



# INCLUSION Project

## Deliverable D4.2

Innovation Pilot Lab Rhein-Sieg:  
implementation and results - Intermediate  
version

Version: 1.0

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<b>Abstract</b>	In this Deliverable 4.2 are the design, the measures, the implementation process of the measures, and the local area description of the pilot lab Rhine-Sieg described in detail. The content of the measures was derived from the results of an extensive survey conducted in the pilot lab area as part of the project. Deliverable 4.2 is an interim result and contains the description of the existing offers as well as the time and implementation plan for the planned measures in pilot lab Rhine-Sieg.		
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# 1 Introduction

"Why do so many parents bring and pick up their children to or from all sorts of destinations in their everyday lives by car, even though there are many other ways to travel?"

Based on this question, the Pilot lab Rhein-Sieg started the search for a well delimitable but at the same time sufficiently populous area in which the target group (families with children) can be found in large numbers in the INCLUSION project. Here, possible measures to change traffic behaviour were to be identified and tested. In cooperation with the Rhein-Sieg district, the city of Hennef was chosen as the location for the new development area Im Siegbogen.

In the new development area Hennef Im Siegbogen the last plot was sold in 2013, in the meantime all plots have been developed and the houses and apartments have been occupied. At the same time, the new development area offered ideal conditions for a locally delimited but broadly based district due to its traffic connections to public transport, its regional proximity to the inner city of Hennef and its excellent connection to the local, the regional, and supra-regional road network.

During the design of the possible measures it became clear that for small-scale, well-founded statements there was not enough data available to understand the motivations for using a particular means of transport for everyday journeys and for not using others – although alternatives were available. Therefore, in consultation with the project management and the management of Work Package 4, it was decided to pre-set possible measures with a local resident survey in order to create a correspondingly reliable data basis on the basis of which the reasons for the use or the reasons for the non-use of certain means of transport (for certain routes) can be determined. In addition, these data formed the basis for the measures subsequently developed on the basis of the needs of the residents of Hennef Im Siegbogen, each of which aims to strengthen the use of public transport (local train and buses) and other environmentally friendly means of transport such as bicycles.

In addition, the independent mobility of children and young people in particular should be promoted in order, on the one hand, to enable or improve participation in the various leisure and everyday activities and, on the other hand, to reduce dependence on mobility by (working) parents and thus the possibility of participation in social or local projects. Here it is also assumed that by linking certain MIT (motorized-individual traffic) -based activities of the parents, paths of the children for whom a mobility alternative would have existed are nevertheless integrated into the MIT-based path chains.

The measures were aimed at several user groups. The aim was to reach people who had previously used MIT to cover most of their everyday journeys and those of their children, i.e. new customers from the point of view of public transport. At the same time, however, the measures also had to be of interest to passengers who have rarely used public transport in the past and also to improve satisfaction with the use of the system for frequent users. The same applies to measures affecting cycling. For this reason - especially when designing the communication concept - care was taken to ensure that the chosen distribution channels address and reach not only existing customers but also new customers in a targeted and effective manner. Of course, this also has an impact on the communication channels, since, for example, indoor vehicle advertising in buses or local trains does not reach new customers, but is merely a possible sales channel for informing existing customers.

According to the study "Mobility in Germany 2017", which combines various generally valid statements on transport and the choice of means of transport by Germans, the definition of a means of transport decreases with disposable income (source: MiD 2017). From this it can be deduced that with a medium or higher disposable income, more means of transport are available on the one hand, but are also used on the other. This is also the hope underlying this pilot lab and the measures applied there: If the number of means of transport and the number of ways to reach one's destination are both different and resilient, then there is a real chance that these means of transport will be used. At the same time, it is precisely at short distances that the means of transport bicycle and public transport can make up ground for the car by playing off their individual advantages and by first remedying as far as possible the existing shortcomings of these means of transport from the user's point of view.

Another important aspect is that the approach applied in the Pilot lab Rhein-Sieg as well as the measures and communication package used can also be transferred to areas and districts with similar framework conditions, i.e. the solutions sought and applied can also be adapted to other new development areas or districts with a high proportion of families with (young) children, not only in the Rhein-Sieg district but also beyond.

In addition to the Rhein-Sieg district, the city of Hennef and the INCLUSION project partner Rupprecht Consult were involved in the planning of the measures. The measures for local public transport are carried out by Rhein-Sieg-Verkehrsgesellschaft GmbH, a local transport company. The partners involved agreed that the chosen approach of orienting themselves towards the actual needs of (non-)users is the right way to create the first (small) building blocks in the new concept of local transport services for families. The measures around biking are carried out with different employees of the City of Hennef.

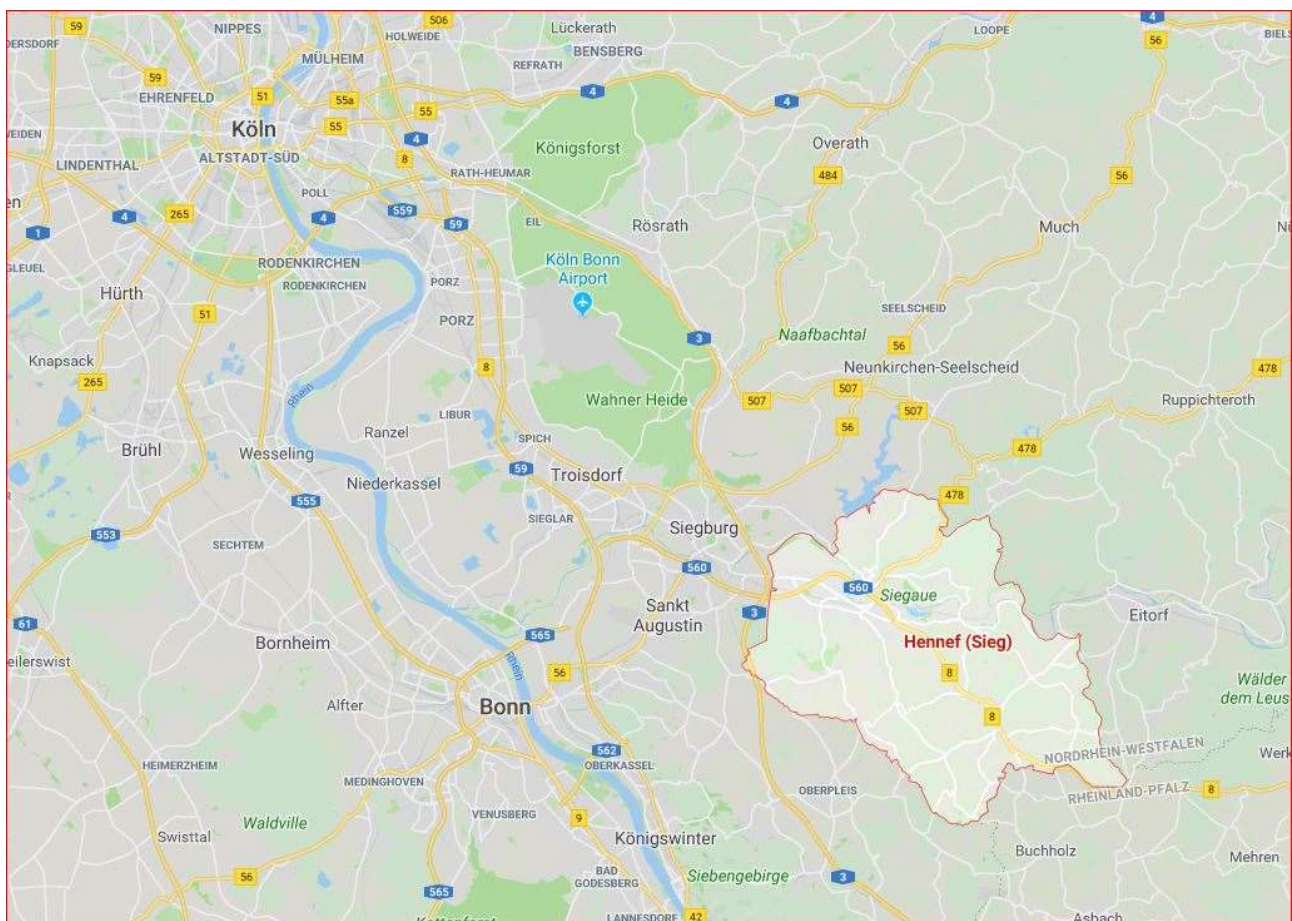
In the following, the regional framework conditions, the mobility needs as well as the existing mobility offers, the determination of the data basis, the draft of the pilot lab Rhein-Sieg as well as the locally acting actors are named and examined in chapters two to seven in more detail. This is followed by an overview of the involved actors and a timeplan for the demo operation of the measures.

This is accompanied by the hope that the measures implemented in the Pilot lab will deliver the hoped-for results and thus become a small building block in changing mobility behaviour of parents and children and also provide a template for further similar implementations in other areas in the VRS region and beyond.

## 2 Site description

Hennef is located between Bergisches Land and Westerwald at the beginning of the Sieg estuary valley, about 30 km as the crow flies southeast of Cologne and 14 km as the crow flies east-northeast of Bonn. The highest point of the city area is reached at 285 m above sea level at the edge of the district Eichholz, the lowest at 60 m above sea level at the Sieg at the district Stoßdorf.

In the west Siegburg and Sankt Augustin border on the city area, in the north the municipalities Neunkirchen-Seelscheid and Ruppichterorth, in the east the municipality Eitorf, in the southeast the municipality Asbach in Rhineland-Palatinate and in the south Königswinter. The area of the city is about 105 square kilometres. Hennef consists of the centre as well as other partly widely scattered villages. The railway line separates the districts Geistingen and Warth on one side and Hennef on the other. Several level crossings and a bridge cross the railway line. Between the crossing possibilities for cars, however, there is sometimes a kilometre of road.



**Figure 1 - Map of Hennef and surroundings**

Source: Google maps,

Hennef is a town in the Rhein-Sieg district and the fourth largest town in the district with around 48,000 inhabitants living in an area of 105 qm<sup>2</sup> which means the population density is 447 inhabitants/qm<sup>2</sup>. However, the inhabitants live only partly in the main town, but are spread over a total of more than 100 smaller villages. Hennef therefore also has the somewhat poetic nickname "City of 100 Villages".

In Hennef, the Frankfurter Straße (formerly "Bundesstraße 8", today "Landesstraße 333") runs through the city centre. On both sides, there are mainly residential areas – interrupted by some mixed areas – next to the city centre with the commercial retail trade. Hennef is, according to the spatial planning system of the central places according to Christaller, a middle centre with all the associated features such as medical specialists, cultural offers, department store, specialist trade, secondary schools, hospital, swimming pools, notaries, tax advisors etc.

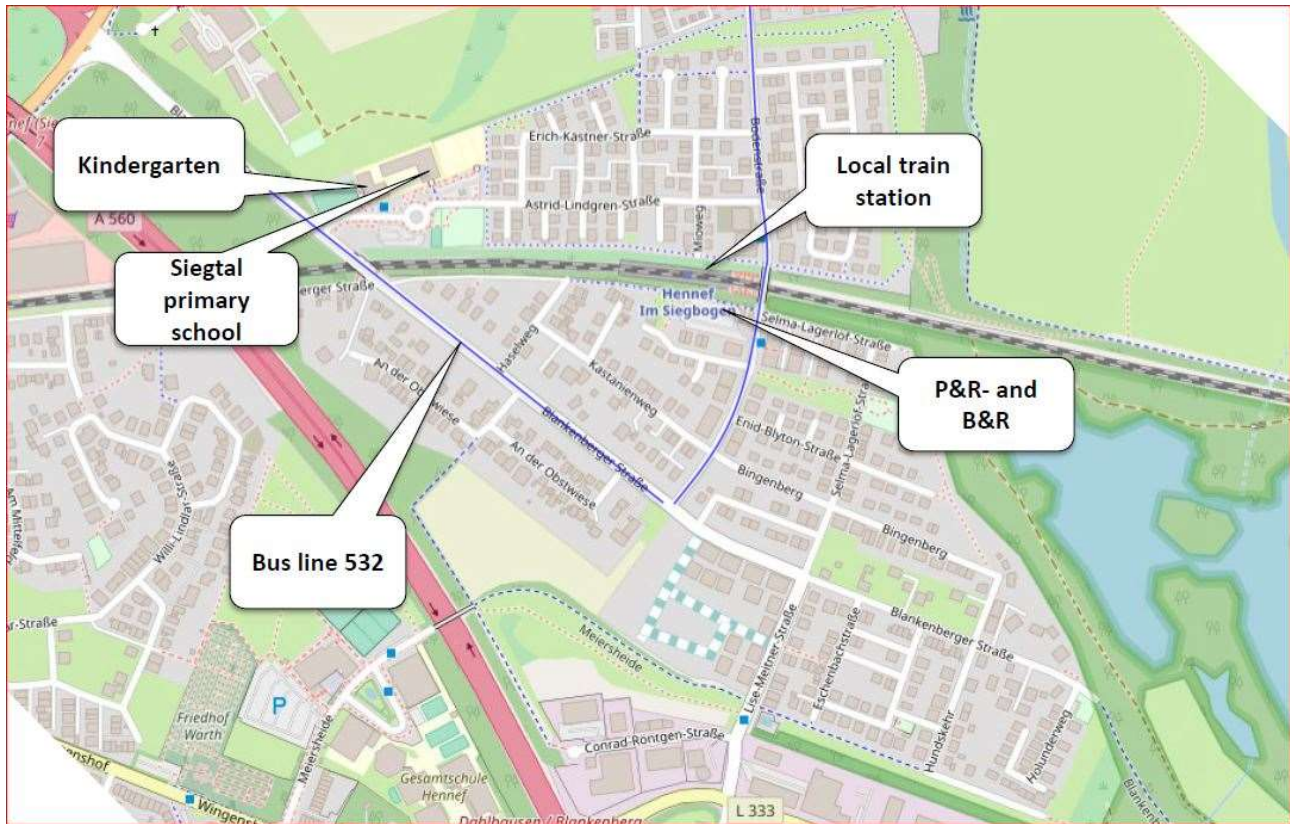
The town hall, together with the market square, is located in the centre of Hennef on Frankfurter Straße. Hennef lies on the river Sieg. Since 2005, there has been a continuous waterfront promenade that cyclists and pedestrians can use. Alternatively, you can reach the Sieg via a cycle and hiking trail.

The entire new development area Hennef Im Siegbogen has an area about 18 hectares (=0.18 qm<sup>2</sup>) and is located in the eastern part of Hennef, next to the district Weldergoven and in the immediate vicinity of the local recreation area Siegaue. In March 2009, the city and the municipal utilities began marketing the new development area Im Siegbogen. In late summer 2013, the complete sale of all plots for detached houses was announced. It's classified as a peri-urban area.

In Hennef Im Siegbogen there is predominantly residential development. The buildings are predominantly single or semi-detached houses as well as multi-family houses with apartments of different sizes and layouts. As is customary in North Rhine-Westphalia, the land areas are between 250 and 350 sqm in size.

The Siegtal primary school has been in operation on Astrid-Lindgren-Straße since August 2007. The kindergarten started operations on September 1<sup>st</sup> in 2013.





**Figure 2 - Map of new development area "Im Siegbogen" in Hennef**

Source: Google maps, own editing

Hennef is part of the Verkehrsverbund Rhein-Sieg (VRS), a public traffic association located in the southern part of Northrhine-Westphalia up to the border to Rhineland-Palatine. Biggest cities in the VRS are Cologne and Bonn, but even smaller cities like Leverkusen, Euskirchen, Brühl, Siegburg and, for example, Hennef. The VRS area includes high density urban, suburban, peri-urban and rural areas and connects them by public transport and unique tariffs.

The local train station Im Siegbogen was opened in December 2011. It offers two railroad tracks at the Siegen – Siegburg – Troisdorf – Cologne – Düren – Aachen connection. At the new local train station are also the bus stops of the bus line 532 and 75 parking lots for cars. The adjacent Park&Ride area offers train drivers from outside the residential area the opportunity to use it. The car park has two parking lots with a charging station for electric cars. Cyclists have 54 covered parking spaces and 38 lockable bicycle boxes at their disposal. Some of the boxes are equipped with a charging station for e-bikes/pedelecs.

From Hennef Im Siegbogen you can reach the motorway A 560 to the motorway junction Bonn/Siegburg with connection to the A3 Cologne/Frankfurt and the A 59 as well as the federal road 478 in direction Ruppichteroth and Waldbröl in a few minutes via the Blankenberger Straße.

### 3 Mobility demand

The city of Hennef in the Rhein-Sieg district has benefited from the so-called "spillover effect" for years in terms of attracting young families, i.e. young people who have previously lived in the two large regional cities of Cologne or Bonn cannot or do not want to buy or rent larger properties in the family start-up phase due to the high costs, but instead move to the surrounding districts, which are well connected to commuters. These districts in turn have a high interest in the settlement of young families from outside, since the population living there so far is ageing as in many rural or semi-rural regions of Germany. One consequence of this development is that the proportion of commuters with long commuting distances is increasing, and the local transport services available for public transport and cycling are not growing at the same rate or are more geared to the needs of commuter traffic.

