Principles of successful high quality public transport operation and development

Directorate General for Energy and Transport

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Final Publishable Activity Report (M 1-40)

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CONTENT OF THIS REPORT

This Publishable Final activity report of the project PROCEED cumulates and summarises the project activities and results over the full project duration; from the beginning (October 2006) until the end of the project (January 2010).

While not excluding technical language, it is aimed to be broadly comprehensible to an interested general reader.

The report starts with a presentation of project objectives, and contractors involved. Then the work performed, the end results of the project, how these project results can be used, and lessons learnt are described. In the last sections publishable results of the "Final plan for using and disseminating the knowledge" are presented.

1. THE PROCEED PROJECT

PROCEED - Principles of successful high quality public transport operation and development - is an almost 3.5-year project (10/2006-01/2010) co-financed by the European Commission within the 6th RTD Framework Programme.

Project Website: www.proceedproject.net

Project logo:

1.1. Summary of the project's objectives

The PROCEED project has produced guidelines that will support planning, developing and implementing effective and efficient public transport systems by bus in small and medium-sized European cities.

The research work undertaken within PROCEED has improved the understanding of the main issues related to the fundamental changes that local and regional public transport operations in most EU Member States are currently undergoing. PROCEED has tackled the challenges and **produced an improved expertise and an extended knowledge-base**, that on the one hand will **help to develop, implement and assess European policy**, and on the other hand will **help to plan, develop and implement effective and efficient public transport (bus) systems** in small and medium sized cities (between 25.000 and 200.000 inhabitants) and their surroundings all over Europe. Such provision of high quality public transport is an essential contribution to the framework-conditions supporting modal shift away from individual motorised traffic towards sustainable transport modes.

Within the PROCEED project guidelines to support practitioners at local level in planning and operating high-quality urban bus services have been derived taking into account the experiences of more than five dozens of cities in 24 European countries and the expert-knowledge of the public transport specialists involved in PROCEED as research partners.

However, it has to be considered that local conditions are different from city to city across Europe. What might be applicable in one city, may not work in another city or country. Since public transport specialists involved as researchers in PROCEED could not oversee all framework conditions and 'pitfalls' existing in planning and operating local public transport in Europe, the PROCEED consortium includes also a number of practitioners (public transport operators and public transport authorities). Their role has been to support the check of guidelines versus "reality" which means to apply the guidelines on real-life planning and operation of urban bus systems.

The PROCEED guidelines are intended to answer practical questions such as:

- Which measures and combination of measures in marketing and operation are most efficient in attracting more customers to the public transport system?
- How can a bus system achieve success similar to that of a tram system?
- How can improvements in public transport systems be financed?
- Which marketing strategy is best suited for a special target group?

The major goal of the guidelines is to mention all aspects to be considered when planning a "High Quality Public Transport" (HQPT) system. However, giving all available solutions for each aspect in detail would exceed the guideline document and the project's focus in many cases. Since the specification of details can be manifold and is sometimes influenced by national standards, it cannot be covered by a European-wide document. Therefore it is important to take into account the local framework conditions when applying the PROCEED guidelines.

1.2. PROCEED contractors

The PROCEED project Consortium contains of the following contractors:

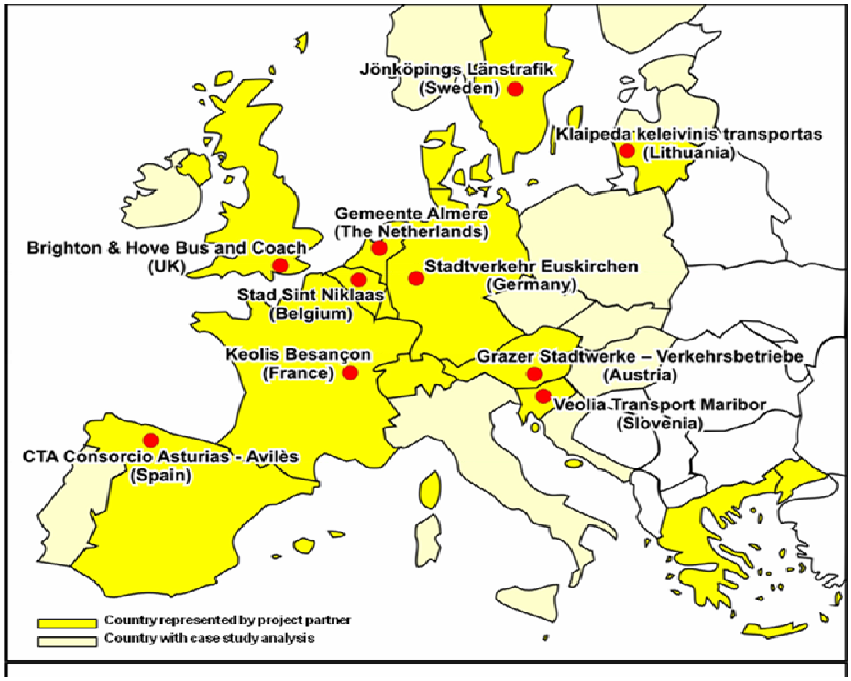
Project Coordinator:
Trivector Traffic (Sweden), Åldermansgatan 13, 227 64 Lund, Sweden
Contact: Per Gunnar Andersson, pg.andersson@trivector.se, +46-46-38 65 04

Project Partners:
Austrian Mobility Research FGM-AMOR (Austria)
ECORYS Research and Consulting (The Netherlands)
Ingenieurgruppe IVV (Germany)
Vectris (Belgium)
Equipo de Técnicos en Transporte y Territorio (Spain)
National Technical University of Athens, Faculty of Civil Engineering (Greece)
Lund University, Department of Technology and Science (Sweden)
University of Maribor, Faculty of Civil Engineering (Slovenia)
Vilnius Gediminas Technical University, Department of Urban Engineering (Lithuania)
Institute for Transport planning and Systems, ETH Zürich (Switzerland)
Austin Analytics (United Kingdom)

Subcontractors (practitioners):
CTA Consorcio de Transportes de Asturias (Spain)
Jönköpings Länstrafik AB (Sweden)
City of Almere (The Netherlands)
Stad Sint-Niklaas (Belgium)
Veolia Transport (Slovenia)
Keolis Besançon (France), replaced by EGIS Mobilité (France)
SVE Stadtverkehr Euskirchen GmbH (Germany)
Klaipėda keleivinis transportas (Lithuania)
Brighton&Hove Bus&Coach Company (UK)
Grazer Stadtwerke AG – Verkehrsbetriebe (Austria)

The following figure gives an overview regarding the European-wide distribution of project partners and practitioners as sub-contractors of PROCEED:

Figure 1-1: European-wide distribution of project partners and practitioners as sub-contractors of PROCEED



2. AN ANALYSIS OF HIGH QUALITY PUBLIC TRANSPORT IN SMALL AND MEDIUM SIZED CITIES

2.1. High-Quality Public Transport (HQPT)

High-quality public transport can be described as a public transport system that is able to compete with private car use. The service offered as a real option to the majority of potential users with access to a car must be:

- Fast
- Reliable
- Safe
- Frequent
- Comfortable
- Simple to understand and use
- Reasonably priced.

Providing urban public transport at a high-quality level is often regarded as a question for the bigger cities in Europe. **Increasing car use is however affecting the city centre of small and medium-sized cities as well and a high share of car trips are local trips, these facts call for improvements in local public transport as an alternative to the car.** The special features of the demand market in small and medium-sized cities (short trip distances, serious competition with the private car, and even to some extent with cycling) require detailed strategies for balancing an attractive system with the efficient use of resources. Such strategies have been developed and implemented in a number of European towns and cities so far. Their experience and success can serve as good practice for other European towns and cities. PROCEED has presented and disseminated these successful strategies.

2.2. Characteristics of Public Transport in small and medium sized cities

The PROCEED project has dealt with high-quality public transport in medium-sized and large towns and small and medium-sized cities, whose characteristics can be described as follows:

- **Small and medium-sized urban areas:** The urban areas in the scope of the PROCEED project are of small to medium size. A small city, or medium-size town, comprises 25,000 to 75,000 inhabitants and a medium-sized city, or large town, about 75,000 to 250,000 inhabitants. Some major cities - still in the scope of PROCEED - could have up to 350,000 inhabitants.
- **Mode:** The services are operated mostly by bus. Local surface rail services − known as modern trams or light-rail services, or even metro trains in tunnels − are unusual for that city size. However, using buses as the backbone of the local public transport system does not necessarily mean abandoning dedicated ways or lanes for public transport services. Even bus systems can be operated with the characteristics of a comprehensive system which is independent from general road traffic. “Think tram, use bus” is often applied as a planning vision for public transport in medium-sized cities.
- **Local demand:** The public transport service provides for a local demand market characterised by short trip distances taking place within the city’s borders. The service usually has no regional component. Within the complete range of trip purposes, daily trips such as home-to-work, shopping, and school/education are the biggest group.
- **High-quality approach:** The local service characteristics are clearly designed to attract passengers with access to a private car. The intended quality level is orientated towards a proper standard, and without exceptions to these general standards (e.g. no mixed use of low-floor and high floor vehicles on one line). In this context, the ‘package approach’ of the vehicle, bus stop, information material etc. all being organic components of one combined ‘product’ − the urban bus system − plays a high role.

3. WORK PERFORMED WITHIN PROCEED

The work within PROCEED is divided into three main parts:

- analysis
- synthesis
- verification

Analysis

In the first part of the project lessons learned in strategic market development, operations and new business opportunities for local public transport operators were collected and analysed both from the market side but also on the product side. Data have been collected from case cities in all EU member states, and from case cities in Switzerland and Norway.

In total 67 cites were chosen as case cities. The main criterion for the selection was that there are lessons to be learned from the city bus system in the selected (small or medium sized) cities.

Figure 3-1: Case city overview and spatial spread

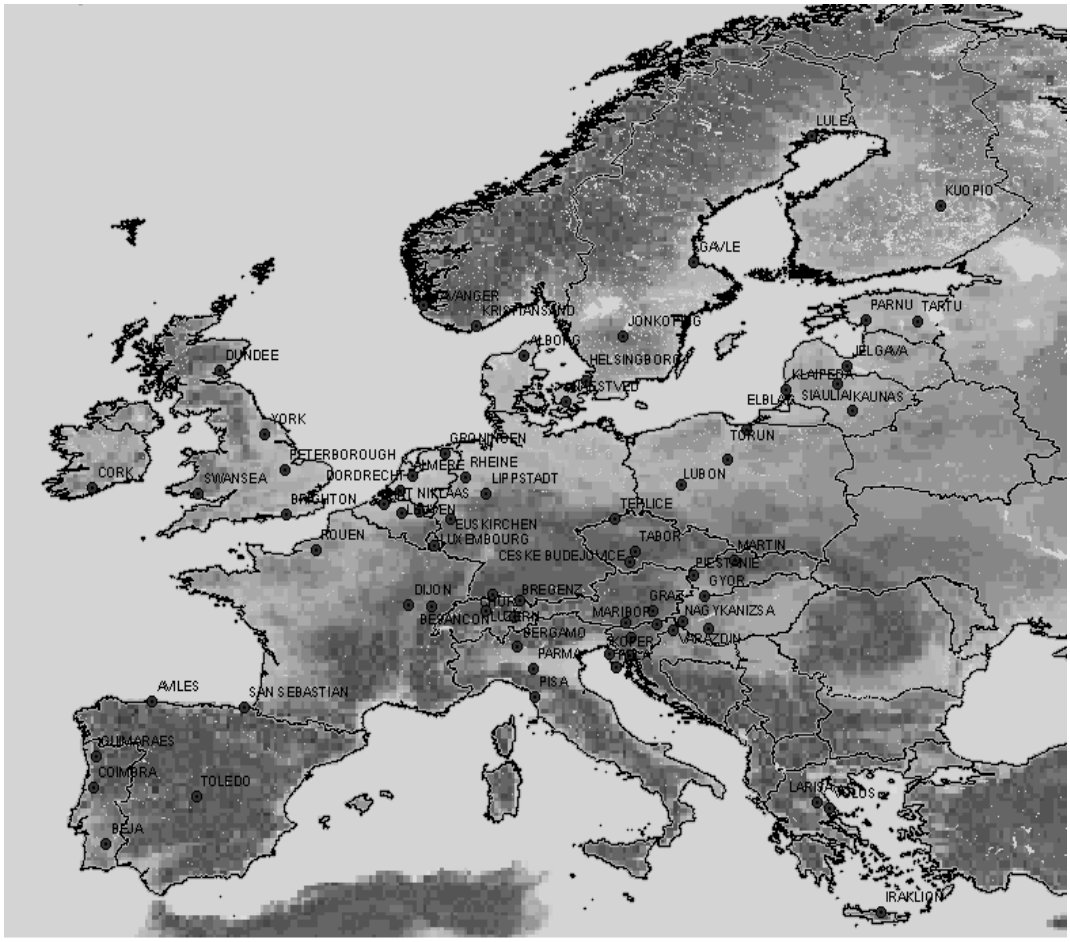


Table 3-1: Countries and case cities (blank = statistics missing or confidential)

