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Measure Evaluation Results

UTR 4.2 - Disruption planning and Communication

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THE CIVITAS INITIATIVE
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<i>Measure title:</i>		Disruption planning and Communication			
<i>City:</i>	Utrecht	<i>Project:</i>	Mimosa	<i>Measure number:</i>	4.2

Executive Summary

Since 2007 extensive infrastructural adaptations have been implemented and will continue to be over the coming years in the city of Utrecht. As a result, road capacity dropped temporarily 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. Private businesses also 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 (Rijkswaterstaat), the Utrecht Regional Authority (BRU), 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' (Foundation Utrecht Accessible). This cooperation extends into the following areas: information and dialogue 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.

The specific objectives of the measure 'Hinder planning and Communication' are to make citizens and road users aware of the road works and the expected disruption to the traffic in and around Utrecht in order to: (i) achieve a situation in which citizens and road users are satisfied with the information about the road works and delays in and around Utrecht and (ii) reduce the amount of cars on the roads during peak hours.

Stichting Utrecht Bereikbaar implemented different measures to influence mobility, which included: the Utrecht Bereikbaar pass (UTR 4.1), FileMijden Utrecht/rewarding travellers for avoiding rush hour (UTR 4.3), and communications (this measure). These three measures form a bundle within CIVITAS MIMOSA. All have the objective to limit the negative impacts on traffic flows during the major road works in and around Utrecht, reduce the traffic disruption and therefore improve air quality.

In the R&D phase of this measure, a pilot project on communication regarding disruption by two large road construction projects was carried out. Based on these experiences, different levels and types of traffic disruption have been defined and a coherent communication approach for each level/type formulated. This resulted in a 'Manual for Communication on Road Works and Events': a practical tool that can be used to enable putting communication into a project and implementing it.

The measure was implemented in the following stages:

Stage 1: Development of a communication strategy (July 2008 – December 2011) The innovation of this measure lies within the fact that the communication is consistent and standardised. Detailed synchronisation of the planning of road work activities was necessary. One brand has been developed that was used in all communication about the road works. Furthermore there was one message giver (Utrecht Bereikbaar) for communicating all the different road works instead of a different sender for each of the individual road works.

Stage 2: Execution of communication (2009-2010) To the press and media there was one joint spokesman. Special communication channels have been developed for joint communication.

Stage 3: Activities undertaken by the Chamber of Commerce (KvK) in cooperation with the partners Utrecht Bereikbaar (2009-2010)

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Stage 4: Evaluation of the impacts and the effectiveness of the communication on the road users (June 2010 – February 2011) An on-line survey was conducted in November 2010 among a sample of three target groups: residents, commuters and students. Participants were asked questions like "which communicators do you know?" and "how satisfied are you about the communication on road works?" 421 respondents completed the questionnaire.

Stage 5: Implementation of the manual (December 2010- January 2011) This resulted in a 'Manual for Communication on Road Works and Events': a practical tool that can be used to tailor communications for a project and implementing it.

Stage 6: Setting up of a Network Team and decide how to continue Utrecht Accessible (from 2011 and continuing) A Network Team was set up including (large and medium-sized) municipalities surrounding Utrecht, the Province and the Ministry of Transport. This team coordinates the planning of road works in a wider area (provincial level), including corresponding mobility management measures.

The impact of the measure was evaluated by an online survey to measure awareness, understanding and satisfaction about communication and traffic was counted. Four **key results** emerged from the evaluation of the measure. Firstly, a clear communication strategy was developed and implemented. The strategy was based on a standardized approach and Stichting Utrecht Bereikbaar was selected as the single body responsible for the information dissemination on behalf of public/private partnership. The communication worked and is now up scaled to the Province level. Secondly, the research showed that awareness of road works is high, 65% of survey respondents know when road works commence in their neighbourhood, 47% on the highways and 22% elsewhere in the city of Utrecht, regardless of whether they are affected by the road works or not. Understanding of disruption during road works is high, less than 10% of the respondents do not understand or accept disruption during road works. The research also showed that respondents change their travel behaviour if they are aware of road works and disruption (91% would). Thirdly, traffic counts show that the number of cars on the main roads in to the city centre increased compared to the situation in 2006. However this was expected, as traffic is growing every year. For Business-as-Usual (BaU) a growth of 1.5% was expected each year. Nonetheless, compared to the BaU 1,200 less vehicles were counted during peak hours on main roads in to the Utrecht city centre. As this measure is bundled with two more measures aimed at decreasing traffic it is difficult to say what the precise impact of this measure was.

From the process evaluation, barriers and drivers encountered during implementation of the measure were identified. **Two main barriers** were the political change and change of department responsibility within the municipality, which occurred during the realization of the measure, and late delivery of information did not leave enough time for proper communication. **Three main drivers** were identified: (i) the measure was part of the Air Quality action plan of Utrecht, (ii) a political ambition was expressed to widen the concept to provincial level and to drive the measure in the long-term, and (iii) the extension of the Accessible Utrecht Public Transport Pass (UTR 4.1), which was a measure closely related to this one, contributed to strengthening the dissemination of information.

For measure replication, **several recommendations** came from Utrecht's experience. One set of recommendations concern the significance of building a sustainable collaboration between the stakeholders involved. To achieve a good working cooperation, the setting of common budget creates common commitment between organisations and close cooperation between involved communications departments. To ensure a long-term and successful cooperation, efforts invested in relationships/networking are crucial. Nevertheless, building a working cooperation

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takes time: decision-making process, contracts' negotiation, promoting the service and to 'sell' the products are energy and time consuming. It is also recommended to keep a good record of decisions and history, to cope with changes in politics and stakeholder staff. One of the key-factors of success in Utrecht was the definition of a unique brand for the entire communication. Furthermore, it is relevant to conduct in depth-surveys: they provide valuable information and are necessary for monitoring use and effects and helping to think from the viewpoint of the communication recipient.

This MIMOSA measure enabled the implementation of a communication tool for the monitoring and management of traffic changes due to infrastructure workings. Beyond MIMOSA, the Province of Utrecht is in charge of continuing communications.

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A Introduction

A1 Objectives

The measure objectives are:

(A) High level / longer term:

- To improve air quality.

(B) Strategic level:

- To limit the negative impacts on traffic flow in Utrecht during major road works in and around Utrecht.

(C) Measure level:

- To **make citizens and road users aware of and understand the need for road works** and the expected disruption to the traffic in and around Utrecht in order to:
 - achieve a situation in which citizens and road users are satisfied with information about the road works and disruption in and around Utrecht
 - reduce the amount of cars on the roads in Utrecht during peak hours.

A2 Description

Extensive infrastructural adaptations have and continue to be implemented in Utrecht since 2007. As a result, road capacity dropped temporarily 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 in the accessibility of Utrecht. Private businesses acknowledged this situation and saw the necessity to act.

To limit the negative impacts on traffic flows, the City of Utrecht reached a unique public/private cooperation 'Stichting 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 organisations.

The translation of 'Utrecht Bereikbaar' is 'Utrecht Accessible'.

Figure A2.1 Logo of Utrecht Bereikbaar



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The biggest employers in Utrecht signed an agreement in which they agreed to invest efforts into establishing alternatives for car use during peak hours (for companies/ambassadors of Utrecht Bereikbaar see: <http://www.utrechtbereikbaar.nl/utrecht-bereikbaar-pas/ambassadeurs>).

This cooperation extends into the following areas: information and dialogue 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).

Stichting Utrecht Bereikbaar implemented different measures to influence mobility, which include: the Utrecht Bereikbaar pass (UTR 4.1), FileMijden Utrecht/rewarding motorists avoiding rush hour (UTR 4.3), and communications (this measure). These three measures form a bundle within CIVITAS MIMOSA. All have the objective to limit the negative impact on traffic flows in Utrecht during the major road works in and around Utrecht and reduce traffic disruption. A decrease in the number of cars is or can be the result of all of these three measures. Whereas 4.1 tries to get motorists on to 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.

Within this measure 4.2 the road users have been informed of all the different road construction works and the expected disruption in a way that was innovative for the organisation. By doing this, the organisations involved wanted to reach an understanding and acceptance among these road users about the construction works and disruption and in addition to limit the disruption as much as possible. The assumption was that people who are well informed about construction works and expected disruption, will prepare their journey and choose their transport mode, travel times and routes consciously. Inhabitants of and visitors to Utrecht are generally understanding towards (maintenance/construction) work in the public space, provided they are informed clearly and on time and know where to go with questions.

The innovation of this measure lies in the fact that the communication is consistent and standardised. Because of the large number of construction projects, detailed synchronisation of the planning of road work activities was necessary. One brand has been developed that was used in all the communication about the road works, so people would recognise the communicators more easily. Furthermore there was one message giver (Utrecht Bereikbaar) of the communication about all the different road works instead of a different sender for each of the individual road works. To the press and media there was one joint spokesman. Special communication channels have been developed for joint communication. The project managers and communication advisors of the different road works used a specially developed toolkit for the communication about the expected disruption levels. This could only succeed by setting up a new organization with all the communication advisors who are involved in road construction projects.

