

# **CIVITAS MOBILIS: GENDER ISSUES FINAL REPORT**

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## **0. DOCUMENT DESCRIPTION**

This document is the final version of Milestone 3 of Task 5 'Compilation results gender audits and recommendations' of the Gender Issues Workplan of the CIVITAS MOBILIS project.

This report includes following sections:

- a) Research findings regarding gender and mobility/transport in Europe
- b) A screening of all CIVITAS MOBILIS measures on 'gender sensitivity' for each MOBILIS city
- c) The selection of gender sensitive measures by the cities
- d) The implementation report by the cities for every gender sensitive measure
- e) Policy recommendations

# 1. INTRODUCTION

## 1.1 GENDER IN EU PROJECTS

With the 6th Framework Programme for Research and Technological Development, the EU Commission has set the aim of systematically implementing gender mainstreaming. The European Commission considers that without gender equality in science and without a better use of the human resources available, scientific excellence will never be truly achieved within the European Research Area. This is why it has developed a gender equality policy based on at least two combined objectives:

- Ensuring that the gender dimension is properly addressed in EU-funded research content,
- Promoting the participation of women scientists in Framework programme activities. (European Commission, 2003)

Mrs. Maria Cristina Marolda (Programme Officer in the Surface Transport Unit Research Directorate – European Commission) puts it this way:

*'A modern sustainable transport cannot avoid taking into consideration the interactions between transport policy and other community policies, such as environment, energy, economy, health, industrial activity as well as all the societal implications of the same. Gender differences in lifestyles should be at the centre of such attention.'* (TRANSGEN, 2007, p. 9)

## 1.2 GENDER IN CIVITAS MOBILIS RESEARCH PROJECT

The MOBILIS project aims to promote and implement sustainable urban mobility measures and innovations in transport. Mobility is seen as a basic need and one indicator of the quality of life. Transport is a tool for living and working, it provides a level of mobility and accessibility to meet activity requirements. The degree of mobility can be influenced by gender, age, ethnic background, physical constitution and economic situation, as well as by accessibility, availability, safety and affordability of travel options. The project aims to take account of all these factors as far as possible, ensuring that gender issues are particularly taken into account (Inception Report CIVITAS MOBILIS, 2005, p.1).

Unless gender imbalance is specifically dealt with, many of the obstacles to participation and advancement will not be identified. Underlying the concept of gender is a recognition that women and men do not have the same situations, needs and resources, and that these differences can affect the way in which women and men, policy-makers can ensure better policy-targeting, more effective provision and gender equality (NDP Gender Equality Unit, Department of Justice, Equality and Law Reform, 2003).

## 2. LITERATURE REVIEW ON GENDER AND MOBILITY

### 2.1 INTRODUCTION

During the last decade, transport policy-makers and practitioners have started to recognise that there are differences in the way certain target groups of people travel, and, in response to this, to try to develop more inclusive policies.

One of the approaches that can shed a light on these differences regarding mobility is the 'life stage'-approach. A life stage can be defined as a specific, optional event such as learning to drive, moving home, moving job or having children.

Life stage is distinct from life cycle, a natural event that affects an individual as he or she gets older, progressing from a child to an adult and then to a senior citizen.

An individual's attitude to travel and subsequent travel behaviour changes in response to life stage and life cycle events. Ryley identified the following is an example of a classification linking household composition and life stage to travel behaviour ([Transport Visions Network, 2001](#)):

- *Young single adult living alone.* Prime activities for young single adults are work or education and leisure. Nightlife and meeting other young people would tend to be seen as a priority and travel would predominantly be by bus and taxi.
- *Young adult living with partner.* The effect of two individuals living together would be an increase in household income, a change of leisure activities, and spending time with each other and other couples would tend to be seen as a priority. Car ownership and use would be more affordable, and although not essential, would probably increase.
- *Living with partner and young family.* With a family, time would become a premium and the patterns of activities would tend to be centred on the children. Motor car use would be seen as essential.
- *Living with partner and teenage family.* A divergent pattern of activities for parents and children would have increased demands on motor car use, and may lead to an increase in household car ownership.
- *Middle aged living with partner.* Once children have left home there would tend to be an increase in affluence and a further changes in activities. House size and motor car ownership could be in excess of that required.
- *Retired couple.* The daily commute(s) would disappear and the absence of the work activity would lead to routines and patterns of activity being redefined with a greater flexibility. Time would tend to be less of a premium, and the activity pattern could be shaped by a role as grandparents.

(Ryley, 2006, p. 368)

So, travel needs and behaviour can differ on certain life stages.

The main question in this report however is whether there are differences regarding transport needs and behaviour between males and females in general and/or at the same life stage.

### 2.2 GENDER DIFFERENCES IN TRAVEL NEEDS AND BEHAVIOUR

When looking for answers to this question, (partial) answers can be found in literature from the UK, Ireland, Sweden, the Netherlands and Belgium.

#### 2.2.1 Gender differences in travel modes

Evidence in Great Britain shows men and women differ regarding travel mode, purpose, driving licence holding, car availability and mobility difficulties.

The 2005 National Travel Survey (NTS) is the latest in a series of household surveys designed to provide a databank of personal travel information for Great Britain. It is part of a continuous survey that began in July 1988, following ad hoc surveys since the mid-1960s. Information on travel by gender is available from the NTS. The annual statistics bulletin includes tables showing a breakdown by men and women for key transport variables such as travel by mode and purpose, driving licence holding, car availability and mobility difficulties. Gender proves to be a critical dimension of the diversity of travel needs amongst adults (Department for Transport, 2006 b).

As for car trips, the UK National Travel Survey 2005 shows women are less likely to have a car, sometimes reflecting men's use of the family car for travel to work purposes – women are more reliant on public transport, taxi or walking. Men aged 17 and over made more trips as car drivers than as passengers in all age groups. Women aged 21-69 also made more trips as drivers than as passengers, but women under 21 or over 70 were more likely to be passengers than drivers. The proportion of trips made by car as a driver increases with age to a peak of 68 per cent of trips among men aged 50-59 and 57 per cent among women aged 40-49, and then declines in older age groups. Further, differences in car usage can largely be accounted for by differences in licence holding. Eighty-one per cent of men held a full car driving licence in 2005, compared with 63 per cent of women (Department for Transport, 2006 b).

Regarding PT use, women of all ages used buses more than trains, but men aged 30-39 made slightly more rail trips, reflecting the more widespread use of rail among commuters. Bus use is highest for 17-20 year olds, accounting for 16 per cent of trips in this age group. Among both men and women, bus use was higher for those aged 70 or more than in middle age, probably reflecting availability of concessionary bus fares and differences in holding driving licence. Thirteen per cent of work and business trips made by men were followed by a further trip to work or business compared with nine per cent for women. Men were also more likely than women to go home directly after a work or business trip (Department for Transport, 2006 b).

Concerning walking in the UK, the proportion of trips made on foot in 2005 was higher for men than women among adults aged 17-20, but was higher for women in all other age group (Department for Transport, 2006 b).

Cycling in the UK was most common among men aged 17-20 in 2005, but even for this group only three per cent of trips are by bicycle. Cycling declines gradually with age, accounting for just over two per cent of trips by men aged 40-49, and just over one per cent of trips made by people aged over 70 (Department for Transport, 2006 b).

Recent research in Ireland, indicate Irish men are more likely to privately own a car than Irish women (57% to 36% respectively) (NDP Gender Equality Unit, Department of Justice, Equality and Law Reform, 2003). Further, proportionally almost twice as many Irish women than men use the bus to travel to their place of work (approximately 10% and 5%), with more women than men travelling to work by train or on foot. More women than men travel to work as a car passenger (10% to 7% respectively), while more men than women work from home (12.8% to 5.3% respectively) Further, almost three times as many Irish men as women cycle to work (NDP Gender Equality Unit, Department of Justice, Equality and Law Reform, 2003). In the UK, women undertake a higher proportion of their journeys on foot, as car passengers and using buses. Men, however undertake nearly half of all journeys as car drivers (Reid-Howie Associates, 2000).

The same differences occur in Flanders, when looking at the travel modes used in 2000. While men spend more time in the car as car drivers than women (52% male car drivers compared to 37% female car drivers), women are more likely to be car passengers than men (10% male car passenger ship, compared to 22% female). (Ministerie van de Vlaamse Gemeenschap, 2000) Further, Flemish men tend to cycle more, while Flemish women walk more often. PT appears to be of low importance both to males and females.

