



Challenges



Solutions

**Towards an Integrated  
Travel Information System**

Good Practices

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# Why is providing travel information important to my business?

What is a public transport information system? It can be defined as the logical arrangement of several independent means of exchanging knowledge between transport actors and travellers about public transport. Travel information itself is all information that is helpful for travellers in helping their journeys end smoothly. The benefits derived from a successful information system are numerous and should not be underestimated:

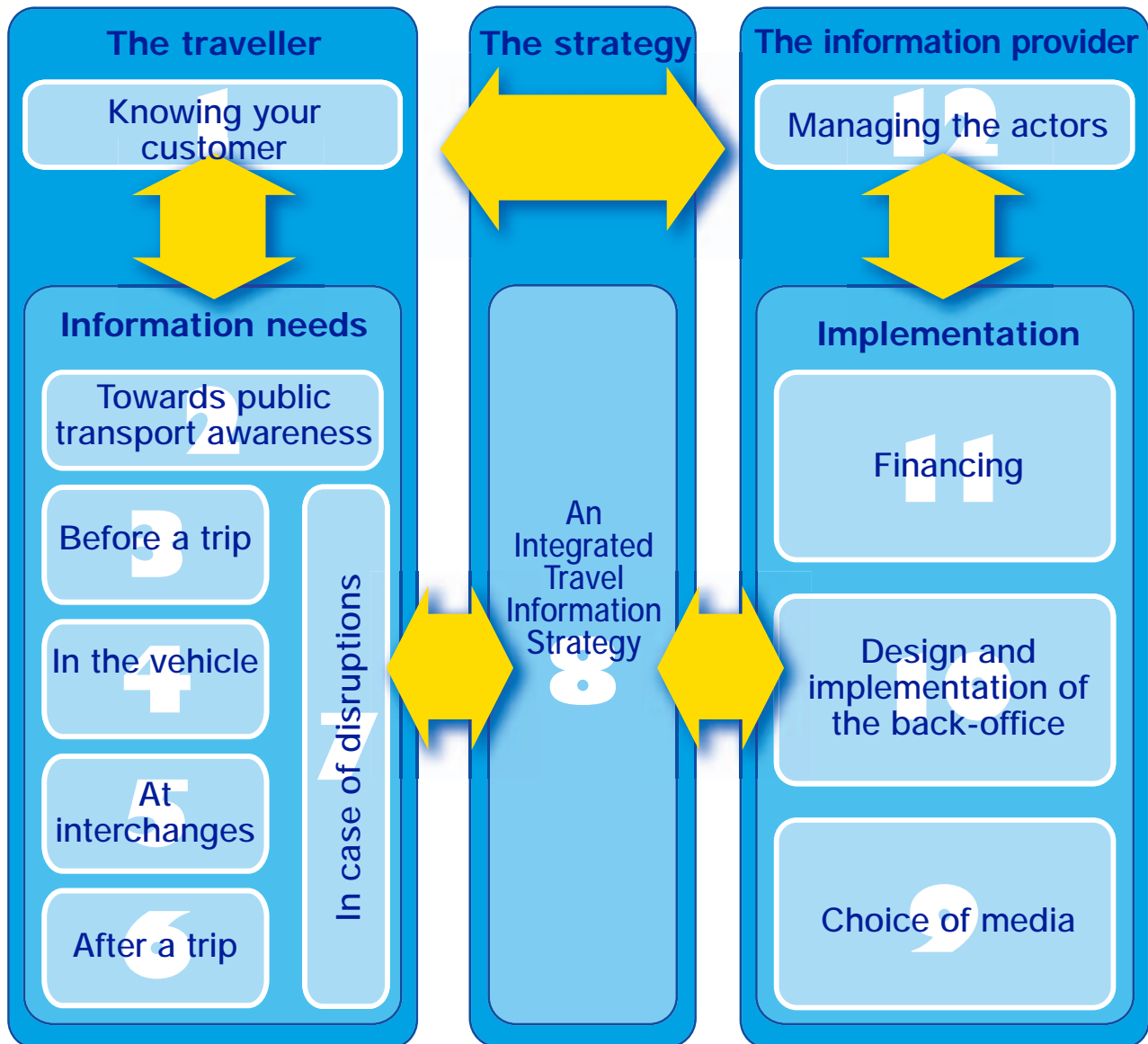
- Having accurate information is crucial in enabling users to fully exploit transport services. Choosing the best itinerary according to personal needs and preferences implies having precise information about the transport system. It is pointless to provide a service if your customers are unaware of it;
- Bringing opportune information to passengers can vastly improve the travelling experience. Time spent waiting for a vehicle or connection, for example, is perceived as shorter if the waiting time is known. It is clear that the experience the traveller has during a journey is extremely important for possible repeat business;
- A strong and coherent communication strategy greatly increases public transport's visibility and profile, which at the end of the day will result in a better positioning of the public transport product.

Effectively, these positive aspects of travel information increase public transport usage. Different research has shown that between 5% and 25% of journeys are not made on public transport solely due to a lack of adequate information. A well-designed communication strategy can tip the balance between failure and success, especially in a competitive context within the public transport sector itself, and furthermore with the private car.

Implementing an efficient public transport information system could be seen as costly, difficult and time consuming. You may wonder if it is worth the effort, but we are convinced that after reading this handbook, you will answer this question with a resounding "yes" and agree with us that high quality travel information is an integral part of the public transport product.

John Carr, Chairman of the UITP working group on travel information

# BROCHURE ORGANISATION



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## CHALLENGE 1: Many customers, many needs

Information needs of travellers are determined by their cultural, geographical and historical background. However, even within a given population these needs will also depend on personal characteristics, such as trip purpose, travel habits (regular user, irregular user, regular user making an irregular trip) and so on.

Some travellers will look for door-to-door solutions, while others are only looking for timetable information on a specific stop. Disabled people will want to know if escalators are out of use, or if support for the blind is available; tourists will appreciate multilingual information, maps and any information that will help them find their way in an unknown city, but on the other hand, they may place less importance on minimising trip time.

Likewise, people will have preferences regarding how they are informed, which will suit their travel experiences gained and ability to use maps, timetables and other media. Finally, travellers will also like to receive different types of information depending on whether they are at home, on the bus, at an interchange, or even at the end of their trip.

All this information could be provided at every stage of the trip, but it would result in bad communication of the information that would really be needed at a precise moment in time. These elements make determining what information is required an extremely hard job.



## Solution 1: Identifying your passengers and their information needs

### Gathering existing data about (potential) travellers

Knowledge is needed about (potential) travellers. Different sources can provide useful data about the characteristics of travellers and potential customers. One can use existing information from within or outside the organisation, such as the experiences of staff in contact with the customers, internal databases with information about the use of the services (e.g. those based on electronic ticketing), incoming complaints, existing market surveys or household surveys, and so on.

### Gathering specific data

Specific data will have to be gathered for very particular travel information needs (e.g. at bus stop level) or differentiated according to the diverse customer groups. Local community meetings, customer panels or user associations can help in these cases. Comparing the information services over different routes and networks (even world-wide) and trying to determine what causes the variations can also be very instructive.

A survey will possibly be required in some cases, implying that various points will have to be taken into account during preparation:

- The interviewed population should be representative, in other words, enough people interviewed at relevant times and places. It is also essential to interview potential clients along with existing ones;
- The questions should be clear, pertinent, unprejudiced and allow efficient analysis. The survey should be repeatable in order to be compared throughout time;

- The questionnaire should be of a reasonable size and, to reduce costs, could be joined to another questionnaire designed for other purposes.

### Pilots

In some cases, however, a survey will not provide satisfactory findings. Travellers will not always know in advance which information service will prove to be the most useful if they have not experienced any. Before implementing a new service throughout the whole network, it is thus worth considering a pilot. Experiences from these pilots will allow the service provider to fine-tune the information service according to the expectations of travellers.





## GOOD PRACTICE 1:

### Gothenburg: Changing typography on the demand of travelers

In Gothenburg (Sweden) many transport users had difficulties reading destination signs on trams, in addition they were found to be unattractive.

This illegibility was due to both the design of individual letters and to how they were combined in so-called word pictures. The former design tried to make the letters as large as possible. The result was that no space was reserved for descenders.

After having received several remarks about it from travelers, Vasttrafik (the public transport body of West Sweden) commissioned a designer to develop binary type faces with optimal legibility for destination signs on trams.

<http://www.trafikkontoret.goteborg.se/gotic>



### Liverpool: Hiring staff members from user groups with special needs

Merseytravel, the organising authority for public transport in the area of Merseyside, around Liverpool (UK), aims to make its public transport network accessible to all. Merseytravel has recruited a number of people with disabilities to positions within the organisation, including a wheelchair user who works in a team dedicated to ensuring that the needs of people with disabilities are adequately addressed in all areas of Merseytravel's work. An early success for this team was the adoption internally of a set of guidelines to ensure that all travel information and publicity items are produced to maximise its suitability for people with special needs.

<http://www.merseytravel.gov.uk>



### Stockholm: Testing the travel information systems by questioning new inhabitants of the city

In 2002 The Royal Institute of Technology of Stockholm (KTH) in Sweden conducted a survey. New students not originating from Stockholm were asked after one month of living in the city to draw a map of the transport system and to mention the difficulties they experienced in using it.

This information was used to understand travellers' learning processes and difficulties experienced when using public transport information. Overall results showed for example that the bus map of Stockholm was slightly confusing and suggestions were made based on the findings to make it easier to read.

<http://www.kth.se/eng/>



## GOOD PRACTICE 1

### The Netherlands : Benchmarking the services by a user association

ROVER, the National Public Transport Users Association was founded in 1999 on the initiative of the Dutch Departement of Transport. ROVER's objective was to define the 'users' point of view' for the public transport policy. One of the first surveys the association performed was based travel information related.

Experienced travellers were asked what would really help them in their travels regardless of technological possibilities. The survey found that the most important need would be individualised travel information in cases of disruption. Research was made in other countries about the experiences with applications covering this travel information need. Based on this a national real time travel information system for public transport through mobile phones (IRIS) was developed and is now ready to be launched.

<http://www.rovernet.nl>



### SARAJEVO: Survey shows 16% drain of travellers due to lack of information during disruptions on the network

The method consisted in carrying out a survey on passengers at stops selected at random and through a questionnaire on the KJKP GRAS web site.

Results showed that around 5,000,000 journeys per year (compared to 174,000,000 effective public transport journeys) are not made with public transport in Sarajevo (Bosnia-Herzegovina) due to the lack of information. Another finding was that 16% of passengers drain from the network due to a lack of information in case of disturbances.

This information has led to the development and launch of a new strategy for traveler information including visual traveller information at stops like timetables and available capacities on the vehicles, as well as information on traffic delays.

<http://www.gras.co.ba>





## CHALLENGE 2: Attracting people to public transport

For a lot of journeys, people often forget to even consider public transport as a possible solution. This can be due to many reasons, ranging from a negative image of public transport, for example, as a poor substitute to the private car, to the unawareness of existing public transport solutions. Whereas public transport should become the first option people think of while planning a trip.

In some cases, sub-branding will be needed for additional or particular services, different operators, or specific target groups. The difficulty here will be not to affect the public transport brand as a one-stop solution.



## SOLUTION 2:

# Creating a strong public transport brand

### Creating awareness, a positive attitude and making public transport a first choice solution

Before any further information can be provided for travellers, they should be convinced that public transport could offer a way out of their transport problem and even be a better solution to private alternatives. A positive attitude has to be communicated and conveyed to the public transport sector; both with staff and users. Finally, public transport has to be brought to the forefront of travellers' minds, so that when planning their journeys, people think of it as a possible, if not automatic solution. To achieve these goals, a branding strategy should be clearly defined, preferably for public transport as a whole, and take all of these factors into account.

### An integrated brand

The aim of an integrated brand is to present a co-ordinated visual picture of public transport and avoid confusion in the mind of the traveller. To avoid competition, the authorities and operators need to develop a strong collaboration in accordance with their respective mission, and within the framework of a branding or co-branding partnership. The most appropriate way would be to let an organisation integrating all public transport actors it deals with.

An appropriate logo and brand should be prominently displayed throughout the whole transport system i.e. on all public transport vehicles, at stops, stations, in advertisement and at interchanges. Travellers will thus

perceive the public transport system as a one-stop solution.

### Differentiated branding

Once the relationship with the traveller is established, and without endangering the integrated brand, additional targeted branding of products and solutions towards customer groups might be needed.

