J R C T E C H N I C A L R E P O R T S

Analysis of National Travel Statistics in Europe

OPTIMISM WP2: Harmonisation of national travel statistics in Europe

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OPTIMISM

optimising passenger transport systems

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OPTIMISM's scope is to provide a scientifically documented insight of the transport system and people's travel choices via the study of social behaviour, mobility patterns and business models. The overall aim of OPTIMISM project is to define which of the future changes in the travel system would lead to a sustainable way of travel-ling, as people could travel more efficiently, cleaner and more safely, without compromising mobility. The OPTIMISM project consists of six work packages (WPs):

- Work Package 1: Management
- Work Package 2: Harmonisation of national travel statistics in Europe
- Work Package 3: Demand and supply factors for passenger transport and mobility patterns – status quo and foresight
- Work Package 4 : Analysing measures for decarbonisation of transport
- Work Package 5: Elaborating on strategies for integrating and optimising transport systems
- Work Package 6: Dissemination and Awareness

OPTIMISM is a project partially financed by The European Commission under the framework programme. It is coordinated by the Coventry University Enterprises (UK). The consortium includes partners from different EU Member States and Associated Countries such as Zürcher Hochschule für Angewandte Wissenschaften (Switzerland), Signosis (Belgium), DLR – German Aerospace Center (Germany), Forum of European National Highway Research Laboratories (Belgium), Universita Degli Studi di Roma La Sapienza (Italy), Transport & Mobility Leuven (Belgium), CE Delft (Netherlands) and the IPTS Joint Research Centre (European Commission)

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Table of contents

List of Figures		4
List of Tables		5
Chapter 1	Introduction	6
	1.1 The OPTIMISM project	6
	1.2 Research interest	6
	1.3 The report structure	7
Chapter 2	Status quo of National Travel Surveys (NTS) in Europe – Recent standardisation efforts	8
Chapter 3	Methodology	11
	3.1 Objectives	11
	3.2 Pilot study and questionnaire design	11
	3.3 Approach and scope of study	12
	3.4 Survey implementation	12
Chapter 4	Results	14
	4.1 Basic survey information	14
	4.2 Data collection methods	22
	4.3 Type of data collected	26
	4.4 Quality checks and future surveys	36
	4.5 Travel data	38
Chapter 5	Conclusions and Recommendations	42
	5.1 Countries collecting NTS	
	5.2 Design of survey in terms of classification of data, sampling and survey implementation	
	5.3 Comparison of NTS data in the EU	
	5.4 Co-modality and ICT measures	42
	5.5 Recommendations	43
References		44
		44
Annex A	Questionnaire	45

List of abbreviations

AUDIMOB - The Observatory of styles and mobility behaviour of the Italians

CAPI – Computer Assisted Personal Interviewing

ISFORT – Istituto Superiore di Formazione e Ricerca per I Trasporti

MiD – Mobilität in Deutschland

NTS - National Travel Survey

OPTIMISM - Optimising Passenger Transport Information to Materialise Insights for Sustainable Mobility

ORIGAMI – Optimum Regulation and Infrastructure for Ground, Air and Maritime Interfaces

SHANTI - Survey Harmonisation with New Technologies Improvement

List of Figures

4.1	Summary of results for purpose of survey	17
4.2	User groups of NTS	17
4.3	Modes covered in the survey	26
4.4	Countries collecting information on parking data (%)	32
4.5	Accessibility and satisfaction with public transport (%)	34
4.6	Trip purpose – number of daily trips per person on a national average	38
4.7	Modal split (Distribution of transport mode used based on person-kilometre (%))	41

List of Tables

2.1	Selected activities with respect to the harmonisation of travel surveys and international comparison of national data	9
2.2	Potential areas for harmonisation and standardisation of household travel surveys	10
3.1	List of countries that were contacted	11
3.2	Inclusion/omission of surveys from analysis	13
4.1	Name of survey and website address	15
4.2	Commissioning, funding and holding of survey data	16
4.3	Purposes of and users of NTS (number of responses out of 15 countries)	18
4.4	Groups to whom microdata is available, its format and language of use	19
4.5	Microdata availability	20
4.6	Other data and costs of data	21
4.7	Data collection year and frequency	21
4.8	Survey sample size and approach	23
4.9	Methodological approaches	24
4.10	Minimum and Maximum age of respondents	25
4.11	Age groupings	25
4.12	Personal and household information	27
4.13	Trip information	28
4.14	Trip purpose	29
4.15	Recording of trip length	31
4.16	Duration of trips	32
4.17	Vehicle ownership and use	33
4.18	PC/smartphone availability	34
4.19	Other data collected	35
4.20	Future surveys and future opportunities for adjustments	36
4.21	Future surveys	37
4.22	Trip length – distribution of trip length per person on a national average (%)	39
4.23	Trip duration – distribution of trip duration per person on a national average (%)	39
4.24	Cross tabulation showing number of daily trips, average trip length and average trip duration	40

Chapter 1: Introduction

1.1. The OPTIMISM Project

The aim of the OPTIMISM project is to *optimise passenger transport systems using co-modality ICT solutions, while keeping in mind the needs of passengers and ensuring that the impacts of any proposed measures are carbon neutral*. It is intended in this project to examine passengers' current travel needs, mobility patterns and business models and to examine how future changes might be used to bring about more sustainable travel patterns.

To achieve this aim, work is taking place in 3 areas:

1) Identifying gaps and harmonisation of data in travel behaviour,
2) Defining demand and supply factors that shape transportation systems and mobility patterns, and
3) Defining the potential decarbonisation of the passenger transport system and ensuring sustainability of the system.

This report describes work carried out under WP 2. Task 3.2 of the project, "Harmonisation of national travel statistics in Europe" is a Task which helps to achieve the first of the objectives as outlined above. The specific objectives of this Task were:

1) To establish what countries are collecting National Travel Surveys (NTS),
2) To identify the information and travel data that is collected in those NTS,
3) To examine how the surveys are designed in terms of classification of data, sampling and survey implementation, and
4) To analyse if travel data from the different countries can be compared.

Furthermore, the collected information and analysis of Tasks 2.1 should build the data basis for the following Tasks 2.2 and 2.3 which aim to develop methodologies and recommendations how to harmonise NTS in Europe.

1.2. Research interest

The OPTIMISM project sets out to examine how ICT and co-modality can be used to bring about more sustainable travel and better travel systems. Although both the application of ICT related measures and improved co-modality options may provide a roadway towards more sustainable travel, a number of conditions exist that need to be fulfilled. Some of these relate to the actual travel patterns that can be found in practice. In order to understand how future solutions might impact upon travel behaviour and patterns and how ICT and co-modality might bring about more sustainable travel, it is important to first have a good understanding of existing travel patterns. To allow for a valid selection of ICT and co-modality related measures, it is
important to know if countries are already collecting data about co-modality and ICT, and their impacts upon travel behaviour and modal choice. One of the useful data sources for this type of research are NTS. For this reason, in this task countries with NTS have been

identified. The NTS of those countries have been collected and analysed both to identify and describe the travel patterns that are taking place in those countries, but also to discover what data is actually collected in different countries and how methodologies differ across Europe for collection of travel data.

By examining the NTS in different countries, it has been possible to identify some general conditions of national travel behaviour in each country and to identify some trends in travel patterns. However, comparing travel patterns across countries using data from the different NTS has been limited by the variety of methods that are used to collect data and by differences in the type and format of data that is collected. In addition, there are several countries who do not collect national travel data, or who have not collected data during the last 10 years (and therefore have been excluded from the analysis). Some countries that collect national travel data do not share this data or make it available to others. Therefore, the availability and type of national travel data is quite varied across Europe.

What has been possible in this report is to identify the different approaches taken by national statistics offices and transport departments in the collection of national travel data. Differences exist in terms of frequency of data collection, type of data that is collected, survey methodology and implementation and how the data is subsequently used. Comparing travel patterns or coming to meaningful conclusions about European travel patterns or the impacts of co-modality ICT solutions on travel patterns across countries is extremely difficult when countries are not collecting travel information in the same way or even collecting the same travel information. This report describes the main differences found and the findings will be used at a later point in OPTIMISM to help define how travel statistics and collection of such statistics might be harmonised.

1.3. The report structure

The report is divided into five sections. The introduction explains the need for the aims and research interest. The second section on the status quo of NTS describes current research into the standardisation of NTS. The methodology presents an outline of how the pilot study and questionnaires were developed, the approach and scope of the study and how the survey was implemented. Chapter 4 presents the results of the questionnaires in terms of data availability, collection methods, type of data, quality checks and travel data. Chapter 5, outlines the major conclusions that can be drawn from the comparison of NTS.

Chapter 2: Status quo of National Travel Surveys (NTS) in Europe – recent standardisation efforts

National travel surveys have a long tradition in many countries throughout the world. Despite their undisputed value for transport research in terms of basic analysis and subsequent modelling and/or planning of the transport system or for relevant administrations and decision makers, both data collection and usage are facing serious challenges in terms of rising costs and limited financial budgets. In the case of available surveys, the issue of comparability arises in different ways:

At a national level, in many cases multiple surveys have been carried out over a number of years, not always within regular time intervals and sometimes with alterations in methodology. Usually, resulting data are analysed in the sense of time series in order to describe not only the current status-quo but also the development of transport within the respective country over time.

At an international level, more emphasis is given to the cross-country comparison of overall transport patterns and main key figures. Besides a general description, the identification of inherent (national or regional) conditions and the understanding of their respective impact are of particular interest, for example in order to derive best practices of transport management.

In both cases comparability might be limited or even impossible due to the application of distinct methodological approaches based on varying concepts (e.g. the definition of what is regarded as trip), differing data collection times (e.g. workday coverage vs. seven day week), specific national conditions (e.g. availability of sampling frames etc.) or the prevailing law (e. g. data protection regulations, privacy policy).

Within the current context of European and worldwide integration of public and private activities or growing environmental concerns, an understanding of respective national transport patterns and interrelations, similarities or disparities within countries become increasingly important. For as long as no genuine pan-European travel survey is available, its national equivalents remain the most important data sources for comparative research.

Due to the current difficulties in comparing data, several attempts to standardise or at least harmonise both data collection and data preparation have been made.

Most of the activities aim to suggest a more or less detailed set of recommendations towards harmonisation. However, as each activity has its own particular background and purpose, resulting guidelines may vary considerably. In order to illustrate the broad range of these guidelines, a list of potential areas for harmonisation and standardisation covering the whole lifecycle of a survey is summarised in Table 2.1 (cf. Stopher *et al*. 2006:19f.).

Type of activity	Objective	Examples
Research project (content related)	Harmonised cross-country analysis of particular phenomena (e.g. long distance mobility) compiling transport data from different countries and surveys	KITE (STRATA-Gmb, 2007) LINK (Trip Consortium, 2012)
Research project (methodological focus)	Identification of potential areas of standardisation within the context of survey design and execution; Development of procedures for consistent practice to be required by funding agencies or applied by practitioners	NCHRP project 08-37 "Standardised Procedures for Personal Travel Surveys" (Stopher *et al*. 2008; Transportation Research Board of the National Academies, 2012)
Methodological guideline	Recommendations towards harmonised survey design, data collection and preparation	TRB Travel Survey Manual (TRB Travel Suvey Methods Committee); Kernelemente von Haushaltsbefragungen zum Verkehrsverhalten (BMVBW,2003)
Network of expertise	Exchange research and information on methodological knowledge and best practices against the background of European integration	COST Action TUD 0804 SHANTI- Survey Harmonisation with New Technologies Improvement (SHANTI, 2012)
Multi-country travel survey	Contemporaneous and partly harmonised travel survey	DATELINE (SOCIAL DATA, 2002)
Survey inventory	Ongoing monitoring of national statistical activities with respect to passenger mobility within the EU27, EU candidate countries, and EFTA countries (methodology, data); Proposal for harmonised data collection on car passenger mobility	EUROSTATS "Support for passenger" mobility statistics project. Inventory of national surveys on passenger mobility (including methodological report and non-harmonised database with key mobility indicators) (Agilis: 2011, 2012a, 2012b, 2012c)

Table 2.1. Selected activities with respect to the harmonisation of travel surveys and international comparison of national data

Area	Items
Design of survey instruments	Minimum set of questions, standardised categories, standardised question wording
Design of data collection procedures	Number and type of contacts, proxy reporting, complete household definition, sample replacement, item non-response, unit non-response, initial non-contacts, incentives, respondent burden
Pilot surveys and pre-tests	Requirements for pre-tests and pilots, sample size for pre-tests and pilot surveys
Survey implementation	Ethics, mailing materials, respondent questions, caller identification, answering machines and repeated call-back requests, incorrect reporting of non-mobility, recording time of day, time of day to begin and end reporting, creation of identification numbers
Data coding and geo-coding	Geo-coding standards, level of geo-coding to be performed, missing values, use of zero, coding of complex variables
Data analysis and expansion	Assessing sample biases, weighting and expansion of data, missing data imputation, data archiving, documentation
Assessment of data quality	Computing response rates, transportation measures of quality, coverage error, proxy reporting as quality indicator, validation statistics, data cleaning statistics, number of missing values, adherence to quality guidelines

Table 2.2. Potential areas for harmonisation and standardisation of household travel surveys (compiled from Stopher *et al*, 2008)

Acknowledging the respective national peculiarities, Eurostat's "Proposal for a harmonised data collection on car passenger mobility" is much more general, promoting a desirable common denominator (Agilis, 2012c: p.46 ff.). It has to be noted, that Eurostat's recommendations focus on car passenger mobility only.

