USEmobility Survey of Users who have changed their Mobility-Mix

1. Introduction

1.1 Aims of the Survey

USEmobility surveyed citizens in six European countries to analyse their behavioural patterns when choosing their mode of transport. A representative picture has to be drawn of the findings. The aim of the survey is to discover the individual reasons that lie behind selecting a mode of transport. Particular focus is placed on the reasons that, from the point of view of the survey participant, led them to decide to make more use of an eco-friendly mobility mode, such as public transport. The analysis is set up to reveal the extent of the role played by multimodal travel.

The survey is very comprehensive. It deals with factors relating to the range of mobility services on offer as well as with factors rooted in the mobility needs and the traveller's personal circumstances. It highlights public transport's potential for attracting new customers and simultaneously examines factors relating to customer retention.

1.2 Survey Approach

The survey is solidly anchored in a representative selection of citizens who have changed their preferred mode of transport in the last five years. We call these travellers swing-users. We understand this as including both, people who have completely changed to another mode of transport as well as travellers who have altered the weighting (of a particular mode) within their mix of multiple transport modes (‘mobility-mix’).

From the perspective of users who have already shifted their use of modes, we asked travellers for their main reasons for changing. Participants were additionally asked about detailed reasons for change to find out, which motives are behind the main reasons already stated.

All the travellers who have shifted their use of modes are placed within a USEmobility palette of socio-economic, socio-cultural and psychological characteristics. The analysis concentrates on the following dimensions: *cause for change*, *direction of change* and the *environment* in which the change took place. What was the situation that led to the change? Was the reason external and did it therefore not primarily have anything to do with mobility issues? Altogether, it is important to factor the user's personal circumstances into the analysis as broadly as possible. From which position did the user change, and where to? The ebb and flow between public transport and motorised personal transport is of particular importance. What mobility choices were on offer when the change was made?

Once this analysis has been completed, a clear distinction can be made between different circumstances: was it the attractiveness of the new transport mode (pull-in factor) or was it

unhappiness with the old transport mode (push-out factor), which primarily influenced the decision? As potential factors for change, the questionnaire did not just list hard, clearly definable parameters such as punctuality and cost, but also 'soft factors' like feeling safe or design issues.

An analysis of the information provided by users made it possible to develop a profile for those users who simultaneously show characteristic behavioural patterns for change and great potential for making increased use of multimodal transport chains. These groups are especially interesting when it comes to making recommendations to policy makers or transport companies.

The USEmobility survey covers issues relevant to transport policy and was carried out in cooperation with six European countries from Belgium to Croatia. It focuses on the similarities found in Europe but also identifies characteristics distinctive to a specific country. In addition, ten surveys were carried out, mainly in regions where particularly successful public transport or multimodal transport services had managed to become established.

1.3 Scope and Limits of the Survey

USEmobility is following an innovative approach and does not simply rely on the users' stated intentions to make the desired decision on their mobility. To take part in the USEmobility survey, users had to say that they had actually changed their behaviour within the last five years. Depending on the reason for travelling, this was the case for up to 50 percent of those who were initially asked, so that it can be stated that almost half of all travellers can be regarded as swing-users.

The USEmobility team chose a survey methodology that enabled it to reconcile aspects of psychology and sociology, which are hard to grasp, with hard facts. The remarks made by users and other parties in the ten chosen regions with the best public-transport practices were particularly valuable.

Decisive questions guided us through this process: Does the choice of transport mode have a more static and personal character? Was the decision in favour of a new transport mode made suddenly or was the change gradual? The answers to such questions are critical with regard to attracting new customers. Why was the user's role in making the decision to change hitherto not considered? Is it enough to offer a good range of services? Was the importance of soft factors influencing the decision to change previously underestimated? Are there distinct factors for attracting and retaining customers?

Most of the conclusions of the survey are representative of the motivation and behaviour of swing-users. Only a few of the questions were formulated to be representative of all citizens. In contrast with the survey covering a whole country, the regional surveys make no claim to be representative.

Whereas official transport forecasts use transport-performance reference values that make it possible to state the exact market share (modal split) of the different modes of transport, the reference value applied by USEmobility is the change in frequency of use as perceived by

users. The survey is not designed to collect data on the exact quantity of transport-kilometres and therefore cannot be used to determine any changes in the modal split.

