

2015

# PUBLIC TRANSPORT **TRENDS**



ADVANCING  
PUBLIC  
TRANSPORT



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# Introduction

**P**ublic transport is facing a number of challenges and opportunities that result from changes occurring within the sector itself, as well as from external trends affecting its wider socio-economic environment.

Growing urbanisation leads to an increasing demand for transport, which requires a corresponding increase in mass transit supply in order to absorb it. Cities have multiple modal choices at their disposal, most often proposed in a combination – conventional or automated metro, light rail or tramway, bus or BRT, or waterborne – plus other less conventional modes such as cable car, tram-train or monorail to meet specific needs. Within this range, cities can choose the most appropriate modes and take advantage of potential spill-overs, through coordination and prioritisation. Cities with long-established public transport systems, particularly ageing rail infrastructure and rolling stock now need rehabilitation and automation to improve their operational efficiency and capacity.

Besides challenges linked to quantitative growth, public transport must make significant qualitative improvements in order to become more attractive. Customers expect the same kind of lifestyle services and connectivity from public transport vehicles and stations as they already have in their own environment and living space. Such services build on basic requirements, which include comfort, security and cleanliness. The notion of quality in

public transport should also be created through operational excellence, which includes enhanced frequency, punctuality and reliability of the service thanks to optimised network design and service performance. Likewise, smart ticketing and integrated travel information contribute to making public transport customer/user-friendly, while facilitating accessibility for all citizens. All these tools offer a huge potential to attract new public transport customers and consequently increase revenues.

In order to provide truly customer-focused services, public transport providers must adopt modern and business-oriented management. The main objective should be to ensure that the whole organisation has a strong strategic direction reflecting stakeholders' expectations. All personnel, from top management to front-line staff, should translate and apply these objectives in their daily routines. They should feel pride in working for public transport and serving its customers, while the sector itself should pro-actively strengthen its position as a provider of green jobs and a contributor to economic growth. In several developing countries, the formalisation of public transport and its corporatisation can help to tackle unemployment and boost the economy.

For its development, public transport requires funding. However, excessive dependency on public funds can thwart the sector's growth efforts. Alternative funding streams and resilient funding

architecture are increasingly considered to be indispensable. Moreover, partnerships with private investors are often an extra option for major projects. A virtuous circle can be created by adopting a more commercial approach to service delivery and pricing, yet without compromising social policy objectives. This enables investment in better quality and efficiency, in order to achieve a better cost-coverage ratio and to raise the financial attractiveness of the sector. Such changes should take place with adequate governance, and within a clear regulatory framework that provides business stability, supports sustainable mobility and leaves room for commercial activities, in parallel to the traditional public transport provision.

Overconsumption of energy and the impact of this on greenhouse gas emissions is an obvious challenge. Oil and transport are interdependent: 90% of transport fuels are oil-based and 50% of oil produced worldwide is consumed by the transport sector. Peak oil means we will have to improve energy efficiency, while looking for alternative 'fuels'. This is more necessary than ever, as traffic congestion is worsening in most cities, thus increasing environmental damage at local and global levels. Public transport, cycling and walking are the answer to achieving sustainable urban mobility. In addition to being energy-efficient and green, they use less public space and are collectively safer and healthier than cars. Though its contribution to overall energy consumption is very low,



public transport is improving its emissions standards, increasingly adopting clean fuels and making greater use of electricity. Simultaneously, improving public transport energy efficiency also reduces operation costs.

There are significant changes taking place amongst public transport players. Globalisation of the economy has affected the business of public transport, just as it has affected many other sectors. The removal of most trade barriers has led to business expansion in the sector, as well as increased competition and consolidation of the market players through mergers and acquisitions. This has been the case for both operating and manufacturing companies.

Changes happening today go beyond public transport, and are affecting the urban mobility landscape in general. These changes – which are driven by a mixture of technological innovation, the development of sharing economy, business strategies and business model adjustments – are sustained by governmental frameworks and policy initiatives (Smart Cities). Industry players (e.g. car manufacturers, battery-makers), media groups, payment service providers, Internet start-ups and a number of organisations/sectors are collaborating in the transport and mobility fields and are reinventing themselves as mobility services providers. IT and internet-related services companies provide integrated information to travellers. They also support information exchanges between travellers through mobile applications and social media. In short, a growing number of options are now available to travellers, who can interact with an ever-increasing number of service providers before and during their journey.