Given the overall national approach of the surveys under consideration, the coverage of particular topics will be limited as questionnaires have to be kept to a reasonable length to limit respondents' burden. Therefore, specific questions regarding the individual use of ICT or underlying restrictions and motives to use one or another transport mode could not be taken for granted. Accordingly, respective questions and variables are not an explicit part of any guideline as yet. With respect to OPTIMISM's emphasis on co-modality and the influence of ICT, the following questions have to be answered:

1. What kind of information is currently provided by NTS with respect to co-modality and the respective use / influence of ICT?
2. Is this information sufficient to describe and assess the development of co-modality at both national and European level in a comparative way?
3. What kind of information is missing?

Chapter 3: Methodology

3.1. Objectives:

The objectives of this task were:

1. To establish what countries are collecting National Travel Surveys,
2. To identify the information and travel data that is collected in those NTS,
3. To examine how the surveys are designed in terms of classification of data, sampling and survey implementation, and
4. To compare travel data from different countries.

With this in mind, a questionnaire was designed and distributed to the relevant authorities with responsibility for travel data collection in a number of countries.

Country Name			
Austria	France	Luxembourg	Slovakia
Belgium	Germany	Malta	Slovenia
Bulgaria	Greece	Netherlands	Spain
Cyprus	Hungary	Norway	Sweden
Czech Republic	Ireland	Poland	Switzerland
Denmark	Italy	Portugal	United Kingdom
Estonia	Latvia	Romania	
Finland	Lithuania	Serbia	

Table 3.1. List of countries that were contacted

3.2. Pilot study and questionnaire design

In the initial stages, a pilot study was conducted in order to aid in the design of the final questionnaire. In this study, a subset of countries was selected: Ireland, the Netherlands, Germany, Belgium and Poland. These were the countries represented by partners in this work package. Partners from these countries were requested to complete a short survey using the literature, reports and resources available to them. This survey included questions on who collected the data, where data was stored and what data was collected. Using the results of this questionnaire, it was decided to design a subsequent questionnaire to collect information on the National Travel Surveys of each of the countries in Table 3.1.

This second questionnaire comprised of the following sections:

1) ***Basic survey information*** - giving background details to the survey such as frequency of collection and organisations involved,
2) ***Data collection methods*** - giving information on the samples, survey instruments and methodological approaches,
3) ***Data availability*** - giving information on who had access to data and how that data was used,
4) ***Type of data*** - giving information on what was actually collected in the surveys,

5) ***Quality checks and future surveys*** - giving information on how the survey could be improved in the future and what future plans existed, and
6) ***Travel data*** - examples of tables of trip durations, lengths etc.

A full copy of this questionnaire may be found in Appendix A.

3.3. Approach and scope of the study

Once the design of the full survey had been completed, each partner in the OPTIMISM project was assigned a minimum of 2 countries from Table 3.1 and was provided with the full questionnaire. For the countries for which they had responsibility, partners were requested to first of all identify if a NTS existed and if so, to identify the relevant authority with responsibility for the NTS. Partners were told that for a travel survey to qualify for analysis as a true NTS, it needed to fulfil a certain number of criteria. These were:

1. The survey must be national in nature – not regional,
2. The latest survey must have been conducted no more than 10 years ago,
3. The surveys must be multi-modal (not focus on only one mode) and include both motorised and non-motorised modes, and both public and private transport, and
4. The surveys must include all types of travel (not be limited by purpose or trip length).

These criteria were selected to ensure that the surveys under examination could truly be classified as national travel surveys. Only countries that had surveys that met all these criteria were included in the analysis.

Table 3.2 outlines which countries were able to present information on surveys meeting all these criteria and gives explanations for why countries were omitted from the survey.

3.4. Survey implementation

Of the 29 countries that were contacted only 15 of the NTS fulfilled the four criteria as outlined, 6 provided no NTS data and 8 did not meet the criteria. Partners made every effort to collect data from the countries to which they had been assigned. However it was not possible to obtain the relevant data in all cases. In some case, this was because the NTS did not meet the criteria outlined above in Section 3.3. In some cases despite several attempts to contact the relevant authorities, replies to the questionnaires were not returned.

While no contact could be established with the survey authority in France, the French NTS was included in the analysis. Information was taken from the Department of Ecology, Sustainable Development, Energy and Commissioner General for Sustainable Development website (DESD, no date) and from SHANTI (2012) and although the information presented in the following report has not been checked by the national authority the results from this research were suitable for inclusion in the results.

Once partners had identified if a country had a NTS that fitted the criteria as set out in Section 3.3 and had also identified the relevant data collection authority, they were then asked to complete as much of the survey as possible, by examining existing data sources and literature on National Travel Surveys (including outputs from projects such as SHANTI,

Eurostat and ORIGAMI). Following this, partners sent the partially completed survey, with a cover letter, to the relevant data collection authority in the countries for which they had responsibility. The authorities were asked to check the data already entered into the spreadsheet and to complete the survey. Once completed, the authorities could simply send the survey back to partners or could be interviewed by partners if any clarification on particular aspects of the questionnaire warranted this.

Country	**Included or omitted**	**Reason for omission**
Austria	Omit	There has been no survey in the last 10 year
Belgium	Include	
Bulgaria	Omit	No reply was received from the relevant authority
Cyprus	Include	
Czech Republic	Omit	The survey only considered one trip purpose (commuting)
Denmark	Omit	No reply was received. Data available for a few questions only
Estonia	Omit	The survey only considered one mode (car)
Finland	Include	
France	Include	
Germany	Include	
Greece	Omit	The survey was a regional survey only
Hungary	Include	
Ireland	Include	
Italy	Include	
Latvia	Include	
Lithuania	Omit	The survey was a traffic count
Luxembourg	Omit	No reply was received from the relevant authority
Malta	Omit	No reply was received from the relevant authority
Netherlands	Include	
Poland	Omit	The survey was a traffic count only
Portugal	Omit	The survey did not consider non-motorised modes
Romania	Omit	No reply was received from the relevant authority
Serbia	Omit	The survey was a regional survey only
Slovakia	Include	
Slovenia	Omit	No reply was received from the relevant authority
Spain	Include	
Sweden	Include	
Switzerland	Include	
United Kingdom	Include	

Table 3.2 Inclusion/omission of surveys from analysis

Chapter 4: Results

The results from the surveys are given in the following tables and figures. The results are based upon the detailed questionnaires completed by partners of the project and checked by data collection authorities in the relevant countries. The tables are presented under the four sections:

1. Basic survey information,
2. Data collection methods,
3. Type of data,
4. Quality checks and future surveys, and
5. Travel Data.

In all cases except for one country (France) the data in the surveys was provided and checked by data collection authorities. In the case of France, however, no contact with the relevant data collection authority could be established. Therefore the data presented in the tables below for France is based on publicly available information.

4.1. Basic survey information

This section presents baseline information on the NTS such as the names of the surveys, websites where information is disseminated, how the surveys were managed and for what purposes the surveys were developed. Table 4.1 gives the names of the surveys and associated websites. The information gathered in Table 4.2 shows that in general the national statistical agencies of the survey country governments, commission, fund and hold the survey data. In some countries, universities and research organisations are involved with collecting and holding data (for example in Germany, Ireland).

Country	Name of Survey	Website
Belgium	BELDAM - Belgian Daily Mobility	No web site
Cyprus	Short distance passenger mobility survey 2009	http://www.mof.gov.cy
Finland	Valtakunnallinen henkilöliikennetutkimus 2010-2011 (en. National travel survey 2010-2011)	http://www.hlt.fi
France	National Transport and Travel Survey (Enquete Nationale Transports et Deplacements)	http://www.insee.fr
Germany*	Mobilitaet in Deutschland 2008 (MiD 2008)	http://www.mobilitaet-in-deutschland. de/
Hungary	Passenger mobility survey	No web site
Ireland	National Travel Survey	www.ucd.ie/cso/nationaltravelsurvey
Italy (ISFORT)	AUDIMOB	http://www.ISFORT.it
Latvia	Passenger mobility survey 2003 Passenger mobility survey 2008	No web site
Netherlands	Onderzoek Verplaatsingen in Nederland (OViN)	http://www.cbs.nl/nl-nl/menu/informatie/deelnemers-enquetes/personen-huishoudens/ovin/doel/default.htm
Slovakia	Annual survey of passenger transport Quarter sampling survey of trips	http://portal.statistics.sk/showdoc.do?docid=58
Spain	Movilia	http://www.fomento.gob.es/mfom/lang_castellano/estadisticas_y_publicaciones/informacion_estadistica/movilidad
Sweden	RES 2005-2006 Den nationella resvaneundersökningen / res 2005-2006 (en. The National Travel Survey)	http://www.trafa.se/Statistik/Resvanor/
Switzerland	Microcensus on Travel Behaviour 2005	http://www.mobilita2005.ch
United Kingdom	National Travel Survey	http://assets.dft.gov.uk/statistics/series/national-travel-survey/ nts 2010-technical.pdf

Table 4.1. Name of survey and website address

(*There is a second NTS survey called "Mobilitäatspanel Deutschland" (MOP) which is carried out annually. MOP is not further analysed in the following. All statements regarding Germany are based on MiD).

