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Good practice in TTI service implementation

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1 ABA – Autoklub Bohemia Assistance

Type of activity: National road traffic information centre set up by private sector organisations
Geographical location: The Czech Republic
Other Key Features: Private-sector service providing comprehensive national driver-information service, 'Marketing the organisation' is a key part of the Business model
Key 'Good Practices': Clear Business Model for the present time; Multi-partite research is being done to secure a long-term business model for the future
TTI dissemination media used: Radio, Teletext, TV, Call centre, Internet, SMS, Fax

1.1 Abstract

In a private sector initiative, the ABA motorists' club set up an unofficial traffic information centre serving the whole of the Czech Republic, in partnership with the national radio station. The centre is the main source of traffic information for third party information service providers. When it was set up there were no plans for a government-funded information service, but the government has subsequently funded a project to develop a traffic information centre based on the current service. Other options for the future include extending the partnership to involve the other main motorists' club.

1.2 Background

The ABA motoring club and Czech Radio set up a privately run national road traffic information centre for the Czech Republic in 2000. A government-funded research study including ABA is working to define the model for an official national traffic and travel information centre.

1.3 Objectives

The centre was originally set up by ABA to provide co-ordinated and reliable traffic information for drivers. ABA now aims to develop the service into an independent national traffic and travel information centre providing good quality up-to-date information meeting the needs of road users, road managers and other service providers.

The centre has been developed as a marketing tool for ABA services, and it is funded largely from the ABA marketing budget. Some revenue comes from third party providers, who pay for information according to audience size and number of news items broadcast.

1.4 Implementation

Traffic information nationally includes incidents and delays, weather conditions, road works and waiting time at borders. For Prague, it includes information on traffic conditions on main routes. Data is collected from recovery vehicles, volunteer drivers, police, local authorities, border controls and two surveillance aircraft; only a minority is from automatic monitoring equipment.

Information is available through a free Internet site, RDS, radio, television, and teletext broadcasts. Motoring organisations in other countries, mobile phone operators and car manufacturers also use the information. Individuals and businesses can obtain information by SMS, fax and telephone, including information for specific routes or areas.

The initiative for the service came from the motoring club, providing a co-ordinated information service as part of their package of services to drivers. The partnership with the national radio station gave the service a semi-official status.

1.5 Evaluation

Drivers welcome the information and many use it to change their route or journey. The Internet service is popular among people under 45, while over 45s use television, teletext and radio. The SMS and WAP services are less popular but use of these services is growing.

1.6 Conclusions

Use of data from other sources is difficult for a commercial organisation. Public sector support is needed to ensure that data is comprehensive. In Central and Eastern Europe, a private sector initiative can be the most effective way of starting a ‘public interest’ service, avoiding the inertia involved in state funding. State funding can come later, once success has been proven.

Other ways of accessing the information are being developed, includng a car information portal. The service could continue expanding under the current business model, another option would be to extend the partnership, for example to include the other main motoring club. The research project is developing the concept of a state-backed service operating in the public interest, with support to ensure comprehensive good quality data.

2 CHAPS National Schedule Database

Type of activity: National public transport timetable information service set up by a private company
Geographical location: The Czech Republic
Other Key Features: Specific conditions in Regulatory framework ensure TTI data supply and protect its business case. The business case is also based on selling data to 3rd-party providers
Key 'Good Practices': Clear link between Business Model and Regulatory Framework; Use of multiple dissemination channels and partners bolsters the Business Case
TTI dissemination media used: Internet, WAP, SMS, Call-centre (3rd party), CD-ROM, Kiosks, PDA (planned)

2.1 Abstract

CHAPS, a private sector company, has set up the only national data source on public transport timetables in the Czech Republic, using an Internet service. The information contributes to the government objective of freely available inter-modal public transport information for travellers, and the state has supported the service by setting up a regulatory framework which ensures that public transport operators provide good quality information only to this database. CHAPS meets its commercial objectives by selling information to third party service suppliers.

2.2 Background

Since 1993 CHAPS spol. sr.o. has provided the only national source of inter-modal public transport information in the Czech republic. In 1995, partnership with Czech Railways (DATIS unit) added rail information to the service. The information is available on the Internet: www.chaps.cz The government does not contribute financially, but supports the service through legislation requiring public transport operators to provide timetable information in a standard form, and through contractual arrangements for the service.

2.3 Objectives

The government objective is to enable high quality public transport timetables to be freely available. CHAPS has a commercial objective to provide high quality data to value-added service providers. DATIS objectives involve commercial sale of information and promotion of its transport services. The general public have the benefit of a national inter-modal Internet-based public transport route finder service which is available free of charge.

2.4 Implementation

Legislation defines the minimum contents and the format of the data provided by operators, ensuring a minimum level of service. New timetables are made available at least 15 days in advance. Inter-modal information is available for journeys on national and regional services and on urban public transport in the three largest cities. Elsewhere, information on single public transport modes can be obtained. Real time information is available for train services.

The Internet information is also available as WAP services. Third party information providers include mobile phone companies. Eurotel uses the data in a door-to-door navigation service, which is available in map form on WAP phones or in SMS directions for other phones. The service helps the government to achieve its policy objectives, while the commercial position for CHAPS is strengthened, so that income from sale of the information and advertising on the Internet is enough to ensure that the service is financially viable. The main source of income is from sale of information to mobile phone operators.

2.5 Evaluation

Experience of the CIS is very positive, the information is inter-modal, covers all regional transport and many towns, is of high quality and is well used through several relatively ubiquitous media and reaches most information providers. In one month in 2002, mobile phone operators received over a million requests for information: one for every 14 in the population.

2.6 Conclusions

The service highlights the benefits of well balanced co-operation on TTI projects between the state (providing service regulation and institutional support) and private sector (in the role of service management, data marketing and system development). The arrangement allows for some innovation, but because new developments are financed by sales of existing information, the scope of new developments is restricted.

Future developments will include detailed information about interchanges, and real time information is being tested for bus services, in partnership with a mobile phone operator.

3 Cité Futée

Type of activity: Public transport operator providing Internet-based traveller information service
Geographical location: Paris, France
Other Key Features: Whilst the service is provided by the main public transport operator (RATP) it also includes traffic information; strongly promotes RATP's image and promotes RATP as a 'one-stop shop'
Key 'Good Practices': Integration of travel information with leisure and city information; uses TTI as a strong tool within the organisation's marketing plan, aiming towards travel information market dominance; collaboration with other content and service providers
TTI dissemination media used: Web

3.1 Abstract

CitéFutée provides an inter-modal traveller information service for the Paris area via an Internet site, which is available free of charge. Information on travel by public and private transport is integrated with leisure and city information, under agreements to share data with other information owners.

