

**CiViTAS**  
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## Focus Measure Evaluation Results

### UTR 4.1 Mobility Management Policy

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## Executive Summary

Since 2007 extensive infrastructural adaptations have been implemented and more will be implemented in the coming years in the city of Utrecht. As a result, road capacity drops temporarily on the ring road and on some of the most important entry routes. Due to these road works the city of Utrecht and the national highways authority expected a lot of disruption, traffic delays and a decrease in the accessibility of Utrecht. Also private businesses acknowledged this situation and saw the necessity to act. To limit the negative impacts on the traffic flows a unique public/private cooperation was set up with the Municipality of Utrecht, the National highways authority, the Utrecht Regional Authority, the Province of Utrecht, the Mid Netherlands Chamber of Commerce and VNO-NCW Utrecht (employers' organisations). This cooperation was organised as a foundation called 'Stichting Utrecht Bereikbaar (SUB)' (Foundation Utrecht Accessible). Stichting Utrecht Bereikbaar implemented different measures to influence mobility. One of them was the measure 'Mobility Management Policy' which aimed at raising private companies' awareness on urban mobility, at reducing the amount of cars on the roads in Utrecht during peak hours and at increasing the use of alternative transport modes by implementing the free public transport pass, the so-called UB pass. UB-pass holders can use the buses and trams in the region and the OV fiets (a rental bicycle). The passes can only be bought by employers.

This measure belonged to a set of three measures (with UTR 4.2 'Disruption planning and Communication' and UTR 4.3 'Rewarding Travellers for Avoiding Rush Hour') which shared the common objective to limit negative impacts on traffic flows in Utrecht during the major road works in and around Utrecht and reduce traffic disruption. A decrease of the number of incoming cars from 2,000 till 4,000 per day during rush hours was the shared target of all three measures.

The measure was implemented in the following stages:

**Stage 1: Development of an implementation plan (2008-2009)** The RTD phase was focused on developing an implementation plan to keep the city of Utrecht accessible during the major road works, including a strategy to implement the UB-pass.

**Stage 2: Selling of the UB-pass** (Since October 2008) Employers can buy UB-passes for their employees, online or at the back-office. SUB produced the UB-passes for each subscription.

**Stage 3: Marketing communication plan** (end of 2008 - February 2010) SUB developed a marketing campaign called 'Pak de Pas' ('Catch the Pass') with the aim of informing commuters about on-going road construction works and introducing the UB-pass.

**Stage 4: Realisation of P+R facilities and traffic jam free PT** (2009-2010) SUB realised seven P+R locations in the region, situated along the ring highway and offered traffic jam-free buses to connect the Parking to the city centres. The buses could use the highway hard shoulders. The low occupancy rate of the buses led to some necessary adaptations and four P+R locations were closed.

**Stage 5: Setting up and monitoring of a website** (2008 - present) To raise attention to the UB-pass; a comprehensive website was put online and was continuously monitored.

**Stage 6: Surveys among UB-pass owners** (2009 and 2010) In July 2009, in February 2010 and during the year 2010, SUB conducted online surveys to collect data among UB-pass users.

**Stage 6: Prolongation of the UB-pass** (October 2010) The UB-pass was extended into 2011 and the geographical area of companies that are eligible to buy the pass was expanded to the whole region. Furthermore a new pass was introduced: the 'Eemland Bereikbaar Pass'; this is a pass for employees in the region of Amersfoort (a city 20 kilometres to the east of Utrecht).

**Stage 7: Green shuttle bus (2011)** The Green shuttle bus was introduced as an alternative transport mode between transfer locations like public transport hubs, train stations and park and ride facilities and less well serviced business areas. One or more companies in the same area can order this shuttle (on payment). The shuttle is flexible and decreases the travel costs and space needed for parking places.

Based on the surveys and data collected during the measure, the impact evaluation was conducted. Some **key-results** highlighted the success of the measure. In September 2012, 715 companies participated in the UB pass measure. This number exceeded the targeted number of 600. In this same month the total number of UB passes sold was 19,120. The objective of 20,000 was practically reached. In order to measure the frequency of usage of the UB-pass, SUB conducted a survey among UB-pass holders: 5,833 of the 17,369 invited pass owners responded (rate of 34%). 95% of the respondents to the questionnaire use the UB-pass. Almost 60% of them were former car drivers and (will) use the pass at least three times a week to travel to work.

Based on the survey among UB pass owners the estimated impact of the measure is that the approximately 2,100 respondents who were former car drivers made 295 fewer car trips per day during peak hours on the south-western roads in Utrecht. Due to the fact that the number of UB pass owners with more than 19,000 is much bigger than the number of respondents, the reduction of cars is likewise many times higher. Based on the fact that the response rate was 34%, the estimation is that in real the number of avoided car trips on the south-western roads in Utrecht is three times higher: 885 cars per working day from 7AM-9AM. The impact of the UB-pass on the number of car trips is far bigger than only on the south-western roads. A calculation of Rijswaterstaat Utrecht shows a total decrease of 2,880 car trips in the morning rush hours (2,880 cars from 6AM-10AM per working day, 2011). Traffic counts show that the number of cars on the main roads to the city centre increased compared to the before situation in 2006. However this was expected, as traffic is growing every year. For the BaU a growth of 1.5% was expected each year. Compared to the BaU the traffic during peak hours on main roads to the Utrecht city centre is 1,200 less. As there are more (MIMOSA) measures aimed at traffic decrease it is difficult to say what the precise impact of the measure was. From January to September 2012 more than 86,000 trips have been made by the OV-fiets. When the UB-pass scheme finishes, most of the former car drivers (63%) will again use the car to travel to work, nevertheless 37% will not use the car anymore thanks to the UB-pass: this means that even after the disappearance of the UB-pass there still will be a positive effect on the usage of sustainable transport modes.

Several **barriers** were encountered. At the start it was complicated and time consuming to set the objectives. Another example is that, due to the UB pass being used more than estimated, the costs were also higher than estimated. The organisations involved now need to agree upon how to cover these costs. One action taken from January 2013 on is that the OV-fiets can be used for free 15 times in 2013. If the Pass holder wants to use the OV-fiets more, his/her employer needs to sign a supplementary contract with Stichting Utrecht Bereikbaar.

Important **drivers** that pushed the implementation of the UB-pass forward were the fact that the pass was partly financed by the authorities and the fact that different mobility services were bundled on the pass which made it a true intermodal concept.

Practice shows that the concept of the UB pass can be transferred to other (European) cities. Preconditions for a UB-pass are a good PT system, publicity (for example about big companies that participate) and a very intensive approach to (big) companies to participate. The advantage of a separate organisation, like the Stichting Utrecht Bereikbaar, is that you create an

independent entity. Thus you avoid repeated discussions and administration on operational budgets, targets, and joint communication strategies. When you start with few but large clients you can build quickly a critical mass. But it is important to be aware of the interests of the different partners and use these to decide your strategy, operational management and communication.

Even though most of the roadwork disruption had disappeared the pass was extended for another year into 2012, and will most likely also continue within its present form and financial structure during the following year 2013. Public subsidies are however announced to be reduced and the public aim was that the pass becomes economically self-sustaining. From 2014 on, the pass, and more specifically its package of services, are expected to be part of the regional public transport concession.

## A Introduction

### A1 Objectives

#### High level objectives:

- Improvement of air quality.
- Increase of modal split towards sustainable modes.

#### Strategic level objectives:

- Stimulation of the use of sustainable modes.
- To limit the negative impacts on the traffic flow in Utrecht during the major road works in and around Utrecht.

#### Measure level specific objectives:

- To raise the attention of private companies about a shared sense of urgency and shared responsibilities (for the measures as well as for financing), during a long period of time.
- To reduce the amount of cars on the roads in Utrecht during peak hours.
- To increase the use of alternative transport modes because of the free UB pass.

### A2 Description

Extensive infrastructural adaptations have been and will be implemented in the "Utrecht-West" area since 2007. As a result, road capacity drops temporarily on the ring road and on some of the most important entry routes. Due to these road works the city of Utrecht and the national highways authority Rijkswaterstaat Utrecht expected a lot of disruption, traffic delays and a decrease of the accessibility of Utrecht. Private businesses acknowledged this situation and saw the necessity to act.

To limit the negative impacts of these road works on the traffic flows, the City of Utrecht reached a unique public/private cooperation 'Platform Utrecht Bereikbaar' with the following organisations:

1. The Municipality of Utrecht
2. The National highways authority Rijkswaterstaat Utrecht (RWS)
3. The Utrecht Regional Authority (BRU)
4. The Province of Utrecht
5. The Mid Netherlands Chamber of Commerce
6. VNO-NCW Utrecht – employers organisation

A non profit organization was founded under the name 'Stichting Utrecht Bereikbaar' (Utrecht Accessible Foundation) to execute the program and support the public private partnership.



Picture A2-1: Logo of Utrecht Bereikbaar

This cooperation extends into the following areas: information and coordination in the fields of planning of public building activities and dynamic traffic management and also making

arrangements in the field of city goods distribution, construction logistics and communication (co-sending). Mobility management is one of these fields where cooperation increasingly takes place.

The 'Stichting Utrecht Bereikbaar' has implemented different measures to influence the mobility, which include: communications (measure UTR 4.2), FileMijden Utrecht /rewarding travellers to avoid rush hour (UTR 4.3) and the Utrecht Bereikbaar (UB) pass (this measure).

These three measures have the objective to limit the negative impacts on the traffic flows in Utrecht during the major road works in and around Utrecht and reduce the traffic disruption. A decrease of the number of incoming cars of about 2,000 - 4,000 per day during rush hours was the shared target result of all of these three measures. This means:

1. in normal circumstances a decrease of 2,000 cars during rush hours;
2. during special peaks (e.g. extra disruption because of extreme winter weather or a major decrease in capacity on the main roads in the city) a decrease of 4,000 cars during rush hours.

Whereas 4.1 (this measure) tries to get car travellers to use the public transport and other means of sustainable transport, measure 4.2 aims to reduce the disruption to a minimum by communication and in measure 4.3 car drivers that avoid travelling during the peak hours are financially rewarded.

The UB-pass (a Public Transport pass) has been created with the aim of increasing the use of alternative transport modes. Especially car travellers are stimulated to travel with this UB-pass. Cooperation with as many private companies as possible was needed to make this initiative a success. At the start the 10 biggest employers in Utrecht signed an agreement in which they agreed to invest efforts into establishing alternatives for car use during peak hours. The UB-pass offers car drivers the possibility to by-pass the traffic jams and experience alternative sustainable transport modes. Because they can chose (daily) the most appropriate transport mode and travel time to go to work, they can be more flexible.

The passes are personal passes with the size of a credit card.



Picture A2-2: an example of the UB-pass

Until 2011 there were two different types of passes: the UB-pass (for people living in the region Utrecht) and the UB-Pluspass (for people living outside the region). In 2011 the pass was extended to the region Eemland, by the introduction of the Eemland Bereikbaar pass. The

passes offer alternative sustainable transport modes seven days a week paid by the employers (for work and private trips):

- Usage of the buses and trams in the region concerned: the UB-pass is valid in the Utrecht region, the Eemland pass is valid in the Amersfoort region and the UB-pluspass is valid in the whole province. Annex 1 shows the maps of these regions. To avoid the so-called cannibalism effect, in principle the UB-pass was only available to people who did not have a PT subscription yet.
- Usage of the OV fiets ([www.ov-fiets.nl](http://www.ov-fiets.nl)) in the Netherlands. The translation of OV-fiets in English is PT-bicycle. It is a rental bicycle that can be easily used for, among other things, the last part of the trip to work or to a business meeting. Most of these bicycles are located at railway stations, but also at large company-areas and city centres. In 2012, in Utrecht the OV-fiets was located at four bicycle parking facilities near the central station, at the railway stations Terwijde, Overvecht, Zuilen and Vleuten, at the three P+R locations within Utrecht and at the city hall. Picture A2-4 shows these locations.



Picture A2-4: Locations of the OV-fiets

- Usage of a matching carpool service [www.automaatie.nl](http://www.automaatie.nl). This service matches two people who want to carpool based on the home and work addresses, the availability of car and driving license, the days and working times and even the music preference.
- The UB plus pass is also valid at the Utrecht Bereikbaar P+R facilities (Soesterberg, Leusden and Meerkerk) in the region.

Until October 2010 the UB pass could also be used for KPN Hotspots at around 800 locations in the Netherlands (internet) for free.

Annex 2 shows in detail for which alternative transport modes the passes were valid.

The passes can only be bought by employers: employers in the Utrecht region can purchase the UB-pass and the UB-pluspass for their employees, while employers in the Amersfoort region can buy the Eemland-pass and the UB-pluspass for their employees. The employers started paying 40% of the costs in 2009, while the authorities contribute 60% of the costs. Nowadays (2012) all the costs are paid by employers. Employees can not buy these passes themselves. Some companies pay the total costs for the employees, other companies let their employees pay (part of) the costs.

Costs/year	2009	2010	2011	2012
<b>UB-pass</b>	€ 75	€ 75	€ 100	€ 150
<b>UB-pluspass</b>	€ 250	€ 250	€ 250	€ 275
<b>Eemland-pass</b>	NA	NA	€ 100	€ 100 (discount of € 50)

*Table A2-1: Tariffs of the different passes (Utrecht Bereikbaar).*

The more companies involved in using the UB-pass, the more effective it will be. It is the aim to encourage as many companies as possible to join the initiative and to support them in the implementation of the UB pass. In 2012 almost 20,000 passes were sold.