Country	Case city	Number of residents in the city	Total number of passengers per year
Austria	Bregenz	29 032	2 827 270
Austria	Graz	240 278	98 165 378
Austria	Klagenfurt	92 404	20 500 000
Belgium	Hasselt	71 035	4 331 371
Belgium	Leuven	90 695	23 203 035
Belgium	Sint Niklaas	70 028	9 466 484
Croatia	Karlovac	59 000	1 500 000
Croatia	Pula	58 594	3 515 211
Croatia	Rijeka	144 000	25 000 000
Czech Republic	České Budějovice	97 000	42 478 000
Czech Republic	Tábor	36 182	28 000
Czech Republic	Teplice	51 223	14 158 000
Denmark	Aalborg	123 000	16 500 000
Denmark	Naestved	37 000	1 610 000
Estonia	Pärnu	43 788	21 100 000
Estonia	Tartu	100 872	13 942 360
Finland	Kuopio	91 000	4 356 500
France	Besançon	120 000	23 780 000
France	Rouen	400 269	40 325 000
Germany	Euskirchen	55 110	4 425 000
Germany	Lippstadt	67 446	900 000
Germany	Rheine	76 440	1 650 000
Greece	Heraklion	150 000	10 601 938
Greece	Larissa	125 000	8 400 000
Greece	Volos	85 000	6 800 000
Hungary	Győr	127 594	51 762 000
Hungary	Nagykanizsa	51 468	
Ireland	Cork	138 000	11 150 000
Italy	Bergamo	117 887	28 000 000
Italy	Parma	175 789	26 785 159
Italy	Pisa	89 964	2 933 294
Latvia	Jelgava	66 136	6 400 000
Lithuania	Kaunas	361 274	99 000 000
Lithuania	Klaipeda City	186 561	31 000 000
Lithuania	Šiauliai	129 036	18 650 000
Luxembourg	Luxembourg	82 200	25 905 000

Country	Case city	Number of residents in the city	Total number of passengers per year
Netherlands, the	Almere	178 500	15 000 000
Netherlands, the	Dordrecht	119 263	5 810 168
Netherlands, the	Groningen	180 747	1 400 000
Norway	Kristiansand	76 000	7 575 500
Norway	Stavanger	171 609	15 400 000
Poland	Elbląg	127 000	29 000 000
Poland	Luboń	26 000	
Poland	Toruń	208 000	52 670 800
Portugal	Beja	22 061	1 051 919
Portugal	Coimbra	168 000	27 394 000
Portugal	Guimarães	62 000	95 000
Slovakia	Martin	58 500	10 787 000
Slovakia	Piešťany	29 957	885 563
Slovenia	Ljubljana	269 000	89 702 977
Slovenia	Maribor	114 349	6 200 000
Slovinia	Koper	23 726	466 000
Spain	Avilés	83 855	2 987 191
Spain	San Sebastián	183 536	27 238 769
Spain	Toledo	73 578	
Sweden	Gävle	79 790	5 700 000
Sweden	Helsingborg	91 500	9 400 000
Sweden	Jönköping	102 200	10 260 000
Sweden	Luleå	57 670	3 469 000
Switserland	Chur	32 409	4 000 000
Switserland	Luzern	180 000	36 941 150
Switserland	Schaffhausen / Neuhausen	44 095	12 200 000
UK	Brighton	321 000	36 400 000
UK	Dundee	151 200	8 600 000
UK	Peterborough	147 400	6 700 000
UK	Swansea	190 600	
UK	York	168 376	15 500 000

A database was developed for the data and information collected. In order to collect the data and information, various data sources and data collection methods were used. Each partner decided - given the knowledge of the country - which data sources and methods to use in order to fill in the database in the most efficient way.

Besides the database there are 24 national reports and 63 case city descriptions available on the PROCEED website *www.proceedproject.net*.

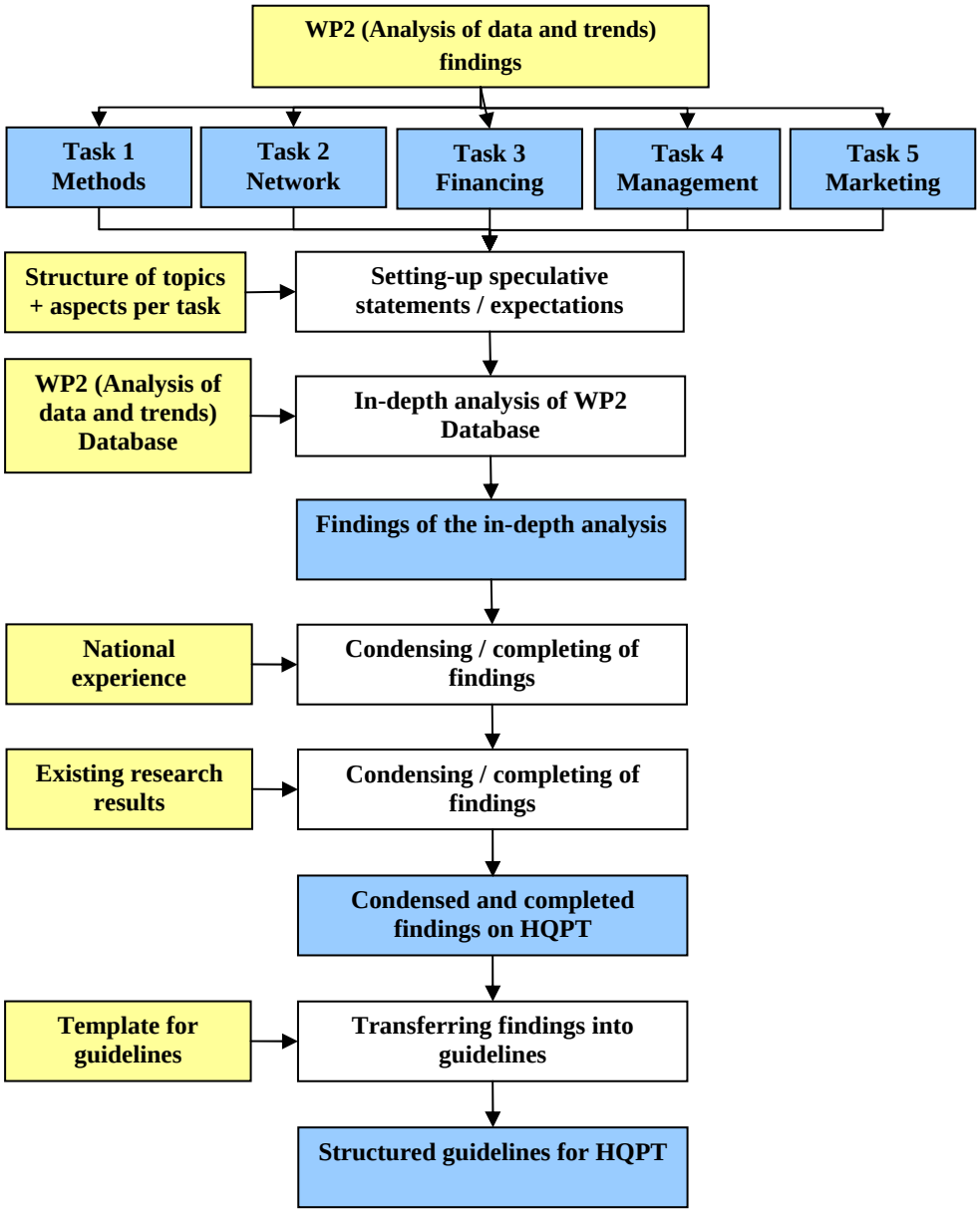
Synthesis

Detailed analysis of data and experiences led to better understanding of success factors and pitfalls for efficient and effective public bus transport. The most important findings were formulated into guidelines structured according to the set of tasks that have to be considered when planning a HQPT bus system:

- to make a proper analysis of the local situation and the respective user needs
  → *Guidelines on "**Methods for analysing the market side**",*
- to draw-up a network design that fits the local public transport demand
  → *Guidelines on "**Developing and upgrading Network and Infrastructure**",*
- to ensure the system's financing
  → *Guidelines on "**Financing**",*
- to establish an efficient system management
  → *Guidelines on "**Management**",*
- to carry out comprehensive marketing
  → Guidelines on **"Marketing strategies"**.

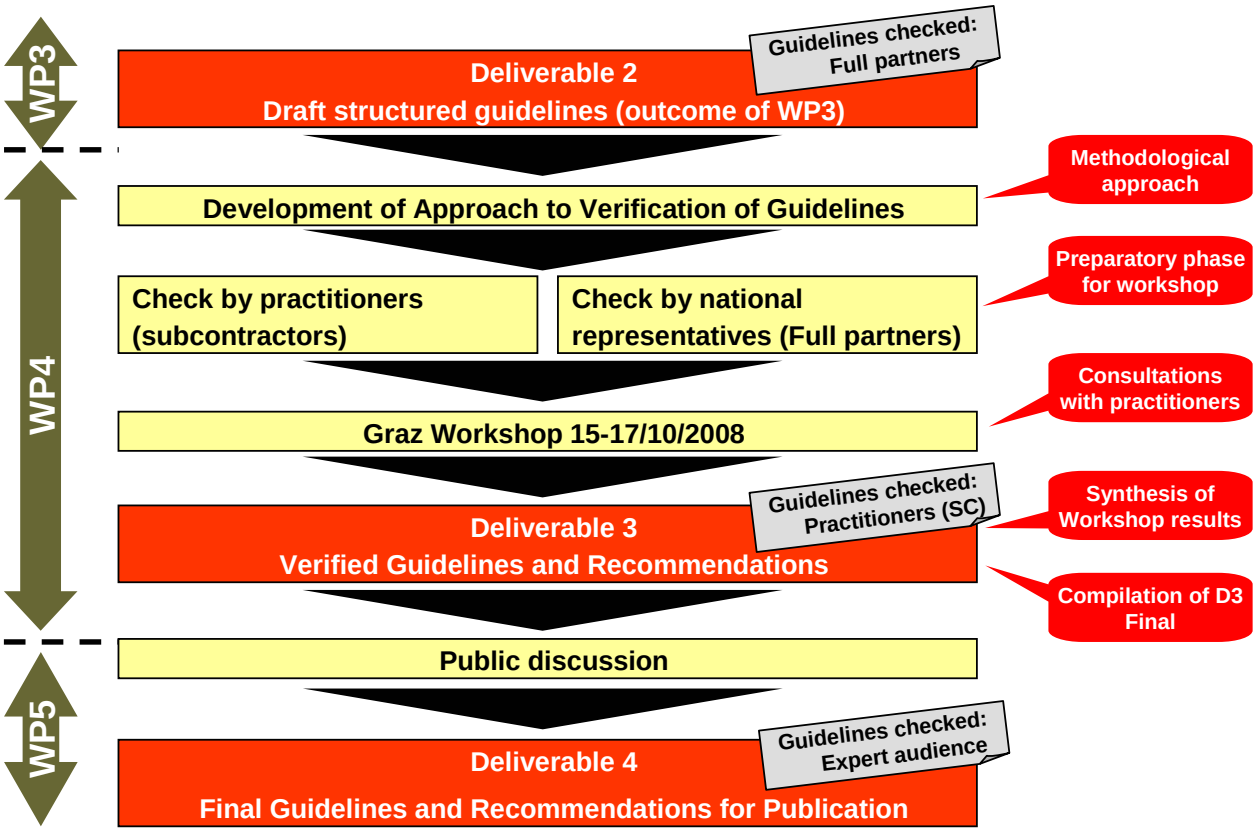
The following figure gives an overview on the process how the guidelines were deducted from the collected information and data:

Figure 3-2: Approach to deduct guidelines from the database



Verification

Figure 3-3: Structure of the multi-step approach to verification of the PROCEED guidelines



As the figure above shows, the overall verification process of the PROCEED guidelines followed a multi-step approach with a sequence of different checks at distinct levels. By that, the verification process was broadening the knowledge base of PROCEED from the author's level via all partners of the PROCEED consortium including the project's 'practitioners' to a general expert audience.

- **Check by practitioners:** All operators and Public Transport Operators as partners of PROCEED started to test and check each guideline against reality as far as their own local public transport system is concerned. By considering small scaled projects, this check revealed selective weaknesses in the guidelines as well as hints for upgrading the practitioners' own local public transport system.
- **Check by national representatives**: Partners from universities or consultancies with rather good overview about the national context of public transport planning and operation checked the guidelines in order to assure that the guidelines are in line with the respective national features or frameworks.
- **PROCEED Workshop event:** The workshop event gathered all experience gained with the application and use of the guidelines regarding 'practitioners' experience as well as researchers' national overview. The workshop event turned out to be an effective way to manage the verification process.

- **Public discussion:** Though a WIKI version of the guidelines on the PROCEED website external experts have been invited to take part of the guidelines and to give their views on the content.
- **Public discussion:** Though the Final seminar of PROCEED were external experts have been invited to take part of the guidelines and to give their views on the content.

This verification procedure revealed a lot of important information to improve the guidelines. For example, the check of guidelines by applying them to real-life projects and the check of national representatives provided about 1000 comments, remarks, requests for changes, and enhancements regarding practical issues, missing aspects, incorrect interpretations, national peculiarities, and other hints from national perspective. All these comments and remarks provided a valuable basis for revision of the guidelines.

Of the verification tasks performed, the project regard the WIKI as not successful, though. The interactive online beta-version of the PROCEED guidelines was available on the PROCEED website from June 2009, and open for comments of external experts until August 2009. Even though the guidelines were finalised in August 2009 the WIKI was active until December 2009 in order to collect more information. However, the project only received comments during the first two months (July/August) and in total only four comments were received. Most of the comments came from people that attended the Final seminar in Brussels and were already expressed at the Final seminar.

