of the AMC campaign

The process evaluation includes the respond 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). After receiving to low response during the mail-out mail-back based campaign, all those households were contacted by telephone, where a telephone number was available in the address data sets or via electronic telephone book recherche.

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

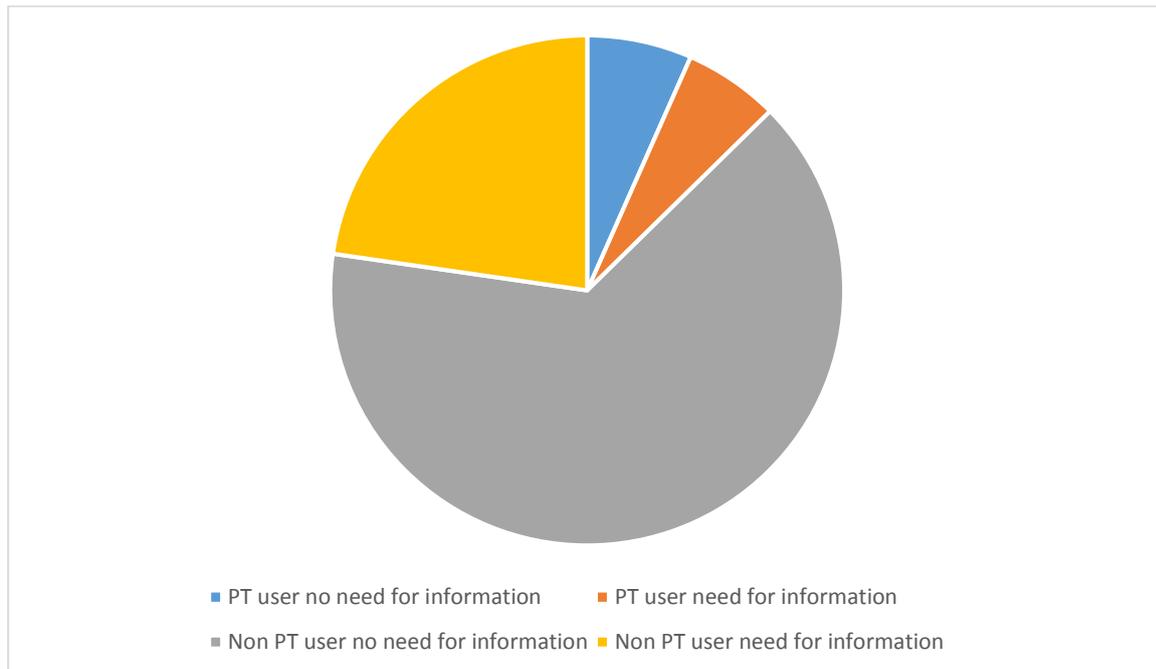
Category	Variable name	Number of households	Number of persons
Response	People contacted with initial letter (gross sample)	5300	11543
	Persons to which communication could be established via telephone or as having returned the answer post card	527	1148
	Persons, who refused to response with no further information at all	8	17
	Persons, who ordered an info package but were not willing to participate in the campaign	21	44
	<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 (9,4% of all contacted), of which:	498	1085
	Persons with no need for further information (PT-users)	33	69
	Persons with no need for further information (non PT-users)	322	676
	Persons with need for further information (PT-users)	30	63
	Persons with need for further information (non PT-users)	113	237

Including both strategies a total response rate of 9,4% was achieved. As a special group 21 persons ordered (and got) the information package but were not willing to participate at the campaign at all. Additional 97 information packages were given out

through active measure bustraining. In total, 261 information packages were given out to people, who ordered them in frame of the SmartMove campaign.

Figure 3-1 shows the segmentation of the participants of the AMC campaign, distinguished between users and non-users of the public transport system in the region.

**Figure 3-1: Segmentation of participants of the AMC campaign**



### 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, regional mobility agency, bus operators, and public transport consortium) worked smoothly.

Lessons learned:

- Check, if all material you plan to offer is available, respectively organise printing yourself,
- Check, how the time line of the campaign fits to the current developments of the (public) transport market in your area, to avoid a need of updating the information or distributing out dated information to the participants.

### **General contact phase of target persons**

It turned out, that the mail-out mail-back strategy created too poor response. A second wave of announcement letters were send out to fulfil the envisaged number of participants. Additionally phone calls were made to remind the people, who have not reacted to the announcement letter so far and explain once more the idea of the AMC campaign. Therefore, the duration of the campaign was extended as two telephone calls were integrated in the campaign, which needed extra time and extra effort. In addition to the announcement letters and reminder calls people were recruited during active measure “Bustraining” where the participants were informed and asked.

#### Lessons learned:

- Without direct contact on the phone, the response rate is too poor to stimulate significant behavioural impact in the region. If the majority of the targeted persons cannot be motivated to participate, the impact of the campaign may be too small.
- Recruitment at active measures which went in line with the dialogue marketing is a successful way to get in contact with your target group.
- Recruitment during events may be successful if you offer interesting, individual and helpful information for your target group.
- The success depends strongly on the composition of the visitors. The expected visitors of the event should be native to the village or the local region. Usually the promoter of the event got such information.

