



## Integrating land-use transport planning with long term urban planning

### The Land Transport Authority, Singapore

**Overall Objectives:** Holistic planning and development of land use and transport networks. To allow the state to envision an overall Concept Plan for the long term future, from which the Development Master Plan and the supporting Transport Master Plan can be developed.

**Description:** From the Concept Plan, which is the 'big picture' that maps out Singapore's long term physical development, a Development Master Plan is prepared which translates the vision and broad development strategies of the Concept Plan for implementation in the medium term. A supporting Transport Master Plan is developed. There is conscious planning to integrate the transport networks with land use, both in terms of planning and implementation. It requires planning well in advance for high density developments at and around major transport nodes such as Mass Rapid Transit (MRT) stations and bus interchanges. Attention is also paid to achieve a high level of integration between the various transport modes at these nodes. This helps to facilitate seamless travel by commuters and encourage public transport use.

At the same time, land transport policies are developed covering all modes of transport to meet the mobility needs of the people while maintaining the liveability of Singapore's urban environment. A holistic package of measures to enhance the integration of the public transport system, manage road use and cater to the diverse needs of the people is adopted.

To be successful in integrating land use and transport planning, it is critical for the land use planning agency and the transport agency to work together to realize the common vision for the good of the state.

**Results:** Such integrated planning and development has transformed Singapore into a vibrant city with a land transport system that is characterised by a comprehensive network of smooth-flowing traffic and a high quality easily accessible public transport system. The MRT networks have grown in tandem with development growth and link the high density housing developments to the city centre and to other employment areas. A high proportion of travel (63% daily mode share) is by public transport. Accessibility to public transport is universal and public transport fares are one of the lowest in the developed world, even though there is no direct subsidy from the state for operating costs.

For more information please see: [www.lta.gov.sg](http://www.lta.gov.sg)



## Taking overall responsibility for transport (integrated transport management)

### Transport for London, United Kingdom

**Overall Objectives:** Transport for London (TfL) was created in 2000 and is the integrated body responsible for the capital's transport system. Its main role is to implement the mayor's Transport Strategy for London and manage transport

services across the capital for which the mayor has responsibility.

**Description:** TfL is one of the most comprehensive transport authorities in the world, under the control of the mayor of London. One of the key distinguishing features of TfL as a transport authority is that it is responsible for both the strategic road network and public transport. TfL also acts as both an authority and a direct operator, depending on the mode of public transport involved.

The mayor appoints the Board of TfL, according to the Greater London Authority Act, and both of London's mayors have chosen to chair TfL. The mayor is required to publish a Transport Strategy, alongside the London Plan and other statutory plans. He also decides transport policy (including fares policy) and TfL delivers that policy. Aside from fares and the policy of charging, the rest of TfL's funding comes from national government.

**Results:** One of the most obvious outcomes of the influence of a Mayor for London and supported by an Integrated Transport Authority has been a successful policy to promote and invest in public transport. TfL received a ground breaking five-year financial settlement from the government in 2005 to deliver an investment programme, worth over GBP 10 billion, the first one in the history of London's transport.

TfL has recently received a financial settlement from the Government which is worth GBP 39 billion of grant and borrowing for the period 2010 to 2017. Furthermore, bus usage has increased by over 40% since 2000/01, with currently 2 billion journeys per year. In this time underground/DLR have seen over one billion journeys per year. And traffic in central London has reduced by over 20%. Since 2000, London has achieved a 5% modal shift from car to public transport, walking and cycling. The scale of this shift has not been matched by any other comparable city in the world.

For more information please see: [www.tfl.gov.uk](http://www.tfl.gov.uk)



## Integrating public transport in the Hamburg area

**Hamburger Verkehrsverbund GmbH  
(Hamburg Public Transport Agency Ltd.)**

**Overall Objectives:** Full integration of public transport services irrespective of operator and competent authority, showing “one face to the customer”.

**Description:** The Hamburger Verkehrsverbund (HVV) was founded in 1965, working for 10 area municipalities (Gebietskörperschaften). It was the first integrating organisation worldwide.