## B Measure Implementation

### B1 Innovative aspects

The innovative aspects of the measure are:

- a **new organizational type of arrangement**: mobility management in the form of a PPP (Public-Private Partnership) (the involved organisations are described under A2);
- a **new conceptual approach**: one single transport pass is suitable for a variety of mobility solutions for commuters;
- a **new organizational type of arrangement** by the use of one brand and combined communication channels;
- **targeting specific user groups** and direct contact with the pass holders for further research about the public transport, improvements and experiences.

### B2 Research and Technology Development

To achieve an optimal effect of the Public Private Partnership cooperation in the field of mobility management a well-coordinated, joint approach by public and private organisations was required. Proper organisation and good work processes are essential for a successful approach. This is why in the R&D phase of this measure an implementation plan to keep the city of Utrecht accessible during these major road works has been developed, including a strategy to implement the UB-pass.

SUB made agreements with several (transport) companies to ensure optimal benefits of the UB-pass for its users. The following aspects were part of the implementation plan for the UB-pass.

#### Bus

SUB made a contract with the public transport service provider in the region of Utrecht. It was agreed that SUB paid this public transport organisation €72 per UB-pass sold, per year. In exchange for this, the owner of the pass could travel for free in the region of Utrecht for 24 hours a day, 7 days a week, 12 months a year. The expected amount of sold UB-passes was at least 20.000.

#### Train

SUB reached an understanding with the Dutch National railways on the available train capacity around Utrecht. It was agreed that on several trajectories – Amsterdam-Utrecht being one of the most important ones – SUB could give out ‘year trajectory cards’ that allowed the users to travel for free on a certain, pre-determined train trajectory. This benefit was supplementary to the UB-pass and was added to the standard pass based on an individual selection of employees for whom this would be interesting or beneficial. This extended UB-pass was called a UB-PlusPass.

#### Rental bicycles (OV-fiets)

SUB signed a contract with OV-fiets. The UB-pass has a barcode which can be scanned at the OV-fiets locations and the pass owner can rent an OV-fiets for free. The number of this kind of bicycle trips will be registered by OV-fiets and invoiced to SUB afterwards. SUB pays a fixed price per trip.

#### P+R including traffic jam free PT to business areas

Utrecht Bereikbaar built seven P+R locations in the region (Reeuwijk, Montfoort, De Witte Bergen, Stichtse Brug, Soesterberg, Leusden and Meerkerk). Owners of the UB-pluspass can use these P+R facilities and the public transport from these facilities for free.

Commuters could travel by car to these P+R locations and travel further by bus (in rush hours the buses run every 10 minutes) via routes without traffic jams to business areas in Utrecht. In case of traffic jams the buses drove on the hard shoulder. For this reason the necessary measures were taken to allow the buses on these hard shoulders:

- 'Bus on hard shoulder' road signs were placed every 600 meters.
- Places where broken down vehicles can be placed every 1,000 meters.
- Widening of the hard shoulder along some of the routes to satisfy the minimum width.

At the request of SUB an extra bus line was realized which drove from April 2009 from P+R's Stichtse Brug, De Witte Bergen, Reeuwijk and since November 2009 Montfoort to the business areas in Utrecht.

### **Telework locations**

SUB signed a contract with the Dutch phone company KPN regarding HotSpots. These HotSpots are publically accessible places such as hotels, restaurants, airports, gas stations or train stations where people can use wireless internet. People with a UB-pass could use all HotSpots in the Netherlands on an unlimited basis for free. The pass number of the UB-pass was the login-code for the KPN HotSpot.

### **Personal travel advice**

Owners of a UB-pass can receive a personal travel advice through [www.utrechtbereikbaar.nl](http://www.utrechtbereikbaar.nl). On this website, all possibilities of SUB within the Utrecht Accessible project are combined with the existing public transport options.

From mid 2008 onwards, SUB has aimed at selling as many UB-passes as possible and at the same time stimulating the use of the UB-pass. This was done in cooperation with the involved companies.

### **Public transport by boat**

The 'traffic jam free' buses could not be implemented on the highway A2 (Amsterdam-Utrecht) due to the lack of a hard shoulder during the ongoing road works. The train was an alternative, but not optimal for the business areas along the Amsterdam Rijn canal because commuters would need to transfer. For this reason it was researched whether it was possible to introduce a boat. Due to the complexity and the major investments of the realisation of transport by water a thorough, time-consuming approach was necessary. In this research four major aspects that influence the feasibility were distinguished:

- The potential among the employees of the businesses that were situated along the canal: a questionnaire among these employees proved this potential.
- The exploitation in relation to the participation and financing of the industry: the involved businesses stated their participation and financing would be dependent on the level of competitive travel times compared to the travel times by car.
- The desired speed of the boat (40 km/hour) was not feasible because of the safety and of the vulnerability of the watersides.
- An external agency calculated the travel times by car and by boat. The conclusion was that that a car usually is faster than transport by water.

Based on these results it was decided to have no further research and to not implement the public transport by boat.

## **B3 Situation before CIVITAS**

Mobility management has been on the Utrecht agenda for a long time, but private businesses did not regard it necessary to cooperate on this issue. Due to the large-scale construction works

in the Utrecht West area, with expectedly much traffic disruption, but also due to parking problems at the companies and traffic delays in general, private businesses now acknowledge this situation and see the necessity to act themselves. Another reason for companies to participate is the desire to position themselves as a socially and environmentally consciousness company.

## B4 Actual implementation of the measure

**Stage 1: Development of an implementation plan (2008-2009)** – In the first year of CIVITAS MIMOSA, in the RTD phase of this measure, an implementation plan to keep the city of Utrecht accessible during the major road works was developed, including a strategy to implement the UB-pass (July 2009). A summary is written in chapter B2.



Picture B4-1: Logo of the UB-pass

**Stage 2: Selling of the UB-pass (Since October 2008)** – Employers can buy UB-passes for their employees since October 2008. An account manager of Utrecht Bereikbaar contacts the employees to inform them about the possibilities to participate. Smaller companies buy the UB-passes through an internet web shop. A back-office was installed for handing out the passes. Information about the employees was collected, photos for the passes were taken, and the passes were produced.

The process of handing out the passes is as follows:

1. The employer signs the contract with Utrecht Bereikbaar.
2. Utrecht Bereikbaar supports the employer with supplying the databases.
3. Utrecht Bereikbaar provides a photographer on location who takes the photo's of the employees and/or a photo up-loader.
4. Utrecht Bereikbaar checks the postal codes of each of the employees to decide which pass he/she receives.
5. For the people who receive a UB-Pluspass Utrecht Bereikbaar examines whether the train is an extra alternative and whether the trains have enough capacity left on the railway line. Furthermore it is checked if the pass owner already has a Railway pass.
6. Production of the pass and delivery to the employer.



Picture B3-1: taking pictures of employees for the UB-pass at location

**Stage 3: Marketing communication plan** (end of 2008 - February 2010) – Stichting Utrecht Bereikbaar developed a marketing campaign called 'Pak de Pas' ('Catch the Pass'). The aim was to inform travellers and commuters about on-going road construction works and at the same time focussing attention on the alternative: the UB-pass. The campaign concept was implemented in phases from December 2008 onwards.



*Picture B3-2: the UB-pass promotion team*

In 2009, the focus was on implementing mass media techniques, aimed at the general public and visible on the streets. SUB approached the media in a pro-active way, with the aim of generating much free publicity. One brand was used. Adverts and radio commercials were published, billboards were used, a web shop was opened, media like Twitter were used and the construction of the new P+R areas started. There was extensive press coverage. Furthermore, promotional teams were active at areas with a lot of companies, there was commercial advertising on the streets and on buses, possibly interested companies were called pro-actively and the website was promoted.

Presentations were given at companies. A special launch event with the national minister of traffic and transport was organised in which the first UB-passes were handed out which got a lot of media attention.



Picture B3-3: Launch of the UB-pass with the national Minister of traffic and transport, October 2008

#### **Stage 4: Realisation of P+R facilities** and traffic jam free PT (2009-2010)

SUB realised seven P+R locations in the region, situated along the highways in a big circle around Utrecht:

- Stichtse Brug, since April 2009 (closed in February 2010)
- De Witte Bergen, since April 2009 (closed in February 2010)
- Leusden, since April 2009
- Soesterberg, since October 2009
- Meerkerk, since March 2010
- Montfoort, since November 2009 (closed in February 2010)
- Reeuwijk, since April 2009 (closed in February 2010)

Due to a less than expected number of passengers the traffic jam-free buses were replaced by smaller ones in the autumn of 2009, a long bus-line was cut into two shorter ones to decrease the chance of delays and a new bus line was introduced to better serve one business area. On February the 1st of 2010 the bus lines were cancelled: compared to the costs the number of passengers was too few. The related P+R locations (Stichtse Brug, De Witte Bergen, Montfoort and Reeuwijk) were closed too. SUB found for most of the involved pass owners an alternative by train.

**Stage 5: Setting up and monitoring of a website** (2008 - present) for raising attention of the UB-pass; a comprehensive website was put online and was continuously monitored. It still gets around 150.000 visitors a year.

#### **Stage 6: Surveys among UB-pass owners** (2009 and 2010)

In July 2009 Stichting Utrecht Bereikbaar sent a questionnaire to 3.616 UB pass owners (partly by email and partly by letter); 38% of these filled in the questionnaire completely (1.392 respondents). They were asked questions about how frequently they use the pass, the reasons for using the pass, aspects they would like to see improved, and the appreciation of the services Utrecht Bereikbaar offers. In February 2010 a second online questionnaire was conducted among two groups of pass owners: the ones that have a UB-pass since the 1st of July 2009

(they were not invited to participate in the survey before) and the ones that had a UB-pass before the 1st of July 2009 and already participated in an earlier survey and wanted to participate in a customer panel. 1890 out of the 4133 invited pass owners participated and filled in the questionnaire completely (response rate of 46%). Furthermore all new pass owners during 2010 were asked to fill in an on-line questionnaire; 2,551 from the 9,620 pass owners filled in the questionnaire completely (27%).

Date survey	No. of pass owners	No. of invited pass owners *	No. of respondents who completely filled the questionnaire	Response rate (%)
2009 (baseline)	3853	3616	1392	38%
2010	7311	4133	1890	46%
Continuous 2010	17369	9620	2551	27%
Total	17369	17369	5833	34%

Table B3-1: overview of the number of respondents on the questionnaires (Utrecht Bereikbaar)  
\*only the new pass owners received the questionnaire.

The results of the questionnaires were found representative for the total population based on the background characteristics (gender, age, postal code and type of UB-pass) of the total pass owners (Zest Marketing – www.zest.nl).

In 2011 another expert (Significant – www.significant.nl) performed an analysis of the results of the three surveys. This expert also gave a second opinion about the representativeness of the results. They noticed that the response rates were good and the previous statistical tests had been performed well. But, as noticed in the previous judges, there was a suspicion that there was an overrepresentation of pass owners who actually use the pass. This was an assumption, but a plausible one. Nevertheless Significant confirmed the former conclusion that the response data were representative on all the included background characteristics. On the other hand Significant indicated that they had not enough data to confirm two other former conclusions: A. the results of the surveys can be extended to the entire population (= total pass owners) and B. the results of the pass owners that use the pass and the pass owners that do not use the pass can be summarized.

**Stage 7: Prolongation of the UB-pass (October 2010)** – The decision was made to prolong the UB-pass into 2011, since large infrastructural projects continued and with this expected disruption for the traffic flows. The geographical area of companies that are eligible to buy the pass for their employees expanded in 2011 to the whole region (before only companies in the cities Utrecht and Nieuwegein could participate). Furthermore a new pass was introduced: the 'Eemland Bereikbaar Pass'; this is a pass for employees in the region of Amersfoort (a city 20 kilometres to the east of Utrecht). These employees could use the OV-fiets and the public transport in this region.

**Stage 8: Green shuttle bus introduced (2011)** – The Green shuttle bus was a new service which offers an alternative transport mode between transfer locations like public transport hubs, train stations and park and ride facilities and less well serviced company areas. It is not a public transport service, but private transport. One or more companies in the same area can order this shuttle (on payment). By this employees and visitors can reach the company quickly, without

financial transactions. The shuttle is flexible and decreases the travel costs and needed space for parking places.

**Stage 9: Another prolongation of the UB-pass** (October 2011) – Even though most of the roadwork disruption had disappeared the pass was extended for another year into 2012, and will most likely also continue within its present form and financial structure during the following year 2013. Public subsidies are however reducing and the public aim was that the pass becomes economic self-sustaining. From 2014 on, the pass, and more specifically its package of services are expected to be part of the regional public transport concession.

#### **Activities undertaken by the Chamber of Commerce:**

1. Chairmanship of and participation in the Platform Utrecht Bereikbaar.
2. Actively bringing the UB pass to the attention of employers.
3. Made company data files available to the Stichting Utrecht Bereikbaar, in order to reach employers (potential customers) more easily.
4. Helped to shape the current and future structure of the Utrecht Bereikbaar programme.
5. Underlined, whenever possible, the importance of Utrecht Bereikbaar and its PT pass to various authorities and other relevant organisations.

## **B5 Inter-relationships with other measures**

This measure is related to the measures:

- **UTR 4.2 Disruption planning and Communication**
- **UTR 4.3 Rewarding travellers for avoiding Rush Hour.**

These three measures are implemented by Stichting Utrecht Bereikbaar in the same period. All have the objective to limit the negative impacts on the traffic flows in Utrecht during the major road works in and around Utrecht and decrease the traffic disruption. The measures get a lot of political attention and are innovative.