### **Segmentation phase: Identifying the information needs**

Besides the segmentation in users of public transport and non-users both with and without information needs, further segmentation took place, which allowed to adept the order form to the needs of the contacted households (e.g. are there pupils in the household?; Is there a car available in the household?). The basic segmentation can be seen in Figure 3-1 above. To some of the respondents no contact could be established via the phone after their response to the announcement letters. From this group no information was available, if they are users or non-users of the public transport system, if the additionally ignore the short questionnaire on the order form.

#### Lessons learned:

- Segmentation could not be carried out for all participants, if a surface mail contact was established only and the corresponding information was not filled in in the order-form. However this 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.
- There was only little effect on the response, if segmentation could not be carried out in advance before sending out the order forms.

**Individualised contact phase: Send the service form**

Service forms were sent to the participating households or given during active measures in the region. All service forms received could be treated within the campaign. All material was available until the end of the project.

Lessons learned:

- Sending out the announcement letters and launching the telephone contacts were not made at once, but sub region by sub region. This caused a more homogenous work flow over time which allowed reacting on the requests from the participants within a short time with two persons working 10 hours per week only.

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

The information packages were delivered to the people who ordered them just in time. The materials were stored at the agency responsible for the dialogue marketing, and the packages were packed just as they were ordered. The packages were sent out by DHL (a biggest German mail and parcel service) or were given during active measures. All information packages could be delivered at site either personally or by deposit at the door. No unknown or unclear address was recorded.

Lessons learned:

- All information packages could be delivered either personally or at the door of the participating households. There was no need for delivery via surface mail (which was foreseen, if delivery at site would have been impossible).
- Giving out information packages during active measures will be long lasting because of the individual consulting.

### 3.3 Implementation process and response of accompanying active measures

Based on discussion with local stakeholders in the beginning of the project and own research, the events the SmartMove project should participate with its active measures were fixed as early as possible. Starting with the EnerKom in Gemünd in March 2015, the Bauernmarkt in Schleiden and the Kräutermarkt in Bad Münstereifel followed in May. In September were planned the Straßenfest in Hellenthal and one day at the Michaelsfest in Bad Münstereifel. Unfortunately the Straßenfest in Hellenthal was cancelled by the organisers, so one additional day at the Michaelsfest in Bad Münstereifel was added.

All events were located in the relevant municipalities, the estimated visitors were mainly local inhabitants, and except for the Bauernmarkt in Schleiden all events were well-attended. At all events the information desks, chairs, tents, self-inflating event-pillar, and tabloid were used from VRS event infrastructure free of charge. Table 3-2 describes exemplarily the Michaelsfest at Bad Münstereifel.

**Table 3-2: Variables for reporting the process of the accompanying active measures: Michaelsfest at Bad Münstereifel**

Category	Variable label	
<b>Type of event</b>	description of event	Michaelsfest at Bad Münstereifel
	type of event (presentation, discussion, demonstration, interactive demonstration) according to active measures guidelines	Information stand, active contacts to visitors, recruiting of participants and delivering information at site, bustraining
	Alone standing event/event in combination with .....	The Michaelsfest take place two days in September, offers local products, local handcraft and various items
	Dates and duration of event	26.09.2015 09:00-19:00 27.09.2015 10:00-19:00
	People invited	Announcements at local newspaper, local City homepage, and radio by the organisers of the event
	People participated	3000+ (both days)
	People personally contacted at event	400+ (both days)
	People within the target group	250+ (both days)
	People recruited for AMC (if foreseen)	
	Description of implementation process (story of success, problems occurred, strategies to overcome problems etc.)	The information stand was placed in the main street of Bad Münstereifel, next to famous "Werther Tor" where the bus was placed. All information (and Give-Aways) about timetable, tariff and SmartMove-project was offered to the contacted persons, recruitments were only made with visitors residing in one of the municipalities where SmartMove was active. Some visitors came from other areas but are visiting the SmartMove implementation area frequently. Which means a lot of information material was distributed to them as well.

### 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 Kreis Euskirchen staff cost, parts of the cost for obtaining address data (partly they were provided by the municipalities), the paper and stamps for communication, the individual documents printed on request and the giveaway items were additional costs within the campaign. Some standardised brochures used were printed in any case and provided by the VRS, which reduced the cost for the campaign.

