

Better mobility for people worldwide

# Bringing quality to life

The contribution of the public transport sector to sustainable development illustrated with best practices from signatories to the UITP Sustainable Development Charter

International Association of Public Transport



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More complete information on charter signatories  
can be found on their web sites and more detailed information  
on the case studies can be found on the UITP electronic database Mobi+.

Information on how to access this is available on  
the UITP web site [www.uitp.com](http://www.uitp.com).

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This brochure is printed on recycled paper.

Dépôt légal: D/2005/0105/24  
Layout: Little Blue Cat sprl  
Printer: JCB Offset

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## World Events

## UITP Response

Bruntland report - Our Common Future Introduction of the term Sustainable Development	1987	
United Nations Conference on Environment - 'The Earth Summit' - 100 leaders signed the Framework Convention on Climate Change and adopted Agenda 21. Creation of United Nations Commission of Sustainable Development (CSD)	1992	
Earth + 5 Summit	1997	
	April 2001	UITP created first International Environment Working Group
	May 2002	Renamed UITP working group and extended work topic to cover Sustainable Development
World Summit on Sustainable Development (WSSD) United Nations Commission on Sustainable Development (CSD)	Aug. 2002	UITP part of joint delegation on Rail and Public Transport, with exhibition stand at Ubuntu Exhibition
UN CSD 11 <sup>i</sup> annual meeting at UN Headquarters in New York	April 2003	UITP attended and was part of UN initiative for World Car Free Day
	May 2003	Launch of UITP Sustainable Development Charter at 55th World Congress with 33 pioneer signatories Publication of 'Ticket to the Future' brochure
United Nations Framework Convention for Climate Change (UNFCCC) COP 9 <sup>ii</sup>	Dec. 2003	Joint side event on transport with UIC and UNIFE. UITP invited to speak at the 'Tackling Transport Emissions' UNFCCC official event
	Jan. 2004	First UITP Coaching and Training Workshop, Brussels, Belgium
UN CSD 12	April 2004	Attended Annual Meeting
	June 2004	Attended WHO Transport, Environment and Health Ministers meeting and Workshop on Sustainable Transport
UNFCCC COP 10	Dec. 2004	Joint side event on transport



ONGOING

<sup>i</sup> CSD Commission of Sustainable Development  
<sup>ii</sup> COP Conference of the Parties

## Foreword from the UITP President – UITP taking the lead

UITP, as the international representative of the public transport sector, took the lead in 2003 and launched a charter on Sustainable Development at its 55th World Congress. UITP members are asked to become signatories and make a voluntary, measurable commitment to this charter.

Today more than 100 members have done so and this partnership allows us to collect best practises and results, demonstrating what public transport contributes to sustainable development. This report sets out these achievements and is one of three major reports prepared for the 56th World Congress (2005)<sup>1</sup>

Since the World Summit on Sustainable Development (WSSD) there is a growing awareness and understanding of this issue. International disasters have acted as a 'wake-up' call and now we must stop discussing and debating and move to implementing measures and actions. The public expects governments and the organisations that serve society to actively demonstrate their commitment.

Indeed, sustainable development has evolved from one grounded in environmental concerns to being a key business driver – and this report shows that engaging in sustainable development is not only critical to environmental protection and social equity but also makes good business sense. Indeed if economic development is not to be compromised, it must be properly addressed. Here transport in all its forms plays an undeniably important role, and with our increasingly urban life style, public transport needs to show its credentials and value more clearly.

This is one of the key motivations for UITP to take leadership with its Charter on Sustainable Development. Indeed increasing the understanding of what is required, recognising what is being achieved and expanding the knowledge on this issue for our members is now core to UITP's mission and a sustainable future.



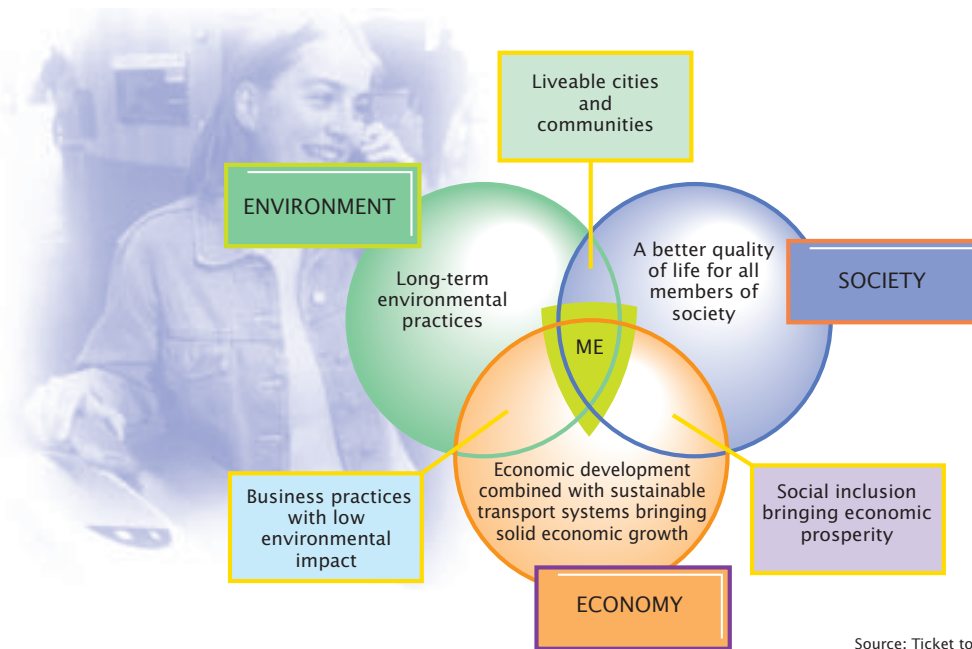
Wolfgang Meyer  
UITP President



## The Concept of Sustainable Mobility

Bringing Quality to Life is one of three major reports prepared for the 56th UITP World Congress in 2005. *PT 2020 : from vision to action* and *Mobility in Cities* are complementary to the information found here. More information and details on how to obtain these UITP publications can be found on the UITP website ([www.uitp.com](http://www.uitp.com)).

This publication and a six page executive summary are available in English, French, German, Spanish and Italian on the UITP website and can be downloaded free of charge.



Source: Ticket to the Future, UITP

The UITP Sustainable Development Commission is an international, multi-discipline group of UITP members and charter signatories, experts implementing sustainable development in their organisation

Chair Glenn Frommer, Sustainability Development Manager, MTRC Ltd Hong Kong  
 Co Vice Chairs Julie Hoover, Parsons Brinckerhoff USA  
 Eric Terrier, Quality Manager, Transdev, France

### Working groups of the commission Sustainable reporting and indicators

Chair Michael Schemmer, Bombardier Transportation, Germany  
 Vice Chair Jean Pierre Charrier, RATP, France

### International Diversity Initiative

Co-chairs Elaine Seagriff, Transport for London, UK  
 Sylviane Delmas, RATP, France

### Commission members (June 2005)

Antonietta Argilli ASSTRA, (Italian Public Transport Association) Italy  
 Heloise Boyer Keolis, France  
 Johan Nordgren Svenska Lokaltrafikföreningen (Swedish Public Transport Association)  
 William Tyson Greater Manchester Passenger Transport Executive, UK  
 Ajay Singh Metropolitan Transit Authority – New York City Transit, USA  
 Ulrich Weber UITP EuroTeam

### Corresponding members

Rose Sheridan APTA, American Public Transit Association  
 Michael Roschlau CUTA, Canadian Urban Transit Association

### UITP coordinator

Heather Allen UITP

# List of charter signatories

June 2005

The following UITP members have committed to the Sustainable Development Charter. An updated list is available on the UITP web site [www.uitp.com](http://www.uitp.com)

## Full Signatories

- 
- Alcan Inc.
  - Alstom Transport, France
  - AnsaldoBreda S.p.A., Italy
  - ATAC – Agenzia per I Trasporti Autoferrotramviari del Comune di Roma
  - ATCM – Azienda Trasporti Collettivi e Mobilita, Modena, Italy
  - ATM, Azienda Trasporti Milanesi SPA, Italy
  - Berliner Verkehrsbetriebe (BVG), Berlin, Germany
  - Bombardier Transportation, (Headquarters Canada)
  - Communauté Urbaine de Nantes, France
  - CONNEX, France
  - Electricité de France (EDF), France
  - FirstGroup plc, UK
  - GMPTE - Greater Manchester Passenger Transport Executive, UK
  - Hamburger Hochbahn, Germany
  - HTM Personenvervoer N.V., The Hague, The Netherlands
  - Keolis, France
  - Knorr-Bremse Systeme Schienenfahrzeuge GmbH, Germany
  - KVB – Kölner Verkehrs-Betriebe, Germany
  - Land Transport Authority (LTA), Singapore
  - Leipziger Verkehrsbetriebe, Germany
  - Metro of Bilbao, Spain
  - MTA New York City Transit, USA
  - MTR – Mass Transit Railway Corporation Ltd., Hong Kong
  - Parsons Brinckerhoff, Australia
  - Parsons Brinckerhoff, (Headquarters USA)
  - Provincie Gelderland, Arnhem, The Netherlands
  - Queensland Rail (QR), Australia
  - RATP, Régie Autonome des Transports Parisiens, France
  - Siemens Transportation Systems, Germany
  - Stadtwerke Augsburg, Germany
  - STIB, Société des Transports Intercommunaux de Bruxelles, Belgium

- TMB- Transports Metropolitans de Barcelona, Spain
- The Kowloon Motor Bus Co., (1933) Ltd. - KMB, Hong Kong
- Transdev, France
- Transport for London, UK
- Transports Publics Genevois, Switzerland
- üstra Hannoversche Verkehrsbetriebe AG, Germany
- Verkehrs-Aktiengesellschaft (VAG), Germany
- Yarra Trams, Melbourne, Australia
- YTV Helsinki Metropolitan Area Council, Finland

## Pledge Signatories

- 
- Aare Seeland Mobil AG, Switzerland
  - Action Authority, Canberra, Australia
  - Azienda Perugia della Mobilità, APM, Italy
  - BERNMOBIL - Städtische Verkehrsbetriebe Bern, Switzerland
  - Brisbane Transport, Australia
  - Bremer Strassenbahn AG, Germany
  - Budapest Verkehrs AG – Budapest Transport Ltd (BKV)
  - Chemnitzer Verkehrs-Aktiengesellschaft, Germany
  - Compagnia Trasporti Pubblici, Napoli, Italy
  - Connekt, The Netherlands
  - Consorcio Transportes de Madrid, Spain
  - Departamento de Movilidad del Ayuntamiento de San Sebastián, Spain
  - Dresdner Verkehrsbetriebe, Germany
  - Gauteng TCC, Johannesburg, South Africa
  - Helsingin Kaupungin Liikennelaitos - Helsinki City Transport HKL, Finland.
  - Lohr Industrie, France
  - Merseytravel, Liverpool UK
  - Metro de Lisboa, Portugal
  - Metrorrex, Bucarest, Romania
  - Metro Mondego, Coimbra, Portugal
  - Mosgortrans State Unitarian Enterprise, Russia
  - Moskovsky Metropoliten, Russia

- Nexus, Newcastle, UK
- Oslo Spoorveien, Norway
- Queensland Transport, Australia
- Rheinische Bahngesellschaft AG, Germany
- Scheidt & Bachmann, Germany
- SÉMITAG, Grenoble, France
- Skybus Super Shuttle, Australia
- Société de transport de Montréal (STM), Montréal, Canada
- Société Régionale Wallonne du Transport (TEC), Namur, Belgium
- Stadtwerke München GmbH/ Münchner Verkehrsgesellschaft MVG, Germany
- Stuttgarter Strassenbahnen AG, Germany
- Syndicat mixte des transports en commun clermontois, France
- SYTRAL, Lyon, France
- Transport de l'agglomération de Montpellier, France
- Verkehrsverbund Ost-Region GmbH, Vienna, Austria
- Vossloh Kiepe GmbH, Germany
- VVM De Lijn, Belgium
- Yapi Merkezi, Turkey
- Wiener Linien, Vienna, Austria

## Association Signatories

- 
- ANTP, Brazilian Public Transport Association
  - APTA, American Public Transit Association
  - ASSTRA, Italian Public Transport Association
  - CPT, Confederation of Passenger Transport, UK
  - CUTA, Canadian Urban Transit Association
  - SLTF, Swedish Public Transport Association
  - UNIFE, European Rail Supply Industry Association
  - UTP, Union des Transports Publics, France
  - VDV, Verband Deutscher Verkehrsunternehmen, Germany
  - URTP, Uniunea Romana de Transport Public, Bucuresti, Romania



Bangkok, Thailand

*Worldwide sustainable development means narrowing the mobility divides between levels of society and the richest and poorest countries*

## Global developments

*“For many years governments have heavily subsidised unsustainable forms of transport and energy with commensurate growth in demand and increasingly disastrous implications for the global environment. In both sectors, the solutions to these problems, locally and globally, must now be based on a fundamental reorientation towards reduction in consumption and a shift of government subsidies towards support for sustainable energy and transport policies, strategies and technologies, and targeted support for disadvantaged, low income sectors in all countries.”*

*United Nations Commission on Sustainable Development, 2001*

### Managing paradoxes

A dominant feature of the world economy is an almost universal desire for a higher standard of living. The notion and expectation of material progress is an integral part of economic development. The world of tomorrow will have not only more people but more people wanting a higher standard of living, and therefore higher expectations for their mobility.

Traditional approaches to trade and service provision must change. This trend is being driven by increased liberalisation, deregulation and privatisation and other factors, such as the present influence of the financial markets, the vacuum of political power, and increased competition. In addition information and communication technologies are creating different values and expectations, which become widespread more quickly than ever before. In today's world these trends must now be reconciled with social, ecological

and cultural criteria to establish a new global arena for balancing business interests with the public good. Successful organisations in the 21st century, both public and private, will be those that skilfully manage the prudent juggling of these seemingly conflicting objectives. They will be able to strike a better balance between high levels of competition, short term gains and the longer term goals of sustainable development.

### Fairness in a fragile world

The rising share of people in urban areas and the corresponding economic growth of cities are two defining principles of economic and social development. The world is becoming increasingly urbanised with 80% of world population projected to be living in cities by 2020, and in reality the gap between rich and poor seems to be widening rather than narrowing.



In the developing world, the speed that people are moving from rural to urban areas is putting a heavy strain on infrastructure and services. Furthermore, most cities in these regions are not developing as compact, high density urban areas but rather as multimodal, low density, sprawling conurbations of mixed use with untraditional city structures – setting a new set of challenges for governments and societies. Yet these cities must be guided to develop harmoniously while contributing fully to global stability.

Cities and towns are centres of economic growth and employment, centralising much of a nation's power and wealth. This brings different challenges to the existing industrialised world and to developing economies. Urban areas in Europe generate 75-85% of European gross national product.