Present in 92 countries with more than 1,300 member organisations representing 15,000 professionals actively involved in the Association, UITP is the only worldwide network to bring together all public transport stakeholders and all sustainable transport modes. As the reference association and worldwide knowledge centre for public transport, UITP is continuously monitoring the state-of-the-art advances

and innovations in public transport and urban mobility, as well as changes and megatrends that have an impact on the organisation of the sector and its players. With the Public Transport Trends report, UITP is willing to share this knowledge with public transport professionals and mobility actors as well as with politicians and decision-makers involved in city policies and urban affairs.

As described above, there are numerous internal and external trends impacting public transport. This report is neither an exhaustive analysis of all trends, nor a prospective study. It focuses on the most significant developments that already have an effect on the mobility market in general and public transport in particular. We have identified six main clusters which strongly reflect these trends: (1) Demographic trends and growing mobility in urban areas; (2) Governing and providing mobility in connected cities; (3) Public transport funding; (4) Market globalisation and emerging players; (5) Climate change, air pollution and energy; and (6) Human resources and employment. Each chapter includes a number of sections describing the latest developments related to the topic, illustrated by case studies, infographics and interviews that provide additional context for the reader.

It is part of the mission of UITP to keep our members informed and up to date. This is the first issue of the Public Transport Trends report, a periodic publication which will be released every second year. It has been produced by a group of experts from UITP Secretariat General and steered by the PresCom, the committee gathering the chairpersons of all UITP working bodies. We warmly thank all UITP experts, PresCom members, and senior executives who were interviewed as well as all other contributors and providers for their input into this important report, which is one more major milestone in UITP's long life.

**Sir Peter Hendy CBE**

*UITP President*

**Alain Flausch**

*UITP Secretary General*



**Sir Peter Hendy CBE**

*UITP President*



**Alain Flausch**

*UITP Secretary General*



## .. 1 ..

# Demographic trends and mobility in urban areas

**T**he world is changing fast and urban areas are springing up everywhere, driven by the growth of cities of all sizes. Combined with rapid economic growth and the emergence of a large middle class in emerging countries, these trends are shifting the world's centre of gravity to the South-East. Globally, some 1,000 cities of more than 500,000 inhabitants are already facing major mobility problems, due to the near impossibility of providing adequate infrastructure to keep pace with the ever-increasing popularity of the private car.

In this context, public transport has an important role to play. It can meet the growing mobility demand by providing the systems on which a city can build its sustainable development. But what is the right mode for each city? The debate about the relative merits of BRT, LRT and metro is sure to continue. Moreover, other less conventional modes such as cable cars, tram-trains and monorails are gaining momentum.

In the meantime, in Western countries, car use seems to have reached a ceiling. Young people are apparently now more interested in all the latest mobility solutions than in car ownership. In urban and rural areas, this is leading to new mobility behaviour, encouraged by the emergence of new products described in chapter 2.



## ..2..

# Governing and providing mobility in connected cities

**T**here seems to be a strong correlation, which we can partly explain, between the increasing connectivity within our society – of people, vehicles, and soon of pretty much all our surrounding environment – and the demand for and provision of new mobility services.

Connectivity creates a growing volume of available data for the transport sector's stakeholders. For most of them, this high volume of data or 'big data' is a potential source of efficiency gains. Data like this does not only come from the transport sector, our vehicles or customers. It can also be produced by other sectors. As a result, once combined with our sector's data, it can open opportunities for all, such as efficient operations and maintenance, new services, integration, and a better understanding of travellers.

Manufacturers expect this trend to bring them closer to their customers. Operators would like to gather faster and more individualised information on their customers in order to improve operations, as well as to maximise the profitability of commercial spaces in stations for instance. Big data is also an opportunity for external stakeholders to develop new services for our sector and to enhance the digital experience of our customers.

Increasing connectivity is also enabling the fast development of new mobility services, such as transaction platforms for ride-sharing, alongside the rapid increase of services that have emerged in the last decade, such as car-sharing.