**Table 3-3: Costs of dialog marketing campaign (full cost calculation)**

Cost item	Quantity	Unit price	Total [€]
<b>Developing the process:</b> creating database, composing announcement letters and response cards, preparing, collecting and printing of information material and give away items, conducting dialogue agency			
Staff costs [person-hours]	254 hours	37.00 €	9398.00 €
Staff costs [person-hours]	81 hours	51.00 €	4131.00 €
<b>Obtaining data</b> of inhabitants of the implementation area (addresses)			
Data set (incl. doublet cross check)	3000 addresses	0.32 €	945.00 €
<b>Conducting the campaign:</b> printing and sending letters and respond cards, creating and compiling the required information material, conducting ex-ante-interviews			
Agency costs	1	9280.04 €	9280.04 €
<b>Costs for announcement letters and respond cards</b>			
Mailing	1	2299.46 €	2299.46 €
Postal charges	1	1086.40€	1086.40 €
Respond cards	8000 copies	0.05€	395.00 €
<b>Costs of informational material</b>			
Timetable "Kreis Euskirchen" <sup>1)</sup>	117 pieces	0.00 €	0.00 €
Timetable Mini, various lines <sup>1)</sup>	275 pieces	0.00 €	0.00 €
Timetable "Hellenthal, Kall, Schleiden" <sup>1)</sup>	137 pieces	0.00 €	0.00 €
Schematic map "Kreis Euskirchen" <sup>1)</sup>	117 pieces	0.00 €	0.00 €
Topographic map "Kreis Euskirchen" <sup>1)</sup>	150 pieces	0.00 €	0.00 €
Brochure "Tickets" <sup>1)</sup>	117 pieces	0.00 €	0.00 €
Brochure "Aktiv60" <sup>1)</sup>	96 pieces	0.00 €	0.00 €
Brochures tariff (10 various items) <sup>1)</sup>	579 pieces	0.00 €	0.00 €
Brochure "Mobil auf ganzer Linie"	156 pieces	1.06 €	0.00 €
Map "Mobil in Bad Münstereifel"	32 pieces	0.79 €	25.28 €

Map „Mobil in Hellenthal“	58 pieces	0.79 €	45.82 €
Map “Mobil in Kall”	35 pieces	0.79 €	27.65 €
Map “Mobil in Schleiden”	32 pieces	0.79 €	25.28 €
<b>Give away items</b>			
Spectacle cases	108 pieces	3.13 €	338.04 €
Reading glasses <sup>1)</sup>	108 pieces	0.00 €	0.00 €
Cleaning tissue for glasses	108 pieces	0.90 €	97.20 €
Magnets	108 pieces	0.95 €	102.06 €
<b>Total sum of costs</b>			<b>28196.26 €</b>

<sup>1)</sup> These items were provided by Verkehrsverbund Rhein-Sieg GmbH for free. No costs are listed in this table because they are not charged for the SmartMove-campaign.

During the SmartMove-campaign at Kreis Euskirchen different active measures were held. The costs for these active measures varied. The bustrainings were carried out in partnership with a local bus operator, the Regionalverkehr Köln (RVK), which set the bus, and the driver/consultor. Two employees of the VRS organised the bustrainings and informed during the training about the (local) PT. The mobility checks were held together with an agency, which organises the check and keeps the records. The participation at local events was organised by the VRS and was partly held in combination with the RVK if a bustraining was offered besides the information desk. The two citizen audits were organised by the VRS.

Table 3.4 shows exemplary the costs for a stand-alone-bustraining in Hellenthal as a full cost calculation. The costs for the other stand-alone-bustrainings varied just a little, depending on the costs to the catering and the costs for guided tours. The costs for each activity are comparable as employed staff is the main cost factor and the duration of the events are comparable. As the number of visitors was more or less similar the number of items distributed was more or less similar as well. The bustraining as a stand-alone-event was held five times.

**Table 3-4: Exemplary cost of active measure “Bustraining Hellenthal” (08.05.2015)**

Cost item	Quantity	Unit price	Total [€]
<b>Preparation and execution of the event</b>			
Staff costs for 2 persons [person-hours]	15 hours	37,00 €	555,00 €
Bus, driver, conductor	1	300,00 €	300,00 €
Guidance tour	1	20,00 €	20,00 €
Catering at bus tour (“Kaffee & Kuchen”)	1	113,78 €	113,78 €
<b>Information material</b>			
Bag <sup>1</sup>	20 pieces	0.00 €	0.00 €

Timetable “Kreis Euskirchen” <sup>1</sup>	20 pieces	0.00 €	0.00 €
Timetable Mini, various lines <sup>1</sup>	80 pieces	0.00 €	0.00 €
Brochure “SmartMove”	20 pieces	0.00 €	0.00 €
Brochure “Aktiv60”	20 pieces	0.00 €	0.00 €
Topographic map “Euskirchen”	20 pieces	0.00 €	0.00 €
Brochures Various items	40 pieces	0.00 €	0.00 €
Brochure “Mobil auf ganzer Linie”	20 pieces	1.06 €	21.20 €
<b>Give away items</b>			
Grape-sugar	40 pieces	0.15 €	6.00 €
Cleaning tissue for glasses	20 pieces	0.90 €	18.00 €
Magnets	40 pieces	0.95 €	38.00 €
<b>Total sum of costs</b>			<b>1071.98 €</b>

<sup>1)</sup> These items were provided by Verkehrsverbund Rhein-Sieg (VRS) for free. No costs are listed in this table because they are not charged for the SmartMove-campaign.

Additional bustrainings were also offered along with the participation at local events. All participations at local events were held with an information desk, tent, roll-up, self-inflating event-pillar, information about the project SmartMove, and all sorts of brochures, timetables, and information sheets about the local and regional PT. Table 3-5 show exemplary the cost of a participation at the Michaelsmarkt in Bad Münstereifel. The participation at the event includes three bustrainings.

In more or less the same way participation at four events was held (Bauernmarkt Schleiden, Kräutermarkt Bad Münstereifel, Michaelsmarkt Bad Münstereifel (2 days)). A stand, tent and other necessary equipment were provided by VRS free of charge. Brochures and timetables were provided by VRS, too, which reduced the cost per event a little. The costs for each activity are comparable as employed staff is the main cost factor and the duration of the events are comparable. As the number of visitors was similar the number of items distributed was more or less similar as well.

