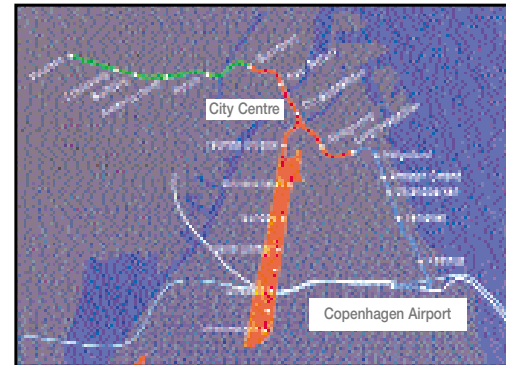


## Best Practice 1: Public transport adds value to developing new areas



The London Docklands light rail was jointly financed by the developers of this new area.

In 2002, a new automatic metro line financed by private funding will link the new town of Orestad to the centre of Copenhagen. A company owned jointly by Copenhagen City and the Government of Denmark is in charge of building and operating the new metro line. It borrowed capital based on floating state and city backed bonds which are paid back by selling the land to property developers.



Finance new public transport investments with the land-owners, who are able to build up undeveloped areas, as in Copenhagen.

**Investment in providing a high quality public transport system increases the value of real-estate**

## Best Practice 2: Light rail regenerates city centres



The attractive “transit” mall of prosperous San Jose (CA).

Many cities have successfully combined public transport projects with a policy of revival of its city centre. Well designed public transport such as light rail systems are successful and attractive to passengers, even in car dominated low density US and Canadian cities.

In the last 20 years, 14 cities in USA and Canada have introduced new light rail systems: Baltimore, Buffalo, Calgary, Dallas, Denver , Edmonton, Los Angeles, New Jersey, Portland, Sacramento, Saint Louis, Salt Lake City, San Diego, San Jose.

Building ‘transit malls’ with light rail access, trees and pedestrian zones encourages private investment in city centre office blocks, shops and apartments.



**New public transport systems are a good starting point for commercial development and a better urban environment.**

## Best Practice 3: Pedestrians, cyclists, buses and trams make a good combination for inner city centres



In Amsterdam, the narrow Leidestraat, is a pedestrianized zone where trams are allowed.

Even in narrow streets where cars are banned, pedestrians, cyclists, deliveries, buses and trams can coexist.

In Italy, more than 60 cities have restricted access to their historic city centres except for buses and trams, for most of the day. In Rome this zone extends from the east of the Tiber as far as the Termini station, encompassing the historic city centre, with its high density of employment, commerce and habitation.

Prague has used concrete humps in the city centre to separate car lanes from tram tracks and prevent cars and trucks from driving on the rails. An 800 m section with humps has eliminated former regular delays of 7 - 10 minutes and reduced the circuit time of 5 tram routes.

This cost-effective solution together with appropriate parking policies helps:

- keeping the track free for trams
- delays resulting from congestion
- reduction of circuit time
- increased smooth flow of tram traffic
- energy savings

**Trams and buses can adapt to the narrow streets of historic city centres.**

## Best Practice 4: Attractive rail and bus services to out-of-town shopping and leisure centres



In Oberhausen (Germany), 28% of visitors to the big out-of-town shopping and leisure centre arrive by bus and tram due to the fast dedicated routes.

The car is not the only way to reach out-of-town shopping and leisure centres. Attractive public transport well adapted to the needs of the visitors to these centres can offer a good alternative.

Such as in Oberhausen (Germany) where the new out-of-town centre with shopping and leisure activities is linked to the town centre and main station by a right-of-way exclusively dedicated to buses and trams. Most of the investment for this was financed from the German federal fuel tax.

**Out of town facilities should also be served by public transport.**

## Best Practice 5: Fast reliable links from city centres to airports



Source: Heathrow Express

Heathrow Express, a rapid rail link has taken an estimated 3 000 vehicles per day off the local roads.

Fast, reliable access to airports is of fundamental importance. Neither passengers on their way to catch a plane nor airport employees can afford to be delayed by congestion. In some cities public transport carries as much as 40% of all airport passengers. The station needs to be very close to the arrival and departure terminals, with easy access for people and luggage.

Country	Existing	Planned
Europe	40	49
North America	14	32
Asia	7	22
Africa	1	2
Australia	0	6
South America	0	5
Total	62	116

This table shows the number of rail links to airports at the beginning of 1998 including speed networks, high speed dedicated links, regional links or metro style links or a combination of them.