However, better understanding behavioural change-patterns is a basis for recognising further potential for increasing the modal split of public transport.

2. Central Statements

2.1 New Insights

Our survey delivered a series of new, partly surprising insights: When choosing the mode of transport, users' behaviour is far more dynamic than examining the modal split, which appears to be static, would lead us to believe. Almost half of the participants said that they had changed their mobility behaviour patterns in the last five years. This throws a new light on the prevalent market share analyses, which show that overall there is very little dynamism in the choice of transport mode. For practical purposes, this insight is of great importance: Where there is a great deal of movement there is also the opportunity for policy makers and companies to motivate travellers to decide in favour of public transport.

Today, already half of all people belong to the group of swing users. Within this group, only 30 percent travel using mono-modal transport, compared to 40 percent who are pragmatic in deciding which mode of transport suits their purpose. Most rearrangements in the personal mobility-mix were made when the participants were deciding how to travel to work.

Thirty percent were aware of the advantages of combining multiple modes of transport for their journeys and changed their behaviour accordingly. Choosing the transport mode is therefore not so much a case of either/or, but a dynamic case of 'both, one as well as the other'. For the majority of swing users, multimodal travel is already a reality.

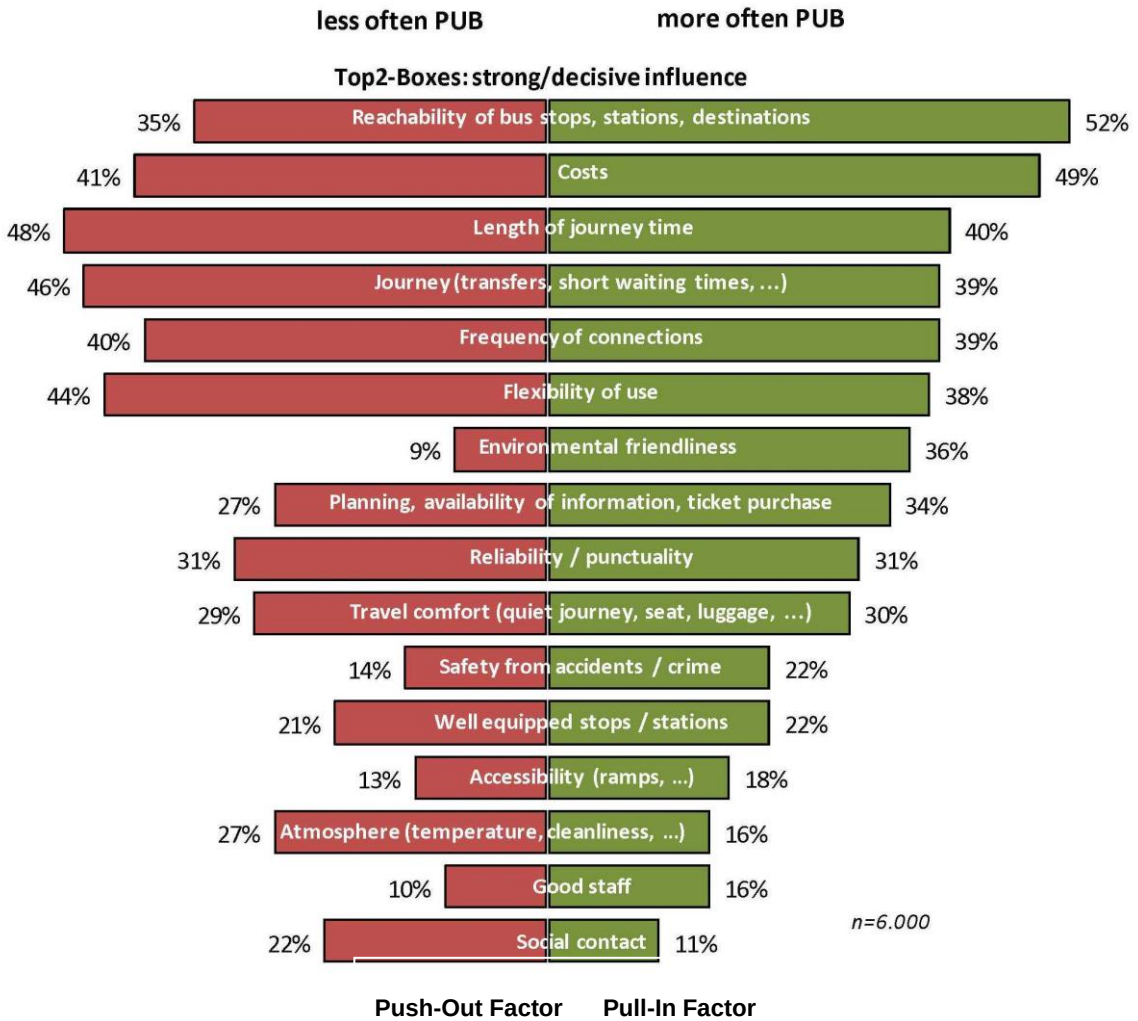
If people decide to make greater use of public transport, the share of those who completely change to public transport and no longer use any form of personal motorised transport is nevertheless nearly 30 percent. Overall, the change to public transport is by no means always due to the person not owning a car. Multimodal users of public transport make a conscious decision when to choose their cars, and when not. Altogether, with increasing age, there is a higher degree of freedom-of-choice among swing users. Older people often own a car but, nevertheless, show a greater flexibility in deciding whether or not to use public transport in any given situation.