.. 3 ..

## Funding public transport: the search for alternatives

**T**o cover investments and operational deficit, public transport companies can no longer limit themselves to their two traditional financing sources: ticket selling and the public contribution. Over the last decade, changes in public transport funding have been mostly influenced by three key trends:

- 1.** Fares, supported by innovative technology, have varied in their complexity across cities. In parallel, networks have also paved the way to enable the development of commercial revenue within their systems;
- 2.** Investment in infrastructure is one of the main challenges for many regions. Networks have begun to include the business community, linking commercial property development and transport or requesting the private sector to take the lead through PPPs;
- 3.** Contribution of direct and indirect beneficiaries, such as land value capture, is increasingly being incorporated in public transport financing models.

A review of these trends is covered in this chapter.



## .. 4 ..

# Market overview: Globalisation and emerging players

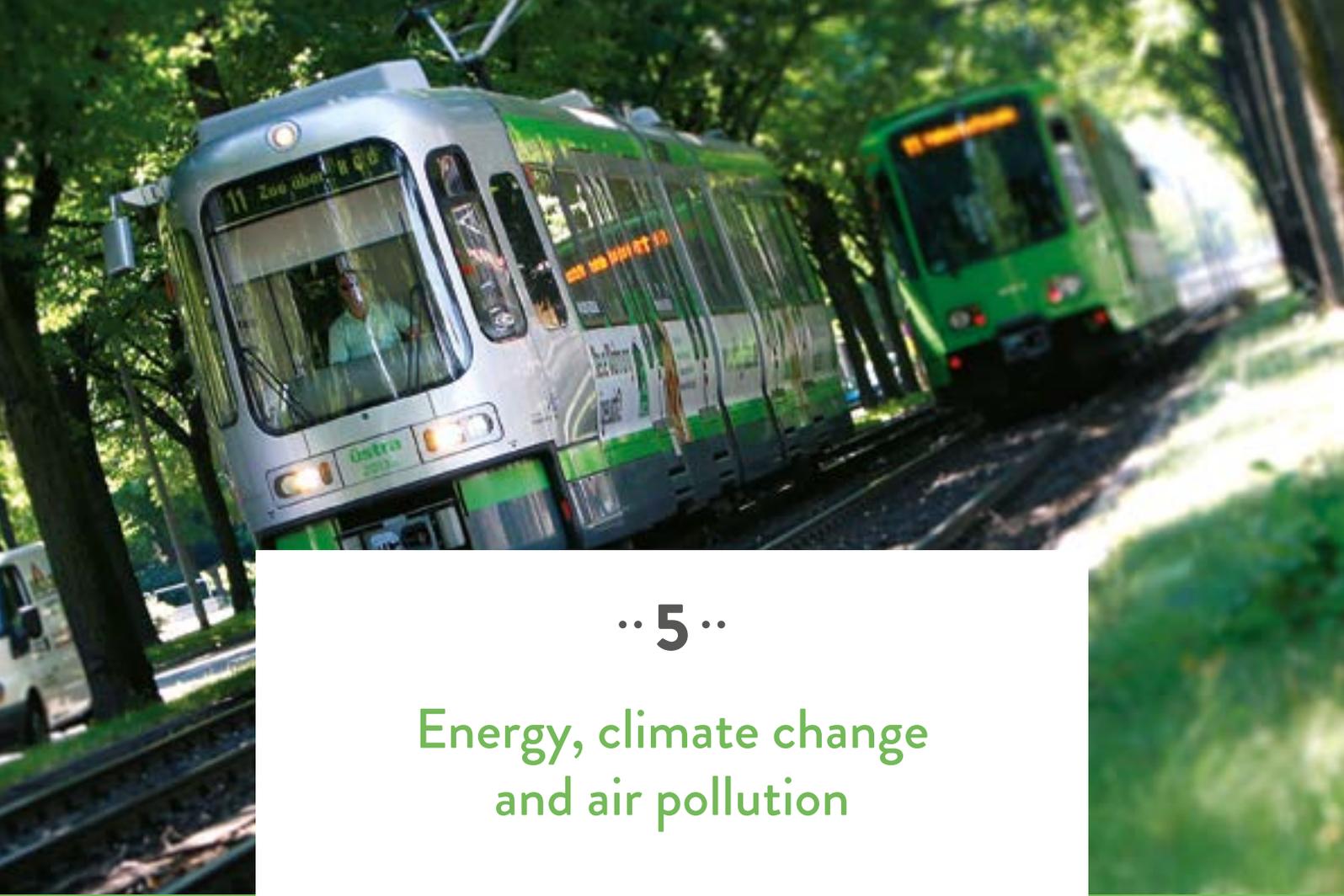
**G**lobalisation of the economy has affected the business of public transport, just as it has affected many other sectors. The removal of most trade barriers has led to business expansion, increased competition and consolidation of the market players through mergers and acquisitions. This has been the case for both operating and manufacturing companies.

