

**Highlights** 

2011 annual summit

## **Transport for Society**





2011 annual summit

## **Transport for Society**

**Highlights** 



25-27 May 2011 Leipzig, Germany

### **Contents**

#### Introduction

- 4 About the International Transport Forum
- 6 José Blanco López: "Society Shows us the Path"
- 8 **Jack Short:** "We Bring Decision-makers Together"
- 10 **Peter Ramsauer:** "International Transport Policy for Tomorrow's Society"

#### **Transport for Society**

- 14 Jeremy Rifkin: "We Have Forty Years to Make the Shift"
- 18 Enrique Peñalosa: "A Powerful Symbol"
- 22 Transport for Society: Key Messages from Ministers

#### **Understanding the Issues**

- 28 Putting People First: Opening Plenary
- 30 A Delicate Balance: Mobility Rights, Needs, Expectations and Costs
- 32 More with Less: Shrinking Budgets and Growing Demand
- 34 Meeting Tomorrow's Needs: Transport and Employment
- 36 Equitable Access: No Passenger Left Behind
- 38 Security in Transport: Protecting and Respecting Users
- 40 Keeping it Clean: Transport, Health and the Environment









#### **Taking Action**

- 44 **Jeffrey Sachs:** "We Face a Stunning Challenge"
- 48 Meeting People's Needs in Policy and Planning: Part 1 Moving Passengers
- 50 Meeting People's Needs in Policy and Planning: Part 1 Moving Freight
- 52 Creating Liveable and Sustainable Societies
- 55 Making Transport Safer
- 58 eSafety Challenge Demonstrations: Advanced safety technology in action
- 60 Innovators' Platform: New ideas for transforming transport

#### **Better Transport, Better Communities**

- 64 Jaime Lerner: "We Have to Better Understand the City"
- 68 Achieving Sustainable Urban Mobility: Decision-makers' Dialogue

#### **Where Ideas Meet**

- 74 International Transport Forum Awards 2011: Achievements that have made a difference
- 76 Active Transport Tour: Leipzig by Bike
- 78 Childrens' University: Kids Quiz Transport Experts
- 80 Summit Exhibition: The future of transport on display
- 82 Partner Events at the 2011 Summit: Linking the issues
- 84 Media at the 2011 Summit: Making headlines
- 85 Technical Visits and Cultural Programme: The summit on the road
- 86 Sponsors and Exhibitors
- 87 Recent Publications
- 88 List of Speakers
- 90 Forum 2012: Seamless Transport: Making Connections









## **About the International Transport Forum**

The International Transport Forum is an intergovernmental organisation with 52 Member countries that work together to shape transport policies for the 21st Century. As a strategic think tank, it provides evidence-based insights on transport issues for the world-wide transport community. The International Transport Forum's annual summit of transport Ministers, held each year in May on a topic of strategic importance, has established itself a major global meeting place for policy-makers, business leaders, top academics and civil society representatives.

The goal of the International Transport Forum is to ensure that transport policy contributes to economic growth, environmental protection, social inclusion and the preservation of human life and well-being.

Member countries of the International Transport Forum include most of the member states of the Organisation for Economic Co-operation and Development (OECD) as well as India, Russia, and many countries in Central and Eastern Europe.

China is officially engaged in the accession process for membership and is expected to participate as a full member in the 2012 summit.

#### Forward-looking debate

The creation of the International Transport Forum in 2006 was driven by the desire to foster constructive, relevant and forward-looking debate about the future of transport on a global level and across all modes. It reflected the fact that numerous challenges to transport cannot be addressed on a national level.



Issues like climate change, oil dependency, economic fluctuations, infrastructure investment and maintenance, fighting congestion, accessible mobility, safety and security, among others, are global in scope and are best tackled in close collaboration across borders and among all stakeholders.

It is the involvement of a broad range of actors from the world of transport and beyond that make the International Transport Forum a truly unique platform for a global conversation on the future of mobility. In-depth research carried out by the International Transport Forum's Research Centre supports transport policy making in Member countries and provides high-quality input for the annual summit, contributing to an unrivalled level of debate.

#### A unique platform

The meeting of Ministers is at the heart of the annual summit. The Ministers' Key Messages emanating from this meeting are important signals to policy makers, the transport sector and society at large. The high-level political aspect is integrated into a thematic setting of expert panels and debates that help link policy to practice. An exhibition, live demonstrations, side events organised by partner organisations, technical and cultural tours and a wide range of social events provide countless opportunities to learn, exchange ideas and to network.

The presidency of the International Transport Forum alternates among Member countries on an annual basis. Following Spain, Japan will preside over the International Transport Forum and its annual summit in 2012. The 2012 summit on "Seamless Transport: Making Connections" will take place on 2-4 May 2012 in Leipzig, Germany.

#### Member Countries of the International Transport Forum

- Albania, Armenia, Australia, Austria, Azerbaijan
- Belarus, Belgium, Bosnia-Herzegovina, Bulgaria
- Canada, Croatia, Czech Republic
- Denmark
- Estonia
- Finland, France, FYROM
- Georgia, Germany, Greece
- Hungary
- Iceland, India, Ireland, Italy
- Japan
- Korea
- Latvia, Liechtenstein, Lithuania, Luxembourg
- Malta, Mexico, Moldova, Montenegro
- Netherlands, New Zealand, Norway
- Poland, Portugal
- Romania, Russia
- Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland
- Turkey
- Ukraine, United Kingdom, USA
- Morocco (Observer)
- China and Brazil are invited to participate.

## "Society Shows us the Path"

José BLANCO LÓPEZ, Ministro de Fomento, Spain

"Society
demands new
and better
interconnected
transport
models"

#### José Blanco López looks back on the 2011 summit

The development of the global economy has made the different sectors of society - citizens, companies and organisations - focus on transport. Our first duty as those responsible for this sector is to respond to this challenge in an appropriate manner. So I cannot help but be pleased to have presided over the International Transport Forum's 2011 summit held under the motto "Transport for Society".

The International Transport Forum enjoys a well earned reputation for its leadership in strategic thinking on the transport challenges in our world. The panel sessions and discussions at the 2011 summit again provided ample proof of this. The range of issues which the Forum has been working on since its creation, and on which it has given interesting recommendations, reflect the challenges faced by transport in relation to society's demands.

Society shows us the path we must follow and the things we must pay more attention to, especially those of us who bear responsibility as elected officials. Citizens are increasingly conscious of the fact that transport systems play a decisive role in their well-being. They understand that transport is essential to economic growth and provides access to markets for labour, goods and services.

Companies and individuals that use various transport modes on a daily basis ask that their mobility needs be met by services of ever improving quality. And they want their means of transport to have less impact on the climate, on health and on nature.

#### Complex challenges

A wide range of complex challenges to transport were given thorough scrutiny in Leipzig. Fairness was one of them, meaning guaranteed access to transport for those in society who enjoy fewer opportunities due to their level of income, their reduced personal mobility or their location. Protecting travellers against criminal or terrorist activities, while at the same time respecting their rights and optimising the public resources spent for this purpose is another important issue that was discussed in depth.

Coinciding with the launch of the United Nation's Decade of Action for Road Safety, the quest for decisive reductions in the number of traffic accidents and victims was another obvious high-profile issue. Here, Spain is proud to be a leader, having achieved a 57.5% reduction in road fatalities between 2001 and 2009, one year ahead of the target set by the European Commission for halving roadside deaths.

A spotlight was put on improving mobility in urban areas. Society demands new and better interconnected transport models with more information on the services as well as a reduction of the negative impact caused by the distribution of goods in urban environments.

Caring for the environment and for health is, of course, closely linked to this. Transport has become more energy efficient but it still has to overcome its oil dependence and the ensuing negative effects on the environment. Citizens are requesting major new steps in the race to achieve the sustainable mobility that is sought throughout the world.

#### Do more with less

At the same time, now more than ever, transport policy has to be geared towards supporting economic growth and employment. This is why we must invest resources in conservation, renovation and improvement of our transport systems. In the wake of the financial crisis, society is asking us to do more with less, and efficiency of resource allocation was another central theme in Leipzig.

Major transport investments will have to rely on diverse sources of funding, with greater emphasis on Public-Private Partnerships, new tools to optimise the use of public resources, steppedup international, regional and local collaboration and better indicators to assess transport efficiency from both the user's and taxpayer's point of view.

Not least, technological innovation and human resources play a key part. Many of the most important challenges cannot be met just by promoting new technology. Improved training of transport sector employees must be a priority. To a large extent, the quality of our transport infrastructure and of our transport services depends on highly qualified labour.

Meeting all the challenges and demands that society puts before us requires us to redouble our efforts to draw up a clear and useful roadmap. We know that decisions in the world of transport need time for planning and for realisation, and that the effects of these decisions last many years. Today, we are at that key moment.

I am convinced that the lessons from this year's summit will contribute to responding to the many challenges that society has put before the transport sector. My country was delighted to preside over the 2011 International Transport Forum and I wish to reaffirm Spain's commitment and dedication to the Forum's objectives and to its role as the top level international meeting point in the world of transport.

"Now more than ever, transport policy has to be geared towards supporting economic growth and employment."



José BLANCO LÓPEZ opens the 2011 summit

## "We Bring Decision-makers Together"



Jack SHORT, Secretary General of the International Transport Forum 2001 - 2011

#### Jack Short on the summit and his tenure as Secretary General

Transport for Society – our theme for the 2011 summit may seem a truism: What is transport for, if not society? But behind the seeming redundancy of the title lie some important policy implications.

A key one is that transport authorities have too often not been sufficiently engaged with users. As a result the supply side has had a preponderant role, leading to a top-down approach to transport policy-making. So this year's theme was a conscious effort to engage users and take a more bottom-up look.

The results are contained in this publication. The range of issues covered is wide. Is there a right to mobility? If so, what exactly does this mean? How can we provide better access – not just for increasingly older and fragile users in the rich countries but also for a growing population in emerging economies?

#### Communicating objectives

Ministers addressed the central issue of how to do more with less. Financing is a challenge, and examples of innovative approaches were shown by Switzerland for railways and France for urban transport. The role of competition in improving services and keeping costs down was emphasised. Consultation with the public is increasingly important for investment decisions, but also to explain the aims of policy.

In his keynote address, Jeffrey Sachs reminded us that our infrastructures will have to adapt to new challenges:
To changing concepts of the city, to the convergence of transport and communication, to providing infrastructures where these do not yet exist. To do this, argued Sachs, "we need networking among and between universities, industry, civil society and government in an extremely intensive manner."

## Linking policy and implementation

That is of course what the International Transport Forum is all about. And many of the summit speakers personified the crucial link between policy development and policy implementation – such as Enrique Peñalosa, former mayor of Bogotá and a leading thinker on liveable cities; or Jaime Lerner, architect, three-time mayor of Curitíba, former governor of Brasil's Parana province and mastermind of bus rapid transit.

In Leipzig, Jaime Lerner was honoured with our first Leadership in Transport Award for his visionary policies and determination to implement them. Arriva Denmark SA received the Achievement in Transport Award for "Better Bus Ride", a project that truly puts people first. And Canadian researcher Dr. Jonn Axsen was named 2011 Young Researcher of the Year for shedding new light on consumers' motives for buying electric vehicles.

The European launch of the U.N. Global Decade of Action for Road Safety at the summit highlighted the continued fight against road fatalities.

Partners like the World Bank, WHO and the International Chamber of Commerce provided added perspectives on the summit theme through events on issues such as gender, health and piracy. The summit also reached out to the public: Nearly 100 delegates joined an hour-long cycling tour through Leipzig in glorious sunshine, led by Mayor Burkhard Jung as tour guide. And at the Childrens' University, Leipzig schoolchildren quizzed politicians on transport issues and had their picture taken with U.N. Road Safety Ambassador, Grover of Sesame Street.

#### Important decisions

Important decisions also marked the 2011 summit: China declared its intention to join the International Transport Forum. That is a most welcome development, and as the world's largest exporter and most populous nation, China can contribute much to the debate on transport's future.

On the fringes of the summit, a number of agreements were signed. Armenia and Germany signed a road transport agreement. And Minister Ramsauer and I put our signatures to a document that ensures the summit will stay in Germany until 2017. The Forum is exceptionally grateful to Germany and Minister Ramsauer for their continued and generous support.

The 2011 summit was my last as Secretary General. It has been a great honour to have led the ECMT and the International Transport Forum over the last decade. These ten years have seen significant changes in the reach, aims and structures of the organisation. The Forum is a necessary addition to the world's transport institutions.



Jack SHORT welcomes delegates to the 2011 summit

As the global industry par excellence, as the driver of globalisation, as the conduit for human contacts and trade on scales never seen before, transport more than ever needs global policies and arrangements. The International Transport Forum has a broader perspective than existing global bodies and brings together key decision makers. Its further development is necessary, as the challenges ahead are shared, complex and increasingly global.

Ministers elected Carole Coune as their new Secretary General. In wishing her great success in this position, I express the hope that the Member Countries will ease her task by showing the strong cooperation that this new organisation needs. I thank the Ministers, board members and delegates for their support and enthusiasm over so many years.

Finally, special thanks go to the dedicated staff who serve the Members so well and who have made my task so much easier and more enjoyable over my career with the ECMT and the International Transport Forum.

"The challenges ahead are shared, complex and increasingly global."

## "International Transport Policy for Tomorrow's Society"



Peter RAMSAUER, Federal Minister for Transport, Building and Urban Development, Germany

#### Peter Ramsauer reflects on global challenges

This year's annual summit of the OECD's International Transport Forum in Leipzig once again attracted increased interest. This surge in interest also saw the largest ever number of high-ranking political leaders from the 52 member countries attend the meeting. The contributions from the guest speakers - drawn this year from the United Arab Emirates, China and Latin American countries in particular - proved that the International Transport Forum is regarded as one of the most important global platforms for mobility and transport. In addition, China announced that it was to become the 53rd Forum member country. This is a very positive sign. The International Transport Forum is increasingly developing into a global think tank and platform for international transport policy. Contact with counterparts, high-ranking representatives from industry, academics and leading representatives of civil society is constructive and fruitful.

This year's theme, "Transport for Society", offered us a multi-faceted and, once again, very topical subject. Volumes of everyday traffic are increasing. While this undoubtedly brings many benefits, it also presents major challenges.

Most of the time we are not consciously aware of these benefits, as long as connections run smoothly. In contrast, the failure or deficiency of a transport mode or route very swiftly triggers a public debate on its causes. The vulnerability of our transport systems was clearly demonstrated by the impacts of the volcanic eruptions which took place this year and last year – interestingly on both occasions on the days that delegates were due to travel to the International Transport Forum.

As soon as airspace is closed and flights are cancelled, we suddenly realise how important fully operational transport systems are for travel, trade and co-operation in a globalised world. Of course, this is particularly true in the case of international air transport. The International Transport Forum clearly showed that we are all very much aware of the importance of having fully functional modes of passenger and freight transport.

At the same time we need to bear in mind the possible negative effects of transport, for example its influence on land use, the climate and the environment, as well as on the use of resources. Responsible transport policy therefore goes beyond the construction of transport routes or the development of transport regulations. Transport policy has far-reaching implications – for society, the environment and the economy.

#### Far-reaching implications

A forward-looking and sustainable transport system, in our towns and cities for example, requires an integrated approach that optimises the performance of individual means of transport and their interplay with other modes of transport. Accordingly, the design of private car and public transport systems, as well as options for pedestrians and cyclists, must be both attractive and interconnected. Sustainable town planning must support this process. Central to this, especially for the construction of infrastructure, is the level of acceptance accorded to decisions on transport policy, meaning that the highest level of public participation needs to be achieved at an early stage in the process.

This is especially relevant for us in Germany. We need to adopt new approaches which will allow us to find workable solutions that will reconcile competing interests and secure an enduring consensus within society on projects that are important for the future.

#### Intercity services increase

Transport must become more environmentally friendly. Germany is therefore promoting the development of alternative drive systems and electric mobility and, as part of this effort, has launched some 200 field projects in several pilot regions. This effort is also aimed at environmentally friendly local transport. On the occasion of the International Transport Forum, for example, 20 low-floor hybrid buses were brought into everyday operation in the city regions of Leipzig and Dresden in Saxony. These buses are fitted with a series-hybrid system which enables the vehicle to be intermittently powered by a zero-emission, all-electric motor. At the International Transport Forum's summit in Leipzig participants were able to examine the suitability of these technologically advanced vehicles for everyday commuting.

