



CiViTAS
Cleaner and better transport in cities

MIMOSA

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Measure Evaluation Results

UTR 6.1 Public and Rental bikes

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Executive Summary

Bicycle use in Utrecht is high: 52% of the residents usually go to the city centre by bike. Providing sufficient parking facilities is therefore one of the challenges in bicycle supply/demand management. As the city of Utrecht wants to continue to promote cycling and give priority to the bicycle as the main mode of transport within the city, the measure 'Public and rental bikes' was designed with the aim at implementing a bike rental system with a dense network of pick-up and return points. It would contribute to solve the problem since one rental bike could be used by several cyclists a day without requiring extra public space. The goal of this measure was to increase the availability and use of rental bikes among commuters and/or visitors in the city. The longer term objective was to reduce the amount of short trip within the city centre by cars and increase the modal split towards sustainable modes. Due to several circumstances occurring in Utrecht during the MIMOSA project period, the measure was abandoned in April 2010.

Before the measure was introduced to MIMOSA a target group survey and a study of the costs and possible systems was conducted. In this report the feasibility and potential of a fine-grid bike rental system was investigated. The results from the survey led to the adaptation of the initial measure plan of implementing few rental places which would be located at spots attractive to commuters and visitors. An estimated 30 to 50 rental places at strategic locations in the city seemed more viable than hundreds of rental places around town. After the first feasibility study was conducted, the decision was made to continue the measure within the MIMOSA project (with an adaptation of the original plan).

From November 2008 until February 2009, a project group was formed to set up a market consultation and to interview companies who would be able to provide the city with a bike sharing system. The goal of this consultation was to get into a dialogue with bike sharing companies to allow them to give their view on the adapted rental bike concept. The main result of the survey pointed out that most companies think that operating a bike sharing system seemed unprofitable. Hence almost all companies expected the City of Utrecht to provide a (yearly) cost-effective contribution to cover the expected losses or assign an advertising concession to cover the costs. However, the market consultation reported very high operating costs for a rental system.

In March 2010 elections were held and as a result the responsible alderman changed. After the elections it became apparent that the government no longer wished to invest in the bike rental system (as proposed by the city council several years ago) due to the very high costs and given the fact that only one company successfully achieved the implementation of a rental system without public financial support. The mildly promising results of the market survey and the political changes in Utrecht led to the abandon of the measure in April 2010.

The process evaluation was conducted based on the feasibility study which was developed November 2008 until February 2009 and enabled the identification of the main barriers and drivers encountered during the process.

As mentioned before, **one of the significant barriers** which led to the abandon of the measure was the lack of political commitment from the new alderman due to the very high costs and the knowledge that at least one company had already become very successful in

developing and implementing a rental system in the mean time. Besides this the low commitment of the private sector to invest in bicycle rental system was low.

Despite the withdrawing of the measure, **one of the most important drivers** observed during the process was the common understanding shared among city councillors at the beginning of the measure for promoting bicycle in Utrecht which enabled the implementation of the feasibility study. Furthermore, several Dutch companies had already developed an automated bike rental system which could easily be adapted for bike sharing. Therefore appropriate technology was available and implementing a bike sharing system would be possible in a short time period if it should be desired in the future.

Although this MIMOSA measure was suspended before implementation, there are **several recommendations** for parties who are considering implementing a bike sharing concept. It is important to define for which target groups bike sharing is attractive. As in Utrecht almost every resident has his/her own bike, bike sharing concepts will not be used by them. The most important target group would be commuters arriving via public transport. Another recommendation in the Dutch/Utrecht case is not trying to develop a unique custom made system as the city of Utrecht had in mind, but to consider developing a national bike sharing system, as costs can be lowered and it would be attractive for commuters to have one system throughout the country.