Based on the experiences from the PROCEED project is seems difficult to engage people to take and active part in commenting a document on the web. The most obvious reason is perhaps that those people we would like to have comments from are much occupied. Furthermore there are only a limited number of persons having this kind of knowledge on public transports. One way to solve this is perhaps that you get some kind of "reward" or compensation for your time. We would also like to stress the importance of publishing the invitation to comment in a WIKI. Maybe the project would have received more comments if the link to the WIKI had been published an a web platform much visited like, UITP or ELIS.

4. RESULTS OF THE PROCEED PROJECT – THE PROCEED GUIDELINES

The main result of the PROCEED project is the PROCEED guideline tool that is designed to help decision makers and transport planners (e.g. public transport authorities, local authorities, operators, consultants) efficiently and effectively develop, upgrade, finance and manage urban bus systems and related mobility services. The PROCEED guideline tool is accessible for free on the project's website *www.proceedproject.net*.

Figure 4-1: Screenshot of the PROCEED guideline tool.

The PROCEED guidelines are, in the first instance, addressed to practitioners in urban public transport. In order to ease the practical use of the PROCEED guidelines, the guideline-tool is available in several languages: you can explore the guidelines in English, French, German, and Polish. The guidelines are available both as an **online tool** but also as a **downloadable version**. Both versions can be downloaded for the project's website.

PROCEED has also produced **educational materials** (Power Point presentations, written materials) especially addressing ongoing transport planners and decision makers, and distributed these educational materials to relevant schools and universities. This study material is also available in English, French, German, and Polish and can be downloaded from the website.

4.1. The structure of the PROCEED guidelines

Each guideline is structured according to a set pattern which provides information under the following keywords:

- Guideline: This sentence - highlighted in a blue box - provides the core message of the guideline. Each guideline gives a concise clear advice to follow.
- Explanation: Explanatory information to understand the respective guideline is provided below this keyword. Selected analysis results from PROCEED's case study analysis which covered 62 small and medium-sized European cities are described here.
- Critical issues: There are often limitations regarding a specific guideline or recommendations or special conditions to consider. If applicable, this information is given here.
- Good practice examples: There are, of course, several examples of HQPT in Europe. Reference is made especially to the respective case studies as part of the PROCEED database. The examples cannot be regarded as the only good practice examples available; however, they give an impression of how things can be organised when implementing high-quality public transport elements.
- References and background reading: Reference is given here to related literature and to other available sources of information which provide additional information to the user of the guidelines.
- Related guidelines: This item refers to other PROCEED guidelines.

Figure 4-2: Example of the structure of a guideline.

Basic analysis

If commencing a HQPT urban bus network, or radically redesigning an existing network, carefully analyse the local conditions and the local travel demand patterns to ensure realistic estimations of the expected travel demand potential.

Explanation:

Basic analysis of a city or town's local conditions aims at objectively assessing the economic and financial impacts of intended service improvements in public transport. This enables a city council's political decisions to be soundly based.

In the case of smaller cities (approx. 25,000 – 75,000 inhabitants), it should be checked carefully whether the municipality provides all the necessary prerequisites for a high-quality urban bus system, considering its location, size, population density and the concentration of the town centre. For example, small towns as part of a greater conglomeration may have travel demand patterns with a high share of commuting into neighbouring towns, resulting in a low share of local trips, which can be targeted by a local bus service.

Fields of interest to be studied before considering improvements in local public transport refer to all aspects affecting public transport demand to any extent (e.g. number and spatial distribution of inhabitants). For examples see ► ***Background information: Fields of interest with regard to basic analysis.***

In medium-sized cities (≥ 75,000 inhabitants) **transport demand modelling** or other sophisticated transport engineering methods for network re-design and network optimisation are available and are usually of high benefit. On the other hand, the usage of transport modelling in small towns and cities (approx. 25,000 – 75,000 inhabitants) is rare and often not necessary.

Prior to the planning phase a **local transport master plan** could be set up dealing with all transport goals and modes while raising the question of how to reach the city centre (or other key area) with modes other than private cars. While an integrated local transport master plan covering all modes of transportation might exceed the requirements of smaller towns in terms of costs and complexity, the approach is recommended at least for medium-sized cities.

When starting basic analyses aiming for a HQPT system, **external experts / consultants** experienced in the field of urban public transport may support the decision-making process by providing the necessary studies (e.g. an initial feasibility study).

For political decisions it is essential to consider transferability, seeing **best practice** elsewhere. Studying real-life examples by site visits may persuade decision-makers to aim for high-quality urban public transport.

⊞ Critical issues:

⊞ Good practice examples:

⊞ References and background reading:

⊞ Related guidelines:

⊞ Background information: Fields of interest with regard to basic analysis (examples)

The general aim is to keep each guideline and its description as short and simple as possible. However, there is often additional information attached to a single guideline which is useful to know when discussing the issue. Consequently, background information is attached to the relevant guideline. In the online version of the PROCEED guidelines this background information is availed either when looking at a guideline or through the main menu. In the printable version these background information is displayed as grey boxes in the end of the guidelines.

Some recommendations cannot be assigned to a single guideline since they refer to more than one guideline or make aware of some "tips and tricks" behind some transport solutions of urban bus planning. Therefore, so-called "high-level guidelines" were established as additional recommendations.

4.2. The scope of the PROCEED guidelines

In summary, the PROCEED guidelines are practical **guidelines** that include the most important experiences, and have been developed and designed to help decision makers, public transport planners and operators to efficiently and effectively develop, upgrade, finance and manage urban bus systems and related mobility services.

However, the PROCEED guidelines cannot provide a list of ready-to-go 'recipes' for implementation because the local specific features, the size of the city and its structure are very dominant. Consequently, it is important to appreciate that the PROCEED guidelines have to be adapted to the local context.

4.3. The access and filtering system of the PROCEED guideline tool

In the online version of the PROCEED guideline tool guidelines a filtering and selection system points users to the guidelines that are most relevant to them in order to assist users to apply the PROCEED guidelines to their own situation. By this search system the guidelines are clustered according to the following three aspects:

1. relevance of the respective guideline to different stakeholders (e.g. decision makers, public authorities, transport operators)
2. relevance of the respective guideline for a specific level of the planning process (Level 1: Master plan and politics - Level 2: Market analysis - Level 3: System planning - Level 4: Operations)
3. relevance of the respective guideline for a specific stage of the quality pyramid (Stage 1: Basic service - Stage 2: Quality upgrade - Stage 3: Organisational improvement)

In the printable version there is a table at the head of each guideline (example is below) which indicates the types of stakeholder that the guideline is aimed at, the level of planning to which the guideline applies, and the nature of the impact that the guideline will have. The relevance of each single guideline for the respective type of stakeholder, planning level or guideline impact is set to important (X) and not relevant (-).

Figure 4-1. The presentation of relevance for various areas and stakeholders, example.

(1) Target stakeholders	(2) Planning level	(3) Guideline Impact
X Decisions makers	X Master plan and political	X Basic service
X Public authorities	X Market analysis	- Quality upgrade
X PT operators	- System planning	- Organisational improvement
	- Operations	

1) Target stakeholders

The users of PROCEED's outcome may differ according to the national organisational framework of public transport. Therefore, a broad definition of the different user groups is needed. With respect to the guidelines, the following **user groups of the guidelines** have been determined:

Decision makers

- *Definition:* not directly involved in the transport planning process but in need of certain information to support public transport on a political level
- *Examples:* politicians, leading personnel in public administration

Public authorities

- *Definition:* there are often public authorities responsible for organising and administrating public transport services
- *Examples:* public transport authority at local / regional level, municipal / regional planning department

Public transport operators

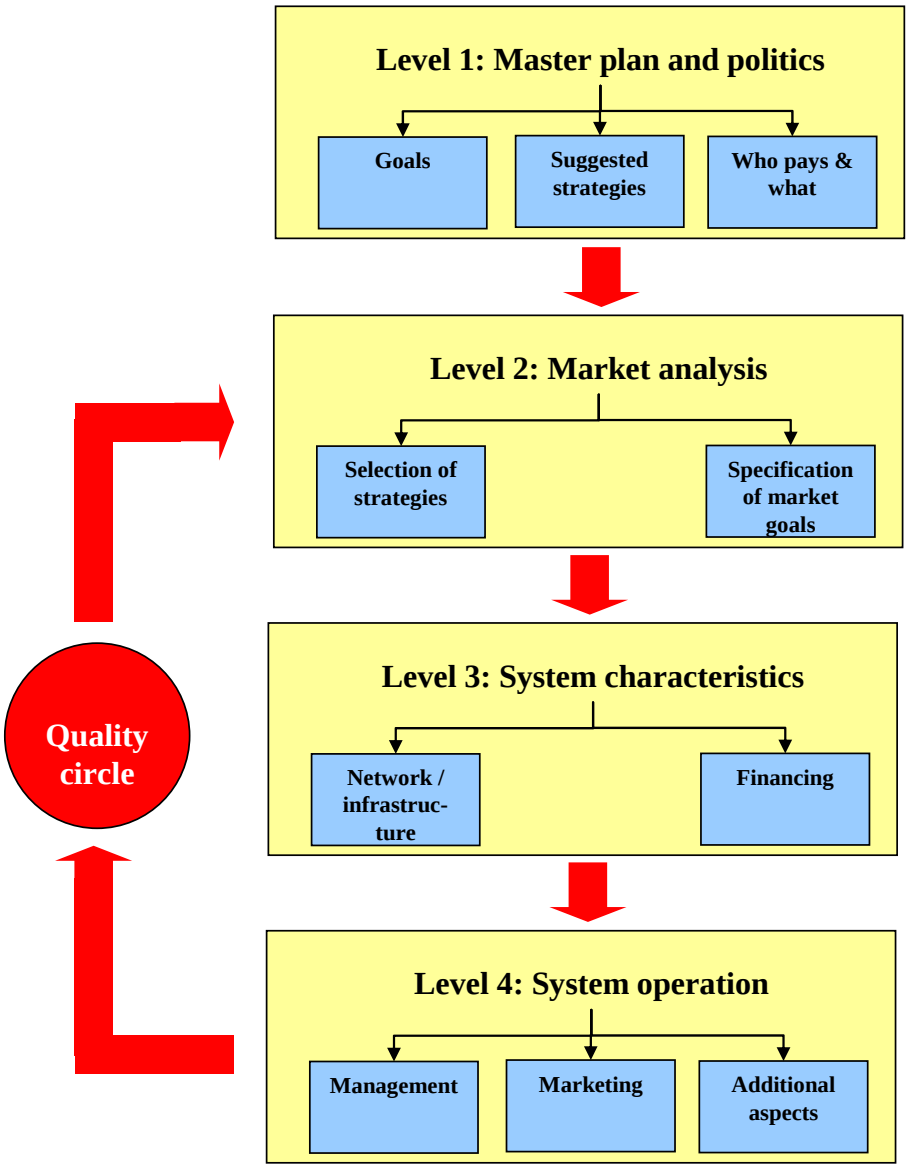
- *Definition:* body with a duty to provide a certain public transport service as agreed with the public authorities (or providing such a public transport service under rights granted by legislation)
- *Examples:* staff from operators at management level, strategic planning level

All three parties involved can obtain additional support from (external) consultants and others. For the respective questions consultants have to fall back on the knowledge of one of the three stakeholders identified.

2) Planning level

The planning process from political decision to system operation gives additional guidance to the user. The assignment of each guideline to one planning level contributes to a clear structured system helping the user to find the respective guideline for his / her planning or operational purposes. Figure 4-3 shows the four levels of the planning process that have been identified and used for clustering the guidelines:

Figure 4-3: 4 levels of the planning process related to urban public transport systems

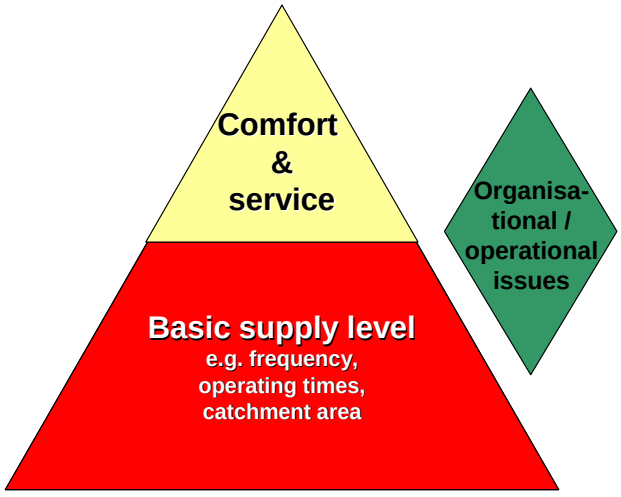


3) Guideline impact

When aiming for an improvement of a public transport network, attention has to be paid to the quality pyramid, see Figure 4-4. In order to provide physical transport from A to B, a public transport supply has to fulfil certain basic supply features: There has to be a timetable meeting the needs of potential customers with properly selected routes and stops to exploit the respective transport market. Comfort and service features make a service more attractive to users and create high-quality public transport service, but the prerequisite of properly developed basic supply characteristics has to be fulfilled in any case.

