

# ALTERNATIVE PUBLIC TRANSPORT IN AUSTRIA

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## INTRODUCTION

This proceeding is based on a study carried out in the years 2000-2001 (Graf, Kaufmann & Risser 2001) in which the state of the art of alternative public transport systems in Austria was analysed and in which several systems were looked at in detail.

The proceeding will give an overview of different alternative public transport systems and will focus on the traffic safety aspect of such systems. We will also look at the motivation of the planners and operators of alternative public transport systems, what goals they wanted to achieve with the implementation of this kind of traffic system, the user-perspective and what role these systems play in connection with the users' mobility.

The project was divided in several phases: A screening phase in which the State of the art of alternative public transport systems in Austria was analysed. About 80 alternative public transport systems were found in this phase.

The second phase was an interview phase: First a questionnaire was sent to the operators of the alternative public transport systems found in phase one, dealing with statistical questions like capacity, time of operating etc. From those systems where we got back a questionnaire (50 systems) ten systems (five best practice and five bad practice samples) were selected and looked at in detail. In-depth interviews with the operators, with representatives of the cities and with the drivers were made. Finally about 100 users per system were asked about how well the system is working.

In the finalisation phase the following steps were taken: Based on the results of the screening phase and the interview phase guidelines for implementing alternative public transport systems were produced. They include important aspects which should be considered before, during and after implementing an alternative public transport system and they show what errors should be avoided.

## WHAT IS “ALTERNATIVE PUBLIC TRANSPORT”

During the screening phase a workshop with experts were organised in which especially the definition of alternative public transport systems were discussed. According to the results of this workshop the following definition of alternative public transport systems was elaborated: **“Systems which complement or substitute the normal public transport and which are positioned in a traffic concept”**. Starting from this definition we identified the following kinds of alternative public transport systems:

### **“Call-Collecting-Taxi” - Anrufsammeltaxi (AST)**

AST complements the conventional public transport network in special areas and at certain times, when public transport is not able to work cost-effectively. The areas for AST are strictly defined. Within these areas there are fixed stops where AST-vehicles stop, but in general you are able to get to any place you want. The idea behind the AST is that if more people register for a ride, all people will be collected at the (different) stops on a route and will be brought directly to their houses. AST runs within a certain schedule but only if you register your ride by telephone in time. Stops and routes, where no one registered for a ride, are skipped. In some areas AST is integrated into the ordinary public transport system. Tickets for an AST-ride can be bought from the driver. In general the tickets for AST are a little bit more expensive than for conventional means of public transport. The passengers, however, profit from shorter travel times and in addition, they are brought directly to their front door.

Operational area:

- ⇒ In the city centre of large cities and small towns, as link between cities and small villages, in regions as complement of the conventional public transport network after the closing hour (in the evening, at night time, on weekends)
- ⇒ In rural areas as link between small villages and the next town and as loader for bus and railway lines (link to the public transport network): Creation of a new offer (it runs the whole day)
- ⇒ On bus lines with a low number of passengers, in order to close the gaps in the schedule, by offering additional rides by AST, or as complete replacement of the bus line by the taxi line

### **Call-bus-system -Rufbusse**

If the public transport network is not working to full capacity, and if the number of passengers is too high for installing an AST-system, one can introduce a call-bus-system. Another difference to the AST is that the Call-Bus operates only on a fixed route. Like for the AST all requested rides are collected at a call centre, which checks the disposition of rides. The route of the buses is arranged in the course of the ride due to permanently updated travel-wishes. The normal public transport system tickets are valid for a ride.

### **CITY-Taxis**

There is only one difference between a city-taxi and an ordinary taxi: The rate for a city taxi is fixed, as the municipality supports the city taxi financially. This means that the passengers can use this taxi to a fairly low price. City-Taxis are mainly used in cities with 10.000 to 15.000 inhabitants for the down-town traffic. City-Taxis can be used by passengers at any time for any route in the special city area. The ticket is valid for one ride and not for one person. This means that the more persons travel in the same city taxi the lower the price for each passenger is.

## Disco-Buses

Disco-busses are used in rural areas during weekends at night time. The main target groups for this system are teenagers. Disco busses run along a pre-defined route (along local pubs, discos and if requested in areas, where events take place) at a fixed schedule. In general the main aim of disco busses is to offer teenagers the possibility to be mobile without a car.