HVV is responsible for the planning of all public transport services in the area taking into account other urban policies, a common fare and ticketing system, marketing of the HVV brand and publishing information on all public transport modes.

HVV introduced cooperation contracts to regulate all aspects of integration and to ensure that all public transport services in the area are fully integrated. The contract includes the planning of the network and time schedule, high quality standards and the integrated fare scheme set up by HVV. Lately, HVV has introduced a quality management system with bonus and penalty payments for all transport services within the HVV area. The contracts are enforced by only awarding commercial authorisation if the operator accepts to sign the cooperation contract. For non-commercial services the cooperation contract will be part of the public service contract.

**Results:** HVV is the brand for public transport in the area. All 38 operators must accept the regulations concerning the integration of services within the area. HVV policy has clearly contributed to shaping a customer-friendly public transport service. Since its foundation, passenger numbers in the HVV have risen by 60%, in the last ten years (since 1998) passenger numbers rose from 480 million to 630 million per year (which is equivalent to a rise of more than 30%).

Even more important is the success of HVV in regard to customer satisfaction. HVV measures customer satisfaction regularly. Since the last ten years it has continuously risen. It is therefore among the top-ranked organising authorities in Germany with a high rating for customer satisfaction.

For more information please see: [www.hvv.de](http://www.hvv.de)



## Developing a structured and interconnected public transport network

**Nantes Metropole (Communauté Urbaine)**

**Overall objectives:** the overall objectives are described in the current urban mobility plan (2000-2010), which states goals in terms of market share for the different modes of 50% for private cars, 18% for public transport and 32% for

other modes (walking and cycling).

As far as public transport is concerned, these objectives should be reached through developing a structured and efficient Public Transport network in the Greater Nantes territory and widening the range of services to offer solutions adapted to the different needs and the volume of demand.

**Description:** The network is designed to allow easy and convenient interconnections between the complementary modes. The current network is made of 3 tram lines, 1 BusWay line, 59 bus lines including 3 Chronobus<sup>1</sup> lines and 3 express lines (operating only at peak hours), one on-demand transport system for PRM (proxitan), 2 shuttle boats, 4 local train lines and 11 railway stations in the urban transport perimeter.

To improve coverage and efficiency a new ‘BusWay’ service was introduced to extend the dedicated lane transport scheme. The scheme is composed of a comprehensive tram system of five branches radiating out from a central hub. The line 4 BusWay has successfully come to expand this high frequency network applying all the elements that made the tram successful to a bus system: dedicated lanes, priority at all intersections, extended hours (from 05:00 to 02:30) and high frequency (every 3.5 minutes at peak times). The line is operated with 20 dedicated CNG-powered vehicles providing comfort and innovation. Four park and ride car parks (1046 parking places) are located along the line.

**Results:** The modal shift from private cars to public transport for the 4 lines was between 25 and 30%. The four park and ride facilities around the BusWay show a 95% occupancy rate. As far as the whole network is concerned, the activity has been growing steadily.

<sup>1</sup>Chronobus is a label created to improve the performance and the image of main bus lines (quality certification, CNG buses, improved frequency, dedicated lanes on at least 50% of the line)

For more information please see: [www.nantesmetropole.fr](http://www.nantesmetropole.fr)



## Promoting the use of public transport

### Merseytravel, Merseyside, United Kingdom

**Overall Objectives:** Maximising the opportunities for promoting public transport underpinned by the wider agenda of environmental improvements.

**Description:** Merseytravel has a wide range of creative measures to encourage the use of public transport. This includes making information more readily available, clearer and easier to read, using alternative

formats and translating information into multiple languages. In addition, Merseytravel has a number of special promotions of travel opportunities in and around Merseyside either linked to special events (including the Southport Flower Show and Mersey River Festival) or destinations such as Aintree Racecourse. Merseytravel also organizes a 'Soccerbus' service to provide transportation for football games in the Merseyside area.

