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With the involvement of UITP's commissions, committees and staff
In collaboration with an international steering committee (for members see pages 6-9)

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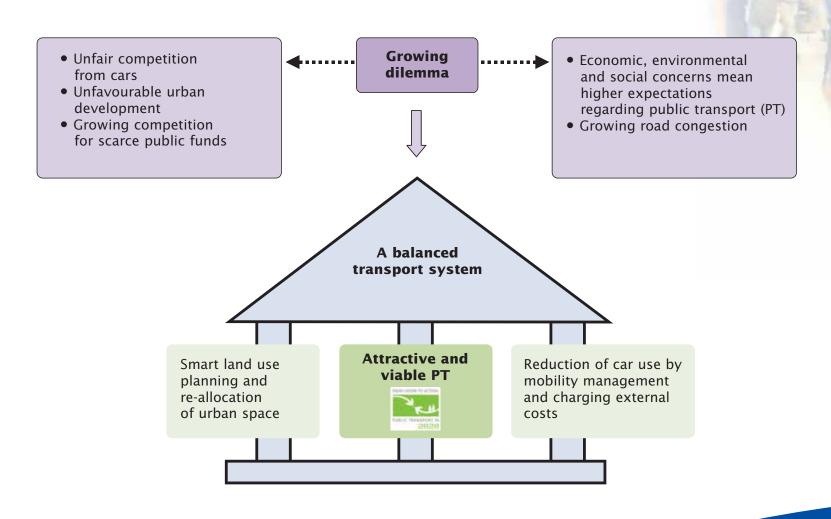
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What is the issue?



PT 2020

Glossary-

Content-

Introduction
Visions 2020
Trends
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Authorities	Public authorities on national, regional and local levels; depending on the context
BRT	. Bus Rapid Transit (Bus system with a dedicated infrastructure)
CCTV	. Closed Circuit Television
CEEC	. Central and Eastern European Countries
CIS	Community of Independent States
CO ₂	. Carbon dioxide
e-ticketing	electronic ticketing
EC	. European Commission
EU	. European Union
EU15	European Union members before enlargement in 2004
EUROSTAT	Statistical Office of the European Communities
GDP	. Gross Domestic Product
ICT	. Information and Communication Technology
IEA	. International Energy Agency (intergovernmental body)
Industry	Supplying companies to public transport operators and authorities (including consultants)
IT	. Information Technology
km	. kilometre
LCC	. Life-Cycle-Costs – including annual expenditure for maintenance, fuel etc
MCD	. Mobility in Cities Database, UITP
MJ	. Megajoule
MOBI+	. E-Library of UITP; part of online 'Members Only' section
Modal split	The share of public transport on the mobility market (sometimes
	including pedestrians and cyclists)
NGO	. Non-Govern <mark>me</mark> ntal Organisation
OECD	Organization for Economic Cooperation and Development
	. <mark>Public Private</mark> Partnership
PT	. <mark>Pub</mark> lic Tran <mark>sp</mark> ort
Sector	. Meant here as the economic entity of public transport (organising authorities, operators, industry, academics)
STUVA	Research Association for Underground Transportation facilities
SITRASS	Afri <mark>can Aca</mark> demic Transport Network
	UITP African Division
UN	
VDV	Association of German Transport Undertakings

.. Brazilian National Traffic and Public Transportation Association

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Where will the public transport sector and UITP be in 2020?

Today, mobility cannot be taken for granted as a key vector of quality of life in cities and regions. It is clear that the level of easy and quick access to jobs, education and services is crucial to the socio-economic well-being of any community. Public transport is a cornerstone of accessibility to and within any urban conglomeration.

Public transport's competitive advantages are undeniable

- Often the sole opportunity for a large proportion of citizens to move around affordably
- The most economic way to move large numbers of people
- The carrier which uses the least space and energy per passenger
- One of the safest ways of travelling

UITP's worldwide studies¹ show how areas with a high population density and high usage of public transport (PT) spend the smallest part of GDP on transport.

PT's success stories

Cities and regions around the world that have

- Invested in intelligently planned public transport infrastructure
- Improved PT services in the right places, combined with dense new housing developments around PT nodes
- Shored up these measures by rationalising caruse

have experienced gains in PT usage and stabilised road traffic. New developments like the metro in Bangkok, bus rapid transit in Bogota, light rail in Porto and congestion charging in London, have been success stories from the outset. Today, a good PT system is a sign of a sustainable and coherent transport policy. Yet, the world around us is spinning fast

External developments will continue to change the business environment for public transport, through globalisation and economic growth, reallocation of public money, restructuring of institutional frameworks and the evolution in energy costs. With this, the needs and expectations of PT customers are constantly changing due to changes in lifestyles, increasing purchasing power and a greater awareness of environmental and health issues.

What does the future hold?

What are the needs of future public transport customers? What will the market structure of choice for the sector be? What will new technological developments mean for innovating services? Where will new partnerships be sought?

The way forward for the sector

Trying to answer these questions will be decisive for our sector's future. However, it is impossible to give a single, one-size-fits-all answer to how PT actors should address future societal needs and desires. Local and regional situations and challenges vary greatly, and the different development models and institutional realities need to be taken into account.

There are, however, a number of common challenges the sector is facing worldwide, and much can be learned from each other on how to turn these challenges into competitive advantages.

The sector can take up this challenge

UITP wishes to support the sector in doing so by offering this paper as a common basis for discussion for public transport decision-makers.

The paper is the result of an extensive dialogue with the UITP membership and its diverse actors (public transport companies, transport authorities, the public transport supplying industry, transport academics).

It contains proposals on how best to address global trends and our customers' future expectations. It sets out what support is required by decision-makers to ensure the viable development of the sector. And, last but not least, it makes suggestions on the role UITP can and should play in supporting its members in these developments.

This paper does not set out a blueprint for the sector's future, nor does it represent a consensus view of its actors. It is meant to stimulate an internal debate and actions that can help to outline a clear vision for future decision-making for the sector.

Having said this, we would like to thank all who contributed to this paper, in particular UITP's PT2020 Steering Committee, all members of UITP's committees and commissions, the editorial team and UITP staff.

Wolfgang Meyer, UITP President Hans Rat, UITP Secretary General Introduction

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¹Millennium Cities Database

Steering Committee members' own vision of PT in 2020

Prof. Philippe Bovy, Switzerland

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UITP in 2020 Sources Professor Emeritus at the Swiss Federal Institute of Technology in Lausanne and International Olympic Committee Transport Expert, Lausanne

With continuing globalisation and metropolitan population growth worldwide, significant structural densification of urban centres and corridors, of satellite cities, of urban multiactivity poles and transport hubs will be the leading development pattern. Only high performance, high capacity and high frequency 24 hour per day rail transport, dedicated priority transport systems and bus rapid transit networks and services will be able to meet the expanding mobility needs and contribute to more sustainable metropolitan mobility development.

Commercial, sport and cultural megaevents, large conventions, exhibitions, and parades are growing rapidly worldwide. As shown by the Olympic Games, very powerful public transport systems and services are "the" transport solution to meet megaevent high accessibility requirements.

More and more "zero parking and 100% spectator and customer by public transport" schemes with "event ticket incorporating public transport" are the trend for meeting mega-event outstanding transport demands. These innovative, high power mega-event public transport schemes become real scale tests and demonstration projects for advanced mobility concepts and alternative transport policy orientations.

Werner Brög, Germany

Social Scientist, Managing Director of Socialdata, Munich

Fresh challenges confront public transport with the ever-increasing numbers of private cars on roads, the on-going trend of people moving to the sub-urbs, and shortages in public funding. Even though many basic conditions have remained unchanged, an increase in awareness has grown:

The world economy has placed "peak oil" and the now-looming depletion of fossil fuel resources on its agenda. Increasingly urgent calls are being made for a mobility system that is eco-friendly and more energy-efficient.

Public transport, together with associations of pedestrians and cyclists, has taken on this challenge and is is heading an alliance of sustainable travel modes. Its understanding of sustainability is in line with the Johannesburg model (PPP = Planet, People, Productivity) and recognises therefore that it can provide sustainable mobility for all citizens.

People are treated as valued customers and are made to feel friends and partners of the alliance. As individuals they are actively engaged in the alliance, and are constantly informed of developments. This also brings many personal benefits such as physical activity, leisure, and social contacts.

The burden from motorised individual transport on society, the environment and the economy is dramatically reduced and quality of life significantly improved.

Claudio de Senna Frederico, Brazil

Engineer, Vice President of ANTP, Sao Paulo

With large urban low-income populations in its dense cities, Latin America should be an excellent market for PT. But prices and lack of integration limit its strength, while crowded and slow services make cars more attractive.

Expansion of its few good rail or bus rapid transit services is slower than growth of car and motorcycle traffic, while cities spread continuously, with lower income populations and road lobbying grows stronger and is politically more rewarding.

PT's success depends on becoming attractive with the following changes happening fast:

- Transportation networks providing seamless service with single ticket systems at affordable prices
- Trunk services on these networks adopting segregated modes such as rail and/or bus rapid transit
- Sustainable funding for investments and subsidies providing better quality and lower prices
- Creative new service-oriented mobility solutions instead of modal optimisations
- Institutional changes including different levels of government with good regulations for safe investment environments for its already predominantly private operators.

Prof. Günter Girnau, Germany

Civil Engineer, former General Manager of VDV, former Chairman of the Board of STUVA, Cologne

As transport, environmental and funding problems steadily mount up in the future, the importance of PT in 2020 will have risen even more substantially compared with today. However:

PT must strike the right balance between

- important customer needs,
- commercial interests of operators, and
- social demands.

In practice, this signifies above all

- consistently focusing investment on qualityenhancing and customer-orientated measures; investment subsidies are absolutely essential.
- developing managerial skills synonymously with technical and operational quality.
- transport operators being consistently prepared for competitive structures; benchmarking "with the best" is required.
- transport businesses being more independent from public operating subsidies and, as a result, more distant from political influences; for this to happen, they must combine to form bigger units and embrace free-market financing methods more openly.
- allowances being made within future business, service and fare strategies for demographic developments in the respective countries and regions.

PT and urban development become interwoven to a greater extent than until now (PT as a component of urban architecture, urban furniture, etc).

Prof. Amer A. Mustafa, United Arab Emirates

Urban planner/architect, Dean of the American University, Sharjah

The rise of urbanisation in the 'Middle East North Africa' region is a mixed blessing for the PT sector. PT will be the preferred, and possibly only, choice for an increasing segment of the urban population: women, young people, the elderly, and the economically disadvantaged, as well as people seeking to reach high density, central business districts.