## PRE-CONDITIONS

What all these systems have in common is that they complement the conventional public transport network in times with low passenger amount (in the evening, by night, on weekends) and in low density areas (rural areas or at the periphery of bigger towns). In times with low passenger amount and in low density areas demand-oriented systems are more cost-effective, and in addition the public transport system is better able to compete with one individual motorised traffic.

However, if one introduces a demand-oriented system, you have to make sure that you find the optimal system for each purpose. Besides it is very important that demand-oriented systems are linked to the conventional public transport system.

Today, the attractiveness of a public transport system is usually displayed with the help of objective figures (classification numbers). Additionally to this, subjective assessments of the users of such systems are of great importance, as they reflect the attractiveness of such a means of transportation. It is therefore becoming more and more important to identify both the subjective components of user-benefits (advantage) as well as benefits of the operators, and to aggregate these indicators.

Three criteria were defined which should be fulfilled when we speak of functioning alternative public transport, according to customer benefits, ecology and economy as well as traffic safety. These criteria were also used to separate best practice samples from bad practice samples:

1. Those people, who are dependent on public transport, can with the help of alternative public transport systems be supplied with mobility means, according to modern standards (customer benefits)
2. People should use the system voluntarily as much as possible, which means that the system has to be so attractive that they also use it instead of their own car. (customer benefits and society benefits)
3. In addition to points 1 and 2 above, the systems should work cost-effectively

## IMPLICATIONS FOR MOBILITY PATTERNS

Alternative public transport systems have theoretically several advantages which are closely connected with sustainable mobility and traffic safety:

- ⇒ Prevention of isolation: It is difficult to supply sparsely populated regions with “normal” transport. For people who do not have the possibility to use a car, which are mainly elderly people, useful solutions like alternative public transport, are needed.
- ⇒ Autonomous living and quality of life: To be independent of other people becomes possible for people who cannot use the car, if there is public transport or alternative public transport systems
- ⇒ Limitation of motorised traffic: Like all public transport systems alternative public transport has the potential to avoid car trips. Many alternative public transport systems in Austria operate during the night with the goal to bring young people back home safely.
- ⇒ Traffic safety: Alternative public transport systems have a great potential to improve traffic safety. This is connected to the fact that people do not use their own cars. Especially in the night, when the normal public transport is not operating, alternative public transport can avoid people having drunk too much form driving on their own. A special case is the concept of the “disco-bus”. (see next chapter)
- ⇒ Social security: Women feel safer if they have the opportunity to use a taxi instead of other public transport forms, like busses or tram. There they will not be harassed.

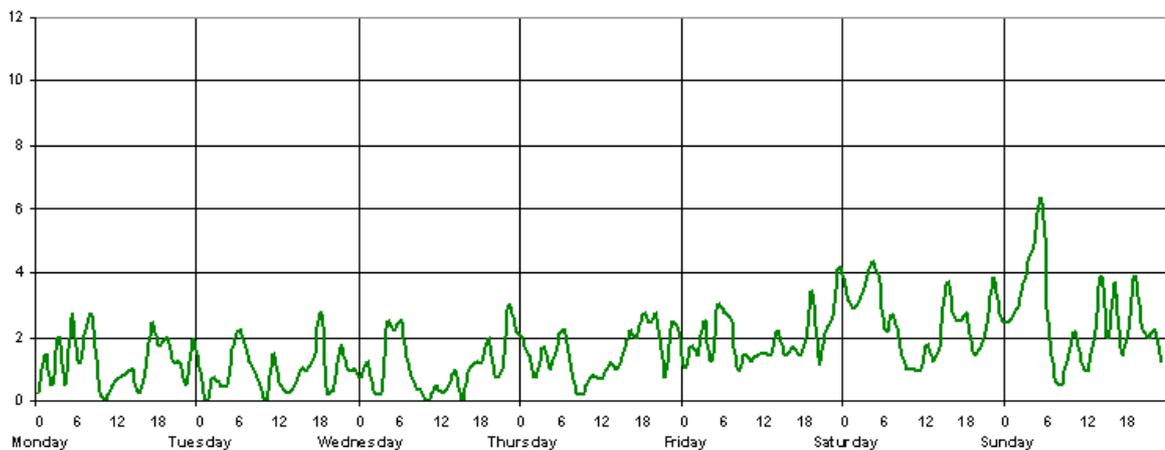
## IMPLICATIONS FOR TRAFFIC SAFETY

As mentioned before alternative public transport systems come into operation in times when the “normal” public transport is not in operation any more, like on the weekends and during the nights.