In most regions, different operators are active and/or different services are provided. This is the case in a competition context where different operators want to be assertive about their specific identity towards their customers. (i.e. the travellers and organising authorities) Separate branding can also be of importance when the transport infrastructure becomes large and complex. In the event of this happening, it can be useful to differentiate the various services according to their speed, geographical coverage, quality, frequency, accessibility for people with disabilities, operational hours (e.g. night service) or any other specificity.

At all times, however, the different types of services or operators should be perceived as different transport possibilities within a single, global and integrated public transport supply.

The bottom line of all this being that the image projected be in concordance with the quality of the transport services.

## GOOD PRACTICE 2:

### Helsinki: Targeting specific groups of travelers

Helsinki City Transport (Finland) has carried out advertising campaigns targeting specific groups of travellers.



The first campaign targeted car owners. A letter was posted to them offering information on public transport in Helsinki such as maps, timetable books, even possibly a brochure according to the area of the city in which they live and a free 10-trip ticket.

Around the same time another campaign was launched targeting teenagers. Postcards were distributed to them during the trip to write down their experiences during the journey. Through a partnership with a local radio station it was arranged that the best stories were read during a popular Sunday afternoon radio programme. A clear rise of certain percentages of the modal share of public transport was observed after both campaigns.

<http://www.hel.fi/HKL>

### Vienna: A decade of consistent marketing went together with an increase of the market share of more than 10%

Wiener Linien (Austria) has been extensively developing branding since the early 90s within a comprehensive and offensive marketing strategy. The evolution of the brand was based on the development of the values established in the 70s when all mobile citizens could travel with Wiener Linien. In 2000, citizens wished to travel with Wiener Linien who is now aiming to provide a service for citizens who love to travel with them by 2010.



In addition to the logo and slogan "The city is yours. Wiener Linien", the company chose a uniform and homogenous use of marketing tools and gave the brand a human touch to help make customers feel personally engaged with the company. It did not take long to attain successful results: a change in the market share of public transport from 29% in 1992 to 33% in 2000 was observed with the aim of reaching a target of 35% by 2010. By 1999 and 2000, indicators of passenger satisfaction rose by more than 20%.

<http://www.wienerlinien.at>

## GOOD PRACTICE 2

### Stockholm: Different brand for different type of services

The buses in the Greater Stockholm area (Sweden) are branded differently depending on their function. The red buses provide travellers with regular bus services whereas the blue buses are more comparable to a light rail service. The blue buses do not only run on lines at a very high frequency, but also can circulate quicker thanks to being given priority at traffic lights and reserved bus lanes. On these lines real-time travel information is provided as well. This differentiated branding proved to be useful also for new or infrequent travellers, since this hierarchy of lines allows them to understand the network more easily and thus lowers the barrier to using the public transport network.

<http://www.sl.se>



### London: A public transport brand known all worldwide

The adjacent logos will probably ring a bell and especially the one of London Underground, even with people that have never been to London (UK) before. When travellers see this logo they will automatically associate it with public transport and be reminded of the public transport solution. This famous and quite simple logo is not only being adapted for the different transport modes in London, but also outside London where some networks are using an adapted version to indicate the presence of public transport in the city.

<http://www.tfl.gov.uk/tfl/>



### Cambridge: 20% travellers more in less then two years through a product redevelopment

After a thorough review of the transport market and the existing public transport offer in Cambridge (UK), in November 2002, Stagecoach implemented an entirely re-designed product. A simplification of the network took place to 5 lines. Three of the lines have buses running every 10 minutes, where the two others have a frequency of 2 buses per hour. Busses run at this frequency from the beginning till the end of the day. The development of this new service went together with a marketing campaign and the provision of high quality travel information all over the network. Today, every single bus is provided with a city map, departure times in list format, frequency headline and journey times between stops. This was not the case in the past. Travellers have highlighted new buses and especially better and more accessible information as key improvements, the pocket size timetables and the city guide were particularly welcomed.

<http://www.stagecoachbus.com/cambridge/index.html/index.html>



## CHALLENGE 3: Making people confident to chose public transport

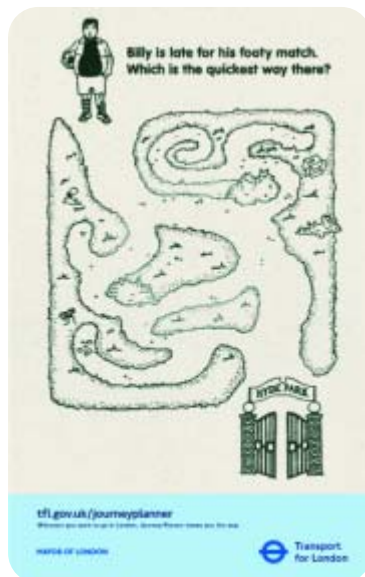
The choice of transport mode will largely depend on the confidence the traveller has in successfully ending his or her journey. Travellers who consider making use of public transport still need to be guided towards the service and learn how to use the information.

In most cases, public transport solutions will require a combination of different services often supplied by different service providers. Due to this, travellers will find it difficult to have a transparent view of the complete journey and to be confident that different trips connect well.

In the context of competition with private transport modes, it is important to realise that a large part of the difference is made before the trip. Travellers with private transport modes are often less demanding towards trip planning due to a general feeling of flexibility during the trip itself, explained by the fact that the traveller is in control of the vehicle and route choice..

Furthermore, once a traveller owns a car the access to it is very low. Boarding the vehicle and paying the journey are quiet straightforward, which is too often not the case for public transport.

This explains why even though the private mode regularly provides the traveller with a less optimal transport solution, many people will still choose it as their main means of transport.



## SOLUTION 3: Providing user friendly planning and pre-trip information

Before even checking timetables and routes, travellers need to be convinced that making their trip on public transport will not be too tedious.

The confidence that they have in reaching their destination largely depends on

- The amount of effort it will take to prepare the journey;
- The expected availability of information on the journey from beginning to end;
- The (sound) reliability of the information that is provided before the trip.

Ideally, travellers need to find all the information in a personalised and easily accessible way.

### Integrated information

Integration of information of all public transport service providers should take place, so as to give the traveller the full picture of what public transport can offer. For example, centralised contact points should be made available for a whole country or region through a website or via a unique telephone number. This will not only provide an integrated solution for travellers, but also help avoid confusion caused by different ways of communications by the different service providers.

### Where to provide information

Some travellers will prepare their trip well before starting the journey, whereas others will immediately go to an access point of the public transport network and plan their trip from there. This is why information should be accessible from all kinds of locations:

- At home (e.g. via the internet and phone);
- At major service points (e.g. libraries, shopping

centres, museums, offices, restaurants, cinemas);

- While on the move (e.g. via mobile phone, SMS or on-board vehicles);
- At all access points of the public transport network (e.g. network maps or electronic kiosks at bus stops).

### Information content

In order to bring the traveller to the public transport network, information should be provided about:

#### - Uses in and around the public transport network

It is clear that under ideal conditions these should be the same for all services in the area, regardless of the operator:

- **The public transport language:** Reading timetables and network maps can be difficult if the traveller is not used to it. Information should be provided to learn how to understand travel information before and throughout the journey.
- **Tariffs and means of payment:** The barrier to using public transport will seriously decrease as travellers will know how, where, when (e.g. when to pay during multi modal journeys?) and of course how much they should pay in total. It is important to note that electronic means of payment can make it easier to use public transport. Like the key of a car they provide access to the public transport network without worrying too much about the cost of the journey.
- **How to board the vehicle:** Travellers should be informed about notable matters like:
  - Points where they can wait for the bus (e.g. can the shelter at the other side of the street be used?),



## SOLUTION 3

- Whether the driver will stop at every bus stop or whether the traveller should signal to the driver to stop,
  - If the vehicle should be boarded at the front or the back.
- **Trip-planning information:**
- **How to get to the bus stop:** The start of the journey is seldom an axis point of the public transport network. Therefore, information is needed on how to reach it in the most efficient way. The route indicator can include street names and well-known landmarks, and information can be provided on the availability of (guarded) bicycle storage, car park facilities, and so forth.
  - **Alternative services:** The optimal solution can differ according to the traveller. Some will prefer a direct bus line nearer their home while others will prefer a rail-solution and will not bother using private transport for the first part of the journey. Information about the different options public transport provides should be available. The ideal public transport solution can also depend on the special needs of certain mobility impaired travellers, such as parents with prams, visually disabled, the elderly, and the physically handicapped. Information about these specific services should be provided even before trips are planned, since it could influence the chosen solutions.
  - **The journey itself:** information is needed on the

overall journey like timetables, connections, frequencies, transfer points. Information about (regular) disturbances or overcrowded services should also be provided.

- **Additional information:**

There is further information that could also influence the confidence travellers have concerning the public transport solution or the modal choice in general:

- Information on how to finalise the journey after having left the public transport network;
- Information about possible solutions for the return trip;
- Information about the weather, road conditions, road traffic, availability of parking at the destination, and so on.



## GOOD PRACTICE 3:

### Barcelona: Multi-languages public transport planning web site

Travellers who are only occasionally in a city like to plan their journey in advance. For these travellers a website is an ideal planning tool. Unfortunately they often do not speak the local language in which the website has been developed.

Barcelona (Spain) has created a website that can be used in Catalan (the local language), Spanish and English. The application identifies the shortest itinerary to commute within the 20 suburbs of Barcelona, combining all bus services and metro lines. A description of the available transport solutions, number of stops and transfers, as well as the required time to allow for the journey is provided. The development of the website involved the integration of different databases and the coordination of 13 different transportation companies.

The service can also be provided through other (mobile) interfaces like WAP, which displays the chosen itinerary on a map, so travellers can even get a feeling of where they are during their journey.

<http://www.tmb.net/camins/source/ingles/formVullTMB.jsp?op=TMB>



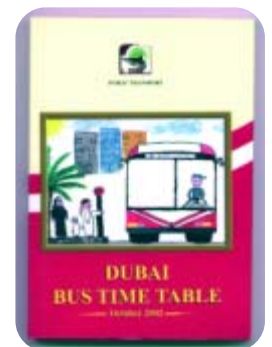
### Dubai: A smart pocket handbook

The public transport department of Dubai (United Arab Emirates) has edited a smart pocket book for traveling in the area around Dubai by bus.

Simple and complete, it provides timetables, maps and useful indications to travel in the urban area, both in Arabic and English.

The first pages of the pocket handbook also give all kinds of contact details (internet, telephone, P.O. box) and inform the traveller about the uses on the network.

<http://www.dubaipublictransport.ae/>



## GOOD PRACTICE 3

### Frankfurt am Main: Mobility centres as a key instrument for multi-modal information



For the last ten years, mobility centres have been built in different European countries. These centres are staffed kiosks where the general public can find information about multi-modal travel information. Mobility centres not only give information face-to-face but also work through other channels such as websites and telephone centres. Not only can individuals find solutions for their transport problems at the mobility centers, but also larger traffic generators such as companies, schools or event organizers can be helped. In a market of increasing competition mobility centres play an extremely important role as objective multi-modal information providers.

<http://mo.st/public/demosites/demosite.phtml?id=127>

### Leipzig: Dedicated public transport maps for leisure

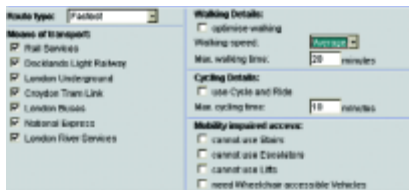


Leipziger Verkehrsbetriebe (LVB) GmbH the operator in Leipzig (Germany) has found that there is big potential for leisure trips in the area. Four maps have been developed, each one on a specific leisure theme (gastronomy, sports, business and culture). The major attractions in the leisure field were brought together and indicated on a map of the city together with the main public transport lines and stops necessary to reach them, clearly marked on an overlapping network map. Over 150,000 of these leisure maps have been diffused among tourists as well as inhabitants. Today other German cities are adopting the concept.

<http://www.lvb.de/>

### London: Web journey planner for mobility impaired travellers

For mobility impaired travellers even the smallest of obstructions can seriously endanger the success of their journey.