Above all, the cause for shifts in the mobility-mix is characterised by changes in users' personal and private circumstances. Over half of participants stated that personal reasons were the motivation for their reorientation. Such changes in life circumstances relevant to the choice of transport mode do happen frequently. On average, almost three such relevant changes occurred within the last five years.

The top ranked reasons, in terms of frequency and relevance, are *changing jobs* and *moving home*, whether to another town or within the same town. This insight offers providers of transport services a good opportunity to attract new customers to public transport.

The circumstances for change are characterised by factors that cause users to feel unsatisfied and therefore motivate them to shift away from their preferred mode of transport (push-out factors), as well as, of course, by encouraging factors that motivate them into changing to a new transport mode (pull-in factors). Both types of factors are characterised by what the transport companies offer users. For public transport, pull-in factors have a greater effect than push-out factors, which means that travellers are more likely to decide to make changes for reasons of satisfaction as opposed to making changes because they are dissatisfied.

Importance of selected Push-Out and Pull-In Factors concerning Public Transport



For such decisions, 'hard' factors such as availability, price and travel time were obviously of central importance. In order to attract new users, providers of public transport must create good conditions. However, there are only few factors - apart from cost - inherent to motorised individual transport that will dissuade people from using their cars or motorcycles.

Especially in terms of user satisfaction, 'soft' factors also play an important role alongside a given transport-mode's 'hard' factors. The former include aspects such as *flexible* and *easy to plan* journeys, as well as the environmental impact. Overall, participants evaluated sustainability and eco-friendliness as important issues. This was demonstrated by the fact that, among other things, 88 percent of the swing users were willing to pay a certain amount of additional cost for improved environmental performance of a mode of transport.