These offers are communicated through a series of leisure-based leaflets encouraging the use of public transport e.g. Out & About, Rideabout, Walkabout, Cruiseabout, Artsabout, Beatles attractions and Performing Artsabout Merseyside. The information is also published on the website.

**Results:** The schemes have been a great success over the last years. Soccerbus users account for over 3.0% of attendance at Liverpool and for Everton football games (the two largest clubs in Merseyside). Merseytravel has developed a DVD in Chinese, Arabic and Somali to provide important information for people who speak these languages.

In order to improve customer service, Merseytravel has published a customer charter, revised and updated Merseylink publicity materials and issued publicity for the English National Concessionary Travel Scheme (reduced or free fares for disabled people and people over the age of 60).

For more information please see: [www.merseytravel.gov.uk](http://www.merseytravel.gov.uk)



## The role of an integrated authority in marketing public transport

### Metlink Victoria Pty Ltd, Melbourne, Australia

**Overall Objectives:** The main objectives are to create a new image for Melbourne's public transport system; to bring together the system wide marketing and communication activities; to reposition the public transport system and to enhance the provision of customer information.

**Description:** Metlink was introduced to provide a new name and brand image for Melbourne's Public Transport System. It involved government and operators forming the specific-purpose company which cooperatively markets public transport, conducts high quality research, enhances the delivery of customer information,

aids passenger navigation and delivers customer-oriented projects.

The advertising campaign aimed to make public transport more accessible to people and to counter some of the misconceptions about public transport. It was designed to encourage customers to reappraise their perceptions to match reality, to promote service improvements and to build the confidence of non users. It was also important to reinforce the positive experience by communicating enhancements and special offers to new and regular passengers.

**Results:** In its short five-year history, Metlink has established itself as a key component in Melbourne's public transport industry.

Its achievements are vast given it has operated during a time of unprecedented change. Patronage on trains has grown by close to 40%, and overall, the network has 25% more passengers. Fare evasion strategies have saved USD 26 million in lost revenue and ticket revenue has grown by over 40%. Customers are changing the way they buy tickets and are switching to high value periodical and multi-use tickets. A staggering 80% of total revenue growth is seen in periodical and multi-use tickets.

Advertising campaigns have repositioned public transport and demystified it for citizens. Customer signage has been overhauled and clearly stands out in the streetscape. Metlink's website is Australia's fourth most popular transport site behind three major airline carriers and is the country's most popular public transport site. Public transport is more welcoming and easier to use following the success of these projects.

For more information please see: [www.metlinkmelbourne.com.au](http://www.metlinkmelbourne.com.au)



## Public transport through local bus projects

### Province of Gelderland, Netherlands

**Overall Objectives:** Promoting access and quality of life in areas with insufficient transport demand for operating 'regular' public transport services.

**Description:** The local bus is a special form of public transport, mainly used in rural areas with low public transport demand levels. As a client for public transport, the province of Gelderland feels that it is its concern and duty to offer residents of these areas some form of basic mobility. The project is financed by the province. Harmonisation and tie-in with other public transport is guaranteed.

The actual implementation of transport operations is undertaken by volunteers who are provided with a mini bus capable of carrying 8 passengers. In the province of Gelderland, every day there are more than 1,100 volunteers active in 26 local bus projects. Equipped with 35 buses, they operate a tight timetable and system of routes.

The majority of the volunteers are retired individuals or people who have taken early retirement. For reasons of idealism, they wish to contribute to the quality of life in the rural areas, and ensure access to essential services.

**Results:** Local bus associations have been in existence in Gelderland for more than 25 years; over the past few years a clear rise has been noted in passenger numbers. On the one hand this is undoubtedly due to increased demand for mobility; on the other hand, both province and operators have focused more attention on the phenomenon of the local bus.

In 2007, the result was an increase in passenger numbers as compared with 2006 of 31%. The initial figures for 2008 as compared with 2007 suggest that passenger numbers are still increasing.