The measures have high objectives in reducing the number of cars in the area of Utrecht West. A decrease of the number of cars can be the result of all of these three measures. Whereas 4.1 tries to get car travellers in public transport and other means of sustainable transport, measure 4.2 aims to reduce the disruption to a minimum by planning and in measure 4.3 car drivers that avoid travelling during the peak hours are financially rewarded.

## **C Impact Evaluation Findings**

### **C1 Measurement methodology**

#### **C1.1 Impacts and Indicators**

This measure aimed to raise the attention of private companies about a shared sense of urgency and shared responsibilities, to reduce the amount of cars on the roads in Utrecht during peak hours and to increase the use of alternative transport modes. To measure whether these objectives have been reached, impact indicators from the areas society and transport were used.

The verifiable results were:

- Participation of at least 600 private companies in the mobility management scheme (the Utrecht Bereikbaar Project organisation originally indicated that the measure output as

recorded in the original Measure Description Form (participation of at least 15 companies) was not actually their goal. For this reason the original objective has been replaced by at least 600 companies.

- A reduction of 2,000 – 4,000 cars on the roads in Utrecht during peak-hours (this is an intended result of all the measures undertaken by the Stichting Utrecht Bereikbaar).
- 20,000 UB-passes sold. (the Utrecht Bereikbaar Project organisation has indicated that the measure output as recorded in the original Measure Description Form (an increase in the total use of alternative transport modes (at least 60.000 transport passes (UB-passes) for alternatives sold with at least 60% frequent usage) was not actually their goal. For this reason the original objective has been replaced by '20,000 sold UB-passes'.

The indicators that were used to measure the impacts of this measure are listed in tables C1.1.1 and C1.1.2.

Table C1.1.1 Table of indicators

No.	POINTER indicator	Evaluation area	Impact	Indicator	Source of data	Related objective
1	--	Society	Acceptance	Number of sold UB-passes	Utrecht Bereikbaar administration	To raise the attention of private companies about a shared sense of urgency and shared responsibilities (for the measures as well as for financing), during a long period of time
2	--	Society	Acceptance	Number of companies participating in the UB-pass	Utrecht Bereikbaar administration	To raise the attention of private companies about a shared sense of urgency and shared responsibilities (for the measures as well as for financing), during a long period of time
3	--	Transport	Traffic flow levels	Number and percentage of UB-pass holders who actually use the UB-pass	Questionnaires among UB-pass holders (Utrecht Bereikbaar)	To reduce the amount of cars on the roads in Utrecht during peak hours. To increase the use of alternative transport modes because of the free UB pass.
4	--	Transport	PT usage	Percentage of UB-pass holders who use the PT, incl. how often they use it	Questionnaires among UB-pass holders (Utrecht Bereikbaar)	To increase the use of alternative transport modes because of the free UB pass.
5	--	Transport	Traffic flows	Number and percentage of UB-pass holders who use the OV-fiets, incl. how often they use it	Questionnaires among UB-pass holders (Utrecht Bereikbaar); Utrecht Bereikbaar administration	To increase the use of alternative transport modes because of the free UB pass.
6	28	Transport	Modal split	Avoided number of car trips by UB pass holders	Questionnaires among UB-pass holders (Utrecht Bereikbaar)	To reduce the amount of cars on the roads in Utrecht during peak hours. To increase the use of alternative transport modes because of the free UB pass.

Table C1.1.2 Table of bundled indicators UTR 4.1 and UTR 4.2

No.	POINTER indicator	Evaluation area	Impact	Indicator	Source of data	Related objective
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7	--	Transport	Traffic flow levels	Number of passenger cars on the main roads to the city centre, differentiated to peak hours and non-peak hours	Visual counts, on one representative working day	To reduce the amount of cars on the roads in Utrecht during peak hours.
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### Deleted indicators

<i>Average journey times:</i>	Initially the idea was to present the journey times to the city centre. But this measure has not the objective to change the journey times and the journey times are influenced by many factors, such as the road works with capacity drops and the fact that people change their travel behaviour anyway due to the expected disruption of these and last but not least the financial crisis. This, together with a problem in the collection of the journey times (camera's had technical problems) lead to the decision to delete this indicator.
<i>Capital, maintenance and operational costs:</i>	The different involved organisations all had different costs; it was not possible to report all of these and to get the data

Additionally, after an analysis of the available data of travel times and traffic flows the conclusion was that a Cost-Benefit Analysis could not be performed due to problems with data collection of the baseline.

Detailed description of the indicator methodologies:

1. **Number of sold UB-passes** – The number of sold UB-passes is registered by Utrecht Bereikbaar continuously. The numbers are presented per year.
2. **Number of companies participating in the UB-pass** - The number of companies connected is registered by Utrecht Bereikbaar continuously. The numbers are presented per year.
3. **Number and percentage of UB-pass holders who actually use the UB-pass** – From the questionnaires Stichting Utrecht Bereikbaar sent to the pass holders in 2009 and 2010 as described under phase 5 of chapter B4, the respondents answered, among other questions, the following question: “How many days per week do you/will you use the UB-pass to travel to your work?”. Based on the answers, the percentage of respondents who used the UB pass are reported.
4. **Percentage of UB-pass holders who use PT** - From the questionnaires among the pass holders we know the percentages of respondents that use PT within the Utrecht region and how often they use it (every day, 4-6 days a week, 1-3 days a week, some times per month, never, different). The questionnaire did not ask specifically about the usage on working days. The percentages are reported.
5. **Number and percentage of UB-pass holders who use the OV-fiets** - From the questionnaires among pass owners we know the percentages of respondents that use the OV fiets (in the whole country) and how often they use it (every day, every week, every month, never, different). The percentages are reported.  
Furthermore Utrecht Bereikbaar has the numbers of the actual used OV-fietsen, because they have to pay the OV-fiets company for this usage. These numbers are presented too.
6. **Avoided number of car trips by UB-pass holders** – From the questionnaires among the UB-pass owners we know the % of former car drivers and the % of these that now use the UB-pass including the frequency of usage. Furthermore the origins and destinations of the UB-pass owners are known. These can be translated in a decrease of the number of car trips.  
In the questionnaires among the pass holders the respondents answered, among other questions, the following questions:
  - a. With which transport mode did you travel (the main part for your trip) to work before you had the UB-pass?
  - b. How many days per week do you travel to your work?
  - c. How many days per week do you/will you use the UB-pass to travel to your work?

Based on the answers, the percentage of respondents that travelled before by car and now with the UB-pass can be reported. Because the postal codes of the home addresses and the addresses of the workplaces of the respondents are known, an estimation was made of the reduction in car trips by respondents who previously travelled by car before they had the UB-pass. These estimated 'disappeared car trips' have been allocated to the different roads, based on an assumption of the highways used by each of the respondents.

7. **Bundled indicator for measures 4.1 and 4.2: Number of passenger cars on the main roads to the city centre, differentiated by peak hours and non-peak hours** - This number was measured by counting the number of cars that drive on the main roads towards the city centre. During one working day in September/October visual counts were conducted from 7.00 to 19.00 hours, in 2004, 2005, 2006, 2008 and 2010 by people who stood along the roads. In 2012 the number of vehicles was counted by pneumatic counting during two weeks. The locations of the counts are listed in annex 3. Unfortunately there are no numbers for Saturdays or Sundays. The numbers for peak and off-peak hours are reported. For peak hours the counting between 7:00 and 9:00 am were used. Due to the fact that in the morning most people travel towards the city, and in the afternoon this is the other way around, it is chosen to only present the morning peak hours.

## **C1.2 Establishing a baseline**

The baseline for this measure is the situation before the implementation of the UB-pass (October 2008). The baseline shows:

- Indicator 7.** The number of passenger cars driving towards the city centre, crossing the Utrecht cordon, on the main streets to the city centre on working days before the implementation of the UB pass, differentiated by numbers in peak and non-peak hours. For the baseline the number of cars in 2006 has been used. A map of the Utrecht cordon is shown in Appendix 5.

Indicators 1 to 6 are not applicable in the baseline, due to the fact that they are related to the situation with the UB-pass.

## **C1.3 Building the business-as-usual scenario**

The business-as-usual scenario consists of:

- Indicator 7.** Due to construction works in and around Utrecht, huge traffic problems were expected if no intervention would take place. Congestion would rise to unacceptable levels. Furthermore the city of Utrecht expects to grow substantially as a result of various building sites that have been and will be realised in the years to come. This growth will increase the number of traffic movements into the city centre. At the same time it is very likely that the financial crisis and the road works influenced the number of cars negatively. Due to these contradictions it was difficult to build the B-a-U. This is also explained in chapter C5. It was decided to build the B-a-U scenario by using the expected growth of 30% of motor vehicles on the roads in Utrecht in 2030 calculated by the traffic model, compared to 2010, so 1,5% in one year. The B-a-U was based on the number of cars in 2006; due to the fact that in 2008 some road works already started and the counted number of cars in 2008 was (besides the influence of the road works) inexplicably lower than the number of counted cars in other years.

Indicators 1 to 6 are not applicable in the B-a-U scenario, due to the fact that they are related to the UB-pass.

## C2 Measure results

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

### C2.1 Economy

NA

### C2.2 Energy

NA

### C2.3 Environment

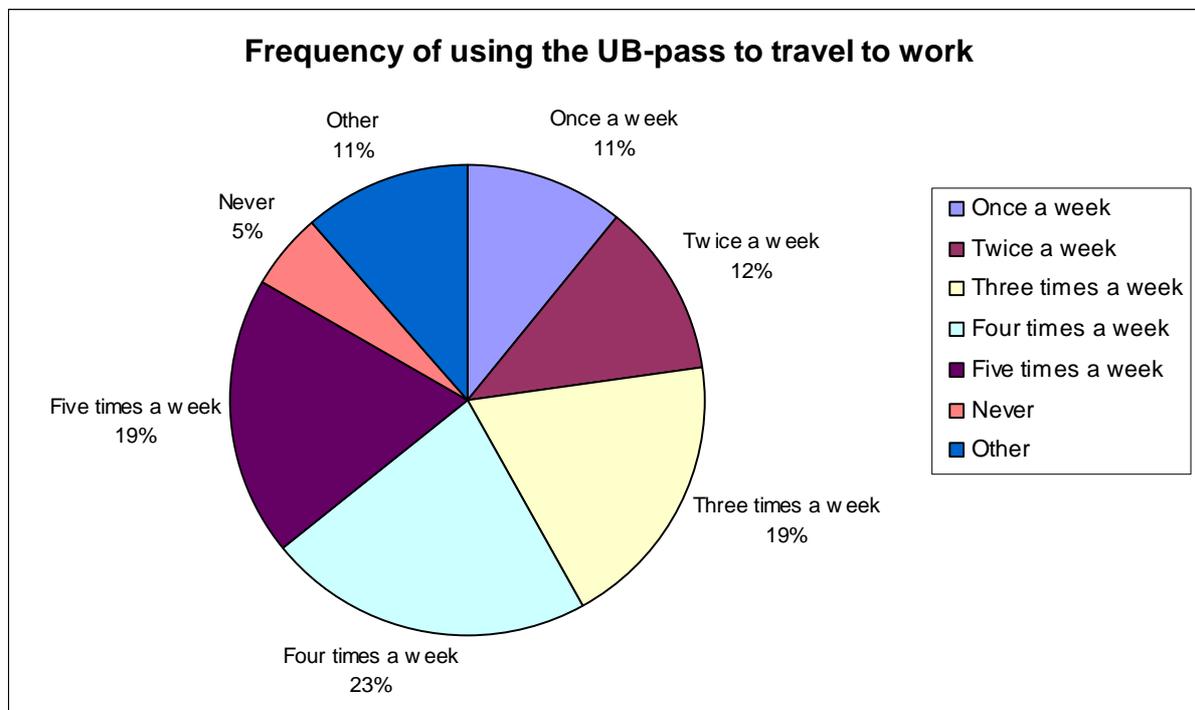
NA

### C2.4 Transport

#### Indicator 3: Number and percentage of UB-pass holders who actually use the UB-pass

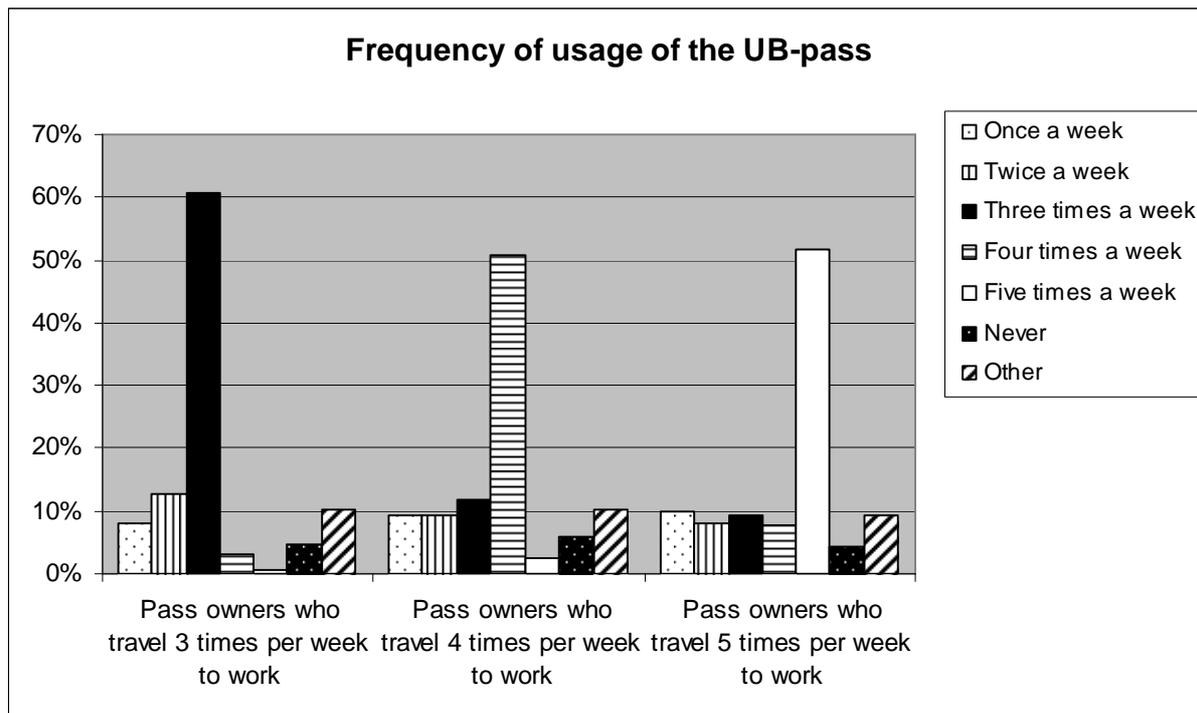
4,442 respondents of the questionnaires among the UB-pass holders answered the question whether and how often they use the pass to travel to work. 95% of these respondents say they use the UB-pass to travel to work. Graph C2.4.1 presents the percentages.

