



CiViTAS
Cleaner and better transport in cities

MIMOSA

BOLOGNA • FUNCHAL • GDAŃSK • TALLINN • UTRECHT

Focus Measure Evaluation Results

UTR 5.1 Road Safety Label

Patricia Stumpel-Vos (City of Utrecht)

February 2013



THE CIVITAS INITIATIVE
IS CO-FINANCED BY THE
EUROPEAN UNION

Executive Summary

Children are vulnerable in traffic and it is important that they learn to behave safely and independently. However, many young children do not know how to do this. In practice the surroundings of many primary schools were not sufficiently safe and recognisable for road users. Increasingly, parents drop off and pick up their children by car. Road safety problems cluster more around schools. Thereby, road safety of schoolchildren is a shared responsibility of the city, the schools, the children and their parents at all of Utrecht's 104 primary schools.

The measure 'Road Safety Label' had the objectives of increasing road safety in primary school areas, reducing the number of car trips and increasing of the number of walking-trips and trips by bicycle to primary schools. The objective was to create recognisable, safe school surroundings and increase the satisfaction with road safety in primary school areas among children, their parents and teachers. To stimulate high quality traffic education at primary schools and to guarantee this education a quality label for primary schools was developed. This Road Safety Label shows that a school has made an effort to achieve traffic education and road safety around the school. Nine out of the 12 provinces in the Netherlands work with this kind of quality label. In Utrecht the Province of Utrecht was responsible for the Utrecht Road Safety Label (URSL). To determine whether a school is qualified for the URSL a list of criteria is being used.

The measure was implemented in the following stages:

Stage 1: Development of a plan to make uniform school zones (August 2008 - November 2008) Utrecht chose to use existing materials, such as road signs, sustainable road markings and poles because they have a legal status, they fill the existing need and they reduce the purchase and maintenance costs. Within the plan the school zone consists of the following design elements: Standard (always applied) and tailor-made (dependant on the school zone).

Stage 2: Implementation of a pilot (January 2009 – October 2009) In the first months of 2009 this school zone was implemented at five pilot locations in which eight primary schools are situated. The figure below shows an example of a school surrounding before and after the implementation of the school zone.

Stage 3: Evaluation of the pilot zones (2009) An evaluation which included the experiences of stakeholders, the satisfaction with the school zones (among teachers of all the grades, children of the three highest grades, parents of all the school children and the people that live near the schools), the average vehicle speed and the costs of the new school zones.

Stage 4: Resulting Decision-making and continuation (2010) Results of the pilot were described in a report in which the department of traffic and transport recommended to continue with the implementation of the school zones at the other schools that participated in the Road Safety Label project. They also recommended making crossings of main routes to primary schools more visible by using road signs.

In order to encourage schools to participate in the URSL, the city of Utrecht intensified the recruitment of and support of primary schools within this measure. Also the city of Utrecht developed a plan to make uniform and recognisable school zones. In a pilot five school zones were implemented and evaluated. One of the conclusions of the evaluation was that the perceived safety increased. After positive decision-making the city implemented the uniform school zones at all the primary schools that participated in the URSL project.

Because of the importance of children for our future, this measure was identified as a focused measure. To measure whether the objectives were achieved, impact and process evaluations

were conducted. The following **Key-results** can be highlighted: **Firstly**, in October 2012, 38 primary schools received the label and another 32 schools were actively working on meeting the criteria. Although 80% participation was not reached; the 67% achieved is considered a good result because schools are participating voluntarily and it thus shows the high acceptance of the measure. So far 54 of these 70 participating schools were redeveloped with a school zone.

Secondly, the modal split was measured with questionnaires among school children, parents and school teachers. The bicycle is the most used transport mode to travel to primary school followed by walking. The survey among the children showed that car usage in two of the three URSL schools decreased, whereas it increased on the non-URSL school which was used as a control site. The results of the survey among the parents (which must be treated as an indication only) showed an increase of car usage on two of the three URSL-schools, whereas a decrease of car usage was measured on the non-participating school. In 2011 on average 12% of parents still bring their children to school by car. Probably it is very difficult to convince these parents to use the bicycle or walk to school instead. But compared to the other modes (cycling/walking) this number is low. **Thirdly**, the satisfaction about road safety was measured by a survey among children, parents and teachers. The measure led to an increase of satisfaction about road safety among parents of URSL schools. Satisfaction among school children of the URSL schools increased whereas the satisfaction on the non-URSL school decreased. The satisfaction about road safety among teachers of URSL schools also increased. **Finally**, on city level, taking all primary schools into account, it cannot be concluded that the measure made a change in the satisfaction among parents about road safety of primary schools. Nevertheless, the measure was considered successful. It made clear to schools and parents that the city invests in the road safety of school children, and achieved a situation in which schools and parents take their own responsibility for road safety. The number of participating schools increased hugely and the school zones made the schools visible.

Several barriers were encountered. It was a complicated task to have schools involved in the URSL due to the fact that schools are already busy with their own activities, involvement of parents was difficult to achieve, and the many changes in the schools led to delays. The uncertainty about the regional budget and the involvement of the Province were barriers that led to many time-consuming discussions and additionally needed municipal budget.

Important drivers were the positive political and societal attention for road safety of schools which increased and ensured the availability of the municipal budget. The school zones turned out to be a major attraction for new schools to start participating in URSL.

Increasing the road safety of children is a popular measure on a political and social level. This kind of road safety label can **easily be transferred** to other countries, although it should be adapted to the local context. The implementation could take place at the national or regional level, and if the city is large enough (having a sufficient number of schools) the development of a school road safety label would also make sense at the city level. Also the school zones of Utrecht are easy to implement, cheap and recognizable in every (European) city. In order to successfully implement such a measure, **several important recommendations** came out from Utrecht's experience. Firstly, the schools should be pro-actively approached by a partner that really understands how a school is run. This pro-active approach and assistance will also make the fall-out risk smaller during the implementation phase, for example as a result of a school management change. Schools should be approached with a consistent school road safety package that shows why it is in their interest to participate. Additionally, school participation needs to be free of charge. This assures that the objectives set by the city are really met.

Secondly, the establishment of a local project team that combines all the necessary skills is a key-factor for an efficient measure management. The following should be included:

- (1) understanding of the school management and priorities,
- (2) understanding of education priorities within the city (department of education),
- (3) understanding of mobility issues and
- (4) physical infrastructure (department of traffic and transport).

Thirdly, it is crucial to involve politicians and high level administration officials in the process by explaining to them correctly and on a continuous basis the needs and advantages of the measure. This is indispensable to ensure continuity and available budgets in a long-term perspective. Finally, it is recommended to focus at first at the participation of a few schools, once they have started this can create a snowball effect, as they are an example for other schools.

The measure is a huge success story in Utrecht. Based on these positive results, it was decided to invest additional money to be able to continue the label for the participating schools in 2013.

A Introduction

A1 Objectives

The measure objectives are:

High level objectives:

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

Strategic level objectives:

- Improvement of road safe behaviour both of children and their parents. Through this improvement of road safety in the school areas and in the surrounding residential area.
- Increase of cycling and walking.

Measure level specific objectives:

- Reduce of the number of car trips and increase of the number of walking and cycle trips to primary schools.
- Creation and establishment of recognisable, safe school surroundings (e.g. by placing the same road signs, road markings and coloured railings).
- Increase of satisfaction about the road safety in primary school areas among children, their parents and teachers.
- 80% of the primary schools have received the Road Safety Label or are working towards getting it in 2011.

A2 Description

Children are vulnerable in traffic and it is important that they learn to participate safely and independently in traffic. Road safety problems cluster increasingly around schools. More and more often, parents drop off and pick up their children at schools by car, and children who cycle or walk to school are hindered by this. Many young children do not know very well how to behave safely in traffic. Furthermore in practice the surroundings of many primary schools were not sufficiently safe and recognisable for road users. Utrecht has 104 primary schools. Thereby, road safety of schoolchildren is a shared responsibility of the city, the schools, the children and their parents.

To stimulate traffic education at primary schools and to guarantee high quality of this education a quality label was developed. This Road Safety Label with the logo of 'Seef' the zebra shows that a school makes efforts for traffic education and road safety around the school. Nine out of the 12 provinces in the Netherlands work with this kind of quality label. In Utrecht the regional department of road safety (ROV-Utrecht) of the Province of Utrecht was responsible for the Utrecht Road Safety Label (URSL). The city of Utrecht participates since 2005.

To determine whether a school is qualified for the URSL a list of criteria is being used. The so-called URSL committee is responsible for checking whether the school meets the criteria. Within this committee are a representative of the Province of Utrecht and some independent education advisors.

The criteria are clustered in the following five themes:

1. Traffic education in theory
2. Practical traffic education
3. Involvement of parents
4. A safe surrounding for the school
5. The school's policy

Appendix 1 contains the criteria. There are obligatory criteria and some optional criteria. The school needs to meet all the obligatory and 50% of the optional criteria. Some examples of the obligatory criteria are:



Picture A2-1: Seef the zebra—the logo for the RSL

Practical traffic education

- At least once a year children of at least four grades practice their behaviour in traffic and the traffic rules in the school yard, on the street or in the Utrecht traffic garden (see below).
- All schoolchildren participate in the practical part of the national traffic exam during their school-time.

Involvement of parents

- The school informs the parents frequently about road safety and traffic education.
- There are agreements about safely taking children to school and picking them up.
- There is at least one traffic parent active at the school.

The school's policy

- Traffic education is part of the school's policy.
- Every year the school makes an activity calendar for traffic education and road safety.
- The school has a traffic team in which teachers and parents are represented.

Schools who meet enough criteria receive a URSL-sign the school can hang on the wall (see picture A2-2). Many schools organise a little celebration during which for example the alderman of traffic or the aldermen of education congratulates the school and holds a short speech.



Picture A2-2: The alderman of education (Mr. Kreijkamp) (left) awards the Koningin Beatrix school with the URSL (17 November 2010).

A labelled school is subject to a biannual audit which will determine if the respective school still meets the criteria and keeps the road safety label. In the Province of Utrecht there are no cases known up till now of schools of which the label has been withdrawn. Additionally, ROV-Utrecht rewards schools that meet the criteria with a one time compensation of 75% of the costs of a new method for traffic education or a practical traffic lesson.

In order to encourage the schools to participate in the URSL, the city of Utrecht intensified the recruitment of and support on primary schools within this measure. On behalf of the city of Utrecht an education support agency (Eduniek – www.eduniek.nl) recruited primary schools actively to participate in the URSL project and supported the participating schools to set up and implement an action plan that indicates which criteria will need the schools' attention for improvement. Other cities within the Province of Utrecht do not invest in this additional support.

Also the city of Utrecht developed a plan to make uniform and recognisable school zones within the Research and Development phase of this measure. In a pilot five school zones have been implemented and evaluated (see section B2). After positive decision-making the city implemented these uniform school zones at all the primary schools that participated in the URSL project.

Utrecht traffic garden

The city of Utrecht has a dedicated traffic education park which is used by many primary schools for the “real life” traffic education and for the practical traffic exam (two of the criteria the schools need to meet). Traffic situations are imitated on a traffic layout 1/3rd of the real size. Up to 2012 schools could use this park for free, a theoretical and practical traffic lesson by a retired policeman was given. Within this lesson different traffic situations and traffic signs are explained. The children can put the learnt theory in practice as pedestrian, cyclist and car driver. By this they practice their traffic participation in a safe surrounding. The practical traffic exam starts at the traffic garden; children cycle a route of 5.5 km along which small traffic signs are placed. People who check whether the children obey the traffic rules are situated along the route.



Picture A2.3: Pictures of the traffic education park in Utrecht.

B Measure Implementation

B1 Innovative aspects

The innovative aspects of the measure are:

- **New physical infrastructure solutions, regionally** - This measure established uniform, recognizable school surroundings by using new traffic and road signs (see section B2).
- **Targeting specific user groups** – This measure targeted primary school children, their parents and primary school staff by intensifying the recruitment and support of these schools and by implementing school zones.

B2 Research and Technology Development

When a primary school actively participated in the URSL project, the city of Utrecht implemented a uniform and recognisable school zone. In the Research and Development phase of this CIVITAS measure the city developed this plan to make these uniform school surroundings. After positive decision-making a pilot was implemented in which five school zones were implemented and evaluated. Hence the RTD phase consisted of the following activities.

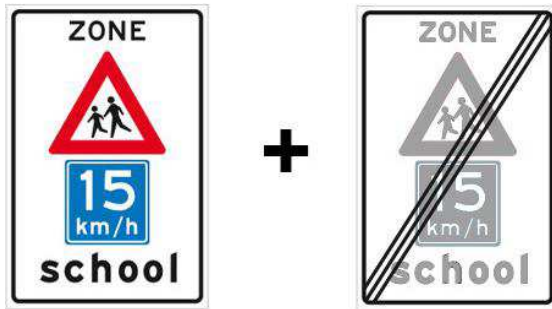
Stage 1: Development of a plan to make uniform school zones (*August 2008 - November 2008*)

The infrastructure around primary schools in Utrecht was not always how it should be. An overload of traffic signs and other visual interruptions prevented the relevant signs from received the necessary attention. Furthermore, different types of materials were used to achieve the same goal. The city of Utrecht actively wanted to contribute to a safer school environment by implementing infrastructural improvements.