Even if the establishment of a public bicycle rental system was not achieved in the frame of the MIMOSA measure, the city of Utrecht worked on a strategy to improve the demand/supply bicycle management, identify potential partners and determine specific challenges to take into account by developing bicycle rental system. Furthermore, the city established a close cooperation with a Dutch company which has been very successful in developing and implementing a system for public and rental bikes from 2008. The so-called OV-Fiets system enabled users the possibility to rent bicycles at railway stations all over the Netherlands (including Utrecht). In the frame of this cooperation, the potential of expanding the OV-Fiets concept in Utrecht to non-railway station locations were explored and it is planned to expand the OV-Fiets concept to several locations in the city in 2013. The first expansion of the OV-Fiets bike sharing system in Utrecht will be at a bicycle parking 'Vredenburg' in the downtown area, which will open in April 2013.

A Introduction

A1 Objectives

(A) High level / longer term:

- To increase modal split towards sustainable modes.

(B) Strategic level:

- More Energy-Efficient Vehicle Use.

(C) Measure level:

- To increase the availability of rental bicycles in the city centre.
- To increase the use of rental bicycles among commuters and/or visitors to the city.

A2 Description

A great deal of very short car trips take place in the inner city centre area. Many of these trips could be easily substituted by bicycle trips. If bicycle availability is high, in the form of a fine-grid bicycle rental system, this system can replace many of these very short car trips. Moreover, it is expected that the rental bicycle will complement – rather than substitute – public transport trips, because the bicycle will be available at much more locations than the city has public transport stops.

Air quality in the city needs to be improved. To this end, it is necessary for the number of car trips in the city to decrease. A bicycle rental system can contribute to this objective.

Bicycle parking has been a problem in Utrecht for several years, particularly at Utrecht central railway station, but also at other venues that attract many visitors. Since the start of building activities in the station area in 2010 the problem has become even bigger, as bicycle parking capacity diminished in this area. The city of Utrecht still wants to promote the use of bicycles. Cycling can be further promoted by the introduction of a bicycle rental system, without making a further claim on public space, because a rental bicycle can be used by several cyclists a day.

The aim of this measure was to implement a bike rental system with a dense network of places to pick-up and leave bicycles. To accomplish this, a new system needed to be developed to allow users to register and pay for rental bikes.

B Measure implementation

B1 Innovative aspects

The innovative aspects of the measure are:

- **New conceptual approach** – There are several European cities that have a bike rental system as proposed. In the Netherlands, Utrecht would be the first.
- **New mode of transport utilised** – Rental bikes could be used to compliment public transport services and to substitute short car trips in the city.

B2 Research and Technology Development

Before the measure started in 2007, a target group survey and a study of costs and possible systems was completed. In this report the feasibility and potential of a fine-grid bike rental system was investigated. This research was conducted by Hendriks/Rademakers (<http://www.hendriksrademakers.nl/>) and consisted of several research activities: questionnaires, focus groups with potential users, interviews with companies, expert meetings, interviews with suppliers and foreign cities and extensive desk research. This research showed that a bike rental system would not reduce the bicycle parking problem in Utrecht, but it could promote the use of bicycles, in particular complementary to public transport and P+R (Park and Ride facilities located at the city borders) usage. The research also tells us that the use of rental bikes is in particular attractive to visitors and commuters but not for residents (as most of them have their own bikes already, unlike in foreign cities).

The results from the survey led to an adaptation of the original plan. Instead of the implementation of a fine-grid rental system with bicycle rental parking places throughout the whole city, the focus was shifted to fewer rental places strategically located at spots attractive to commuters and visitors. An estimated 30 to 50 rental places at strategic locations in the city seemed more viable than putting hundreds of rental places around town.

After the first feasibility study was conducted and the decision was made to continue the measure within the CIVITAS MIMOSA program (with an adaptation of the original plan), a market consultation was carried out in 2008. The goal of this consultation was to get into a dialogue with bike sharing companies to obtain their views on the adapted rental bike concept for the city of Utrecht. The companies were asked several questions:

- Which bike rental system would be best for Utrecht and why? What would they recommend?
- What they think about the results of the first study regarding the implementation?
- What could the company offer: in terms of the development and/or running of a bike rental system and what would the costs be?
- To provide several detailed business case studies concerning rental bikes and also regarding marketing and advertising.