Between now and 2025 we expect to see a dramatic increase in freight transport in Germany. Developments in passenger transport, on the other hand, are driven by demographic change. Older people, for instance, do not have fewer mobility requirements, they simply have different ones. Among other things, they require door-to-door services.

There will also be a greater concentration of the population in major conurbations. Rather than declining, intercity transport services are set to increase. Lastly, the international division of labour will carry on growing – and with it the transportation of goods.



Peter RAMSAUER addressing the delegates in Leipzig

Rising wages in emerging countries will lead to the relocation of manufacturing plants.

Alongside these developments, one thing is clear: even in an exporting nation such as Germany, 50% of freight transport and 80% of total transport volume still comes from domestic transport and is therefore not linked to globalisation and the international division of labour. We must therefore provide the necessary infrastructure and take steps to ensure mobility. These are both prerequisites for economic growth and employment.

To conclude, an important appointment was made during the Ministerial session of the summit. Carole Coune, a Belgian national, was elected Secretary-General of the International Transport Forum at the OECD. I would like to personally wish Ms Coune and her new team in Paris the best of luck for the Forum's future development. I would also like to thank her predecessor, Jack Short, for his commitment and hard work, and I wish him all the best for the future.

I am looking forward to the future summits in Germany. The Ministers approved Germany as the host location until 2017. I also hope that readers of this publication will continue to provide valuable contributions to the Forum.

"We need an enduring consensus within society on projects that are important for the future."



2011 annual summit



## **Transport for Society**

## "We Have Forty Years to Make the Shift"



Jeremy RIFKIN, President of the Foundation on Economic Trends, USA

"The key that brings people together in more evolutionary ways is transport."

## **Jeremy Rifkin** on how the third industrial revolution will shape transport

Two events in the last three years signal the long endgame for the great industrial evolution based on fossil fuels, and fossil fuel transport. The first event occurred in July 2008: Oil hit USD 147 per barrel on the world market, prices across the supply chain soared, purchasing power plummeted, and the economic engine shut down. Why did this happen? Because the entire civilisation is based on fossil fuels – not just transport. Petrochemicals and pesticides for agriculture. Pharmaceutical products. Construction materials. Fibre. Power. Heat and light.

We have likely hit peak globalisation on oil, according to the International Energy Agency. Yet the industry age based on fossil fuels will be with us for the next thirty years. The key is to make sure the old system does not collapse while we wean in a completely new economic paradigm. Transport will be right at the centre of this.

#### A new economic vision

The second event: December 2009, Copenhagen. 192 leaders come together from around the world to deal with the entropy bill for the industrial age. Our scientists say that perhaps there will be a three centigrade rise of temperature in this century, possibly higher. We are not grasping the enormity of this moment. We are in the early stages of a mass extinction event again. We could lose, up to 70% of all the species of life on this earth, as early as the later part of this century.

We are now paying the bill for the industrial age, and we need a new economic vision and a game plan that is practical and can be implemented in less than 40 years.

So how do the great economic revolutions in history occur? When we change the way we organise energy. This makes possible much more integrated civilisations and requires communication revolutions to manage them. And when energy revolutions converge with communication revolutions, they change tempo-spatial orientation, they change consciousness and they change our transport patterns.

#### Transporting empathy

In the last fifteen years, our neuro-cognitive scientists have opened up whole new doors regarding human consciousness. It turns out that we are not self-interested advantage-seekers, but the most social creature. Built into our neuro-circuitry is empathic distress, the ability to feel another being's experience as if we were feeling it ourselves. Empathy is the social glue that allows increasingly large units of people to identify and have solidarity.

Transport allows us to annihilate time and space so that we can integrate into these larger social units. The ancient forager or hunter societies only had the human body for transport. This limited their empathy to just blood ties. If you were in another tribe the other side of the mountain, you were a nonhuman. The key that brings people together in more evolutionary ways is transport. With animal transport and sailing ships in the hydraulics civilisations, more people were brought together, from blood ties to religious ties and other fictional families. We became integrated in larger units so we could empathise in broader ways.



Decentralised energy production will drive the Third Industrial Revolution

During the 19th century empathy extended again. It evolved from blood ties and religious ties to something called national identity. Principalities became countries. It was the railroad, together with the telegraph, that allowed us to consolidate time and space, so people could communicate, travel and become integrated into larger fictional families. And it is the transport of the 20th century, the automobile and jet travel, that has enabled us to extend empathy to even broader, more inclusive communities.

But this second industrial revolution is on life support. Fossil fuels and uranium are sunset energies. Technologies based on them have exhausted the s-curve and the whole infrastructure based on carbon is now too costly. We have had a very powerful communication revolution in the last fifteen years. The Internet revolution is now converging with a new energy regime: distributed energy. When distributed Internet technology organises distributed energy we will have a powerful third industrial revolution and transport should be right at the centre.

The European Union has committed itself to a five-pillar infrastructure for a third industrial revolution. I was privileged to develop the plan.

Its first pillar is distributed energies. The sun shines all over the world every day. The wind blows across the planet, 24 hours a day. We have ocean tides and waves coming in every day. We have forestry and agricultural waste in rural areas. We have hydropower where there is water. And we have garbage-converted energy. We have enough energy until our species' end days. The question is, why we collect them only in a few central points.

#### Positive power

Pillar 2: Buildings. The number one cause of climate change is buildings. The goal in Europe is to convert every single existing building – home, office, factory – into a micro power plant to secure green energy onsite: sun off the roof and walls, wind off the sides of the building, geothermal heat under the ground. This starts a construction boom. Bouygues has a new building in Paris. It is positive power. You can send that to the grid.

Pillar 3: Storage. The wind is not always blowing. The sun is not always shining. We need to store this energy. So we have introduced flywheels, batteries, capacitors, water pumping. The EU has made a commitment of EUR 8 billion to hydrogen as our central storage capacity so we can store these energies and use them whenever we need them.

"We will have a powerful third industrial revolution and transport should be right at the centre."



Jeremy RIFKIN talks about the need to re-envisage transport

Pillar 4 is where the new Internet technology, the central nervous system, connects with the new energy. We take off-the-shelf Internet technology. We take the power lines and transmission lines of Europe. It will cost EUR 1 trillion over the next decade. We convert those power lines to an Internet for energy. Millions of buildings will be collecting energy onsite, storing it in hydrogen, like we store digital media. If the energy is not needed, your software will direct that energy all across the continent.

#### Re-envisaging transport

Finally, pillar 5: transport. Without the other four pillars, we cannot get pillar 5. Electric plug-in vehicles have just come out this year; fuel cell vehicles will be out in 36 months. In future we will be able to plug-in anywhere and get green electricity from the infrastructure – or sell it back. If 25% of your transport fleet is sending electricity back to the grid at any given time, every centralised power plant in the world will be superfluous.

These five pillars go together. If one gets ahead of the other, we lose billions of dollars and time. We can only go to green transport if the other four pillars are in.

The music companies did not understand file sharing. When the kids started file-sharing music, the companies laughed at it – then they went out of business. The newspapers did not understand distributed power of the blogosphere. And now the newspapers are going out of business or creating blogs. Imagine what happens when distributed Internet technology merges with the fundamental energy to create distributed energy. This is power to the people.

So the third industrial revolution crosses continents, and transport is critical. We need to re-envision transport toward continental markets, and toward continental political spaces.



What we need is seamless energy with third industrial revolution infrastructure, seamless communication, and at the centre seamless transport from continent edge to continent edge. We begin to realise that we are as connected in the energy flows of our ecosystems as we are connected in the social spaces on the Internet.

#### Biosphere consciousness

Less we think this is an impossible task, let me give you some hope: Our kids are already learning biosphere consciousness. They come home from school and they say: "How much electricity are we using in our home?", "What kind of a car are we driving and how much mileage is it getting?" They are learning quickly that everything they do leaves an ecological footprint that affects some other creature somewhere else in this biosphere. That is biosphere consciousness. Time is running out for us.

Human beings are only one half of 1% of the biomass of this earth. Yet we are using 31% of the photosynthesis of this planet. So the ambition here is clear: Find a way to integrate the human race, with all five pillars of this infrastructure. Create seamless transport across continental markets, help us creating continental political unions.

The Asian union is forming. The African union is starting to get on the way. The South American union was just created. The European Union is mature.

You, the policy-makers, play a central role. You need to lay down a new seamless transport grid across the continents of the world. We have forty years to make the shift.

But we matured the first industrial revolution in forty years. We matured the second industrial revolution in forty years. We should be able to mature this third revolution by 2050.

"You, the policy-makers, play a central role."

## "A Powerful Symbol"



Enrique PEÑALOSA, Director of the Institute for Transportation and Development Policy

"It is very easy to solve mobility in any city if we really give priority to public transport in the use of road space."

## **Enrique Peñalosa** on urban mobility solutions for low-income countries that work

Developing world cities means giant opportunities and challenges. More than 2 billion new inhabitants will live in cities over the next forty years. Here we are in Leipzig - many developing world cities are growing at the rate of one Leipzig per year. My own city, Bogotá, grows by one Leipzig about every three years. So the challenges are enormous, not least because in terms of economic development most of these cities are in a different reality. It would take Bogotá, and all of Colombia, about 100 years growing at 5 or 6% per year to reach Germany's present per capita income. It is a different reality.

Transport poses a very peculiar problem. different from health or other challenges. As incomes rise, we tend to solve almost any other problem, while transport gets worse. There are more and more traffic jams, as people have more cars. But we cannot propose transport solutions unless we know what kind of a city we want. It is a very different story if we want to be more like Houston or rather more like Amsterdam. And even before we know what kind of city we want, we have to decide how we want to live, because, ultimately, a city is only a means to a way of life. So this has more to do with politics and democracy than with technology.

What is democracy? The first article in every constitution in the world says that all citizens are equal before the law. This may sound like a nicety, but it is actually a very powerful statement. Because if all citizens are equal before the law, a bus with 100 or 150 passengers should have the right to 150 times more road space than a car with one person.

And there is a conflict for space in cities between cars and people. There is a conflict for space between bicycles, pedestrians, cars and public transport. And there is also a conflict for funds in very low-income countries, because if we invest in highways, there may not be enough money to invest in housing, hospitals and schools.

#### What cars on sidewalks say

It is very easy to solve mobility in any city if we really give priority to public transport in the use of road space, and we give that space to dedicated bus lanes. This carries very low costs and is easy to do. But of course, it is a huge political challenge. The redistribution of road space is not a technical issue. It is a political issue.

We can give more space to sidewalks, to bicycles, to cars. It does not matter how much space you give to cars, we will never solve traffic jams just by giving them more space. Sidewalks are the most important element of transport infrastructure and I would say what really makes the difference between advanced and backward cities in terms of transport are quality sidewalks.

We find great highways in some very poor African cities where there is not even running water for most citizens. And we find even subways in some terrible cities. But what we do not find is high quality sidewalks, because upper income citizens who own cars – in my own city, for example, about 22% of homes own cars – have all the political power.

And so, the majority of people who only walk are not respected. One symbol of lack of democracy is to have cars parked on sidewalks.

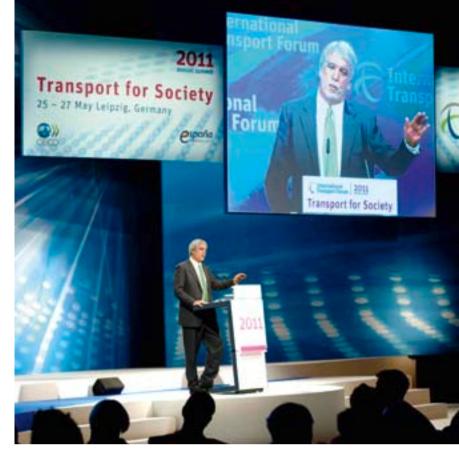
When I was a mayor of Bogotá, I was almost impeached when I was getting tens of thousands of cars off the sidewalks. People used to tell me: "There is enough space for cars to park and for people to walk by." We told them that sidewalks are not just for getting from one place to another. Sidewalks are for talking, for playing, for kissing. Sidewalks really are much closer relatives of parks than of streets.

So to say that sidewalks can accommodate parked cars and pedestrians is equivalent to saying that we could turn parks into open-air parking lots, as long as we leave enough space for people to walk by.

These issues are subjective. I cannot prove mathematically that it is better to have a 10-metre wide sidewalk than one that is two or three metres wide. This is something you feel with your soul, your heart. Upper income citizens only want highways. Sometimes they also want subways - not because they have the slightest intention of using them, but because they want to put lower income people and their buses underground so they do not take space away from their cars.

#### Making bus use sexier

There are huge political conflicts around this. In Bogotá, we decided not to follow recommendations to build billions and billions of dollars worth of elevated highways. We decided to restrict car use and to create bikeways, schools, libraries, housing projects and such things.



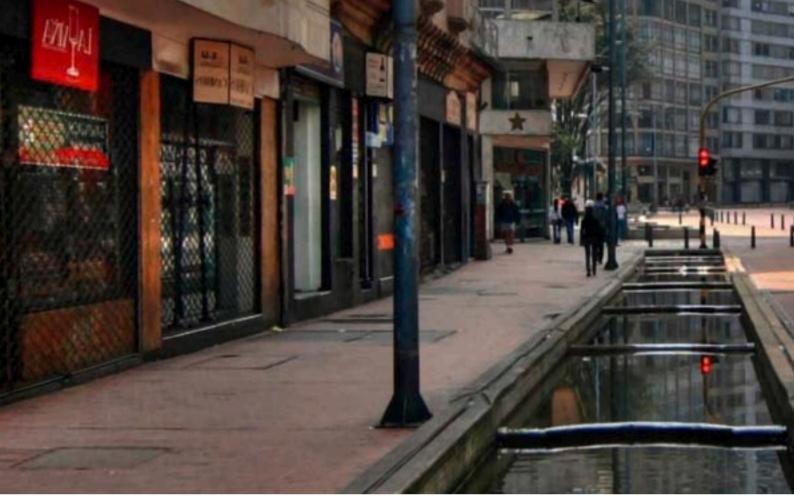
Enrique PEÑALOSA lays out his vision

And we have started a car free day, which was a approved through a referendum: The first Thursday of every February, there are no cars in Bogota, a city of 7 million inhabitants – only taxis and trucks. And 99.9% of the people go to work nonetheless. This is a fascinating exercise.

We also started investing in bicycle lanes. The bike is a very important means of transport. It can save more than 20% of a low-income citizen's income. Sidewalks are seen as a right today.

But are protected bicycle lanes a right, or are they just a cute architectural feature? I hope that we will see a day when bikeways will be considered a right. Or will we continue to believe that only those who have access to a motor vehicle have a right to mobility without the risk of getting killed?

"One symbol of lack of democracy is to have cars parked on sidewalks."



Enhanced bus lines in Bogotá help make public transport more appealing

"A protected bicycle lane in our low-income city is a symbol of equality." Today, Bogotá has more than 500 kilometres of bikeways and we need much more. This is a powerful symbol: A protected bicycle lane in our low-income city is a symbol of equality; it shows that a citizen on a USD 30 bicycle is equally important as someone in a USD 30 000 car.

Our protected bicycle lanes increased the social status of cyclists, which was extremely important. It helped us to move from 0% of the population using bicycles to 5%, in all about 350 000 people.

As for buses, in Bogotá they work more like trains or subways, with dedicated lanes and real stations. To increase the social status of buses, we gave it a name, the TransMilenio. We wanted to make it a little sexier, because buses have lost a lot of sex appeal in the last decades. Transport has a lot to do with status, anywhere in the world.

Now, when the upper-income people are stuck in traffic jams in their cars, the TransMilenio buses pass them by on dedicated lanes. It's a powerful symbol of democracy, which really shows that public good prevails over private interest.

#### Who gets the space?

But this is not just a matter of symbols. TransMilenio is moving more passengers per hour than almost any subway line in the world, except for a dozen. It moves more than 47 000 passengers per hour and we are certain that it could move even more. This kind of system is not necessarily the best, but it is the only possible means to solve mass transit in a developing world city.

Subways are wonderful, except that they are very expensive. An underground subway like in Sao Paolo costs USD 250 million per kilometre, while a very high quality Bus Rapid Transit can cost USD 10 million or USD 15 million per kilometre, including the lanes, the improved sidewalks and such.

20



No developing country today moves more than 10% of its population by rail; only Mexico City reaches 11% or 12%. If we really are going to give public transport priority, why are we putting public transport users underground and force them to give up the view of the city, light, and all of these things.