The aim was to achieve a clear, recognizable and uniform design for all school surroundings. To reach this, the city developed a plan in 2008 for a school zone. Utrecht chose to use existing materials, such as road signs, sustainable road markings and poles, instead of new concepts. These materials were preferred because they have a legal status, they fill the existing need, they prevent the invention of all sorts of new 'modern' varieties that maybe not be available anymore in some years and they reduce the purchasing and maintenance costs. Within the plan the school zone consists of the following design elements:

Standard (always applied):

- a. Road signs to indicate crossing children and a lower maximum speed limit: A road sign has been designed for Utrecht, including the road sign J21 which depicts crossing children, road sign number A4 (with recommended speed 15 or 30km/h) and the words 'zone' and 'school'. Within 30km/h zones, this sign was 40cm x 60cm. Along 50km/h roads, the sign was 60cm x 90cm.



Picture B2-1: the new developed road sign which is placed close to the schools

b. Road markings to indicate school zones

School zones are indicated by a white continuous line on the road, at right angles to the direction of the traffic, with the word 'school' written behind the line in large letters. Different sustainable materials are used for asphalt roads and brick-paved roads.

c. Fencing to install on sidewalks near school exits

To prevent children from running straight out from their school onto the road, fencing is placed at the exit of the school building or school playground. This fencing is the same at all schools, is child friendly and is of a noticeable colour red.

d. Measures to prevent parking such as poles / bollards and/or stopping prohibitions

If incorrect parking behaviour is noticed when parents drop off or pick up their children, anti-parking bollards are placed. These poles are alternately red and yellow coloured. This increases the visibility and gives the area a child-friendly character. If this measure turns out to be insufficient, a stopping prohibition can be implemented.

Tailor-made (dependant on the school area):

e. Slow ramps or speed bumps

These can be installed when the design of the road does not cause cars to obey the maximum speed limit.

f. Road isles with poles and road markings

g. Pedestrian crossings

To increase the safety of pedestrian crossings, white pedestrian markings (including the appropriate road signs) can be installed on roads where the speed limit is 50km/h.

The city chose to use the colours red and yellow for the poles and fences because of the following reasons:

- The clear signal colours red and yellow improve the visibility and the road safety.
- The uniform colours that are applied only in school zones at primary schools. This increases the recognisability of these schools throughout the whole city. This generates a uniform character.
- The colours provide a cheerful (childlike) character to the design. The red and yellow poles are placed alternately.
- Red and yellow are also the colours of the municipality of Utrecht.

Stage 2: Implementation of five school zones *in a pilot* (January 2009 – October 2009)

In the first months of 2009 this school zone was implemented in five pilot locations in which eight primary schools are situated. Picture B2-2 shows an example of a school surrounding before and after the implementation of the school zone.



Picture B2-2: Example of a school surrounding before and after the implementation of the school zone in the pilot (Rietendakschool)

Stage 3: Evaluation (autumn 2009)

In the autumn of 2009 the evaluation took place. In this evaluation the following aspects have been considered:

1. The experiences of stakeholders.
The following stakeholders were asked about the experiences and opinion of the pilot: the city of Utrecht – Department of traffic and transport, Department of education and the department that implemented the school zones, the Police, the education support agency (Eduniek) and the Region of Utrecht (BRU).
2. The satisfaction about the school zones.
To measure the satisfaction about the uniform school zones, a written questionnaire has been held among the people involved at the eight schools in the five pilot-areas:
 - teachers of all the grades
 - the children of the three highest grades
 - the parents of all the school children
 - the people that live nearby the schools
 These target groups were asked how they judge the uniform surroundings, if they think the situation/safety improved or not and if they changed their behaviour.
3. Vehicle speed.
The speed of vehicles along the road directly before two of the schools in the pilot was measured during approximately one week by a radar.
4. Costs of the school zones.

Results of the evaluation of the pilot

1. The experiences of stakeholders

- City of Utrecht – department of traffic and transport:
Is positive about the school zones, thinks the school zones increase the recognisability of the primary schools and by this increase the road safety, recommends to deviate as little as possible from the standard elements and colours.
- City of Utrecht - department of education:
Is positive that the city shows the primary schools by implementing the school zones that the

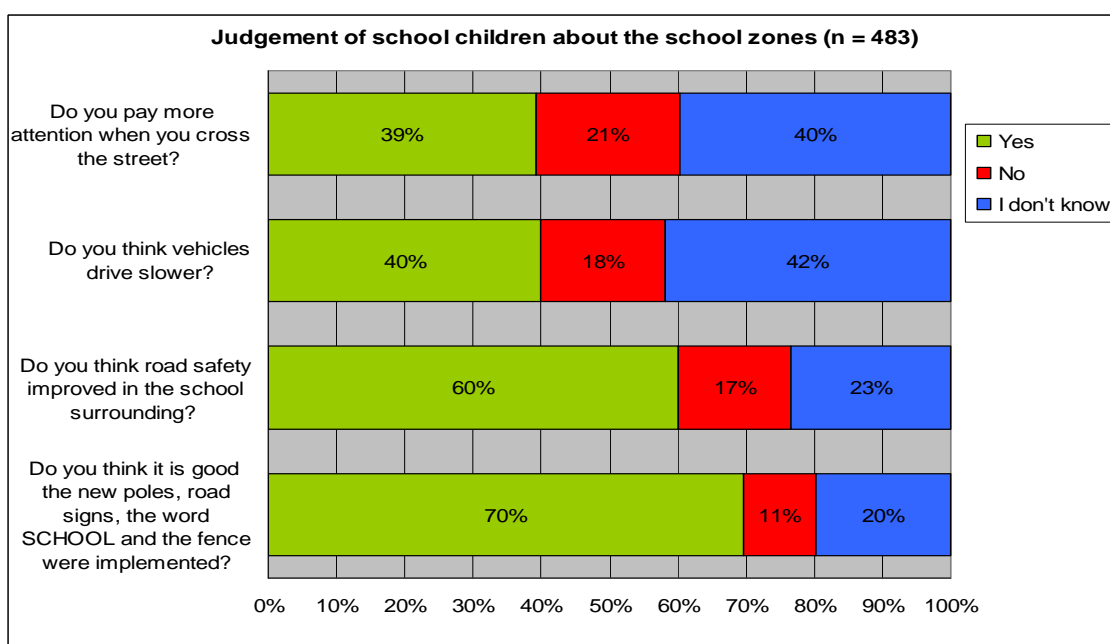
city thinks that safety of the children is important and wants to cooperate with the schools to make the schools safer.

- City of Utrecht – the department that implemented the school zones:
Thinks it is good to use official road signs because this emphasizes the serious and important message. The word SCHOOL on the road is recognized very well. Experienced that the standard fence of 3 meters is very applicable, this saves costs, because they can order large numbers at once. Experienced some problems by applying the word SCHOOL on the road in case of clinker bricks, changed some elements due to experiences (e.g. placing chains between the poles at some locations, applying a double white line under the word SCHOOL on the road and placing bigger road signs within 30 km/h zones as along 50 km/h roads).
- Police of Utrecht:
Is positive about the clear recognisability of the school zones.
- Education support agency (Eduniek):
Noticed that the schools are very happy with the attention for road safety of the city. Noticed that the school children especially recognise the school zones. Recommends to involve the schools better in the communication (e.g. by providing a standard letter with information about the school zone which the school can use to inform the parents. Parents and people living nearby the schools ask the schools questions about the school zone);
- Region of Utrecht (BRU):
Thinks the Utrecht model of the school zone is very good because with little money, schools are recognizable. Some other cities in the region plan to implement the same school zone (and one city did in 2011).

2. The satisfaction about the school zones

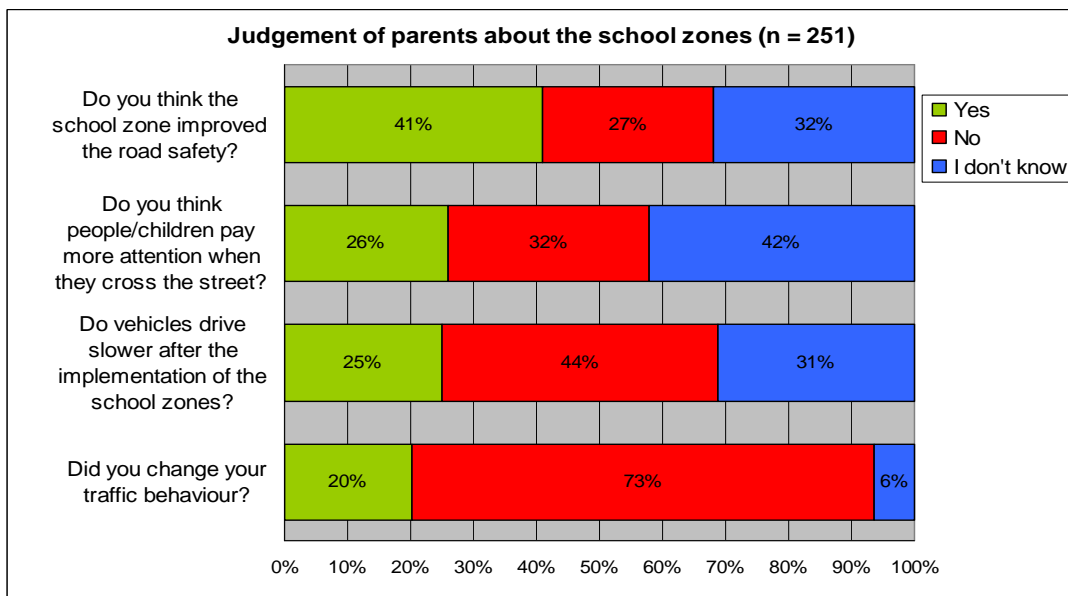
Conclusions from the questionnaire were the following.

- Schoolchildren are (very) positive about the school zones (483 children of the three highest grades filled in the questionnaire). Graph B2-1 shows that most of the school children think the road safety improved. Nevertheless a small percentage, but still bigger than the group that disagrees, thinks vehicles drove slower and pay more attention when crossing the street.



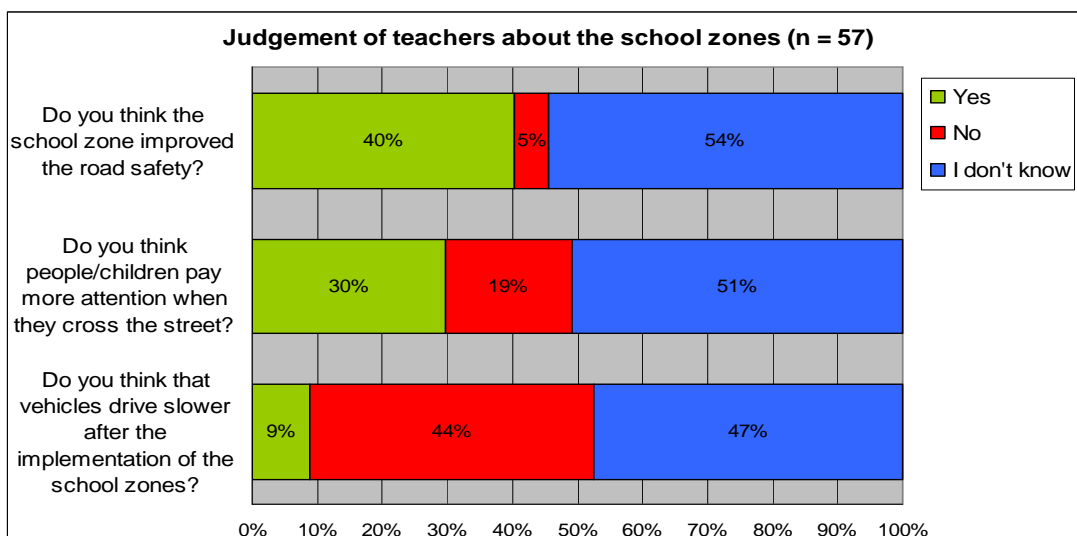
Graph B2-1: Judgement of school children about the implemented school zones in the surroundings of five primary schools (autumn 2009).

- 41% of the parents think that road safety improved as a result of the school zones whereas 27% disagrees (251 parents of all the school children filled the questionnaire – response rate of 15%). Despite the fact that 32% of the parents do not think that people pay more attention when they cross the street after the implementation of the school zone, 44% do not think that vehicles drive slower and 73% of the responding parents did not change his/her behaviour, they are positive about the impact on the road safety.



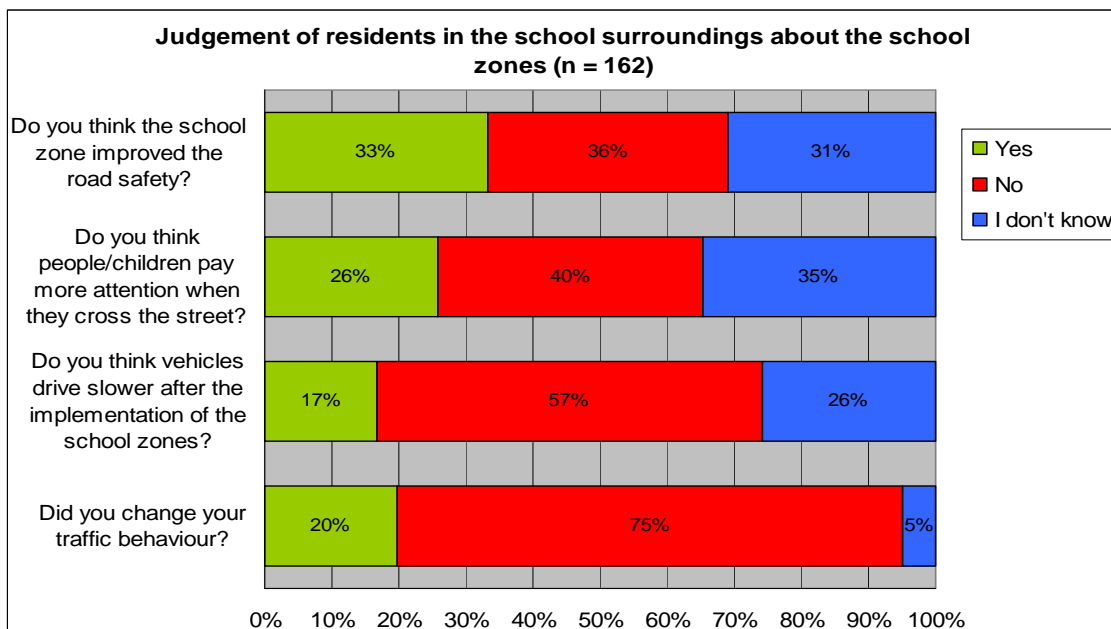
Graph B2-2: Judgement of parents of school children about the implemented school zones in the surroundings of five primary schools (autumn 2009).