The developing world still supplies the majority of the raw materials for manufacture and consumption by the developed world but this balance will shift in the future. By 2020 the balance of power and wealth will be different to today. The promises of poverty reduction, access to water and education as set out in the United Nations Millennium Goals<sup>2</sup> are unlikely to be achieved by 2015 or even 2030. In today's world, 70-80% of the world's resources are consumed by 20% of the world's population, clearly demonstrating the imbalance of present production and consumption patterns.

Revaluing and re-evaluating society and the renaissance of cities are key to rebalancing the distribution of wealth between the fast growing, younger population of the developing world and the aging populations of the developed.

## Developing for future generations

Over the last decade sustainable development has evolved from an esoteric concept to a management principle, key to the successful future of governments and organisations. Reflecting this a new definition has emerged:

*Sustainable development is about ensuring a better quality of life for everyone, now and for generations to come.<sup>3</sup>*

There are certainly significant challenges for the transport sector to achieve any level of sustainable development in both developed and developing nations in the short or medium term. The promise of technology being able to solve many of the disadvantages brought by increased personal mobility have simply not delivered over the past 30 years, and worse, are unlikely to in the foreseeable future.

As more people live in towns and cities, they become centres of pollution, poor air quality and congestion restricting mobility. Therefore, responding to the transport challenge is critical to their development, creating the sustainable communities required for future prosperity.

Increased interest and public awareness all over the world make the following priorities for governments and industry to address:

- Environmental concerns, such as climate change, energy, the degradation of land particularly in urban areas, air quality, access to clean water and the depletion of natural resources;

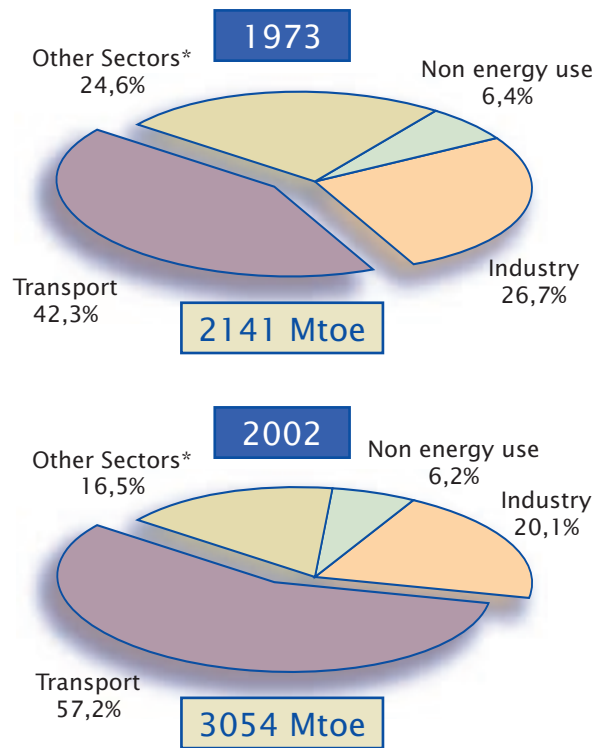
- Human health and risks from widespread exposure to pollution and other air-borne toxic substances, accidents and growing obesity through lack of physical exercise
- Socio-economic disquiet over population growth worldwide, demographic changes are particularly strong in urban areas, the social disintegration from displacement of traditional lifestyles leading to more complex travel needs, the growing income gaps between rich and poor combined with the expectations of quality of life driven by the media and access to information.

Environmental concerns and use of resources, with a focus on climate change and energy use, is now a mainstream topic for all governments. Yet these issues have been 'on the table' for discussion and action at international level for more than 30 years, since the Earth Summit in Rio (1990) and the oil crisis of the 1970's. It is only in the past few years that any comprehensive progress has been made. Two important mechanisms will help move this forward: the European Emissions Trading Scheme (EUTS) which started trading carbon in January 2005 and the Kyoto Protocol, which came into force in February 2005.

The predictions for the transport sector as a whole are demanding. Today 95% of all transport depends on fossil fuel and this is likely to remain the case for the foreseeable future. In addition, much transport infrastructure is vulnerable to climate change. Key



### Evolution of shares of world oil consumption



Mtoe : Million tonnes of oil equivalent  
Source : International Energy Agency

infrastructure connects economic regions, often along coastal areas, or is underground in large cities, making it highly vulnerable to changes in sea levels and flash flooding caused by sudden climatic instabilities. As national commitments to the Kyoto protocol are now legally binding the reduction of CO2 emissions are a top priority.

One of the main consequences of globalisation is the growing awareness of interdependence and interconnection of humanity. In this respect the high levels of mobility enjoyed today are one of the most immediate expressions of globalisation working.

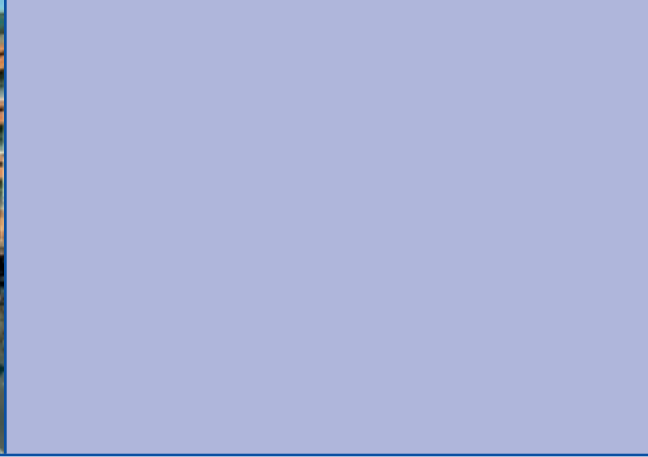
Mobility, and therefore sustainable mobility in the developed and developing world, is an important prerequisite for future economic growth, anchoring social stability and environmental protection. Public transport operators and organising authorities are key players in enabling this. It is not enough that public transport, by definition, is more energy efficient, socially inclusive and space saving than individual car transport, UITP and its members are also committed to ensuring that the production of this transport is sustainable; The UITP Charter on Sustainable Development requires that signatories report on their

environmental, social and economic performance within their own organisations, demonstrating the commitment of the sector to this issue.

### A global set of values

The following six goals can be considered as a framework for the basis of a global initiative to make the world's transport systems sustainable:

- Reduce conventional emissions and transport related noise so that they do not constitute a significant concern to public health anywhere in the world
- Limit greenhouse gas emission from transport to levels that will not endanger the climate
- Significantly reduce the number of road transport related deaths and injuries
- Address and reduce traffic congestion
- Narrow the mobility divides between levels of society and the richest and poorest countries
- Improve mobility opportunities for all levels of society giving access to primary services of health, education and employment



## Setting out the key challenges for the sector

Increasingly complex legislation, globalisation and the liberalisation of markets combined with growing societal pressures means all types of organisations need to understand and act on a widening range of risks across their operations. Successful organisations depend on their relationships with stakeholders, in particular with their customers, employees and investors and it is through enhancing this potential that value is created.

Sustainable development is the complex outcome of shared values. This touches on environmental protection and justice; social equity, healthy economic growth; stakeholder involvement and having a global perspective. In today's world, the general public's concern of environmental pollution is growing and, in parallel, their expectations for organisations to

perform responsibly are increasing. This means that organisations and businesses need to incorporate new values and activities, traditionally covered by governments.

Public transport actors are in contact with the public on a daily basis, both transporting and employing large numbers of people. They are increasingly becoming aware that they need to find innovative ways to manage and influence the attitudes and perceptions of all their stakeholders. These stakeholders include customers, employees, suppliers, and other investors both of a political and/or commercial nature. This entails building trust and creating positive relationships to deliver advantages in the short, medium and long term.

## Today's market environment

### Present trends and drivers

- Globalisation
- Legislation and regulation
- Evolving societal expectations
- Threats to licence to operate
- Strengthening organisations' governance processes
- Expanding the value chain of products and services
- Access to information and misinformation
- Attract, retain and motivate employees and staff

### Response - Actions to increase the sustainable development performance of organisations

- Scope the context of actions required
- Prioritise and set strategic direction
- Allocate ownership, set targets and goals
- Leadership and governance
- Measure and monitor results
- Evaluate, learn and adjust
- Stakeholder relations
- Performance reporting

### Benefits and added value

- Demonstrate performance
- Increase value of intangible assets (eg.) reputation, image and brand value
- Opportunities for growth
- Cost reductions
- Strengthen stakeholder relationships and alliances
- Employee motivation
- Better decision making processes
- Increased trust and credibility with decision-makers, customers and suppliers

Source: based on GEMI <sup>5</sup>

This is one of the most fundamental reasons for engaging in sustainable development and it is occurring in all sectors. Over the past twenty years there has been a significant change in the number of organisations that are publicly engaging and reporting on their environmental and social performances as well as their economic activities. Only twenty years ago the term sustainable development simply did not figure, the provision of service and contributing to public good have always been prerequisites for successful public transport, and economic performance cannot be decoupled from the other two areas.

A number of factors have created widespread awareness for organisations to be more accountable, responsible and transparent. Today's debates on performance and sustainable development have an impact on an organisation's value in a number of ways:

- Contribute to the trustworthiness and credibility;

- Increase effectiveness through a better understanding of the potential of the environmental and social implications of their activities;
- Motivate all stakeholders within and outside an organisation to focus efforts toward achieving performance targets and strategic goals.

### Key skill sets for tomorrow's organisations

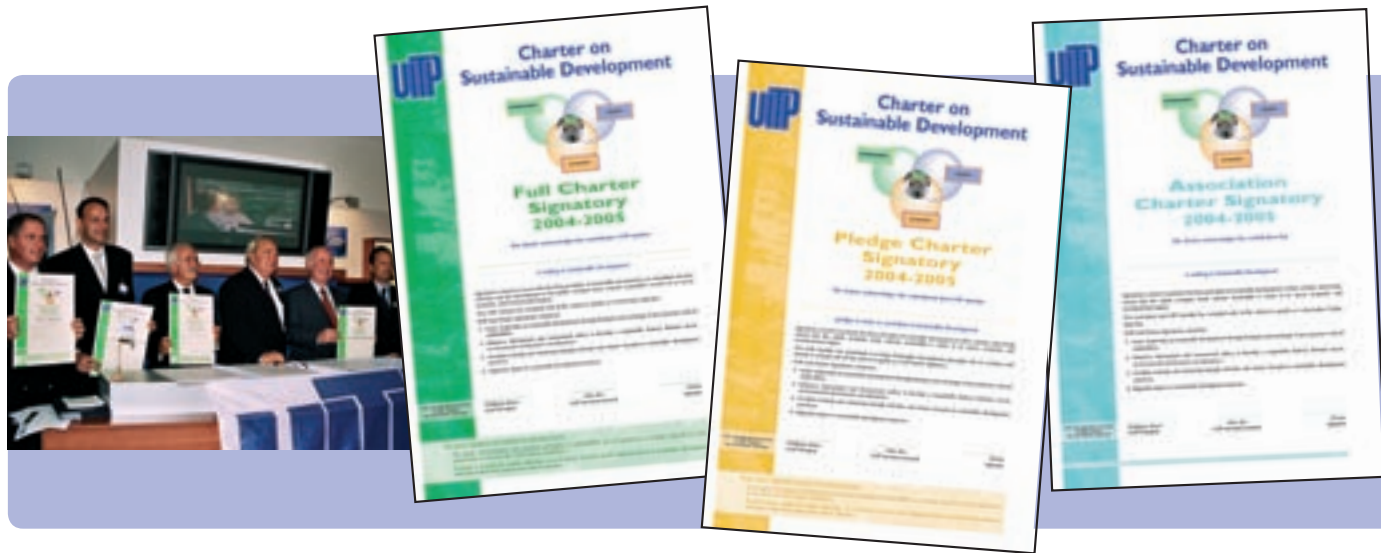
Sustainable development is a journey rather than a destination and is based on a new, or certainly different, set of values to traditional business. In recent years there has been much written on the business imperatives of taking a wider approach to building value. This does not just reflect taking a commercial perspective but includes acting responsibly and serving a community, a core value of public transport.

### New business imperatives

Commonly recognised new imperatives are:

- Reputation management
- Risk management
- Employee motivation and satisfaction
- Innovation and learning
- Access to capital
- Financial performance

As the public transport sector moves from a technology based industry to a service based sector, addressing these six imperatives in the context of implementing sustainable development will help realign the sector as a key player in growing economies and build stable communities.



UITP members are invited to make a voluntary commitment. Those who are not UITP members are invited to sign as 'Supporting Signatories' to ensure that the full product and service cycle is covered.

## New roles and competencies

However this also means that new and non-traditional competencies and skills need to be fostered within traditional public transport organisations and institutions. Multidisciplinary project teams stimulate more comprehensive solutions. They are also helpful to reduce tensions between stakeholders and/or internal units or departments within organisations that need to collaborate on complex projects and service provision.

*Over 100 UITP members representing public and private operators, organising authorities, services and the manufacturing industry have signed the UITP charter on sustainable development and have committed to making sustainable development a strategic objective*

## Leadership and governance

Key elements for successfully implementing sustainable development principles are solid leadership, good governance and stakeholder relations. Continuous performance improvement streamlining processes help focus reporting and monitoring. The charter asks all members to recognise these and this report sets the base line on the sustainable development performance of the sector. Full signatories must demonstrate their performance in environmental, social and economic areas.

Strong, committed leadership is vital to send the right messages and communicate this topic throughout an organisation. All full charter signatories are asked to provide a signed letter from the Chairman or Board members of the board stating that sustainable development is a strategic goal of the organisation. This leadership also establishes expectations and accountability, whereas good governance ensures that the commitment is implemented.

## UITP's commitment

UITP has held a series of international Coaching and Training Workshops where charter signatories provide coaching for other signatories. To date these interactive capacity building workshops have been held in Brussels, Hong Kong, Brisbane, Montreal and Naples during the period 2004-2005 and more are planned during the 2005-2007 cycle of charter engagement, connecting more closely to regional needs. New working groups attached to the UITP Commission on Sustainable Development are focusing on three areas: creating a set of international indicators for sustainable development reporting, diversity and non-traditional competencies and skills in public transport and the contribution of public transport to avoiding permanent climate change. Conclusions from the discussions and more information can be found on the UITP website [www.uitp.com](http://www.uitp.com)



## Looking through an investor's lens

Adequate access to capital and finance is necessary for all public transport actors. However, all investors, institutional, private and public, are increasingly asking questions that go beyond traditional financial disclosure. They are becoming more interested in the relevance of reputation and risk management; and the capacity and competencies of the management to deal adequately with implementing the core values of the organisation.

In today's competitive environment, the disclosure on non-financial information is not simple. Non material assets and value are more difficult to monetise. They include customer satisfaction, employee commitment and turnover, reputation in the market place and with other stakeholders, as well as the capacity to innovate and trial new technology. An organisations strategy and policies on these types of issues need to be communicated to investors and analysts.

There are several stock indexes that review companies on their sustainable credentials. The most well known are the Dow Jones Sustainable Index (USA) and the FTSE4GOOD (UK). They are gaining in popularity with investor advisors as they have outperformed the regular indexes in the recent downturns of the world-wide stock market.