In the Netherlands, the same picture appears and the results are even more striking. Dutch females tend to drive more kilometres as car passengers compared to men (7kms travelled daily as car passenger by males, compared to 11 km by females). Further, males tend to drive almost three times as many kilometres as a car driver compared to women as a daily routine (23kms compared to 9 kms). Regarding other transport mode use, no large differences appear (Rijkswaterstaat Adviesdienst Verkeer en Vervoer, 2005).

Research by the Swedish Road Administration in 2005 reflects women to use more public transport, to walk more and to cycle more than men. Moreover Swedish women tend to have lesser access to a car than Swedish men (79% compared to 86%). The largest difference is found amongst the elderly (between 65 and 84), where 62% of the females compared to 85% of males has access to a car (Swedish Road Administration 2005, p.30).

Further, the Flemish situation shows differences regarding driver licence ownership between men and women. In Flanders, over 3 in 4 men (75.72%) own a drivers licence compared to 60.16% of females. These differences are mainly a result of the large differences in driver licence ownership amongst Flemish elderly. In the age group of 65 and older, 63.19% of the females indicate not to own a drivers licence, compared to 10.53% amongst males (Ministerie van de Vlaamse Gemeenschap, 2000).

The same tendency appears in the Netherlands, where males in general more often own a driving licence (87.6% of men compared to 73.2% of women own a driving licence). The largest difference between both sexes regarding driving licence ownership can be found in older age groups (50 years of age and older) (Rijkswaterstaat Adviesdienst Verkeer en Vervoer, 2005).

All of these findings were echoed in a recent European study TRANSGEN (2007, p. 42-43) where gender differences regarding travel modes were looked upon throughout Europe, US, Canada and Australia.

They found that:

- Men consistently travel further distances than women, but women make the same or fewer trips.
- Men are more likely to travel by car, while women to a larger extent use public transport.
- Women are more likely to make multipurpose trips (i.e. home-nursery-workshop-nursery-home rather than home-work-home) and more non-work trips.
- Some studies indicate that women make more suburban trips and that they tend to travel out of peak hours.
- Studies also show that men to a larger extent than women have access to cars in terms of economic capability and driving licence.
- However, importantly this situation changes over time as social relations, urban spatial structures and labour market change, so that younger women more often have a driving licence and better access to cars than older women.
- There are differences between women due to education, economic situation, geographical location, ethnicity and other background variables.

### **2.2.2 Gender differences in travel motives**

The reasons for these differences regarding travel modes used are complex and relate partly to the different working arrangements of women and men, but also clearly to the different social roles of women and men (women as the prime care takers for children and elderly, family shopping responsibilities), as well as to differences in the number of women and men who hold driving licenses.

Literature in the UK suggests that travel needs vary for men and women. The Department for Transport (2006 a) found that men were more likely to make work-related trips than women (23% of all men's journeys were work related, compared to 14% of women's), whereas women made more shopping trips than men and 14% more personal business trips, i.e. trips to the bank, post office, library, church, playground, doctor or optician.

Similarly, Mason and Prior (2005) found that men were more likely to travel for work purposes than women, while women were more likely to travel to visit friends/relatives and for shopping trips. Wixey e.a. (2004) found that men were slightly more likely to use the London Underground to get to work and education facilities, while women are more likely to use it to go shopping.

Department for Transport (2006 a) notes that, nationally, over a quarter of trips made by women in their 30's were escort trips, typically escorting children to school.

Women are more likely to hold primary childcare responsibilities within families, and their transport needs often revolve around the need to coordinate their own and their family's travel. For example, Dobbs (2005) analysed travel among women in the North East, and found there to be heavy emphasis on travel for private or domestic purposes: escorting children and dependant relatives, and household shopping trips. Twenty-three per cent of women reported making these types of journeys at least five days a week, and 71% at least once a week. 67% travelled at least once a week to take part in civic or social activities. However, much of women's daily travel was about accessing employment, education or training. 52 per cent travelled on five or more days per week to undertake paid work, and 76 per cent travelled at least once per week to undertake paid work.

The Department for Transport notes that trip chaining is particularly important to women i.e. combining journeys for different purposes such as their travel to work, shopping, escort of children or access to healthcare (Department for Transport, 2006 b).

Irish research indicates 73% of Irish men are in the labour force compared to 49% of women (NDP Gender Equality Unit. Department of Justice, Equality and Law Reform, 2003). Further, survey results indicate only 32 percent of Irish women travel to work every week, compared to 58 percent of Irish men. Of women, 23% travel to school to drop the children there, compared to 8 percent of men (NDP Gender Equality Unit. Department of Justice, Equality and Law Reform, 2003). Scottish research points in the same direction, indicating that only 19% of all trips made by women are for work or business, while for men this is 29%. The authors state this is related to the fact that women tend to work closer to home and mostly part-time, and in jobs which do not require as much in-work travelling (Reid-Howie Associates, 2000). Austrian women questioned used the bicycle mostly as a means of transport to do daily chores, such as shopping trips (45%), 30% of the women used the bicycle as a means of recreation (Pilz C. & Panian T., 2001).

Further, given their caring responsibilities, women in general are less likely than men to travel to leisure activities. Of women, 55% travel weekly to leisure activities (e.g. gym, pub) compared to 73% of men. However, women are more likely to travel to supermarkets (84%) than men (52%) (NDP Gender Equality Unit. Department of Justice, Equality and Law Reform, 2003) Research in the UK confirms this (Reid-Howie Associates, 2000).

The Flemish Research Travelling Behaviour (2000) (Ministerie van de Vlaamse Gemeenschap, 2000) shows the main reason for both sexes to travel are work purposes, shopping and leisure/sports and culture. The amount of time spent for these purposes differs between men and women. Men travel more for work, for business and leisure/sports and culture. While women spend more of their travelling time to shopping and escorting something or someone compared to men.

Not only does the distribution of travel time vary. Also the total amount of time spent on travelling differs between men and women. Flemish males spend almost half an hour more a week on travelling compared to females (7 hours 33 minutes compared to 7 hours 6 minutes). This was also confirmed in the local study in the city of Leuven where the travelling behaviour of women was examined (Van Uytven & Wildiers, 2007). The women questioned stated to travel more time compared to men and especially for escorting children (to school and after school activities) and shopping purposes. Further, they point out these caring responsibilities and the travel time needed to fulfil these responsibilities has a negative effect on their professional career and need to look for jobs closer to home and work in part time regimes.

Research in the Netherlands shows the same picture. Dutch males cross larger every day commuting distances compared to women. The male commuter distances crossed tend to be

almost three times the length of women's commuting distances (12 kms compared to 5 kms). (Rijkswaterstaat Adviesdienst Verkeer en Vervoer, 2005).

The situation in Sweden shows the same differences: men travel more and larger distances to work (Swedish Road Administration 2005). Polk shows Swedish men travel more for work purposes compared to women, while women travel more for domestic related purposes such as child care and shopping (Polk, 2001, p.9).

### 2.2.3 Barriers to travel

When looking at the differences in travel modes and motives, it becomes clear that there are certain barriers both for men and women to travel.

Research in the UK found that despite having lower levels of access to cars, women preferred to travel by car. Many saw a car as essential in coordinating employment, childcare and domestic responsibilities. Women often used their cars for short trips in order to manage these journeys. The time cost and complexity of travelling by public transport was deterrent for many women. Women complained about long waits when services were unreliable, problems boarding and alighting, difficulties with long and complex journeys, and inability to afford transport, particularly in the case of low income mothers. Bus routes often did not meet women's needs to travel off-peak, and on non-radial routes. Women were more likely to feel safe when travelling by car than by public transport. Women generally did not see cycling as a viable mode of transport, primarily due to journey complexity and safety concerns, although women were more likely to cycle when larger numbers of people cycled in their local area. (Department for Transport, 2006 a)

The same barriers were found in a local Flemish study (Van Uytven & Wildiers, 2007) where the women questioned (especially the ones with younger children) said to be quite reliant on the private car to combine travelling (mainly trip chaining) in the morning and after school (escorting children to school, travelling to work, do shopping after work and picking up the children after school, taking the children to after school activities). Some of them claimed to have opted for a part time job closer to home to get around all these responsibilities and proved to be a real barrier in their carrier. The women questioned also raised the issues of

- Lack of female participation on preparation, implementation and evaluation of mobility measures at the local level,
- Lack of lockers to temporarily leave heavy shopping bags while shopping in the city centre,
- Lack of clean and accessible public toilets in the city centre,
- Lack of room for storage of bike trailers and carrier cycles,
- Lack of pram renting services to change travel modes when arriving in the city centre by bicycle or bus,
- Lack of accessibility for prams on buses and especially the lack of courteousness amongst the other PT users.

