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## Disclaimer statement

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## Table of contents

1.	Foreword.....	6
2.	Definition of research period.....	6
3.	Quantitative analysis .....	7
3.1	Overview and comparison of the countries .....	8
3.1.1	Belgium.....	10
3.1.2	Germany.....	10
3.1.3	The Netherlands .....	11
3.1.4	Austria.....	11
3.1.5	Hungary .....	12
3.1.6	Croatia .....	12
3.2	Comparison of the development (selected trends in comparison) .....	13
3.2.1	Socio-economic and demographic trends .....	13
3.2.1.1	Stagnating population figures .....	13
3.2.1.2	Ageing of the population.....	14
3.2.1.3	General urbanization.....	15
3.2.1.4	High economic growth rates in Eastern Europe.....	16
3.2.1.5	Price increases in individual transport higher than in public transport.....	18
3.2.2	Transport and mobility trends .....	19
3.2.2.1	Public transport is gaining on individual transport throughout Europe.....	19
3.2.2.2	Eastern Europe is gaining on Western Europe concerning motorization .....	22
3.2.2.3	Supply in passenger transport by railway increases .....	24
3.2.2.4	Eastern Europe makes up for motorway network expansion .....	26
3.2.2.5	Stagnation or reduction of rail infrastructure .....	27
3.2.3	Intermediate results of the quantitative analysis .....	28
4	Qualitative analysis.....	31
4.1	Belgium .....	32
4.1.1	National level .....	32
4.1.2	Municipal level .....	33
4.1.3	Non-governmental level .....	35
4.2	Germany.....	37
4.2.1	National level .....	37
4.2.2	Municipal level .....	42
4.2.3	Non-governmental level .....	44
4.3	Netherlands .....	46
4.3.1	National level .....	46
4.3.2	Municipal level .....	47
4.3.3	Non-governmental level .....	49
4.4	Austria .....	50
4.4.1	National level .....	50
4.4.2	Municipal level .....	51
4.4.3	Non-governmental level .....	52
4.5	Hungary.....	53
4.5.1	National level .....	53
4.5.2	Municipal level .....	56
4.5.3	Non-governmental level .....	57

4.6	Croatia.....	58
4.6.1	National level .....	58
4.6.2	Municipal level .....	62
4.6.3	Non governmental level.....	63
4.7	Intermediate results of the qualitative analysis.....	64
5.	Results .....	65
6.	Bibliography.....	68
	Appendix 1: USEmobility Best-practice list.....	73

## List of figures

Figure 1: Geographic overview of the research countries.....	8
Figure 2: Population growth 2000 to 2010 [million] .....	14
Figure 3: Midage of population 2000 – 2010 .....	15
Figure 4: Degree of urbanisation 1950 - 2050. ....	16
Figure 5: Nominal Gross domestic product per capita 2001 – 2009 [in €].....	17
Figure 6: Annual average inflation rate 2000 – 2010 .....	17
Figure 7: Unemployment rate development 2000 – 2011 [in %].....	18
Figure 8: Price increases in percent 2000 to 2010.....	19
Figure 9: Annual growth rates in public and individual transport 1990 - 2008. ....	20
Figure 10: Comparison of Modal splits 2000 and 2008 [in % of total pkm].....	21
Figure 11: Number of registered cars in million.....	23
Figure 12: Registered cars per 1000 inhabitants 2000 – 2008.....	24
Figure 13: Train kilometres in passenger transport 2000 – 2008. ....	25
Figure 14: Train kilometres (train-km) per 1000 inhabitants (inh.) 2000 – 2008. ....	25
Figure 15: Total lengths of motorways 2000 and 2008 [km].....	26
Figure 16: Total length of railways in use 2000 – 2008 (in km).....	27
Figure 17: Change of selected indicators in % 2000 – 2008.....	29
Figure 18: Modal split of public transport and average annual growth rates of transport performance [pkm] in public transport 2000 – 2008 and 2004 – 2008. ....	66

## List of tables

Tab. 1: Overview of the data sources of the statistical data.....	9
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## 1. Foreword

USEmobility aims to identify the reasons for behavioural change in the personal mobility of citizens in different European countries and to identify future potential.

Work Package 2 identifies factors which have an impact on the choice of means of transport. Objectively measurable “hard factors” such as structural and technological factors and also subjective “soft factors” like socialisation, amenity values of transport and environmental awareness will be examined. Furthermore, trends and best practices towards multimodal and environmentally friendly mobility in different European countries will be identified. Within work package 2, the ten regions, which will be examined in detail, will be selected.

A sustainable and eco-friendly multimodal mobility can only be achieved when acquiring a deep understanding of the specific motivation and factors of decision processes regarding the choice of the means of transport as well as relevant criteria for changes in mobility behaviour.

Report 2.2 contains the analysis of national trends regarding the choice of transport mode. It is based on the assessment of additional sources:

- Statistics (e.g. transport volume, number of vehicles, development of fuel prices, economic development, development of population figures, development of ticket prices in public transport).
- Statements concerning transport policy in political programmes of national/regional governments, coalition agreements of governments, programmes of political parties, relevant legislation.
- Publications of governments, ministries, public transport authorities, (public) transport providers, civil society organisations (e.g. consumer organisations, environmental organisations).

It is obvious that such different sources in the form of political documents contain dissimilar tying statuses for politicians and public authorities and therefore include different levels of profundity and concreteness.

As far as possible best practices leading towards multimodal and environmental friendly mobility shall be identified.

## 2. Definition of research period

Analysing “National trends in passenger transport regarding the choice of transport mode” within USEmobility requires a clearly defined period under review. The period of time shall not be too tight, as trends usually need some time to be clearly identifiable, nor shall it be too extended. In the case of USEmobility there are some good reasons for a period under consideration of 20 years that is to say between 1990 and 2010. This would be a possibility to accompany processes in Hungary and Croatia from the beginning, that is to say starting with

the democratic and economic transformation in the 1990s. It should be mentioned that in Croatia the declaration of independence was followed by a homeland war. All these transformations also had enormous impacts on national and transnational transport in these countries. In the same period the situation in Germany has changed considerably too due to reunification.

The changes were followed by a general catching up process of Hungary and Croatia on the other European countries, and a growing closer together of Europe in general. These changes definitely had an impact on transport sectors and the choice of transport mode. However, as democratic and economic transformations in the 1990s were one-time effects, their impact dwindles with the time until they will disappear nearly completely.

In addition to that, the leading signs for mobility changed significantly in the past ten years: The 1990's were the last decade of a long period of low oil prices, whereas in the last ten years the oil prices increased heavily, and the time of cheap oil and fuel currently seems to be over.<sup>1</sup> This has a significant impact on mobility and the choice of transport mode.<sup>2</sup> Furthermore, presently environmental and sustainability discussions, which also are quite important for the image of certain transport modes, were definitely debated more intensively throughout national societies and on European level about ten years ago.<sup>3</sup>

Besides, there are two additional arguments directly of the USEmobility project that count for a period under review of ten years: First, the survey in Work Package 3 of USEmobility will include a questionnaire where people were asked for changes in their mobility behaviour in the last five years. As the trends of the present report should be a basis for the questionnaire, the period of the identified trends should be as close as possible to the five years in Work Package 3. Second, Task 4.1 of USEmobility elaborates "Developments of scenarios for multimodal mobility" for a medium term perspective of ten years and a long term perspective of 30 years.<sup>4</sup> Again, an observation period of ten years would fit better as then the timeframe USEmobility would be ten years to the past and ten to the future.

Considering all mentioned aspects, a timeframe of ten years that is to say between the years 2000 and 2010 were chosen for USEmobility trend analysis. Nevertheless, important one-time effects which took place more than ten years ago will obviously be mentioned if they had important impacts on the transport sector.

### 3. Quantitative analysis

The quantitative analysis of the research countries starts with an overview and a comparison of

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<sup>1</sup> cf.: International Energy Agency: World Energy Outlook 2010. p. 7 f.

<sup>2</sup> Energy requirement of the transport sector depends on a 96 % on oil. Cf.: White Paper on Transport of the European Commission. P. 4.

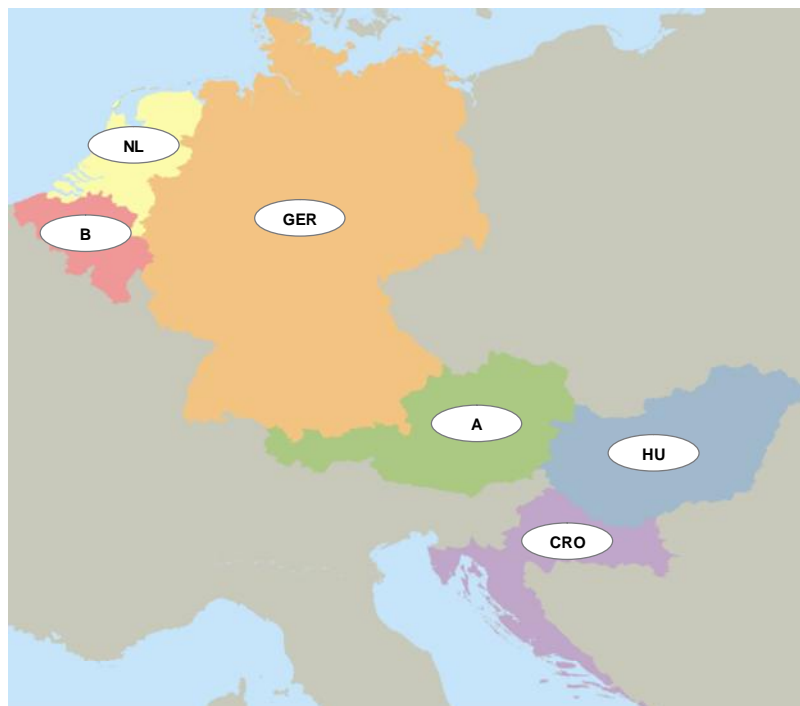
<sup>3</sup> One evidence is the release of the first White Paper on Transport of the European Commission in 1992. cf: European Commission: White Paper: The future development of the common transport policy. A global approach to the construction of a Community framework for sustainable mobility, P. 6., followed in 2001 by the White Paper on Transport – European transport policy for 2010: time to decide.

<sup>4</sup> cf.: USEmobility proposal p. 23, 25.

the countries based on the most important national statistical data. If there have been important political or economical changes in some countries in the past ten years, they will shortly be explained as well, as they are very important for the understanding of many trends. Concluding there will be a description of the coherences between the trends as well as a first conclusion.

### 3.1 Overview and comparison of the countries

The following chapter introduces the research countries, giving a short geographic description and registering the most important data about the countries. The introduction will be made with selected indicators. They consist socio-demographic, economic but also transport relevant information. It is important to mention, that the focus of the transport relevant information will be the passenger transport and not the freight transport. Furthermore, it should be noted that the presentations of the countries are a descriptive status quo demonstration. The focus is on statically current data and figures, as analysing developments and trends will be the content of the chapter 3.2.



**Figure 1: Geographic overview of the research countries.**  
Map created with Mappoint 2010 European Maps

The overview and the comparison of the countries contain several different data and data sources, which are usually the same for all countries. To preserve clarity within the text, the following table provides an overview of the data sources used in the following chapter. Unless stated otherwise, the sources correspond to the shown and mentioned data. As a general remark concerning data it is important to note, that usually data period is between the years 2000 and the latest available value. Due to the fact that not all data is updated every year, the



data has differences of one or two years concerning their actuality. Most latest available values are from 2008 or 2009, some from 2010 and occasionally from 2011.

Data	Unit	Year	Source
Area	[km <sup>2</sup> ]	2006	Eurostat, New Cronos Datenbank, in: Österreichisches Bundesministerium für Verkehr, Innovation und Technologie Abteilung V/Infra 5: Verkehr in Zahlen, p. 10, Vienna, 2007.
Population	[Mio. Inh.]	2010	Eurostat: Population at 1st of January (1999 – 2010): <a href="http://epp.eurostat.ec.europa.eu/tgm/table.do?tab=table&amp;init=1&amp;language=de&amp;pcode=tps00001&amp;plugin=1">http://epp.eurostat.ec.europa.eu/tgm/table.do?tab=table&amp;init=1&amp;language=de&amp;pcode=tps00001&amp;plugin=1</a> last access: 9.5.2011
Population density	[inh./km <sup>2</sup> ]	2010	Eurostat: Population at 1st of January (1999 – 2010): <a href="http://epp.eurostat.ec.europa.eu/tgm/table.do?tab=table&amp;init=1&amp;language=de&amp;pcode=tps00001&amp;plugin=1">http://epp.eurostat.ec.europa.eu/tgm/table.do?tab=table&amp;init=1&amp;language=de&amp;pcode=tps00001&amp;plugin=1</a> last access: 9.5.2011
Population age (average)	[years]	2010	Eurostat: Midage of the population at 1st of January (1999 – 2009) <a href="http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=demo_pjanind&amp;lang=de">http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=demo_pjanind&amp;lang=de</a> last access: 15.4.2011
Life expectancy	[years]	2010	United Nations – Department of Economic and Social Affairs: World Population Prospects The 2006 Revision (estimated Data), p. 80 ff. New York, 2007.
Household size (average)	[number]	2009	Eurostat: Average number of persons per household (2005 – 2009) <a href="http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=lfst_hhantych&amp;lang=de">http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=lfst_hhantych&amp;lang=de</a> last access: 15.4.2011
GDP per capita (nominal)	[€]	2009	Eurostat: Nominal GDP per capita (2001 – 2009) <a href="http://appsso.eurostat.ec.europa.eu/nui/show.do">http://appsso.eurostat.ec.europa.eu/nui/show.do</a> last access: 15.4.2011
Unemployed persons	[number]	2010	Eurostat: Unemployed persons – annual average (2000 – 2010) <a href="http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=une_nb_a&amp;lang=de">http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=une_nb_a&amp;lang=de</a> last access: 15.4.2011
Unemployment rate	[%]	2011	Eurostat: Harmonised unemployment rate 01/2000 – 01/2011 <a href="http://epp.eurostat.ec.europa.eu/tgm/table.do?tab=table&amp;init=1&amp;plugin=1&amp;language=en&amp;pcode=teilm020">http://epp.eurostat.ec.europa.eu/tgm/table.do?tab=table&amp;init=1&amp;plugin=1&amp;language=en&amp;pcode=teilm020</a> last access: 15.4.2011
Inflation rate	[%]	2010	Eurostat: Inflation rate (1997 – 2010) <a href="http://epp.eurostat.ec.europa.eu/tgm/table.do?tab=table&amp;init=1&amp;plugin=1&amp;language=en&amp;pcode=tsieb060">http://epp.eurostat.ec.europa.eu/tgm/table.do?tab=table&amp;init=1&amp;plugin=1&amp;language=en&amp;pcode=tsieb060</a> last access: 15.4.2011
Degree of Urbanization	[%]	1950 - 2050	United Nations: Degree of urbanisation (1950 – 2050) (estimated data). <a href="http://esa.un.org/unup/">http://esa.un.org/unup/</a> last access: 15.4.2011
Registered cars	[Mio.]	2009	European Commission – Statistical Pocketbook 2010. Luxembourg, 2010. p. 156..
Registered cars / 1000 inh.	[number]	2009	European Commission – Statistical Pocketbook 2010. Luxembourg, 2010. p. 155.
Modal split of passenger transport	[% of passenger kilometres]	2000 - 2008	European Commission – Statistical Pocketbook 2010. Luxembourg, 2010. p. 120 f. Hungarian Data: Hungarian Central Statistical Office: Transport Trends 1970 – 2009. Tables submitted via Email on 09.05.2011
Total length of motorways	[km]	2000 - 2009	Total length of motorways 2000 - 2007: European Commission – Statistical Pocketbook 2010. Luxembourg, 2010. p. 147. Data for 2008: Eurostat: Total length of motorways: <a href="http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=road_if_motorwa&amp;lang=de">http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=road_if_motorwa&amp;lang=de</a> last access: 26.4.2011. Hungarian Data for 2008: Hungarian Central Statistical Office: Total length of motorways in Hungary. Table submitted via Email on .09.05.2011.
Total length of railways in use	[km]	2000 - 2008	European Commission – Statistical Pocketbook 2010. Luxembourg, 2010. p. 149
Price increase of Fuels in passenger transport	[%]	2000 - 2010	HICP development in railway passenger transport and Fuels and lubricants for personal transport equipment: <a href="http://appsso.eurostat.ec.europa.eu/nui/setupModifyTableLayout.do">http://appsso.eurostat.ec.europa.eu/nui/setupModifyTableLayout.do</a>

Price increase of tickets in passenger transport	[%]	2000 - 2010	HICP development in railway passenger transport and Fuels and lubricants for personal transport equipment: <a href="http://appsso.eurostat.ec.europa.eu/nui/setupModifyTableLayout.do">http://appsso.eurostat.ec.europa.eu/nui/setupModifyTableLayout.do</a>
Train kilometres in passenger transport	[km]	2000 - 2008	Eurostat: Movements of passenger trains <a href="http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=rail_tf_passmov&amp;lang=de">http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=rail_tf_passmov&amp;lang=de</a> last access 20.3.2011 Hungarian Data: UIC –Railisa Database: 4105 Train kilometres passenger trains. <a href="http://railisa.tsf.it/railisa">http://railisa.tsf.it/railisa</a> last access: 3.5.2011

**Tab. 1: Overview of data sources of the statistical data.**

### 3.1.1 Belgium

The Kingdom of Belgium borders the Netherlands to the north, Germany and Luxembourg to the east and France to the south. The capital and largest city is Brussels with 1.1 million inhabitants.<sup>5</sup> Belgium covers an area of 30.528 km<sup>2</sup>, which makes it to the smallest of the selected countries, and has a population of 10.8 million people. The population density in Belgium is 355 persons per km<sup>2</sup> and the urbanization rate of 97.4 % makes Belgium to the most urbanized of the selected countries.

The population has an average age of 40.9 years and a life expectancy of 79.4 years and the average household size is about 2.4 persons (2009).

The Belgian economy in 2010 generated a nominal gross domestic product of 31.400 € per capita and shows inflation rate of 2.3 %. There were 408.000 unemployed persons in 2010, which made up an unemployment rate of 8 %.

In the Belgian transport there are 5.2 million registered cars (2009), which lead to a motorization of 483 cars per 1000 inhabitants. In the passenger transport sector<sup>6</sup>, 77.7 % of the Belgians use a car, 14.3 % drive by buses and coaches, 7.3 % move by rail and 0.7 % by tram and metro (2008).

### 3.1.2 Germany

The Federal Republic of Germany is bordered to the north by Denmark, to the east by Poland and the Czech Republic, to the south by Austria and Switzerland and to the west by France, Luxembourg, Belgium and the Netherlands. The capital and largest city is Berlin with 3.4 million inhabitants.<sup>7</sup> Extending over 357.027 km<sup>2</sup> with population of 81.8 million, Germany is both the largest and the most populated of the investigated countries. The population density is 229 persons per km<sup>2</sup> and the degree of urbanization is 73.8 %.

The average age of the inhabitants is 44.2 years, at a life expectancy of 79.4 years. The households are inhabited by 2.1 persons on average (2009).

<sup>5</sup> All data in this chapter is from Eurostat (cf. Table 1) and, if not indicated otherwise, from the year 2010.

<sup>6</sup> As not indicated otherwise, the passenger transport sector means the passenger transport by land, excluding air and inland waterway transport.

<sup>7</sup> All data in this chapter is from Eurostat (cf. Table 1) and, if not indicated otherwise, from the year 2010.

Germany features the fourth largest nominal GDP of the world and has a nominal GDP per capita of 29.300 €. The inflation rate is 1.2 % and the unemployment rate 6.5 %, which corresponds to almost three million jobless people.

With a number of 41.7 million registered cars (2009), Germany has a motorization rate of 509 cars per 1.000 inhabitants. The modal split in passenger transport shows 84.1 % car use, 6.3 % movements by buses and coaches, a rail percentage of 8.1 % and 1.5 % use of tram and metro (2008).

### 3.1.3 The Netherlands

The Netherlands borders Belgium to the south and Germany to the east. Amsterdam is the capital and also the largest city with 750.000 inhabitants.<sup>8</sup> The 16.6 million inhabitants live on 41.528 km<sup>2</sup>, which means the highest population density of the selected countries with 399 persons per km<sup>2</sup>. 82.9 % of the Netherlands' inhabitant's live in urban agglomerations. The averaged household size is 2.2 persons (2009). The average age of the inhabitants is 40.6 years and the life expectancy is 79.8 years.

The nominal GDP per capita is 34.600 €, which is the highest value of the studied countries. In addition to that, the Netherlands have the lowest unemployment (4.3 % / 478.000 people) and the smallest inflation rate (0.9 %).

The Netherlands' motorization rate is 462 cars per 1000 inhabitants, which is equivalent to a total number of registered cars of 7.6 million (2009). The modal split in passenger transport shows a very slight use of tram and metro (0.9 %) a moderate use of buses and coaches (7.1 %) as well as of railways (9.0 %) and in consequence a high percentage of 83 of car use (2008).

### 3.1.4 Austria

The Republic of Austria is one of the two landlocked countries of the research countries. It borders Germany and the Czech Republic to the north, Slovakia and Hungary to the east, Slovenia and Italy to the south and Switzerland and Liechtenstein to the west. The capital and by far the largest city is Vienna with 1.7 million inhabitants.<sup>9</sup> The Austrian population of 8.4 million lives on a territory of 83.871 km<sup>2</sup>. The population density is 100 persons per km<sup>2</sup> and the urbanization degree is relatively low with a percentage of 67.6 %. The life expectancy is 79.8 years as well as the Netherlands and the average age is 41.7 years. An Austrian household is inhabited by 2.3 persons on average (2009).

The Austrian economy in 2010 generated a nominal GDP per capita of 32.800 € and showed 390.000 jobless people, which corresponds to an unemployment rate of 4.3 %. This is, in tandem with the Netherlands, the lowest unemployment rate of all studied countries. The inflation was averagely 1.7 %.

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<sup>8</sup> All data in this chapter is from Eurostat (cf. Table 1) and, if not indicated otherwise, from the year 2010.

<sup>9</sup> All data in this chapter is from Eurostat (cf. Table 1) and, if not indicated otherwise, from the year 2010.

Austria has the highest motorization rate of all selected countries, with 522 cars per 1000 inhabitants. That is a total number of cars of 4.4 million (2009). The car use in Austria is not that pronounced as in the other Western European countries: One fourth of the passenger transport is performed by rail (11.1 %), by bus (9.8 %) or by tram and metro (4 %). As a consequence, there is a relatively low car use of 75.1 % (2008) in comparison with the other Western European countries.

### 3.1.5 Hungary

The Republic of Hungary is the second landlocked country of the research countries. It borders Slovakia to the north, Ukraine and Romania to the east, Serbia and Croatia to the south and Slovenia and Austria to the west. The capital and largest city is Budapest with 1.7 million inhabitants.<sup>10</sup> The Hungarian population of 10 million lives on a territory of 93.029 km<sup>2</sup>. The population density correspondingly is 108 persons per km<sup>2</sup>. Nearly two thirds (66.3%) of the Hungarian live in urban agglomerations. Hungary has the youngest population with 39.8 year on average, but also the lowest life expectancy (73.3 years) of all studied countries. In contrast, the average household size of 2.6 (2009) is the highest number of persons per household of all research countries.

The Hungarian economy currently shows the lowest performance of all studied countries: The GDP per capita (9.300 €) is the lowest and the inflation (4.7 %) and unemployment (12.6 %) rate are the highest of all selected countries. There are a total number of jobless people in Hungary of 188.000.

Hungary has three million registered cars with means a comparatively low motorization rate of 300 cars per 1000 inhabitants (2009). The modal split in Hungary shows a significant use of public transport with a total percentage of 33.8 %. The majority of the public transport users drive by bus (20.8 %) the others by train (10.2 %) or tram and metro (2.8 %). Nevertheless, the car is also in Hungary the most used mean of transport with a value of 66.2 % (2008).