The Dow Jones Sustainability Index (DJSI) uses five indicators where companies need to outperform regular companies so they may be quoted on the DJSI:

- Innovative and efficient technology
- High standards of governance
- High returns to shareholders

- Industry leadership
- Commitment to social well being

It defines corporate sustainability as a business approach that creates long-term shareholder value by embracing the opportunities in managing the risks deriving economic, social and environmental development.

Managing risks and the ability to effectively balance liabilities and potential opportunities combined with an organisations' capacity to respond to present and future challenges are evaluated by investors and need to be clearly demonstrated by management.

Reputation is a valuable asset – 96% of Coca Cola or 84% of American Express' value comprises intangibles such as reputation, knowledge and brand value<sup>5</sup>.

What investors and analysts look for in an organisation The overall performance of an organisation is looked at in terms of:

- All risks
- The capacity to address the risks
- The understanding of the management and its capacity to react in a timely and effective manner

In today's market place this no longer means only looking at purely financial risks and now includes the associated environmental and social risks<sup>6</sup> and the processes in place to manage them.



**MTR Ltd, Hong Kong and First UK** are two charter signatories quoted on the DJSI and the FTSE4GOOD. MTR outperformed the Hang Seng index by 11% in 2003. Queensland Rail (QR) is one of Australia's top 100 companies by revenue and has been assigned an AA rating for Corporate Reputation (RepuTex 2003) reflecting high social responsibility achievements, positive workplace setting and proactive approach to community involvement. In 2003 environmental performance was rated 4th in Australia over all entities and leader in the Transportation sector. QR is one of only four companies to maintain a top ten ranking since the performance index was first established in 2000.

Risk Management as the key strategy for sustainability at MTR, Hong Kong. MTR has implemented a corporate wide risk management system considering the key business risks in terms of environmental, social and economic issues. Issues are first listed and then prioritised in terms of their severity (frequency and consequence). A business risk portfolio can then be constructed and managed. Once the key business risks are identified, ownership is assigned and alleviation is agreed in terms of taking advantage of an opportunity or through risk transfer or mitigation. The system, its policies, procedures and manual are reviewed on a yearly basis with the annual MTR Corporation Sustainability Report being the final report.

Once the risks have been identified, the MTR uses the questionnaire developed by Strategic Asset Management (SAM) in support of the Dow Jones Sustainability Index to analyze the risk management costs in MTR's Activity Based Costing system. The cost of managing the key risks: ensuring passenger safety, maintaining passenger

numbers, developing and retaining motivated and skilled staff and ensuring environmental compliance and improvement was HK\$292million in 2003 and HK\$299million in 2004. For comparison, the MTR invested HK\$135million per year in 2004 in its capital asset management programme.



**STIB/MVIB – Société de Transports Intercommunaux de Bruxelles, Belgium** takes its commitment to the UITP charter seriously.

Since signing the charter in 2004 a Sustainable Development Coordinator was recruited for the Department of General and Strategic Research.

A special environmental unit has been created with one full time 'éco-conseiller' and three other personnel. Sustainable development indicators are being integrated into the company and seven priority environmental themes have been identified: air, noise, waste, energy, environmental management and soil. These indicators measure the amount of waste, including the impacts of sorting it, noting the percentage of metro stations with acoustic measures, quantifying the number of clean buses and the costs and number of site that have been cleaned up. In addition STIB/MVIB has developed a set of new social indicators such as the number of hours dedicated to training and the lines that are accessible for people with reduced mobility.



**Keolis** is a private company jointly owned by 3i, a British investment fund and SNCF, the French rail operator. It is present in the French, English, Swedish, German, Danish and Canadian markets, where it operates all modes of public transport. Keolis expects to start being quoted on the stock market in the near future.

The NRE laws (Nouvelles Regulations Economiques) for French companies that are publicly listed require a yearly report on social and environmental performance, and Keolis will publish its first sustainable development report in May 2005 and to be published every year thereafter. As the 3i fund is listed on the Dow Jones Sustainability Index the report will serve to satisfy the expectation of its investors to the same level of commitment to sustainability, of particular importance when further investments are required. [www.keolis.com](http://www.keolis.com)





## Setting global values in context

No metropolitan area anywhere in the world is performing efficiently today without public transport. In these densely populated areas, individual transport can only function as a complement to collective, high capacity public transport. Therefore, public transport is a cornerstone of sustainable urban mobility and an integral part of global sustainable development. The global challenges to transport challenges must be addressed from within the sector, as is the case with the charter process and within the wider framework of global, regional and local actions. The response to the sector to these framework values can be illustrated with examples from charter signatories.

### Reduce transport related noise and conventional emissions from transport

Research on human health indicates that air borne particulates are extremely dangerous to us all, in particular to young children and the aged. Asthma attacks, respiratory diseases, heart attacks, and premature death are among the most serious public health problems – and all are strongly linked to emissions from transport. The good news is that the technology exists to clean up emissions from engines, and with cleaner fuels, most of the adverse health impacts can be prevented. This is a major challenge for developing countries, where the vehicle fleet is highly polluting and unleaded fuel or low (or ultralow) sulphur diesel is not yet available. In addition the maintenance cycles of many road vehicles is not optimal allowing them to pollute more than they



#### Nantes, France

*The urban conurbation of Nantes (Communauté Urbaine de Nantes) has sustainable development at its heart. Its Urban Mobility Plan 2000-2010 (PDU) puts the highest priority on achieving a balance between the private car and other transport, and aims at reducing trips by car from 57% in 1997 to 50% in 2010 and achieving an 18% share for public transport. The emphasis is equally on controlling private car travel and on developing the public transport system, and increasing cycling and walking. The Greater Nantes Council is taking its goals beyond its borders by participating in the EU Vivaldi project on new clean urban transport strategies.<sup>7</sup>*



should and retrofitting buses with soot or particulate filters is simply not an option for many countries.

In Europe, the United States and Canada substantial progress has been made in urban air quality and concentrations of PM10<sup>8</sup>, No<sub>x</sub><sup>9</sup> and other ozone precursors are generally going down. 'Hotspots' continue to be a problem and the growing overall level of traffic is to some extent offsetting this progress. This is not the case though for most cities in the developing world, where these local pollutants are on the rise, affecting more people and causing significant health problems.



Charter signatories have the cleanest vehicle fleets. More stringent measures are needed for Europe to be able to comply with the European Directive<sup>10</sup> on Air Quality that came to force in January 2005 and sets the limit values for sulphur dioxide, nitrogen dioxide and nitrogen oxides, particulate matter and lead in ambient air. Towns and cities can only exceed strict limits for air quality on 35 days per year.

All UITP signatories are working to ensure that their transport fleets use clean technology; these examples from outside France show that both large and small systems take this issue seriously.

- **ATM<sup>11</sup>**, Milan will have reduced particulate emissions by 90% by 2006
- **BVG<sup>12</sup>**, Berlin is trialling new filters for buses that reduce No<sub>x</sub> as well as noise
- **STIB/MVIB<sup>13</sup>** will have replaced 28% of the bus fleet by 2006 making 80% of the fleet clean. A € 3 million programme for particulate filters will cut local emissions and improve air quality in Brussels.

- **VVM Vlaamse Vervoermaatschappij De Lijn**, in Flanders, Belgium has accelerated its fleet renewal and 67% of bus fleet is now EURO IV compliant.



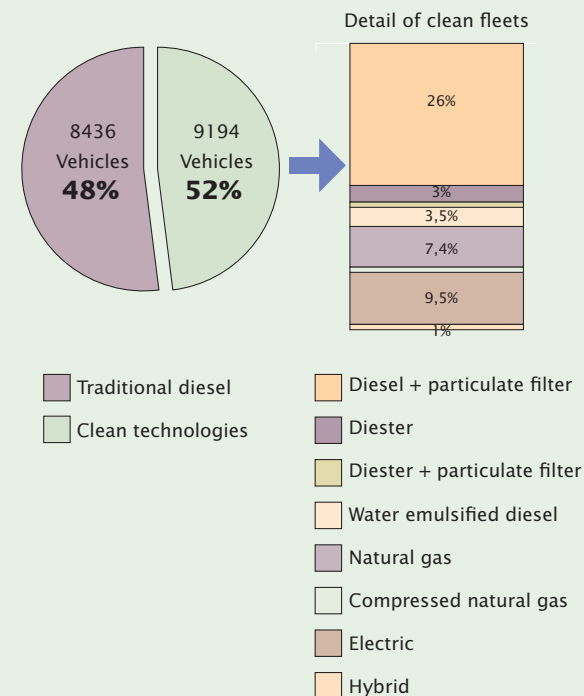
Air Quality in Manchester, Great Britain  
The **Greater Manchester Public Transport Authority (GMPTA<sup>14</sup>)** is keen to see public transport part of the solution to the air quality problems in the city. In 2004 it worked to extend the Metrolink tram network – as trams produce zero pollution at street-level.

The contract conditions for buses has been changed to make sure as many vehicles as possible have particulate traps and it offered grant-aid to companies to fit the traps. GMPTA also supported a local company (Pertek) to develop field trials of an innovative particulate trap, which has now received national (UK) accreditation. GMPTA reports publicly on its environmental performance with an annual review. Its performance is measured against a set of actions to achieve an environmental policy statement, supported by a strategy and implementation plan.



France is striving to have the cleanest bus fleet in Europe. Research by **UITP – Union des Transports Publics**, France published in January 2004 shows that more than half (52%) of all the 17 630 vehicles circulating in France (bus metro and tramway) use clean energy technologies. RATP is taking the lead with 93% of its fleet classified as clean. Even in towns of less than 100 000 inhabitants the average is 20%.

Profile of total bus fleet in France (2003)





Transit helps to keep Canadians healthy by giving them cleaner air to breathe – led by the **Canadian Urban Transit Association** <sup>15</sup>.

While twenty million Canadians are exposed to harmful levels of air pollution, and one in five has some kind of respiratory problem, bus travel is significantly less polluting (25 to 90 % less, depending on the specific pollutant) than travel by single-occupant car. This makes a real difference on an urban scale - during transit strikes, air pollution readings are 15% higher than the five-year average downtown (Calgary), 70% higher than the previous year in downtown Vancouver, and 20 % higher in downtown Hamilton.

Urban transit is also three times more energy-efficient than car travel and will play a key role in reducing Canada's greenhouse gas emissions - thereby helping to prevent climate change and reduce its threats to Canada's ecosystems and public health.



Carbon Neutral 24/7 service  
**The Skybus Supershuttle, Australia.**

Run by a private operator, the 24/7, 15 minute frequency service between Melbourne city centre and the airport has a new state-of-the-art bus fleet.

Skybus Super Shuttle has to conform to high service levels and environmental considerations in vehicle maintenance levels, waste collection and disposal, chemical use and storage. The contract states that it must comply to the strict Melbourne Airport Environmental ISO Management System.

It is the first carbon neutral transport service within the UITP membership and offsets its carbon by making an annual down payment.

## Limit greenhouse gas emissions from transport

Climate change is one of the most important and difficult challenges facing the world today, and it can only be tackled if governments and industry work together.

The rise in greenhouse gas (GHG) emissions over the past 150 years is mainly due to human activity, so ultimately there is no choice – we need to change and not the climate!

Greenhouse gas emissions from transport are increasing. Urban traffic now accounts for 40% of transport-related CO<sub>2</sub> emissions in Europe <sup>16</sup> alone. Globally transport is the worst performing sector today in terms of GHG emissions. Other highly emitting sectors, such as energy and cement industries, have had to make heavy cuts in their emission levels, and the present increase in emissions from transport is offsetting these efforts. This has an overall negative effect on national Kyoto targets for all industrialised countries.

*“Climate change is one of the biggest challenges facing society. The European Commission has confirmed its commitment not to exceed the 2°C global increase in temperature <sup>17</sup> ...and reinvigorate international discussions on emissions... Carbon trading was introduced for some sectors in January 2005 with the European Emissions Trading Scheme (EUTS). The price of carbon has doubled since January and now at 16€/ton (April 2005) is adding as much as 10% to the bottom line.”*

*Catherine Day, Director General of Environment, European Commission <sup>18</sup>*

Oil is still the unmatched fuel for bus-based public transport, which remains the predominant mode for public transport world-wide. Other energy sources are not yet competitive in terms of supply, availability or operational/maintenance costs. Still more needs to be done to make switching to other fuels attractive. In Europe today (EU15) only € 5.3 billion is spent on stimulating renewable energies, a small amount if compared to the € 23.9 billion given as subsidies to supporting the extraction of fossil fuels (to the coal, oil and gas industries).

Cleaner technologies are certainly vital for the future but it is unlikely that they will make much difference to transport in the short and medium term. UITP members are already showing leadership by spreading the energy risk of their services over several different sources and are trialling promising new technologies, such as hydrogen.



*Technologies will not make a difference in global emissions from vehicles before 2030*

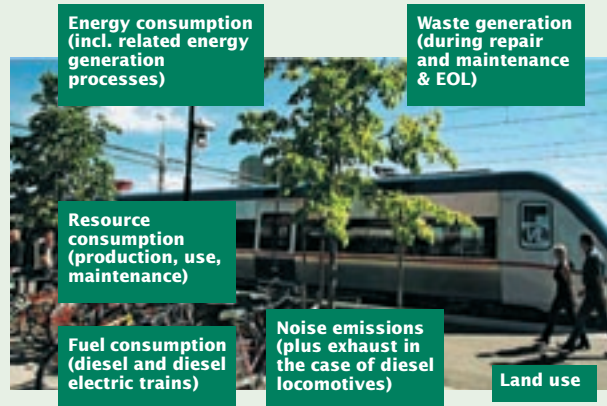
## Technology will only start making a difference after 2030

Steps towards zero emission technologies in transport are simply not making a difference to GHG gas emissions largely due to the sheer increase in traffic. Transition measures are critical to bridge the gap until new technologies become mainstream and the pathways to achieve these targets need strong political will and commitment. One of these must be modal shift from private car travel to more sustainable transport modes, including de facto public transport, if urban areas are to avoid being strangled by gridlock.

The life cycle of vehicles is as high as 20 years in some countries<sup>19</sup> and the total number of road vehicles is constantly growing. Predictions of 1.6 billion cars by 2030 world-wide are not outrageous. Even the industry admits that despite the present focus on improved fuel and propulsion-based technologies, they are not going to bring the required change within an appropriate time frame. Assuming that large scale introduction of zero or ultra low emission vehicles started in 2010 with 200 000 units and it grew by 20% per annum thereafter, a real difference in emission levels would only be noticeable in 2030. Today there are about 750 million Light Duty Vehicles (LDV) contributing around 50% of the transport sectors' emissions. These projections do not take into account the second hand, high emission vehicles that will be imported into developing countries to satisfy their increased demand for mobility. These countries are not able to adopt new cleaner technologies or fuel yet the aspiration of their communities for mobility is most certainly 'car centred'.