The basic supply features can be regarded as 'groundwork' of public transport with comfort and convenience features on top of it as shown in the customer-oriented quality pyramid. Besides the customer-oriented quality approach there are organisational and operational issues that affect the quality of a public transport system in a secondary way.

Figure 4-4: Quality pyramid in public transport



In order to assign the expected impact of each guideline in accordance with the quality pyramid, the following clustering is provided:

Impact 1: Basic service

Guidelines considering characteristics that are a 'must' to create a basic supply level

Impact 2: Quality upgrade

Guidelines regarding other, generally comfort and service-orientated aspects of the supply (to be considered if the above given characteristics are fulfilled).

Impact 3: Organisational improvement:

Guidelines aiming at an optimisation of issues such as financing or management

5. LESSONS LEARNT

5.1. Defining High Quality Public Transport

Initially the fundamental idea of the PROCEED project was: We know that there are many small and medium cities with successful public transport systems. If information is gathered from a number of these cities regarding their context, performance, organisation, etc, then we can find critical factors that are important for a high quality system.

However, the analysis of the data collected within the project revealed no pattern. Following the analysis-results the consortium could thus not point out any specific and quantifiable characteristics with a common and clear impact on the success of the public transport system.

Another problem highlighted was that in order to find success factors the consortium first had to define what "success" of a High Quality Public Transport System means. Based on which factor(s) should the successfulness be evaluated? – On the one hand success can be defined based on the cost side of the operation - if you can run your system at as low cost as possible (high cost efficiency) then you have a successful High Quality Public Transport system; and on the other hand success can also be defined on the output side of the operation – if you have a high number of satisfied passengers (high attractiveness) then you have a successful High Quality Public Transport system. This lack of clear definition may have contributed to the fact that less successful cities were selected for the data collection and this may in turn have had a negative impact on the analysis of common success factors.

The lesson learnt from this is that in the first stage a definition has to be developed earlier in the project either on good examples or theory – what a "successful High Quality Public Transport system" is. This definition may in turn help to single out cities with a successful High Quality Public Transport system to analyse further in order to find crucial factors for a successful High Quality Public Transport system

To summarise, is has been difficult to find a strict definition on what a successful High Quality Public Transport System is within the PROCEED project and we believe that this is a general and crucial problem for the whole sector of public transport. What are transport operators and authorities really looking for? What is the aim and goal? This strikes as an important area to continue discussing and research further.

A very simple definition of a successful High Quality Public Transport System could be a transport system including both an optimisation of efficiency and attractiveness within a given context. This system results in a high number of passengers to a low cost. The main aim, if there is a conflict between the two, must be a high number of passengers. Without passengers there is no need for public transport.

5.2. Benchmark indicators

The use of benchmark indicators could help public transport operators and authorities to recognise, through quantitative benchmarking, which guidelines are most appropriate for their public transport system. The potential value of using benchmarking is that it helps users to determine which guidelines are most appropriate for their public transport, and thus contribute to a more effective utilisation of the guidelines. Such system would enable each user to properly appreciate and position the specific situation of her/his public transport system versus the potential and available good practice described in the guideline. This type of relative positioning could help identify areas for potential improvements. Links to good or best practice cases could furthermore allow users to identify possible approaches, solutions and systems that could help their agency reach the envisaged improvement and success.

Attempts to introduce benchmarking in the public transport field have been ongoing for more than a decade. Several European projects (e.g EQUIP) and national initiatives (e.g. the Italian Quality Transport Pool) have worked on defining indicators, measurement procedures, limits, and the value of benchmarking considering the complex framework conditions (regulation, city dimension, PT infrastructures, services, political approaches, etc.).

But it must be stressed that developing and applying an effective benchmarking exercise requires high level data and data of good quality.

The data collected in the PROCEED database of case studies to perform the analysis can be regarded as technical information, forming a solid internal knowledge base of the project regarding urban bus systems in small and medium-sized cities. However, it has to be acknowledged that in a limited number of fields of urban bus planning and operation, only qualitative indicators exist (e.g. a policy to keep the vehicles clean and in a good appearance is difficult to cover with quantitative indicators). Furthermore, the analysis of the consortium revealed that national conditions (e.g. funding of local services) and local conditions (e.g. spatial structure of the city and the region) have a major impact on performance and demand indicators. Thus it is obvious that the PROCEED case studies' database cannot be used for benchmarking exercises.

Any benchmarking approach to compare public transport operations between cities with different framework conditions (such as different regulations, topography, demography, fare system etc) would rather need further data refinement /data adjustments to reflect actually comparable situations. It is very hazardous to compare bare operation figures without any background information.

The overall idea to connect quantitative benchmarking indicators with the guidelines of PROCEED shows a major dilemma: a certain indicator value does not provide a complete and consistent insight view on the processes which lead to it. There might be even a set of processes behind a certain value, so that there is no objective correlation between both the indicator value and a distinct guideline. Consequently, the complexity of a public transport system impedes such an assignment of guidelines (measures to improve a system) to an

indicator value of a benchmarking approach (descriptive indicators reflecting the current status of the system).

Based on the experience gained in PROCEED it can be stated that a sophisticated organic system consisting of guidelines for improvement of public transport that corresponds directly to results of a benchmarking process seems to be difficult to obtain. Benchmarking initiatives are a promising approach to generate benefit for operators and /or authorities in order to define starting points for improvements, but the transfer of the gained information to universally valid guidelines can be regarded as an unsolvable process.

Our conclusion from the PROCEED project is that a benchmarking system can only work within a very limited area with persons having a very good knowledge of their own system and “what” they are benchmarking against. Based on these limitations all efforts put into trying to develop a benchmarking system might be better spent and have a better out put if they are put into other areas.

5.3. Verification of guidelines using real life projects

A verification of the PROCEED guidelines by general “real” application of the guidelines on completely new projects (within the time designated in the project for the verification of the guidelines) would have revealed major barriers:

- The implementation costs of such a project might exceed by far the financial contribution assigned to each subcontractor and as a consequence only small-scale projects with low importance would be launched.
- A risk of delays of site-specific projects due to day-to-day business at the subcontracted organisations may have impeded the work progress of verification.
- The personnel who implements the respective project at site level may differ from leading personnel participating in PROCEED research work (e.g. participation in meetings) which impedes the information flow.

Therefore a "retrospective" approach was proposed in the beginning of the project and followed by all the individual work packages. As given by the description of work, for verification purposes the guidelines were virtually applied by desk work on already implemented and terminated real projects. The advantage of this retrospective approach is, that the project used for verification purposes could be selected by an authorised person with a good overview about the project. Furthermore, an already completed project provides a more complete view for the planning, implementation and operation process than an ongoing one. Consequently, the personal experience of the authorised person was considered to be most effective for verification of the guidelines by this “retrospective” approach.

However, the work carried out by the PROCEED project has revealed difficulties in finding projects that could give a good overview of the application and the usefulness of all the guidelines. A lesson that could be learned is: if you want to verify your project findings (e.g. guidelines) at the end of the project, you should make an inventory of possible upcoming projects, where the guidelines could be applied on, already in the beginning of your project. From this list of potential “verification”-projects a range of projects could then be selected that gives a good representation of the application of the guidelines. However, still one has to keep in mind that these potential (upcoming) “verification”-projects are real life projects and adjustments in time, e.g. delays of measures and investments, can be expected, affecting the verification process.

6. HOW CAN THE RESULTS OF PROCEED BE USED?

6.1. Proactive use of the guidelines – application

Two of the PROCEED subcontractors have been willing to continue **testing, using, and validating the guidelines** with reference to ongoing projects or initiatives. The subcontractors are presenting what has been useful, how and with which type of impact and benefit. They are offering evidence of the effective and specific value of the guidelines:

6.1.1. Brighton and Hove

The PROCEED guidelines have proved helpful in assisting the already high-quality city of Brighton & Hove to implement new initiatives to further develop high-quality public transport. After a series of achievements by both the local authority and the bus operator in winning national awards for various aspects of public transport in recent years, Brighton & Hove Bus and Coach Company has recently crowned this in November 2009 by winning not only the UK "City Operator of the Year" but the "*crème de la crème*, the "UK Bus Operator of the Year" Award. The judges were impressed by all aspects of its operations, ranging from driving skill, through presentation of vehicles and responding to complaints, through widespread, accurate and clear real-time information, to marketing. All the excellent principles which Brighton & Hove Bus & Coach Company follow are reflected in the PROCEED Guidelines.

Improved Marketing Materials through deeper consideration of customer preferences for form and content

Brighton & Hove Bus & Coach Company has engaged a specialist and highly experienced design agency to implement improvements to many of its marketing materials. Changes have been made to its well-established Bus Times guide, which is published six-monthly to coincide with service changes, while a range of new leaflets has also been produced.

Brighton & Hove Bus & Coach Company is very well-known within the UK bus industry for its innovative, consistent and high-quality approach to marketing, and is a major UK leader in this respect. That is an important reason why it was invited to contribute to PROCEED by becoming a subcontractor. However, use of the PROCEED guidelines has assisted Brighton & Hove Bus & Coach Company in enhancing its existing policies by encouraging a formal, structured approach to reviewing customer requirements. Specifically, Guideline 5.1 ('Knowledge Base about your existing Customers'), 5.6 ('Measures to attract new users'), 5.10 ('Corporate Design'), and 5.12 ('Product Regeneration / Review') have all been helpful by ensuring that "all bases are covered". Guideline 5.1 leads to an approach which takes account of the varying needs of all types of customers and not just the main type of passenger, and this requirement influenced the new design of the map. Guideline 5.6 reminds the bus operator or authority that a range of product improvements is continually necessary, and hence it was considered the right time to review the map and product leaflets in the light of this. The need to have clear, attractive design and to continually review and regenerate the

product (Guidelines 5.10 and 5.12) influenced the decision to engage the design company to deliver changes to the map designs which enhance the product while still containing strong, clear links with what had gone before.

The resultant changes include:

- A new, stronger corporate image, with a cleaner, less 'cluttered' design and easier-to-read print
- Redesigned maps making much better use of colour, with both individual bus routes and their numbers having separate colours on the map, matching the colour coding for these routes used elsewhere on the operator's publicity. Whilst the maps are still geographic they are now slightly more diagrammatic than previously. This has involved some loss of information on the printed map, such as bus stops but as this information can be found very easily elsewhere (such as on the website) and in a more useful form (e.g. bus stop SMS codes as well as names) this is felt to be a worthwhile trade-off.

The bus company has also produced a new student travel handbook with a strong corporate image, in the company's red and yellow colours, matched by an attractive dark grey, combined with innovative use of eye-catching photos designed to appeal strongly to the student market. This approach feeds heavily on Guideline 5.1 ('Knowledge base about your existing customers'), and on Guideline 5.6 ('Measure to attract new users').

Again using the principles in those two Guidelines a range of new leaflets have also been produced by the design agency, as follows:

- A new night buses leaflet in a very attractive design aimed at clubbers. Some of Brighton's night buses run every 15 minutes in university term time, right through the night, 6 days a week, with a 30-minute service on Sunday nights and during university vacations. The new leaflet has been designed to highlight these.
- A new leaflet for Bus ID, which was re-launched in August 2009, which is a free card for children and teenagers giving them extra discounts on bus fares.
- A glossy fold-out brochure for the company's flagship interurban 'Regency Route', which complements its large urban network. This includes easy-to-read timetables and maps and attractive photographs all designed to encourage travel.

All these innovations have been very well-received by the bus company's customers and have been reflected in continued growth in bus passenger numbers in the face of downward trends nationally.

Brighton Station Travel Centre

Brighton & Hove Bus Company's strong and positive experience was a major influence on the drafting of PROCEED Guideline 5.5 ('Customer Information Centre').

However, reflection on what was implied by this, together with a review of customer perceptions, as explained in Guideline 5.1 ('Knowledge base about your (potential) Customers') led to a review of facilities and signage there. Although the existing Brighton Station Travel Centre covers both bus and rail, and is quite busy, paradoxically travellers tend to see it as a bus enquiry office and do not appreciate that it sells train tickets as well. The approach that has now been adopted is to "get inside the mind of a visitor" and market it much more as a 'One-Stop Travel Shop', using better signage and a more prominent front to better point travellers to this. At the same time it will have better supplies of bus information to make Brighton's bus services more attractive to people who have just arrived from getting off a train. Current indications are that because of the thorough customer research that has been carried out by the bus company as part of this process, in line with PROCEED Guideline 5.1, the changes will prove to be a success.

Monitoring use of E-mail

PROCEED Guideline 5.6 ('Measures to attract new users') stresses the need to use a broad spectrum of techniques to target potential users. Following this, as part of its continual review of tools that can be used to regenerate the product (PROCEED Guideline 5.12), Brighton & Hove Bus Company has been considering how better use can be made of its E-mail database. Accordingly, it is improving the way it monitors E-mails and is using more analysis of its E-mail database. It is now sending out special offers by E-mail and alerting those on its E-mail database to service changes. The E-mail database was used to promote 'Car Free Day' in Brighton, and has been used in other special promotions such as a prize draw offered to customers who complete a survey, which changes every month, following purchase of a Saver Ticket online. Here, PROCEED Guideline 5.15 is being followed, using the Ticketing Strategy to market the bus operator's services and give 'added value' to its customers.

Initial results are encouraging and are prompting greater thought as to how further innovative ways of exploiting the E-mail database can be developed.