- There are considerably more teachers who think road safety increased, than teachers who think it did not (57 teachers filled the questionnaire). 44% of the teachers do not think that vehicles decreased their driving speed, whereas 5% think the speed decreased. On the other hand 30% of the responding teachers experience that children pay more attention when they cross the street, against 19% who disagree. 40% thinks that road safety improved as a result of the school zones, whereas 5% disagrees. It is remarkable that about 50% of the responding teachers did not know whether to agree or disagree with the questions.



Graph B2-3: Judgement of primary school teachers about the implemented school zones in the surroundings of five primary schools (autumn 2009).

- The percentage of residents who think the school zones improved the road safety (33%) is more or less the same as the percentage who disagrees (36%). It could be that the fact that residents in some of the neighbourhoods complained about the colours of the poles affected the results of the questionnaire. 162 residents filled the questionnaire – response rate of 31%. Many people say they don't think that vehicles decreased their driving speed (57%). Also they say that they did not adjust their own behaviour (75%).



Graph B2-4: Judgement of residents in the school surroundings about the implemented school zones in the surroundings of five primary schools (autumn 2009).

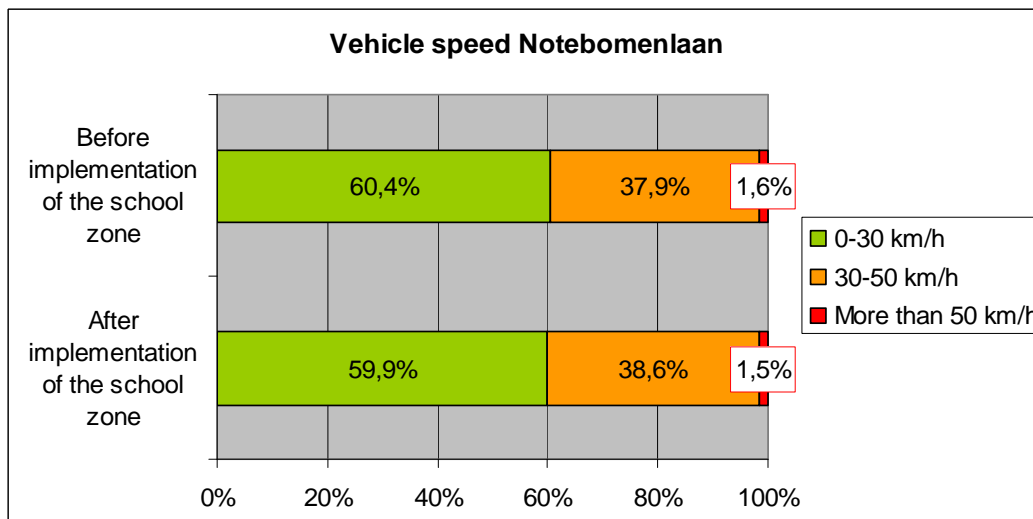
3. The vehicle speed

Right before the entrances of the Maliebaanschool and the Notenboomschool the driving speeds were measured. The results are the following.

Maliebaanschool

Before the school zone was implemented the speeds were measured from Monday 23 March to Sunday 29 March 2009. The maximum speed limit on this road was 30 km/h.

After the implementation the speeds were measured from Monday 6 July to Saturday 11 July 2009. The maximum speed was still 30 km/hour, but the new road sign showed an advisory speed of 15 km/h.

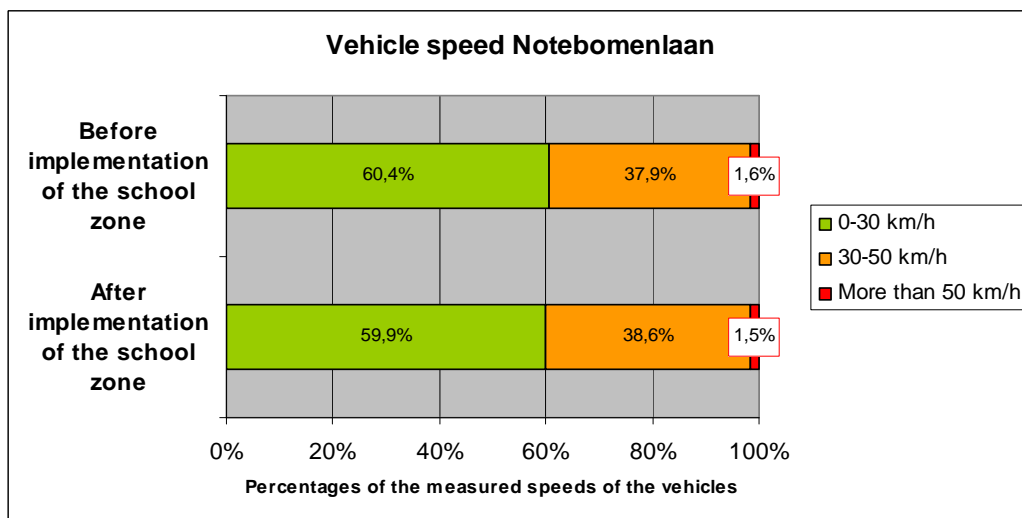


Graph B2-5: Measured speed of vehicles right before the entrance of the Maliebaanschool, before and after the implementation of the school zone.

Notenboomschool

Before the school zone was implemented the speeds were measured from Tuesday 10 March to Tuesday 17 March 2009. The maximum speed limit on this road was 30 km/h.

After the implementation the speeds were measured from Monday 6 July to Saturday 11 July 2009. The maximum speed was still 30 km/hour, but the new road sign showed an advisory speed of 15 km/h.



Graph B2-6: Measured speed of vehicles right before the entrance of the Notenboomschool, before and after the implementation of the school zone.

Based on the results it is concluded that the differences between before and after the implementation of the school zones are very small; no major changes occurred. The vehicles did not drive significantly slower (or faster) after the implementation of the school zone.

4. Costs

The city had the objective to increase the safety and recognisability of a large number of the primary schools within the city. Due to the large number of primary schools the costs per school zone needed to be quite low, so the design was quite sober. Nevertheless with these low costs an impressive effect was reached. In advance the city estimated that the average costs of one school zone would be € 6,000 to € 8,000 per school. After the pilot the average real costs were €

6,500 per school. It was noticed that the costs of school zones that would be implemented after the pilot would rise slightly due to more durable materials (thermoplastic instead of normal road paint).

Conclusions of the evaluation of the pilot

The conclusions of the evaluation were:

- The organisations involved (the schools, schoolchildren, their parents, residents of the school surroundings, engineers, the department of traffic and the department of education of the city of Utrecht) consider that the school zones contribute to make primary schools more recognisable.
- Schoolchildren are (very) positive about the school zones.
- 41% of the responding parents thought that road safety increased, 27% thought that road safety did not increase and 32% did not know.
- 40% of the responding teachers thought that road safety increased, 5% thought that road safety did not increase and 55% did not know.
- The percentage of residents who think the school zones improved the road safety (33%) is more or less the same as the percentage who disagrees (36%) and 31% did not know.
- In two school zones speed measurements were performed before and after the implementation of the school zones. An increase of speed was not found.

Stage 4: Resulting Decision-making

The results of the pilot were described in a report in which the department of traffic and transport recommended to continue with the implementation of the school zones at the other schools that participated in the Road Safety Label project and to make crossings of main routes to primary schools more visible by applying road signs.

Despite the resistance of some people who live in some of the older, more expensive neighbourhoods about the colours of the poles, the alderman of traffic agreed with these recommendations. It was also decided to apply the same materials in all areas as much as possible. The fact that road safety of vulnerable young children is a subject that every political party think is important, helps to implement this project.

The following lessons were learnt from the pilot:

- It is important to use the same materials in the whole city or even better: the whole region. This increases the recognisability. During the pilot the city experienced some difficulties in convincing other regional cities to use the same school zones; some cities wanted their own model. A coordination of the region could help to prevent all different kind of school zones. The city of Utrecht disseminated its experiences with and the results of the pilot to the region (BRU) and other cities within the region. These cities were very interested in the school zones and its evaluation.
- Some changes were made to the materials of the school zones:
 - The smaller road signs in the 30 km/h zones (40 x 60 cm) were too small, and replaced by bigger ones (60 x 90 cm).
 - Chains were placed between the poles at some locations to prevent children crossing the street between the poles.
 - The single line under the word SCHOOL on the road was replaced by a double line to increase the attention.

- As a big city Utrecht has a department that produces the road signs themselves, this means short lines and short delivery times.
- It is important to involve the schools in the communication about the school zones. It takes more time but prevents discussions afterwards.
- The city experienced that the usage of standard road signs work well: people know these signs and this prevented that all kind of confusing, different road signs were being placed.
- There was a lot of political and societal attention for the issue of road safety around schools, which assured for the moment the availability of the necessary budget.
- Already during the pilot it became clear that there was another positive effect of the school zones; the fact that a school that participated in the URSL was awarded with a school zone, appeared to be a reason for schools to start participating. Schools were asking the city if they could get a school zone too. This resulted in a major increase of participating schools at the URSL.
- It is important to unite a local project team that combines all necessary skills, as to say (1) understanding of the school management and priorities (Eduniek); (2) understanding of education priorities within the city (department of education); (3) understanding of mobility issues and (4) physical infrastructure (department of traffic and transport).

B3 Situation before CIVITAS

Road safety problems clustered increasingly around schools. More and more often, parents dropped off and picked up their children at schools by car, and children who cycle or walk to school were hindered by this. Parents, teachers, children, residents and politicians perceived huge road safety problems around primary schools.



Picture B3-1: An example of a school surrounding during pick up time (May 2009)

There are no reliable numbers on accidents with school children in school areas (see section C5). The city of Utrecht started to participate in the URSL project in 2005. At the end of 2007 two of the 104 primary schools received the label and 11 other schools were working towards getting it.

Primary schools were not very enthusiastic to participate. An important reason for this was that schools are extremely busy; road traffic education often does not receive priority because most of the time the school curriculum is already filled with other priorities.

The city council acknowledged this problem. In order to increase the number of participating schools and to improve the infrastructure in the school surroundings, the city council supplied € 407.000 in November 2006. The objective was to have 80% of the primary schools participating in the URSL.

After two years no primary school had asked for infrastructural solutions. At the same time, the city acknowledged that in practice the surroundings of many primary schools were not sufficiently safe and not recognisable for road users. For this reason during MIMOSA a plan was made to develop school zones (see section B2).

In October/November of 2009 the staff of all the primary schools were asked how they judge several safety aspects. One of the topics was road safety. Over 1,000 teachers responded. Teachers have very negative views about how safe roads are: in 2009 only 22% of them thought the pupils never have to deal with unsafe traffic situations around the schools. This percentage was the same as it was in 2007.

B4 Actual implementation of the measure

The measure was implemented in the following stages:

UTR 5.1 Utrecht Road Safety Label

Activity	2008			2009												2010											
	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S			
Recruitment of and support for schools																											
Development plan for schoolzones																											
Pilot schoolzones																											
Further implementation schoolzones																											

Activity	2010			2011												2012											
	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S			
Recruitment of and support for schools																											
Development plan for schoolzones																											
Pilot schoolzones																											
Further implementation schoolzones																											

Stage 1: Recruitment of and support for schools (2008 -2012) – By order of the city of Utrecht, the Education support agency Eduniek approached primary schools that didn't already participate in the Road Safety Label scheme. They telephoned school directors, visited them and gave an explanation. Also they supported schools that were working towards getting the label by for example helping them and giving possible solutions to meet the criteria, supporting them in making an activity calendar for road safety education and supporting them in how to inform the parents. In April 2010 a new Utrecht Road Safety Label folder was published and sent to all primary schools.



Picture B4-1: First and last page of the folder to inform primary schools about the URSL (April 2010).

Stage 2: Development of a plan to make uniform school zones (August 2008 - November 2008) – The city of Utrecht developed a plan to make uniform, recognisable, safe school surroundings (see section B2).

Stage 3: Pilot school zones (January 2009 – October 2009) – In five areas surrounding eight primary schools (pilot school zones). Afterwards the pilot was evaluated (see section B2).

Stage 4: Further implementation of uniform school zones (December 2009 – October 2012) Following the evaluation of the pilot a positive decision followed to continue with the implementation of school zones in school surroundings of primary schools that were working towards getting the URSL.