The findings from Scottish research in 2000, suggest that the system of transport which is provided in Scotland imposes a range of restrictions on women's mobility and accessibility and hence participation in economic and social life.

Safety was identified as a major constraint, particularly at night. Comfort was linked to this and physical access to transport was a key issue, particularly for disabled women and for women travelling with children. The timing and routes of services were identified as another constraint, particularly in terms of the provision of evening and early morning services. The cost of using transport and the links between this issue and the levels of women's income were also highlighted, as was information, in terms of its clarity and accessibility. Finally, the lack of consultation with women was seen to be an overall constraint, affecting the development of relevant policy and provision of transport, and the development of understanding and awareness amongst staff.

Specific groups were found to experience particular constraints in their use of transport, including women in rural areas, women on peripheral estates, women from ethnic minorities, disabled women, older women, homeless women, unemployed women, women experiencing domestic abuse, lone parents and others.

In the short survey of transport providers, it was found that generally, despite some examples of good practice, only a small number of the operators surveyed had initiated improvements for women. Few specific or systematic future plans had been made to address these issues, and although some identified the need for action, the level of priority afforded to this was clearly varied (Reid Howie, 2000).

#### **2.2.4 Guidelines for transport/mobility policy makers**

Based on research results, in some cases recommendations were made to (local) mobility or transport policy makers.

For the UK, the Department for Transport launched its Gender Equality Scheme 2007-2010 acknowledging that men and women have different needs and concerns when it comes to using transport services and working in the transport sector. The aim of this Gender Equality Scheme is to make sure that all aspects of the Department's policies and employment practices take proper account of these differences.

The Scheme is both a strategy and action plan outlining the journey from where they are now to where they want to be. It is their intention that this Gender Equality Scheme will not only be relevant in meeting their statutory requirements, but will also serve as an informative guide in promoting a better understanding of gender equality amongst all their colleagues within the Department and those in the wider transport world (Department for Transport, 2006 a).

The main objectives of this scheme are:

1. Deliver better access to jobs and key services such as health care, education and food suppliers for both women and men.
2. Ensure that all new and existing policies are assessed for their impact on gender equality, as part of a wider equality impact assessment, to ensure effective targeting of policy and resources.
3. Work towards the Department for Transport 2008 diversity target to increase the representation of women in the Senior Civil Service and its feeder grades, as set out in the Department for Transport Diversity Delivery Plan.
4. Consider how procurement practice can help to deliver gender equality.
5. Increase awareness of the gender equality duty across the Department, its agencies and its non-departmental public bodies.
6. Eliminate unlawful gender discrimination and harassment and promote equality of opportunity between the sexes.

In order to reach these targets, a Department for Transport Gender Equality Action Plan 2007-2010 was developed indicating how certain measures relate to the overall key objectives the Department has identified as being necessary for it to perform its gender equality duties. The Department has put mechanisms in place to ensure that these actions are recorded and that progress towards milestones and implementation of the individual action plan entries can be monitored (Department for Transport, 2006 b).

The same strategy was used for the local research project on gender equality and mobility in the city of Leuven (Van Uytven & Wildiers, 2007). Based on the results a number of recommendations were formulated aimed at the mobility department of the city of Leuven:

- increase the female participation on preparation, implementation and evaluation of mobility measures at the local level by providing information regarding mobility issues at locations women visit (such as schools, childcare centres, shops, etc.
- increase the number of lockers to temporarily leave heavy shopping bags while shopping in the city centre,
- increase the number of clean and accessible public toilets in the city centre,
- increase the room for storage of bike trailers and carrier cycles,
- introduce a pram renting service to change travel modes when arriving in the city centre by bicycle or bus,
- increase accessibility for prams on buses and especially improve the courteousness amongst the other PT users.

In Ireland, the National Development Plan Gender Equality Unit (established in the Department of Justice, Equality and Law Reform) provides for advice and support to all bodies working on the National Development Plan to meet the requirement to gender mainstream. The Unit is producing a number of factsheets which outline the main gender

equality issues in different policy areas, as well as mechanisms which have been used to address inequalities between women and men in the relevant area. One of these factsheets covers the transport sector. Research in Ireland shows that women and men have different needs, access and participation patterns with regard to transport. In order to successfully mainstream gender in the transport programmes of the National Development Plan. It is recommended that a range of processes regarding transport needs to be scrutinized:

- Programme governance and decision-making structures
- Needs analysis and data collection
- Communication and consultation
- Measurement and reporting practices

In 2000, the Scottish Executive conducted a research study on women's transport needs in order to set out a number of guidelines for transport policy makers. The research findings suggest a number of areas for improvement in transport provision to better meet the needs of women.

- improvements to safety and comfort include traffic reduction, taxi regulation, surveillance measures / additional staff, better lighting, access to assistance, reduced vandalism, safe car parking and the provision of clean, safe and comfortable facilities.
- improvements to physical access (to transport vehicles and infrastructure) include more low floor buses and the extension of low floor services, consistent provision of lifts and ramps, improvements to roads and pavements, storage space for luggage / buggies on vehicles and the provision and regulation of parking for orange badge holders and in residential areas.
- the provision of more frequent services and improvements to evening / Sunday services and services to specific areas (e.g. rural areas, housing areas and small towns). The need for integrated transport, routes consistent with women's employment and punctual, flexible and reliable services is also highlighted.
- lower fares and reduced costs for taxis, parking charges and petrol , as well as the development of concessionary travel schemes, initiatives such as travel passes, off peak reductions and other options for women on low incomes (and, where relevant, their companions) and the provision of integrated / through ticketing.
- accessible, reliable, up to date and clear timetables and the provision of national information; the information should be in a range of formats and should be distributed at places relevant to women. There is also seen to be a need for increased information about specific issues such as fares, accessibility, routes and safety.
- consultation with women and the involvement of a range of women in all aspects of transport development. This should include strategic and practical issues. It should also include both proactive consultation using a range of methods, and the development and publication of complaints mechanisms, as well as the provision of appropriate training to transport staff.

The report recommends that service providers should use the information and the priorities for change to identify and address elements of their own services, which currently present barriers for women. It is recommended that they should take steps to implement the changes which have been identified and should recognise the benefits of the provision of fully inclusive services. Drawing on the research findings the consultants developed a checklist designed to ensure that the process of developing transport policy, its implementation and the services provided take full account of the needs of women in Scotland. In relation to broader developments in equalities work, it is also suggested that the methods used here should be considered in developing mainstreaming work, as the general principles can be applied more widely. The findings can also be used to link to other areas of policy (e.g. housing, violence against women, employment issues etc) and to identify where changes can complement each other to combat social exclusion (Reid-Howie Associates, 2000).

## **2.3 GENDER DIFFERENCES IN TRAVEL BEHAVIOUR IN THE CIVITAS MOBILIS COUNTRIES**

Next to the available literature discussed above, we take a closer look on the statistics regarding gender and travel behaviour available in one of the MOBILIS countries Denmark.

### **2.3.1 Denmark**

Since 1993 the Danish Technical University has been collecting data on work related travel behaviour throughout Denmark.

Most recent figures from 2006, demonstrate more or less the same trends that were discovered in other European countries.

When looking at work related travel in Denmark in 2006, statistics show in total men travel longer distances compared to women (52.7km work travel a day for an average Danish man whereas 37.2 km daily work travel for an average Danish female).

As for the travel modes used for work purposes, again here differences between sexes occur. In 2006, 62.0% of the kilometres travelled by males were undertaken as car driver, while for women this meant 48.1% of their kilometres travelled. Further, large differences exist on car passenger ship, where 27.1% of the kilometres travelled by women were as car passenger compared to only 8.8% for males.

Other smaller gender differences were found for walking (1% males; 2.2% females), cycling (3.0% males; 3.9% females), bus use (2.4% males; 3.4% females) and train usage (6.5% males; 7.8% females). (Danish Technical University Institute for Transport, 2006)

### 3. SCREENING METHOD GENDER EQUALITY OF MEASURES CIVITAS MOBILIS

How than incorporate these research findings into the CIVITAS MOBILIS project?

For the CIVITAS MOBILIS project, all CIVITAS MOBILIS measures were screened using the Gender Impact Assessment -tool. This Gender Impact Assessment is a tool that involves an assessment of policies and practices to see whether they will affect women and men differently, with a view to adapting these policies/practices to make sure that any discriminatory effects are eliminated (Crawley & O'Meara, 2004). Crawley and O'Meara developed a four-step Gender Impact Assessment tool, which is a set of four questions regarding gender differences that should be answered in relation to any action/measure you are planning to undertake.