Increased environmental awareness and advancement in telecommunications and PT technologies will support the use of PT. Yet, challenges for the PT sector will be rife: the predominance of urban sprawl, poorly integrated planning techniques and practices, and the desirability of and ease in owning and using a car. To succeed, PT must rely on multimodal systems (rail, bus, smaller vehicle/taxi). An effective, reliable and efficient PT system is central to quality and productive urban living. A smooth interface between the various modes, a more involved private sector and a restructured institutional framework are key to a successful PT system.

Peter Ivanov, Russia

Economist, Deputy Director General, Mosgortrans, Moscow

Russia has always preferred rail and road transport for long distance travel.

Today, our large cities are making the same mistakes as those already experienced in developed countries. It is a long and slow process to change politicians' and decision makers' understanding that building and expanding new roads, without providing people with accessible, comfortable and fast public transport, will not lead to effective public mobility. By 2020 the importance of public transport to the urban economy and its influence on urban development will be recognised. This will establish the right conditions for introducing dedicated bus lanes and to a revival of electric transport as the most ecologically friendly and economic mode of transport. Operators of light rail systems, created on the basis of private-public partnerships will come into their own. Within the same timeframe, the legislative system defining precise rules for public transport operation under market conditions will have been developed and come into force. Privatisation of public transport should be completed, retaining a significant number of operators with government ownership. Market conditions will be established that allow both private and public operators to compete on equal terms, on a competitive basis for the right to carry pas**sengers.** Ecology and more effective and efficient use of resources will acquire strategic importance.

Steering Committee members' own vision of PT in 2020

Henri Schwebel, France

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The past forty years in Africa have been marked by the breakdown of post-colonial public transport systems and their subsequent replacement with private-sector initiatives, the limits of which are now apparent particularly in terms of congestion,

safety and protecting the environment. This situation has essentially been aggravated by the various economic, financial and political crises experienced by many States.

Yet public transport can still provide Africa with an adequate alternative that will respect the economic, environmental and social demands of our urban areas in the face of the trends observed from spiralling levels of vehicle ownership, the absence of networks. etc. Nevertheless, the only way in which demands for the promotion of this "economic/social/environmental" triumvirate will be truly implemented is if support is forthcoming in the form of unshakable political will that elevates mobility problems to the same level of importance as other national priorities such as water and education.

Provided that the responsibilities of the various actors are well-defined and political support becomes embedded, the outlook for public transport in Africa may be brighter by the year 2020.

Dr. Maurice Niaty-Mouamba, Benin

Economist, former Minister of Transport, Republic of the Congo, President of SITRASS, Cotonou

> We are living in particularly interesting times. The main dogmas regarding PT have not survived the 20th century. No one can deny that PT. especially in dense urban areas, is a service of general interest; a public service.

Engineer and Economist, Former Vice General

Manager, Operations and Commerce, RATP, Paris

To my knowledge, there isn't a major heavy passenger rail system in existence that does not have to call on public funding.

Funding can take different forms, such as direct financing or granting of land and commercial

In a well run and socially responsible company, fare revenue covers running costs as a minimum. Whether public or private, what counts most is the efficiency of the transport system.

By making the town accessible to all, PT is a tool for social cohesion.

It is a great injustice that the poorer the population, the more mediocre their PT seems to be. Where there is no fare policy integration, trips are expensive for disadvantaged

Its contribution to the functioning of cities, low energy consumption and its social role mean that PT is a key player in sustainable develop-

Integrating PT systems in physical and fare terms, but also making them user-friendly, innovative, attractive and comfortable is a modern idea enjoying a boom and which should attract talented people.

Prof. Nick Tyler, United Kingdom

Transport Engineer, Head of Department of Civil and Environmental Engineering, University College of

My vision is of society with a public transport system in which **people come first**, which is designed to be easy for everyone to use and which is the means of choice for moving around the city. This system has friendly infrastructure and vehicles which are emission-free, quiet and unobtrusive. Together, they act as the lifeblood of the urban economy and providing the key to a quality of **life enjoyed by all.** In this vision, the public have a direct role in designing their own public transport system. The technical aspects are 0resolved by skilled specialists who respond to the needs dreams and expectations of the public by providing a system which is truly responsive in all aspects: the network, schedules, physical and system design.

Prof. José Viegas, Portugal

Civil Engineer, Professor of Transportation at Lisbon Technical University; CEO of TISpt consultants, Lisbon

In 2020, most cities in the world will have more. and cleaner, cars as well as wireless communications supporting digital integration of many devices. For lack of urban space to accommodate daily mobility based on all those cars, public transport must be capable of providing mobility in a way that many car owners accept as a good substitute. High frequency public transport along axes of strong demand will still be the cornerstone of the system.

But public transport has to provide better service outside the main axes and become easier to use and more reliable, especially when it implies non direct services.

For this, a greater variety of forms of road based public transport, and integrated ICT services is needed so that travellers can have easy access to just-in-time individually tailored configuration of a good quality path to their destination. Car owners would use their cars on days with a more complicated agenda, but public transport on the other

Jürg Zehnder, Switzerland

Senior Consultant, Alcan Alesa Engineering Ltd,

Public transport today is for the whole supply industry a very difficult market due to a lack of standardised solutions but one linked with high prestige. Development and tooling costs for equipment must be born by relatively short production runs.

The PT profession as a whole cannot continue in this way. The future for PT must be a clear reduction in the variety of equipments for one and the same purpose. This will have very beneficial consequences:

- lower cost as a result of longer production runs
- interchangeability of equipment between net-
- low maintenance cost due to relatively low stock of spare parts
- simplified training of operation and maintenance personnel
- shorter delivery times
- high resale value for equipment

Industry understands its role in PT not as a supplier but as a partner and is working hard to improve PT's position in the mobility market. The research and development focus is on convenience for users from door-to-door, energy efficiency, clean fuels, reliability and affordability.

Young professionals' own vision of PT in 2020

Maria Signal, Sweden

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Engineer, Sales Manager Scandinavia, Bombardier Transportation Västerås

PT in 2020 should be the preferred mode of transportation by the majority of the population in urban centres across the world. PT can achieve this by ensuring that both on board staff and rolling stock can deliver a fast, comfortable and safe journey. This will enable the creation of lively and vibrant cities where all passengers can feel safe and secure using PT. A competitive PT system will in turn lead to a more sustainable metropolitan area with reduced emissions, creating a better environment for ourselves and our children.

Susana Palomino, Spain

Marketing, Quality and Environment Manager, Metro Bilbao S. A.

In fifteen years time, the European scenario will probably be: highly crowded cities that will not allow cars to drive in the city centre, some people will still live in the outskirts, **crude oil prices will be high, the population will be older**, and awareness of sustainability issues will also be higher.

What kind of PT will those citizens demand? Mobility will be a basic need, and an "all in one" PT will be necessary: one ticket, one price scheme, one seamless journey, high frequencies, one PT network that reaches most of the population securely and safely, on-line updated information, high quality and fully accessible trains, buses, stations and shelters, and all modes using renewable energy/fuel.

Passengers will use PT not only to save costs and time, but also because they will know they contribute to a more liveable city.

As operators, we need to start working now, on a multiprofessional and international environment. We have a wonderful challenge ahead!

Christiane Just, Belgium

Geographer, UITP Project Coordinator, Brussels

Today the public transport sector is focusing too strongly on seeing the car as their main competitor and energy is being wasted on internal debate and infighting in PT's segmented and complex market.

The risks at stake are huge. The car industry is already well on the way to making cars cleaner, more comfortable and cheaper. The real barriers for progress are no longer technology-based but on providing door-to-door travel solutions.

However a strong wakeup call is needed to get all actors in the sector to work with a common focus, overcoming present inertia that is hampering progressive synergies between operators, organising authorities and the industry.

Public transport is part of the solution and is in strong supply in urban areas.

It has to more **confidently position itself as** a **complement to other modes**, rather than a competitor, and this will take a paradigm change in culture within this sector as well as much effort in **building alliances with other modes**.

ECONOMIC

In 2020, public transport is

the preferred choice in

mobility policy decisions

and provides an attractive

alternative to individual

transport. It is seen as

essential to guarantee

quality of life and the

the world.

sustainable development of

cities and regions around

UITP's vision for public transport in 2020

Public transport is – together with walking and cycling - the most economic way to travel and facilitates economic development in urbanised areas.

SOCIAL

Public transport makes, first and foremost, basic services accessible to all people regardless of their social level.

ENVIRONMENT

Public transport makes a significant contribution to the attractiveness of urban spaces, limits the use of natural resources and reduces pollution and noise.

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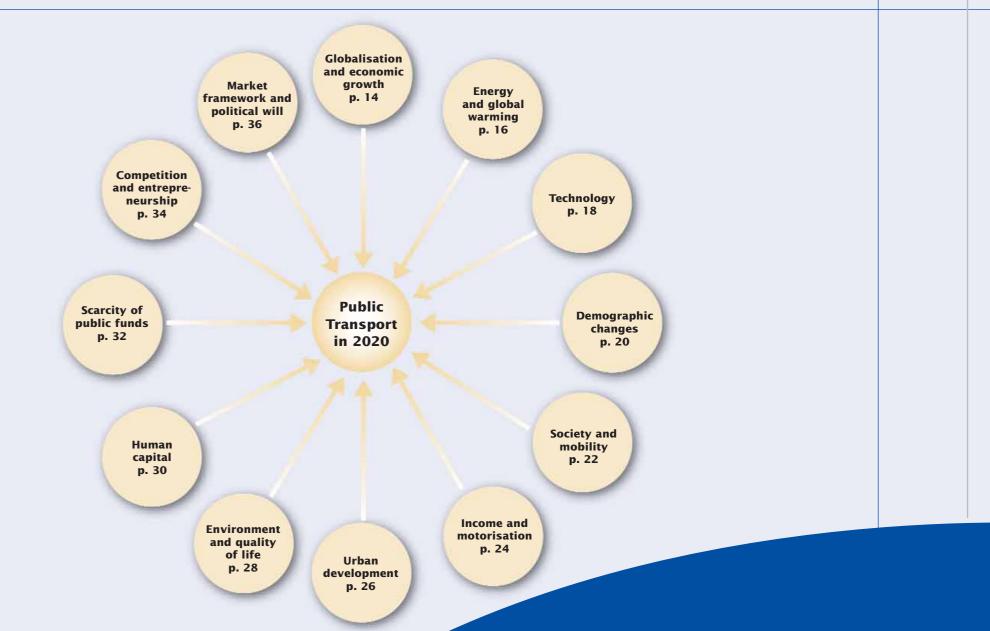
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Twelve external challenges for the public transport sector



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Cheaper and faster travel

faster and cheaper. This leads to an internationalisation of economic activity and business, with direct impact on investment, production, trade and technology transfer. Throughout the world, free trade areas are being created and internal markets are open to foreign suppliers. Economic growth means an increase in freight and passenger transport.