In Hennef, this is reflected in the modal split. While the share of cars is 64% (48% as drivers and 16% as passengers), public transport accounts for 9%, walking for 20% and cycling for 7% (Source: MiD 2008).

Looking at the distance travelled, for the Rhein-Sieg district it can be seen that around 30% of all journeys by car are 2 kilometres or shorter, while the share of journeys by public transport is only around 10% (Source: MiD 2008). Public transport is therefore more interesting for longer distances, which leads to the conclusion that commuters to Cologne or Bonn may be interested in using public transport, but not for shorter local routes. Possible reasons for this could be, for example, an offer of journeys which is unattractive due to its timing and the associated waiting times. Or this may also be due to the lack of trips during off-peak periods on weekdays. In addition, it proves the statement made in advance that new commuters to the Rhein-Sieg district have relocated their homes but not their workplaces from the city to the region.

62% of Hennef citizens use their own city for shopping and supply routes, while 5% go to Bonn for shopping, 23% visit other cities and municipalities in the Rhein-Sieg district and 9% go to completely different destinations (Source: MiD 2008). This quite high share of local shopping traffic offers the possibility that a change from cars to bicycles or public transport seems quite possible, not least because all important destinations are available locally and in short distance.

41% of buyers prefer to go to the city centre, while 20% prefer shopping centres on the outskirts. 27% prefer to go closer to the city centre, and 10% choose completely different destinations for their purchases (Source: MiD 2008).

From these framework data it can be concluded that there is potential for the various public transport and bicycle services to significantly increase the modal split share of these environmentally friendly modes. In general terms, however, this requires significantly improved services and, from the perspective of the users, a change in behaviour.

Whichever way you look at it: The offers are usually not able to adequately serve the sometimes high needs and demands of the new inhabitants, who often come from an urban milieu and are therefore used to efficient public transport as well as bicycle-friendly offers, which is why a rethinking is necessary, especially for times beyond the working day.

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The Rhein-Sieg district is well aware of this task and also knows that the district must provide potential new residents with high-quality infrastructure and attractive transport services, precisely because without a high-quality offer no change to more sustainable means of transport can be expected. Against this background, a separate survey was carried out on a small-scale level in order to identify the most important local needs (see Chapter 6) and then, based on these needs, to offer tailor-made measures (see Chapter 7).



## 4 Mobility service operated in the site and stakeholders involved

### 4.1 Public transport

As part of the Rhein-Sieg district, the city of Hennef is integrated into the Verkehrsverbund Rhein-Sieg (VRS, a German public transport association) with regard to public transport. Within the Verkehrsverbund, the travel times of the bus and train lines are coordinated. The VRS coordinates all cross-company activities in the Verbund region. One of the central design elements is the Verbund tariff, the same tickets and ticket prices are charged across companies. This means that with a ticket sold from the local bus transport company, for example, you can travel to Cologne by S-Bahn and vice versa.

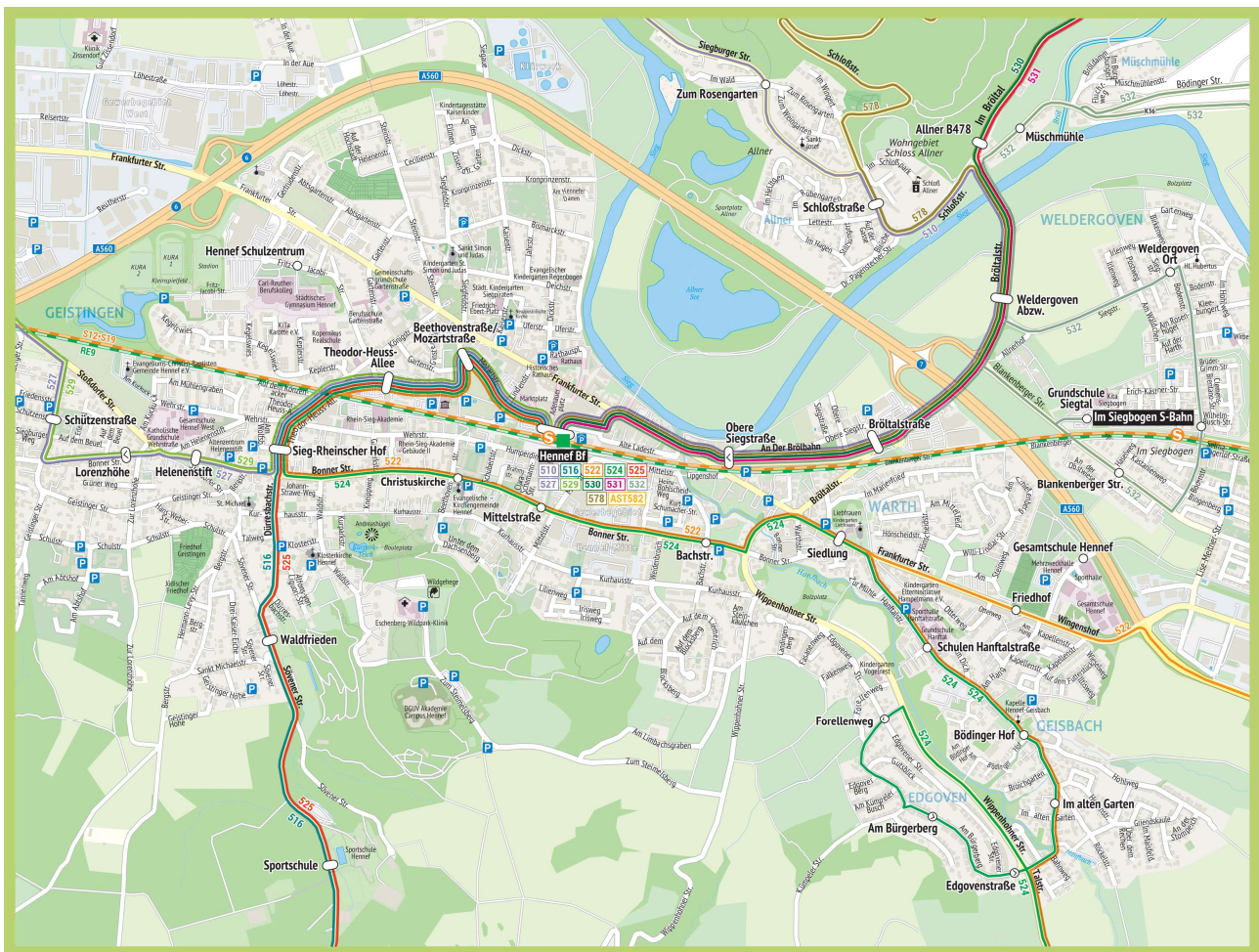


Figure 3 - Detailed city map of Hennef including PT lines

Source: VRS GmbH



The VRS assumes a large number of planning, coordination and service tasks for the regional authorities and transport companies. These include in particular a composite tariff, sales, marketing, communication and revenue sharing. The traffic area of the VRS covers an area of 5,111 km<sup>2</sup> with 3.4 million inhabitants. There are 6828 public transport stops in the VRS, served by 24 railway lines, 19 tram lines and 506 bus lines. In 2018, around 546.5 million passengers were transported on the VRS public transport lines.

The bus stop Hennef Im Siegbogen belongs to the peri-urban area of Hennef and is located at the edge of the new development area in the Siegbogen. The stop is served by the local train lines S12 and S19, the bus 532 as well as the "Anruf-Sammel-Taxi Hennef" (AST 582).

The local train stop Im Siegbogen is connected to Hennef city, Siegburg, Cologne/Bonn Airport and Cologne via the two S-Bahn lines. Hennef city, Siegburg and Cologne are served three times per hour during the day (Monday - Friday) without changing trains and are important both for commuters and leisure traffic. Bonn is also frequently connected to the tram line 66 by changing at Siegburg station. The journey time to Cologne main station is 41 minutes, to Bonn main station 39 minutes. It takes three minutes to get by local train to Hennef and ten minutes to Siegburg. The first trip to Cologne starts at 4.50 am, the last at 0.20 am. On Saturdays there are two journeys per hour, Cologne is connected every hour.

The bus line 532 connects the bus stop Hennef Im Siegbogen to Hennef train station. During rush hours the buses run every half hour, otherwise every hour. The primary school Siegtal is always served on the route. Furthermore there is a bus to the comprehensive school Meiersheide and a bus to the school centre Hennef Fritz-Jacobi-Straße. The journey to the primary school from the stop Im Siegbogen takes two minutes and to Hennef Mitte ten minutes. On weekdays, the first journey starts at 5.41 a.m. and the last at 21.41 p.m. On Saturdays and Sundays, line 532 runs every two hours. Barrier-free low-floor buses are used in Hennef.



**Figure 4 - Bus line 532**

Source: VRS GmbH

The stop Hennef Im Siegbogen is barrier-free. This applies to the transition from bus to train and vice versa. Both tracks can be reached by lifts and stairs. Aids for the blind and deaf are also available. There are a total of 54 covered and illuminated Bike&Ride places at the stop, some of which can be rented as bicycle boxes. The change from bicycle to train or bus and vice versa can be done quickly and easily.

Both the railway lines S12 and S19 as well as the bus line 532 are conventional public transport. During the late evening hours and at weekends, AST line 582 complements the service. AST is demand public transport. It picks up passengers at special stops, but then takes them to their front door within the city limits of Hennef. The trip must be ordered in advance by telephone and costs a surcharge of € 3.00 for VRS subscribers and € 4.00 for non-customers.



**Figure 5 - Bike&Ride places incl. bicycle boxes at Hennef Im Siegbogen**

Source: VRS GmbH (Picture: Smilla Dankert)

The Rhein-Sieg district, in cooperation with the city of Hennef, is the planning authority and thus responsible for the preparation of the timetables in Hennef, but also for covering the financial deficit. The bus services are provided by Rhein-Sieg-Verkehrsgesellschaft (RSVG), a bus company owned by the district and the individual municipalities. The S-Bahn is operated by DB Regio, a subsidiary of Deutsche Bahn. The AST service is organised by the district and operated by a local taxi company. The VRS is responsible for setting the tariff, in close coordination with the transport companies operating within the network.

The public transport offer is subsidised by the state of North Rhine-Westphalia, the district and the local communities. In addition to the subsidies, the revenues generated by ticket sales are of course an essential basis for public transport, too.

The VRS offers both temporary and spatially limited tickets as well as flat-rate tickets. The latter are usually open to special social groups, i.e. there is a flat-rate ticket for pupils ("VRS SchülerTicket"), but also for working people ("VRS-JobTicket") or senior citizens ("VRS-Aktiv60Ticket"). Beside these there are tickets in the single purchase, i.e. one acquires a ticket for a journey. This ticket is valid for a city or municipality, but can also be purchased for longer distances. Then the price increases accordingly. For particularly short distances there is the short-distance fare ("VRS Kurzstrecke"), which is calculated on the basis of the stops used ("1 plus 4"), i.e. the short-distance fare always applies



from the boarding stop plus four further stops. The regional rail routes (also local trains) are excluded from the short-distance fare due to the large distances between stops.



Stand: Januar 2019

**Figure 6 - The expanded VRS network ("Erweitertes VRS-Netz")**

Source: VRS GmbH

Total ticket prices are proposed by carriers operating within the VRS and confirmed (or rejected) by political bodies. The advantage of this tariff structure is that customers always pay the same price irrespective of the company making the journey and can also change between different means of transport (e.g. bus to train, etc.) without additional costs. On the other hand, this makes the system somewhat less flexible, i.e. local special solutions are more or less excluded. The cheapest ticket for adults is the short-haul ticket. It costs € 2.00, the EnzelTicket for one municipality € 2.50, the EnzelTicket for another municipality € 3.00 and for the entire VRS network up to Aachen € 18.10.

Flat-rate tickets are much cheaper. A VRS pupil ticket as net map (complete VRS inclusive Cologne, Bonn etc.) costs the pupil monthly € 12.00, is subsidized however still substantially by the country. A VRS JobTicket costs about € 68.00 per month and is also valid in the complete expanded VRS network. Flat rate tickets are issued as electronically readable chip cards, single tickets can be purchased either in paper form or on the smartphone as mobile phone tickets ("HandyTicket"). With HandyTickets, customers receive a 10% discount on the ticket price.

Information on timetable times, stop equipment, fares, connections, transfer connections, etc. is published jointly by the VRS for all transport companies. This takes place both as printed products (timetable books, mini timetables, notices at stops) and electronically as real-time data (VRS App, homepage, dynamic display in the vehicles and at stops with higher passenger turnover).

Communication from a single source within the entire VRS area ensures a consistently high standard of quality. In addition, the data comes from its source via a data hub, so the same data is displayed at the various collection points. The app and the electronic chip cards have integrated access for other mobility services such as Car-Sharing and Bike-Sharing (including discounts for subscription customers).

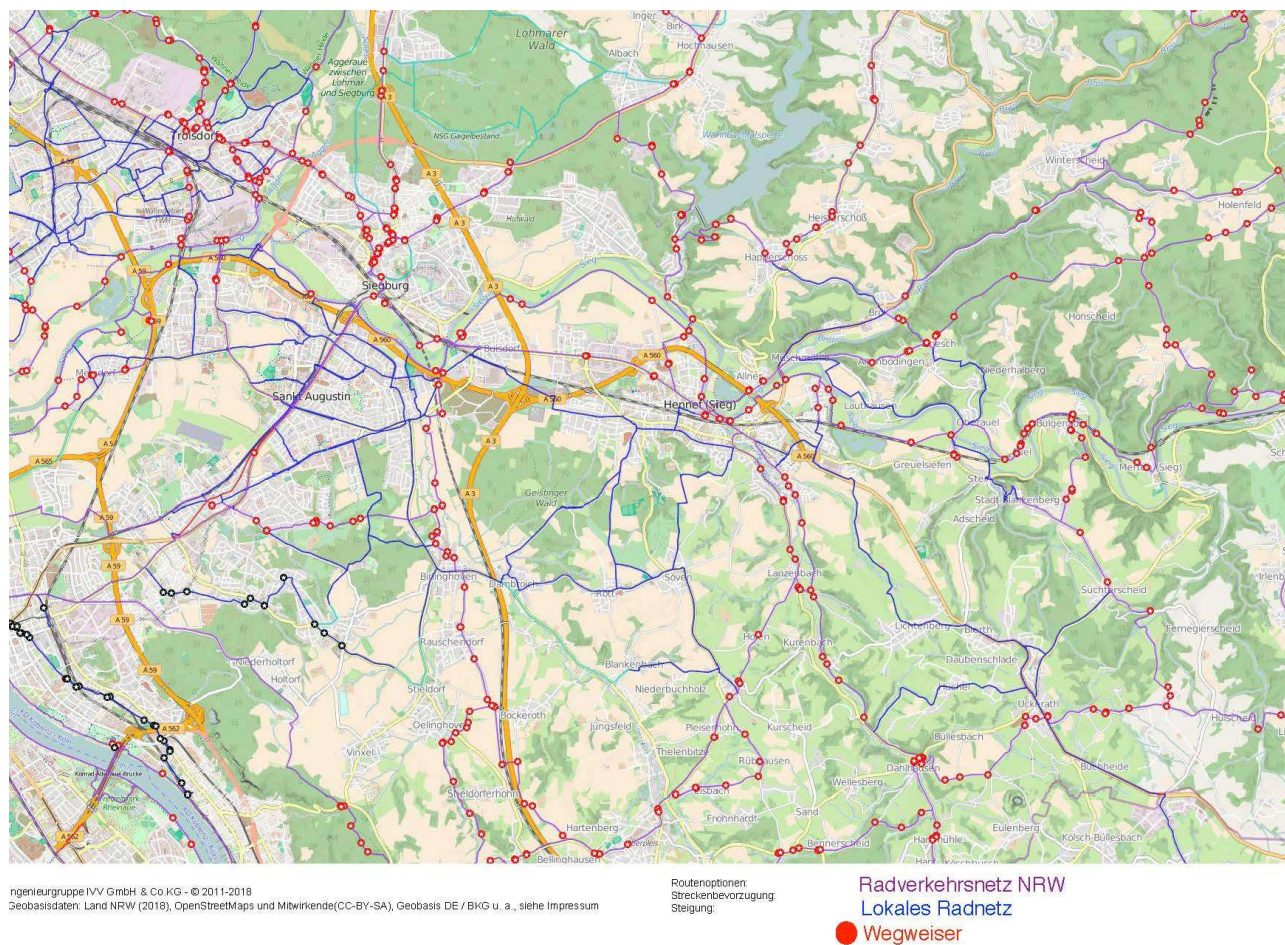
## 4.2 Biking

Hennef is connected to the NRW cycle path network and also has other local cycle paths in the town centre. However, many roads are also dominated by the MIV, and cycle traffic is either made possible by a combination of sidewalk and cycle path, or the road space can be shared by cyclists. In such an area there are no clearly defined paths for cyclists. If the cycle path has been moved to the sidewalk, the entrances located along the road space can be dangerous.

From Hennef Im Siegbogen, the various schools in Hennef as well as the city centre can be reached by bicycle without great effort, although not always directly. There are bicycle parking facilities at the schools. In addition, further parking facilities are installed at various locations in the city centre. However, as a rule these are not roofed over.

At the station in Hennef and also at the local train station Hennef Im Siegbogen bicycle parking facilities are available. Most of these are covered.