The journey planner on the website of transport for London gives special attention to mobility impaired users. While being able to request the optimal transport solution on the website, the traveller can adapt solutions on different criterias such as not using stairs, escalators or lifts, needing access with a wheelchair, and so on. If required, the traveller will be provided with a detailed description of the solution

<http://www.tfl.gov.uk/journeyplanner>

## GOOD PRACTICE 3

### Rouen: Creating awareness about public transport among new inhabitants

The municipality of Rouen (France) organises a reception for its new inhabitants four times a year. The public transport operator TCAR has taken this opportunity to create awareness on the public transport network in the city with a stand where maps and other information are provided as well as a free public transport ticket for one day. The newcomers are also invited to take a bus trip through the city to become more familiar with the uses on the network. In addition new inhabitants are made aware of the possibilities of public transport and in this way they are able to create a mental map that will define their future mobility patterns in the city.

<http://www.tcar.fr/>



### Washington: Information about bike facilities

The website of the Washington metropolitan Area Transit Authority (WMATA) in the USA provides information about all facilities for cyclists on the public transport network. The aim is to convince people that it is easy to combine cycling with public transport.

Information is provided on the equipment available for taking bicycles on both buses and metros, and also about storage facilities at stations.

<http://www.wmata.com/metrorail/bikes.cfm>



## CHALLENGE 4: Making interchanges less stressful

Interchanges are often the most stressful part of a trip, as important decisions have to be taken in a very short space of time in what is often a complex and unfamiliar environment. The feeling of uncertainty is a pertinent problem at an interchange and due to this they are often perceived as breaks in journeys.

Unfortunately, an interchange occurs in practically every journey, be it a bus stop where the traveller arrives or leaves by foot or a huge metro station where connections with long distance trains can be made. The public transport experience largely depends on what the traveller has to go through at transfer points.





## SOLUTION 4:

### Defining an interchange information strategy

Providing adequate information guides the traveller in making a smooth transfer; a feeling that one has had a problem free trip.

Given that only a short amount of time is available at transfers, special care must be taken to make the information as clear and easy to understand as possible. Providing information will also largely decrease travellers' uncertainty during the transfer, the waiting time at the interchange and throughout the rest of the journey.

Especially at larger interchanges, but also at smaller ones, a strategy should be developed at the interchange level, in order to guarantee effective travel information. The interchange manager should make sure that this coherent strategy is implemented and maintained, taking into account all transport modes and operators and their travel information systems.

The information provided at an interchange should largely depend on the different characteristics of the station itself such as size and environment. A bus stop in a rural area will probably require less travel information than an interchange station where different modes connect at one interchange. People living in a residential or rural areas planning their journey will need different information to those at a city centre interchange where knowledge of the different services and functions would be more important. In general, following information should be taken into account:

- **Recognisable within the surrounding environment:** An interchange station will often be the entry point to the public transport network. Whether people arrive at the interchange by car or by foot, they should be able to easily recognise the interchange within the surrounding environment. The interchange should be visible with a logo or the colours of the public transport network and name of the stop or station. A surrounding map with a “you are here” indicator will help travellers to orient themselves and plan the rest of their journey.

- **Directions within the interchange:** Very clear directions should be provided to guide travellers from their point of arrival at the interchange station to where they will proceed to board the vehicle, even if the different stops are within clear sight of each other (e.g. two bus stops at each side of the street). For every possible transfer, directions have to be clearly marked so that the traveller does not get lost in the station. Large or complex interchanges should have clear, large-scale plans or diagrams indicating the location of the various stops and relevant route numbers and directions. In addition it should also be clearly indicated which bus is calling at what bus stop. Finally, attention should also be paid to specific problems concerning the interchange and specific target groups. Interchanges are extremely difficult for people with reduced mobility, therefore, detailed information is needed for them.

- **Trip planning information:** In some cases a connection may have been missed or the traveller may not have been able to plan his whole trip. Therefore, all information and devices for trip planning should be



## SOLUTION 4

available at interchanges. Ideally, the information should be adapted to the interchange itself indicating the main destinations that can be reached directly, nearby destinations, route diagrams including well-known landmarks and street names, maps, etc. In general, this information will also reconfirm and thus reassure the traveller throughout the rest of the journey.

- **End of trip information:** All those wishing to leave the public transport network will do so at an interchange station. Therefore, information has to be provided so that they can orient themselves and finalise their journey.

- **Scheduled or real-time departure times:** Displays and timetables with scheduled or, ideally, real-time departure times and passage time for each service are needed at an interchange. Information on disturbances and possible delays throughout the network will help to reassure the traveller.

- **Boarding information:** Before boarding the connecting transport mode, users have to be sure that they are boarding the right vehicle. It is therefore essential that the destination, service number and a brief route description are clearly displayed on the front and side of vehicles.

- **Additional services:** Waiting time at interchanges is perceived twice as long as the time spent on a vehicle. This is possibly the ideal moment to communicate with travellers. They can be given information on services such as alternative routes, new services, fares, payment procedures, special discounts, services for targeted groups, the meaning of symbols used on the network, etc. It is also important to provide information on the

interchange station itself such as notices about pickpockets, security in the interchange station and what can be done in cases where the traveller needs help or assistance. This will in turn reduce feelings of insecurity while waiting. Finally, in order to make time pass quicker travellers can be told about the additional services available at the interchange station such as shops and other facilities or even be provided with news and entertainment through newspaper or TV-monitors.



## GOOD PRACTICE 4:

### Bologna: Information system for blind people

In general bus stops are used by different bus lines. It is not easy for sight impaired travellers to be sure that buses calling at a stop at a certain moment is the one they want to board and not a bus following another line. Sight impaired travellers are not able to recognise the vehicle or at least have difficulties reading the displayed line number. Installing an audio infrastructure, however, at bus stops is often not possible in city centres, for example since surrounding inhabitants will not appreciate hearing announcements every few minutes for the majority of the day. ATC, the main public transport operator in Bologna (Italy) has provided its sight-impaired travellers with portable radio devices that receive messages from radio transmitters at the bus stop. Information about calling buses is automatically detected by the radio transmitter from the GPS based automatic vehicle monitoring system.

<http://www.atc.bo.it>



### Gelderland: Improving static information at all bus stops

The province of Gelderland (The Netherlands) developed a new concept for static information at bus stops. In order to define this new concept a partnership was set up with ROVER (the national user association) and a graphic design company. Various national and international solutions were examined and discussed before testing the first design with a panel of travellers. Their comments and recommendations were noted and further developed by the project group.

The current bus stop information was converted into an “information column”, which is particularly important for stops with no shelter. The information panel itself was optimised and standardised regarding content and form. A different design exists for regional bus stops and for those in urban areas. Even before the final evaluation of the initiative took place other provinces in the Netherlands took over the concept, proving its high quality.

<http://www.gelderland.nl/smartsite.dws?id=168&goto=1995>



## GOOD PRACTICE 4

### Gothenburg: Kiosks for orientation within an interchange

An information kiosk with six LCD monitors shows real time departure times from the different stops at the major public transport interchange in Gothenburg (Sweden). Tens buses and trams call every hour at different corners of Brunnsparken one of the main squares within the city. In order to help commuters easily find out what side of the square they should board their connecting bus or tram, one of the monitors shows a map of the square with real-time information on arriving and departing vehicles. In this way a system of signposts guides the passenger to the right stop. At one side of the kiosk an interactive travel planner can be found for eventual (re-) planning of a journey. Static information can also be found on white bars showing numbers, destinations and stops for each line.



<http://www.trafikkontoret.goteborg.se/gotic/>

### Hanover: Static information about tickets and fares

Static panels are displayed at interchange stations in Hanover (Germany) providing travellers with information on how much they should pay for their journey. Information is clearly provided on the different fare zones and different types of tickets (following age or social group). Finally displays explain how ticket machines work.

<http://www.uestra.de>

### Hong Kong: 4200 photographs of bus stops to guarantee smooth transfers at interchanges

KMB, the largest bus operator in Hong Kong (China), transports more than 3 million travellers each day on its 400 bus routes. In a huge city such as Hong Kong that has plenty of advertisements in the streets, it is not always easy to find a bus stop. Therefore, photographs of over 4,200 bus stops were put on the KMB website. The photographs help travellers to find their bus stop for departure as well as for transfers. The KMB website provides comprehensive and up-to-date information on the services and can receive up to 4 million hits every day.

<http://www.kmb.com.hk/english.php?page=search&prog=route.php>



## GOOD PRACTICE 4

### Paris: A travel information strategy on the level of interchange stations with static information

RATP, the main operator in Paris (France), has applied a strategy on all its interchange stations for helping travellers during transfers. For the choice of colours and fonts, studies have been carried out to make the contrast between the black or white characters on coloured backgrounds as clear as possible. At the same time difficulties experienced by colour-blind travellers were also taken into account.

Today 15 different colours are used in a systematic way in all interchanges in Paris to indicate different lines so that travellers can be guided during transfers. The colour for exits is blue over the whole network, for example.

<http://www.ratp.fr>



### Wales: Real time information for travellers at rural bus stops

This new application implemented in Wales (UK) brings real time information (RTPI) to residents of rural areas, via mobile telephones (SMS) and landline enquiry services. At this stage it has only been implemented on three bus routes that cover some of the most rural parts of the counties of Gwynedd and Conwy. These services link residents from very rural areas (average population densities of 40 people per square km) with small towns. A six-digit code has been attributed to every single bus stop so that travellers can request real time departure times via SMS, WAP or the Internet whenever they wish. In this way long waiting times at remote bus stops can be avoided.

[http://www.gwynedd.gov.uk/adrannau/economaidd/bws\\_gwynedd/index.english.htm](http://www.gwynedd.gov.uk/adrannau/economaidd/bws_gwynedd/index.english.htm)



## CHALLENGE 5: Minimising uncertainty during trips

When travellers are in a public transport vehicle, they can experience uncertainty since control of the trip is not in their hands but in those of the operator. While riding they basically have nothing to do and tend to constantly check whether the trip is still going as planned. This concern can lead to further questions.

In case of a disruption to the service, the need for information will probably be even more important as it might influence the rest of the journey. Travellers are locked up in a vehicle they do not control, so they cannot undertake any kind of action.



## SOLUTION 5:

# Turning travel time into communication time

Since travellers are in a vehicle that they are not driving themselves, they have time on their hands. This can be a real opportunity for the service provider to communicate with them. Communicating with travellers can reduce the feeling of uncertainty and answer questions they might have about the rest of the journey, and it can also be used to develop a long term relationship with the customer.

Information could be provided about:

- **The trip:** In order to reduce the doubts caused by the inability to control the vehicle, it is extremely important to provide travellers with information on the progress of the trip itself:
  - **Route number and direction** can reassure travellers about having boarded the correct vehicle;
  - **Detailed information on the line itself** such as the travelling time to main stations or stops can help evaluate the progress of their trip;
  - **The name of the next stop and possible connections** will avoid travellers missing their intermediate or final destination. At the interchange or bus stop itself the name of the stop and the main road should be displayed so that it is clearly legible from inside the bus;
  - **Providing real-time information** is especially valuable when a service is not running according to schedule.
- **The rest of the journey:** Time spent in the vehicle can be used to gain knowledge of the situation beyond the next interchange:
  - **Integrated information on connections** with other lines and operators, and possibly about disturbances is of high interest for the traveller. If delays occur, information should be provided on the expected duration of the delay so that travellers do not feel the situation is out of their control. Ideally, they should be told about possible alternatives;
  - **In some cases the traveller will have to (re)plan their trip** out of the vehicle, so possible alternatives for connecting trips should be provided automatically. Otherwise a network map can be of assistance. The telephone number of a call centre could be displayed in the vehicles.
- **Additional issues:** The trip itself can also be the ideal moment to communicate with the traveller on relevant but not directly related transport information:
  - **Information about how to customise the infrastructure** of the vehicle like the heating, radio, access to electricity for computers, a desk for writing can make the trip for the traveller more pleasant;
  - **Information about the public transport services** such as alternative routes, new services, fares, payment procedures, special discounts or services for targeted groups, the meaning of symbols used on the network, etc. can easily be communicated ;
  - **Destinations** that can be reached easily via public transport such as libraries, museums, markets and other places of interest can bring about awareness amongst travellers using public transport for a future trip;
  - **News and entertainment**, but also information such as job announcements can also give an extra value to the use of public transport.



## GOOD PRACTICE 5

### Region Nordost: TV-monitors for travel information and entertainment



DB-Regio, a regional train operator in Germany has installed TV-monitors in its trains for different uses. The TV-monitors provide travel information to indicate the next stop, alternative routes in case of disruption, entertainment like cartoons, general information such as news and weather forecasts and finally advertising.

After a few months of implementation surveys showed that thanks to these new TV monitors 82% of travellers felt well informed about the transport service, 62% found the DB-regio service more attractive and 22% would use public transport more often.