B Measure Implementation

B1 Innovative aspects

The innovative aspects of the measure were:

- **A new conceptual approach** – A standardisation of the communication strategies has been completed, depending on the level of expected traffic difficulties due to construction works. Different levels are formulated for the different construction projects and before the execution of a construction project starts, the level of expected disruption is assessed with a traffic

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model. The communication strategy is based on the outcomes of these assessments. More information about these levels is included in chapter B2.

B2 Research and Technology Development

Research has been done on how to plan, implement and communicate road construction works in a small area where three different infrastructure authorities work together.

In the R&D phase of this measure, a pilot project on communication about the disruption to two large road construction projects has been carried out. Based on these experiences different levels and types of disrupted traffic as a result of road works have been defined and a coherent communication approach for each level/type has been formulated. This resulted in Deliverable 4.2.2, a “Manual for Communication on Road Works and Events”.

This manual is a practical tool that can be used to tailor communication to a project and implement it. Within the manual there is a long list and explanation of communication tools.

The manual is being used by all the organisations involved and aims to improve communication about the different road works (and events) and create uniform communication. The manual aims to give communication a standard place in the project. In this way the communication will be part of the project from the start, it will be included in the planning and in the budget. This prevents delays in time and unnecessary costs and creates support among the involved stakeholders.

The core of the manual is a checklist that contains essential points to note for clear communication on road works and events in the public space. It can be used for large as well as small projects. The project leader’s use of the checklist is an important step for good project communication. He/she needs to discuss with an employee of the communication department whether sufficient budget has been reserved for communication, how the tasks and responsibilities are divided, how reporting and evaluation on communication takes place, which are the minimum necessary communication means etc. In case of road projects that cause major disruption and/or projects that last more than a month, a communication plan needs to be made.

For road works lasting longer than two weeks Utrecht developed a classification for traffic disruption categories. It looks like the matrix below. These disruption classifications have been put into a matrix with all available communication measures (see table B2.1). This gives a clear overview for each communication measure in which a disruption category (such as A, B, C, D or E) is mandatory or optional to implement. The Manual includes a table (see table B2.2) with explanations of the various communications options: how long it takes to arrange / write / design / lay-out / produce a radio or TV commercial/advertisement/website/road sign etc, at which stage the communication specialists need to become involved and for how many hours. The other table in the Manual is one with indications of the costs of all communication measures, for project leaders to take into consideration (see table B2.3). This allows a project leader to implement communication in their plans at an early stage.

The checklist contains the following steps:

1. Register the project by filling in the application form.

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2. Determine the category of disruption:

Table B2.1. Table to determine the category of disruption A to E

		Intensity (motorized vehicles per 24 hrs) in 2 directions on average weekday				
Capacity will be decreased by:	Example:	<5.000	<10.000	<15.000	<20.000	>20.000
	1 lane/ direction 2 lanes/ direction	<5.000	<10.000	<20.000	<30.000	>30.000
< 10%	shifted lanes	E	E	E	E	E
10-25%	lower driving speed	D	D	D	C	B
25-50%	1 lane closed off	D	D	C	C	B
50-75%	weekend- and evenings	C	C	B	A	A
75-100%	all lanes closed off	B	B	B	A	A

Source "Manual for Communication on Road Works and Events", City of Utrecht

If the project has disruption category A, B or C: determine which measures to take during the road construction works.

3. Develop a plan for road signs and mobile text carts.
4. Contact the communications department and determine the way to communicate and the tools to use, based on the disruption category. Table B2.2: helps to determine which communication tools a project needs to apply depending on the category of disruption A to E. In the manual more tools are described.

Table B2.2 Table to determine the communications tools depending of the category of disruption A to E

Tools	Disruption categories									
	A		B		C		D		E	
	Required	Optional	Required	Optional	Required	Optional	Required	Optional	Required	Optional
Newsletters for nearby residents	X		X		X		X		X	
Weekly radio news	X		X		X					
Press releases	X		X			X				
Advertisements in local newspapers announcing the disruption	X		X		X					
Project website		X		X		X				
Utrecht.nl and Utrecht.nl/bereikbaarheid	X		X		X		X		X	
News alerts UtrechtBereikbaar.nl	X		X		X					
Traffic news on local TV channel	X		X			X				
Text carts along the road with up-to-date information	X		X			X				
Et cetera										

Source "Manual for Communication on Road Works and Events", City of Utrecht

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5. Determine the necessary communications budget. Table B2.3 helps by providing an indication of the costs of the communication tools for measure leaders within the municipality.

Communication tools	Costs of production of the tools	Costs of working hours
Newsletters for local residents	<ul style="list-style-type: none"> • € 72 to € 500 (design) • € 300 to € 1650 (printing of 4,000 to 15,000 letters) • € 300 (distribution to 4,000 addresses) 	€ 360 (6 hours communication employee)
Weekly radio news	None	€ 60 (1 hour communication employee)
Press release	None	€ 426 (6 hours communication advisor)
Advertisements in local newspapers announcing the disruption, combined advertisement of several works in and around Utrecht	€ 72 (design) € 400 (placement)	€ 240 (42 hours communication employee)
Project website	None (by using plain text and images)	€ 2400 to € 4800 dependent of type of project (40-80 hours communication employee)
Utrecht.nl and Utrecht.nl/bereikbaarheid	none	€ 60 (1 hour communication employee)
News alerts / digital newsletter UtrechtBereikbaar.nl	none	€ 60 (1 hour communication employee)

Table 2.4 gives an indication of the yearly costs for Stichting Utrecht Bereikbaar for the different communication tools. In 2009-2010 a budget of 500,000 each year has been allocated for communications about road construction works, campaigns and communications for the Utrecht Accessible Pass.

Communication tools	Costs of production of the tools	Costs of working hours
Website Utrechtbereikbaar.nl and mobile website	5,000 a year	News, maintenance, updates points of interest. 20,000 a year
Radio commercials with music logo Utrecht Bereikbaar	15,000- 20,000 a year	4,800 a year
Facebook and Twitter	none	2,000-4,000 a year
Text carts along the road with up-to-date information	Incidental costs for the project (depend on the number of text carts used)	Incidental costs for the project (depend on the number of text carts used)
Source "Manual for Communication on Road Works and Events", City of Utrecht		

6. Handling of questions- Questions about the road construction works are the responsibility of the authority involved. Contact information is provided on the website. The service desk of Utrecht Accessible will pass these questions on to the project leader.
7. Handling of press questions- Press questions about a single road construction work are handled by the press officer of the road authority involved. Press questions about the

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entire road construction works are handled by the press officer of Utrecht Accessible. She also organised press conferences at the start of this project and during this project. Parties involved attended the conference. Conference themes were the road construction works and the mobility measures.

8. Subsequent communication is only necessary when road construction works end earlier or last longer. Press release, advertisement, radio commercials etc.

B3 Situation before CIVITAS

In earlier days the different infrastructure authorities worked and communicated their own projects. Within the city of Utrecht the communication about accessibility and traffic disruption was done by five different departments of the city, as well as by institutions such as the Province and the National Road Authorities. The target audience received information from (too) many information channels which was not effective or cost efficient

B4 Actual implementation of the measure

The measure was implemented in the following stages:

Stage 1: Development of a communication strategy (July 2008 – December 2011)

A Communication Strategy for Traffic Delays due to road works has been developed. A workshop on the development of a Manual 'Communication During Projects' (see chapter B2) has been organised. A coherent communication approach for the different levels of expected disruption has been defined. Standards and Tools for Project leaders have been developed. Communication channels for joint communication have been developed. One brand and one sender for communication road works and travel information has been established, including communication/promotion of Utrecht Bereikbaar Pas (UTR 4.1) and Rewarding travellers for avoiding rush hours (UTR 4.3).

An organisation of communication advisors cooperating in communication of traffic disruption with other partners has been established.

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Figure B4.1 Website www.utrechtbereikbaar.nl with up to date information about traffic disruption

The screenshot shows the website www.utrechtbereikbaar.nl in a Microsoft Internet Explorer browser. The page features a navigation menu with links for Home, Reisinformatie, Utrecht Bereikbaar Pas, Eemland Bereikbaar Pas, Utrecht Shuttle, Overige mobiliteitsprojecten, Nieuws, and Organisatie. The main content area is titled 'Wegwerkzaamheden regio Utrecht' and displays a map of the Utrecht region with various roadwork markers. A search bar is located at the top right, and a yellow button labeled 'BESTEL HIER DE PAS nu vanaf € 33,33' is visible. Below the map, there are sections for 'Utrecht Bereikbaar' and 'Nieuws', with a news item titled 'Wat betekent het lente akkoord nou straks voor mij?'. The browser's address bar shows the URL, and the taskbar at the bottom indicates the system time as 16:05.