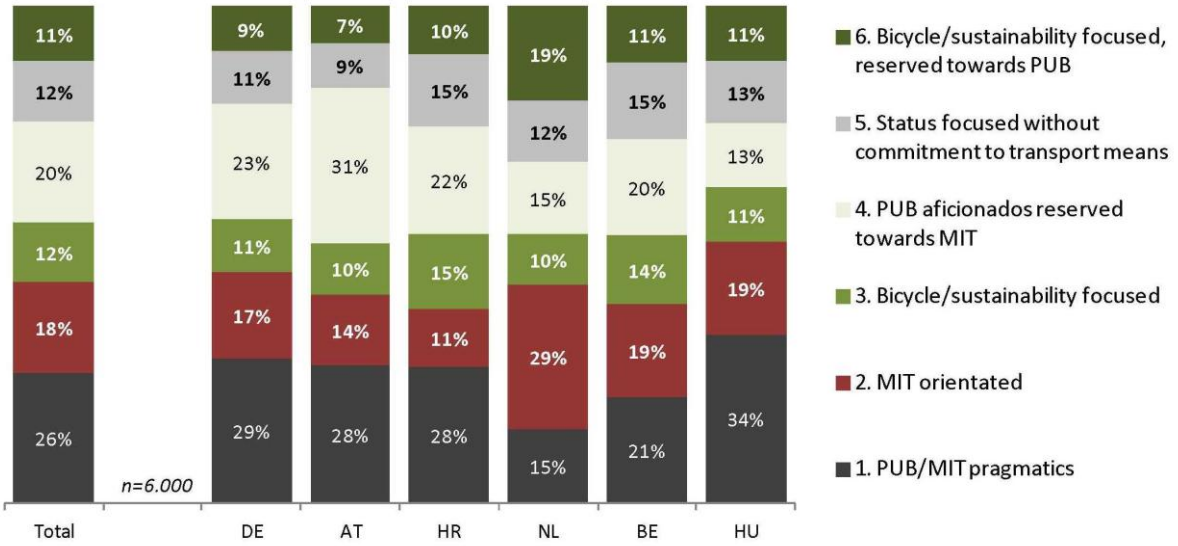
Users expect satisfying 'soft' factors to be in place if they are to remain true to a mode of transport. In particular when new, comparable transport alternatives are offered, these factors once again become the subject of users' attention, and aspects such as *comfort*, *personnel* and *atmosphere* become relevant factors when decisions are being made.

It is interesting to note that compared with public transport providers, the automotive industry puts far more emphasis on emotions when addressing its customers. As a result, for swing users, motorised individual transport usually has a positive, but in any case a distinctive image profile. Public transport retains its customers in a far less emotional way. At most, the participants associate dimensions such as *urbanity*, *rational behaviour* and *communality* most strongly with public transport. Public transport could certainly gain some leverage from projecting a more emotional image.

2.2 Swing User Profile

For citizens who change their previously chosen mobility-mix from time to time, the shift takes place in all directions, but can be observed above all between the categories *motorised individual transport, bicycle* and *public transport*. In cases where there are changes, there are some occurrences where the participants have generally reduced or generally increased their level of mobility. Mostly however, the emphasis on one particular transport mode is shifted to another mode in the mix.

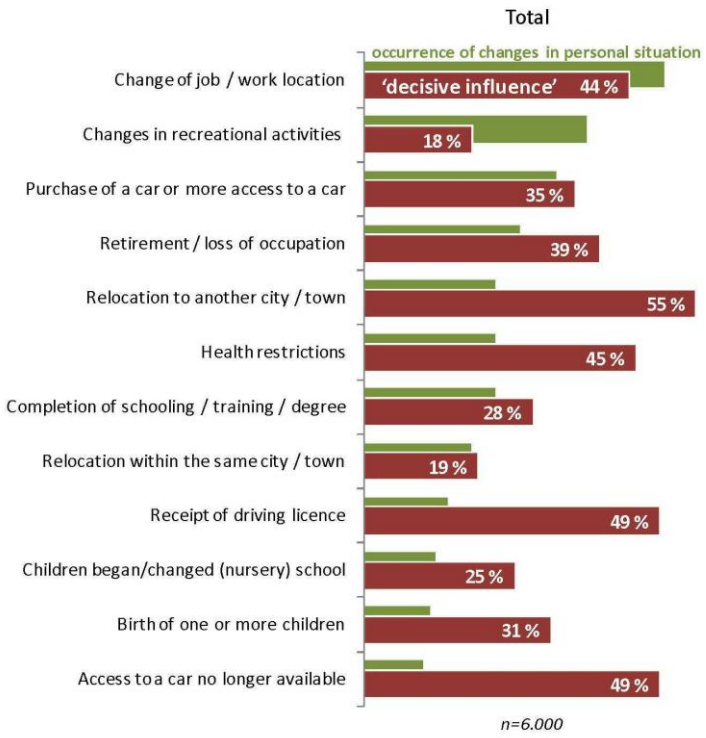
For users, the decisions to change are based on their own personal background and attitudes. According to their attitude towards different modes of transport, the swing users can be more precisely subdivided into various segments.



The most important group of swing users covers the public transport / motorised individual transport pragmatists (segment 1) with 26 percent. These people take a pragmatic point of view when choosing their mode of transport. They make different decisions according to the situation they are in and are the most dynamic in their behavioural patterns. Another important segment covers the advocates of public transport who are somewhat reserved in their attitude towards motorised individual transport (segment 4). The distribution of the attitude segments is specific to the country. For example, German and Dutch swing users focus on quite different priorities.