<http://www.bahn.de/>



### Brussels: Leaflets for general information during the trip

STIB, the public transport operator in Brussels (Belgium) has detachable leaflets in all its trams and buses. These leaflets give information on temporary changes in the network, new tariff systems, extra services during events and other public transport related information. In addition to this travellers can also find advertising for festivals in the city centre, discount vouchers in shops and restaurants along the public transport line, and so on.

<http://www.stib.be>

### Helsinki: Journey planners on cell phones to help travellers during their trip

The new public transport journey planner for the Helsinki region (Finland) can be used to search for the best travel options between chosen points. The system is based on the public transport register for the whole region, which includes all services and stops. This transport register covers all forms of public transport in the region: buses, trams, the metro and local trains. Introduced in autumn 2001, it is also available on the Internet and as a mobile phone application (SMS and WAP). The latter application particularly helps travellers during their journey. Helsinki is probably also the first city where public transport tickets were sold on a large scale through the mobile phone.

<http://pathfinder3.meridian.fi/yty/eng>



## GOOD PRACTICE 5

### Johannesburg: Using public transport as an opportunity to communicate with citizens

The majority of citizens in the area around Johannesburg (South Africa) use public transport. Communication in and around public transport has proven to be the best way to transmit messages of major importance to the whole population. Buses are used for advertising campaigns to create awareness about HIV and AIDS, for example.

According to a study conducted by the Centre for AIDS Development, Research and Evaluation (CADRE), people have started to change their sexual behaviour, partly as a result of education campaigns made on the public transport system.



<http://www.un.org/works/campaigns/busint2.htm>

### Paris: Next stop information in vehicles

Buses and metros in Paris (France) are equipped with different devices that automatically provide voice announcements and digital displays to indicate the next stop. In addition the journey time necessary to get to major stops are provided. In addition, static information is available showing the public transport line and connections. Finally, network maps are fixed inside the vehicles in order to help travellers evaluate the progress of their journey.



<http://www.ratp.fr>

## CHALLENGE 6: Helping travellers to reach their destination

The end of the public transport trip is only rarely the final destination of the travellers. They still need to find out how they can accomplish the last part of the journey either by foot or on another mode of transport. Leaving travellers at their last public transport stop without help will mean they lose a lot of time.

Apart from that, the end of the public transport journey is the last chance for a contact with the customer and thus a last chance to deal with potential displeasure about the service.



## SOLUTION 6:

### Providing information about the last mile

Especially at the end of the public transport journey, it is important to make sure that travellers will evaluate the full journey as positively as possible. After the journey, travellers will be able to evaluate the efficiency of the chosen transport solution in various ways: objectively, subjectively, consciously or unconsciously. When the evaluation is negative they will discuss their experience with other travellers. Travellers should at least feel that a professional, caring service provider transported them.

- **The last contact:** Just before the traveller leaves the public transport network, remaining questions, complaints, and so on have to be dealt with. Contact details of the service provider, i.e. a telephone number or an e-mail address should be clearly mentioned at all exits of the public transport network. In larger stations, a staffed desk can even be foreseen for this purpose. Travellers may also need contact information regarding lost property and suggestions for improving the service.

- **Future transport solutions:** Information can be provided in preparation for future journeys of the travellers. The traveller might need to make his return trip at night using a special service, or maybe the actual trip was only the first part of a multi-stop journey that is not necessarily leaving again at the actual stop. This is also a good

opportunity to inform travellers about other services that might match their needs better than the current one, like direct lines, first class services or additional services that are relevant for the specific stop or station (e.g. a delivery service at the stop in front of a shopping mall).

- **How to leave the network:** Travellers need to know exactly where they have disembarked the public transport vehicle. Very often they will leave the public transport network at an interchange station or a large crossroad. At complex interchange stations travellers should be guided to the exit of the station. Once in the street, a location map should show exactly where and at what side of the street the traveller has stepped out of the bus or tram.

- **Finalising the journey:** Large-scale maps showing the street names, main attractions and public buildings in the surrounding area of the stop are to be developed so that travellers can orient themselves towards their final destination. In some cases, another transport mode may still be needed, a taxi or a shared car, for example. Information will help to find these services easily.

- **Additional services:** Additional information like tourist attractions, libraries or museums near the bus stop or town information in general can be provided to the traveller as an extra service.

## GOOD PRACTICE 6



## Amsterdam: Electronic information desk providing dedicated free street maps

Since 1995, electronic information desks provide free maps in stations in Amsterdam (The Netherlands).

On a touch screen travelers can put in their final destination be it a specific address, a company, a shop or a public building. After 15 seconds a map on paper is printed. The map shows the shortest path from the station to the final destination of the traveler. This electronic information desk allows travelers to easily finalise their journey.

<http://www.infostop.nl/index2.html>

## Berlin-Brandenburg: Trip planner with additional information for finalising the journey beyond the national border

The public transport authority Verkehrsverbund Berlin-Brandenburg (VVB) in Germany provides a journey planner (VVB Fahrinfo) on the Internet with different kinds of additional information for finalising the journey.

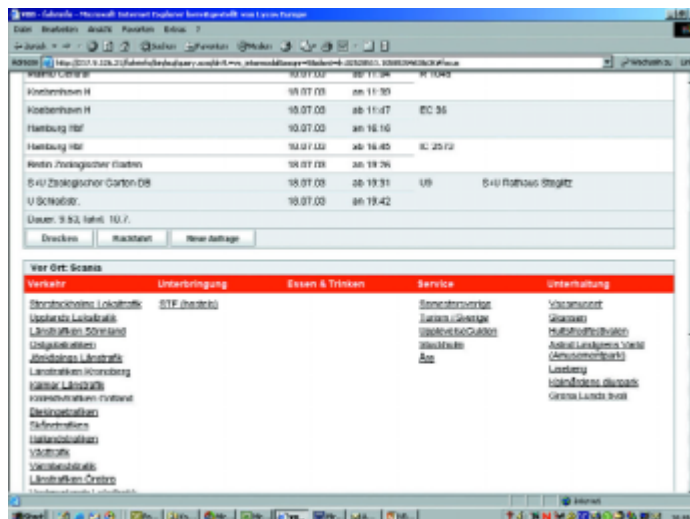
Travellers can find information for example on taxi services they may use as a part of their journey.

Information on directions and fares that must be paid from the last public transport stop to

travellers' destinations will be given. The same kind of information is also given for trips by demand responsive public transport services.

International travellers will find the ideal connection to reach the airport. This service is provided in real time so that plane delays are covered in the journey planner. The information provided goes beyond the national border, since VBB made deals with some regions in other countries. Travellers will find information about hotels, restaurants, mobility centres, local public transport services, tourist information and other additional services in Sweden, for example.

<http://www.vbbonline.de>



## GOOD PRACTICE 6

### London: Leaflets for future trips

Extra buses were put in to service in London (UK) as an alternative for over-crowded underground lines. When leaving the network, travellers packed like sardines during their underground journey, were provided with leaflets showing them alternative bus routes calling at the same station. Underground travellers, who are very often not used to the bus service, subsequently discover that in a lot of cases buses provide a faster and less crowded service without transfers. The result is an optimised use of the network for the operator and the organising authority.

<http://www.tfl.gov.uk>



### Munich: Journey description until the very end of the journey

Journey planners often only provide travellers with information from one public transport stop to another. However, in most cases the traveller still needs to go further after having got off the public transport. On its Web journey planner, Münchner Verkehrs- und Tarifverbund GmbH (MVG) in Germany provides transport solutions right until the traveller's destination. Maps and directions can be downloaded and printed to finalise the journey by foot, bicycle or car.

<http://www.mvv-muenchen.de/>

07:35 dep. Pullach			S-Bahn S7
08:17 an. Neubiberg			Kreuzstraße
			about 3 minutes
08:22 dep. Neubiberg			Regionalbus 211
08:32 an. Pullbrunn, Kirchenzentrum			Eggenling, Schule
08:32 dep. Pullbrunn, Kirchenzentrum			about 5 minutes
08:37 an. Schule Pullbrunn			about 0.3 km

### Paris France: Local maps at stops help to finalise the journey

RATP, the public transport operator in Paris (France) provides large-scale maps of the local environment of bus stops or metro stations. The maps show street names, monuments, and other public service areas like parks. The grid maps are linked with an alphabetic legend.

For underground stations, the different exits are clearly indicated and named. These maps help travellers to orient themselves quickly and allow them to reach their final destination by foot easily.

<http://www.ratp.fr>





## CHALLENGE 7: Coping with disruptions

There are various reasons for disturbances within the network. Some are planned (e.g. maintenance on the network, an event or demonstration), however it may not be possible to predict others (e.g. a car parked on a tramline or congestion due to an accident). It's clear that it's much more difficult to react in the latter case. Unfortunately, customers tend not to make a difference between planned and unplanned disruptions, as for them the service they expected was not provided.

Even the smallest unexplained service disruption can transform the journey into an extremely bad experience from a practical point of view, i.e. missing connections or important appointments, and also emotionally, i.e. bewilderment and anxiety. It is extremely important to deal with these situations appropriately. Unfortunately, not all travellers will react in the same way and as a result expectations can seriously differ.

Research has shown that if waiting time is uncertain and it goes on for longer than 3 minutes this will create dissatisfaction and decrease confidence in the quality of the public transport service. At the end of the day, unhappy customers will talk about negative experiences to ten other people and seven positive experiences are needed in order to make up for only one glitch in customer care.



## **SOLUTION 7:**

# **Keeping the traveller informed about disruptions**

### **Informing the traveller**

Providing information on disturbances can radically change the situation for travellers. When an incident occurs, information must be given to those who are affected by the incident itself, but as well as to other travellers on services that might undergo changes with the goal of bringing the traffic process back to normal. Travellers distressed by having no control over the vehicle they are riding are reassured if they are informed about:

- The fact a delay has occurred;
- The cause of the delay;
- The consequences;
- Routes, destinations and stops that are affected;
- Alternative routes;
- How much time the disruption is expected to last.

By keeping travellers informed, they can make their own choices about how they want to proceed, have a sense of freedom and subsequently opt for a solution that fits their needs better. Some may use the delay as an opportunity to run other errands and may perhaps even choose to catch a later vehicle.

The knowledge that information is available or will be available if something goes wrong, creates a general climate of confidence. Regular announcements can be envisaged so that travellers know that everything is following a certain schedule.

### **Developing a strategy for disturbances**

During disturbances any contradictory information should be avoided. For a planned disturbance this

means that the full travel information infrastructure should be checked and adapted where needed.

For unforeseen disruptions a strategy has to be developed that can be rolled out in a minimum amount of time. An efficient system for incident management requires a specific form of organisation and professional management. The strategy has to be realistic and robust. It must be clear which part of the staff is going to be deployed in order to resolve incidents and serve affected passengers. Therefore, appropriate staff training has to be foreseen in order to select the right people for the job. After every incident the strategy needs to be evaluated and adapted where needed.

### **Acting as a professional service provider**

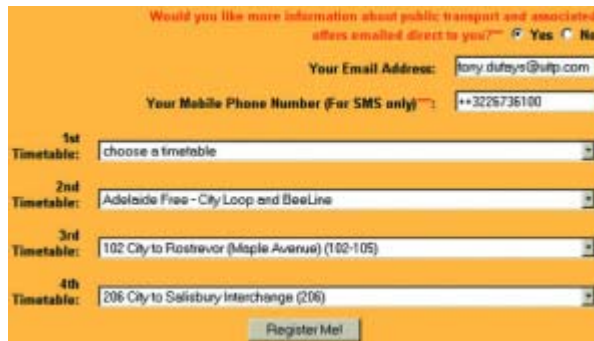
When travellers decide to take advantage of the service on offer, they are effectively placing themselves "at the mercy of the public transport operator." Therefore a degree of trust is required in the work carried out by the Incident Management team. In the event of an incident, customer expectations are especially high regarding the service provider. Giving information quickly and handling the impact of an incident professionally demonstrates the company's competence and offers the firm the chance to prove its distinctive service.

Professionalism is also about being able to deal efficiently with customer complaints. As a result, the location of customer services desks or contact details should be announced during the disruption at hand so travellers can either speak directly with a member of the team or send a letter of complaint.