Reducing the environmental impact of rail,  
**Bombardier Transportation** –  
a manufacturer's perspective



*The role of technology is crucial for the supply industry, who have to find the best balance between increased levels of comfort and safety and the production of lighter, more energy efficient vehicles and rolling stock.*

*Bombardier Transportation, world-wide rolling stock manufacturer gives the following definitions to its products. The environmental aspects are those elements or properties of a product that interact with the environment and the environmental impact of a product is the change to the environment (positive or negative) created by that product or its use.*

*Processes involved in rail vehicle production, use or disposal have an environmental impact, mainly as the result of the following environmental aspects:*

- Energy consumption (including the effects of related energy processes)
  - Resource consumption (during production, use and maintenance)
  - Fuel consumption (diesel and diesel-electric engines)
  - Noise emissions (plus exhaust in the case of diesel locomotive)
  - Waste generation (during repair and maintenance and following decommissioning)
  - Land use
- The eco-efficiency in terms of energy and pollution of trains compared to road vehicles (using the internal combustion engine) is many times greater, for both freight and passenger transport.*

*The world's first Environmental Product Declaration (EPD) for railway vehicles was for the Bombardier Stockholm Metro Car*

- > *Recycling rate is 94% (by weight) at end of life.*
- > *Recycling description is provided to the client and can be used by the operator or external recycling companies*
- > *Adhesives without isocyanates are used to glue the windows (with added improvement regarding health and safety)*
- > *Low energy consumption of only 0,09 kWh / passenger - km*
- > *Low noise levels of less than half as noisy as the old trains*



This cyclist in Ho Chi Minh City wears a mask to protect her from the local pollution



*Driver certification helps improve safety*

**The Swedish Public Transport Association (SLTF)** has a driver certification scheme, which

*aims to:*

- improve public transport quality
- increase safety and security for travellers
- raise the status of the driver profession
- increase job security for the driver staff
- create a knowledge norm, which is common for the entire country

*Six public transport operators in Sweden have already joined in the system and once certified for one operator, the driver can work for any of the other companies. This initiative is also preparation for the European Directive on the training of professional drivers.*

## Significantly reduce the number of road transport related deaths and injuries

High levels of road traffic affects the health, safety, and life of a community and paradoxically the ability for all citizens to travel. High speed freeways cut deeply into community life. This affects much of society, in particular children who are not able to become 'mobility' independent if they cannot walk, cycle or use public transport in safety. World-wide growth in mobility means that more people are travelling on a daily basis, and their trips are for longer distances and are at faster speeds than 50 years ago. When travelling by road the risk of having an accident is high, and a person in a car is 10 times more likely to have an accident than in a bus or coach and 20 times more likely than travelling by rail<sup>20</sup>.

At least 1.2 million deaths world-wide occur from road accidents with many more people injured and maimed, but it is impossible to estimate the real impact and loss to human life and livelihood. The links between road safety and sustainable development relate in part to the intergeneration impacts of road crashes, in particular in the developing world. As economies grow,

parts of society become more affluent. In many emerging countries, the poor are traditionally at high risk and are often victims of road accidents as well as pedestrians, cyclists and children. A new phenomenon is emerging with well educated males between the ages of 20-30, seduced by fast cars, often killing themselves and others unnecessarily in road accidents. This impacts the future development of their countries, as they are not able to use their education or position to help build the economy.

Road traffic accidents are the leading cause of death for children and young people in Europe<sup>21</sup>. Tragically 6,500 deaths are of children between the ages of 1-14, with many more suffering from post traumatic stress disorders after being involved in or seeing an accident. Children are less able to go to school by walking and cycling and cannot play safely around their homes.

The 1.3 million accidents within the European Union (15)<sup>22</sup> cause over 40,000 deaths and 1.7 million serious injuries. This has an estimated price tag (direct and indirect costs) of €180 billion<sup>23</sup>, around 2% GNP, and close to the costs of congestion. The average annual cost of road traffic injuries has been estimated in the order of 1.5% of GNP, nearly US\$ 9.9 billion<sup>24</sup> in Central and Eastern European countries.<sup>25</sup>



Although traffic pollution poses a serious problem the cost of road accidents cannot be neglected. London spends £94 million or 2% of its health budget dealing with traffic accidents, whereas it spends considerably less on air pollution and this will decrease as better technology helps improve air quality<sup>26</sup>. The costs of road injuries burden a community yet some of this can be avoided, as 67% of all crashes occur in built up areas<sup>27</sup>, where public transport can offer a viable alternative to the private car. Public transport provides part of the solution (but not the whole solution) but it does bring an alternative to having more cars on the road. UITP member organisations strive daily to continuously improve safety performances of their networks and ensure that the safety of their passengers is optimal when travelling.

## Successful measures

Enforcing speed limits reduces crashes by 15-80%<sup>28</sup>, particularly in urban areas. Stockholm, the capital of Sweden is pioneering a 30km speed limit on all local roads within the city boundaries. It is well known that driving behaviour strongly influences safety and most UITP charter signatories train drivers in safety and eco driving on a regular basis. Electric vehicles also cause

fewer accidents and there has been a 30% reduction in all accidents in the 30 cities in France that have introduced electric powered buses over the past 2 years.<sup>29</sup>

## Address and reduce congestion

Traffic congestion is a huge drain on local and national resources and it acts as a brake to economic development. Decisive action is needed to tackle this challenge. In the European Union alone, more than € 200 billion is wasted due to congestion, in lost time and productivity. Traffic jams are no longer just restricted to city limits or peak periods and almost every working person loses several hours a week due to high levels of traffic. Based on passenger kilometres, a 1% modal shift in Europe from car to public transport would take 2 million cars off the roads at any one time.<sup>30</sup>

Despite political resistance, major research across Europe in all member states shows that the majority of consumers favour road pricing to combat congestion.<sup>31</sup>

### *International actions:*

**CEMT**, the European Conference of Ministers of Transport have made a commitment to put policies in place to reduce accident levels by 50 % from 2000 figures by 2012.

The UITP European Union Committee adopted a position paper on the road safety action programme in September, 2003. The paper called on the EU Commission to include modal shift to public transport as a key strategy towards achieving the target of a 50% reduction in road accidents by 2010 as part of its Road Safety Action Plan.

The European Commission has launched a Road Safety Charter with targets and commitments to reduce accidents in the Union. Several members of UITP, such as ARRIVA, UK and CONEXXION, NL have signed the EU charter and UITP will sign by the end of 2005. The UITP commitment can be found on the UITP website [www.uitp.com](http://www.uitp.com).



### **Congestion Charge success**

London, the capital of the United Kingdom, has shown the way with the first area wide congestion charge. Results are impressive with an overall reduction of 30% of congestion with travel by private car decreasing the most - largely exceeding expectations. Two hundred new bus services were put in service on the same day and sustained efforts in stakeholder information helped get the business community on board early on in the project. The gains are impressive with the efficiency of all activities improved. Retailers have complained of lower sales but it is difficult to allocate this to the charging system alone. Urban air quality has been substantially improved.

- 35% Reduction of car traffic
- 15% Reduction of total traffic volume
- 20% Reduction of CO<sub>2</sub>
- 20% Saving on fuel consumption (buses)
- 38% Increase in bus patronage
- 60% Reduction in bus delays
- 20% Fewer accidents

Further efforts to reduce CO<sub>2</sub> and local pollution is planned for London with the introduction of a 'Clean Air Zone' with restricted or no access for highly polluting vehicles.



### **Land Transport Authority, Singapore**

Electronic Road Pricing (ERP) has been in place for more than a decade in Singapore. Payment is needed to enter the Central Business District (CBD) by car from morning peak period until 7.00 p.m. Prices increase according to the number of cars on the road and the time of day. Peak times are therefore most

expensive. Automatic payment is made electronically with in-vehicle devices and all vehicles not registered in Singapore can opt for a fixed ERP payment or rent a device on entering the country.

The total number of vehicles circulating in Singapore is monitored by setting an upper limit for new vehicle licences. The price for licence plates is market driven and bidding for a Certificate of Entitlement (COE) can be done via the internet.



### **Berliner Verkehrsbetriebe, BVG, the leading public transport operator in Germany's capital city, has had to strongly reduce its labour costs.**

Many jobs have been lost since the unification of the city when two transport operators became one. Through careful negotiations with the Unions and motivating staff, the payroll has been halved since 1992. This has been done with employees agreeing to work part time or taking voluntary early retirement at 57. Importantly not one day of service to customers was lost due to strikes or unrest during these negotiations.



### **Health and Safety at Yarra Trams, Australia**

Yarra trams puts human capital at the centre of its success (it states that the "expertise and experience of its employees are its greatest asset") and commits to provide a safe, fair and rewarding working environment. Its Health and Safety (H&S) policy for employees, contractors and visitors is very ambitious.

Goals include:

- Maintaining health and safety competency and integrating H&S into all aspects of the organisation
- Providing health and safety training for employees
- Employing only those contractors that aspire to the same health and safety standards as Yarra Trams
- Promoting a positive H&S culture of prevention of accidents, emergency response programme and rehabilitation programmes for work related injury or illness

Implementation policy:

- All managers, supervisors and contractors are accountable for H&S performance in their areas
- Employees are required to adhere to rules and requirements and to report hazards



### **Staff Management at KMB<sup>33</sup>**

The Kowloon Motor Bus Co. (1933) in Hong Kong has a "Caring for people" policy for its employees. In 2002 it carried out an Employee Opinion Survey that looked at satisfaction with their work, pay levels and working environment. Over 33% of its 13,000 employees responded and named career opportunities, interaction with supervisors and senior leaders, and performance recognition as key attributes that influence satisfaction and commitment to the company. Six joint consultative committees, a staff intranet and a monthly magazine and Video Compact Discs (VCDs) keep field staff informed about the latest developments in the organisation. Since September 2003 it also has a safety policy for all employees, and presents safe driving awards to 15-, 10- and 5-year accident free bus captains.

## People make the world go round – narrowing the mobility divide

Public transport actors not only have a high profile within a community but they are also large employers. Therefore attracting, retaining and motivating quality people are vital to their success.

High standards for health and safety are not only legally required in many countries they are also part of the 9 principles of the United Nations Global Compact<sup>32</sup>. Several signatories to the UITP charter are also signatories of the Global Compact, notably Transdev and RATP.

Reputation management is a new management skill that adds value to public transport operations within a community and helps close the gap between cultures and levels of society.

## Innovative advertising to change people's habits

Most people these days understand the concept of recycling – in fact according to research done by the worldwide advertising agency McCann Erickson it is one of the few actions that they consciously take to help the environment.



*The Metro of Bilbao in Spain uses advertising to make people understand that it is necessary to "Recycle your habits", and encourages people to take the underground. For this purpose they have advertisement campaigns like this one here to help make people change their habits.*



The world is your home - Look after it



UITP joined forces with the United Nations Environment Programme (UNEP) for its first public awareness TV campaign to promote the environmental and life-style benefits of public transport in a new TV campaign. The animated 30 second commercial available in English, French, German and Spanish and produced by McCann Erickson ran on seven international TV stations, and was launched on 16 February 2005 the day the Kyoto Protocol came into force. Many UITP members put it on their national TV channels and used it for their own promotion.

## Improve mobility opportunities for all levels of society giving access to primary services of health, education and employment

Every time a public purchasing official spends a dollar or a euro of tax payer's money on buying a product or service many considerations need to be taken into account. Many public authorities, particularly in Europe, are now being directed to develop criteria for sustainable, green purchasing at national and local level.

Public authorities can not only set an example, with their considerable purchasing power, but they also undoubtedly influence the marketplace. By considering the total life-cycle of products and setting sustainable criteria for tendering procedures, they can have a substantial impact on the demand and the price of sustainable products, services and technologies. This will directly influence the competitiveness of companies, trigger innovation, and stimulate sustainable considerations being integrated into business practices.

Sustainable procurement, sometimes 'green or eco' purchasing, in the public transport arena encompasses purchases of new vehicles and rolling stock, as well as the building of more sustainable infrastructure such as the use of recycled concrete and the use of solar panels for supplementing the energy of local stations or depots.



This modern tram in the southern French city of Montpellier shows how public transport infrastructure gives the image of a city



### Queensland Rail (QR) – Procurement Policy

QR is Australia's largest rail network servicing an area of 1.7 million km<sup>2</sup> of Western Australia.

QR pursues five principles when undertaking purchasing:

- Influencing practise of contractors/suppliers in terms environmental or ethical positions for procurement, contractors and third party operators and revenue and expenditure contracts.
- Procurement handbook defines State Purchasing policy (5 principles) and QR's Supply Chain Policy (with QRs code of conduct and procurement/purchasing code of ethics)

1. Open and effective competition
2. Value for money;
3. Enhance the capabilities of local business and industry;
4. Environmental protection; and
5. Ethical behaviour and fair dealing with suppliers.

QR states that it is in a position to influence the railway industry, other transport industries and the community as a whole through the development and implementation of leading practices such as: timber sleeper alternatives, greenhouse gas emission strategies and the noise code of conduct.

Employee training and awareness is a compulsory part of employee induction. All 13 000 employees must attend an Environmental Awareness Session with a 3 year refresher course for relevant personnel.



Harmonising procurement bringing environmental benefits and economies of scale to railway procurement

**UNIFE**, the European Rail Supply Industry Association is part of the PROSPER project – Procedures for Rolling Stock Procurement with Environmental Requirements. All the major world rail suppliers are members of UNIFE so these procedures have wide spread consensus. The project will provide a documentation of environment related legal aspects and recommended target values (where feasible) for a set of harmonised environmental indicators/ specifications in the four environmental key areas: Energy Efficiency, Materials/Recycling/Waste, Noise and Exhaust Emissions.

## Mitigating environmental damage and controlling costs

Environmental damage is the most difficult to put right. 95% of all transport relies on non renewable, fossil fuel for this energy supply and it is likely that this will continue. Non renewable energies sources are just that – non-renewable! Although oil production may not have peaked, most of the oil that remains is more difficult and more expensive to extract.

*The stone age did not end because they ran out of stones – the oil age will not end because of a lack of oil.*

Present consumption habits will have to change not only because of the damaging effects of emissions and pollution, but also because oil supplies are centred in regions of the world that are historically unstable. This will be especially hard for the US, as its oil production has declined in recent years to less than 5 million barrels a day when demand is nearer 20 million barrels a day<sup>34</sup>. Today it has to import around two-thirds of its needs. The economic dimensions of continued oil use, therefore, cannot be neglected.





The photovoltaic panels are installed on the depot roof in Naples, in Southern Italy, where they catch the most sunlight.

Air quality, climate change and energy are possibly the key environmental issues for this century but finding new affordable, viable energies and stability of energy source are also major areas of concern for all governments. Energy consumption has more than doubled in the last thirty years and as 95% of transport relies on fossil fuels – and this is not likely to change in the short or medium term – efforts to reduce energy consumption overall and to switch to other types of transport are a priority. Indeed, as almost all the projected growth in fossil fuel use will come from transport, energy efficiency is a key challenge for the sector.