There is currently no bicycle rental system in Hennef.



**Figure 7 - Cycle path network NRW and local cycle paths in Hennef**

Source: IVV GmbH



## 5 Target groups for Pilot Labs

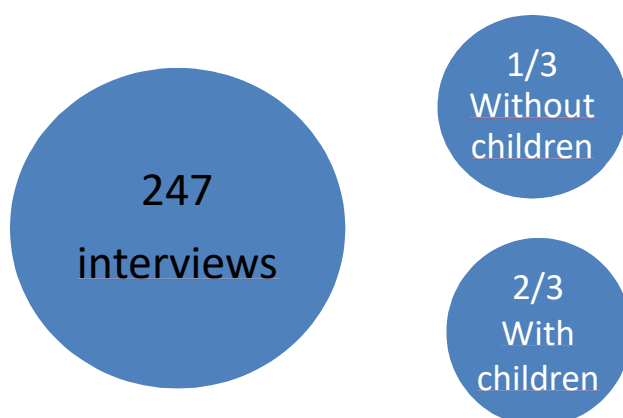
Target group in the pilot lab are families with (younger) children and their daily trips. The focus is not so much on the daily commuting routes of commuters, but on other paths in everyday family life, such as the children's way to school, the accompanied routes of the smaller children to kindergarten or the childminder, for example, as well as the numerous different routes of leisure travel. These can, of course, include the trip to the sports club as well as trips to friends, relatives, music lessons, the cinema, or shopping. This results in chains of paths for parents in particular, i.e. they combine the way to work or shopping with bring- or pick-up routes for the children. It is possible that these chains of routes influence the choice of means of transport.

Also important for this target group are the children's unaccompanied routes to their various destinations. Can you get to school by bus or bicycle in a reasonably fast, inexpensive and, above all, safe way? Can appropriate recreational goals such as participation in a sports club or a visit to the swimming pool also be achieved without mother or father having to bring the children?

Even though the routes of the individual family members are in the centre of consideration in the pilot lab Rhein-Sieg, the routes of other social groups are of course also interesting with regard to the choice of means of transport and the reasons responsible for it.

In the new development area Hennef Im Siegbogen there are families with young children, childless singles and families as well as seniors. Of course, the intended changes should also be relevant for these population groups and all other, possibly locally weaker represented, groups. Experience has shown that this can be achieved because the target group of families with children covers a large area of everyday needs.

In the Hennef Im Siegbogen development area, the 567 households consist mainly of families with several children.

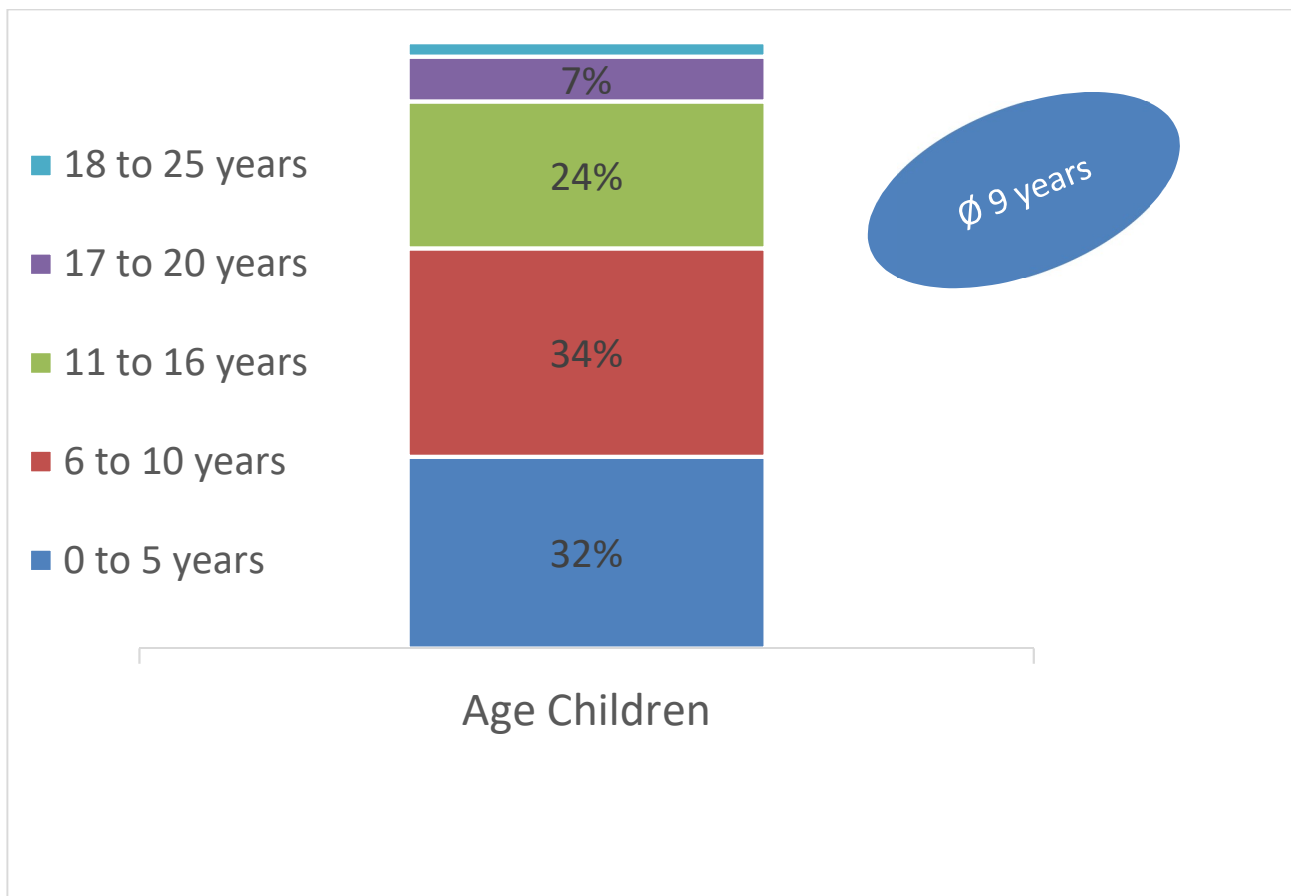


**Figure 8 - Households with/without children in Hennef Im Siegbogen**

Source: Own survey

Based on the results of the INCLUSION survey, two out of three households have children. Statistically, 3.1 persons live per household and 1.2 children live in Hennef Im Siegbogen (1.8 children only in households with children).

Statistically, this is above the average figures for the Rhein-Sieg district. Here there are an average of 2.2 persons per household, from which it can be concluded that the consideration made at the beginning (cf. Chapter 1) is correct that the proportion of families with children in the new district is significantly higher than in the district as a whole.



**Figure 9 - Age of children in the households in Hennef Im Siegbogen**

Source: Own survey

The use of the car to bring and/or pick up children plays a central role, although the development area is connected to the local and regional public transport network. The average age of the children in the households is around 9 years. Around 60% of the children living in the households are in the school-phase of life, 23% visit the kindergarten, 2% are at daycare mother, 5% are not yet with daycare mother or kindergarten and 10% do an apprenticeship or study.

The use of the bicycle as an everyday means of transport is still expandable, especially for children and young people.



## 6 Identification of the Pilot Lab actions

### 6.1 General information

Although a great deal of information is available on the general statistical data of the state of North Rhine-Westphalia, the specific needs at the very small-scale level of a new development area could not be precisely clarified on the basis of these data. In addition, data from the constantly updated MiD study can be used in Germany, which provides a great deal of general information on transport and the choice of means of transport. However, the data from this study cannot be evaluated on a small scale either, but on the other hand offers interesting insights through comparisons. A large part of the available data material is therefore only suitable to a limited extent for deriving well-founded conclusions about the mobility needs of local residents and thus changes in services.

Against this background, the decision was obvious to carry out an extensive small-scale survey in the new housing development Hennef Im Siegbogen in addition to the original planning when applying for a project. The results of this survey, compared with generally available statistical data, will serve as the basis for further measures. The contents of the survey were prepared in close cooperation between VRS, Rupprecht Consult, the city of Hennef, the municipality of Eitorf and Rhein-Sieg-Kreis and were designed by the market research department of VRS. The market research department of the VRS regularly conducts surveys on mobility in the area of the transport association.

In addition, with regard to the evaluation of the measures planned in the Pilot Lab as part of the INCLUSION project, care was taken to ensure that the information obtained through the survey - as far as this was possible in advance - could also be used for the prior survey in order to avoid double surveys.

### 6.2 Own survey

In order to identify the specific needs, a survey was carried out in Hennef Im Siegbogen. On the basis of these survey results, measures should be developed that best met the needs and requirements of local residents for mobility, were feasible within the timeframe of the project and could also be financed.

After intensive considerations, the decision was made to conduct a written survey. This was preferred to a telephone survey and a front door survey. To ask for a written statement seemed to be the most promising because the necessary logistical effort was in the best proportion to the expected result. In addition, it was to be expected that the implementation period would be relatively short. In order to create a small incentive to complete and return the questionnaire, all participants received a voucher code in the amount of € 10.00. Such an incentive worked as a good "motivation boost" in past surveys carried out by the Market Research Department of the VRS.

The address data required for the mailing could be provided by the city of Hennef in accordance with the data protection guidelines. In view of the number of households (567), the response rate was 100 plus X in absolute figures (i.e. about 20%) in order to obtain meaningful and statistically reliable results. Should the desired number of returned questionnaires not be reached within the

defined period, a reminder letter would have been the first measure and, should this still not be sufficient, a front door survey would have been planned as the second measure. As a third measure to achieve the survey rate, telephone calls would then have been made to the respective households.

During the survey, all 567 households in Hennef Im Siegbogen were sent a letter signed by the mayor, the district administrator, and the managing director of the VRS explaining the INCLUSION project and the objectives of the survey. A questionnaire was also sent, which the residents were asked to fill in and return. 247 households took part in the survey, which corresponds to a rate of around 44%.

The questionnaire contained questions on the current general and situation-specific mobility behaviour of all household members, in particular children in the household. It was also possible to provide open answers. The wishes and/or the largest problem areas of the current mobility were also asked, separated by means of transport.

Note: The contact letter and the questionnaire are in the annex of this deliverable.

### **6.3 Supplementary group discussion with local experts**

In addition to the written survey, a panel of experts was convened to discuss the results of the survey on the one hand and to receive further suggestions and food for thought on the other. This mixed-method-approach allowed verification of the survey results to a certain extent and at the same time served to collect possible solutions. The VRS invited leading representatives of the schools in Hennef, parents' representatives, youth street workers, representatives of the youth welfare office, sports clubs, local networks, kindergartens, etc. to participate.



**Figure 10 - Group discussion in Hennef**

Source: Ralf Brand

All invited participants act on the one hand as multipliers and are also deeply involved in local issues and problem areas of local mobility. The group discussion was moderated by Ralf Brand (Rupprecht Consult), while Bernd Knieling (VRS) presented some key survey results. In the idea, this supplementary group discussion follows a mixed-method approach. The participating multipliers agreed on the Chatham House Rule, according to which the contents may be reported, but not by whom the respective statement was made. This creates a good basis for an open discussion culture.

## 6.4 Main results of the survey

Note: A complete presentation of the results of the survey are in the annex of this deliverable.

The main fields of action are therefore the reduction of costs for the use of public transport, the improvement of public transport services, and the improvement of safety in bicycle traffic (Safety in this context means safety in road traffic, i.e. above all in relation to passenger cars).

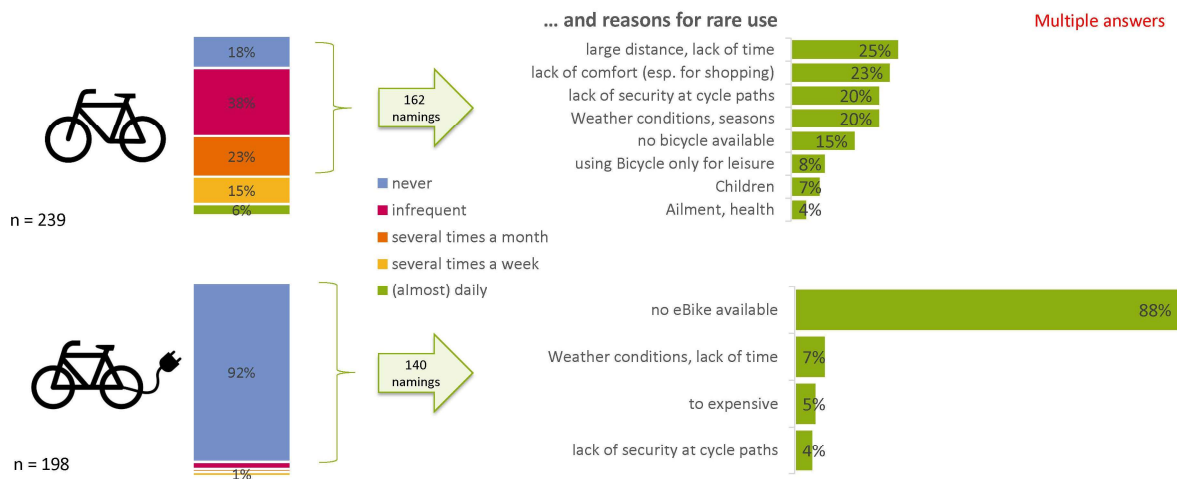
The survey also surveyed the means of transport used. The survey showed that the car is the most frequently used means of transport in almost all everyday journeys, and that more than two thirds

of those surveyed use it every day. According to the survey, public transport or bicycles are used far less frequently. In addition, all rare users were asked why they did not use the respective means of transport.

The following two figures 11a and b show the usage of bicycles, e-bikes, PT and cars and, on the right side of the figure, the reasons for the rare use for every mean of transport.

The two most important reasons for many participants in the survey not to use public transport (115 namings) are, from the user's point of view, too high costs and a lack of connections. Bicycles were in rare use because of (too) long distances, a lack of comfort especially for shopping and a lack of safety at cycle paths (162 namings).

## Means of transport in use by interviewees



Question 8) How often do you usually use the following means of transport? Reasons for the infrequent use: If the accompanying means of transport is not used every week

18

## Means of transport in use by interviewees

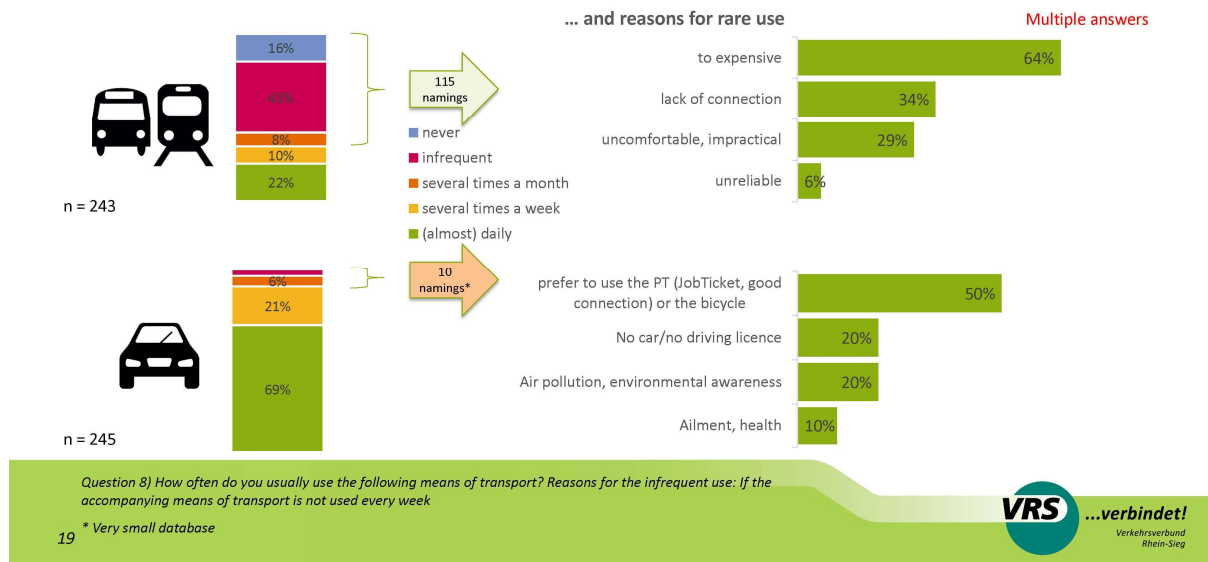


Figure 11 (a and b) - Means of transport in use by interviewees

Source: VRS GmbH, Own survey

A further assumption was confirmed, as 37% of the participants stated that they always bring or pick up their children and as much as 30% do so frequently. This confirms that the independent mobility of many children cannot or only insufficiently be lived out. In addition, the majority of children on these routes are also brought by car, but also by bicycle.