5% of the people who own the pass never use it, which is the same as about 220 respondents. Due to the fact that it could not be concluded that the results of the surveys can be extended to the entire population it can not be concluded that 5% of the total pass owners never use their pass. 42% of the respondents use their pass at least four times a week, which is approximately 1,870 respondents.



Graph C2.4.1: Frequency of the usage of the UB-pass to travel to work among pass holders (questionnaires inn 2009 and 2010, n = 4,442) (Utrecht Bereikbaar, Significant).

From the UB-pass owners who travel to work at least three times per week, we know how often they use the pass. Graph C2.4.2 shows these frequencies of usage, specified according to how many days per week the owners work. Most of the pass owners use the pass to travel to work on all the days they travel to work: 61% of the 804 respondents who travel to work three days a week, use the pass these three days; 51% of the 1,653 respondents who travel to work four days a week, use the pass these four days; and 52% of the 1,527 respondents who travel to work five days a week, use the pass these five days.



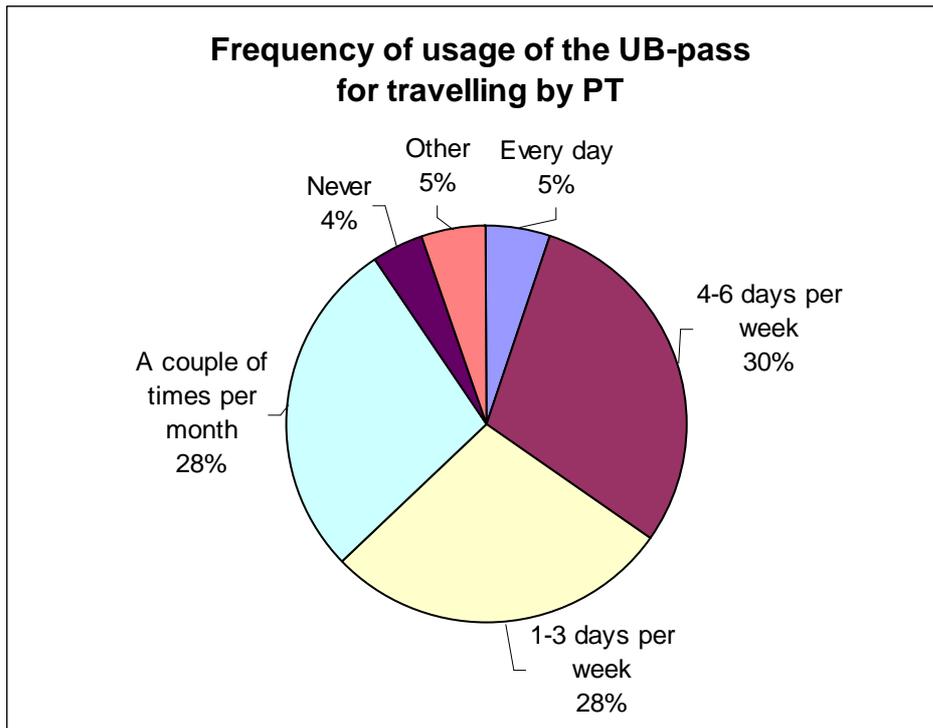
Graph C2.4.2: Frequency of the usage of the UB-pass to travel to work among pass holders who travel to work 3, 4 and 5 times per week ( $n = 4,442$ ) (Utrecht Bereikbaar, Significant)

It can be concluded that almost all the respondents do use the UB pass to travel to work, which means these respondents travel to work with sustainable transport modes. Although it can not be concluded that this result can be extended to the entire population, the estimation is that a large amount of the entire group of UB pass owners uses the pass.

#### Indicator 4: Percentage of UB-pass holders who use the PT

Indicator 4 tells how many respondents use the pass, but it does not tell whether they use the pass for public transport, the OV fiets or in another way. This indicator 4 presents how many pass owners use the pass to travel by public transport.

4,213 respondents answered the question how often they used the UB-pass to travel by city bus lines and regional bus lines. 96% said they use the pass to travel by public transport. Graph C2.4.3 presents the frequencies of PT usage. 35% used the UB-pass in the bus lines four times per week or more, which is the same as 1,475 respondents.

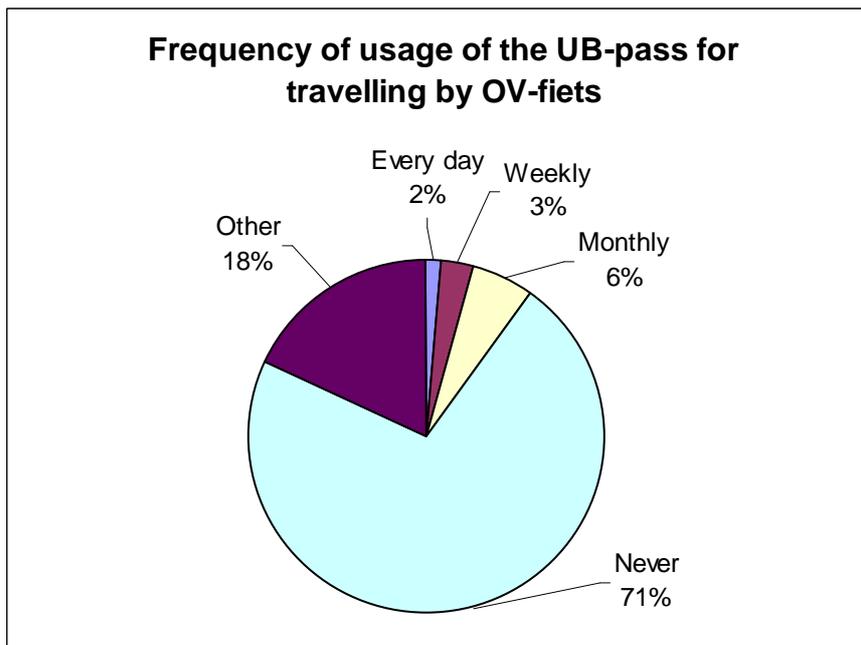


Graph C2.4.3: The frequency of usage of city bus lines and regional bus lines by UB-pass owners (n = 4,213) (Utrecht Bereikbaar, Significant)

It can be concluded that about 1/3 of the respondents use the bus at least four times a week.

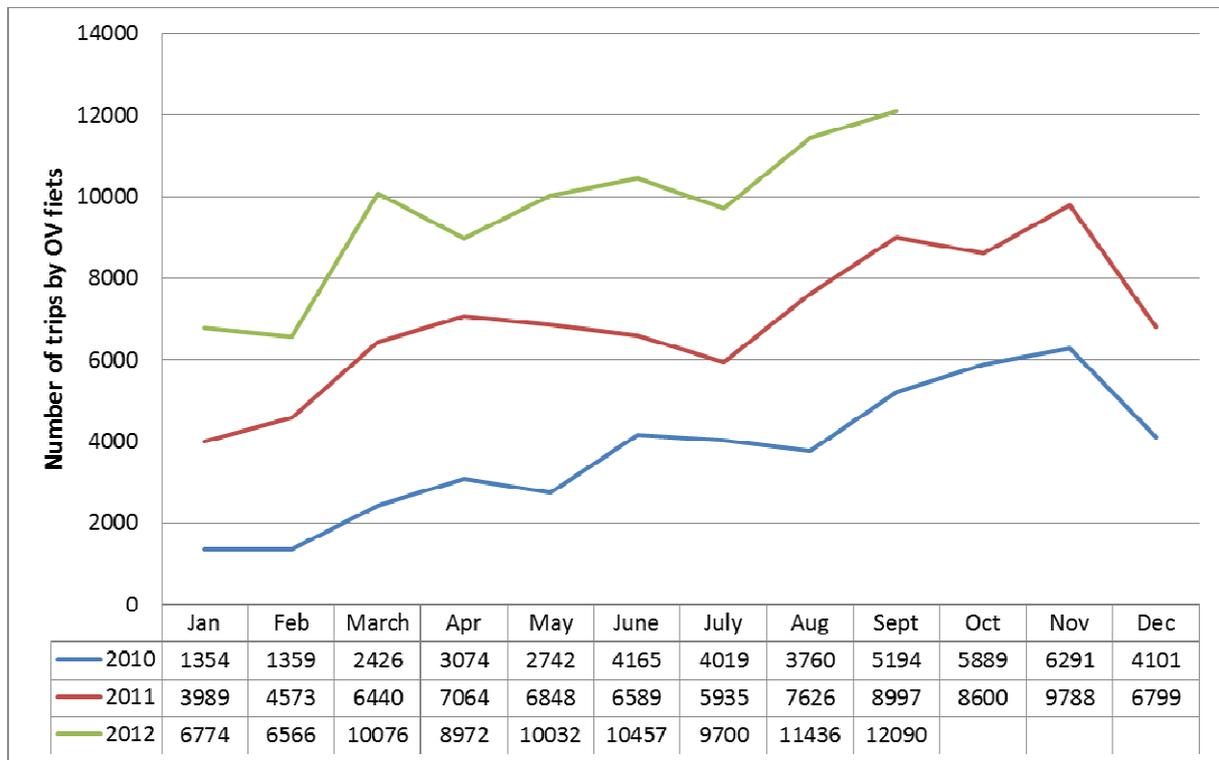
**Indicator 5: Number and percentage of UB-pass holders who use the OV-fiets**

4,213 respondents answered the question how often they used the UB-pass to travel by OV-fiets. 2% used the pass daily to travel by OV-fiets and 3% weekly. Graph C2.4.4 presents the frequencies of OV-fiets usage.



Graph C2.4.4: The frequency of usage of the OV-fiets by UB-pass owners (n = 4,213) (Utrecht Bereikbaar, Significant)

The actual number of trips by the OV-fiets made by UB-pass owners shows a significant increase (see graph C2.4.5).



Graph C2.4.5: The number of trips made by OV-fiets by UB-pass owners (Utrecht Bereikbaar)

In 2012 the number of OV-fiets rental bicycle trips will exceed 100,000. In this year there were about 2,500 UB pass owners who used the OV-fiets.

It can be concluded that the UB-pass contributed in a large way to the usage of bicycles.

**Indicator 6: Avoided car trips**

Transport modes that the UB pass owners used to travel (the main part of their trip) to work before they had the UB-pass

From the questionnaires among the pass owners we know which transport modes they used before they had the UB-pass. Table C2.4.1 presents the numbers.

Transport mode	Number of respondents	Percentage (without cat. other)
Car/lease car	2,147	39.1%
Carpool/transport of company	145	2.6%
Motorcycle	42	0.8%
Bicycle/moped	1,154	21.0%
Public transport	2,003	36.5%
<b>Subtotal</b>	<b>5,491</b>	<b>100%</b>
Other	342	
<b>Total</b>	<b>5,833</b>	

Table C2.4.1: Transport modes that the UB pass owners used to travel the main part of their trip to work before they had the UB-pass (n = 5,833) (Utrecht Bereikbaar, Significant)

40% of the respondents with a UB pass used the car/motorcycle to travel to work before they had the UB-pass. 60% of the former car users use the UB-pass at least three times per week.

1,562 of the 40% respondents that used a car/motorcycle to travel to work before they had the UB-pass answered the question how often they (will) use the UB pass to travel to work – the other 730 did not answer this question.

Usage of the UB-pass per week (one way trips)	Number of respondents	Percentage (without cat. other and unknown)
0 days per week	104	7.4%
1 day per week	179	12.8%
2 days per week	230	16.4%
3 days per week	327	23.4%
4 days per week	321	23.0%
5 days per week	237	17.0%
<b>Subtotal</b>	<b>1,398</b>	<b>100%</b>
Average	2.925 one way trips per week	
Other	164	
Unknown	730	
<b>Total</b>	<b>2.292</b>	

Table C2.4.2: Frequency of usage of the UB pass to travel to work by former car drivers (n = 2,292), based on the question: How many times per week do you or will you use the UB-pass to travel from your home to work? (Utrecht Bereikbaar, Significant)

57% of these former car drivers, which is 885 respondents, (will) use the pass at least three times a week to travel to work; 7% said they never (will) use it for work (see graph C2.4.7).

#### **On average the formal car drivers use the UB-pass 2.9 times per week to travel to work.**

Although this number can not be extended to the total number of UB pass owners, it can be concluded that the UB-pass lead to a significant decrease of the car usage.

1,458 former car drivers answered the question whether they would like to keep the UB-pass/extend the current period: 95% said 'yes'.