## GOOD PRACTICE 7

### Adelaide: Individualised email or SMS to announce service changes

Adelaide Metro (Australia) has introduced an SMS service that notifies travellers of any service changes that affect public transport lines they frequently use. When the service changes the traveller will be one of the first to be informed through an SMS sent directly to their mobile phone, or via email. Travellers simply need to register their mobile phone number and/or email address on the Adelaide Metro site, along with any timetables relevant to their travel needs.



Would you like more information about public transport and associated offers emailed direct to you? ☐ Yes ☐ No

Your Email Address:

Your Mobile Phone Number (For SMS only):

1st Timetable:

2nd Timetable:

3rd Timetable:

4th Timetable:

<http://www.adelaidemetro.com.au/feedback/mailing.html>

### Hanover: TV-monitor as a flexible communication medium

Üstra, the operator in Hanover (Germany) has equipped its vehicles with TV-monitors, each device consisting of two screens. One is dedicated to entertainment and the other is for travel information only. During regular trips, information about next stops, connections and driving times are automatically provided. When incidents occur on the network, however, the TV-monitors are a very flexible information medium through which an operator can provide messages to the traveller in addition to the ones provided through voice announcements.



<http://www.uestra.de>

## GOOD PRACTICE 7

### Jonkoping: Meticulous real-time information reflecting the status of the services

Sweden is well known for real-time travel information systems at public transport stops since their implementation in 1991 in Gothenburg. The system, recently implemented in Jonkoping, another city in Sweden, goes even further than the already high standards of Gothenburg's travel information system. The IT-radio system creates a direct link between what travellers see and what is shown on devices. Whereas in the past the information on devices were only updated approximately once a minute, now information is given at the exact moment the bus departs the bus stop.

<http://www.jlt.se/citybus.htm>



### Leipzig: A mobile desk to provide people information in case of disruptions

It was identified in Leipzig (Germany) that insufficient information was one of the major reasons why people do not use public transport. Therefore 3 years ago the Leipziger Verkehrsbetriebe started developing an "information network". This network provides a high density of travel and service information using different information channels. One of these channels is the 25 "mobile service people" who provide information at main interchanges and can be easily moved in cases of emergency. It is known that in spite of good and high technological information devices, especially people who do not often use public transport still prefer and have more trust in information they get through face-to-face contact, be it from professional staff or other travellers.



<http://www.lvb.de>

## CHALLENGE 8: Developing a consistent travel information strategy

Once the customers have been identified and their travel information needs are understood at the different stages of the journey an information strategy has to be defined. However, the business reality of the service providers will also have a huge impact on the strategy through the different partners that are willing to cooperate or not, the available budget and the concrete choices towards solutions. The different aspects of information needs and implementation are all interacting with each other in different directions. Defining a consistent travel information strategy out of all these interactions is a real challenge.



## SOLUTION 8: Covering all information needs with efficient solutions

### From vision to strategy

Before working out a concrete strategy a clear vision is needed. This vision will be based on the general strategy of the organisation and its targets. The detailed analysis of travellers' needs must be confronted to the business reality of the service providers. The strategy has to integrate both, while providing for clear missions, objectives and plans.

In order to make sure that the strategy will be adopted, the different internal and external actors have to be involved in the development of it. At every stage, people involved in the design of the information strategy (and its implementation) should keep in mind that issues that appear trivial to them may be difficult for the travellers to grasp, as they are not in constant contact with the transport infrastructure.

### An integrated approach and a unified language

Ideally, travel information should be coherent on the level of the whole public transport network in an area, so that in the eyes of the traveller, the public transport solution seems integrated. To achieve this aim it is important that information is not fragmented between different operators or transport modes. It should follow a characteristic presentation across different media and communication channels, make coherent use of logos and standardised pictograms, signs and even fonts and use coherent colour-codes across the whole information system. It is already difficult enough for travellers to learn the public transport language; so they should not be obligated to learn a different dialect for every different service provider.

		Stages of a journey:					
		At home before a trip	Arriving at the PT-network	At an interchange	In a vehicle during disturbances	Leaving the PT-network	Etc.
Traveller profiles and purpose of journey:	Irregular user going to a shop						
	Commuter going to work						
	Commuter on irregular journey						
	Tourist sight seeing						
	Visually impaired traveller visiting family						
	Mobility impaired traveller going to hospital						
	Child (<12y.) going to school						
	Youngster visiting friend						
	Etc.						

Application covering needs



## GOOD PRACTICE 8:

### Adelaide: The Chain of Information Program

Adelaide is a sprawling city in South Australia with a population of 1.1 million.

However the population is growing at a rate of less than 0.5 % whereas car ownership is growing at 2.8 %. Budget restraints limited high tech system wide solutions or major investments in the public transport infrastructure.



Three years ago a programme of information under a comprehensive information-marketing concept was launched. This resulted in a growth of patronage of an average of 3.4%t per annum, reversing the trend of a declining public transport.

The Chain of Information Programmes recognised that once an existing or new customer was prepared to put the Adelaide Metro system to the test, they revealed a need for service information. This needed to be addressed locally and reinforced at each decision point of the journey. It also recognised that the obvious presence of this information in the community would attract and reassure customers of the public transport system in its own right. In this way information is brought to the customer and the community.

<http://www.adelaidemetro.com.au>

### Copenhagen: A long-term strategy for relevant, recognisable and consistent travel information

A clear strategy for travel information is especially valuable when changes take place in the services. Service changes will affect travellers' habits and as a consequence, they may feel lost or get annoyed. HUR, the Greater Copenhagen Authority (Denmark) aimed to find a communication concept that would overcome these kinds of problems. To achieve this, it should be easy to recognise travel information straight away. Furthermore, it should be consistent in terms of how and where the information is provided and relevant in terms of giving the right people the right information.



A new design was developed that uses yellow as the main colour combined with a white area defined by a distinct flick. The white area is used for a sub-brand and a descriptor called TrafficInfo.

The sub-brand and descriptor are written in a specially developed typography to make it easy to distinguish one from the other.

## GOOD PRACTICE 8

Also the language to address the travellers has been changed to make it more direct, straightforward and positive.

Finally instead of putting the same information everywhere, a hierarchy of communication and messages was developed based on the premises of each media.

<http://www.hur.dk/trafik>

### **Madrid: A consistent image among all public transport partners**

In the Madrid region (Spain) different public owned and private public transport companies operate together. In 1986, a Regional Transport Consortium (CRTM) was created. According to the Law by which the CRTM was created, one of its goals was to provide travellers with information using every type of means, ranging from paper to new technologies such as a web journey planner, as well as the creation of an overall image of the public transport system.

The information programme of the CRTM takes into account not only the different types of users, but also the information oriented to attraction centres, applying a global and homogeneous approach to all the information. CRTM publishes public transport maps and guides for tourists, students of the different University campuses, shopping centre visitors, workers at office centres and industry estates, leisure travellers including walking and biking routes, etc. The role of the public transport authority is one of coordination, updating of information and making sure that the image of the public transport system is consistent.



<http://www.ctm-madrid.es>

## CHALLENGE 9: Choosing the ideal medium for travel information



After having decided what information should be distributed where, when and to whom it must still be decided through which medium the information will be communicated. Different media will prove to be optimal for these different combinations of situations. Other aspects will also play a role in the final choice of the medium like the devices that are already in use, the financial resources or all kind of operational aspects. The choice of a communication medium and the devices that go with it is a daunting task and there is no single answer.



## SOLUTION 9: Matching travellers' needs and characteristics of communication devices

### Elements influencing the choice of media

The choice of the medium can be influenced by different factors:

- **The contact time:** Travellers tend only to be willing to read or listen to information for a certain amount of time. This contact time will also depend on the stage of the journey. At transfers, for example, sometimes only a few seconds are available for providing information. In some cases, travellers will be looking for the information themselves where in others the initiative of providing information has to come from the service provider (e.g. in cases of disturbance). For all these reasons communication devices should not only be chosen very carefully depending on the situation in which they will be used, but also the design should be adapted in order to provide the information within the available contact time.

- **The needs of the user:** Different travellers will prefer their information to be provided through a different medium even at the same stage of a journey. This may have something to do with the fact that some travellers have reading or hearing difficulties, are not used to new technological devices, need more information to be reassured or need information in a different language (e.g. tourists). Some information should be provided in an individualised manner to specific groups of travellers, in order not to overload other travellers with information. It is clear that the choice of the medium should be adapted for the user.

- **The possibilities of the service provider:** Choices will be influenced by the available budget and the priorities in the defined strategy. If an additional information channel is needed, it should be evaluated whether a high-end solution is realistically seen possible to implement and to maintain in the long run. In some cases cheaper alternatives can be chosen that are not necessarily worse in reference to communication. In some other cases, information will already be distributed through a similar medium and it should be evaluated following the priorities on whether or not the available budget should be used for improving or expanding the existing medium rather than implementing a new one).

### Media for communications:

Different media for communicating travel information are being used by service providers. Here is a list of the most important ones:

- **Printed information:** In spite of the new technological developments of the last decades, printed information will always be very important means of communication with the travellers at every stage of the journey. Printed information can range from freely available leaflets at help desks, information on the back of tickets, printables from the Internet, detachable leaflets in vehicles or stations to mailings to customers, and so on. The design of printed information requires very clear thought processes and possibly market research, since information like public transport maps and timetables attempt to simplify and explain the inherently complex public transport offer.

## SOLUTION 9

- **Displays:** All kinds of electronic or static displays are used on the network like in the streets as network directions or logos, in vehicles to announce next stops, at interchanges for timetables and so on. Electronic displays have the advantage that they are more flexible towards changes in services and can even be used for providing real-time information. On the other hand they are often more expensive and their maintenance much more complex as they are sometimes more likely to be vandalised and in certain situations they are not as clear as traditional static displays. For both electronic and static displays the design and message are extremely important as in most cases travellers will not have much time to read them.

- **Enquiry desks:** There are a whole range of enquiry sources, ranging from a basic digital touch screen to staffed desks. It is possible to find enquiry offices situated near main stops of the network or at interchanges, in central areas of the city or at major attractions like shopping centres or museums. Using even different sources of information next to each other does make sense. For example a touch screen can be placed next to a staffed desk for use when the desk is closed or when there is a long queue.

- **Staff:** For many people the preferred way to obtain information is still human contact. Every member of staff of the service providers should be prepared and trained to deal with questions travellers' inquiries in a professional way.

- **Other travellers:** An important source of information for travellers is other travellers. Hence, maps and timetables should be available on the network as supporting material for the information travellers might exchange.

- **Telephone services:** A single telephone number and call centre should be set up that is available at least every day around the most important operational hours. With the growth of mobile phones, travel inquiries are no longer only made before a trip but at every stage of the journey. Travellers call the operator from inside the vehicle in case of disturbances. This means that modern call centres must have access to the latest real time operational information.

- **Internet and other mobile devices (WAP, SMS, etc.):** Journey planners on the web often prove to be used for planning a trip. The vulgarisation of PDA's, mobile phones with WAP, etc., means that this medium is being used more and more as an information tool during the journey.



## GOOD PRACTICE 9:

### Abidjan: Communication through the national press to change behaviour of youngsters on the bus

SOTRA, the main public transport operator in Abidjan (Ivory Coast) had to confront a dangerous and deadly phenomenon called "Bôrô". The "sport" practised mainly by youngsters, consists of climbing on the roof of a bus, standing up on it and then surfing on the bus while in motion. It is clear that accidents were caused and buses were delayed.

SOTRA therefore launched a campaign through the national press in order to make the whole population aware of the risks and the nuisance they cause other citizens. Today, youngsters have almost stopped practising "Bôrô".

<http://www.bnetd.ci/partnr/sotra.htm>



### Bologna: Virtual staff at bus stops

For financial reasons it is not realistic to have staff members available to help travellers at all bus stops. However, despite all the new technological developments, staff members are still the preferred source of information for travellers. ATC, the public transport operator of Bologna (Italy) has therefore developed interactive devices that have been installed on several bus stops in and around the city of Bologna.

The device is made up of a button, a screen, microphones and a camera. On pushing the button travellers are directly connected with a call centre. The workstation of the call centre operator is equipped with a web-cam that allows audio-visual communication with travellers.

The operator in charge is able to provide information concerning timetables, disruptions, fares, as well as other services offered by ATC. The devices have been very well received with travellers feeling more secure, especially late at night, since in cases of an emergency request, not only can the camera register everything, but also the operator can immediately notify the police or ask for ambulance intervention.