Country	Survey by	Survey funded by	Survey data held by
Belgium	BELSPO,Federal Service Mobility & Transport, NMBS Mobility, MIVB, IWEPS, Province of Luxemburg TEC Namen-Luxemburg	BELSPO, Federal Service Mobility & Transport, NMBS Mobility, MIVB, IWEPS, Province of Luxemburg TEC Namen-Luxemburg	University of Namur, University of Hasselt, University of Saint-Louis
Cyprus	Statistical Services of Cyprus	The Government	Transport Sector - Statistical Service
Finland	Finnish Transport Agency	Finnish Transport Agency	Finnish Transport Agency, WSP Finland Oy
France	Ministry for Transport	Ministry of Transport	Insee. Direction des statistiques demographique et socials/ Office of Economics. Statistics and Forecasting
Germany (MiD)	Bundesministerium für Verkehr, Bau und Stadtentwicklung (BMVBS) / German Federal, Ministry of Transport, Building and Development	Bundesministerium für Verkehr, Bau und Stadtentwicklung (BMVBS) / German Federal Ministry of Transport, Building and Development	DLR (Deutsches Zentrum für Luft-und Raumfahrt)- Institut für Verkehrsforschung (Institute of Transport Research)
Hungary	Hungarian Central Statistical Office (Department of Service Statistics)	Hungarian Central Statistical Office (Department of Service Statistics)	Hungarian Central Statistical Office (Department of Service Statistics)
Ireland	CSO. It was commissioned by the Department of Transport, Tourism and Sport.	Part-funded by the Department of Transport, Tourism and Sport and part funded by the CSO.	The CSO/Irish Social Science Data Archive. UCD
Italy (ISFORT)	ISFORT - Istituto Superiore di Formazione e Ricerca per i Trasporti (Institute for Education Research on Transport)	Fondazione BNC - Banca Nazionale delle Comunicazioni (National Bank of Communications)	ISFORT
Latvia	Central Statistical Bureau of Latvia	Government	Central Statistics Bureau of Latvia
Netherlands	Ministry of Infrastructure and Environment	Ministry of Infrastructure and Environment	CBS Statistics Netherlands
Slovakia	Statistical Office of the Slovak Republic	Statistical Office of the Slovak Republic	Statistical Office Slovak Republic
Spain	Ministero de Fomiento (Ministry of Public Works and Transport)	Spanish Government-Ministero de Fomiento (Ministry of Public Works and Transport)	Ministero de Fomiento (Ministry of Public Works and Transport)
Sweden	Commissioned by a working group including: Vägverket, Banverket, Luftfartsverket,Sjöfartsverket, Rikstrafiken,Statens institut för kommunikationsanalys (SIKA), Vinnova	Vägverket, Banverket, Luftfartsverket, Sjöfartsverket, Rikstrafiken, Statens institut för kommunikationsanalys (SIKA), Vinnova	Data is collected by Statistics Sweden and managed by SIKA. SIKA does not exist anymore. Tasks taken over by Transport Analysis and SCB.
Switzerland	Swiss Federal Statistical Office (BFS), Federal Office for Spatial Development (ARE)	Different public Organisations and regional partners	Swiss Federal Statistical Office (BFS)
United Kingdom	Department of Transport	Department of Transport	Department for Transport / Office for National Statistics

Table 4.2. Commissioning, funding and holding of survey data

Figures 4.1 and 4.2 show that the most common reason for carrying out a NTS was general data collection. Other common reasons included policy support, planning support, verifying existing data and research. Figure 4.2 shows that the most common uses were relatively equally balanced between government agencies, policy makers and researchers; this reflects the most common purpose for collecting data in the first place.

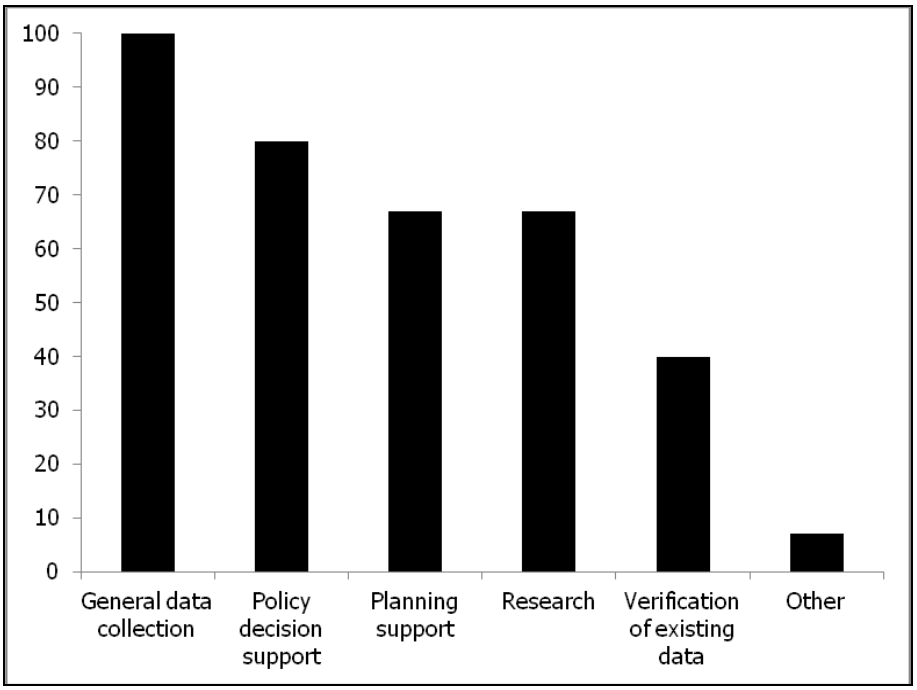

Figure 4.1. Purpose of the survey (% responses)

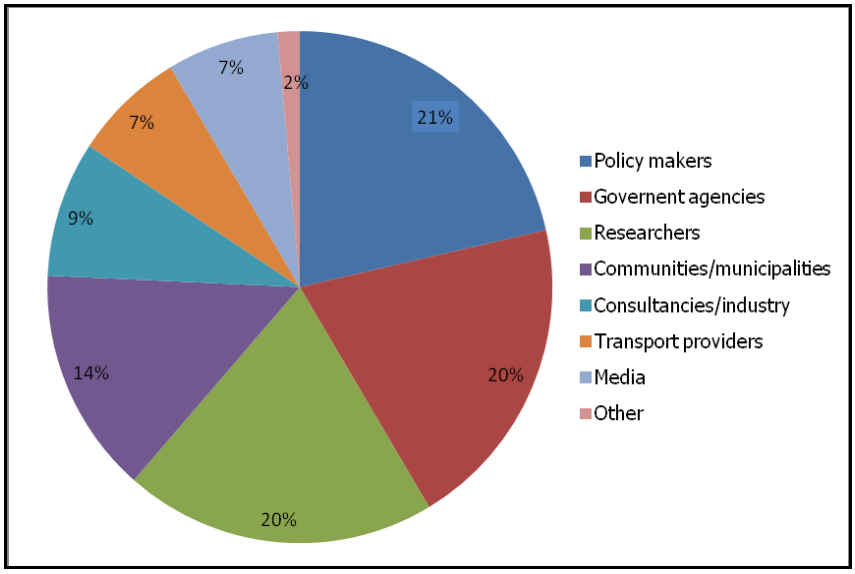

Figure 4.2. User groups of NTS

Table 4.3 presents a cross-tabulation showing how many countries collect the data for each purpose alongside who the data is actually used by. From this table it is clear that countries that are collecting data to support decisions regarding planning and policy

making are providing that data to policy makers, government agencies and sometimes communities and municipalities. Only a minority of countries provide data to consultancies, industries, transport operators and the media which again reflects that these surveys are generally being used to provide governments with better awareness of travel patterns and general travel data and to assist governments and authorities in making better decisions regarding planning infra structure and implementing transport policies.

Purpose of survey	**General data collection**	**Policy decision support**	**Planning support**	**Research**	**Verification of existing data**
Policy makers	15	12	10	10	6
Government agencies	14	12	10	9	6
Researchers	14	11	8	10	6
Communities/ municipalities	10	8	8	7	5
Consultancies/ Industry	5	4	5	5	2
Transport providers	4	3	5	4	3
Media	5	4	2	4	2

Table 4.3. Purposes and users of NTS (Number of responses out of 15 countries)

Country	Groups to whom microdata is available	Data format	Languages
Belgium	Academia, Public Authorities/ agencies. Other access to third parties as yet not confirmed.	No data provided at present	Dutch and French
Cyprus	The microdata is not publicly available	No data provided	Greek and English
Finland	Academia, Education, Public authorities / agencies, Commercial sector/industry, General public	Excel	Finnish. Short report available in English
France	Academia, Education, Public authorities/agencies,commercial sector/industry	No data provided	French
Germany (MiD)	Academia, Education, Public authorities/agencies, Commercial sector/industry, General public	SPSS Stata SAS	German
Hungary	Microdata is not available to anyone	No data provided	Hungarian
Ireland	Academia (but only on application)	SPSS, Stata, SAS CSV. All the data in all formats is encrypted	English
Italy (ISFORT)	The survey microdata are not accessible for two reasons: i) issues relating to personal/sensitive data treatment; ii) manipulation of data according to the principles expressed in the Code of European Statistics. On request it is possible to ask ISFORT to perform customised calculations.	SPSS	Italian
Latvia	Microdata is not made publicly available	we don't know	Latvian and English
Netherlands	Permission has to be granted depending on research and where data will be used.	SPSS	Dutch
Slovakia	Since 2012 the microdata will be sent to EUROSTAT	No data provided	Slovak, English
Spain	General public	Plain ASCII Format	Spanish
Sweden	Academia Public authorities	SAS	The microdata is available only In Swedish. Reports are in both English and Swedish
Switzerland	Academia, Education, Public authorities, agencies, Commercial sector/industry, Summary is available for everybody.	Plain ASCII SPSS SAS	Microdata only in German, summary in French, short summary in English and Italian
United Kingdom	Everyone	No data provided	English

Table 4.4. Groups to whom microdata is available, its format and language of use

There are restrictions on data and who can access NTS information. Table 4.4 shows the availability of microdata in each of the fifteen countries. There are a number of countries that have restrictions on the availability of data (Cyprus, Latvia). SPSS and SAS were the most popular statistical programmes that were used for data input and manipulation, but 46% of the surveys did not provide any information on programmes for data analysis. Languages of reports or information tended to be the native language of the country. The second most common language for data was English.

Table 4.5 presented results of the availability and accessibility of microdata. Most of the microdata is either downloaded after registration or produced on a CD Rom which is posted out to the recipient.

Country	**If microdata is available, how is it accessed?**
Finland	Free download (without registration)
Germany (MiD)	Mailing of CD Rom
Ireland	Mailing of CD Rom (after registration)
Netherlands	Restricted download (after registration)
Spain	Email request with an authorization process
Sweden	Mailing of CD after registration
Switzerland	Mailing of CD Rom after registration
United Kingdom	Technical report is available without registration

Table 4.5. Microdata availability

Table 4.6 shows the availability of other data and in what format it was available. Table 4.6 also lists costs associated with obtaining data. The most common form of presenting other data is in the form of a written report. Eleven out of the fifteen countries said that they had produced a final written report, but results concerning costs of data were varied with a high number of non responses (no information was provided at all).

Country	**Data other than microdata available**	**Cost of obtaining Data**
Belgium	No data provided	No data provided
Cyprus	Final written report, Methodological report, Questionnaires, On-line publication	Cost only in obtaining hard copies of the reports
Finland	Final written report, User manual, Web site	None
France	No data provided	No data provided
Germany (MiD)	Final written report, Tabular report, On-line analysis tool, Methodological report, Codebook, Questionnaires, User manual, Web site	Non-commercial use €100 Commercial use €10000-20000
Hungary	Final written report, Questionnaire, User manual	Yes
Ireland	Final written report, Questionnaires (both written questionnaire and CATI or online master)	No
Italy (ISFORT)	Final written report, Methodological report, Tabular report	No cost
Latvia	Final written report	No data provided
Netherlands	Methodological report, Code book, Questionnaire, website CBS: tabular , summary of the results	No costs after permission granted
Slovakia	Final report, Tabular report, Methodological report, Questionnaire, Web site	Yes for specific data which is not on portal
Spain	Final written report, Methodological report, Web site	No
Sweden	Final written report, Tabular report , Codebook , User manual	No
Switzerland	Final written report , Tabular report, Methodological report, Questionnaire, Codebook, Web site	A cost for data used for commercial purposes
United Kingdom	Methodological report and questionnaire	No

Table 4.6. Other data and cost of data

Country	Last date of survey	Frequency of data collection
Belgium	2010	No regular data collection
Cyprus	2009	Annually 2007-9 Survey has been discontinued due to austerity measures
Finland	2011	Every 6 years
France	2008	Every ten years approximately
Germany (MiD)	2008	Irregularly
Hungary	2009	Irregularly
Ireland	2009	The NTS has only been collected once. Further surveys planned but no details available.
Italy (ISFORT)	2011	Since 2000 each year quarterly
Latvia	2003	Once
Netherlands	2011	Annually
Slovakia	2011	Quarterly
Spain	2007	Irregularly
Sweden	2006	Next survey 2011-13 - but data collected annually. 2007-10 no surveys. Annually from 1994 until 2001. Fourth quarter 2005, Third quarter 2006
Switzerland	2010	5 years
United Kingdom	2010	Annually

Table 4.7. Data collection year and frequency

Table 4.7, presents information on the last date on which the national survey was conducted and on the frequency of data collection. Most surveys are no older than four years but frequency of collection varies. Four countries collect data annually. Of these Cyprus will no longer collect the survey annually in the future due to shortages of resources.