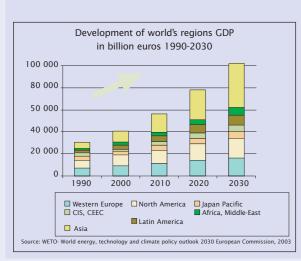
People, goods and ideas move around the world

Smaller firms merge into bigger entities

The fragmented market is consolidating into more influential companies via mergers and acquisitions.

Knowledge and information-based society

People are rapidly aware of economic progress and failure in other countries through internet and TV.



Globalisation increases competition and could therefore pose a threat to companies not used to competition.

Globalisation of car industry

Greater competition

Globalisation of the car industry results in a decrease in prices, meaning more people can buy cars.

More challenges for smaller companies

Smaller PT operators have difficulty competing with multinational companies for capital procurement and knowledge transfer. For operation itself, operators do not have the advantage of global manufacturers, since the PT workforce the biggest cost factor - has to be recruited where the service is located and does not therefore provide the opportunity to reduce costs by transferring production to countries with cheaper labour

Fragmented market knowledge

Opening up of the market and fast-paced change in operating companies can lead to fragmented and possibly less in-depth local market knowledge.

Tomorrow's economic giants: "The so-called BRICs (Brazil, India, Russia and China) have today a combined GDP (at market exchange rates) of roughly one-eighth of the output of the G6 (USA, Japan, Germany, France, Britain, Italy). This Goldman & Sachs study concludes that the total output of the four economies will overtake that of the G6 in less than 40 years. China is tipped to overtake Germany by 2007, Japan by 2015 and America by 2041."

Investment possibilities

Economic growth means more money available for investment for the PT sector too. Globalisation offers financing possibilities through international

Larger markets for procurement

Global access to operating markets and production sites is increasing. Operators can obtain cheaper rolling stock and other equipment through international procurement, provided local technical peculiarities do not prevent them from being flexible in using rolling stock built to international standards. The manufacturing industry can benefit from globalisation, if businesses are organised as international companies and are able to manufacture in countries with lower production costs.

Larger markets for services

When tendering PT services, authorities may have a wider choice of operators and hence a greater possibility of selecting the most suitable

Larger companies can bring innovations

Consolidation into larger (global) companies can allow economies of scale and the ability to invest in technology, innovations and staff development.

More international benchmarks

Global operators can strengthen their experience by being active in several countries. This affords more internal benchmarking opportunities for comparing different production methods and efficiency levels.

Strengthen the authorities' capabilities

Authorities can have access to international players, which is only of value if they are capable of setting long-term strategies for transport development and gaining specific knowledge of the transport market. This calls for authorities with a high degree of expertise.

Setting fair competition rules

What authorities can do

By setting fair competition rules, authorities give a chance to the most efficient local or foreign companies to run PT in their area.

Tendering control

When tendering on the (international) market, authorities can define not only the service required, but also quality, its control and a premium for achieving certain quality-standards and increasing passenger numbers.

International knowledge

Authorities can only benefit from international competition if they have knowledge of the international market and the experiences of tendering process etc in other countries. UITP provides the ideal network to get this information.

International standards

To gain maximum benefit from globalisation, international technical standards are necessary. Authorities can promote this process by refraining from setting national regulations, which makes international standardisation more diffi cult.

Compatibility in a global market

To gain maximum benefit from global markets, PT companies can buy their equipment through functional procurement and therefore promote the compatibility of their infrastructure and rolling stock with other networks. In turn, this will lower purchasing prices and make secondhand markets available.

Alliances between companies

Smaller, independent companies can cooperate with other local or global companies to ensure the best use of common skills and knowledge, reduce costs via joint purchasing or jointly develop and implement new technologies etc

Attracting private money for investment

As a healthy and vibrant sector, PT companies can represent higher reliability for capital investors investing in, for example, infrastructure or rolling stock. Public Private Partnerships are only one of several options.

Attract global travellers as customers

To facilitate using PT when in foreign cities, PT companies can adopt international standards on information and user interfaces.

International standards are costefficient

Making use of globalisation advantages could enable the industry to offer standardised products at lower cost to the benefit of PT companies and/or authorities.

Better product quality

Bad quality is very costly for suppliers in the long term. Greater economies of scale, enhanced technologies and testing techniques can allow manufacturers to improve the quality of their

International leasing or renting

Similar to air transportation, PT's suppliers can initiate and benefit from international leasing schemes.

Although the PT sector is working primarilv at a local and regional level, globalisation is an opportunity for opening up the PT market to new ideas and

higher perfor-

15

mance pro-

ducts.

Ouote taken from

2003 on BRIC

Goldman and Sachs study

Energy and global warming

State of the art and trends

PT is largely based on fossil fuels

Fossil fuels are very likely to remain the main fuel

for all types of transport until at least 2020.

According to the International Energy Agency

(IEA), global energy consumption is expected to

expand by 54% between 2001-2020. The trans-

port sector accounts for half of primary oil

demand. Energy use by modal share reveals that

over 80% is dominated by road transport, with air

(13%), water (2%) and rail transport (2%) taking a

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minor share. **Fossil fuel prices**

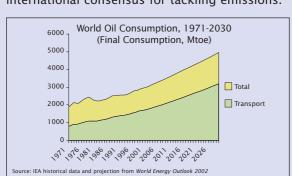
> Increased demand will bring higher prices, which may further be increased by instability of supply, political unrest and/or increasing prices for extraction.

CO₂

Transport is responsible for over 30% of the global CO2 output. Globally, CO2 emissions will grow by 60% until 2020, largely due to economic and transport growth in developing countries.

International initiatives

The Kyoto Protocol is the first legally binding international consensus for tackling emissions.



PT's image

Until now, PT has enjoyed a relatively good image in respect of energy consumption and CO2 emissions. This advantage might diminish as the car industry insistently markets its undeniable technological progress in engine energy efficiency, although this might be outweighed by the trend for buying heavier cars with greater fule consumption.

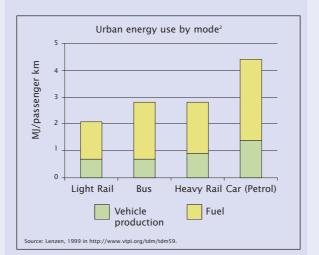
PT is vulnerable

Public transport is vulnerable to instability in energy supply.

"If China had the motorisation rate of Portugal in 1950, it would absorb the total oil production of Saudi Arabia"

PT is the most energy efficient mode

PT sector's opportunities



PT can win political support by offering a transport mode that consumes less oil per passenger and allows for cleaner air.

PT ensures mobility in times of crisis

An energy crisis could severely constrain transport activities and the economy in general. It is therefore in the interests of far sighted governments to diversify their energy sources and invest in more efficient transport. PT has a good chance of receiving support to meet transport needs and thus keep the economy up and running in times of crisis.

Fuel tax influences transport demand

Fuel taxation can be a powerful instrument to manage overall transport demand and foster transport modes using less energy. Furthermore, the tax collected from energy inefficient transport modes can be redirected to the more efficient mode: public transport.

Limit urban sprawl

By limiting urban sprawl - which favours car traffic - authorities can reduce energy consumption.

Smoothen the flow of PT vehicles

By giving absolute priority at traffic lights and dedicating lanes for PT, energy consumption through stop-and-go of heavy PT vehicles can be reduced.

Emission trading (Kyoto)

Authorities can look into financing PT investment by selling prospective emission reductions afforded by modal split shifts.

Promote energy and emission benefits

What PT companies can do

PT companies can proactively communicate to political decision-makers and citizens their comparative advantages in terms of fuel savings and pollution.

Optimise routes and schedules

By optimising timetables and routeing in line with actual demand, PT can reduce 'empty' trips. PT can show that it takes energy savings seriously.

Demand-adapted vehicle sizes

Adopting different vehicle sizes (or longer or shorter trains) to match demand can be another way of saving energy.

Driver training

Operators can include energy saving in driver

Support energy efficiency

Industry can continue to develop more lightweight, lower energy and cleaner PT vehicles. Industry can also help to set common standards and indicators for energy consumption and emissions.

Savings through joint research

By means of a strategic alliance with authorities, university researchers and operators, the industry can develop, test and implement new technologies to save energy and reduce emissions.

Recyclable products

By producing more recyclable products, industry can help to reduce energy consumption.

Public transport is the most energy efficient motorised system of transport. By further improving its energy efficiency and especially by attracting more motorists, it can contribute to meeting the goals set by the Kyoto protocol.

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Quote from ADEME 2004 colloquium, Sénat, Paris

²These figures take into account the average occupation level. Well patronised buses and trains have a much lower energy consumption per passenger.

PT saves on oil and allows for cleaner air

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innovations.

Public transport actors can work together to foster reliable

Rapid technological development

Technology is an important factor in improving efficiency and environmental performance. Technological developments are evolving at an ever faster pace.

Innovation-driven economic development

Technological innovations and their implementation can be a source of economic development by raising political awareness and therefore political support (ie. financial support).

Digital divide

Due to a lack of finances and education, the spread of new technologies will inevitably be slower in developing countries.

Even in highly developed societies, information and communication tools are not evenly spread

Long lifetime vs. innovation

Innovations are rather slow to be implemented in the PT sector for several reasons: long lifecycles of rolling stock and infrastructure, high investment costs in general and demanding staff training. The overriding need for high reliability hinders experimentation with new technology.

Lack of research

A single PT company does not have enough financial capital to put large amounts of money into research and development.

Lack of coordination

The positive effect of introducing new technologies (eg ticketing systems) can be limited if there is a lack of coordination between neighbouring PT companies.

Risk of excluding customer groups

If PT bases its customer communication on new technologies (eg electronic devices), this risks excluding important customer groups which are not yet familiar with using these devices.

Black box

Sophisticated technology can be a burden on staff shoulders. PT staff, especially drivers, can experience stress when the sophisticated technology fails, the vehicle stops and they are left alone to face passengers' reactions.