Stage 2: Execution of communication (2009-2010)

- Telephone calls to all companies with more than 35 employees. Result: 300 companies subscribed to receiving the digital News alerts about road works.
- Card holders of the Utrecht Accessible Pass automatically receive the news alerts.
- Information market for entrepreneurs in West Utrecht (June 2009), in City Centre (July 2009) and East Utrecht (November 2009)
- A press conference was held in January 2010 about the commencement of major road works from 2010 -2013.
- The design of billboards called motto signs has been finalised. In part of the text it says up to date information on road works is available on www.utrechtbereikbaar.nl. The signs were placed in January and February 2010 at the main entry routes into the city.
- Weekly advertisements with a link to the website in the local newspaper (Ons Utrecht) about the road works that week.
- Weekly radio-items for Radio Utrecht about road works that week.
- Radio commercials during extensive road traffic works with recognisable Music Logo Utrecht Bereikbaar.
- Development of a mobile website m.utrechtbereikbaar.nl with travel information (train, bus, webcams, roadworks, bicycle).
- Development of a web broadcast channel.
- E-mail news alerts 3-8 times per month, only in case of severe congestion.

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Figure B4.2 Example of an e-mail news alert

Verzonden aan oostrom@easthouse.biz door noreply@utrechtbereikbaar.nl.
[Klik hier om de e-mail in uw browser te bekijken](#) | [Klik hier om u uit te schrijven](#)



**UTRECHT
BEREIKBAAR
GOED OP WEG**

E-MAIL NIEUWSALERT • 18 JANUARI 2010

IN DEZE UITGAVE

- 19 januari 2010: afsluiting Waterlinieweg ter hoogte van Tamboersdijk
- 20 januari 2010: werkzaamheden ter hoogte van knooppunt Oudenrijn



Foto: Willem Mes

**19 januari 2010:
afsluiting Waterlinieweg ter hoogte van Tamboersdijk**

Dinsdag 19 januari 2010 van 9.30 uur tot 15.30 uur zal de oprit naar de Waterlinieweg ter hoogte van de Tamboersdijk in verband met asfalteringswerkzaamheden afgesloten zijn voor al het verkeer. Het verkeer op de Waterlinieweg richting knooppunt Laagraven wordt voor de oprit naar de Waterlinieweg over de linker rijbaan omgeleid. Het overige verkeer wordt via de Berekuil omgeleid.



**20 januari 2010:
werkzaamheden ter hoogte van knooppunt Oudenrijn**

In de avond en nacht van woensdag 20 januari werkt Rijkswaterstaat aan de A2 ter hoogte van knooppunt Oudenrijn. Tussen 20.00 uur en 05.00 uur is toerit 8 Utrecht Centrum richting A2 Den Bosch en A12 Arnhem en Den Haag afgesloten. Verkeer wordt omgeleid en moet rekening houden met een langere reistijd.

[>>> lees meer](#)

Anders reizen

Utrecht Bereikbaar Pas

De Utrecht Bereikbaar Pas is een vervoerbewijs in de vorm van een creditcard waarmee u van en naar uw werk reist. De pas is er nu in twee varianten: De Utrecht Bereikbaar Pas die geldig is in de stadregio Utrecht. Reizigers kunnen hiermee gratis gebruik maken van alle bussen van GVVU/Connexion. De pas kan

Stage 3: Activities undertaken by the Chamber of Commerce (KvK) in cooperation with the partners Utrecht Bereikbaar (2009-2010)

- The KvK underlined, whenever possible, the importance of a solid communication on expected traffic delays as executed by Utrecht Bereikbaar to various authorities and other relevant organisations.

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- Taking account of the wishes of the businesses in the Utrecht region and coordinating the communication of those to, among others, the Platform Utrecht Bereikbaar.
- Collecting recommendations from companies in the Utrecht region and integrating them into the "Network Team approach" (see stage 6 for more information) that is currently under development, coordinated by the Province of Utrecht.

Stage 4: Evaluation of the impacts and the effectiveness of the communication on road users *(June 2010 – February 2011)*

An on-line survey was conducted in November 2010 among a sample of three target groups that have a large share in the total amount of users of the roads in and around Utrecht: residents, commuters (companies in and around Utrecht with more than 50 employees) and students of the University of Utrecht were invited by letter to participate. In this survey participants were asked questions like "which communicators do you know?" and "how satisfied are you with the communication about the road works?" 421 respondents completed the on-line questionnaire. More information about this survey is included in chapter C1.1.

Stage 5: Implementation of the Manual *(December 2010- January 2011)*

The Manual was implemented. All project leaders and all communications teams of Utrecht know how to work with the Manual.

However there has been uncertainty with regard to which municipal department was responsible for the communication about accessibility during the road works. Until the 1st of January 2011 the 'Program Accessibility and Air Quality' was responsible. After this date the responsibility was transferred to the Department of Traffic and Transport, but this department had no money/hours for communication. Due to this some communication means were stopped: the adverts about road works disruption was stopped, there was no contribution to the coordination and management of the communication from the municipality, or the contribution of new communication budget. The parties involved started to do research on continuing Utrecht Accessible on a provincial level. This research took a long time. In 2011 the communications was downsized. Website and news alerts were the only means to jointly communicate. Utrecht continued the project communications of the individual projects according to the manual. When necessary, projects in the same area of the city or on the highways communicate together in newsletters for citizens.

Stage 6: Setting up of a Network Team and deciding how to continue Utrecht Accessible *(from 2011 onwards)*

A Network Team was set up including some (large and medium-sized) municipalities surrounding Utrecht, the Province and the Ministry of Transport. This team coordinates the planning of road works in a wider area (provincial level), including corresponding mobility management measures. Within this Network Team, there is a separate Communications Team. The City of Utrecht has a prominent role in both this Network and Communications Team. This communication team made a communication plan to expand the communications of Utrecht Accessible to a wider area, the Province, with the Province in charge of the network team and the communications. They work according to the concept and organisation of Utrecht Accessible. This plan is not yet operational. Province had some delay in managing the new role. In 2011 the network team had the task of investigating how to work together on provincial level and make plans on mobility management and had to decide whether or not to continue the Utrecht Accessible Pass.

In 2012 the Department of Traffic and Transport arranged some funding for the communications in Utrecht. Communication department advised the coordination team again.

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The network team still has not decided how to upgrade to communications at provincial level. Project communication in Utrecht has improved thanks to the Manual. The Utrecht Accessible website, mobile website and the digital newsalert are still highly appreciated channels. These are currently the only means used. In Utrecht the project communication means as recommended in the manual are also used (in 2012 the website was visited 117,864 times and the mobile website 198,486 times, 38 e-mail news alerts were sent and 5 news letters). The followers on Twitter are growing. In 2012 a Facebook page was created. The organisation is still awaiting the decision on how to continue. In November 2012 the Province began to make a communication plan.

B5 Inter-relationships with other measures

The measure is related to other measures as follows:

- **UTR 4.1 Mobility Management Policy (the UB-pass)**
- **UTR 4.3 Rewarding travellers for avoiding Rush hour**

These three measures were 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 major road works in and around Utrecht and decrease traffic disruption. The measures receive a lot of political attention and are innovative.

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

C Impact Evaluation Findings

C1 Measurement methodology

C1.1 Impacts and Indicators

This measure aimed at making citizens and road users aware and knowledgeable of the road works and expected traffic disruption in and around Utrecht and to achieve a situation in which citizens and road users were satisfied with the information on the road works and the disruption in and around Utrecht. Furthermore this measure shares the objective with the other measures in WP4 to reduce the amount of cars on the roads in Utrecht during peak hours. To measure whether these objectives will be reached, impacts on society and transport are used.

The intended verifiable results were:

- A clear communication strategy about road works in Utrecht.
- Citizens and road users that are aware of and satisfied with the information about the road works and the disruption caused (originally the intended verifiable result was 'Increased awareness of expected traffic disruption for citizens and road users due to construction works', but this measure did not have the objective to increase these).
- A reduction of 2,000 – 4,000 cars on the roads in Utrecht during peak-hours (which is an intended result of all the measures undertaken by the Stichting Utrecht Bereikbaar).

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

Indicators measure UTR 4.2:

1. The awareness of road works and expected disruption among road users;
2. The understanding/acceptance of the road works and the disruption for road users;
3. The satisfaction amongst road users about the information of the road works and the disruption.