**Table 3-5: Exemplary cost of active measure “Participation at local event Michaelsmarkt in Bad Münstereifel” (26.09.2015) incl. three bustrainings**

Cost item	Quantity	Unit price	Total [€]
<b>Preparation and execution of the event</b>			
Staff costs for 1 person [person-hours]	12 hours	52,00 €	624,00 €
Staff costs for 2 persons [person-hours]	32	37.00 €	1184.00 €
Bus, driver, conductor (bustraining)	1	300,00 €	300,00 €
Market space rental	1	50.00 €	50.00 €
<b>Information material</b>			
Brochure displays, various sizes	1	203.72 €	203.72 €
Brochure “SmartMove”	64 pieces	0.00 €	0.00 €
Timetable “Kreis Euskirchen” <sup>1</sup>	86 pieces	0.00 €	0.00 €
Timetable Mini, various lines <sup>1</sup>	287 pieces	0.00 €	0.00 €
Schematic map “Kreis Euskirchen” <sup>1</sup>	113 pieces	0.00 €	0.00 €
Topographic map “Kreis Euskirchen” <sup>1</sup>	39 pieces	0.00 €	0.00 €
Map “Mobil in Bad Münstereifel”	246 pieces	0.79 €	194.34 €
Map “Mobil in Kall”	28 pieces	0.79 €	22.12 €
Map “Mobil in Hellenthal”	17 pieces	0.79 €	13.43 €
Map “Mobil in Schleiden”	19 pieces	0.79 €	15.01 €
Brochure “Tickets” <sup>1</sup>	78 pieces	0.00 €	0.00 €
Brochure “Aktiv60” <sup>1</sup>	108 pieces	0.00 €	0.00 €
Various brochures tariff <sup>1</sup>	67 pieces	0.00 €	0.00 €
Brochure “Bustraining” <sup>1</sup>	46 pieces	0.00 €	0.00 €
Brochure “Mobil auf ganzer Linie”	124 pieces	1.06 €	131.44 €
<b>Give away items</b>			
Spectacle Cases	107 pieces	3.13 €	334.91 €
Grape-sugar	700 pieces	0.15 €	105.00 €
Cleaning tissue for glasses	156 pieces	0.90 €	140.40 €
Magnets	143 pieces	0.95 €	135.85 €
<b>Total sum of costs</b>			<b>3454.22 €</b>

<sup>1)</sup> These items were provided by Verkehrsverbund Rhein-Sieg (VRS) for free. So there are no costs listed in this table because they are not charged for the SmartMove-campaign.

## 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. In Kreis Euskirchen were two ex-post interviews held. The first one with 221 participants, the second one with 102 participants.

### 4.1 Respondents of the campaign

Table 4-1 shows the key parameter of the impact of the AMC campaign carried out in four municipalities Bad Münstereifel, Hellenthal, Kall, and Schleiden in Kreis Euskirchen. 90% of the participants received information within the campaign, they were not aware of before and another 28% feel motivated to reduce the car use. 25% of participants increased their public transport usage, which corresponds with an average shift of 1.5 car trips per week to public transport. As the focus of the campaign was the full household, interviewed participants were asked, if the whole household was involved actively in the campaign, which was confirmed by 51% and 13% of the household members made changes in their mobility as well. Furthermore 38% of the participants talked with other people than household members as well, which means multiplier effect outside of the households can be expected as well. The experience with the campaign was welcomed in general, 91% stated to support the extension of this campaign.

**Table 4-1: Variables for reporting situation after AMC campaign – specific questions (102 interviews)**

Category	Variable name	Value
Specific questions after AMC campaign	People who feel better informed	90%
	People who feel motivated to reduce car use	28%
	People who increased the usage of PT	25%
	Average number of trips shifted from car to PT per person and week (for people increased PT usage)	1.52 trips per week
	People who have talked about the campaign within the household	51%
	Have other household members made any changes in mobility?	13%
	People who have talked about the campaign with other persons than household members	38%
	People who bought a season ticket during the campaign	10%
	People who agree to an extension of the campaign	91%

Table 4-2 shows the concrete reaction on the bus usage. Those people, who never used the lines, reacted considerably on a smaller extent in comparison to the users, who only infrequently used the bus before the AMC campaign was launched. The usage raised up in every use.

The average rating of the PT (train, bus, and/or TaxiBus) decreased. Main reason to the negative rating is the VAREO-train-concept, which starts in December 2014. The two railways connect the Euskirchen area (including Kall and Bad Münstereifel) to Cologne and Bonn. Unfortunately the start doesn't work very well. Trains have to be cancelled due to technical damage, and a lot of trains are delayed because of planning mistakes and other technical problems. In fact, a huge number of people using the trains to reach their work are very happy to the new offer and reacted with discontent. Although the VAREO wasn't part of the SmartMove activities it became noticeable.