Boys' toys

Expensive technological innovations do not always prove their direct worth for customers.

Potential for automation

Safe operation and efficiency in PT can be enhanced through technology. Automation can upgrade customer service, since staff previously needed for operation can be redeployed in customer care.

Reliability becomes more important

The industry should continue to balance its efforts between innovation and higher reliability.

Enhance productivity, comfort & security

Various fields of technological development offer new opportunities for PT:

- Communication with customers in general
- Ticketing
- (Real-time) timetable information

Automation (eg driverless trains)

- Routeing information
- Computer aided operation control systems
- Computer aided maintenance control
- Low floor
- Security

Technology can be used to reduce user barriers.

New technologies give PT a good

New technologies generally have a good image. PT could benefit from this perception by implementing these technologies.

Attract younger users

New technology - eg for ticketing and information - can be a good instrument to attract younger users, provided traditional channels, preferred by more traditional clients, remain.

Support new technologies

Authorities can support the development and implementation of new technologies to boost PT.

Integration

Authorities can encourage the integration of technological tools and the use of technology to promote service integration.

Efficiency vs. safety requirements

Safety inspectors should be careful not to impose costly and inefficient safety requirements when PT wants to introduce new technologies (eg labour saving practices like automated metros).

Traffic management helps PT

Road authorities can optimise traffic flow for PT vehicles by introducing new traffic management technologies.

E-ticketing - a part of the money market

Authorities - working with operators and industry - can promote IT-based payment systems, which are not isolated from general banking and consumer systems.

Further automation in the PT sector

PT companies can take advantage of new technologies as long as this enhances efficiency and customer service.

IT as a tool for training staff

Companies can complement their staff training schemes with e-learning and simulators.

IT systems to foster services integration

Integrated smart ticketing systems can make PT systems more user-friendly and facilitate collaboration between different operators when sharing out revenue.

Keep PT's image linked to technology

Using modern technology can enhance the image of PT.

Time for testing secures future reliability

Operators (and authorities) should allow enough time for testing new technologies before implementing them in commercial operation.

From technological to functional standards

Operators can open the way to innovations by limiting the procurement process specifications to functional descriptions.

Improve personal security

Personal security in vehicles and stations can be enhanced by using modern technology.

Innovation through cooperation

Industry can step up cooperation in order to reduce costs and enhance results in basic technological research (pre-competitive cooperation).

Innovation versus standardisation

Like the car or the IT-industry, rail and bus suppliers can actively help to create standards, especially when new technologies are emerging. This is also applicable for e-ticketing and travel information.

Cross sector knowledge transfer

PT can take advantage of new technology generated by other sectors.

IT systems to help customers

The industry can propose new information technologies in order to communicate with passengers (eg for connecting services), but also to avoid passengers feeling that time spent in PT is 'lost time' (eg passenger entertainment or services).

New versus proven technology

New technology has to be tested and validated before it is used commercially, to ensure acceptability by users and high reliability.

Demographic changes

State of the art and trends

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Comfort versus rush

What authorities can do

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The population is increasing worldwide, especially in developing countries, whilst decreasing in some highly developed countries. This general fact does not take into account varying regional patterns or differences between rural and urban areas.

Developing countries: more young people

Key features of the demographic development towards 2020 are a rapid growth in the African population and a slowdown in growth in Asia and Latin America, though these regions will experience the largest absolute increase in population numbers. There will be a surge in the percentage of younger people in developing countries.

Developed countries: more elderly

Due to medical progress and declining birth rates, the age structure will be dominated by elderly people, especially in developed countries. In some regions, the overall population is even shrinking.

Increase in migration

Societies will become more multi-cultural due to an increase in migration.

The world population is growing

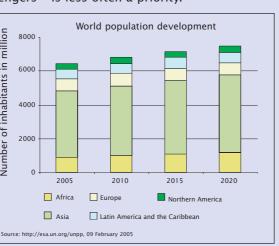
Senior citizens seek security and safety

tions of security and safety, along with greater travel information requirements.

A larger proportion of senior citizens of tomorrow are active, have a driving licence and are no longer captive riders of PT.

Younger passengers seek faster travel

Big progress in comfort is and will be introduced to the rail and bus services of the future, but cutting travel time - a prerogative for younger pas sengers – is less often a priority.



Currently, many PT services are uniform and hence do not correspond closely enough to the expectations of diversified demand ie senior citizens, the working population, students, young parents etc

Senior citizens have different needs and percep-

Seniors have a driving licence

Growing population means more

PT sector's opportunities

A growing population in urban areas - especially in developing countries - means higher transport demand. If PT is not instrumental in meeting this need, the urban road network could col-

Shrinking working population

The population in developed countries is aging If this means fewer people working, commuter traffic will inevitably be reduced, and peaks will flatten. This will positively impact on PT systems, which suffer from overcrowding at peak times. It may also mean more passengers at offpeak times.

However, if the retirement age is increased, this trend will be less significant.

Active senior citizens are mobile

This growing population segment can be a very reliable customer group if looked after and appropriately served. Providing at least one lowfloor entrance in every bus, tram or train and more accessible stations will enable a larger group of people to take part in daily urban life and will, at the same time, help to attract customers.

Foreign workers without cars

If there is an increase in migration of people whose mobility is not car-based, this will boost user numbers and local PT systems stand to benefit

Security issues

The authorities can - apart from providing effective security levels - strive for better perceived security. This is especially important for women and elderly passengers, PT's best clients. These measures are not only important on PT vehicles, but also in the areas surrounding stations and door to door trips.

Influence young people's travel choices

A pro-active approach can be used to encourage voung people to use PT, eg school travel plans. Image campaigns can be launched in close cooperation with operators.

Learning civilised behaviour

The authorities can influence schools to teach pupils how to use PT and how to behave in this enclosed environment, in contact with other age groups.

Coordination of accessibility information

Authorities can issue information on PT use, especially for mobility impaired users. This can include more useful information than could be distributed by an individual PT operating company.

Diversification and market seamentation

PT can try to offer more tailored services to meet different customer and age group specific needs:

- Between point A and B, service could be diffe rentiated according to travel times, interchanges etc, possibly by different fares
- Night service for younger people
- 'Quiet' train compartments for people who want to work, read, rest etc.

Customer loyalty programme

PT companies can introduce customer loyalty programmes that target different age groups, addressing varying customer needs and expectations, with the aim of achieving life-long customer loyalty.

The three facets of accessibility

PT should be accessible for everybody, and take into account:

- Physical accessibility (eg low-floor vehicles)
- Information (readable and understandable. also multilingual where necessary)
- Mental barriers or perception

These measures will increase the satisfaction levels of all customers. Physical accessibility will greatly help all other mobility- impaired users (with strollers, carrying shopping bags or heavy luggage).

Accessibility and information

Industry can continue to develop smart and efficient solutions for vehicles, platforms, stations, ticket issuing and information so that in 2020 the mobility-impaired and a growing share of the elderly population can use all PT modes on local and regional lines (eg barrier-free).

Meet different comfort needs

The industry can offer a diversified range of vehicle interiors (eg seating, standing areas to meet the various needs of different user groups. In the cities of developing countries, a primary task will be to cope with increasing demand; in developed countries. quality issues are highest on the agenda.

Society and mobility

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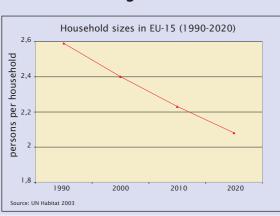
There are great differences in lifestyle between countries, but some global trends emerge:

- Broad spread of individualistic and consumption-oriented way of life (personal life and professional career)
- Internet and mobile phones are part of our everyday working and private life. E-commerce and e-banking are influencing travel behaviour
- More flexible working hours
- Time and money spent on leisure (and tourism)
- families in some societies
- Decreasing overall fitness of citizens, primari ly in developed countries, also due to a lack of physical exercise

Mobility patterns get more complex

less based solely on trips between home and work.

Household sizes get smaller



Different countries – different lifestyles

- Women tend to become more economically independent, which also influences the role of

New lifestyles create new travel patterns which are

PT's poor image

Cultural attitudes in some regions means PT is only used by the very poor and captive riders.

Trip chains make PT use difficult

More complex travel patterns due to new modern lifestyles do not favour the traditional, radial and high capacity-oriented PT system. It is difficult for PT to meet demand if travel combines different trips in a chain-like fashion (eg homeworkshop-leisure -home).

A virtual way of life could reduce travel

Travel by PT could drop as a result of virtual lifestyles, however there is currently no scientific evidence that e-commerce activities, home shopping or e-banking are causing a drop in physical trips made.

Fraud

Dishonest behaviour, combined with uncontrolled access to stations and vehicles fosters fraud and therefore a drop in revenue.

Social behaviour

Accessible for all - PT is vulnerable to vandalism. urban violence and even terrorism. Passengers might deliberately choose not to use PT out of fear of being harmed, also during the walk between stations and home. PT staff might suffer from lack of respect from some customers.

Violence in disadvantaged areas

In economically disadvantaged areas, violence will increase, and target other people and 'public property' such as PT vehicles and stops.

Social inclusion

To carry 'everybody' in one single vehicle within a restricted space can be regarded as a tool for social inclusion and thus a societal advantage of

PT sector's opportunities

Time on buses and trains is not lost

The widespread use of technological devices (eg mobile phones, internet) combined with a growing need to 'be connected', enables users to make productive use of their travel time.

Tourists and business travellers in cities

The mobility of tourists and business travellers in cities is not normally car-based. Local PT systems can benefit and boost customer numbers.

PT encourages physical activity

In today's increasingly sedentary lifestyles, walking or cycling to PT stops is a good way to buildin daily physical activity and improve health.

More women entering the labour market

In some regions of the world, such as the Middle East, more women are entering the labour market, again a possibility to attract new rider-

People and politicians like large events

Hosting large events (Olympic Games, exhibitions etc) is impossible without a high capacity PT system. These events often represent a starting point for new PT systems.

Knowledge of long-term demand

Authorities - with the help of operators who are in daily contact with passengers - can obtain detailed knowledge of socio-economic characteristics and travel behaviour. They can then project future travel needs and expectations, fundamental to all long-term investment decisions.

Security and fraud

Authorities can set up dedicated police units to support operators in delivering security and combating fraud.

Market research defines customised services

What PT companies can do

Market research can show up the different expectations of customers, whose needs can then be much better addressed.