As a result of power shifts in the world economy and the rise of 'new powers' (BRICS: Brazil, Russia, India, China and South Africa), new opportunities for public transport have arisen in previously inaccessible markets. Moreover, new competitors are emerging, initially within countries, then regionally and increasingly on the global stage.

BRICS nations are sure to lead growth in public transport. However, other world markets – such as Africa and ASEAN – are expected to become more important as they shift towards more economical and flexible urban transportation solutions.

Due to a major imbalance in production factors (especially low wages), Western manufacturers in this sector are struggling to cope with challenges such as a significant transformation of the supply chain and a shift in production to countries with lower labour costs. Traditional Western plants tend to specialise in high innovation and value elements of the supply chain.

Operating companies have seen the emergence of large groups that are active first on their domestic markets and then internationally. This is a result of deregulation, liberalisation and the need for expertise and investments.

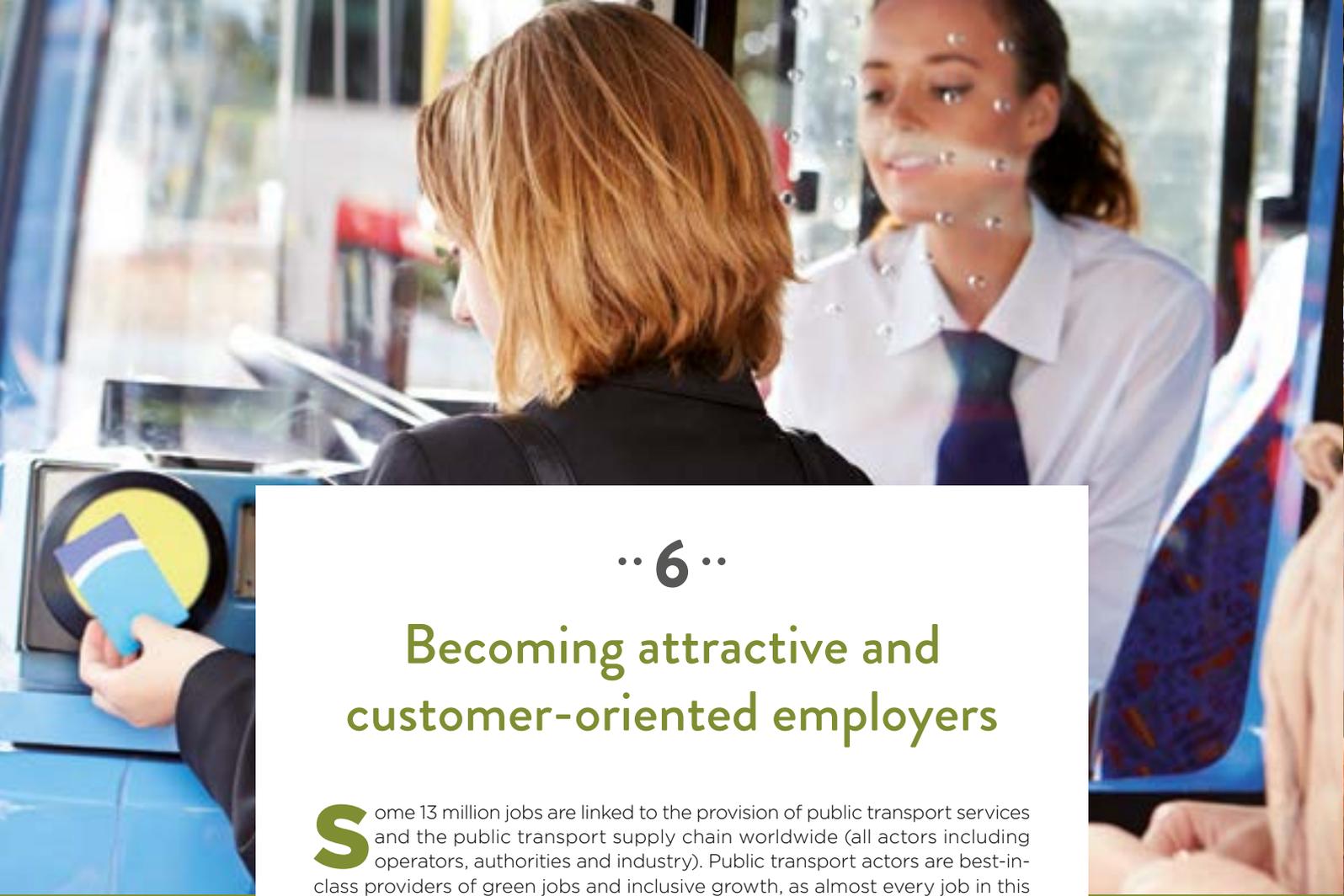


## .. 5 ..

# Energy, climate change and air pollution

**E**nergy use and greenhouse gas (GHG) emissions from the land transport sector are expected to increase under a 'business as usual' scenario by nearly 50% by 2030 and more than 80% by 2050, compared with year-end 2009. This increase in emissions will be primarily caused by a surge in the global stock of private vehicles. Already in 2009, transport contributed approximately one-quarter of energy-related global GHG emissions and was responsible for about one-fifth of energy use, according to the United Nations (UN). It is expected that transport will remain heavily dependent on oil and that technologies will not be able to prevent health hazards related to air quality, which will become a major concern in many cities across the world.

These trends are clearly unsustainable and we must seize the solutions at hand. Ambitious and visionary actions and strategies are essential to radically change current mobility patterns and to avoid dangerous climate change, as well as worsening air quality in cities across the globe. Cities and governments have a crucial role to play in this, and public transport and other sustainable urban mobility solutions need to be put forward to tackle the urban mobility challenges currently faced by our cities. Support for our sector and for a greater recognition of its role in mitigating emissions will need to be backed by economic incentives, which could take the form of carbon pricing.