### 3.1.6 Croatia

The Republic of Croatia is bordered by Slovenia and Hungary to the north, Serbia to the east, Bosnia and Herzegovina to the south and southeast, Montenegro to the southeast and Italy to the west (bordered only by sea). The capital and largest city is Zagreb with 800.000 inhabitants<sup>11</sup>. Croatia covers an area of 56.542 km<sup>2</sup> and has the smallest population of all research countries with a total number of inhabitants of 4.4 million. Accordingly, Croatia also shows the slightest population density with 79 persons per km<sup>2</sup> and also the smallest urbanisation rate with a percentage of 56.5 %. The average population age is 41.3 years and the life expectancy 75.7 years. As well as in Hungary, the average household size is 2.6 persons (2009).

The Croatian economy currently shows a slightly better performance than the Hungarian: The

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<sup>10</sup> All data in this chapter is from Eurostat (cf. Table 1) and, if not indicated otherwise, from the year 2010.

<sup>11</sup> All data in this chapter is from Eurostat (cf. Table 1) and, if not indicated otherwise, from the year 2010.

nominal GDP per capita is 10.800 € and the inflation rate of 1.1 % is at the level of the Netherlands (0.9 %) or Germany (1.2 %). On the other side there is an unemployment rate of 13.3 % with over 334.000 jobless people.<sup>12</sup>

As well as Hungary, Croatia has a motorization rate of 336 cars per 1000 inhabitants<sup>13</sup>, even though the total number of cars is just 1.5 million (2009). The passenger transport in Croatia is mostly realized by cars (80.5 %) and only in a few cases by bus (12.2 %), rail (5.4 %) or tram and metro (1.9 %) (2008).

## 3.2 Comparison of the development (selected trends in comparison)

### 3.2.1 Socio-economic and demographic trends

A closer look at the development of the six research countries in the last ten years shows some interesting trends concerning the socio-economic and demographic data. There have been changes, which can be seen in every country, some of them are just observable in one or two countries and there are even completely contrary trends in the different countries. There are also differences in the timing occurrence of the trends. Some has been occurring for almost ten years, others showed up about five years ago. The primary concern of the quantitative analysis is a description of the trends and not their explanation or interpretation. Possible connections between the different trends will be explained partly in chapter 3.2.3 and partly subsumed with the qualitative analysis in chapter 4.

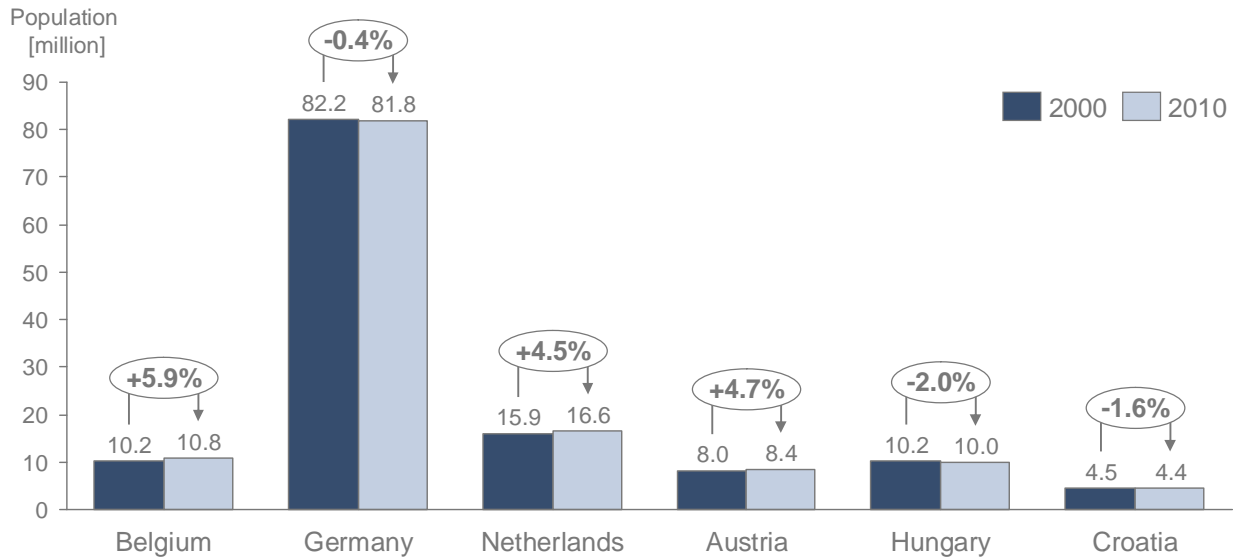
#### 3.2.1.1 Stagnating population figures

As mentioned before, the research countries are very heterogeneous concerning their size and population. Nevertheless, there are similarities regarding the population at least between some countries. Looking at the population development in the last ten years, there is an increasing population in Belgium, the Netherlands and Austria between 4.5 % and 5.9 %. On the other side, Germany's population is stagnating (-0.4 %), whereas Hungary (-2 %) and Croatia (-1.6 %) present declining population, as Figure 2 shows:

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<sup>12</sup> cf.: Croatian Bureau of statistics, monthly statistical report: [http://www.dzs.hr/Hrv\\_Eng/msi/2011/msi-2011\\_02.pdf](http://www.dzs.hr/Hrv_Eng/msi/2011/msi-2011_02.pdf)  
last access: 15.4.2011

<sup>13</sup> Data from 2008.



**Figure 2: Population growth 2000 to 2010 [million]**

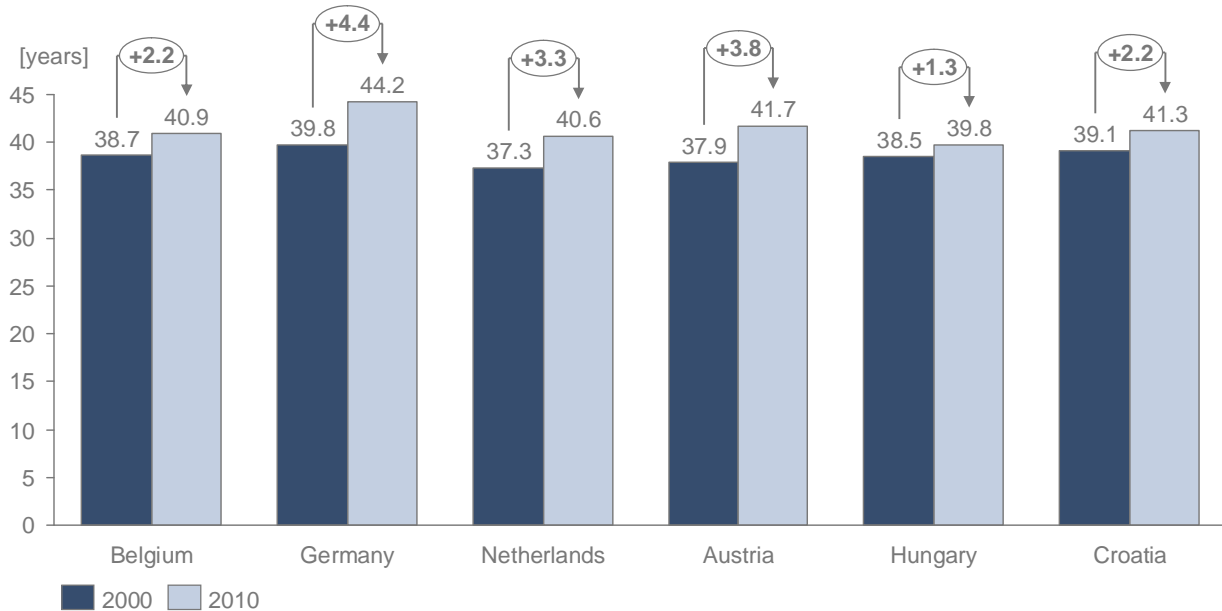
Source: Eurostat: Population at 1st of January (1999 – 2010):

<http://epp.eurostat.ec.europa.eu/tgm/table.do?tab=table&init=1&language=de&pcode=tps00001&plugin=1>

According to this, the trend of stagnating and decreasing population figures, which can be seen in most of the other European countries, is also seen in some research countries.

### 3.2.1.2 Ageing of the population

As a second trend, a quite rapidly aging of the population in the research countries has been and still is observable. In the past ten years the residents average age has increased between four and twelve percent. Even though there are differences between the countries, as Germany, Austria and the Netherlands aged much more rapidly than Croatia, Hungary and Belgium. In Germany, during ten years there has been a significant aging of the population up to 4.4 years. This progress accompanies and underlines the demographic change that is currently observable in all European countries.



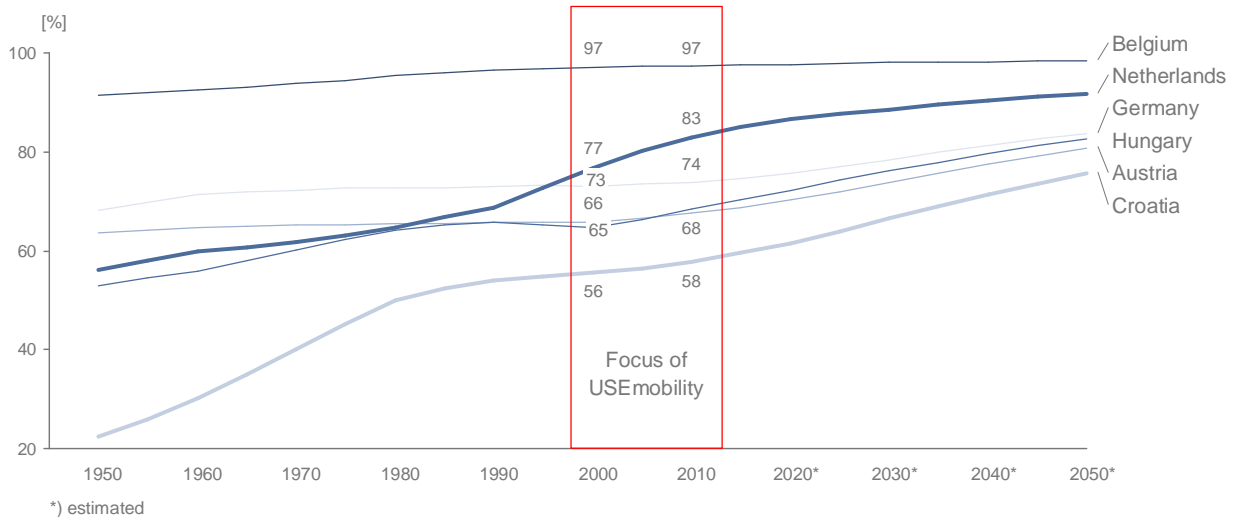
**Figure 3: Midage of population 2000 – 2010**

Source: Eurostat: Midage of the population at 1st of January (2000 – 2010)

[http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=demo\\_pjanind&lang=de](http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=demo_pjanind&lang=de)

### 3.2.1.3 General urbanization

A second transnational trend, which is shown in the research countries, is the tendency towards urbanization. This trend has already started in the 19<sup>th</sup> century progressing at different speeds for which reason there are different levels of urbanization at the beginning of the year 2000. In the year 2000 Belgium was a nearly completely urbanized country, with 97 % urban inhabitants, whereas the other nations had an urban percentage between 56 % (Croatia) and 77 % (Netherlands).



**Figure 4: Degree of urbanisation 1950 - 2050.**

Source: United Nations: World urbanisation prospects. <http://esa.un.org/unup/>

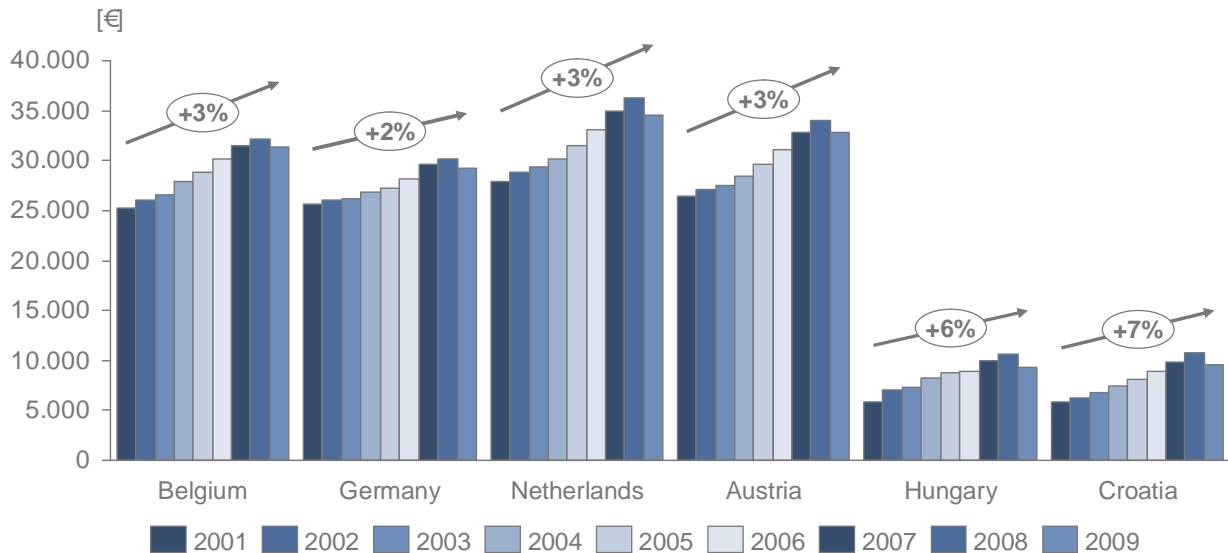
A ten year time slot is not really significant in order to monitor the process and progress of urbanization: the urbanization rate stagnated in Belgium and in Germany it increased only slightly by one percentage point. Also in Austria (3 percentage points), Hungary (4 percentage points) and Croatia (2 percentage points), the urban population increased moderately. Only in the Netherlands there has been a strong rise of the urban population by 6 percentage points from 77 % to 83 %. Having a look at the prediction of the United Nations concerning urbanization for the year 2050, the implied trend that has occurred in the last ten years is confirmed:

In 2050 the United Nations expect for all studied countries that at least 75 % of the population will live in urban areas. In Croatia it will be 76 % and Hungary 83 %. Austria will show with 81% the strongest rise of all. In Germany 84 % of the people will live in cities, in the Netherlands it will be 92 % and Belgium will keep its level with 98 % urban population. In general it can be said that there might be coherence between a high degree of urbanisation and the use of public transport which will be explained later on.

### 3.2.1.4 High economic growth rates in Eastern Europe

Even though the economic power and performance of the six selected countries are quite different and the nominal GDP per capita in Germany, the Netherlands Belgium and Austria is about three times greater than in Hungary and Croatia, there are similar economic trends in all countries: In the past ten years, there has been a consistent growth of the GDP per capita in every economy. In doing so, the average rise of the GDP per capita in Hungary (6 %) and Croatia (7 %) has been three, respectively two times higher than in Belgium, the Netherlands, Austria (3 %) and Germany (2 %).



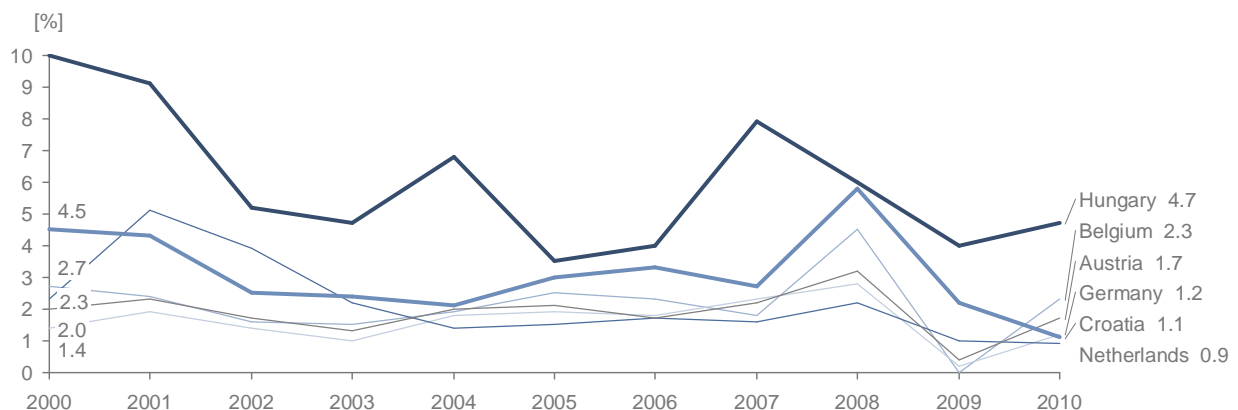


**Figure 5: Nominal Gross domestic product per capita 2001 – 2009 [in €]**

Source: Eurostat: Nominal GDP per capita 2001 – 2009.

[http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=nama\\_inc\\_c&lang=de](http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=nama_inc_c&lang=de)

In the same period, the annual average inflation rates of Western and Eastern European countries converged. Even if the current inflation of Hungary of 4.7 % is much higher than the average inflation of the other countries (1.44 %), there is a clear trend towards the reduction of inflation, as it were at ten percent ten years ago. This process is also viewable in Croatia, where the inflation has been reduced from 4.5 % to 1.1 %, which is currently the second lowest value behind the Netherlands with 0.9 %.

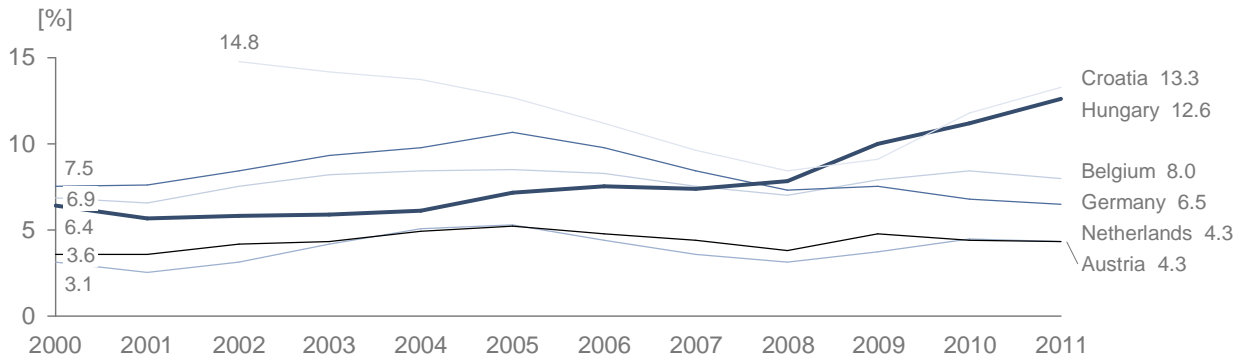


**Figure 6: Annual average inflation rate 2000 – 2010**

(Annual average rate of change in Harmonized Consumer Prices (HICPs).

Source: Eurostat: HICP - all items - annual average inflation rate.

<http://epp.eurostat.ec.europa.eu/tgm/table.do?tab=table&init=1&plugin=1&language=en&pcode=tsieb060>



**Figure 7: Unemployment rate development 2000 – 2011 [in %]**

Source: Eurostat: Unemployed persons – annual average (2000 – 2010)

[http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=une\\_nb\\_a&lang=de](http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=une_nb_a&lang=de)

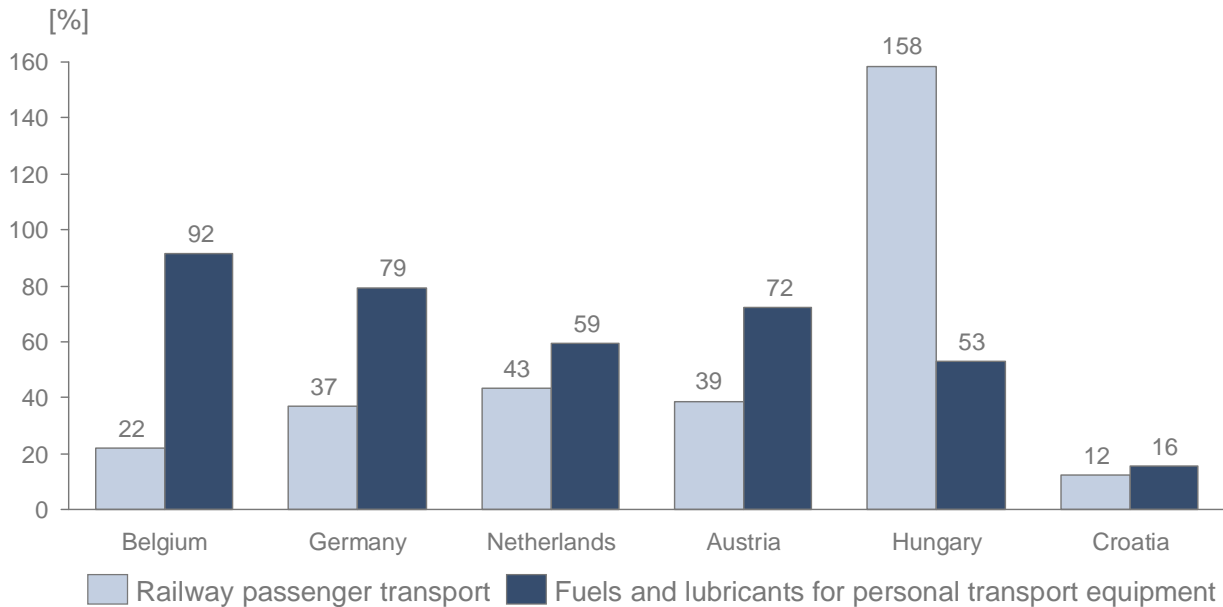
Despite of the positive economic development of all countries in general and especially of Hungary and Croatia in the last two decades, there are still differences in the stability and the crisis-prone of the national economies. The global financial and economic crisis of 2007/2008 disclosed these distinctions quite clearly: During and after the crisis, the nominal GDP per capita of all research countries declines. But while GDP in 2009 in Belgium, the Netherlands, Germany and Austria decreases between two and five percent in comparison with 2008, the decline in Hungary and Croatia was 12 % respectively 11 %. This difference is even more significant, when looking at the unemployment rates: In the last ten years there has been stagnation (Austria, the Netherlands, Belgium, and Croatia) or a decrease (Hungary and Germany) of the unemployment in all research countries until the year 2008. After the crisis there was for a short time an increase of unemployment in the Western European countries but currently the rate has reached again the level it was before the crisis. On the contrary, in Hungary and Croatia there has been barely economic recovery of the crisis, such as the unemployment rate kept increasing again till this day. The result is a much higher unemployment rate of 13.3 % in Croatia and 12.6 % in Hungary, than the average 5.8 % of the Western European countries.

### 3.2.1.5 Price increases in individual transport higher than in public transport

Besides the already mentioned economical indicators it is interesting to have a look at the price development in the transport sector. The price development in railway passenger transport will be compared with price development of fuels and lubricants for personal transport equipment. In almost all research countries the prices of fuels increased much more than ticket prices in railway passenger transport. The differences in price increase between fuels und railway tickets are huge in Belgium, Germany or Austria and moderate in the Netherlands and Croatia.

The enormous increase of railway ticket prices in Hungary may be explained with the liberalisation of the national electricity market in the year 2006. The price of electricity was increasing up to 40 % in this year. Transport companies handed the increasing prices directly

down to passengers by increasing the ticket prices.<sup>14</sup>



**Figure 8: Price increases in percent 2000 to 2010**

Source: Eurostat: HICP development in railway passenger transport and Fuels and lubricants for personal transport equipment: <http://appsso.eurostat.ec.europa.eu/nui/setupModifyTableLayout.do>

### 3.2.2 Transport and mobility trends

Just as the distinct general development of the countries, there have been individual national developments in the transport and mobility sector as well. However, some universally valid trends for all nations concerning their transport and the mobility performance during the past 10 years can be identified.