Vehicle refurbishment and new vehicles

Brighton & Hove Bus Company is in the process of making significant upgrades to its fleet. Around 45 vehicles are refurbished each year and, following additional investment, the entire bus fleet now consists of low-floor, accessible vehicles - in line with PROCEED Guideline 2.12 ('Accessibility of vehicles'). Principles in PROCEED Guideline 5.6 ('Measures to attract new users') have been followed to continually raise the quality of the vehicles so as to make bus travel more attractive.

Following PROCEED Guideline 2.16 ('Traction concept'), other improvements include the introduction of Euro 4 emission standards for new vehicles; while a hybrid bus has also been tested recently, using a diesel engine to power an electricity generator.

In line with PROCEED Guidelines 2.14 ('On-board safety and security measures'), 2.15 ('Appearance and age of vehicles'), and 5.14 ('Information during the journey') new buses also now feature climate-controls on the upper-deck, tinted windows, and the incorporation of next-stop indicators.

Seats are another vehicle feature where a radical review has taken place, and new buses have seats to the latest design with ergonomic features. Here concepts espoused in PROCEED Guideline 5.1 ('Knowledge base about your customers') have been followed to run a significant process of testing to gauge user reaction to ensure that seats are comfortable.

Operating such a continual process of improvements to the vehicle fleet is one key reason why Brighton & Hove Bus & Coach Company has gained such an excellent reputation nationally and won the UK's 2009 "Bus Operator of the Year" Award.

Smartcard

This is expected to be introduced during 2010. It is being integrated with trains operated by Southern Railway, and was a commitment of the Southern rail franchise. It will be available on all Brighton & Hove Bus & Coach company services, and will provide Bus and Train season tickets on one card. Eventually it will roll out to 'Pay as You Go' tickets. The bus operator has not yet decided whether the Smartcard will be 'Touch In' and 'Touch Out', or just 'Touch In', but is carefully considering the implications of these alternative approaches, as in PROCEED High-level Recommendation 16 ('Carefully consider new technologies').

Experience of best-practise elsewhere is being studied closely, in line with PROCEED High-level Recommendation 6 ('Use best-practice ideas from other cities and operators'). Without such evaluation of others' experience it is considered that the Smartcard project would have become high-risk with a major possibility of show-stopping issues arising.

The main aim of this project is to build an optimised and user-friendly environment for public transport modes for the benefit of citizens and those visiting the city. Providing passengers with an integrated ticketing system will offer passengers a simpler and more seamless way of travelling and as a result it will increase the attractiveness of public transport in the city, with an increase in usage as a result.

300 ticketing machines will be purchased and by the end of 2010 it is planned that ticketing machines will be installed with the system fully operational. At this point the new ticketing system will be promoted through a campaign involving close partnership working with the Southern rail franchise operator.

In line with PROCEED Guideline 5.15 ('Ticketing strategy') and with Brighton & Hove Bus Company's existing practice of using ticketing as a marketing tool, the new integrated Smartcard will be marketed in innovative ways such as to make it very attractive and a real 'sell' of public transport to those who are not yet public transport users.

Personalised Travel Plans

As part of the CIVITAS Archimedes initiative Brighton & Hove City Council is introducing or planning a number of initiatives to help create an environment where public transport becomes seen as a more attractive, popular and sustainable option. The mere fact that CIVITAS is being implemented indicates that the city is seeking to follow PROCEED High-level Recommendation 1 ('Build political support for High-Quality Public Transport'), but CIVITAS also requires a review of other experience, so by its participation the City Council is also following PROCEED High-level Recommendation 6 ('Use best-practice ideas from other cities and operators').

The city council introduced Personalised Travel Planning in summer 2006, and contacts 10,000 households via a team of Travel Advisors each year.

PROCEED Guideline 5.6 ('Measures to attract new users') and PROCEED Guideline 5.13 ('Information before and after the journey') are now being followed in a current expansion of Personalised Travel Planning under the CIVITAS initiative. The direct distribution of information material (e.g. Bus Times booklet and newsletter about new products), as advocated in these Guidelines, forms an essential part of the Personalised Travel Planning initiative.

The use of a team of Travel Advisors to visit 5000 households in the centre of Brighton and spend time with residents chatting about different travel options, offering free advice and information, can also be seen as a 'mobile' implementation of PROCEED Guideline 5.5 ('Customer Information Centre'). This Guideline states that *"There is no reason why such visibility of local public transport should be less in modern times, though it may take different forms from previously"*. As stated in this Guideline *"When selecting staff for services at customer centres it should be realised that the personnel need a high-service orientation and a good knowledge of the area"*. Mobile interviewers going house-to-house to conduct Personalised Travel Planning interviews have been selected according to these same criteria.

A success from the expansion of the current Personalised Travel Planning project of 10,000 households per year, to 15,000 households from 2009 to 2012 in the Brighton & Hove CIVITAS area is expected because of the positive results that have already been achieved from the existing implementation of Personalised Travel Planning.

Commuter Travel Plans

Another CIVITAS initiative concerns Commuter Travel Plans. The main objective will be to reduce the number of people commuting by single occupancy vehicle by maximizing the take up of more sustainable travel options, through the development of travel plans. The project aims to develop a Travel Plan Partnership with the 28 businesses where good practice can be shared. Wherever possible, travel planners will visit businesses to work directly with them on an individual basis in developing travel plans. These businesses will be supported throughout the process of travel planning by the travel planner and will be further supported by attendance at Travel Plan Partnership Meetings on regular basis.

This approach follows that in PROCEED Guideline 3.5 ('Advertising') which encourages bus operators to work together with local businesses to promote bus use as a means of getting to these businesses. PROCEED Guideline 5.6 ('Measures to attract new users') also encourages joint working between operators and businesses in fields such as contracts between businesses and the public transport company in combination with mobility management, and job tickets (with tickets bought by employers). By using the PROCEED Guidelines the CIVITAS project will investigate various ways of joint working and the development of promotions to best promote public transport use by staff of local businesses.

PROCEED Guideline 1.3 ('Market Analysis / Monitoring of Demand') advises organisations providing public transport to *"Systematically monitor usage of the Public Transport system in order to ensure that the system performs to maximum effect."* The principles in this Guideline will be followed in order to assess the effect of the Commuter Travel Plans. Modal share will be gathered through travel survey questionnaires and focus group interviews with the participating businesses, throughout the life of the project. The main expectation is that by the end of the project, 28 employers in Brighton & Hove will have an effective travel plan in place that helps reduce the number of single car journeys to and from the work-place. Because of the careful attention to detail that is being planned, and the use made of others' experience elsewhere (as in PROCEED High-level Recommendation 6) it is expected that the project will be a success.

Lessons learned and experiences gained will be shared with partners in a Good Practice Guide which will contain the approach used to engage businesses, the initiatives that have proven to work in promoting sustainable travel and the sharing of good practice. It will also include case-studies as a way of demonstrating best practice.

Car Sharing

PROCEED Guideline 5.8 stresses the importance of Car Clubs in supporting a lifestyle which has a major place for Public Transport. The CIVITAS Archimedes initiative in Brighton recognises that new forms of vehicle use (car-sharing and car-pooling) can fill the gap in mobility needs and remove the need for car purchase (which tends to lead to over-use). Through the car sharing scheme, Brighton & Hove City Council aims to expand mobility services and promote energy-efficient vehicle use.

The Car Sharing Improvements Scheme aims to develop the Car Club provision in the city, beyond its core market, which is already well-established in the city. As part of this, PROCEED Guideline 5.8 is being considered so that possible tie-ups between the bus operator and the car club(s) can be investigated. This will only work if there are clear commercial benefits for both the car club operator and the bus operator, but the experience of other cities leads Brighton & Hove to consider that the planned expansion of Car Clubs in the city may mean that now is the right time to initiate co-operation between the two modes. What form this might take has not yet been fully investigated because the expansion of the Car Club facilities is at an early stage. Research will be undertaken initially to identify the optimum locations for the car club demonstration in the city. The research will include a review of best practice from other established car clubs in Europe including, Aalborg in Denmark.

Personalised Travel Information website

For some time now Brighton & Hove City Council and the Brighton & Hove Bus & Coach Company have worked together to "Develop a comprehensive and achievable information strategy, which provides easy-to-understand, accessible and attractive information widely available via various media", as advocated in PROCEED Guideline 5.13 ('Information before and after the journey'). As part of this approach the CIVITAS project is planning to develop the existing JourneyOn website so as to offer personalised travel information in a user-friendly format. It is planned that the website will be made available on handheld devices so that information is available from home, the office or on the move to help inform travel choice.

The development of the personalised travel information website will improve the amount of travel information available to residents and will enable users to access tailored information which is specific to their particular journey. Personalised information will include information such as best route, time required, calories burned (by mode) and topography. By integrating all forms of sustainable travel the JourneyOn website will offer citizens an informed choice, while keeping a very prominent role for public transport within the whole 'sustainable travel' mix.

Awareness of the website will be increased by promotion using traditional and social media strategies, and there will also be a programme of surveys to find out users' views and therefore inform how user information can be improved. By raising the profile of the

JourneyOn website the city council will also be raising the profile of pubic transport generally. PROCEED Guideline 5.13 stresses the importance of a website in the whole 'marketing mix' for public transport. Because of the already high usage of web-based services and media amongst Brighton & Hove's population, and the fact that the JourneyOn website already exists in a less-advanced form, it is expected that following the PROCEED Guideline 5.13 in this way will have a very positive effect.

PTI for visually impaired people

The CIVITAS project is also planning to expand the provision and accessibility of real time bus information for the visually impaired community in the city, in accordance with PROCEED Guidelines 2.18 ('Accessibility of bus stops') and 5.14 ('Information during the journey').

The project seeks to improve accessibility and public transport provision for people with visual impairments in Brighton & Hove by providing Real Time Information displays at bus stops with audio devices. Talking bus stops provide bus information to visually impaired people at the touch of a key fob, helping them to move around the city independently and with increased confidence. The audio devices make announcements from Real Time Information displays at bus stops.

CIVITAS is helping to fund a further 12 locations: the first of these additional 12 'talking bus stops' was launched on Friday 2nd October 2009, following a visit by CIVITAS Archimedes partners where they shared their own experiences of such devices, in accordance with PROCEED High-level Recommendation 6 ('Use best-practice ideas from other cities and operators').

It is expected that more visually impaired users will have access to the system allowing them to travel more independently on the bus and also increase the number of visually impaired people using public transport within the city.

School Travel Plans

The CIVITAS Archimedes project also aims to increase the proportion and amount of travel to school in Brighton & Hove that takes place on sustainable modes. It is therefore aiming to introduce innovative and integrated strategies to reduce car journeys to and from school. Part of that will involve the application of PROCEED Guideline 1.2 ('User Needs and Expectations'), assessing the travel needs of school pupils, evaluating the extent to which those can be met by bus, and designing service products and marketing strategies accordingly. As part of this process there will be an assessment of which elements of School Travel Plans are the most effective.

The main objectives of the demonstration will be primarily to reduce the impact of the 'School Run' (parents driving their children to and from nursery and school) so as to achieve a sustained increase in the number of safe, sustainable journeys to and from school. The

Measure will also increase awareness of the importance of exercise, contributing to a reduction in childhood obesity levels. The School Travel Planner will work directly with 59 schools and nurseries in the CIVITAS Plus corridor, aiming to create Travel Plans for all of them. The Travel Planner will also work in depth with 22 educational establishments as part of a focus group. The School Travel Planning Officer will work closely with the schools on a regular basis, supporting and helping them identify their individual needs, implementing changes and monitoring their success. As part of the measure a dedicated route planner for safe school routes will be developed.

It is unlikely that a review of bus fare structures and ticketing strategy as they affect school pupils will be considered appropriate at this time (PROCEED Guidelines 3.6 and 5.15), because of the knock-on effect on other aspects of the bus company's operations; but in principle bus services that provide travel facilities to the targeted schools will be reviewed as part of the School Travel Plan project. If this result in any marginal alterations to service patterns for bus routes serving the schools, PROCEED Guideline 4.4 will be followed insofar as it is relevant to such marginal changes. The bus company is very conscious of the need to plan operations to maximise vehicle efficiency, but also to ensure that scheduling efficiency does not go against costumer-focussed routes and timetables, both these elements being stressed in the Guideline.

There is a strong expectation that carrying out the School Travel Planner work to produce Travel Plans for all Schools and Nurseries in the CIVITAS Plus corridor, and to develop a dedicated Route Planner for all Schools in Brighton and Hove, in collaboration with the bus company, using PROCEED Guidelines as appropriate, will be very successful. The City Council and the bus company have a long history of working together in partnership very well, and the confidence in this work is such that a Good Practice Guide for the use of all CIVITAS partners is envisaged as an output of this project.

6.1.2. Grazer Stadtwerke

New 3-day-ticket

In Graz a new 3-day-ticket was implemented in 2009. It combines a 3 day travel pass for the whole public transport in the city with price reductions in many tourist attractions. When planning and implementing this new ticket, Grazer Stadtwerke – Verkehrsbetriebe found several of the guidelines included in the PROCEED-guidelines useful in practical application. According to the PROCEED-guidelines the implementation started with a profound basic market analysis and customer screening, involved the users already at an early stage of the planning process, rouse interest with a marketing campaign, and the performance of the new implemented feature is monitored continuously.