The swing users can also be characterised according to their life circumstances because change here also follows definite patterns. In most cases, a cause for change already existed that motivated the user to think about shifting to another transport mode. This could have been moving home or a new phase in their working life, from starting the first job to retiring altogether. In such situations, the survey participants thought about whether they were satisfied with their previous choice and looked to see if there were any better alternatives available.

Occurrence and Importance of Factors related to the personal Life Situation



DE	AT	HR	NL	BE	HU
43 %	42 %	27 %	47 %	50 %	50 %
17 %	17 %	11 %	20 %	22 %	23 %
33 %	30 %	24 %	43 %	39 %	46 %
33 %	31 %	30 %	37 %	42 %	55 %
67 %	60 %	39 %	55 %	45 %	61 %
39 %	33 %	31 %	54 %	55 %	57 %
30 %	21 %	19 %	30 %	44 %	32 %
20 %	17 %	15 %	11 %	20 %	29 %
51 %	52 %	28 %	64 %	70 %	35 %
22 %	20 %	16 %	17 %	38 %	29 %
36 %	32 %	21 %	26 %	36 %	40 %
51 %	55 %	32 %	64 %	53 %	45 %

Alongside personal attitudes and the cause for change there are additional attributes characterising swing users.

Those in urban environments, for example, tend towards making greater use of public transport; in rural areas, there are a greater number of changes towards motorised individual transport.

3. Country Portraits

The insights gained are very similar in all the countries that were surveyed, suggesting that they are also applicable to other European countries that did not participate in the project. Nevertheless, we also observed a series of characteristics specific to individual countries. Whereas the characteristics of change and reasons for change showed hardly any deviations, user characteristics displayed large differences. Satisfaction with public transport also varied from country to country, although there were also large differences between regions in individual countries.

3.1 Belgium

Belgium has, with the capital Brussels, its political and administrative centre and at the same time, if the prevalent clichés can be believed, one of the most heterogeneous communities in the EU. The USEmobility project did actually find indications for this: while 30 percent of Flemish swing users were satisfied with public transport services, in the Walloon region and Brussels it were only 20 percent.

Altogether, public transport in Belgium is regarded as being mainly an urban transport mode. Typical push-out factors for Belgian public transport are lack of punctuality (for ca. 50 percent a decisive factor) or journeys that are too complicated (changing, waiting times etc. for ca. 60 percent). However, motorised individual transport also displayed stress factors, for example, the high risk of traffic congestion, which is the reason behind 84 percent of those swing users who high-ranked the MIT push-out factor "punctuality problems.

Safety from accidents is in Belgium a considerably larger factor in favour of public transport than, for example, in the Netherlands. The opposite is true for safety from crime.

3.2 Germany

Among Europeans, Germany is regarded as being well-organised - public transport included. For example, Germany's railways are considered very punctual. At the same time, the opposite view holds that Germany is a country that is completely dominated by the car.

In fact, our survey showed that motorised individual transport in Germany has a strong image linked with mainly positive attributes such as *fast*, *spontaneous*, *exciting*. In contrast to the cliché, that Germany is a nation of car drivers, the USEmobility survey also showed that the frequency of change in Germany is particularly high. For journeys to the place of work, more than 50 percent of those surveyed have made changes to the way they use public transport in the last five years. Additionally, Germany also has the highest rate of multimodality (77 percent) out of all surveyed countries in Europe. When it comes to multimodal journey chains, 42 percent of swing users travel with multiple modes, usually in a combination of cars and public transport.

Satisfaction with personnel still has some issues in Germany. On average we have recorded 10 percent less swing users who are happy with personnel than in the other countries.

3.3 Croatia

The rest of Europe regards the acceding EU member Croatia's transport infrastructure as being in need of modernisation: Public transport is underfunded; its citizens have a lot of catching-up to do in terms of individual transport; environmental issues tend to have a low priority.

The USEmobility survey did not confirm this picture. It even showed that Croatia has the lowest swing user rate, and there is only a very small image difference between public and motorised individual transport.