#### 3.2.2.1 Public transport is gaining on individual transport throughout Europe

A first guiding trend of the past ten years is increasing demand in public transport and higher growth rates compared to individual transport in almost all research countries. This means that more people decide to use public transport and therefore change from individual to public transport to satisfy their daily mobility needs. A closer look at the transport performance, indicated by the market shares of passenger kilometres will help to analyse this trend.

The following figure compares the percentage growth of individual and public transport demand in the past ten years. This is actually the focus of the USEmobility project, whereby the development between 1990 and 2000 is also shown in the grey field to identify differences between the two decades. Individual transport denotes passenger kilometres travelled by cars, whereas public transport summarises passenger kilometres travelled by buses, railways, trams and metros.

<sup>14</sup> Interview with Zoltán Szabó from the Clean Air Action Group (CAAG), member of the USEmobility consortium on 20.4.2011.



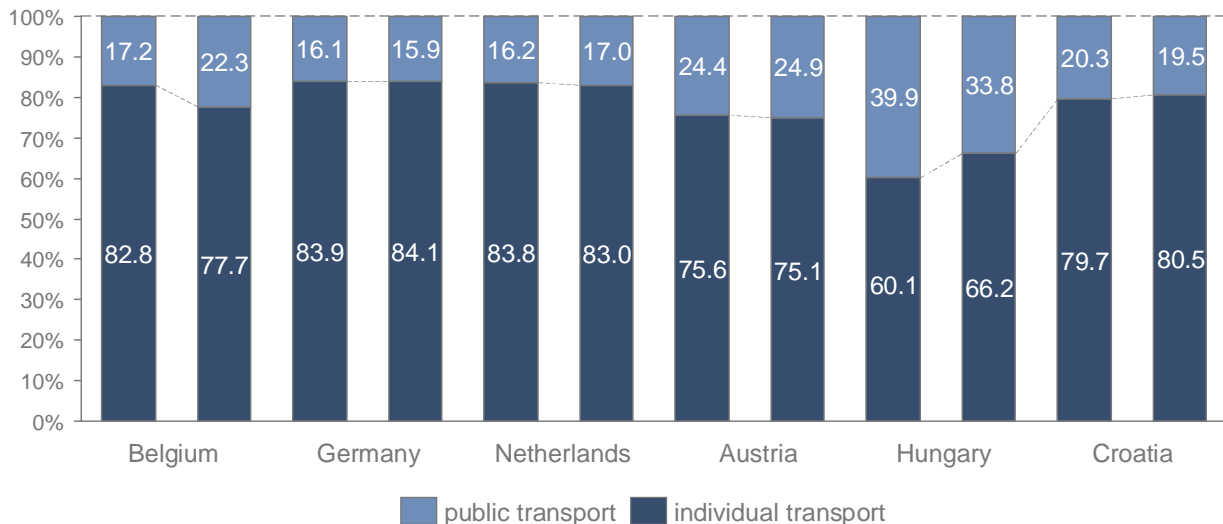
**Figure 9: Annual growth rates in public and individual transport 1990 - 2008.**

IT= individual transport, PT = public transport

Source: European Commission – Statistical Pocketbook 2010. Luxembourg, 2010. p. 120 f. Hungarian Data: Hungarian Central Statistical Office: Transport Trends 1970 – 2009. Tables submitted via Email on 09.05.2011.

It can be seen, that especially in recent years in most research countries the growth rates of public transport, considering passenger kilometres are mostly higher than of individual transport. However, there are regional differences, such as Belgium shows most constantly high rates since 2000 whereas Austria's rates generally are more moderate. Out of this demand analysis, there are two important observations concerning people's choice of transport mode:

First, public transport growth rates in the last decade were predominantly higher compared to those of individual transport, whereas the decade before individual transport in most countries has shown higher rates. Second, at the latest since 2006 there are higher growth rates in public transport in all research countries (with the exception of Hungary) compared to individual transport's rates. Besides the already mentioned constantly high rates of increase of public transport in Belgium, the growing demand of public transport in Croatia is very remarkable. 15 years ago individual transport demand was increasing heavily, while public transport has shown moderate growth rates. At the start of the new millennium, more and more people started to use public means of transport in Croatia, so that the rate kept growing constantly while individual demand declines until in the year 2006. Then, for the first time, public shows higher growth rates than individual transport. Meanwhile the proportions of 15 years ago have nearly been reversed: Currently public transport presents high growth rates in demand while the demand for individual transport is no longer increasing heavily, so that individual transport presently shows just moderate growth rates. Besides this positive development, in Hungary public transport has shown negative growth rates, whereas individual transport was increasing, especially in recent years.<sup>15</sup>



**Figure 10: Comparison of Modal splits 2000 and 2008 [in % of total pkm]**

Source: European Commission – Statistical Pocketbook 2010. Luxembourg, 2010. p. 120 f.  
 Hungarian Data: Hungarian Central Statistical Office: Transport Trends 1970 – 2009. Tables submitted via Email on 09.05.2011

<sup>15</sup> The negative growth rates in public transport in Hungary seem plausible in light of the enormous increase of the ticket prices in railway transport (cf. Figure 8).

The high growth rates of public transport in the last years are not yet reflected in the Modal splits of the research countries, with the exception of Belgium, where public transport gained five percent market share. Hungary in the same time period shows a strong increase in individual transport of six percent market share. The other countries either show share increases in public transport (the Netherlands, Austria), or slight share decreases (Germany, Croatia). Nevertheless this is an interesting development as individual transport in the last decades as a general tendency used to gain market shares and this period seems to run out.

### 3.2.2.2 Eastern Europe is gaining on Western Europe concerning motorization

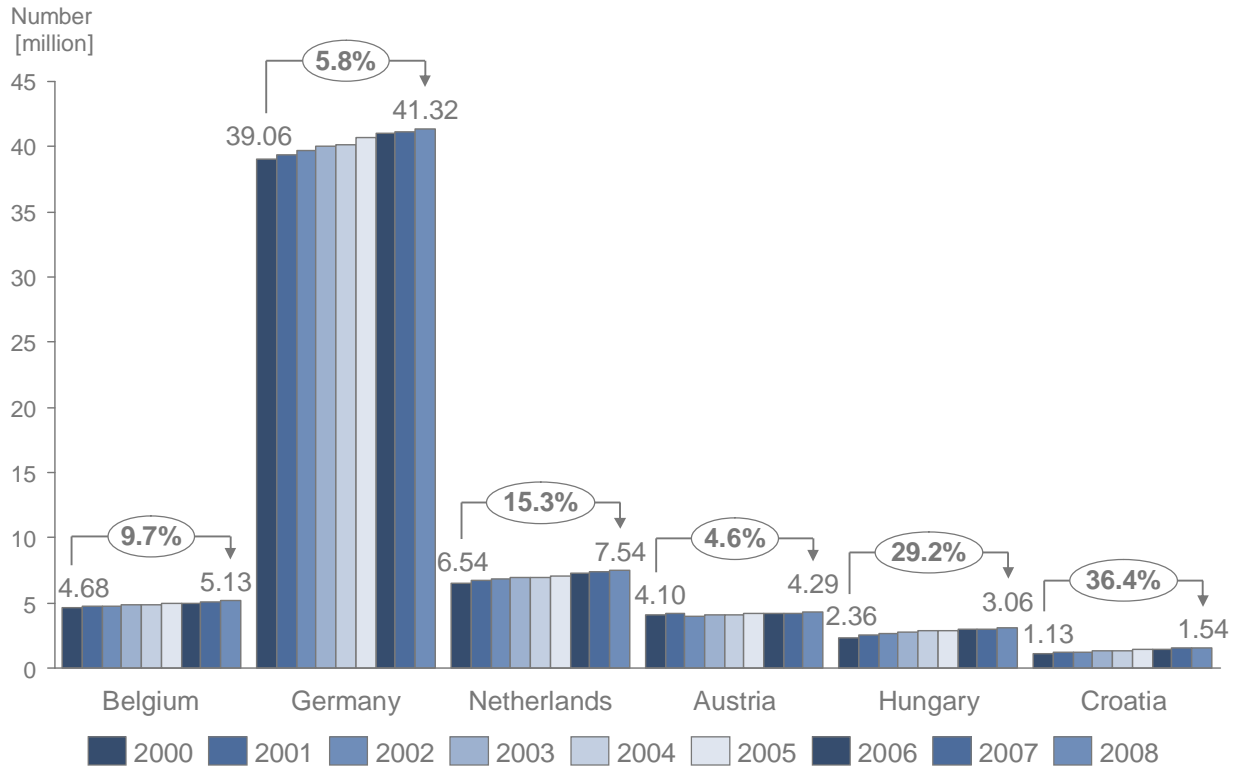
In order to analyse motorization, the absolute number of registered cars and the number of cars per 1000 inhabitants are taken as indicators.<sup>16</sup> Having a look at the number of registered cars, first observations are increasing figures in all studied countries. However, there are differences in intensity of the growth: While in Western European countries car stock has grown between 4.6 % (Austria) and 15.3 % (Netherlands) in the past nine years, Hungary (29.2 %) and Croatia (36.4 %) presented much higher rates of increase. The already mentioned catching-up process in Hungary and Croatia (cf. chapter 3.1), is accordingly still recognisable in the car stock development. Interestingly, in almost all research countries (with the exception of Austria) the growth rates of passenger kilometres by car are lower than the growth of the car stock (see Fig. 17). Actually in most of the Western European countries there is even a trend that possession and utilisation of an own car is no longer seen as a special status symbol, especially by younger people. Electronic equipment or the numbers of social contacts in online networks in most cases are much more important.<sup>17</sup>

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<sup>16</sup> It is important to mention, that these indicators do not give any information about intensity of car use. If that were the case, an increasing motorization and number of car stock as a consequence must have increasing growth rates if individual transport concerning transport performance indicated by passenger kilometres. The already analysed, transport demand showed that this is not the case (cf. chapter 3.2.2.1).

<sup>17</sup> cf.: Progenium: Car no longer favourite object of Germans.

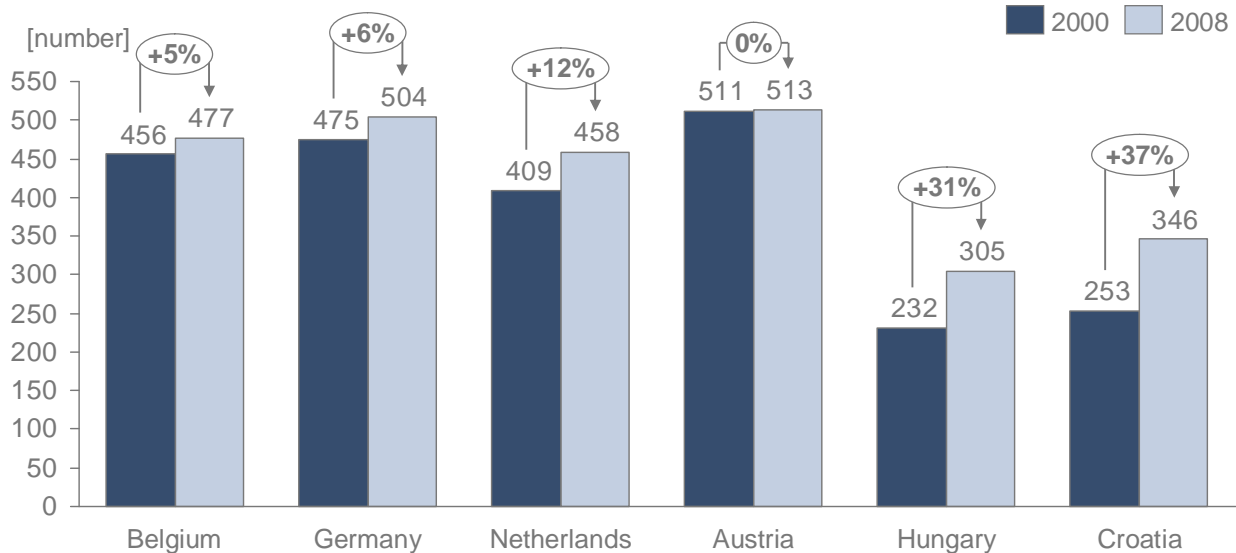
[http://www.progenium.com/fileadmin/user\\_upload/PDF/Pressemitteilungen/PROGENIUM\\_Pressemitteilung\\_Status\\_des\\_Automobils.pdf](http://www.progenium.com/fileadmin/user_upload/PDF/Pressemitteilungen/PROGENIUM_Pressemitteilung_Status_des_Automobils.pdf) last access: 13.4.2011 and: Centre of Automotive Management: Jugend und Automobil 2010. [http://www.auto-institut.de/download/Zusammenfassung\\_AM10-jugend.pdf](http://www.auto-institut.de/download/Zusammenfassung_AM10-jugend.pdf) last access 18.4.2011



**Figure 11: Number of registered cars in million.**

Source: European Commission – Statistical Pocketbook 2010. Luxembourg, 2010. p. 156.

A similar pattern is visible looking at the motorization rate, displayed through the number of cars per 1000 inhabitants. There has been a similar increase throughout Europe, with a still noticeable catching-up effect in Eastern European countries. The motorization rate increased nearly parallel to the absolute numbers in every country, though Hungary (31 %) and Croatia (37 %) are presenting much higher increases than the Western European countries (in average 5.6 %). The highest motorization rates are shown by Germany and Austria, where theoretically more than half of the population owns a car.



**Figure 12: Registered cars per 1000 inhabitants 2000 – 2008**

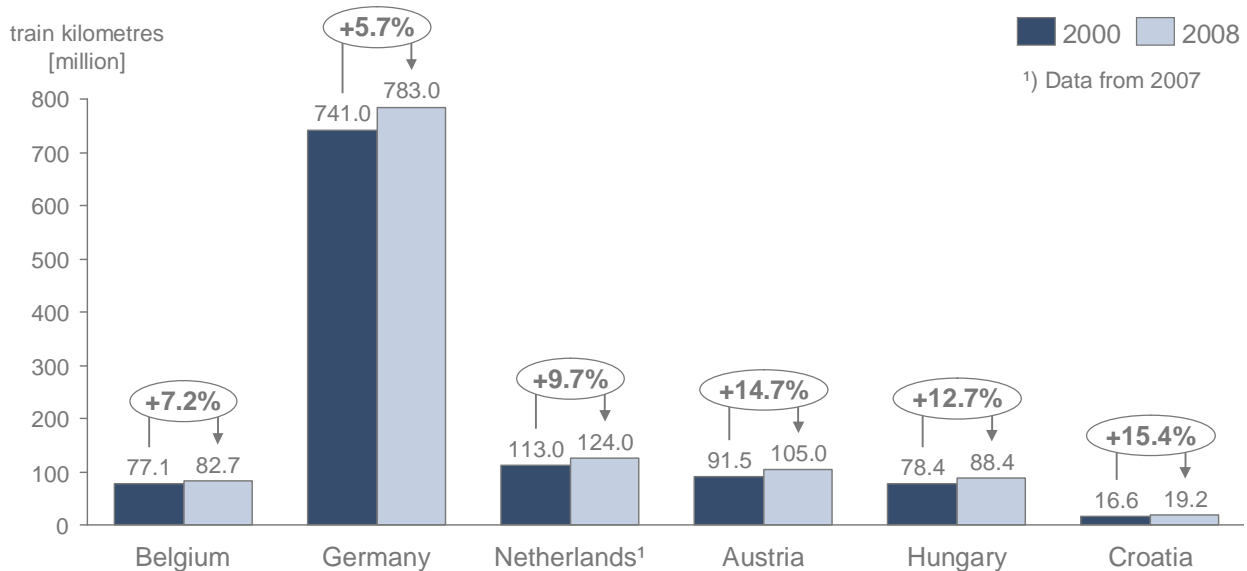
Source: European Commission – Statistical Pocketbook 2010. Luxembourg, 2010. p. 155.

### 3.2.2.3 Supply in passenger transport by railway increases

Similar to an increased supply in individual transport shown by a higher motorisation, passenger transport by rail also has presented a growing offer in the last years. Train kilometres in passenger transport are the analysed indicator to show this development. A growing number of train kilometres in passenger transport means an increase in train services as there are either more trains on new lines or a higher frequency on existing lines.<sup>18</sup>

<sup>18</sup> It is important to mention that the number of train kilometres do not give any information about the passenger seating capacity of the trains.



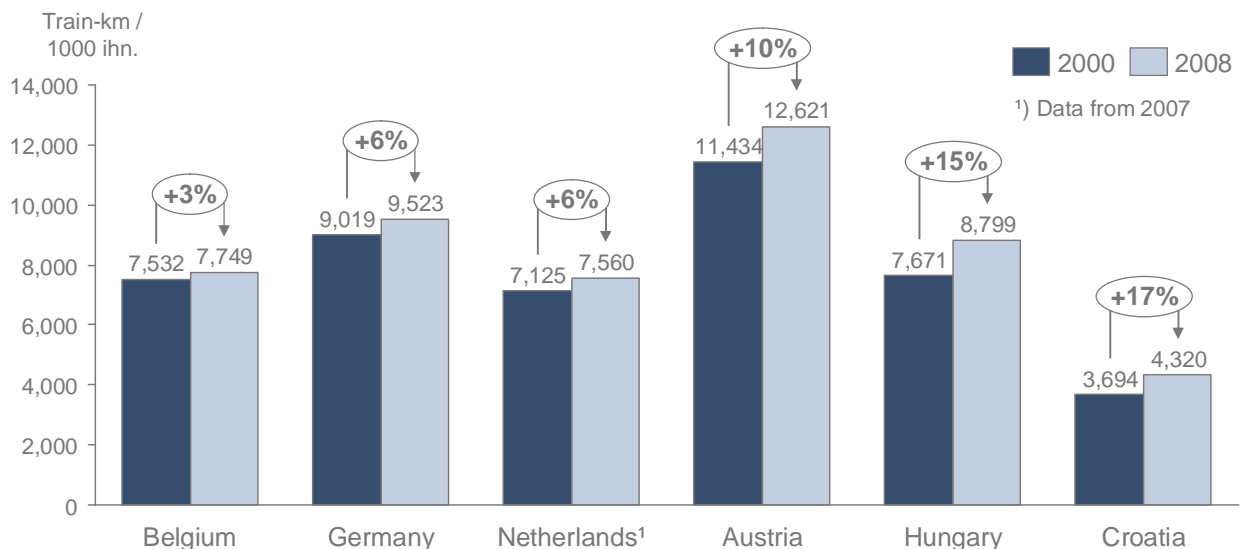


**Figure 13: Train kilometres in passenger transport 2000 – 2008.**

Source: Eurostat: Movements of passenger trains

[http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=rail\\_tf\\_passmov&lang=de](http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=rail_tf_passmov&lang=de) Hungarian Data: UIC –Railisa

Database: 4105 Train kilometres passenger trains. <http://railisa.tsf.it/railisa>



**Figure 14: Train kilometres (train-km) per 1000 inhabitants (inh.) 2000 – 2008.**

Source: Own calculation from: Eurostat: Movements of passenger trains

[http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=rail\\_tf\\_passmov&lang=de](http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=rail_tf_passmov&lang=de)

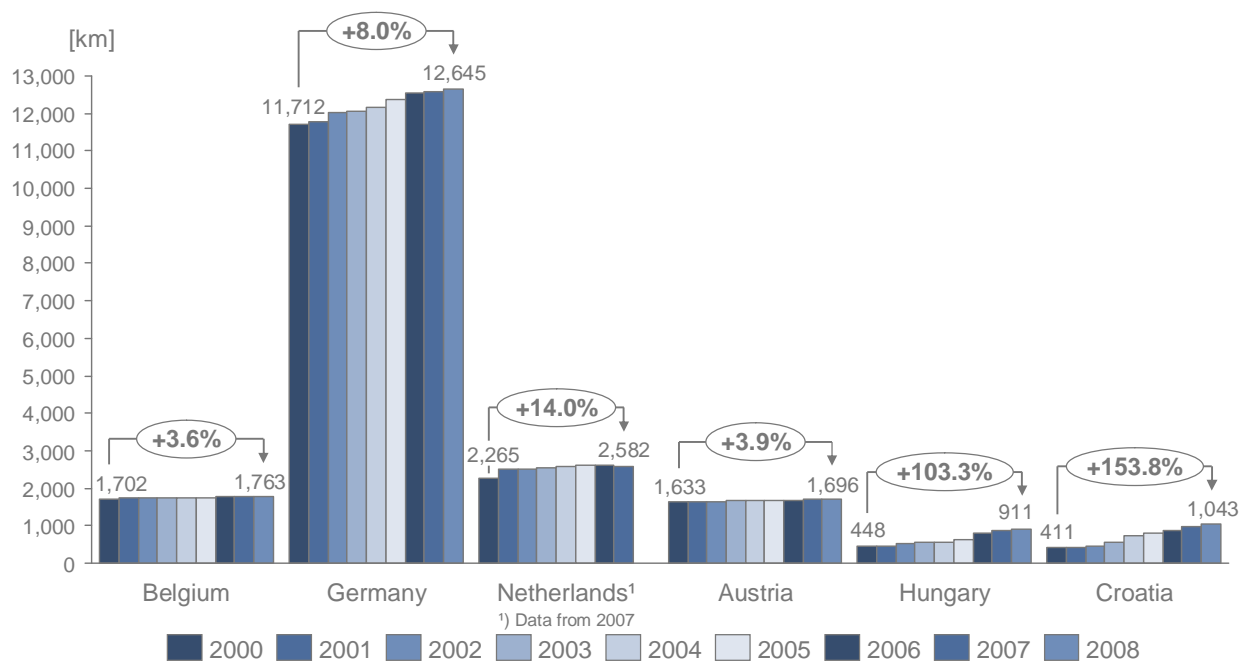
Hungarian Data: UIC –Railisa Database: 4105 Train kilometres passenger trains. <http://railisa.tsf.it/railisa>

Concerning train kilometres per 1000 inhabitants, Austria presents the best supply of all research countries. Interestingly, except Croatia, who lags a behind a little bit, there are just

small differences between the other countries although they all have different leading signs. As a consequence, the available offer concerning train kilometres, in Hungary is comparable to Germany, Belgium and the Netherlands.

### 3.2.2.4 Eastern Europe makes up for motorway network expansion

Concerning individual transport, Eastern Europe is gaining on infrastructural expansion. The examined indicator is the total length of motorways. There has been a constant increase in all countries in the past nine years, but differences in the dimensions.



**Figure 15: Total lengths of motorways 2000 and 2008 [km]**

Source: Total length of motorways 2000 - 2007: European Commission – Statistical Pocketbook 2010. Luxembourg, 2010. p. 147. Data for 2008: Eurostat: Total length of motorways:

[http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=road\\_if\\_motorwa&lang=de](http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=road_if_motorwa&lang=de) last access: 26.4.2011.

Hungarian Data for 2008: Hungarian Central Statistical Office: Total length of motorways in Hungary. Table submitted via Email on .09.05.2011.