Bundled indicators measures UTR 4.1 and 4.2:

4. The number of cars/hour on the road during peak and off-peak hours.

Table of Indicators:

Utrecht no.	Pointer no.	Category	Impact	Evaluation Indicator	Source
1	--	Society	Awareness level	The awareness among road users of road works and expected disruption; 1. The percentage that says they know when the road works start; 2. The percentage that says they know when the road works end; 3. The percentage that says they know there are many major road works in and around Utrecht.	Questionnaires
2	--	Society	Acceptance level	The understanding/ acceptance of the road works and the disruption for road users: 1. The percentage that say they are knowledgeable of the disruption. 2. The percentage that says that they think the road works are necessary. 3. The percentage that says the disruption is unacceptable. 4. The percentage that says that traffic disruption caused by road works is unavoidable.	Questionnaires
3	--	Society	Acceptance level	The satisfaction among road users regarding information on the road works and the disruption: 1. The percentage that give a mark of 6 or more for the provision of information about accessibility and the road works in and around Utrecht from January 2009 onwards. 2. The percentage that says the information is clear, complete, reliable and up to date. 3. The percentage that says the information meets their needs.	Questionnaires

Utrecht no.	Pointer no.	Category	Impact	Evaluation Indicator	Source
4	--	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 and pneumatic counts on working days

Detailed description of the indicator methodologies

- Indicators 1, 2 and 3 were measured by conducting a survey among three target groups:

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1. Commuters from companies in and around Utrecht with more than 50 employees.
Commuters are a major part of the users of the roads in and around the city of Utrecht. They face the road works on a daily basis. 677 companies received a letter from the city of Utrecht with an invitation to participate in the survey. They were asked to spread the invitation among their employees. If they were prepared to cooperate they received an email with a link to the website.
2. Students of the University of Utrecht.
The city of Utrecht has many students. Every day around thirty thousand students travel between the city centre and the University area. Special flyers were produced with an invitation to participate in the survey. On different days and different times, students were asked to participate face-to-face in the library of the University and were handed out flyers.
3. Residents of the city of Utrecht.
The residents of the city are – of course – also affected by the road works; it is interesting to know what they think about the communications. A random sample of 2000 residents of Utrecht (including Vleuten and De Meern) aged between 16 and 99 were invited to participate. They received a letter with a link to the website.

The online questionnaire consisted of 31 questions about the awareness and satisfaction of the (provided information about) road works. Appendix 1 shows these questions. This survey was conducted in November 2010, after the communication activities had started. 421 people completed the questionnaire.

- Bundled **indicator 4** for measures 4.1 and 4.2:
The number of cars per hour on the road during peak and off-peak hours 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 2003, 2004, 2005, 2006, 2008 and 2010 by people standing along the roads. In 2012 the number of vehicles was counted by pneumatic counting. The locations of the counts are listed in the appendix. Unfortunately there are no results for Saturdays or Sundays. The numbers for peak and off-peak hours are reported. For peak hours the counts between 7:00 and 9:00 am were used.

C1.2 Establishing a baseline

The baseline for this measure is the situation in 2008 and earlier before the implementation of the new communication strategy. The baseline shows:

Indicator 4. 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 marketing plan. For the baseline the number of cars in 2006 has been used. A map of the Utrecht cordon is shown in the appendix.

Indicators 1, 2 and 3 are not applicable in the baseline, due to the fact that they are related to the situation with the communication strategy.

C1.3 Building the business-as-usual scenario

The Business-as-Usual scenario (BaU) is a situation without this measure, in which there would be “Very unsatisfied citizens and confusing planning and impacts of road works on the local network”. Because the measure is implemented in the whole city (end also outside the city), there is no control group.

The business-as-usual scenario will consist of:

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Indicator 4. Due to construction works in and around Utrecht, huge traffic problems were expected if no intervention took 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 coming years. This growth will increase the amount of traffic movement into the city centre. At the same time it is very likely that the financial crisis and the road works will influence the number of cars negatively. Due to these contradictions it was difficult to build the BaU. This is also explained in chapter C5. It was decided to build the BaU scenario by using the expected growth calculated through the traffic model of 30% of motor vehicles on the roads in Utrecht in 2030, compared to 2010, so 1,5% in one year.

Indicators 1, 2 and 3 are not applicable in the business-as-usual scenario. Due to the fact that the communication about the road works was implemented for the whole city, we can not measure whether and how many people would not have known about the road works without this measure.

C2 Measure results

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

C2.1 Economy

Not applicable.

C2.2 Energy

Not applicable.

C2.3 Environment

Not applicable.

C2.4 Transport

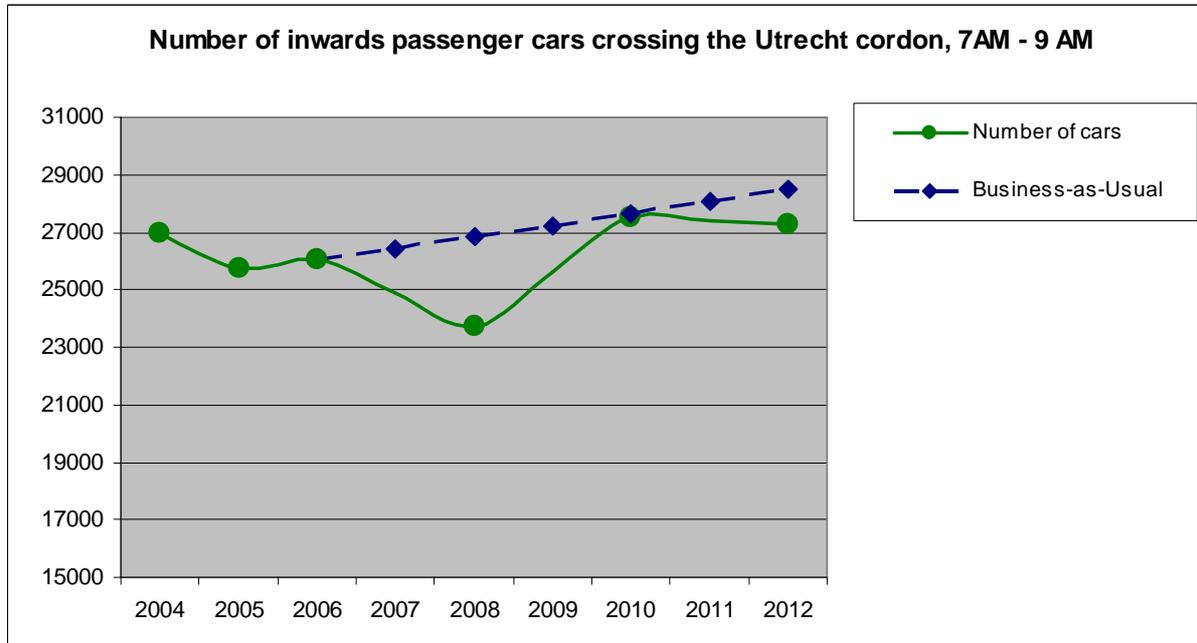
Indicator	Before (Sept 2006)	BaU (2012)	After (Sept 2012)	Difference: After – Before	Difference: After – BaU
4. The number of passenger cars on the main roads to the city centre during peak hours (7-9 am) on working days**	26,100	28,500	27,300	1,200	-1,200
4. The number of passenger cars on the main 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 2 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.					

Measure title:		Disruption planning and Communication			
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Indicator 4: The number of passenger cars on the main roads to the city centre

Figure C2.4.1 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 C2.4.1 Total number of city bound 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 over 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.

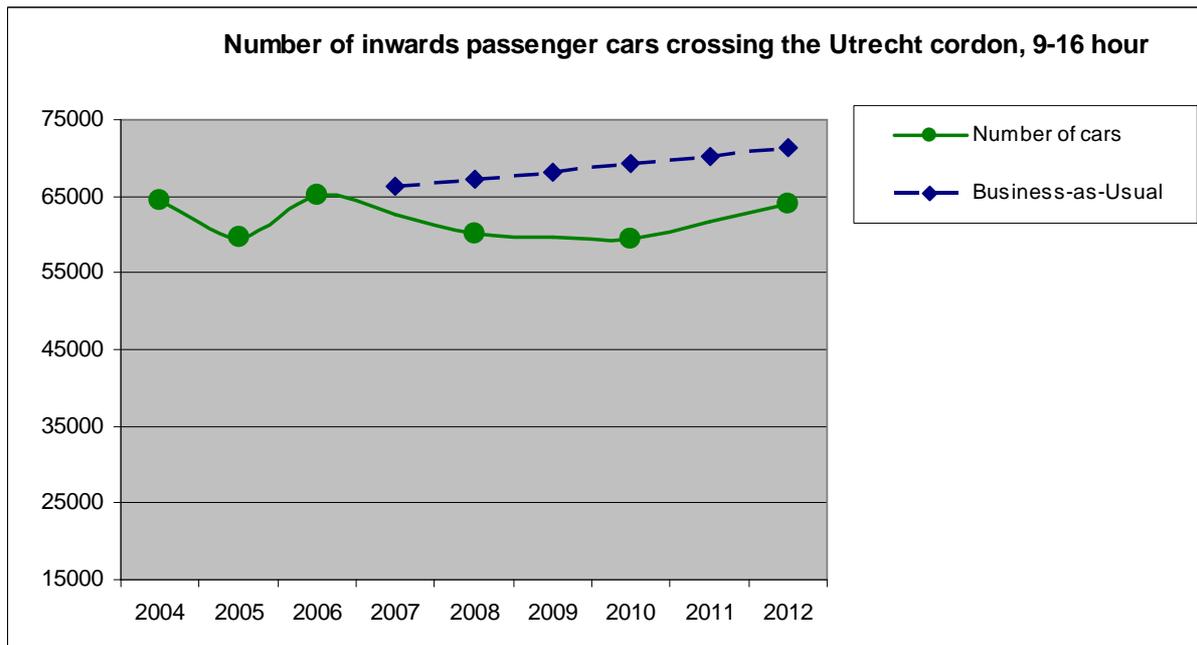
The number of inbound passenger cars crossing the Utrecht cordon fluctuates. In October 2008 23,700 passenger cars crossed the cordon between 7AM and 9AM hours driving towards the city. At this time some road works had started. The number of cars counted in 2008, other than those influenced by road works, was inexplicably lower than the number of cars counted 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 over two weeks. Due to this motorcycles and taxis were also 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 showed an increase of 1.5% per year. Compared to BaU the number of cars during peak hours decreased by 1,200. This is 4% less than BaU.