4.2. Data collection methods

Table 4.8 presents the results of sample sizes and approaches taken for the NTS. The results suggest that sampling approaches vary considerably. Household samples ranged from 1,000 households (Hungary) to 31,950 households (Switzerland) and 1200 individuals (Slovakia) to 60,713 individuals (Germany).

Several approaches which vary in terms of complexity and number of stages are used to produce the samples and several sources are used from which to draw upon the sample. Comparison of data from the National Transport Survey will be very difficult given that samples are different sizes and are selected very differently across countries Sampling approaches include random sampling, stratified sampling and multi-stage sampling.

Table 4.9 shows the different methodological approaches to conducting the surveys. The most common approach is a cross-sectional, one time survey which is used in 10 out of 15 cases. Techniques for distributing surveys are conventional with mailing the surveys being the most common way for surveys to be distributed. Two countries collected data from GPS devices and two used computer programmes but travel diaries and surveys are still the most common form of data collection. These techniques are intensive in terms of time

spent and future national surveys may be more suited to less intensive techniques. These could include the use of IT e.g. smartphones. National surveys could be conducted to assess core transport data using quantitative techniques and supported by qualitative surveys which use techniques such as diaries, face to face interviews.

Table 4.10 shows the range and groupings of ages. Six countries used age 6 as the first point of their survey. This may be because the age at which children enter formal education in many countries is 6 and so this is when they are making journeys for themselves (usually educational). Three countries included all age categories. Four countries did not include children in the survey, each using a different age to determine when respondents could be included in the survey (UK-starting at 17, Ireland -18, Slovakia-15 and Italy-14).

Country	Sample size/units	Sampling approach
Belgium	8,532 Households 15,821 Individuals	Random sample
Cyprus	1,056 Households 2,410 Individuals	Stratified sampling. Up to 3 members of all ages interviewed from each household
Finland	12,318 Individuals	Random sample
France	20, 178 Households 18,632 Individuals	Population frame is the population census and new addresses (houses built since last census) Stratified, multistage sampling
Germany (MiD)	25,922 Households 60,713 Individuals	Two stage random sampling with geographically stratification. Sampling was taken at community level by communal registration offices. Sampling units: - individuals aged 14 and over, registered as residents
Hungary	1,000 Households 25,000 Individuals	Sample from a tourism survey of Hungarians
Ireland	7,245 Households 7,221 Individuals	A three stage sample design was used. 1) 2600 small areas (blocks) were selected at county level to reflect population density. Each block contained 75 dwellings on average. The sample of blocks is fixed for 5 years for the QNHS. 2) 15 households were surveyed from each block of wave 3 and 5 households for the NTS survey sample. 3)From each of the 15 households, 1 person aged 18 or over was randomly selected to participate in the module and was randomly assigned a travel reference day.
Italy (ISFORT)	1,5000 Individuals	Persons aged between 14 and 80 years are sampled and the sample is stratified by sex, age classes, demographic size of municipalities and region. Regions with fewer inhabitants are oversampled to reach a minimum of 400 observations, so that it is possible to perform analyses at a regional level.
Latvia	2,476 Households 6,208 Individuals	Stratified random sampling
Netherlands	43,400 Individuals	Sampling frame of CBS. Each year a new sampling frame is created. The target populationof the OVIN consists of all residets living in the Nlnds who are in a private house and registered with the GBA.
Slovakia	1200 Individuals	15 year and over
Spain	49027 Household 55955 Individual	Selection of section and households in the Register Office. Household member selection
Sweden	27,647 Individuals	Randomly selected
Switzerland	31,950 Households 33,390 Individuals	Randomly over the year with equal probability
United Kingdom	8,775 Households 20,839 Individuals	Random sample drawn from the Postcode Address File (PAF)/Multi-stage stratified random sample

Table 4.8. Survey sample size and approach

Country	Methodological approach	Survey instrument	Distribution methods
Belgium	Cross section (one time)	Written questionnaire, Telephone interview	Conventional mailing
Cyprus	Interviews	Face to face interview	Conventional mailing, Face to face interviews
Finland	Panel survey (one-time)	Telephone interview, GPS	Conventional mailing
France	Cross- section (one time)	GPS device, CAPI	No data provided
Germany (MiD)	Cross-section (one-time)	Written questionnaire, Telephone interview, Online questionnaire, Memory jogger for trips	Conventional mailing
Hungary	A sample from another survey was used. House-holds were interviewed four times	Face to face interviews	Face to face interviews
Ireland	Cross section (one time)	Telephone interview, CAPI	Respondents were issued with a travel diary, Face to face, Telephone interview
Italy (ISFORT)	Cross section (one time)	Telephone interview	Telephone interview
Latvia	Cross section (one time)	Written questionnaires, Face to face interview	Face to face
Netherlands	Cross section (one time)	Telephone interview, Face to face, On line questionnaire	An internet link is given in a letter (conventional mailing)
Slovakia	Panel survey (repeated)	Face to face	Face to face
Spain	Cross section (one -time)	Written questionnaire, Telephone interview, Face to face	Home face to face interview in Daily Mobility, Phone interview in Long Distance Mobility
Sweden	Panel survey (repeated)	Telephone interview	Conventional mailing
Switzerland	Cross section (one time)	Telephone interview, Geo-coding of several places (place of residence etc.)	Conventional mailing
United Kingdom	No data provided	Written questionnaire, Telephone interview, Face to face, Diaries	Conventional mailing

Table 4.9. Methodological approaches

Country/Survey	Age ranges
Belgium	6 and older
Cyprus	All ages
Finland	Age 6 and over
France	Age 6 and older
Germany (MiD)	All ages
Hungary	All ages
Ireland	18 and older
Italy (ISFORT)	14-80
Latvia	6 and older
Netherlands	All ages
Slovakia	15 and over
Spain	All
Sweden	Age 6 up to 84
Switzerland	6 years and older
United Kingdom	17 and older

Table 4.10. Minimum and Maximum age of respondents

Country	Age groupings
Belgium	0-12, 13-18, 19-59, 60-99
Cyprus	Below 14, 14 - 17, 18 - 25, 26 - 50, 51 - 65, 65 and over
Finland	6-17, 18-34, 35-54, 55-64, 65 and above
France	There is no grouping of age
Germany (MiD)	There is no grouping of age
Hungary	0-14,15-24,25-44,45-64, 65 and over
Ireland	18-24, 25-34, 35-44, 45-54, 55-63, 65 and over
Italy (ISFORT)	14-29, 30-45, 46-64, 65-80
Latvia	6-18, 19-24, 25-50, 51-61, over 61
Netherlands	0-5, 6-11, 12-14. Ending with the category 80 years and over
Slovakia	15-24, 25-44, 45-64, 64 and over
Spain	Under 14, 15-29, 30-39, 40-49, 50-64, 65 and over
Sweden	There is no grouping of age
Switzerland	There is no grouping of age
United Kingdom	16-18, 19-25, 26-30, 31-40, 41-50, 51-60, 61-70, 71-80, 80 and over

Table 4.11. Age groupings

Table 4.11 shows that only respondents who were 80 or under were included in the Italian NTS and only those who were 84 years or under were included in the Swedish NTS. The remaining thirteen countries did not appear to have age cut off points at the upper level according to the responses in the questionnaire. However, when asked about how they grouped ages in reporting of travel statistics, Belgium did not include an age grouping over 99 (Table 4.9). Given that many countries in Europe have aging populations, future surveys

may include the older age groups as these may represent a high proportion of the population. It is important to note the different cut off points as this will lead to different counting of trip purposes. For example countries which do not include children may have fewer education trips counted than those countries that do include children.

Where countries have selected the same cut off point for inclusion in the survey they have grouped these ages differently in the reporting of the results as shown in Table 4.11.

Figure 4.3 outlines the modes that are included in the survey. All countries include walking, motorcycle, cycling, car, bus/coach as modes of travel. Many also include different forms of public transport, like train or metro, depending on what mode of public transport is available in their country. There are some examples of modes which are particular to specific countries (for example snow scooter in Finland) which do not appear in the lists of other countries for obvious reasons.

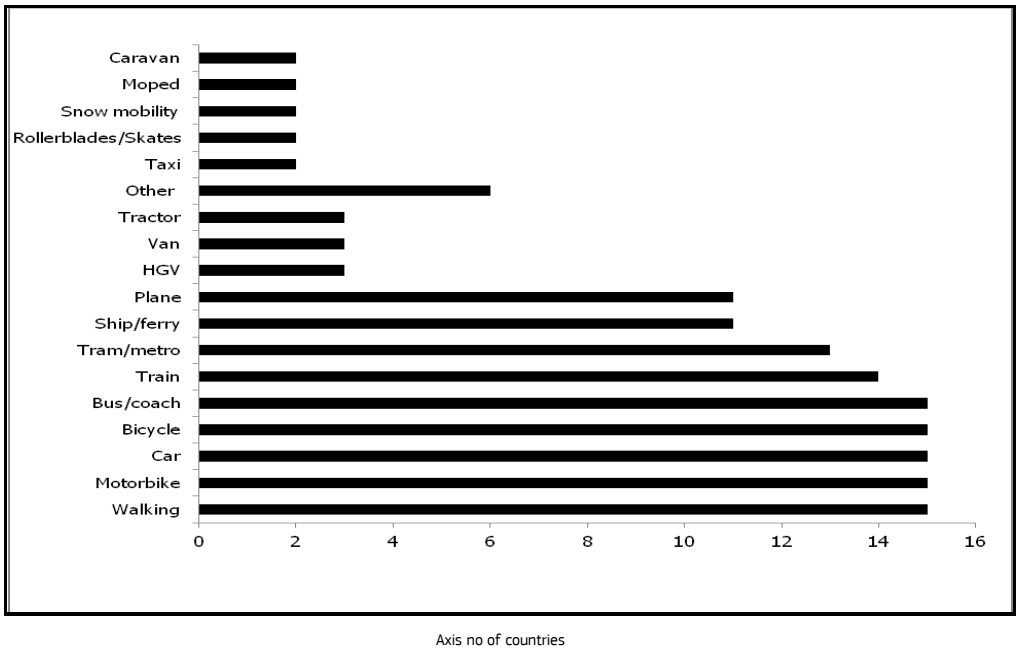

Figure 4.3. Modes covered in the surveys

4.3 Type of data collected

Table 4.12 shows if personal information such as gender, age and household information are collected as part of the NTS. This reflects the availability of data which gives baseline information and comparative data for further investigation. All fifteen countries collected data on gender, age. Only 27% of the surveys indicated that they collected information on "usual working hours". The remaining categories had between 66-80% response rates. If we are to consider the impact of telecommuting or changing working times on travel patterns it is useful if data on working hours is collected.