3.2 Background

CitéFutée ("sharp/crafty/smart/clever city") is the traffic and travel information website for Paris and its suburbs. The service is multimodal, and includes details of leisure activities and other local information. CitéFutée is provided by RATP, the main public transport operator. RATP is publicly owned but operates as a commercial company, providing transport and services. RATP is contracted to the public transport authority to provide transport services and deliver optimal quality, and is paid according to performance. RATP has been developing electronic information services since 1985, and the current service, combining road, transport and local information, has been operating since 2001.

3.3 Objectives

RATP aims to provide an information service as part of their service to the public, and to encourage public transport use. RATP aims to serve public transport users and car users. Multi-modal information helps to promote RATP's image as a service provider and the site promotes a positive and modern image for public transport by linking it with leisure activities, Internet resources, maps and local information.

Users benefit from having a single web site where they can obtain leisure information and plan outings. Drivers can compare their trips with public transport alternatives, so the site will become the point of contact for road information, and drivers seeking route information may be encouraged to look at public transport alternatives.

3.4 Implementation

The site is reached by: www.citefutee.fr and www.citefutee.com. The service includes route calculation for road and public transport, taking into account real-time information. This real time information is generally received by telephone or fax from transport and service operators and local authorities. There is a common database, created and managed by RATP and shared with other operators. Public transport is part of a comprehensive package of information including local directories, local street plans, cinemas and other leisure activities. Co-operation with other agencies involves sharing data, generally at no cost.

3.5 Evaluation

The service is successful, with the number of users growing rapidly. Requests for public transport information have grown to over 40 000 hits each day. The SMS service has been less successful, with only 400 users.

3.6 Conclusions

Awareness and respect for RATP as a public entity and source of transport information have contributed to the success of the service. Maps are a key to making the service easy to use, and are found on many of the Internet pages. Door-to-door information is important, linking public transport with final destinations. The inter-modal aspect of the service is crucial, and in Paris, journey time comparisons between modes are favourable to public transport.

RATP is continuing with investing in updating and improving the web site to improve the service, and its future success seems assured. To offset the investment in the less successful SMS service, its role may be changed to become a mechanism for promoting season ticket use, by offering it as a free service to season-ticket holders.

4 LogicaCMG plc

Type of activity: Private IT company providing a range of traffic and travel information and mobile ticketing services for travellers
Geographical location: The Netherlands
Other Key Features: The company is involved in several other fields with IT, and has strong expertise in integrating individual components of information an communication systems
Key 'Good Practices': Wide range of TTI services; traffic centres development function includes a clear systems model to ease implementation
TTI dissemination media used: SMS, other mobile phone services various other media (through third-parties)

4.1 Abstract

LogicaCMG is a private company offering IT systems and services in a range of industries, which has developed a range of traffic and travel information services in the Netherlands. These include traffic management services, traffic and travel information services, and mobile ticketing services for public transport. Services are developed in integrated packages through close cooperation with suppliers and building on the latest technological developments.

4.2 Background

CMG started as a small UK-based IT company in the 1960s, developing accounting software. The company gradually expanded in both size and scope, and by the 1990s, was an international information and communications technology group. After a merger in 2002, LogicaCMG became the second largest provider of IT services in Europe.

CMG started developing traveller information services in 1991 and services for travellers now account for 5% of CMG's turnover. The services include traffic data services, using mobile phones to collect real time traffic information, traffic management centres, SMS traffic information, and mobile phone based ticketing services. The Mobile Ticketing Service for NoordNed's bus and train services in the Netherlands is an example of one of CMG's services.

4.3 Objectives

CMG's objective is to lead the creation and development of the most advanced IT services and wireless data solutions. CMG aims to deliver enhanced operational efficiency and competitive advantage to their clients.

In the case of mobile ticketing for NoorNed bus and train services, CMG plans to use the data collected from its Mobile Ticket Service to expand the service to include mobile phone based real time information, which will also be an additional selling point for NoordNed's services.

4.4 Implementation

CMG bases its traveller information services on mobile phones; CMG's figures show that 70% of people in Europe carry mobile phones, providing a market for the information services.

The Mobile Ticketing Service is in the process of being tested in trials with users. When users buy tickets by phone or on the Internet, a code is sent to their mobile phone; when they travel they present the phone to a ticket collector who checks it using a hand-held computer. There is a free phone number to use for buying tickets when no Internet access is available.

CMG develop a new business model for each new project. They specialise in integrating separate components and partial solutions in information and communication technology, and they can offer a variety of roles in projects. For the Mobile Ticketing Service, CMG is the project manager, co-ordinating the work of a bank, transport specialists, university, and others.

4.5 Evaluation

As an IT company, CMG can develop technologies into effective solutions. Cooperation is a key to success and good relationships with suppliers help the company to keep ahead of technological developments. Travellers benefit from easier journeys, with fewer processes and events; information and communications technologies can help achieve this.

4.6 Conclusions

To enhance the development of traveller information services, CMG recommends use of common standards for public transport information, and development of services based on new mobile phone technology.

For the future, CMG have a long term plan to develop global traffic information services.

5 Dirección General de Tráfico

Type of activity: National road authority delivering road traffic information to users and private road operators
Geographical location: Spain (map)
Other Key Features: Extensive national data coverage, disseminated through multiple channels, extensive public-private agreements to disseminate data
Key 'Good Practices': Based on clear national ITS strategy; dissemination media used reflect real demand and practices of users; possible involvement of private-sector in outsourcing is being actively researched
TTI dissemination media used: Call centre, Radio, TV, RDS/TMC, DAB, SMS, WAP, Internet, VMS, commercial 3rd parties

5.1 Abstract

The Spanish national road authority DGT (Ministry of Interior) is the main agency responsible for processing traffic data in Spain. It operates a network of traffic management centres across the country and distributes high-quality road information services via several media, to meet a rapidly growing demand. Traffic data is also delivered to private operators, who are free to create commercial information services, complying with basic operating conditions defined by the DGT.

5.2 Background

DGT started delivering basic TTI services to the public in 1986 with a telephone enquiry service, and national radio broadcasts. The range of media for delivering services has gradually been extended. By 1997 television, RDS-TMC, SMS, WAP, and Internet services were available and a Digital Audio Broadcast service has been operating experimentally since 1999. Since 1990 these services have been based on a formal data sharing policy, close co-operation with the private sector being recognised as important in using traveller information to manage traffic.

5.3 Objectives

DGT aims to use TTI services as a tool for traffic management and control, thereby improving road safety. DGT has a public obligation to deliver high quality services free of charge. While DGT services are primarily policy- and supply-driven, aimed at drivers on major routes, they are also responding to the increasing demand for information arising from traffic growth and availability of information and communications technologies among users.

5.4 Implementation

DGT services are based on wide network coverage and ownership of detection equipment and traffic data. The police, city authorities and road users also supply information. The private motorway operators collect information for their routes and are obliged to supply it to DGT. Cross-border information is exchanged with centres in France and Portugal. Nine traffic centres located in major cities carry out data processing.