<http://www.atc.bo.it>





## GOOD PRACTICE 9



### **British Columbia: Remote bus stops powered by solar energy for a better readability of travel information at night**

Providing electricity at bus stops in remote areas is often expensive. However it is precisely these remote stops that would benefit the most from lighting during the night, since these stops are often in rather dark places, which makes it difficult to read the information displayed at bus stops. This is one of the reasons why BC transit, active in British Columbia (Canada), has installed solar powered bus stops. Solar energy is generated during the day to be used at night for lighting. Providing light at bus stops has even more advantages such as the fact that travellers do not have to wait in the dark and bus drivers can easily spot waiting customers at bus stops.

<http://www.bctransit.com>

### **Hong Kong: Customer Service Centres**

Conveniently located at major transport hubs, 7 Customer Service Centres provide travellers in Hong Kong (China) with, one-stop public transport services. Travellers can go to the centres for information on routes, complaints or other suggestions and remarks, tourist information, payments, sales of souvenirs and so on. The centres are a major pillar in the customer relation management strategy of the Kowloon Motor Bus Company.

<http://www.kmb.com.hk>



### **Leicester: Waiting for the bus on the mobile**



In November 2000, the city of Leicester introduced, together with other partners active in the public transport business, a real-time information system through SMS known as "star track ". To obtain bus information, passengers just have to enter the bus stop code into their mobile phone and send the message and a rapid reply will provide the waiting time for the next buses from the chosen stop.

The accurate information provided by the system does not only inform travellers, but also allows them to minimise time spent at bus stops, which is also an important personal security benefit. By the end of 2003, 300.000 requests will have been answered.

[http://www.leics.gov.uk/highways/press\\_releases/2002/11/01.htm](http://www.leics.gov.uk/highways/press_releases/2002/11/01.htm)

## GOOD PRACTICE 9

### **METRO-news paper: Free metro newspapers for entertainment and public transport communication**

During the last decade free newspapers have been appearing on several public transport networks in the world. In some cases the publication of this newspaper was a private initiative, independent from any public transport actor. However it was mainly the public transport operator or organising authority that took the initiative. The main aim of these newspapers is to be an independent means of communication and to bring regular news to travellers during their journey on the network. In addition, the newspaper is a good opportunity for the public transport operator or authority to communicate with its customers on a daily basis.

<http://www.freemetro.be>



### **Stockholm: Providing efficient travel information to passengers with the help of wirelessly connected employees**

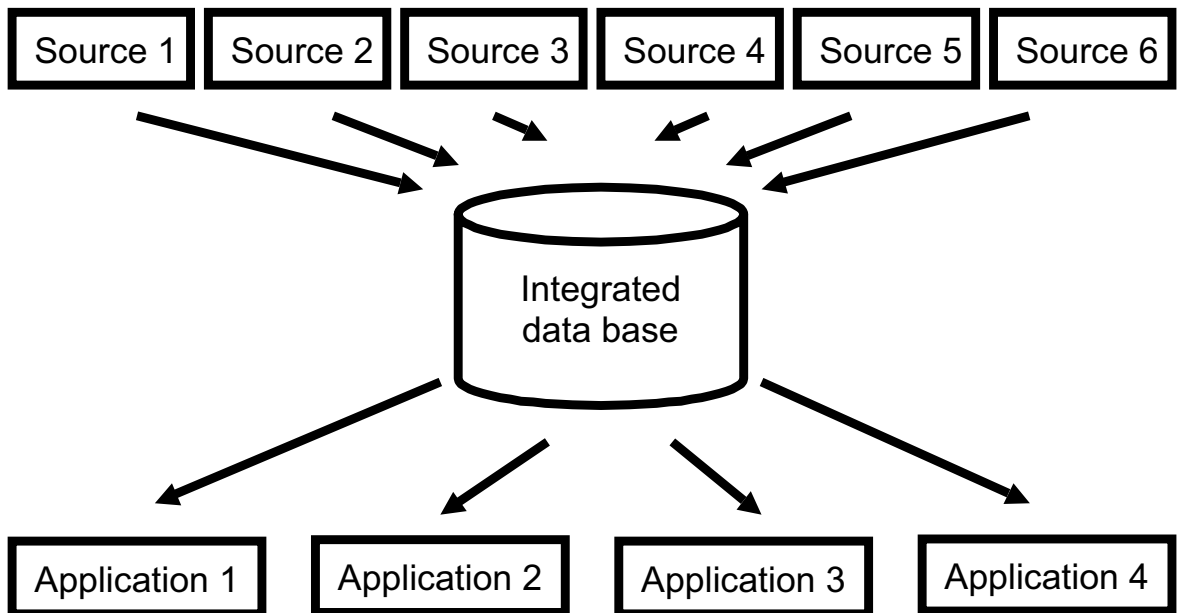
SL, The Stockholm Local Transport Authority, and Connex, the operator of the Stockholm (Sweden) subway, have introduced a new wireless information concept to their employees called "workspot", relying on wireless hand-held devices, high-speed local wireless networks and an innovative software platform. The system enables "contextual services", i.e. applications that spontaneously "appear" on the screen of mobile devices, depending on the location of the employee (and thus the device), the time and the profile of the user. Information is given to employees, and possibly directly to travellers if they have a device that can be connected (PDA). Wirelessly connected employees can receive information about operations in real-time, so they can answer any questions from passengers about traffic, traffic disruptions, connections, proximity services, and so on.

[http://www.connex.se/sweden/projekt\\_um/](http://www.connex.se/sweden/projekt_um/)



## CHALLENGE 10: Setting up an information system

Whether you are planning to implement a very basic information strategy or one with state of the art real-time travel information, gathering all the necessary information and structuring the back-office will, in practice, be extremely complex. It will be even harder to make the integrated system work if the current systems, strategies and applications are taken into account. Last but not least, the entire system or strategy needs to be maintained, monitored and controlled in order to guarantee that it will work in the long term.



## **SOLUTION 10:**

# **Creating a coherent architecture and a maintenance plan for the back-office**

### **An analysis of the available sources and applications**

Setting up systems for gathering data and collecting information is very costly. Therefore, before starting from scratch, it is often worth checking what is already available and what might be of use. While some additional data may have to be compiled, the majority of it will most likely be available 'in-house' or from other actors in the same sector:

- The rolling stock department can provide real time information and information about disturbances;
- The planning department can give maps and timetables;
- The administrative department can supply information about peak hours, passenger volumes, booking information, fares, etc.;
- The communication or marketing department can provide general information, and so on.

### **A clear vision**

Creating an information system will be facilitated if there is a precise idea of the final result that is being aimed for. It is useful, therefore, to define the information requirements at the different stages and the applications that would ideally be implemented (see all earlier chapters). Objectives and strategies must be clear and translated into operational goals. At this stage choices represent the basis for the complete system and will have a huge impact on the final result in many ways such as the information the customer will hear or see at a certain point and the financial implications of the project. Prioritisation is essential in order to develop the project.

### **Design of the architecture of the back-office**

Once it has been decided which information should be provided where, when and how, it is possible to begin the design of the (virtual) integrated database and the full back-office.

In order to achieve an efficient working system, a framework has to be developed that communicates how the different parts of the information system and their relations have been integrated. In addition to the necessary information, it should also show the different actors involved (e.g. staff and external partners), their roles, responsibilities and relations, the type of information that will be used and its flow through the system. The level of detail of the architecture will depend on the complexity of the information system.

The architecture has to be developed in such a way that realistically speaking a reliable and steady data flow can always be guaranteed. When selecting the sources that will be used, the following criteria should be taken into account:

- Source and data reliability;
- Definition of data and indicators;
- Compatibility of data and systems;
- The rate at which the data will have to be collected and distributed.

## SOLUTION 10

### Implementation of the back office

Even though efficient design and preparation are prerequisites for successful implementation, the efforts made are often underestimated. Possible problems include:

- Hardware that does not fit in with the end-user devices, vehicles, and others;
- Unreliability or insufficient capacity of some of the system's key parts;
- migration and integration from existing systems due to inaccurate definition of the present system during the planning phase;
- Underestimation of the required time and financial resources;
- Unnecessary complex design of the system;
- Use of non-proven technology parts with a need for unexpected problem solving;
- Additional requirements that were not foreseen during the planning phase.

### Involving the staff

Travel information is certainly not only a matter of technology, software and hardware, but everything will stand or fall with the human factors. The staff of the service provider has a big impact on increasing the efficiency of information systems and will need dedicated training.

### Maintenance of the back office

Once implemented, every system needs to be maintained and updated. In addition, the cost, resources and responsibilities for this maintenance are

often underestimated or even not foreseen, which could prevent the system from continuing in the long term. From a very early stage, implementation and maintenance have to be considered since often some minor choices and investments at the design and planning stage can greatly increase cost effectiveness and the reliability of the system.



## GOOD PRACTICE 10:

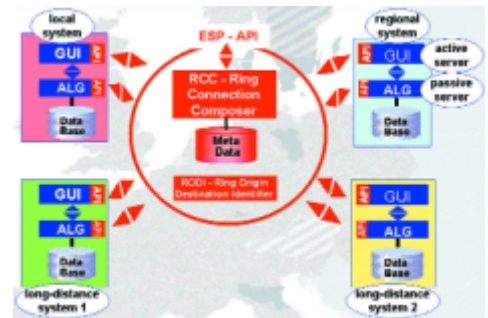
### EU-SPRIT: A Distributed system for a European wide journey planner

Launched as an EU-funded project, EU-Spirit aimed to provide travellers with a customer-friendly, door-to-door public transport journey planner for the whole of Europe. The information system is based on a web search engine that links different existing regional web journey planners in Europe.

High service quality is obtained thanks to the distributed approach of the architecture. The distributed approach is also less costly as it minimises technical and administrative efforts.

Thanks to the integration of the different existing local journey planners, travellers can now get seamless travel information for international journeys from and to the partner regions. Today even international trains and flights are included in the provided transport solutions.

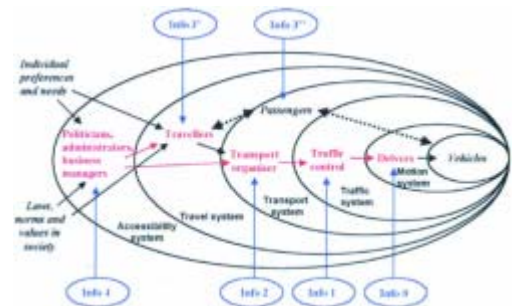
<http://www.eu-spirit.com>



### Gothenburg: A system approach for travel information

For nearly 2 decades, the city of Gothenburg (Sweden) has been constantly improving its travel information system. Since the system is being built section by section, it is important to keep a global view and have strategy for the system as a whole. Therefore a conceptual model has been designed. A hierarchy of functional levels show five dynamic processes to be found in transportation (accessibility, travel, transport, traffic and motion processes).

<http://www.trafikkontoret.goteborg.se/gotic>





## GOOD PRACTICE 10

### London: One journey planner, many applications

When Transport for London (TfL), the organisation in charge of all transport issues in the capital of the UK, developed the journey planner for their Internet site, they decided to use an XML based interface. This allows for the development of other channels using a structured industry standard interface. Today, the journey planner has already been tailored to other services, through a dynamic and static PDA application, SMS and WAP applications. In addition a text based web interface is available to ensure accessibility. Opportunities to utilise this include the potential development of an interactive voice application allowing even wider access to the already rich functionalities of the TfL journey planner.



<http://www.tfl.gov.uk/journeyplanner>

### Paris: One system for different uses

RATP, the main operator in Paris (France), has several location-based applications currently running. Its 4000 buses are permanently localised through a Global Positioning System (GPS). This information is used for providing travellers waiting at bus stops with real-time information about the arrivals at the bus stop. Another application supplies the necessary data for announcements on buses such as next stop messages. The GPS is also the basis for not travel information related applications like the monitoring of the fleet. With this information the network manager can build an equivalent operational management center to those of metro systems. Finally another major application using the location-based data is the security and emergency system. In addition to the 4000 buses, 160 intervention vehicles are also equipped with the GPS. In case an incident occurs on one of the buses, the bus driver can put its bus in "alarm". Furthermore, knowing the location of both the intervention vehicles and the buses allows the security agent to send the closest intervention vehicles to the "alarmed vehicle". In addition the information is transmitted to the local police who can intervene quickly if needed.