Ten companies (both Dutch and foreign) gave their views on the plans Utrecht expressed about a bike sharing program. The exact outcome of the interviews has to stay confidential

as the reports sent in and presentations given were part of a European tender (market consultation). Overall, most companies weren't very positive about the feasibility of a bike sharing system in Utrecht. Operating a bike sharing system seemed unprofitable and therefore almost all companies expected the city of Utrecht to provide a (yearly) cost-effective contribution to cover the losses expected or assign an advertising concession to cover the costs.

Alderman De Bondt decided to change the scope of the plan (2010) for introducing a bike sharing system in Utrecht, because the annual costs seemed too high and the chances of the bike sharing system being successful were questionable. Instead of setting up a unique bike sharing system, specific to Utrecht, alderman De Bondt decided to let the companies themselves make the decision to introduce a bike sharing system in Utrecht. This decision came also from the fact that one company had already introduced a bike sharing system by itself in Utrecht (without significant local government funding) and Utrecht didn't want to compete with this system (no use in having two competitive bike sharing systems in one city).

The consequence of this decision was that companies didn't start a bike sharing system by themselves, except for the one company that had already started operations (NS OV-fiets). In 2011, the city of Utrecht teamed up with NS OV-fiets to expand their bike sharing system to locations in downtown Utrecht (so far, only railway station locations have been facilitated with rental bicycles by NS OV-fiets).

B3 Situation before CIVITAS

In the city of Utrecht the use of bicycles is very popular, especially to go to the city centre. In 2008, 52% of Utrecht residents said they usually go to the city centre by bike, 25% of the residents used public transport, 11% walked and only 9% usually used their car to go to the city centre. The city of Utrecht still wants to promote the use of bicycles.

As cycling is popular in Utrecht a lot of parking facilities are necessary. In 2008, Utrecht had a shortage of parking space for bicycles, which meant a lot of bicycles parked outside racks on the street. This is an unwanted situation and the municipality has several measures to solve this problem. One of them is another CIVITAS MIMOSA measure UTR 6.4 Parking facilities for bicycles. This measure aims to solve the bicycle parking problem by creating extra/new parking places and regulations for bicycle parking. In 2008 there were around 11,600 public bike parking racks and around 9,000 guarded parking racks in the city centre of Utrecht. In 2008, a count revealed 16,200 parked bicycles in the public area both in and outside racks.

In 2000, a bicycle rental system called "OV-fiets" (public transport bicycle), which offers rental bikes at railway stations for commuters, began operating in the Netherlands and also in Utrecht. These bicycles have to be brought back to their original rental point once the user has finished their journey. The OV-fiets is an initiative from Stichting OV-fiets.

B4 Actual implementation of the measure

The measure did not go ahead, no implementation took place.

B5 Inter-relationships with other measures

Originally this measure would have been related to UTR 6.4 Parking facilities for bicycles and UTR 2.1 Park and ride facilities.

UTR 6.4 Parking facilities for bicycles is a measure that aimed to solve the shortage of bicycle parking spaces in the city centre of Utrecht by creating more parking space with different solutions: new racks, mobile parking spaces, extra parking areas and regulations for bike parking. Both UTR 6.4 and UTR 6.1 want to increase modal split to more sustainable modes and increase the use of bicycles. Bicycle and parking space usage are influenced by both measures.

UTR 2.1 Park and ride facilities is a measure in which Park and Ride facilities (P+R) in and around Utrecht were promoted by one consistent formula (price, safety, quality and frequency of public transport) in order to increase P+R awareness and usage and change modal split towards sustainable modes. As UTR 2.1 also aimed to change modal split, it would not have been possible to distinguish the effects in change of modal split between this measure and measures UTR 6.1 and UTR 6.4.

C Impact Evaluation Findings

Impact evaluation is not applicable because the measure did not go ahead.