I have already mentioned the political difficulties, because the 20% or 30% of our citizens who own cars are also the only ones who hold political power. Let us imagine that there had been some kind of natural catastrophe, and we would only have fuel for 5% of the vehicles in a city.

To which vehicles would we give the fuel? I am sure we would give it to the trucks and buses, because otherwise our city would collapse. It is a matter of survival. It is also a matter of democracy, but fundamentally it is a matter of survival.

Now let us imagine that what is scarce is not fuel, but space. To whom shall we give space?

I believe that we have many possible solutions for mobility needs. For low income countries there are solutions which are politically difficult, but which have been shown to work.

"The first
Thursday of
every February
there are no
cars in Bogota."

### **Transport for Society**

#### **Key Messages from Ministers**

The Ministers of the International Transport Forum, meeting in Leipzig on 26 May 2011,

#### **Underscore:**

- The vital importance of passenger and freight transport for enabling economic growth, supporting individual well-being, and providing access to markets for labour, goods, and services;
- The complex challenge of meeting society's increasing demand for high-quality transport, while simultaneously reducing the adverse impact of transport on climate change and air quality, human health and the natural environment:
- The additional challenges facing transport systems from growing urbanisation, and changing demographics, notably the ageing populations in many countries;

- The need for a sustainable and efficient logistics and freight transport system, able to meet the demands of economic and traffic growth; and
- The considerable pressures on public budgets in many countries in the wake of the global financial crisis.

#### Note:

That the disruptions caused by the recent earthquake and tsunami in Japan tragically highlight the essential role of transport in the lives of individuals and communities, reminding us that what is particularly important in the event of a natural disaster are disaster-resistant infrastructure; the quick restoration of operations; and the provision and sharing of information on damage, recovery and the availability of transport services.

#### Highlight:

- The importance of focusing transport policy on citizens and communities, all of whom are directly affected by the benefits and impacts of transport use;
- The essential and complementary roles of the private and public sectors in providing services and infrastructure; and
- The efforts underway in the OECD and other organisations to broaden the framework for measuring societal wellbeing beyond GDP, and the need to ensure that transport is included adequately in this work.



Carole COUNE (centre) addresses the Ministerial Session



"Transport for Society": The Ministerial Session was one of the highlights of the 2011 International Transport Forum

Agree to work to improve the net benefits of transport and increase social, environmental and economic sustainability, focusing on the following challenges:

- Equity, by taking into account the needs of those segments of society whose access to opportunity is limited as a result of their income level, reduced mobility, or location patterns; by ensuring that questions of equity are adequately considered in investment decisions; and by recalling Ministers' 2006 recommendations on Improving Transport Accessibility for All;
- **Safety**, by recognising that the global numbers of road traffic deaths and serious injuries remain unacceptably high, and by supporting the United Nations' Decade of Action for Road Safety, while continuing to promote global best practices in all modes;

- **Security**, by supporting continued global collaboration to combat terrorism and crime in transport, and by constantly enhancing vigilance on the basis of risk-based approaches that respect the individual integrity of the traveller and optimise the use of public resources;
- with other levels of government to foster urban transport systems that optimise the use of all modes to meet the mobility and freight needs of growing urban populations, and by recalling Ministers' 2006 recommendations on Implementing Sustainable Urban Travel Policies;

Wakio MITSUI
Senior Vice Minister
of Land, Infrastructure,
Transport and Tourism,
Japan





- **Economic growth**, by orienting transport policy towards supporting economic growth and employment; by prioritising the availability of resources for the maintenance, renewal and upgrading of transport systems; by focusing on investments that facilitate access to economic centres, urban areas and key corridors; by promoting a freight transport system that is reliable, efficient, and environmentally sound, with strong links between all modes; and by implementing recommendations from the 2009 Annual Summit on Transport for a Global Economy: Challenges and Opportunities in the Downturn;
- Employment, by working with employers, employee associations and educational institutions to facilitate the veducation and training required to ensure the availability of skilled personnel to meet the needs of the transport sector of the future, while recognising the links between working conditions, the ability to attract skilled employees and the quality of services provided;

- efficiency, by making the most of the efficiency-enhancing potential of private-sector actors in providing services and infrastructure; by employing appraisal tools in order to optimise the use of public resources; by encouraging pricing that better reflects the costs of transport use; by collaborating with other national, regional and sub-national governments to share best practices and avoid duplication of efforts; and by monitoring the performance of the transport sector to achieve the highest possible value to users and taxpayers;
- **Financing**, by identifying new funding sources, business models and best practices to support the construction, implementation, operation, and maintenance of transport, thus providing options to decision-makers for effective funding and resource strategies that provide the highest possible value for users and taxpayers;

#### ■ Technology and innovation,

by promoting new practices and technologies – including Intelligent Transportation Systems (ITS), and new vehicle technologies, such as hybrids, new-generation batteries and fuel cells – that improve access, environmental performance, safety, efficiency, connectivity and the effective and optimal use of infrastructure for freight transport; by adopting policy frameworks to encourage innovation; and by implementing recommendations from the 2010 Annual Summit on Transport and Innovation: Unleashing the Potential; and

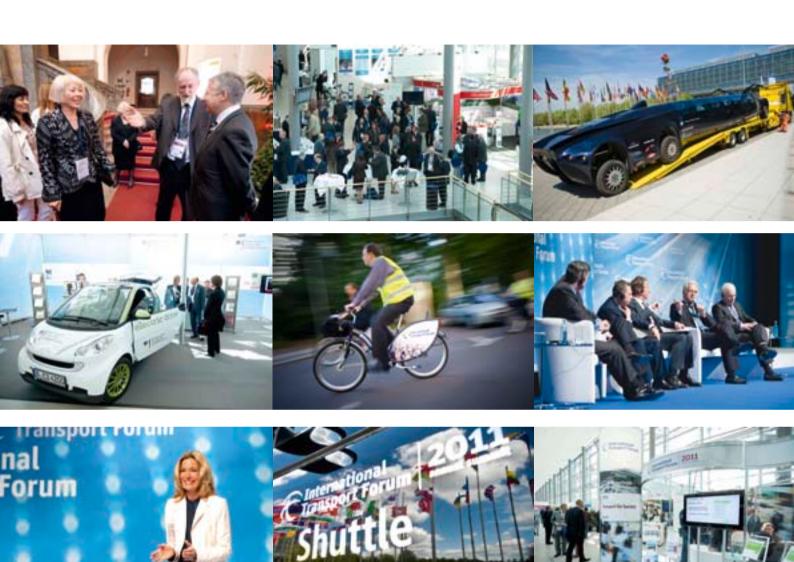
■ The environment and health, by encouraging the use of transport modes - including public transport, cycling and walking, as well as rail and inland waterways for freight – that can reduce emissions of greenhouse gases and air pollutants, mitigate congestion and improve individual health; by working to reduce the energy intensity and emissions of motorised transport; and by implementing recommendations from the 2008 Annual Summit on Transport and Energy: the Challenge of Climate Change and recalling Ministers' 2004 recommendations on National Policies to Promote Cycling.

In conclusion, Ministers of the International Transport Forum will, in their national policies, continue to address these challenges, and call on all transport stakeholders to join them in their efforts to ensure that transport continues to enhance the quality of life of individuals and communities.

These key messages are supported by a Background Paper and by analytical work on the various aspects of transport and society carried out by the International Transport Forum for the 2011 summit. All documents are available from www.internationaltransportforum.org



Outgoing Secretary General **Jack SHORT** (centre) with his successor **Carole COUNE** and **José BLANCO LOPEZ,** Ministro de Fomento, Spain



Following the kick-off keynotes by Jeremy Rifkin and Enrique Peñalosa, Day 1 of the 2011 summit saw stimulating debates on transport's role in society: Is there a right to mobility? Will shrinking budgets accommodate rising demand? Can we protect passengers and respect privacy? How to ensure equitable access for all?



# **Understanding the Issues**

## **Putting People First**



Jan MÜCKE, Federal Parliamentary State Secretary, Ministry of Transport, Building and Urban Development, Germany

"Mobility without ifs or buts."

– Jan Mücke

#### **Opening Plenary**

Quality of life is a multi-faceted concept, embracing prosperity, opportunity, the environment, health, safety and security. Transport has an important role in all these areas and its net benefits could be both increased and better distributed. Finding means to achieve this was the objective for the International Transport Forum's 2011 summit, which opened with a discussion moderated by **Melinda Crane** of the key challenges facing transport.

The tone was set by Jan Mücke, Parliamentary State Secretary for Transport in Germany, who called for more attention to the sounding board of public opinion in determining the quality of transport services. Sustainable mobility needs public transport, but includes a central place for private transport, with e-mobility one element. Infrastructure management is equally important, with potholes to fill and traffic light systems to optimise. Infrastructure development has to focus on providing for pedestrians and cyclists as well as cars. Mr Mücke underlined Germany's commitment to mobility "without ifs or buts" and aims to improve mobility not limit it.

John Porcari, the US Deputy Secretary for Transportation, expanded on the need to begin putting people first in transport planning. A US citizen today can easily spend more on transport than housing. With 100 million more citizens to provide for in 40 years time this has to change and it will require new investment. The current generation is living on the infrastructure investments of its parents and grandparents and not investing enough for the coming generations.

Asked just how much the quality of transport services needs to be stepped up, **Tim Leunig**, Professor at the London School of Economics, brought the debate down to earth, suggesting "transport needs to be good enough but not much better": People flock to London and New York with lousy transport infrastructure, rather than Geneva with its perfect transport. Buses are often nearly as good as metros and "if you can get from A to B that will do". He lamented the lack of ex-post evaluation to assess whether projects deliver the benefits promised. Some of the money for ex-ante project appraisals should be used to assess what is actually delivered.

Sharing cars can relieve pressure on resources, as **Robin Chase**, CEO of Buzzcar and Zipcar explained: "A privately owned car consumes around three parking spaces overall, whereas car-sharing models can result in 30 or even 50 people being served by those resources." Asked how big such schemes could grow, she noted that Zipcar now serves 56 000 people using 8000 cars with users clocking up 80% less driving miles than if they owned their own car.

Low cost rental or shared cars could be a big part of future mobility in poor cities in **Enrique Peñalosa**'s view, as people only need a car for trips once or twice a month. The only way to restrict cars is to restrict parking, which is not after all a constitutional right.

Making these changes is not easy. Mr Peñalosa noted that in poor countries the middle class use private health, private schools and private clubs and the only thing the rich need from government is roads, so pressure on the government to deliver is huge.



Mr Porcari observed that change in the US is happening, with "complete streets" increasingly popular and being retrofitted in many cities. City bike sharing systems have also become important in New York and Washington, DC. And retiming of pedestrian crossing lights is a widespread, important even though small thing that is changing the pedestrian-vehicle balance.

Ole Thorsen of the European Cyclists Federation asked why pedestrians are overlooked in project evaluation. They are hard to count as they do not buy tickets, was Tim Leunig's explanation. Also, little is known about pedestrian trip purpose, although some appraisal methods, e.g. in the UK, explicitly include pedestrians. For John Porcari the key is bottom up planning to develop a consensus on transport alternatives.

The final part of the discussions returned to investment issues. In a survey of people using BMW's pilot electric cars, 70% believed government needs to make a major investment in public charging stations. John Porcari's answer was to start the roll-out of electric vehicles with public fleets and transit buses that run the same routes and require only a small number of charging stations. Sibel Bulay of EMBARQ, Turkey, asked if politicians can resist build-operate-transfer (BOT) road projects promoted by financiers without a need for a financial contribution from city governments.

Enrique Peñalosa cautioned that such BOTs are often plagued by bribes and high costs and create barrier effects and noise. They should be resisted, he argued, as building more roads has nowhere solved congestion. Tim Leunig added that more roads generate more trips and more fuel taxes while more public transport passengers usually mean more subsidies. Both visionary politicians and insistent NGOs for alternative transport solutions are needed, with the outcome to be fought out democratically.

"A privately owned car consumes around three parking spaces overall."

- Robin Chase



### A Delicate Balance

#### Mobility rights, needs, expectations and costs

"There may
be a need to
reconsider
assessment,
focusing more
on accessibility
gains."

- Iosé Manuel Viegas

Mobility is sometimes perceived as a right, but defining a basic level of mobility provision is not easy. Transport demand is guided by people's needs and aspirations, which are diverse and depend on other choices, such as where people live and work. The cost of transport to individuals is an important factor, and this often differs from costs to society. Societal demands for broad access to transport services come at costs that must be accounted for.

These issues, debated in the session chaired by **José Manuel Viegas**, President of Transportes, Inovação e Sistemas, Portugal converge in the policy debate on finding the right balance between mobility rights and the costs of providing safe, reliable and sustainable transport systems.

#### Sustaining adequate mobility

Mobility is vital for the quality of life of citizens. Innovations, both technological and organisational, have enabled people to travel faster and greater distances.

John Hanlon, Secretary General of the European Low Fares Airline Association, explained that market liberalisation in Europe and the United States gave birth to the low fare airlines industry that carries one third of passengers today. With rising incomes and growing population, expectations for mobility continue to grow although there are some signs of change.

**David Metz**, Visiting Professor at University College London, UK, pointed to emerging data showing a levelling-off of car travel in some developed economies. This suggests that the level of car mobility is enough to meet peoples' needs and expectations.

There are reasons to expect a continued decline in the extent to which higher incomes mean more travel. However, given the heterogeneity in transport demand, finding right levels of mobility and sustaining them in the future is still a challenge.

#### Access is not equal

Some groups, especially the elderly and the disabled, find access to mobility a challenge and protecting their mobility rights becomes more difficult. The disabled citizens may need parking closer to destination. The elderly may need to give up driving but not know how to use public transport. As a consequence, their mobility is reduced.

There are solutions to help ageing populations maintain their mobility. Better use of vehicle technology and training of the elderly to use public transport can help, underlined Susan Pikrallidas, Secretary General for Automobile Mobility and Tourism at the Fédération Internationale de l'Automobile (FIA). Infrastructure design could also take into account access issues. For example, green light extensions already in use for buses could be also used for pedestrians at crossings. Public transport can be made more attractive and accessible by providing high quality services meeting passengers' mobility needs. Jan Scherp of the European Commission underlined that legislation plays an essential role in implementing minimum service levels for accessibility.



Today, a large share of public space in cities is used for driving and parking cars. Transport networks are among the most valuable assets in cities. As **Enrique Peñalosa**, Director of the Institute for Transportation and Development Policy and a former Mayor of Bogotá, Colombia, put it: The question becomes how to allocate space between motorised and non-motorised transport. Urban design plays a major role and focusing on liveability and active mobility may change the layout of our cities. Increasing city density may also reduce the need for more travel and improve accessibility.

In developing countries, many households still do not own cars. Equitable transport policies therefore would focus more on cycling and pedestrians than they do today. In the words of **Manfred Neun**, President of the European Cyclists Federation: Cycling for society is the approach for transport for society.

#### **Developing indicators**

How should we allocate funds between non-motorised and motorised modes? The traditional assessment methodology, cost-benefit analysis, measures benefits through travel time savings and highlights efficiency gains. "There may be a need to reconsider assessment, focusing more on accessibility gains", summarised José Manuel Viegas.

This does not necessarily imply changes to cost-benefit analysis. Tools exist already for achieving more equitable access. Some countries have developed indicators for accessing different services. Indeed, developing indicators for access and quality of travel may be a tool to ensure equity in decision making.



### **More with Less**

#### Shrinking budgets and growing demand

"Privatisation
should be driven by efficiency, not by desperation for finance"

limited maintenan In his summary particle. Lord Macdonald surprisingly unconfunding strategies from a heavy relia funds towards incluser charges, while extreme should not also noted that the that there are opposite from the private swidely.

- Urban Karlström

The gap between how much transport infrastructure is needed and how much is available is large and is broadening, because of growing demand, lagging investment in new infrastructure, and limited maintenance of what exists. In his summary panel chairman Lord Macdonald concluded that it is surprisingly uncontroversial to say that funding strategies need to shift away from a heavy reliance on general public funds towards increased reliance on user charges, while recognising that one extreme should not replace another. He also noted that there is broad agreement that there are opportunities to benefit from the private sector's strengths more

While there is considerable consensus that the funding structure can be improved along those lines, experts disagree about exactly how much can be expected from user charges and increased private sector involvement.

User charges generate revenues, but they are first and foremost demand management tools. When other funding sources are scarce, the political appeal of user charges increases. But social acceptance for charges is limited - unless they can be shown to produce benefits such as less congestion or lower environmental impacts.