Figure 6-1: The Graz-3-Day Ticket

The ticket offers three days unlimited travel on all public transport lines in Graz (central fare-zone 101 which covers the city plus some of its surroundings), and it includes also travel free-of-charge on the cable railway and lift to the Schlossberg, and on the bus-line to the Airport, which is situated further outside the city. Two children up to their 15th birthday are included in the fare for free. Furthermore, the ticket also offers reduced entrance-fees for several touristic points of interest or activities.

The Graz-3-Day Ticket is available from hotels and accommodations, from the Graz Tourism office, the City Mobility Centre, from ticket sales at the Schloßberg cable railway and lifts, at the Graz main railway station and the airport of Graz. The sales of the 3-Day-ticket started in April 2009.

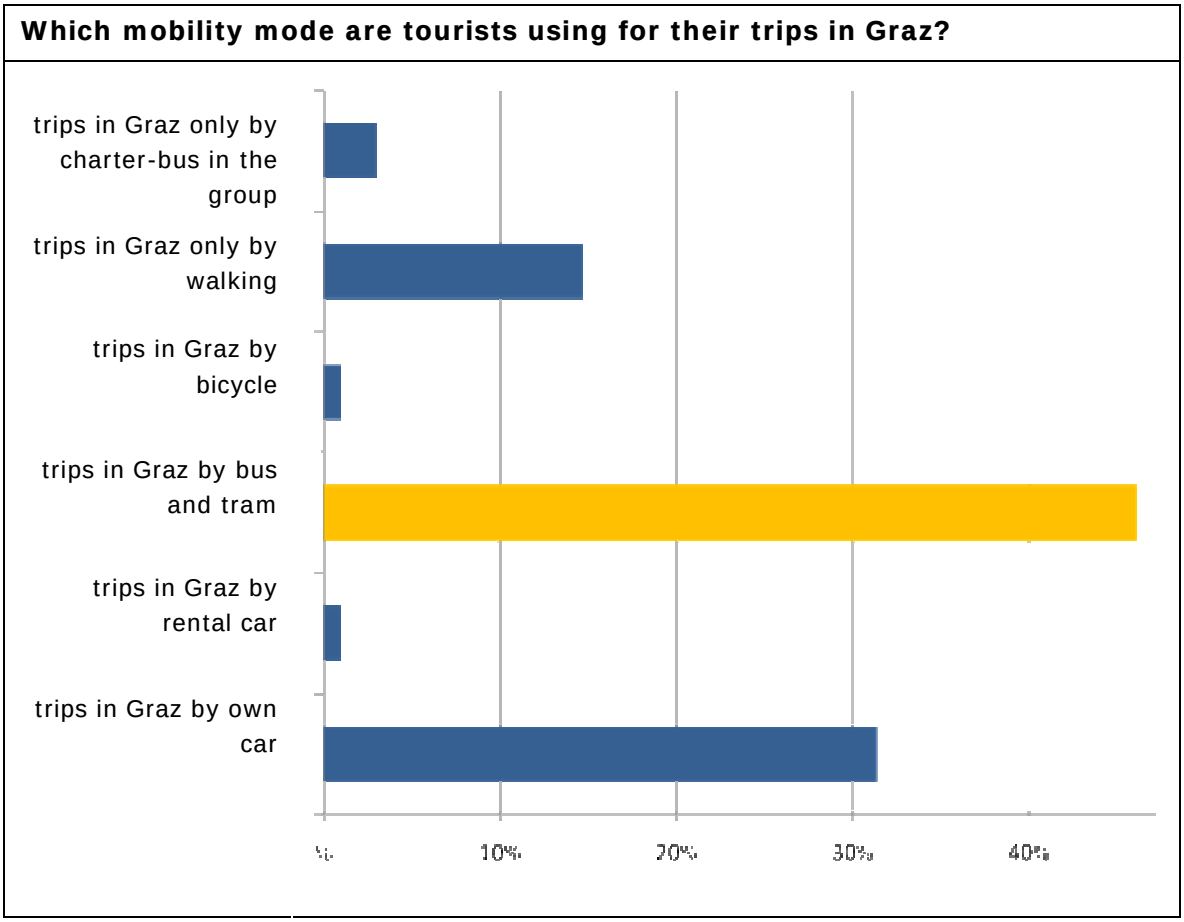
Market analysis / Basic analysis

It has been a long existing wish to broaden the portfolio of public-transport-tickets in Graz to some special offer for tourists. Before the introduction of the 3-Day-ticket tourists (and public transport passengers in general) could only choose between 1-hour-tickets or 24-hours-tickets (which were only useful for short stays) or weekly-tickets (which were useful for longer stays). For a 2 or 3 day stay, the most common duration of touristic visits in Graz, no suitable ticket was available.

According to the PROCEED-guidelines “Basic Analysis” and ”Market Analysis” an external company (Mainland Economic Consultants) was assigned to research the possibilities for a ticket especially for tourists. This research revealed the following outcomes:

- One outcome was for example that public transportation is the most common mobility-mode for tourists during their stay in Graz. Figure 6-2 shows that more than 45% of the tourists stated that they use bus and tram for their trips in Graz.

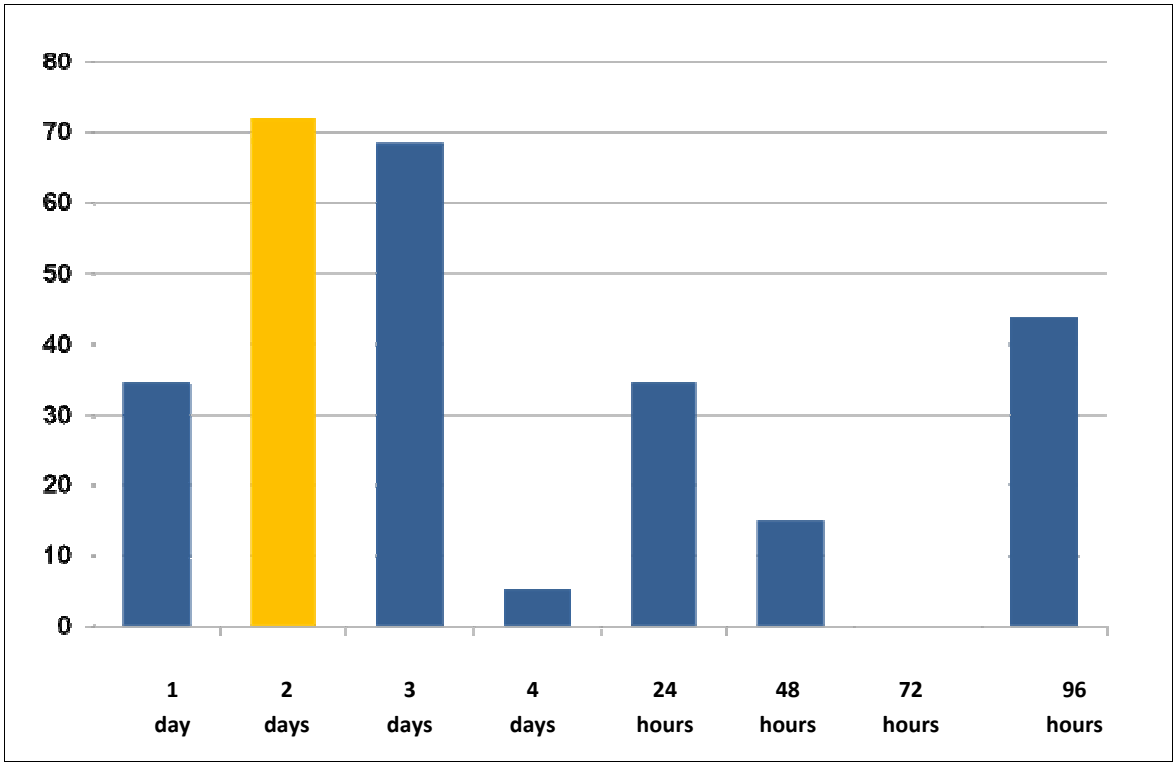
Figure 6-2: Preferred mobility mode of tourists.



(all graphics © Mainland Economic Consultants)

- In addition to the mode-of-transport used by tourists, also the tourists' main points of interest were researched: showing for example that a main focus of interest for tourists in Graz is the "Schlossberg" (e.g. more than 70% of the interviewed tourists stated that they want to visit the Clock-Tower on the Schlossberg, and more than 50% stated that they want to ride with the Schlossberg-cable-railway). Therefore the cable-railway and the lift leading to the Clock-Tower on the Schlossberg were included in the 3-Day-ticket as well.
- The market-analysis-study researched also the wishes of the tourists' regarding their favourite public-transport-ticket. Figure 6-3 shows the results: most tourists stated that they would prefer a 2-day-ticket or a 3-day-ticket.

Figure 6-3: Distribution of ticket types.



(all graphics © Mainland Economic Consultants)

From these results the study calculated an optimal duration between 2 and 3 days for the new public transport ticket targeted especially at tourists.

Involvement of customers from an early stage of the planning-phase

According to the PROCEED-guideline "User needs and expectations" and "Board of Customers" the so called "Fahrgastbeirat" (= board of customers) of the public transport company of Graz was involved already in the phase of the discussion of the new ticket.

Advertisement and implementation of the new ticket

Besides press work and posters on railway stations and the airport, the new ticket was mainly advertised with a multilingual folder that was distributed at hotels and other tourist-accommodations, the airport and railway stations, and the customer information centres. The folder included a description of the ticket plus a network map and a list of the points of interest, see figure 6-4.

Figure 6-4. Advertisement of the new 3-day-ticket

Of course the 3-Day-ticket was also advertised on the websites of the involved parties (i.e. transport operator, city of Graz, tourist agency, participating tourist-attractions).

Results – tickets sold

As described in the PROCEED-guideline ”Measures to attract new users” - Product development: new users were attracted through the introduction of new PT-products or PT-services – in this case a ticket combining public transport with cheaper entry to several points of interest for tourists.

As described in the PROCEED-guideline also some kind of “Product regeneration / review” was introduced, by adapting the fare to the shorter duration of stay (3-Day-ticket instead of weekly-ticket).

Since April 2009 about 5.000 of the new 3-day-tickets for tourists were sold in Graz.

6.2. Retro perspective use of the guidelines – proof of an effective tool

According to the technical annex of Proceed and according to projects' audit decisions the retrospective validation of the guidelines mainly took place at the Graz 2008 Workshop. In this verification process the adequacy and usefulness of the guidelines was controlled and verified. The questions that were asked contained; to what extent the guidelines covered the studied project, whether the guidelines were correct, helpful and whether the information provided was sufficient and whether there was missing information. The following subcontracted practitioners took part in this verification process:

- Grazer Stadtwerke – Verkehrsbetriebe (GVB)– Austria;
- Stadtverkehr Euskirchen (SVE) -Germany;
- Klaipeda kelevinis transportas - Lithuania;
- Veolia Transport Maribor - Slovenia;
- Gemeente Almere -The Netherlands;
- Brighton & Hove Bus and Coach - UK;
- Stad Sint Niklaas - Belgium;
- CTA Consorcio Asturias – Aviles - Spain;
- Jönköpings Länstrafik (Sweden)

Each of these subcontractors verified the guidelines for two projects and made a description regarding which specific guideline was found to be relevant, aligned and supporting the specific project but also how, why and where the guidelines were considered to be useful, and what should be changed, amended, and corrected in the guidelines.

The responses from the subcontractors are presented in the following sections. For each project the relevant guidelines and the response from the subcontractor is presented. The verification of the subcontractors was carried out based on the first version of the guidelines. In many cases the guidelines mentioned by the subcontractors have been renamed, revised, moved, removed or merged with another guideline in the working process of the development and refinement of the guidelines. The numbering of the guidelines is therefore excluded in this section to avoid confusion. Instead reference is given to the area/topic that the guideline deals with.

6.2.1. Grazer Stadtwerke – Verkehrsbetriebe - GVB

I) PARSON Passenger registration system based on bluetooth and satellite navigation

A bluetooth device was installed in vehicles of the GVB. This device is used to read the bluetooth addresses of every mobile device and helps to identify the exact route of the passenger. The collected data are transmitted to a server during the night when the vehicles are in the depot. After testing and clearing, the data can be used for further interpretations.

Relevant guideline: Basic analysis: If commencing a HQPT urban bus network, or radically redesigning an existing network, carefully analyse the local conditions and the local travel demand patterns to ensure realistic estimations of the expected travel demand potential.
Response: GVB found that the guideline covers the project Parson in full extent and is correct. Suggestion to ensure realistic estimations is helpful as getting the actual data from bluetooth devices can be a challenge (experience: non PT users with bluetooth devices (e.g. bicycles) were also registered). GVB's suggestion about additional information of methods to collect various data e.g. PT passengers, cars per day, etc. were considered.

Relevant guideline: Market analysis / Monitoring existing services: Systematically monitor usage of the Public Transport system, together with the perception of the services (by both users and non-users), in order to ensure that the system performs to maximum effect.
Response: GVB found that the guideline covers the project Parson in full extent, is correct and helpful. The information provided is sufficient and in-depth details provide clearer understandings of the topic.

II) Special signal lights at interchanges to prevent that passengers miss their connecting buses

The goal was to give information to the waiting bus that the arriving bus is coming within a few minutes. On interchanges, buses, and traffic lights receivers were installed with focus on development of guaranteeing connections of buses, when there is no computer based operation control system.