#### **Avoided car trips: 0.126 per day per UB pass owner**

The calculation of the average number of avoided car trips by UB pass holders is as follows:

Percentage of respondents that used the car to travel to work (40%) x Average usage of the UB-pass by former car drivers per week (2,925) x estimated (Rijkswaterstaat) correction car usage on working days in reality (90%) x estimated (Rijkswaterstaat) correction for car usage in peak hours in reality (60%) / number of working days per week (5) =

$(0.40 \times 2.925 \times 0.9 \times 0.6) / 5 = 0.126$  avoided car trips in morning rush hours per UB pass owner per working day.

#### **Estimation of decreased car trips on south-western roads**

In order to assess the car reduction on the roads within Utrecht, the origin and destination of these respondents have been made visible (as shown in appendix 4). Based on this, some indications can be given about the reduction of cars on the roads in the western part of Utrecht. Due to the fact that it is not known which road the respondents in reality used, this effect is estimated.

Based on the most obvious road, the estimation is that the respondents living outside the city of Utrecht and traveling to Cartesiusweg, Centre, Centre west, De Wetering, Kanaleneiland, Lage Weide and Papendorp entered the city by the south-western roads. The number of these respondents is 2,342 (the origin 'Other' has been excluded), so 40% of the 5,833 respondents.

Based on the origins of respondents that were former car users compared to the origins of the total number of respondents, this percentage is probably a little higher. At the same time the former car drivers could also have entered the city of Utrecht by other roads (non-south-western). It is assumed that these two will equalize the difference.

This number together with the average number of avoided car trips per UB pass owner per day results in an estimation of 295 avoided car trips among the 5,833 respondents.

Due to the fact that the number of UB pass owners with more than 19,000 is much bigger than the number of respondents, the reduction of cars is likewise many times higher.

Based on the fact that the response rate was 34%, the assumption is that in real the number of avoided car trips on the south-western roads in Utrecht is three times higher: 885 cars per working day from 7AM-9AM. But after a judgement whether the results were representative it was concluded that it could not be indicated that the results of the survey could be extended to the entire population (= total pass owners).

On the other hand the respondents, who live within the city of Utrecht, will also have caused a reduction of the number of cars on these roads; this effect cannot be determined. And in addition it is important to state that the impact of the UB-pass on the number of car trips is far bigger than only on the south-western roads. A calculation of RWS Utrecht shows a total decrease of 2,880 car trips in the morning rush hours (2,880 cars from 6AM-10AM per working day in 2011).

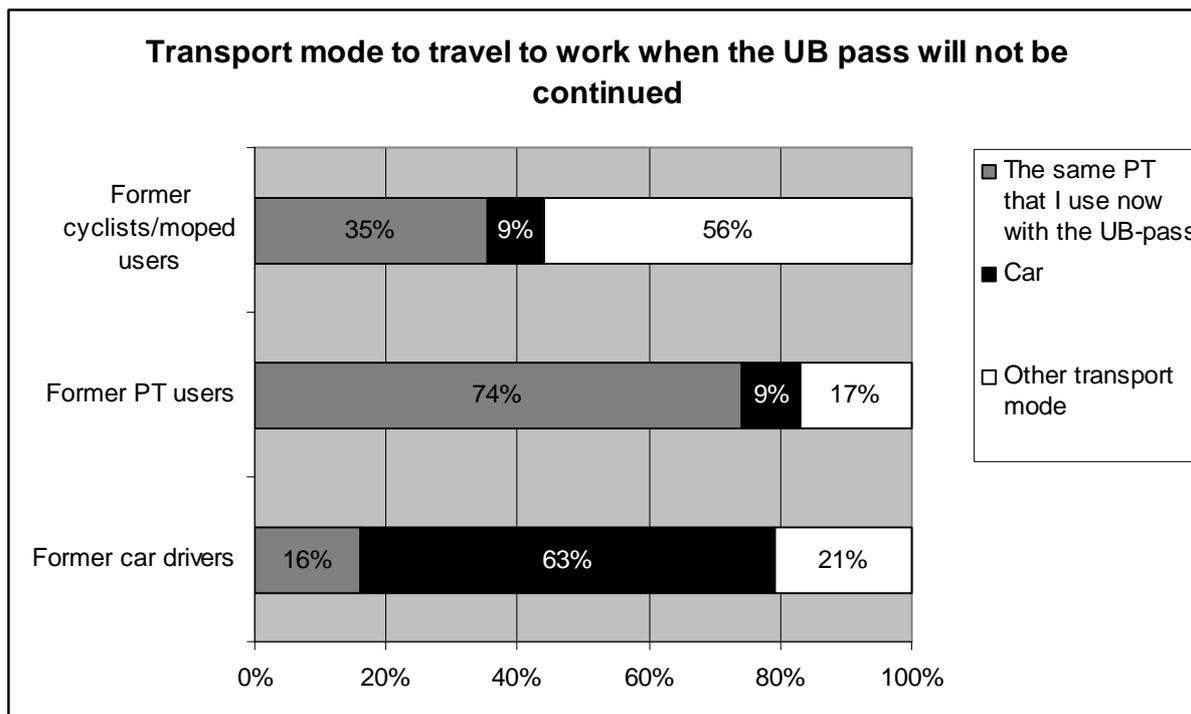
Furthermore it is very likely that the UB-pass has resulted in a decrease of car trips made by UB-pass owners who travelled mainly by bicycle and public transport before they received the pass, but this was not researched.

Finally the UB-pass is also used for other trips, like shopping or social activities. The UB-pass contributes to the increase of the possibilities to structurally make a more well-considered choice.

### **16% of former car drivers will keep using PT to travel to work if the UB-pass will not be continued**

Graph C2.4.6 shows the transport modes that will be used by former car drivers, former PT users and former cyclists/moped drivers when the UB-pass will not be continued.

Most of the 1,458 former car drivers (63%) will use the car again to travel to work, which is the same as 921 respondents. Nevertheless 37% will not use the car anymore thanks to the UB-pass: 16% say that they will keep using the public transport. 21% say they will use another transport mode. It is very likely that this will be a bicycle, which is also a positive effect. This means that even after the disappearance of the UB-pass there still will be a positive effect on the usage of sustainable transport modes.



Graph C2.4.6: Transport modes that will be used to travel to work when the UB-pass will disappear by former car drivers (n = 1,458) former PT users (n = 1,567) and former cyclist/moped users (n = 864) (Utrecht Bereikbaar, Significant)

**Indicator 7: Number of passenger cars on the main roads to the city centre, differentiated by peak hours and non-peak hours.**

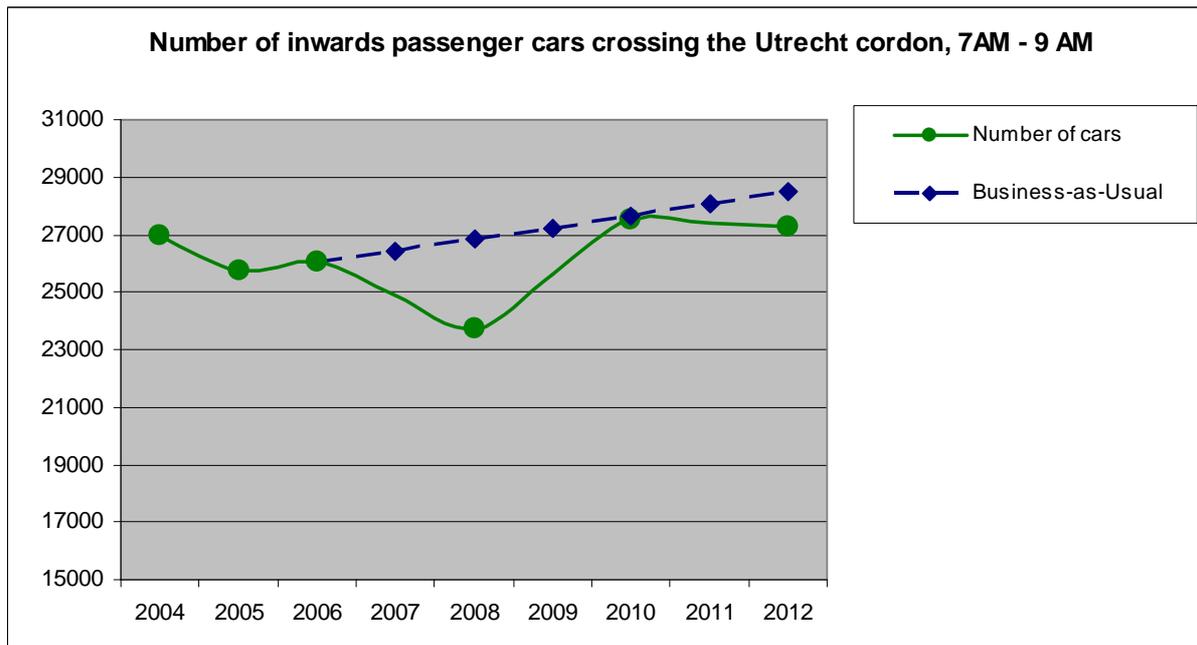
Bundled indicator 4.1 and 4.2	Before (Sept 2006)	BaU (2012)	After (Sept 2012)	Difference: After – Before	Difference: After – BaU
7. The number of passenger cars on the main roads to the city centre during peak hours (7 - 9 am) on working days**	26,100	28,500	27,300	1,200	-1,200
7. The number of passenger cars on the main roads to the city centre during off peak hours (9 am - 4 pm) on working days**	65,300	71,400	63,900	- 1,400	-7,500

\*see appendix 5 for the cordon.

\*\*Total number of city inward passenger cars crossing the Utrecht cordon between 7AM and 9AM, based on visual counts on one working day in 2004-2010 and pneumatic counts in 2012 during two weeks, with Business-as-Usual scenario based on the calculated estimated growth of 1,5% per year. In 2007 and 2009, no motor vehicles were counted.

Figure C2.4.10 shows the number of cars driving towards the city centre in the morning rush hours. Included is the B-a-U, based on 2006.

Figure C2.4.10 Total number of city inward passenger cars crossing the Utrecht cordon between 7AM and 9AM



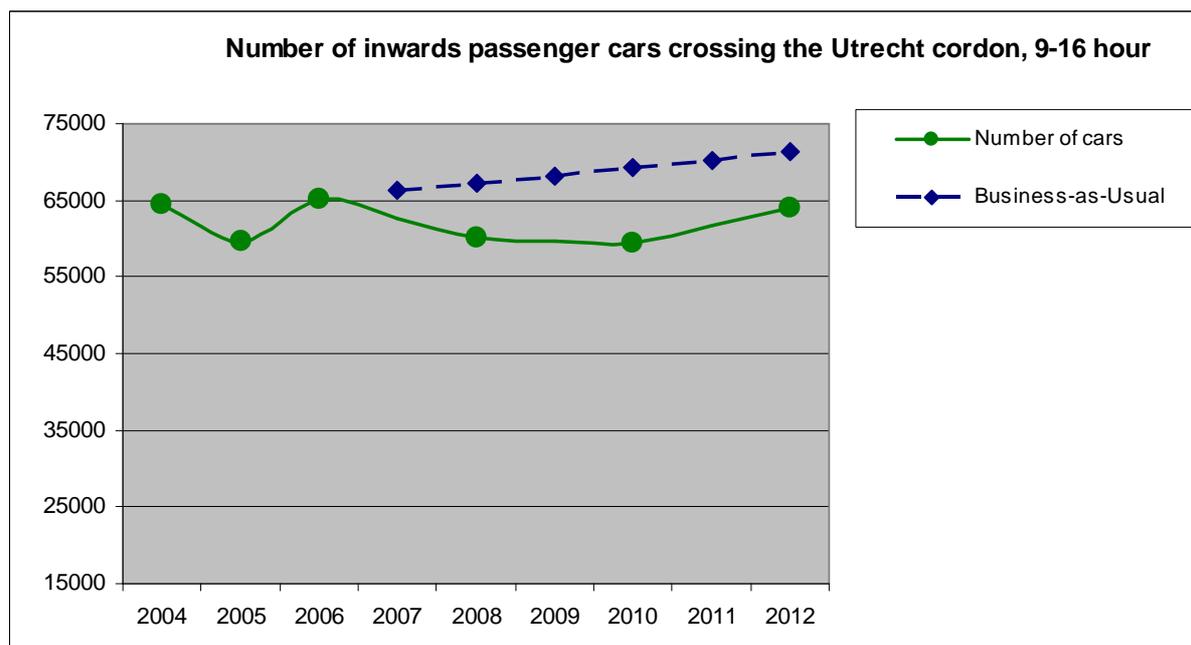
Source: Based on visual counts on one working day in 2004-2010 and pneumatic counts in 2012 during two weeks, with Business-as-Usual scenario based on the calculated estimated growth of 1.5% per year. In 2007 and 2009, no motor vehicles were counted.

The number of inward passenger cars crossing the Utrecht cordon fluctuates. In October 2008 23,700 passenger cars crossed the cordon between 7AM and 9AM driving towards the city. At this time some road works had already started. The counted number of cars in 2008 was, apart the influence of the road works, inexplicably lower than the number of counted cars in other years. For this reason the number of cars in 2006 has been used as the baseline. The number of cars between 7AM and 9AM in September 2010 increased to 27,500.

In 2012 the traffic counts were performed by a different method: pneumatic counts during two weeks. Due to this also motorcycles and taxis were counted within the same category. Despite this, the number of counted vehicles in September 2010 was on average 27,300 per working day which is about the same as it was in 2010. At the same time the BaU shows an increase of 1.5% per year. Compared to BaU, the number of cars during peak hours decreased with 1,200. This is 4% less than BaU.