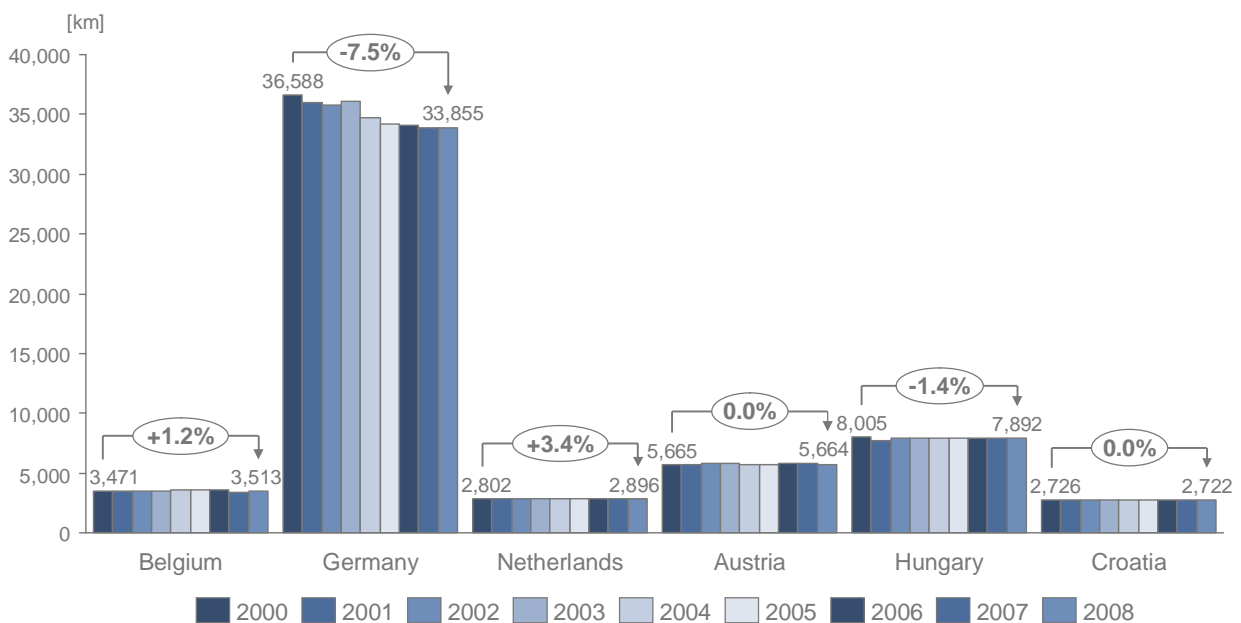
While in the Western European countries there have been moderate expansions between 3.6 % (Belgium) and 14 % (Netherlands), in Hungary and Croatia a downright jump concerning the length of motorways has taken place: The Hungarian motorway length increased by 103.3 % and the Croatian even by 153.8 %. The reasons for this development can be found in already mentioned incidents: The expansion of Hungarian and Croatian motorways has two principal reasons: First, strong motorway expansion in the last decade is still offshoots of the already named transformation processes in both countries.<sup>19</sup> Second, Hungarian and Croatian approach towards the European Union were and still are accompanied by establishing and improving connectivity with neighbour states and the EU. Linkages to Transeuropean Networks

<sup>19</sup> cf.: chapter 3.

(TEN) and the geographically given position as transit countries, especially for freight transport on the road between Europe and Asia are complementary reasons.<sup>20</sup> The high percentage values of Croatia and Hungary can be explained in light of the low base level of the motorway networks. The strongest increase in length in absolute numbers shows the German motorway network with 933 km.

### 3.2.2.5 Stagnation or reduction of rail infrastructure

Unlike the individual transport infrastructure, in railway transport there has been no infrastructural expansion comparable to just seen motorway expansion in the last ten years. The total length of railways in use, which is taken as indicator, only shows slight expansions in Belgium (1.2 %) and the Netherlands (3.4 %). In Austria and Croatia the extension of the railway network has not change, whereas Hungary (-1.4 %) and Germany (-7.5 %) show decreases. Especially the situation in Germany is interesting, due to the fact that the last nine years contained significant expansions in the high-speed and suburban railway networks<sup>21</sup> and total length of railways in use declined anyway.



**Figure 16: Total length of railways in use 2000 – 2008 (in km)**

Source: European Commission – Statistical Pocketbook 2010. Luxembourg, 2010. p. 149.

In this context it is important to mention that condition, non-existing extension of total railway network respectively putting out of service of railway track sections currently are intensively discussed topics in almost every research country. In several cases initiatives from non-

<sup>20</sup> Motorway expansion currently still is one of the main critical discussed topics in Hungarian and Croatian policy and non-governmental organizations. cf.: chapters 4.5. respectively 4.5.

<sup>21</sup> cf.: chapter 4.2.1.

governmental organizations aim at revitalisation of closed railway lines, mostly for passenger but also for freight service. This issue will be taken up again in the qualitative analysis.<sup>22</sup>

### 3.2.3 Intermediate results of the quantitative analysis

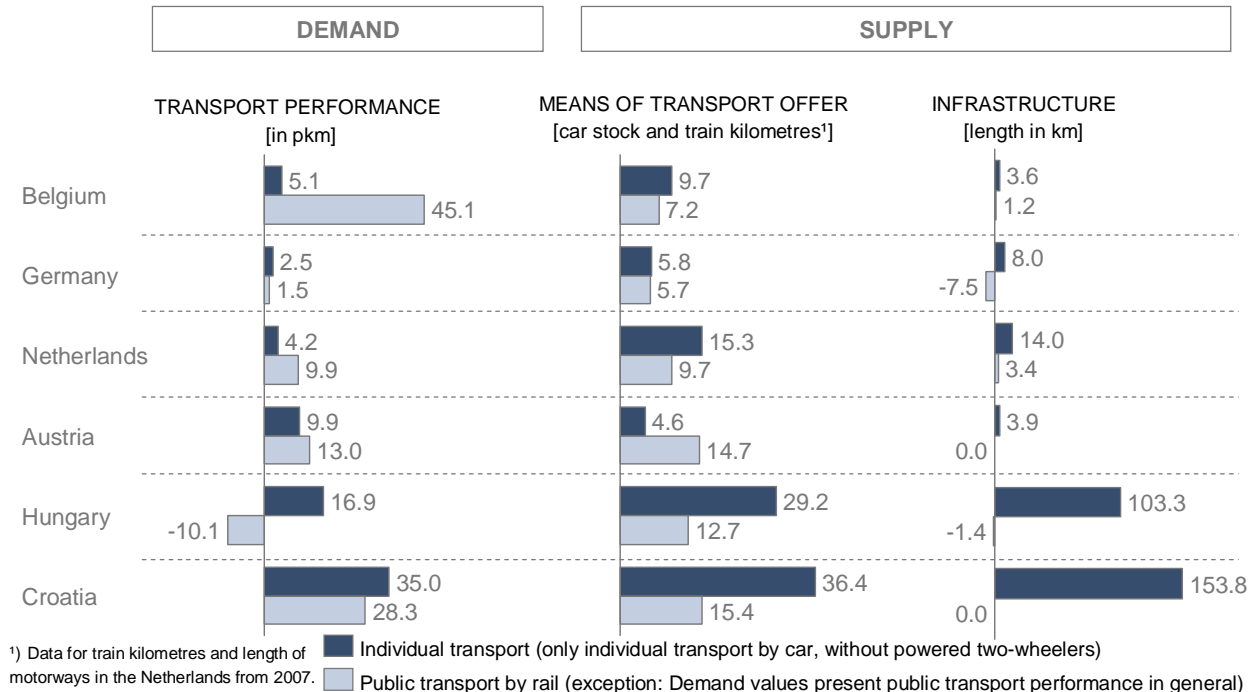
In consideration of the trends of the past ten years mentioned in the chapters before, a more detailed picture of the development of population and mobility of the research countries can be shown. In the following, the demonstrated trends will be combined and compared to point out the most important ones.

According to the research approach of USEmobility, which examines public transport in the context of multimodal transport on demarcation to individual transport, in the following the central figures of the quantitative analysis will be summarised and contrasted. In order to improve comparability of data in the following trend comparison the development of rail transport is considered equivalent to the development of public transport in general. This is justified by similar developments in rail transport and public transport in general as well as by the USEmobility focus on railway transport.<sup>23</sup>

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<sup>22</sup> A good example is an initiative of the Verkehrsclub Deutschland (VCD) which started a discussion to reopen a closed railway line near Osnabrück (Germany). The discussion lead to the decision by the local authorities to reopen this line (so called „Haller Wilhelm“) for regular passenger service. cf.: chapter 4.2.3.

<sup>23</sup> Modal split of bus transport and railway transport show parallel developments for the research countries in the last ten years. Cf.: Eurostat: passenger transport by means of transport (2000 – 2008)  
<http://epp.eurostat.ec.europa.eu/tgm/table.do?tab=table&init=1&language=de&pcode=tsdtr210&plugin=1> last access: 15.4.2011



**Figure 17: Change of selected indicators in % 2000 – 2008**

**Sources:**

**Transport performance:**

- European Commission – Statistical Pocketbook 2010. Luxembourg, 2010. p. 120 f.
- Hungarian Data: Hungarian Central Statistical Office: Transport Trends 1970 – 2009. Tables submitted via Email on 09.05.2011

**Means of transport offer:**

- Car stock: European Commission – Statistical Pocketbook 2010. Luxembourg, 2010. p. 156.
- Train kilometres: Eurostat: Movements of passenger trains [http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=rail\\_tf\\_passmov&lang=de](http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=rail_tf_passmov&lang=de) Hungarian Data: UIC – Railisa Database: 4105 Train kilometres passenger trains. <http://railisa.tsf.it/railisa>

**Infrastructure:**

- Total length of motorways 2000 - 2007: European Commission – Statistical Pocketbook 2010. Luxembourg, 2010. p. 147. Data for 2008: Eurostat: Total length of motorways: [http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=road\\_if\\_motorwa&lang=de](http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=road_if_motorwa&lang=de) last access: 26.4.2011. Hungarian Data for 2008: Hungarian Central Statistical Office: Total length of motorways in Hungary. Table submitted via Email on .09.05.2011.
- Total length of railways in use: European Commission – Statistical Pocketbook 2010. Luxembourg, 2010. p. 149.

Figure 17 compares demand and supply in transport sector in each country and sums up the results of the quantitative analysis. The transport performance in passenger kilometres represents demand, whereas supply is represented by means of transport offer and infrastructure. Means of transport offer represents the availability of vehicles to satisfy mobility needs, that is to say car stock and train kilometres. Infrastructure compares the length of motorways and the length of railways in use.

A first general observation is that there has been general increase in demand for mobility in all research countries with the exception of Hungary where there has been a decrease of public

transport and only an increase of individual transport.<sup>24</sup> The increase in the other countries is viewable in individual<sup>25</sup> as well as in public transport. Especially remarkable is that in several countries the demand for public transport showed a greater increase than the demand for individual transport. These include Belgium, the Netherlands, and Austria. The greatest increase of demand for public transport has been in Belgium by almost 50 %. Besides Hungary which shows a differing transport performance in public and individual transport, interesting observations can also be made in Germany and Croatia: In both countries the increase of individual transport in the past nine years has been greater than the increase of public transport. Though, a closer inspection at passenger transport by rail in these two countries shows that the demand for rail transport has increased much more than the demand for individual transport. Transport performance by rail between 2000 and 2008 increased by 8.2 % in Germany and even by 44.6 % in Croatia.<sup>26</sup>

This seems to be a remarkable trend which has been observable in the last nine years, in some countries even just in recent years (cf. Figure 9). Although the time interval since this is viewable is relatively limited, there seem to be first signs of a change of trends. Following this trend public transport's modal split has increased slightly in some, although not all research countries. These include Belgium, the Netherlands and Austria. Even if additional market shares as a rule are still very moderate and individual transport still makes up the lion's share of modal split in all research countries (cf. Figure 10), there seems to be a turnaround from declining market shares in public transport in former times towards increasing market shares at least in some countries.

Concerning transport infrastructure expansion the quantitative analysis has shown that the focus in all studied countries is still on road construction. In all countries the motorway network has grown faster than the railway network, some countries like Germany and Hungary even show a shrinking railway network.

In addition to that, it has been shown that in all countries the car stock has grown much faster than the transport performance by car. Concerning the already indicated trend of stagnating or even declining market shares of individual transport in some countries, one must come to the conclusion that today an increased motorisation rate not necessarily leads to more intensive car use. On the other hand all countries show significant increases of train kilometres which lead to a distinctly improved quantitative supply in railway transport. This result is to some extent a counterbalance to the stagnation and also shrinkage of railway infrastructures.

Looking to the future

If the motorisation rate will continue to grow as it has done in the past is an open question. Although the GDP is still growing in all research countries (cf. Figure 5), recent studies show, that for younger people the trend is going towards other status symbols and material values and economic welfare is no longer equivalent to increasing purchase of a car.<sup>27</sup> This could lead

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<sup>24</sup> cf.: Footnote 15.

<sup>25</sup> Individual transport in this chapter means only individual transport by car, without powered two-wheelers (cf. Figure 17)

<sup>26</sup> Same data source like Figure 17.

<sup>27</sup> cf.: Centre of Automotive Management: Jugend und Automobil 2010. <http://www.auto->

to a significantly lower increase of motorisation in the future.

Regarding mobility costs, there is a trend which is observable in almost all research countries that costs for car fuels raise more quickly than for railway tickets. Costs have an impact on the choice of transport mode and if this tendency will continue, it will assumedly foster the trend towards higher growth rates in public transport respectively railway transport.

On top of that, demographic change and the urbanisation process might have an impact on the choice of transport mode: The trends in population development in some countries on the one hand are stagnation or even a decline of the population and at the same time a constant ageing of the population. Especially population ageing has an impact on transport demand and presents new challenges for individual and public transport such as improvement of accessibility.<sup>28</sup> Though, an advantage for a particular transport mode through the demographic change cannot be indicated clearly within this quantitative analysis.

The ongoing urbanisation process, however, might have an impact on market shares in the transport sector. For example in Germany urban areas already show much higher public transport market shares than the national average and in recent years the shares are even growing.<sup>29</sup> Ongoing urbanisation thus might be a chance for public transport in the future.

The quantitative analysis has indicated the main trends in the transport sector of the research countries at a macroeconomic level. However, to understand people's choice of transport modes, there are also reasons on individual level, which are associated with changes in attitudes and behaviour of the demanding population. To fathom and explain these reasons is the research focus of USEmobility.

## 4 Qualitative analysis

Whereas the quantitative analysis has shown national trends regarding the choice of transport mode based on statistical data, the qualitative analysis attempts to find out impulses of the political environment in the research countries, as well as of NGO's. On this account, the quantitative analysis will contain policy objectives and measures of national and municipal governments and perceptions and positions of non governmental organizations. The levels were chosen, as it is important to present policies of authorities which make the decisions concerning transport policy. In the research countries this usually happens at national level and at municipal level by the governments of the city. In Germany because of the federal state

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[institut.de/download/Zusammenfassung\\_AM10-jugend.pdf](http://institut.de/download/Zusammenfassung_AM10-jugend.pdf) last access 18.4.2011 see also footnote 17.

<sup>28</sup> cf.: Statistical Department of Baden-Württemberg: Demographic Change and its impact on transport sector until 2050. [http://www.statistik.baden-wuerttemberg.de/Veroeffentl/Monatshefte/PDF/Beitrag04\\_12\\_13.pdf](http://www.statistik.baden-wuerttemberg.de/Veroeffentl/Monatshefte/PDF/Beitrag04_12_13.pdf)

<sup>29</sup> cf.: D. Zumkeller: Demographie, Lebensstile, Mobilität – Einblicke und Ausblick. In: Stadtverkehr – Urbane Mobilität im Wandel.

G-A Ahrens, F. Liefke: Urbane mobilität heute – Status quo. In: Stadtverkehr – Urbane Mobilität im Wandel. p. 165, Figure 6.

G-A Ahrens: Mobility in German Towns. 2010 Annual Polis Conference „Innovation in transport for sustainable cities and regions“ Dresden, 2010.

organisation in comparison to the other countries the situation is quite different: As many decisions, especially concerning public transport, are made at the level of the federal states, the national chapter of Germany also explains and presents federal state decision making. This will be explained more detailed in chapter 4.2.

On municipal level there will be an exemplary presentation of transport policy at municipal level of one city per country. For this reason usually the capital was chosen, which in almost all countries is at the same time the largest city and furthermore is part of the selected regions presented in Task 2.3 of the USEmobility project.<sup>30</sup> Only in Germany the city of Hamburg was chosen instead of the capital Berlin which is also the largest city. The reason is that Berlin is not incorporated in any selected region while Hamburg is part of the selected “Metronom” region. The chosen cities have a closer connection to the USEmobility project due to the fact that they are directly incorporated in one of the selected regions of task 2.3. In reverse, transport policies of the selected municipalities might have a direct impact on trends regarding passenger’s choice of transport mode in the selected regions.

To analyse transport policy, it is important to understand the general structure of decision making. Usually there are main goals, which are followed by decisions and concrete measures. Goals and measures can be found in government declarations, coalition agreements, political programs and guidelines, to identify clearly the individual situations and processes of the research countries. As in the quantitative analysis, the focus of this chapter will again concentrate on the evaluation of the (passenger) transport relevant programs and documents. While some programs and documents will just be mentioned as indicators for a particular trend, the most interesting ones will be observed and analysed in detail.

## 4.1 Belgium

### 4.1.1 National level

In the current Belgian policy, transport relevant issues seem to play just a minor role. The government agreement between the political parties CD & V, MR, PS, Open VLD and CDH points out other focuses than the transport sector. Focal points of the present governments are economic and employment development, social cohesion/division just like the effectiveness of the state. Environmental challenge is the only declared aspect which is indirectly related to transport policy.<sup>31</sup>

Within the agreement, there are two interesting aspects concerning the national transport policy. Both of them are especially designed to promote the multimodal transport: First, the Belgian Government wants to improve the accessibility of stations and trains with particular attention on the linkage to tram and bus users as well as to car drivers (e.g. installation of parking lots). Second, the Government will initiate a dialogue with social partners and employers to reduce the car use on the way to work and provide offers to more intensive use of

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<sup>30</sup> cf.: USEmobility proposal p. 22.

<sup>31</sup> cf.: Kingdom of Belgium: Government Agreement between CD & V, MR, PS, Open VLD and CDH. Bruxelles, 2008. p. 1.



multimodal transport.<sup>32</sup>

It should be noticed that although Antwerp in Belgium has one of the biggest port of the EU, in national policy passenger transport is prioritized over freight transport. It is clearly recognizable that these are only small measures and amendments in a transport policy with a well functioning system. The reasons have partly been given in the quantitative analysis, as the expansion of the infrastructure is terminated and the density of motorways and railways is within the highest all over the world.

As car ownership and urbanization rate remains among the highest in the world (cf. chapter 3.2.1. and 3.2.2.), congestion is getting worse around the cities. However, due to attempts at a more sustainable mobility, all modes of public transport are growing steadily. Subsequently, the Belgian Ministry of transport made a program to develop and improve mobility in a sustainable way. The general problem was that, due to government efforts at a modal shift, not only the number of public transport users kept growing, but as well the number of car users. This was especially observable at commuters.<sup>33</sup> In the last years this development has stopped and individual transport is no longer showing higher growth rates. On the contrary, chapter 3.2.2.1 has shown that especially in Belgium public transport currently shows much higher growth rates than individual transport and the market share since the year 2000 has increased strongly.

The main goal of the sustainable transport and mobility development in Belgium was the reduction of car use, to reduce congestion and emissions on motorways and in cities. The only logic way to reach this aim was to reduce the number of cars respectively the number of persons using the individual transport.

In order to combat congestion on the road during peak hours, the federal government offered free public transport to civil servants and subsidized part of the public transport fares for commuting workers in the private sector. Due to this initiative a fair percentage of workers already switched to train, bus, tramway or metro.

Another method in the same context of clearing the roads of excess commuter traffic were some forms of fiscal advantages which are offered to employers. Furthermore, there was a massive stimulation of a new cycling culture: on a daily basis Belgian households made over an million cycling trips, mainly trips to school, work or shopping.<sup>34</sup>

A general obstacle in Belgian transport policy is the intricacy of the Belgian political system, with a split up of responsibilities between the EU, the federal and the regional governments because it definitely complicates the implementation of policies.<sup>35</sup>

#### 4.1.2 Municipal level

The capital region of Brussels has quite similar general and transport policy trends as Belgium

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<sup>32</sup> c.f: Ibid.: p. 25.

<sup>33</sup> cf.: Kingdom of Belgium – Ministry of transport : Conseil Fédéral du Développement Durable (CFDD) Avis cadre pour une mobilité compatible avec le développement durable. Bruxelles, 2004. p. 19 f.

<sup>34</sup> cf.: Kingdom of Belgium – Ministry of transport : Conseil Fédéral du Développement Durable (CFDD) Avis cadre pour une mobilité compatible avec le développement durable. Brussels, 2004. p. 31 ff.

<sup>35</sup> cf.: Ibid.: 44 f.

at national level. The first regional mobility plan called Iris 1 edited in 1998 was the first attempt to detain the heavy car usage in the city. The main goal of the plan was to improve the public transport to set an alternative to individual transport. As the general idea of Iris 1 was a quite innovative one, there were some difficulties in the implementation. In the first years after Iris 1 started the number of passengers in Brussels public transport even declined before it increased year by year starting in 2001.

Since then the reduction of car use by offering better public transport conditions is the most important aim of Brussels transport policy. The number of (public) transport and mobility related programs increased heavily and there were special development plans for every public transport sector.<sup>36</sup> Multimodal transport supply was extended offering bike entrainment in metros and trams, installing bike parking at metro stations, creating an alternative to the usage of the own car implementing “Cambio” car-sharing.<sup>37</sup> It can be said that there was and still is a growing awareness and identification of multimodal chains in passenger transport.

Although there was a general atmosphere of departure towards new mobility opportunities, the objectives of the Iris 1 plan were, as has been indicated, not reached and not used very well by the inhabitants. As a consequence:

- The increase in road traffic was not curbed.
- Consequently, the commercial speed and regularity of the public ground transport system regressed, despite the construction of several dedicated throughways.
- The offer in public transport was often not sufficiently adapted to the needs of the population as regards fares, territories covered, running schedule, efficiency, comfort and information.<sup>38</sup>

In the face of these observations a second plan Iris 2 was edited by the Brussels capital region in the year 2008. The centre of attention still was the reduction of the car use in the city and as a new aspect, environmentally sustainable development of the mobility in Brussels.<sup>39</sup> Arguments for public transport partly already stated in Iris 1 like more attractiveness, focus on users, efficient and improved network were supplemented with concrete measures for facilitation of biking and walking in the inner city. It is important to mention that Iris 2 “increased awareness of the link between travel habits and impact on public health, quality of life and the environment”.<sup>40</sup>

Based on Iris 2 some current programs picked up the central ideas and elaborated concrete measures for every transportation sector. Within these programs a special interest is given to the cycling and walking mobility, as it is at the same time the cheapest and most environmental friendly way to move as well as a part of the promotion of active mobility modes to promote to

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<sup>36</sup> cf.: Ville de Bruxelles: Plan Communal de Développement – Bilan 2000 – 2006. Brussels 2006. p. 16 f.

<sup>37</sup> cf.: STIB: Les performances actuelles de la STIB en termes d’offre de transport. Brussels 2010. p. 1.

<sup>38</sup> cf.: Brussels Capital Region . Institute for the encouragement of Scientific Research and Innovation in Brussels. Brussels, 2008. p. 4.

<sup>39</sup> cf.: Brussels Capital Region: Iris II Plan de mobilité. Brussels, 2008. p. 4, 15.