Country	Gender	Age	Education level	Driver license (car)	Employment status	Usual working hours	Family composition
Belgium	Yes	Yes	No data provided	Yes	No data provided	No data provided	Yes
Cyprus	Yes	Yes	No	No	No	No	Yes
Finland	Yes	Yes	No	Yes	Yes	No	Yes
France	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Germany (MiD)	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Hungary	Yes	Yes	Yes	No	Yes	No	No
Ireland	Yes	Yes	No	Yes	No	No	No
Italy (ISFORT)	Yes	Yes	Yes	Yes	Yes	No	No
Latvia	Yes	Yes	No	No	Yes	No	Yes
Netherlands	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Slovakia	Yes	Yes	Yes	No	Yes	No	No
Spain	Yes	Yes	Yes	Yes	Yes	No	Yes
Sweden	Yes	Yes	Yes	Yes	Yes	No	Yes
Switzerland	Yes	Yes	Yes	Yes	Yes	Yes	Yes
United Kingdom	Yes	Yes	Yes	Yes	Yes	No	Yes
%	100	100	66	73	80	27	73

Table 4.12. Personal and household information

Country	Trip length	Trip duration	Trip purpose	Modal choice	Trips per day	Passenger km	Vehicle km
Belgium	Yes	No data provided	Yes	Yes	Yes	Yes	Yes
Cyprus	Yes	Yes	Yes	Yes	Yes	Yes	No
Finland	Yes	Yes	Yes	Yes	Yes	Yes	No
France	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Germany (MiD)	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Hungary	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Ireland	Yes	Yes	Yes	Yes	Yes	No	No
Italy (ISFORT)	Yes	Yes	Yes	Yes	Yes	Yes	No
Latvia	Yes	Yes	Yes	Yes	Yes	No	No
Netherlands	Yes	Yes	Yes	Yes	Yes	Yes	No
Slovakia	Yes	Yes	Yes	Yes	Yes	No	No
Spain	Yes	Yes	Yes	Yes	Yes	No	No
Sweden	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Switzerland	Yes	Yes	Yes	Yes	Yes	Yes	Yes
United Kingdom	Yes	Yes	Yes	Yes	Yes	Yes	Yes
%	100	93	100	100	100	73	47

Table 4.13.Trip information

Country	Trip purposes
Belgium	Standard listing of trip motives e.g. picking up or driving a third party, going home, daily commute, work related trip, schooling trip, restaurant visit, shopping/groceries, services (bank or medical), visiting friends or relatives, leisure (walking), hobby, sport, culture and other.
Cyprus	Work, education, shopping, personal reasons, entertainment, other reasons
Finland	Commuting to work, commuting to school/university, work related travel (during work time, paid by employer), shopping and other errand (bank, post etc.). Trips to summer cottage/holiday house, visiting family or friends, other leisure travel (sport, hobbies, culture etc.)
France	Returning to place of departure/Studying/nursery: to go home, to return to occasional residence, to return to parents or friends' home, to study (School, secondary school, university, to look after a child (nursery, creche, family home) Shopping to got to a big mall, to go to a nearby shop, small supermarket etc. Personal care medical or personal (hairdresser). Processes-administrative processes, find information. Visits Parents, friends. Escort trip or to collect someone - bring someone to a station, airport, metro, bus, coach, to bring someone somewhere else, to collect someone from station etc. to collect someone from somewhere else. Leisure religious ceremony, meeting, to go to a leisure centre, park, to eat or drink to visit a monument or historic site, to see a cultural or sporting event, to do sport, o go for a walk, to go to a place for a walk. Other holidays in second home, to return to second home, to return to occasional residence, other personal trips. Professional trips to work in normal work place, to work outside of the normal work place (site, meetings etc), course, conference, training, professional trips or meeting patients, other professional reasons.
Germany (MiD)	Two-stage collection of trip purpose (i: main purpose, ii: detailed purpose, if main trip purpose is shopping, private business, leisure): i) Work, business, school / secondary education, shopping, private business, escorting, leisure, home, return trip from previous destination/purpose, other activity, accompanying adults). ii) particular purposes for children (school / pre-school, kindergarten)
Hungary	Going to work, going to school, nursery, private administration (business), going to doctors, shopping, sport, accompanying other person(s), visiting relatives, Cultural or free-time activity, going home
Ireland	To travel to/from work school/education, shopping, to go for Food/Drink (eg lunch or coffee), personal business, companion journey, just walk, visit family/friends, social/entertainment (e.g. cinema), sports (participate), medical appointment, day trip/same day visit
Italy (ISFORT)	Business/study, personal or household business, leisure time are the usual aggregation levels for the reports. However, in the survey trip purposes are collected at a more disaggregated level. For IPR issues the single purposes cannot be revealed by ISFORT
Latvia	Home based to work, education, shopping, leisure, visiting friends and relatives, sport, personal business, escort; Non home based: to work, education, shopping, leisure, visiting friends and relatives, personal business, sport; Change of mode transport mode; Change of mode transport mode; Employer's business
Netherlands	Commuting, business visit in relation to work, services/personal care, shopping, education, visit/stay the night, other social recreational, walking/touring, other
Slovakia	Distance travelled, recreation at water/beach, mountains, cultural activities, sightseeing, agro-tourism, visiting friends/family, shopping, voluntary, health treatment
Spain	Home, work, business, education, shopping, leisure, accompanying other persons, visiting someone
Sweden	Trip purposes are classified as follows; work and education, shopping and other errands, leisure travel and other purposes
Switzerland	Work, education, shopping, business activities, business trip, leisure, service and support
United Kingdom	Commuting, business, education, escort , other, social, holiday

Table 4.14. Trip purpose

Table 4.13 shows information on trip length, trip duration, trip purpose, modal choice, number of trips per day, passenger kilometres and vehicle kilometres. All of the fifteen countries collected data on trip duration, trip purpose, modal choice and number of trips per day. Only 47% of the countries collected information on vehicle kilometres. However, other countries may collect some of this data in other ways, other than in a NTS. For example, the Netherlands do not collect vehicle kilometres in the NTS but do so using other data collection tools.

A number of qualitative responses were sought from each country to determine trip purposes. The results are presented in Table 4.14. Comparison of data for trip purpose was found to be very difficult, with a wide range of trip purpose being incorporated under different subdivisions (e.g. in Germany educational trips are sub-divided into school and preschool). The results also showed that there are some cultural differences represented in the trip purpose that are listed e.g. in Finland visiting a "summer cottage" is a trip purpose that is not found for any other country. The results were also varied when it came to examining recreation and entertainment in terms of how countries sub-divide these trip purposes. Responses included shopping, visiting family, walking, sightseeing, errands etc. It is also worth noting that in most NTS for both trip purpose and mode, most countries ask respondents to fill in only the main mode used or the main purpose of the trip. This means, it is hard to identify trip chaining or multi-stage trips for most countries.

The second part of the trip data collected from the surveys examined the measurement of how trip lengths are presented. The collection of data showed that the range of data varied and it was not possible to compare responses. Some countries recorded trip length as km/day, others gave a range of km travelled (Netherlands, Latvia, Ireland) whilst others gave trip length per purpose or mode. The UK used the imperial system for measurement e.g. miles.

Country	How are trip lengths recorded
Belgium	Kilometres, grouped over modes and trip motives
Cyprus	Kilometres by mode of transport, age, gender. Total distance, passenger km by purpose of trip, age group and gender. Passenger Kilometres by mode of transport and purpose of trip. Average distance travelled per person per day by mode of transport.
Finland	Kilometres/day and kilometres/year
France	Kilometre
Germany (MiD)	Kilometres per trip or mode
Hungary	It is calculated up to the lengths of trips by different means of transport.
Ireland	Kilometres. Less than 2, 2-4, 4-6, 6-8, 8 and over
Italy (ISFORT)	Kilometres for journey purpose
Latvia	Kilometres, <1, 1-4.9, 5-9.9, 10-14.9, 15-19.9, 20-29.9, 30-39.9, 40-49.9, >50
Netherlands	0,1-0,5, 0,5-1,0, 1,0-2,5, 2,5-3,7, 3,7-5,0, 5,0-7,5, 7,5-10, 10-15, 15-20, 20-30, 30-40, 40-50, >50 km
Slovakia	Number of trips
Spain	Kilometres. <50km (daily mobility) and >50km (long distance mobility)
Sweden	Trip length in kilometres/mode and kilometres /trip purpose (If several modes used during one trip the mode for the largest share of the trip is recorded)
Switzerland	Kilometres/person; kilometres/day; kilometres/year
United Kingdom	Miles

Table 4.15. Recording of trip lengths

Table 4.16 shows how trip durations are recorded. The most common way of recording trip duration is minutes, although as in the previous table the groupings of data recording could not be compared. Ireland Latvia, Netherlands and the UK all collected data in groupings but each country had different groupings.

Figure 4.4 shows that most countries do not collect data on house type or parking space availability at work while just over half collect information on parking availability at home. Parking data may be something that local authorities and municipalities have a greater interest in than national organisations as information on parking data may in the future become more relevant due to an increased use of sustainable transport modes (e.g. electric vehicles). The use of these modes will impact upon future parking policies and planning where public charging posts may be a future feature of our urban environment.

Country	Recording of trip durations
Belgium	Unknown. It is not yet reported in detail
Cyprus	Minutes
Finland	Minutes per day
France	Hours and minutes.
Germany (MiD)	Minutes
Hungary	Duration of trips by different means of transport in minutes
Ireland	Minutes. Less than 15, 15-30, 30-45, 45-60, 60 and over.
Italy (ISFORT)	Minutes
Latvia	Minutes, <5, 5-10, 11-15, 16-20, 21-25, 26-30, 31-35, 36-40, 41-45, 46-60, >60
Netherlands	1-5 5-10, 10-15, 15-20, 20-25, 25-30, 30-45, 45-60, 60-90, 90-120, >120 minutes
Slovakia	Number of night and sleep
Spain	Average time in long distance daily mobility (nights spent abroad) Only reported for trips more than 50 kilometres.
Sweden	Trip duration minutes/main mode and minutes/purpose
Switzerland	Minutes/person; minutes/trip
United Kingdom	15 minutes or less, 16-20, 21-30, 31-40, 41-60, 61 minutes or longer

Table 4.16. Duration of trips

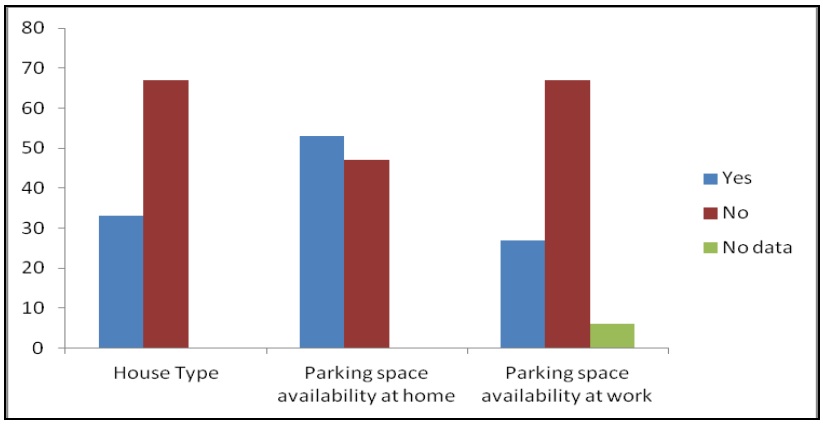

Figure. 4.4. Countries collecting information on parking data (%)

Table 4.17 shows that data on car and bike ownership is collected by at least 80% of the countries. Only 20% of surveys asked for information on CO^2 emissions and 53% on fuel type. This is interesting to note as if impacts of policies on sustainable travel and emissions are to be examined. It is important to collect data on the CO^2 emissions of current travel patterns.

Country	Cars owned per household	Fuel type	CO2 emissions	Bicycle ownership	Bicycle use
Belgium	Yes	Yes	No	Yes	Yes
Cyprus	Yes	Yes	No	Yes	Yes
Finland	Yes	No	No	Yes	Yes
France	Yes	Yes	Yes	Yes	No data provided
Germany (MiD)	Yes	Yes	Yes	Yes	Yes
Hungary	Yes	No	No	No	No
Ireland	No	No	No	Yes	Yes
Italy (ISFORT)	Yes	No	No	Yes	Yes
Latvia	Yes	No	No	Yes	No
Netherlands	Yes	Yes	No	Yes	Yes
Slovakia	No	No	No	No	No
Spain	Yes	No	No	Yes	No
Sweden	Yes	Yes	No	No	Yes
Switzerland	Yes	Yes	No	Yes	Yes
United Kingdom	Yes	Yes	Yes	Yes	Yes
% Yes	**86**	**53**	**20**	**80**	**66**

Table 4.17. Vehicle ownership and use

Figure 4.5 shows the collection of data on public transport accessibility and satisfaction with public transport. It can be seen that only 46% of countries ask about accessibility of public transport and 20% about satisfaction with public transport. Definitions of accessibility may vary from country to country and therefore, even for those countries that measure public transport accessibility it would be important to understand how they have defined it and what indicators they have used to measure it (proximity to stations or bus stops, frequency of services, etc). Measuring satisfaction with public transport performance is also problematic and may vary from country to country in terms of what is used to measure it.