Stage 5: Decision to make extra money available (August 2011)

In terms of local evaluation a report on “Utrecht Road Safety Label – current state and evaluation 2006-2010” was sent to the City Board and Council in 2011. At the end of 2010 63 primary schools (61% of the total number of primary schools) participated of which 19 (18%) had received the label. The remainder of the available money was sufficient to reach the participation of 70% of the schools, including the implementation of a school zone in the surroundings of these schools. It was decided to make additional local budget available to reach the targeted number of 82 schools. This additional budget (€ 160,000) was needed to give all the 82 schools support in obtaining the label and to be able to implement the school zones.

Stage 6: Budget-cuts on regional level led to the decision that the Province of Utrecht could not continue the URSL in the cities within the Region of Utrecht (Autumn 2011)

After a long time of uncertainty the Region of Utrecht (BRU) decided to not continue the financing of the ROV-Utrecht of the Province of Utrecht. Due to this the Province of Utrecht decided to not continue the URSL within the cities in the Region of Utrecht after 2012.

Stage 6: Political decision to continue URSL in Utrecht (July 2012)

The city council of Utrecht decided to take over the URSL project by itself and made an amount of € 150,000 available to be able to take over the periodic checks if the labeled schools still met the criteria.

B5 Inter-relationships with other measures

The measure is not related to other measures.

C Impact Evaluation Findings

C1 Measurement methodology

C1.1 Impacts and Indicators

This measure aimed to improve road safe behaviour both of children and their parents, and through this improve of road safety in the school areas and in the surrounding residential area, to reduce of the number of car trips and increase the number of walking-trips and trips by bicycle to primary schools; to establish recognisable, safe school surroundings and to increase the satisfaction about the road safety in primary school areas among children, their parents and teachers. To measure whether these objectives were reached, impacts on society and transport were used.

Verifiable outcomes were:

- 82 primary schools are working towards the label in 2011 and in relation with that, attention for road safety in education and improved road safety around schools.
- the surroundings of primary schools are uniform and recognisable by the use of uniform, recognisable road signs and markings.

After analysis of the available data the conclusion was that a cost-benefit analysis could not be performed. The measure could show benefits in terms of fewer accidents and a decrease of trips made by car resulting in an increase of trips by bicycle and on foot, which cause less pollution and more health compared to the situation without the URSL. However, there is a serious problem in the Netherlands regarding the traffic accidents data since the data from 2010 is not comparable to the former years due to another registration and a decreasing degree of registration of the traffic accidents.

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

Table C1.1.1 Table of indicators

No.	POINTER indicator number	Evaluation area	Impact	Indicator	Source of data	Related objective
1	--	Transport	Road safety	Number of primary schools with a school zone	Administration of the city of Utrecht	Creation and establishment of recognisable, safe school surroundings
2	--	Transport	Modal split	Modal split for home-school trips	1. Survey among school staff, school children and their parents with a question about the transport mode to school 2. Annual questionnaire (autumn 2009, 2010 and 2011) among a sample of residents of the whole city with a question about the transport mode to school	Decrease of the number of car trips/increase of the number of walking-trips and trips by bicycle to primary schools
3	--	Society	Participation	Number of schools working towards getting the label	Administration of the Education support agency Eduniek	80% of the primary schools have received the Road Safety Label or are working towards getting it in 2011

No.	POINTER indicator number	Evaluation area	Impact	Indicator	Source of data	Related objective
4	--	Society	Participation	Number of schools that received the label	Administration of the Education support agency Eduniek	80% of the primary schools have received the Road Safety Label or are working towards getting it in 2011
5	--	Society	Acceptance	Satisfaction about the road safety among primary schools	1. Survey among school staff, school children and their parents about road safety 2. Annual questionnaire (autumn 2009, 2010 and 2011) among a sample of residents of the whole city with a question about the safety of school surroundings	Increase of the satisfaction about the road safety in primary school areas among children, their parents and teachers.

Due to a deterioration of the registration of traffic accidents on national level the number of accidents with children in the age of 4-12 years could not be compared over the years to measure whether the road safety in the school surroundings improved.

The results of the evaluation of the pilot with the school zones are shown in section B2.

Detailed description of the indicator methodologies:

- **Indicator 1: Number of primary schools with a school zone**

The number of primary schools supplied with a school zone, was provided by the city of Utrecht – department of Traffic. This department was in charge of creating these school zones and administered them. The numbers of schools with a school zone are reported per year.

- **Indicator 2: Average modal split for home-school trips**

In order to measure the modal split of home-school trips the following two sources have been used:

1. Written questionnaires among a. parents of all the schoolchildren and b. the school children of the three highest grades. These questionnaires were conducted on four primary schools of which three schools participate in the URSL project and one does not. See table C1.1.2 for more information about the questionnaires.

School	Participates in URSL?	First survey			Second survey		
		Month	Resp. children/ Resp. rate	Resp. parents/ Resp. rate	Month	Resp. children/ Resp. rate	Resp. parents/ Resp. rate
Van Asch van Wijkschool	yes	Nov. 2010	65 / ≈ 100%	17 / 8%	Sept. 2012	57/ ≈ 100%	41 / 26%
OBDS Pieterskerkhof	Yes	Oct. 2010	75 / ≈ 100%	73 / 32%	March 2012	64 / ≈ 100%	27 / 12%
Jenaplan Cleophas	yes	Oct. 2010	85 / ≈ 100%	66 / 30%	March 2012	76 / ≈ 100%	77 / 29%
Torenpleinschool	no	Aug. 2011	48 / ≈ 100%	42 / 36%	Sept. 2012	51/ ≈ 100%	98 / 66%

Table C1.1.2 Overview of the surveys to measure indicators 2 and 5.

At the time of the second survey the Van Asch van Wijkschool and the OBDS Pieterskerkhof had not received the URSL but were still actively working towards meeting

the criteria, while Jenaplan Cleophas did meet the criteria at the time of the second survey. The Torenpleinschool did not participate at the URSL and was used as control group. Two other schools (one not participating and one that participated in the URSL but stopped during the project) co-operated in the first survey but did not participate in the second.

In the questionnaires the parents and children were asked which transport mode the child usually used to travel to school. The results are presented in section C2.4. It was decided not to summarize the data of the three participating URSL schools because the assumption is that the school location affects the modal split.

Because the children filled the questionnaires at school, all present children participated in the survey so these results show the (almost) real used transport modes for the three highest grades.

On the other hand, the number of responding parents was quite low, which means these results must be interpreted with caution and treated as an indication only.

2. An annual questionnaire (autumn 2009, 2010 and 2011) among a sample of residents representative for the Utrecht population (gender, age, origin and income) (Inwonersenquête). The Inwonersenquête is an annual survey carried out in Utrecht in November each year. This larger long term survey contains different questions about opinions and behaviour of Utrecht citizens. Since 2009 the survey includes questions about the school and safety. The average response rate on the total questionnaire is each year about 30%. Table C1.1.3 shows the sample size, the total number of respondents and the response rates per year.

About 14% of the respondents stated in the questionnaire that they have children on a primary school. In 2010 13% of all Utrecht households had children in the age 4-11 year (primary school). Based on household developments in the last years, we can assume this percentage didn't change within the CIVITAS period.

Annual Resident's survey response						
	Sample size	Response	Response %	n families with children at primary school	% of total response	% families with children age 4-11 (primary school)
2009	26730	8420	31,5%	1208	14,3%	
2010	24771	6932	28,0%	998	14,4%	13,4%
2011	23259	6866	29,5%	940	13,7%	

Table C1.1.3 Response of the Inwonersenquête; total response and response among families with a child at primary school.

The respondents with a child on primary school were asked an additional question which transport mode their child usually uses to travel to school. They could choose between car, bicycle, bus/tram, on foot, or other. The results of this written questionnaire are only available for the city in total, so it was not possible to differentiate the results to only parents with children on URSL schools. It can be concluded that the survey is representative for the parents in Utrecht. The results are presented in section C2.4.

- **Indicator 3: Number of schools working towards getting the road safety label**
The Onderwijs begeleidingsdienst Eduniek who recruited and supported primary schools in the URSL, administered the number of schools that were working towards getting the label.

The numbers are presented per year and converted into percentages (% primary schools working towards getting the label/total number of primary schools).

- **Indicator 4: Number of schools that received the road safety label**

The Onderwijs begeleidingsdienst Eduniek administered the number of schools that received the label. The numbers are presented per year and converted into percentages (% primary schools with the label/total number of primary schools).

- **Indicator 5: Satisfaction about road safety among primary schools**

To measure the satisfaction three sources were used:

1. The questionnaires among parents and school children as mentioned under indicator 2, supplemented with the teachers. For each of these three target groups a written questionnaire has been developed. The following questions were used:

Parents:

- How do you judge the road safety near the school?
- Is it safe enough for your children to cycle near the school?

Children:

- Is it safe to cycle on the road along your school?

Teachers:

- How do you judge the road safety near the school?

Due to the fact that schools have a limited number of teachers, the number of respondents was quite low (see table C1.1.4) so the results must be interpreted with caution and treated as an indication only. The results are presented in section C2.5.

School	Participates in URSL?	First survey		Second survey	
		Month	Resp. teachers	Month	Resp. teachers
Van Asch van Wijkschool	yes	Nov. 2010	9	Sept. 2012	6
OBDS Pieterskerkhof	Yes	Oct. 2010	5	March 2012	2
Jenaplan Cleophas	yes	Oct. 2010	12	Dec. 2011	7
Torenpleinschool	no	Aug. 2011	8	Sept. 2012	13

Table C1.1.4: Overview of the surveys to measure indicator 5 among the school teachers.

2. An annual questionnaire (autumn 2009-2012) among a sample of Utrecht residents which contains a question about how they judge the road safety of school areas. Only parents with children on primary schools were selected. The results of this questionnaire are only available for the whole city. The number of respondents on this question were 1,188 in 2009, 985 in 2010 and 929 in 2011. See indicator 2 for more details. The results are presented in section C2.5.

C1.2 Establishing a baseline

The baseline for this measure is the situation at the beginning of 2008, before the intensifying of recruitment and support for primary schools and before the implementation of the school zones. The baseline shows:

Indicator 1. Number of primary schools with a school zone

In the baseline the number of schools with a school zone was zero.

Indicator 2. Average modal split for home-school trips

The baseline was established by:

1. the first surveys on the three participating URSL schools
2. the city questionnaire in the autumn of 2009 (the question about the transport mode was asked for the first time in 2009 so there are no numbers for 2008).

Indicator 3. Number of schools working towards getting the road safety label

At the beginning of 2008 the number of participating schools was 13.

Indicator 4. Number of schools that received the road safety label

At the beginning of 2008 three schools received the label.

Indicator 5. Satisfaction about road safety among primary schools

The baseline was established by:

1. the first surveys on the three participating URSL schools.
2. the city questionnaire in the autumn of 2009 (the question about the satisfaction about the road safety of primary schools was asked for the first time in 2009 so there are no numbers for 2008).

C1.3 Building the business-as-usual scenario

Indicator 1. Number of primary schools with a school zone

Without this measure no school zone would have been implemented.

Indicator 2. Average modal split for home-school trips

To build the B-a-U in case of the modal split the first and second survey on the not-participating URSL school have been used.

Indicator 3. Number of schools working towards getting the road safety label

Without the intensified recruitment and the implementation of the school zones the number of participating schools would not have increased as much like it did in reality. It is very difficult to estimate how many schools would have participated without this measure. The estimation was that in 2008 the number of participating schools would have increased as it did in 2007, and after 2008 only few schools would start to participate. Schools who are eager to participate would start early in the project. Other schools would not start at all. In practice many schools decided to participate so they got the school zone. Without this 'present' these schools probably would not have started.

Indicator 4. Number of schools that received the road safety label

At the beginning of 2008 three schools received the label. The estimation is that without the intensified recruitment and the implementation of the school zones the number of schools that received the label would only have increased slightly.

Indicator 5. Satisfaction about road safety among primary schools

To build the B-a-U in case of the satisfaction the first and second survey on the not-participating URSL school have been used.

C2 Measure results

The results are presented under sub headings corresponding to the areas used for indicators - society and transport.

C2.1 Economy

Not applicable.

C2.2 Energy

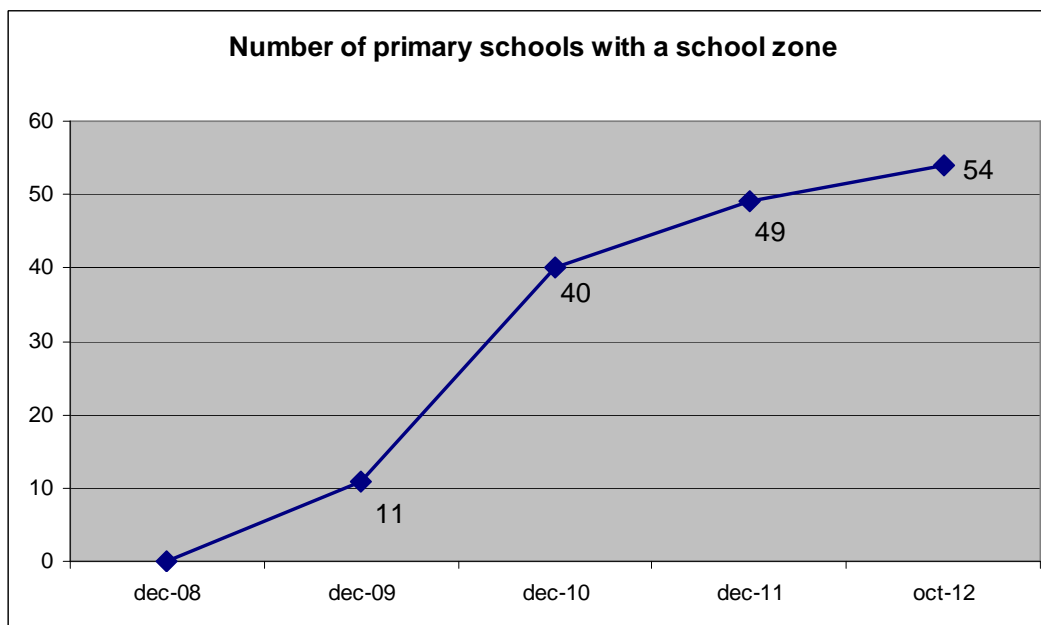
Not applicable.