D Process Evaluation Findings

D.1 Deviations from the original plan

The deviations from the original plan comprised:

- **The measure was officially stopped in September 2010** – (CIVITAS MIMOSA amendment #2)
 - The market consultation led to the insight that the project might best be implemented entirely by market parties without public funding. The market consultation reported very high operating costs for a rental system, which could not be recovered/made profitable without yearly funding by the city of Utrecht. Financial support from the local government may turn out to be inappropriate and very expensive and was therefore one of the reasons to change the objectives of the measure.
 - A privately organised bike sharing system (OV-fiets) was already implemented in Utrecht. This system was set up at railway stations in the Netherlands and focused on commuters. This bike sharing system became very successful since it was bought and run by the Nationale Spoorwegen(NS) company (2008), who integrated the bike sharing system into their mobility chain (travel by train and bicycle with one single card). It seemed that the City of Utrecht would become a direct competitor of the OV-fiets system if it established its own bike sharing system (even though the target groups were different). Therefore, it was decided by the city board to seek a form of collaboration with OV-fiets instead of trying to set up a bike sharing system that had to compete with an already existing and successful bike sharing system.

The city of Utrecht is still working on introducing a bike sharing system, in cooperation with NS OV-fiets, but the objectives and goals differ too much from the original Description of Work. The Alderman and CIVITAS MIMOSA site manager concluded that the measure could no longer be executed according to plan (DoW) and therefore had to be stopped within the context of CIVITAS MIMOSA.

D.2 Barriers and drivers

The barriers described in this section have led to the cancellation of the measure as described in Utrecht's CIVITAS MIMOSA program in April 2010. This decision to stop the measure was made by the CIVITAS MIMOSA site manager for Utrecht (Ms. M. Pels) in consultation with the head of the 'mobility department' (director J. Schuring). This was finalised in the CIVITAS MIMOSA amendment #2 (Sept 2010).

D.2.1 Barriers

Preparation phase

- **Political (1)** – The city board considered that investing in parking spots for rental bikes (that can be used by private operators of public rental bikes systems) could be as effective as investing in a system itself. As there were elections in March 2010 the

decision making was delayed. After the elections the government no longer wished to invest in a rental bikes system due to the very high costs and the knowledge that at least one company had already become very successful in developing and implementing a rental system without financial support.

- **Financial (9)** – High operating costs: the market consultation revealed that the running costs of a bike rental system were much higher than initially considered. The question to be answered was whether or not the local government would invest (a lot of) money each year to cover the heavy losses of a bike rental system.
- **Strategic (1)** – The OV-fiets concept became very successful from 2008. Especially in Utrecht, the numbers of bicycles rented for short bicycle trips was rising fast. In 2010, at least 60,000 times per year a bicycle was rented. Starting a new bike rental system in Utrecht would mean that it would become competitive with an already very successful OV-fiets system.

D.2.2 Drivers

Preparation phase

- **Political/strategic (1)** – As clean air and accessibility are important objectives for the city board, car traffic in the inner city should be reduced. A bike rental system could contribute to that.
- **Political (1) / Involvement, communication (5)** – The city council filled in a proposal to implement a bike sharing system in Utrecht, following the success of these systems in other countries. A majority of the city council supported this proposal. Thus it was decided to further deploy this proposal and investigate it with a survey on implementing a bike sharing concept in Utrecht.
- **Technology (10)** – Several Dutch companies had already developed (and had in operation) automated bicycle rental systems which could have easily been transformed for the use of a bike sharing concept. Employing easy to use proven technology already available on the (Dutch) market, would make it possible to implement a bike sharing system in a relatively short period of time.

D.2.3 Activities

Preparation phase

- **Organisational (8)** – A project group was formed to set up a market consultation to interview possible partners to develop a customised bike sharing system. This activity was undertaken in response to the positive political feedback on the proposal to implement the system.
- **Involvement, communication (5)** – As a follow up to the target group survey (finished before the measure started), a market consultation was carried out over the period November 2008 until February 2009, taking stock of all possible companies and organisations that could be future partners of the city of Utrecht in the rental bike project.