Dynamic TTI is used to manage traffic instantly. In addition to the information services delivered through public channels, there are various private service providers offering services (GSM, internet, radio, TV). Private sector involvement in TTI dissemination has made it possible to diversify and at the same time personalise the services offered. The DGT requires all private TTI services to be free of charge and to fulfil technical, privacy and quality conditions. All risks are assumed by the private agencies. Due to the strong growth in demand, the telephone call-centre operation is being outsourced. For the first time, users will be charged the cost of calls.

5.5 Evaluation

The varying success of the different information channels reflects the needs of the users and penetration of technologies. The phone, SMS and Internet services have grown dramatically (there was a 64% growth in Internet use between 2000 and 2001). In 2001 there were 2.2. million SMS messages and 12 million web page accesses. At the same time, the demand for WAP, DAB and RDS-TMC has been slow to develop because the number of users with the necessary equipment remains small (800 DAB receivers in 2001).

5.6 Conclusions

For the future, there is a potential for private service providers building on the growing market for mobile devices to develop personalised and location-based services, using DGT data. Integrating Floating Vehicle Data for urban areas with the data on the national network would enhance the quality of information and could be a key driver for service developments.

6 Eurotel 'Mobile Guide'

Type of activity: Private sector inter-modal door-to-door traveller information service using mobile phones
Geographical location: The Czech Republic
Other Key Features: Part of a location-based service offering information about 'nearest' features of interest in different categories. Integrated with high-quality maps and the company's patented 'Mobile Compass'
Key 'Good Practices': An innovative application which is designed to enhance the company's existing product offerings; by being integrated with the company's other applications its Business Case is strengthened and a 'climate' of TTI use by customers is encouraged.
TTI dissemination media used: WAP, SMS

6.1 Abstract

A mobile phone company in the Czech Republic has developed an inter-modal traveller information service providing a high quality service for door-to-door public transport and walking information, as part of a 'Mobile Guide' package, including retail and leisure information.

6.2 Background

Eurotel is the leading mobile phone company in the Czech Republic. It set up a local information service in 2000, to help users find the location of nearby services and destinations. This Mobile Guide' provides transport information in the context of reaching local destinations and services.

6.3 Objectives

Eurotel's commercial goals are to expand the range of uses for mobile phones, maintain market position and support its image as an innovator. Users' needs are met by providing them with location details for local facilities and instructions for reaching them, including walking and public transport. 'Mobile guide' is most attractive to people with high specification WAP phones, but an SMS service is also available.

6.4 Implementation

Eurotel buys data from several sources under commercial arrangements for co-operation with data owners and providers. Eurotel has exclusive rights to use the strategically important data. High quality maps are bought for the service from an external developer, but Eurotel developed the navigation software internally.

The Mobile Guide uses a series of search criteria to find local facilities. The optimal route by public transport or on foot is calculated, and directions or a map are provided. The map displays can be seen at several different scales, and the user can move around the display or zoom in and out. The phone can be used as an electronic compass, which is unique to Eurotel. The SMS service is a cheaper option for users with slow mobile phones, for whom the cost of calls to maintain the connection while receiving map information would be high.

The transport information is seen as a complementary part of the wider information package, and does not need to be commercially viable in its own right. Marketing is aimed at business users, people with a high disposable income, and young people. The market for the service is expanding as people buy new models of mobile phone, but this is a long term process.

Eurotel has recently started offering a multi-media messaging service which is likely to encourage people to buy new higher quality phones with displays that are more suitable for using the Mobile Guide.

6.5 Evaluation

The service is innovative and the Mobile Compass and door-to-door navigation services are unique in the Czech Republic. For users it is vital that the service is simple to use, with logical links between different features and economical use of the space available on the screen to display instructions.

The commercial approach means that the current service is aimed at a particular part of the market, and is not suitable as a mass application for users whose main need is for transport information.

6.6 Conclusions

Future plans include an Internet service, for which there will be a charge, and real time traffic information for mobile phone users. As use of new generation mobile phones grows, real time navigation may be added to the Mobile Guide service.

7 ITIS Holdings plc

Type of activity: Full service transport telematics company
Geographical location: Various areas of the UK
Other Key Features: Wide range of products / services, including strong consumer telematics brand (NavTrak)
Key 'Good Practices': multiple business models (different models for different services);; innovative use of 'floating vehicle' data sources with innovative partner agreements; close relationships with car manufacturers gives secure revenue channel, with a service that is attractive to the user in terms of perceived cost; emphasis on good quality of data; low fixed costs by expanding on existing systems
TTI dissemination media used: RDS-TMC, Digital Radio, in-vehicle receivers, phone (automated service), web, radio

7.1 Abstract

ITIS Holdings plc is a privately run UK transport telematics company, which has developed a unique system for collecting and analysing traffic information. Information is collected from floating vehicles through contractual arrangements with some major fleet operators, providing national coverage of the UK road network, and from traffic broadcast journalists. ITIS has launched its own consumer telematics brand and provides a range of traffic information services, using several business models.

7.2 Background

ITIS Holdings plc is the UK's leading full-service transport telematics company. Formed in 1997, it now works with vehicle manufacturers, mobile networks, broadcast media, Internet service providers and fleet logistics companies, having established a traffic information centre to collate and then analyse the information gained from these organisations.

ITIS collects data from floating vehicles and traffic journalists, analyses it in the traffic information centre, and provides a range of real-time information services. Information services are provided using RDS-TMC, mobile phones and in-vehicle devices through agreements with mobile communications and internet service providers and car manufacturers.

7.3 Objectives

ITIS aims to integrate information services into road vehicles, helping users to avoid congestion and experience smoother journeys. A large number of probe vehicles is crucial to the accuracy of the data.

7.4 Implementation

The probe vehicles use GPS/GSM technology to provide the control centre with data on the speed and position of each vehicle at any time.

To maximise quality of data on congested roads, the data collection focuses on the busiest roads at busiest times, using high mileage probe vehicles. Agreements with fleet operators enable a fleet of lorries and a nationwide coach fleet to provide much of the data.

Traffic broadcast journalists, the police and road operators provide information. Their information includes details of planned and unplanned events, and the impact of these is included in the ITIS traffic forecasting models.

ITIS has the UK licence for broadcasting traffic information via RDS-TMC. ITIS has an agreement with Toyota to provide in-car information using RDS-TMC. ITIS also provides Siemens in-car navigation units with real time traffic information.

ITIS owns a digital traffic and travel radio station ‘Travel Now’. An agreement with the motoring organisation, the AA, provides information and marketing opportunities, and ITIS operates the AA Roadwatch commercial information service.

7.5 Evaluation

Due to the commercial nature of ITIS activities, detailed evaluation results are not available. Nevertheless, ITIS serves thousands of users each day, and numbers are growing.

7.6 Conclusions

Success has been due to good quality data, effective delivery, low fixed costs, use of existing standards and systems, and a niche market. ITIS has adopted several different business models depending on the data available. Agreements with specific companies in the information chain have been important in expanding the services provided.