Market segmentation - a fine balance

Although PT is a collective mode of transport, to meet the future needs of customers, PT compa nies can tailor their services to increasingly match demand in terms of travel speed, waiting times and comfort.

This could also be reflected in differentiated price levels, which could improve PT companies' revenue levels.

Keep customers loyal and gain new

By tailoring supply to meet the varying needs of customers, PT can win young customers and keep the elderly loyal! Similar to airline loyalty programmes, PT companies could reward their regular customers with free services or products.

Offering door-to-door service at night

PT can meet the needs of a 24-hour city through alliances with taxis and demand responsive transport.

Welcome young passengers with young staff

To provide a younger and more dynamic image, PT companies can try to deploy younger staff to be in touch with younger customers, eg where there are higher concentrations of young people in night buses, or buses frequented by students.

Technology for market research

Suppliers and consultants can develop sophisticated tools for market research - such as electronic ticketing to track customers' travel behaviour - to use as a basis for further market segmentation.

Technology for customised systems

Industry can further develop comprehensive ticket and communication systems, which are user-friendly and in parallel enable PT companies to use market segmentation elements to enhance revenue.

Product testing

Like the car industry, PT suppliers can set up vehicle testing facilities, where interior design is judged by customers for comfort, design, etc.

Enhanced security through technology

Industry can develop sophisticated surveillance devices, which do not in themselves enhance the security, but support the staff in their difficult duties.

Technology against vandalism

Industry can develop even more efficient materials to combat vandalism.

The challenge

Conclusion

for PT is to sell a 'mass product' as a 'tailor-made' service.

Income and motorisation

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Quote from Prof. K Ueta of Kyoto University, cited in IRI 12/04

² Vicious circle see 'Better mobility in urban areas', UITP Brussels, May 2001

State of the art and trends

Overall increase in income

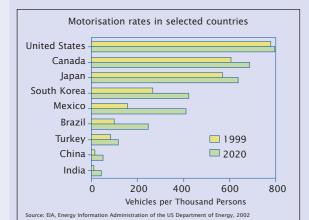
In the long term, average incomes and purchasing power are increasing across the globe.

Income disparity

Income disparity leads to a division of wealth in society, with two major consequences:

- Social inequity is widening within countries
- The wealth gap is increasing between the very poorest countries and the richest. In India and China average incomes are growing much faster than in wealthy industrial economies whilst in some African countries, the contrary is the

Wealth promotes private motorisation



"If China reaches the same level of car ownership as Japan, the number of cars in China would be eauivalent to the total number of cars in the world todav." 1

Threats to PT sector

"Everybody has a driving licence"

In developed countries motorisation is increasing due to second and third car ownership by households. Developing countries are catching up quickly.

Growing motorisation slows down buses

The greatest threat to PT is the growing number of private cars causing congestion and therefore slowing down buses and trams. This starts the vicious circle².

Higher income - higher expectations

The higher the incomes are, the less potential customers are prepared to accept a unsatisfactory service eg to be carried in overloaded buses or trains and to accept any shortcomings in staff behaviour. The better cars become - equipped with air conditioning, information and audio and video technology - the higher the expectations of car drivers when they decide to use PT services.

Cheap fares never outweigh poor quality

Cheap fares have traditionally been justified on social grounds, but "cheap" fares do not necessarily enhance the image of PT (and therefore usage), especially for people who are enjoying an increase in income.

PT is benchmarked with new industries

Customers are used to high service quality from emerging service-oriented companies (like mobile phones) and PT operators are benchmarked against those levels of service.

PT sector's opportunities

Congestion could promote PT use

Increasing motorisation rates will lead, in most cases, to more congestion. If PT runs on separate tracks or lanes, it can turn this fact to its advantage in the marketplace and become competitive.

From pedestrians to PT users

Higher incomes, especially in developing countries, might act as an incentive for pedestrians and cyclists to use PT.

What authorities can do

Pay subsidies directly to those in need

Instead of reducing fares for everybody, subsidies can be directed to those with low-income and who really depend on cheaper fares to gain access to jobs, educational and health institutions, etc.

PT is not a charity

As expectations of better quality in PT services increase, PT can no longer afford to offer social fares without dedicated and direct compensation.

Create lines for disadvantaged areas

Authorities can give disadvantaged areas good access to PT, since this is the only means for those living there to reach work and amenities. If these lines are not commercially viable, PT companies must be directly compensated for operating them.

Rationalise car use

If the capacity of the road network cannot cope with the traffic demand, authorities can introduce traffic management schemes to rationalise car use (parking, congestion pricing, fiscal measures).

What PT companies can do

More service oriented PT - value for

Competition for customers can lead to a more customer-oriented PT service, and increase in revenue.

PT as a mobility service provider

PT companies can evolve from being traditional, high capacity network operators to general urban mobility service providers working in cooperation with taxis, car-sharing, park&ride, cyclists etc They can offer an information platform which gives citizens advice on how best to

What the industry can do

Technology to enhance quality

The industry itself can propose ways of enhancing PT quality by further developing technologies to integrate services, provide real time information, create cleaner transport and differentiate fares.

Higher income and therefore higher motorisation leads to greater congestion. This could indirectly turn into an advantage if PT is operating independently from

general traffic.

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Urban development

State of the art and trends

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What authorities can do

What the industry can do

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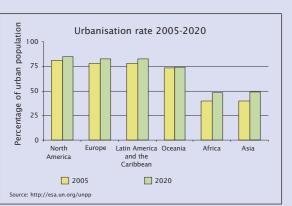
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Cities grow rapidly in size and number

In 2000, 47% of the world's population were living in urban areas. By 2020, this figure is expected to rise to 56%.



Suburbanisation versus innercity growth

In developed countries, more and more people move from cities to suburbs and the country-side, due to a lack of suitable housing in the city or the desire for more green space. On the other hand, living in a city centre is fashionable again for many people (especially for young professionals) and popular with elderly people.

Rapid sprawl of cities in developing world

Cities in the developing world show a very rapid sprawl, mainly in disadvantaged neigh-bourhoods on the outskirts of cities.

Privatisation of public space

The growing number of 'gated communities' reduces public urban space.

No integrated planning result in low density

In a lot of urban areas, development is not guided by a comprehensive land use or transportation planning process. Rail-based systems in particular need high density near their stations to exploit their competitive advantages.

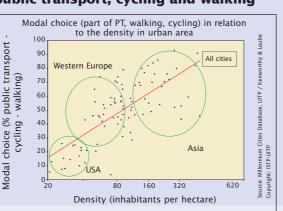
High density but lack of planning

In the fast growing cities of developing countries, it is often impossible to finance a PT-network able to keep up with demand. Informal settlements (eg ghettos) sometimes have more inhabitants than normal housing areas. However, a lack of planning hinders the development of a long-term strategy for a stable PT network. Investments are at risk.

Travel patterns are changing

Sprawling cities are producing more complex travel patterns. Often the city centres are no longer the main attraction point and therefore traditional radial public transport lines do not fulfil new demand.

High density promotes stronger use of public transport, cycling and walking



PT encourages high density urban

PT sector's opportunities

A concentration of jobs, shops and leisure activities (culture, sport events, pilgrimage), and therefore short walks between activities, is only possible with access to high capacity public transportation.

High capacity PT structures the city

Unsustainable sprawl can be reduced with high capacity solutions (rail, BRT) which structure the city.

PT provides important public space

PT stations and their surroundings as well as their vehicles provide an important public space facilitating social contacts and business opportunities.

Urban renewal

Attractive new PT lines can be at the heart of urban renewal. Moreover, well-planned stations and their access can spread out positive economic developments to the surrounding neighbourhoods.

Integrated planning

Authorities can promote integrated planning between transport and land use, thereby fostering the development of high density areas along PT corridors. This is especially important in growing regions.

Density near PT stations is necessary

Even if urban structures are more or less fixed, there is still scope for small-scale changes in terms of landuse. Authorities can foster the reintroduction of high density and mixed land use especially around PT stations. The rejuvenation of disused, but well placed and connected industrial areas may be a good example.

Developers finance PT infrastructure

A new PT connection generally brings with it the relocation of business and rises in land prices. Authorities should capitalise on the increase in value by selling land which they hold. Private developers should also be prompted to provide funding to help finance attractive PT lines and stations.

Rationalising car-use

Authorities can introduce measures to curb the demand for car travel (eg parking supply and traffic management, car free city centres).

PT carries the city's image

The appearance of PT vehicles and stations can enhance the city's image. New transport infrastructure can trigger the renewal of urban centres and other neighbourhoods.

PT responds to polycentric city structures

What PT companies can do

PT can react to the growing importance of suburban centres and diversified travel patterns by adding direct 'suburb to suburb' connections.

Hierarchical PT network

The bigger cities become, the more the network can be split into backbone lines and feeder lines. This only works if these different lines are perfectly integrated (interchanges, timetables, fares). In a network of different service patterns, low density areas could be served by demand-responsive transport.

PT nodes as multi-functional centres

PT infrastructure companies can create convenient multi-functional attraction poles – for shopping, catering, leisure - in their stations and on adjacent land by cooperating with authorities and developers. This fosters car-free activities, brings more PT passengers, higher fare-box income and moreover additional revenues from real estate.

'Beacons' of how it could work

If the finances and political will to enhance the whole PT network are lacking, the companies can first improve one line, or one part of the network and monitor the results. If the positive effects are well communicated, the pressure to improve other lines will mount. Whole cities can, in doing so, act as "shining examples" for other cities.

PT as attractive 'urban furniture'

Industry can support PT companies in producing well-designed and well-styled vehicles, urban furniture and visually unobtrusive infrastructure.

Adapt vehicle size to demand

The industry can further develop a modular vehicle system, enabling PT companies to

- Serve high demand with high capacity vehicles (BRT)
- Serve narrow streets with smaller vehicles without losing some of the advantages of standardised vehicle components (standard or modular 'product family').

Cities need high-density development - and dense cities require public transport.

Environment and quality of life

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Clean fuels for road transport, UITP 2004

State of the art and trends

The vicious circle of urban decline

Outer suburban developments

aggravates the situation.

when choosing where to locate.

awareness

lution.

Higher education means higher

Traffic increases, resulting in more local pollu-

tion, noise, visual intrusion and less reliable

travel. This impacts heavily on the quality of

urban life and triggers the start of urban decline.