D.3 Participation

D.3.1. Measure Partners

- **City of Utrecht** – in the start-up and preparation phase, Utrecht's department of parking was the only institution that was trying to implement the measure, no other partners were involved.

D.3.2 Stakeholders

- **Contractor of the public bike rental system**– Several companies were consulted to give their views on the proposed bike sharing scheme Utrecht had in mind, but no companies/partners were selected to develop a bike sharing system.

If the measure was implemented **commuters** and **visitors** to the city of Utrecht would have been important stakeholders.

D.4 Recommendations

D.4.1 Recommendations: measure replication

This public and rental bike measure can be attractive for cities with a lot of cyclists and a problem with bicycle parking space or for cities that want to promote the use of bicycles instead of car or public transport in the city centre. By increasing the availability and use of rental bikes among commuters and/or visitors in the city one bike could be used by several cyclists a day and uses less parking space. When considering implementation of a public and rental bike system the following is important for success:

- **Determine for which target groups bike sharing is attractive** – It seems like a 'traditional' bike sharing system as implemented in most other European countries will not lead to the expected results in Utrecht/the Netherlands, as most people already own one or more bicycles and therefore would not choose to rent a bicycle for inner city movements. Instead of focusing on different target groups, it is recommended to focus at first mainly on commuters arriving by train, as it appears that this target group is willing to use a form of bike rental system to travel from the train station to their place of work.
- **Choose a stepwise development for establishing a bike sharing system in downtown areas** – The city of Utrecht tried to set up a fine-grid bike sharing system, but the start-up costs and annual operating costs proved to be very high, while the use of the system by the target group was expected to be low in the first year(s). To tackle these problems, the city of Utrecht teamed up with a private organisation (NS OV-fiets: <http://www.ov-fiets.nl>) which already operates a successful bike sharing system around railway stations. Although this system focuses on a different target group (commuters instead of residents, visitors and tourists), the city of Utrecht and NS OV-fiets are working together to incrementally develop this system in downtown Utrecht. Though the NS OV-fiets system is not developed for residents and tourists, the city of Utrecht and NS OV-fiets hope that by expanding this system (in a stepwise fashion) into downtown

Utrecht, it will be noticed and used by groups other than commuters (as the product is already widely known among the Dutch, it is hoped that it will also be adopted and used by non-commuters). Due to the fact that it is already an operational system and (almost) profitable, it is easier and more affordable to expand this system to places which are not frequently visited by commuters. By choosing an already well known partner and a stepwise development, the system can grow in time without loss-making high annual costs, which gives a better prospect of success for the system.

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

- **Consult companies before a choice is made** - The idea of establishing a bike sharing system in Utrecht was initiated by several political parties. They did some research on the feasibility and costs of a system in Utrecht and concluded that a bike sharing system could be a success in Utrecht as well as profitable. The city board adopted the idea of establishing a bike sharing system in Utrecht, but requested more research before deciding whether it would implement a bike sharing system and if so, which specifications the system had to comply with. Therefore, a market consultation was set up to interview companies. This market consultation was set up as the first phase of a European tender, to ensure that as many companies as possible from all over Europe would reply to the call for a consultation. The results from this consultation were very useful, as it gave a good insight into the possibilities, problems and costs of implementing and maintaining a bike sharing system. The results from this market consultation deviated from the information which had led the city board to first adopt the idea of establishing a bike sharing system and led to the insight that the city of Utrecht had to change its original plan to make the bike sharing system successful. Without this market consultation, Utrecht would probably have purchased a bike sharing system which was not suited to the Dutch situation.
- **United effort for a national bike sharing system for commuters** - Utrecht was focusing on a customised public bike sharing system instead of working together with other Dutch cities to create a universal/national bike sharing system. To lower the costs of running the public bike sharing system and make renting bicycles more appealing for the target group, working more closely together with other cities to work on a standardised bike sharing system that works exactly the same in all Dutch cities is recommended. This would make the planning process of a measure such as this, more effective in many cities. A company called "NS OV-fiets" did develop a national bike sharing system for commuters which does seem to function very well and is (almost) profitable.