*Üstra's Ücology – The Environmental Protection Fund. Üstra, Hanover, Germany is investing a great deal in environmental protection, be it in resource conservation, waste avoidance or new technology. They all cost money but quite often economy and ecology go hand in glove. For example for brake energy recovery and energy storage. Half of the cost savings generated by the environmental protection activities in the first year of a project implemented by üstra are reinvested in new projects, and so on. This is a straightforward system of ecology financing called the 'üstra in-house environmental protection fund'.*



*Energy reduction at **Hamburg Hochbahn**, a major German urban transport provider. Annual reduction of energy use of around 2% is being achieved bringing total energy use down by 10% since 1995. This has been achieved by using lighter materials for vehicles, new driving techniques and optimising transport planning and vehicle use on all routes.*

- Bus energy use stabilised in 2002 with only a 0.5% reduction in energy use mainly due to upgrading the fleet to EUR II and III levels (additional levels of comfort e.g. air conditioning increases energy use)?
- Regular eco driving training for drivers (recuperating braking energy for metro and accelerating and braking for bus drivers).



*Using solar energy in Southern Italy **CTP<sup>35</sup>, Compagnia Trasporti Pubblici, Napoli, Italy**, serves nearly 2 million people in the Naples area and actively takes part in many European and international projects. CTP is also an actor on the regional level with the local plan of activities for the sustainable development of the province, Agenda 21 and the European Week of Sustainable Development.*



## Balancing energy use

Today there are more opportunities for spreading the risk as there is a wider choice of energies available. Although hydrogen and fuel cells may be the technologies of the future, transport operators and authorities must balance their use of diesel with other fuels today. The use of CNG (Compressed Natural Gas), LPG<sup>38</sup>, low and ultra low sulphur diesel, and diesel mixes are quite widespread despite having, in general, slightly higher costs for the operator than regular diesel. Second generation bio fuels are showing some promise but at present there is little or no incentive for transport operators to switch to bio fuels or to specify 'green' (clean) electricity.

Increasing the understanding of sustainable development and environmental awareness across organisations requires investment in training. Training all levels of staff on environmental protection and social equity is key so all members of personnel both understand what the issues are and the organisation's strategy.

To improve the amount of 'green' energy used by CTP, and with the financial support of the Campania Region and the Italian Ministry of the Environment, photovoltaic equipment has been installed in three depots. The three plants allow energy savings of 5,300,000 kW over their 30 year life and during this time they will avoid or save 3,620 tons of CO<sub>2</sub> being emitted (using today's technologies).

Emissions have decreased in 2004 with the introduction of 50 methane vehicles and one EURO III diesel bus. Eight methane fuelled intercity buses and a new trolley bus line will be put into service and 4 new electric/methane fuelled hybrid buses will lower emissions further. The latter are even cleaner than EUR V levels.

The social aspect is not forgotten as the management takes its social responsibility seriously. CTP is the first local public transport company in Italy to be SA 8000 certified; Absenteeism has been reduced by 2% and as SA 8000 requires supplier to CTP to comply to this standard, each supplier must formally adhere to this standard and during 2004 50 new suppliers were certified and three were excluded as they did not comply.



To improve passenger comfort, information and to make public transport more attractive, **First North Western**, in partnership with Lancashire County Council, in the north of England have launched the "eco-shelters". The shelters have solar panels on their roofs, and wind turbines to gather energy. This energy can then be used to heat the shelter seats, provide lighting and power real-time information systems where provided.

New York City Transit does Energy Conservation in a Powerful Way



Going green Makes 'Cents' - **New York City Transit, NYCT, USA** started an energy challenge in 1993 leading to savings of more than 2.4 Million US\$.

Energy efficiency is only one aspect and New York City Transit has also shown leadership in green building practices. Renovating the Roosevelt Avenue Station in Queens<sup>36</sup> and Stillwell Avenue Terminal Station in Brooklyn, around 84% of demolition materials were recycled avoiding waste and reducing landfill (the average cost of landfill for US metro areas was \$100 per MT<sup>37</sup> in 2004).

Concrete .....	33,222 MT .....	(80.8%)
Metals .....	987 MT .....	(2.4%)
Lumber/wood.....	17 MT .....	(0.04%)
Land fill.....	6,894 MT .....	(16.76%)



**EDF – France moving toward renewable energies**

*Trials in 30 cities between 2002-2004 have shown that electric powered buses now have comparable operating costs to traditional energies and offer zero emissions (except from the production of the electricity). Electricité de France (EDF) <sup>39</sup> has agreements with 35 agglomerations (28 in France) for electric transport projects, such as developing innovative solutions for trams without catenaries for inner city use and improvements in ultralight and recyclable batteries. In addition, the safety record of electric buses is even better than for traditional buses as their acceleration is lower. However there is still some inertia in the supply industry to provide high capacity electric powered buses and ATAC, Rome and CPT, Naples have had poor response from the industry to two tenders for 40 seater buses (period 2002-2004).*

*buses from general traffic. This also reduces energy use and increases the attractiveness of public transport)*

- *Pedestrianising streets improving safety and giving priority to pedestrians. The street ‘San Francisco’ and the quarter ‘Gros’ now has wider sidewalks, walking itineraries, and pedestrian only zones encouraging more trips by foot. This measure will gradually be extended out from the city centre and has been made possible with the support from the EU LIFE programme.*
- *Extend bicycle lanes to reduce car use and for the environmental benefits. Two new ones are being implemented.*

*In June 2003, the company signed a Framework Agreement envisaging the supply of 500 buses during 2003-2005. This will reduce the average age of the bus fleet to five years by eliminating all the oldest Euro 0 rated vehicles. The average age of the urban bus fleet is currently 6.3 years, which is above average for Europe, and the age the entire bus fleet has been reduced by 40.8% during the last six years (1998-2003).*

*In 2003, the company obtained Environmental System Certification for all its transport service design and delivery activities, as well as for vehicle maintenance, following a similar and parallel process to the one used to obtain certification of its Quality Management System.*

*ATM's attention to environmental safeguard is borne out by its decision to make electricity the main power source of its transport network, in spite of the considerable financial drawbacks caused by the increases in electricity prices. In Milan, the percentage of seats/km offered by electric traction amounts to 69.6% compared to 30.4% of seats/km offered by non electric driven vehicles.*



**The Department of the Environment of the municipality of UITP member Donostia-San Sebastián, a city in the north of Spain strongly engages with Agenda 21. More than 60 people have worked on a diagnostic of the municipality to establish a set of objectives and an action plan. Actions in the first phase include installing photovoltaic panels on municipal buildings. Sustainability indicators to measure and quantify the environmental impacts around the key themes of energy, water, mobility, atmospheric pollution and waste are being developed. The performance results will be communicated to citizens.**

*Measures include:*

- *Bio fuels being used by municipal buses since September 2004 to reduce emissions and pollution*
- *Dedicated bus corridors are being trialed, separating*



**ATM, Azienda Trasporti Milanese (Spa);**

*plays a leading role in the fight against atmospheric pollution by continuously researching new initiatives for reducing the polluting emissions generated by vehicles.*

*The company's environmental commitment is based on a series of “anchors” which ATM has never abandoned in spite of the considerable financial costs attached to them:*

- *constant renewal of the vehicle fleet;*
- *attention to infrastructures and, consequently, planning of maintenance operations for renewing systems, maintaining safety levels and improving their functionality (and, consequently, environmental impact);*
- *experimentation of leading-edge technical solutions in order to reduce polluting emissions and manage the vehicle fleet on a more cost-effective basis.*



**CONNEX** <sup>40</sup>, an international public transport operator invests heavily in training.

Connex with operations in many countries such as France, Sweden, and the US aims to give environmental training to 90% of the drivers within their first five years of service. For example, at Connex France, 80% of the personnel are drivers.

They have to take a Mandatory Minimum Initial Training and a Mandatory Continuing Education in Safety every five years. Topics covered in these training programs include: driving in a safe manner, defensive driving, building relationships, managing stress, promoting safety awareness and accident prevention, improving attitudes and taking steps towards a healthier lifestyle. Conflicting situations are simulated so drivers can be trained to cope with them better.



**Parsons Brinckerhoff**, an international engineering and consulting firm, with 8000 employees strongly promotes its internal training courses. Top level support from management for sustainable development includes launching an internal global SD task force, and the development of goals for monitoring progress in five numerous key areas. PB is also developing a check list for ensuring that all aspects of sustainable development are incorporated into every project, to ensure continuous improvement.

Employees are encouraged to become LEED (Leadership in Energy and Environmental Design) and BREEAM-accredited (US and UK recognised qualifications). A recent example of their support for transit-oriented development (TOD) is the project to develop the area surrounding the existing WMATA <sup>41</sup> West Hyattsville Metrorail station, Maryland. The development is a model of green building and low-impact development, promoting the use of Leadership in Energy and Environmental Design-certified (LEED) green building technologies ([www.pbworld.co](http://www.pbworld.co)).

The resulting TOD strategy will help foster economic development and urban revitalisation initiatives in an underdeveloped part of Maryland and will serve as a guide for implementation at 14 other Metrorail stations in the county.

The successful construction, and subsequent occupancy, of the high quality development (compact and mixed-use; pedestrian friendly; reduced parking ratios and effective parking management) shows prudent investment of government resources.

The strategy included a balanced street and circulation network plan maximise the proximity of the development to the surrounding community and its relationship to the other Metrorail stations.

Zoning codes and development design standards were rewritten with a focus on sustainable development, and a comprehensive parking management program reduced the number of parking spaces by a third - making the development more pedestrian-friendly.



### **Transports Metropolitan de Barcelona<sup>42</sup>**

**(TMB)**, Spain, signed an agreement with a socio-cultural Association IBN Batuta (Muslim people)

and one of TMB's suppliers to employ people with a different cultural background in the regular workplace. The agreement has three partners: TMB, who offers employment, IBN Batuta who look to find work for its community members, and Mantylim (the company that contracts) to select candidates. IBN Batuta, promotes learning sessions to get people to apply for the positions offered.

#### Objective

- To include people normally at risk of social exclusion in formal work and reduce marginalisation.
- To break down the existing stereotypes of these groups
- To change social habits
- To give training to address the specific issues mentioned above
- To create a 'responsible-behaviour' and tolerant environment

#### Key Performance Indicators

- Number of contracted people
- Improved economic capacity due to them
- Improve training and capacity building
- To acquire habits and culture of a 'responsible-behaviour' environment



### **YVT Helsinki Metropolitan Area Council,**

**Finland**

Finland has signed the Kyoto Protocol and is the only European country to have stabilised their emissions at 1990 levels (with a slight total decrease which has recently been reversed by a slight rise) due to an integrated approach to land use and transport. Stringent transport policies (high fuel tax, high vehicle tax and high national maintenance standards) as well as

a high proportion of hi-tech industries and community planning have all played a strong role.

Local air quality is also highly important. Public transport is strongly promoted by YTV. 40% of daily trips are made by PT within the Helsinki metropolitan area. Air quality is monitored by 11 mobile and fixed monitoring stations and the results are available online via the internet and YTV Air Quality Index is published hourly.

## Stakeholder engagement

Stakeholders are those people who have an interest in a particular decision, either as an individual or as representatives of a group. This includes people who do or can influence a decision, as well as those affected by it. Stakeholder or multi-stakeholder engagement is a process which brings together people in a new form of communication, decision finding, and possibly even decision making, on a particular issue. Stakeholder involvement is absolutely crucial to sustainable development.

These exchanges may take numerous forms and there are many practical implications ranging from creating dialogues and consultations between civil society and governments as part of an official decision making process, at both national and international levels. On a local level public transport organisations often engage with passenger councils or representatives and with local community actors.

Gaining support and understanding the needs of local communities are vital to successful public transport.

## Investing in stakeholder dialogue and the staff that are able to manage this process is a new and valuable skill set

As part of today's need for risk management, these platforms can also play a critical role in times of crisis such as a major incident involving public transport, social unrest and are of particular importance when new transport projects affect communities..

The skills needed for successful stakeholder engagement and dialogue are relatively new to public transport actors. Investing in hearing the different perspectives of diverse groups of people that can affect an organisation's licence to operate and it requires resources and trained moderators. It is important that these consultations do not uniquely occur in a moment of conflict – after an accident, strike or other crisis – and are part of the investment in the reputation of an organisation.

## Sustainable development barometer

*Time line of changing attitudes to Sustainable Development*

1970

*In the 1970s organisations were mainly unprepared, unregulated and there was a low interest. The term sustainable development was not even talked about.*

1980

*In the 1980s organisations became predominantly reactive. Environmental regulation and legislation was starting but sustainable development was still considered a passing phase.*

1990

*By the 1990s there was a greater preparedness, pressure from the public and legislation increased. More organisations engaged in pollution prevention, and started environmental management systems. There was a general shift from compliance to stewardship and the concept of sustainable development took form.*

2000

*By the year 2000, organisations had become proactive and now considered engaging in sustainable development to add value. It started to be integrated into competitive advantage, investor value and total life cycle responsibility.*

*Today governments and business are under increased societal pressure for transparency and environmental justice but there is a weariness accompanying the term 'sustainable development' due to over use. Despite this the concept of what it stands for grows closer to mainstream business practice.*



## Making it happen

Implementing sustainable development is the logical outcome of evolving industry practice including environmental stewardship, pollution prevention, waste minimisation, cost effective processes and high performance design.

The socio-economic dimension, the beneficial or adverse impacts on societal well being, sets sustainable development apart from regular environmental or quality based business processes. The recognition of the links between sustainable development and competitive advantage in the market place, elevate it to an issue of strategic importance.

### Relevance of Sustainable Development to top levels of management

- be responsible for the governance and culture of an organisation
- sense and anticipate change
- anticipate market developments
- manage and reduce risks
- ensure financial and employee security

Many of these areas of business benefit strongly from engaging in sustainable activities and this can be measured in both financial and non-financial methods. This is often called 'triple bottom line' (economic, social and environmental) reporting.