Measure title:		Disruption planning and Communication			
City:	Utrecht	Project:	Mimosa	Measure number:	4.2

Figure C2.4.2 Total number of city bound 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 over 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 C2.4.2 shows the number of cars driving towards the city centre on the main roads between 9AM and 4PM (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 still decreased by 7,500. This is 11% less than BaU.

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

Furthermore we learned from the questionnaires that were used to measure the indicators 1, 2 and 3 that the respondents say they do change their behaviour when they are aware of road works on their route. The respondents answered the question: "Suppose you know there are road works on your route. What would you do?" They could pick more than one answer. The results are shown in table C2.4.2.

Table C2.4.2: Numbers and percentages of respondents changing their behaviour if they know there are road works on their route (n=416)

Answer	Numbers (n = 416)	Percentages
I adjust my departure time	323	78%
I take another route	339	81%
I use another transport mode	165	40%
I do not change anything	36	9%

Source: B. Bruseker, 2011, 'Op weg naar bereikbaarheid', University of Twente and City of Utrecht

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The questionnaires tell that 91% said he/she would adjust his/her travel behaviour. From this it can be concluded that it is very important and useful to communicate traffic disruptions.

C2.5 Society

421 people filled in a questionnaire about the awareness and satisfaction of (provided information about) the road works. These respondents were divided as followed:

Answer	Number	Percentage
I live in Utrecht	260	62%
I work in Utrecht	259	62%
I study in Utrecht	33	8%
I am a visitor to the city	21	5%
Other	18	4%

Source: B. Bruseker, 2011, 'Op weg naar bereikbaarheid', University of Twente and City of Utrecht

Some respondents were part of more than one group. The target groups were residents, employees and students, all people with a direct relation to the city of Utrecht. The analysis is mostly based on these groups as they make up 91% of the responses. The respondents were divided in a representative way among males and females: 209 men and 212 women. The average age was 41 years; the youngest respondent was 16 and the oldest 82 years old.

Indicator 1: The awareness of road works and expected disruption among road users

421 respondents answered the questions: 'I know when road works start' and 'I know when the road works end', with 'I strongly agree'; 'I agree'; 'neutral'; 'I disagree'; 'I strongly disagree'; 'I don't know'. The questions were differentiated to the following areas:

- Road works and disruption in my neighbourhood
- Road works and disruption in my city
- Road works and disruption on the highways leading to and from Utrecht

The answer 'I don't know' has been excluded from the analyses.

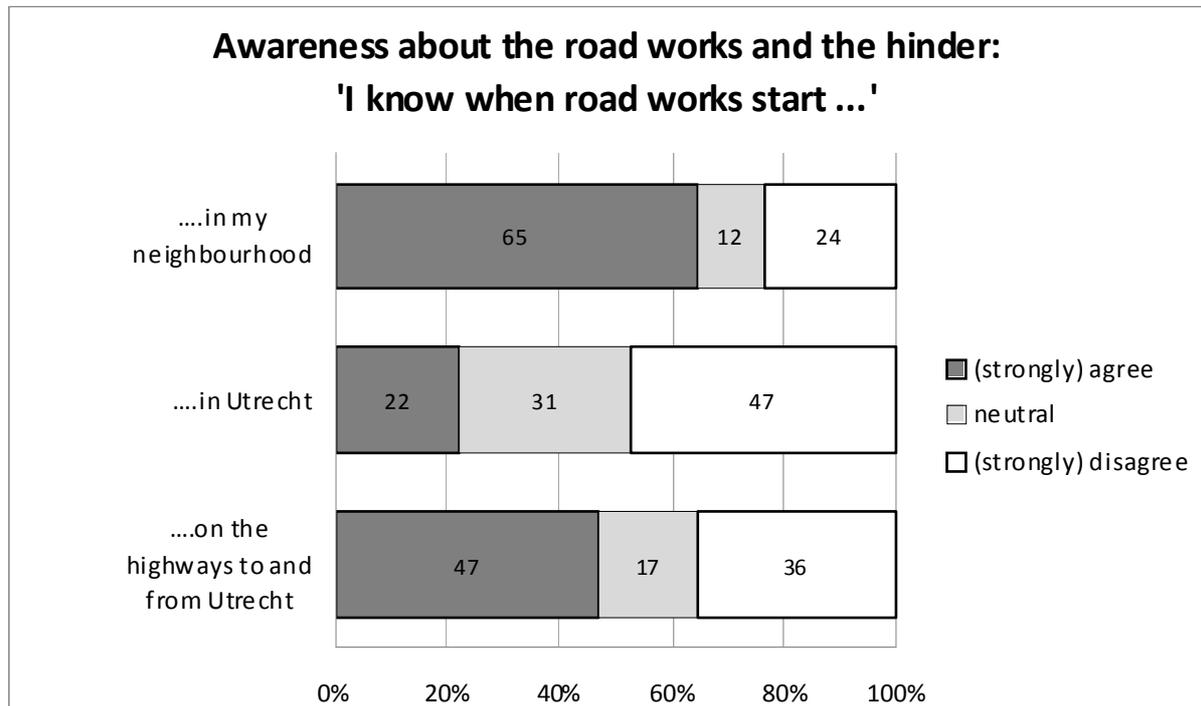
Figure C2.5.1 and figure C2.5.2 show the results. Most respondents know when the different roadworks start on the highways, but they know less about the road works in the city, with the exception of the road works in their own neighbourhood. The respondents know most about the road works in their own neighbourhood (65% (strongly) agree).

The answers to the question about knowledge of road work completion gives the same picture. The respondents know more about the start of road works than of their completion.

Table 2.5.2 shows that residents are more aware of road works in their neighbourhood and employees and students are more aware of road works in, and on the highways to and from, Utrecht. Employees and students probably travel more often from, to and through Utrecht. From the results it can be concluded that respondents are informed about road works with which they are likely to be confronted.

Measure title:		Disruption planning and Communication			
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Figure C2.5.1: Awareness about road works: 'I know when the road works start...'(% of respondents)



Source: B. Bruseker, 2011, 'Op weg naar bereikbaarheid', University of Twente and City of Utrecht (.. in my neighbourhood n = 382,.. in Utrecht n = 388, ..on the highways to and from Utrecht n = 398)

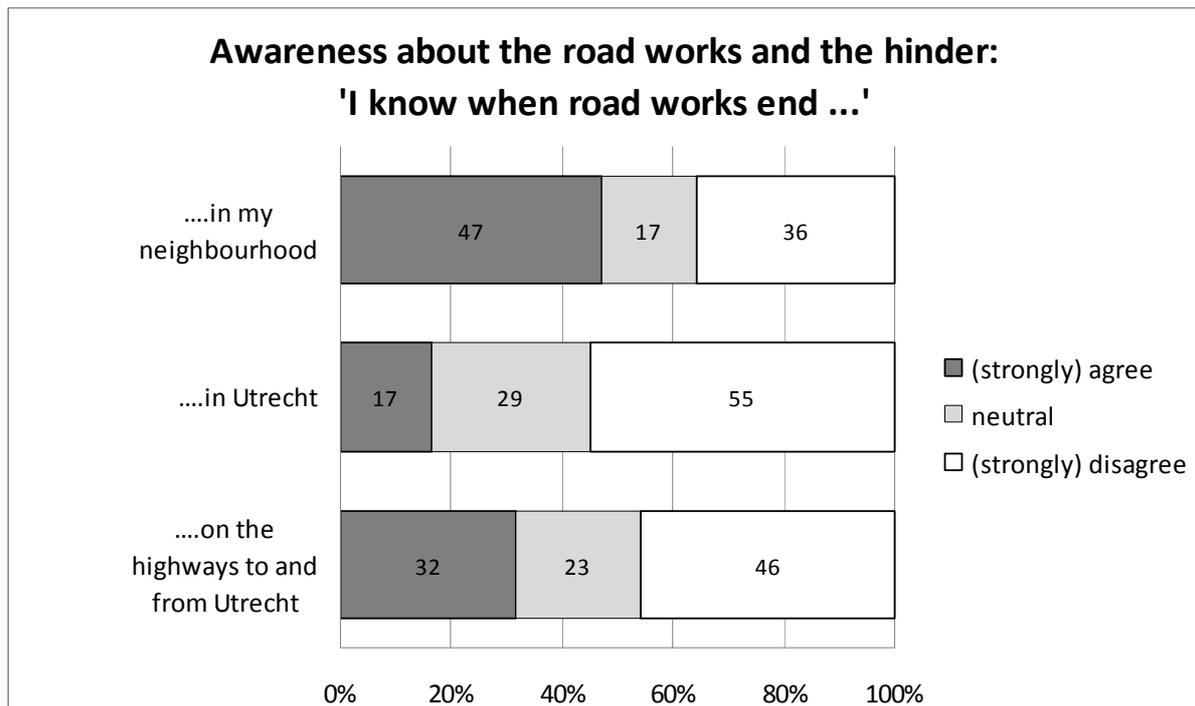
Table C2.5.2: 'Do you know when road works start?' % (strongly) agree