Figure C2.4.11 shows the number of cars driving towards the city centre on the main roads between 9 AM and 4 PM (the off-peak period). In contrast to the number of cars in the morning rush hours, the number of cars between 9AM-4PM decreased in the first years, but increased compared to 2010. Compared with the BaU however, the number decreased by 7,500. This is 11% less than BaU.

Figure C2.4.11 Total number of city inward passenger cars crossing the Utrecht cordon between 9AM and 4PM



Source: Based on visual counts on one working day in 2004-2010 and pneumatic counts in 2012 during two weeks, with Business-as-Usual scenario based on the calculated estimated growth of 1.5% per year. In 2007 and 2009, no motor vehicles were counted.

Based on these results it can be concluded that the number of cars in the morning rush hours driving towards the city centre decreased, but the number of cars during off peak hours did as well. Nevertheless compared to 2010 an increase in passenger cars during off peak hours can be seen together with a decrease of passenger cars during rush hours. This could be an effect of the measure when car drivers decided to travel after rush hour when informed about the road works.

## C2.5 Society

### Indicator 1: Number of sold UB-passes

The number of sold UB-passes is registered by Utrecht Bereikbaar continuously. The numbers are presented per year. The number of sold UB passes has grown enormously since the start of the pass. The decrease in 2011 was caused by the cancellation of the train service.

Type of pass	End of 2009	End of 2010	End of 2011	Sept. 2012
<b>Utrecht Bereikbaar pass</b>				
Owners living within city Utrecht	--	5553	7793	6726
Owners living within region, outside city Utrecht	--	6881	6855	7149
Owners living within Region Utrecht	4360	--	--	--
Owners living outside the Region Utrecht	486	1191	2751	3465
<b>Total Utrecht Bereikbaar pass</b>	<b>4846</b>	<b>13625</b>	<b>17399</b>	<b>17340</b>
<b>Utrecht Bereikbaar Plus pass</b>				
Highwaybus and P+R facilities included	1542	1618	NA	NA
Train route between home and work included	939	2126	NA	NA
<b>Total Utrecht Bereikbaar Plus pass</b>	<b>2481</b>	<b>3744</b>	<b>2328</b>	<b>1823</b>
<b>Eemland pass</b>	--	--	52	80

<b>Total number of provided passes</b>	<b>7327</b>	<b>17369</b>	<b>19779</b>	<b>19243</b>

Table C2.5.1: Number of sold passes (Utrecht Bereikbaar)

Appendix 6 contains information about the satisfaction among the UB-pass owners about the options the UB-pass offers. 3,927 out of the 4,213 respondents (93%) said they were satisfied with the possibilities the UB-pass offers (52% was very satisfied and 41% was satisfied). 97 respondents (2%) were not satisfied.

### Indicator 2: Number of companies participating in the UB-pass

	<b>End of 2009</b>	<b>End of 2010</b>	<b>End of 2011</b>	<b>Sept. 2012</b>
<b>Number of participating companies</b>	<b>134</b>	<b>488</b>	<b>646</b>	<b>715</b>

Table C2.5.2: Number of UB-pass participating companies (Utrecht Bereikbaar)

The number of participating companies increased from 134 at the end of 2009 to 715 at the end of 2012.

## C3 Achievement of quantifiable targets and objectives

No.	Target	Rating
1	Participation of at least 600 private companies in the mobility management scheme	***
2	A reduction of 2,000 – 4,000 cars on the roads in Utrecht during peak-hours (this is an intended result of all the measures undertaken by the Stichting Utrecht Bereikbaar)	*
3	20,000 sold UB-passes	**
4	Increased usage of alternative transport modes because of the free UB pass	**
<b>NA = Not Assessed    O = Not Achieved    * = Substantially achieved (at least 50%)</b> <b>** = Achieved in full                    *** = Exceeded</b>		

- In September 2012, 715 companies participated in the UB pass measure.
- Based on the survey among UB pass owners the estimation is that the former car drivers decreased their car trips on the south-western roads in Utrecht by 885 per day during peak hours (7AM-9AM). RWS Utrecht calculated a total decrease of 2,880 car trips from 6AM-10AM in 2011 on all the roads in the Utrecht region.  
Furthermore the traffic counts showed a decrease of 1,200 passenger cars on the main roads to the city centre during peak hours (between 7AM and 9AM) compared to the BaU. Although the objective was a larger decrease, compared to the BaU the number of cars did decrease by 4%. It is difficult to say this decrease is an effect of the measure(s), as there are more aspects that influence the traffic flows.
- At the end of 2012 almost 19,243 UB passes were sold. The objective was practically reached.
- Although the objective was not quantified there has been reached an increase of the use of sustainable transport modes; almost 60% of the respondents who were former car drivers use the pass at least three times a week to travel to work

## C4 Up-scaling of results

Within the measure there already has been up-scaling:

- In 2011 also companies within the region and outside the cities of Utrecht and Nieuwegein could buy the UB-pass.
- In 2011 a new pass was introduced: the 'Eemland Bereikbaar Pass'; for employees in the region of Amersfoort.

Although in a different format, the pass exists also in Maastricht, IJmond and Brabant. Whereas for the first two the main initial reason relates like Utrecht to envisaged road works, in the latter two environmental reasons formed the basis of the initiative. Without any doubt the concept looks transferable to other EU Member States. A good quality public transport network has to be present to allow the concept to be successful.

Companies want to continue with the UB-pass and see it as a regular part of the conditions of employment. This can be seen as a longer-term preservation.

## C5 Appraisal of evaluation approach

**Indicators 1 and 2** are directly supplied by Utrecht Bereikbaar. The reported numbers are the real numbers.

**Indicators 3 to 6** are measured by questionnaires among UB-pass owners. More than 5,800 pass owners participated in the surveys which is enough to present reliable data.

The response data were representative on all the included background characteristics.

Zest Marketing and Significant judged whether the results were representative. It was concluded that it could not be indicated whether there was an overrepresentation of pass owners who actually use the pass. Due to limitations in the representativity test, some uncertainty remained with regard to the distribution of the origins and destinations of trips made with the UB-pass. Two former conclusions could not be confirmed: A. the results of the surveys can be extended to the entire population (= total pass owners) and B. the results of the pass owners that use the pass and the pass owners that do not use the pass can be summarized. Due to this the results on these indicators are estimations.

Unfortunately within the question about the former used transport mode no distinction was made between bicycle and moped.

### Indicator 7

To measure the number of cars towards the city centre in the years 2004, 2005, 2006 and 2008 visual counting on a cordon around the city of one working day in September/October was used. The results of these were reliable and representative for this one day and give a good sense of the number of cars driving to the centre in general but at the same time it has to be noted that due to the fluctuations in the number of cars, the results fluctuate too. Probably this (together with the influence of the road works) contributed to the relative low number in 2008. In 2012 the number of vehicles was counted by pneumatic counting. It is not clear to what extent this led to different numbers.

It was difficult to build the B-a-U due to contradictions in the estimated future numbers of cars. Traffic model calculations showed an expected growth of 30% of motor vehicles on the roads in Utrecht in 2030, compared to 2010. In contrast with this, possibly due to the financial crisis the number of cars on the national highways decreased in the last years. Some examples:

- in the Netherlands the number of kilometres driven by Dutch passenger cars decreased by 2.1% in 2010 compared to 2009 (Centraal Bureau van de Statistiek);
- in 2011 the congestion in the Netherlands decreased by 7% compared to 2010 (Inrix).

Nevertheless in 2012 the number of cars on the highways increased while the number of traffic jams decreased thanks to the implementation of extra driving lanes on several highways. Besides this, during road works car drivers change their travel behaviour anyway due to the

expected disruption of these.

These developments could have decreased the (growth of the) number of cars.

It was decided to build the B-a-U scenario by using the expected growth of 30% of motor vehicles on the roads in Utrecht in 2030 calculated by the traffic model, compared to 2010, so 1.5% in one year. In practice this percentage could be less.

## **C6 Summary of evaluation results**

The key results are as follows:

- Large number of involved companies (715).
- Big number of sold UB-passes (almost 20,000).
- 95% of the respondents on the questionnaire use the UB-pass.
- Almost 60% of the former car drivers (will) use the pass at least three times a week to travel to work.
- The number of cars on the Utrecht main roads to the city centre increased compared to the before situation in 2006. However this was expected, as traffic is growing every year. For the BaU a growth of 1.5% was expected each year. Compared to the BaU the traffic during peak hours on main roads to the Utrecht city centre is 1,200 less. As there are more (MIMOSA) measures aimed at traffic decrease it is difficult to say what the precise impact of the measure was.
- Based on the survey among UB pass owners the estimation is that the impact of the UB-pass is that former car drivers made 885 fewer car trips per day during peak hours (7AM-9AM) on the south-western roads in Utrecht. RWS Utrecht calculated a decrease of 2,880 car trips from 6AM-10AM in 2011 on all the roads in the region of Utrecht.
- From January to September 2012 more than 86,000 trips have been made by the OV-fiets.
- 3,927 out of the 4,213 respondents (93%) said they were satisfied with the possibilities the UB-pass offers.
- When the UB-pass will cease most of the former car drivers (63%) will again use the car to travel to work, nevertheless 37% will not use the car anymore thanks to the UB-pass: this means that even after the disappearance of the UB-pass there still will be a positive effect on the usage of sustainable transport modes.

## **C7 Future activities relating to the measure**

The impacts and conditions of the UB pass have been analysed to build a common framework for future usage.

The UB-pass will most likely continue within its present form and financial structure during the year 2013. Public subsidies reductions are however announced and the public aim is that the pass becomes economically self-sustaining. From 2014 on, the pass, and more specifically its package of services are expected to be part of the regional public transport concession.

Furthermore Utrecht Bereikbaar has the idea to develop electrical charge stations with the objective to increase the usage of electrical cars.

## D Process Evaluation Findings

### D.0 Focused measure

2	Most important reason	The measure fits into the city policy towards sustainable urban transport and / or towards sustainability in general
4	Second most important reason	The high level of innovativeness of the measure with respect to technique, consortium, process, learning etc
1	Third most important reason	The measure fits into the EU policy towards clean urban transport (five pillars of the EU Green Paper)

### D.1 Deviations from the original plan

The deviations from the original plan comprised:

- **Closure of P+R locations**
- **Cancellation of the ‘call-off business car’.** These cars would be made available to businesses (for an extra charge) by SUB and could be used for business trips during working days. Due to the fact that most of the businesses were not very interested in this extra facility, the ‘call-off business car’ was not further developed.
- **Cancellation of the Vanpool.** Part of the original plan of SUB was a Vanpool; this could be a solution when more people from a certain area travelled to a certain business area and no alternative transport modes could be supplied on this route. Until 2009 the focus was to develop the UB-pass and the basic facilities. After the implementation of some improvements the introduction of the Vanpool was not necessary anymore.
- **Cancellation of the Train service.** The Dutch railways stopped its service contract with the UB pass organisation.
- **Implementation of the Green shuttle bus.** The Utrecht shuttle bus was added as a new service, which allowed the connection between public transport hubs/stations/park and ride facilities and often less well serviced company areas.

### D.2 Barriers and drivers

#### D.2.1 Barriers

##### Preparation phase

- **Different objectives made it complicated** - The setting of the objectives proved to be complicated and time consuming. Each partner of the Utrecht Bereikbaar association stepped into the cooperation with its own objectives. The road and public authorities aimed to reduce commuter road traffic during peak hours, the public transport operators to generate more traffic (and income). The private employers and chamber of commerce were involved out of the notion that entrepreneurship also involves a societal dimension, and most likely also for the opportunity to organise this with an attractive format and offer. Furthermore the employers wanted to reduce the costs of travelling. It was experienced that objectives were changing over time.
- **Organisational complexity caused delay** - The negotiation of the contracts proved to be complicated and time consuming. In the beginning an organisational complexity caused a number of management problems, and proved time consuming to be resolved. This mainly concerned the non up-to-date employees’ registers of the client companies and the complex

process of issuing the mobility pass. Major delays were experienced between the moment of signing a contract with a client company, the invoicing and the real delivery of the passes.

- **At the start some resistance from PT** - The public transport authorities had no specific interests in the UB-pass, which caused some tacit resistance against the set up of the UB-pass. They feared also the necessity to put in service additional buses to be able to absorb the additional public transport travellers. The latter apprehension proved not to materialise. Nevertheless there have been some discussions about a possible reduced income for the PT because the principle that only people who had no PT subscription yet could get a UB-pass was not completely followed. Due to the automated intake there were fewer checks on this.

### Operation phase

- **Uncertainty about the future** - When the major road works were almost finished, this set the public interest at another level, more focused on the promotion of multimodal travel from an environmental perspective. Even if the package of multimodal services was unique, other chip cards existed that could carry a combination of these services. Following this changing environment and objectives a discussion was started between the different stakeholders about the future of the UB pass. This had no direct impact on the present processes, other than the creation of a level of insecurity about the future. Indirectly the operational stakeholders had to manage with an ever-present insecurity about what could happen tomorrow.
- **Cancellation of train service within the UB pluspass led to a decrease of pass users** - The regional train services within the UB-pluspass were abandoned, as the Dutch railways stopped its service contract with the UB pass organisation. The Dutch railways wanted to have the direct relation with their business travellers themselves, for which they have the business travel pass. Furthermore Utrecht Bereikbaar wanted to be independent of one public transport company. Utrecht Bereikbaar estimated that this resulted in a 10% loss of UB pass users.
- **Costs were higher than estimated** - Due to the fact that the UB pass was being used more than estimated, the costs were also higher than estimated. As a result the involved organisations need to agree upon how to cover these costs. An example is the discussion about costs for possible extra needed buses. One action taken from January 2013 on is that each pass holder can use the OV-fiets for free 15 times in 2013. If the pass holder wants to use the OV-fiets more often, his/her employer needs to sign a supplementary contract with the Stichting Utrecht Bereikbaar.