**The airport becomes more accessible, benefits from a higher image due to the rail access and there is less need to provide parking places.**

## Best Practice 6: Co-ordination of all modes

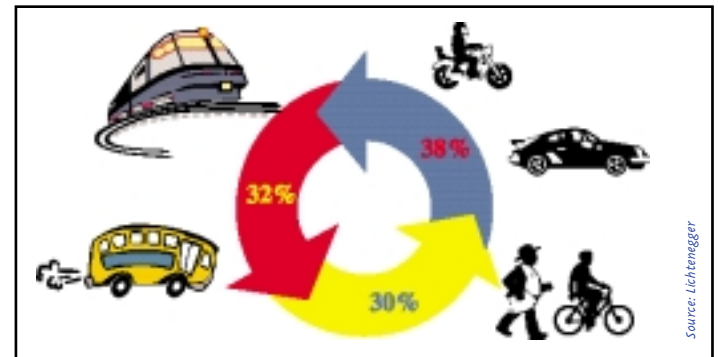


Low floor tram in Vienna - after high levels of investment citizens of Vienna now benefit from a comprehensive and well-used public transport network.

The market share of public transport has risen by 10% in 4 years in Vienna, the capital of Austria.

The reasons are:

- A common ticket for all modes in the metropolitan area,
- Well planned interchange stations to encourage making easy changes from one mode to another.
- Expansion of metro and suburban rail.
- Modern light rail system in city streets.
- New tramline to a new housing area.
- Personalised marketing in new residential areas.



**A fully integrated public transport system contributes to the social and economic development of a city.**

## Best Practice 7: New technology can be used to better inform passengers



London Underground is one of the leading transport companies in the field of information technology, with its real-time information giving next train arrival times.

OVR, Openbaar Vervoer Reisinformatie, is the intermodal source of passenger information for The Netherlands. A single telephone number for the call centres gives access to all the timetables of any mode of public transport, as well as, a 'door-to-door' itinerary showing the best way to the chosen destination. OVR also takes reservations and payment, and the information it gives out includes taxis and walking or cycling itineraries. OVR receives more than 10 million calls per year.

Göteborg, Sweden, has a network wide real-time passenger information system. The information centre monitors the position of vehicles on their routes allowing real-time information of the next service to be given at stops, including any disruption to service. This information is also available in the vehicles themselves and is accessible via the Internet and mobile telephone (WAP – wireless application process).

**Good passenger information is a deciding factor to increase the competitiveness of public transport.**

## Best Practice 8: Easy access to all modes by 'e-ticket'



Nearly 80% of the total population of Hong Kong possess at least one smartcard. Each day 4.5 million transactions for public transport are made – a remarkable technical success for improving client service.

A contactless smartcard in Hong-Kong has been in operation since 1997. This contactless ticketing system integrates all modes of public transport (trains, metro, light rail, bus and ferries).

Used by 85% of passengers, the Smartcard reduces access time to platforms and vehicles. Its use is not limited to public transport and electronic purse applications have been added so that other services such as parking, taxis, and the telephone can also be paid for. The overwhelming success is attributed to its convenience.

New marketing applications and revenue streams are being developed and transport applications are being called the 'killer application' for contactless smartcards.

**New electronic tickets make journeys easier for public transport users.**

## Best Practice 9: **Quality Bus Corridor transports 40% to 200 % more passengers at peak times**



The Stillorgan Quality Bus Corridor in Dublin has a frequency of one bus every minute during the critical peak periods and since its introduction there has been a 200% increase in ridership during the morning peak time band.

A key component of Dublin's Transportation Strategy is the introduction of Quality Bus Corridors. Twelve such corridors comprise the first phase of QBCs, with others planned to follow. The package of measures along a main corridor includes:

- priority right of way – dedicated road space for buses,
- direct alignment of bus route,
- a bus every one to three minutes at peak periods,
- a modern fully accessible bus fleet,
- trained staff committed to quality and customer care,
- real-time information with expected time of arrival of next bus,
- illuminated shelters with seats at every stop.

The results so far are very successful. Bus journey times have been reduced by 30% to 50% and 60% of the passengers are new clients who formerly made the trip by car.

**Improving bus routes on corridor alignments can be cost effective and produce rapid short-term benefits.**

## Best Practice 10: High capacity buses networks can successfully transport large quantities of people



Expensive infrastructure is not always possible and adapting existing networks creatively can improve the service and increase patronage, as in Quito, Ecuador.

When demand is high but investment funds are scarce, a bus system on dedicated roads provides a good solution. Curitiba and Sao Paulo (Brazil) have high quality rapid bus services. Rapid bus systems, such as the one in Sao Paulo, have a capacity of 20,000 passengers in each direction per hour.

This example is being followed by more and more South-American cities. Measures include improvements in their bus system, reserved roads and specially designed stops.

In Quito (Ecuador), a new trolleybus trunk route has been introduced, serving stations with high platforms for easy and quick boarding.