## .. 6 ..

# Becoming attractive and customer-oriented employers

**S**ome 13 million jobs are linked to the provision of public transport services and the public transport supply chain worldwide (all actors including operators, authorities and industry). Public transport actors are best-in-class providers of green jobs and inclusive growth, as almost every job in this sector helps to preserve and restore environmental quality, usually requires minimum qualifications and offers a decent salary when compared with informal employment.

On all continents, formalising public transport and the growth of public transport help to fight unemployment and boost the economy. In emerging economies, providing skilled jobs for unqualified people encourages social integration and helps stabilise living conditions, which in turn can lead to the creation of a middle class. In developed countries, public transport companies and authorities offer stable, green and local jobs that cannot be offshored or moved out of the local area. These jobs are therefore less affected than jobs in other sectors when there is an economic downturn. In many European cities, the local public transport operator is one of the largest employers (e.g. Amsterdam, Barcelona, and Paris).

In most European countries, jobs in the public transport sector offer a good level of remuneration compared to other jobs requiring similar qualifications; this is especially so in comparison to national minimum wages.

With a view to achieving the UITP PTx2 Strategy (doubling the market share of public transport worldwide) by 2025, the challenge today is to attract, recruit in large numbers and retain qualified staff as well as to make employees proud of working in public transport. This multiple challenge calls into question the attractiveness of the public transport sector as an employer, its business culture and its HR managerial practices. The attractiveness of the public transport sector depends on its own ability to attract employees, as well as on the economic situation and job market conditions. However, corporate culture and strategy and managerial practices, not to mention human resources policies, all play an essential role here. They cover a wide range of aspects, including employer branding, investment in training and formalisation, valuing the jobs in public transport, customer orientation, etc.