**STEP 1:** What do we know to be the different experiences, situations and roles of men and women, which might impact on how they get involved in/are affected by this action? Use statistics and data when available.

**STEP 2:** What are the implications of these for the action being assessed?

**STEP 3:** a) Given these implications, what do we need to do when pursuing this action to promote equality of opportunity for men and women?

b) If any of the implications identified above are 'macro issues' what can you do within the scope of your job to progress action in this area?

**STEP 4:** a) What indicators will you use to measure success (i.e. what will you measure?)

b) What are your targets (i.e. how much do you want) in relation to each of these indicators?

#### 3.1 GENDER SCREENING OF THE MEASURES IN CIVITAS MOBILIS CITIES

In the gender screening of all CIVITAS MOBILIS measures, steps 1 and 2 of the Gender Impact Assessment (Crawley & O'Meara, 2004) were taken into account. Steps 3 and 4 of the Gender Impact Assessment need to be considered in the next phases of development and implementation of the gender audits (Tasks 3 and 4 of the Gender Issues Workplan).

For every CIVITAS MOBILIS city, all gender sensitive measures are being summed up below.

## DEBRECEN

### Measure 6.6 D: Accessibility scheme for the conference centre and pedestrian zone in Debrecen

#### Measure description

This measure aims at the enlargement of the pedestrian area in order to increase the attractiveness of the city centre and prevent the downtown area from high traffic. By enlarging the pedestrian space towards the conference centre, increasing the attractiveness of the city centre, connecting the parking facilities at the new conference centre to the pedestrian zone and establishing a park and walk option at the conference centre.

#### Gender differences

Research indicates women tend to be the ones to do most of the daily shopping and to be the primary caretakers, accompanying their children to school (Reid-Howie Associates, 2000; NDP Gender Equality Unit. Department of Justice, Equality and Law Reform, 2003; Department for Transport, 2006 a; Van Uytven & Wildiers, 2007). Further, research shows that women, more than men, are more adaptable to a sustainable transportation system (Polk, 2003).

### Measure 9.3 D: Car-pooling service for students in Debrecen

#### Measure description

The city of Debrecen plans the development of an internet based car-pooling service. This will be hosted at the website of the municipality.

#### Gender differences

Research indicates women tend to be lesser car owners compared to men. (Reid-Howie Associates, 2000; NDP Gender Equality Unit. Department of Justice, Equality and Law Reform, 2003; Department for Transport, 2006 a; Van Uytven & Wildiers, 2007 ).

### Measure 11.5 D: Sustainable city-traffic development plan for Debrecen

#### Measure description:

This measure wants to unite all stakeholders in the field of transport, traffic and mobility involved in an expert working group, in order to work out a city-traffic development plan. Regular round tables where the most important and critical issues are dealt with are being organised.

#### Gender differences:

Given earlier findings indicating a higher use of public transport by women, lesser car use compared to men, more non-work related travelling, and gender differences in the labour force (e.g. part-time work) (Reid-Howie Associates, 2000; NDP Gender Equality Unit. Department of Justice, Equality and Law Reform, 2003; Department for Transport, 2006 a; Van Uytven & Wildiers, 2007).

### Measure 11.6 D: Integrated and extended cycling network in Debrecen

#### Measure description:

This measure should provide for an integrated cycling network as well as a better connection and accessibility increasing the safety and security of the cyclists. In addition, the city of Debrecen is planning to set up a promotion campaign for cycling.

#### Gender differences:

Research shows that improving and extending the cycling network and further installing safe bicycle racks, should improve the number of women who ride their bicycle in the city. Traffic unsafety is one of the main obstacles why women don't tend to use their bicycle. Moreover, we point to the fact that when setting up a promotion campaign to get women to ride a bicycle, special focus should be put on the health aspects of cycling. (Pilz C. & Panian T., 2001).

<b>Measure 12.4 D: Tramway priority scheme and real-time passenger information system in Debrecen</b>
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<b>Measure description:</b>
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This measure should improve the public transport service by technical developments of trams and therefore reach a higher passenger satisfaction via tram priority and a real-time passenger information system.
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<b>Gender differences:</b>
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Research shows that generally women make more use of public transport and that their main complaint regarding this transport mode is a lack of security. Therefore, installing a system indicating the time remaining until the next vehicle comes along should improve the feelings of security, especially for women (Reid-Howie Associates, 2000).
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## LJUBLJANA

<b>Measure 11.7 L: Participatory planning and promotion of sustainable mobility in Ljubljana with emphasis on safe and increased bicycle use</b>
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<b>Measure description:</b>
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The city of Ljubljana wants to promote cleaner vehicles and alternative fuels as well as issues of sustainable mobility, for example, cycling. Further, one wants to promote an active participation of civil society in mobility planning and implementation. In addition, the cycling infrastructure will become safer.
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<b>Gender differences:</b>
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Research shows traffic unsafety is one of the main obstacles why women don't tend to use their bicycle (Pilz C. & Panian T., 2001). Improving the safety of bicycle infrastructure would therefore especially benefit women's cycle use. Further, women are the primary role models for their children, because most mothers accompany their children to schools, sports clubs, music schools ... (Reid-Howie Associates, 2000; NDP Gender Equality Unit. Department of Justice, Equality and Law Reform, 2003; Department for Transport, 2006 a; Van Uytven & Wildiers, 2007). Moreover, Polk shows women are more adaptable to a sustainable transportation system than men (Polk, 2003).
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<b>Measure 11.8 L: Set-up of information points and campaign on clean vehicles and alternative fuels in Ljubljana</b>
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<b>Measure description</b>
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The city of Ljubljana wants to promote the use of alternative fuels and sustainable mobility by educating information personnel in the city administration and the development of info points.
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<b>Gender differences</b>
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Research shows women tend to be more adaptable to a sustainable transportation system than men (Polk, 2003).
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## ODENSE

<b>Measure 6.10 O: Implementation of environmental zones in Odense</b>
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<b>Measure description:</b>
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This measure aims at increasing the quality of life for city residents and users by reducing the negative impacts of motor vehicles on residential environments introducing measures to limit/restrict/change vehicle access, speed, road space, road geometry and noise. Further, one tries to catalyse social processes to increase the use of public road space for social interaction. Odense indicates involving the public inputs in order to indicate those environmental zones.
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<b>Gender differences:</b>
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Given the results of earlier research, women tend to be more sensitive compared to men regarding the negative impact of motor vehicles on environment and traffic safety (Polk, 2003). In addition, one of the main reasons for women not to ride a bicycle is traffic unsafety (Pilz C. & Panian T., 2001).
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<b>Measure 8.7 O: Integration and quality improvements of sustainable modes in Odense</b>
<b>Measure description</b>
This measure will integrate different non-motorised and public modes (buses, bicycles, taxis and car sharing) by institutional and technological coordination and publicity-related activities with the aim of offering viable alternative transportation means for citizens. A number of technical innovations and new services will be implemented which will lead to quality improvements of the sustainable transport modes (bus priority, bike-friendly interchanges, common payment system, traveller information services).
<b>Gender differences</b>
Research indicates women are the main public transport users and play an important role model for their children when choosing transport modes in accompanying them to school, leisure activities... (Reid-Howie Associates, 2000; NDP Gender Equality Unit. Department of Justice, Equality and Law Reform, 2003; Department for Transport, 2006 a; Van Uytven & Wildiers, 2007).

<b>Measure 11.10 O: Interactive traffic training for children in Odense</b>
<b>Measure description:</b>
With this measure the city of Odense wants to develop and produce an internet based behavioural traffic training programme for children.
<b>Gender differences:</b>
Earlier findings indicate that boys not only go to school more often using their bicycle, but also they feel much more at ease riding this bicycle in daily traffic. Girls tend to feel much more unsafe in busy traffic (Petermans A. & Zwerts E., 2006)

<b>Measure 11.11 O: Personal transport choice marketing in Odense</b>
<b>Measure description:</b>
The aim of this measure is to provide unique information to 25 000 inhabitants about environmentally friendly mobility modes in Odense via direct personal marketing.
<b>Gender differences:</b>
Earlier research indicates women to be more sensitive using environmental friendly mobility modes (Polk, 2003). This seems contradictory those research stating men are the most important bicycle users (Reid-Howie Associates, 2000; NDP Gender Equality Unit. Department of Justice, Equality and Law Reform, 2003; Department for Transport, 2006 a; Van Uytven & Wildiers, 2007).