#### More privatisation?

Private sector involvement can increase efficient operation of infrastructure in a context where government sets performance standards. The merits of this approach were emphasized by **Gabriel Gutierrez**, Project Director at Cintra, Spain. But it can be taken further, towards privatisation. Some countries have privatised infrastructure, and the understanding of when this is a good solution and how it should be done is increasing. To make it work, the need for a strong, independent regulator was emphasised.



Should there be more privatisation? In one view, there is considerable potential for more socially beneficial privatisation, if it is done right, and the supply of capital looking for investment opportunities is large. Roberto Aguerrebere, Director of Instituto Mexicano del Transporte, sees private investment as a compliment to public investment. In Mexico, 40% of the investment over the last 10 years came from the private sector and this had been seen particularly in interurban transport infrastructure, such as Bus Rapid Transport systems, suburban trains and roads. But there are downsides and false hopes. Privatisation deprives government of the possibility to correct mistakes, for example when assets are sold to parties that pursue objectives very different to those of the government. And that privatisation can deliver large social savings beyond those from more efficient management is a false hope.

Privatisation should be driven by efficiency, not by desperation for finance, said **Urban Karlström**, President of the Swedish Forum for Innovation and Strategies in the Transport Sector. Infrastructure needs to be paid for under any funding approach, so these approaches differ mainly in terms of who pays what. While private funds are better in some cases in terms of cost efficiency, public funds will be better in others.

Joris AI, Director at Rijkswaterstaat, The Netherlands, emphasized that public involvement in transport funding will remain widespread, and that attention should focus on maintenance: Politicians like cutting ribbons on new projects, but good maintenance is the real prize.

#### Overstated budget pressures?

In the discussion, it was suggested that the impact of the crisis on the funding ability of governments is sometimes overstated. The crisis certainly provides opportunities to improve cost-efficiency. But the necessity of a massive shift towards private funding is less obvious, other than for reasons already understood before the crisis. Most of all, the crisis should not lead to reduced spending. As **Paolo Costa**, President of Venice Port Authority, Italy, pointed out, the priority is to avoid doing less with less.

"The priority is to avoid doing less with less."

- Paolo Costa

The crisis has damaged the reputation of some financial techniques, including securitisation. But, emphasized by **Hélène Mizrahi-Walden**, Head of Transportation at BNP Paribas, UK, these instruments have their place in a wellfunctioning financial system, for which a strong independent regulator is essential.





## **Meeting Tomorrow's Needs**

#### Transport and employment

"Prospects remain good for job growth in the sector"

Transport's workforce is evolving as society changes. But is employment in transport keeping pace with changes in demand, technology and society? Up to one in ten workers in developed countries works in transport. Some sub-sectors, such as road freight, are fragmented, with thousands of small-scale operators and a few very large operators. Others, such as national rail services, tend to be dominated by large employers. Some jobs did not exist just a few years ago, such as mobility managers. Others risk losing relevance.

This session, chaired by **George Dragnich**. Executive Director Social Dialogue at the International Labour Organization (ILO), addressed the employment challenges facing transport in terms of societal trends, technology development, new service provision and training. The discussants were David Cockroft, General Secretary of the International Transport Workers' Federation; Sylviane Delmas, Inspector General at RATP Paris, France; Thomas Ehm, Vice President of Employment, Training and Competence Management, Airbus; Oksana Exell, Executive Director of the Asia-Pacific Gateway Skills Table, Canada; and William Millar, President of the American Public Transportation Association, USA.

#### Are transport jobs attractive?

Globally, the transport sector is hiring in unprecedented numbers, despite the crisis. Prospects remain good for job growth in the sector. It is largely fuelled by developing countries, other regions display divergent trends with job losses and worker shortages often coinciding. Are careers in transport attractive? In areas such as truck and bus driving employers face difficulties recruiting qualified drivers willing to accept difficult working conditions. Hiring foreign labour can be problematic when domestic unemployment is high. Many jobs are attractive but also less well known to firsttime job seekers, indicating a need for better communicating such opportunities.

Women are underrepresented in transport. Is the sector addressing their needs? In some areas this seems to be the case. Maternity leave is one example, as more women rise to management positions.



How can careers in transport become more attractive?



In other areas, changing transport jobs offer new opportunities for women: Physical strength is less important for dockworkers, as containers are moved effortlessly with high-tech cranes.

#### Innovations in training

Generations X, Y and Z have different work expectations than their predecessors, especially with regards to flexibility and work-life balance. Likewise, qualified workers shy away from jobs that do not meet growing expectations regarding health and safety, as seen among truck drivers in several developing countries. Making transport jobs safe, flexible, non-repetitive, and part of a creative solution set to delivering real lifeimproving services will contribute to job attractivity in the sector. This will require changes in the thinking of both organised labour and management.

New forms of training are required for jobs attracting too few qualified workers. Establishing common qualifications and aligning state and private sector training programmes is one step.

Training may also have to adapt to the lifestyles of a changing workforce, for example by allowing workers to gain specific competencies rather than receive full-scale training that are the norm now. New partnerships between employers and education institutions can help ensure that workers enter the market with the skills sought. But there also needs to be a focus on retaining experienced older workers. Training has costs, but it also enables increased productivity. Ultimately, training will have to be for new skills that allow employers to deliver on the needs of transport service users.

Oksana EXELL

"New forms of training are required for jobs attracting too few qualified workers."



### **Equitable Access**

### No passenger left behind

Personal mobility and access to goods. services and employment are important determinants of quality of life. Poor access to transport and reduced mobility are linked to economic disadvantage, inequality and social exclusion. Particularly vulnerable to inequitable access are older and disabled people, economically disadvantaged individuals, women, young adults and those who live in remote and rural communities.

Accessible transport is fundamental. It ensures access to basic needs such as education, health services, shopping, social interactions and working. In the past, priority has been given to increasing average speed of transport, rather than on connecting all citizens.

#### Break the car bias

In the United States, 30-40% of the population lack access to transport; in developing countries this can be as high as 85%. In transport planning, costbenefit analysis often reinforces the bias towards the car. But in many car-centred cities, a large part of the population is not able to afford a car. Promoting equal access is only possible if the real costs of car usage become visible.



Access to transport is key to a better quality of life



There is an over-fascination with megaprojects that favour car travel and neglect pedestrians. Large projects often displace poor populations to make room for roads or railways, and new roads often add to the safety problems of poor populations living alongside. Metro systems in many developing countries ironically remain inaccessible to those through whose neighbourhoods the metro lines run, as they cannot afford fares.

There is an obvious need to re-prioritise policy goals and design transport projects with people's needs in mind. Emphasis should be on recreating geographic proximity. Integrating pedestrian and cyclist needs is therefore a key part of providing equitable and sustainable transport. The specific requirements of women – who often need to juggle a (non-paid) job at home and a (paid) job outside – are also not fully understood by planners. To drive change, the voice of those left behind has to be made heard; here, non-governmental organisations have an important role.

In terms of policy making, long-term choices have to be made compatible with equity and sustainability. Politicians have to adopt a strategic view but also consider proximity needs and understanding co-benefits. In economic terms, subsidising car users directly and indirectly creates huge distortions between the transport modes. Correcting this and opening the market for innovative and diversified transport is part of creating efficient solutions. A clear vision of a functional city and consultation with users is the basis for this. Project appraisal has to start with a dialogue with all parts of the community concerned.

As Geetham Tiwari summarised, "The single most important practical measure would be to include providing pedestrian and cycling facilities as a compulsory part of any major urban transport development project."

"Include pedestrian and cycling facilities as a compulsory part of any major urban transport development project."

- Geetham Tiwari

### The strategic view

Increased opportunities provided by access to services are critical to quality of life. To take account of this, measure for well-being beyond GDP are needed. Increased efficiency can be made consistent with improvements in quality of life when proper economic signals are in place and better indicators are used in appraisals.

Ann FRYE



Robert CERVERO



## **Security in Transport**

### **Protecting and Respecting Users**

"Passengers want protection, but not by wasteful and ineffective systems."

- John Hanlon

Security is paramount, but it makes travelling more arduous and more costly. Many parts of the transport system present potential targets for terrorists. In this context the session examined how different approaches to security can make the most of scarce resources and protect vulnerable parts of the transport system.

The London Underground carries 2.9 million passengers a day. Physically screening such traffic volumes is impossible. The focus must therefore be on deterring attacks by creating a controlled environment. This involves multiplelayered security based on observation and interaction with passengers. Geoff **Dunmore**, Network Security Manager of London's Underground, underlined that "security in public transport systems is built on demonstrating that the public space is actively managed". This includes "unpredictable interventions" critical to staying ahead of changing threats, explained Marta Lestau Saenz, Director for Civil Aviation Security and User Protection at Spain's Safety and Security State Agency.

For airports, smarter processing of passengers is the way forward.

John Hanlon, Secretary General of the European Low Fares Airline
Association, pointed out that "passengers want protection, but not by wasteful and ineffective systems".

More use needs to be made of passenger data. "We have tended to look too much at objects and not enough at people", said Nico Beilharz, Deputy Head of Aviation Security at Lufthansa.

### Selective screening

Adjusting the level of screening to alert levels, to observed behaviour and to irregularities in identity data is key. Selective screening will free up resources for more effective checks, reducing delays for the 99.9% of passengers that present no risk. Yet improving screening, rather than simply adding new procedures, is not easy in an environment where changes can be politically sensitive.

Martin Matthews, Chief Executive at New Zealand Ministry of Transport, gave an example: In response to an attempted highjacking by a mentally unstable passenger, full passenger screening at all regional airports was proposed.

A thorough impact assessment enabled politicians to turn down a proposal that would have crippled remote areas economically, while being ineffective against the kind of attack that initiated it. Panel chairman **Zoltan Kazatsay**, Deputy Director General at the European Commission Directorate-General for Mobility, summed up the approach as "proportionality based on risk assessment".



38

The need to adapt to changing risks was stressed by **Jean-Marc Suchier**, Senior Vice President for Special Affairs, Technology and Strategy at SAFRAN Morpho, France. He noted that "the Maginot Line was absolutely useless – people felt secure but it didn't work. We have first to define risks and define what we want to achieve." Faster, user-friendly processing will be needed to handle growing flows of airport users.

New technology promises walk-through devices to check boarding passes, identity, baggage and people, without the need to remove clothing. It will not be perfect, but will ensure today's security level in less time. The body scanner issue will be resolved, as the future promises automatic recognition of dangerous objects and substances.

Splitting the bill

Air passengers used to bear the main risk of hijackings. Today's terrorists use planes as a weapon to create large scale disruption on the ground and in the functioning of the State. Security measures thus benefit all citizens. This is relevant to decide how security should be paid for. Splitting costs for aviation security between operators and the State may help to focus attention on cost effectiveness and proportionality of measures.

The US and Europe have to agree common systems for security in international transport, because complying with two sets of systems escalates costs. Coordination with other countries is also more difficult, undermining global security. Responses to new threats have historically been developed in parallel and incompatibilities have been common. In responding to future threats, underlined Nico Beilharz, "joint development of security measures must be the goal".

"Joint development of security measures must be the goal."

- Nico Beilharz



39

Nico BEILHARZ

## **Keeping it Clean**

### Transport, health and the environment

"Putting people first and understanding their needs are the prerequisite for improving mobility and urban planning."

Are societal expectations for transport services, environmental quality and health incompatible? Much has been done to reduce pollutant emissions from new vehicles, but air pollution levels in cities have not reduced as much as expected. Modern transport systems provide access to more jobs and opportunities, but active forms of transport such as walking and cycling have been sidelined, with negative effects for health.

Dense urban areas have the potential to reduce greenhouse gas emissions and promote active mobility. But many choose to live outside of city centres, and the existing transport systems allow suburban sprawl. Such paradoxes and other challenges created by current mobility patterns were at the centre of this panel discussion.

Chaired by Eva Molnar, Director of UNECE's Transport Division, panellists Lawrence Burns, Professor at the University of Michigan, USA; Yasuo Hozaki, Executive Officer at West Nippon Expressway Company, Japan; Kee Yeon Hwang, President of the Korea Transport Institute; Professor Haixiao Pan of Tongji University, China; Helle Søholt, Managing Director of Gehl Architects, Denmark; and Jean-François Toussaint, Professor of Medicine and Member of France's High Council of Public Health; debated the environment and health aspects of how transport systems are developing.

### Cities for people

As incomes rise, individual motorised mobility becomes a compelling option, and some cities have seen a reduction in the share of public and non-motorised transport over the past decade. This has important consequences in terms of health – due to pollution and a sedentary lifestyle –, congestion and the environment. At the same time, there is a general demand for better environmental quality and improved health.

Putting people first and understanding their needs are the prerequisite for improving mobility and urban planning. For decades, traffic planning has created uninviting urban environments, and a paradigm shift is needed towards "Cities for People", where mobility supports people's ways of life and is not an end in itself. Automobiles should not be imposed on cities at the expense of the human beings living in the urban environment.



Urban areas have the potential to reduce greenhouse gas emissions



Traffic management technologies can ensure personal freedom to move while limiting the negative side effects. Technology is also essential to optimise the delivery of goods to citizens.

Walking and cycling have great potential to contribute to more sustainable and healthy cities. Active mobility brings physical and mental health benefits that largely outweigh possible increased exposure to pollution or safety risks. Promoting these transport modes may require thinking outside the conventional box, not least regarding the use of the space. For example, dedicated elevated bicycle paths have been successfully implemented in Korea's capital, Seoul. There was a debate, however, whether sharing space is a better approach than segmenting it.

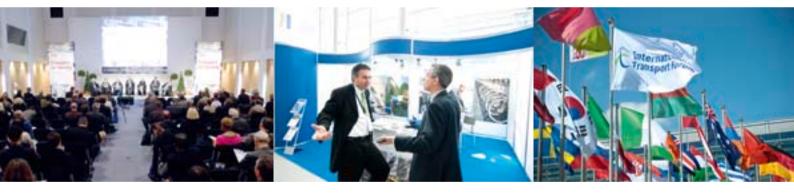
### Measuring liveability

New indicators are needed to measure the liveability of cities, with a focus on the well-being of citizens and the costs versus the benefits of active mobility. There is also a need to better understand people's behaviour in order to adjust the transport system to their true mobility needs - after all, policies implemented today will determine the design of cities for many decades. Actions are needed now, but cities around the world face a wide variety of problems, while there is no one-size-fits-all solution. Future mobility will require a combination of innovative urban design, new technologies and appropriate incentives to stimulate walking and cycling.

"New indicators are needed to measure the liveability of cities."







Ministers from Forum member countries and beyond addressed the challenges of meeting users' needs on Day 2, following a keynote by economist Jeffrey Sachs.

Both passenger travel and freight were highlighted against the question of how to improve policy and planning to innovate for more liveable and sustainable societies.



## **Taking Action**

## "We Face a Stunning Challenge"

Jeffrey SACHS, Director of The Earth Institute, Columbia University, USA

## **Jeffrey Sachs** on transport for a global society of 9 billion people

In the last three days, I have travelled through Abuja in Nigeria, Lagos, Atlanta, New York City, Frankfurt and Leipzig. All flawlessly, without a single delay, without any inconvenience and without lack of safety. It is a brilliant accomplishment that modern transport systems can move 5 billion air passengers per year and an unimaginable amount of freight around the world.

Transport is the backbone of the world economy. If there is any quest to place the importance of transport in society, we can put it aside in a way, because transport defines economic life. Without transportation, one may well live at subsistence level as in some of the villages where I work in Africa. One of the first things we do in such a context is to try to identify the roads, transport and communications, connections that allow impoverished communities to escape from poverty.

If you go back to the very beginning of modern economics, to Adam Smith's great book, "The Wealth of Nations", you will find transport virtually on every page. Smith famously stated that the discovery of America and that of the passage to the East Indies by the Cape of Good Hope are the two most greatest and most important events recorded in the history of mankind.

To him, transport uniting the world was the pivotal event for modern humanity, the moment that created the global era. In his great book he explains how favourable transport conditions, particularly sea-based transport, make possible the division of labour and make possible the large scale trade that defines the rise of productivity and the rise of the modern economy. And it is fair to say that every fundamental step of globalisation since then has been occasioned by breakthroughs in transport: ocean-going vessels in the 15th century, ocean steamers and the telegraph in the 19th century, finally container vessels and the digital era in the second half of the 20th century.