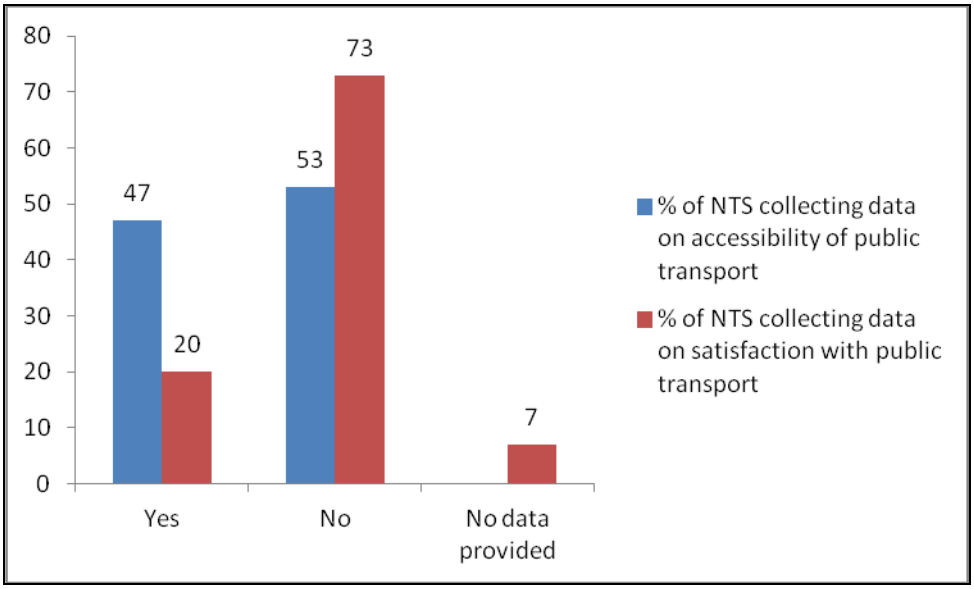

Figure 4.5. Accessibility and satisfaction with public transport (%)

One important objective of the OPTIMISM project is to assess how ICT might be used to improve passenger transport systems and make travel more sustainable. With this in mind, countries were asked if they collected data on PC/smartphone availability. It was found that only 3 countries collected this information. To fully estimate the potential impact of ICT on people's travel patterns, it would be important for more countries to know what the penetration rates of various types of technology are amongst passengers and travellers.

Country	PC/Smartphone availability
Germany (MiD)	Yes
Slovakia	Yes
Sweden	Yes
% Yes	**20**

Table 4.18. PC/Smartphone availability

Table 4.19 concluded the questions on data collection by asking what other data was collected. The responses varied from indicators, internet, marital status, public transport ticket type and fuel costs.

Country	Other data collected
Belgium	No data provided. Data is not clear and information is limited
Cyprus	No data provided
Finland	Yes accessibility indicators; - use of Internet, online schedules; online shopping; internet bank
France	Information on other homes; respondents region of birth; if respondent is from outside of France, the year they move to France is collected; Income information, Information on vehicle theft and vandalism is collected; Data on where vehicles are parked for each journey is collected; if public transport is used for a trip respondents are asked about type of ticket that they used; Accessibility indicators; if car is chosen as a mode, respondents are asked about types of roads used on the trip; Availability of parking at train stations; Respondents asked if they have taken a flight in past year; Respondents asked if they have taken a holiday in the past year; Driving licence data collected; Information on infrastructure quality close to home is collected; information computer ownership, mobile phone ownership, internet access and tv access is collected; Information on GPS ownership is collected; Respondents asked about days on which no travel took place and why not; Respondents asked about use of low cost airlines; Respondents asked about weight, height and spending on travel.
Germany (MiD)	Accessibility indicators, Individual availability of car, average frequency of bicycle use, public transport ticket type, individual health and resulting mobility impairment, user group in terms of mode choice, segmentation of household cars: type, status
Hungary	Characteristics of households/persons
Ireland	Frequency of bus use, tram use and train use. Number of other occupants in the vehicle (only asked if mode of travel was car/van/lorry/motorcycle), number of other occupants over 16 and under 16 in the vehicle (only asked if mode of travel was car/van/lorry/motorcycle), was the journey part of the normal routine (only asked for trips >30km, longer than 3 hours or described as day trips), for non normal journeys, participants were asked for more details on the trip purpose, for non normal journeys, participants were asked for how much they and other occupants spent on meals, fuel, transport costs (Excluding fuel), entertainment, shopping and other expenses, driver license details for motorcycles, PSV and HGV,
Italy (ISFORT)	None
Latvia	No data provided
Netherlands	No other data available
Slovakia	Accessibility indicators, traffic intensity indicators, aggregate data only, see Eurostat - New Cronos
Spain	No data provided
Sweden	Telephone and video conferences, tele-working and working while travelling
Switzerland	Is Person X member of a car sharing organization, cylinder capacity, Possibility of home office/ tele-work, attitude to transport policy
United Kingdom	Season ticket details, vehicle subsidies

Table 4.19. Other data collected

4.4. Quality checks and future surveys

Tables 4.20 and 4.21 relate to quality checks that are in place for the data and identify if there are plans regarding future surveys. Information from Table 4.21 found that around 9

countries claim to have some controls in place, whilst others either did not respond to the question or were vague. For those countries where controls are in place, in general countries did not give a lot of information on what these controls are or how they are enforced. In Table 4.22 Ten countries state that future surveys are currently planned.

Country	**Quality controls in place**
Belgium	No information currently available
Cyprus	Telephone verifications of some questionnaires
Finland	The survey is carried out regularly (1998-1999, 2004-2005, 2010-2011) and with similar methods ensuring the comparability. The entire population of Finland is considered, including different ages, geographical areas, cities and the countryside The interviewers were trained and quality controls were conducted during the interviews
France	No data provided
Germany (MiD)	Plausibility checks during CATI:plausibility checks after data collection, limited corrections (e.g extreme values); no imputation
Hungary	Microvalidation. Search and correct data that is not clear
Ireland	Internal controls and quality checks are in place
Italy (ISOFoRT)	Controls on data consistence are performed on a regular basis both during and after the survey
Latvia	No data provided
Netherlands	Several correction methods are in place to ensure data quality, like the representation of the different population groups in the sample
Slovakia	Statistical controls
Spain	There is not any planned surveys
Sweden	No specific quality control measures are in place, but reasons for non-participation and unanswered questions are controlled for
Switzerland	Feasible estimates
United Kingdom	Data entry during the interview implemented via CAPI. A major advantage of CAPI is that most of the checks on data quality are performed during the interview while the respondent is present, thereby improving the accuracy of the data compared with post-fieldwork edition

Table 4.20. Future surveys and future opportunities for adjustments

Country	Is a future survey planned?	Who will perform this future survey?	Is there an opportunity to suggest adjustments?
Belgium	No	No data provided	No data provided
Cyprus	No	No one. No planned survey due to austerity measures	No
Finland	Yes – for 2015-2016	Finnish Transport Agency with WSP Finland Oy	Yes – comments/ suggestions welcome
France	No data provided	No data provided	No data provided
Germany (MiD)	Yes	Not sure. The process is tendered out.	Prior to the 2008 survey, a user survey and user workshop took place to collect comments, critique and suggestions. Maybe, this will be the case again).
Hungary	Yes. 2012.	Hungarian Central Statistics Office	Yes
Ireland	Yes. 2012	CSO	Not as yet. Survey being finalised. No details available.
Italy	Yes Each year.	ISFORT	No data provided
Latvia	No	No data provided	No data provided
Netherlands	Yes. Survey is already ongoing.	No information available	No information available
Slovakia	Yes. Quarterly.	The programme of state statistical survey http://portal.statsitics.sk/showdoc.do?docid=3131	No
Spain	No	No data provided	No data provided
Sweden	Yes. 2011-13.	SCB and Trafa	No official way but feedback can be given by contacting the individual/organisation conducting the survey
Switzerland	Yes. Every 5 years.	Swiss Federal Statistical Office (BFS)	Other federal authorities may add additional questions
United Kingdom	Yes. 2012.	DFT	Public consultation,

Table 4.21. Future surveys

4.5. Travel Data

Respondents were asked to complete a number of tables showing trip rates by gender, age, trip purpose and mode. It had been intended to compare trip rates between countries. However, the data was not provided by all countries: only 10 countries presented data. Even for those 10 countries the format in which they provided the data was such that it was not possible to compare trip rates in any realistic or reasonable manner and not all 10 countries provided the data requested. Some countries recorded trip rates as absolute numbers, some as trips per person and others as annual trip rates. When comparing trip lengths and trips durations again countries used different groupings to record trip lengths and durations and so it proved impossible to present tables comparing the numbers of trips by different trip lengths even for the 10 countries which did return the data.

Figure 4.6 below shows the trip rate by purpose. Respondents were asked to record daily trip rates per person but as this table shows this did not happen. Cyprus did not provide data for this table.

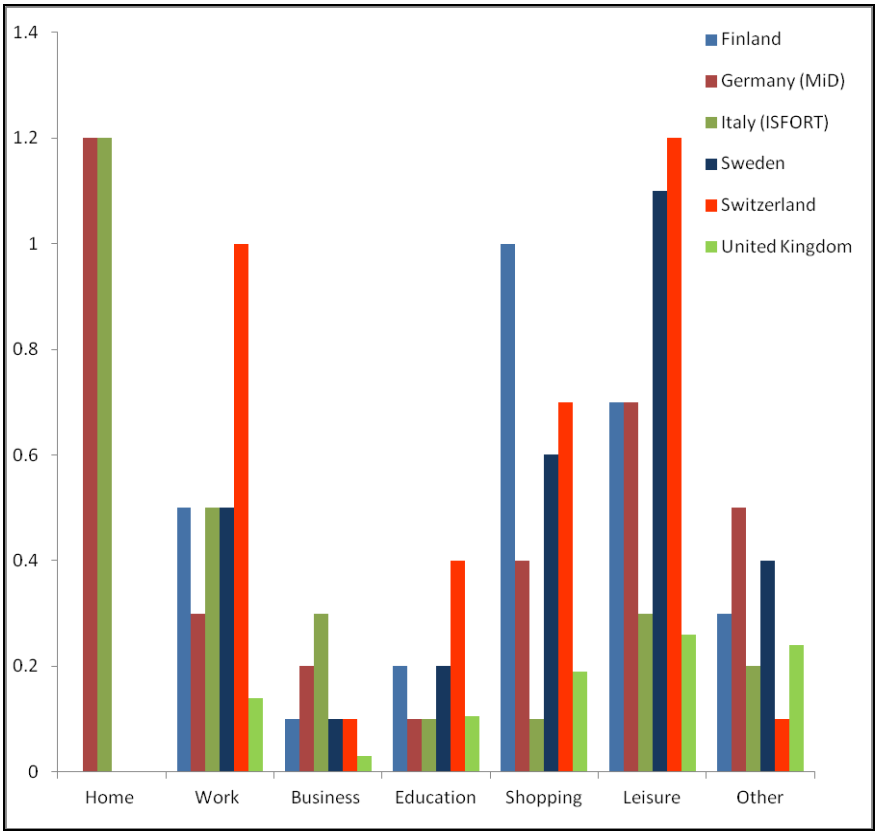

Figure 4.6. Trip purpose - number of daily trips per person on a national average

Country	Below 1km	1 <5 km	5<10 km	10<25 km	25<50 km	50<100 km	100+ km	Average trip length (km)
Cyprus								10.4
Germany (MiD)	26.2	35.3	15.1	14.5	5.5	2	1.4	11.5
Italy (ISFORT)		42.8	21.2	24.7	7.6	2.5	1.2	12.2
Latvia	4.7	51.5	26	11.4	5.5	50km+ 1.3		8.7
Sweden	14.6	36	15.2	17.1	8.6	3.7	2.6	15.8
Switzerland	39.6	32.9	11.6	9.9	3.5	1.9	0.7	7.2

Table. 4.22. Trip Length - duration of trip length per person on a national average (%)
(Number of responses to the survey = 8)

Table 4.22 shows the trip lengths for each country that reported data. Countries used different groupings for the length of trips so it was not possible to present this data more succinctly. Table 4.23 shows a similar situation when trying to compare trip durations: countries group trip durations differently.