Outer suburban developments increase traffic

passing through inner suburbs. Increasing noise

and pollution in these areas cause the quality of

life to deteriorate and consequently inhabitants

settle further out, and this new travel pattern

Business and quality of life are linked

In a global market, regions compete more and

more for interested investors and potential resi-

dents. The quality of urban life, which also

includes environmental quality and time lost in

traffic, is an important factor in the decision-

making processes of multinational companies

The higher the level of education, the more environmentally conscious people tend to become. Citizens are aware of their quality of life deteriorating from increasing noise, air and water pol-

Noise and local pollution cost money Transport in general, and car traffic in particular produces various harmful gas emissions and noise. This generates many external costs which

Threats to PT sector

Reality versus image

In some developing countries, leaded or sul-

phured fuel is still used in bus and car engines,

which produces harmful exhaust emissions and

wreaks health and environmental damage. Low-

quality second hand buses can also have this

Even in developed countries, diesel - the most

common and effective form of propulsion for PT

vehicles - still has a poor image. This image does

not reflect the actual progress made in engine

and fuel technology, which is supported by new

legislation (EURO norms). There is a danger that

political pressure will aim to substitute diesel with

much more expensive propulsion technologies.

effect and contribute to a poor image of PT.

Low grade fuel - low grade image

PT sector's opportunities

Individual environmental and health concerns might strengthen political pressure against car use and road building programmes, as well as support for sustainable transport forms like PT, cycling and walking.

The better educated people are, the more they appreciate quality of life and hence the advantages of PT for society instead of excessive reliance on the private car.

Healthy to walk to PT stations

In a beauty and health-oriented society, it should be easier to promote physical activity and environmentally friendly modes of travel. From this perspective, PT, walking and cycling belong together and should also be promoted together.

PT as a symbol of a city's image

Environmental policy and especially the promotion of metros, buses and trams can contribute to a city's modern image.

Environmental concern supports PT

'Quality of life' awareness

What authorities can do What PT companies can do

The protection of urban public space

Authorities can put the protection of urban space high up on the agenda. Promotion of collective transport is one important way to do this.

Pollution issues taken into account

Authorities can tackle pollution issues

- by setting standards for cleaner fuel and exhaust emissions
- by reducing congestion and stop-and-start traffic conditions, and
- by participating in local agenda 21 schemes

Noise reduction remains important

Noise reduction can be achieved by a modal shift to PT as well as making PT quieter (via technical standards).

Talk about PT's benefits to society

PT companies can promote their competitive advantage more actively and speak out about:

- less local air pollution and noise
- faster and more reliable mobility for investors and the workforce
- less space taken up

Implementation of new technology

In order to maintain its overall positive image, the PT sector can continue to adopt all technical innovations for reducing energy consumption and vehicle exhaust, including the reduction of noise and vibration, as long this is financially

Market the best propulsion system

By communicating the impact of different propulsion systems, PT companies can prevent political decisions being taken on propulsion and fuel technology where financial costs outweigh environmental benefits1.

What the industry can do

Cleaner and quieter vehicles

The industry can further support PT by producing guieter and cleaner engines - combined with the provision of cleaner fuel - so that PT can maintain its role in sustainable mobility.

Conclusion

Public transport

promotes 'Life

and the city'.

Emission standards

Industry can support the setting of standards and indicators as a basis for cutting emissions.

Comfort

Industry can not only design vehicles with good ride quality but can introduce monitoring devices to ensure a constant quality standard.

are covered by society as a whole.

Human capital

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Socio-demographic changes

Changes in the population and education are of course reflected in characteristics, attitudes and expectations of PT's current and future staff.

- Today people are educated in a more wellrounded manner than their ancestors.
- Learning will not only take place at school and on the job, but more and more off the job (internet, e-learning).
- More and more people change their profession, learn other skills and move for work reasons during their professional life. But they also seek flexibility in terms of working time and career prospects whilst having to achieve a work/social life balance.
- Better educated staff demand higher wages, which may have great significance for labourintensive service industries in particular.
- An ever greater number of cultures are represented in PT companies and their customers (diversity).
- Due to the ageing of the population in certain places, social security systems might not be able to bear the burden. A postponement of the pension age is being discussed in some cases.

Threats to PT sector

Strikes versus reliability of services

In the case of strikes. PT services are felt as unreliable which might cause the loss of passengers in the short term and employment in the PT sector in the long term.

Increasing demands on drivers

It is difficult to find PT staff - especially drivers -combining

- reliable and safe behaviour, technical skills,
- attentive customer care

Like in a limited number of other jobs, drivers in PT services are under an increasing amount of

Not always attractive for the young

Work in the PT sector is often perceived as too static, too routine an activity, and does not therefore always attract young, dynamic and motivated professionals. Management development schemes can often only be offered by larg-

Unsocial hours

People are more and more reluctant to work unsocial hours (early or late, Sundays) or multiple shifts.

PT sector's opportunities

Good image of PT staff

In a lot of countries, especially in the developing world, employment in the PT sector is still a highly regarded occupation.

New social dialogue

Agreements with work councils on labour conditions, wages, and personal development paves the way for smooth relationships.

Multinationals attract staff for PT sector

Some ambitious staff who would not normally think of joining the PT sector could be attracted via training programmes and new career opportunities.

Environmentally conscious staff

Working in PT will become more and more attractive to people looking to work in an environmentally conscious company.

What authorities can do

Fair competition on the labour market

When tendering, authorities should adopt standards on maximum working hours and minimum wages to ensure quality and safety.

Open up the labour market

Authorities should, on the other hand, abandon all regulations which have no direct impact on security and customer relations, thereby opening up the PT labour market to diversified, multidisciplinary staff with good language skills etc.

Minimal service during strikes

Authorities can support PT operators in guaranteeing service to customers during labour conflicts.

Diversity

To meet complex challenges, PT companies can hire staff with diversified backgrounds, skills and ambitions:

age (attracting young people to PT jobs)

What PT companies can do

- gender (women are likely to have more customer-service skills and represent the majority of customers)
- ethnical/cultural background
- part time/full time (to enable more flexibility in working for PT)

Flexibility

A concept of 'individualised' work eg booking the shifts on the internet (similar to low cost airlines) can be implemented.

Training for customer care too

Training will become increasingly important, not only for technical skills, but also for customer service skills. Smaller companies can forge strategic alliances with other companies and training institutions to share costs and enhance training quality.

Increase staff motivation

Staff from all company departments and levels can be motivated to develop and/or contribute to projects.

Internal communication crucial

In the PT sector - where staff is often spread over great distances - the internal communication channels are even more important than in other modern industries.

What the industry can do

Automation

Higher staff costs are the driver of greater automation of PT services. The industry can offer a wide range of staff-reducing methods in driving trains, selling tickets and overseeing overall PT operations.

Consultants

Experienced consultants can help companies in introducing modern human resource management methods

Investment in human capital is crucial, as staff behaviour has an immedi-

Conclusion

ate effect on the real - time performance of PT.

Scarcity of public funds

State of the art and trends

Threats to PT sector

PT is very labour- intensive and as a sector can-

not keep pace with the productivity gains of

other sectors, creating a constant need to

Labour – intensiveness

What authorities can do

What the industry can do

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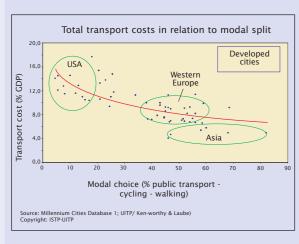
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Public funds become scarcer

Urban mobility is often subsidised

The PT sector is particularly vulnerable to this development as in most countries private cars and public transport do not fully cover their real costs and are dependent on public funds.

The higher the proportion of PT use, walking and cycling, the lower the cost to society



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Public funds are increasingly in demand, especially to cover social needs and investments in health and education. This increases the pressure to reduce public spending in other areas, or to justify it better.

Political influence on funds

Dependency on public funds causes a wide range of political influences - including from unions - which do not always lead to a secure real long-term future for PT. Important opportunities for productivity gains can be delayed in this

increase funding.

Political influence on revenues

PT markets might become more regulated. Revenues could more or less stagnate if 'fare-box' revenues continue to be utilised as political tools for 'distribution of wealth' (in some countries without compensation for the operators), and not as a tool for increasing PT revenue.

Social duty versus commercial behaviour

Business interests and social obligations are often mixed, resulting in unclear financing streams. Often, not only the socially disadvantaged ride for free on PT, but also certain civil servants, students and elderly people. If not directly compensated, this is a growing burden on PT's finance.

Appraisal of true mobility cost

PT sector's opportunities

The scarcity of public money could lead to a fundamental discussion about the real cost of mobility. If external costs, including costs of the environmental impact of transportation and the costs of congestion were charged to private car users, PT could increase its fares without losing passengers and so run more commercially. This is not in contradiction with fulfilling clearly defined social obligations.

Less dependency from public money

When less public money is available, PT operators can call for a clearer but more liberal market framework, thus possibly gaining more freedom from intervention by the regulatory authorities. With more commercial activities to increase revenue, PT actors can shake off the image of 'subsidy-chaser'.

PT saves money

As UITP studies prove, in denser cities with a higher modal share of PT, walking and cycling, the overall cost of transport for the community (as a % of GDP) is lower.

Priority for PT reduces public funding

By applying economic principles in distributing scarce road space, authorities can allocate more separate lanes for PT. Buses and trams will then run with a higher commercial speed, allowing the same level of service to be provided at lower cost. Combined with higher revenues from a more attractive service, PT would need fewer subsidies.

Separating social and commercial tasks

By clearly separating out the social task of PT and also remunerating it appropriately (eg dedicated services for schoolchildren, mobility impaired users and reduced fares for specific groups), authorities can expect PT to behave more commercially. This would establish a clear basis for private investments. Clients would be paying for the service they actually receive.

Internalise external costs

Transport modes cause pollution, congestion, accidents and other harmful effects that have a cost for society. Authorities can define a system where each transport mode pays for the external costs it generates and transfer revenues to transport modes with less harmful effects. Congestion charging is part of the solution.

'Beneficiary pays' principle

Alternative funding sources can be found by making those who benefit from PT services pay for them eg employers, land and property developers, leisure and shopping centres etc.

Restructure operation processes

What PT companies can do

Private or public operators can improve their financial situation and their competitiveness - continuously attracting more customers and providing better services - by taking action on at least four points:

- Re-examining company structure
- Re-examining products (PT is a mature sector, therefore needs market segmentation)
- Reassessing of the processes for producing those products, outsourcing where necessary
- Reinventing how these products are marketed

Cooperation with other companies

Cooperation between companies can reduce the need for public funding, especially when equipment can be used by several companies.

The reduction of overhead costs should be balanced against potential losses in flexibility.