## TOULOUSE

<b>Measure 6.2 T: Public space redesign in Toulouse</b>
<b>Measure description:</b>
With this measure the city of Toulouse wants to increase the use of soft mobility modes on the corridor of the 2 <sup>nd</sup> subway line by renewing and redistributing the public space: extension of the pedestrian areas, development of cycle networks, ...
<b>Gender differences:</b>
During earlier research issues that were raised by women's groups regarding spatial planning because of their social roles, were the construction of dished kerbs, benches, provision of enough public space for social interaction, trees and bushes, ... (NDP Gender Equality Unit. Department of Justice, Equality and Law Reform, 2004; Van Uytven & Wildiers 2007).

<b>Measure 6.3 T: Implementation of the Urban Mobility Plan in the Blagnac area</b>
<b>Measure description:</b>
The Local Urban Mobility Plan in the city centre and the development of associated infrastructures aims at reducing the number of private cars, promoting the use of sustainable modes like bicycling and walking and making the population more aware about the need of changes in mobility behaviour.
<b>Gender differences:</b>
Research shows men are the main group of car owners, using lesser sustainable modes compared to women (Reid-Howie Associates, 2000; NDP Gender Equality Unit. Department of Justice, Equality and Law Reform, 2003; Department for Transport, 2006 a; Van Uytven & Wildiers, 2007). Further, women tend to be more sensitive compared to men regarding the negative impact of motor vehicles on environment and traffic safety (Polk, 2003).
<b>Measure 7.1 T: Innovative multimodal PT contracts, services and electronic ticketing in Toulouse</b>
<b>Measure description:</b>
The city of Toulouse aims at totally renewing and improving its ticketing and tariff system. Electronic support and multimodal pricing should encourage an increased use of the public transport services and provoke multimodal behaviour. The city indicates developing and implementing inventive PT contracts targeting specific user groups.
<b>Gender differences:</b>
Research shows women to be the main PT users group compared to men (Reid-Howie Associates, 2000; NDP Gender Equality Unit. Department of Justice, Equality and Law Reform, 2003; Department for Transport, 2006 a; Van Uytven & Wildiers, 2007).
<b>Measure 8.3 T: Improving the accessibility of PT services in Toulouse</b>
<b>Measure description:</b>
With this measure Tisséo-SMTC aims at developing an innovative charter that should standardise and improve the accessibility of public transport services with a special focus on disabled persons. Analysing the whole PT network accessibility and creating and applying an overall framework to ensure an accessible PT network are the main objectives.
<b>Gender differences:</b>
When looking from a gender perspective, this improvement of accessibility can also be extended towards women. Given the fact that women are more frequent PT users compared to men, and the prime children care takers (women accompanying small children or pushing prams), accessibility of PT is an issue especially women are confronted with. (Reid-Howie Associates, 2000; NDP Gender Equality Unit. Department of Justice, Equality and Law Reform, 2003; Department for Transport, 2006 a; Van Uytven & Wildiers, 2007).
<b>Measure 8.4 T: Integration of the demand responsive transport as a complementary service to PT in Toulouse</b>
<b>Measure description:</b>
This measure aims at standardising and increasing the efficiency of transport-on-demand services in low density areas, improving the connection with the core public transport network, improving the services of the reservation centre and extending the transport-on-demand services to other low density areas.

**Gender differences:**

From a gender point of view we approve of this policy measure. Especially since older women living in areas with low PT frequencies, often not owning a drivers licence, have the risk of becoming completely immobile (Reid-Howie Associates, 2000; NDP Gender Equality Unit. Department of Justice, Equality and Law Reform, 2003; Department for Transport, 2006 a; Van Uytven & Wildiers 2007). Not only older women, but women in general would profit from this measure, since research indicates women tend to be lesser car owners compared to men. Especially in low-density PT areas such a transport-on-demand service would be very useful. A call-on-demand service raises the safety of women due to preventing them from walking alone or waiting at desolate places. By day at low traffic hours the service of the public transport is adjusted to the individual traffic but elderly people or women with children have at this time higher mobility needs than other groups due to their different habits and needs (Reid-Howie Associates, 2000; NDP Gender Equality Unit. Department of Justice, Equality and Law Reform, 2003; Department for Transport, 2006 a; Van Uytven & Wildiers, 2007).

**Measure 9.1 T: Promotion of car-pooling and integration with PT services in Toulouse****Measure description:**

With this measure the city of Toulouse aims at improving and extending the car-pooling use as a service complementary to public transport. This development of car-pooling will propose a diversified transport means to those user categories not much concerned by PT, especially the ones living in a peripheral area with low PT density. The main objective of this policy measure concerns the development of a personalised mobility advice, associating car-pooling and other transport modes.

**Gender differences:**

Research indicates women tend to be lesser car owners compared to men. Moreover, they tend to be the main user group of public transport (Reid-Howie Associates, 2000; NDP Gender Equality Unit. Department of Justice, Equality and Law Reform, 2003; Department for Transport, 2006 a; Van Uytven & Wildiers, 2007).

**Measure 9.2 T: Implementation of a new car-sharing service linked to PT services in Toulouse****Measure description:**

This measure aims at developing a car-sharing service as a complementary mobility service for a target panel of users that will have access with specific and interesting conditions to other mobility services, such as PT.

**Gender differences:**

Research indicates women tend to be lesser car owners compared to men, therefore there could be some potential amongst women regarding car-sharing (Reid-Howie Associates, 2000; NDP Gender Equality Unit. Department of Justice, Equality and Law Reform, 2003; Department for Transport, 2006 a; Van Uytven & Wildiers, 2007).

**Measure 11.1 T: Awareness raising campaign for changing mobility behaviour in Toulouse****Measure description:**

With this measure the city of Toulouse wants to develop an individualised marketing approach to promote PT use and multimodal behaviour consulting a users panel of 200 persons. Further, the city wants to set up an awareness campaign for sustainable mobility, highlighting the benefits of clean vehicles and alternative modes, aiming at a modern, clean and attractive image of PT, especially the new CNG busses. This individual marketing will provide an output about the feasibility of behavioural changes for a representative sample of 200 persons. The aim is to create this panel and analyse their needs in terms of transport in the agglomeration and to propose them through an individual approach, sustainable solutions for their mobility. The general campaign will increase the knowledge of the population about the links between their mobility behaviour and the quality of air and other environmental issues.

<b>Gender differences:</b>
Earlier research showed women make more use of public transport compared to men (Reid-Howie Associates, 2000; NDP Gender Equality Unit. Department of Justice, Equality and Law Reform, 2003; Department for Transport, 2006 a; Van Uytven & Wildiers, 2007). Further, women tend to be more sensitive in using environmental friendly mobility modes (Polk, 2003).

<b>Measure 11.2 T: Promotion of bicycle use and integration with PT services</b>
<b>Measure description:</b>
This measure aims at analysing the current bicycle use in the Greater Toulouse and defining an action plan for its implementation with a close integration in PT services.
<b>Gender differences:</b>
Research shows that on the one hand more men than women cycle to work (NDP Gender Equality Unit. Department of Justice, Equality and Law Reform, 2003), while on the other hand women tend to be more sensitive in using environmental friendly mobility modes, compared to men (Polk, 2003).

<b>Measure 11.4 T: Commuter and school mobility plans in Toulouse</b>
<b>Measure description:</b>
With the introduction of commuter and school mobility plans, the city of Toulouse aims at introducing dedicated PT services and infrastructure, the improvement of accessibility and the development of complementary services and the assessment of the trips made from and to school and possible traffic safety issues surrounding schools. The expected commuter plans include a wide set of topics; PT use, bicycle use and freight delivery.
<b>Gender differences:</b>
From a gender viewpoint, we stress that research indicates women tend to practice more part-time jobs than men. Regarding school mobility plans, we point to earlier research findings indicating women tend to be the ones bringing children to school, more than men (NDP Gender Equality Unit. Department of Justice, Equality and Law Reform, 2003; Department for Transport, 2006 a; Van Uytven & Wildiers, 2007).

## VENICE

<b>Measure 9.4 V: Expansion and diversification of the car-sharing scheme in Venice</b>
<b>Measure description:</b>
With this measure the city of Venice wants to introduce a totally new scheme for the car-sharing service, reducing the number of corporate vehicles and using cars with low emission standards. Further, they want to enlarge the innovative car-sharing scheme already implemented in the city of Venice with alternative fuels and give the possibility to customers with disabilities to join.
<b>Gender differences:</b>
Earlier findings indicate that on average women tend to own fewer cars than men. In addition, researchers state women are the primary child care takers, do most of the shopping tasks and are often part time employees. Therefore, they are the ones asking to buy a second car, while mostly this second car is being used only a few hours a day (Reid-Howie Associates, 2000; NDP Gender Equality Unit. Department of Justice, Equality and Law Reform, 2003; Department for Transport, 2006 a; Van Uytven & Wildiers, 2007).