C2.3 Environment

Not applicable.

C2.4 Transport

Indicator 1: Number of primary schools with a school zone



Graph C2.4.1: Number of primary schools with a uniform school zone per year

In October 2012 the city of Utrecht had redesigned the surroundings of 54 URSL participating primary schools. Also two school zones were implemented at school locations in which primary schools are situated temporarily, when their own location is being redeveloped. So a little more than half of the total primary schools were uniform and recognisable.

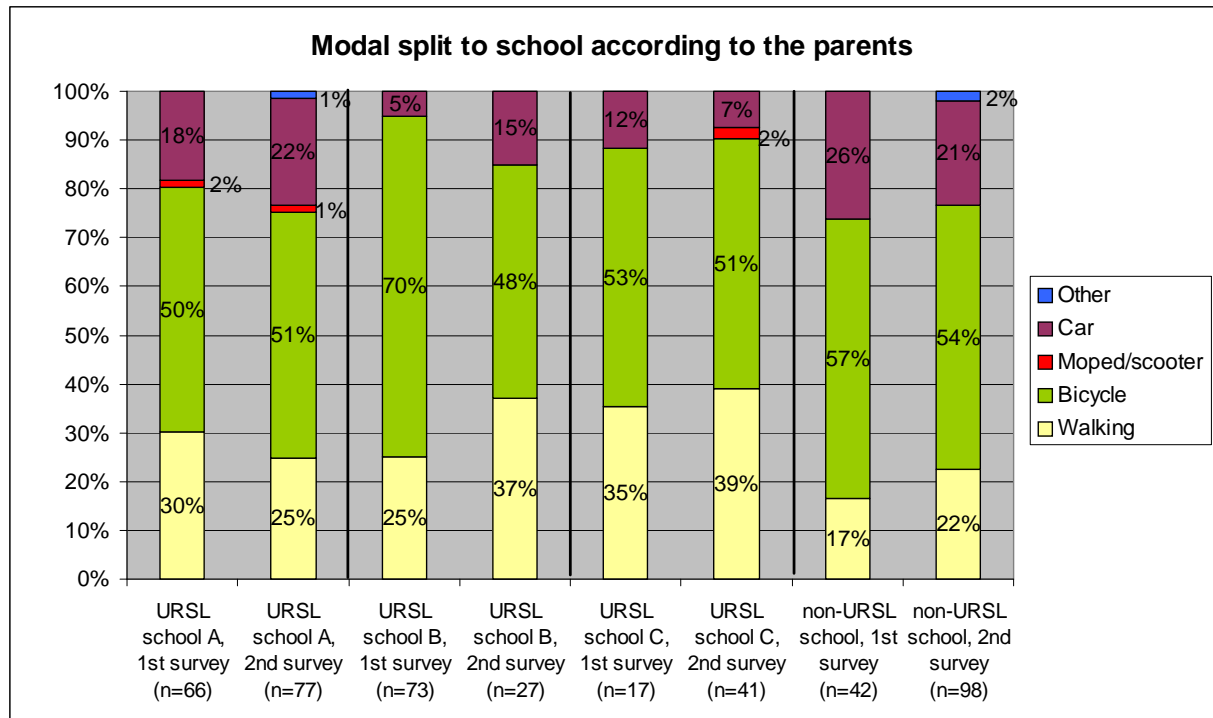
54 of the 70 participating primary schools received the school zone. The surroundings of the other 16 schools were not yet redeveloped. In some cases the city was in the phase of making an inventory of the surroundings to see how many poles etc. were needed. In other cases the schools just started to participate and also some school zones were not implemented yet because the school was not actively participating.

Indicator 2: Average modal split for home-school trips

A. Modal split according to the parents

Graph C2.4.2 shows the modal split for home-school trips according to the parents of children in the first and second grade. The results are differentiated to three participating schools and one non-participating school. The most used transport mode to travel to school is the bicycle, walking is second and the car is the third. Whereas the results of two of the participating schools show

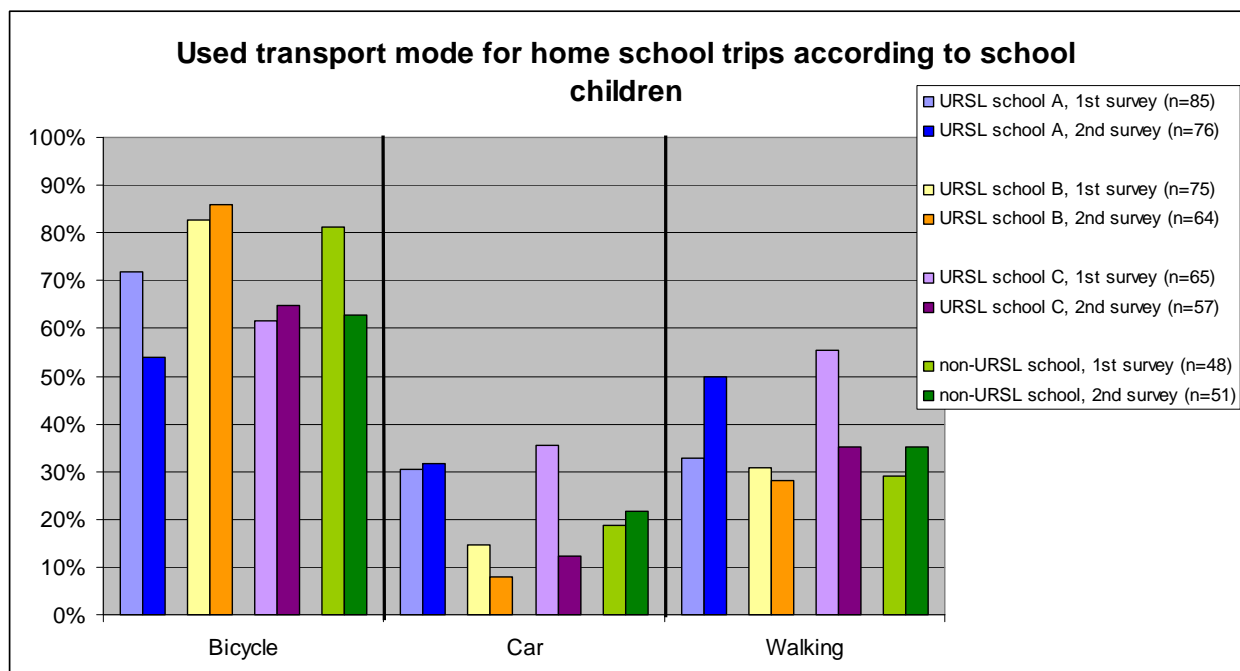
an increase of car usage, the results of the third participating schools show a decrease of car usage. The results for the non-participating school shows a decrease of car usage too. From these results it could not be concluded that more than one year after the first survey the car usage decreased. At the same time the results do show that the percentage of people that walk and cycle was bigger at the participating schools.



Graph C2.4.2: Modal split of home-school trips according to the parents.

B. Modal split according to the school children

Graph C2.4.3 shows the results of the survey among the schoolchildren of the three highest grades for three participating schools and one non-participating school.

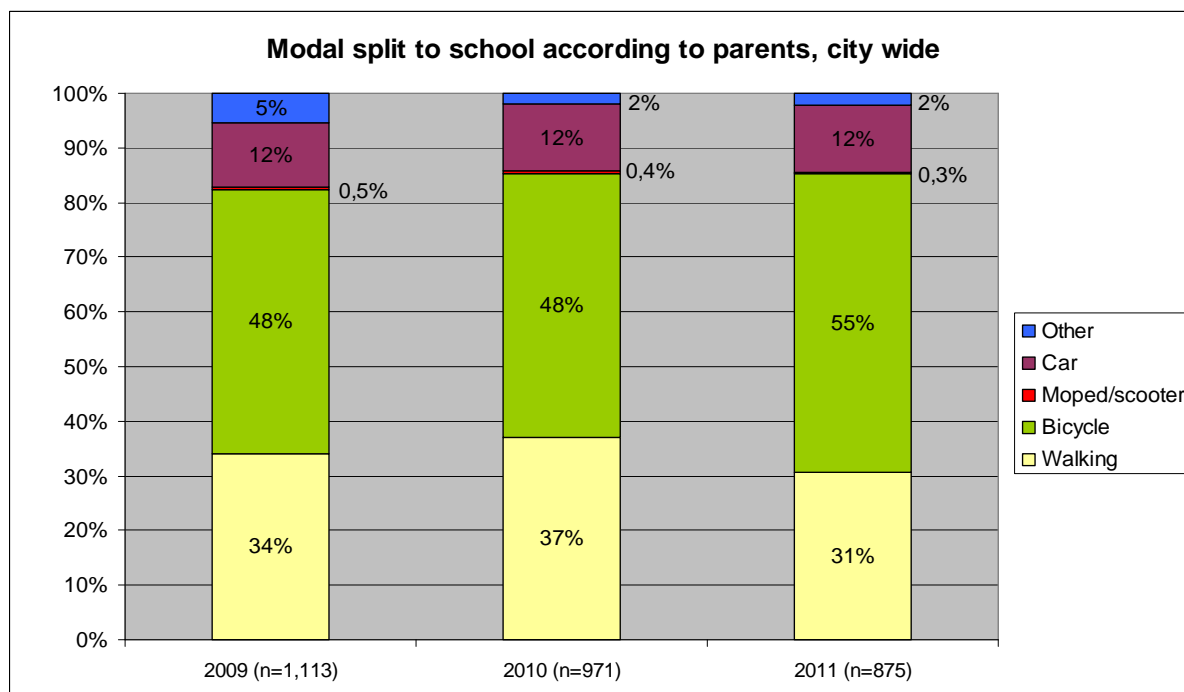


Graph C2.4.3: Modal split of home-school trips according to the children of the three highest grades.

(Almost) all the invited children participated in the survey, so the results give a very good indication of the transport modes used. Because many children picked more than one answer on the question 'Which transport mode do you usually use to travel to school?' it was decided to present all the answers, which means the sum of the answers is more than 100%. Like the results of the survey among the parents, these show that the bicycle is the most used transport mode in all the schools, followed by walking. Also cycling and walking seem to interact: If cycling decreased in the second survey, walking increased and the other way around. The results demonstrate that the car usage slightly increased on one URSL school and on the non-URSL school, whereas it significantly decreased on the two other URSL schools.

C. Modal split according to parents city-wide

In 2009, 2010 and 2011 residents with children on a primary school were asked the question what transport mode their child mostly used to travel to school. Graph C2.4.4 shows the results.



Graph C2.4.4: Modal split of home-school trips according to parents city wide.

Like the other two sources, this survey shows that the bicycle is the most used transport mode, followed by walking. On city level, the car usage to school did not change between 2009 and 2011. It can be concluded that in 2011 there was, on city level, no decrease of car use to travel to primary schools. In this year 64 schools participated in the URSL measure of which 19 schools received the label, which is 18% of the total primary schools.

Conclusions from indicators 1 and 2:

- The bicycle is the most use transport mode to travel to primary school followed by walking;
- The survey among the children shows that car usage on two of the three URSL schools decreased, whereas it increased on the non-URSL school;
- The results of the survey among the parents (which must be treated as an indication only) show an increase of car usage on two of the three URSL-schools, whereas a decrease of car usage was measured on the non-participating school.

- In 2011 on average 12% of parents still bring their children to school by car. Probably it is very difficult to convince these parents to use the bicycle or go to school walking instead. But compared to the other modes (cycling/walking) this number is low.

C2.5 Society

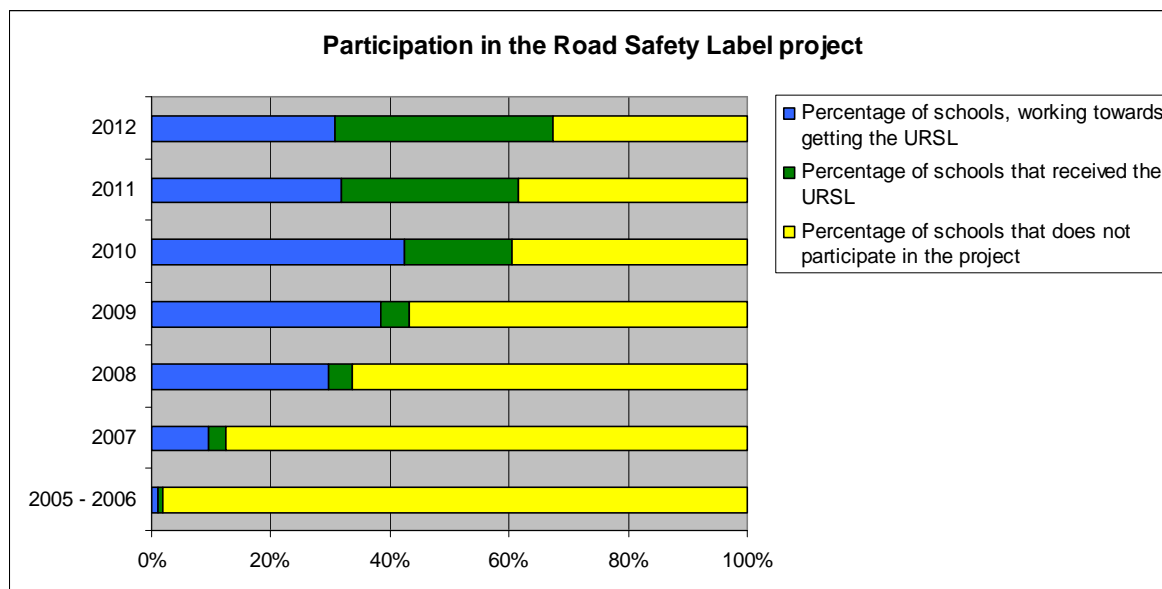
Indicator 3: Number of schools working towards getting the label and

Indicator 4: Number of schools that received the label

At the beginning of 2008 13 primary schools participated in the measure. In 2008 in which the recruitment was intensified the number of schools was more than doubled. Ten more schools started to participate in 2009, the year of the school zone pilot and in 2010 almost 20 more schools started to participate, probably as a result of the fact that these schools received a school zone when they actively participated.