<http://www.ratp.fr>

## GOOD PRACTICE 10

### Singapore: A wireless network to ensure a stable data transmission

Huge data transfers will result from the implementation of large information technological systems between moving vehicles and static places on the public transport network. On occasion, for example during disruptions, peaks in transmitted data can occur. It is especially during situations such as these that a stable system is needed in order to guarantee that the data is directly transmitted without fail. In Singapore (Republic of Singapore) a system using 802.11 Wireless LAN technology has been deployed at each station and depot for the distribution of multimedia data in trains. The TCP/IP's Multicast distribution protocol was deployed for the distribution of the massive information via the Wide Area Network (WAN) allowing wide geographical coverage.

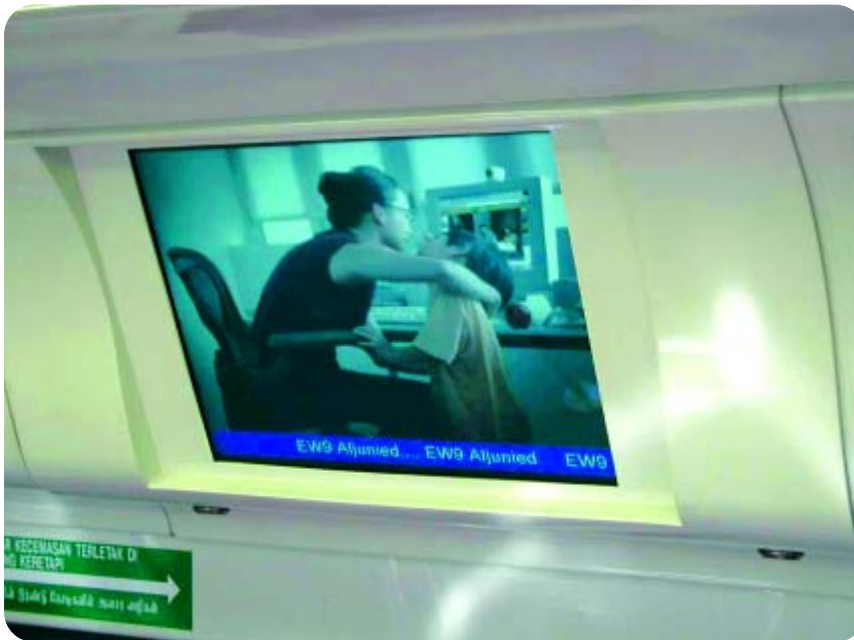
In order that the system can support differing data with self-recovery built into the data distribution, a Messaging Protocol (GUSM) was designed. With these frame structures in place, each end node of the network will be able to receive or request all message frames transmitted from the system.



[http://www.lta.gov.sg/public\\_transport/index\\_pt\\_travel.htm](http://www.lta.gov.sg/public_transport/index_pt_travel.htm)

## CHALLENGE 11: Turning information into a profitable investment

Setting up a strategy for high quality integrated travel information is expensive. At first sight, outsiders often perceive travel information systems as expensive projects without any clear return. In many cases it is extremely difficult to estimate the expected return on investment in advance. Once implemented it is still difficult to evaluate the benefits, since improvements in travel information often go hand in hand with other changes in the services or the demand.



## SOLUTION 11: Evaluating the full returns

### Travel information as an entire part of the public transport product

Without any information it will be difficult for the traveller to know about and use all the services public transport provides. It is like buying a new car without a manual or explanation from the car dealer. As customers are needed to make the high investments infrastructure and transport service profitable, the traveller must be given travel information as a full part of the product.

#### Direct return:

- **Additional customers:** When evaluating the costs of a travel information system, it is necessary to consider the additional amount of travellers that could make use of the service thanks to the information provided. In some cases, however, due to increasing competition with cars, retaining customers represents a big achievement.

Different evaluations of existing travel information systems have clearly shown that investment costs were covered by the increase of the rider ship since their introduction. Increases of rider ship were registered at varying percentages, the highest being around 20%, of course depending on the present travel infrastructure and the local circumstances. In certain cases, huge revenues could be revealed.

- **Increasing efficiency of the available infrastructure:** Travel information systems can help to increase the efficiency of the use of the current infrastructure by redirecting travellers to more optimal services from the operator's point of view. In some

instances, this will avoid building new and subsequently expensive infrastructures. Real-time information systems, for example, can sometimes cover costs since they can be used for monitoring operations. Based on this data not only can the service be optimised, but also the management and network.

- **Economies of scale:** Integration of travel information services from different service providers is not only beneficial for the traveller, but can also prevent every single service provider from investing in his own travel information system. Bringing together the budgets of different partners will show that rapidly growing economies of scale can be achieved.

### A matter of priority

- **Strategic choices:** Economic research has shown that around 80% of the financial implications of a project is fixed due to decisions made at the planning level. These choices set the scene for the entire system and will have a huge impact on the final budget.

- **Choice of media:** Before setting up a travel information strategy, a realistic and detailed assessment of the total cost of the information systems, including maintenance costs, must be carried out. Comparing this to the planned investment will reveal what is possible in the specific local situation. Very often cheaper substitutes can be found without necessarily decreasing the quality of the provided information, but in turn this has a great effect on the final price. In some other cases, new projects may appear less important if an extra

## SOLUTION 11

investment is made in an existing infrastructure.

- **Network priorities:** Not all lines and interchange stations require the same solutions. For example, only a few lines might be experiencing regular disturbances, which would only make the investment in real-time information systems relevant for them.
- **Priorities within the organisation:** In absolute terms, however, travel information might appear to demand high investments, in comparison to the full budget required for the infrastructure, the running and maintenance of the transport service itself – even the proportional cost for the most advanced travel information systems are often very low.

### Financing by third parties:

- **Sharing costs:** The strategy behind a real-time information system can also be useful for other sections of the organisation such as the operations management department. Furthermore, information displays can be used by the marketing and communications department, for example. When implementing a travel information strategy, it should be checked whether collaborations could be established with other departments of the organisation and thus whether costs could be shared.
- **Advertising:** A lot of devices used for travel information ranging from TV-monitors to displays in bus shelters can be used for advertising purposes. In some established cases, the revenue earned paid for the full

information system. Nevertheless, this should be managed with great precaution since advertising risks jeopardising the “travel information message”.

- **Partners:** Some partners may be interested in (co-) financing travel information. This is possibly the case for authorities who want to profile themselves in the street towards the public (and thus the voters), organisers of large attractions or events that want to provide an efficient transport alternative to cars in order to avoid parking problems and congestion when travelling to the event or attraction, or even (mobile) telephone operators through which a travel information service is provided, since extra business can be generated for them.



## GOOD PRACTICE 11:

### The Alps: Making money through providing information to target groups



The majority of visitors going to French ski resorts in the Alps are foreigners. For them it is often very difficult to find the regional public transport solution that will bring them to the mountains. Transdev Alpes and 12 other regional public transport operators therefore has launched a website and a telephone number that allows international travellers to find a solution to their transport problem. Timetables can be checked and the bus ticket can be bought from anywhere in the world. The initiative has experienced additional success among skiers.

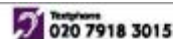
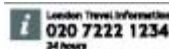
For certain destinations, the bookings made on the Internet represents up to 40% of all travellers. A commission of 7% to 9% on the ticket price is taken by Altibus, the company managing the website.

<http://www.altibus.com>

### London: Automatisation of services lowers costs in the long-term

In the 90s London Transport's call centre was probably one of the city's most used telephone numbers. In the past, enquiries made by public transport customers were answered by call centre staff using their own knowledge and brainpower, supplemented by a library of printed information. In 1996 a computer has been installed in call centres for finding the transport solutions. This had significant benefits of speed and consistency. The system increased productivity by cutting the time taken to answer calls by 17% on average. More calls could therefore be answered per staff member. Since the introduction of the journey planner on the Internet and the popularisation of this communication medium, today more and more travellers are using the Internet for their travel enquiries.

<http://www.tfl.gov.uk/journeyplanner>



[www.tfl.gov.uk](http://www.tfl.gov.uk)

[www.tflwap.gov.uk/](http://www.tflwap.gov.uk/)



## GOOD PRACTICE 11



### Yogyakarta: Low cost travel information strategy based on high frequent services

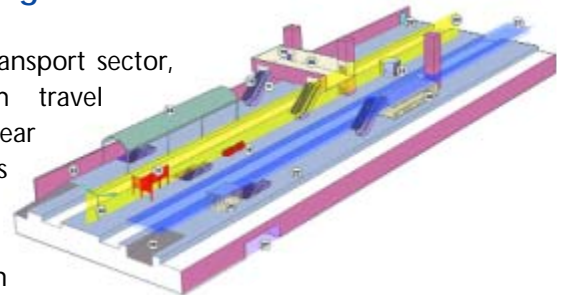
The public transport network in the city of Yogyakarta (Indonesia) was simplified covering 10 radial and 2 orbital lines. This made it possible to provide highly frequent transport services. Every bus is equipped with several panels (sometimes just cardboard) indicating the line number from 1 to 12 and on the front of the vehicle a wooden board with the major stops on the line. Thanks to this and within its budget restrictions, the local operator KOPATA managed to offer a very simple public transport network making it possible for travellers to orient themselves with ease.

<http://www.pustral-ugm.org>

### The Netherlands: Guidelines for advertising to guarantee clear public transport information

Advertising can be a profitable business for the public transport sector, but it should not take travellers' attention away from travel information messages and displays. In the Netherlands clear guidelines have been defined for railway stations. Stations are split up into different zones according to their different functions. The proportion of commercial information is defined in line with the travel information needed in each zone of the stations, colour schemes and forms are regulated, and so on. The guidelines start from the idea that without travellers, there would be no profitable activities in stations, so the public transport service and its information has priority. An optimal circulation flow has to be guaranteed, the visual qualities pleasing to the eye and finally safety and harmony with the architecture of the station is essential.

<http://www.ns.nl/domestic/index.cgi>



## GOOD PRACTICE 11

### Madrid: TV-monitors with travel information and entertainment, financed by advertising

The Metro operator in Madrid has its own television channel with special short programmes that are shown on large screens around platforms and in between the tracks and in smaller ones on the metro vehicles themselves. These programmes aim at entertaining travellers during the time spent on the network and informing them about issues directly and indirectly related to public transport services. In addition to this, the TV-monitors provide travellers with real-time travel information, and, when needed, during disruptions for example, with travel advice. Advertising shown in between programmes partially covers the infrastructure and the production costs of the programs.

<http://www.metromadrid.es>



### Brussels: Shelters and devices for travel information financed through advertising

In the city of Brussels (Belgium) a private company has received authorisation from the local authority to put advertising on bus shelters. In return they have to finance the building of shelters throughout the city. This includes standardised devices for static travel information. Today, the major bus stops are also equipped with real-time arrival and departure times.

[http://www.bruxelles.irisnet.be/EN/7en\\_user/7en\\_2mov/7en\\_2mov.htm](http://www.bruxelles.irisnet.be/EN/7en_user/7en_2mov/7en_2mov.htm)



## GOOD PRACTICE 11



### OSLO: A Revenue of 4 Euro for each Euro invested in travel information

The most evident business case for travel information is proof that thanks to improved travel information, ridership is increasing.

Trafikanten is a provider of integrated travel information in the Oslo-area (Norway). It is in charge of distributing all travel information by phone, via the internet, WAP and SMS, on behalf of public transport companies.

Trafikanten provides a service for approximately 4 million customers per annum, which is a real achievement taking into account that the whole region around Oslo only has 1 million inhabitants. Surveys show that 14% to 17% of the users of the telephone number 177 or the internet, would have chosen a taxi or private car if they had not received travel assistance from Trafikanten. The ratio of Trafikanten's operating costs to the increased ticket revenue is 1:4.

<http://www.trafikanten.no>

### The Netherlands: Extra subsidies for less polluting transport solutions

Openbaar Vervoer Reisinformatie (OVR), or "Public Transport Travel Information", provides integrated travel information to the general public of the Netherlands. Based on its achievements in the last decade, OVR has been able to prove to the national government that investing more money into travel information will bring more people to public transport, thus inducing a modal shift of a few percentages. This modal shift will reduce CO2 emissions and help the Netherlands to reach targets set by the Kyoto Protocol. The ration of CO2 reduction versus investment was regarded as so beneficial that the national government has granted extra money to OVR to further develop its travel information services.