## Risks

### People

- Damage to customer relations
- Staff retention and motivation
- Poor reputation with 'neighbours'

### Performance

- Delay to services
- Delays to projects
- Damage to corporate image and reputation
- Lower efficiency

### Compliance

- Mandatory reforms and legislation
- Employee/ stakeholder and public pressure
- Reactive rather than proactive

### Costs

- Fines and compensation
- Cost of clean-up
- Loss of political reputation and lower funding
- Increased insurance
- Lower financial rating

## Opportunities

### More benefits

- Reduce cost of compliance
- Reduce use of raw materials and waste
- Reduce energy use
- Increase understanding and acceptance of responsibility by all for keeping costs under control

### Avoid risks

- Assure licence to operate
- Avoid commercial liabilities
- Manage risks through measurement and monitoring better
- Create trust

### Create opportunities

- Sound environmental management
- Develop cheaper and better methods of operation
- Develop alliances and new ways of working with partners
- Invigorate present processes

### Leadership advantage

- Improve stakeholder relationships
- Enhance reputation as responsible custodian of expensive transport infrastructure
- Attract resources: people and investment



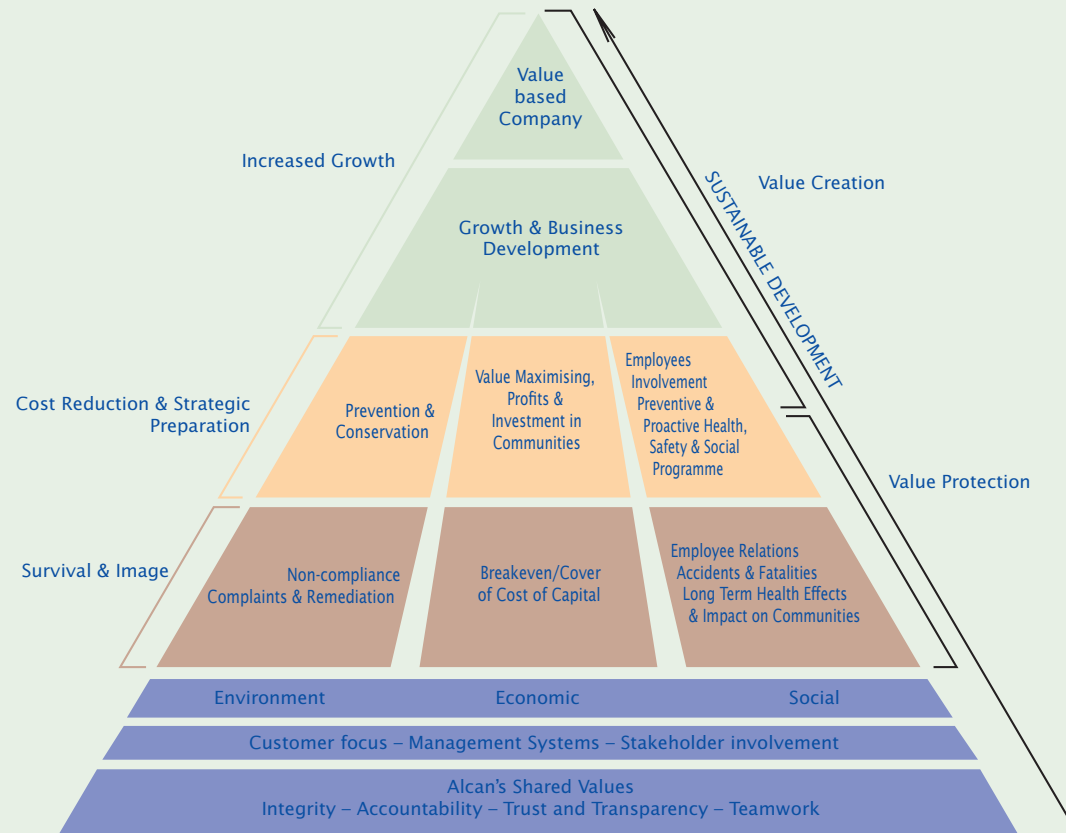
**Alstom Transport**, a major international player in rail rolling stock manufacture, has a strong commitment to deliver environmentally, sustainable products. A new approach is being put into action across the organisation, with increased communication at all levels and a move from a paper culture to a practice culture, a reactive, contemplative approach to a proactive, preventive mode.

*New internal processes include*

- A management system that includes self evaluation and external/internal audit; 4 levels of environment, health & safety management and business risk assessment.
- Performance is measured via Environment, Health and safety indicators, monitored quarterly with unit managers. Quarterly reports show performance score card, key evolutions and best practice examples.
- Eco design environmental impact Eco design intranet is available to all salaried employees with self training; environmental information/studies modules.
- Environmental product declaration for Hamburger Hochbahn (Germany) metro car shows all aspects of environmental product performance of DT 4.5 underground vehicle



### Alcan's <sup>43</sup> sustainability framework



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*With maximising value as the governing objective, Alcan is now focused on creating value in all business decisions instead of simply protecting value (risk avoidance and risk management). In 2003 Alcan implemented an 'Integrated Management System (AIMS) built on three components: Maximising Value, EHS FIRST and Continuous Improvement. Maximising value is the basis for all strategic investments, EHS FIRST brings the environmental, health and safety management systems of all business groups under a common framework and discipline, and Continuous Improvement integrates two complementary approaches Lean Manufacturing and Six Sigma, with the goal to develop a toolbox and a common 'Continuous Improvement' language.*

## Managing risks and building reputation

The global market place is changing. New risks appear and new technologies influence the market. The continuing revolution in information technology and communication means that the influence of enterprises easily extends beyond a region and they need to adopt a more international perspective in framing their business decisions.

The business case for sustainability is grounded in long-term profitability, but the short and medium term gains should not be overlooked. Sustainability is more than just buffering an organisation from stakeholder demands for reasons of short-term reputation management, and by mainstreaming sustainability in their strategies and day-to-day operations, innovative corporations find new ways to bridge evolving demands. They need to engage in a learning process and understand that responsible social and environmental business conduct is necessary to co-create the conditions for the long-term endurance of the company.

Change usually increases risks and it is much easier to simply carry on in established patterns and business practices. 'Business as usual' is no longer an option and new far reaching changes are going on in all areas of business and service provision. 'Triple bottom line'<sup>44</sup> accounting is an example.





**Making it Happen with MTRC Ltd Hong Kong**

MTR Ltd was the first company to produce a sustainability report in Hong Kong and one of the first transport organisations world wide to do so. The annual MTR Corporation Sustainability Report <sup>45</sup> sets out the MTR's achievements in managing its key business risks. The recently published 4th sustainability report illustrates the progress that MTR is making to incorporate sustainability into its operations.

- Risk and stakeholder engagement are main components of its sustainability strategy and states how risks are identified and prioritised
- Gives a clear list of the portfolio of priority business risks
- Shows what indicators were used to measure performance against each business risk

The report uses the GRI<sup>46</sup> indicator set as a template for the report, ensuring that those indicators that relate to MTR's business case are discussed and reviewed. Not all of the GRI indicators are applicable to or relate to the internal management of MTR's business. As MTR's sustainability programme is based on corporate risk management, it is essential that the indicators chosen for detailed reporting best describe the actual risks involved.

In 2004, MTR also compared their GRI achievements with those from the World Economic Forum Citizenship Initiative. While there is a good correlation between the two sets of indicators, it is still MTR's business case that provides a unique set of indicators. The report is publicly available via their website<sup>47</sup>.



**Knorr Bremse (KPS) – a world leader in**

manufacturing brake parts for the supply industry has a strong focus on improving productivity and competitiveness by improved management, shop floor process reviews and streamlining methods e.g. the KPS Berlin location has reduced the inventory of some production cells by 50% and preventive maintenance and new skills training has raised productivity.

The human dimension is cited as being of highest importance to Knorr Bremse, supported with robust training programmes,

- 5 point leadership policy: Reliability and Honesty; Loyalty and Mutual Respect; Responsibility and Team Spirit; Openness and Trust; and Responsible Behaviour.
- The Leadership Manual is communicated to all managers (first one in 2004)
- The framework for integrating 'Corporate Principles and Values' is given support at board level; via an interdisciplinary team and is measured by two year review process
- REX, Rail EXcellence programme with guidelines for managing people (BPM Business Process Manual) was introduced over past two years (2002-2004). All processes are available to entire staff on the internal intranet and are part of KPIs \*
- Culture of excellence is being put into place with Centres of Competence and increased management responsibilities.

\* Key performance indicators



**Siemens Transportation has introduced a**

process oriented management system for improving health, safety and environment issues at work called PROcess Management for Environment, Health & Safety

[ 'promis ]



In addition, realising that they are not maximising the potential of existing employees and to attract more women to work in the transport division of Siemens, they have also launched a programme entitled 'Promoting Diversity'.



**Translohr (part of Lohr Industries) an**

innovative rolling stock supplier based in France, displays the UITP charter in the workplace so all staff and employees understand the organisation's commitment and strategy to sustainable development.





Public transport organisations are usually themselves large entities directly employing or are responsible in some way for large numbers of employees. Traditionally the sector has been centred on high standards of engineering and new technologies; but this focus is shifting to a more service-oriented approach. This requires a better understanding of the services people need and how to provide this. As the payroll often represents 50% of operating costs, the human capital of a public transport undertaking must be motivated to provide this new customer-focussed, high level of service to all passengers. Many charter signatories are committed to energising this change by training people how to deal directly with passengers on a day-to-day basis, treating them as valued clients, as part of the social pillar of the sustainable development.

Drivers for consumer purchasing are not well understood but there is increasing evidence to suggest that consumers do consider a company's reputation when making a purchasing decision. A public transport operator most often uses the rational argument of comfort, reliability and price to convince customers to use their services or to drive model change. However the emotional aspects should not be neglected as they may be more, or are at least as convincing as the

rational arguments, to increase customer satisfaction and loyalty. Much research shows more people are interested in the 'ethics' of a company.

Building strong local community relations is considered to be a two way stakeholder engagement and goes beyond simple philanthropic actions. A socially responsible culture in organisations helps ensure that employees take their responsibilities seriously and helps create a reservoir of goodwill between company, customers and the community. This also creates cultures of tolerance, and responsible behaviour – and can have a positive impact on other key areas for transport operators such as passenger and employee security. In addition, it should not be forgotten that public transport creates local employment. In Europe, more than 570 jobs are created for each € 10 million invested in public transport operations in the short term and in the year following investment 314 jobs are created for each € 10 million invested in capital funding for public transport.<sup>48</sup>

This is a clear demonstration of embedding sustainable development into companies. This investment can pay-off handsomely in times of crisis, and helps keep existing strong customer base loyal.



**Transdev**, with 50% of one of the world's largest tram networks, in Melbourne, Australia, have undertaken an eco-efficiency pilot programme

The Green Depot™ at 8 tram depots to address the relative lack of familiarity among the majority of the workforce in environmental and sustainable work practices.

1. Establish eco-efficient capital assets and work practices (ex. capturing rainwater to wash the trams, installing photo voltaic panels on roof space, etc)
2. Strategic, corporate and social partnerships (with national and local government agencies as well as NGOs)
3. Employee communication and education (through employee training and participation programmes)
4. External stakeholder communication and brand positioning and suppliers of eco-efficient products are keen to partner with Transdev to co-promote the project in their own industry forums.

*The additional costs to install eco-efficient and increased staff costs to establish, develop, implement and closely monitor cost savings and waste reduction in the longer term are offset against savings.*

*The Green Depot™ further reinforces Transdev's position as an innovative mass transit operator with a demonstrable commitment to social and environmental responsibility and will provide them with a competitive advantage when bidding for future public tenders in an increasingly environmentally-conscious market place.*



### Creating jobs and local wealth

Use of passenger public transit in the United States is increasing with over 9.5 billion trips made annually. Public transit organizations employ 350,000 people in the United States and every billion US\$ invested in public transport infrastructure supports 47,500 jobs. The cost of congestion during peak periods to each road user in the US in 2000 was US\$ 1,200 in wasted fuel and lost productivity. Yet there is a US\$ 6 return for every US\$ 1 invested in transit. <sup>49</sup>

25% of the about 2500 people using now an annual ticket are people who used to travel to work only by car. SEMITAG has also established a travel plan for its own employees, including the set-up of a car-sharing club with an intranet site, 50 bicycles with accessories for professional use, e-services on the intranet, a participation on the SNCF periodic ticket, etc. SEMITAG's internal objective is to reduce its car travel by 10% until June 2006.



### Connecting with all business

Work place travel plans typically reduce car commuting by between 10% and 30% and increases the image of a dynamic transport provider. More and more UITP members are extending their offer to the local business community. Indeed, in Italy any organisation with more than 300 employees is obliged to have a mobility manager in Italy, and ASSTRA <sup>50</sup> has identified many examples.



### The Swedish Public Transport Barometer

The Public Transport Barometer was introduced on the Swedish market in December 2000, and is currently used by all 25 PTA's <sup>52</sup>. In a world of continuously changing market conditions, the Public Transport Barometer was designed in order for the PTA's to get "online" with their customers and thereby provide a solid foundation for successful decision making. The unique concept is based on non-stop collecting of information about the market's attitudes and behaviours and presentation of results in real-time on a secure website. Between 100 and 500 interviews are also performed per month by telephone for each participating PTA. This enables analysis of the customers' and markets' reactions towards campaigns and market interventions as well as seasonal changes and effects of unpredictable incidents due to weather, system failures etc. The results give valuable and relevant business and local market knowledge.

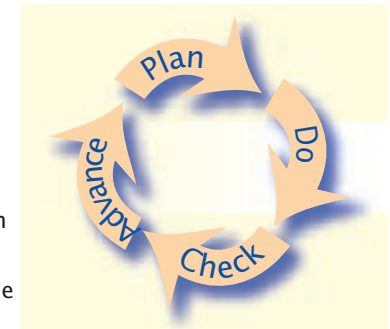


SEMITAG <sup>51</sup> encourages businesses in Grenoble, France to adopt company travel plans, and offer their employees better conditions for travelling on the public transport network. Though a special department, "le Pôle Déplacements", SEMITAG offers support in drafting the travel plan and can negotiate specific services for the company (for example shuttle buses at certain times, adaptation of timetables, creation of new lines or new stops, special tariff plans, etc). In March 2005 there were already 34 such plans in place, covering 21% of the companies in the region.

## Sustainable development must be a strategic goal

The fundamental management system of Plan-Do-Check-Advance is an effective framework of a strategic approach to sustainable development. These steps outline the structure for identifying related opportunities and risk, determining the business case for action and developing an appropriate strategy, taking action and evaluating results.