As you see on the following graph the road accidents in Austria happen especially on weekends between 12 and 6 o'clock in the morning. Similar statistics can be found in Belgium, France, Italy, Spain and Greece. This is the time when alternative public is or could be used to avoid these accidents by providing another mode of transport.

Graph 1: people aged 18-25 killed in road accidents, for each hour and day of the week – rate by population in the age group (per million population; average of last 5 years available)

### Österreich (1997 - 2001)



Source: CARE

The results of the screening phase showed us that in the 80 Austrian municipalities with alternative public transport systems known to us, about 500.000 so-called „risky-trips“ (alcohol, disco) and thus about 2 million person-kilometres are avoided or done in a safer way.

There are of course problems with the data: traffic safety can in this case only be evaluated marginally. Plus: data is very often not comparable – not even nation-wide, which is even worse when trying for a cross-European comparison.

But there are obvious reasons why travelling with an (alternative) public transport is safer than driving on your own.

- Passengers are carried with bigger and more compact cars or busses consequently they are much safer than with a lot of other cars
- The drivers of public transport systems are usually better trained and have more driving experiences than private car drivers
- Drivers of public transport systems or taxi drivers are not allowed to drive under influence of alcohol (0,0 per mil)
- Vehicles of public transport systems are constantly maintained
- Pubic transport systems normally drive slower and more evenly than the individual traffic

Basically one has to say that the influence of alternative public transport systems on the traffic safety of an area (the number of accidents and casualties of an area) in general, is rather marginal due to the usually modest use. Still one can safely assume that alternative public transport systems contribute to avoiding especially accidents during the nights, very often in connection with alcohol, which often end fatally.

It is an established fact that for young drivers the accident risk is particularly high. Especially at occasions such as disco-nights, pub-visits et al. the accumulation of various risk factors like: youth, alcohol, showing off/posturing, youthful abandon, conceitedness, distraction, etc. make the use of car, motorcycle and the like highly dangerous. Alternative public transport systems such as disco-busses have a serious potential to improve traffic safety for adolescents.

To summarise at the end of the project the following results concerning alternative public transport and traffic safety were achieved.

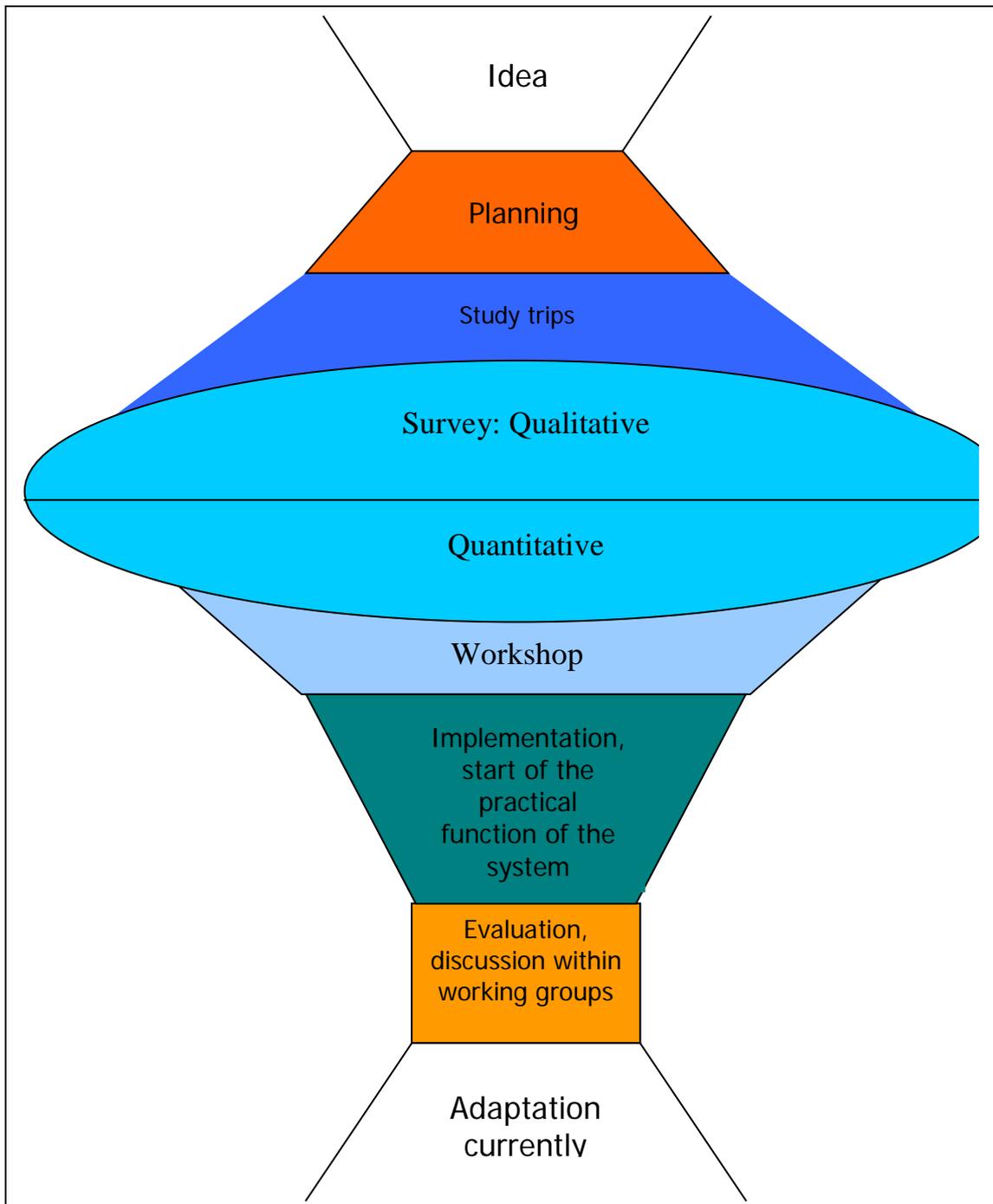
- ⇒ With the option of alternative public transport, risk-groups can be “extracted” from traffic and transported in a safer way.
- ⇒ People having drunk too much who use alternative public transport get home safer than with their own car and do not endanger other road users.
- ⇒ Alternative public transport-systems help to avoid disco accidents. Every 9th case of a disco-accident ends fatally. In Austria nearly 1.000 adolescents are involved in disco-accidents and 50 die every year.
- ⇒ During the last 10 years, accidents in those areas where there are discobus facilities, the numbers of accidents have decreased