<b>Measure 11.9 V: Promotion of safe and increased bicycle use in Venice</b>
<b>Measure description:</b>
With this measure the city of Venice wants to increase significantly the use of bicycles in daily urban trips, by specifically targeting residents for urban displacements and shoppers.

**Gender differences:**

Earlier research indicates women as doing most of the family shopping (Reid-Howie Associates, 2000; NDP Gender Equality Unit. Department of Justice, Equality and Law Reform, 2003; Department for Transport, 2006 a; Van Uytven & Wildiers, 2007 ). In addition, research shows that improving and extending the cycling network and further installing safe bicycle racks, should improve the number of women who ride their bicycle in the city. Traffic unsafety is one of the main obstacles why women don't tend to use their bicycle. Moreover, we point to the fact that when setting up a promotion campaign to get women to ride a bicycle, special focus should be put on the health aspects of bicycling (Pilz C. & Panian T., 2001)

**3.2 CHOSEN GENDER MEASURES BY CIVITAS MOBILIS CITIES**

Based on this gender screening of all MOBILIS measures, members of the gender issues task force all indicated one or more 'gender sensitive' measure from their own city to work on.

Below all by the cities chosen gender measures are listed:

**City of Debrecen:**

- Measure 11.6 D: Integrated and extended cycling network in Debrecen  
*Method used:* survey on citizens' satisfaction regarding new cycling racks (specific gender focus)

**City of Ljubljana:**

- Measure 5.4 L: Implementation and large-scale deployment of bio-diesel and CNG fleets in Ljubljana  
*Method used:* survey on public transport use and non-use patterns in the city of Ljubljana and overall satisfaction with the services provided

**City of Odense:**

- Measure 11.10 O Interactive traffic training for children in Odense  
*Method used:* evaluation of the interactive traffic training for children (differences between boys and girls)

**City of Toulouse:**

- Measure 9.1: Promotion of carpooling and integration with PT services in Toulouse  
*Method used:* evaluation of the number of carpool subscribers
- Measure 11.2: Promotion of bicycle use and integration with PT services in Toulouse  
*Method used:* evaluation of the number of cyclists
- Measure 7.1: Innovative multimodal PT contracts, services and electronic ticketing in Toulouse  
*Method used:* survey on barriers and opportunities regarding PT amongst users and non-users

**City of Venice:**

- Measure 9.4 V: Expansion and diversification of the car-sharing scheme in Venice  
*Method used:* car sharing service survey on users behaviour and needs (specific gender focus)

## Chosen gender measure by the city of Debrecen

### Measure 11.6 D: Integrated and extended cycling network in Debrecen

This measure should provide for an integrated cycling network as well as a better connection and accessibility increasing the safety and security of the cyclists. In addition, the city of Debrecen is planning to set up a promotion campaign for cycling.

In the framework of the CIVITAS MOBILIS project, the Department of Sociology and Social Policy of the University of Debrecen has realized a survey on citizens' satisfaction regarding the newly placed bicycle racks financed by the project. The research has been carried out with professional questionnaires recruited from the students attending sociology between 21 and 24, October 2007 with quota sampling, where the sample size was N=295.

The poll takers not only asked cyclists about their opinion on the new cycling racks, but also counted the number of rack-users during given time-periods: the average number of cyclists using the racks is 12,90 per period. Men tend to use the racks more often than women (7,24 bikes driven by a male compared to 5,66 driven by a female on average).

Further, results state that men are significantly more intensive cyclists than women: 62% of men cycle on a daily rate, while this proportion is only 56% for women. The average distance of cycling on a working day is 10,139 km for men, and only 7,577 km for women. These results strengthen the hypothesis that men see cycling more as a sporting activity and joy while women use bicycles for more practical reasons, primarily for transportation and in course of daily business and administrative activities.

Further, women prove to be especially active cyclists in case of doing the shopping, doing everyday administration and escorting children to school, while men are significantly underrepresented in case of these cycling purposes.

Another interesting finding from this survey was that men tend to leave their bicycle in front of the building where they were heading for, while women tend to use racks and choose to walk to the exact place they were going to, this way often risking to leave the bicycle out of eyeshot. Also noteworthy that men have more successfully found opportunities of leaving the bicycles inside the building of their working place, this way they significantly decrease the risk of theft and damage.

## Chosen gender measure by the city of Ljubljana

### Measure 5.4 L Implementation and large-scale deployment of bio-diesel and CNG fleets in Ljubljana

September 2007, Ljubljana Public Transport Company (LPP d.d.) performed a survey on public transport use and non-use patterns and overall satisfaction with the PT service in the city of Ljubljana. August 2008 the city of Ljubljana used survey data for additional analysis to find out any significant gender differences among users and non-users.

Amongst users of Ljubljana public transport services over 58 % are women and 42 % are men, and women use public transport services more often.

Amongst PT users, males and females are differing regarding travel motives when using public transport. Women more often stated that:

- (1) public transport is the simplest way of transport in and through the city (16%) and
- (2) having no drivers' licence (14 %) in comparison to men.

Male non-users stated many "impracticalities" regarding public transport use

- many things to do,
- cycling is more convenient,
- too much luggage to go on a bus,
- other means are more adaptable,
- uncomfortable buses,
- bus stations are too far away.

Female non-users on the other hand stated more often reasons for their non-use being

- congestion,
- lack of knowledge about bus lines and
- health issues.

Further, important differences were identified in answers regarding second transport option amongst the PT users.

Women tend to drive the car less compared to men (41% against 56%) when asking for a transport option next to PT.

This difference is even larger for the bicycle as a second transport option. 27% of the women PT-users identified the bike as a second transport option compared to 46 % males.

Women are also much more often co-drivers in the car (30 % against 15 %).

Amongst PT non-users differences are smaller. 75% of male PT non-users and 69% of female PT non-users identify the car as their preferred means of transport. Further, male non-users are use the bicycle more often compared to female non-users (35% male cyclists against 25% female cyclists), while women non-users tend to walk more than male non-users (19% against 14%). Also interesting to note is that amongst non-users more respondents are walking (17 %) compared to the PT-users (7 %).

Regarding public transport's contribution to diminishing environmental pollution in the city, no significant difference was found between both sexes. Though one difference amongst male public transport users was observed in terms of educational levels. Male PT users with higher education proved to be more supportive to the assumption that public transport is protecting the environment compared to male PT users with lower levels of education. Such difference was not observed amongst female PT users.

### **Chosen gender measure by the city of Odense**

#### **Measure 11.10 O Interactive traffic training for children in Odense**

Over 4,000 children are killed in traffic accidents in Europe every year. Years of experience with behavioural training has already documented that traffic accidents can be reduced and thus mobility choice for children improved. There is a need, however, for new innovative tools to support and improve behaviour-based training programmes. That's why the city of Odense has developed the interactive training programme B-game, an internet based behavioural traffic training programme for children.

During the project period, the B-game has been used 1,694 times. 50.4% of the trials were made by girls. Boys succeeded all 11 missions 86.5% of the trials while girls succeeded them in 84.1% of the trials. This shows that the pupils tried until most of them succeeded all 11 missions and that the difference between the boys and the girls is almost none existing in this field.

### **Chosen gender measures by the city of Toulouse**

**City of Toulouse:** integration of gender dimension into evaluation activities in 3 measures

- Carpooling
- Innovative multimodal PT contracts, services and electronic ticketing
- Promotion of bicycle use and integration with PT services

### **State of the art gender differences regarding mobility in the city of Toulouse**

Based on the Family Travel Survey or 'Traveling Survey Greater Toulouse' conducted in 2004 amongst the inhabitants of Greater Toulouse, where 5004 families were questioned.

The aim of this survey was to understand inhabitants' transport habits (origin and destination, purpose, transportation modes used, etc...) throughout Greater Toulouse.

All results listed refer to significant differences between men and women questioned.

Differences in travel modes

- Women travel more by PT and on foot;
- Men travel more by car and by motorbike;
- Twice as many women don't own a driving license compared to men.

## Differences in travel motives

- Women travel less for compulsory reasons (work, studies) than men;
- Women travel more than men for shopping and other reasons;

## Differences in travel distance

- Women travel shorter distances than men;
- Women mainly travel within the city center and the outer suburban area, and between those

**Measure 9.1: Promotion of carpooling and integration with PT services in Toulouse**

Measure 9.1 plans to increase the use of carpooling in the agglomeration of Toulouse through the development of a dedicated service and its integration with other sustainable transport modes such as cycling, public transport, etc.