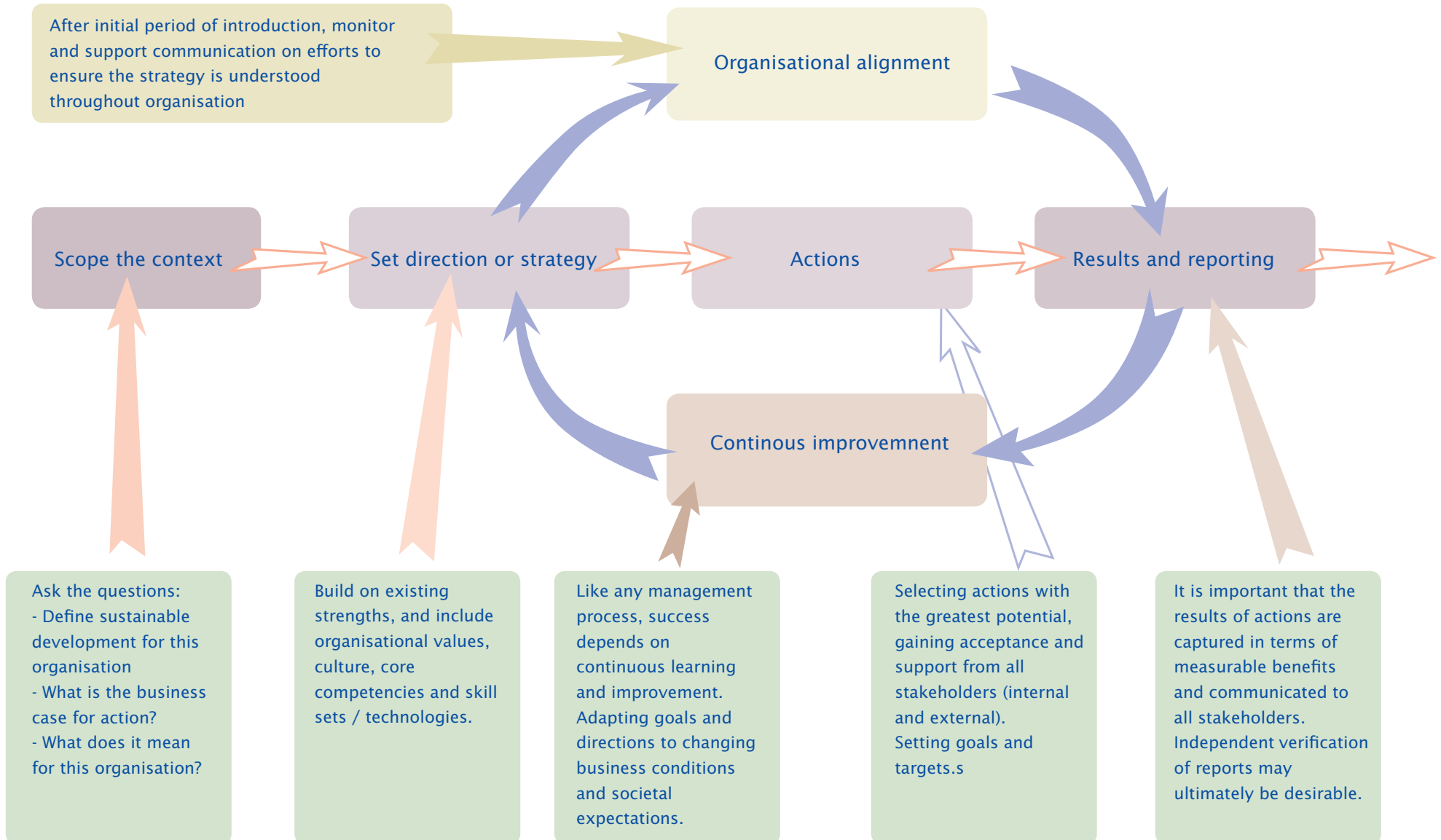
Most organisations already have management processes in place and are already partially reporting on several aspects that are key to sustainable development.



Whenever possible these should be incorporated to provide a coherent structure and bring more focus to the efforts of an organisation.

Many signatories have found this to be a positive aspect of the UITP charter, as it has helped them gather together what is already in place yet is not being presented and reported to full advantage for the organisation. Organisations have been able to streamline processes, sometimes identifying some valuable initiatives that are performing well and adding value, but that are not being fully recognised.

## Steps on the sustainable development journey



## Measurement and reporting

Effective management depends on the successful integration of an organisations' core values into everyday practices. Reporting plays a vital role in improving, not just communication, but also the credibility and trust between organisations and their stakeholders.

It brings increased transparency and accountability to key stakeholders and provides a sound basis for dialogue and engagement with them. These stakeholders are sometimes internal such as employees, staff and suppliers or external such as customers, the local community, investors, regulators and other decision makers.

Reporting also enhances reputation, which over the long term translates into brand value, customer and employee loyalty and increased market share. However, traditional financial accounting is usually retrospective, giving information on past performance and results. Faced with rising stakeholder concerns, as mentioned earlier, long term success no longer depends solely on financial results but also on the social and environmental performance of an organisation.

Sustainable reporting illustrates the readiness of an organisation to address pressing but difficult issues and is a major tool for building reputation and gaining stakeholder support. Putting the processes in place for formal and planned reporting often identifies areas where greater efficiencies can be gained and motivates all departments to perform better to achieve an organisation's strategic objectives.

Accountable decisions tend to be better as they are more likely to be consistent and rule based rather than arbitrary. Therefore, sustainable development reporting should be viewed as a tool to bring more focus to the organisation itself and to encourage innovation and continuous improvement, stimulating leading edge thinking and performance.



*UITP membership represents all mobility players and the **Province of Gelderland**, in The Netherlands is the first regional authority to have signed the Charter. Their five strategic themes include stimulating public transport use (particularly for leisure and recreation), improving the network and introducing innovative technologies. Examples include a network of high quality bus stops fitted with cycle racks and mobility management programmes with local companies and authorities. The community of Apeldoorn will soon have a new light-weight diesel/hybrid bus called 'The Whisper' expected to reduce fuel consumption by 50% and, when the generator is running, will reduce the noise level from 75DB to only 55DB. It only produces 10% of harmful emissions compared to regular buses.*

For all actors in the public transport sector implementing sustainable development is not a simple process, and there are a variety of different standards, certifications and systems on the market. Part of the rationale for reporting is to communicate what is interesting and useful and to be able to position the organisation's performance in the global marketplace.

Organisations need to be able to combine data they are already collecting for economic, quality and environmental, health and safety performance and combine it with some new elements in a useful way to report on their sustainable development performance rather than develop completely new, expensive and complicated processes.

The UITP Sustainable Development Commission has launched a working group to develop a set of guidelines and international indicators for the sector <sup>53</sup>.

## What is reported on, how and when are all crucial points to be taken into consideration.

Organisations setting out on this journey need to have a strategy in place; the next steps are to measure and monitor performance.

Reporting for reporting's sake should be avoided. The target audience must be well defined by the organisation and the data should be clearly presented and transparent for all readers. Data collection should focus on what is important to know rather than what is easy to get, and incomplete but well explained information is also valuable. In depth statistics which do not respond to the questions from stakeholders damage trust and lower the credibility of the organisation.



Several charter signatories are EMAS the European Eco-Management & Audit Scheme,<sup>55</sup> accredited. This stringent audit system monitors the environmental performance of all types of organisation.

**KVB, Kölner Verkehrs-Betriebe AG**, serving 242 million passengers in the Cologne district of Germany was the first tramway system to be EMAS accredited and since then others have complied with this environmental management system, accredited by the European Commission.

Becoming EMAS accredited means implementing an environmental management system backed up with an environmental manual and requires

- performing internal audits according to the EMAS requirements
- examination of the installations by environmental verifier or officer
- publishing an environmental statement and report.



**Transport for London, (TfL) UK** is responsible for all modes of transport across the capital and therefore collecting environmental data and information alone poses problems. A new refined approach with a coordinating body has been recently put in place. Each business is responsible for the management of its environmental matters supported by local professional staff.

Group Transport Planning & Policy (GTPP) is responsible for coordinating TfL's environmental reporting and monitoring of progress and it facilitates an internal environment forum, the Environmental Liaison Group (ELG), whose purpose is to share information and best practice and to coordinate projects, plans and processes. The ELG comprises representatives from all directorates.

TfL reported project progress in the 2004 Environment Report against a framework of ten environmental objectives. The objectives are based on the London Mayor's five environmental strategies (air quality,

energy, ambient noise, biodiversity, and municipal waste) and TfL's impact on resources, the built environment and the quality of water and land.

The objectives are ordered into a three-tier hierarchy, reflecting the degree to which TfL has an environmental impact, the level of influence and control TfL has and the extent to which an impact occurs across TfL. TfL's three key objectives, reflecting areas of most impact or level of control by TfL are air quality, energy use and carbon dioxide (CO<sub>2</sub>) emissions, and noise and vibration.

The baseline data for each performance indicator, (current performance) represents TfL's contribution. TfL is working with the GLA<sup>54</sup> to put the performance indicators and baseline data into the broader London context by comparing TfL's contribution to each indicator to the transport sector as a whole and to the contribution from all sources in London.

## Examples of environmental performance measurement

Tier	Group Environmental Objective	Group Key Performance Indicator
1	Reduce pollutant emissions to air	<ul style="list-style-type: none"> <li>▪ NO<sub>x</sub> emissions total tonnes and per modal passenger x km</li> <li>▪ PM<sub>10</sub> emissions total tonnes and per modal passenger x km</li> <li>▪ SO<sub>2</sub> emissions total tonnes (stationary)</li> </ul>
1	Reduce energy consumption, implement efficiency measures and increase the use of renewable energy to reduce greenhouse gas emissions	<ul style="list-style-type: none"> <li>▪ CO<sub>2</sub> emissions tonnes total and per modal passenger x km</li> <li>▪ Percentage of renewable energy (of total electricity portfolio)</li> </ul>
1	Reduce noise and vibration by promoting the use of quieter travel modes and vehicles, reduce the noise generated by vehicle use and control the levels of transport noise sensitive locations	<ul style="list-style-type: none"> <li>▪ Number of complaints</li> <li>▪ Number of written complaints</li> <li>▪ Investigating: <ul style="list-style-type: none"> <li>- e.g. % roads surfaced with SMA (Stone Mastic Asphalt)</li> <li>- Number/proportion of properties exposed to road traffic and rail noise levels within a given noise band</li> </ul> </li> </ul>
2	Reduce consumption of resources, implement efficiency measures and recognise where resources are consumed, to reduce the adverse effect on the environment through environmentally preferable procurement and trading	<ul style="list-style-type: none"> <li>▪ % recycled materials/products for 2004-2005 top ten suppliers, in terms of expenditure and volume</li> <li>▪ % recycled materials/products for 2004-2005 top commodity groups, in terms of expenditure and volume</li> <li>▪ No. and % of recycled toners purchased (total and normalised capacity per occupant)</li> <li>▪ Tonnage and % of recycled paper purchased (total and normalised capacity per occupant)</li> </ul>
2	Maintain and where possible enhance the quality of built environment	<ul style="list-style-type: none"> <li>▪ Modal enviro-crime percentages from Customer Satisfaction Surveys and Mystery Shopper Surveys</li> <li>▪ Enviro-crime score from other sources</li> </ul>
2	Reduce the impacts of waste generated and waste from contractor activities through minimising consumption and promoting re-use and recycling	<ul style="list-style-type: none"> <li>▪ Tonnes of commercial and industrial (C&amp;I) waste total and per passenger x km</li> <li>▪ % commercial and industrial (C&amp;I) waste recycled</li> <li>▪ Tonnes/litres of special waste total and % recycled</li> </ul>
2	Promote the sustainable transport of waste	<ul style="list-style-type: none"> <li>▪ Awaiting completion of Strategy; first deliverable (date)</li> </ul>
3	Maintain and where possible enhance the quality of natural environment	<ul style="list-style-type: none"> <li>▪ % of open land holdings which have been habitat surveyed for biodiversity</li> </ul>
3	Reduce pollutant emissions to land and water	<ul style="list-style-type: none"> <li>▪ Number environmental incidents (land or water)</li> <li>▪ Number contaminated land sites remediated (LU)</li> </ul>
3	Reduce consumption of water resources and implement efficiency measures	<ul style="list-style-type: none"> <li>▪ M<sup>3</sup> of water consumed total and per modal passenger x km</li> <li>▪ M<sup>3</sup> of water consumed per occupant (Group Property and Facilities)</li> </ul>

(from Transport for London example)



Since the end of 2003, **Stadtwerke Augsburg**

**Verkehr GmbH**, Germany has been going through the EMAS certification process and developing an environmental plan, and reporting mechanisms. It has recently gone through its first environmental audit and

five objectives have been set out:

- 20% reduction in costs through improved management processes
- More attractive service (new lines, creating a mobility hub at the train station, etc.
- Reduce emissions by modernising the bus fleet – by 2007, 60% of buses EURO V standard and 60% of the buses to be running on natural gas. Reduce particle emissions by 80%, NOx and CO emissions by 60%
- Reduce Energy consumption by 10% and use more renewable energy
- Reduce waste water



Waste and water are the focus of the environmental performance of **Ansaldo Breda**, an Italian manufacturer of rolling stock vehicles.

Through various efforts it has achieved its environmental targets namely the recovery 10% of industrial waste and the reduction of expenditure on water by 2% in two years (2001-2003).



More than 9 million citizens are transported

daily in Paris by **RATP**, *Regie Autonome des Transports Parisiens*, by bus, metro, tramway and RER. RATP has a solid commitment to sustainable development. It has one of the most ecological bus fleets in Europe and monitors its performance closely. It has the objective to achieve 100% ISO 14001 certification for all installations by 2010. At a rate of 15 new sites per year they expect to have 60% accreditation by the end of 2007.

They have identified key categories for reporting: installations and equipment, management and direction, environmental performance, economic performance and socio-environmental performance.

They find that energy efficiency of public transport is three times higher than the private car per passenger. While only taking a small amount of precious urban space, it produces only 4% of the pollution, 2% of the CO<sub>2</sub> and 5% of the noise measured in Paris.



**Action Authority, Canberra, Australia** an

organising authority and bus operator

states in its strategic plan that Action's values

are:

- Excellence in customer service
- Assisting people with disabilities
- Unity with our people, unions and management
- Diversity in the work place
- Friendly supportive work place
- Providing safety within the transport system
- Providing sustainable accessibility
- Delivering value for money
- Being environmentally responsible

Further commitment is made to innovation, transparency and accountability and a performance and achievement orientation

Key strategic priorities 2005-2007 include:

- Increase patronage (target +1% increase 2004-2005)
- Improve economic sustainability (measure performance and increase efficiencies in service (customer focus), diversity, creativity and innovation (people focus), maximise resource use and ensure continuous improvement
- Improve environmental sustainability



The social pillar of sustainable development requires an integrated approach. The human capital of public transport undertakings encompasses both internal and external stakeholders. Many charter signatories can demonstrate their commitment to their own staff and also have forged strong links with local communities.



**Hamburg Hochbahn**, Germany has developed a 'Lernlanskarten' – a didactic support for communicating the Hamburg Hochbahn strategy 2010 and helping staff understand the changes in the market. Market research has shown that 85% of employees now understand the company's strategic targets.



**Leipziger Verkehrsbetriebe (LVB) GmbH**  
- the largest tram operator in Germany boasts a social consultation system with many useful functions. In 2003, 179 people used it for various problems, ranging from work-related problems, accident after-care, family problems, debts, etc. In 2003, a series of "discussion tables" for women's issues made it clear that a new officer should be hired to deal with the problems of female employees. LVB is also trying to extend its offer of services to staff such as inaugurating a new service aspect for the staff canteen in 2003 which now offers catering for events such as birthdays, marriages or sport meetings.



**VAG Nuremberg**, has a process in place to integrate staff suggestions for improvement. From a total of 84 suggestions, 23 new ideas were implemented bringing € 54 000 cost savings to company. Staff were rewarded with prizes for a total value of € 9 500. New method training and team communication have been introduced. New safety procedures and safety rules in 2003 focus on the emotional as well as rational needs of staff/employees. Workers over 60 are given a special dispensation for reduced hours on physical straining jobs and there is a comprehensive programme for rehabilitation if needed after a work related accident.