Relevant guideline: Interchange Strategies: Create high quality transfer points and interchanges (incl. Bike & Ride and Park & Ride solutions) so as to be able to create a competitive alternative to the car. Create as seamless an end-to-end journey as possible.
Response: GVB found the guideline correct and helpful as it emphasizes seamless end-to-end journey and high quality transfer points. In the project the problem occurred, when the traffic lights turn off automatically, the passengers have to wait to long. GVB find that the guideline covers the project to medium extent as some improvements in other points of interchanges should be mentioned (e.g. Bus driver – connection bus – interchange passengers, network design – interchange bus stop).

6.2.2. Stadtverkehr Euskirchen - SVE

I) Customer's dialogue system based on quality surveillance of the bus services

As troubleshooting depended on the person of the SVE who was concerned by chance and it was difficult to proof declarations of users, a new Customer's dialogue system based on quality surveillance of the bus services was developed. New software joined the communication between bus users in case of trouble clearing and the communication within the SVE. After project implementation reports of the bus performance were integrated and inside SVE staff worked with clearer responsibilities and hierarchies for the proofing and answering of passengers' feedback.

Relevant guideline: Tools and survey techniques for quality control: Public Transport Authorities can measure customer's satisfaction and performance by standardised measurement methods like the Customer Satisfaction Survey. Operators can make use of self-assessment models to assess their own production quality.
Response: SVE found the guideline correct as it is sufficiently reflected in national framework. However, the project is only medium covered. Based on experience gained in the project, SVE proposes a model of closer analytical link between the customer's view and the operator's output, where quality measures for external operators are also provided.

Relevant guideline: Customer feedback: Establish a structured customer feedback management as a basic element of Customer Relations Management.
Response: SVE found the guideline fully covered, correct and helpful. Additional information about hints for the realisation of customer's feedback was added in the synthesis.

Relevant guideline: Board of customers.
Response: Technical analysis (e.g. over internet) is an appropriate tool also for the board of customers, as collecting advices for planning and evaluation of performance gets to the responsible people. Consider peripheral relevant guidelines: Computer-based operation control systems and Contract types and contract provisions

II) InfoPoint Establishment of a new customers' centre with extended service

The InfoPoint took over the function of a town/regional information centre, which so far didn't exist in the city. As the technical facilities were strengthened, higher ticket offer was possible.

Relevant guideline: Customer information centre: Establish well run customer information centres that are easily-accessible and visible to all local citizens and visitors.
Response: SVE find the guideline fully covered, correct and helpful as it provides the information, that good personal is necessary as well as sufficient opening time. For SVE it would be helpful to tell how the aim is reached.

Relevant guideline: Customer feedback: Establish a structured customer feedback management as a basic element of Customer Relations Management.
Response: SVE find the guideline fully covered, correct and helpful. Additional Information about recommendations how to realise an effective board of customers were implemented in synthesis.

6.2.3. Klaipeda kelevinis transportas

I) Establishment of regulated contracted PT system, management by PT authority

The City Council established Klaipeda Public Transport authority with responsibilities for network and timetable planning, marketing and management (passenger information systems, ticketing system, monitoring, etc.) of PT. New PTA developed common ticketing system based on tendering procedure for municipal and 2 private operators.

Relevant guideline: Market organisation: The activities of the Public Transport Authority should reflect the market regime and regulatory structures.
Response: Klaipeda found the guidelines helpful, fully correct and it fully covered the project. Recommendations that PTA should set the rules for the operators and develop "good" contracts as an efficient tool for HQPT is in retrospective correct as establishment of regulated contracted PT within PTA eliminated "wild competition", created "common ticketing system" and took over financial risk on the revenues.

Relevant guideline: Contract types and contract provisions: The design of any contracts for operation of Public Transport services should also reflect the market organization and regulatory structures. Financial and service provisions should be defined within bus service operation contracts, but there should be at least some degree of performance-based incentives.
Response: The guideline is helpful, correct and it fully covers the project as in contracts, penalties in case of not served and unpunctual service are clearly defined.

Relevant guideline: Tendering and contract length: Within the tendering process the aims, scope, eligibility of operators (e.g. national / international operators and their competence) and contract duration should be established at the beginning.
Response: The guideline is helpful, correct and it fully covers the project as introduction of "common ticketing system" was the base for the tendering procedures for 7 years contracts for three operators.

II) Implementation of e-ticketing system; Stage 1 - presentation of smartcards and monthly e-tickets

A more flexible and efficient fare system was introduced including: smartcard technical specifications, tender procedure for smartcards production, incorporation of different selling facilities, creation of e-ticket control system, preparation of a new fare structure and implementation of selling facilities over internet using banking e-systems.

Relevant guideline: Fare level changes
Response: Klaipeda found the guidelines helpful, fully correct and it fully covered the project as the guideline mirrors the decision about fare changes which were considered carefully. Some costs were eliminated (e.g. ticket printing) and some new costs appeared (e-ticketing support) which also led to a new fare system.

Relevant guideline: Fare structure
Response: Klaipeda found the guidelines helpful, fully correct and fully mirror the project as attractiveness and simplicity were established through new fare system for e-monthly and period tickets. Creation of e-ticket control centre and internet selling possibilities raise the benefits of new technology.

6.2.4. Veolia Transport Maribor

I) Construction of new depot and implementation of new maintenance procedures

Construction was established to reduce unused surface area and inefficient energy consume. A new workshop manager was appointed, new maintenance software was implemented and new processes were defined in order to minimise "fire fighting" and to increase planned maintenance.

Relevant guideline: Vehicle parking area (overnight): Plan optimal locations of bus depots to minimise empty-running. Attempt to integrate maintenance and cleaning departments in bus depots. Under-cover parking of vehicles usually has a positive effect on vehicle lifespan**.**
Response: The guideline is correct and fully covered as it mirrors the actions taken in the project: new depot integrates maintenance and cleaning departments and the location (with new management processes) was change due to: reducing unused surface area, minimization of empty-runnings in depot. In our project operational aspects in case of vehicle break downs and agreements with neighborhood inhabitance were also considered.

Relevant guideline: Bus maintenance and repair workshop: Consider reaping economies of scale by offering vehicle maintenance and repair services commercially to other organisations. Attention should be paid to the management of maintenance costs throughout the vehicle lifecycle.
Response: The guideline is correct, helpful and fully covered as repair services in one depot were planned for urban-, city-, and regional-buses of same or different operators. Other relevant guidelines: Strategies for vehicle checks and cleaning and Strategies for efficient use of vehicles

II) New city bus transport image with a new information concept/layout/design for timetable/tariff information at bus stops

New image were established to develop better branding policy and corporate design. New city bus transport image with a new information concept/layout/design for timetable / tariff information at bus stops provided a consistent, professional and unified identity in all printed and electronic material.

Relevant guideline: Branding policy: Develop a long-term, clear and attractive branding policy which will make it possible for public transport to compete on all levels in the consumer market.
Response: Guideline mirrors the reasons for new PT design…, as 25 % of the city bus fleet was being replaced, the number of passengers was slowly but steadily decreasing a breakthrough with long-term branding policy was necessary.

Relevant guideline: Corporate design: An attractive corporate design is an important aspect in creating a positive emotional connotation for public transport and is an important element of branding.
Response: The guideline is correct, helpful and fully covered as new layout, approved by competent authorities, was successfully implemented on 12 new buses with a unique design (later being transferred also to the rest of the fleet) and on all timetables on all bus stops in the city.

6.2.5. Gemeente Almere

I) Designing & building new busways in Almere

By designing the new district (Almere Port, 20.000 inhabitants) mobility aim was to integrate public transport system based on short travel times / high speed. Designing & building new busways in Almere was heavily discussed between architects, urban and transportation planners in planning phase (form vs. functionality). After a heavy discussion the responsible alderman decided in favour of PT.

Relevant guideline: Bus stops should be accessible for pedestrians and also for cyclists and passengers arriving by car.
Response: Municipality of Almere found the guideline helpful, correct and medium covered. By designing and building new bus stops the condition "walking distance to a bus stop should not be longer than 400 m" was considered. Recommended range between bus stops (100 – 1000 m), fit to project framework condition range (400 – 800 m). Critical issue reveals same experience as gained in project - no attention is made for accessibility of motorcar passengers (parking facilities).

Relevant guideline: Network planning: decide your planning task based on the objectives for PT in your city/town. Plan your system to be simple, easy-to-understand and attractive to users
Response: Municipality of Almere find the guideline helpful, correct and medium covered as after setting the objectives for PT system, planning tasks are easier to decide. Remarks on additional information on view of different kinds of network structure / forms (e.g. tangential lines vs. radial lines vs. circle lines) were considered in synthesis.

II) Tendering of local public transport in Almere

According to national legislation (NL) tendering of local public transport in Almere is demanded for provinces and middle sized city's. The city of Almere has made the tendering specifications (according the EU procurements rules). As four operators made a bid, finding and fixing a list of criteria to choose the most promising bid was a challenge.

Relevant guideline: Contract types and contract provisions
Response: According to national legislation, market organisation and regulatory structures the guideline is helpful, correct and fully covered. Additional information about EU rules concerning obligation of tendering is missing.

Relevant guideline: Tendering and contract length
Response: The tendering process has been very stimulating for the market. As the contract comprises severe bonus/penalty agreement it mirrors the guideline. In our project selection criteria (for frequency, quality of buses, growth of amount of passengers etc.) was considered to give a different score to bidders. Comparison between a tender based on price (fixed quality) and a tender based on quality (fixed price) was added in the synthesis.

6.2.6. Brighton & Hove Bus and Coach

I) Introduction of Real-Time Information system

To provide more comprehensive, permanent information on bus services in order to raise customer confidence and assurance Introduction of Real-Time Information system was established. Brighton and Hove Bus and coach found the guidelines helpful, correct and it covers the project in 10 guidelines.

Relevant guideline: Intersection / traffic-light priority
Response: RTI was integrated with traffic lights at 11 junctions to maximise running speed as to give late-running buses priority.

Relevant guideline: Bus stop hierarchy
Response: Adjoining local authority with bus Operator founded additional signs in peripheral urban areas where it believes there is a strong customer requirement for additional investment.

Relevant guideline: Electronic travel planner on the internet
Response: Real-time information is available 24 hours a day on public websites (Journeyon.co.uk and buses.co.uk) as suggested.

Relevant guideline: Electronic Real-time Displays at bus stops
Response: Bus stops are equipped with electronic RTI displays as suggested. Additional RTI screens were also installed in public buildings (such as the new Jubilee Library).

Relevant guideline: Dynamic display showing the next stop in vehicles
Response: Each bus was equipped with On-Bus "next stop" indicators driven by the GPS facility, which is linked to the RTI system.

Relevant guideline: Computer-based operation control systems
Response: Explanation part of the guideline overlaps with reasons for implementing RTI such as: to control operations more effectively, know where vehicles are, enable real-time scheduling of individual vehicles, have better information to enable planned schedules to be revised to improve time-keeping.

Other relevant guidelines: Intelligent Service features in buses, Communication with drivers, Use of software tools for staff and fleet management, Information during the journey

II) Delivery of continuously-developed, innovative total marketing

The scope was further awareness (in terms of reliability and costumer friendly) of bus services in the city and beyond, and in doing so increase the number of people using the bus. Brighton and Hove Bus and coach found the guidelines helpful, correct and it covers the project in 12 guidelines.

Relevant guideline: Network planning
Response: B&H developed simple, easy to understand and attractive to users PT and promoted it as such.

Relevant guideline: Age of the vehicles-
Response: For attractive and reliable service B&H ensured not very great age-distribution of vehicles in the fleet. Oldest bus in the fleet is 12 years old.

Relevant guideline: Accessibility of vehicles
Response: 78 % of buses are accessible with low floor (goal 100 %).

Relevant guideline: Advertising
Response: Integrated advertisement to promote bus use as a means of getting to advert businesses

Other relevant guidelines: Appearance of the vehicles and other features affecting comfort, Fare structure, Get to know your (potential) customer, Customer feedback, Measures to attract new users, Branding policy, Corporate design, and Product regeneration / review

6.2.7. CTA Consorcio Asturias – Aviles

I) Introduction of the Unique Ticket in the region of Asturias

The project was a pilot project in the city of Avilés, where the aim was to implement a fare integration system in the region of Asturias in order to achieve an efficient use of the transport infrastructures by means of a more user-friendly payment scheme that would also save money to regular transport users. In first step of this project Avilés represented a single zone within the 30 zones scheme intended for Asturias. Five private public transport operators providing services in this area joined the fare integration system designed by CTA. This implied the exclusive use of CTA smartcards and ticketing hardware. By the end of the pilot project more than 530.000 trips had been done with our smartcards, with a penetration close to 50%. Since then, the project was successfully extended to the remaining zones.

Relevant guideline: Automatic onboard counting systems
Reponse: CTA found the guideline correct and medium covered. In project electronic ticketing schemes were regarded also as counting system for collecting data to identify the weak points in the present public transport network. These systems supplies reliable information to the regional authorities, an information that otherwise would be very hard to gather.

Relevant guideline: Fare level changes
Reponse: As fare elasticity is often quite hard to estimate an accurate profile of present and possible transport users in the area was a priority before introducing a fare modification.