<sup>40</sup> cf.: Ville de Bruxelles: Plan Communal de Mobilité de la Ville de Bruxelles. Brussels, 2010. p. 77 f.

fight against inhabitant's physical inactivity.<sup>41 42</sup>

Due to the number of special programs, transport and mobility policy appears only indirectly in current municipal governments program: Out of eight stated challenging priorities in its legislative program for the years 2006-2012 (e.g. ambitious housing policy, the installation of economy employment training, strengthening education and health) mobility aspects are summarised under the wish of making Brussels “cleaner, more mobile, greener and more beautiful”.<sup>43</sup>

A special advantage of the City of Brussels is its integrated tariff system of STIB, which combines metro, tram, bus and night bus lines in an integrated tariff and public transport system since the year 2003. There is full integration between metro, tram and bus tickets but there is only partial integration with the tickets of the national rail operator NMBS/SNCB and the bus companies De Lijn (Flanders) and TEC (Wallonia).<sup>44</sup> The ticket integration is guaranteed by a contactless smartcard system called moBIB which has card readers installed at all metro station, buses and trams.<sup>45</sup>

In addition to the shown trends, mobility and transport policy is partly impeded by general conditions: There are delays in the implementation of some programs and projects due to financial problems as Brussels capital region is financially weak. Furthermore, Capital Region of Brussels suffers from some internal and external governance difficulties: There are multiplication and dispersion of responsibilities among and in the Region between ministries, administration and services), STIB/MIVB, the municipalities and police districts. This leads to difficulties in mobilising all the actors concerned around a strategic plan. Above all, there is Regional Government's lack of “de facto autonomy in relation to the municipal councils and lack of the political will to implement the plans it adopts itself”.<sup>46</sup>

### 4.1.3 Non-governmental level

The general concern of Belgian non-governmental organizations (NGO's) working on transport issues is reduction of environmental pollution caused by car use as well as a shift towards eco-friendly transport and mobility. In the last years there has been a rising number of Belgian

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<sup>41</sup> cf.: Ville de Bruxelles - Ministre des Travaux publics et des Transports, du Port de Bruxelles et de l'Informatique : Plan stratégique – travaux publics et transports 2010- 2014 : Bruxelles: une ambition pragmatique. Bruxelles 2010 p. 10 f. 42 ff.

<sup>42</sup> cf.: Brussels Capital Region: Iris II Plan de mobilite. Brussels, 2008. p. 26.

<sup>43</sup> cf.: Ville de Bruxelles: Ville de Bruxelles 2006 – 2012. Programme de politique générale. Brussels, 2006. p. 4.

<sup>44</sup> For people living outside Brussels who commute to Brussels, NMBS/SNCB sells the STIB season ticket as an add-on to their season ticket for the train. Occasional users from outside Brussels, however, have to buy separate tickets. For travels within the Brussels Region, there is a so-called Jump Ticket, which is valid on all transport modes of all four operators within the boundaries of the Region. This ticket exists since 2003 and offers full tariff integration. In recent years, a smart card, called MOBIB, is being put in service. In the years to come, NMBS/SNCB and the bus companies De Lijn (Flanders) and TEC (Wallonia) will also introduce the MOBIB smart card. This will establish ticket integration on a national basis and at a later stage, also real tariff integration. Source: Interview with Bram Van den Bulcke form the European Passenger Federation (EPF), member of the USEmobility consortium. 2.5.2011

<sup>45</sup> cf.: STIB: STIB – the heart of the city. <http://www.stib.be/corporate.html?l=en> last access: 17.4.2011

<sup>46</sup> cf.: Brussels Capital Region . Institute for the encouragement of Scientific Reseach and Innovation in Brussels. Brussels, 2008. p. 6.

NGO's militate against ongoing expansion of roads and motorways to solve congestions problems especially in and around metropolitan areas. A work group called "modal shift"<sup>47</sup> unites some environmental and transport related NGO's, which are engaged in this topic. In their opinion, expansion of road infrastructure is just a short term solution of congestions problems as there will be more cars due to the additional given driving space in the long term.<sup>48</sup>

According to this, the main effort of "modal shift" members and other ecological and transport related NGO's in Belgium is avoidance of car use, especially in urban areas. Smart driving charges are one concrete recommendation to keep the number of cars on the streets as small as possible.<sup>49</sup> Suggestions were completed by an appeal to the national and municipal governments to support public and multimodal transport modes even more than it has been the case in the past.<sup>50</sup> Concrete measures to improve public transport and its embedment into multimodal transport chains were given from various angles. This mainly includes the support of car sharing offers<sup>51</sup> and cycling interests<sup>52 53</sup> as well as rail-bound local and long distance transport.<sup>54</sup>

Besides concrete measure and suggestions the main work of these NGO's consists of informing and educating people and politicians to establish stimulation towards sustainable mobility within the population. There are internet and media publications, installation of documentation centres, organization of training courses, study conferences and workshops as well as thematic weeks and public hearings.<sup>55</sup> Furthermore, there is a strong attempt doing lobbying to convince policy makers of the need for a sustainable mobility policy.<sup>56</sup> Participation in formal committees like the Regional Commission of mobility, the Advisory Committee of the Société des Transports Intercommunaux de Bruxelles (STIB) and the National Railway Company SNCB as well as the Committee for the Standardization of services STIB are some activities to achieve this aim.<sup>57</sup>

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<sup>47</sup> cf.: Members of „Modal Shift“: Bral vzw, Greenpeace, Bond Better Environment, Natuurpunt Inter-Environnement Bruxelles, Cyclists, Friends of the Earth Belgium, Gracq, Inter-Environnement Wallonie, TreinTramBus, Youth League for Nature and Environment (JNM), Amis de la Terre, and Mobile Komimo 21. Modal Shift, Meer weginfrastructuur, (g)een goed idee? Brussels, 2010. p. 2.

<sup>48</sup> cf.: Modal Shift: Meer weginfrastructuur, (g)een goed idee? Brussels, 2010. p. 5 f.

<sup>49</sup> cf.: Ibid.: p. 16.

<sup>50</sup> cf.: Inter-Environnement Wallonie: [http://www.iewonline.be/spip.php?page=recherche&id\\_groupe=10](http://www.iewonline.be/spip.php?page=recherche&id_groupe=10) last access: 7.4.2011

<sup>51</sup> cf.: Carsharing network Cambio: <http://www.cambio.be/> last access: 7.4.2011

<sup>52</sup> cf.: Fietsersbond cycling interests: <http://www.fietsersbond.be/> last access: 7.4.2011

<sup>53</sup> cf.: Inter-Environnement Bruxelles: <http://www.ieb.be/article2992> last access: 7.4.2011

<sup>54</sup> cf.: l'Association des Clients des Transports Publics (ACTP asbl), <http://www.actp.be/nous.php?db=nous&pg=0>, <http://www.treintrambus.be/> last access: 7.4.2011

<sup>55</sup> cf.: Mobiel 21 : sustainably on the road <http://www.mobiel21.be/> last access: 7.4.2011

<sup>56</sup> cf.: Komimo: <http://www.komimo.be/> last access: 7.4.2011

<sup>57</sup> cf.: Groupement des usagers des transports publics à Bruxelles (GUTIP): [http://www.gutib.be/main\\_accueil.php](http://www.gutib.be/main_accueil.php) last access: 7.4.2011

## 4.2 Germany

### 4.2.1 National level

As already mentioned, transport policy making in Germany distinguishes from the other research countries concerning sharing of tasks and responsibilities. In the following, task sharing in the individual policy fields will be explained: Infrastructural policy is made by the federal government (national level) and the federal state governments (regional level) on their respective levels. This applies not to rail network infrastructure, which lies (with a few exceptions) in the hands of the federal government. Providing transport services is not the task of the federal government so that federal state governments and the municipal level have all responsibilities and autonomies of decisions. Responsibilities for regional railway transport lies with the federal state governments, which as a rule delegate the responsibility for local public road transport<sup>58</sup> to administrative districts and municipalities. The public transport is financed by federal funds which are called “regionalisation funds”.<sup>59</sup> They are given to the federal states governments by the federal government.

As shown, there are three levels – federal level, federal states level and municipal level – of transport policy and decision making, for which reason objectives and measures of transport policies in the following will be explained:

Federal level:

Transport policy at federal level in Germany contains several objectives which partly overlap. These include energy efficiency and sustainability as well as increasing the share of non-motorised transport to put more transport onto rail. The goals shall be achieved in the context of an integrated transport policy.

One of the largest measures of German transport policy in the context of passenger transport is the German railway reform. Main objectives of the reform were increasing transport by rail (both passenger and freight) and also cost reduction for the public budget. Initiated in 1994, the reform can be described with “market opening” and “privatization”<sup>60</sup> and contained the following aspects:

- Reorganisation of the Deutsche Bundesbahn (state railway in the western part of Germany) and the Deutsche Reichsbahn (state railway in the eastern part of Germany, former German Democratic Republic) into a new railway company under private law, called Deutsche Bahn AG, including debt relief.
- Establishment of access to railway network for other national and international railway companies.
- Dissociation of profit and non-profit making sector. This means a market organisation

<sup>58</sup> Local public road transport is local public transport with the exception of regional rail transport.

<sup>59</sup> „Regionalisation funds” mainly finance regional railway transport. Local public road transport is financed only on a small part by „regionalisation funds”.

<sup>60</sup> Privatization was initially planned but then postponed and is currently not yet foreseeable. Formal privatization from a state-owned enterprise to a public limited company has already taken place.

combining competition and services for the public.

- Devolution of regional rail transport (since 1996) with transfer of competency from national level to the level of the federal states (see above).

As a consequence, besides local public transport law which already has been in decentralised responsibility, also regional rail transport was from there on in the responsibility of the federal states governments. Furthermore, regional rail transport and local public transport were specified as services for the public,<sup>61</sup> which are financially supported by the national government through a “regionalisation fund”.<sup>62 63</sup> There has been enhancing in competition through newly added market actors which led to quality improvement and increase in efficiency. From this it followed that there were more effective financial resources and gradually more offer in public transport.

In general, the railway reform, especially regionalisation in Germany has been quite successful. Over the years, there have been significant increases concerning passenger numbers, train-kilometres and public transport enterprises, which are even higher than the growth of financial support of the “regionalisation fund”.<sup>64</sup>

Besides the railway reform and the associated regionalisation, a second significant change in German transport policy at federal level in the past ten years was the new version of the “Federal Transport Infrastructure Plan” (“Bundesverkehrswegeplan”) published in 2003. It contained the approach of an integrated transport policy leading to a sustainable transport policy making in accordance with objectives of environmental and regional planning policies.<sup>65</sup> This new approach integrated planning fields which has been separated before and launched measures for a better combination of transport modes. One example was the integration into Trans-European Networks (TEN) which should take place fostering combined transport modes<sup>66</sup> in freight and passenger transport to increase rail transport in Germany.<sup>67</sup> Despite these positive attempts to boost multimodal transport chains, one must realize that the heart of German infrastructure policy, the investment policy, still orients towards the existing share of means of transport and not towards future traffic distributions. That is to say, as road transport is still dominating in passenger transport as well as freight transport,<sup>68</sup> individual transport is still financially supported in large extends concerning infrastructure.

A third important aim of German federal transport policy is put into writing in the current

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<sup>61</sup> "Aufgabe der Daseinsvorsorge"

<sup>62</sup> for more details concerning German Railway Reform cf.: Peter, B.: Railway Reform in Germany: Restructuring, Service Contracts, and Infrastructure Charges. Berlin, 2008.

<sup>63</sup> From then on a „Besteller-Ersteller-System“ („orderer-originator-system“) applies to local rail transport: Federal states respectively engaged authorities, determine the offer of local rail transport („Besteller“) and pay public service obligations out of the regionalisation funds to the railway transport companies („Ersteller“). Public service obligation are necessary as fare incomes are not sufficient to finance the ordered offer.

<sup>64</sup> Information of Allianz pro Schiene, Sources: destatis, Verkehr in Zahlen, BAG-SPNV.

<sup>65</sup> German Federal Ministry of Transport, Building and Housing: Bundesverkehrswegeplan 2003. Berlin, 2003. p. 8 f.

<sup>66</sup> cf.: „Combined transport“ is used for freight transport, whereas „multimodal mobility“ refers to passenger transport.

<sup>67</sup> cf.: German Federal Ministry of Transport, Building and Housing: Bundesverkehrswegeplan 2003. Berlin, 2003. p. 27.

<sup>68</sup> cf.: Federal Ministry for the Environment, Nature Conservation and Reactor Safety: Transport and Environment – Challenges. Berlin, 2007. p. 8 ff.

“Sustainable Development Strategy of Germany” which focuses on environmental impacts. Regarding transport, it centres the attention on increasing the share of “non-motorised transport and environmental friendly means of transport like rail, public transport and inland waterways” in modal split. Whereas in freight transport there are concrete figures for a higher market share of railway transport (24,3 % of all freight transport in 2015) in passenger transport there is only a vague statement towards an increase of modal share.<sup>69</sup> Nevertheless, at least the modal share of rail transport in Germany has started to increase slightly in the last years (see above chapter 3.2.3) and the avoidance of car use for the benefit of public means of transport is generally seen as an important contribution to reduce energy consumption and pollutant emissions.<sup>70</sup>

Just like the Ministry for the Environment as a non directly transport related Ministry, the Ministry of Economy and Technology also formulates objectives concerning energy use which inter alia also affect the transport sector. The “Energy Concept” from 2010 of the Federal Ministry for Economy and Technology claims for a reduction of final energy consumption in transport sector by 10 % until 2020 and 40 % until 2050, outgoing from 2005. Again, an intensified use of “environmental friendly forms of mobility as an alternative to motorised private transport” is indicated as a considerable and necessary development.<sup>71</sup> Unfortunately until now there are no concrete measures to achieve this aim.

Although there have been large road infrastructure investments in the past ten years, German transport policy also contained substantial measures which supported railway transport. There has been railway network expansion, especially in the high-speed rail link network. In the last ten years, the number of high-speed rail links increased constantly, partly by network extensions, partly upgrading existing tracks. Currently high-speed lines in Germany at speeds of 230 km/h and even more have a total length of 1.300 km. In addition there are further tracks at speeds of 200 km/h. This high-speed network shall still be expanded in the future.<sup>72</sup> Furthermore, there has been an expansion of infrastructure of the suburban railway system in Germany. In addition to network extensions in almost all existing areas, five new systems have been implemented throughout the country in the past ten years. However, there was not always infrastructural expansion for new routes, as rapid-transit railways sometimes use the existing rail network.<sup>73</sup> Although, it is important to mention that German federal government still spends much more investments in expansion and preservation of road networks than in expansion and

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<sup>69</sup> cf.: German Federal Government: Perspektiven für Deutschland – Unsere Strategie für eine nachhaltige Entwicklung. Berlin, 2002. p. 111 f.

<sup>70</sup> cf.: Federal Ministry for the Environment, Nature Conservation and Reactor Safety: Transport and Environment – Challenges. Berlin, 2007. p. 16 f., 20 f.

<sup>71</sup> cf.: German Federal Ministry of Economy and Technology: Energy Concept- for an environmentally friendly, reliable and affordable energy supply. Berlin, 2010. p. 5, 25.

<sup>72</sup> High-speed rail links refer to tracks with a speed of more than 200 km/h. Cf.: G. Ellwanger: Weltweite Erfolge des Hochgeschwindigkeitsverkehrs. In: Eisenbahntechnische Rundschau 03/2011. p. 10 – 17. And Deutsche Bahn: Aus- und Neubaustrecken in Deutschland.

[http://www.deutschebahn.com/site/hochgeschwindigkeit/de/infrastruktur/hgv\\_netz/ueberblick.html](http://www.deutschebahn.com/site/hochgeschwindigkeit/de/infrastruktur/hgv_netz/ueberblick.html) last access: 26.4.2011

<sup>73</sup> cf.: German Bundestag: Verkehrsinvestitionsbericht 2010. Berlin, 2011. p. 35 ff.

preservation of railway networks.<sup>74</sup>

In addition to that there were measures which did not foster public transport directly but supported it in an indirect way. These include increasing fuel taxes as well as implementation of a truck toll system on motorways in 2005 in order to increase the share of multimodal transport chains in freight transport.<sup>75</sup> The earnings of the truck toll system were spent until 2010 for infrastructure investment in all modes of transport which contributed to the integrated and sustainable transport policy of the “Federal Transport Infrastructure Plan” and the “Sustainable Development Strategy of Germany”.<sup>76</sup> In this context it is important to mention that increasing fuel taxes and the truck toll system were not mainly motivated by transport related aspects with the objective of shifting transport, but by financial ones. The significant reductions of “regionalisation funds” in the years 2004 and 2006 are another example of financially motivated measures with an important impact on the transport sector.

The federal subsidies for purchasing a new vehicle (called car-scrap bonus) in the year 2009 were likewise not motivated by transport policy. Car-scrap bonus was supported with a total of five billion Euros, because automobile industry in Germany is economically important. Fostering Electronic Mobility (E-mobility) is also motivated by economic and industrial policy and one can see only little transport policy related influence for two reasons. First, the concept is centred on individual transport by car.<sup>77</sup> Public transport will not be supported financially in this context, although electronic powered vehicles already have a high share in passenger transport by rail, and although there still is a huge potential for more and innovative E-mobility in public transport. Second, even if the self proclaimed aim of one million electronic vehicles on German streets in the year 2020<sup>78</sup> is to succeed, with a total number of registered cars of 41.7 million (2009) throughout Germany, electric driven cars will still show a minimal percentage of total car stock and also environmental aspects play just a minor role.

#### Federal state level

At the level of the federal states one can identify different measures to foster public transport. As one consequence of the German Railway Reform was a shifting of responsibilities from the national governments to federal governments (regionalisation), federal states governments got more powers and created more resources for a stronger commitment in public transport policy. As transport policy at federal states level is rather oriented executively, the focus laid especially on improving regional connectivity and integration by infrastructural aspects like the already mentioned expansion of suburban railway systems, but also on tariff integration between the regions and transport companies.

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<sup>74</sup> cf.: Allianz pro Schiene: Die zukünftige Rolle des Schienenverkehrs in einer nachhaltigen Mobilität– Potenziale, Risiken und Handlungsoptionen. Berlin, 2011. p. 41 f.

<sup>75</sup> cf.: Ibid.: 24 f.

<sup>76</sup> Later on, starting 2011, the current federal government decided to spend truck toll earnings from now on just for road infrastructure, which again gives an advantage to individual transport, see:

<http://www.vifg.de/de/service/aktuelles/2010/Finanzierungskreislauf-Strasse-kommt.php>

<sup>77</sup> cf.: German Federal Government: National Development Plan Electromobility. Berlin, 2009. p. 6.

<sup>78</sup> cf.: cf.: Coalition Agreement between CDU, CSU and FPD: Wachstum. Bildung. Zusammenhalt. Berlin, 2009. p. 41 ff.



On this occasion there have been a growing number of regions with new implemented integrated tariff systems (one ticket for all modes of transport of all transportation companies of the relevant region (regional rail, metro, tram and bus)) throughout Germany in the last ten years. The first German integrated tariff system “Hamburger Verkehrsverbund (HVV)” was already founded in 1965 in Hamburg and until the year 2010 the number increased to a total of 67.<sup>79</sup> <sup>80</sup> Especially in the last ten years, the number of regions with integrated tariff systems almost doubled. Tariff integration with the incentive of using every or at least almost every mean of transport in a particular region has increased the attractiveness especially of regional rail transport. One ticket throughout Germany permitting the use of every mean of transport all over the country is currently not yet available but there is a clear attempt to achieve this aim.<sup>81</sup> However, before it comes to that, the extension and merging of integrated tariff systems will continue contributing to the increase of passenger numbers<sup>82</sup> as using public transport is no longer as complicated as before.

In addition to that, the integrated tariff systems are also a chance to combine individual and public transport. There are already successful examples for integration of car-sharing or bike rental programs.<sup>83</sup> But also beyond integrated tariff systems combinations between individual and public transport, for example park and ride (P&R) facilities, enjoy popularity. As this rather interesting on municipal level, it will be revisited in the next chapter.

## Conclusion

Concluding one can say that transport policy in Germany like in other countries not only follows transport related interests but is also motivated by economic and industrial policy and therefore often follows the interests of the automobile industry. These conflicts of aims show why formulated political aims like to put more transport onto rail are not implemented consequently and even foiled through contradictory measures like the car-scrap bonus.

As energy and environment policy in Germany will increasingly be focused on transport policy, one can assume that a transport political useful fostering of public and multimodal transport will, as in parts already occurred, originate from this policy fields.

Independent of other political aims it can be retained that especially the mentioned railway reform and the shifting of responsibilities for the regional rail transport to the federal state governments has been an important measure to boost public transport. This way the decision-making power has been brought closer to the beneficiaries of public transport and many

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<sup>79</sup> cf.: <http://www.mobilitaetsportal.info/?seitenID=34> and [http://kursbuch.bahn.de/hafas/kbview.exe/dn?rt=1&mainframe=IK\\_verbund](http://kursbuch.bahn.de/hafas/kbview.exe/dn?rt=1&mainframe=IK_verbund) last access: 26.4.2011

<sup>80</sup> cf.: Knieps, M.: Aufgabenträger oder Verkehrsunternehmen als Gesellschafter von Verkehrsverbänden ? - eine Analyse bestehender Verbundstrukturen und eine Bewertung unterschiedlicher Organisationsmodelle unter institutionenökonomischen Gesichtspunkten. Gießen, 2004. p. 26, 32.

<sup>81</sup> cf.: Contactless smartcard systems like “Touch and Travel” and “E-Ticket Germany / VDV Kernapplikation” are first steps to reach this objective. Cf.: <http://www.touchandtravel.de/site/touchandtravel/de/start.html> and <http://www.eticket-deutschland.de/> last access: 27.4.2011

<sup>82</sup> Extension of HVV tariff to Lüneburg and Stade in 2004 and merging of integrated tariff systems in North Rhine-Westphalia into the NRW tariff in 2005 as examples.

<sup>83</sup> cf.: Verkehrsverbund Rhein-Rhur (VRR): <http://www.vrr.de/de/service/mobilitaetsangebote/carsharing/index.html> and Karlsruher Verkehrsverbund (KVV): <http://www.kvv.de/service/car-sharing.html> last access: 26.4.2011

politicians at federal states level has recognised that good public transport policy is able to contribute to a successful policy as one meet the needs of the population for an efficient and comfortable transport system.

#### 4.2.2 Municipal level

The City of Hamburg has since ever been an important port location and therefore a centre of commerce and transport. Transport policy in Hamburg currently is governed by a general trend towards ecological awareness and environmental friendly mobility. Whereas former transport policy programs and projects focused on the use of a private car and facilitated individual transport even in the inner city through expansion of arterial routes, current programs centre on avoidance of individual transport in favour of intermodal connected eco-friendly mobility.<sup>84</sup>

In order to improve public transport means, the backbone of its development is a meanwhile well expanded and integrated public transport system. As already mentioned, the transport association HVV was the first in Germany and it still has increasing passenger numbers.<sup>85</sup> City, underground and suburban train systems transport 60 % of all passengers in public transport, the other 40 % are carried by ferry and mostly by buses.<sup>86</sup> In 2001 there has been a restructuring of the bus system implementing a Bus-Rapid-Transit (BRT) system with trunk and feeder lines. In order to increase speed and reliability, some of the lines operate in extra corridors apart from individual traffic.<sup>87</sup>

As a complementary system the cycling network has been developed in Hamburg due to the growing public awareness towards health issues. Besides the possibility of taking bikes into metros and buses, the installation of an electronic car rental system called “StadtRad” in 2009 increased bike integration into public transport. The facilities are mostly installed at crossings or next to a bus or metro station. Although the system in terms of tariff is not fully integrated in the public transport tariff system (the access is provided after an one-off registration, each ride is debited directly from ones bank account), “StadtRad” is seen as an addition to the existing public transport system in Hamburg.<sup>88</sup>

Even more than with the “StadtRad” concept, multimodal transport chains are fostered through park and ride (P&R) facilities. Currently the Metropolitan Region of Hamburg contains 187 P&R locations, mainly at suburban railway or underground stations. Hamburg has experience with P&R facilities for years and it has proved itself especially at major events like sport events, concerts or funfairs like the Hamburg Harbour Festival. To ensure a sustainable management of park and ride facilities the Metropolitan Region of Hamburg in 2010 presented a “Park and Ride concept for the Metropolitan Region of Hamburg” which shall be complemented with a bike and

<sup>84</sup> cf.: City of Hamburg - Department of Urban Development and Environment Hamburg - Department of Urban Development and Environment: Inner City Concept of Hamburg 2010. Hamburg, 2010. p. 84 ff.