## PROPOSAL FOR IMPLEMENTATION

With the help of the results of the questionnaires and from a social science point of view a best practice proposal for the implementation of an alternative public transport system was established which include the following steps:

1. Elaboration of an idea: (which problems should be solve with the help of the alternative public transport system etc.) literature study, first project planning :
2. Study trips: people who are involved in the project planning should travel to cities were already functional systems are operating. The aim of such trips should be to get in contact with the responsible people and the operators to get information about the experiences of the implementation and the current situation
3. Preparation of the qualitative survey: Round-table discussions and narrative interviews with citizens about mode choice, daily trips etc.
4. Standardised questionnaire: Customer questionnaire considering different target groups
5. Working group: Establishing of a working group including representatives from the city, from local enterprises and citizens. Wokshops before the implementation and periodical during the operation (once a year)
6. Currently psychological and social-scientific evaluation: interviews with citizens (similar to point 4), interviews with the staff (drivers etc.). Results should be presented in the workshop (point 5)
7. Technical evaluation: currently technical and economical evaluation on the basis of the actual state of the art. Presentation in the workshops (point 5)
8. Currently adaptation: Based on the results of point 6 and 7 the working group should decide wi

Graphic 2:: best practise approach for the implementation and the operation of a alternative public transport system



## SUMMARY

To sum up if there is a possibility to get home later at night, e.g. after a late night out, having consumed alcohol, some people will renounce in using their own car. They will become non-motorised in the sense that they do not have their own car with them, which of course is enhancing safety under the mentioned conditions.

More generally speaking, the option of getting a fare even later in the night, in less frequented parts of a city or in rural areas can influence the "travelling strategy" of the whole day – people can decide to leave the house in the morning by using public transport, do some trips during the day, e.g. to take lunch by walking, shopping, walk to the pub after work and finally use an alternative public transport system to get home again.

So especially in rural areas and at the boarder parts of a city, alternative public transport ensures the provision with public transport in these areas. The local supply (supermarkets, bakery, newspaper-agents, post-offices, banks etc.) in small towns vanishes because they can not keep up with the big shopping centres. So the ways to get your daily supply like milk, bread, money etc. are getting longer and longer and daily shopping get more and more difficult if you do not have a car or if you are not able to drive a car, for whatever reason. So dependence on the car is getting higher and higher. This problem is even more relevant for elderly people. Alternative public transport can be a solution in the sense that such systems helps to prevent isolation and enhance autonomous living and quality of life. Alternative public transport can ensure to keep people mobile with out having to be dependent on a car.