ITIS's main aim for the future is to expand their network of traffic information dissemination. The company will continue to focus on services for the motor and telecommunications industries.

8 Kizoom

Type of activity: Private sector IT company providing personalised user interfaces for a range of travel information service providers
Geographical location: Various areas of the UK
Other Key Features: Single-mode and Multi-modal Public transport TTI services specifically designed for mobile devices. Both scheduled and real-time services are provided.
Key 'Good Practices': Exploits national and mode-specific ITS database and standards developments to build new TTI services; innovative design based on specific features of dissemination media, including personalisation capabilities
TTI dissemination media used: SMS, WAP, PDA

8.1 Abstract

Kizoom, a private sector company involved in data fusion and processing, develops software applications for TTI services in the UK. It builds user interfaces, back-end platforms and personalisation engines. Kizoom provides personalised user interfaces for TTI service providers covering rail and other public transport. It connects its systems to information disseminators, which convey Kizoom's information via the internet and mobile internet, including SMS, email, WAP and PDA.

8.2 Background

Kizoom provides journey planning and real time travel information services for rail, public transport, and in London, a service for all modes, using mobile telecommunications technology.

The services are based on an increased expectation of better public transport information, supported by UK government funding. The UK government has introduced several initiatives to improve public transport information. The ultimate goal is 'Transport Direct', a service which will provide real time and scheduled timetable information over the internet and via mobile devices. Kizoom's portfolio of travel information products are designed to support these initiatives.

8.3 Objectives

The aim is to develop a mass market for mobile, personalised travel information services. Users benefit from relevant and timely information appropriate to their needs and delivered to them directly, wherever they are.

8.4 Implementation

Kizoom offers information both on demand and in response to events for its mobile customers. Users can personalise the service and obtain real-time information in case of delays. Kizoom places great emphasis on the careful structuring of applications to make them easy and fast to use on small devices. Kizoom has developed a range of payment mechanisms, including micro-billing, and these are ready for implementation.

Different business agreements for use of the data have been reached for different services.

8.5 Evaluation

Use of the national rail enquiry service grew from 40000 to 100000 enquiries per week in one year. It is not clear whether users are willing to pay for the service.

Kizoom was a technology start-up company formed to exploit a potential business opportunity arising from the growth in the number of mobile telecoms devices. It took advantage of rapid software programming development techniques developed by the company's founder. The company developed a family of mobile, personalised public transport TTI applications in a short

time. A key event was agreeing a partnership with Railtrack (responsible for national rail information) in 2000.

8.6 Conclusions

The current business model depends heavily on government funding and leadership, to create a business climate where all parts of the delivery chain can survive. The government needs to act as the driving force for infrastructure development, and for creating TTI systems and processes. The need to find a sustainable long-term business model and a mass market are crucial. More insight into user needs is also important.

The roll-out of third generation mobile phones will create more opportunities for developing services. Kizoom's strategy involves using research and development to "develop, demonstrate and adapt" services, led bychanges in the market.

9 Korkonet

Type of activity: Private company providing traffic information service on the Internet, with SMS service for mobile phone users
Geographical location: Warsaw, Poland (map)
Other Key Features: Private data collection system, developed using own infrastructure in advance of interest from public authorities, with advertising a key source of revenue
Key 'Good Practices': Innovation in the ways that the service provider 'pays' for data and in the service offering 'packages' it offers to subscribers; well-designed websites for disseminating data to users
TTI dissemination media used: Internet, SMS

9.1 Abstract

Korkonet (Bottleneck-net in English) is an Internet site operated by private company to provide real-time traffic information for Warsaw. Revenue from advertising is an important source of funding. The range of services is being expanded, in co-operation with mobile phone companies, but the future of the service may be threatened by a parallel public sector initiative.

9.2 Background

Korkonet - Warsaw is the first web site offering real-time CCTV scans of traffic in Poland free of charge: www.korkonet.pl. The service was set up initially by a small group of technology enthusiasts in 1999 who saw the need for information and developed a service in the context in which there were no ITS systems in place.

The company was bought by an investment company in 2001, and a new company, E-Monitoring, was set up to develop the service to cover a range of traffic and travel information available in various forms.

The first of these new services was *Infokorek,* launched in 2002, and providing SMS information on traffic conditions on selected routes using mobile phones: www.infokorek.pl.

9.3 Objectives

The commercial goals are to provide a profitable service for travellers, and commercial benefits for those advertising their services on the Internet site. Costs are reduced by giving benefits in kind to those involved in providing information.

There are plans to expand the services to other cities in Poland, and to widen the scope, for example to include monitoring public spaces in the city.

Users benefit from an alternative to radio traffic broadcasts, which was previously the only way of finding out about traffic conditions on the increasingly congested streets of Warsaw.

9.4 Implementation

CCTV cameras (21 to date) at strategic points provide views of traffic conditions on main routes in Warsaw. The cameras are installed on buildings with direct Internet access, avoiding the need for dedicated communications. Taxi operators and couriers also provide information.

In addition to the views from the cameras, the Internet site provides other traffic and travel information, and links to public transport sites. The SMS service enables mobile phone users to buy traffic information for their selected routes, either on a one-off basis or on a monthly subscription.

9.5 Evaluation

Both of the Internet sites are well designed, and are being used by a growing number of people. There are 5 000 ‘hits’ on the Korkonet web site each day. The SMS service has 400 clients.

9.6 Conclusions

Initially the company experienced severe difficulties because their financial resources were very limited. One of the obstacles to development was that there was only limited interest in the project from the local authorities, so that the company had to set up equipment and infrastructure independently. Despite this, the first phase was sufficiently successful to demonstrate the potential for such services, which attracted the interest of the investment company which now owns Korkonet.

The services are still developing, and not yet self-financing. The local authority is developing a parallel service as part of a package of traffic management and information services. The future of the private services depends on whether they can have a role in that package of services.

10 Mappy

Type of activity: Private company providing travel information for drivers on the Internet
Geographical location: Based in France, covers 15 countries in Western Europe
Other Key Features: International service; develops a strong brand name through wide coverage
Key 'Good Practices': multiple-language, as it has an international user base; comprehensive information service
TTI dissemination media used: Web

10.1 Abstract

MAPPY is an Internet service providing road travel information for Western Europe free of charge. It was set up by a subsidiary of a French Telecommunications company, and includes route planning, maps and tourist information.

10.2 Background

Mappy is a European Internet service providing maps and route planning for drivers, and tourist information. The 15 countries covered are France, Italy, Switzerland, Austria, Germany, Belgium, the Netherlands, Luxembourg, Portugal, Spain, Andorra, the UK, Denmark, Sweden, and Norway. The service is operated by Wanadoo (a subsidiary of France Télécom), which is the largest provider of Internet access, portal and directory ('Yellow Pages') services in France.

Mappy was set up in 1987, and was available on Minitel, the French audiotext service. The service was extended from France to other European countries in 1993 and the Internet service was launched in 1997.