Without those advances in transport, the rise of Asia, the fundamental shifts in the world economy to a rebalancing between East and West and a rapid convergence of the developing countries would be unimaginable. Transport has made it possible. Transport is the essence of what makes the world economy interconnected and productive.



Jeffrey SACHS evokes the challenges ahead



Transport systems must grow to accommodate higher demand

#### Problems of scale

So what is the problem, if all is working so well? The problem lies in several dimensions, all of scale. First, we are now 7 billion people and will be 9 billion by mid-century, as the world population continues to grow at about 75 to 80 million people per year. We face a stunning challenge of scaling up our infrastructure, including transport infrastructure, to accommodate 9 billion people. There can be no greater challenge than to bring the billions of people in the low-income countries into a modern economy in a sustainable manner, and this is perhaps also the greatest transport challenge in the world.

Second, is the era of unprecedented mass urbanisation. China is undergoing the most rapid urbanisation in world history. How the Chinese accomplish this will profoundly affect their quality of life throughout this century. It will have profound consequences to the rest of the world as well.

There are about a hundred million lightduty vehicles in China today. The country has overtaken the United States as the world's largest automobile market. If China were to have the automobile density of the US, about one billion vehicles will be added over the next decades, more than doubling the number of cars in the world. This, I think, would be unattractive for China's development, and it would raise profound questions for global sustainability as well. But it is a fundamental choice and it involves lots of crucial questions, decisionmaking, economic incentives, strategies of urbanisation, in short: some of the biggest challenges that have ever been taken on.

"There need to be fundamental changes in the 21st century."



Jeffrey **SACHS:** Business as usual is no longer an option

"We need a new sustainable design, mass transit, high density, lots of walking for a safe, high quality urban environment."

Third, a vast part of our transport system is petroleum based. We are in the era of peak oil. The rise in oil prices during the past several years to roughly USD 110 a barrel is a sign of a fundamental shift towards scarcity in conventional oil supplies. And this poses a massive question, as billions of people enter the income levels of mass scaling up of transport.

So managing scarcity is a new challenge, because, our whole era of modern economic growth has been a fossil fuel era. And we know that we are reaching fundamental limits.

### Era of instability

The fourth point is the scarcity of the environmental load to absorb the use of those fossil fuels. We have already reached 390 parts per million of carbon dioxide in the atmosphere. Leading scientists argue that 350 parts per million is the threshold beyond which we have serious damage to the global climate system. So we are already in the era of instability.

True, the transport infrastructure of the world is in some sense almost miraculous, moving billions of people and vast amounts of freight safely and efficiently at relatively low cost. But we simply cannot go on this way. There need to be fundamental changes in the 21st century.

Yet these changes also harbour great opportunities. First, the fastest urbanisation in human history offers the chance for a new era of urban planning and organisation. Billions of people will be entering the urban environment in the coming decades. Mistakes of the past such as urban and suburban sprawl and an automobile-based society should not be repeated. We need a new sustainable design, mass transit, high density, lots of walking for a safe, high quality urban environment.

## Fundamental breakthroughs

Second is the convergence of technologies. Transport and communications are always complementary. Together, the digital era, the renewable energies era and new transport technologies create an opportunity for fundamental breakthroughs in new design.

It is not just about electric vehicles; it is about a much smarter traffic flow design and lighter, safer urban vehicles that tap into sustainable energy systems.

Third in opportunities is building the new infrastructure where it does not exist. Africa is now a continent of a billion people. It will be 2 billion people by mid-century. There, infrastructure will have to be built for the first time, and this is an opportunity to be harnessed properly: rail, highways, fibre, waterways. Similarly, new infrastructure in Central Asia can link China and Europe, with a better integration of the Middle East, North Africa and the Mediterranean. And all of this has to square with the transition to a low carbon economy.

### "We need networking"

Ministers, you have a huge task. It is an unavoidable task; business as usual is no longer an option. All of this needs a new sustainability framework as the fundamental organising principle.

In terms of thinking about the necessary policy framework, Europe seems ahead of the curve. It is the only region that, in a politically as well as technically fully integrated manner, has taken a regional view of these issues. Europeans have put together the sustainability, the carbon, the climate and the quality of life dimensions. Their experience needs to be shared broadly.

Finally, there is the question of the political institutions and of governance arrangements. This is a tremendously complex challenge because transport goes together with public health, energy systems and land use.

Transport is not a technology, it is not a device, it is a complex system. It needs research and development and public acceptability. As the challenges are getting more complicated, we need networking among and between universities, industry, civil society and government in an extremely intensive manner. We are in the lock grip of the 20th century technologies, at a time when we need to move decisively to 21st century solutions. I hope that you will help to make that change happen.

"We are in the lock grip of the 20th century technologies."



Global transport networks become more and more complex

# **Meeting People's Needs** in Policy and Planning

### Part 1 – Moving Passengers

"Trying to restrain urbanisation is neither possible nor desirable, but it needs to be managed."

- Hongfeng Gao

How can the net benefits of transport for individual users be increased?
And what are the respective roles of companies, governments and individuals, as well as the costs and trade-offs?
Are new governance structures needed so decision-makers can better incorporate the individual user – and beneficiary – into the planning and provision of transport?
These were the issues at the centre of the panel on "Moving Passengers" chaired by moderator Michael Portillo, former UK transport minister and now a journalist.

China's Vice-Minister of Transport **Hongfeng Gao**, in his opening
statement, pointed to the merits of
international cooperation as embodied by
the International Transport Forum and
expressed China's interest in becoming an
official member.

China is expanding its transport infrastructure very rapidly, yet still has difficulties keeping up with growing demand and faces a major challenge to ensure that growth is orderly and green.

Accommodating everyone's desire to use private cars, as in the US or in Europe, will not be possible in China. Trying to restrain urbanisation is neither possible nor desirable, but it needs to be managed and public transport options must be made available quickly. Here, the European experience is seen as particular helpful for China.

### The share of public transport

The renaissance of the Spanish railway system in the past 20 years was presented as an example for a successful European experience by Teófilo Serrano Beltrán, President of RENFE. Environmental concerns and congestion prompted investment in reliable, fast and frequent train services for commuters, and today the highspeed rail connection between Madrid and Seville, for example, moves more passengers than car and air travel combined. Spain's rail network has been developed despite vested interests fighting it and is the key in making the transport system sustainable.





Top experts discussing the future of passenger transport

This vision was shared by **Alain Flausch**, President of the International Association of Public Transport (UITP) who presented results from a UITP simulation exercise. This suggests that under business-asusual policies, mobility and emissions will increase by 50% by 2025, with the modal share of public transport declining – a bad outcome from a sustainability perspective. UITP aims to double the modal share of public transport by 2025 instead, from 16% to 32%.

This will require a new business culture in public transport, with an emphasis on high quality service and higher fares to finance growth, in a stable mobility framework and strategy defined at the national level.

### The need for space

The emphasis on public transport or transit as the key to sustainable mobility was not entirely shared by Danish architect **Helle Søholt**, Managing Director of Jan Gehl Architects. If cities are to exist for people and there is to be accessibility for all, what is needed is not transit-oriented development, but people-oriented development.

The latter emphasizes the need for public space that accommodates the presence of people, so it focuses on non-motorized transport modes. It emphasizes proximity, not just density. Urban design needs to start from people, not from traffic.

Taking up the issue of long distance passenger travel, **Rainer Ohler**, Senior Vice President for Public Affairs and Communications with Airbus, noted the very strong expected rise in air travel.

Aviation is still a young mode, as the current generations are the first for whom flying is a routine option. Eighty percent of the potential global market is still in a development phase. Surveys suggest that current and potential passengers expect to fly more, greener, faster, and more comfortably. For this, more and better airplanes are needed.

The necessary investments make government support for research and development inevitable. Reducing environmental impacts requires multiple approaches, including new technologies, regulatory improvements like the Single European Sky, the use of biofuels and carbon trading schemes – if they are neutral to competition.



49

# **Meeting People's Needs** in Policy and Planning

### Part 2 - Moving Freight

Freight transport drives the economy and helps ensure equality. The freight sector is also an important employer. Higher productivity has sparked a long-term decline in transport costs and restructured the physical way the economy operates. Containerisation has reduced unit costs, fuel consumption and pollution.

There is a tension, however, between consumer demand generating freight and societal demands for environmental quality. Freight transport will continue to grow – in Germany alone, a 70% increase is expected by 2025, explained German Minister **Peter Ramsauer**. Road traffic would increase by 85% and transit freight by 150%. As Germany is a transit country, this has a serious impact on safety and emissions.

Increased productivity has made longer supply chains possible. But they are more complex and inter-related, making them more vulnerable. And as FIATA president **Jean-Claude Delen** put it, goods are only as good as when they are delivered. The supply chains face threats from congestion and unreliability, increasing the importance of collaboration and optimisation at all levels.

#### From road to rail

The challenges can be met, with government in an important role. Minister Ramsauer argued that governments should try to control the growth in road traffic and shift freight transport to rail and waterway transport as much as possible.



Ministers and experts discussing scenarios for freight transport



US Deputy Secretary of Transportation **John Porcari** echoed this view, stating that to tackle CO<sub>2</sub> emissions, moving goods should be kept on water and rail as long as possible, with trucks being used only for "the last mile". In this framework, the role of the government is to follow this policy through funding priorities. The role for the industry's firms is to position themselves as logistic solution providers within this framework.

Jean-Claude Delen reminded the panellists that shippers appreciate flexibility and use the mode that is most economical. In Europe, forwarders have tried to use railways but face problems of reliability and lack of competition. The role of governments therefore, in Delen's view, is to reduce overregulation and promote simplification.

Rail freight in the US has been successful in comparison, and this is in fact attributed to deregulation. Currently, the focus is on removing bottlenecks and improving passenger capacity.

The federal policy is to fund infrastructure projects with dual benefits for both passenger and freight transport, said John Porcari. Ukraine's Minister of Infrastructure **Boris Koleshnikov** illustrated the potential of rail:

Ukraine's network comprises 22 000 km, with less than half of it electrified. Plans to add another 5000 km of electrified tracks could bring down CO<sub>2</sub> emissions of rail by 45%.

### The problem of piracy

Potential for cutting CO<sub>2</sub> emissions also exist in the maritime sector. The International Maritime Organisation (IMO) has recently introduced the Energy Efficiency Design Index for new vessel as standard for energy consumption, which should enable 20-25% gains in fuel efficiency, noted **Michael Parker** of the International Chamber of Shipping. But as old vessels are slow in being replaced, it may take 40 to 50 years before new vessels will be introduced.

Securing the international supply chains poses great difficulties. Many parts of the transport system present opportunities for terrorists and criminals, causing increased expenditure on security. All panellists shared the concern for the safety of maritime shipping. According to Michael Parker, around 600 seamen are held by pirates. Countermeasures are not working, the pirates are moving faster than the international community. Not many countries are willing to bring criminal cases against pirates. Use of the military is a way to deal with the issue, but, as Minister Ramsauer concluded, the problem of piracy needs to be solved at its root.

"Reduce overregulation and promote simplification."

- Jean-Claude Delen

## **Creating Liveable and Sustainable Societies**

"The future will see more diverse urban transport in which cars will provide only part of the mobility options."

- Matthias Wissmann

What is "sustainable" and what constitutes a "liveable" society - and just how creative is the transport sector in delivering on these two objectives? Moderator **Nik Gowing** opened by pointing out that the idea of "liveability" conflates societal objectives such as access to quality employment, affordable housing, safe streets and pleasant living surroundings. Many of these concepts are open to interpretation, as B.K. Chaturvedi, Member of India's Planning Commission, made clear: In India, liveability in the context of transport often means access to a paved road or a rail line, especially in rural areas. But beyond that, more liveable can mean buying first a two-wheeler and then a car.

Lichtenstein is faced with a doubling of its affluent population in the next 9 years. Here, liveability means moving away from car-based mobility towards public transport and soft mobility, as Deputy Prime Minister Martin Meyer noted. Royal Dutch Shell CEO Peter Voser warned of the enormity of the challenge posed by mass car ownership. Equally, the scale of the responses necessary to manage urban mobility is daunting: By 2050, 75 % of the projected global population of 9 billion will live in cities.

Environmental carrying-capacity on both a local and global scale would be sorely tested should they be fully motorised.

The President of the Federation of the German Automotive Industry, Matthias Wissmann, provided an upbeat assessment of his industry's progress in improving energy efficiency and environmental performance. The rapid introduction of new technologies and engine downsizing has allowed significant efficiency gains in each car market segment in Europe. The potential of internal combustion engine vehicles has not yet been reached; more efficient cars will continue to drive CO<sub>2</sub> savings. But Wissmann accepted that the future will see more diverse urban transport in which cars will provide only part of the mobility options.

Peter VOSER







Jan KUBIŠ

### Huge unused capacity

Mass motorisation will require shifting transport's energy sources. For Henry Li of Chinese car-maker BYD Auto, electric vehicles are an obvious solution that meets societal expectations. By shifting emissions to non-urban areas, e-vehicles can reduce pollutants and improve urban air quality. Electricity production still generates emissions in many instances certainly in China, where coal power plants dominate. But households there view climate change with less urgency than poor air. The high cost of battery electric vehicles means that focusing deployment (and subsidies) on high-travel vehicle segments may make sense. Urban buses and taxis in China are good candidates for electrification, as they replace 30 and 10 private cars respectively.







Lively debate on how to achieve sustainability

Other panellists stressed the need for full life-cycle assessments to adequately compare different energy sources and transport technologies. Well-to-wheel accounting is improving but still far from the rule. Biofuels are a good example of the problems faced in moving to multiple different energy sources. While the full life-cycle greenhouse gas impacts of some biofuels seem clear, this is much less so for others, especially when looking at impacts such as indirect land-use change and water use. Beyond electricity and biofuels, Shell's Peter Voser cautioned to keep an eye on rapidly emerging energy sources such as shale gas which has the potential to shift relative energy prices to the detriment of biofuels and electricity from renewable sources.





Martin MEYER

53



Is car-sharing the future?

Robin Chase, CEO of Buzzcar, challenged the panel to be more creative in their approach and argued that "the car of the future is a shared car". Most cars spend the majority of the day unused, so separating the service provided by cars from the cars themselves and to capitalise on their huge collective unused capacity seems to be a clear, innovative way forward. Commercial car-sharing (as opposed to car-pooling) has allowed city dwellers to use cars only when they make most sense, reverting to public transport, walking and cycling for other trips.

"The car of the future is a shared car."

- Robin Chase

Public transport is key to creating liveable and sustainable societies Informal, peer-to-peer and crowd-sourced car-sharing sites build on the same premise, as emerging internet services can multiply mobility options and further reduce car use without reducing access to cars or overall mobility. This, Chase argued, is a win-win outcome for society and a model that might be compelling for the developing world: Car-sharers can still tout their access to different, sometimes prestigious, cars without having to purchase them.

### Cars use space too

But even a clean car fleet takes space away from other city users, contributes to congestion and may cause injuries and fatalities. UNECE Executive Secretary Jan Kubiš observed a disconnection between the sustainability and liveability sides of the equation. Urban centres must better balance attention and resources directed towards vehicles of all transport modes with attention for creating places more adapted to humans. This shift requires a consistency of purpose that outlives the short-term political cycle. It will require considerable input and creativity from private sector and government to eliminate barriers and enforce regulatory frameworks.



54

## **Making Transport Safer**

Road traffic has become the leading killer of young people worldwide. Almost 1.3 million people die each year on the world's roads, between 20 and 50 million are severely injured. Although safety is an absolute priority in transport operations, crashes continue to take too great a human toll on the roads. In recognition of this, the UN Decade of Action on Road Safety was launched in May 2011, with redoubled efforts by all stakeholders.

Air, maritime and rail accidents are far fewer but no more acceptable. The "safe system approach" is much better established in these modes. It is now the basis for forward-looking road safety policy with an emphasis on a long term vision of zero fatalities and no serious casualties. Responsibility to make the system safe is shared between planners, operators and users.

Sweden led the way with the adoption of its "Vision Zero" policy in 1997, driving road deaths to the lowest rate ever recorded in 2010 at 2.8 fatalities per 100 000 population. As Minister Catharina Elmsäter-Swärd explained, this approach changed the "mind set" of all stakeholders and raised the level of ambition. The approach is valid for all countries, whatever their level of development.