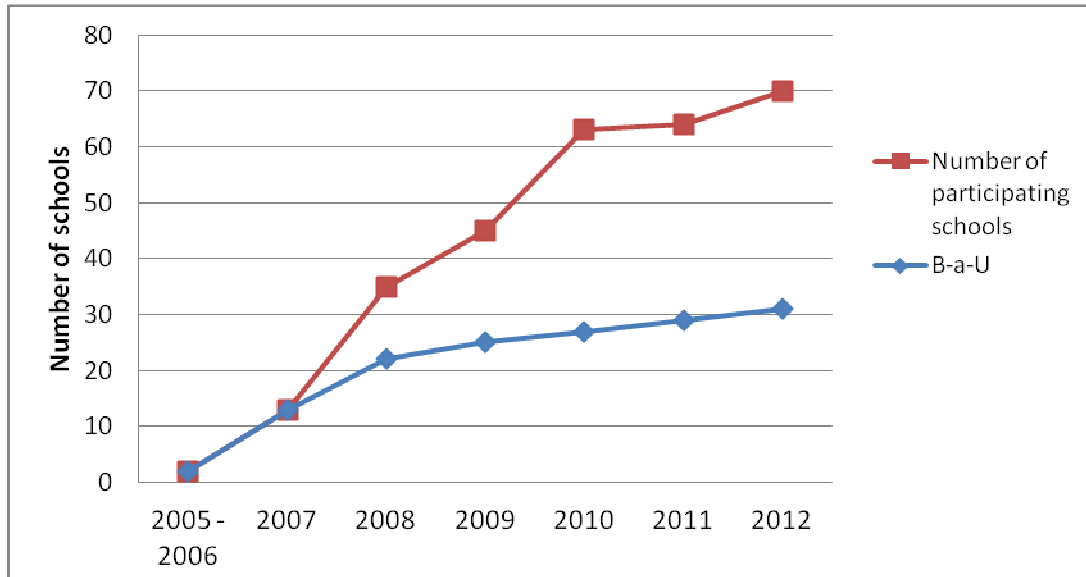
Graph 2.5.1 show the percentages of the 104 primary schools in the city of Utrecht that worked towards getting the label, received the label, and did not participate within the URSL project during the years since 2005-2006. The results show that the number of participating schools increased tremendously during these years, especially after the intensified recruitment and support of the schools in 2008. After this, the number of schools that received the label increased immensely in 2010. On average schools needed about two years to meet the criteria. In October 2012 38 primary schools received the label whereas another 32 schools were actively working on meeting the criteria.

The ambitious objective was that in 2011 80% of the schools participated. This objective was not reached. In section D.2.1 the different barriers that negatively influenced the results are described. Nevertheless in October 2012 67% participated. This is still considered a good result because schools are participating voluntarily.



Graph C2.5.1: Percentages of primary schools that 1. worked towards getting the URSL, 2. received the URSL and 3. did not participate in the URSL per year (source: Eduniek).

Graph C2.5.2 shows the estimated B-a-U. The estimation is that the number of participating schools would still have increased in 2008 because some schools were enthusiastic to participate, but after this year only some schools would have started.

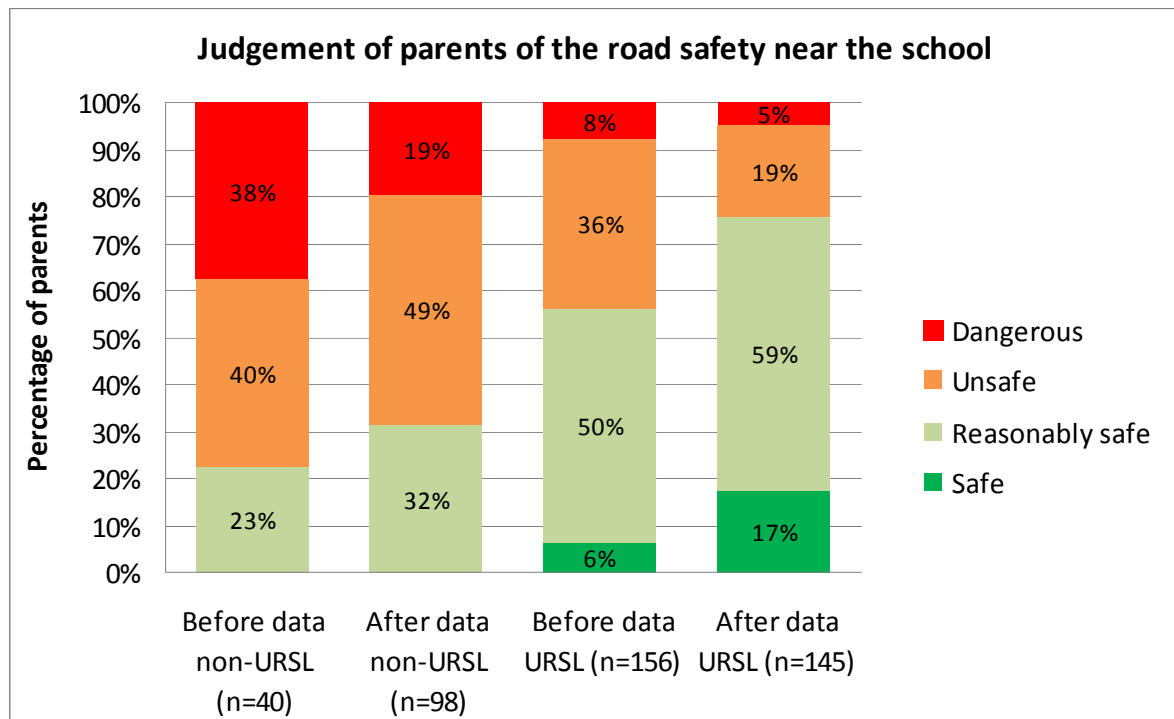


Graph C2.5.2: Number of primary schools that participated in the URSL, including the estimated B-a-U.

Indicator 5: Satisfaction about the road safety on primary schools

A. Satisfaction among the parents

Graph C2.5.3 shows the judgement of parents about the road safety near the school.



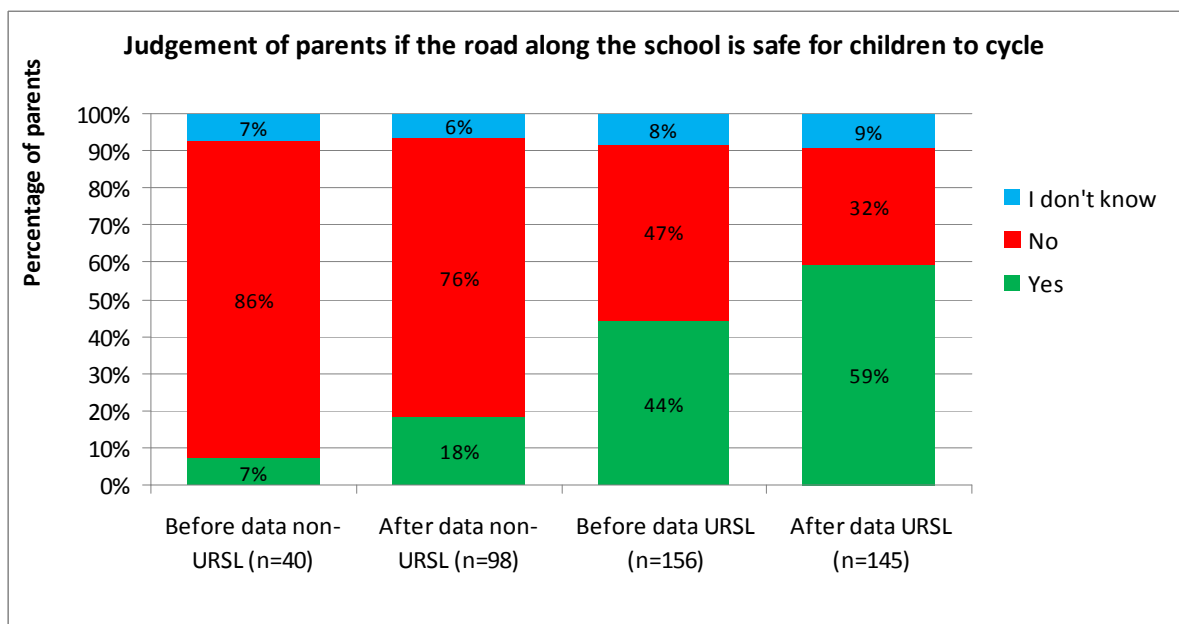
Graph C2.5.3: Judgement of the parents about the road safety near the primary school of their child on three URSL-schools and one non-URSL school.

The results of the surveys show that parents on URSL schools are far more positive about the road safety than parents on non-URSL schools. Furthermore, more than a year after the first survey, the satisfaction about the road safety on URSL-schools increased more than on non-URSL schools. The percentage of parents who think the road safety is (reasonably) safe increased from 56% to 78%, whereas on the non-URSL school it increased from 23% to 32%. A possible reason for this increase is that in this period a paper container was displaced

backwards (and due to this one parking place has been removed) and the other waste containers were placed underground. These changes made the space more open which may have increased the perception of the safety. It can be concluded that the URSL project led to an increase of the satisfaction about the road safety among parents of URSL schools.

The parents were also asked their opinion about whether they think the road along the school was safe enough for their children to cycle. Again the results show a difference between the URSL-schools and the non-URSL school, see graph C2.5.4). Parents of URSL-schools are far more positive than parents of the non-URSL school. The satisfaction increased on both. On the participating schools the increase was 15% whereas on the non-participating schools the increase was 11%.

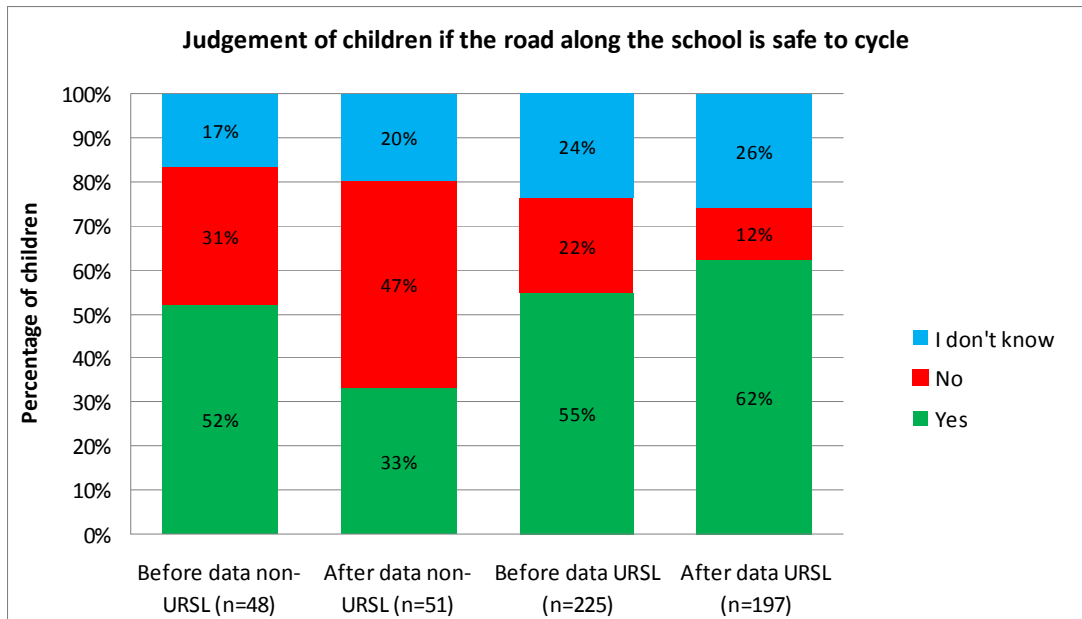
Important to note is that the sample size on the non-participating school was relative small in the first survey (42 respondents) compared to the second survey (98). The parents who answered the first survey were likely to have been those that were concerned with the issue.



Graph C2.5.4: Judgement of the parents whether the road along the primary school of their child is safe enough to cycle.

B. Satisfaction among the school children

The children of the three highest grades of three URSL schools and one non-URSL school were asked whether they think the road along their school was safe to cycle. Graph C2.5.5 shows the results.