Some public transport organisations and operators have acted as pioneers in recent years by implementing innovative strategies and policies in response to these challenges. These new trends will certainly pave the way for new solutions for more attractive public transport companies and better services.



# Conclusion



**U**rbanisation is accelerating and cities are playing an increasingly important role and shifting towards the production and exchange of ideas and knowledge. These trends are affecting the shape of cities and the demand for mobility, with proximity and connectivity now more valued than ever. In this context, public transport has a bright future, as the demand for mobility is booming and mass transit solutions are needed on all continents. However, the development of conventional public transport networks and services must be integrated into a new landscape of shared mobility.

In developed economies, there is growing recognition of the benefits of public transport compared to private motorised mobility. Car ownership and use are being progressively challenged as the dominant mode of transport in cities, notably due to the increased use of new communication technologies. However those very technologies may allow cars to play a totally new role in urban mobility in future and they may even blur current differences between public and private, or collective and individual mobility.

In developing economies, public authorities are well aware of the consequences of car dependency, and are often willing to give priority to the development of public transport (notably through better organisation and procurement). However, the appeal of car ownership for new middle classes is likely to offset these efforts and drive these countries into the same vicious circle that affected developed economies in the second part of the 20<sup>th</sup> century.

Recent efforts to organise and regulate urban public transport – where public transport authorities play a key role in defining service supply – have to be put into perspective with the crucial

role of the market (i.e. consumers) in developing new mobility services, which match supply and demand almost in real-time.

*The Public Transport Trends* report shows just how much public transport will need to change, both from the inside and in relation to the external trends affecting its socio-economic environment. It also highlights the positive role that the sector plays and its clear benefits. On the one hand, public transport must perform better, be more efficient, meet changing expectations, be more customer-oriented and adopt a business-oriented approach. On the other, it can contribute to jobs and growth, make cities more competitive, attract investors, reduce congestion, contribute to a better environment and quality of life in the city, and be the natural leader of urban mobility integration.

As the worldwide centre of knowledge and expertise for public transport, UITP will take full ownership of those trends and hot topics. They will shape the Association's work programme for the next two years. UITP working bodies and project teams will take these trends and topics on board and help to enrich related knowledge from different perspectives, notably regional, sectoral, modal and thematic. In the next two years, UITP will deliver a set of publications, events, policy briefs, training programmes, research projects and initiatives structured around the main findings of the *Public Transport Trends* report with the following objectives:

- Learn and strengthen the overall knowledge on public transport and local mobility;
- Serve UITP members and support them in their (day-to-day) public transport-related business;
- Engage with politicians and decision-makers for the defence of public transport.

## IN THE PUBLIC TRANSPORT TRENDS REPORT 2015

**“This report focuses on the most significant developments that already have an effect on the mobility market in general and public transport in particular.”**

Sir Peter Hendy CBE, UITP President  
Mr Alain Flausch, UITP Secretary General

**“Mobile technology might allow developing economies to jump directly to efficient mobility management.”**

Mr Jean-Christophe Victor,  
Founder of the Think Tank Lepac

**“It’s time for rail to catch up with other transport modes by intensifying cooperation between the industry and the EU.”**

Mr Michael Cramer,  
Member of the European Parliament,  
Chair of the Transport Committee

**“As transport workers, we want to see a good range of public transport services and we support the PTx2 strategy.”**

Mrs Sabine Trier,  
Deputy General Secretary of ETF,  
European Transport Workers’ Federation

**“The success of Delhi Metro can be attributed to two basic factors: strict adherence to construction schedules and a thorough focus on ensuring world-class service in operations.”**

Dr Mangu Singh,  
CEO of Delhi Metro Rail Corporation

**“Traffic jams have huge costs for everyone, and public transport has a key role to play to improve living conditions and fight climate change.”**

Prof. Jean-Pascal van Ypersele,  
Climate scientist, Vice-Chair of IPCC  
(Intergovernmental Panel on Climate Change)

**“Africa is well positioned to make a major contribution to achieving the UITP’s goal of doubling the share of public transport markets globally by 2025 (PTx2).”**

Dr Ousmane Thiam,  
President of the Executive Council  
for Urban Transport in Dakar