The UN Road Safety Collaboration partnership has developed a Global Plan to support the UN Decade of Action. It provides guidelines for implementing a safe system approach, with the goal to stabilise and then reduce the global road toll, especially in low and middle income countries which bear 90% of the casualties. Implementing it will be a matter of political will, stressed WHO's **Etienne Krug**.

"The most difficult part is to change behaviour and mentality."

- Karim Ghellab



Road safety has to become part of the mind-set

"One can be unpopular, but useful to public health."

- Thierry Mariani

### Managing safety

The top priority is to build institutional capacity for managing road safety, backed by an adequate regulatory framework and driven by a designated lead agency, said **José Luis Irigoyen**, Director of Transport at the World Bank. The key legislative measures are rules on using helmets, seat-belts, child restraints, and preventing drink-driving and speeding; complemented with effective enforcement. But only 15% of countries worldwide have comprehensive laws that implement even these basic measures.

Morocco, where the risk of death on the roads is around 15 times higher than in France, has recently achieved dramatic improvements. As Transport Minister **Karim Ghellab** explained, a 2010 law implemented targeted measures including the introduction of speed cameras and a demerit point system on driving licences. The effects have been immediate, with a 20% reduction of road fatalities in the first quarter of 2011. "Finance is not the main issue", said Minister Ghellab, "the most difficult part is to change behaviour and mentality, and this requires an adequate legislative system".

Strict and equitable enforcement is needed to change behaviour, "One can be unpopular, but useful to public health", as Thierry Mariani, France's Secretary of State for Transport, put it. In response to a 14% increase in the number of people killed at the beginning of 2011, France has just strengthened policy for speed cameras. Such technology can also help provide objectivity, and help fight corruption in the context of traffic rules enforcement. More generally on this point, José Luis Irigoyen discussed the need to change the culture of the police, stressing the potential of the newly created ROADPOL network of police agencies for improving performance.

José Luis IRIGOYEN





Karim GHELLAB

### The next step

Equity also requires harmonized rules between countries, and Russia's Transport Minister **Igor Levitin** highlighted a need for more standardized rules for international freight transport. Russia and France share a role as important transit countries and Thierry Mariani called for adoption of the long due European Directive on transfrontier enforcement of speeding and traffic offences. In France, 25% of speeding offences in the summer holiday months are committed by foreign drivers, who currently escape sanction by automated radar controls.

New technologies for safer roads provide huge opportunities and are "our next step", said Catharina Elmsäter-Swärd. Uptake can be accelerated by regulatory means. Australia's Parliamentary Secretary for Infrastructure and Transport Catherine King gave the example of Electronic Stability Control, which will become mandatory on all new cars in Australia from November 2011 and will save many lives. Automated speed cameras have proved their worth in many countries and need to be promoted to showcase their effectiveness and "dispel the myth that speed cameras are revenue

raiser", said King.

Asked from the audience whether road safety is ultimately about shifting to safer modes, the panel agreed that cycling, walking and increased use of public transport will contribute to a more efficient and safer transport system. But people will continue to drive cars, and it is a shared responsibility to make the roads safer for everyone.

"Dispel the myth that speed cameras are a revenue raiser."

- Catherine King



Sharing best practices in road safety

# **eSafety Challenge Demonstrations**

### Advanced safety technology in action

Initial advances in protecting the lives of motorists were based on mechanical aides, such as the three-point safety belt, the folding steering column or the head rest. Later innovations, most notably the air bag, were based on mechanical safety mechanisms aided by electronic components.

Increasingly, however, further advances in road safety are made possible by purely electronic devices that are integrated into vehicles. Many of these are not intended to reduce the consequences of an impact in case of a crash, but to help to prevent an accident in the first place by aiding drivers, and even taking over for them, in potentially dangerous situations – hence not only protecting the lives and health of passengers and other persons in a highly efficient way, but also preventing damage.





Once broadly deployed, such tools have the potential to save a huge number of lives on our roads. Courtesy of the eSafety Challenge, Ministers and VIPs were offered the opportunity to observe and participate in demonstrations of such advanced vehicle safety technologies over lunch on the second day of the Leipzig summit.



Technologies that were showcased included Anti-lock Braking Systems (ABS) for motorcycles, Electronic Stability Control, Emergency Braking Systems, Blind Spot Monitoring systems and e-Call. ABS for two-wheelers enables the rider to apply the brakes fully in an emergency and reduce the braking distance without fear of wheel lock. Electronic Stability Control (ESC) helps to prevent vehicles from skidding, one of the most common causes of crashes. Studies show that ESC can reduce the number of serious or fatal single vehicle accidents by nearly half, making it the most important vehicle safety system after the seat belt, more important than the airbag.

Emergency Braking Systems detect the danger of an imminent rear-collision, warn the driver of a potential crash and assist in the braking process – automatically activating the brakes if there is no reaction from the driver. Blind Spot Monitoring Systems detects other vehicles moving into the sensitive "blind spot" zone towards the back and sides of a car and alerts the driver of the potential danger.



Promoting e-Safety in the exhibition area

E-Call is an automated emergency call system. An e-Call can either be generated manually by vehicle occupants or automatically through activation via in-vehicle sensors in the event of a crash. E-Call directly establishes a voice connection with the relevant emergency Public Service Answering Point (PSAP), and sends crucial information such as time and location of the accident as well as a description of the vehicle involved.



### **Innovators' Platform**

### New ideas for transforming transport

"Large-scale testing of well-developed ideas is the key to achieve leverage over politicians."

What will the transport system of the future look like? This session has allowed innovators to present new ideas that could fundamentally transform transport. Electric mobility was the main focus of the session, presented by Professor Anthony May as moderator. It featured dynamic presentations by cutting-edge thinkers as well as opportunity for discussion with the audience.

**Henry Li**, Senior Director of BYD Auto, China, focused on the question how to electrify public transport. Reducing pollution in cities is a key policy concern in China, and e-buses and e-taxis are seen as a way of achieving this objective, as one city e-taxi can replace 30 private cars and realise substantial environmental benefits.

Important programmes of public transport electrification are therefore progressively put in place in China. Traditional limitations of electric vehicles, such as battery costs, range of autonomy and refuelling time can be solved with adequate infrastructures, argued Li. Presently, a range of 250 km and 40 minutes refuelling time can be achieved for e taxis. Operational costs of e-buses and e-taxis are economically viable at high mileage use. Potentially, solar energy could cover all electricity needs of China, but it is still too expensive.

Reinventing the automobile and personal mobility was the focus of **Lawrence Burns**, former Head of R&D at General Motors and now a Professor at the University of Michigan. Burns argued that appropriate technological solutions exist for the side effects of the freedom to use automobiles, such as safety issues, congestion, energy source and environmental degradation.

Progress with respect to the automation of private vehicles makes it possible to put all the pieces together in an integrated fashion, at least for urban mobility purposes.

To Burns, the limiting factor for the automation of private vehicles is the lack of a "kick off" experiment. The transition to automated private vehicles could be tested in a smaller city prepared to become a testing ground and ready to begin.







#### The Superbus is an electric 23-seater

Once that happens, Burns predicts, a contagion effect would help diffusing the innovative concept of private automated driving.

The Superbus is an electrically powered, high-profile transport concept that combines the possibilities of both the individual car and the high speed train. Masterminded by former Dutch ESA astronaut and physics professor **Wubbo Ockels**, it offers 23 seats and is intended to run on dedicated road infrastructures linking major cities, then switching to common roads as it approaches its destination.

So, while the Superbus is as fast as a high speed train, it can respond to individual travel forms. And the economic case for the Superbus seems to be stronger than for a high speed train. The superbus project is also part of a high profile public transport system.

Quite another category of e-mobility than the Superbus is the e-bicycle. But, argued **Manfred Neun**, president of the European Cyclist Federation in his presentation, reinventing personal mobility implies that there should be no separate categories of mobility. A pyramid of mobility means integrating e-taxis, automated individual cars, the superbus project and other modes also needs to take the bicycle into account. Cycling has to be part of the system, and human beings are definitely part of the system.

Involving people in an active mobility can have a leverage effect on urbanity. Even though infrastructure for cycling is sometimes very bad, here again, improvements and full scale testing may have a contagious effect.



Wubbo OCKELS





An inspiring presentation by Jaime Lerner, recipient of the Forum's first Leadership in Transport Award, provided food for thought for the Decisionmakers' Platform on Day 3. Ideas for sustainable urban mobility were at the heart of debate among mayors from major cities and representatives from government and business.



## Better Transport, Better Communities

# "We Have to Better Understand the City"



Jaime LERNER
Architect and Urban
Planner, Jaime Lerner
Institute, Brazil

## Jaime Lerner on why making cities sustainable is not a question of money

To improve mobility, we have to better understand the city. Most people have a very pessimistic approach about the city. Mayors say: "Oh, my city is so big." Or: "We don't have enough financial resources." There are a lot of excuses. But from my experiences during the past 35 years, I am sure that every city could succeed in achieving an improvement in the quality of life of its citizens in less than three years, no matter what the size of the city or what financial resources are available. It depends on political will, solidarity, good strategy and how to achieve a good equation of coresponsibility.

Let us talk about strategies for working in a city. I want to introduce you to a few characters from a book I wrote for teenagers, trying to explain the city.

For me the metaphor of quality of life is the turtle. This may seem a strange when we talk about speed and mobility that I am taking the turtle as an example. But the turtle represents a structure of living, working and moving together. On top of that, the shell of the turtle looks like an aerial view of an urban area. If we cut the shell of the turtle, it is going to die. That is exactly what many cities in the world are doing. Separating people, separating urban functions. Living here, working there, leisure there. Spending a lot of energy, useless energy, because there is no structure. A city is a structure in which living and working go together.

Another character in this book is the automobile. It is the kind of guy who never wants to leave when he is invited to a party. And he drinks a lot. He coughs a lot.

He transports one or two people on average, and he is a very demanding character: He wants more viaducts and more freeways all the time. And I always like to say that the car is like our mother in law. We have to have good relationship with her, but we cannot let her run our life. In other words, if the only woman in your life is your mother in law, you have a problem.

### Work and live together

Every city has a design. It may be radial, it may be linear, but a city has a design. Finding it can be archaeology. That is what we did in Curitiba, trying to regain old streets, old roads and linking them with what is important for us. Curitiba today has close to 2 million inhabitants and a metropolitan area of 3.5 million people. The design of the city is a structure of working and living together. Land use is integrated with public transport. We have a high density, together with a broad range of public transport - this is how we organised the whole city. Buses are running in dedicated lanes. No money had to be spent for compensating expropriations; we use existing streets.

A long time ago we started improving access – the boarding facilities, high frequencies. In Curitiba you will not have to wait more than one minute for a bus, sometimes only 30 seconds. When we started in 1974, we had 25 000 passengers a day. Today, the city's public transport is moving 2.3 million passengers a day.



A Bus Rapid Transit stop in Curitíba, Brasil

London, which has the oldest subway and is a much bigger city, transports 2.9 million persons a day.

### The secret of mobility

We had to give very quick answers. We did not have time, and we couldn't build a whole network of subways. So we introduced the boarding tube for the Bus Rapid Transit. It is very simple, but it provides the same function for the bus as a subway station. You can board quickly, as you pay before entering the bus. You board on the same level as the platform, so there is no problem for the disabled. The capacity is the same as a subway line, in some cases higher, and you can go to every part of the city with the public transport. Very simple, and it costs 100 times less than a subway.

My view is that the future of urban transport lies on the surface, not underground. But I do not want to argue, or prove that our system is the best. We have to understand that the secret of mobility lies in connections.

The different systems are not competing in the same space. If you want to have a subway, the secret is to have a smart subway. And a smart bus, a smart taxi. Or smart individual transport without ownership like public bikes. The bike sharing that started in Paris now is all over in Europe and has transformed the bicycle into public transport.

But there is also a future for small cars. We designed the first prototype of a new electric car we called the Dock-Dock. Electric alone is not the solution. The problem is still space, and how to make a car available without ownership – these questions will be even more important. So the Dock-Dock is, I would say, a form of individual public transport.

### Individual public transport

We want to introduce around 1000 Dock-Docks in Curitiba, operating in dedicated lanes they will share with cyclists and connect to the public transport system. You cannot have a big car in the city, that is not smart. In the city you do not need a car that drives 100 km/h. The Dock-Dock travels at 25 km/h. There is no risk; it can share space with bikes and with the pedestrians. With the Dock-Dock you do not need to use a car that was made for the road in the city.

"The future of urban transport lies on the surface, not underground."



Jaime LERNER with a prototype of his Dock-Dock city car (right) and a standard sedan

"I am obsessed with the question how to teach children about sustainability."

My vision of the future is that we will have to have one mobility system. You use the subway, you use the bus, you use an individual public transport car or a shared car – the vehicles are different, but everything functions as one system. That is the proposal we made for organising mobility during the Olympic Games in Rio de Janeiro in 2016.

### Think everything together

Another example for a structure that unites living and working is our proposal for Sao Paolo. Since 84% of the people travel on the surface, it is important to improve it. The metropolitan railroads are being upgraded. But why not take advantage of this structure and connect it to its surrounding areas, creating a synergic urban environment thus enabling a city like Sao Paolo to be without a periphery, meaning universal access to quality urban space and good transit? For instance, a long promenade could be created above the railroad, where we could have a huge park - two times bigger than the area of Central Park.

The Park would be accessible for all income groups, from all kinds of buildings. In this park, you can have pedestrians, you can have bicycles, you can have electric cars. We have to understand that when we talk about land use, we have to think everything together.

Linked to this is the issue of the sustainable city. We had many discussions about what that means, what sustainability is. I am obsessed with the question how to teach children about sustainability. It's becoming very important, because they will teach their parents. Recently, we presented a movie at a film festival in New York for films on sustainability. Incidentally, we won their award; it was not a big deal, as there were not so many movies, but we won anyway. We were trying to find a way to make children understand, and our answer was a short movie called "A convenient start". It is on YouTube.

The key fact about the whole issue of sustainability is that 75% of carbon emissions are related to cities. It is important to use new materials. It is important to design green buildings. It is important to tap new sources of energy. Recycling and re-using are important.

But the most important thing is to work on the concept of the city. What is at least as important is to use the car less. I am not saying: Do not use your car. But for everyday routine travel, use your car less. Separate your garbage. Live closer to work. Think of sustainability as an equation; an equation between what we save and what we waste.

### Budget cuts help creativity

But most of all, I want to stress that the issue is not money. Too much money is not good. If you want creativity, cut one zero from your budget. If you want sustainability, cut two zeros. If we want solidarity, assume your identity and respect others' diversity. Because we cannot live in cities separated, with some people living in very rich ghettos and others in very poor ghettos. The more we mix, the better and the more human is the city.

All this we have to do fast. Why? Moving quickly helps us to avoid getting entangled in bureaucracy. The moment a decision is made and the discussion is over, we should start immediately. If not, the process will be like a long Sunday brunch in a huge family: you'll never get to leave. We also need to move fast to avoid falling victim to our own insecurity. You may have had a very good idea, but after a while you start to think and question it. So it can be done. It has to be done. But it has to be done very fast. Innovation is to start now.

"Think of sustainability as an equation – between what we save and what we waste."



Jaime LERNER stresses the need to move ahead quickly

# **Achieving Sustainable Urban Mobility:**

### Decision-makers' Dialogue

Achieving sustainable urban mobility is a formidable task. Cities will continue to concentrate population and activities as the world moves from being 50% urbanised to three-quarters urbanised by 2050. This growth will be particularly rapid and challenging in megacities but all large urban agglomerations will have to contend with growing demand for mobility. At the same time, many solutions are likely to be expensive and public funds limited. What then, challenged Moderator **Nik Gowing** are the priority areas that must be better managed if we are to have more sustainable cities?

The response from the Mayors of Leipzig and Kumamoto, the Deputy Mayors of Stockholm and Vienna and the Vice President of the Urban Community of Lyon were unanimous – the place of the car in the urban mobility mix must be re-balanced. This, they acknowledged, is a challenging task given citizens' strong, albeit conflicted, relationship with the car.

When car users are in the minority, car-based mobility is an attractive and liberating model; in fact this model has been fundamental in contributing to democracy and prosperity. Historically, this has been the case in OECD countries and the underlying idea continues to drive motorisation in the developing world.