For more information please see: [www.prv.gelderland.nl](http://www.prv.gelderland.nl)



## Coordinating of organising authorities to provide an integrated high quality service

### Region Emilia-Romagna, Department for Mobility and Transport

**Overall Objectives:** The Emilia-Romagna region's Department for Mobility and Transport governs (by planning and ensuring participation) the system of public transport in order to abate the consumption of energy, reduce the causes of environmental pollution and protect the health of its citizens.

The department coordinates organising authorities (called "agencies") with the goal of improving accessibility for individuals and businesses and promoting an integrated system which is safe and of high quality. In addition, the department develops research relating to technical innovation and management for collective and

individual transport to promote a culture of sustainable mobility.

**Description:** By regional law, the department retained the competences on railway transport and delegated competences relating to road and urban transport. For public transport the department set up nine provincial agencies who own essential infrastructure and are responsible for the regulatory functions of public transport. The department cooperates closely with the agencies, participating with them on several EU funded projects (Civitas, COMPRO). The regional authority signs agreements with the agencies and with local bodies for the financing and the regulation of public transport, agencies award the (net-cost) management of services to operators with whom they sign public service contracts.

**Results:** The department provides public transport services which are: integrated with the rail network, consistent with each other, of homogeneous quality and ultimately, organized under a single fare system at regional level.

4.3 million citizens within the region are given the right to access transport facilities and diverse services, providing a concrete alternative to individual transport.

For more information please see: [www.regione.emilia-romagna.it/wcm/ERMES/Canali/trasporti.htm](http://www.regione.emilia-romagna.it/wcm/ERMES/Canali/trasporti.htm)  
[www.srbologna.it](http://www.srbologna.it)



## Smartcard ticketing

### Seoul Metropolitan Government, South Korea

**Overall objectives:** Combining smartcard ticketing with other policies to provide a better service on the Seoul public transport network.

**Description:** Seoul Metropolitan Government first introduced a smart card ticketing system in 1997. Since then it has been updated to improve the way the card is used and to make it more convenient for passengers.

The objectives of the recent changes are to improve the fare system by not charging passengers when they transfer between services provided by different operators and to introduce a more convenient system for fare discounts. The automated distance fare, which started in July 2004, allows passengers to transfer for free up to five times and only pay for the total distance which they travelled. In addition, the new system is more sophisticated and differentiates between children, students and adults. So that when children become students and when students become adults, their card will remain valid and provide the correct discount.

The new transportation card known as T-Money has many advanced functions such as: providing detailed information on fares and type of service for the customer, calculating and adjusting the fare structure by time and distance and ensuring that data remains secure through sophisticated encryption technology. It is also available in different forms (such as key rings) to make it more convenient for passengers.

**Results:** The new transportation card system has been a great success; when the new system was introduced in 2004 the number of passengers increased by 6.6% compared to the previous year. Over the same time the number of bus passengers increased by 11.1%.

In addition, the number of passengers has increased by 2% for the subway, 8% for urban bus and 27.5% for local bus, which was to a large extent due to the free transfer policy between local buses and the subway.

For more information please see: <http://english.seoul.go.kr>



## Investment in public transport

### Dubai Roads and Transport Authority

**Overall Objectives:** Dubai Roads and Transport Authority (RTA) was established in 2005 and its mission is to prepare legislation and develop integrated solutions for road systems and land transportation networks that are safe and in line with Dubai's economic development plans and the highest international standards.

RTA is responsible for planning and providing the requirements of transport, roads and traffic in the Emirate of Dubai, and between Dubai and other Emir-

ates of the United Arab Emirates, and neighbouring countries in order to provide an effective and integrated transport system capable of achieving Dubai's vision and serving the vital interests of the Emirate.

**Description:** Dubai has been experiencing rapid economic and demographic development for the last ten years. As a result of this continuous growth, Dubai's transport needs are growing rapidly. RTA expects traffic (expressed in person-trips) to be multiplied by 4 between 2005 and 2020. This means that in the coming years RTA will have to meet the challenges of increasing the use of public transport, reducing congestion, improving the urban environment as well as ensuring that everyone has access to public transport, including people with special needs.