<http://www.9292ov.nl>



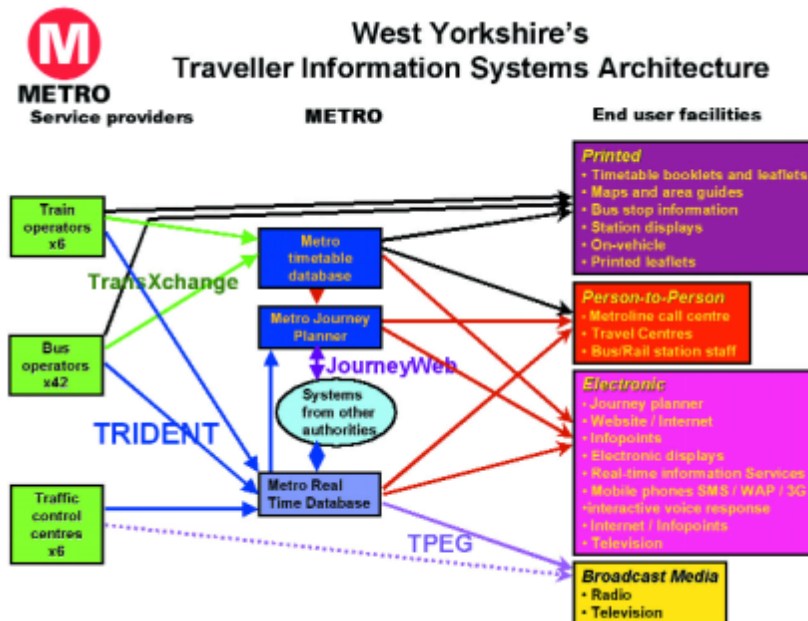
## GOOD PRACTICE 11

### West Yorkshire: Jointly financed integrated travel information

METRO, the West Yorkshire Passenger Transport Executive, in the UK has successfully established its role as coordinating authority for its area in the deregulated United Kingdom travel market. The white M on a red circle creates a strong presence promoting sustainable integrated transport. By branding throughout bus and rail stations, bus stops, travel centres, printed information and the Metroline telephone enquiry bureau, the authority built a strong presence for Metro as the entry point to public transport. METRO has a high spontaneous recognition of 86%, despite the fact that over 40 different public transport operators provide the services METRO promotes.

METRO has a well-focused information strategy developed in consultation with the operators who contribute towards its costs, as well as to other integrated transport services such as multi-operator ticketing. In this way METRO as a coordinating authority makes best use of resources as, for example, one journey planner and one telephone enquiry bureau serve all of the participants in West Yorkshire's public transport system.

<http://www.wymetro.com>



## CHALLENGE 12: Ensuring that all actors cooperate

Travel information (and public transport in general) is a field where the sum of the parts is much more valuable for the end users than the fragmented solutions. This makes integration of the information an important issue.

Implementing an integrated travel information strategy will require the collaboration of several partners within and outside the organisation. Data will have to be compiled, infrastructures have to be installed in properties that are owned by other actors, costs have to be shared, and so on. Even in the best organisations, at a certain point, institutional barriers will appear.

In the current changing markets, with increased competition, co-operation between different actors is probably even more difficult than before. Travel information is a strategic element that service providers do like to control themselves, since it is one of the major ways to communicate with the customer. On top of that travel information, and in particular its integration, costs money. It will thus be difficult to convince private actors to finance a project that they do not fully control themselves and that will only be profitable in the longer term.



## **SOLUTION 12:**

### **An integrated approach based on strong agreements**

#### **Setting the rules: a strong institutional framework**

The organising authority can have a decisive role in organising and integrating travel information. National and international regulations circumvent discussions on some issues at a local level again and again and will motivate or even oblige actors to collaborate. A clear definition of the needs and objectives of the travel information strategy and possibly additional funding will increase the probability of success. A well-structured regulatory and organisational framework will help to distinguish clearly everyone's responsibilities as well.

#### **Partnerships through strong agreements**

Not only will integration materialise in the framework of a partnership among all the actors involved within an area, but it will also imply the commitment and co-operation between actors across economic, political and geographical barriers. Partnerships are based on goodwill and they put into practice the willingness of the actors to co-operate towards an integrated system. Explicit agreements will have to be made between the different partners and between various departments of each partner. While most details of the agreements will depend on the specific context, they should at least specify the responsibility of the various actors, give standards for data exchanges, deal with maintenance issues objectives and monitoring processes, and so on. In cases where an agreement cannot be result-oriented, working processes or methodologies should at least be taken up in a contract.

Contracts constitute an efficient tool which enable the parties to express their expertise in their field of competence. Contracts are essential to support successful partnerships and agreements by clearly setting out the responsibilities of the parties, their mutual commitment and the management of their interface to the traveller. Implementing an (integrated) travel information system will create new relationships between the multitude of actors, ranging from:

- Funding and revenue allocation;
- Operational aspects such as management of common infrastructures;
- Contact with the traveller (CRM);
- Definition of the services;
- Allocation of responsibilities;
- Quality management.

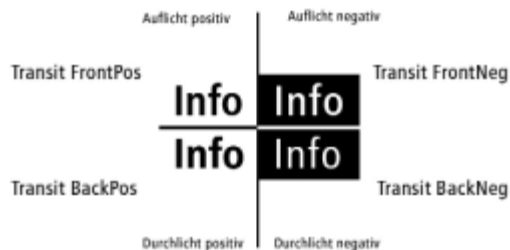
#### **An integrated body**

There is a clear need for a place where all actors can meet. Fair competition and success can only be guaranteed when all actors are involved in an integrated body by solid partnerships agreements or contracts. The integrating body will hold great power in orienting integration policy and funding and should, consequently, include all the relevant actors:

- Organising authorities;
- Operators;
- Interchange managers;
- Infrastructure managers;
- Local businesses and public services;
- Customer associations.



## GOOD PRACTICE 12:



### Berlin: Detailed guidelines to guarantee an integrated travel information system

Germany is split up into different Verkehrsverbunden. These are regional organisations that are responsible for all public transport in their respective regions. Usually they represent a form of partnership between operators and authorities. One of the main tasks of the Verkehrsverbund Berlin-Brandenburg (VBB) is to guarantee consistent travel information on a regional level. Therefore, a contract has been

made with all other relevant partners in the region including a 97-page book of guidelines stipulating very precisely all kind of details about travel information. Every detail is defined, such as what symbols of the different types of service should look like in maps, at bus stops or as final destinations, how bus stop signs have to be designed, how the digital database must be structured and the formats in which data has to be saved, fonts and abbreviations, and so on.

<http://www.vbbonline.de>



### Hanover: Bringing road traffic information and public transport information into the same room.



When a new traffic information centre was planned in Hanover (Germany), it was suggested that the public transport control centre would ideally be put together with the road traffic control center in one room. Today both road traffic and public transport operations are followed up in one and the same physical room. Today in cases of major disruption on either one of both networks, fast decision-making is possible and interventions can be taken based on the full picture of the situation and possible alternatives.

<http://www.region-hannover.de/deutsch/politik/strassen.htm>

## GOOD PRACTICE 12

### Madrid: An integrated body in charge of integrated travel information

In the Madrid region (Spain) different public transport companies operate together, some of them being public-owned companies (Metro de Madrid; Cercanías Renfe; and urban busses E.M.T.), whereas others are private-owned companies like the 33 private metropolitan bus operators and the operator of one of Madrid's metro lines. Under these conditions, the role of an integrating body that regulates and coordinates the travel information strategy and the image of public transport is crucial.

In 1986, a Regional Transport Consortium (CRTM) was created. Its competencies cover all regular public transport in the Madrid region and surrounding municipalities. Its Board of Directors consists of representatives from different public bodies such as the Regional Government, related municipalities and the Central Government, as well as the private transport operators, trade unions and user and consumer organisations.

According to the Law by which the CRTM was created, one of its main goals was to provide information to travellers by every type of means, ranging from written communications to new technologies, as well as the creation of an overall image of the public transport system. Between 1986 and 2002 passenger trips already increased with more than 59.3% and is still increasing.

<http://www.ctm-madrid.es>



## GOOD PRACTICE 12

### The Netherlands: An integrated Nationwide Public Transport Travel Information System

Openbaar Vervoer Reisinformatie (OVR), or “Public Transport Travel Information”, was founded in 1992, as a collaboration between the Dutch Ministry of Transport and all Public Transport Companies in the Netherlands. OVR's aim was to collect data from all public transport companies and integrate it into one single nationwide public transport journey planner.

In order to ensure that OVR would always have the full picture of the situation throughout the country, the Dutch Ministry of Transport made it obligatory for all PT-companies to deliver the data by law.

Today OVR is much more than a nationwide journey planner and call centre. It is involved in nearly all projects in the field of travel information launched in the Netherlands.

<http://www.9292ov.nl>



### U.S.A.: 511, a three-digit telephone number for nationwide local travel information

The telephone is still an extremely important means of information for transport services. In the past 300 different ten-digit numbers existed throughout the U.S.A., making it extremely difficult for travellers to find the appropriate number for getting travel information. On the initiative of the U.S. Department of Transportation (U.S. DOT), the Federal Communications Commission (FCC) designated “511” as the United States’ nationwide three-digit telephone number for access to locally managed advanced traveller information. The FCC ruling leaves nearly all implementation issues and schedules to state and local agencies, and telecommunications carriers.

In early 2001, mindful of both the opportunity and challenge that 511 represents, the American Association of State Highway and Transportation Officials (AASHTO), in conjunction with many other organisations including the American Public Transportation Association (APTA) and the Intelligent Transportation Society of America (ITS America), with the support of the U.S. DOT, established the 511 Deployment Coalition. An executive-level Policy Committee and a supporting Working Group were put into place to conduct the work of the Coalition. Membership of the Coalition draws various segments of the telecommunications industry and the fields of consulting, system integration and information service provision from all levels and different types of government agencies.

The coalition supports implementers by promoting communication and networking, through workshops, conference sessions, e-mail networks and conference calls to make the public aware of the 511 service.

In 2005, the FCC will review the progress of the 511 services.

<http://www.deploy511.org>



# Conclusions

In an increasingly information dominated world, intelligent travel choices have to be marketed just as consumer products are. When a consumer buys a new product there will be instructions on how to use it. Transport products are no different, our new consumers need to be informed and guided in their use. Indeed, as privatisation and deregulation spread the need for good information becomes greater because of the complex interactions between operators and organising authorities in competitive markets. Add to this the need to achieve modal shift for a host of reasons, not least environmental, and operators and authorities need also to ensure their “products” can be “known” as well as the main competitor, the private car. And most importantly, keeping the customer well informed builds loyalty even if some of the news imparted (like travel delays) is not immediately good.

Modern Information and Communication Technology enables many new approaches to providing travel information. However, this need not be expensive, using computers to organise and access information already held in an organisation’s databases, or to bring together information from different organisations can assist with the provision of better “conventional” information (timetable displays, leaflets, interchange maps and so on) as well as to most advanced real-time systems.

Information on its own cannot work miracles, but research suggests better information may contribute 5 to 25% increases in trips. The challenges, solutions, proposals and good practice examples in this handbook show how travel information strategies can be developed and implemented.



# Project team

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## SOURCE OF PHOTOS, LOGOS AND MAPS

P4	Regional Transport Consortium of Madrid	P34	Üstra
P5	RATP (Jean-François Mauboussin)	P35	Thoreb, LVB
P6	GOTIC-project, Merseytravel, KTH	P36	Société de Transport de Montréal
P7	OVR, KJKP GRAS	P38	Passenger Transport Board Adelaide, HUR
P8	RATP	P39	Regional Transport Consortium of Madrid
P10	Helsinki City Transport (Stefan Ideberg), Wienerlinien	P40	Warman Consult
P11	SL, TfL, Stagecoach	P42	Passenger Transport Board Adelaide
P12	TfL	P43	SOTRA, ATC
P14	Openbaar Vervoer Reizigers (OVR)	P44	Carmanah Technologies, KMB, Leicester City Council
P16	traffiQ - Lokale Nahverkehrsgesellschaft Frankfurt am Main mbH	P45	Appear Networks
P17	TCAR	P48	RATP (Bertrand Chabrol)
P18	Warman Consult	P49	EU-spirit, GOTIC-project
P20	Warman Consult	P50	RATP (Margueritte et Sutton)
P21	ATC, Provincie Gelderland	P51	Land Transport Authority (Singapore)
P22	GOTIC-Project, David Debruijn	P52	Land Transport Authority (Singapore)
P23	RATP (Bruno Marguerite), Leicester City Council	P54	RATP (Bertrand Chabrol)
P24	EU-SPIRIT	P56	Intergo (A.D.P. Zwaagstra)
P26	Infoplus, Plusdial	P57	Regional Transport Consortium of Madrid
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