Public-private partnership (PPP)

PPP can be a valuable tool to overcome the current shortage of public funds. The key issue is to properly allocate the different types of risks to those who can influence them best.

New ways to finance and deliver products

Competition will introduce contracts between authorities and operators that are shorter than the lifetime of investments (eg rolling stock). The industry can facilitate the search for new forms of financing, shifting the task of raising capital from authorities and PT companies to the private capital market.

Re-engineering
PT companies
and their
operation and
distinguishing
between commercial and
social goals will
make PT companies more
commercially
viable.

Competition and entrepreneurship

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Long-term development could be

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UITP in 2020 Sources More competition

probably accelerate in the future. In cases of public ownership or 'in house' production, greater use of contracts and benchmarking are set to stimulate competitive pressure.

Privatisation

The present trend is towards more extensive privatisation in nearly all sectors (eg telecommunication, energy, transport). Often privatisation aims to relieve authorities' financial involvement, to enhance efficiency and to improve quality of service.

Developing countries

In developing countries, where public funds are even scarcer, many services are privately organised and self-supporting. However, in these countries a regulatory framework is often missing.

The trend of more competition will continue and

Quality versus costs

Regardless of ownership the quality of service is influenced by the ability of operators to recover legitimate costs and reasonable profit.

Short term contracts may inhibit optimum invest-

ment in long-term PT market developments.

Contract awarded just on the basis of cost may lead to a decline in quality and subsequently to lower ridership levels.

Increasing administrative costs

Cost-efficiency might be offset by the administra tive burden during tendering process and opera-

Social achievements might be at risk

In some countries, PT's workforce may find it harder to negotiate stable social conditions in view of companies' needs to increase competitiveness. In other countries there is legislation to protect employees.

Informal PT

If the provision of PT services is unregulated, the necessary coordination of timetables, fares and information (lack of integration) may create a service that is not user-friendly for passengers.

Competition could enhance efficiency

PT sector's opportunities

Entrepreneurship opens the way to increase efficiency and to utilise a broader marketing mix and therefore can increase the quality and market share of public transport.

More customer oriented

Since there is an increasing competition for customers in general, all public and private services are becoming more customer oriented to increase revenues.

New roles for supply industry

Privatisation will open new forms of services from the supply industry, e.g. new forms of rolling stock procurement (such as leasing) and maintenance.

New ideas and capital

Companies with new management tools and entrepreneurship may be in a better position to offer a service for less public money or deliver a better quality for the same price. They may attract with new marketing ideas new segment of customers. The prospect of profit can bring urgently needed capital especially in developing countries.

Good governance

Principles of openness, participation, accountability, effectiveness and coherence are important when devising local mobility policies.

Ownership

Authorities can decide on the merits or demerits of private or public ownership or a mixture of the two depending on their local requirements.

Contract awarded on basis of quality

Before going to tender, authorities can introduce a clear contract framework, including quality control with strong incentives. This can include an effective bonus/malus system to incite good performance of PT operators and increased ridership giving operators as much freedom as possible.

Contracts' length reflecting commitment

By offering contracts of a longer duration, authorities can stimulate PT companies to develop a long-term quality commitment and gain financial stability.

Minimising administrative costs

Authorities can minimise administrative costs and encourage entrepreneurship.

Limit the cost of the tendering process

Authorities can reduce the costs of the tendering process and the risk of legal battles after contracting by issuing clear tendering documents and limiting the size of the bids. They can ensure a wider participation in the tendering process by offering compensation to the applicants.

Clever organisation of companies

What PT companies can do

A publicly owned company can adopt organisation and management principles inspired by the private sector and hence combine the advantages of entrepreneurship with the strategic advantage of public ownership.

Business orientation of public companies

Publicly owned companies can adopt a more commercial approach to business in order to improve productivity, especially where governments reduce

Delivering quality

By delivering quality and a high level of innovation the PT operators can improve their image, that of the sector and encourage higher PT usage.

Transparency

Transparency of accounting practices must ensure that, in competition framework, there is not unfair cross-financing.

PT company as mobility provider

In 2020 more and more PT companies can act not only as train, tram or bus-company, but as 'mobility provider' for urban areas.

Consultants can help tendering

Competent consultants may have a role to play in advising authorities and operators on tendering.

New forms of supplying equipment

The supplier can find new roles in the addedvalue-chain by offering rolling stock and other equipment to private operators through leasing or renting e.g. with a maintenance/performance contract etc.

Second-hand market

Similar to the car industry, PT industry can provide a more formal second-hand market for rolling stock and other equipment which is not needed anymore.

New business model

There can be a continued shift from 'selling products' towards 'selling services'. In 2020, more new forms of contracts could emerge to not only sell products, but also to maintain them during their lifetime (km-based contracts, LCC). Even fleet hiring models could become common practice.

Entrepreneurial spirit can enhance PT's quality and reduce costs.

Market framework and political will

State of the art and trends

PT is often provided with a very complex set of

rules that might inhibit good decision making.

However, there is growing recognition that PT

has an important role in the sustainable devel-

opment of urban areas. More attention is being

placed on integrated transport and land-use

planning to limit the damage caused by increas-

ing car traffic in terms of road safety, environ-

Institutional frameworks are often lacking in the

developing countries. The result is a general

lack of regulation and enforcement of regulations, and absence of business start-up proce-

dures etc. There is a general lack of public serv

ice and the PT market is therefore largely infor-

mal. In transition countries, organised PT sys-

tems are just evolving and regulatory public

mental pollution and congestion.

Developing countries: lack of

Developed countries:

too many actors?

framework?

bodies are being set up.

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"The development of public transport systems requires a combination of science and art. The building blocks of public transport worldwide are the same, but how you put it together to suit the specific area, its history, culture and historical background becomes the art of it. African countries are faced with the same challenges and it is thus good that Africa comes together and that we look at a solution for Africa by Africa with the assistance of overseas experience."

Threats to PT sector

Legislative change

Changes in the market framework - eg after a change of a government - may make private capital. staff and customers warv of PT.

PT sector's opportunities

fails to be accepted.

Clear framework

Growing role of NGOs

supporting the case for PT.

Public transport is a political winner

Supporting PT can often enhance the image of

politicians. Where citizens vote on transport

matters, decisions on PT investments seldom

Emerging environmentally aware groups are

A clear framework for the tasks and responsibil-

ities of all PT actors can be the foundations for

the long-term high quality development of PT

Political influence

In some countries, overly complex legislation and administration leaves PT with not much room to adjust its services to changing demand. In others, inadequate institutional frameworks prevent PT actors from providing economically viable busi-

Political intervention not always effective

PT can be used as a political tool to attract votes, without adequate consideration for the impact on society of ineffective and inefficient service provi-

Legal insecurity in the European Union

The effect of the interpretation and implementation of European legislation on state aid and the dependency on court decisions hamper the activities and the long term development of the PT sec-

Informal PT lacks stability and safety

Informal PT - often the main PT supply in developing countries - does not offer stability and integration between modes. On top of this are safety and image concerns. The risk is that people with a mobility choice might not choose PT over cars.

PT a poor lobbyist?

Public transport actors are not always successful in communicating the needs for a clear framework.

What authorities can do

Framework for a balanced traffic

Authorities can organise the transport market in such a way that a balanced system will emerge. The roles of the different actors should be clearly defined. This should guarantee overall strategic planning for all transport modes - private and public - and land-use planning.

Transparent framework

Authorities can develop a clear legal framework that will make the tasks and responsabilities of each actor transparent.

PT as a smart lobbyist

More forceful and more vocal communication of our needs with regard to a market framework can increase the competitiveness of the sector vis-à-vis individual transport.

What PT companies can do

What the industry can do

Lobbying for a clear framework

The industry – as full actor of the PT sector with worldwide influence - can help UITP to fight for a clear framework and a long-term commitment of authorities to develop a sustainable mobility system with a higher share of PT usage.

Economic health can be achieved with a clear regulatory framework that leaves room for the businessoriented activities of the operators, without sacrificing the social function of PT.

Conclusion

lack van der Merwe. Vicepresident of UATP

Actions for a sound future of PT-

Reconcile PT's roles Reinforce actors' roles Redesign urban areas Redistribute road space Rethink services Not re-inventing PT Conclusion **Authorities distinguish between PT's** Specific local conditions may cause PT is only able to meet customer PT would be more financially viable if PT is a collective transport mode but it Of course we do not have to complete-PT continues to Introduction multiple roles: roles to be distributed differently, but needs and attract car users to its road space were distributed based on needs to address increasingly diverse ly re-invent PT and its virtues. Visions 2020 evolve from a service if: vehicle occupation rates: customer expectations, which means: production Trends and PT's response activity to a • PT has a **social purpose**, to provide afforda-• Only a clear and stable market framework Urban development fosters high density in PT could then operate faster and more Introducing customised services targeting But the sector's main and most difficult task is existing and new areas reliably. new market segments Actions ble mobility to those without access to a car that defines the roles and responsibilities of all to deliver the daily service promised. In the modern service PT actors allows for long-term planning, sound • There is a solid relationship between urban future, the sector must guarantee even higher Its costs could be reduced and revenues • Intermodal integration with taxis, bikes and UITP in 2020 industry. day-to-day operation and a solid basis for service quality, reducing technical failures development and the PT network. would **increase** with the rise in ridership. car sharing to move towards becoming a com- PT has the role of reducing the adverse effects attracting private capital. and human errors and becoming even more It continues to Sources prehensive mobility provider. of car traffic by attracting motorists customer-oriented. • Only close collaboration between the different through good service adopt modern actors can create a positive market effect. management • PT is a business and its companies must be methods and healthy. marketing tools The integration of land use and transportation There is one key statement which is most impor-In the light of these concurrent roles, PT's serv-It is therefore important to clarify and reinforce A proper distribution of road space combined A uniform PT service and fare-system cannot by fostering the general roles of each actor, notably the planning is crucial to avoid car-focused urban tant for attracting customers today and in 2020: with appropriate charging of all transport modes adequately serve both the leisure traveller and ices and social obligations need to be differentiproactive authorities. PT companies and the industry. development to include their external costs will result in a ated. the commuter. much more viable mobility system entrepreneurial **Keep PT reliable!** spirit.

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Introduction

This paper is not only meant to stimulate a discussion within UITP on strategies to strengthen the competitive advantage of the sector, but also about the future of UITP itself:

What role UITP should play in the next 15 years in addressing the challenges the sector is facing and in fostering a proactive approach to leading the way forward.