10.3 Objectives

Mappy is a commercial service for the travelling public, financed by France Télécom. It is used to promote the image of Wanadoo and France Télécom. Mappy aims to attract business users by providing an access point for mapping and related business services. It is already the leading provider in France of mapping and route planning for road journeys, and Mappy aims to achieve this elsewhere. The service is being used to establish a customer base for new services in the future.

Users benefit from a one-stop shop for information when driving to unfamiliar areas and finding their way around when they arrive.

10.4 Implementation

The site is reached by: www.mappy.com and seven other national sites (e.g. www.mappy.be, www.mappy.co.uk) providing services in English, French, German, Italian, Dutch and Spanish. Users obtain map-based information which they can either print before starting their journeys, or download on mobile devices (e. g. WAP phones or Palm) which they can refer to when they need it. Information includes route planning, cost calculation, town maps, personal maps, and in France there is also traffic flow information and traffic prediction for the motorway network.

Most of the services are available free of charge to users, and the web site supports advertising, both for Wanadoo products and other companies. Data supplied by map companies and other partners are shared in return for publicity on the web site. Contracts with partners are arranged for providing different types of information, and revenues are shared.

10.5 Evaluation

Users of the Internet service are spread across Europe and over 4 million different users access the information each month. There was a 50% growth in users in 2001 – 2002. Revenue from Internet access calls and advertising does not cover the costs.

10.6 Conclusions

Access to good quality data and response to users' needs have been key to the success of the service. However Mappy has been unable to expand into an inter-modal information service because it has not been possible to acquire the necessary information from transport operators. As a commercial service, it has proved difficult to rely on data held by public authorities. Support from a large organisation has been essential to run the service until it is profitable.

For the future, there are plans to charge fees for the service as part of a package of value-added services, and Mappy aims to develop new and emerging services, e.g. for mobile devices.

11 Mattisse

Type of activity: Public-private partnership providing multi-modal traveller information services
Geographical location: Midlands area of UK
Other Key Features: Extensive range of services, with data collected from a large number of sources ; aimed largely Business sector, but also serves general public; Partnership with Private-sector technology companies to deliver service
Key 'Good Practices': Innovative Business Model incorporating a public-private agreement to operate the whole system, following a competitive procurement process, with overall management by a multi-partite public-private consortium; it benefits from having key personalities who act as champions and driving forces to ensure that the service develops and that key decisions are taken
TTI dissemination media used: Internet, Kiosks, Mobiles, Hand-held devices, large public-access screens, real-time bus stop signs

11.1 Abstract

Mattisse is a traffic and travel 'information wholesaler' for the Midlands area of the UK. It collects information on public and private transport from a range of sources and repackages it for dissemination to the public, road hauliers and Value-Added Service Providers. Mattisse is a partnership between local authorities and transport operators, with innovative contracting and procurement processes. It enables up-to-the-minute travel information to be exchanged easily between transport authorities, allowing them to respond more quickly and efficiently to travel problems.

11.2 Background

Mattisse provides a range of real-time and other TTI services for the Midlands area of the UK, a heavily populated area crossed by several motorways with a dense road network, expanding rail services and an intensive network of bus services. Mattisse was set up in 1998 under an EC-funded R & D project, and since 2002 has run as an innovative Public-Private Partnership involving nine local authorities, transport operators and two private sector technology service providers.

11.3 Objectives

The objectives of Matisse are to use information services to encourage modal shift away from car use and reduce congestion. Providing better access to good quality information is a key goal, and Mattisse provides high-quality electronic TTI data, partly as a 'wholesaler', and partly as a direct supplier to the public. Mattisse provides a wide range of static and real-time multi-modal information. A large number of different stakeholders have an interest in the Matisse service. Mattisse plans to focus differently on two distinct markets: businesses and the general public. The business model is based initially on most revenues coming from business users by providing chargeable information that will give businesses a competitive advantage.

11.4 Implementation

Information is collected from a wide range of sources: both manual and automatic, public and private, including transport operators and the police. Matisse consolidates the information and disseminates it using an Internet site http://www.mattisse.org.uk/, mobile devices, public information screens, public Internet kiosks, radio broadcasts, and SMS services. Business users can buy customised services.

The innovative Public-Private Partnership has a clear management structure, with a neutral leader. Partners bring particular skills with mutual benefits. Private sector partners are able to

develop added value services. The public sector offloads risk but achieves services to meet policy objectives. Local Authority payments are focussed on achievement of Public Service Criteria. Initially the service relied on mutual co-operation, but more formal arrangements are now needed for sharing data.

11.5 Evaluation

The web site has 4000 hits per day without publicity. The service is being re-branded and will then be publicised. Ways to measure success in achieving policy goals are to be developed.

11.6 Conclusions

The Public-Private Partnership was complex to set up. Key factors for success are non-quantifiable 'human' factors, co-operative working and political will. Strategies for dealing with technological change and leadership from central government in providing overall architectures for TTI services are also critical to success. Data ownership has become a significant issue. The partnership may form a model for similar services elsewhere.

For the future, service quality is being improved and added value services for business travellers are being developed. Future success will also depend on the rate of innovation.

12 Mizar Mediaservice

Type of activity: Private company providing traveller information services and software
Geographical location: Italy
Other Key Features: Produces MSTIC (software tool for Traffic Information Centres) and WALKIE (personalised travel information services)
Key 'Good Practices': Develops customer-focused and multiple-application software for ITS from a strong research background (both technical and market-based)
TTI dissemination media used: TMC, Internet, WAP, Kiosks, SMS

12.1 Abstract

MIZAR Mediaservice is an Italian IT company which is developing commercial transport telematics services, based on work in research and development projects. The markets for the company's services include service providers, transport authorities and end users. The traveller information services provided include the Walkie personalised traveller information service which gives users information both on demand and in response to incidents.

12.2 Background

MIZAR Mediaservice is a small IT company specialising in software for traffic information and providing traveller information services. The latest development is 'personal navigation' services providing traffic information and driving directions over the Internet, and traffic information via WAP, SMS and PDA.

12.3 Objectives

Mizar Mediaservice aims to expand its customer base to the point where its 'infomobilty service' accounts for 10% of the market in Italy. It is about to launch a service with a major European Internet Service Provider that will increase the number of users dramatically. The company's enthusiasm for cooperating with other companies enables it to stay small, whilst being active in ITS developments.

12.4 Implementation

The company sells software and operations through system integrators or licencees, it provides engineering support to system integrators, and it sells tailor-made services to end users.

Information is provided both on demand and in response to incidents. Information is made available through the Traffic Message Channel, the Internet and WAP based Walkie services, MISTIC, a software tool for interfaces in traffic centres, and mobile phone based applications.

MISTIC, based on DATEX, is popular with traffic operators' for its ease of use and varied options for connection formats. Mizar has also developed MIDAS, a software service platform and basis for MIZAR's personalised information services such as Walkie.