<sup>85</sup> Hamburger Verkehrsverbund (HVV): HVV-Jahresbilanz: Ansturm auf den HVV hält an. [http://www.hvv.de/aktuelles/presse/archiv/2010/PM100527\\_HVV-Jahresbilanz.php](http://www.hvv.de/aktuelles/presse/archiv/2010/PM100527_HVV-Jahresbilanz.php) last access: 12.4.2011

<sup>86</sup> cf.: Hamburger Verkehrsverbund (HVV): HVV Zahlenspiegel 2009. <http://www.hvv.de/pdf/wissenwertes/downloads/Zahlenspiegel-2009.pdf> last access: 12.4.2011

<sup>87</sup> cf.: City of Hamburg - Department of Urban Development and Environment: Spatial Concept. Hamburg, 2007. p. 142 f.

<sup>88</sup> cf.: Ibid.: p. 143

ride (B&R) concept in summer 2011.<sup>89</sup>

As in most other cities, also in Hamburg there are sometimes discrepancies between objectives of a sustainable transport policy and concrete projects. The extremes in Hamburg's transport policy are inter alia reflected in the current government's declaration:<sup>90</sup> Whereas on the one hand sustainable development and reduction of emissions are crucial points of the cities transport policy, on the other hand large infrastructural programs to promote truck traffic in order of port expansion are planned at the same time.<sup>91</sup> In addition to that, the current government wants to foster public transport to disburden the inner city from the individual transport and at the same time there is a clear statement against the implementation of congestion charging.<sup>92 93</sup> Also concerning modal shift there are no consequent objectives. Whereas the current governing party in 2007 declared to increase the modal split share of environmental friendly transport modes by up to six percent until the year 2015, this intention is no longer mentioned in the current government's declaration of the same party.<sup>94</sup>

Another example for the discrepancy between desire and reality in Hamburg's transport policy is the reimplementation of tram services, called "Stadtbahn". After it has been planned and developed for a long time its implementation currently is detained due to the poor budgetary situation. Expansion and modernisation of the BRT network to get "one of the most modern bus systems in Europe" is currently seen as an alternative, but it is also heavily criticised from the financial point of view.<sup>95</sup>

As complement to the shown development, it is important to mention, that Hamburg currently became "European Green Capital 2011". In this context the municipal government started a massive campaign to communicate the ecological objectives to achieve the title as well as the responsibility that comes with it.<sup>96 97</sup> One of the achievements is that city trains in Hamburg

<sup>89</sup> cf.: Metropolitan Region of Hamburg: P+R-Konzept für die Metropolregion Hamburg. Hamburg, 2010. p. 5 f.

<sup>90</sup> City of Hamburg – Government Deklaration: Regierungserklärung des Ersten Bürgermeisters Olaf Scholz vor der Hamburgischen Bürgerschaft: Wir schaffen das moderne Hamburg – Vernunft und Pragmatismus für eine starke und solidarische Stadt. <http://www.olafscholz.de/1/pages/index/p/5/1629> last access: 26.4.2011

<sup>91</sup> cf.: City of Hamburg -- Department of Urban Development and Environment: Linienbestimmung für die Hafenuerspanne <http://www.verkehrsplanung-im-sueden.hamburg.de/> last access: 12.4.2011 and: German Federal Ministry of Transport, Building and Urban Affairs: Neue Linienbestimmung für die Hafenuerspanne Hamburg. <http://www.bmvbs.de/SharedDocs/DE/Pressemitteilungen/2011/032-ferlemann-hafenuerspanne-hamburg.html> last access: 12.4.2011

<sup>92</sup> City of Hamburg – Government Deklaration: Regierungserklärung des Ersten Bürgermeisters Olaf Scholz vor der Hamburgischen Bürgerschaft: Wir schaffen das moderne Hamburg – Vernunft und Pragmatismus für eine starke und solidarische Stadt. <http://www.olafscholz.de/1/pages/index/p/5/1629> last access: 26.4.2011

<sup>93</sup> Verkehrsruerschau: Keine City-Maut für Hamburg. <http://www.verkehrsrundschau.de/keine-city-maut-in-hamburg-1023488.html> last access: 26.4.2011

<sup>94</sup> SPD Faction Hamburg: Verkehr in der Menschlichen Metropole Hamburg: sicher – umweltfreundlich – zügig Eckpunktepapier der SPD-Bürgerschaftsfraktion Hamburg. Hamburg, 2007.

<sup>95</sup> cf.: Initiative against the „Stadtbahn“: Mayor Scholz say no to the „Stadtbahn“. <http://www.hamburg-strassenbahn.de/index.php/pressearchiv/274-keine-stadtbahn-spd-olaf-scholz> and: Track-guided buses for Hamburg? An expensive experiment. <http://www.nahverkehrhamburg.de/strassenverkehr/2011-04-05-spurbusse-fuer-hamburg-teures-experiment.html> last access: 15.4.2011.

<sup>96</sup> cf.: City of Hamburg - Department of Urban Development and Environment: Hamburg Europe's Green Capital 2011. Hamburg, 2009.

<sup>97</sup> cf.: European Union – Commission of the Environment: Catalogue of Best Practice – Urban Sustainability – Learning

since 2010 are completely powered by eco-electricity.<sup>98</sup> The hope is that although the “European Green Capital” title will be given to another European city next year, the general ecological awareness will remain in Hamburg’s policy and population and will ideally be translated as a positive trend into transport policy and behaviour.

### 4.2.3 Non-governmental level

German transport and environment related NGO’s can be divided into different groups. There are NGO’s which mainly provide consumer protection and representation, others are focused on infrastructure and lobbying and others again operate mainly on cycling or environmental issues. There are also some NGO’s including almost every of this different aspects in their activities.

Passenger Federations like “Pro Bahn” or “Deutscher Bahnkunden Verband” are mainly providing consumer protection and representation, fighting for legal rights of railway passengers as well as a fair treatment of public transportation compared to motorised individual transport. Their activities contain informing people on special fares, new lines, better equipment, etc. as well as organizing trips and journeys using public transport. Furthermore, they negotiate with politicians and decision makers of local transit authorities to improve all modes of public transportation.<sup>99</sup>

The “Verkehrsclub Deutschland (VCD)” includes the aspects mentioned before in their activities. They mainly engage for environment- and consumer-friendly mobility. This includes lobbying in transport policy making, promotion of cycling and walking programs, analysing environmental impacts and defending passenger rights. Furthermore, VCD provides special mobility education programs to contact children with public transport and multimodal mobility as they usually get involved with motorised transport only in backseat of their parent’s cars.<sup>100</sup> In addition to that, as already mentioned in chapter 3.2.2.5., VCD supports reactivation programs for abandoned rail routes like for example the so called “Haller Wilhelm”-line near Osnabrück.<sup>101</sup>

On the contrary to VCD, which focuses on different means of transport, the “Allgemeiner Deutscher Fahrrad Club (ADFC)” is exclusively centred on intensified bike use, as well as in expediting multimodal transport, especially the combination of railway and cycling. The focus is not on a change of transport means at stations like in bike and ride projects, but on the possibility of taking bikes into the trains. In German rail bound means of transport this currently is possible in metros and trams (except at rush hours) as well as regional trains and some long distance trains. However, the Deutsche Bahn AG still does not permit taking bikes in ICE high-

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from the Best. Brussels, 2010. p. 18 f.

<sup>98</sup> cf.: City of Hamburg – European Green Capital 2011: Umweltfreundlich mobil mit dem HVV.

<http://umwelthauptstadt.hamburg.de/mobilitaet/2787374/mobilitaet-hvv.html> last access: 12.4.2011

<sup>99</sup> cf.: Pro Bahn: [http://www.pro-bahn.de/sub\\_index.php?ziel=welcome.htm](http://www.pro-bahn.de/sub_index.php?ziel=welcome.htm) and: Deutscher Bahnkunden Verband. <http://www.bahnkunden.de/DBV/Veranstaltungen-mit/vom-DBV/E1568.htm> last access 12.4.2011

<sup>100</sup> cf.: Verkehrsclub Deutschland (VCD): Kinder im Verkehr. <http://www.vcd.org/mobilitaetserziehung.html> last access: 12.4.2011

<sup>101</sup> cf.: Verkehrsclub Deutschland (VCD): <http://www.vcd.org/vorort/osnabrueck/initiative-haller-willem/> also chapter 3.2.2.4.

speed trains although the majority of German population is in favour of it.<sup>102</sup> ADFC put themselves out for an improvement of connections between eco-friendly means of transport promoting these kinds of multimodal transport chains.

Besides consumer protection and promotion of rail bound, eco-friendly and multimodal transport, environmental issues, especially environmental impacts of transport modes are important items of German NGO activities. The “Deutsche Umwelthilfe” is one of the environmental organisations specialised on emissions and green mobility. Their work mainly contains publications like studies or press releases as well as practical hints to diminish ones personal impact on the environment.<sup>103</sup> The already mentioned scepticism towards a road-focused E-mobility is also shared by the “Deutsche Umwelthilfe” which represents a critical opinion towards this approach and claims for an overall more efficient and less pollutant mobility.<sup>104</sup> Besides the already named NGO’s there are additional environmental associations related to transport policy like for example the “BUND (Friends of the earth Germany)” and the “NaBu (Nature and Biodiversity Conservation Union)”.<sup>105</sup>

Most of the mentioned activities promoting sustainable, environmental friendly, multimodal means of transport are summarised within the scope of work of “Allianz pro Schiene”. Indeed all presented NGO’ are member of this alliance (with the exception of the ADFC), which has a total of 18 member organisations and represents two million individual members. Increasing the market share of railway transport because of its strong environmental, social and safety advantages is “Allianz pro Schiene’s” main aim. This means inter alia an improvement of the railway image in policy and society as well as presence and accessibility of railway transport. Furthermore, environmental advantages of rail bound transport should be increased as well as public funds which should be used more efficiently. Establishing fair market competitions between transport modes and forward integration and expansion of European railway transport are complementary intends.<sup>106</sup>

As a conclusion, the German transport and environment NGO’s stand on a broad base with their working contents and opinions. In terms of influence and policy making they compete for example with Europe’s largest automobile club called “Allgemeiner Deutscher Automobil Club (ADAC)”. On paper, ADAC has a large influence in transport policy as it represents more than 17 million individual members. On the other hand it has to be considered, that policy making is not the only relevant service of ADAC but their broad service spectrum, which contains assurances as well as breakdown services, let them intervene in many different fields.<sup>107</sup> Meanwhile the ADAC also recognises the signs of the time and has opened itself for public

<sup>102</sup> cf.: Allgemeiner Deutscher Fahrradclub (ADFC): Bahn contra Kundenwunsch. <http://www.adfc.de/Verkehr--Recht/Fahrrad--Bahn/Fahrradmitnahme-im-ICE/Deutsche-Bahn-contra-Kundenwunsch> last access: 12.4.2011

<sup>103</sup> cf.: Deutsche Umwelthilfe: <http://www.duh.de/855.html> and: How clean are Europe’s cars? An analysis of carmaker progress towards EU CO2 targets in 2009. [http://www.duh.de/uploads/tx\\_duhdownloads/t\\_and\\_e\\_car\\_company\\_co2\\_report\\_2009.pdf](http://www.duh.de/uploads/tx_duhdownloads/t_and_e_car_company_co2_report_2009.pdf) last access: 12.4.2011

<sup>104</sup> cf.: Deutsche Umwelthilfe: Elektromobilität. <http://www.duh.de/2500.html> last access: 12.4.2011

<sup>105</sup> cf.: BUND (Friends of the Earth Germany): [http://www.bund.net/bundnet/ueber\\_uns/bund\\_in\\_english/](http://www.bund.net/bundnet/ueber_uns/bund_in_english/) and NABU (Nature and Biodiversity Conservation Union): <http://www.nabu.de/en/index.html> last access: 3.5.2011

<sup>106</sup> cf.: Allianz pro Schiene: Die Ziele der Allianz pro Schiene. <http://www.allianz-pro-schiene.de/ueber-uns/unsere-ziele/> last access: 12.4.2011

<sup>107</sup> cf.: Allgemeiner Deutscher Automobil Club (ADAC): <http://www.adac.de/Produkte/> last access: 12.4.2011

transport issues as they were realising a test of public transport systems in European metropolises.<sup>108</sup>

Although the ADAC represents 17 million members (which mainly just draw on an insurance benefit) it becomes apparent that in Germany there is a wide and honorary sustained NGO structure concerning transport and environment issues.

## 4.3 Netherlands

### 4.3.1 National level

The current national transport policy of the Netherlands is based on the Mobility Policy Document “Nota Mobiliteit - Naar een betrouwbare en voorspelbare bereikbaarheid” and the Spatial Planning Policy Document “Nota Ruimte - Ruimte voor ontwikkeling” of the year 2004 and 2006, respectively. In addition to these plans there is the “National Traffic and Transport Plan 2001-2020”. The Spatial Planning Policy Document outlined the spatial planning strategy for achieving “a strong economy, a safe society, a good living environment and an attractive country”.<sup>109</sup> The Mobility Policy Document worked these starting points out in greater detail to reach the aims until the year 2020. The aim was a better interrelationship between space, transport and the economy at every level (municipal, regional and national).

Whereas the Dutch government policy viewed mobility until that point as a problem because it conflicts with other policy fields like economic or financial policy, the assumption is now that mobility is a must that should be fostered. Mobility, for people as well as goods, is “a prerequisite for society and the economy to function well”.<sup>110</sup> Three interconnected columns should help to achieve the goals:

- Building: creating and adapting infrastructure
- Road pricing: having road users pay to use the infrastructure
- Utilisation: making the best possible use of available road capacity<sup>111</sup>

In road transport, which definitely is the main focus of attention of the Mobility Policy Document, the reliability of the journey time should be greatly improved by 2020, with travellers reaching their destination on time in 95% of cases. In this context there should be an improvement of incident management, traffic management and route and travel information. Other measures could be the expansion of motorways in order to have more lines in each direction. Above all, the motorways should take absolute precedence over other roads in cases of maintenance and replacements. Furthermore, the Dutch Government was thinking about implementation of road

<sup>108</sup> cf.: Allgemeiner Deutscher Automobil Club (ADAC): Test of public transport systems in 23 European metropolises: [http://www1.adac.de/adac-im-einsatz/motorwelt/m\\_archiv/Pressemeldungen/OEPNV\\_Test.asp?TL=2](http://www1.adac.de/adac-im-einsatz/motorwelt/m_archiv/Pressemeldungen/OEPNV_Test.asp?TL=2) last access: 15.4.2011

<sup>109</sup> cf.: Nederlands Rijksoverheid - Ministeries van VROM, LNV, VenW en EZ: Nota Ruimte - Ruimte voor ontwikkeling The Hague, 2006. p. 12

<sup>110</sup> cf.: Nederlands Rijksoverheid - Ministeries van Verkeer en Waterstaat: Policy framework for utilisation - A pillar of better accessibility. The Hague, 2008. p. 10

<sup>111</sup> cf.: Ibid.

pricing since 2000 and started to make all necessary preparations for the introduction in 2004 in order to improve national budgetary and reduce emissions by minor car use.<sup>112 113</sup>

Concerning the railway infrastructure, the existing rail network could cope with demand. There was no need of expanding the rail capacity seen through additional infrastructure.<sup>114</sup> Attention at public transport is kept quite low, as improving the accessibility of facilities throughout the entire country is the only mentioned measure.<sup>115</sup> However, National Traffic and Transport Plan 2001-2020 gave special attention to public transport and parking policy as they were the key to reduce car use towards the use of multimodal transport means.<sup>116</sup>

As a conclusion, the Mobility Policy Document was focused on road transport but not in all parts road transport friendly, as the planned introduction of road pricing shows.

The current Dutch Governments program has a much more distinct character. On the one hand there are specific measures for the promotion of individual transport, like an increasing of maximum speed on motorways up to 130 km/h, abandonment of road pricing and expansion of motorways to more lines to reduce congestion. On the other hand, the existing program is mainly designed to boost public and multimodal transport. Concrete measures are the installation and expansion of park/bike and ride facilities, intermodal terminals, car pooling, and cycling facilities. Transfer point between long distance and urban railways systems shall be redesigned and improved as well as disabled access to public transport.<sup>117</sup> In order to finance the transport and mobility projects, especially in public transport, the actual trend in the Netherlands is cooperation between government and industry in terms of public private partnerships.<sup>118</sup>

With regard to sustainable and environmental friendly transport policy the current governments program provides for a further implementation of all measures of the national air quality cooperation, with the exception of road pricing measures. This means to “seek a level playing field in Europe regarding standards on emissions, vehicle noise and vibration levels, public transport, aviation and shipping in order to ease the burden on the residential and living environment” as well as tax incentives to purchase and lease environmentally friendly cars.<sup>119</sup>

### 4.3.2 Municipal level

Transport policy in Amsterdam is based on the Regional Traffic and Transport Plan "Regionaal Verkeer en Vervoerplan" originally of the year 2004 but repeatedly adjusted every two years. In contrast to national transport policy there has been a clearly identifiable focus on a sustainable

<sup>112</sup>cf.: Dutch Government - Social and Economic council: National Traffic and Transport Plan 2001-2020. The Hague, 2000. p. 9 f.

<sup>113</sup> cf.: Nederlands Rijksoverheid - Ministeries van Verkeer en Waterstaat: Nota Mobiliteit - Naar een betrouwbare en voorspelbare bereikbaarheid. The Hague, 2004. p. 31 ff.

<sup>114</sup> cf.: Ibid.: p. 52 ff.

<sup>115</sup> cf.: Ibid.: p. 50 f.

<sup>116</sup> cf.: Dutch Government -Social and Economic council: National Traffic and Transport Plan 2001-2020. The Hague, 2000. p. 14 f.

<sup>117</sup> cf.: Dutch Government: Freedom and Responsibility – Coalition Agreement VVD-CDA. The Hague, 2010. p. 36 ff.

<sup>118</sup> cf.: Ibid.: p. 37.

<sup>119</sup> cf.: Ibid.: p. 39.

and environmental friendly development of traffic and transport: Almost all measures are suggested considering or mentioning environmental issues and the centre of attention is development of public and non-motorised transport.

Main objectives in public transports development already known from other cities are increasing of accessibility (door to door travel), reliability (goal is 95 % of public transport journeys during rush hour in time), security (in vehicles and stations) and comfort. Interestingly, the focus in this context is not only on “hard factors” like travel time, but also on “soft factors” like atmosphere.<sup>120</sup> Furthermore, significant increase of and effort on share of public transport with bicycles even at rush hour is one of the eye catching trends in Amsterdam.<sup>121</sup> In this context, intensified installation of bike and ride parking especially at public transport nodes is an important expansion of infrastructure. These facilities are seen as an expansion of the public transport system, which in Amsterdam, as well as in other Dutch cities, is organised by a transport association to ensure tariff integration between different modes of transport.<sup>122</sup> A smartcard payment system was installed throughout the country to make travelling with public transport modes easier.<sup>123</sup>

Generally in Amsterdam the most innovative and noticeable trend is cycling as a normal mean of transport. A regional bicycle network has been installed in 2004, which meanwhile is no longer optimally equipped and maintained due to other spatial development projects. Therefore, restoration and completion of the network is one of the main goals of the Regional Traffic and Transport Plan.<sup>124</sup>

The diffusion of the new cycling trend in Amsterdam can also be measured with a number of programs to establish and improve cycling infrastructure and facilities, which were edited by different departments and organizations.<sup>125 126 127</sup>

Besides the omnipresent cycling trend another innovative trend of non-motorised transport takes part in the Dutch capital: A project called “Amsterdam Electric” provides and boosts the usage of electric powered cars in the inner city of Amsterdam. At special point in the city (municipal garages, park and ride areas, company premises or on the streets along waterways) an electric car can be rented and also combined with other means of transport in a multimodal transport chain.<sup>128</sup>

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<sup>120</sup> cf.: Staatsregio Amsterdam: Regionaal Verkeer en Vervoerplan. Amsterdam, 2011. p. 21.

<sup>121</sup> cf.: Ibid.

<sup>122</sup> cf.: GVB (Public transport company for Amsterdam). <http://www.gvb.nl/english/travellers/tickets-and-fares/Pages/Ticketsandfares.aspx> last access: 18.4.2011

<sup>123</sup> cf.: OV Chipcard: <http://www.ov-chipkaart.nl/allesoverdeov-chipkaart/watisdeovchipkaart/eennieuwbetaalmiddel/> last access 18.4.2011

<sup>124</sup> cf.: Staatsregio Amsterdam: Regionaal Verkeer en Vervoerplan. Amsterdam, 2011. p. 33, 37.

<sup>125</sup> cf.: City of Amsterdam – Department of Infrastructure, Traffic and Transport – Head of Strategy and Policy: Cycling in Amsterdam – Developments and policies. Amsterdam, 2000.

<sup>126</sup> cf.: Regionaal Orgaan Amsterdam: Beleidsregel subsidiebijdragen stedelijke fietsenstallingen - Actualisatie 2006. Amsterdam, 2006.

<sup>127</sup> cf.: Fietsberaad: Continuous and integral: The cycling policies of Groningen and other European cycling cities. Publication number 7, April 2006. Rotterdam, 2006.

<sup>128</sup> cf.: City of Amsterdam: Air Quality Program Bureau: Amsterdam Electric – Action Plan for Electric Mobility in Amsterdam. Working program 2009 – 2011. Amsterdam, 2009. p. 23 ff.



### 4.3.3 Non-governmental level

Dutch environmental and transport related NGO's claim for a more ambitious sustainable mobility policy of their national and municipal governments. One main objective is a government which is focused on more and better public transport offer and demand. In “a densely populated country as the Netherlands, a well developed public transport is an essential facility” to cope with the strong growth of mobility needs. As a general observation of the “Netherlands Public Transport Passenger Association”, in the last years there have been “too many cars and too little public transport in the transport mix” of the Netherlands.<sup>129</sup> As in Belgium, Netherlands governments see the solution of the growing mobility problem in construction of new and more roads in order to solve congestion problems. This approach has been and still is heavily criticized by different NGO's, like “Friends of the Earth Netherlands”: “Paving the Netherlands means more congestion, more air pollution and climate change”. An improvement of public transport means and flexible working hours to straighten out traffic at rush hours could be reasonable alternatives.<sup>130</sup>

Another important effort in the work of Dutch NGO's is the fight against raising maximum speed on motorways from 120 km/h to 130 km/h. In their opinion this measure causes fatal consequences for the environment, economy and road safety: There will be an increase in energy consumption, pollution and road accidents. At the same time there will be a higher need for expensive modifications of roads to make them safer as well as a much more chaotic traffic due to differences in speed between vehicles. As a result, there will not be a significant time saving but again in increase of congestion.<sup>131</sup>

In addition, there is the important aim of Dutch NGO's to make mobility completely powered by electricity. As this goal will take some time to be achieved, a current strategy is supporting car leasing companies which offer environmental friendlier cars as their emissions are well below current and future EU ambitions.<sup>132</sup>

Most of these activities are part of the work of “Railforum”, which is an independent organisation and unites 85 companies and organisations that are actively involved in the train/metro and tram transportation system in the Netherlands. Its main goal is to provide a broad platform for the knowledge exchange, participating in the public debate and influencing public opinion. Advice given by Railforum is based on facts that have been gained objectively and independently, and can contribute to the larger body of research and knowledge on general issues pertaining to the traffic and transportation system as a whole.<sup>133</sup>

As the aim of Dutch environmental and transport related NGO's is sustainable freight and passenger transport for the Netherlands, they provide some idealistic and futuristic visions of transport for the “foreseeable future”: Ideally, most of the cars were replaced by electric ones powered by solar or wind energy. This will at the same time reduce noise and pollution mainly

<sup>129</sup> cf.: Reizigers Openbaar Vervoer vzw: ROVER mist ambitie in Nota Mobiliteit - Overheid moet inzetten op meer en beter openbaar vervoer. Amsterdam, 2004.