Relevant guideline: Welfare economics principles
Reponse: In this guideline we read that “calculations based on welfare criteria… are intended to lead to a use of resources which is economically efficient for society as a whole”. Unfortunately decisions in this direction find resistance from contractors (fear of lower revenue) and locals (fear of a decrease in services). Partially based on this response the text regarding welfare economic principles was moved to the section of background information connected to the guideline of Cost benefit analysis.

Other relevant fully covered, helpful and correct guidelines: Ticketing strategy and Fare structure

II) Bike loaning system for the city of Avilés.

The aim of Bike loaning system for the city of Avilés and free loan to users of the Unique Ticket was to promote environmental-aware transport within the city, loaning bikes for free to users of the public transport system (CTA smartcards users) to cover the last stages of their travels. A hundred bikes were procured, along with the hardware and software required to run the loan scheme: bicycle racks, smartcard readers, anti-theft devices, etc.

The project was delayed due to uncertainties on the side of the city administration regarding the chosen locations for these facilities.

Relevant guidelines: Measures to attract new users: Co-operation with Park & Ride, Topic Quality link between Urban Public Transport and other modes (intermodality), Interchange Strategies and Appearance and service facilities at bus stops
Reponse: CTA found the guidelines helpful, correct and medium covered, as free loaning of bikes for PT users differs from other more common interchanges in the field of marketing and network planning.

6.2.8. Jönköpings Länstrafik

I) Timetables in mobile phone

As printed timetables have many disadvantages, like high costs and uncomfortable for the customer and the way of communication changed Jönköpings Länstrafik introduce Timetables in mobile phone which is regularly updated and could be easy transferred to other mobiles.

Relevant guideline: Information during the journey: Provide clear and customer-friendly guidance for travellers during their journey from the first to the last bus stop
Reponse: Guideline is correct, helpfull and provides sufficient information. "Travel planner" on Jönköpings Länstrafik web-site gives door-to-door solution. But with this tool for planning no information is available, if a potential passenger cannot use computer. Mobiles are then a useful tool.

II) Contractual incentives

In a gross contract operator(s) have no direct benefit, if there is an increase in number of passengers. Incentives are then a "push-pull" instrument and an argument for operator to work with quality. Some years ago we introduced contracts with "carrots and sticks". That system has been improved. “Carrots” were related to the outcome of passenger surveys and to increase in travelling. “Sticks” were reduced to certain imperfections in service. The latest step is to combine the results of passengers’ attitudes and increase in travelling. That means a multiplier if positive attitudes results in more passengers.

The model used during our last contract period was complicated to use. There was also a disadvantage that if we (authority) reduced our fares we have to pay much more to the operator without any improvements from their side. That’s a reason why we transferred a lower basic incentive which could be multiplied if better service results in more passengers.

Relevant guideline: Contract types and contract provisions: The design of any contracts for operation of Public Transport services should also reflect the market organization and regulatory structures. Financial and service provisions should be defined within bus service operation contracts, but there should be at least some degree of performance-based incentives.
Response: Guideline is correct, helpful and medium covered. As contract involves lower basic performance – based incentive, where operator has the “obligation” to constantly improve their service, which results in more passengers. A number of items are applicable regarding financial and service provisions are defined within the contract. Additional information about needed measurements from neutral parts was added in synthesis.

6.2.9. Stad Sint Niklaas

I) North south bus corridor

With mobility plan and agreement with Flemish Government (in 2002) the aim of reducing car traffic in the city centre was set. Since then bus service has been upgraded, and many interventions favoured sustainable transport and the use of buses. The most important project was the creation of a north south bus corridor, between rail station in the north and a big shopping mall in the south of the city. Before implementation of mobility plan there were problems like: insufficient supply of PT, problems with circulation of the buses, lack of high quality bus stops, not many tariff measures occurred. North south corridor solved the problem of circulation of the buses.

General response: In general Stad Sint Niklaas found the guidelines correct, helpful and with sufficient information.

Relevant guidelines: Network planning
Response: Planning tasks were based on the aim of Mobility plan.

Relevant guideline: Interchange Strategies
Response: On the bus corridor the frequency is 7,5 minutes, as regional and city lines are integrated.

Relevant guideline: Intersection / traffic-light priority
Response: Buses have priority at all intersections in the corridor.

Relevant guideline: Busways / Bus lanes
Response: Bus lanes are placed on free infrastructure and more than 80 % of all buses take the north south corridor.

Other relevant guidelines: General planning objectives and long/medium/short term planning; High Quality Public Transport as part of urban transport policy integrated with land use planning; Basic Analysis; Quality link between Urban Public Transport and other modes (intermodality).

II) High quality bus stops

To ensure higher service quality high quality bus stops were introduced. Sinkt-Niklaas counts 183 bus stops, where 120 were sheltered. Dynamic travel information was introduced in March 2008 on bus stops at the rail station and on bus stops at the marketplace. De Lijn (PTO) situates stops in consultation with the road authority(ies) and remains responsible for maintenance of the information and the bus posts. All stops have travel information. Maintenance is performed by community.

Relevant guideline: Bus stop hierarchy and Electronic Real-time Displays at bus stops
Response: Stad Sint Niklaas found the guidelines correct, helpful and with sufficient information.

7. DISSEMINATION AND USE

7.1. Dissemination Activities

List of the dissemination activities recently carried out and also planned by the Consortium members for the coming months:

- FGM-AMOR: Presentation of the PROCEED guidelines to the responsible persons for public transport at the regional government of the Austrian province of Styria in March 2010.
- TRIVECTOR: Presentation of the PROCEED project together with Lund University at a national seminar (New tools for Mobility Management/Sustainable Planning) that Trivector is organizing in Stockholm on the 3rd of December. Presentation of the PROCEED project at a national conference (Transportforum) in Linköping 13-14 of January 2010. Trivector will also forthcoming inform and recommend the use of the Proceed planning tool in contacts with Swedish transport planners and Transport Authorities. There are currently discussions with the Swedish Road Administration regarding a translation of the PROCEED planning tool into Swedish.
- LUND UNIVERSITY: presentation of the PROCEED project at a meeting of the Swedish association of Transport Planners, the 3 of March 2010. Lund University will also forthcoming use web tool in a new course at the university in Public Transport but also in courses aimed for practitioners that the Department of Technology and Society, regularly arrange.
- ETH Zurich is periodically writing short messages for the "VöV - Voyage" (Association of Swiss Public Transport Companies), that is monthly information papers that are also sent to the LITRA (Lobby organisation of public transport where politicians and industry stakeholders in the field of public transport are members). ETH is also planning to write a publication in a German journal, named "Der Nahverkehr" in collaboration with IVV-Aachen.
- IVV will write an article-contribution (a kind of announcement) for a scientific journal which aims to make people aware of the guidelines on the web. In the past IVV used to submit such articles to “nahverkehrspraxis” (Arnold Publishing, Dortmund). This journal is addressed to practitioners at public transport companies.
- ECORYS has carried out the following dissemination activities: On 15/16th of May 2009: Excursion to Sint Niclaas (Case City) organised by the City of Sint Niclaas (Jurgen Goemine, Fred van de Mortel Vectris) and the Dutch Organisation of small and medium sized cities (VOC-municipalities, Arthur ter Weeme). The group consisted of a few local alderman and local PT policy employees. Presentation of the (preliminary) guidelines of Proceed was part of the programme. On 5th of October 2009: Presentation of the submitted paper on the Proceed Guidelines on Marketing in Local Public Transport at the ETC conference (European Transport Conference) in Noordwijk, Netherlands (http://www.etcproceedings.org/paper/public-transport-and-marketing-in-

small-and-medium-sized-cities). In November 2009: Interview with a representative of the Dutch Knowledge Centre of Mobility and Transport (KPVV) about the Proceed results to provide info for a KPVV newsletter which was submitted to a broad audience of Dutch stakeholders and consultants and also available on their website (http://www.kpvv.nl/templates/mercury.asp?page_id=2046&id=1166&onderwerp_sub=61).

- AUSTIN ANALYTICS has published PROCEED at the UK workshop of the LINK project (in York) and at a regional meeting of the Transport Planning Society (in Leicester) and furthermore displayed PROCEED newsletters at a major conference on the UK's Local Transport Act (aimed at bus operators, local governments and planners) in London on 12 January 2010. AA has also written letters for publication in both 'New Transit' and 'Local Transport Today' publicising PROCEED. Further plans for future dissemination includes writing an article for a major UK industry magazine, or magazines, on the Guidelines, publicising them in conjunction with an organisation such as the UK's new statutory body for bus passengers and / or the national organisation for bus operators and seeking out relevant forthcoming UK conferences at which to publicise the guidelines.
- UNIVERSITY OF MARIBOR (UM – FG) has presented the PROCEED project at national seminar TRANSSLO for transport and the environment on 17 December 2009 in Ljubljana, Slovenia. University of Maribor plans to write an article in the international journal “Transport policy” about HQPT in small and medium sized cities.
- BRIGHTON & HOVE BUS & COACH COMPANY has presented findings from PROCEED and own study work to the members of CIVITAS from around Europe. B & H B&C Co are taking part in another European Project to develop multi-modal ticketing, again taking on board some of the principles in PROCEED. Brighton & Hove will promote PROCEED to the company´s workforce and other bus companies around the UK and will continue using the PROCEED guidelines to further develop the company´s business.
- ETT published the PROCEED project at the II Mobility Forum in the Region of Murcia held on 10-11 September 2009 in Murcia. ETT also published PROCEED at a national Seminar organised by CEDEX in Madrid, on 19 November 2009. ETT will publicise PROCEED during the ECOMM 2010 (European Conference on Mobility Management) which will be held in Graz, Austria on 5-7 May 2010. Also, will be distributing newsletters and pen-drives and advertising the project the project during the CIT2010 Congress, to be held in July 2010 in Madrid. There is also a plan to write an article for a major Spanish industry magazine, journal about the Guidelines.
- The city of EUSKIRCHEN will present results in the advisory board of the company. Furthermore, to all the groups that will visit Euskirchen to study the public transport system in the coming months. These groups are coming from universities (e.g. Trier), from other cities and even from abroad.

7.2. Publishable results

This section provides a publishable summary of each exploitable result the project has generated:

"Guidelines for High Quality Public Transport" – a web-based tool

The "Guidelines for High Quality Public Transport" is a web-based tool designed to help decision makers and transport planners, such as public transport authorities, local authorities, operators, consultants, etc efficiently and effectively develop, upgrade, finance and manage urban bus systems and related mobility services. This tool is intended, in the first instance, to serve to practitioners in urban public transport.

The main goal of the Guidelines is to mention all aspects to be considered when planning high quality public transport. The tool provides solutions based on the study cases analysed, and based on the experience of practitioners from all over Europe. It includes all aspects of public transport planning and operation, such as methods for analysing the market, developing and upgrading the infrastructure, financing of high quality public transport services, managing of such services, marketing strategies, etc. However, the guidelines cannot provide a "ready-to-go recipe" for implementation: Local specific features, such as the size of the city and its structure are dominant, and thus, the guidelines must be adapted to the local context.

The "Guidelines for High Quality Public Transport" can be accessed for free via the project's website *www.proceedproject.net*, and in addition the tool is distributed by the project consortium among stakeholders in Europe via the PROCEED pen-drives.

"Guidelines for High Quality Public Transport" – study materials

The Study materials for education about planning, implementing, and operating High Quality Public Transport are composed of two different documents:

- The "Guidelines for High Quality Public Transport" is the written material - document that synthesizes all findings of the research conducted within PROCEED. It includes data and methodologies and trends to investigate local needs and expectations, addressing the development of marketing strategies. The document also presents examples of best practices that have been identified across Europe. These important experiences have compiled to help decision makers, public transport planners and operators. The document has been edited in word format in four languages: English, French, German and Polish,

- A MS Powerpoint presentation specially addressed to current and future transport planners, decision makers, schools, research centres and universities. The presentation aims at facilitating the lectures of professors or trainers while teaching. It includes a brief overview of the project´s background to understand the origin of the Guidelines, and continues with a summary of the main aspects that characterize the five topics in which the Guidelines have been structured, including examples of case studies. At the end, the presentation pinpoints some general recommendations and includes various final conclusions. The MS Powerpoint presentation is also edited in four languages: English, French, German and Polish,

These two documents will be uploaded in the project´s website and will be downloadable for free for the next 5 years.

PROCEED Case studies' database

The original PROCEED case city database contains 67 case cities and almost 200 items for which data were collected. For several items though, no or only limited information was available. In many case cities figures on costs of operation, personnel, or rolling stock. were either not provided or only provided under the limitation of confidential treatment.

Therefore a selection was made of 60 items on which sufficient and comparable data were collected. The resulting database is publicly available at the PROCEED website. It contains data on the following topics:

1. General characteristics of the city (like number of inhabitants, GDP per capita, or car ownership)

2. Modal split

3. Bus System Characteristics (like service intervals, average distance between and to bus stops, or total length of free bus lanes)

4. Fleet Characteristics (like number of buses, infotainment, average age of the buses)

5. Contract (Tendered/not tendered, bonus/incitement)

6. Performance (like number of passengers, % of the costs covered by the fare box revenues)

7. Monitoring (customer satisfaction, punctuality, cleanliness of the buses)

8. Information and service (real time information available, drivers training, travel guarantees)

The PROCEED project partners intention is to continue disseminating these documents and tools at the local, regional, national and international level to promote and divulge the results of the study and to allow other people to benefit from the Consortium's findings, experience and broad knowledge.