**Emerging and developing countries need to invest in urban transport systems that are sustainable and respond to their growing needs for mobility.**

## Best Practice 11: Light rail can also satisfy heavy demand



The citizens of Tunis and Istanbul rely heavily on the tram and light rail services to get to the city centre.

Istanbul, Tunis and Manila have efficient tramways with a frequent service on dedicated right of ways.

Istanbul has two lines, tram and light rail, with a total of 30 km which is used by more than 300,000 passengers every day.

Tunis, with 4 radial tram lines and a total length of 37km, transports 250,000 passengers daily.

In Manila, one 15km light rail line carries nearly 400,000 passengers daily.

These light rail networks are among the most patronised systems in the world.



**Tramways on dedicated rights-of-way provide an economic and effective solution for emerging countries.**

## Best Practice 12: The renaissance of trams



The new Grenoble light rail system in the city centre. Sitting in a café near an environment-friendly light rail vehicle is more pleasant than next to a road with heavy traffic.

20 years ago, only 3 cities in France still had trams, and each retained only one line. But many French cities have now found that they can keep their character and increase their commercial activities by building a modern tram or in today's terms light rail system.

Totally new systems have been successfully introduced in: Nantes, Grenoble, Strasbourg, Paris, Rouen, Montpellier, Lyon, and Orléans.

Existing tram networks are being extended and new ones are being built such as in Bordeaux. Other cities, such as Nancy, have chosen to invest in the 'tramway on tyres'.

None of this would have been possible without the 'transport levy', a tax paid by employers and used for investment in and the operation of collective passenger transport.



**Light rail can become part of the unique identity of a city and be an object of civic pride for its citizens.**

## Best Practice 13: Tram-train, a new concept using both light and heavy rail lines



A Karlsruhe city tram on DB tracks next to a high-speed ICE train.

Karlsruhe (Germany) has a main railway station which is not in the city centre. Trams can be run on the same railway lines used for regional services, linking the city centre with the outer city region. Passengers benefit from a fast rail journey and continue into the centre, without changing modes.

The overwhelming success of the scheme in Karlsruhe has led other cities such as Saarbrücken to adopt the same principle.

The examples of Karlsruhe and Saarbrücken show that the problems of compatibility between heavy and light rail can be overcome. The high number of Tram-train projects either being planned or in progress confirms this.

**Connecting urban trams and regional railways is an excellent way to increase the accessibility of cities.**

## Best Practice 14: Metro can rapidly move a large number of passengers



Madrid has built 56 km of metro in 5 years.

In large cities the metro or RER is unrivalled in its capacity to rapidly move large numbers of people: 20 000 passengers per hour in each direction is the average, rising to over 80 000, on some networks.

Several metros such as New York, Sao Paulo, London, Paris, Hong Kong, Seoul, Osaka, Mexico City, St Petersburg carry 1 billion passengers or more per year. In Tokyo and Moscow the annual figures are even higher with more than 3 billion passenger trips per year.

Madrid (5.0 inhabitants) had 112 km of metro line in 1993, today boasts 171 km with further extensions planned bringing the total up to 225 km by the year 2003. The network will have effectively doubled its length in a period of 10 years, averaging 11 km of new lines constructed per year. During this time an orbital line has allowed to the metro to now serve several districts in the surrounding area of the city, and a new metropolitan orbital line 40 km long is in construction.

**With a rhythm of 10 km of metro line built per year, the costs of construction are drastically reduced - to only 32 million euros per km of metro in Madrid.**

## Best Practice 15: Art brings light underground



Art and modern architecture brings new life to underground transport systems.

In the nineties, as part of the expansion of the Lisbon metro extra investment was also made in art and architecture to create a modern dynamic environment. This transformed the stations and made each one radically distinctive showing how art and culture adds an extra dimension to the attractiveness of a system.

As a result, the Lisbon Metro can now be considered to be a contemporary art gallery with works from architects and artists from many continents.

Other cities such as Sao Paulo, Stockholm, Paris and Brussels are doing the same.

**Citizens look to their Metro systems as a reference of public transport quality and including art improves its positive image.**

## Best Practice 16: Wealth and public transport go together !



Paradeplatz in Zurich, where two world-leading banks have their headquarter is reserved for pedestrians and the blue Zurich tram.

In Zurich - as in other banking and service centres world-wide - an attractive public transport system fulfils the demanding needs of its highly paid managers. The concentration of jobs, in financial districts such as Wall Street, New York, The City of London and Frankfurt need high capacity attractive transport systems.

Public transport becomes the preferred choice for everyone if it is quick and comfortable and if parking capacity is limited, as is often the case in central business districts.

**Public transport is the intelligent choice for all classes of people and can be used for professional as well as for leisure purposes.**