Whereas those surveyed characterised Croatia's public transport as 'social' and 'less aggressive', switching to motorised individual transport is actually considered less attractive than in other countries. As a reason, people cited the high cost of purchase and repair, and the running costs.

In comparison with other countries, the willingness of Croatians to increasingly organise mobility in line with sustainability and environmental considerations is actually particularly high. 28 percent of participants are planning to do so, with 31 percent stating that they are not willing. 70 percent of swing users state that they would be prepared to pay 10 percent and more for a transport that was more environmentally friendly.

3.4 The Netherlands

The Netherlands are seen by Europe as a country of cyclists. The Dutch are liberal and open-minded towards public transport it is said. Judging by the USEmobility survey, the very opposite is the case. It shows that in the Netherlands, 43 percent of swing users make strictly mono-modal journeys, more than in any other country in the survey. Overall, more than half the swing users regularly use a bike (78 percent are regular cyclists); however, 65 percent use motorised individual transport (mono and multi modal). Only 45 percent of those who switched to make more use of public transport were motivated by their own experience - in comparison with 66 percent in Germany. Only 13 percent of those surveyed are unhappy with their current choice of transport mode.

The segmentation based on attitudes shows that only 15 percent of Dutch swing users are pragmatists; 19 percent have an affinity with cycling but astoundingly display a very reserved attitude towards public transport. Seven percent of swing users are planning to use public transport more often in the future; however, 40 percent rejected this idea.

3.5 Austria

Transport in the Alpine state Austria is characterised by a typically strong contrast between urban and rural areas. The fact that the mountains restrict the space available for transport is more than a simple cliché. However, the rest of Europe regards Austria's public transport system as being well funded and properly organised by the state.

Largely this view correlates with the results of our survey: Austria displays a high level of multimodality (75 percent). Within one journey, almost 40 percent of swing users travel combining multiple modes and, by doing so, demonstrate the flexibility with which Austrians counter the difficulties in travelling in the geographically challenging Alpine state.

Customer satisfaction with public transport is high in Austria, with a 43 percent satisfaction rate and only 7 percent stating that they are unhappy with services. The aspects *good availability of destinations*, *low environmental impact* and *good accessibility* of services were particularly important here.

Overall, public transport has a positive image and is perceived as being social and urban. 31 percent of swing users have an affinity with public transport while simultaneously having reservations about individual transport. For this group, a series of soft factors also count against motorised individual transport. They feel there is less time to relax or spend on other activities. In addition, the parking situation is often bad, which is something that puts many Austrians up against using motorised individual transport.

3.6 Hungary

Similar to the Croatian case, Europeans believe that Hungary needs to modernise. According to the cliché, the country's public transport system is poorly developed and uses out-of-date rolling stock; there is a lack of funding for appropriate infrastructure measures; Hungarians have to be pragmatic about the services available to them.

In fact, the results of the USEmobility survey show that the Hungarian transport market is highly dynamic. However, in the competitive environment between public transport and motorised transport, the ratio of strict swing use is balanced at 20 percent for each direction of change. The picture is similar for satisfaction / dissatisfaction with the current mode of transport: 20 percent are satisfied compared with 18 percent who are dissatisfied. The rate of change is high with the share of swing users reaching almost two thirds.

In cases, where Hungarians perceive a public transport service to be modern, this is a result not only of low costs, but also soft factors such as *safety from crime*, or *clean* carriages with *air-conditioning*. However, if there is a lack of cleanliness or comfort, or if bus stops and stations are inadequately equipped, travellers will decide against public transport.

34 percent of swing users are pragmatists. 28 percent are planning to use park & ride facilities once they’ve become available; 32 percent are not planning to do this. The Hungarian transport companies seem to have missed an opportunity regarding theirinformation policy: Only 7 percent of swing users stated that they had received information from transport providers about their services.

4. Regional Success Stories

Surveying travellers in mainly railway-based public transport systems in selected European regions delivers highly interesting insights into the choice of transport mode in environments with best practice cases. Here are several examples:

Efficiently networked rapid-transit train systems such as the *S-Bahn in Salzburg* and the *S-Bahn Rhine-Neckar* guarantee a high degree of multi-modality. Less than 10 percent of swing users of the S-Bahn Salzburg use only the S-Bahn. For almost 40 percent, the S-Bahn is a permanent component of a combined journey chain comprising several modes of transport. Just 4 percent of the Rhine-Neckar swing users are solely S-Bahn users. For 80 percent the decision to use the S-Bahn or another mode of transport depends on the journey's purpose.