	Residents	Employees	Students
Aware when road works start in my neighbourhood	70% n =259	63% n =224	66% n =32
Aware when road works start in Utrecht	23% n =257	22% n =231	42% n =31
Aware when road works start on highways to and from Utrecht	36% n =247	42% n =242	39% n =28

Source: B. Bruseker, 2011, 'Op weg naar bereikbaarheid', University of Twente and City of Utrecht

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Figure C2.5.2: Awareness about road works: 'I know when the road works end...' (% of respondents)



Source: B. Bruseker, 2011, 'Op weg naar bereikbaarheid', University of Twente and City of Utrecht (.. in my neighbourhood n= 385,.. in Utrecht n= 387, ..on the highways to and from Utrecht n= 396)

Indicator 2: The understanding/acceptance of the road works and the disruption among road users

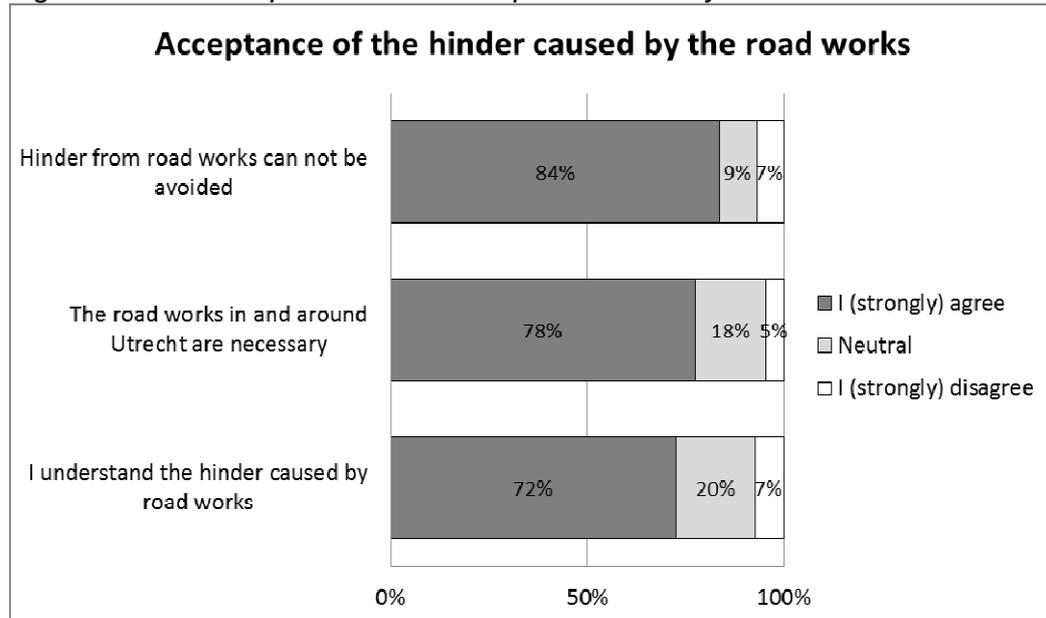
To report the acceptance of the road works and disruption, the following aspects of the questionnaire described in chapter C1.1 were used:

- I understand/sympathize with the disruption that is caused by the road works (n = 414).
- The road works in and around Utrecht are necessary (n = 400).
- Disruption from road works can not be avoided (n = 411).

The respondents scored these aspects with 'I strongly agree'; 'I agree'; 'neutral'; 'I disagree'; 'I strongly disagree'; 'I don't know'. The answer 'I don't know' has been excluded from the analyses. Figure C2.5.3 shows the results. The results show that most respondents accept the disruption caused by roadworks and they think the road works are necessary.

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Figure C2.5.3: Acceptance of the disruption caused by road works.



Source: B. Bruseker, 2011, 'Op weg naar bereikbaarheid', University of Twente and City of Utrecht

Indicator 3: The satisfaction among road users regarding information about the road works and the disruption

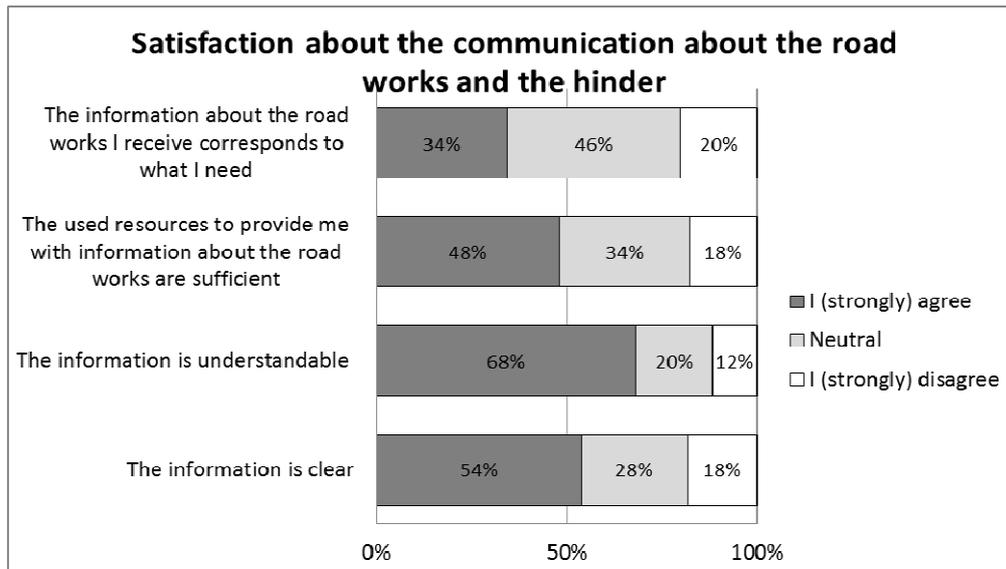
To report the satisfaction about the information of the road works and the disruption, the following aspects of the questionnaire described in chapter C1.1 were used:

- The information is clear (n= 414).
- The information is understandable (n = 406).
- The used resources to provide me with information about the road works are sufficient (n= 400).
- The information about the road works I receive corresponds to what I need (n = 386).

The respondents scored these aspects with 'I strongly agree'; 'I agree'; 'neutral'; 'I disagree'; 'I strongly disagree'; 'I don't know'. The answer 'I don't know' has been excluded from the analyses. Figure C2.5.4 shows the results. For most people the information is clear (82% neutral or (strongly) agree), understandable (88%), sufficient (82%) and corresponds to what they need (80%).

Figure C2.5.4: Satisfaction with the communications about (disruption caused by) road works.

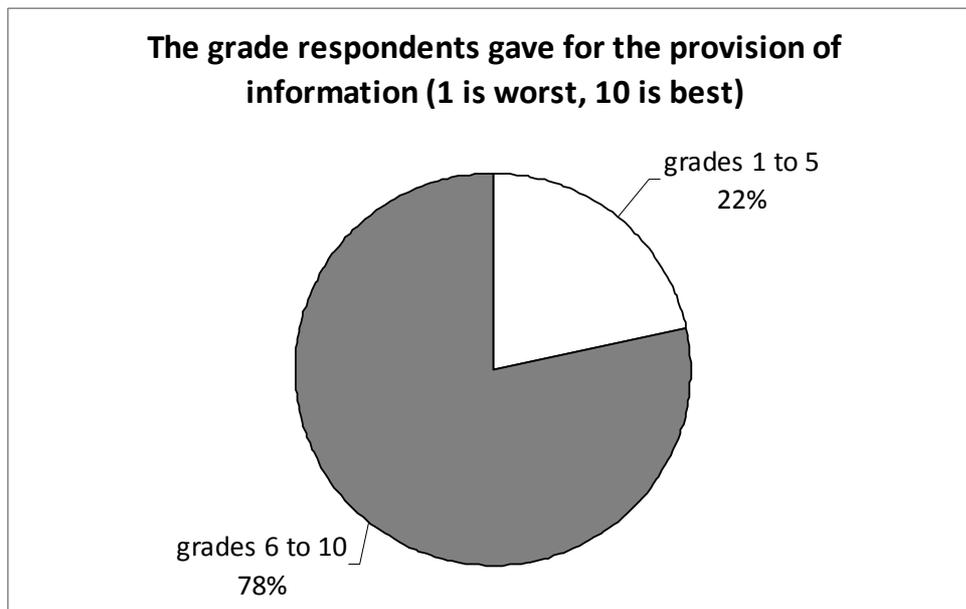
Measure title:		Disruption planning and Communication			
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Source: B. Bruseker, 2011, 'Op weg naar bereikbaarheid', University of Twente and City of Utrecht

Furthermore we know what percentage of the respondents rated the provision of information regarding accessibility and the road works in and around Utrecht from January 2009 on by a mark of 6 or more. Figure C2.5.5 and table C2.5.3 show the results. 78% of the respondents rate the information provided with a 6 or more. The average grade was 6.25.