## Regular ways of the children

Data per child in household

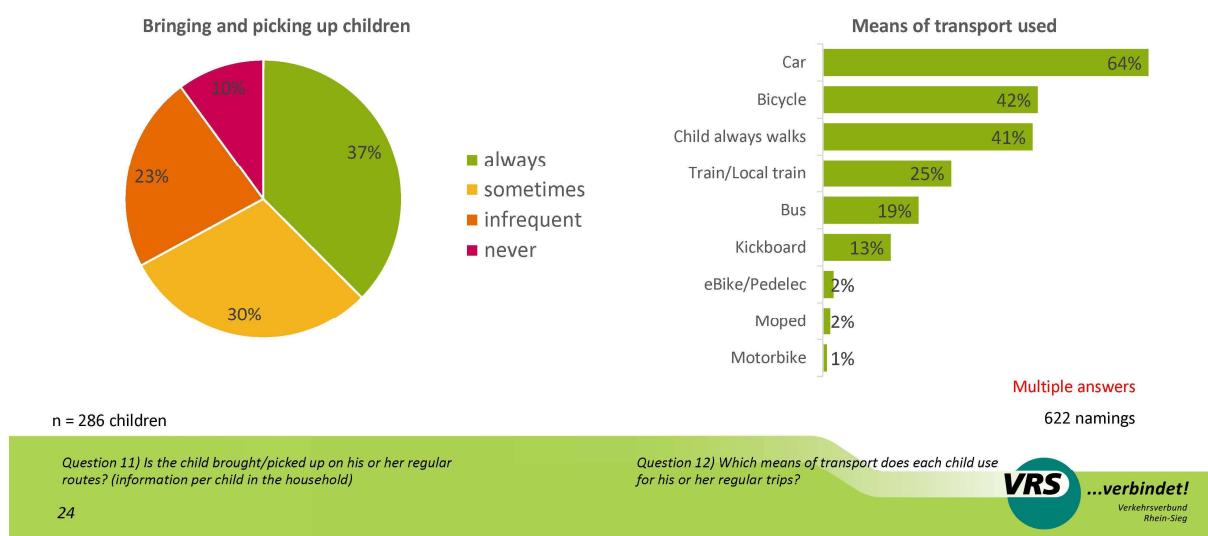


Figure 12 - Regular ways of the children

Source: VRS GmbH, Own survey

In many cases, the reason why the children were taken to different destinations was either the length of the route or (perceived) lack of safety. The figure below shows the proportions of the respective means of transport and the reasons why parents accompanied the children to the sports club and to music lessons.

### Means of transport in use by bringing/picking up children

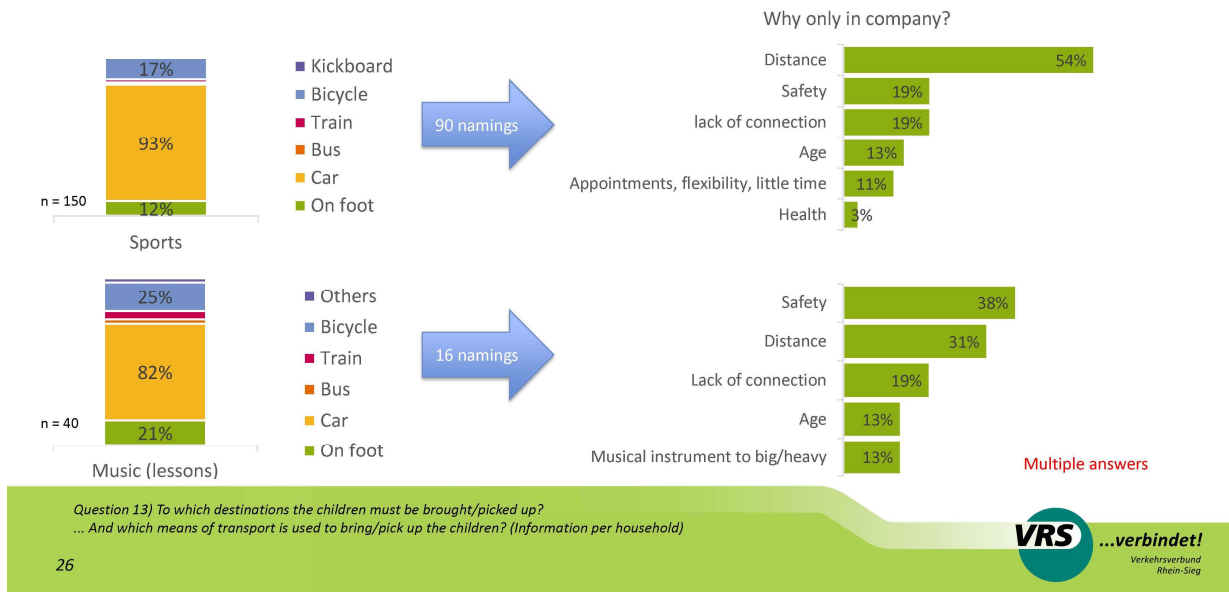


Figure 13 - Means of transport in use by bringing/picking up children (and why in company)

Source: VRS GmbH, Own survey

### More frequent use if ...

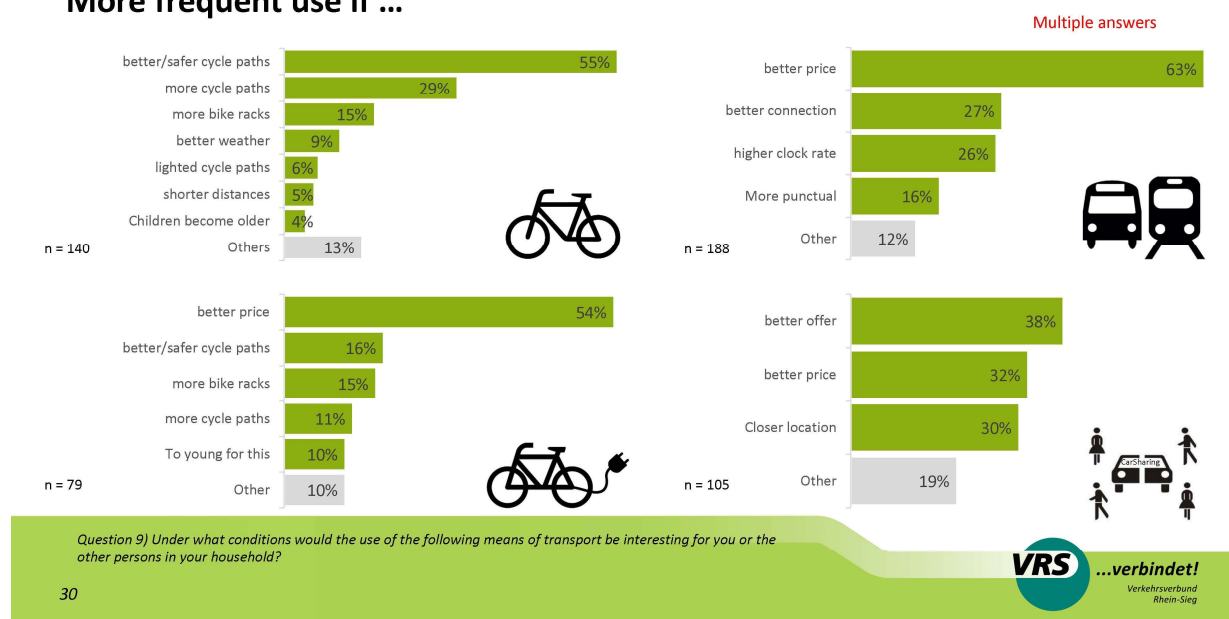


Figure 14 - More frequent use if...

Source: VRS GmbH, Own survey



At the end of the survey, possible suggestions for improving the traffic situation in Hennef were asked about the respective means of transport. As Figure 14 shows, most users want more and safer cycle paths and more bicycle racks, and in terms of public transport, many users would want cheaper prices and better connections to encourage more frequent use of transport in the future.

From the results of the survey mentioned above, clear areas can be defined which can contribute to improving the local offer. These are for public transport:

- Significantly improved local offering during off-peak hours (afternoon, early evening)
- Lower prices for PT use

There are three main aspects for cycling in Hennef Im Siegbogen and in the city of Hennef resulting of the survey:

- More cycle paths
- Safer cycle paths
- More bike racks

The topic "safety" here refers less to a "stranger danger" for children and young people, but rather to the dangers of participation in road traffic by bicycle, if the roads are predominantly designed for car traffic and the bicycle traffic is rather tolerated and not equal. This aspect is particularly important, since the bicycle plays a central role in the mobility of children and adolescents, both for the routes to school and for leisure activities in the local area. The extent to which the role of helicopter parents and/or curling parents also has an impact here is difficult to assess. At the same time, the aim must be to counteract even a "perceived" lack of security through good offers.

In this respect, safety for cycling (and especially for children riding bicycles) can be achieved on the one hand by improving cycle paths, i.e. by infrastructural measures, but on the other hand also by strengthening the abilities of cyclists, i.e. by helping them to learn correct behaviour in road traffic and developing strategies for making calm, prudent and correct decisions in potentially dangerous situations.

In addition, another aspect seems to be that the existing offers and the resulting possibilities are not sufficiently known by (potential) users. In this respect, a further field of action has been defined as how offers can be communicated better and more user-oriented, e.g. via a performance-oriented approach.

This means that not only possible new offers must be communicated, but the existing ones should also be made known in detail. Furthermore, communication must reach new customers as well as existing users, not least in order to further increase satisfaction among this customer group and thus strengthen loyalty to public transport and cycling.

## 7 Design of the Pilot Lab

The results of the survey in Hennef Im Siegbogen and in the course of the group discussion with the multipliers and locally relevant representatives of the interest groups resulted in various approaches to action. These can be grouped into the areas of public transport and cycling. For public transport, the main focus was on improving services and cheaper fares, while for cycling, more and safer cycle paths and additional parking facilities for bicycles were mentioned as possible improvements.

New, additional parking facilities for bicycles are already being set up and installed on an ongoing basis in the Hennef urban area, especially in the immediate vicinity of local retail locations in the city centre.

Based on the results of the survey in Hennef, the planned measures are described below. In addition, a short description of the communication measures - quasi as a measure at meta level - will follow at the end, with which the new mobility offers are to be made known to the customers.

### 7.1 Bus line 532 – Additional trips from Hennef Im Siegbogen

The bus line 532, which runs from Hennef via Weldergoven to Oberauel and Bödingen and from there back again, is the backbone of public transport in the new Hennef development area Im Siegbogen, in addition to the S-Bahn connection. The line is particularly important for school traffic, but also for leisure traffic.

After an expansion of the range of services on Line 532 had already taken place in August 2018, a total of eight additional services were added to the timetable of Line 532 between 6.00 a.m. and 8.00 a.m. and between 11.00 a.m. and 4.00 p.m. during the day. A further extension of the 532 service will now come into force in August 2019. In the time range between 16.00 and 19.00 the previous hourly cycle will be extended to a half-hourly cycle. This extension has almost doubled the capacity of Line 532.

The extension during the afternoon and early evening in particular will hopefully be very well received by users, as according to the study "Mobility in Germany 2017" most of the routes will be taken during this three-hour-period (source: MiD 2017). In this respect, an extension of the offer on line 532 in this time span is tailored exactly to the user's wishes and needs on weekdays. The dominant purpose in this period is leisure time, followed by shopping, handling, work and company.

The improvement of public transport services was one of the key findings of the local residents' survey, which was conducted at various locations. In this respect, it is hoped that the expansion of public transport will make it more attractive for new passengers to travel to and from Hennef, for whom the departure times previously offered were not sufficient. With regard to the target group (families with children) and the orientation towards journeys beyond commuting to and from work, the significant expansion of the range of services offered during off-peak periods on weekdays gives reason to hope that the expansion of services will be well received, as many of the family's everyday journeys take place during these periods of the day and week, such as trips to sports and club




activities, visits to friends or relatives and the use of all kinds of leisure facilities such as cinemas, swimming pools, etc. The number of trips is also increasing.

The new travel times will be communicated in various ways, with the focus on performance-oriented communication and on local control of the campaign in the Hennef Im Siegbogen development area (see Chapter 7.5).

## 7.2 Short-haul fare

For journeys between Hennef Im Siegbogen and Hennef Mitte, the price for the price level 1a VRS tariff has to be paid so far. This is € 2.50 for adults in single ticket paper sales (as of 2019; purchase by HandyTicket: € 2.25). For the journeys made by bus lines 532 and new 531, the short-haul route is to be introduced, as this (in one direction) only applies to boarding plus four stops, which corresponds to the short-haul route according to the VRS tariff. In the opposite direction, a fifth stop will be served, but it will only be served in one direction and can therefore be excluded from pricing.

VRS-HANDYTICKET-ÜBERSICHT										
Gültig ab 01.01.2019 Preise in EUR										
HandyTickets	K	1a	1b	2a	2b	3	4	5	6	7
<b>Einzel- und 4erTickets</b>	Kurzstrecke									
EinzelTicket Erwachsene	1,80	2,25	2,70	2,70	3,60	4,77	7,38	10,71	13,32	16,29
EinzelTicket Kinder (6-14 J.)	0,90	1,17	1,44	1,44	1,80	2,34	3,42	4,68	6,39	7,74
<b>TagesTickets</b>										
24StundenTicket 1 Person	6,93	8,36	8,36	10,54	13,20	18,14	24,60	26,22	28,59	
24StundenTicket 5 Personen	9,78	12,73	12,73	16,05	19,19	25,74	35,34	39,23	41,23	
<b>ZeitTickets Erwachsene</b>										
WochenTicket	18,05	24,98	24,98	31,25	38,00	56,05	68,40	80,46	92,91	
MonatsTicket	69,25	93,57	93,57	117,99	142,50	212,89	257,07	271,89	288,42	
Formel9Ticket	49,78	66,59	66,59	76,38	93,95	112,00	135,09			
<b>Zuschläge 1. Klasse</b>										
Einzelfahrt	1,23	1,42	1,42	1,90	2,56	3,89	5,70	7,03	8,64	
Woche	9,02	12,54	12,54	15,67	19,00	28,02	34,20	40,28	46,45	
Monat	34,67	46,83	46,83	58,99	71,25	106,49	128,53	135,94	144,21	
<b>Schnellbuszuschläge Buslinie SB60</b>										
Einzelfahrt Erwachsene					3,04					
Einzelfahrt Kinder (6-14 J.)					1,61					
Woche					15,39					
Monat					51,11					
<b>Zuschlag Fahrradmitnahme</b> 										
EinzelTicket (Preisstufe 1b/2a)				2,70						
Monat				35,05						
<b>AnschlussTicket</b>										
Einzelfahrt VRS-AnschlussTicket				3,61	(gilt nur in Verbindung mit VRS-ZeitTickets)					

Maßgeblich für die genauen Preise und Leistungen aller Tickets sind die Beförderungsbedingungen Nahverkehr NRW und die Tarifbestimmungen des VRS, die Sie unter [vrs.de](http://vrs.de) finden.

Figure 15 - Current price list VRS-HandyTickets

Source: VRS GmbH

The price for a single ticket for adults on short journeys will therefore be € 2.00 (as of 2019; purchase via HandyTicket: € 1.80) after implementation of the measure, the savings per trip will thus be around 20% or € 0.50 (€ 0.45 for the mobile tariff). This change also affects the VRS children's tariff. Instead of € 1.30 for a single ticket in price category 1a (HandyTicket: 1.17), only € 1.00 (HandyTicket: € 0.90) will have to be paid for a ticket for a short-haul child, resulting in a saving of € 0.30 (HandyTicket: € 0.27) per trip.

The trips from Hennef Im Siegbogen by local train to Hennef, however, cannot benefit from this tariff adjustment, as rail transport is excluded from the short haul. In this respect, however, at least part of the daily trips (and thus the user) can benefit from the tariff adjustment.

The adjustment only affects customers of the bar fare, as the VRS does not offer time tickets for the short-haul fare. This means that the effect of this measure will be limited to the users of the bar fare and can thus at least partly fulfil the wish for a cheaper public transport system, which was repeatedly expressed in the survey. Even if the - faster - local train cannot be implemented here, as it is excluded from the short-distance regulation due to its inclusion in the VRS tariff, this measure at least gives rise to the hope that passengers can benefit from this new regulation in individual cases.

However, it won't be possible to change the VRS tariff beyond this at this level, as this will not be a positive basis for a decision against the background of the complex network of relationships between the transport companies operating within the transport association and the possible loss of revenue from the already loss-making public transport system - and thus also subject to political influence.

### 7.3 Forgotten paths

In addition to improvements in public transport services, respondents often mentioned the need for improvements in cycling. The creation of new, better and safer cycle paths was at the centre of the survey, followed by additional parking facilities in the urban area.

Together with the responsible department of the city of Hennef, it is being worked out whether there are possible cross-connections and routes that can be used for cycling or can be made without great effort. Possible forgotten paths in the urban area of Hennef are currently being examined and then advertised as part of the communication measures. Making these forgotten paths known is a simple and quick measure that can benefit cyclists and pedestrians.

The routes will then also be included in the "Mobil-in-Hennef" map and marked and communicated in the new Hennef development area Im Siegbogen. As there was also great interest in this topic on the part of those present during the group discussion, the secondary schools as well as the tourist office of the city of Hennef will be informed comprehensively and precisely about the results and the "newly discovered routes".