Walkie is available through mobile phones, public kiosks and the internet: www.Walkie.it. New developments such as Virtual navigation, delivering information about points on the journey, are made possible using large bandwidths.

MIZAR develops commercial services on the basis of research and collaborative demonstrations with authorities and operators. For example the findings of previous EU funded projects were analysed to provide information on the likely viability of Walkie as a new service.

12.5 Evaluation

Involvement in large scale R & D projects has provided a basis for developing the company's products.

Use of Walkie is growing rapidly, at around 20% per month, and there are between 1500 and 2000 different people using each day.

12.6 Conclusions

MIZAR believes concise rules need to be laid down by the EU, to enable authorities, businesses and consumers to obtain high quality data. The development of the Walkie service demonstrates that partnerships are needed for marketing, while good cooperation with content providers is important, and information chains need to be simple.

An advertising campaign is raising the profile of Walkie and the new paid for service, with the aim of increasing trust in the service and hence users' willingness to pay for it. An English language version of the Walkie service for Italy is also being developed.

13 Openbaar Vervoer Reisinformatie (OVR)

Type of activity: Private company providing national public transport information service
Geographical location: The Netherlands
Other Key Features: fully funded by public transport operators (previously largely by the state)
Key 'Good Practices': Full door-to-door Journey Planning, agreed basis of financing; strong emphasis on user needs and market research
TTI dissemination media used: Web, Call-centre

13.1 Abstract

OVR is a private sector company providing a national public transport information service for the Netherlands. All public transport operators are obliged to supply OVR with details of their services. Initially OVR received government funding, but is now funded by public transport operators. OVR focuses on providing high quality accurate information for the whole journey, which is disseminated through a telephone enquiry service and a well-used Internet service.

13.2 Background

OVR provide travel information incorporating bus, tram, metro and train services throughout the Netherlands. The database includes all streets, addresses and points of interest. The two main services offered are a telephone enquiry service (set up in 1992) and an Internet journey planner (set up in 2000).

13.3 Objectives

OVR focuses on quality and providing end-to-end information for planning journeys, to maximise use of the service and of public transport. It provides a one-stop shop for planning fully linked details of any journey involving public transport in the Netherlands. Transport operators benefit from having the information service run by a specialist company.

13.4 Implementation

Public transport operators have a legal obligation to provide service details to one private company, and OVR has an arrangement with the government to receive the information.

For the first few years, government funding for OVR provided a strong base for setting up the service, as the joint information service for the public transport operators. Government support has been reduced gradually, and since 2000, OVR has been funded entirely by public transport operators, in proportion to the amount of use made of the information on their services.

To encourage more customers to use and trust the service, information is updated regularly to ensure that it is as accurate as possible.

Users can obtain the information via a free Internet service: www.ovr.nl. The telephone enquiry service is well used and is based on the same journey planning software as the internet service. An automated voice response service has been developed to assist operators when demand is high.

13.5 Evaluation

The OVR Internet Journey Planner attracts 50000 users per day. A telephone call centre serves 25000 callers per day, at a low call charge.

13.6 Conclusions

OVR recognise to have the most effective web site they must use the most suitable search engine available. Displaying the information in an appropriate way is just as important as collation of the data itself.

OVR carried out fundamental research on customer needs and developed a service that is well used and accurate, OVR recognise that work on customer needs must be constantly updated to ensure that customer needs continue to be met.

New ways of disseminating information are being investigated. Future developments may include integrating road traffic information into the journey planner, and developing services for third generation mobile devices.

14 P4 Radio

Type of activity: Public-private partnership providing national traffic information service
Geographical location: Norway
Other Key Features: Developed from an R&D project; emphasis on high-quality information, based on data from a range of sources
Key 'Good Practices': Innovative public-private partnership involving a considerable degree of joint working, which has provided a good basis for further partnership ; strong emphasis on data quality and format to meet users' needs
TTI dissemination media used: Radio, Internet, SMS, WAP, PDA

14.1 Abstract

The Norwegian Dynamic TTI messages service is provided by a Public Private Partnership which includes the public road authority, telecommunications and broadcasting companies and a research and development organisation. The service is designed to provide high quality information based on data from a range of sources. Revenues are shared on the basis of a contractual arrangement between the partners.

14.2 Background

The Dynamic TTI Messages service was launched in 2001 and was developed through a Public Private Partnership to provide high quality road traffic information from a variety of sources to drivers in Norway through a variety of media. The development of the service was funded partly by partners and partly by the national research budget. Radio listeners form the main audience for the service but the Internet service is also popular. The SMS service has few users.

14.3 Objectives

The service was developed through a project designed to create a platform for providing services that could help to make more efficient use of the road network. Other objectives for the project focused on the safety of drivers using in-vehicle devices to receive information. The public sector goals are policy-driven. The private sector communications provider and solutions provider have benefited from the opportunity to develop and test new technologies and services.

14.4 Implementation

The service covers the whole of Norway but most of the messages are related to the Oslo area, since this is where most of the congestion occurs. Messages cover road traffic conditions, but the radio broadcasts include some public transport information. The service uses information from a specially recruited team of drivers who report on traffic conditions as they encounter them, a traffic surveillance helicopter, the national road administration's data, and the police. Information from different sources is analysed, checked and integrated in a database, before it is formatted for use on the Internet site www.p4.no/trafikk, in traffic broadcasts and in the WAP and SMS services. High quality messages are ensured through careful technical analysis of the data, and a training programme for staff.

Users can specify the area or sections of the network for which they will receive messages. The Internet service is free of charge, while SMS users pay for each message. The main source of funding is from advertising. The revenues are shared between the partners, on the basis of a contractual arrangement. The benefits of the service to the radio station are seen in promoting its position as the leading source of traffic information.

Further development is needed for some of the technologies. User interfaces have been tested, using touch and voice instead of a visual display.

14.5 Evaluation

The WAP and SMS services have made the service available on new platforms but the number of users is currently low. Message quality has been improved dramatically. Partners have needed to spend significant time and effort in accommodating different ways of working so that they could co-operate to develop and implement the service.

14.6 Conclusions

The partnership has been successful and forms the basis for developing further services in the future. Plans are being considered for integrating the service with related information services such as route planning and tourist information. Potential future developments include tailoring the service more closely to users' needs, enhancing it with travel time prediction and advice on route planning, and integrating it with other related services.

15 stadtinfoköln

Type of activity: R & D project to develop Traffic Information Centre and deliver multimodal TTI
Geographical location: Cologne / Germany (map)
Other Key Features: Provides new high-quality information services for collective and individual users, with basic service delivered free-of-charge, and on-trip and real-time services charged for and delivered to mobile devices; many types of data from a wide range of sources; large number of partners in consortium (16); limited life of present contract (4 years)
Key 'Good Practices': Built clearly on work of earlier programmes; closely integrated with local long-term policy goals and framework for ITS implementation; developed using step-by-step approach; has involved public-private partnership from the start; uses 'open' system architecture to enable easy data integration
TTI dissemination media used: Internet, PDA, VMS, TV, radio, in-car systems, kiosks

15.1 Abstract

"stadtinfoköln" is a research and demonstration project focusing on urban traffic management, traffic information and mobility services in an integrated way. It represents a crucial building block within a long-term local policy framework for ITS implementation. Particular achievements have been the development of new high-quality information services for collective and individual users, and the definition of an operating model for the traffic management and information centre through a public-private partnership.