**Table 4-2: Variables for reporting situation after AMC campaign – line usage of respondents (n= 498 people before; n=221 people after)**

Category	Variable name	Before	After
Usage of line of respondents	People, who never use PT (train, bus, and/or TaxiBus)	84%	64%
	People, use PT (train, bus, and/or TaxiBus) less than once a month	6%	10%
	People, use PT (train, bus, and/or TaxiBus) less than once a week	2%	9%
	People, use PT (train, bus, and/or TaxiBus) at least once a week	8%	11%
	Average rating of performance of PT (train, bus, and/or TaxiBus)	7.3 out of 10 <sup>1)</sup>	5.6 out of 10 <sup>1)</sup>

<sup>1)</sup> Where 1 equals poor and 10 equals best performance

In Kreis Euskirchen an additional question asked for the high profile of the TaxiBus, a feeder system which partly replaced the normal bus. Before SmartMove activities took place 19% of the asked people know the TaxiBus. After SmartMove dialogue marketing and active measures 46% know the TaxiBus.

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 the wish to use the own car, followed by time table reasons.

**Table 4-3: Classification of open answers - reasons for not using PT**

Reasons	n=195 responds from 160 people	[%] - of people have named this reason
Want to use my car <sup>1)</sup>	87	54.4 %
Time table – frequency of links	30	18.8 %
Time table – operation time	31	19.4 %
Healthy reasons <sup>1)</sup>	17	10.6 %
Lack of information about the service <sup>1)</sup>	0	0.0 %
Travel time	0	0.0 %
Travel comfort	9	5.6 %
I’m driven by family member/friend <sup>1)</sup>	10	6.3 %
TaxiBus order deadline <sup>1)</sup>	0	0.0 %
Location of pt stop	5	3.1 %
Cost, Ticket tariff	4	2.5 %
Need to change lines to often	2	1,3 %
Time table – not understandable	0 (visibility, readable)	0.0 %
Need to carry heavy goods	0	0.0 %
Time table – links to other lines	0	0.0 %

**Figure 4-1: Reasons for not using PT – Before and after AMC (in %)**

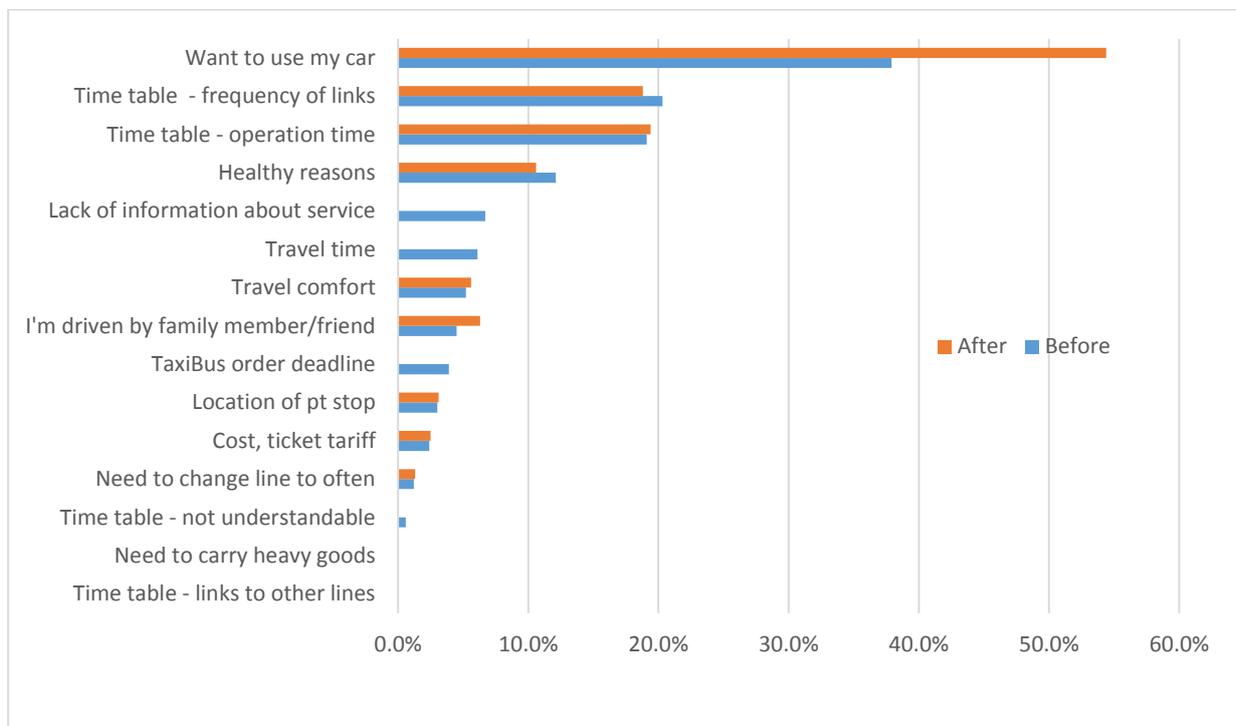


Figure 4-1 shows the changes in the before and after situation of this group. To compare the results the information is given in percentage. While the share of people who want to use their car is in the after-evaluation a bit higher, the share of reasons around communication/information (i.e. “Lack of information about service”, “Taxibus order deadline”) are in the after-evaluation not counted. It seems all questions could

be answered. The frequency of links and the operation time is a problem as important as before and seems to be still a barrier. As well do healthy reasons, travel comfort, location of pt stop, and costs.