Country	Below 5 mins	5-10 min	10-15 mins	15-30 mins	30-60 mins	60-120 mins	2 hrs +	Average trip duration	Population size (millions)
Cyprus	Have not filled out total but some data for gender and average trip duration given for age groups.								
Finland	Different data categories							22.7	5.3
Germany (MiD)	6	19.1	19.8	28.1	17.9	6.5	2.5	24.2	81.7
Hungary	Different data categories							24	10.0
Italy (ISFORT)		19.5	23.9	32.7	17.7	5.1	1	21.8	60.4
Latvia	3.1	14.4	18.8	45.6	15.7	2.4			2.2
Spain	0.6	15.3	24.7	31.3	20.2	7.1	0.8		47.1
Sweden	5.3	18.9	19.4	28.3	17.5	6.2	2.2	24.1	9.3
Switzerland	8.2	18.6	16.5	26.2	17.1	8.8	4.7	31.1	7.8

Table. 4.23. Trip duration - distribution of trip duration per person on national average (%)
(Number of responses to the survey =9) (Population size source: World Bank, 2010)

Table 4.24 tries to compare the number of daily trips per person on a national average, the average trip lengths and the average trip duration across the sample. With such a small group of countries drawing any meaningful conclusion is difficult.
For all of the countries where data could be compared the highest numbers of trips taken were between 15 to 30 minutes. When comparing population size with average trip duration there were no clear trends although the number of countries that responded to this question were 53% of those who were included in the surveys. Average trip rates were

broadly similar, although it appears that there are more shorter trips in Switzerland than the other countries in Table 4.26.

Figure 4.7 shows the modal split for the 8 countries that provided this data. Again this is only a small sample of countries and so it is not possible to draw any real conclusions about variations in modal share across Europe, but differences are apparent. In Cyprus, a small country with no rail service, there is a very high level of car use, while car use in Spain is relatively low compared to other western European Countries like Germany and Italy. Finland and Sweden, the 2 Nordic countries in the same sample have quite different levels of car use. However when all private motorise modes are taken together the modal share in each country is more similar (Finland-80.9%, Sweden -82.1%). Both Switzerland and Latvia have relatively high levels of public transport use (20.5 and 28.2 percent of trips, respectively), although the reasons for this high level of public transport use probably differ in each country. Spain grouped car passenger and motorcycle together and walking and cycling which made analysis of each mode difficult to carry out.

Country	**Number of daily trips per person on a national average**	**Average trip length (km)**	**Average trip duration (minutes)**	**Comment**
Cyprus	Not reported	10.4	Not reported	
Finland	2.9	14.3	22.7	
Germany	3.4	11.5	24.2	
Italy	2.7	12.2	21.8	Italy reported the number of people who made at least one trip
Sweden	2.8	15.8	24.1	
Switzerland	3.6	7.2	31.1	
United Kingdom	0.97	Not reported	Not reported	UK report number of trips per thousand people

Table 4.24. Cross tabulation showing number of daily trips, average trip length and average trip duration

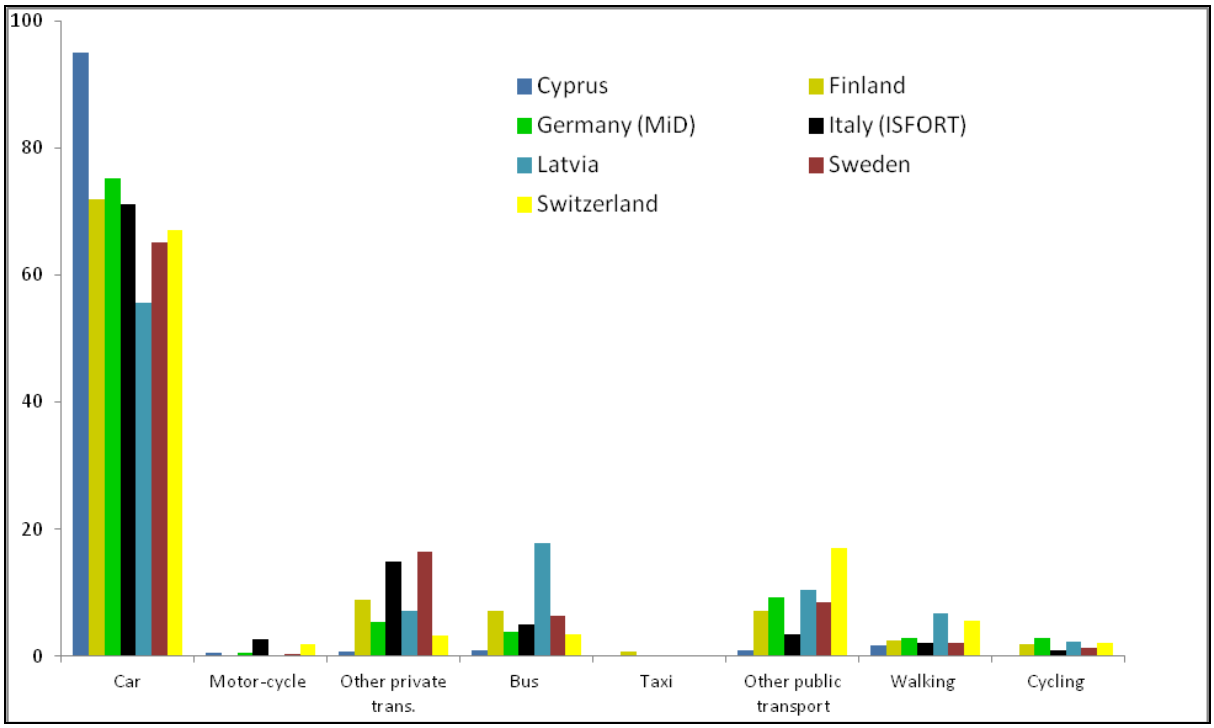

Figure 4.7. Modal split (Distribution of transport mode used based on person-kilometre (%))
(Number of responses to the survey =9)

Chapter 5: Conclusions and Recommendations

The OPTIMISM project examines if travel data can be harmonised and how ICT measures and co-modality solutions could be used to bring about more sustainable travel and better travel systems. A questionnaire was originally sent to 29 European countries. Of these only 15 fulfilled the four criteria that were provided. These NTS were distributed, collected and analysed to understand the status and identify harmonisation needs.

The final chapter is divided into five sections based upon the results from the questionnaires that were presented in detail in Chapter 4. The sections are:

1) Overview of the countries that collect NTS
2) Design of survey in terms of classification of data, sampling and survey implementation,
3) Comparison of NTS data in the EU
4) Co-modality and ICT measures
5) Recommendations

5.1. Overview of the countries that collect NTS

Of the 29 countries that were selected for further investigation, 15 fulfilled four criteria as set out in section 3.3. Data from these 15 countries was compared. The research found that the most common reasons for NTS not being included in this research was that they had not conducted any surveys in the last ten years, they did not respond to any contact made and survey data was limited e.g. regional, commuting only. One exception was made regarding the French survey, where information where information was available on line (French Department of Ecology, Sustainable Development, Energy and Commissioner General for Sustainable Development website and from SHANTI, 2012).

The 15 countries studied in this research provided a good selection of examples. They included Eastern European, Mediterranean and Western European countries. They also included those countries that had larger populations (Germany, France, Netherlands, UK) and smaller populations (Latvia, Switzerland). This selection was intended to ensure that an overview of countries collecting NTS would be not only representative but would reflect the different cultural and economic differences across the member states.

In general the NTS surveys were managed by government agencies, usually statistical agencies and used for policy making and government decision making. Access to data was also found to be an important issue where some data was only available to selective audiences and other data incurred charges for commercial or non-commercial bodies. Some countries did not allow open access to data such as Cyprus, Hungary, Ireland, Italy, Latvia and Slovakia. For individuals it was found that data was not easily available. The availability of data will need to be addressed if a cross-national survey is to be developed. Given that countries may have their own data protection legislation this is a topic that requires further investigation. It would be useful to explore why some countries state that there are legal and privacy issues relating to sharing data, while others seem to have surmounted these issues. A core data set would be recommended so that information can be obtained across the EU.

5.2. Design of survey in terms of classification of data, sampling and survey implementation

Belgium, Hungary and Latvia were the only three countries where there was no website for the data available. It was found that the websites often had limited information, were hard to navigate and consisted of data in different formats. Clearer sections on websites would enhance the accessibility of NTS data greatly.

In the NTS the range and classification of age groups varied making comparison very difficult. Age groupings not only varied but collection ranges were different. For example, Germany collected all ages whilst Netherlands collected those aged between 0-80. A more consistent methodology for age range would make analysis more purposeful as comparisons could be made across the countries.

A number of countries did not collect data on parking availability, vehicle kilometres, passenger kilometres, access to smart phones or on private vehicle fleets in the NTS. However this does not mean that these countries do not collect the data at all. Some of the data that is not collected in NTS may be collected in other forms or through other surveys. For example Ireland collects data in its census on smart phones vehicle ownership details and vehicle fleet details can be collected from the government vehicle records and local data such as parking data is often collected at local authority/municipal level.

The survey included a section on the collection of travel data. Nine countries responded to this section. Reasons for lack of data were that there was no data or the data that was available was difficult to apply to the format of the tables. The results were not comparable or consistent and were clearly not measuring the same thing.

Sample size also varied and while population size explained some of this variation in sample size, it did not explain all of it. Germany with one of the highest populations (81.7 million; 2010, World Bank) had a sample size that represented 0.07% of the population whilst Latvia (2.2 million; World Bank, 2010) had a sample size that represented 0.28% of its population. Most sampling approaches were either random or stratified. Some countries such as Italy surveyed persons aged 14 to 80 according to their sex, age, size of region whilst other countries (for example Ireland) sampled areas based upon criteria of population density and those over 18 years old. Therefore for countries to be compared, it is recommended that a consistent and comparable sampling methodology and similar sample sizes (in proportion to the populations of countries) are adopted.

The baseline for the surveys was inconsistent. The last date of survey varied from 2003 to 2011. The large range of survey years means that comparing data over such a wide time frame would be difficult to perform since it would have to take into account underlying changes (demographic devolutions, introduced or amended legislations etc.) Also the frequency of data collection was quite different with some countries carrying out NTS every year, some carrying them out quarterly and others carrying them out irregularly at an interval of several years. The baseline time frames for data collection were simply too inconsistent to compare and this would need to be resolved and common time frames agreed to enable comparability of data across the European region.

There is still considerable reliance upon the use of paper based surveys. The use of technological methods such as the integration of GPS information was only used by one country which was France. Technology such as the use of smartphones to track travel patterns could be a very useful tool. There may be issues around data protection and privacy but if these were addressed then the future use of technology for collecting some of the travel data collected in these surveys could simplify survey methodology, improve data reliability and reduce time taken up for the participants in completing the surveys. The use of technology can skew data in that it is not used by a significant proportion of the population e.g. elderly, the very young, those on low incomes. However the use of technology and ICT to collect some travel data should be explored in future research.

When asked if quality controls were in place and if future surveys were planned, it was found that there are limited internal procedures and often these are quite protected and information is not easily accessible When replies were given they were often vague and inconclusive.

5.3 .Comparison of NTS data in the EU

Similar types of data were collected across all countries but cross-country comparisons are difficult as how the data was collected and how it was grouped varied. Personal information was collected by all countries but was inconsistent in how it was grouped in response categories e.g. age groups. Grouping of other data types (e.g trip length, trip duration) was also different for different countries. Section 5.2 explains the differences in data baselines, non technical intensive methodologies of data collection and categories of data collection. It is difficult to compare data unless the survey is standardised and methods of collection the same for each country.