15.2 Background

Since 1991 the city of Cologne has been implementing a municipal action plan for ITS applications, financed by local, regional and national funds. This has made it possible to successively extend the urban traffic management centre (TMC), the parking information system and high-quality TTI services.

In 1999 the city set up a public-private partnership consisting of the city, system and content providers, vehicle manufacturers, a car-sharing service and research institutions, to establish an urban traffic information centre (TIC), co-funded by a federal government R&D programme.

15.3 Objectives

At the strategic level "stadtinfoköln" aims to improve the city's traffic management capacity and cost efficiency, the quality of the urban environment, and to promote the Cologne region as an attractive and innovative business location. In practical terms the city is seeking to achieve this by providing high-quality real-time information to travellers in public transport and private cars via collective and individual delivery channels.

15.4 Implementation

Through a pragmatic step-by-step approach to implementation, previous components of the traffic management and information system have become integrated through the "stadtinfoköln" project: area-wide road data collection (induction loops, cameras), urban TMC, parking information and reservation system, public transport control centre and information system.

The project consortium has established a TIC with an open system architecture that makes it possible to integrate all of the traffic data collected, and to deliver multimodal information to travellers in real-time via VMS, radio, videotext, TV, printed media, internet, PDA, info-kiosks and in-car systems. All information on traffic flows and incidents affecting traffic and public transport, as well as on parking, weather and events is also offered to private service providers

on a commercial basis. The partnership is defining a final operating model for the running the TIC from May 2003.

15.5 Evaluation

Positive effects of the long-term ITS policy have been demonstrated on urban road traffic volumes, modal split and perception of transport problems. For instance, while motorway traffic volumes increased by 18%, inner-city road-traffic has fallen by 10% (1991 - 1998). “stadtinfoköln” contributes strategically to this policy, integrating ITS services, but more time is needed before valid results evaluating its particular contributions can be obtained.

15.6 Conclusions

Due to the early stage of the project, the capacity for lasting value-added TTI service delivery still needs to be proved. It is clear, however that long-term political commitment and gradual implementation have been important is the success of “stadtinfoköln”. The project has confirmed the potential of R&D projects to foster public-private cooperation, define new modes of partnership and explore the business-sensitive field of public data exploitation for high-quality TTI service delivery.

16 Trafikanten

Type of activity: Publicly-owned company providing public transport information
Geographical location: Oslo, Norway (map)
Other Key Features: Journey planning service. Owned by major publicly-owned operators, but does not include services of all operators (who participate voluntarily)
Key 'Good Practices': Agreements have developed to use the same journey planning software in other services and other countries
TTI dissemination media used: Call centre, Web, WAP, SMS

16.1 Abstract

Trafikanten is a private company (but publicly-owned) providing public transport information for the Oslo area of Norway. Set up by the public transport operators, Trafikanten currently collates data from all the major transport companies, to avoid fragmentation. The future of this comprehensive coverage is uncertain, as deregulation of the public transport industry is introducing competition into the market.

16.2 Background

Trafikanten is entirely owned by the three transport authorities in the Oslo region: Sporveien, Stor-Oslo Lokaltrafikk and NSB BA. Trafikanten offers information and ticketing services for all public transport modes. This information can be sold free of charge to commercial public transport operators.

Information and journey planning services are available through a range of media: a service centre based at the airport, a telephone enquiry centre (operating since 1986), a visitor centre, an Internet service providing a Travel Planner (since 1997), and WAP (since 1999) and SMS based travel planners.

16.3 Objectives

The aim is to provide a "competition neutral" service, finding people the best route without encouraging use of services run by any particular operator. To achieve a really high quality information service, Trafikanten see a need to set up a forum for standardisation, to ensure minimum standards of quality for the data provided by operators.

16.4 Implementation

The three most popular ways of obtaining information from Trafikanten are the telephone enquiry service, WAP and the Internet: www.trafikanten.no/ To access Trafikanten's telephone service, users dial a common telephone number '177' which can be used anywhere in Norway. New services are being planned, including real-time information.

State grants contributed to the set up costs. Sales of the software to other counties are used to fund improvements. With the privatisation of more public services, Trafikanten have to struggle against becoming fragmented.

16.5 Evaluation

The travel planner has increased public transport use. The Internet service has seen rapid growth with over 2.6 million customers during 2002. Originally the number of customers using the WAP service was low, but the number of users doubled in 2001, to 190000 in 2002. Use of the call centre has been decreasing, the number of calls was 950000 in 2002.

The neutral nature of the service has made some operators reluctant to provide data, and deregulation of the transport market may increase this problem unless regulations are introduced to ensure that operators provide information to a public transport information service.

16.6 Conclusions

Trafikanten has found that it is important to consider the ease of use and completeness of a service, while the needs of the public must be considered to discover any potential markets.

Trafikanten often subsidises smaller commercial operators so that comprehensive coverage of services can be maintained. In future, national working groups of the relevant stakeholders may be needed to ensure standardisation of information and services in a deregulated industry

New projects that are being planned include SMS, speech recognition and real-time information systems.

17 Trafikinfo

Type of activity: Collaborative forum providing traffic and travel information and traffic management services
Geographical location: Copenhagen, Denmark
Other Key Features: Voluntary collaborative organisation, with membership renewed annually; both national and local organisations are involved, but all are public-sector Has developed a comprehensive traffic information and journey planning website
Key 'Good Practices': Has developed organically over a long period (from 1986) according to the needs and objectives of partners; has a mix of small effective activities and more ambitious projects; has developed a flexible platform for supporting a range of traveller information and traffic management services; has developed a common vision
TTI dissemination media used: Internet, radio, WAP, SMS, E-mail

17.1 Abstract

The traffic and transport authorities in Copenhagen have joined together in a voluntary forum with a common vision for providing integrated traffic and travel information services. Subscriptions to the forum are used to fund joint initiatives, which are implemented in stages by securing small achievable improvements in the context of longer term plans for common systems and flexible architectures.

17.2 Background

The TRAFIKINFO forum members are the main public authorities and organisations concerned with traffic and travel in the city of Copenhagen. From an informal start in 1986, the group has continuously formalised its commitments and in 2001 agreed a common vision, and created an action plan for 2001 – 2006. The largest of the projects is the TRAFIKINFO project, named after the forum, which involves demonstrating the effects of a range of ITS systems and services on the east-west corridor which connects the city centre, the suburbs, and the Trans-Eurepean road network route to Sweden.