### Federating citizens

Once car-users are in the majority, however, the car-only model reveals its limitations as congestion, noise, pollution and the number of crash injuries rise. Most constituents would like to continue driving their car, hoping at the same time that others will drive less, pointed out Michèle Vullien, Mayor of Dardilly and Vice President of the Urban Community of Lyon in France. The way forward in the view of Seishi Kohyama, Mayor of Kumamoto City in Japan, is to federate citizens around a positive vision of a balanced and sustainable urban mobility system. This message was consistently reinforced by other discussants - policies based on constraints and mobility restrictions will not win votes and will not be successful. Crafting this vision and ensuring that it has the staying power to guide policy beyond the short-term political cycle requires "participation, participation, and more participation" stressed Vienna's Deputy Mayor for Transport and Urban Development, Maria Vassilakou.

Leipzig

"Participation, participation, and more participation."

- Maria Vassilakou



Lyon





Mayors and city officials debate urban mobility

Engaging the public in the creation of this vision means going beyond treating citizens separately as "public-transport users", "car-drivers", "cyclists" or "pedestrians". Panellists stressed that people are all of the above at different times and that their needs are not mode-specific but are based on a desire to move around the city comfortably, conveniently, inexpensively and quickly without being overly inconvenienced by the travel of their fellow citizens. The car has fulfilled these needs historically. The challenge of the future is to provide a suite of mobility options and services that are at least as attractive as those provided by cars at comparable costs. An additional challenge, noted Mayor Kohyama, is to also ensure that ageing populations can retain a high level of mobility even if they can no longer use a car.

## Light on cars, rich on mobility

Achieving a "car-light" but "mobilityrich" city is possible – yet it won't happen by itself, warned **Ulla Hamilton**, Deputy Mayor for Transport of Stockholm. In the Swedish capital, 80% of commuters leave their car at home, preferring to travel by public transport, bicycle or by walking. This is the result of a concerted effort to offer citizens a wide range Delhi of mobility options, conjointly with an attempt to control congestion via road pricing. The city integrates transit-oriented planning with high quality, but relatively inexpensive and reliable public transport, including centralised information regarding all transport options and infrastructure investment in public transport facilities such as traffic monitoring and bikeways. At the same time, congestion is managed via the Stockholm congestion charge which, despite continued population growth, has reduced road congestion by 17%. Managing parking is also an important part of the mix, as Michèle Vullien and Maria Vassilakou emphasised. Kumamoto City Vienna



Many cities offer innovative transport solutions

One key element in making alternatives to the car more attractive is to bundle alternative mobility options with valueadded services. Many cities provide mobility-related smart phone applications. Some, such as Stockholm, make public data freely available to open-source entrepreneurs who bundle this data into innovative location-based services. "Services with everything" was a recurrent theme with Lyon's Michèle Vullien and Leipzig's Mayor **Burkhard Jung**. Transport information can be merged with data for locating services that travellers value, such as dry-cleaners, grocery stores and cafés in public transport terminals.

"Cities draw strength from the networks that connect them."

- Matthias Ruete

Tangible value

New technologies such as electric cars and e-bikes also give rise to new opportunities for value creation. Facilitating infrastructure such as public recharging stations will be required, and cities will have to engage with the private sector to develop new and innovative solutions. Neil Walker of Bombardier Transportation cited the example of his company's PrimoveCity inductive charging solution as an innovation that liberates electric vehicles from the weight and cost-constraints imposed by high-range batteries. Implementing such a system on a city-scale will require fundamental changes to how urban roads are financed and managed.

The need for innovative financing models was also discussed. **Peter Brown** of BetterHouston, USA, noted that cities can capitalise on the fact that the creation or extension of public transport facilities generates tangible value for citizens and businesses. The city of Houston, for example, has customised local ordinances and regulations in certain transit-oriented development areas in order to capture this value. Taxes on the incremental property value created by allowing denser and mixed uses near public transport stops are fed back into the neighbourhood to finance further improvements.

#### Medium size first!

Panellists underscored that city size may play a role in the implementation of urban transport policies. **Jaime Lerner**, former three-time mayor of Curitiba, Brazil, pointed out that rolling out new solutions may be hindered in large cities, suggesting that medium-sized cities and neighbourhood-scale projects may be more successful.

National circumstances matter as well. In Delhi in India, current shares of public transport use, walking and cycling are higher than in many European cities, explained **Arvinder Singh**, Minister of Transport of the Government of Delhi. But the urban transport system as a whole is far from sustainable, with high levels of air pollution due to poor quality fuels. Reducing pollutant emissions from the public transport fleet by switching to natural gas and other cleaner fuels continues to be a priority for the health of the city's 17 million inhabitants.



70

Cities cannot be considered in isolation to the areas that surround them nor to the networks in which they are embedded.

Matthias Ruete of the European
Commission stressed that "Transport is a network industry ... cities are not islands isolated from each other but draw strength from the networks that connect them". Here national and supra-national organisations have a role to play in ensuring that continental and international transport networks support the development of vibrant and attractive cities.

In particular, care should be given to the interface between strictly urban transport networks and inter-city and inter-regional networks. Parliamentary State Secretary **Andreas Scheuer** of Germany's Federal Transport Ministry warned that the focus on sustainability in cities should not be to the detriment of citizens in rural areas. Nor should it come at the expense of people's natural desire to move

At the same time, freight transport should not be treated separately and should be fully integrated into a region's vision for future mobility. Options proposed by public authorities should align personal desires and societal objectives and ultimately serve to enhance, rather than restrict, mobility and access.

Ultimately, Mayor Jung pointed out, people are attracted to attractive cities and this means working on all fronts – jobs, housing, and transport – together with citizens. Achieving sustainability, emphasised Lerner, will require successfully avoiding the trap of thinking that urbanisation is the principal "problem". The city, he argued, is the solution to many of the issues discussed at the 2011 Summit.

Michèle VULLIEN









Beyond expert panels and keynotes, the 2011 summit offered many opportunities to explore new ideas and to network. The exhibition featured state-of-the art technology and innovations. A VIP cycling tour of Leipzig highlighted active transport. Partner events, technical visits and cultural tours also added extra flavour.



# **Where Ideas Meet**

# **International Transport Forum Awards 2011**

#### Achievements that have made a difference

Every year, the International Transport Forum Awards aim to highlight exemplary achievements in transport that have made a difference. In 2011 the two established Awards – for contributions to transport by a budding academic and an operator or institution respectively – were complemented with a third prize category, the Leadership in Transport Award.

### Leadership in Transport Award

Every year, this new prize will honour a public persona that has demonstrated leadership and that has lead to major advances in transport - be it through a single, high-impact initiative or through a sustained commitment over a long period of time. **Jaime Lerner**, legendary urban reformer and public transport pioneer from Brazil, voted one of the 25 most influential thinkers of the world by Time magazine in 2010, came to Leipzig to receive the first Leadership in Transport Award. Secretary General Jack Short presented the Award in a festive atmosphere during the Gala Dinner in Leipzig's impressive Glass Hall.

"Through his ideas and work as an architect and politician, as a teacher and visionary, Jaime Lerner has made a real difference in the lives of people by making transport better", said Short. "There can be few people who are as deserving of being the first to receive our Leadership award."

# Young Researcher of the Year Award

Why do people buy electric vehicles – or why don't they? **Dr. Jonn Axsen**, a Canadian who carried out his research at the University of California at Davis in the US, won the 2011 Young Researcher of the Year Award for identifying factors that shape consumer choices about sustainable mobility – and thereby giving policymakers an additional lever to influence such decisions.

Transport Achievement Award





Kristine Burr, John Porcari, Jan Mücke and Jack Short present the Young Researcher Award to Dr. John Axsen

For the jury, German Parliamentary State Secretary Jan Mücke saluted Axsen for opening up a new perspective on how e-mobility can be promoted. In accepting the Award, Axsen emphasised that "the barriers are not really in technology, the barriers and the opportunities lie in people; in understanding the dynamics of culture, of consciousness and how we can develop values of sustainability through leadership."

# Transport Achievement Award

The winner of the Transport Achievement Award was honoured on Day 2 of the Leipzig summit for excellence in meeting the needs of their clients, with two other companies each receiving a special mention from the jury. **Arriva Denmark**'s "Better Bus Ride" won this Award for the many ingenuous ways it puts people first, which included its improvements to the transport experience for both clients and staff.

Arriva's Commercial Director Jonas Permin received the Award from Secretary General Jack Short, who was joined on stage by Alain Flausch, President of UITP, Jean-Claude Delen, President of FIATA, and Marco Sorgetti of CLECAT representing the Award's partner organisations. Two special mentions attested to the high level of applications: one for Istanbul Electricity, Tram and Tunnel (Turkey) for their Bus Rapid Transit across the Bosporus, and one for DHL Global Forwarding (Germany) for a custom-built road-to-rail terminal.

# **Active Transport Tour**

## Leipzig by bike



A unique opportunity to experience the host city first-hand

In glorious sunshine, nearly 100 delegates of the 2011 summit gathered on Leipzig's central square, the Augustusplatz, on the afternoon of Day 1 for a true first in the history of the International Transport Forum: an hour-long bicycle tour through central Leipzig, with Lord Mayor Burkhard Jung as the group's personal tour guide. "We want to show our guests the most beautiful sights of Leipzig and enable them to experience our 'city of short distances' concept", explained Jung.

At Augustusplatz, a range of bicycle models – both regular end electric bikes – were available to choose from, thanks to various partner organisations. After donning bright yellow International Transport Forum safety vests, the hand-waving peloton embarked on a route meticulously planned by the Mayor's office in collaboration with the Leipzig chapter of the German Cyclists Association, ADFC. UN Road Safety Ambassador Grover of Sesame Street waved back.

A police motorcycle escort accompanied the group along the inner city ring past Leipzig Central Station towards a first stop over at Leipzig Zoo, where director Jörg Junhold welcomed the delegates and provided a short introduction to the zoo's fascinating history and current projects based on a "Zoo of the Future" development plan. In another world premiere, the Zoo opened its gate for the first time ever for cyclists, and participants were able to appreciate the beauty of the zoo from their bikes.





# **Childrens' University**

## Kids quiz transport experts

Around 50 schoolchildren aged 8 to 12 years gathered in a seminar room of Leipzig University on the afternoon of Day 1 of the 2011 summit, waiting for the opportunity to meet – and quiz - real politicians and senior transport experts. Outside the university building, sponsor DEKRA had set up a cycling obstacle course to provide the kids with an opportunity to test their cycling skills after the more theoretical part inside.

The Children's University was held for the fourth consecutive year under the auspices of the International Transport Forum and again proved to be an excellent way of reaching out to the broader public, while at the same time helping to educate children about mobility issues. "Children need our utmost attention when it comes to traffic", explained Parliamentary State Secretary Jan Mücke of Germany's Federal Ministry of Transport, Building and Urban Development: "We need to adequately prepare them for a responsible integration with traffic."

Mücke was one of the adult guests speakers accompanying Secretary General Jack Short to discuss better road safety with the young crowd; Leipzig's Mayor Burkhard Jung and Arndt Birkigt of DEKRA Germany were the others. The event kicked off with a funny video of Sesame Street's famous blue-furred star character, Grover, demonstrating how to safely ride a bike - namely wearing a helmet, elbow-pads, kneepads and a cushion to protect one's backside. Obviously, the young audience was thrilled when Grover himself walked through the classroom door live-sized after the video had ended.



Helping to educate children about mobility issues



The Childrens' University in action: "Some of these children could be the engineers of tomorrow"

After much hugging and picture-taking with the other VIPs, Grover, who is a veritable United Nations Ambassador for Road Safety, sat down in the auditorium to follow the proceedings.

Speed limits, the dangers of crossing the road and pollution were recurrent themes in the children's interventions. When Mayor Jung asked the youngsters to share their ideas on improving road traffic and security, a flow of ideas and

visions were voiced: Cars should be able to capture their own emissions, process and then re-use them; why do bicycles not have airbags; could cars not run on tracks like trams, so they cannot collide? "Some of these children could be the engineers of tomorrow", Jung noted. "The children were so enthusiastic about their involvement", said Secretary General Short in summing up the event: "They really offered many insightful opinions."



## **Summit Exhibition**

## The future of transport on display

Strategically placed around the main meeting halls and outside the main entrance, the exhibition allowed delegates to see cuttingedge innovations in transport technology and policy from a wide range of organisations, companies and institutions, covering all aspects of transport. The exhibition featured stands focussing on subjects ranging from electric mobility and toll collection to bike sharing and transport project financing. All transport modes were represented and demonstrated the vast array of possibilities to build transport systems that will serve its users even better than today.

Exhibitors included many major transport manufacturers, among them Daimler, Porsche and Bombardier Transportation. Porsche presented an electric version of its popular Boxster roadster. Porsche's first all-electric car ever, the Boxster E runs on a 29 kWh lithium-iron phosphate battery that gives it a range of up to 170 kilometers. Its two electric motors drive all four wheels, to accelerate the twoseater from 0-100 km/h takes a mere 5.5 seconds. The Boxster on display in Leipzig, one of only three prototypes, would have drawn attention even without its bright-orange-and-silver racing look.

Among the operators featured in the exhibition, Spain's RENFE presented its High Speed Rail network, while





#### Networking in the exhibition area

Outside the conference centre, live demonstrations showcased innovative projects and products.

Two of the highlights were Toll Collect's demonstration tours of its road charging infrastructure which even involved the tour bus being pulled over for a (planned) inspection by German authorities. One of the most fascinating and spectacular projects on display in Leipzig was the Superbus, a 23-seat electric sportscar with a maximum

The vision of its inventors, based at Delft's Technical University in the Netherlands, is to operate the Superbus on dedicated lanes between big cities, where it could then also use normal streets and thus combining the advantages of high speed rail with individual mobility.



# Partner Events at the 2011 Summit

## Linking the issues

Partner organisations used the 2011 summit to present their transport-related activities highlighting a wide range of important aspects that complemented the main programme.



The controversy about the **Peak Transport** hypothesis was at the centre of a panel organised by BMW Group's Institute for Mobility Research (ifmo), bring together proponents and critics in a lively discussion. Although it is clear that the rate of growth of the demand for car transport in some of the richest economies has been zero or even negative in recent years, the understanding of what causes this remains limited. Several factors are likely to matter, including higher prices and limited income growth. Yet drivers in the most advanced economies may also no longer be interested in driving more, even if they could afford to.



The **World Bank**'s Leipzig event brought together researchers and practitioners to share their expertise on **Gender Needs and Constraints in Transport**. The discussion centered on how gender measures can best be integrated into national transport policies to ensure equality and how to build capacities for addressing gender differences in transportation.





Top experts exchanging views





The Regional Office for Europe of the World Health Organization (WHO) focused on Bringing Health into Transport Planning. The growth of road transport affects health and the environment, posing costs to society estimated at 8% of GDP. To promote walking and cycling as an answer, the WHO's Transport, Health and Environment Pan-European Programme (THE PEP) launched Health Economic Assessment Tools (HEAT) for cycling and walking in Leipzig. HEAT can help transport planners to estimate the economic savings due to cycling and walking and provide a basis for improved investments.







A partner event organised by the **Ministry** of Infrastructure and Environment, Netherlands and NL Agency addressed transnational collaboration on Biofuels in **Transport**. The event was conceived as part of a wider process of identifying potential future topics for the ERA-NET Transport (ENT), which aims to step up the cooperation and coordination of research activities carried out at national or regional level. The workshop resulted in a shortlist of topics, which will help to improve collaboration in biofuels.



## **Media at the 2011 Summit**

## Making headlines

More than 120 journalists attended the 2012 summit – fully 50 per cent more than last year. Almost 40% of them had come from abroad, representing 18 nations. The large presence of non-European journalists, many supported by the International Transport Forum's newly launched Media Travel Grant programme, was particularly enriching. Among the Media Travel Grant recipients were journalists from Argentina, Australia, Canada, Chile, Columbia, India, Japan, New Zealand and the US.

More than half a dozen press conferences, on top of the official programme, provided ample additional input for media coverage. On Day 1, the International Transport Forum launched its signature study, the Transport Outlook for 2011, to a packed audience. Chief Economist Kurt Van Dender set out scenarios for a transport sector that will have to provide mobility for a global population of 9 billion people.

Another media highlight was the European launch of the U.N. Decade of Action for Road Safety at a press event jointly hosted by the International Transport Forum and WHO. Road safety was also the focus of a press conference held by the European Agency for Safety and Health at Work (EU-OSHA) which highlighted the need to better manage health and safety for employees in the road transport sector.

The European Cyclists Federation (ECF) had chosen Leipzig to take the case for cycling directly to Transport Ministers, and at the same time used the opportunity to brief the media on the "Charter of Seville".