### 7.4 E-Bike rental

The use of e-bikes has not played a significant role in Hennef Im Siegbogen so far. Nevertheless, it has often been argued that the bicycle is not used for certain routes because the distances are too great. Compared to conventional bicycles without motor support, e-bikes have the advantage that they can cover long distances or the same distances in the same time with far less effort. In Hennef Im Siegbogen, a district on the outskirts of the main port, it may therefore be interesting to see whether the use of an e-bike for certain routes that the respondents currently consider to be too long can influence the choice of means of transport away from the car and towards the e-bike.

Against this background, the idea was born to lend e-bikes for a period of five months together with the tourist office of the city of Hennef and a regional bicycle dealer in order to try out the possibilities opened up by this relatively new technology in an uncomplicated way. The e-bikes are to be lent to

people on a weekly basis, for example, in order to enable their use to be integrated into everyday life.

The rental of two e-bikes will be (almost) free of charge for the users - however, for legal reasons the name of the user etc. must be deposited. An activation by chip card is not possible for organizational reasons - the registration takes place over the tourism office of the city Hennef.

In order to avoid that the e-bikes are rented but not or only very little used, a small fee (e.g. € 5.00 or € 10.00 per week) should be charged, which is not booked as revenue, for the duration of the measure is collected. When borrowing or returning the bike, the speedometer reading will be noted so that the mileage can be determined for each user. At the end of the rental period (October 2019), all participants will then be determined who has covered the most kilometres per day by bicycle and who will then receive the collected amount. In this way, there is an incentive not only to rent the bike but also to use it, which in turn gives rise to hopes that the positive impressions that the users will have will also encourage them to travel further distances themselves later in Hennef by bicycle. In addition, by publicising this approach, additional local media attention can possibly be generated and the topic of e-bikes and cycling can be further brought to the fore.

The stop Hennef im Siegbogen offers itself as a station for the e-bikes, as the charging infrastructure for the e-bikes is already available here in addition to the secure storage in boxes (see 4.1).

## 7.5 End-customer communication

Within parts of the public transport sector, end-customer communication has not yet been valued to the extent that it should be in accordance with its importance in terms of accompanying changes in supply. In this respect, communication within the Pilot Lab Rhein-Sieg is of particular importance, since in addition to the improvements implemented as part of the INCLUSION project, the actual status of the mobility service must also be transported. In addition to the existing public transport services, this applies even more to the possible "forgotten paths" as well as the current cycle paths and bicycle parking facilities. This is challenging from a communication point of view.

In the basic orientation, the focus should be on a performance-oriented approach within the communication of all relevant information. Performance-specific means that the possible accessibility of concrete goals that could be interesting from the customer's point of view are named, for example "You can reach the pharmacy within ten minutes by bus line 532 from Hennef Im Siegbogen" or "By bicycle along the cycle path Frankfurter Straße in only five minutes at school".

The advantage of this approach is that the addressees of the communication can be given a concrete route to their desired destination, which is much less abstract. This also removes a possible obstacle for new public transport customers, as they do not have to deal with the bus timetables and route plans that they may not have been familiar with before. The service-specific approach can of course also be applied to the costs of using public transport ("For two euros to Hennef").

The procedure is facilitated by the clearly defined area in which the addressees live. This means that the start and destination points for the various offers are predefined and easy to use for communication.

The "Mobil-in" map is an already used and tested medium within the VRS in municipalities and cities of various sizes, which can be used to present and locate the various local mobility offers in a simple and clear way. Possible contents of the "Mobil-in" maps are (depending on the existing offer):

- Local rail passenger transport stops
- Bus/requirement bus stops
- Bus lines incl. destinations (if outside the map)
- Bicycle parking facilities
- Cycle paths
- Park&Ride places/Bike&Ride places
- Taxi stands
- Parking lots
- Locations of the station-bound CarSharings/BikeSharings
- Charging stations for e-bikes
- Information and advance booking offices for tickets/ticket vending machines
- Local destinations like cinema, swimming pools, sports fields, schools, library, etc.
- Scale/map legend
- Accessibility radius on foot (10 minutes)/by bicycle (5 minutes) from a relevant starting point (e.g. bus stop, central point)

The map data is OSM-based and already available in high quality for Hennef, but must be prepared for map display and checked for content.

Drawing a radius on the "Mobil in" map that indicates how far you can walk in ten minutes or cycle in five minutes is based on the idea that people very often misjudge the length of a path. If you explain a route and say that you would have to walk about one kilometre to reach your destination, many people instinctively think that this is too great a distance to walk, and yet they return to the car. However, if you point out that the target is about ten minutes' walk away, it will seem too far to most people.

With the corresponding display on the map, users should become aware of how large the area is, what can be reached on foot (or by bicycle) within a few minutes, and thus be motivated to rethink their everyday routes - using a little trick, so to speak.

The map display is supplemented by further information useful from the user's point of view. In addition to a short excerpt from the PT tariff offer, these include:

- References to relevant apps
- Local contact persons for mobility
- Information about further brochures
- Information about special PT offers
- URLs of participating partners
- References to other print products on the various mobility topics, etc.



The information is provided in the "Mobil in" map at the non-map-side.

## VERBINDUNGEN

### Bahnlinie

RE 12/22/RB 24 (Trier) - Euskirchen - Weilerswist - Köln

### (Taxi-)Buslinien

823 Weilerswist - Vernich - Lommersum - Bodenheim  
869 Euskirchen - Kessenich - Bodenheim - Lommersum  
985 Euskirchen - Derkum - Weilerswist - Brühl  
986 Weilerswist - Metternich - Heimerzheim

ClimatePartner  
Klimaneutral  
Druck 1 (12.10.2018-10.01.2019)



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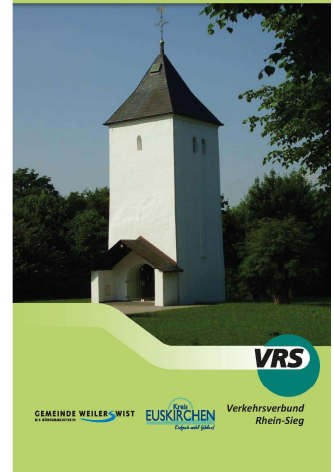
Regionalverkehr Köln GmbH  
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Alle Inhalte: Stand Januar 2018

## MOBIL IN...

### Weilerswist



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Wie einfach die Nutzung öffentlicher Verkehrsmittel funktioniert, zeigen wir mit dieser Karte. Sie finden hier Tipps zu Fahrtenplanung, Tickets, Tarifen und an wen Sie sich bei Fragen wenden können. Probieren Sie es einfach mal aus.

Alle Informationen zu Fahrplan und Tarif gibt es täglich rund um die Uhr bei der **Schlauen Nummer** für Bus & Bahn telefonisch unter

**0 180 6 50 40 30**

(Festnetz 20 ct/Anruf, Mobil max. 60 ct/Anruf)

Die Ortsteile sind durch die (TaxiBusPlus-)Linien 823, 869, 985 und 986 angebunden (Karte Rückseite). Per Bus kommt man nach Euskirchen und Brühl. Von Weilerswist Bf erreicht man mit dem Zug Euskirchen, Bonn, Köln oder Trier.

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- Fahrplan Kreis Euskirchen
- Telefonauskunft
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Der TaxiBusPlus fährt gemäß Fahrplan von der Haltestelle sogar bis zur Haustür in der Nähe der Haltestelle. Die Fahrt wird per Taxi oder Kleinbus durchgeführt.

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anfordern. Bestellt werden kann Montag-Samstag: 6.20 - 21.30 Uhr  
Sonntag/Feiertag: 9.30 - 19.00 Uhr

Zum Fahrausweis wird beim TaxiBusPlus ein Zuschlag von 1,20 Euro (Erwachsene) bzw. 50 Cent (Kind 6-14 Jahre) pro Fahrt erhoben. Die gängigsten Fahrausweise erhalten Sie beim Fahrpersonal.

Wichtig: Die TaxiBusPlus-Fahrt muss mindestens 30 Minuten vor Abfahrt telefonisch bestellt werden. Bei der Bestellung müssen Sie angeben, **von wo, wohin und wann** (Tag, Uhrzeit) Sie fahren wollen und wieviele Personen mitfahren. Der Disponent am Telefon hilft gern weiter.

## FAHRAUSWEISE

Für die Fahrten in Bus und Bahn benötigt man einen Fahrausweis. Den erhalten Sie bei Busfahrern oder am Bahnhof am Automaten.

- Sind Sie ab und zu mit Bus & Bahn unterwegs, empfiehlt sich das **Einzel-Ticket** oder das **4erTicket**. Es gilt für eine Fahrt bzw. vier Fahrten.
- Fahren Sie an einem Tag mehrmals, ist das **TagesTicket** eine gute Wahl (Tipp: besonders günstig auch für Kleingruppen bis 5 Personen)
- Für Vielfahrer sind **Wochen-** oder **MonatsTickets** besonders günstig. Mehr Informationen finden Sie in unseren kostenlosen Tarifbroschüren.





Figure 16 (a) and (b) - Mobil-in-Weilerswist-map (Front & Back) as example

Source: VRS GmbH

The format of the map will be long in folded state of easier dealability due to DIN, while the unfolded map will be four times DIN wide long and twice DIN high long.

The example shows a Mobil-in map from Weilerswist, both in front and rear view. While Figure XXa shows the cover picture, an overview map of the communal area, the supra-regional transport connections as well as information about public transport and contact data, the back side is mainly

taken up by a detailed map showing the core location and all traffic-relevant aspects, including a cloud display of the accessible area within three minutes by bicycle or ten minutes on foot.

## 8 Actors to be involved in the Pilot Lab, roles and responsibilities

- 1) Verkehrsverbund Rhein-Sieg GmbH (VRS)  
Dept. Communication & Marketing  
Glockengasse 37-39  
D-50667 Köln  
[www.vrsinfo.de](http://www.vrsinfo.de)  
  
Contact persons:  
Bernd Knieling ([bernd.knieling@vrsinfo.de](mailto:bernd.knieling@vrsinfo.de))  
Birgit Strecker ([birgit.strecker@vrsinfo.de](mailto:birgit.strecker@vrsinfo.de))
  - Co-ordinator of the pilot lab and all local actions
  - Contact for project partners and local partners
  - Responsible for local actions
  
- 2) Rupprecht Consult – Forschung & Beratung GmbH  
Clever Str. 13-15  
D-50668 Köln  
[www.rupprecht-consult.eu](http://www.rupprecht-consult.eu)  
  
Contact persons:  
Ralf Brand ([r.brand@rupprecht-consult.eu](mailto:r.brand@rupprecht-consult.eu))  
Kristin Tovaas ([k.tovaas@rupprecht-consult.eu](mailto:k.tovaas@rupprecht-consult.eu))
  - Leader WP 3
  - Consulting partner for pilot lab Rhine-Sieg
  
- 3) Rhein-Sieg-Kreis (Municipality Rhine-Sieg)  
Dept. Economic Development and strategic district development/Mobility and traffic  
Kaiser-Wilhelm-Platz 1  
53721 Siegburg  
[www.rhein-sieg-kreis.de](http://www.rhein-sieg-kreis.de)  
  
Contact persons:  
Dr. André Berbuir ([andre.berbuir@rhein-sieg-kreis.de](mailto:andre.berbuir@rhein-sieg-kreis.de))  
Dr. Christoph Groneck ([christoph.groneck@rhein-sieg-kreis.de](mailto:christoph.groneck@rhein-sieg-kreis.de))  
Petra Gloge ([petra.gloge@rhein-sieg-kreis.de](mailto:petra.gloge@rhein-sieg-kreis.de))



- Local partner authority
- Local supporting partner for pilot lab Rhine-Sieg
- Supporting partner at local actions

4) Stadt Hennef (City of Hennef)  
 Dept. PT/Tourism  
 Frankfurter Str. 97  
 53773 Hennef  
[www.hennef.de](http://www.hennef.de)

Contact persons:

Birgit Münch ([b.muench@hennef.de](mailto:b.muench@hennef.de))

Karin Nikolaizik ([karin.nikolaizik@hennef.de](mailto:karin.nikolaizik@hennef.de))

- Local partner authority
- Local supporting partner for pilot lab Hennef Im Siegbogen
- Supporting partner at local actions in Hennef

5) Verkehrsverbund Rhein-Sieg GmbH (VRS)  
 Dept. Market research  
 Glockengasse 37-39  
 D-50667 Köln  
[www.vrsinfo.de](http://www.vrsinfo.de)

Contact persons:

Alexandra Gast ([alexandra.gast@vrsinfo.de](mailto:alexandra.gast@vrsinfo.de))

Alexander Schwan ([alexander.schwan@vrsinfo.de](mailto:alexander.schwan@vrsinfo.de))

- Design of the survey
- Conductor of the survey

6) Zukunftsnetz Mobilität NRW  
 Koordinierungsstelle Rheinland/Geschäftsstelle NRW  
 Glockengasse 37-39  
 50667 Köln  
[www.zukunftsnetz-mobilitaet.nrw.de](http://www.zukunftsnetz-mobilitaet.nrw.de)

Contact persons:

Meike Wiegand ([meike.wiegand@vrsinfo.de](mailto:meike.wiegand@vrsinfo.de))

Henning Korte ([henning.korte@vrsinfo.de](mailto:henning.korte@vrsinfo.de))

- Consulting youth mobility
- Supporting group discussions

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7) Rhein-Sieg-Verkehrsgesellschaft mbH  
Steinstr. 31  
53844 Troisdorf  
[www.rsvg.de](http://www.rsvg.de)

- Local bus company/PT operator

8) Interessengemeinschaft Weldergoven  
Irlenweg 46  
53773 Hennef  
[www.weldergoven.de](http://www.weldergoven.de)

- Local neighbour network

9) Mapvis e.K.  
Im Tabakfeld 7  
D-76770 Hatzenbühl  
[www.mapvis.de](http://www.mapvis.de)

Contact person:

Markus Müller ([info@mapvis.de](mailto:info@mapvis.de))

- Handling OSM data
- Preparation of schematic route network maps and topographic maps

## 9 Timeplan for the demo operation (M19-M34)

As already described in the previous chapters, a comprehensive survey on mobility needs was carried out in the pilot lab Hennef Im Siegbogen in order to determine the actual needs of the residents and due to the fact that not enough data material could be consulted for such small-scale considerations (for a new housing development). This was evaluated in detail and the results then served as a basis for the measures to be implemented in the pilot lab Hennef Im Siegbogen as part of the INCLUSION project.

The implementation of the measures, based on the original time planning in Pojket planning, has shifted somewhat due to the preliminary survey. This postponement was unavoidable for the aforementioned reasons and does not pose a problem with regard to the further steps and, above all, the evaluation of the measures.

In addition, the results of the conducted survey can also be used for the prior survey, i.e. they already represent the first part of the evaluation within the framework of the project. The necessary follow-up survey will then follow the content of the survey already carried out.

Month	Action
M12 (Oct 18)	Start of survey in Hennef Im Siegbogen
M13 (Nov 18)	End of survey in Hennef Im Siegbogen
M15 (Jan 19)	Analysis of the results of the survey, first design of potential measures Group discussion in Hennef (31.01.2019)
M16 (Feb 19)	Design of the measures in pilot lab Content coordination with partners
M17 (Mar 19)	Additional design of the measures in pilot lab Planning communication strategy
-----	
M19 (May 19)	Start of communication measures Start of e-Bike rental Distribution of Mobil-in-Hennef-map incl. forgotten paths

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M20 (Jun 19)	Start of measure Bus line 531 new stop at Hennef Im Siegbogen (09.06.2019) including implementation in VRS mobility app
	Start of e-bike rental
M22 (Aug 19)	Start of measure Bus line 532 including implementation in VRS mobility app
	Start of measure short-haul tariff from Hennef Im Siegbogen to Hennef City including implementation in VRS mobility app
	Additional communication measures
M24 (Oct 19)	First check together with Rhein-Sieg-district and City of Hennef about implemented measures and possible first effects on mobility behaviour
	Additional communication measures (possibly)
	Preparation of content and design of follow-up survey
	End of measure free e-Bike rental (end of October)
M28 (Feb 20)	Start of follow-up survey
M29 (Mar 20)	End of follow-up survey
	Analysis of the results of the follow-up survey
M32 (Jun 20)	Adjustment of the implemented measures (possibly, depending on the results of the follow-up survey)
M 34 (Aug 20)	Final report about the pilot lab experiences



## 10 Risk assessment

In general, risk management requires that continuous, open and trusting communication be established and maintained with all partners involved during the course of the project. As a result, many risks have already been minimized as far as possible. This approach also enables difficulties to be identified at an early stage and possible hurdles to be removed promptly.

The assessment of the risks for the measures planned in the pilot lab Hennef Im Siegbogen is very different. This is due to the actors involved as well as to the boundary conditions influencing the respective measure. In the following, the individual measures are briefly described, possible risks are named and - in the event of an unplanned hurdle occurring - the planned alternative procedure and, as far as possible, the associated financial and time expenditure are specified. In addition, the main actors involved are briefly listed.