17.3 Objectives

The TRAFIKINFO forum aims to encourage more informed travel decisions and better use of infrastructure through integrated TTI services. The objectives are to improve the joint use and co-ordination of traffic information and services, and to be the forum for discussing and implementing joint activities and projects. The group has agreed a long-term vision.

The TRAFIKINFO project plan for 2002 – 2006 involves developing small effective improvements and larger joint projects, all on one corridor.

17.4 Implementation

The forum's activities cover a range of information services and the facilities and architectures to support them. The Internet site www.trafikinfo.dk provides dynamic traffic information and journey planning. The quality of traffic and travel information services and broadcasting have been improved through standardisation and co-ordination. Information on events and roadworks is co-ordinated on the web site. Users can obtain maps and a free subscription e-mail service tailored to individual routes. Traffic management services are also developing.

Transport decision makers set up the forum, seeking the benefits of collaboration. The forum is funded from members' subscriptions. Private service providers will pay for any information they use. The forum is more successful now than it was initially, when the focus tended to be on individual interest at the expense of collaboration.

Individual forum members retain ownership of data and infrastructure. Services are free to the public. The role of the private sector is still limited, but Public-Private Partnerships are being investigated for infrastructure finance or added-value services.

17.5 Evaluation

TRAFIKINFO has stimulated service quality improvements and the development of new services based on a flexible data platform. The scope and scale of the work of the forum have increased dramatically since it was formed.

17.6 Conclusions

The motivation and commitment of individual decision-makers in the various transport authorities in the city have been key to setting up the forum and achieving improvements. Success has been attained by working in small stages which were easy for organisations to work with. Voluntary collaboration, securing support at all levels in the member organisations, and a common vision have all been key success factors.

18 Trans Basel

Type of activity: R & D project involving public and private sector partners in three countries set up inter-modal travel information service on the Internet
Geographical location: Basel region, Switzerland, France and Germany (Map)
Other Key Features: Trial project; provides information on all modes, including cycling and walking; involves multi-national collaboration
Key 'Good Practices': Multi-modal route calculation tool integrates public and private transport modes, with Park and Ride an integral part of the mode-service offering, as is real-time car park occupancy data; uses concept of 'data layers' to enable incorporation of partial information in a useful way; has close working relationship between partners
TTI dissemination media used: Internet

18.1 Abstract

TransBasel is an Internet-based travel information service for the Basel area. The service co-ordinates public and private transport information from authorities and transport operators in three countries, and provides inter-modal trip planning, journey times and real-time information. The service was set up in a Research and Development project, and is not a commercial service.

18.2 Background

Trans-Basel is a multi-modal Internet-based information service which was developed in an R&D project between 2000 and 2002. The service relies on co-operation between operators of all transport services and authorities in Switzerland, France and Germany.

18.3 Objectives

TransBasel aims to improve transport efficiency, inform mode choices, promote public transport and encourage multi-modal journeys. Travellers in Basel needed co-ordinated information covering cross-border journeys and linking journeys using services run by different transport operators.

18.4 Implementation

TransBasel provides pre-trip planning information and details of real-time traffic conditions on the Internet site: www.transbasel.com. The innovative pre-trip route planning tool provides travel time calculations to enable users to compare journeys by different modes and combinations of modes. The service includes real-time information on parking availability and traffic conditions on the motorways. Web camera views and maps show traffic conditions. The network coverage is complete for basic information, but other information is available only on parts of the network. Routes are calculated using the best information available.

The information is free of charge, funded by the project and the consortium. Agreements ensure that the information is used only for TransBasel. The project consortium ran the information service and developed plans for a future organisation. The service is in a transitional stage, maintained using external funding to ensure continuity of service.

18.5 Evaluation

The web site has 100 – 150 users each day. The site is well received by users but experience shows that they are not likely to pay for the service, so public sector financial support may need to be found if it is to continue. Surveys of users found that the information is most useful for planning non-routine journeys, but relevant real-time information can be useful for commuting; 17% of users had changed their plans at least once after seeing information on the web site. Advertising and media coverage have increased use of the service.

18.6 Conclusions

Close working relations between partners have been a key to the success of the service. There were a number of lessons for the technical development of web-based multi-modal information services. Standard formats were successful for obtaining real time road traffic data from road operators, while public transport timetable information was difficult to use. Lack of geographic data for the transport network meant that it was too expensive to display maps.

Options for extending the service to provide in-trip services using Variable Message Signs, mobile devices and information kiosks are being considered. The business case for a future service is based on a publicly funded service with a value-added service for businesses. Transfer of the service to other areas is technically feasible; the amount of effort involved depends on availability of geographic and transport data.

19 YTV Helsinki Metropolitan Area

Type of activity: Publicly-owned organisation managing public transport and providing information.
Geographical location: Helsinki Metropolitan area, Finland.
Other Key Features: Public Transport journey planning
Key 'Good Practices': Strong emphasis on data quality
TTI dissemination media used: Web, Call centre, mobile phone services, at-stop displays

19.1 Abstract

Helsinki Metropolitan Area Council (YTV) is owned by the municipal authorities in the Helsinki region, and is responsible for managing public transport in the region including regional public transport across municipal boundaries. YTV provides traveller information services as a tool for promoting public transport and reducing car use. YTV sees the development of minimum data quality standards as being important to the future success of traveller information services.

19.2 Background

YTV organises public transport in the Helsinki region, running the competitive tendering process for public transport services. In order to ensure co-ordinated information, YTV collates transport data and disseminates information through other organisations and their own services.

19.3 Objectives

YTV's public policy goals include promoting public transport and reducing car use. These, rather than commercial goals, have driven the development of its public transport information services. Improving real time information services is another objective for YTV.

The timetable database information is generally available free of charge to users and contracted services providers.

19.4 Implementation

Most of the information for the integrated timetable database comes from services managed by YTV, and information from all local and regional public transport operators in the area is collected. YTV also collects real time operational data from bus operators.

Timetable and fare information is shared with organisations providing services to the public by agreement with YTV, and with commercial content providers.

YTV operates a web site which includes a public transport journey planner http://pathfinder3.meridian.fi which is available free of charge, in addition to printed information, call centres and displays at stops.

19.5 Evaluation

YTV have found that traveller information services can be used to improve the quality of public transport services. In Finland there is a large amount of development in mobile technology, but the demand for traveller information services is not so strong, even though there is high use of mobile technology.

An investigation of customer 'willingness' to pay for mobile services has been carried out, with a large survey among users of the information service. Customer opinion of the TTI service has been assessed using a national survey, but the results are not yet available.

19.6 Conclusions

A need has been identified for minimum standards for data quality, to enable use of information services to be promoted.

Business models have yet to be developed in Finland for real time information services on public transport.

Development of traveller information services in Finland is being hindered by lack of standards for data, limited resources and insufficient profit.

A new real time information database is planned for the future, but it may be delayed due to lack of funding.