<sup>130</sup> cf.: Milieudefensie: <http://milieudefensie.nl/weguitbreidingen> last access: 8.4.2011

<sup>131</sup> cf.: Milieudefensie: <http://milieudefensie.nl/maximumsnelheid/130-km-uur> last access: 8.4.2011

<sup>132</sup> cf.: Natuur en Milieu: <http://www2.natuurenmilieu.nl/themas/mobiliteit/schoner-leasen/> last access: 8.4.2011

<sup>133</sup> cf.: Railforum: <http://www.railforum.nl/?s=3&m=1> last access: 2.5.2011

in metropolitan areas. Concerning local transport in cities, it will mainly be performed by public transport means and bikes. Generally, public transport efforts should be fully supported by national and municipal transport policies and not thrown back by individual transport forwarding decisions.<sup>134</sup>

Although these futuristic examples will hardly be completed in the prescribed period, even if it is not determined exactly, they show the ambitiousness of the NGO's attempts.

## 4.4 Austria

### 4.4.1 National level

The current Austrian transport policy is based on “Austrian Transport Strategy” edited by the Ministry of Economy and Transport in 1991. It contained the basics of the Austrian transport policy which was “oriented at environmental protection as well as protection of life and health without ignoring the importance of a well functioning transport system for a business location like Austria”. The main transport policy objectives of the “Austrian Transport Strategy” were, inter alia:

- avoidance of unnecessary traffic
- modal shift to environmental friendlier modes of transport
- make accessible previously hard reachable areas
- involvement of concerned persons to increase acceptance for transport policy projects<sup>135</sup>

The Austrian Government wanted this objectives kept as ideals of Austrian Transport Policy so that they became part of every transport related policy program for a long time.<sup>136</sup>

One of these programs was the “Federal Transport Network Plan” of 1999 presenting the development of Austrian road and railway infrastructure until the year 2015. A central intention was the integration of Austrian transport network into the Transeuropean Networks (TEN). As the Motorway network as well as the road network in general, was already completed at that time, the main attempt of the “Federal Transport Network Plan” was the expansion of railway network. Concrete measures were alleviation of capacity constraints, speed restrictions and deficiencies in development.<sup>137</sup>

The current Austrian governments program partly continues with the already mentioned objectives: Due to the infrastructural development degree, the main goal concerning roads and rails is no longer expansion but maintenance and replacement. In addition to that the systems

<sup>134</sup> cf.: Milieudéfensie: <http://milieudéfensie.nl/watwijdoen/themas/verkeer/verkeer-1> last access: 8.4.2011

<sup>135</sup> cf.: Austrian Government – Ministry of Economy and Transport: Federal Transport Network Plan – completed and ongoing work packages. Vienna, 1999, p. 3.

<sup>136</sup> cf.: Austrian Government – Ministry of Economy and Transport: Federal Transport Network Plan – completed and ongoing work packages. Vienna, 1999, p. 4 f.

<sup>137</sup> cf.: Ibid.: p. 9.

reliability and security are the most important efforts as well as environmental compatibility.<sup>138</sup> As the infrastructure is developed to a sufficient degree, a main effort currently is the restructuring of the managing companies to establish liberal, market competitive concerns on a European railway company market, where in the future most assignments will be put out to tender.<sup>139</sup>

As in European transport economic context Austria has the role of a transit country, the concept of “Rolling Motorway” is a quite important part of the Austrian transport policy. Concentrating and shifting freight traffic has not only economic advantages. It is environmental friendly as well and fits into the principles of the Austrian transport policy.<sup>140</sup>

Concerning public transport, the Austrian government wants to improve the coordination between authorities, companies and vehicle manufactures in order to reduce costs and improve availability and attractiveness. As Austria’s territory is completely covered with eight integrated tariff systems (one ticket for all modes of transport of all transportation companies of the relevant region (regional rail, metro, tram and bus)) since the year 1997<sup>141</sup> the main focus is improvement of comfort and quality. One crucial point is the replacement of old vehicle by modern ones.<sup>142</sup>

In contrast to its usually shown cost-oriented operation, the Austrian Ministry of Transport, Innovation and Technology is currently fostering E-Mobility (meaning E-cars) as an environmental friendly way of individual transport. Target group are operational fleets of companies as well as commuters with a total expectative of 20 % of Hybrid- and Battery powered cars until the year 2020 across Austria.<sup>143</sup>

#### 4.4.2 Municipal level

The traffic and transport situation in the City of Vienna has regularly been organised by transport concepts with the attempt to modernize and develop the transport system as far as possible. The main goal of the “Viennese Transport Concept of 1994” was a significant decrease in the use of individual transport until the year 2010. Providing an attractive public transport alternative should help to reach that aim. Taking public space from the individual transport was one of the central measures. Public transport was given priority in the usage of street space expanding tram tracks of bus lanes. At the same time recovery of public space from individual transport for other uses constricted car use much more. Public space recovery was not only an objective to please pedestrians and cyclists but also a way to establish public spaces without traffic influence improving quality of life of the Viennese population.<sup>144</sup>

<sup>138</sup> cf.: Republic of Austria: Ministry of Transport, Innovation and Technology: Expansion Plan National Transport Infrastructure 2011–2016 Klug investieren, verantwortungsvoll sparen. Vienna, 2010. p. 3 f.

<sup>139</sup> cf.: Republic of Austria: Government program 2008-2013 Gemeinsam für Österreich. Vienna, 2008. p. 51 ff.

<sup>140</sup> cf.: Ibid.: p. 57.

<sup>141</sup> cf.: Der Nahverkehrswegweiser. <http://www.nahverkehr.info/> last access 18.4.2011

<sup>142</sup> cf.: Ibid.: p. 56.

<sup>143</sup> cf.: Republic of Austria: Ministry of Transport, Innovation and Technology: Ja, E! Sauber von A nach B. Vienna, 2010.

<sup>144</sup> cf.: City of Vienna - Business Group Urban Development, Transport, Climate Change, Energy Planning and

Another aim was the implementation of a cyclist paths network and cycling facilities. In combination with the recovery of public space separated cycling lines should be generated to boost cycling activity in Vienna.<sup>145</sup>

In the “Transport Master Plan of 2003” the trend of the “Viennese Transport Concept of 1994” continues: Traffic avoidance and shift still are slogans of the plan as well as sustainable economic, social and environmental development. As 1994 there was only a slight attempt towards public transport, in 2003 there ideas of connection between transport modes and multimodal mobility became part of transport development: The installation of park/bike and ride facilities at public transport stations was one of the important achievements in that context.<sup>146</sup> Interestingly, there are differences in attraction of public transport use across Vienna: The inner city shows a heavy increase in public means of transport also due to the restriction of individual transport in the inner city, mentioned in the “Viennese Transport Concept of 1994”. On the other hand the use of public transport in the Viennese suburbs stagnates.<sup>147</sup> An explanation can be the concentration of public transport providing measure on the inner city region.

As a result of the “Transport Master Plan of 2003” the “Transport Master Plan 2013” keeps going on with the current trends. The centre of attention still is on the development of public transport, this time traffic safety is added to the main goals due to the fact that Vienna currently is the safest European city concerning traffic and wants to keep its position.<sup>148</sup> As in former plans, development of environmental friendly transport modes is again the central aim, “as providing public transport is one of the most important infrastructural missions”. It is important to mention that the City of Vienna will not privatise their public transport system for the foreseeable future in order to keep the high level of quantity and quality.<sup>149</sup>

Innovative trends in Vienna are planned in the form of E-bikes which can be rented and should be an amplification of the multimodal mobility offer. In addition to that, the City of Vienna will continue promoting gas cars and wants to start sponsoring new Hybrid-Taxis as well.<sup>150</sup>

#### 4.4.3 Non-governmental level

Austria’s most important transport related NGO is the “Verkehrsclub Österreich (VCÖ)”. It is working for environmentally sustainable, socially and economically efficient mobility. VCÖ acts and intervenes by publicising pioneering ideas, and by working out concrete measures to improve public means of transport. This is done through events, conferences and discussions where the VCÖ shows solutions to decision makers from politics, economy and science. A special skill of VCÖ is their own research institute, which allows one analysis to prove, verify

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Public Participation: Viennese Transport Concept of 1994. Vienna 1994.

<sup>145</sup> cf.: Ibid.

<sup>146</sup> cf.: City of Vienna: Transport Master Plan of 2003. Vienna, 2003. p. 25, 33.

<sup>147</sup> cf.: Ibid.: p. 26.

<sup>148</sup> cf.: City of Vienna: Coalition Agreement - Gemeinsame Wege für Wien. Das Rot-Grüne Regierungsabkommen. Vienna, 2010. p. 60.

<sup>149</sup> cf.: Ibid.: p. 61.

<sup>150</sup> cf.: Ibid.: p. 63.

and falsify other data and data sources. In addition to that, one main focus of VCÖ's work is promotion of public transport, especially multimodal mobility.<sup>151</sup>

The "Fahrgast" also advocates a preferential treatment of public transport by public authorities. It claims for more reliability, punctuality and connectivity as well as an expansion of tariff integration within and between public transport modes.<sup>152</sup>

Another centre of attention of Austrian NGO's is fostering cycling. There are many initiatives planning and suggesting new and better bike strategies, especially in Vienna. One innovative aspect is improving cycling's image by photo contests searching for "the most stylish bike pictures in Vienna" to promote cycling as an alternative mobility in all weathers.<sup>153</sup> Besides, connectivity between cycling and public transport shall be fostered in a special way on order to make it more secure to use bike parking at public transport stations. There are special initiatives to reduce distances between parking and station as well as installing surveillance cameras and increasing police presence.<sup>154</sup>

## 4.5 Hungary

### 4.5.1 National level

Transport policy of the Republic of Hungary currently presents two main trends: At first, there is a continuously advancing process of integration into the European Union. This trend is viewable at almost all political and social levels. Second there is a strong desire to act as a linkage between the EU and the Hungarian neighbour states as well as Asia. Again, this trend is observable in political statements as well as transportation programs.

The current Hungarian government sees Hungary as "the Western gate of the new "railway Silk Road" of the 21st century. To this end, the necessary Hungarian transportation routes must be built to the Chinese-Russian transport corridor." Hungary wants to take advantage of the opportunity to become an important logistics base for the European Union's foreign trade with Asia because the country can form a node for European railway, road, water, and air transportation channels.<sup>155</sup> Concrete measures are not named in the current governments program as there are several concrete transport related programs concerned with this subject.

One of them is the "Environmental protection and infrastructure operational program 2004 – 2006" which states, that "it is essential to improve connections with West European transport axes as soon as possible and to accelerate network development because leading through transit traffic more rapidly and in a more controlled manner boosts integration to global

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<sup>151</sup> cf.: Verkehrsclub Österreich (VCÖ): Multimodal Mobilität als Chance. <http://www.vcoe.at/start.asp?b=104&ID=6252> last access: 14.4.2011

<sup>152</sup> cf.: Fahrgast – Die Österreichische Fahrgastvertretung. <http://www.fahrgast.at/vgsprog.htm> last access: 14.4.2011

<sup>153</sup> cf.: Vienna Cycle Chic. <http://wieneradlchic.files.wordpress.com/2011/02/vienna-cycle-chic-austrianfashion-net.pdf> last access: 14.4.2011

<sup>154</sup> cf.: Argus – The Bike Lobby. <http://www.argus.or.at/info/rad-und-abstellanlagen/radabstellanlagen-oev-haltestellen> last access: 14.4.2011

<sup>155</sup> cf.: Office of the National Assembly: The Programme of National Cooperation. Budapest, 2010. p. 38

economic and trade processes”.<sup>156</sup> The Hungarian transport network at that time was highly deficient, characterised by underdevelopment, poor technical parameters, low proportion of expressways and missing connecting roads. In combination these deficiencies significantly hindered economic and social development in some areas, and certain disadvantaged areas were relatively isolated with poor access to regional centres. There have been accessibility analysis, which showed a negatively affection of the low density of transport infrastructure towards the standard of living of the population. Most settlements were geographically close to their neighbours, but due to the lack of a direct road connection, some of them could only be accessed after lengthy detours. In many cases it also took a long time to access rail connections.<sup>157</sup> As a logic consequence, one key objective of economic development and the “Environmental protection and infrastructure operational program 2004 – 2006” was the improvement of accessibility and infrastructure.

Within the total of connection and linkage measure, the main focus was on the expansion of road infrastructure, to connect Hungary to the Transeuropean Networks (TEN). Therefore, the focal points for the strategy were to: Upgrade the main road network and to develop environmental friendly infrastructure.<sup>158</sup> Even if these two objectives were at a first glance contradictory, the Hungarian government took them as priority aspects of their development program.

Concerning the development of the road infrastructure the priority will mainly focus on the further extension of the motorway network by building the missing links of the highway network. Special regard should be given to connections between the different radial motorways and the main national roads to complete the national road network. However, within the railway sector priority should be given to the rehabilitation of the rail network with special regard to the Transeuropean corridors. The main objective was to open Hungary’s railway network to international operators and provide a competitive transport facility along the main corridors. In addition to that, the suburban Railway development was a key objective of the railway modernization. This should include station upgrades by providing Park and Ride as well as Bike and Ride parking lots to bring forward the use of multimodal mobility chains.<sup>159 160</sup>

As the name suggests, the focus of the “Environmental protection and infrastructure operational program 2004 – 2006” was on the infrastructural expansion, especially of the road transport. However, the “Unified transport development strategy 2007 – 2020” of the Hungarian Ministry of Transport, Telecommunication and Energy centres on the development of passenger transport. The aim of the strategy is, inter alia, to keep the modal share of public transport above the EU27 average, although the individual transport’s share was increasing until the mid of the last decade, while public transport’s share was decreasing. Furthermore, mobility needs shall be answered, offering the possibility to choose between individual or public transport and providing access to public transport modes: “We strive to attain equal opportunities in mobility

<sup>156</sup> cf.: Republic of Hungary - Ministry of Economy and Transport: Environmental Protection and Infrastructure operational Program 2004 – 2006. Budapest, 2003. P. 29.

<sup>157</sup> cf.: Ibid.: p. 30.

<sup>158</sup> cf.: Ibid.: p. 51.

<sup>159</sup> cf.: Ibid.: p. 53 ff.

<sup>160</sup> cf.: Ibid.: p. 66 ff.

through regulated market instruments. The conditions for sustainable mobility shall be insured, taking account of economic, environmental and social sustainability in a way which positively impacts the competitiveness of the national passenger transport along with its growing mobility.”<sup>161</sup>

The public transport in Hungary has experienced a lot of problems in the past. Especially, the railway could not have been developed to a level it might have been possible. The consequence is that services are not up to the economic and social development levels. Over the past decades, postponed political decisions have caused the railway to develop only to a fraction of what it should be and what users expect in terms of speed, regularity, safety and comfort.<sup>162</sup>

One of the main problems is that the trains used for rail transport are not satisfactory, neither in terms of quantity nor quality. The quality of railcars is poor; therefore operators have to use energy wasting locomotives. Financial restrictions over the past decades have resulted in around a hundred trains which roadworthiness certificate have expired, or wagons which are only allowed limited use. The ongoing railcar purchase must be pursued as well as the vehicle modernizing program in order to offer up to date vehicles to users. Besides, politicians try to keep ticket fares low, but clearly without any success, as the railway ticket prices in Hungary has increased strongly in the last years (cf. Figure 8). Furthermore, people above age 65 are free of charge on commuter lines in order to please the population, but on the other hand these revenue losses are not compensated by the state.<sup>163</sup> In addition to that, the Railway operators operate with higher numbers of personnel than needed and generate more costs.<sup>164</sup>

Due to the current situation the “Unified transport development strategy” postpones the following measures for the future:

- The extent of public transport services (in both capacity and frequency, as well as in quality to increase their usability). Private cars represent the greatest challenge for public transport in this respect, since public transport faces multiple competitive disadvantages (lacking resources).
- Private or individual transport gradually eats up on the public transport functions. New projects, shopping centres, greenfield investment industrial parks are all based on private car access, which further damages the environment.
- Following proportionally and environmentally sustainable development principles, public transport development is necessary, even if it may not seem worth it at first. Choosing to implement a strategy based on prevention rather than recovery is justified, since it is impossible to force public transport upon users subsequently.

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<sup>161</sup> cf.: Republic of Hungary - Ministry of Transport, Telecommunication and Energy: Unified transport development strategy 2007 – 2020 – Whitebook. Budapest, 2007. p. 11.

<sup>162</sup> cf.: Ibid.: p. 16.

<sup>163</sup> Interview with Zoltán Szabó from the Clean Air Action Group (CAAG), member of the USEmobility consortium on 20.4.2011.

<sup>164</sup> cf.: Republic of Hungary - Ministry of Transport, Telecommunication and Energy: Unified transport development strategy 2007 – 2020 – Whitebook. Budapest, 2007. p. 18.

- Apart from technical details, economic and funding issues must also be discussed during the planning phase.<sup>165</sup>

Besides the already mentioned trends of increasing national accessibility and international/European connectivity and strengthening the role of public transport towards the ground gaining individual transport in order to keep public transport's above-average modal share, there are additional trends in the Hungarian transport policy which are not stated as a main priority of the national transport policy. There is the already stated minimization of environmental damage through transport as well as the use of modern integration technologies, such as the implementation of an EU conform system of transport tariffs.<sup>166</sup>

## 4.5.2 Municipal level

The City of Budapest is the most important economic, cultural, social and administrative centre in Hungary. As there has been a significantly increasing costs of living, motorization and mobility coupled with the desire to improve the quality of life, there has been and still is an increasing trend for people to move to the suburbs. Due to the fact, that a large proportion of these people are commuters, a great strain is put upon suburban transport systems, this means roads as well as railways.<sup>167</sup>

Nevertheless the focus of the municipal transport policy in Budapest is definitely on the development of public transport: The already mentioned report on the “Hungarian Transport policy 2003 – 2015” centres the development of urban and suburban railway transport as a top priority of the national and also municipal transport policy in Budapest. The process should have started with the replacement of the current vehicle fleet, as a means of significantly reducing car traffic in inner city areas, thus cutting down on harmful emissions until the year 2006.<sup>168</sup> The “Unified transport development strategy 2007 – 2020 – Whitebook” comes to the same conclusion as it points out that „the urban public transport vehicle park is obsolete. Companies strive to change older vehicles to modern ones, but the average age for buses is 15, for trolley buses 20, and the metro and suburban trains go well over 30 years. With some exceptions, most vehicle purchases date back to the 1990s, or even before”.<sup>169</sup>

The situation of the old vehicles has in fact partly been solved until the year 2006<sup>170</sup> but it is still relevant: Except a few bus lines which operate with new vehicles, most of the busses, the tram, the underground and the trolley buses still operate with the old and uncomfortable vehicles.

Although the transport performance in public transport in Hungary is decreasing (cf. Figure 17), there is still a demand for having adequate railway transport for long-distance and suburban or

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<sup>165</sup> cf.: Ibid.: p. 19.

<sup>166</sup> cf.: Republic of Hungary - Ministry of Economic Affairs and Transport: Hungarian Transport policy 2003 – 2015. Budapest 2004. p. 9.

<sup>167</sup> cf.: Republic of Hungary - Ministry of Economy and Transport: Environmental Protection and Infrastructure operational Program 2004 – 2006. Budapest, 2003. p. 37.

<sup>168</sup> cf.: Ibid.: p. 12.

<sup>169</sup> cf.: Republic of Hungary - Ministry of Economic Affairs and Transport: Hungarian Transport policy 2003 – 2015. Budapest 2004. p. 9.

<sup>170</sup> cf.: Ibid.: p. 8.



local transport as well. The Hungarian government stated that the railway in Hungary since 1970 has been in a disadvantageous competitive position compared to the individual transport until the situation started to change about the year 2000. At that time the metropolitan area of Budapest started to be occupied by such a high number of individual cars, that there were traffic congestions almost everywhere at every time. As a consequence, road transport was and still is getting more and more difficult for the inhabitants and commuters due to congestion at peak hours. As a change for the worse the condition of the environment is gradually worsened by noise and air-pollution comes along. According to this, the number of people using public means of transports increased and still increases more and more and led to a congested public transport system as well.<sup>171</sup>

Another interesting trend in the municipal programs is the linkage of the different transport modes. On the one hand, there are linkages between the urban transport modes and on the other hand connections between the urban/metropolitan transport and the intercity transport. The plan of the city of Budapest is to prioritize the construction of intermodal transport nodes, linking at the same place local and the intercity transport and public and individual transport. The connections will be at main transfer points which will be equipped with park and ride, respectively bike and ride facilities.<sup>172</sup>

The current state of construction and disassembling of the connection points is unfortunately unknown. Though, the plans indicate the intenseness of the city of Budapest to translate into action the general guideline of improving the public transport not only as an alternative but as a main mode of transport on the Hungarian capital.

### 4.5.3 Non-governmental level

Non-governmental environment and transport statements and actions in Hungary mostly are provided by the “Clean Air Action Group” (CAAG), a national federation of 87 NGO’s. As well as in the other research countries, in the past ten years there has been a clear trend in the Hungarian NGO movement towards environmental friendly and sustainable mobility. CAAG wanted to change national transport policy awareness from “economic growth is just possible with support of road expansion and individual transport” towards “rail and public transport is a good alternative to achieve economic growth AND environmental sustainability at the same time”.<sup>173</sup>

While national transport policy in Hungary focused on supporting individual transport, CAAG in that period tried to give much more attention towards rail and public transport. This intent was not easy, as individual transport sector received considerable subsidies from national and municipal governments, and motorway expansion, as already shown, was heavily forwarded at the end of the 1990s. Whereas the national government subsidised car manufacturers and tax-

<sup>171</sup> cf.: Republic of Hungary - Ministry of Economy and Transport: Environmental Protection and Infrastructure operational Program 2004 – 2006. Budapest, 2003. p. 37.

<sup>172</sup> cf.: Republic of Hungary - Ministry of Economic Affairs and Transport: Hungarian Transport policy 2003 – 2015. Budapest 2004. p. 38.

<sup>173</sup> cf.: Clean Air Action Group – András Lukács: Misconceptions about transportation in Hungary. Budapest, 1998. [http://levego.hu/en/news/1998/01/misconceptions\\_about\\_transportation\\_in\\_hungary](http://levego.hu/en/news/1998/01/misconceptions_about_transportation_in_hungary) last access: 11.4.2011

free use of company cars, CAAG criticized that Hungarian railways for many years had to finance its losses on passenger transport from the profits made in freight transport, because the government failed to pay for the passenger transport services it ordered from the railways. Due to this development there were no money left for renewal of the tracks and rolling stock.<sup>174</sup>

According to CAAG, current financial and managing problems of Hungarian railways originate from the fact, that there has never been a change of internal railway structure. As a result, Hungarian railways are “still functioning like a huge communist enterprise directed by the ministry of transport and not like a market-oriented company”.<sup>175</sup>

To improve and increase the use of environmental friendly mobility and following the non-governmental trend of supporting sustainable means of transport, CAAG has been given and currently still gives recommendations to Hungarian national and municipal governments: Subsidies granted to road transportation and car manufacturing companies should be gradually eliminated, as they were not justified economically. In general, there should be a major focus on the development of public and especially railway transport and a better balance between individual and public transport development in Hungarian national transport policy with the aim of counterbalancing the damage to the environment and human health caused by road transport. This includes the awareness that the European transport corridors cannot be limited to motorways, but they are to be based primarily on railways.<sup>176</sup>

Furthermore, emphasis should be placed on maintaining and renovating the existing public road network, instead of constructing new motorways. In this context, also the current share of public transport should be preserved, and efforts should be made to increase its share. A concrete measure should be the reasonable use of the scarce subsidies granted to transportation companies: They should partly be used to establish an integrated tariff system between the Budapest Public Transport Company (BKV), the Hungarian State Railways Company (MÁV) and the VOLÁNBUSZ Co. (Coach Service Company) in order to improve service, integration and connectivity.<sup>177</sup>

All these recommendation meet with another important aim of CAAG, which can be taken as general summary of non-governmental activities in Hungary: “Instead of optimising the economic, regional development, environment protection and transport interests, a substantial reduction of the transport needs should be set as a goal to be achieved”.<sup>178</sup>

## 4.6 Croatia

### 4.6.1 National level

Transport policy in Croatia in the past ten years was still influenced by the end of the homeland

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<sup>174</sup> cf.: Clean Air Action Group – András Lukács: Hungarian Transport on the way to the EU accession. Budapest, n.d. <http://levego.hu/sites/default/files/kiadvany/hutransp.htm> last access: 11.4.2011

<sup>175</sup> Ibid.