Figure C2.5.5: The acceptance of the information provided about (disruption caused by) road works.



Source: B. Bruseker, 2011, 'Op weg naar bereikbaarheid', University of Twente and City of Utrecht

Some other results from the survey were:

- From a long list of communicators most people recognise the detour signs (75%) and the electronical signs above the highways (47%). People don't know about communicators such as information evenings (5%), information desks at the municipality (2%), consultation hours with the alderman (1%). Only 14% know that information about road works can be found on the website www.utrecht.nl and 25% know of the website www.utrechtbereikbaar.nl. The weekly advertisements in the local newspaper (Ons Utrecht) about current road works are known by 30% and the advertisements in the national newspaper by 15%.

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Table C2.5.3: The acceptance of the provided information about (disruption caused by) road works

Grade	Numbers (n = 421)	Percentages
1	3	1%
2	6	1%
3	10	2%
4	22	5%
5	50	12%
6	124	29%
7	149	35%
8	51	12%
9	6	1%
10	0	0%

Source: Source: B. Bruseker, 2011, 'Op weg naar bereikbaarheid', University of Twente and City of Utrecht
The grades respondents gave to the question ' Can you indicate, by using a score from 1 to 10, your satisfaction about the provision of information about the accessibility and the road works in and around Utrecht from January 2009 on?

C3 Achievement of quantifiable targets and objectives

No.	Target	Rating
1	Clear communication strategy about road works in Utrecht.	**
2	Increased awareness of expected traffic disruption for citizens and road users due to construction works.	**
3	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).	*
NA = Not Assessed O = Not Achieved * = Substantially achieved (at least 50%) ** = Achieved in full *** = Exceeded		

With the implementation of the Communication Strategy for Traffic Delays and the Manual with recommendations for communication means on project level, a clear communication strategy was reached. There is one brand and standardized means to communicate about road works. This was an important result as it seemed difficult working together with all different road authorities.

The research among residents, students and employees showed that most people are aware of the road works. It also showed that most people would adjust their travel behaviour according to their knowledge of road works. This means it is very important to inform people about roadworks and it is clear that an awareness campaign and stimulating usage of the website for information about roadwork should be very effective for adapting behaviour to the roadworks.

Unfortunately it is not known if awareness and acceptance increased as it is not known what the previous situation was, so we cannot say how awareness developed. However, as stated above, the research showed that information about roadworks is very important as road users say they adapt their travel behaviour when they are aware of roadworks.

The traffic counts showed a decrease of 1,200 passenger cars on the main roads in to the city centre during peak hours (between 7-9 am). Although the objective was a larger decrease, compared to the BaU the number of cars did decrease by 4%. It is difficult to say if the decrease is an effect of the measure(s), as there are more aspects that influence the traffic flows.

C4 Up-scaling of results

<i>Measure title:</i>		Disruption planning and Communication			
<i>City:</i>	Utrecht	<i>Project:</i>	Mimosa	<i>Measure number:</i>	4.2

The initial plan foresaw a focus on communications of the disruption in Utrecht West but was up-scaled early to the entire Utrecht region as traffic is seldom a local phenomenon. Additionally, the communication strategy and developed manual have already been up-scaled from city/regional level to provincial level. At this moment the Province is busy creating a communication plan for this.

C5 Appraisal of evaluation approach

Awareness and acceptance was measured with an online questionnaire. This research gave very important information for the communication and the results. The research showed that most people are aware of the road works and acceptance is high and respondents would adjust their travel behaviour if they knew about road works. A research about communication and acceptance before implementation of the communication was not thought useful as without communication there wouldn't be awareness of this communication. However without this pre-research it is not possible to tell how awareness and acceptance of road works developed and we cannot tell if awareness has increased. In the future it would be recommended to conduct a pre-research about acceptance and awareness of road work before starting a new communication plan.

To measure the number of cars travelling towards the city centre in the years 2004, 2005, 2006 and 2008 visual counting on a cordon around the city was used during one working day in September/October. These results 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 noticed that due to the fluctuations in the number of cars, the results also fluctuate. This (together with the influence of the road works) probably 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 lead to different numbers.

It was difficult to build the BaU 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, 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 (CBS, 2011);
- In 2011 the congestion in the Netherlands decreased by 7% compared to 2010 (Inrix, 2011)

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 changed their travel behaviour anyway due to the expected disruption. These developments could have decreased the (growth of the) number of cars.

It was decided to build the BaU scenario by using the by the traffic model calculated expected growth of 30% of motor vehicles on the roads in Utrecht in 2030, compared to 2010, so 1,5% in one year. In practice, however, this percentage could be less.

C6 Summary of evaluation results

The key results are as follows:

<i>Measure title:</i>		Disruption planning and Communication			
<i>City:</i>	Utrecht	<i>Project:</i>	Mimosa	<i>Measure number:</i>	4.2

- **Clear communication strategy for road works** – With the implementation of this measure a clear communication strategy was developed and implemented. A strategy with a standardized approach and one sender for different parties. The communication worked and is now up scaled to the Province level.
- **More awareness and more understanding of disruption** – The research showed that awareness of road works is high, 65% know when road works commence in their neighbourhood, 47% on the highways and 22% elsewhere in the city of Utrecht, regardless if they are confronted with the road works or not. It seems that most people that are confronted with road works are informed. Understanding of disruption during road works is high, less than 10% of the respondents do not understand and accept disruption during road works. The research also showed that people will adjust their travel behaviour if they are aware of road works and disruption (91% would).
- **Less cars on the roads in Utrecht during peak hours** – Traffic counts show that the number of cars on Utrechts main roads in to the city centre increased compared to the previous 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 in to the Utrecht city centre is 1,200 less. As there are more MIMOSA measures aimed at decreasing traffic it is difficult to say what the precise impact of the measure was.

C7 Future activities relating to the measure

The Province of Utrecht is in charge of continuing communications. The city of Utrecht makes the manual accessible for third parties working on the roads in the city. For example energy and gas companies who have maintenance work to do that would possibly disrupt traffic. It will be a condition in their licence to communicate according to the Utrecht manual.

Measure title:		Disruption planning and Communication			
City:	Utrecht	Project:	Mimosa	Measure number:	4.2

D Process Evaluation Findings

D.1 Deviations from the original plan

The deviations from the original plan comprised:

- **Construction companies and freight traffic not partnered later on in the measure** – At first, construction and Freight companies were included in the measure as a partner. However very soon it was decided that construction companies were no longer included as partners. Stichting Utrecht Bereikbaar decided they were more at a second level as a stakeholder and receiver of the information and not as a partner as they do not communicate information about construction work themselves. The information on the construction works comes from the road authorities responsible (Rijkswaterstaat, BRU, and the city of Utrecht). Due to the recession the Freight Traffic diminished and their role was reduced.
- **Wider focus than Utrecht West** – Initial plan was to focus on disruption in Utrecht West and companies in Utrecht West. The Communications Department advised to inform about all the road construction works, because traffic goes everywhere. Later the Public Transport pass was also sold in other areas in Utrecht. So to develop communication channels for all road construction works proved to be a good idea.

D.2 Barriers and drivers

In this chapter barriers and drivers are described for each measure phase (between brackets the barrier/driver field number as described in the process evaluation guideline).

D.2.1 Barriers

Preparation phase

- No specific barriers in this phase.

Implementation phase

- **political (1): Political change** – The change of leading parties due to elections in Utrecht resulted in some delay in the planning.
- **planning (7): Late delivery information** – At the start there was a lack of discipline in delivery of planning from road construction works, which did not leave enough time to communicate properly and communications were informed too late.

Operation phase

- **institutional (2): Change of responsible department** - There has been uncertainty with regard to which municipal department was responsible for the communication about the accessibility during the road works. Until the 1st of January 2010 the 'Program Accessibility and Air Quality' was responsible. After this date the responsibility was transferred to the Department of Traffic and Transport, but this department had no money/hours for communication. Due to this the implementation of some communication means stopped and for 6 months Utrecht had no communication staff for advice, a second survey was not carried out, adverts about disruption from road works was stopped for some months and there was no contribution to the coordination and management of the communication from the municipality.