### A) Measure: **Bus line 532 additional trips from Hennef Im Siegbogen**

**Actors:** VRS, Rhein-Sieg municipality, RSVG

**Risk:** The additional trips can't be integrated in the actually used vehicle circulations

**Solution:** Alternatively, additional bus routes will be integrated into different vehicle circulations

**Risk level:** Low

### B) Measure: **Short-haul fare at bus lines**

**Actors:** VRS, Rhein-Sieg municipality, RSVG

**Risk:** The new tariff isn't integrated in the VRS mobility app in time

**Solution:** Ongoing contact to app developer; checking beta-version

**Risk level:** Low

### C) Measure: **Forgotten paths**

**Actors:** VRS, City of Hennef, Rhein-Sieg municipality, Mapvis

**Risk:** There can't be identified forgotten paths

**Solution:** Check if even shorter paths (or parts of paths) can be identified

**Risk level:** Medium

**Risk 2:** The map won't be finished in time

**Solution 2:** Ongoing contact to mapvis and other partners

**Risk level:** Low

**D) Measure: E-Bike rental**

**Actors:** VRS, City of Hennef, Rhein-Sieg municipality

**Risk:** E-Bikes can't provided in time

**Solution:** Provider will be changed

**Risk level:** Low

**Risk 2:** E-Bikes rental can't be organised by City of Hennef

**Solution 2:** Involvement of Rhein-Sieg municipality

**Risk level:** Low

**E) Measure: Follow-up survey**

**Actors:** VRS, City of Hennef, Rhein-Sieg municipality

**Risk:** The response rate is too low

**Solution:** Reminder letters will be sent out; additional telephone calls will be made; door-to-door-survey will be started

**Risk level:** Low/Medium

## 11 INCLUSION consortium



For further information

[www.h2020-inclusion.eu](http://www.h2020-inclusion.eu)



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#H2020INCLUSION



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No. 770115

## Annex A: Rhein-Sieg Local Pilot Action Plan

1. Object of the Pilot Lab		
1.1	Actions (to be) demonstrated in the Pilot Lab - Overview	<p>In order to align the measures to be implemented as closely as possible with the actual needs of local residents, the following measures to improve the traffic situation in Hennef Im Siegbogen are planned after evaluation of the survey:</p> <ul style="list-style-type: none"> <li>• The bus-line 531 will additionally stop at Hennef Im Siegbogen</li> <li>• Integration of the data in VRS mobility app (including topographical map of the new route)</li> <li>• The tariff for the trip from Hennef Im Siegbogen to Hennef City by bus will change to short track</li> <li>• There will be an offer to rent E-Bikes for testing the service</li> <li>• In the area of Hennef will be looked for "forgotten paths" whose "discovery" opens up new paths for cyclists and pedestrians</li> <li>• A communication package will accompany the measures</li> </ul>
1.2	What will be demonstrated in the Pilot Lab?	<p><input checked="" type="checkbox"/> <b>Improvement of mobility services</b></p> <ul style="list-style-type: none"> <li>• The PT offer will be increased through the new stop at Im Siegbogen. In fact there will be more trips to Hennef city (and back) possible during the peak and off-peak time.</li> <li>• By reducing the price for a single trip from Im siegbogen to Hennef from € 2,50 to € 2,00 the hurdle to use the PT will be lower.</li> <li>• Looking for possible "new" or forgotten paths and mapping them in a "Mobility map" for Hennef will support the independent mobility of children and teenagers. In an additional effect it will help to reduce the diffuse concern of parents for the safety of their children</li> </ul>



		<ul style="list-style-type: none"> <li>• By free (or even low-cost) E-Bike rental the inhabitants of Im Siegbogen may check out the opportunities (greater range in same time; less time for same range) of E-Bikes (pedelecs).</li> <li>• The communication of the services in a more performance-related way should reach more people in a direct way and make them curious to try new ways for their mobility in Hennef (even the children and teenagers in their own mobility).</li> </ul> <p><input checked="" type="checkbox"/> <b>Provision of new “customers oriented” services</b></p> <ul style="list-style-type: none"> <li>• To improve the PT offer (more trips, lower price for a single trip) is one result of the survey</li> <li>• Second main matter of the survey was the improvement of cycling paths.</li> </ul>
1.3 (a)	In case the answer to 1.2) is “improvement of mobility services”, please detail which is the change involved in the mobility offer	<p><input checked="" type="checkbox"/> <b>Enhancement of a mobility service already operated</b></p> <ul style="list-style-type: none"> <li>• The local bus line 531 will change its route and will additionally stop at the Busstop/local train stop “Im Siegbogen”. During off-peak hour there will be two trips per hour (instead of one at present) to Hennef city.</li> </ul>
1.3 (b)	In case the answer to 1.2) is “Provision of new “customers oriented” services”, please detail which is the new/enhanced service offered	<p><input checked="" type="checkbox"/> <b>New or enhanced access modalities to services (i.e. service registration/ membership, booking, etc.)</b></p> <ul style="list-style-type: none"> <li>• E-Bike rental for free (or even low-cost) for the inhabitants of the area Im Siegbogen</li> <li>• After evaluation of the survey a new bike-rental system may be installed</li> <li>• After evaluation of the survey new information brochures may be produced</li> </ul>
<b>2. Pre-feasibility analysis</b>		
2.1	Please describe the current status of needs analysis and the actions already carried out for the identification of requirements the demo	In pilot lab Rhein-Sieg main part to identify the needs are the questionnaires to be filled by the inhabitants of the pilot lab region and the involvement of local stakeholders. The survey ended already, the questionnaires are now being analysed. When this analysis is finished, along with the group discussions

	actions will comply with. Is the analysis of the requirements completed?	with local networkers which will take place in January 2019 this will be the basis to the measures to carry out in the pilot lab regions.
2.2	Please resume the main results of the requirements analysis	After evaluating the survey the main requirements will measures which will help to improve the independent mobility of children to allow them to reach their destinations in a safe way. The favourite means of transport will be biking and PT (and an easy access) to those.
2.3	Please describe the actions to be carried out in the future to complete the requirements analysis and the milestones	<ul style="list-style-type: none"> <li>• Finalizing the analysis of the questionnaire</li> <li>• Preparing the group discussions with local networkers</li> <li>• Preparing possible changes in bus line offers with local authority as a possible measure (if needed)</li> <li>• Organising new bike rental systems of a possible measure (if needed)</li> </ul>
<b>3. Design of Pilot Lab</b>		
3.1	Please describe the current status of design activities of Pilot Lab actions. Is the design completed?	<p>The preparatory activities for the design of the Rhein-Sieg Pilot Lab have been carried out.</p> <ul style="list-style-type: none"> <li>• The local actors are identified</li> <li>• The area is defined.</li> <li>• The financial framework is coordinated.</li> <li>• The partners are informed</li> <li>• The measures are identified</li> </ul>
3.2	Please resume the main results of the design of the Pilot Lab	<p>3.2.1 Design of new mobility services/ Definition of improvements to a mobility service already under operation / Service integration</p> <p>Access modalities: By reducing the price for a single ticket there can be easier access for rare users of PT. The new departure times will be integrated in the VRS PT app.</p> <p>Service model: covered area, opening time, service scheme, routing, scheduling, pick up-drop off points, interchange points, etc.</p>

		<p>Fleet/vehicle description: Public buses</p> <p>Booking procedure: Normal PT ticketing</p> <p>Payment modalities: PT integrated in the PT tariff; E-bike rental for free (or even low price)</p> <p>Integration within mobility offer: Integration in local tariff and public transport offers.</p> <p>Institutional/regulatory issues: None known.</p> <p>Actors involved, role and responsibilities: Rhein-Sieg-Kreis as public authority, Rhein-Sieg-Verkehrsgesellschaft as transport company, Verkehrsverbund Rhein-Sieg as transport association, communication leader and co-ordinator.</p>
		<p>3.2.2 Design of new customers services</p> <p>Service specifications:.....</p> <p>Management procedure for the operation of the service:.....</p> <p>Data/resources required:.....</p> <p>Institutional/regulatory issues:.....</p> <p>Actors involved, role and responsibilities:.....</p> <p>Other (please specify).....</p>
		<p>3.2.3 Specifications of new internal processes</p> <p>Description of the processes:.....</p> <p>Resources required/involved:.....</p> <p>Supporting data/tools/material:.....</p> <p>Allocation of responsibilities.....</p> <p>Other (please specify).....</p>
		<p>3.2.4 Definition of ITS specifications</p>

		<p>System Architecture: .....</p> <p>Technical specifications: .....</p> <p>Functional specifications:.....</p> <p>Operative specifications:.....</p>
		<p>3.2.5 Definition of new funding/business models/commercial agreements</p> <p>Target clients:.....</p> <p>Involved actors:.....</p> <p>Value proposition:.....</p> <p>Sustained costs:.....</p> <p>Funding/ Revenues: .....</p> <p>Commercial agreements with mobility operators:.....</p> <p>Commercial agreements with other (no transport) organizations: .....</p> <p>Other (please specify).....</p>
3.3	Please describe the actions to be carried out in the future to complete the design of the Pilot Lab and the milestones	

#### 4. Implementation Plan of the Pilot Lab

4.1	Please fill in the following GANTT with the main actions occurring in the future months for the finalization of requirements analysis and design of the Pilot Lab. Please highlight the milestone to be achieved up to the end of the design phase. In case you have indicated that this phase is already completed in section 2, go to 4.2						
		M13	M14	M15	M16	M17	M18
	Questionnaire in pilot lab	M1					
	Analysis of questionnaire		M2				
	Preparing group discussions		M3				



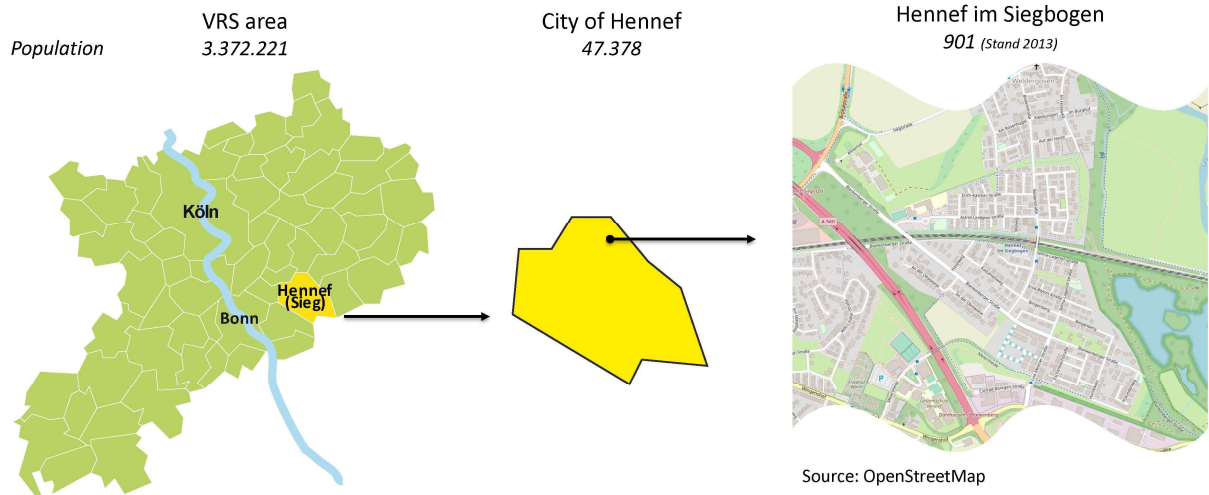
Group discussions				M4																			
Developing measures					M5	M5																	
<p>M1 = Conception and delivery of the questionnaires in Hennef Im Siegbogen</p> <p>M2 = Evaluation and reporting of the results of the questionnaires</p> <p>M3 = Preparing local group discussions</p> <p>M4 = Group discussion with networker and other relevant people (representatives of schools, youth work, sports clubs etc.</p> <p>M5 = Developing and conception of measures based on the results of the survey</p>																							
4.2	Please fill in the following GANTT with the main actions occurring in the demo months for the setup of demo actions included in the Pilot Lab, the implementation of the preparatory activities and the operation. Please highlight the milestone to be achieved up to the launch of Pilot Lab and during the operation of the demo.																						
		M13	M14	M15	M16	M17	M18	M19	M20	M21	M22	M23	M24	M25	M26	M27	M28	M29	M30	M31	M32	M33	M34
M "Additional bus stop"						1			2	3	4							5					
M "Changing tariff"						1			2	3	4							5					
M "E-Bike rental service"						1			3		4							5					
M "Forgotten Paths"						1			3		4							5					
M "Integration in mobility app"						1				3	4												
M "Communication package"						1			3		3	3	3										
<p>1 = Developing and conception of measures</p> <p>2 = Carrying out before evaluation</p> <p>3 = Launching of measure A/Implementation in pilot lab</p> <p>4 = First check of implemented measure</p> <p>5 = Carrying out after evaluation</p>																							
<p><b>5. Local stakeholders and partnership (to be) involved during the Pilot Lab design, implementation and operation</b></p>																							
Name		Typology (e.g. Transport/Mobility Operators, Local Authorities, Service Contracting Authority, Funding Agencies/Bodies, Citizen associations...)										Role											

<b>Rhein-Sieg Kreis</b>	<i>Local authority</i>	<i>Consulting partner, implementator of measures</i>
<b>Stadt Hennef</b>	<i>Local authority</i>	<i>Consulting partner</i>
<b>Gemeinde Eitorf</b>	<i>Local authority</i>	<i>Consulting partner</i>
<b>Zukunftsnetz Mobilität NRW</b>	<i>Consulting agency</i>	<i>Consulting partner</i>
<b>6. Contingency plan</b>		
Partners can't start the one of the planned measures (i.e. additional bus stop) for financial reasons	low	Additional discussions with partners Financial support from VRS

## Annex B: Results of pilot lab survey

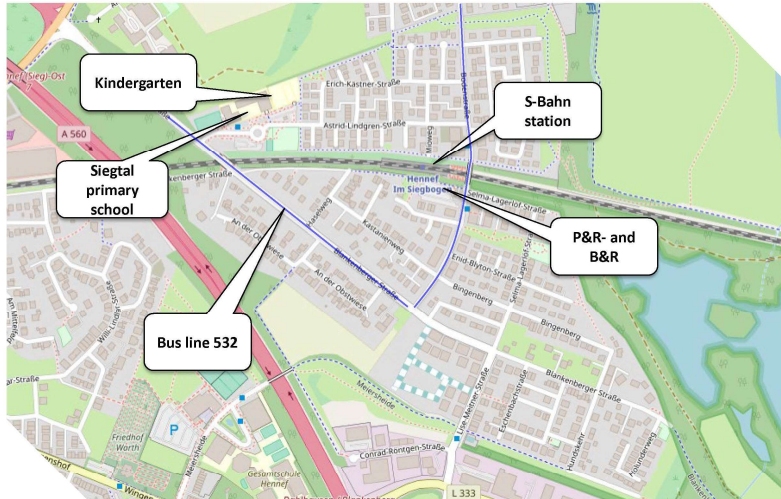


### Hennef Siegbogen



Source (VRS and City of Hennef): IT.NRW, state: 31.12.2017 resp. 30.06.2018  
Source (Hennef im Siegbogen): City of Hennef, state: 05.09.2013

## Hennef Siegbogen



The entire new development area "Im Siegbogen" has an area of about 18 hectares.

In March 2009, the city and municipal utilities began marketing the new development area "Im Siegbogen". The Siegtal primary school has been in operation on Astrid-Lindgren-Strasse since August 2007.

The S-Bahn stop was opened in December 2011. It offers two or three connections per hour to Cologne.

With 75 parking spaces for cars, the adjacent Park & Ride area also offers train drivers from outside the residential area the opportunity to use it. Cyclists have 51 covered parking spaces and 38 lockable bicycle boxes at their disposal. The Boxes are each equipped with a charging station for e-bikes, the car park has two parking spaces with RWE charging station for electric vehicles.

The kindergarten started operations on 1 September 2013. In late summer 2013, the complete sale of all plots for detached houses was announced.

Source: Stadt Hennef,  
<http://dev-hennef.stadt-hennef.de>

Source: OpenStreetMap

3



## Geographical aspects

### City of Hennef

- Rural area, peri-urban area
- Medium centre
- Distances to:
  - Siegburg (Seat of the district administration) : 6km
  - City of Bonn: 15 km
  - City of Cologne: 30 km
  - Airport Cologne/Bonn: 20 km

4





## Methodology

- Written household survey; all households in the Siegbogen in Hennef were written to.
- Questionnaire dispatched by mail in autumn 2018.
- Each questionnaire was refunded with an Amazon voucher amounting to 10 Euro when it was returned.
- In addition to closed questions, the interviewee had the opportunity to openly give his opinion on many questions and to make suggestions for optimization.
- The questionnaire should be filled in by the person who has a general view of the household organisation and, where appropriate, is mainly concerned with the regular routes of the children living in the household.

5



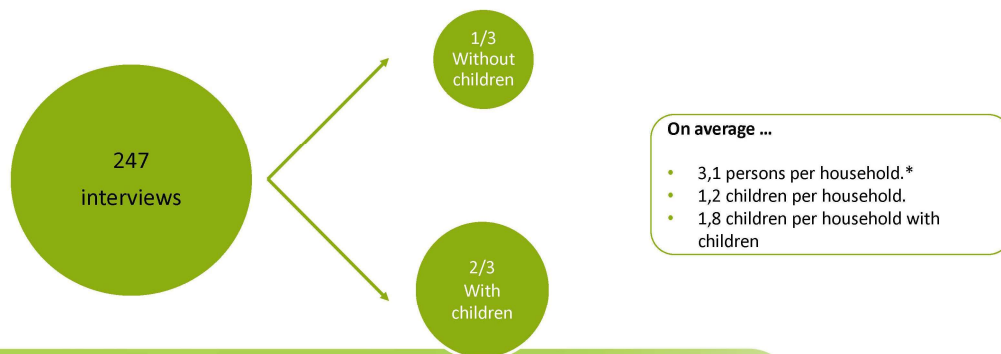
## Who has participated?