The city of Toulouse researched whether women carpool more compared to men and how the share of male and female car pool subscribers changed over time.

Findings show that in November 2006, 54% of carpool subscribers were female compared to 46% male carpoolers. The share of female subscribers slightly diminished when looking at the situation in June 2008: 51% female subscribed carpoolers compared to 49% male. These figures relate to the number of subscribers, not to the number of journeys traveled.

So based on the findings above no real difference between males and females regarding carpooling was identified.

**Measure 11.2: Promotion of bicycle use and integration with PT services in Toulouse**

Promoting bicycle use in Toulouse has been going on for a couple of years. In this measure, an integration of the different promotion efforts and its use in combination with the public transport providers is scheduled. A survey conducted in 2004 in Toulouse, shows that women tend to cycle less compared to men. In the city center, figures show women cycle 21% of the time compared to 27% of the time by men. The same difference exists in the Toulouse suburbs, periphery and the rest of the Toulouse agglomeration.

**Measure 7.1: Innovative multimodal PT contracts, services and electronic ticketing in Toulouse**

In this measure, the city of Toulouse aims to totally renew and improve its PT ticketing and tariff system. Part of this renewal was a survey carried out in November 2007 amongst clients and non-clients of the PT company Tisseo.

The first interesting finding from this survey showed that 2 out of 3 PT clients were female, 1/3<sup>rd</sup> being male. Further, the older the age group, the more females are represented (54% females in the age group of <18 years and 69% females in the age group of > 60 years). Moreover, the percentage of women is significantly higher among sporadic and occasional clients (72% and 68% females) compared to regular users (61% females). This is also reflected when looking at female and male PT users separately as a group. From all female users 37.9% are frequent users; 33% are sporadic users and 29% occasional. While 47% of all male clients are frequent users; 26% are sporadic ones and 27% uses PT occasionally.

The reasons for these gender differences are not clear. The survey could discover part of the answer though. When asked about primary expectations regarding PT, these expectations prove to be fairly similar for both sexes. Though men look more for the most suitable means of transport for their journey compared to women. While women seek more of a means of transport where they feel comfortable and safe. Further, among holders of monthly season tickets, men are more interested (47%) than women (37%) in a season ticket with no validity limit and with direct debit which can be stopped when desired. But apparently, having a driving licence or car availability are not one of the factors that on their own explain the higher proportion of women compared to men that use PT.

Looking at non-PT users, when asked about their earlier PT experiences, women respondents claim to have used PT more often compared to men when there is a PT

alternative to the private car (44% of females compared to 30% of males). When asked about the main barriers for them to use PT, men quote more often than women the speed of the car and the lack of frequency of buses (35% compared to 28%). Whereas women state more often than men the fact that they have children or parcels to transport (10% compared to 2.5%). Further the comfort and the speed of the car are further barriers for PT use, both for men and women. Disadvantages of the car on the other hand are its cost (18% males, 14% females) and the stress that it generates (53% for male users and 43% for female users). When asked what would incite non-clients to use PT rather than their car, it is basically the offer that needs to be developed. More men than women call for more lines, a denser network, fewer changes and faster. While women are more insistent than men on an improvement in regularity and a more attractive pricing structure.

### **Chosen gender measure by the city of Venice**

#### **Measure 9.4 V: Expansion and diversification of the car-sharing scheme in Venice**

With this measure the city of Venice wants to introduce a totally new scheme for the car-sharing service, reducing the number of corporate vehicles and using cars with low emission standards. Further, they want to enlarge the innovative car-sharing scheme already implemented in the city of Venice with alternative fuels and give the possibility to customers with disabilities to join.

During the MOBILIS project, the Venice car sharing fleet increased from 22 already existing vehicles to 57 at the end of the project, so 35 vehicles have been purchased during the project. In May 2008, there were 4.468 users of the car sharing system of whom 2.672 are men (59.8%), 1.266 are women (28.3%) and 530 are firms (11.9%).

The typical users profile for car sharing across Europe are young males between the age of 25 and 35. This is confirmed by findings in Italy, where national data collected by ICS show that men (60% men vs 40% women) between the age of 25 and 35 are the main users of the system, that men use the service for work reasons more than women.

This profile could suggest that there is scope for increasing the use of car sharing on the part of women, particularly because it eliminates costs and maintenance issues which are often negative aspects of car ownership for young women, or it can often replace the second car in a household, the driver of which is often a woman.

#### *Needs assessment survey amongst car sharing users*

In order to investigate why car sharing is less popular amongst women and to give an indication on how the service could be improved in order to attract more women, the city of Venice conducted a survey amongst car sharing users.

Therefore, the city developed a questionnaire made up of 14 questions and distributed it to all car sharing users. Questionnaire collection remained open from May to November 2007. During that period 158 questionnaires were collected. That represents a sample of 4 % of the total users (3875) in that period. 74% of the responses are from men and 26% are from women.

Results show that regarding women needs, an increased network of the service (more pick up and drop off points) is the improvement most requested by both men and women (36,1%). However, in addition to an increase in pick up and drop off points, women mainly want:

- availability of bigger cars, minibuses (4 cases - 9,8%)
- the possibility of carrying animals (3 cases - 7,3%)
- the possibility of booking further in advance (3 cases - 7,3%)
- greater availability of cars in general (2 cases - 4,9%)

Women are not particularly interested in accessories apart from the stereo (7,3%) and don't feel the need for satellite navigators or GPS which men instead foresee as interesting (4,3% vs no mention on the part of women).

Further, women are more frequently light users and use the car sharing service more for leisure related activities (43,9% vs 34,2%) and to run errands (39% vs 37,6%). Men use it

more for work (45,3% vs 36,6% of women) and for activities related to family management (51,3% vs 43,9% of women).

The typical car sharing user in Venice can thus be described as follows. He is male, between the age of 30 and 45, is married with children and has his own car as well as a car sharing car. Car sharing is mostly used for family related and leisure activities.

The questionnaire results suggest that men and women have different ideas regarding improvements when it comes to a car sharing service. In addition to taking into consideration the feedback from male and female users when investing in improvements of the system, there is an opportunity for ASM (operating the Venice car sharing service) to specifically target women ( communication campaign, etc ) in order to increase the number of women availing of the service. One of the possibilities currently being considered is the creation of specific gadgets with information on car sharing to be distributed through informal channels to women in places such as gyms (perhaps following pilates or aerobics classes) or hairdressers or women's clothes shops on a specific day.

## 4. CONCLUSION

When looking at a rather new area in the field of transport and mobility, especially gender, criticism and disbelief are not far away. Why is it necessary to have a closer look at this issue? Is it really necessary to take it into account? And how can we deal with it?

Hopefully the above could shed some light on these questions. After screening the research available in the UK, Ireland, Sweden, Belgium and the Netherlands, indeed there prove to be differences between men and women in the way they travel, their travel motives and the barriers faced.

As for travel motives, men tend to travel mainly for work purposes, while women tend to travel more for caring related activities (escorting children to school, shopping etc.). Further, trip chaining appears to be a female activity. Moreover, research in Belgium shows that this travelling for caring responsibilities is partly the reason why women choose part time jobs closer to home that has a negative effect on their professional career.

Regarding travel modes, what draws attention is the female use of PT throughout the countries examined. The case of Toulouse illustrates this wonderfully. Two in three Toulouse PT users are female.

Further, when looking at the new car sharing scheme in the city of Venice, the average user appears to be male between the age of 30 and 45, is married with children and has his own car as well as a car sharing car. Two in three users of the car sharing scheme is male, one in three female.

When it comes to cycling, this mode seems to be more important to men than women. The MOBILIS case of Debrecen illustrates this.

As for car use, research shows women tend to use the car less, are more often car passengers and drive fewer kilometres. Although car use is very popular amongst women with children in order to combine caring tasks and trip chaining.

This leads us to gender differences regarding travel motives. Literature shows generally men are more likely to make more work-related trips than women, whereas women make more shopping and personal business trips mostly accompanying someone, i.e. trips to school, after school activities, bank, post office, library, playground, doctor or optician.

Because of these differences, literature reveals certain barriers to travel. Often bus routes do not meet women's needs to travel off-peak, on non-radial routes and trip chaining. The same goes for cycling. Cycling is not seen as a viable mode of transport, primarily due to journey complexity and safety concerns. The car does meet all of these issues. It can easily be used to combine trips, carrying groceries, escorting trips and scores high regarding personal safety.