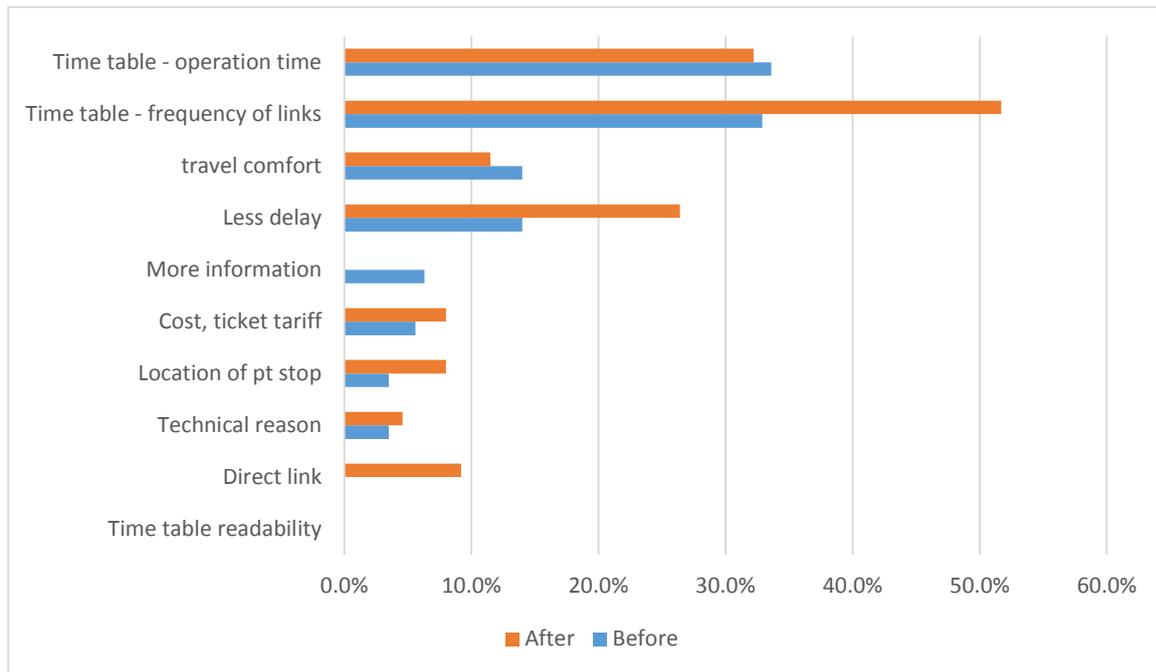
Table 4-4 shows the distribution of the suggestions for improvements of the service. Frequency of links is the most important issue followed by the operation time and less delay. Again, the importance on the suggestion “less delay” may be in conjunction with the delay problems to VAREO trains.

**Table 4-4: Classification of open answers - improvement suggestions for the PT services after AMC**

Improvement suggestions	n=132 entries from 87 people	[%]- of people have named this reason
Time table – operation time	28	32.2 %
Time table – frequency of links	45	51.7 %
Travel comfort	10	11.5 %
Less delay	23	26.4 %
More information	0	0.0 %
Cost, Ticket tariff	7	8.0 %
Location of PT stop	7	8.0 %
Technical reason	4	4.6 %
Direct link	8	9.2 %
Time table readability <sup>1)</sup>	0	0 %

The comparison with the situation before as shown in Figure 4-2 leads to the conclusion the concrete vision how to further improve the service becomes clearer for the users. As an example the frequency of links came more in the focus after the AMC campaign, where users obviously deeper reflect on the existing public transport supply. New are the wishes for more direct links. As expected the desire for less delay (to the trains) raised up. Additionally the widening of the operation time, especially at weekend and during the late evening is another concrete improvement suggestion.