This means UITP itself must be organised:

- (a) in such a way that strategic areas for action are continuously identified and placed on the agenda for discussion with the appropriate set of actors, and
- (b) to drive the development of concrete services for members.

To achieve this, the space for strategic thinking and decision-making must be expanded and flexible mechanisms need to be created to allow easy interaction within diverse groups of members who may be called on at short notice. Such groups may be formed at a regional as well as global level.

UITP will also establish a broader and more

Vision for UITP in 2020

In 2020, UITP will unite the majority of PT actors worldwide, be they organising authorities, operators, suppliers of equipment, systems and services, infrastructure managers or academics.

Decision-makers will regard UITP as the point of reference for local and regional public transport and work together to improve the framework for developing better mobility.

UITP will help its members to add value to their daily business, to experiment, innovate and evolve as well as to reinforce the dialogue with their own stakeholders.

Against this backdrop, UITP takes the lead in addressing themes that do or will have a major impact on the affairs of members and in promoting innovations which will help the advance of the public transport sector.

Mobilising political will

The main task: making the case

UITP will continue demonstrating to decisionmakers at every level - local, regional, national and international - the economic, social and environmental advantages of PT. This will be especially important in rapidly developing urban areas.

Marshalling the arguments

Political will can be mobilised with up-to-date. sound evidence. Work on indicators for measuring the role and impact of PT in improving urban quality of life has to be expanded into a longterm monitoring system of the impact of landuse, environmental and transport choices.

Promoting conditions in which PT can thrive

UITP will promote the measures that the authorities can take to allow PT to make its full contribution to society. These include measures to reflect the full external costs imposed by different transport modes, the creation of bus and tram priorities, the development of the regulatory framework most conducive to efficient and effective PT and road charging to manage the demand for road space.

Fostering innovation

Promoting new ideas for product improvement and marketing

UITP will strengthen platforms for exchange of experience and new ideas on increasing the flexibility of products and the public's awareness of them, by effectively addressing different market

Innovations in financial viability

UITP will bring all PT actors together to explore new financing mechanisms, profit-making business models, new financing terms with banks, and innovations in attracting private investment

Supporting research and development

UITP will play a leading role in the future European Union Strategic Research Agenda for urban, suburban and regional public transport. UITP will continue to promote and coordinate the research activities of its members and harness international support to finance these activities.

Partnerships for demonstration

UITP will encourage partnerships among its members to establish common demonstration platforms for piloting new technologies in all fields relevant to the sector.

Technical harmonisation

Harmonisation is crucial to exploiting economies of scale. UITP can assist technical harmonisation in the local and regional PT sector through consensusbuilding mechanisms with its members, involvement in working groups on the preparation of harmonisation measures, and informing members to enable them to influence the formulation of standards at national level.

Harmonising systems and services

Harmonisation of services for passengers

UITP can organise a much more pro-active approach towards harmonising the interface with customers for their benefit. This can include information and ticketing and other areas with a direct or indirect impact on customer service such as training standards, qualifications for drivers, environmental performance, even public transport services themselves.

Empowering PT's management

Training future PT leaders

UITP will strengthen its training activities to acquaint future leaders with the international dimension of the sector. UITP can add special training for PT leaders joining the sector from other industries.

Staff exchange programmes

UITP will organise the exchange of young professionals and future managers amongst its member companies to help broaden their experience.

Attracting human capital

UITP will promote the image of the sector as a 'forward-looking and exciting' place to work in and an excellent career choice by means of image campaigns setting up work placement programmes in cooperation with universities and membership.



encompassing framework for debate and action on the overall conclusions of this paper. The UITP strategy paper 'PT in 2020: from vision to action' is also meant to act as a basis for UITP members' individual initiatives to establish a vision and strategic action plan for the long

A selection of non - UITP reference sources

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Sources

Bus Systems for the Future

Achieving Sustainable Transport Worldwide IEA, 2002

Cities on the move - a World Bank urban transport strategy review

The World Bank, 2002

Economic instruments for sustainable road transport. An overview for policy makers in developing countries

Jan A Schwaab, Sascha Thielmann Deutsche Gesellschaft fuer Technische Zusammenarbeit-GTZ. 2001

European transport policy for 2010: time to decide - White Paper

European Commission, 2001

External costs of transport in western **Europe**

UIC and CER, 2004

Global environment outlook 3: past, present and future perspectives

UNEP United Nations Environment Programme EARTHSCAN, 2002

Habitat Agenda- sustainable transport and communication systems

United Nations conference on human settlement, 2003

Implementing sustainable urban transport policies. Final report and key messages for governments and national reviews

CEMT-ECMT, 2003

International Energy Outlook 04

Energy Information Administration of the US Department of Energy, 2004

Mobility 2030: Meeting the challenges to sustainability

World business council for sustainable development- WBCSD, 2004

Project on environmentally sustainable transport (EST) - the economic and social implementation of sustainable transportation

Environment Policy Committee OECD, 2002

Sustainable transportation and TDM. Planning that balances economic, social and ecological objectives

Victoria transport policy institute - VTPI, 2003

Sustainable transport systems: linkage between environmental issues, public transport, non-motorised transport and safety

MOHAN Dinesh, TIWARI Geetam Indian institute of technology, 2003

The little green data book 2004

The World Bank, 2004

The state of the world's cities 2004-2005

United Nations Human Settlements Programme EARTHSCAN, 2004

Transportation and Energy

International Energy Agency, 2004

Globalisation and urban culture

United Nations Human Settlements Programme EARTHSCAN, 2004

Transportation cost and benefit analysis- techniques, estimates and implications

Victoria transport policy institute - VTPI, 2003

World energy, technology, and climate outlook 2030

European Commission, 2003

World energy, technology and climate policy outlook - WETO

European Commission, 2003

For global statistics on urbanisation or demographic development

www.esa.un.org/unpp

MOBI+

MOBI+ is UITP's e-library, accessible to UITP members only. http://www.uitp.com/mobi/index.cfm

Sources

This list represents only a selection of over 60 entries in the MOBI+ project section.

Background reports

You can find two more background project reports:

- External trends affecting the Public Transport sector'
- Competitive advantages and disadvantages of the PT sector today' on MOBI+.

UITP reference sources

Statistics

Mobility in Cities Database (June 2005)

Language: English / Format : CD-Rom

The Mobility in Cities Database project gathers and analyses urban mobility indicators in a sample of 50 cities worldwide for the year 2001. By showing how public transport contributes to sustainability and assessing the impact of urban policies on public transport, the Mobility in Cities Database helps further develop a set of arguments in favour of public transport.

This database is an indispensable source of information for organisations with an interest in mobility issues and officials in charge of urban planning and transport policies.

Sustainable Development Bringing quality to life (June 2005)

Language: English (hardcopy and internet) and French, German, Spanish, Italian (only internet) The sector report on the contribution of public transport to sustainable development illustrated with examples from UITP charter signatories. An executive summary and CD-Rom in English, French, German, Spanish and Italian is also available. i

Urban Transport Policy

VOYAGER: A vision for Public Transport in Europe (2004)

Language: English, French, Spanish, Italian, German / Format: hardcopy (56 pages)

The Voyager project aimed to create a vision and make more recommendations for implementing attractive, clean, safe, accessible, effective, efficient and financeable European local and regional public transport systems for the year 2020.

Congress reports

The Challenges of Integration: Turning Multimodality into Seamless Mobility - 55th UITP World Congress in Madrid (2003)

Congress Proceedings

Language: English / Format : CD-Rom (57 speaker presentations). This CD-Rom contains most of the presentations from the 55th UITP International Congress 2003 in Madrid.

The Challenges of Mass Transit in Asia-Pacific (2004)

Congress Proceedings; Language: English Format: CD-Rom (16 speaker presentations) This CD-Rom contains most of the presentations from the 4th UITP Asia Pacific Congress 2004 in Brisbane.

The Finance Dilemma: Growing Requirements Versus Declining Funds (2005)

Language: multilingual (English, French, German)
Format: CD-Rom (22 speaker presentations)
Latest developments and key issues of public transport financing, including case studies of cities/regions which developed innovative financing schemes. The involvement of the private sector in public transport finance and innovative ways of increasing farebox are outlined.

Contractual Relations between Authorities and Operators (2003)

Language: English / Format : CD-Rom (24 speaker presentations)

This thematic CD-Rom offers a comprehensive overview of contractual practices across the different regions of the world in the form of 20 case studies and the conference proceedings.

Marketing

How to make citizens proud of using public transport services? (2003)

Language: English

Format: CD-Rom (22 speaker presentations)
The solutions to several important questions are given in this CD-Rom of the conference proceedings: How to measure satisfaction? How to give an image-enhancing picture of public transport? What is successful branding? What is the future of public transport in 'car countries'? How to involve clients in the process of designing transport supply? Which strategy for the rational use of the different modes?

Organisation

A Market in Motion (2005)

Language: English Format : hardcopy

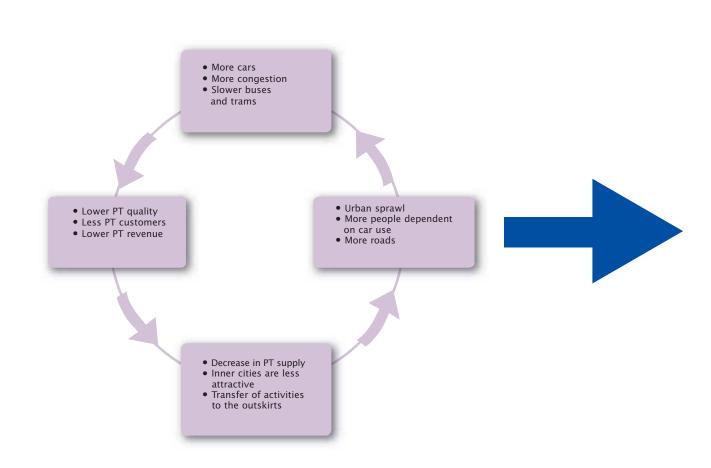
This report can help to raise awareness about the importance of a clear and conclusive division of tasks between the public authorities and/or organising authorities and the operators. It will also enable choices to be made regarding the appropriate division of tasks based on the circumstances and needs of a particular region. Creating clarity for the parties demanding and supplying the service helps improve the efficiency of the public transport system and the quality of its service.

'This list only covers a small part of UITP's most recent publications, directly related to the subject of this brochure. For a full list see http://www.uitp.com/publications/index2.cfm

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... and evolve towards healthy public transport and quality urban life