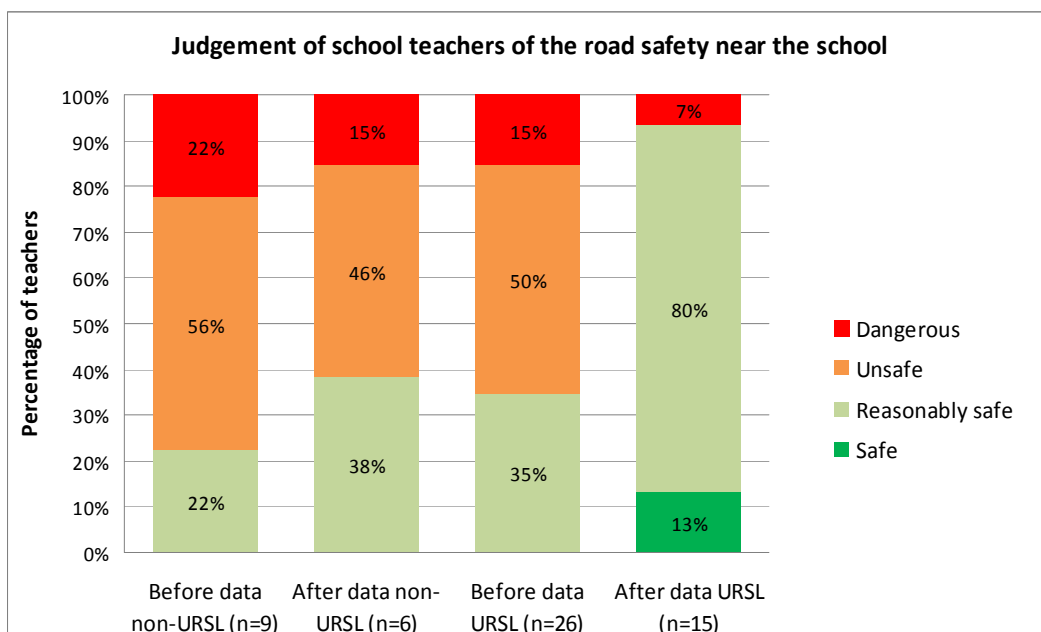


Graph C2.5.5: Judgement of the parents whether the road along the primary school of their child is safe enough to cycle.

(Almost) all the invited children participated in the survey, so the results give a very good indication of judgement. Like the parents, the children of the URSL schools are more positive than the children of the non-URSL school. Also the results show that the satisfaction on the URSL school increased whereas the satisfaction on the non-URSL school decreased. Hence it can be concluded that the URSL measure contributed to the satisfaction among the children about road safety.

C. Satisfaction among the school teachers

Graph C2.5.6 shows the judgement of the primary school teachers about the road safety near the school. Due to the fact that schools have a limited number of teachers, the number of respondents was low, so the results must be interpreted with caution and treated as an indication only.



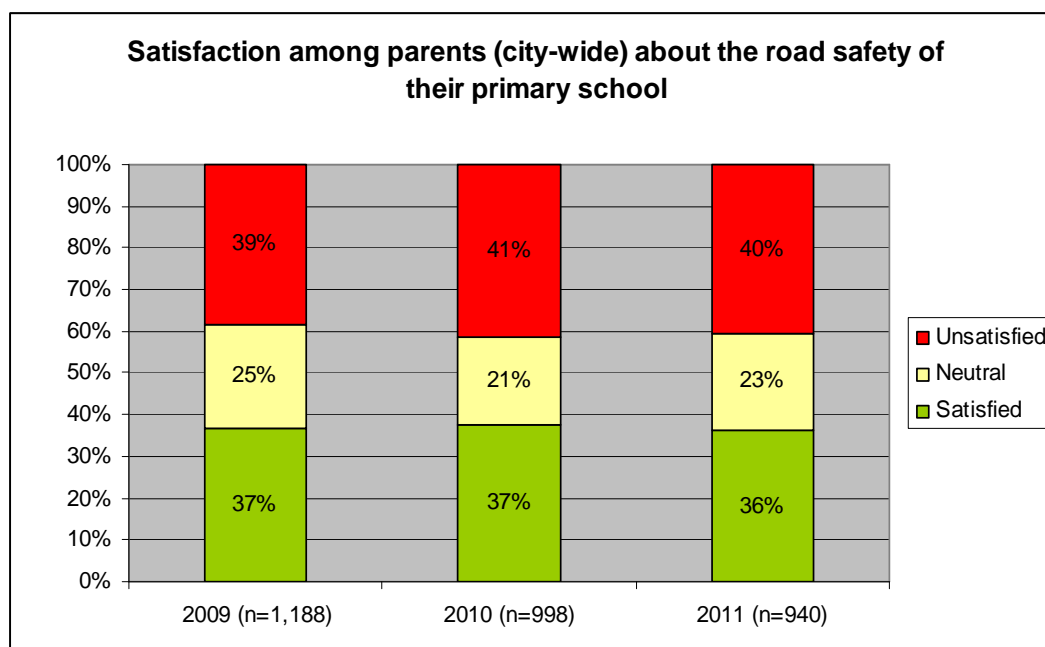
Graph C2.5.6: Judgement of the primary school teachers of the road safety near the primary school.

The results of the surveys show that school teachers on URSL schools are more positive about the road safety than teachers on non-URSL schools. Furthermore, more than a year after the first survey, the satisfaction about the road safety on URSL-schools increased significantly more than on non-URSL schools. These results confirm what would have been expected: an increase of the satisfaction about the road safety among teachers of URSL schools.

D. Satisfaction among parents city-wide

Graph C2.5.7 shows the judgement of parents about the road safety near the primary school of their child (city wide) in 2009, 2010 and 2011. Based on the results above it is likely that the satisfaction among parents on URSL schools increased, but the results of the city wide questionnaire show that the satisfaction on city-level did not change in the period 2009 to 2011. On city level it cannot be concluded that the URSL measure made a change in the satisfaction among parents about the road safety of primary schools city wide. It could be that the satisfaction on non-participating schools decreased, whereas the satisfaction on participating schools increased, which could have equalized the total results.

In 2011 64 schools participated in the URSL measure of which 19 schools received the label, which is 18% of the total primary schools.



Graph C2.5.7: Judgement of parents about the road safety of the primary school of their child (city-wide).

Conclusions to indicators 3 to 5:

- Parents of URSL-schools are far more positive about road safety of the primary school than parents of the non-URSL school. Also it can be concluded that the URSL measure led to an increase of satisfaction about the road safety among parents of URSL schools.
- Parents of URSL-schools judge the safety to cycle near the primary school better than parents of the non-URSL school. The satisfaction increased on both.
- School children of the URSL schools are more positive about the road safety than the school children of the non-URSL school. Also the results show that the satisfaction on the URSL school increased whereas the satisfaction on the non-URSL school decreased.
- School teachers on URSL schools are more positive about road safety than teachers on non-URSL schools. The results confirm what would have been expected: an increase of the satisfaction about road safety among teachers of URSL schools.

- On city level it cannot be concluded that the URSL measure made a change in the satisfaction among parents about the road safety of primary schools.

C3 Achievement of quantifiable targets and objectives

No.	Target	Rating
1	Improvement of road safe behaviour both of children and their parents, and through this improvement of road safety in the school areas and in the surrounding residential area	NA
2	Reduce of the number of car trips and increase of the number of walking-trips and trips by bicycle to primary schools	0 / *
3	The surroundings of primary schools are uniform and recognisable by the use of uniform, recognisable road signs and markings	*
4	Increase of the satisfaction about road safety in primary school areas among children, their parents and teachers	**
5	80% of the primary schools/82 primary schools have received the Road Safety Label or are working towards getting it in 2011	*
NA = Not Assessed O = Not Achieved * = Substantially achieved (at least 50%) ** = Achieved in full *** = Exceeded		

- It was not possible to measure the behaviour of children and their parents. Furthermore the registration of traffic accidents deteriorated hugely which made it impossible to present the traffic accidents.
- Car usage in home school trips according to the parents did not decrease, but according to the school children it did.
- In October 2012 in the surroundings of 54 primary schools school zones were implemented. This school zone is uniform; everywhere the same colours red and yellow have been used, the same road signs and fences are placed and the same sign 'SCHOOL' is applied on the streets leading to the schools. Due to this it is clear for road users that they approach 52% of the schools so they can adapt their behaviour.
- The satisfaction about the road safety on URSL schools increased (significantly).
- At the end of 2011 62% of the primary schools participated. The participation increased hugely during CIVITAS MIMOSA, but due to several barriers the ambitious objective was not reached. Nevertheless this is considered a good result because schools are participating voluntarily.

The measure is considered successful. It made clear to schools and parents that the city invests in the road safety of school children, and achieved a situation in which schools and parents take their own responsibility in road safety. The number of participating schools increased hugely and the school zones made the schools visible. It was decided to invest additional money to be able to continue the label for the participating schools in 2013.

C4 Up-scaling of results

Within this measure an up-scale was already accomplished by the implementation of school zones within the full measure after the successful pilot with five school zones.

It is not envisaged to go to 100% of the schools having a Utrecht road safety label for several reasons:

- The label is not obligatory.

- There are always schools that think they already provide basic safe traffic education, and do not need a school zone or road safety label (e.g. for reasons of an eminent change of building, no need out of traffic safety reasons);
- There is a limitation of budgets even though political discussions were launched to understand if it is feasible to go to 90% of the schools involved and how much additional budget would be needed.

Besides up-scaling up to 90%, other up scaling of the measure can take place to:

- other types of organisations and places where small children come together (e.g. associations, sport clubs, kinder gardens)
- to secondary schools.

In relation to the issue of transferability the following conclusions were made:

- Another Dutch city (city of Zeist) has taken over the elements of the school zones design (which made the Utrecht road safety unique).
- The concept of Utrecht is qualified as being effective in comparison to the budget involved.
- The concept of the road safety label can easily be transferred to other countries, even if it should be adapted to the local context. The level of implementation could be at the level of the country, region, and if the city is large enough (having more schools) a school road safety label would also make sense at the city level.

C5 Appraisal of evaluation approach

An estimation of the benefits (less accidents/ more sustainable travel) was difficult to reveal and quantify. It should be noted that the nature of the road safety label has not only direct benefits, yet also indirectly due to the education element which makes the children of the participating schools responsible traffic participants for life.

Due to a deterioration of the registration of traffic accidents on a national level the number of accidents with children in the age of 4-12 years could not be compared over the years to measure whether the road safety in the school surroundings improved.

To measure the modal split and the satisfaction a survey was conducted on four primary schools (three URSL and one non-participating school). Unfortunately two of the three participating schools had not received the label at the moment of the second survey. Nevertheless the schools made progress within the project.

The response numbers among the school children were good, (almost) all children of the three highest grades participated.

The number of responding parents was quite low and due to the fact that the modal split of home-school trips is influenced by the school location, it was decided not to summarize the results for the three URSL schools. This means these results must be interpreted with caution.

The response numbers among the teachers were very low because the number of teachers of the schools is quite low, so these results must be interpreted with caution and treated as an indication only.

C6 Summary of evaluation results

The key results are as follows:

- Increased satisfaction about the road safety among school children, parents and teachers.
- No decrease of car usage in home-school trips.
- At the end of 2011 62% of the primary schools participated in the URSL measure.
- In October 2012 in the surroundings of 54 primary schools a school zone was implemented.

C7 Future activities relating to the measure

After CIVITAS MIMOSA the measure is continued in the following way:

- From 2013 the city of Utrecht takes over the labelling and audits of schools from the province of Utrecht. The city council provided enough money to continue the label for these schools until 2017.
- In 2013 the city will discuss the auditing with the region and other municipalities within the region to see whether these audits can be organised together in order to save time and money.
- The city of Utrecht stops with the active recruitment of new schools; all the primary schools that do not participate in the measure yet have been informed actively several times and apparently do not want to participate. If schools want to start in 2013, they can.
- The city of Utrecht will implement school zones at schools that are participating but were not yet provided with a school zone.

D Process Evaluation Findings

D.0 Focused measure

1	1	Most important reason	The measure fits into the EU policy towards clean urban transport (five pillars of the EU Green Paper)
2	2	Second most important reason	The measure fits into the city policy towards sustainable urban transport and / or towards sustainability in general
9	3	Third most important reason	The measure is regarded as an example measure

D.1 Deviations from the original plan

The deviations from the original plan comprised:

- **Reformulation of one objective** – The deadline of the objective of participation of 80% of the schools was 2010 according to the LEP. Because schools work on the basis of school-years (September – July), the deadline was adapted to the school year 2010-2011.
- **Changes in the layout of the school zones** – After the evaluation of the pilot the following changes were made to the design of the school zones:
 - The quite small road signs in the 30 km/h zones (40 x 60 cm) were too small to be clearly visible and were replaced by bigger ones (60 x 90 cm).
 - In some locations chains were placed between the poles to prevent children crossing the street between the poles.
 - The single line under the word SCHOOL on the road was replaced by a double line to increase the attention.
- In 2009 the City of Utrecht decided to continue the recruitment and support for schools on their own with the engaged subcontractor Eduniek. Before the city and the province of Utrecht cooperated in this (see D2.1).
- **The biennial survey 'School & Safety' in which teachers were asked to judge different safety aspects was cancelled after 2009** due to too little priority. Due to this it could not be reported whether in the opinion of the teachers, school children had to deal with unsafe traffic situations around the schools changed after 2009.