The network received the European year of disabilities prize from CEMT (ECMT – European Conference Ministers of Transport) and UITP for the high level of accessibility. For example all signs are in Braille and widespread station lift and ramp access for the less physically able.



**Merseytravel**, UK has the mission to provide an integrated public transport network that improves the quality of life on Merseyside.

Its key principles in developing policies are:

- Sustainable development
- Environmental probity
- Public accountability
- Participation
- Partnership
- Education

The social aspect is firmly rooted in its strategy and the Community links Team of Merseyside Travel, UK is responsible for bridging the gap between the transport company, the people who work for it and

provide the service and the local community. It has developed a far reaching series of community projects that address travel safety, vandalism, education and promotion for young people, working hard to reach groups (ethnic and faith minorities, etc).<sup>56</sup>



**Brisbane Transport**<sup>57</sup>, Australia promotes « Equity for All ». Brisbane Transport, running bus services in Western Australia, has a strategy for achieving ecological sustainable development (in conjunction with a training programme) and wants to ensure that decision-makers are also mindful of this issue. They have set down the following principles:

- Integrated and long-term decision making integrating long and short term environmental, economic and social considerations;
- Future intergeneration equity, maintaining or enhancing the health, diversity and productivity of the environment;
- Present intergeneration equity and the equitable sharing of resources and opportunity between and within nations;
- Applying the precautionary principle and properly addressing the threats of serious or irreversible damage;
- Conservation of biological diversity and ecological integrity;
- Internalising external costs i.e. the true costs and all life cycle costs incurred from production to waste disposal.

Above the water surface:

- Micro economics (or company / organisation based)
- Revenues
- Costs
- Cost / Benefit



Below the water surface:

- Macro economics (society based)
- Gross Domestic Product (local and national)
- Taxation base
- Equity and equality
- Occupation / education
- Labour market
- Local effects
- Road safety
- Travel time
- Energy reduction
- Road and traffic intensity and congestion
- Residential and attractive living spaces (houses / apartments)
- Environment
- Health
- Public services for societal good

## Bringing quality to life

The capacity to change our present habits of consumption and in particular our mobility habits. World Gross Domestic Product (GDP) has trebled in the last 30 years yet income inequalities persist. With 78% of the world population classified as poor by world standards, the allocation of global wealth and investments are simply not being evenly spread. Much of the resources needed for global development come from developing countries.

There are signs that GDP, the principle and most widely accepted indicator of economic health and activity, may not be the best judge of real sustainability. In the USA, a country with one of the highest GDP's world wide, the level of happiness has not grown in parallel with this indicator.

In the world today, we enjoy an impressive array of global connections and information, but this world is also one where anxiety about environmental degradation, social tensions and long term financial security are prime concerns for many citizens.

### New pathways needed

Almost all worldwide economies are still programmed for growth in most areas of activity: population, rising life expectancy, increased access to information, higher investments, more products. Many politicians place growth as central to policy development and to stimulating consumption and full employment. Yet this is at best difficult, if not nigh impossible, to fully reconcile with environmental protection and social justice. Indeed the most vocal argument against compliance with Kyoto's national targets is based on the cost it brings to industry.



## Public transport is vital for future development

There has been much debate on decoupling transport and economic growth, yet this can only be done if external effects are factored into the transport model. The highest costs being the negative environmental and social effects and these are also the most difficult to put right.

A level 'playing field' needs to be agreed and greater transparency of funding and subsidies would make the high investment in public transport more attractive to public and private investors. In the short term, governments must bring in policies and measures as greater incentives are needed to change present habits. This applies to the developed and the developing world where today there is little incentive not to choose the 'car-based' mobility models of the developed world.

## Subsidies and external costs in Europe

Cost of congestion, air pollution and traffic accidents <sup>58</sup>	Total turnover including capital investments of Public Transport in Europe	Per capita of GDP wasted due to congestion, air pollution and traffic accidents EU 25
€ 560 billion	€ 120 billion	€ 1240

## Making change a reality

The importance of motorised private transport is over estimated and possibility to reduce it underestimated. The Euro barometer report shows that in the European Union 50% of citizens feel that decision makers feel that they are more favourable to the car than they actually are, yet changes can only be made if there is an attractive alternative <sup>59</sup>.

Despite shortcomings between the unparalleled flexibility and freedom a car might bring, public transport provides an essential service for present day urban mobility. Public transport is outperforming other motorised modes today; in terms of energy efficiency and land take per passenger transported. It is also key to the transition period before clean technologies are fully integrated in all parts of the world and bring new, higher levels of performance.

Technology can no longer be considered a barrier. Clean technologies are well developed, but not yet wide spread keeping them expensive. Particulate filters fitted to buses running on clean diesel reduce local pollution to acceptable levels, and achieving targets for CO<sub>2</sub>, NO<sub>x</sub>, and SO<sub>x</sub> emissions are now quite feasible with smaller engines and other technical improvements.

Urban rail and electric vehicles are already low or zero emission today, it only remains for governments to provide electricity in renewable terms to bring the total environmental footprint down of these high capacity modes of transport. Energy efficiency per passenger transported by collective public transport is already 3-7 times better than personal motorised modes, and would be further improved if even more people choose to use it.

*Current use of public transport in New York avoids 94 million tonnes of CO<sub>2</sub>, 14 million tonnes of hydrocarbons and 1.5 million tonnes of soot<sup>60</sup>.*

The performance of public transport touches many people's lives on a daily basis, indeed their quality of life is directly enhanced by the mobility service they provide.

The World Health Organisation (WHO) predicts that by 2030 there will be more than 23 megacities of more than 10 million people, with 18 of these in the developing world. Cities in China with 4-6 million inhabitants are only considered to be medium sized and are expanding fast. Many are building new housing development that are too remote for cycle trips and are poorly served by public transport. Therefore those that live there will require cars to get about, even for essential short journeys and shopping errands.

*30 million people are expected to be living in the Pearl River delta in China<sup>61</sup> – transport providers need to ask*

- *How will these people get to and from work and at what cost?*
- *Will it be safe, equitable for all members of society?*
  - *Where will we get the energy to move them?*

These sorts of questions also impact the behaviour of governments and key decision makers - what do governments need to do to ensure that this is done ethically and how can they be accountable for their actions?

Ultimately one also needs to ask what kind of organisations will be entrusted to transport the large numbers of people that will be living in urbanised regions without compromising security, safety and the environment. Those that are already in a position to be accountable, report transparently and measure their performance have a greater chance of being the transport providers of the future rather than those that can give no reassurance that this is the case.

UITP, as the representative of the sector and its charter signatories make the following recommendations to enhance the environment for sustainable development and call on politicians and decision-makers to:

- Promote modal shift towards public transport, the safest and most environmentally-friendly mode for urban and regional mobility by increasing investments in making public transport a competitive, attractive and safe alternative to private transportation
- Manage energy use by increasing the use of energy efficient public transport, both surface based and underground.
- Acknowledge and work with transport actors to recognise the useful contribution public transport

makes to reducing national levels of CO<sub>2</sub>, GHG emissions and local pollutants.

- Recognise the contribution of public transport in social cohesion and local economies
- Work with all mobility players to help increase the public awareness about the excellent environmental aspects and good safety record of public transport

In particular they should:

- Review energy and transport policies to allocate more investment to increasing ridership on public transport all over the world
- Give priority and dedicated lanes to public transport thereby increasing its reliability, convenience and operating effectiveness
- Promote design and land use development encouraging the safe use of all sustainable modes, connecting public transport seamlessly with walking and cycling.
- Set and enforce area wide speed restrictions and traffic calming measures,
- Increase awareness about road safety and high standards of training for drivers of all types of vehicles.
- Enforce parking policies strongly as a simple tool to change behaviour

Using the performance measures and the charter process, UITP is stimulating the organisations to report, measure and monitor their performance and contribution to the global objectives of sustainable development.

This report shows that there are real efforts being made within the sector to increase performance and to ensure that public transport is in a position to be an excellent complement to other modes, allowing a range of choices for citizens everywhere to enjoy a high quality of life, in a safe and healthy environment.

**Sustainable Development** is about finding the right balance between economic growth, social equity and environmental justice.

**Social progress which recognises the needs of everyone.** Everyone should share in the benefits of increased prosperity and a clean and safe environment. Action needs to be taken to improve access to services, tackle social exclusion, and reduce the harm to health caused by poverty, poor housing, unemployment and pollution. The present needs of those able to choose must not be met by treating others, including people elsewhere in the world today, and future generations everywhere, unfairly.

**Effective protection of the environment.** Actions by governments and civil society must become more decisive and effective to limit global environmental threats, such as climate change and ground water pollution, to protect human health and safety from hazards such as poor air quality and toxic chemicals; and to protect things which people need or value, such as wildlife, landscapes and historic buildings. Environmental damage is the most difficult to repair.

**Prudent use of natural resources.** This does not mean denying any use of non-renewable resources like oil and gas, but making sure that they are used efficiently and that alternatives are developed to replace them in due course. Renewable resources should be produced and used in ways that do not endanger the resource or cause serious damage or pollution.

**Maintain high and stable levels of economic growth and employment,** so that everyone can share in high living standards and greater job opportunities. Most countries rely on trading in a rapidly changing world and to prosper, businesses must produce high quality goods and services that consumers throughout the world want, at prices they are prepared to pay. To achieve this the workforce must be equipped with the education and skills for the 21st century, businesses must be ready to invest and there must be an infrastructure to support them.

**Urban areas are centres of economic development and wealth creation; yet they cannot perform efficiently without robust public transport networks.**



Some statistics from a selection of UITP members committed to the UITP Charter  
(those operating public transport only and 2003 or 2004 statistics)

	Total number of passengers transported	Modes of transport	Total number of employees	Vehicle km (million)
ATAC, Agenzia per i Trasporti Autoferrotranviari del Comune di Roma, Italy (Population 2.8 million)	5.6 million daily 873 million p.a. urban bus 267 million p.a. metro 46 million Tram	Bus 865 Metro 2662 Tram 8794 Total 565	141 million Bus 31 million Metro 5.6 million Tramway	
Berliner Verkehrsbetriebe (BVG), Berlin, Germany	900 million per year	Rail - Metro - Tram Bus	28 098	
Compagnia Trasporti Pubblici, CTP Naples, Italy 1.7 million people daily use public transport in the area, 64% by bus and 36% by rail	34 million p.a.	Bus (total 477) With Trolleybus (6 hybrid/dual mode growing to 11 2005/6) And 50 natural gas	1 896	24.86 km Bus
Land Transport Authority, Singapore	5.1 million daily on buses, trains and taxis			
MTRC Ltd Hong Kong	842 million p.a.	Rail - Metro - Tram	6 555	130 km/yr
New York City Transit, USA New York has one of the highest population densities in the US of 23,000 people per square mile	7 million daily			
New York City Transport, MTA, USA	2.1 billion p.a. 7.2 million daily	Rail - RER (Regional Express) - Metro - Tram Bus 4200	48 456	

	Total number of passengers transported	Modes of transport	Total number of employees	Vehicle km (million)
RATP, Regie Autonome des Transports Parisiens, France	9 million daily	Rail - RER (Regional Express) - Metro - Tram Bus	43,000	
Société Bruxelloise de Transports Intercommunaux, Brussels, Belgium	240 million p.a.	500 km network 3 metro lines 17 tram lines 45 bus lines	6149	
TMB Transports Metropolitan de Barcelona Spain	Total p.a. Excluding leisure Rail 342.79 million Bus 200.41 Including leisure transport (Cable car, tourist bus and Tramvia Blau) Rail 343.32 million Bus 205.05 million	Rail - 6 metro lines  Bus - 1001 total fleet	Metro 2728 Bus 3360 Total 6078	Metro 66.49 Bus 40.94 Total 107.43
Transport for London, UK		Rail - London Underground (LU) - London Rail (Tram) - Docklands Light Rail (DLR) Bus	LU 13727 Surface Transport 3038 London Rail 49 Corporate 1047 Total Employees 17861	LU 67.7 London Buses 437 Tram 4.8 DLR 3.4 Total 512.9



## References and sources

More information on case studies from charter signatories can be found in the UITP electronic documentation centre Mobi+

- 1 The Rome Manifesto is accompanied by three reports – PT 2020 : from vision to action, a consensus from consultations with UITP members on the challenges and solutions for public transport for the future, Mobility in cities, the follow up report and database for Millennium Cities Database on sustainable mobility indicators in 50 cities, and this report 'Bringing quality to life' on the UITP Sustainable Development Charter.
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- 3 These values are similar to the seven objectives published in Mobility 2030, the results of the World Business Council for Sustainable Development sustainable mobility project.
- 4 Interbrands
- 5 Global Environment Management Initiative –GEMI – [www.gemi.org](http://www.gemi.org)
- 6 Source: Price Waterhouse Coopers presentation at UITP MTR Sustainable Development Seminar, June 2004 and telephone interviews with UK based analysts Generation
- 7 Nantes – [www.communaute-urbaine-nantes.fr](http://www.communaute-urbaine-nantes.fr) and more information on VIVALDI – [www.eltis.org](http://www.eltis.org)
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- 11 ATM, Azienda Trasporti Milanesi, Italy - [www.atm-mi.it](http://www.atm-mi.it)
- 12 BVG Berliner Verkehrsbetriebe, Berlin, Germany – [www.bvg.de](http://www.bvg.de)
- 13 STIB/MIVB Société de Transports Intercommunaux de Bruxelles, Belgium – [stib.irisnet.be](http://stib.irisnet.be)
- 14 More information on charter signatory GMPTC can be obtained from Peter Black ([peter.black@gmpte.gov.uk](mailto:peter.black@gmpte.gov.uk))
- 15 Canadian Urban Transit Association -CUTA ACTU – [www.cutaactu.ca](http://www.cutaactu.ca)



- 16 Towards a thematic strategy on the urban environment Communication for the Commission to the Council, European Parliament, Economic and Social Committee and the Committee of the regions COM(2004)60final.
- 17 UITP, UIC and UNIFE presented a message of support to Climate Action Network at their side event at COP 10 (Conference of the Parties, UNFCCC). The message can be downloaded from the UITP web site [www.uitp.com](http://www.uitp.com) or [www.railway-mobility.com](http://www.railway-mobility.com).
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- 26 [www.susdev.org/transport](http://www.susdev.org/transport) (14/06/04) research published by IGC Ltd.
- 27 WHO/UNECE PEP Transport related health effects with a particular focus on children
- 28 World Bank Report on Road Traffic Injury Prevention
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- 31 Eurobarometer – source UITP EuroTeam
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- 35 CTP web site contains more information [www.ctpn.it](http://www.ctpn.it)
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- 51 SEMITAG – [www.semitag.com](http://www.semitag.com)
- 52 PTA – public transport authorities

- 53 If you are interested in the work of this group please contact the sustainable development manager at UITP
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*Bringing Quality to Life* is part of the Rome Manifesto and one of three major reports prepared for the 56th UITP World Congress together with *PT 2020 - From Vision to Action* and *Mobility in Cities Database*.