5.4. Co-modality and ICT measures

In relation to the estimation of effects of ICT measures and co-modality related options, it needs to be noted that a number of data requirements can be recognised. In order to present a good estimation on the potential effects of co-modality, it is possible to identify a wide set of indicators for which the level of detail depends heavily on the usage (ranging from a broad potential assessment up to a supporting a real-world application of co-modality). Within the OPTIMISM project, the main focus lies on those data that are collected through a traditional NTS. The following quantitative information should be collected at a minimum: trip length and trip duration grouped for different modes; number of single mode vs. co-modal trips. This limited set of parameters allows for a general overview of the current status of co-modality within a test population. Note that for more detailed studies on co-modality (e.g. focussing on the effect of a particular measure), this

information should be completed with information such as trip cost, trip motive, accessibility information, demand, GDP, etc.

In relation to estimate the (potential) effect of the usage of ICT measures, it is more difficult to specify a set of qualitative or quantitative parameters for which information can be collected through traditional NTS. In first instance, it needs to be noted that ICT measures can typically be grouped into three domains: travel information (e.g. multimodal route planners), mobility services (e.g. smart cards and intelligent ticketing) and mobility management (e.g. smart infrastructure, mobility management systems). The use of travel information and mobility services is more specifically related to the end user (traveller) while measures related to mobility management are situated predominantly at the level of public services. At the same time, a distinction needs to be made between the availability of these ICT measures, and the effective usage thereof. Information on the usage of travel information and mobility services can be collected through traditional NTS. In contrast, information on the availability of all 3 groups of ICT measures and the usage of mobility management systems can best be captured through data collection at the level of public services. In both cases, questioning can be limited to the presentation of available ICT measures, the modes these measures have an influence upon and the effective (per trip or overall) usage.

5.5. Recommendations

Based on the analysis of current national travel surveys in European countries a first series of recommendations can be derived:

1) A core set of data points should be developed e.g. trip length, absolute values,
2) Clear methodologies and methodological frameworks for all NTS should be put in place,
3) It is recommended that EUROSTAT decide what groupings in relation to the different data sets (age, trip lengths etc) are appropriate and develop a fixed methodology with clear frameworks of data collection,
4) New technological advances to be examined for future use e.g. smart phone technology, training for such advances, and
5) Exploring how records from different sources can be used together to enrich our awareness of travel patterns and travel behaviour would be a useful exercise.

In the further progress of the OPTIMISM project task 2.2 and task 2.3 will develop methodologies and recommendations how NTS can be improved and harmonised across Europe.

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Annex A. Questionnaire

Section A: Basic Survey Information

A1. Can you provide any of the following for this survey?

(a) A copy of the survey questionnaire(s) /data collection tool

(b) A summary (in English if available) of the survey result

(c) A copy (in English if available) of reports arising from the survey

(d) The raw data collected in the survey (if publically available)

A2. Who commissions this survey and is collection mandatory by law? Is this a public or private organisation?

A3. Who funds the survey? Is this a public or private organisation?

A4. Who is responsible for holding the survey data? Is this a public or private organisation?

A5. How frequently is the survey collected?

A6. When was the survey last collected

A7. What is the purpose of the survey? (multiple answer permitted)

(a) General Data Collection i.e. for statistical reports etc.)

(b) Verification of existing data or other data sources

(c) Policy Decision Support

(d) Planning Support (i.e. transport system planning, infrastructure planning etc.)

(e) Research

(f) Other, please specify:

A8. Is the survey used for policy / planning support or decision making in any of the following domains? (multiple answer permitted)

(a) Private Mobility (slow mode, car, motorbike etc.)

(b) Public Mobility (bus, tram, train, taxi)

(c) Accessibility

(d) Safety / Security

(e) Cost improvement

(f) Infrastructure planning

(g) Other, please specify:

A9. Who is expected to use the survey data and reports?

(a) Policy makers

(b) Government agencies (i.e. planning authorities)

(c) Communities (regional or local level)

(d) Researchers

(e) Consultancies / industry

(f) Transport providers

(h) Media

(g) Other, please specify:

Section B: Data Collection Methods

B1. What is the net sample size used for this survey?

B2. How the sample has been drawn?

B3. Does the survey design ensure representativity for the respective universe?

B4. What are the responding units (i.e. households, individuals, household members)?

B5. How many respondents were included? Please specify the number of valid net responses at the following levels:

(a) household (as a whole)
(b) individuals / household members

B6. Which age-groups are included in the survey (i.e. age 0 and older, age 10 and older, age 18 and older etc)

B7. Which non-motorised and motorised transport modes are covered?

(a) Car
(b) Train
(c) Airplane
(d) Ship / ferry
(e) Tram / metro
(f) Bus / coach
(g) Motorcycle
(h) Bicycle
(j) Walking
i) Other, please specify:

B8. How were external circumstances controlled for?
(for example weather, major traffic disruptions on the day of the survey, special occasions (concerts, sports events))

B9. What methodological approach in terms of the overall survey design is used to collect the survey data?
(a) Panel Survey (repeated)
(b) Cross-section (one-time)
(c) Other, please specify:

B10. What survey instruments were used? (multiple answers are permitted)

(a) Written questionnaire (PAPI / paper pencil)

(b) Telephone interview (i.e. CATI, computer assisted telephone interview)

(c) Face-to-face interview

(d) Online questionnaire

(e) GPS device (for automatic trip tracking)

(f) Other, please specify:

B11. How the survey instruments were distributed to respondents? (multiple answers are permitted)

(a) conventional mailing (i.e. of printed survey material)

(b) conventional shipping (i.e. GPS device)

(c) e-mailing (i.e. of digital survey material)

(d) Other, please specify:

Section C: Data Availability

C1. To whom the microdata are available? (multiple answers are permitted)

(a) academia

(b) education

(c) public authorities / agencies

(d) commercial sector / industry

(e) general public

(f) Other, please specify:

C2. Is there a difference between the access offered to different user groups? Please specify the main conditions that may apply.

C3. If the micro data is available: how it might be accessed? Please tick all that apply.

(a) Free download (without registration)

(b) Restricted download (after registration)

(c) mailing of CD- ROM (after registration)

(d) Other, please specify:

C4. What is the micro data file format?

(a) plain ASCII format (*.dat, *.txt etc.)

(b) Excel

(c) SPSS

(d) Stata

(e) SAS

(f) SQL
(g) Other, please specify

C5. What other materials are available?

(a) Final written report with main results

(b) Tabular report

(c) Online analysis tool

(d) Methodological report

(e) Codebook (detailed documentation at variable level)

(f) Questionnaires (both written questionnaire as well as CATI or Online master)

(g) user manual

(h) web site

(i) Other, please specify:

C6. In which language(s) both micro data and other material are available?

C7. What mechanism is used for people to get access to the survey?

C8. Is there a cost associated? Please specify.

SECTION D. TYPE OF TRIP DATA COLLECTED

D1. How are trip purposes classified in the survey?

D2. How are trip lengths reported? (kilometeres/miles, what grouping is used, if any?)

D3. How are trip durations reported?

D4. How are ages reported from the survey (in groups or individually, what groups?)

D5. Which data is collected within this survey?

Data item	(a) Is this data collected in this survey?	(b) What is the format of the data?	(c) Is the data available as raw data?	(d) If the data is not collected in this survey, is it collected in some other way?	(e) If so, please name the survey/data source for this data?	(f) Comments
HOUSEHOLD INFORMATION						
Family composition						
Type of house						
Parking space availability at home						
Accessibility of public transport						
VEHICLE OWNERSHIP/USE						
Cars owned per household						
Fuel type						
CO2 emissions						
Bicycle ownership						
Bicycle use						
TRIP INFORMATION						

Trip Length						
Trip Duration						
Trip Purpose						
Modal choice						
Number of trips per day						
Passenger KM						
Vehicle KM						
PERSONAL INFORMATION						
Gender						
Age						
Education level						
Driver license (car)						
Employment						
Usual working hours						
Parking space availability at work						
Public transport satisfaction						
Availability of Smartphone/PC						
OTHER DATA						
Accessibility indicators						
Traffic intensity						
…						

D6: What other relevant data is collected in this survey? (particularly with respect to co-modality, ICT solutions or carbon footprint, e.g., CO2 emission / reduction potential)

Data item		(a) What is the format of the data?	(b) Is the data available as raw data?			(c) Comments

D7. What are other sources of transport data (not listed in the table on the cover page)?

(a) Survey name	(b) What relevant data is collected in this survey?	(c) How often is the data collected?	(d) How is the data collected?	(e) Comments

Section E: Quality checks and future surveys

E1. What controls are in place to ensure the data quality?

E2. Where do you see problems in terms of reliability of the collected data?

E3. What data is not collected in the current survey that would enhance the survey?

E4. Are there any ways that the survey could be improved under each of the following headings? Please briefly specify

(a) Sample selection / size

(b) Overall survey design

(c) Methodology of data collection / survey instruments

(d) Frequency of data collection

(e) Type of data

(f) Other improvements

E5. Is a future survey planned? **If yes: When?**

E6. Who is going to perform/administer that future survey?

E7. Is there an opportunity to suggest adjustments?

Section F: Travel data

Please complete the following tables using the data sources provided by the interviewee,
or ask the relevant national authority to complete these tables:

F1. TRIP PURPOSE *Numbers of daily trips per person on national average*								
Trip purpose	**Total**	**Male**	**Female**	**Age group 1** *below 18*	**Age group 2** *18-29*	**Age group 3** *39-59*	**Age group 4** *60 and older*	**Age group 5**
Home								
Work								
Business								
Education								
Shopping								
Leisure								
Accompanying other persons								
Other activities								
Total	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Additional explanations or comments

F2. TRIP LENGTH *Distribution of trip length per person on national average (in percent)*								
Trip length	**Total**	**Male**	**Female**	**Age group 1** *below 18*	**Age group 2** *18-29*	**Age group 3** *39-59*	**Age group 4** *60 and older*	**Age group 5**
Below 1 km								
1 - 5 km								
5 - 10 km								
10 - 25 km								
25 - 50 km								
50 - 100 km								
More than 100 km								
Total	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Average trip length in km per person (absolute value)								
Category average (km)								

Additional explanations or comments

F3. TRIP DURATION *Distribution of trip duration per person on national average (in percent)*								
Trip length	**Total**	**Male**	**Female**	**Age group 1** *below 18*	**Age group 2** *18-29*	**Age group 3** *39-59*	**Age group 4** *60 and older*	**Age group 5**
Below 10 minutes								
10 - 20 minutes								
20 - 30 minutes								
30 - 60 minutes								
1 - 2 hours								
more than 2 hours								
Total	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Average trip duration in minutes per person (absolute value)								
Category average (min)								

Additional explanations or comments

F4. MODAL SPLIT *Distribution of transport use based on person-kilometre (in percent)*								
Trip purpose	**Total**	**Male**	**Female**	**Age group 1** *below 18*	**Age group 2** *18-29*	**Age group 3** *39-59*	**Age group 4** *60 and older*	**Age group 5**
Passenger car								
Train								
Airplane								
Ship / ferry								
Tram / metro								
Bus / coach								
Motorcycle								
Bicycle								
Walking								
Other								
Total	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

Additional explanations or comments

European Commission
EUR 26054 – Joint Research Centre – Institute for Prospective Technological Studies

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Author(s): Aoife Ahern, Gill Weyman, Martin Redelbach, Angelika Schulz, Lars Akkermans, Lorenzo Vannacci, Eleni Anoyrkati, Anouk van Grinsven

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Abstract

National travel surveys are collected in a large number of European countries. This data, if harmonised, could provide useful insights into travel patterns of European citizens and help inform infrastructure provision and policy development, particularly in the area of encouraging sustainable mobility and intermodality.
Thirty European countries, including the EU27, were surveyed to identify what travel data is collected with which methods. There is a considerable degree of variation between the types of data collected by NTS across European countries. It has, however, been possible to identify some common trends across the collection of national travel surveys in terms of trip purposes and modes.
The research, has received funding from the European Union's Seventh Framework Programme (FP7/2007-2013) under the project OPTIMISM, grant agreement n° 284892

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