6



## Who has participated at the market research?

- A total of 567 questionnaires were sent to households.
- The response rate was almost 44% with 247 returned questionnaires
- The interviewee responded partly on behalf of all persons in the household.



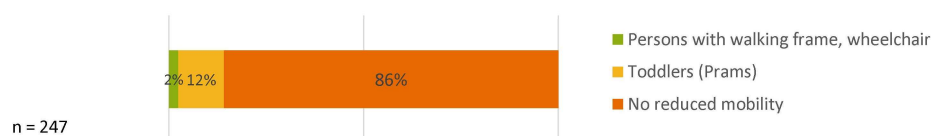
\* Rhein-Sieg district = 2,2 persons per household, Source: Mobilität in Deutschland 2017 (MiD 2017)

7

## Descriptive statistics

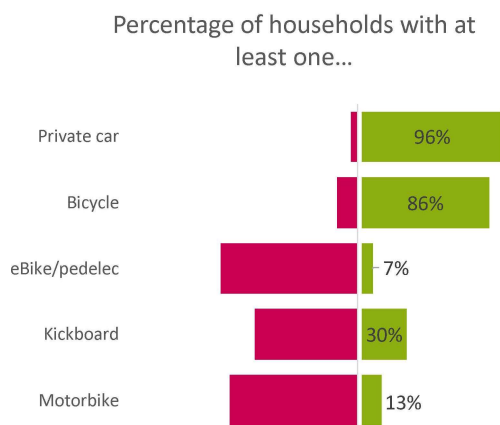


### Households with reduced mobility



8

## Transportation availability

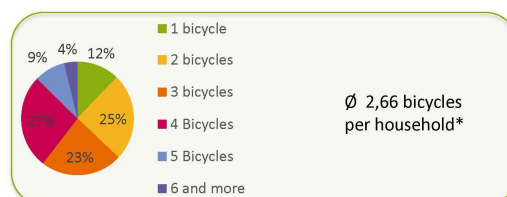


n = 247



Ø 1,44 cars per household\*

\* Rhein-Sieg district = 1,1 cars per household (Source: MiD 2017)



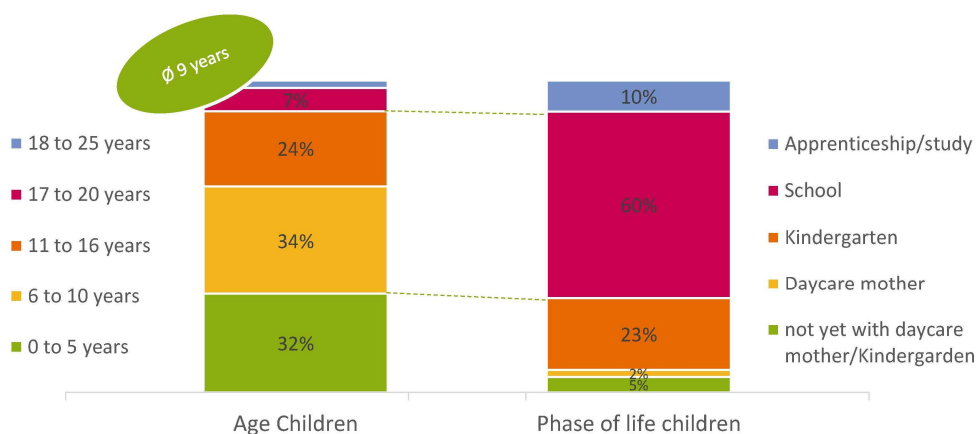
Ø 2,66 bicycles per household\*

\* Rhein-Sieg district = 1,8 bicycles per household (Source: MiD 2017)

Question 3) How many vehicles are in your household?

9

## Children per household



n = 297 children

Question 10) How old are the children living in your household?  
Question 1) How many people live in your household? including children ...

10

## Regular ways/routes

### Means of transport used and distances

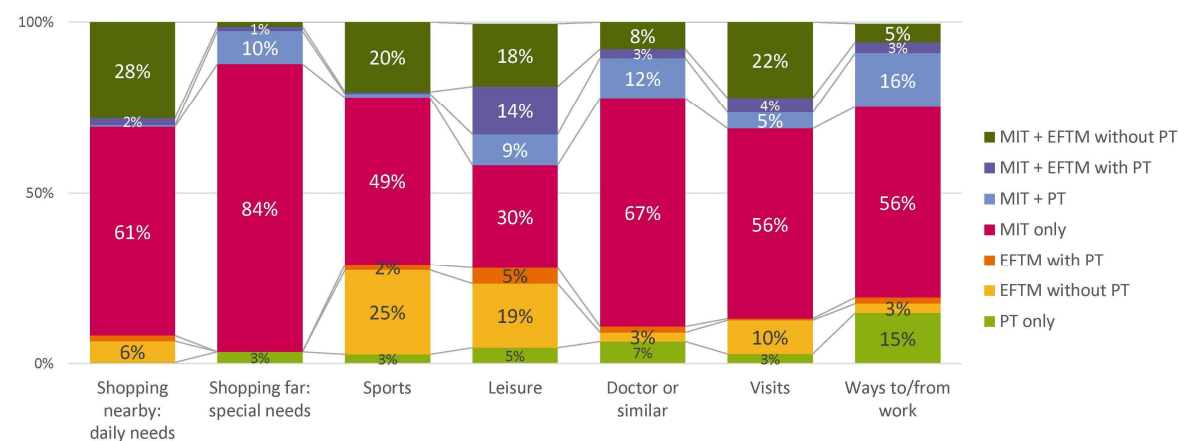


The following evaluations refer to the person who has a general view of the household organisation and who, if necessary, mainly takes care of the regular careers of the children living in the household.

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## Regular ways/routes of the interviewees (combination of transport means)

EFTM (environmentally friendly transport modes) = on foot, by bike, PT, kickboard  
MIT (Motorised individual transport) = Car, motorbike, moped

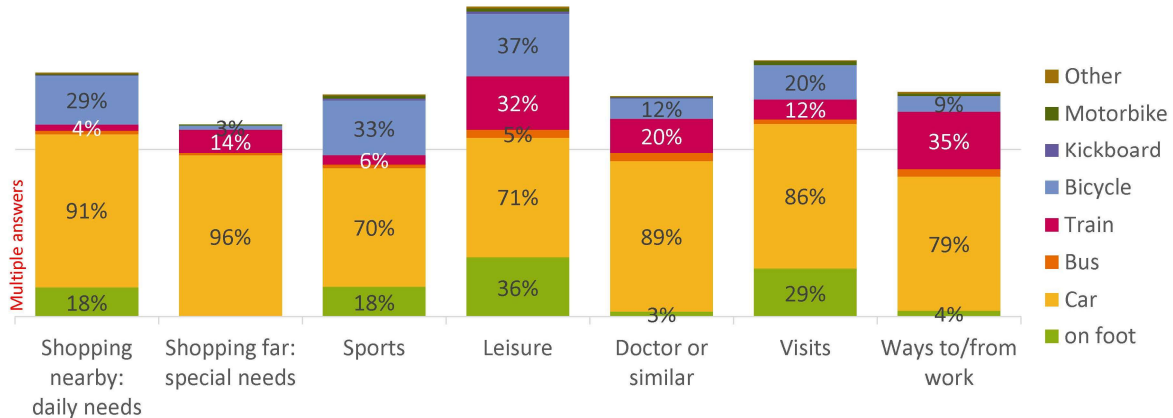


n = 242

Question 5) Which paths do you take regularly? Which means of transport do you mainly use? And how far is the destination from home? You can skip paths that you do not take regularly.

12

## Regular ways/routes of the interviewees



n = 242

Question 5) Which paths do you take regularly? Which means of transport do you mainly use? And how far is the destination from home? You can skip paths that you do not take regularly.

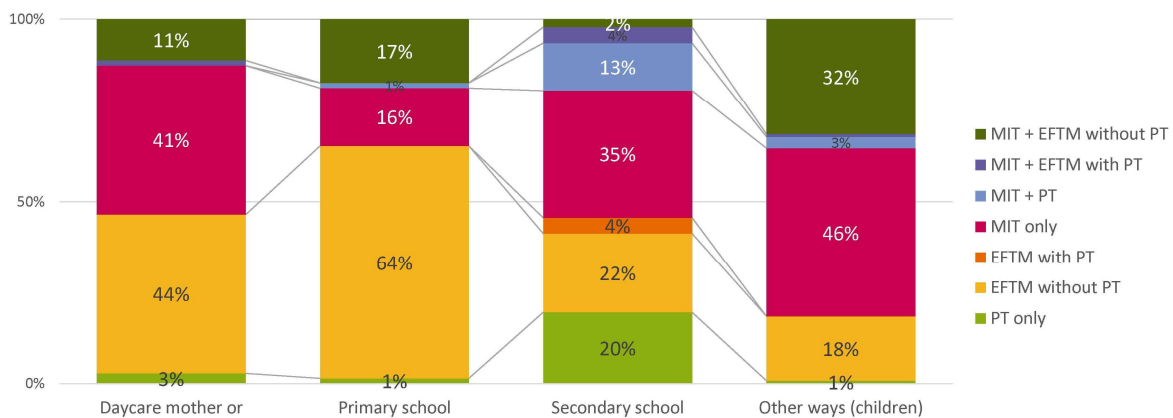
13

**VRS** ...verbindet!  
Verkehrsverbund Rhein-Sieg

## Regular ways/routes of the interviewees (combination of transport means)

Bringing and coming for persons

EFTM (environmentally friendly transport modes) = on foot, by bike, PT, kickboard  
MIT (Motorised individual transport) = Car, motorbike, moped



n = 242

Question 5) Which paths do you take regularly? Which means of transport do you mainly use? And how far is the destination from home? You can skip paths that you do not take regularly.

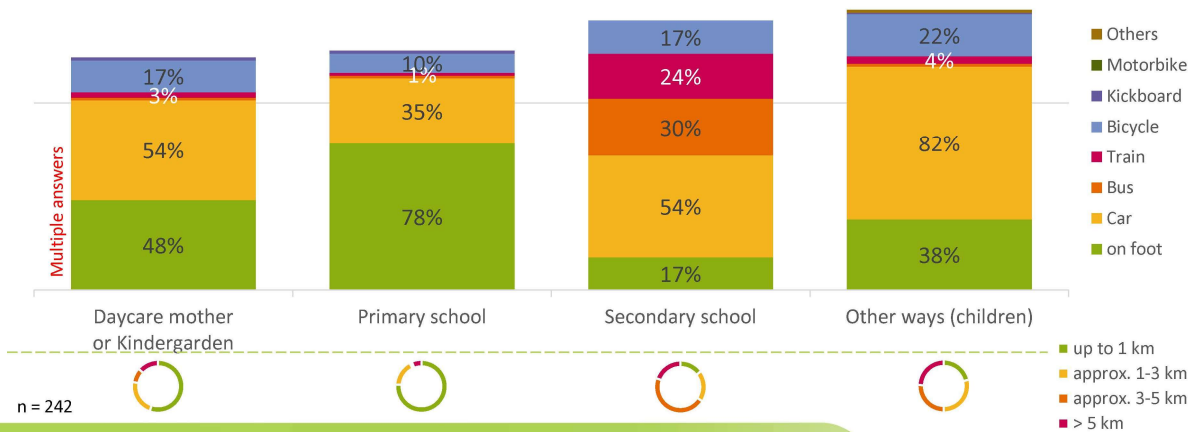
14

**VRS** ...verbindet!  
Verkehrsverbund Rhein-Sieg



## Regular ways/routes of the interviewees

Bringing and coming of persons

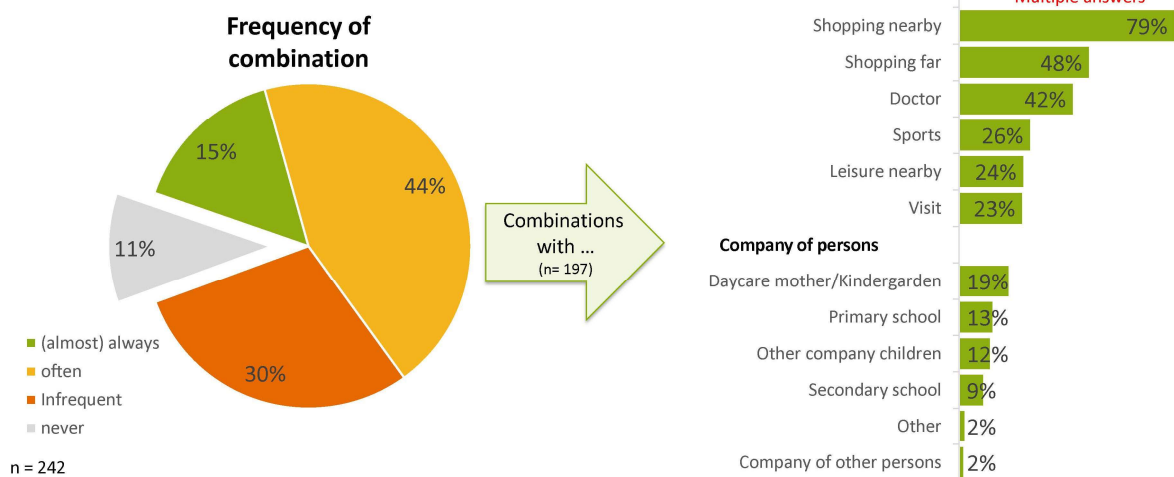


Question 5) Which paths do you take regularly? Which means of transport do you mainly use? And how far is the destination from home? You can skip paths that you do not take regularly.

15

**VRS** ...verbindet!  
Verkehrsverbund Rhein-Sieg

## Combination of working paths with other paths



Question 6) Do you combine routes to/from the workplace with routes that are not actually part of your job?  
Question 7) What destinations do you combine with your journey to/from the workplace?

16

**VRS** ...verbindet!  
Verkehrsverbund Rhein-Sieg

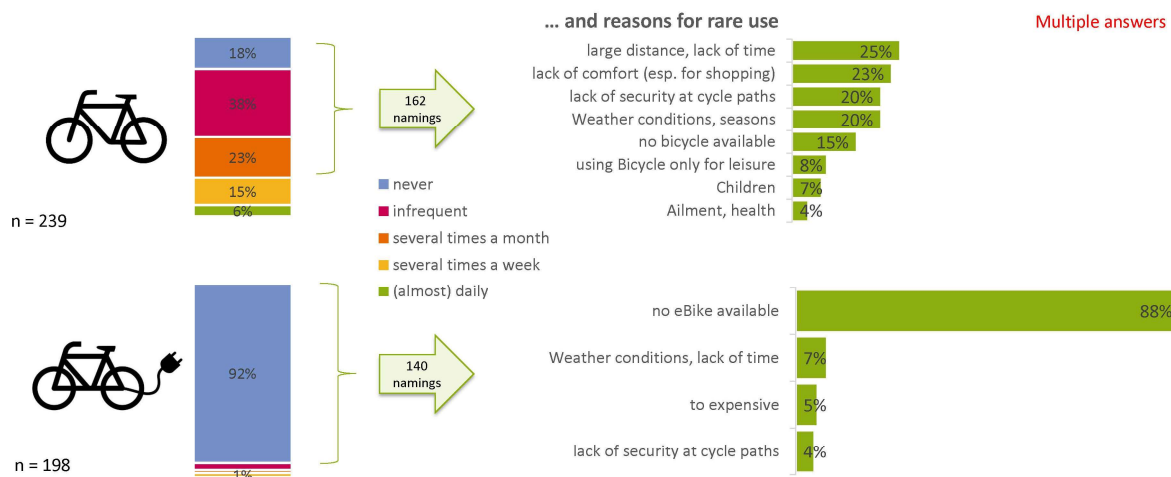
## Means of transport in use



The following evaluations refer to the person who has a general view of the household organisation and who, if necessary, mainly takes care of the regular routes of the children living in the household.