Great media interest was also given to the Call for Action on Piracy, launched in Leipzig by the International Chamber of Commerce: At the end of 2010, more than 1000 seamen were held hostage on a total of 49 hijacked vessels - figures that did not fail to impress journalists.

Finally, the summit itself produced positive news: At the official press conference on Day 2, following the Ministerial session, Secretary General Jack Short and German Minister Peter Ramsauer presented Carole Coune of Belgium as Jack Short's successor. Minister Ramsauer also announced Germany's continued special support for the summit until 2017, thus ensuring that the International Transport Forum's flagship event will retain its venue in Germany. Last but certainly not least, Short and Ramsauer informed the media of China's decision to join to the International Transport Forum.



# **Technical Visits and Cultural Programme**

### The summit on the road

The International Transport Forum's 2011 summit offered technical tours to delegates providing a unique opportunity to see how transport policies translate into actions. Many delegates used this great opportunity to visit some of Leipzig's various transportation sites.

### Q. Cells Solar Cell Manufacturing Plant



The technical tour to Q. Cells allowed summit delegates to understand the precision, detail and processes needed to manufacture

solar cells and modules, which Q. Cells believe will contribute to the energy solution through providing photovoltaics as an efficient, sustainable, and environmentally sound technology.

#### DHL

Deutsche Post DHL, the leading logistics provider, welcomed delegates to its



state-of-the-art
airfreight hub in Leipzig
– a popular tour, despite
taking place at 10 pm.
The DHL hub raises the
bar in industry standards,
with the largest sorting
system in Germany and
a hangar floor space of
27 500 m<sup>2</sup>. On average,

60 aircraft take off and land each night at the hub. Up to 1 500 tonnes of parcels and documents are delivered, re-sorted and reshipped within a few hours to every corner of the globe.

#### **BMW** Leipzig

BMW Leipzig was another very popular tour. The plant, built in 2000, turns out up to 750 vehicles every day. After manufacturing began in March 2005, by June 2010 a total of some 700 000 cars had come off the assembly line, meeting domestic targets. The plant is the only one in the world to build the three-door 1 series, the 1 Series Coupe and the 1 Series Cabriolet convertible. It is one of the greenest plants in the world and also has a centre of excellence for electric cars.

### Porsche Leipzig

The Leipzig plant of Porsche, renowned manufacturer of high-end sports cars, encompasses a gigantic logistics centre and a modern pilot and analysis centre. Two of the company's top car models, the Cayenne SUV and the Panamera, are built in the 25 000 m² assembly hall which incorporates the latest advances in car manufacturing.

### **Cultural Programme**

Delegates also had the option to enjoy the cultural aspects of Leipzig and nearby Dresden.

The Leipzig walking tour highlighted the significant changes since the reunification of Germany, with the restoration of historical buildings and the development of a modern transport infrastructure.

The tour to Dresden – a jewel of German culture and civilisation – included visits to the historic inner city, including the Semper Opera House and the Frauenkirche church.





## **Sponsors and Exhibitors**

The International Transport Forum wishes to thank all sponsors, partners, supporters and exhibitors for their contribution to the success of the 2011 summit.

#### **Platinum Sponsor**

#### **Gold Sponsor**

#### **Sponsors**







BOMBARDIER

#### **Partners and Supporters**





































#### List of Exhibitors

- The Administrator of Railway Infrastructures (ADIF)
- AGES Maut System GmbH & Co. KG
- AustriaTech Federal Agency for Technological Measures Ltd.
- Civitas
- Connekt/ITS Netherlands
- Daimler
- Deutsche Bahn AG
- Dutch Ministry of Infrastructure and the Environment
- DVV Media Group
- European Agency for Safety and Health at Work (EU-OSHA)
- European Commission
- European Cyclists's Federation
- The European Investment Bank and Sustainable Transport Lending
- German Federal Ministry of Transport, Building and Urban Development
- Forum of European National Highway Research Laboratories
- The International Forum for Rural Transport and Development
- Intelligent Transportation Society of America (ITSA)

- Japan International Transport Institute (JITI)
- Kumamoto City
- Michelin
- Ministerio de Fomento
- NETHUN SpA
- Netzwerk Logistik
- Nextbike GmbH
- The Organisation for Economic Co-operation and Development
- Porsche AG
- Renfe Operadora
- Shell International Limited
- Superbus
- Transed
- International Union of Railways (UIC)
- International Association of Public Transport (UITP)
- United Nations Economic Commission for Europe (UNECE) – Transport Division
- Walk21
- WBT Datensysteme
- World Road Association (AIPCR/PIARC)

86

A CO<sub>2</sub> Emission

Responsible

Each year the

by the on-site

International

annual summit

activities of the

Transport Forum's

are offset through

protection projects

which generate

carbon credits.

investment in climate

emissions generated

carbon(CO<sub>2</sub>)

**Summit:** 

## **Recent Publications**



Trends in the Transport Sector. 1970-2008
ISBN 978-92-821-0271-8



Car Fleet Renewal Schemes: Environmental and Safety Impacts.



**Better Economic Regulation: The Role of the Regulator** ISBN 978-92-821-0327-2



Transport Outlook 2011.
Meeting the Needs of
9 Billion People



**Key Transport Statistics 2011** 



Moving Freight with Better Trucks: Improving Safety, Productivity and Sustainability ISBN 978-92-821-0293-0



Improving the Practice of Transport Project Appraisal. ISBN 978-92-821-0129-2



**Stimulating Low-Carbon Vehicle Technologies** ISBN 978-92-821-0291-6



**Drugs and Driving: Detection and Deterrence**ISBN 978-92-821-0275-6



Highlights of the International Transport Forum 2010. Transport & Innovation: Unleashing the Potential



Safety and Regulatory Reform of Railways



**Implementing Congestion Charges.**ISBN 978-92-821-0284-8

87

# **List of Speakers**

Aguerrebere, Roberto

Director, Instituto Mexicano de Transporte, Mexico

Director, Rijkswaterstaat, The Netherlands

Beilharz, Nico

Deputy Head, Aviation Security, Deutsche Lufthansa AG, Germany

Birkigt, Arndt

Director, Technical Control Centre, DEKRA, Germany

Brown, Peter

Director and Founder, BetterHouston, USA

Burns, Lawrence

Professor, University of Michigan, USA

Cervero, Robert

Director, University of California Transportation Center, USA

Chase, Robin

Chief Executive Officer, Buzzcar, France

Member of the Planning Commission, India

Cockroft, David

General Secretary,

International Transport Workers' Federation

Costa, Paolo

President, Venice Port Authority, Italy

Crane, Melinda

International Journalist

Delen, Jean-Claude

President, International Federation of Freight Forwarders Associations

Delmas, Sylviane

Inspector General, RATP Paris, France

Dragnich, George

Executive Director, Social Dialogue, International Labour Organization

Duchène, Chantal

Director, ChD Mobilité Transport, France

Dunmore, Geoff

Network Security Manager, London Underground, UK

Ehm, Thomas

Vice President, Employment, Training & Competence Management, Airbus

Elmsäter-Swärd, Catharina

Minister for Infrastructure, Sweden

Exell, Oksana Executive Director, Asia-Pacific Gateway Skills Table, Canada

Flausch, Alain

Chief Executive Officer, STIB, Belgium, and President, International Association of Public Transport (UITP)

Frye, Ann

Director, Ann Frye Ltd, UK

Gao, Hongfeng,

Vice Minister of Transport, China

Ghellab, Karim

Minister of Equipment and Transport, Morocco

Glover Blackwell, Angela

Founder and Chief Executive Officer, PolicyLink, USA

Gowina, Nik

International Journalist

Gutierrez, Gabriel

Project Director, Cintra Infraestructuras, Spain

Deputy Mayor for Transport of Stockholm, Sweden

Hanlon, John

Secretary General, European Low Fares Airline Association

Hozaki, Yasuo

Executive Officer, West Nippon Expressway Company,

Hwang, Kee Yeon

President, Korean Transport Institute

Irigoyen, José Luis

Director of Transport, The World Bank

Jung, Burkhard

Mayor of Leipzig, Germany

Karlström, Urban

President, Forum for Innovation and Strategies of

Transport, Sweden

Deputy Director General, DG-MOVE, European

Kazatsay, Zoltan

Commission

King, Catherine

Parliamentary Secretary for Infrastructure and

Transport, Australia

Kohyama, Seishi Mayor of Kumamoto City, Japan

Kolesnikov, Boris

Vice-Prime Minister and Minister of Infrastructure, Ukraine

Krug, Etienne

Director of the Department of Violence and Injury Prevention and Disability, World Health Organization

Executive Secretary, United Nations Economic Commission for Europe

Lerner, Jaime

Architect and Urban Planner, Jaime Lerner Institute,

Lestau Saenz, Marta

Director, Safety and Security State Agency, Spain

Leunig, Tim

Professor, London School of Economics, UK

Levitin, Igor

Minister of Transport, Russian Federation

Lewis, David

Senior Vice President, HDR Corporation, Canada

Li, Henry

Senior Director, BYD Company, China

López, José Blanco

Ministro de Fomento (Transport), Spain

Lord Macdonald of Tradeston,

Special Advisor, Macquarie Infrastructure and Real Assets

Mariani, Thierry

Secretary of State for Transport, France

Matthews, Martin

Chief Executive, Ministry of Transport, New Zealand

May, Anthony

President, World Conference on Transport Research Society

Metz, David

Visiting Professor, University College London, UK

Meyer, Martin

Deputy Prime Minister, Liechtenstein

Millar, William

President, American Public Transportation Association, USA

Mizrahi-Walden, Hélène

Head of Transportation, BNP Paribas, UK

Molnar, Eva

Director, Transport Division, United Nations Economic Commission for Europe

Mücke, Jan

Federal Parliamentary State Secretary, Ministry of Transport, Building and Urban Development, Germany

Neun, Manfred

President, European Cyclists' Federation

Ockels, Wubbo

Professor, Delft University of Technology, The Netherlands

Ohler, Rainer

Senior Vice President, Public Affairs and Communications, Airbus

Pan, Haixiao

Professor, Tongji University, China

Parker, Michael

Board Member, International Chamber of Shipping

Peñalosa, Enrique

Director, Institute for Transportation

and Development Policy

Pikrallidas, Susan

Secretary General for Automobile Mobility and Tourism, Fédération Internationale de l'Automobile Porcari, John

Deputy Secretary, Department of Transportation, USA

Portillo, Michael

International Journalist

Ramsauer, Peter

Federal Minister for Transport, Building and Urban Development, Germany

Rifkin, Jeremy

President, The Foundation on Economic Trends, USA

Ruete, Matthias

Director General, Mobility and Transport, European Commission

Sachs, Jeffrey

Director, The Earth Institute, Columbia University,

Scherp, Jan

Principal Administrator, European Commission

Scheuer, Andreas

Parliamentary State Secretary, Federal Ministry of Transport, Building and Urban Development, Germany

Serrano Beltrán, Téofilo

President,, RENFE, Spain

Short, Jack

Secretary General, International Transport Forum

Singh, Arvinder

Minister of Transport of the Government of Dehli, India

Søholt, Helle

Founding Partner and Managing Director, Gehl Architects, Denmark

Suchier, Jean-Marc

Senior Vice President, SAFRAN Morpho, France

Tiwari, Geetam

Professor and Chair, Indian Institute of Technology, India

Toussaint, Jean-Francois

Director, Institute for Biomedical Research and Sports Epidemiology, France

Vassilakou, Maria

Deputy Mayor for Transport and Urban Development, Vienna, Austria

Viegas, José Manuel

President, Transportes, Inovação e Sistemas, Portugal

Voser, Peter

Chief Executive Officer, Royal Dutch Shell

Vullien, Michèle

Mayor of Dardilly, Vice President of the Urban Community of Lyon, France

Walker, Neil

Co-Manager, PrimoveCity, Bombardier Transportation

Wissmann, Matthias President, Federation of the German Automotive Industry



The powerful vision of seamlessly connecting people, infrastructure and markets is driving the development of new forms of mobility and of economic growth. It increasingly shapes the agenda of policymakers and business leaders.

The annual summit of the International Transport Forum is the leading global platform for debate on the future of transport. At the summit, Ministers from more than 50 member countries engage decision-makers from industry, civil society and research to explore the trends that will shape mobility in the 21st century.

The International Transport Forum's 2012 summit on "Seamless Transport: Making Connections" will consider all aspects of connectivity in transport: How can we improve the way people and goods move, globally and within our communities?

- Connecting systems: Implementing advanced technologies and new practices.
- **Connecting people:** Improving urban and inter-urban mobility.
- Connecting markets: Smoothing end-to-end journeys.
- **Connecting sectors:** Integrating transport with energy, finance, urban planning, tourism.
- **Connecting ideas:** Applying new thinking to transport.

#### Why you should participate:

- **Find out** how decision-makers are planning for the new era of mobility.
- Identify trends that will drive future breakthroughs in transport.
- **Explore** ways of overcoming barriers between systems, networks, modes and regions.
- **Network** with top players, understand their views, influence decision-making.

#### How you can participate:

- As a **delegate**: To request an invitation for this exclusive event, please contact rachael.mitchell@oecd.org
- As a **sponsor**: Raise your profile among top transport decision-makers as a sponsor of the 2012 summit. Please contact sharon.masterson@oecd.org for details.
- As an **exhibitor**: Put your products and ideas on display where Ministers and top decision-makers meet. Please contact sharon.masterson@oecd.org for details.

#### © OECD/ITF 2011

No reproduction, copy, transmission or translation of this publication may be made without written permission. Applications should be sent to OECD Publishing **rights@oecd.org** or by fax +33 1 45 24 99 30.

This work is published on the responsibility of the Secretary General of the International Transport Forum. The opinions expressed and arguments employed herein do not necessarily reflect the official views of the governments of its Member countries.

Design/Layout: Corinne Hayworth; Scheunemann PR Consulting Berlin - www.scheunemann-pr.de

Photo credits: Simone M. Neumann – Internet: www.simonemneumann.de – E-Mail: simonemneumann@aol.com

Marc-Steffen Unger – Internet: www.ms-unger.de – E-Mail: info@ms-unger.de Marco Urban – Internet: www.marco-urban.de – E-Mail: mail@marco-urban.de

www.istockphoto.com; www.gettyimages.com; www.shutterstock.com

p. 15: © Greg Randales; p. 20/21: © Gary Yim; p. 34: © Roland Horn / Deutsche Bahn AG;

p. 36: © Ola Dusegård; p. 40: © Xavier Arnau; p. 45: © K.K. Arora / Reuters;

p. 47: © Steven Hunt; p. 54 (top): © Daimler AG; p. 54 (top): © Sean Randall;

p. 60: © GM Co.; p. 61: © BYD; p. 65/66: © Instituto Jaime Lerner; p. 68: Houston: © Allan Baxter;

Leipzig: © TommL; Lyon: © Anna Bryukhanova; Stockholm: © Chris Hepburn;

p. 69: Curitiba: © Jose Luis Stephens; Vienna: © Franz Pfluegel; Kumamoto: © German;

Delhi: © Grant Faint; p. 70: © Andresr & Pincasso; p. 85: © Q-Sells SE; p.85 (bottom): © Klaus Hollitzer

ISBN: 978-92-821-0368-5 (PDF)



## Highlights 2011

Transport is intrinsic to societal activity, and one of its greatest enablers. It allows people to reach their workplaces; provides individuals with access to education and services; and is increasingly important for leisure. It drives trade and creates jobs.

A world without the very real daily benefits of mobility has become unimaginable. But all too often transport is taken for granted, and societal demands on transport are constantly increasing. Transport systems must be adapted to better serve us all, but these systems are complex, and not easy to change. Opportunities for more open, effective dialogue on the development of transport systems should be pursued in order to facilitate a better understanding throughout society of transport issues.

So how can transport provide even more benefits for our citizens and societies?

How can all transport modes – for passengers as well as freight – contribute to growth that is sustainable? Transport Ministers and business leaders, mayors of major cities, top researchers and representatives of non-governmental organisations met together at the International Transport Forum's annual summit on 25-27 May 2011 in Leipzig, Germany, to examine these strategic issues. This publication condenses their main findings.

Platinum sponsor



Gold sponsor



TOLL COLLECT
service on the road

**International Transport Forum** 

2 rue André Pascal, 75775 Paris Cedex 16, France itf.contact@oecd.org www.internationaltransportforum.org

Sponsors

**BOMBARDIER** 