## **D.2.2 Drivers**

### Overall drivers

- The general idea of **necessary social acceptance of the undertaking of companies in the Netherlands bred a good environment** in which it was possible to set up the Utrecht Bereikbaar association and UB pas, also proven by the Eemland pass (a multimodal transport pass from the nearby city of Amersfoort).
- **Co-financing made it more attractive to companies** -The mobility pas is partly financed (40%) by the authorities; therewith it becomes interesting for the employers to offer the UB mobility pass as extra work compensation to their employees. Accordingly, the co-financing has probably led to a higher level of employers' participation in UB pass.
- Another clear driver is the **bundling of the different mobility services** on the card. Employers like the fact that it combines public transport, public bicycles, park and ride, usage of virtual works spots, etc. This makes it a true intermodal concept.

### Preparation phase

- **Necessity to act during road works** - The envisaged major infrastructure road works made it clear to all partners that something had to be undertaken to counter the expected additional traffic congestions.
- **Positive attitude on national level** - The National road administration (RWS) favoured clearly the introduction of the mobility pass. They estimated that this would reduce the expected traffic congestion due to the major road works.

#### **Implementation phase**

- **Promotion by employers association** - The employers association VNO-NCV assisted in the promotion of the UB pass, which helped to bring the product to the attention of the employers.
- **Active and enthusiastic attitude** - The very active and enthusiastic team of Utrecht Accessible and related civil servants of the city of Utrecht made the implementation of the measure a success.

#### **Operation phase**

- **Share of revenues made it attractive to participate for PT operators** - The revenues of the UB-pass were directly shared with the local public transport operators; a reported 1.6 million of euro was distributed to them in 2011. This did not change in any way the operational processes, yet it is clear that when starting the operators were more eager to participate.

### **D.2.3 Activities**

#### **Overall activities**

- **Frequent contact with stakeholders** - In general there is a frequent contact with public transport providers and construction companies to make sure that the offered services are guaranteed, and the accompanying news alerts are correct.

#### **Implementation phase**

- **Data management by clients on website** - The set up of the website and dedicated areas for the client companies proved to reduce part of the initial organisational conflicts. Clients are now able to manage part of their data themselves.

#### **Operation phase**

- **Discussion about self sustainability of the pass** - The public transport authorities were largely in favour of the UB pass, yet they wanted the pass to be financially self sustaining. The organisation of the UB pass was working towards this self sustainability. Discussion is on-going on the levels and time periods related.
- **Thoughts about the way to continue** - Like other so-called "positive" mobility measures, once the UB-pass is introduced it is hard to stop with the product, especially when it is as popular as it is among employers. When it comes to decide in which way to continue this measure, a good balance has to be found between public and private interests and corresponding financing.

### **D.3 Participation**

#### **D.3.1. Measure Partners**

- **Utrecht Bereikbaar** - A unique public/private cooperation 'Stichting Utrecht Bereikbaar'. Utrecht Bereikbaar is responsible for the implementation of the UB-pass.

- **Regional Chamber of Commerce** – This organisation was chairman of and participant in the Platform Utrecht Bereikbaar.
- **Bestuur Regio Utrecht** – The regional public transport authority
- **VNO-NCW** – The employers association
- **GVU and Connexion** – The public transport companies

### D.3.2 Stakeholders

- **Participating companies**
- **UB-pass owners**

## D.4 Recommendations

### D.4.1 Recommendations: measure replication

Practice shows that the concept of the UB pass can be transferred to other (European) cities. Utrecht Accessible started a similar program in the city of Amersfoort, the second biggest city in the Province of Utrecht. In Malmö (Sweden) the concept is going to be used as a best practice.

Although in a different format the pass exists also, among others, in the Dutch cities Maastricht, IJmond and Brabant.

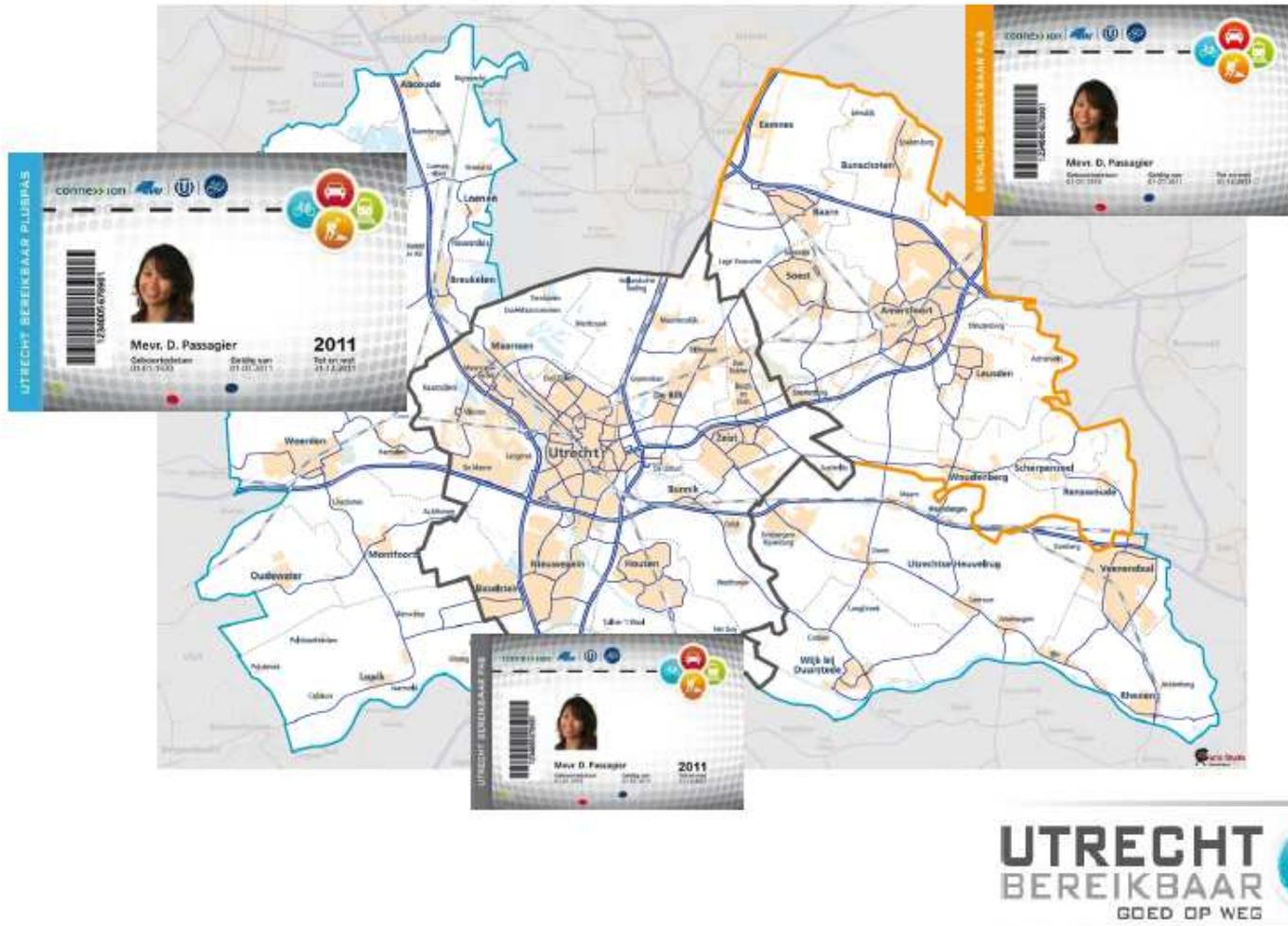
- The advantage of a separate organisation, like the Stichting Utrecht Bereikbaar, is that you create an independent entity. Thus you avoid repeated discussions and administration on operational budgets, targets, and joint communication strategies.
- When you start with few but large clients you can build a critical mass quickly.
- The sales process is relatively costly and work intensive, especially with the smaller clients. Most of the organisations and contacts with the clients are now by phone and even better “online”. The client companies pay up front and can themselves keep up to date their employees’ registration and situation changes. This reduced the amount of administration work for the association itself considerably.
- Once a new client (i.e. company) is on board they are in general loyal.
- Once you get on a larger scale the pass can also be sold more easily.
- Try to avoid too many staff changes; try to partly counter this by the creation of a collective memory.
- Companies that are situated close to the central station and have their own contract with for example OV fiets, are not interested in the UB pass.
- Pay a lot of attention to the growth of the number of pass holders, related to the costs for possible extra buses or OV fietsen.
- Preconditions for a UB-pass are a good PT system, publicity (for example about big companies that participate) and a very intensive approach to (big) companies to participate.
- UB pass holders are very positive about the fact that the UB pass is easy to use (more easy than the PT chipcard, which you have to use when you get in the bus and again when you leave the bus).

### D.4.2 Recommendations: process (related to barrier-, driver- and action fields)

- Start on time, it proved that decision making with multiple organisations and the establishments of contracts take a lot of time.

- The set up of a strong brand takes time, be aware of this in your management and spend a lot of your efforts on joint communication.
- Be aware of the interests of the different partners and use these to decide your strategy, operational management and communication.
- The main issues seem to be in the longer term at the strategic level. Objectives of the different stakeholders might and probably will change. A periodic assessment of the future of the UB pass is justifiable and necessary. For the operational management of the pass it would be good if a clear timing is set for this assessment which allows continuing to guarantee a high quality of the mobility pass for the “clients” (i.e. users).

## Appendix 1: Maps of the different regions



Map Annex 1-1: The region Utrecht (middle area within the grey line) in which the UB-pass is valid, the Eemland region (eastern area within the yellow line) in which the Eemland pass is valid and the whole province (area within the blue line) in which the UB-pluspass is valid.

## Appendix 2: Overview of the UB-passes

Type pass	Valid in / for
<b>UB-pass</b> , for people living in the region Utrecht	<ul style="list-style-type: none"> <li>all buses and trams of the Public Transport companies GUV and Connexxion in the region Utrecht (valid in the cities Utrecht, Nieuwegein, Houten, IJsselstein, Vianen, Maarssen, De Bilt, Zeist and Bunnik);</li> <li>the OV-fiets at more than 230 locations in the Netherlands;</li> <li>until October 2010 KPN Hotspots at around 800 locations in the Netherlands (internet).</li> </ul>
<b>UB-Pluspass</b> , for people living outside the regions Utrecht and Eemland	<ul style="list-style-type: none"> <li>all buses and trams of the Public Transport companies GUV and Connexxion in the region Utrecht (valid in the cities Utrecht, Nieuwegein, Houten, IJsselstein, Vianen, Maarssen, De Bilt, Zeist and Bunnik);</li> <li>all regional buses of the Public Transport company Connexxion in the province of Utrecht;</li> <li>the OV-fiets at more than 230 locations in the Netherlands;</li> <li>the Park and Ride facilities Soesterberg and Leusden and travel from there by public transport to Utrecht;</li> <li>people coming from the direction Breda/Dordrecht/ Gorinchem/Meerkerk can also use P+R Meerkerk and the regional buses of public transport companies Veolia and Arriva to Utrecht;</li> <li>until October 2010 KPN Hotspots at around 800 locations in the Netherlands (internet).</li> </ul>
<b>Eemland bereikbaar pas</b>	<ul style="list-style-type: none"> <li>all buses and trams of the Public Transport company Connexxion in the cities Amersfoort, Baarn, Bunschoten, Eemnes, Leusden, Renswoude, Scherpenzeel, Soest and Woudenberg;</li> <li>the OV-fiets at more than 230 locations in the Netherlands;</li> </ul>

Table A2-1: description of the two different passes.

Annex 1 shows the maps of these regions.

## Appendix 3: Other results of the UB pas survey among UB pass owners

### **85% of the former PT users (will) use the UB-pass at least three times per week**

34% of the respondents (2,003 out of 5,833 respondents) said they travelled by public transport before they had the UB-pass; 8% by a city bus line, 9% by a regional bus line, 6% by tram and 11% by train. 1,586 of these answered the question how often they (will) use the UB pass to travel to work – the other 417 did not answer this question. 85% of these former PT users (will) use the pass at least three times a week to travel to work; 1% said they never (will) use it for work (see graph C2.4.7). 1,567 former PT users answered the question whether they would like to keep the UB-pass/extend the current period: 95% said 'yes'.

### **Former cyclists**

20% of the respondents (1,154 out of 5,833) said they travelled by bicycle/moped before they had the UB-pass. There is no data about how often these former cyclists (will) use the UB-pass. 864 former cyclists answered the question whether they would like to keep the UB-pass/extend the current period: 94% said 'yes'.

### **95% would like to continue the pass**

4,213 respondents answered the question whether they would like to have a UB-pass after the current period. 95% of these said 'yes'. This result shows the UB-pass is a favourite product.

The main part of the 195 respondents who answered 'no' said they travelled to work by car before they had the UB-pass (40%), 24% by public transport, 25% by bicycle/moped, 2% by motorcycle and 9% by another transport mode.