17

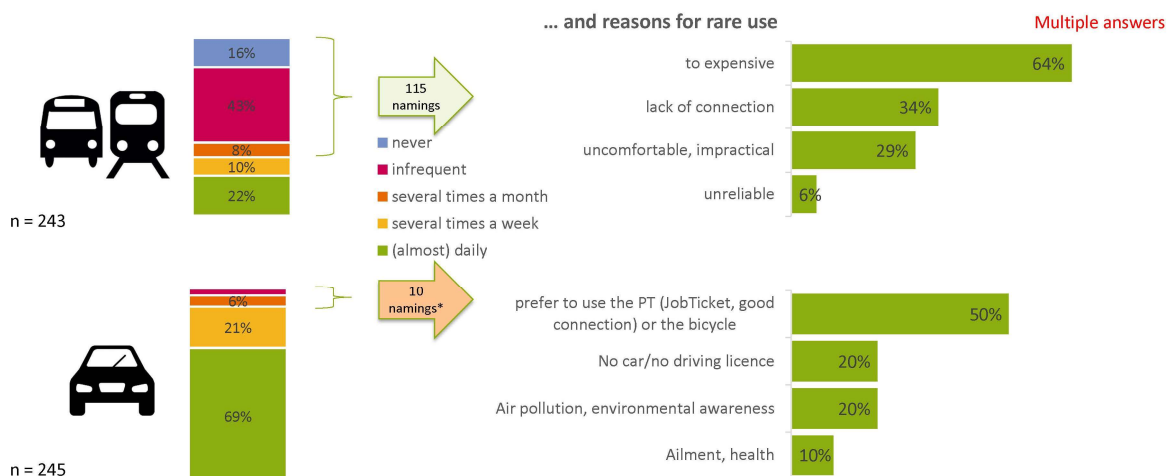
## Means of transport in use by interviewees



Question 8) How often do you usually use the following means of transport? Reasons for the infrequent use: If the accompanying means of transport is not used every week

18

## Means of transport in use by interviewees



## Means of transportation in use by interviewees



## Rating of daily mobility

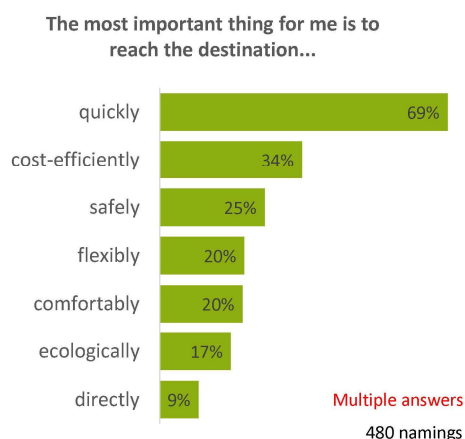
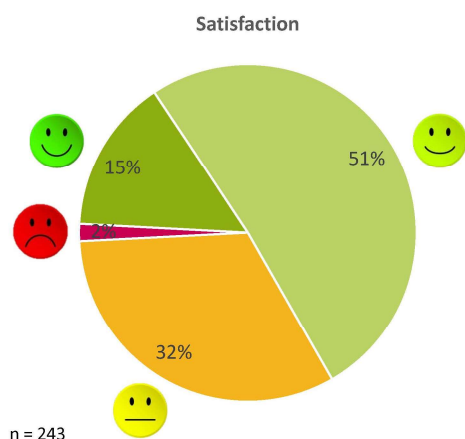


The following evaluations refer to the person who has a general view of the household organisation and who, if necessary, mainly takes care of the regular routes of the children living in the household.

21

### Rating of daily mobility by interviewees

... all means of transport that can be used for this purpose.

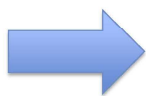


Question 4) When you think of all the routes you regularly take in Hennef: In general, how satisfied are you with the possibility of achieving your goals in Hennef? Please consider all the means of transport you can use.

22

Question 14) What is most important to you for your everyday mobility - regardless of the means of transport - of the following points? Please tick a maximum of two answers.

## Bringing and picking up children



The following evaluations refer to households in which children live (approx. 67% of all returned questionnaires).

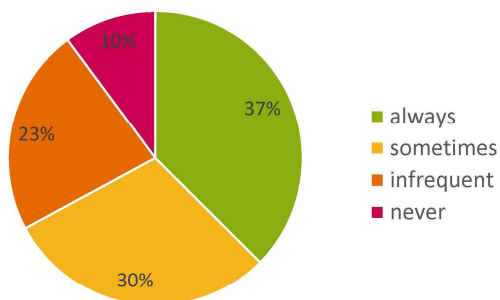
23



### Regular ways of the children

Data per child in household

Bringing and picking up children

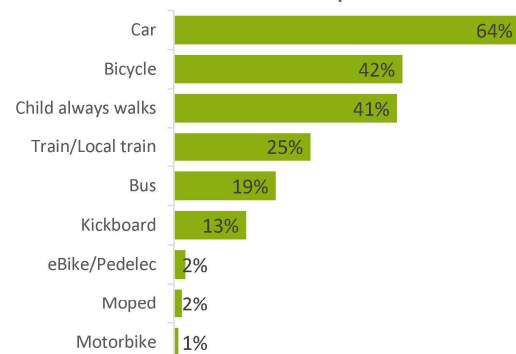


n = 286 children

Question 11) Is the child brought/picked up on his or her regular routes? (information per child in the household)

24

Means of transport used



Multiple answers

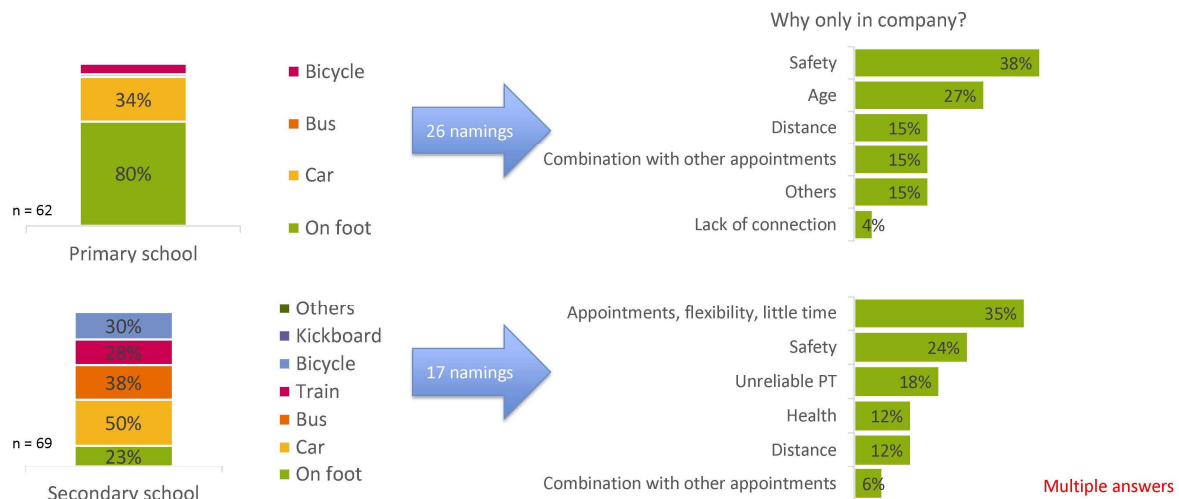
622 namings

Question 12) Which means of transport does each child use for his or her regular trips?



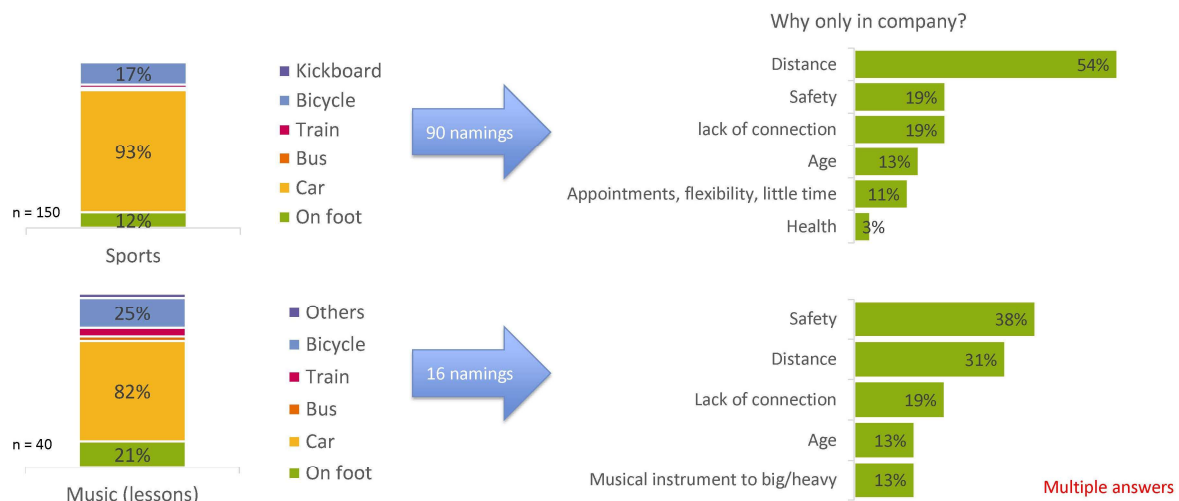


## Means of transport in use by bringing/picking up children



25

## Means of transport in use by bringing/picking up children



26

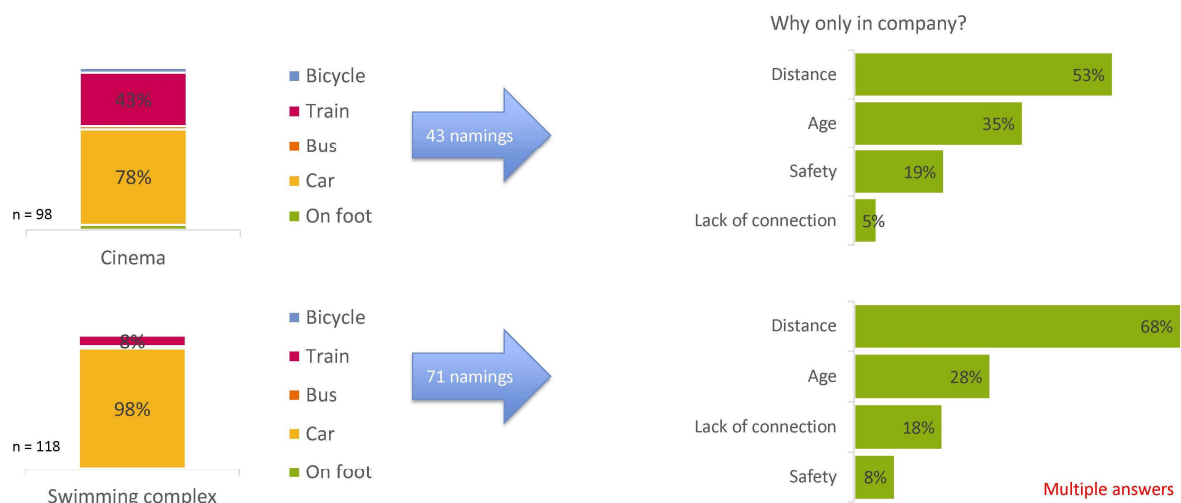
## Means of transport in use by bringing/picking up children



Question 13) To which destinations the children must be brought/picked up?  
... And which means of transport is used to bring/pick up the children? (Information per household)

27

## Means of transport in use by bringing/picking up children



Question 13) To which destinations the children must be brought/picked up?  
... And which means of transport is used to bring/pick up the children? (Information per household)

28

## Proposals for optimising the use of transport in Hennef

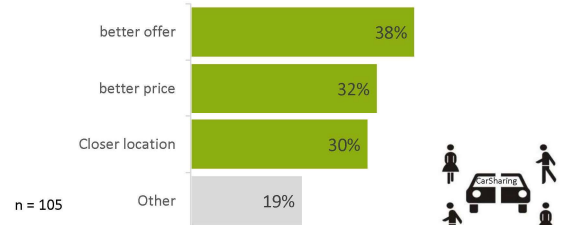
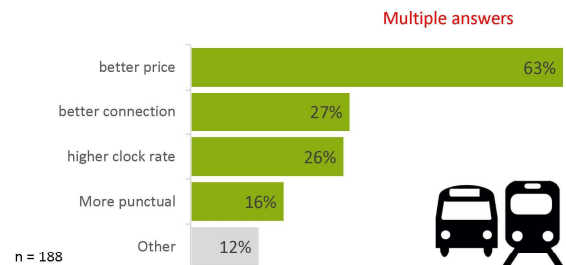
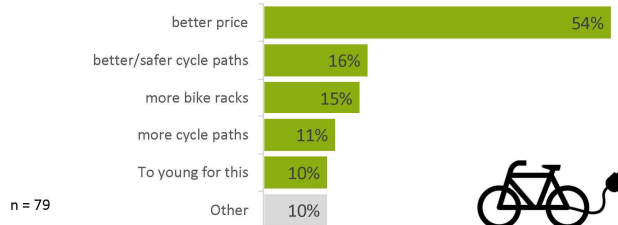
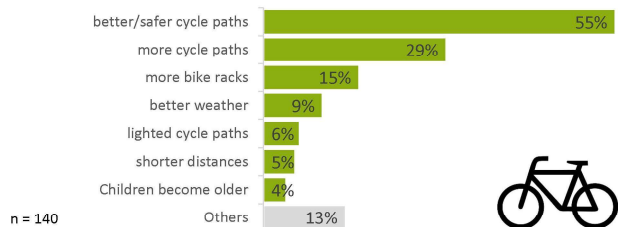


The following mentions refer to data for the entire household. The answer was given by the person who has a general view of the household organisation and who, if necessary, is mainly concerned with the regular routes of the children living in the household.

29



### More frequent use if ...



Question 9) Under what conditions would the use of the following means of transport be interesting for you or the other persons in your household?

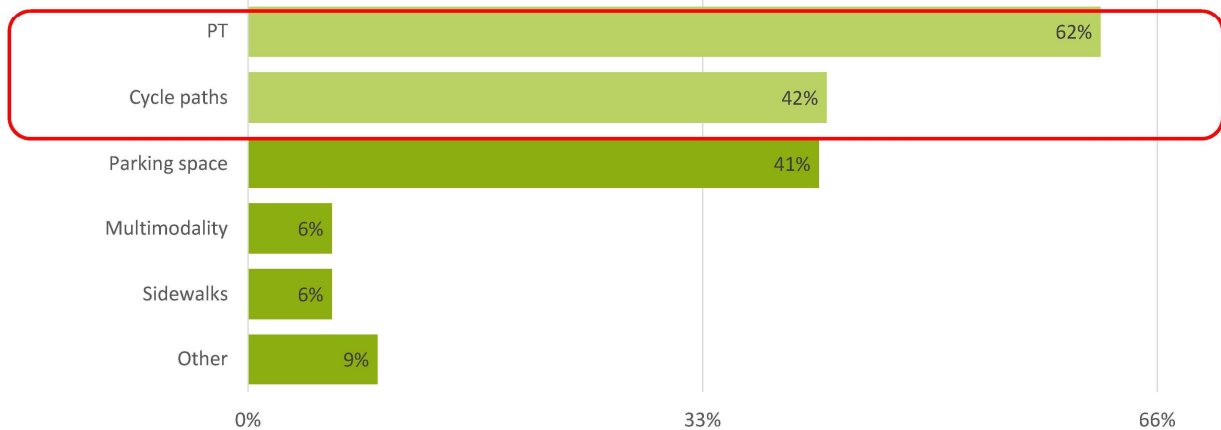
30



## Overview of the priority needs for action

... to improve mobility

Multiple answers



Question 15) What do you or the other people in your household miss to improve your mobility in Hennef in particular?

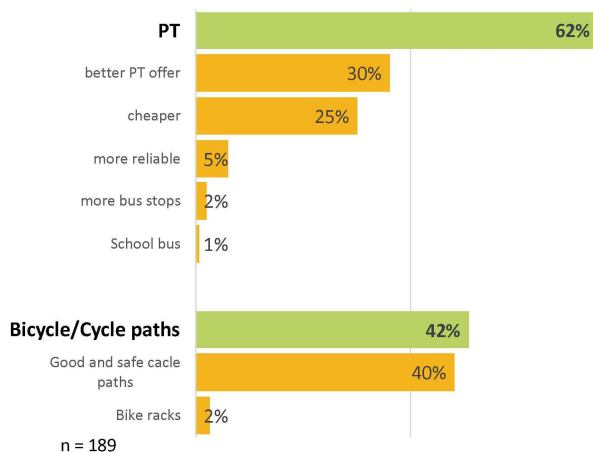
31



## Priority needs for action PT/bicycle

... to improve mobility

Multiple answers



PT: better PT offer / more bus stops

"higher frequency also in the evening hours", "RE connection with hourly connection", "more bus traffic on weekends", "more buses and more trains in Siegbogen", "more frequent bus trips", "bus connection", "bus stops in the settlement", "round bus bringing passengers from outside to the city centre", "P&R on the outskirts", "coordinated departure times of bus and train", "bus from Lise-Meitner-Straße", ...

PT: cheaper

"inexpensive public transport", "short distance-tariff cheaper", "free schoolticket", "inexpensive senior citizen ticket", "the possibility to use the train cheaper for a journey from the Siegbogen to the city centre (approx. 2 km)", "free Park&Ride at Hennef station", ...

PT: more reliable

"avoid long waiting times", "more punctual and more reliable buses", "improve the punctuality of local trains", "reliability of trains", ...

Cycle paths: good, safe, developed

"safe cycle paths", "separate cycle paths, especially Frankfurter Straße and Bonner Straße", "bad cycle paths to the city centre", "development of cycle paths", "Frankfurter Straße is extremely unfriendly to bicycles", "child-safe cycle paths", "free view of roads", "more cycle paths", "good and safe network of cycle paths", "continuous cycle paths", "cycle path through the city", "safe bicycle parking", ...

Question 15) What do you or the other people in your household miss to improve your mobility in Hennef in particular?

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