For customers of the *S-Bahn in Breisgau*, their primary reasons for changing show a typical profile for swing users in well-developed regional transit systems. Hard factors such as cost, frequency of service and accessibility of train stations are important reasons for change for more than half of those questioned. However, for 40 percent of those surveyed, soft factors such as travel comfort, flexibility, eco-friendliness and easy-to-plan journeys are also decisive for increasing their use of public transport.

Public transport customers in the Croatian capital *Zagreb* are more satisfied with the services on offer (45 percent) than in the rest of the country (on average 32 percent). 60 percent of those surveyed in Zagreb saw particular improvements in travel comfort and accessibility. When deciding to change transport mode, ease of accessing trains is 20 percent more important in Zagreb than in the rest of Croatia.

In most cases, choosing the mode of transport is a process. This is not so in Gelderland in the Netherlands: 60 percent of users of the *Valleilijn* train service made their decision from one day to the next. Particularly significant factors here were change of workplace (68 percent) and moving home (70 percent).

Among users of *the S-Bahn Steiermark* or the rail-connection *Varazdin-Medimurje* in Croatia there were a disproportionately high number of young people who had just completed their job training (43 percent in Steiermark and 41 percent in Croatia). This customer group cited 'cost' as one of the most important reasons for the increased use of train services. In addition, satisfaction with the performance of the S-Bahn is high at 75 percent.

75 percent of users of the route between *Budapest and Esztergom* in Hungary were motivated into using the train service by friends, family or colleagues. This 'word-of-mouth' was particularly significant since most of those questioned (80 percent) already had alternatives. For users of the *Metronom* service between Hamburg and Cuxhaven, motivation again was not a result of their own experience with the railways, as is the case for the average swing user. In this case, other information channels played a larger role: For example, information made available by the service provider, or even by employers for people starting new jobs, were decisive factors for changes in the choice of transport mode.

Metropolitan regions such as *greater Brussels* show a typical urban background. Many swing users have recently moved to the area (65 percent) and many do not have (or no longer have) a car (75 percent). The reasons for switching to the public transport system *STIB/MIVB* are mainly the transport-mode's eco-friendliness (48 percent) and the good accessibility of bus stops and train stations (54 percent). At the same time, more than half of users say that reliability of information and journey scheduling has improved considerably.

5 Basis for Strategic Recommendations

The approach used by the USEmobility project was clearly innovative. None of the previous research into personal mobility has focussed on swing users with the aim of better understand their motivation and gaining useful insights from this perspective for developing future mobility. Although the modal split has hardly changed for years, the USEmobility survey has shown that behind the apparent lack of movement there is considerable dynamism, with fluctuations both towards and away from public transport. The second important insight is that people are afforded a multitude of opportunities for rethinking their choices, and that these often go hand-in-hand with changes in their life circumstances. Above all, changing place of work leads to people questioning their usual behavioural mobility patterns.

Since it can be assumed that there is a general desire for mobility to become increasingly eco-friendly in the future, there is now an opportunity to take more notice of users' needs. For the stakeholders who are involved in this project, USEmobility will develop strategic recommendations. These are developed, on the one hand, for politicians who set on a national and local level the policy framework for sustainable transport. They also include the European Commission, the contracting authority for this project, which wants to further develop European transport policy ensuring that citizens' mobility is both, environmentally friendly and sustainable in the future. The recommendations are also directed at providers of transport services, who can attract new customers with made-to-measure offers. Particularly in metropolitan regions, there is considerable potential for public transport, which can benefit from a user-oriented approach incorporating decisive hard and soft factors to attract and retain customers.

We will pay particular attention in our recommendations to civil society organisations that consolidate and represent the interests of passengers. As part of the process of improving the policy framework and the offered services, as well as customer service, these passenger groups play an important role that will have to be strengthened in the future. Only then can it be guaranteed that the needs of the individual (customer, passenger) will be at the centre of this development.