**Figure 4-2: Improvement suggestions**

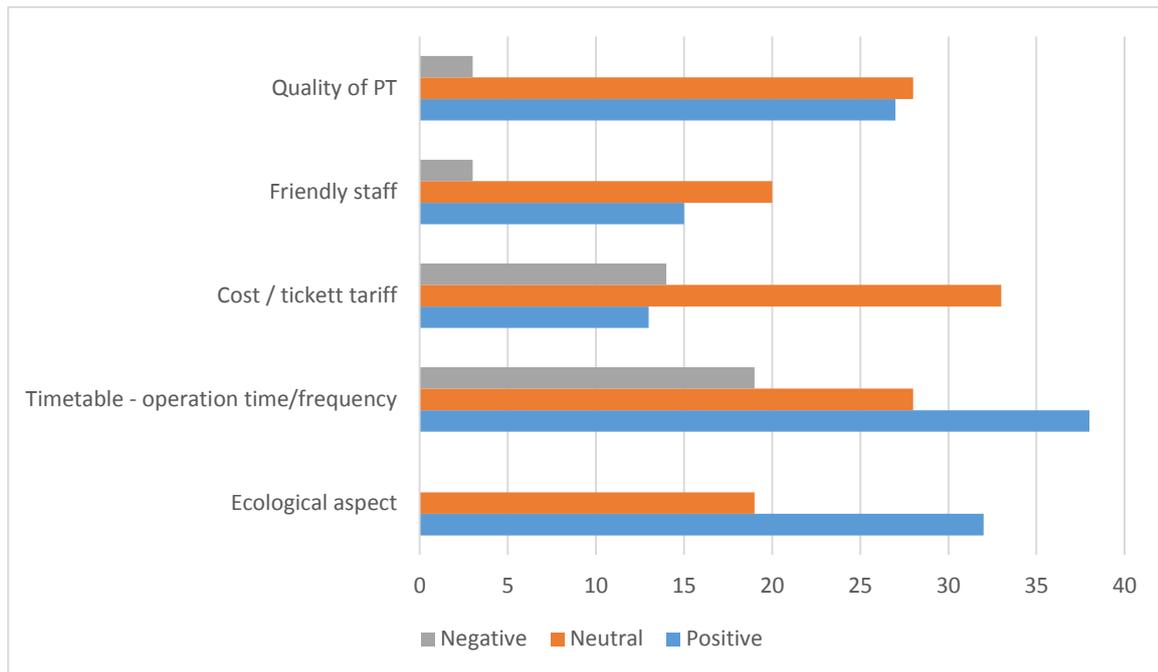


The questions with regard to the positive or negative experiences with the buses as shown in Table 4-5 and Figure 4-3 were only asked to those, stating to use the bus more often.

**Table 4-5: Positive, neutral, and negative experiences with bus use**

Experience	Positive	Neutral	Negative
Quality of PT	27	28	3
Friendly staff	15	20	3
Cost /Ticket tariff	13	33	14
Time table – operation time/frequency	38	28	19
Ecological aspect	32	19	0

**Figure 4-3: Experiences with bus use in Kreis Euskirchen**



In figure 4-3 are the positive, negative, and neutral experiences of participants with the bus use in Kreis Euskirchen shown. Most people rated the time table (operation time, frequency of links) in general, and most of them made positive or neutral experiences. In costs the positive and negative experiences were balanced, while most people the quality of PT and the staff (i.e. bus-driver, TaxiBus-driver) rated positive or neutral. No negative rating was about the ecological aspects given.

## 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	Brochures tariff	10 various items (pupils, students...)	579
	Timetable Mini	Various lines	275
	“Mobil auf ganzer Linie”	Brochure explains PT	156
	Map Kreis Euskirchen	Topographic map of Kreis Euskirchen	150
	Timetable HKS	Timetable Hellenthal, Kall, Schleiden	137
	Timetable Euskirchen	Timetable of Kreis Euskirchen	117
	Schematic map	Of Euskirchen	117
	Brochure “Tickets”	Overview all Tickets	117
	Brochure “Aktiv60”	Tickets for elderly people	96
	Map “Mobil in...”	...Hellenthal	58
	Map “Mobil in...”	...Kall	35
	Map “Mobil in...”	...Bad Münstereifel	32
	Map “Mobil in...”	...Schleiden	32
Give Away items	Brillenetui	Spectacle case	108
	Lesebrille	Reading glasses	108
	Brillenputztuch	Cleaning tissue for glasses	108
	Magnet	Magnets	108

The most ordered documents are brochures about the tariffs for special groups, followed by printed timetables of various lines. As at events the brochure “Mobil auf ganzer Linie” was also liked a lot. The timetable book of the complete Kreis Euskirchen was also ordered nearly as often as the timetables of Hellenthal/Kall/Schleiden, a special – smaller – version of the timetable book. The created maps “Mobil in...” were ordered 159 times in total.

With regard to the giveaway items, the items were send out as a package to everyone who ordered the give aways.

## 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 TaxiBus lines in comparison to reference values. This approach allows to cross-check the data generated from the participants.

A TaxiBus trip has to be ordered by phone. Every Taxibus trip and passenger is observed by the Kreis Euskirchen which has kindly given us the data. To avoid temporal (or local) characteristics and statistical influences (because of the partly low number of users per TaxiBus line) the passenger numbers of one complete month were compared for all TaxiBus lines in the four municipalities in Kreis Euskirchen. To cross check the data was additionally compared with the passenger numbers from the TaxiBus lines in the municipalities in Kreis Euskirchen where no SmartMove activities were held.

The TaxiBus passenger numbers from January 2015 (before SmartMove activities) were compared with TaxiBus passenger numbers from January 2016 (after SmartMove activities). First event (EnerKom) was visited in March 2015, and the dialogue marketing ended with the last evaluation telephone calls in November 2015. The offered trips of the TaxiBus lines (e.g. number of offered trips, offered routes, offered number of stops) don't change during this period. In December 2015 a new TaxiBus line was installed, line 887, which leads from Bad Münstereifel to Mechernich. The direct connection between these two cities doesn't exist before. People have to go by train to Euskirchen and there choose another busline. The numbers of TaxiBus line 887 weren't taken into account.

At the Taxibus-lines in Bad Münstereifel, Hellenthal, Kall, and Schleiden a considerable increase of 14.73% was counted, from 5.356 passengers (January 2015) up to 6.145 passengers (January 2016) per month. Additionally the AST, another feeder system offered complementary to the TaxiBus in Bad Münstereifel and Kall, increased from 78 (January 2015 Kall) and 320 (January 2015 Bad Münstereifel) up to 131 (January 2016 Kall) and 494 (January 2016 Bad Münstereifel). The numbers are shown in table 6-1.