D.2 Barriers and drivers

D.2.1 Barriers

Overall barriers

It was a complicated task to have schools involved in the URSL; several barriers have been experienced on this:

- One of the “pillars” of the road safety label is the **involvement of the parents (5)**. For a large number of schools this is a burden. In many schools parents are difficult to motivate,

especially due to time constraints, or non-existence of such a parent attitude. This is especially true at schools where the parents have a lower level of education.

- **Schools are already busy (4).** The educational program of the schools is already rather packed. In some of the cases this means that the schools choose other priorities than participating to the road safety label.
- **Changes make it difficult to manage (4).** In some of the cases the schools are in a situation in which change is envisaged, or just has taken place. This could be change in relation to the school building, yet also in the educational programme. This means that the school is in need of temporary solutions, which the road safety label team sometimes finds difficult to manage, e.g. does it make still sense to introduce a school zone, when the school will change of building in the coming period. Change could also mean that the school just has changed its situation and does not want another change programme to implement for the time being.
- **Changes in the school management delay the process (8).** The time period between the school starting the process to obtain the label and the moment of really getting the label is in some cases more than two years. In the same time it was found that in around 35% of the schools a change of management takes place within such a period. A change of management means in some cases that the process and advantages of the road safety label have to be explained again. More generally this means that often the process with the respective school is temporarily delayed, or even stopped.
- Furthermore an important barrier has been and still is, that the process of **the involvement of the actors of specific schools, i.e. management, teachers, parents, and neighbourhood is not always that smooth (5)**. A school director indicated that there is not always good feedback from the local municipal administration on what is possible or what not. It also happened that a school zone was constructed without enough consultation of the respective schools. There remains in certain cases resistance of actors who do not profit from the school zones, like for example neighbouring residents.

Operation phase

- **Uncertainty about the future due to regional budget cuts (9).** In 2011, the Regional Authority BRU, which financed the Province of Utrecht (ROV-Utrecht) for road safety education projects incl. the URSL, decided to cut the financial budget they annually paid to the ROV-Utrecht. Due to this the ROV-Utrecht ends the implementation of the Road Safety Label in the city of Utrecht (and other municipalities within the region). This meant uncertainty for the future. Due to this situation the city of Utrecht was not sure whether the label could be continued in the longer term, which made it very difficult to recruit new schools because it was not known whether schools could still receive the label in the future. At the same time the objective of 80% participating schools was not reached. After discussions with the region and the Province on official and governmental level, it was decided that the ROV-Utrecht stops implementing the URSL from 1/1/2013. However, the City of Utrecht and its responsible Vice Mayor and the City Council are dedicated to the project. The city council decided to make another € 150,000 available so the city could continue the label for the schools that already participate to 2017.
- **Practicing in the traffic education park not for free from 2013 (9).** The dedicated traffic education park which was and still is used by many schools for the “real life” traffic education and for the practical traffic exam (two of the criteria the schools need to meet) was under threat of closing due to budget reasons. In 2012 and before schools could use

this park for free, incl. a lesson by a retired policeman. In 2012 it was decided by the city council that from 2013 schools who want to practice the traffic education in this park need to pay an amount of € 1,25 per school child (for the traffic lesson) and € 1,25 per school child for the practical traffic exam. Although primary schools can also organise this real life education themselves (which is already done by some schools, is time-consuming and costs money too). It clearly the decision cannot be seen as a stimulation of the URSL and it could be that as a result some schools won't meet the criteria with regard to practical traffic lessons and participation on the practical traffic exams. The effects will become clear in 2013.

- **Increase of costs due to withdrawal of the province (9).** Until the beginning of 2009, the province of Utrecht/Regional organisation on road safety and the city of Utrecht cooperated in the area of the city of Utrecht. That is to say the province financed part of the recruitment of new schools and support for participating schools was provided by the subcontractor of the city of Utrecht. They stopped as they felt legally obliged to subcontract the service offered to all of the schools in the province through a European tender. The city of Utrecht decided here not to tender (having the legal argument to do not so) and to continue on their own with the engaged subcontractor Eduniek to assure continuity in the approach, which was considered primordial for the success of the measure. Due to the fact that the province did not pay anymore for the contractor who worked in the city of Utrecht, the costs for the city of Utrecht increased.

D.2.2 Drivers

Overall drivers

There are several internal drivers and circumstances that helped to successfully implement the measure.

- **Continuity of collaboration (8).** There was a good and continuity of collaboration between the measure management team, as to say the department of traffic and transport and the department of education of the city of Utrecht and the subcontractor Eduniek. The province of Utrecht was engaged. This is considered as one of the main drivers for the successful implementation of the measure.
- **Political and societal attention (1).** There remains political and societal attention for the issue of road safety around schools, which increased and assured the availability of the necessary budget.
- **Awareness of the needs and environment of the schools (5).** The subcontractor Eduniek was involved with a former local school director who from his background was better aware of the needs and environment of the management of the local schools in general and specifically within Utrecht.
- **School zone attracted new schools (12).** The schools were offered something they are interested in, in addition to the activities they already develop in the field of traffic education. The school zone was a major attraction for new schools to start participating in URSL. In addition, other institutes that house many small children have also started to request school zones, even though they are not traditional primary schools and are beyond the project's target.
- **Free participation and support (6).** The participation of the schools is free of charge and the different elements of the URSL are offered as an integrated package including the

assistance of Eduniek. This avoided a lot of additional work for the schools in implementing the plan.

- **Snowball effect (6)**. As the first group of schools obtained the URSL and the school zone the URSL was becoming a better known concept with the schools. This made it easier to engage new schools and create a so-called snowball effect.

Operation phase

- **More budget (9)**. In relation to the local evaluation of the progress in comparison to the budget the city council approved additional local budget in order to reach the targeted number of 82 schools. This additional budget was needed in order to be able to give all the 82 schools support in obtaining the label (€ 40,000 extra) and to be able to implement a schoolzone at all these 82 schools (€ 120,000 extra).

D.2.3 Activities

The following activities were developed to guarantee the correct implementation of the measure

Operation phase

- **A new URSL folder was developed (5)** to inform the schools about the URSL in April 2010 (see section B4) with the aim to involve more schools and to explain to the schools that the project was still live.
- **An evaluation was carried out (4)** to inform the local council on the progress of the measure, which was also used to assure additional local budget (€ 160,000).
- **An information and discussion evening for all stakeholders (5)** took place in November 2011, initiated by Utrecht's City Council. The implementation partner Eduniek, some parents, the retired policeman in control of the traffic education in the traffic garden, the province of Utrecht and the involved municipal employees were present to discuss the results and the future of the road safety label, the traffic garden and the school zones.
- To assure continuity of participation of the schools in the URSL, Eduniek **closely followed the schools changes (4)** and actively approached the new school management. An involved subcontractor like Eduniek assured a stable implementation process.
- Due to the full educational program schools sometimes set other priorities. To avoid that the URSL did not get the right place in this priority setting, Eduniek was **pro-actively approaching the schools on a continuous basis (5)**.
- In the case of **temporary school accommodation** the school zones were set up in a **more sober format (4)**. They made use of equipment that could be reused elsewhere, which avoided a loss of resources. Eduniek was often stimulating the schools to start already with the "soft" part of the UVL.

D.3 Participation

D.3.1. Measure Partners

Besides the department of Traffic and Transport of the city of Utrecht, the following organisations were involved.

- **City of Utrecht, department of Education** – This department is closely involved in the project, takes care of the contact with the Education support agency (Eduniek), is in direct contact with the schools and has expertise with regard to (traffic) education.
- **City of Utrecht, department that implemented the school zones** – on behalf of the department of traffic and transport this department was involved in the plan to develop school zones and implemented the school zones.
- **Education support agency (Eduniek)** – On behalf of the city of Utrecht Eduniek recruited primary schools actively to participate in the URSL project and supported the participating schools to set up and implement an action plan that indicates which criteria will need the schools' attention for improvement.
- **Province of Utrecht, organisation for road safety (ROV-Utrecht)** – This organisation introduced the URSL in the province of Utrecht, and checks whether schools meet the criteria and provided the label to schools that meet the criteria. Till the end of 2012 the ROV-Utrecht also gave an one-time subsidy to participating schools of 75% of the costs of a traffic education method or a practical traffic lesson and checked every two years whether the labelled schools still met the criteria.
- **Region of Utrecht BRU (Bestuur Regio Utrecht)** - a cooperation of the agglomeration of the city of Utrecht, which subsidised 75% of the physical infrastructure of the school zones till 2012.

D.3.2 Stakeholders

- **Primary schools in Utrecht, including the school children and their parents** – The measure aimed to increase (the satisfaction about) the road safety of primary schools.
- **Residents living in the neighbourhoods of URSL schools** – These residents were influenced by the road safety of the primary schools, the transport modes used by children to travel to school and the implementation of school zones.
- **Other municipalities within the Region of Utrecht** – Some other municipalities also implemented the URSL project. As the biggest city, the city of Utrecht could be an example for some smaller cities in the case of the school zones and in case of the future plans after the URSL is not supported by the province of Utrecht in the region of Utrecht anymore.

D.4 Recommendations

D.4.1 Recommendations: measure replication

- **This kind of road safety label can easily be transferred** to other countries, even if it should be adapted to the local context. The level of implementation could be at the level of the country, region, and if the city is large enough (having more schools) a school road safety label would also make sense at the city level.
- Increasing the road safety of vulnerable children is a **popular measure on political and social level** which makes it easier to obtain money and acceptance.
- **Let the schools be pro-actively approached by a partner** (Eduniek in our case) **that really understands how a school is run**. This will help to create a better relation with the schools. This pro-active approach and assistance will also make smaller the fall-out risk during the implementation phase within the individual schools, for example as a result of a school management changes.

- **Identify at an early stage and understand the resistance** of actors that do not profit from the school zones, and manage upon (i.e. other residents around the school zones, parents that want to continue to bring their children in not sustainable way to school).
- **Focus at first at the participation of a few schools**, once they started this can create a snowball effect, as they are an example for other schools; this happened for example in Utrecht with starting with a group of schools in the completely newly built neighbourhood Leidsche Rijn.
- Approach the schools with a **consistent school road safety package** that shows why it is in their interest to participate and should be a priority for them. School participation is free of charge. Schools that actively participate are awarded with a school zone. This assures that the set objectives by the city or Utrecht are really met. In case of envisaged school changes (e.g. change of school building), temporarily measures can be taken.
- **Do not aim for 100% participating schools** - It is not envisaged to be able to go to 100% of the schools having a road safety label because the label is not obligatory and there are always schools that think they already provide basic safe traffic education and do not need a school zone or road safety label.

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

- Most important is **to unite a local project team that combines all necessary skills**, as to say (1) understanding of the school management and priorities (Eduniek), (2) understanding of education priorities within the city (department of education), (3) understanding of mobility issues and (4) physical infrastructure (department of traffic and transport).
- **An inspiring, rousing person** (this can be a school director, or an enthusiastic employee of the city) helps to increase the participation of schools.
- **Make it as easy as possible for the schools** - Part of the label is that schools need to describe the progress in their activities to meet the criteria of the label and achieve the label in a dossier. It is important to make this as easy as possible: a big dossier scares schools and decreases the number of participants.
- **Involve politicians** - Explain correctly and on a continuous basis to the politicians and higher hierarchy the needs and advantages of the measure, to assure continuity and available budgets.

Appendix 1: Utrecht Road Safety Label criteria

1. Theoretical traffic education	
Obligatory criteria	<ol style="list-style-type: none"> 1. The school uses an up-to-date traffic education method in all grades and spends structural time on traffic education in all grades. 2. All pupils participate at the theoretical traffic exam during their school time.
Optional criteria	<ul style="list-style-type: none"> • <i>The school uses, besides the up-to-date traffic education method, additional education materials.</i> • <i>Traffic education is integrated within other education.</i>
2. Practical traffic education	
Obligatory criteria	<ol style="list-style-type: none"> 1. Pupils of at least four grades practice their traffic behaviour and the traffic rules at least once a year in the schoolyard, the street or in the Utrecht traffic park. 2. All pupils participate at the practical traffic exam during their school time.
3. Parents' involvement	
Obligatory criteria	<ol style="list-style-type: none"> 1. The school informs the parents about road safety and traffic education (through parent meetings, news bulletins, website) regularly. 2. Agreements were made about bringing and picking up the children safely. 3. There is at least one active traffic parent. 4. Road safety is on the agenda of the Participating-council or the Parent Board.
Optional criteria	<ul style="list-style-type: none"> • <i>Parents are involved actively in road safety education at the school.</i> • <i>Parents receive information about how they can practice in traffic with their child.</i>
4. Safe school surrounding	
Obligatory criteria	<ol style="list-style-type: none"> 1. The school is committed to the safety on the school-home routes of the pupils. 2. The school exerts itself for a clear and safe school exit. 3. The school puts effort into a safe accessibility of the school for cyclists and pedestrians. 4. The school has mapped out safe ways for all the trips that are made during school time. 5. The school pays attention to the future school-home trips of pupils of the highest grade.
5. Road safety in the school's policy	
Obligatory criteria	<ol style="list-style-type: none"> 1. Traffic education is part of the school's policy. 2. There is a paragraph in the school guide about road safety and traffic education. 3. Every year the school makes an activity calendar for traffic education and road safety. 4. The school has a traffic team in which teachers and parents are represented. This team is the contact for e.g. parents, police, and neighbours.
Optional criteria	<ul style="list-style-type: none"> • <i>Teachers maintain their knowledge about traffic education.</i> • <i>There is a yearly budget for traffic education.</i>