To cope with these challenges, RTA has developed a comprehensive strategic plan (with 2020 as the target year) around the slogan "safe and smooth transport for all". The public transport component of the plan includes the construction of a new metro and tram network, the expansion and modernisation of the bus network, the development of new water transport routes and modernisation of the taxi fleet. These improvements will together cost around USD 9.9 billion. The main objective of this investment is to reach the target of 30% modal share for public transport by 2020.

**Results:** Less than four years after the creation of RTA, Dubai has already achieved a big step towards the implementation of the strategic plan and more specifically its public transport component.

Two driverless metro lines (Red line and Green line) are almost finalised and it is expected to inaugurate the commercial operation of the first line in September 2009. The second line will open during the first half of 2010. In addition to huge investment in public transport systems, RTA has already implemented a number of initiatives and accompanying measures to promote collective transport including car-pooling, company transport plans, park-and-ride, journey planners, just to name a few.

For more information please see: [www.rta.ae](http://www.rta.ae)



## Sustainable procurement of public transport services

### Västtrafik AB, Göteborg, Sweden

**Overall Objectives:** Improve the local environment by reducing traffic sources and other forms of pollution. Improve the overall quality and accessibility of public transport, as well as its safety record.

**Description:** Bus operations are carried out by private enterprises, but Västtrafik as the region's public transport authority sets the requirements and issues the call for tender. The environment and social factors are introduced at the very beginning of the procurement process. Parallel to this, the local authorities of the region are consulted about environmental needs they consider applicable.

To ensure that the objectives are met, two strategies are followed. The first targets environmental emissions by setting minimum standards achieved by including strict emission standards as part of the technical specification of the call for tenders. The second approach incentivises challenging targets to be met and bettered by rewarding good performance with bonuses. This is achieved by awarding 25% of the income generated from transport fares to the operator (usually operators are paid a fixed amount according to the number of vehicle kilometres).

**Results:** The introduction of competitive tendering was very successful in the Greater Göteborg Area, as well as in the rest of Sweden. The main aim and effect was to achieve better public transport with the same amount of public subsidies provided for the system. The main indicator of success is the number of passengers transported. In fact, between 1990 and 1997 the number of passengers increased by 7.5%.

With regards to social requirements, the goals were also achieved. Wages of bus drivers were kept constant by tendering requirements in the first years.

For more information please see: [www.vasttrafik.se](http://www.vasttrafik.se)



## Transport plans for sustainable mobility

### Agenzia Mobilità e Ambiente, Milan, Italy

**Overall Objectives:** Reducing traffic and polluting emissions.

**Description:** The Milan plan for sustainable mobility includes a set of integrated measures to strengthen the position of public transport in the city. Measures which are a part of this scheme include the integration of fares and e-ticketing in public transport. This is closely linked with policies designed

to rationalise traffic in the city centre, such as the development of interchange parking, extension of parking regulation and the development of car sharing and car pooling.

The shift to sustainable modes is further encouraged through the development of cyclist mobility, and ICT technologies to support mobility management and control. Low emission vehicles are promoted through a variety of incentives and highly polluting vehicles are discouraged by the Ecopass scheme, which charges cars to enter a specified central area of the city. The cleanest vehicles enter free of charge while more polluting vehicles pay fees which increase with the emission levels of the vehicle.

**Results:** The results of the scheme for 2008 have been promising. Traffic levels have been reduced for both private and commercial vehicles, during the time the Ecopass scheme was enforced, but also outside it. In addition there has been an increase in vehicle modification with a significant reduction in the most polluting vehicles, resulting in a total decrease in the level of the main polluting emissions (PM, CO<sub>2</sub>, NO<sub>x</sub>, and ammonia). The actions taken have also contributed to increasing the commercial speed and the level of ridership on public transport inside the Ecopass area and reduced road accidents in the city.

For more information please see: [www.ama-mi.it](http://www.ama-mi.it)