<sup>176</sup> cf.: Clean Air Action Group – Dr. Károly Kiss: EU Accession Transport and the Environment. Budapest, 2002. p. 7.

<sup>177</sup> Ibid.: p. 16.

<sup>178</sup> Ibid.: p. 29.

war in 1995. Development and rebuilding of the country was the most important political challenge. The reconstruction of the transport systems and the development of transport infrastructure was a main project to achieve coordination and integration within Croatia but also at a European level. To forward the development in a sustainable manner, the Croatian Ministry of Maritime Affairs, Transport and Communications in 1999 edited the “Transport development strategy of the Republic of Croatia”.

The analysis of the current state of the development of the transport system in Croatia was made with the help of basic and complementary criteria. Basic criteria were the interconnection of parts of the Country and the connection of the transport system of Croatia with transport systems of Europe and Mediterranean as well as the costs of transport.

As complementary criteria the quality of transport connections in major Croatian cities and microeconomic regions were taken as well as development of city and inter-city public transport of passengers. Furthermore, safety of transport in general and road transport in particular as well as development of modern transport technologies and cargo terminals were part of the criteria. The Croatian Ministry of Maritime Affairs, Transport and Communications and Transport development strategy came to the conclusion that the Croatian transport system was underdeveloped if any of the mentioned criteria was applied.<sup>179</sup>

A closer look at the coordination of the development of the individual transport sectors revealed that the transport system of the Republic of Croatia according to the Ministry of Maritime Affairs, Transport and Communications, Transport development strategy did not yield satisfactory results.<sup>180</sup> That applies to the overall function of the transport system as well as to internal conformity between individual elements of sub-systems or sectors like infrastructure, vehicles or organization.

The „Transport development strategy” contained a multitude of plans and measures to improve and to develop the transport system in Croatia:

#### Road transport:

- Connectivity of the entire Croatian territory, all of its parts and settlements as well as connecting and linking of Croatia with Europe
- Gradual increase of funds invested in maintenance, with the goal of reaching the full standard level by 2007
- Continuing building of motorways, semi-motorways and expressways in the basic transport corridors (most important in terms of strategy, according to the ministry) so that Croatia would have 875 km of completed motorways, semi-motorways and expressways in 2005, 1,175 km in 2010 and 1,935 km in 2021

#### Railway transport:

- Restructuring of railway, so that it becomes efficient in terms of market principles of

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<sup>179</sup> cf.: Republic of Croatia - Ministry of Maritime Affairs, Transport and Communications, Transport development strategy: Transport development strategy of the Republic of Croatia. Zagreb, 1999. p. 27 f.

<sup>180</sup> cf.: Ibid.

business operation (gradual reduction of state subsidies until complete termination of such subsidies)

- State priority will be given to the lines and areas incorporated in the pan-European network of transport corridors
- Comfort improvement, travel time reduction, frequency increasing in passenger transport at European linkage to Euro-City (EC) trains), national and local level
- Expected transition of passengers from road to railway transport

Though the new roads and road structures under construction were necessarily seen to be completed as a priority, according to the ministry, railway should become a fundamental form of land transport, as well as the basis for increasing of the mobility of the population and of overall development of Croatia, according to the ministry.<sup>181</sup> There were huge investments in the rail infrastructure planned for the period 1999 – 2010<sup>182</sup> and the railway transport, as well as the combined transport was seen as an environmental friendly alternative to road transport.<sup>183</sup> The quantitative analysis showed that at least a railway network expansion has not taken place because the total length of railways in use stagnated in the last ten years.<sup>184</sup>

In the year 2007 the Ministry of the Sea, Tourism, Transport and Development edited the “Transport operational programme 2007-2009 - Instrument for pre-accession assistance” with some interesting changes in the transport policy. The priorities of this programme are:

- Increase of the transport business and the growing importance of national and international alliances, which implies closer cooperation between railway undertakings, complementary modes of transport and industries
- Diversification of services in response to continuous changes in the pattern of trade, or in the commodity structure, towards an increasingly higher value-added production system
- Increased specialisation, due to the growth of the complex system of “logistics chain management”, which is replacing the traditional system of distribution.<sup>185</sup>

Furthermore, the Ministry attests Croatia “a well-performed integration into the international trade system. Due to the progress which has been made on the realisation of major reform programmes and investments, Croatia is generally considered to be a functioning market economy “able to cope with the competitive pressure and market forces within the European Union”, as most recently confirmed by the European Commission”.<sup>186</sup> In addition to that, the

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<sup>181</sup> cf.: Republic of Croatia - Ministry of Maritime Affairs, Transport and Communications, Transport development strategy: Transport development strategy of the Republic of Croatia. Zagreb, 1999. p. 93 ff.

<sup>182</sup> cf.: Ibid.: p. 86

<sup>183</sup> cf.: Ibid.: p. 25 f.

<sup>184</sup> cf.: chapter 3.2.2.5.

<sup>185</sup> cf.: Republic of Croatia – Ministry of the Sea, Tourism, Transport and Development Transport operational programme 2007-2009. Instrument for pre-accession assistance. Zagreb, 2007. p. 13 f.

<sup>186</sup> cf.: Republic of Croatia – Ministry of the Sea, Tourism, Transport and Development Transport operational programme 2007-2009. Instrument for pre-accession assistance. Zagreb, 2007. p. 13

ministry is aware that the “adequate provision of public transport services, including railways, is considered an important ingredient for the improvement of the socio-economic situation of under-developed and will have to be balanced against the arguments for closing loss-making lines. The challenge of reform and investment continues in the transport sector of Croatia, particularly in the context of negotiations for accession to the EU, where transport is highly liberalised, competitive and market-oriented.”<sup>187</sup>

In the main it can be said, that the propositions of the „Transport development strategy” from 1999 has been achieved concerning the road transport. The motorway and total street network has been largely extended and is no longer a priority of the current Croatian transport policy. In contrast, the plans concerning the railway transport planned in 1999 has nearly been neglected. As a logic consequence, “Transport operational programme” focuses on infrastructure and operations improvements in the railway and inland waterway network.<sup>188</sup>

The other interesting difference to the 1999’s programme is the current focus on quality instead of quantity: While the “Transport development strategy” concentrates on the quantitative new construction and extension of infrastructure, the “Transport operational programme” centres on more qualitative and sustainable aspects. For example, the main goals are “to harmonise the degree of development, quality and security of the transport infrastructure as well as to promote ecological sustainability in transport and energy” as well as a “balanced development of the transport system, which is one of the basic goals relating to the overall creation of social and economic balance”.

Besides, the 2007’s program is thinking about “reviewing the participation of individual transport sectors in the overall transport sector with the aim to effect the redistribution of traffic among transport routes and with a view towards inter-modality”.<sup>189</sup> This is confirmed by the program of the government of the Republic of Croatia from the year 2008: Increase of investments in the development of railway infrastructure in accordance with the Croatian transport development strategy and enabling the Croatian railway competitiveness with other modes of transport are the main challenges of the next years.<sup>190</sup>

A last important trend in the national transport policy of Croatia is the increase of environmental awareness in transport policy and the definition of environmental criteria for use in the transport sector. The goal is to meet environmental concerns which have an increasingly important influence on transport policy. One policy target is to shift long-distance road journeys and cargo onto the railways as an energy-saving, clean and safe mode of transport, and to make the railways an integral part of the modern multi-modal distribution and passenger transportation chains.<sup>191</sup>

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<sup>187</sup> cf.: Ibid.

<sup>188</sup> cf.: Ibid.: p. 55

<sup>189</sup> cf.: Ibid.: p. 55

<sup>190</sup> cf.: Program of the Government of the Republic of Croatia. Mandate for 2008 – 2011. p. 24 ff.

<sup>191</sup> cf.: Republic of Croatia – Ministry of the Sea, Tourism, Transport and Development Transport operational programme 2007-2009. Instrument for pre-accession assistance. Zagreb, 2007. p. 55

#### 4.6.2 Municipal level

Due to poor data records concerning the transport related information, most trends in the City of Zagreb are taken from the programs made by the city itself. In the year 2005 the City of Zagreb started a General Plan of City Traffic. The following objectives were developed and agreed with the City Government as goals of the project, which lasts until the year 2020:

- improvement of the economic efficiency of the transport system
- protection of the environment from harmful effects of traffic
- increasing the safety of passengers and
- increasing the availability at traffic facilities

The General Plan focuses on an environmental sustainable transport system, which is economically efficient and provides good accessibility, while at the same time protecting the environment and the safety of passengers. It was important, that the Plan can be realized and implemented within the economic situation of the City of Zagreb.<sup>192</sup>

The concrete actions to implement the plan and develop the transport systems should be achieved by the following aspects:

- improving of the capacity of public transport service levels through a financially sustainable modernization
- providing a better access to transport networks and transport facilities
- reducing car use in the city centre
- increasing the number of parking places for cars
- improving conditions for non-motorized transport
- increasing the safety in all means of transport and
- reducing noise and air pollution

It is important to notice, that the implementation of the Plan had to cope with some difficulties like financing issues, legal and building regulations and intense political discussions. On the other hand, the number of every day trips made in Zagreb increased between 1998 and 2010 by 12 % and will still increase by another 6 % until the year 2020. Above all, the Modal Split in the city of Zagreb, which was balanced in 1998, will increase towards a 66 % individual car use and only a 34 % of people using public transport means, if no action is taken.<sup>193</sup> In the light of this development the implementation of the plan seemed to be the right decision.

The first results of the General Plan of City Traffic are just a slightly improvement of the situation: There have been some modifications in the interconnectivity of the public transport means, which means a reduction of the transfer and waiting time. However, the connections and the availability of public transport in the suburban areas are mostly unaltered. Other

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<sup>192</sup> cf.: City of Zagreb: General Plan of City Traffic 2005-2020. <http://www.zagreb.hr/default.aspx?id=664> last access: 12.4.2011

<sup>193</sup> cf.: Ibid.

improvements are noticeable in the environmental parameters and emissions. At the same time there has been a small reduction in the number of road accidents. Both aspects could be explained by a declining car use in the inner city but contrary to the increasing environmental and sustainable awareness, the streets of Zagreb still become crowded every day, even during the day without any rush-hour traffic.

Another interesting aspect is shown on a closer look at the current strategic projects of capital investments: Of the 15 programs, only three are transport or traffic related, one for the individual, and two for the public transport: An investment of 30 million euro is planned for the construction of underground parking garages. For the public transport sector, there should be mass transit system renewal of the public transit company ZET and an extension of the urban and suburban railway projects. The total investment volume of these two projects is about 300 million Euros. This means that within the transport sector priority is given to public transport, but just about 15 % of the total investment of the strategic projects is spend for transport issues and underlines the weak political position of the transport sector in the city of Zagreb.<sup>194</sup>

#### 4.6.3 Non governmental level

The most important transport and environment organisation in Croatia is Savez za Željeznicu (SSZ) which has more than 40 member organisations. The emphasis of their work is on the promotion of safe and environment-friendly railway transport, events, lobbying, media relations and projects. One of the coalition's important strategic objectives is to keep the lead of the railway in terms of their environmental advantages and especially their energy efficiency. Further issues of the organization's work are promoting positive examples and better competitive conditions for the regional passenger rail transport and rail freight transport.

As one key towards a sustainable and eco-friendly mobility SSZ sees a merging of different types of transport in a transport system. The focus of the work of Croatian NGO's mainly are transport and traffic problems in cities, especially in Zagreb, where city and suburban railway is seen as much simpler, cheaper and better solution than the subway (metro) with regard to the fact that most of the city has a good natural position, and now the railway infrastructure in the city centre. Furthermore, SSZ members want to encourage cycling as an alternative to individual transport and promote actively the installation of cycling lanes and cycling station next to public institutions and public transport stations. This is also attempted by other NGO's like ODRAZ (Sustaining Community Development).<sup>195</sup>

As Croatian NGO's mainly focus on traffic problems in Zagreb, the most concrete suggestions towards a better managing of transport are related to the capital. They oppose against the expansions of public garages in the center of the city, as this measure promotes individual transport in the inner city and it does not help to reduce the degree of motorization in Zagreb.<sup>196</sup>

<sup>194</sup> cf.: City of Zagreb: Strategic projects – capital investments. <http://www.zagreb.hr/default.aspx?id=2013> last access: 11.4.2011

<sup>195</sup> cf.: Saveza za željeznicu: SZZ Work Report for 2008. [http://www.szz.hr/wp-content/uploads/2009/09/izvjestaj\\_o\\_radu\\_za\\_2008.pdf](http://www.szz.hr/wp-content/uploads/2009/09/izvjestaj_o_radu_za_2008.pdf) and: ODRAZ (Sustaining Community Development) <http://odraz.hr/en/home> last access 14.4.2011

<sup>196</sup> cf.: Zelena Akcija (Friends of the Earth Croatia): Analysis of Zagreb's traffic system and recommendations for its

In addition to that, they also want to improve and cycling facilities, especially connections between public and bike transport in order to give absolute priority to trams and buses on the streets improving their routes and reliability.<sup>197</sup>

Beside active analysis and suggestions towards Croatian and Zagreb transport policy, some NGO's also run education centres where they "want to increase environmental and sustainable awareness and education of school children as well as decision makers" as a complementary field of action.<sup>198</sup>

## 4.7 Intermediate results of the qualitative analysis

The qualitative analysis has shown that there is a wide variety of basic approaches and measures in the research countries concerning transport policies and the organisation of transport. Despite diverse and distinct differences between the countries, the diverse political levels increasingly assume that the transport sector is facing major challenges. As important issues are, inter alia, named: Environmental and Climate protection (reduction of emissions), shortage and rise in cost of fossil fuels, traffic safety, but also infrastructural bottlenecks. In the light of these challenges the need for political action to make mobility more sustainable is generally seen by the authorities on national level as well as on municipal level in all research countries.

Again, the concrete policy objectives and actions in this context show a wide variety in detail, but as a basic principle fostering public transport and multimodality is seen, among others, as an important instrument to cope with these challenges in all research countries. In all research countries increasing market share of public transport and multimodality (modal shift) is stated as a policy objective on national and/or municipal level.

Although the actions taken to achieve this objective are varying in many respects, the main focus is in all research countries on making public transport and multimodality more attractive for the users.

An important measure in this respect is the introduction of integrated tariff systems (one ticket for all means of public transport). At national level, there is the OV-Chipkaart in the Netherlands, and at regional level you find integrated tariff systems in Belgium, Germany or Austria.

Another important field of action is improving connections between public transport and other transport modes through Park&Ride (P&R) and/or Bike&Ride (B&R) facilities which take place in all research countries.

Other aspects are the expansion of public transport's infrastructure, more frequent services, new rolling stock or discounted tickets for commuters.

Furthermore, the qualitative analysis has shown that fostering public transport at municipal

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improvement. Zagreb, 2010. p. 4 ff.

<sup>197</sup> cf.: Ibid.: p. 13 ff.

<sup>198</sup> cf.: Zeleni Osijek (Association for nature and environment protection Green Osijek): Energy education agency. <http://www.zeleni-osijek.hr/en/energy-education-agency.php> last access 14.4.2011



level is often more concrete than at national level due to more specific measures.

Nevertheless, although there are policy objectives and a lot of measures linked to public transport and multimodality, it should be noted that fostering public transport is mostly not dominating transport policy at all levels. On the contrary, in all research countries there are still important measures to support individual transport. Examples are massive road-network expansions or, in the Netherlands, the increase of maximum speed on motorways, subsidies for car purchase (car-scrap bonus in Germany) or tax-free use of company cars (Hungary), etc. Also measures curbing individual transport, like for example the congestion charge in the City of London<sup>199</sup>, are still few in the research countries,<sup>200</sup> an exception are restraints for individual transport in the City of Vienna (cf. chapter 4.4.2.).

Finally it should be noted that fostering public transport is often avoided or delayed due to financial problems. In Germany there is a stable funding for public transport since public transport has been defined as a service for the public and the “regionalisation funds” have been introduced in 1996. But even in Germany financial problems are a notable problem for the further development of public transport, like examples from the City of Hamburg show. The situation in countries like Hungary or Croatia is even worse.

Despite the continuity of road-focused transport policies and shortness of money for public transport, there is, as a general observation, a noticeable increase of attractiveness of public transport in most research countries.<sup>201</sup> This process is still at the beginning, especially in countries like Hungary or Croatia. Nevertheless this observation is in line with the quantitative analysis, which has shown an increasing demand for public transport in almost all research countries (with the exception of Hungary) and that people are more and more willing to intensify their use of public transport, respectively multimodality.

A more sustainable transport system is also supported by the NGO's in all research countries. Therefore they claim for a more consistent policy fostering public transport, non-motorised means of transport and multimodality. They accumulate expert knowledge concerning transport and environmental issues and their activities are focused on influencing public opinion to achieve a change in transport policy. They campaign for an increase in quantity and quality of public transport, modal shift and also traffic avoidance in order to archive an increased quality of life through less individual transport. Their work contributes to a rising awareness of problems concerning public transport and multimodality both in politics and the population.

## 5. Results

The objective of this report was to show national trends in passenger transport regarding the choice of transport mode. The quantitative analysis of the research countries has focused on an overview and a comparison of the countries based on the most important national statistical

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<sup>199</sup> cf.: Transport for London – Congestion Charging: <http://www.tfl.gov.uk/roadusers/congestioncharging/>

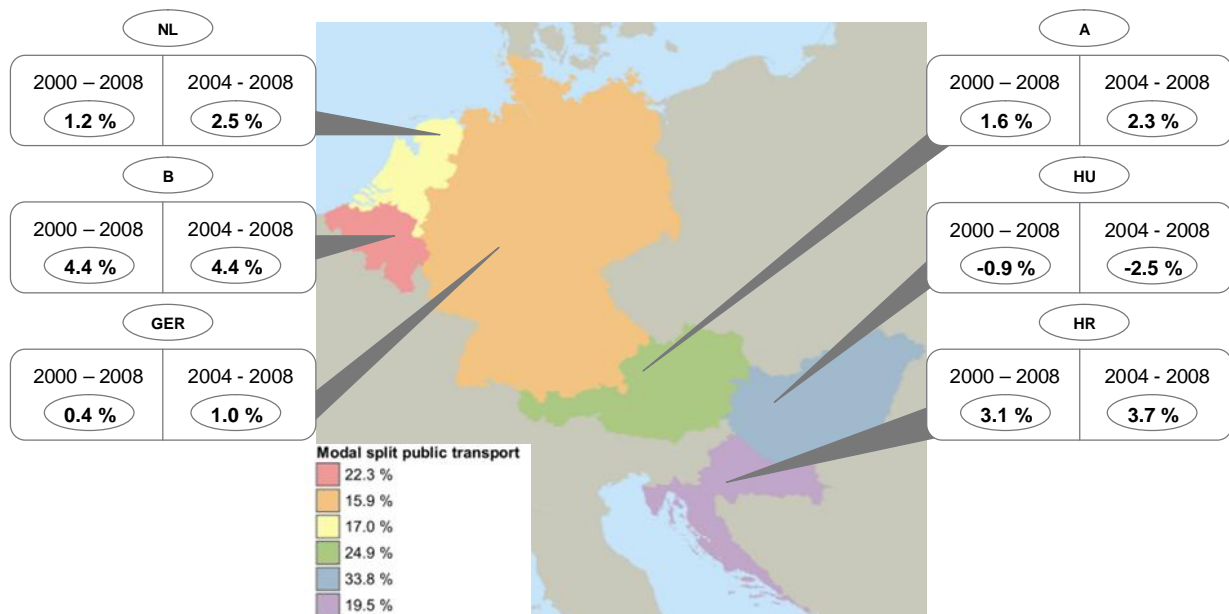
<sup>200</sup> In Germany there are environmental zones „Umweltzonen” in cities, which restrict the access for high polluting cars. However, due to their conception they show just a low steering effect.

<sup>201</sup> In Hungary and Croatia this is just perceptible in urban areas.

data. Whereas the quantitative analysis has shown national trends regarding the choice of transport mode based on statistical data, the qualitative analysis has focused on policy objectives and measures in the research countries, as well as on the contribution of NGO's.

The analysis has shown interesting trends in passenger transport regarding the choice of transport mode. In almost all research countries there has been a general increase in demand for mobility. The increase is viewable in individual as well as in public transport (with the exception of Hungary).

It can be noted that public transport in the last years has been and still is in a challenging competitive situation towards individual transport, both in competition within the passenger market and for political support. The market share of public transport in the research countries fluctuates between 15.9 % (Germany) and 33.8% (Hungary).



**Figure 18: Modal split of public transport and average annual growth rates of transport performance [pkm] in public transport 2000 – 2008 and 2004 – 2008.**

Source: European Commission – Statistical Pocketbook 2010. Luxembourg, 2010. p. 119  
Map created with Mappoint 2010 European Maps

The average annual growth rates of transport performance in public transport in the research countries, examined for a nine year period are until now mainly moderate as Figure 18 shows. But interestingly, the demand for public transport (or rail transport respectively) showed nevertheless a greater increase than the demand for individual transport, especially in the last five years (with the exception of Hungary, see also chapter 3.2.3). Obviously people are more and more willing to intensify their use of public transport, respectively multimodality.

Policy objectives for a more sustainable transport and to foster public transport exist in all research countries. In all research countries increasing market share of public transport and multimodality (modal shift) is stated as a policy objective on national and/or municipal level.

Accordingly attempts to make public transport and multimodality more attractive for the users can be found in all research countries. This process is still at the beginning, especially in countries like Hungary or Croatia. In fact, the analysis has also shown that measures to foster public transport and multimodality do still not dominate transport policy at all levels and often are not consistently implemented.

The approach of solving traffic problems in urban areas with public transport is viewable in the analysis of municipal transport policy which in comparison with the national transport policy is more pragmatic in fostering public transport. The focus of public transport policy on urban areas can also be seen in the “best-practice-list” which is attached to this analysis and where the majority of the examples directly apply to individual cities.

There is some indication that the potential for increased use of public transport and multimodality is still not exploited to the full. This theory follows not only the fact that there still is continuity of many road-focused transport policies and there still is considerably potential for improvement in public transport. Trends like the development of fuel and railway ticket prices, changes of values (ecological awareness, different status symbols) and urbanisation also support this indication.

It must be clear that an analysis based on aggregated data and the examination of transport policy is not able to explain transport behaviour in a complete way. Missing aspects can be explained with an additional analysis of passenger’s behaviour, as it is the focus of USEmobility, which questions changes in behaviour. The analysis of passenger’s behaviour will contribute to a better understanding why people were motivated to use public transport means more intensively. This will help all actors exploiting the potential for additional public and multimodal transport in the future.

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## Appendix 1: USEmobility Best-practice list

(see document: USEmobility\_WP\_2\_D2.2\_Best\_practices\_110511.xls)