**Table 6-1: Overview to the numbers of passenger data**

Category	System	Jan 15	Jan 16	Increase
Average lines in the area	TaxiBus	5356	6145	+ 14.73%
	AST Kall	78	131	+ 67.95%
	AST Bad Münstereifel	320	494	+ 54.38%
	Total	5754	6770	+ 17.65%
	<i>Cross-check:</i>			
	<i>Municipalities without SmartMove</i>			- 2.07%

To cross-check the results the numbers of the TaxiBus lines in municipalities of Kreis Euskirchen, where no SmartMove activities took place. At these line a decrease of 2.07% was counted.

## 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 CO<sub>2</sub>-emission per vehicle form the basis for calculating changes in fuel-consumption and CO<sub>2</sub>-emissions:

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

and

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

and

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

and

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

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**

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 <sub>2</sub> -emissions per kilometre [g/km]	Saved fuel-consumption [l/a]	Saved CO <sub>2</sub> -emissions [t/a]
(1) participants	527	200	10414	11,5	119761	0.055	110	<b>6587</b>	<b>13.2</b>
(2) All contacted	11543	4386	228090	11,5	2623031	0.055	110	<b>144267</b>	<b>288.5</b>
(3) Whole population of the implementation area	188000	71440	3714880	11,5	42721120	0.055	110	<b>2349662</b>	<b>4699.3</b>
(4) Whole population of the VRS region	3.300000	1254000	65208000	11,5	749892000	0.055	110	<b>41244060</b>	<b>82488,1</b>

The direct effect because of the AMC campaign in the Kreis Euskirchen region is a saving of 13.2 tons of CO<sub>2</sub> per year. There is a potential of 4699.3 tons savings of CO<sub>2</sub> per year, if the residents of the whole region of the Kreis Euskirchen line bus network would be accessed.

## 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**

<b>Specific objectives proposed according to description of work</b>	<b>AMC campaign achievements</b>	<b>Method of evaluation</b>
To increase the use of rural PT systems in an area with commuter and leisure trip flows oriented to a metropolitan centre	25% of participants stated to have increased their pt use.	Interviews
	TaxiBus passenger counts recognized an increase of passengers by 15%.	TaxiBus passenger counts
To improve accessibility in rural areas	TaxiBus passenger counts recognized an increase of passengers by 15%, which causes positive message to invest in the rural pt system.	Bus passenger counts
To decrease road traffic induced CO <sub>2</sub> -emissions	On average 1.51 trips were shifted by 25% of the participants.	Interviews
To strengthen individual based PT feeder schemes as cycling and e-cycling	Bustrainings are held in the region.	Counting of participants
<b>Specific key outputs proposed according to description of work</b>	<b>AMC campaign achievements</b>	<b>Method of evaluation</b>
AMC-campaign conducted with at least 500 participants	527 participants in the AMC campaign ordered and received information material.	Recording at data base
Accompanying active measure packages conducted with at least 200 participants	2000+ 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**

<b>Impacts, performance indicators and quantified targets</b>	<b>AMC campaign achievements</b>	<b>Method of evaluation</b>
Substantial increase of PT users: at least 20 % of the advised persons use PT more often	25% of participants stated to have increased their PT use.	Interviews
Reduction of CO <sub>2</sub> -emissions from road traffic: Decrease of 4-6 %	28% of participants stated to feel motivated to reduce car use. 13.2 tons of CO <sub>2</sub> emission could be reduced by the participants.	Interviews
Increased acceptance of bicycle use as PT feeder scheme: User numbers increase for 10 % during the year	28% of participants stated to feel motivated to reduce car use.	Interviews
Increased awareness of existing rural PT service: Perception of PT is improved by at least 50 % of participants	90% of participants stated to feel better informed on PT supply in the region.	Interviews
Increased knowledge of users and potential users about PT service: 50 % of participants feel better informed on PT	90% of participants stated to feel better informed on PT supply in the region.	Interviews
PT passenger retention is increased: 5 % of participants buy a season ticket	10% of participants stated they have bought a seasonal ticket during the campaign.	Interviews

Generally it can be stated, the envisaged objectives as well as the quantified targets could be reached within the AMC campaign.

## 8 Summary and conclusion

The ex post report on the Kreis Euskirchen implementation region gives an overview on the process, the costs and the impact of the AMC campaign implemented from spring to autumn 2015.

During the campaign the framework condition remained unchanged, which allows the conclusion, any changes in the transport demand in the region is mainly driven by the impact of the AMC campaign. The response of the dialogue marketing part of the campaign was 9% of all contacted persons. Additionally another 2000+ persons could be contacted during all active measures during the AMC campaign. Main impact of the AMC campaign are (based on the interviews with the participants after the AMC campaign): 90% of the participants received information within the campaign, they were not aware of before and another 28% feel motivated to reduce the car use. 25% of participants increased their public transport usage, which corresponds with an average shift of 200 car trips per week to public transport. This caused a reduction of CO<sub>2</sub> emission by ca. 13.2 tons per year. Generally it can be stated, the envisaged objectives as well as the quantified targets could be reached within the AMC campaign.

There is a clear potential in AMC campaigning to reduce energy consumption and CO<sub>2</sub> emission, if further extending the campaign to other areas or to increase the participation within the region by increasing the direct contacts to the target people of the AMC campaign.

## 9 References

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