## Appendix 4: Origins and destinations of the respondents of the UB-pass survey

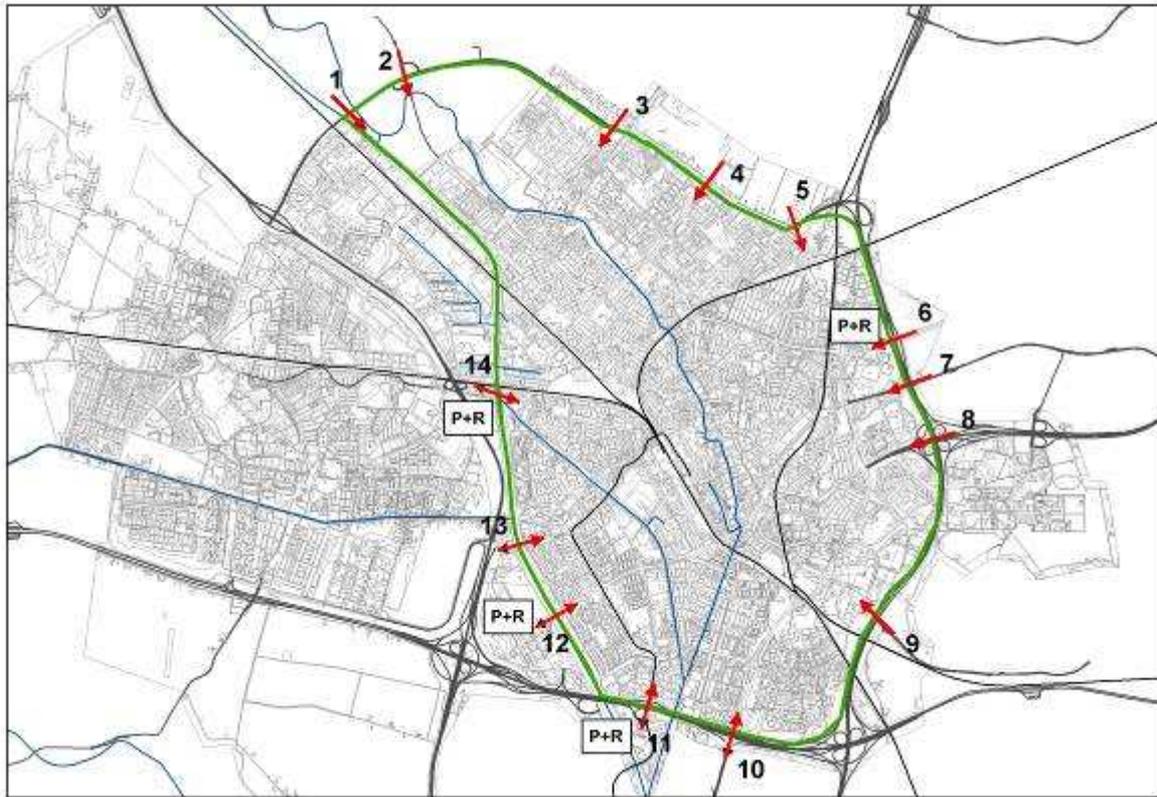
		Herkomst									
		A12 Oost	A12 West	A2 Noord	A2 Zuid	A27 Noord	A27 Zuid	A28	Utrecht Stad	Anders	Totaal
Bestemming	Cartesiusweg	1	5	1	0	1	11	0	3	0	22
	Centrum	77	112	71	31	17	126	66	138	1	639
	Centrum West	43	140	49	28	22	100	38	98	0	518
	De Meern	0	2	0	0	0	1	1	5	0	9
	De Wetering	0	1	0	0	0	1	0	0	0	2
	Kanaleneiland	111	256	69	32	47	239	74	223	1	1052
	Laagraven	1	5	0	0	0	5	1	6	0	18
	Lage Weide	8	13	8	1	1	8	6	25	0	70
	Papendorp	33	117	51	49	25	60	51	122	2	510
	Rijnsweerd	195	287	141	47	40	353	226	442	4	1735
	Utrecht	16	43	11	6	9	45	4	73	0	207
	Overig	20	175	22	4	5	154	16	116	0	512
	Anders	3	12	4	1	4	22	1	13	479	539
<b>Totaal</b>	<b>508</b>	<b>1168</b>	<b>427</b>	<b>199</b>	<b>171</b>	<b>1125</b>	<b>484</b>	<b>1264</b>	<b>487</b>	<b>5833</b>	

Table Appendix 4: Origins and destinations of the respondents of the UB-pass survey (Significant)

The estimation is that the respondents who work in the destinations Cartesiusweg, Centrum, Centrum West, De wetering, Kanaleneiland, lage Weide, Papendorp and Utrecht and have an origin outside 'Utrecht stad' and 'Anders' would use the main roads in the south-western part of Utrecht. The number of these respondents is 2,342.

When only the former car users are taken into account, the percentage of respondents that have origins outside 'Utrecht stad' and 'Anders' is bigger in comparison with the total number of respondents; 78% of the former car users have an origin outside Utrecht and other whereas 70% of the total respondents have an origin outside Utrecht and other.

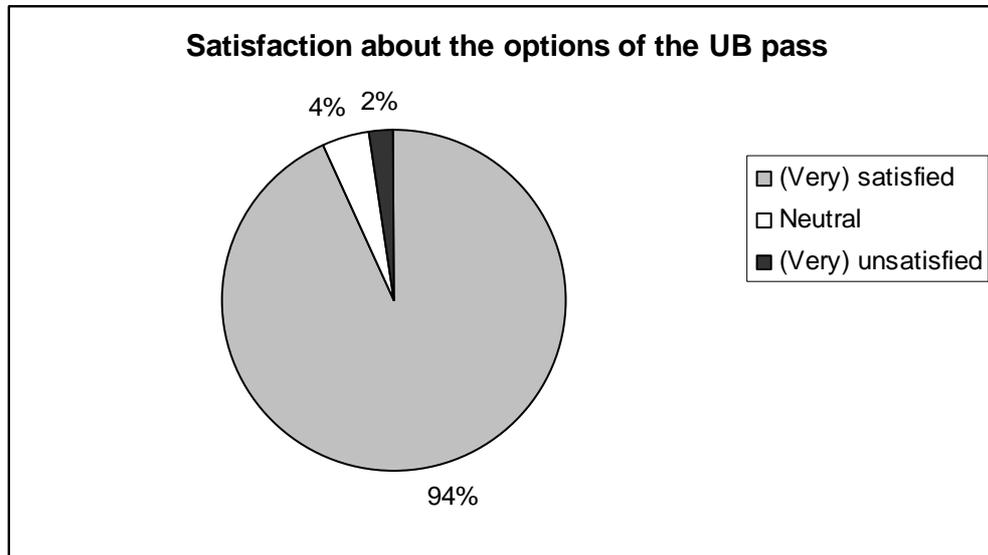
## Appendix 5: Locations of the traffic counts



Map Appendix 5-1: Cordon Utrecht. The numbered locations are the locations where the counts were conducted to measure the number of city inward passenger cars.

### Appendix 6: Satisfaction about the UB-pass

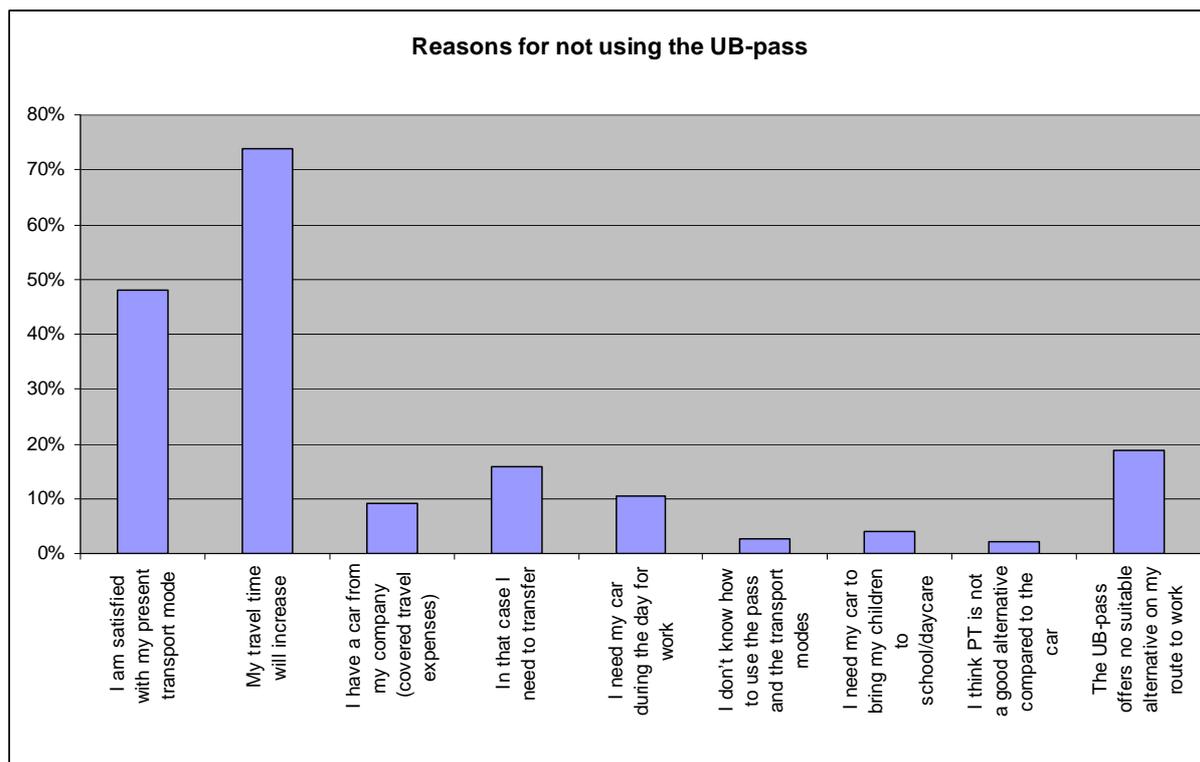
4,213 respondents of the questionnaires among the UB owners answered the question whether he/she is satisfied about the options the UB-pass offers.



Graph Appendix 6-1: Satisfaction among pass holders that use the UB-pass about the option the UB-pass offers (n = 4,213) (Utrecht Bereikbaar, Significant)

3,927 out of the 4,213 respondents (93%) said they were satisfied with the possibilities the UB-pass offers (52% was very satisfied and 41% was satisfied). 97 respondents (2%) were not satisfied.

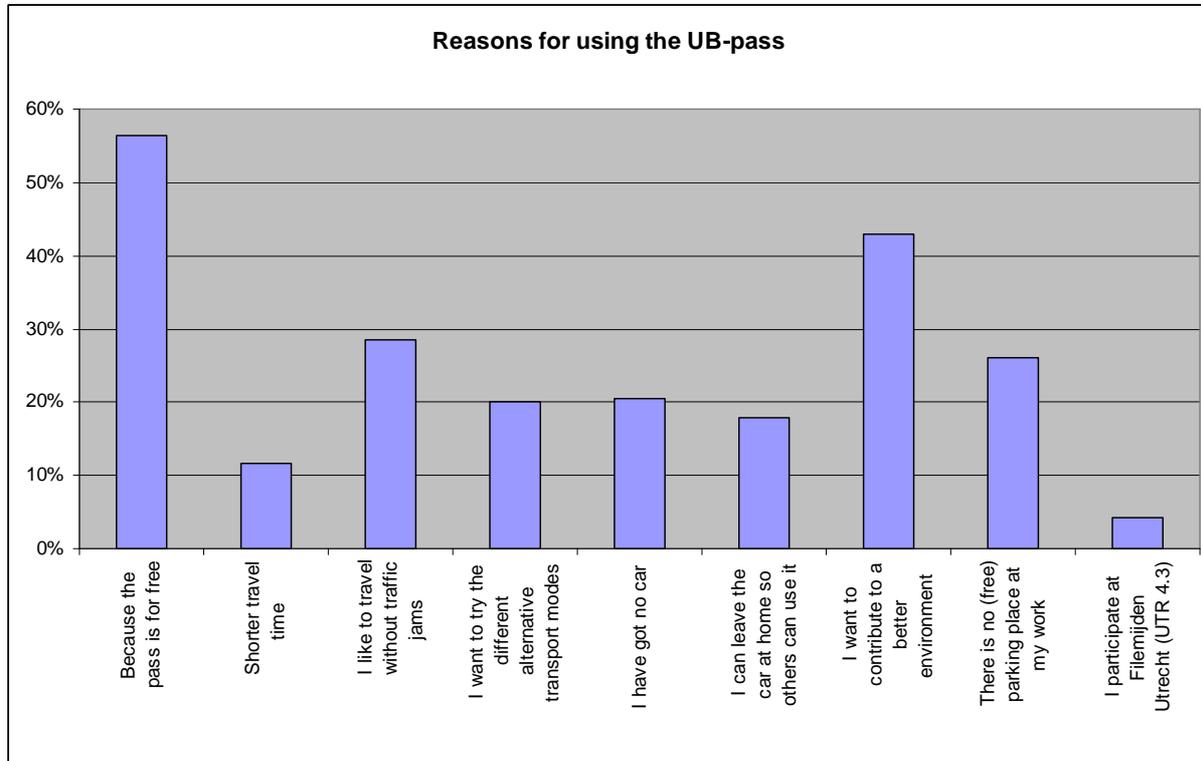
4,442 respondents who use the UB-pass answered the question how often they (will) use the pass to travel to work (indicator 4). 5% of these said they never use it. The reasons they gave for not using the pass are the following.



Graph Appendix 6-2: Reasons for not using the UB-pass (n = 229) (Utrecht Bereikbaar, Significant)

The reason that was answered most was that the travel time would increase.

4,213 of the 4,442 respondents said they use the pass to travel to work. From the questionnaires among these respondents we know the main reasons for using the UB-pass.



Graph Appendix 6-3: Reasons for using the UB-pass (n = 4,213) (Utrecht Bereikbaar, Significant)

The most given answer for using the UB-pass was that the pass is free of charge (for the employee).