D.2.2 Drivers

Preparation phase

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- **strategic (1): Measure included in action plan** - The city government recently approved this Air Quality Actionplan which is a positive stimulant for the measure as it contributes to clean air.

Implementation phase

- **political (1): Political ambition for up scaling** - Political ambition to use the concept of planning and communications in a larger area (from City of Utrecht to the Province of Utrecht).

Operation phase

- **positional (6): Prolongation of UB-Pass** - Due to the prolongation and extension of the Accessible Utrecht Public Transport Pass (M4.1) into 2012, companies are being actively informed about this possibility in combination with the info on road works.

D.2.3 Activities

Preparation phase

- **involvement/communication (5): Getting political attention** - Extra effort was made to inform new politicians about the measure and the results.

Implementation phase

- **financial (9): Discussion for budget** - In order to maintain the communication about the road works, the responsibility for this communication has been discussed in a meeting with relevant directors of the municipality. This resulted in a small budget.
- **positional (6): Up scaling plan** - Enlarge and improve the coordination of road construction planning in a larger area (Province) and joint communication with one sender and one brand. A plan was made to coordinate and implement communication on road construction works and strategy on province level.

Operation phase

- **positional (6): Up scaling to the region** - The new set up Network Team has been commissioned to execute the communication for all the joint governments. To be able to do this, a communications consultant has been appointed. The municipality of Utrecht participates in this. The concept of the cooperation within the Association "Utrecht accessible" is extended to the region.

D.3 Participation

D.3.1. Measure Partners

- **The City of Utrecht** – Measure leader of disruption planning and communication in the city of Utrecht.
- **Utrecht Bereikbaar** - A unique public/private cooperation 'Stichting Utrecht Bereikbaar'. Utrecht Bereikbaar was 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. Participant in the platform Utrecht Bereikbaar.
- **National Road Authority (Rijkswaterstaat)** – The national road authority was responsible for information about road works on highways to and from Utrecht.
- **Province of Utrecht** – regional authority and participant in the platform Utrecht Bereikbaar.

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- **VNO NCW en MKB midden Nederland** – Employer organisations that are participant in the platform Utrecht Bereikbaar.

D.3.2 Stakeholders

- **Public Transport companies** – Information about road works and implementation of the UB- pass (UTR 4.1) stimulates the use of public transport.
- **Businesses who buy the UB-pass-** Businesses who buy the UB-pass are informed about the road works, employees could start work later or start working at home.
- **Citizens** – residents are informed about road works and could adjust their travel behaviour.
- **Commuters and students-** all other people travelling to Utrecht could be informed about the road works and adjust their travel behaviour.

D.4 Recommendations

D.4.1 Recommendations: measure replication

Disruption planning and communication is an interesting measure for every city dealing with different organisations that are responsible for communications about road works and a lot of planned road works. With joint communications road users are more understanding and aware of road works, can adjust their travel behaviour and traffic jams can be prevented.

For successful measure replication the following recommendations are made:

- **One brand-** Develop one brand as the message giver sender for your communication. One brand makes communication more visible and recognizable and at the same time stimulates cooperation between the different infrastructure authorities and organisations.
- **Think before you start communication** - Surveys provide valuable information and are necessary for monitoring use and effects and help to see the viewpoint of the recipient of the communication.
- **Close cooperation and common budgets** - Common budget creates common commitment between organisations and close cooperation between involved communications departments. Get the organisations involved and form a communication group with them. Let infrastructure authorities keep control of their own project communications however. This concerns more extensive information towards people in the neighbourhood of the project.

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

When organising and implementing this measure the following organisational aspects should be taken into account:

- **Cooperation takes time-** Time is needed for the decision-making process, to negotiate contracts, to brand the service and to 'sell' the products.
- **Good process registration-** Keep good record of decisions and history, to face changes in politics and stakeholder staff. Change in politics and management can have a negative effect on the continuation of the measure, good process registration could prevent this.
- **Invest in relationships-** Good relationships are very important for long term and successful cooperation.

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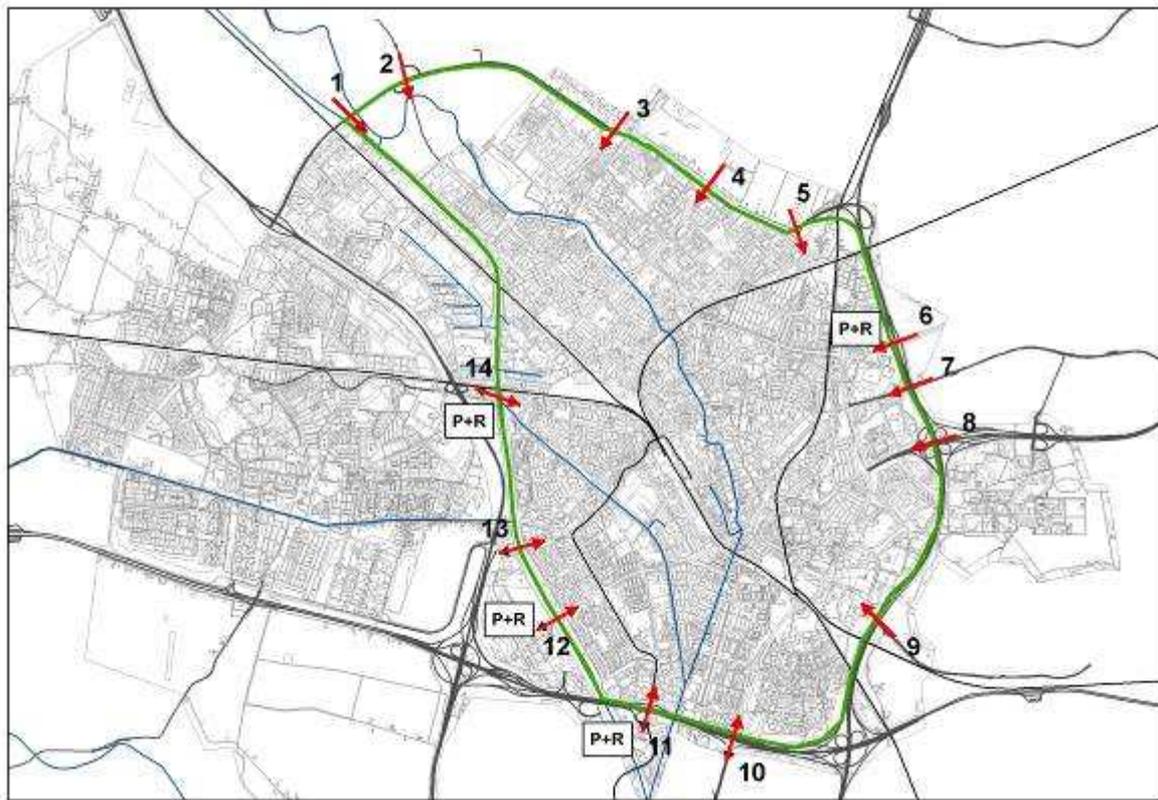
Appendix 1 Questionnaire: the questions

The online questionnaire to measure the awareness and satisfaction about (the information about) the road works consisted of the following 31 questions.

- Can you indicate to what extent you agree with the following statements? Respondents could pick one of the following six following answers: I strongly agree; I agree; neutral; I disagree; I strongly disagree; I don't know/have no opinion.
 - I know when road works start:
 - in my neighbourhood
 - in my city
 - on the highways leading to and from Utrecht
 - I know when road works end:
 - in my neighbourhood
 - in my city
 - on the highways leading to and from Utrecht
 - The used resources to provide me with information about the road works are sufficient.
 - I find the information about the road works clear.
 - I find the information about the road works understandable.
 - I receive too much information about the accessibility in and around Utrecht.
 - The information about the road works I receive is out of date.
 - The information about the road works I receive is complete.
 - The possibilities to request information about the road works are sufficient.
 - The information about the road works I receive is unreliable.
 - The information about the road works I receive corresponds to what I need.
 - The road works in Utrecht only cause hinder.
 - The road works in and around Utrecht are necessary.
 - I'm sick of all the road works in and around Utrecht.
 - I'm understandable towards the hinder caused by roadworks.
 - The hinder for the traffic flows in Utrecht is not too bad.
 - I think the government is doing enough to keep Utrecht accessible.
 - Traffic hinder caused by road works is unavoidable.
 - I receive too little information about the road works in and around Utrecht.
- Do you know there are many major road works in and around Utrecht? (yes, no)
- Can you indicate, by using a score from 1 to 10, your satisfaction about the provision of information about the accessibility and the road works in and around Utrecht from January 2009 on?
- Suppose you know there are road works on your route. What would you do:
 - I adjust my departure time
 - I take another route
 - I use another transport mode
 - I do not change anything

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Appendix 2 Locations of the traffic counts



Map Appendix 2-1: Cordon Utrecht. The numbered locations indicate where the visual counts were conducted to measure the number of city bound passenger cars. Unfortunately P+R Veemarkt lies within the cordon.