Further, some research stresses the fact that transport and mobility are still very male domains and that female needs are often left behind. That is why in some countries the first steps towards acknowledging these different needs are taken into account. In the UK the Department for Transport has set up its Gender Equality Action Plan 2007-2010, while in Scotland, Ireland and Flanders the first small steps towards gender recommendations in this field are taken.

## 5. RECOMMENDATIONS

Based on previous research, a number of recommendations were already made:

**The Department for Transport** states in its **Gender Equality Scheme 2007-2009** to:

- Deliver better access to jobs and key services such as health care, education and food suppliers for both women and men.
- Ensure that all new and existing policies are assessed for their impact on gender equality, as part of a wider equality impact assessment, to ensure effective targeting of policy and resources.
- Work towards the Department for Transport 2008 diversity target to increase the representation of women in the Senior Civil Service and its feeder grades, as set out in the Department for Transport Diversity Delivery Plan.
- Consider how procurement practice can help to deliver gender equality.
- Increase awareness of the gender equality duty across the Department, its agencies and its non-departmental public bodies.
- Eliminate unlawful gender discrimination and harassment and promote equality of opportunity between the sexes.

**Hamilton** (2000) has drawn up a gender audit checklist to use by transport operators, which can be used to assess how well transport providers meet women's transport needs. However, it is not clear to what extent this has been used successfully to change transport practice.

**Skinner** (2005) emphasises the need for a flexible, reliable, efficient and safe PT system to offer women a real alternative to private transport.

**Reid Howie** (2000) point to the need for accessible low floor buses with plenty of space for buggies.

The reinstatement of bus conductors was called for in order improve accessibility and safety (**Hamilton 2000**). A greater awareness of the needs of women travelling with children (such as difficulties boarding and alighting, particularly with babies and toddlers), and the provision of assistance where needed, would be of value.

**Skinner** (2005) argues that it is important for PT to match women's employment needs, which may not be a 'nine to five', Monday to Friday basis.

**Reid Howie** (2000) suggest that a generally-improved PT system is needed with better services on evenings and weekends and with better integration between services. The radial nature of bus routes in many areas (with routes going into town centres from different directions, but not, for example, directly between suburbs) does not meet the needs of many women, and this should be taken into account by service providers. Routes should match with women's needs to transport children to school and to access shopping facilities

**Hamilton and Gourlay's** (2002) study, **Bostock's** (2001) study highlight the need for affordable and direct PT to hospitals to ensure that all women, and particularly those on a low income and with caring responsibilities, are able to attend hospital appointments.

Finding ways to reduce the time costs associated with travelling by PT would mean women are less reliant on the car (**Skinner 2003, 2005**).

**Department for Transport** (2006 a) found that both men and women felt that their security would be enhanced by CCTV at bus stops and train stations, a well lit environment, visibility of bus stops from the road, and the presence of staff at train stations.

**Reid Howie** (2000) noted the importance of improving perceived safety on the journey to work, particularly when this involved shift patterns or employment in isolated areas.

Improvements to comfort and safety, including taxi sharing and regulation, surveillance measures and additional staff on public transport, easy access to assistance, better lighting, providing clean and comfortable facilities and reducing vandalism, and providing safe car parking were suggested.

**Reid Howie (2000):** The provision of reduced fares for women on lower income, and of integrated/'through ticketing' would be beneficial.

**Reid Howie (2000)** suggests there should be greater consultation with women in the planning and development of transport provision, to ensure that the services provided meet the needs of women.

Research by **Pilz & Panian (2001)** shows that improving and extending the cycling network and further installing safe bicycle racks, should improve the number of women who ride their bicycle in the city. Traffic unsafety is one of the main obstacles why women don't tend to use their bicycle. Moreover, they point to the fact that when setting up a promotion campaign to get women to ride a bicycle, special focus should be put on the health aspects of bicycling.

Based on their research **Van Uytven & Wildiers (2007)** formulated a number of recommendations aimed at the mobility department of the city of Leuven:

- increase the female participation on preparation, implementation and evaluation of mobility measures at the local level by providing for information regarding mobility issues at locations women visit (such as schools, childcare centres, shops, etc.
- increase the number of lockers to temporarily leave heavy shopping bags while shopping in the city centre,
- increase the number of clean and accessible public toilets in the city centre,
- increase the of room for storage of bike trailers and carrier cycles,
- introduce a pram renting service to change travel modes when arriving in the city centre by bicycle or bus,
- increase accessibility for prams on buses and especially improve the courteousness amongst the other PT users.

The recently completed EU Research Project **TRANSGEN, Gender Mainstreaming European Transport Research and Policies (2007)** recommends:

- Gender mainstreaming transport concerns how overall priorities in transport are made. High-level strategic policy-making should include and address the issue of gender equality and sustainability simultaneously and assess how they influence each other.
- Explicit gender equality policies in the transport sector need to be developed at national and EU level. Both in terms of women's representation and in terms of gender dimensions in the transport sector. 'Adding' women is necessary, but not sufficient.
- Mainstreaming gender equality into transport policy should consider how transportation affects women and men. Accordingly, future transport policy should emphasise accessibility as well as mobility.
- Traffic planners and policy-makers need to take into account gender from a user perspective and to integrate women's values, needs and interests in transport policy, as well as incorporate the voices of women users in planning.
- Mainstreaming gender equality into the transport sector should focus on the political and organisational elements in public and private transportation structures. Equal representation in decision-making at all levels needs to be ensured.
- Gender mainstreaming the transport sector includes the creation of inclusive work environments to support the employment of more women in the sector. There is an urgent need for organisations to raise awareness of gender stereotypes in the organisation.

Based on the research done in the **CIVITAS MOBILIS project**, the following recommendations are stated:

- In order to assure for a sustainable mobility system based on equality, gender should be a topic of interest for all current and future EU mobility projects
- When planning for and developing sustainable mobility measures, a gender screening of these measures should be put into place using the Gender Impact Assessment tool
- When evaluating sustainable mobility measures, differences between males and females should be taken into account
- When planning mobility measures in the field of PT, please bare in mind that overall most of the current users are female especially elderly women and women with caring responsibilities. So please make sure you include facilities that are of particular interest to this large user group. Offer accessible low floor buses with plenty of space for buggies and groceries, the provision of (safety) assistance where needed (social safety is an important issue for most women), match women's employment needs, which may not be a 'nine to five' or a Monday to Friday basis. When you are trying to reach male target groups in using PT, research in the city of Toulouse shows male monthly season ticket holders are more interested in a season ticket with no validity limit and with direct debit which can be stopped when desired compared to women. Further, men indicate to be willing to use PT when it is as fast as using the car and frequency is high.
- When planning cycling measures, keep in mind that the majority of cyclists are male. When trying to convince women to cycle more, again bear in mind that caring responsibilities and trip chaining are important to women. Therefore looking at earlier recommendations made by other researchers, improving and extending the cycling network and further installing safe bicycle racks, should improve the number of women who ride their bicycle in the city. Traffic unsafety is one of the main obstacles why women don't tend to use their bicycle. Moreover, when setting up a promotion campaign to get women to ride a bicycle, special focus should be put on the health aspects of bicycling. In addition, try to increase the storage room for bike trailers and carrier cycles. Further, introduce a pram renting service to change travel modes when arriving in the city centre by bicycle or bus.
- Regarding car sharing measures research shows the typical users profile for car sharing across Europe are young males between the age of 25 and 35. This given was confirmed by research conducted in the city of Venice. In the MOBILIS car sharing scheme almost 2 in 3 users are male, compared to 1 in 3 female users. The city of Venice wanted to research what needs should be met in order to convince women to become part of the car sharing scheme. Research shows, an increased network of the service (more pick up and drop off points) is the improvement most requested by both men and women. However, in addition to an increase in pick up and drop off points, women mainly want:
  - availability of bigger cars, minibuses
  - the possibility of carrying animals
  - the possibility of booking further in advance
  - greater availability of cars in general
 Women are not particularly interested in accessories apart from the stereo and don't feel the need for satellite navigators or GPS which men instead foresee as interesting.
- Finally try to increase the female participation on preparation, implementation and evaluation of mobility measures at the local level by providing for information regarding mobility issues at locations women visit (such as schools, childcare centres, shops, etc.). After its needs assessment regarding a car sharing scheme, the city of Venice is considering is the creation of specific gadgets with information on car sharing to be distributed through informal channels to women in places such as gyms (perhaps following pilates or aerobics classes) or hairdressers or women's clothes shops on a specific day.

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