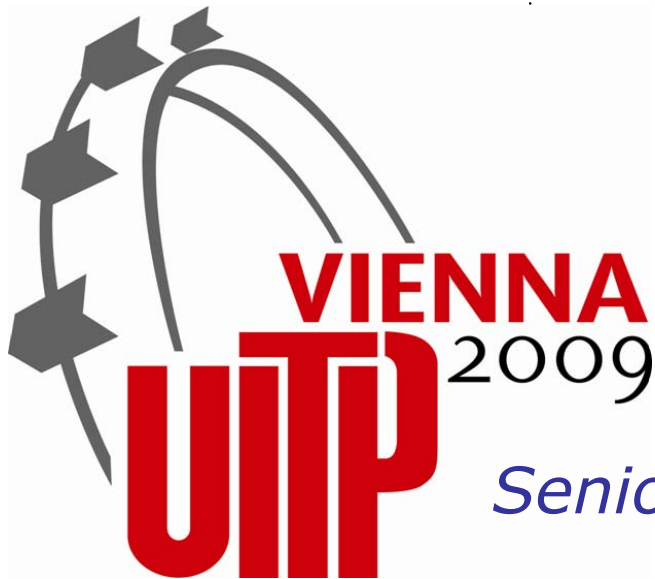




International Association of Public Transport  
Union Internationale des Transports Publics  
Internationaler Verband für öffentliches Verkehrswesen  
Unión Internacional de Transporte Público

## ***Capacity Building and Public Transport***



*MEET Follow up Meeting*

*Hakodate, Japan*

*17 June 2009*

*Heather Allen*

*Senior Manager Sustainable Development*

UITP

Connecting the world of public transport

# Overview

- 1 Introduction to UITP
- 2 The role of cities and their (future) importance on national scale
- 3 Capacity needs
- 4 UITP activities and examples
- 5 Suggestions and Debate

**3000 members world wide, all modes passenger  
urban transport**

**Main office in Brussels, and nine liaison and regional  
offices worldwide**



# Public transport means a public service offer



UITP covers **all modes** of PUBLIC TRANSPORT:

- Metro
- Bus
- Light rail
- Regional and suburban railways
- Waterborne

And **collective transport** in a broader sense:

- Taxis
- Car-sharing
- .....

## What are the stakes?

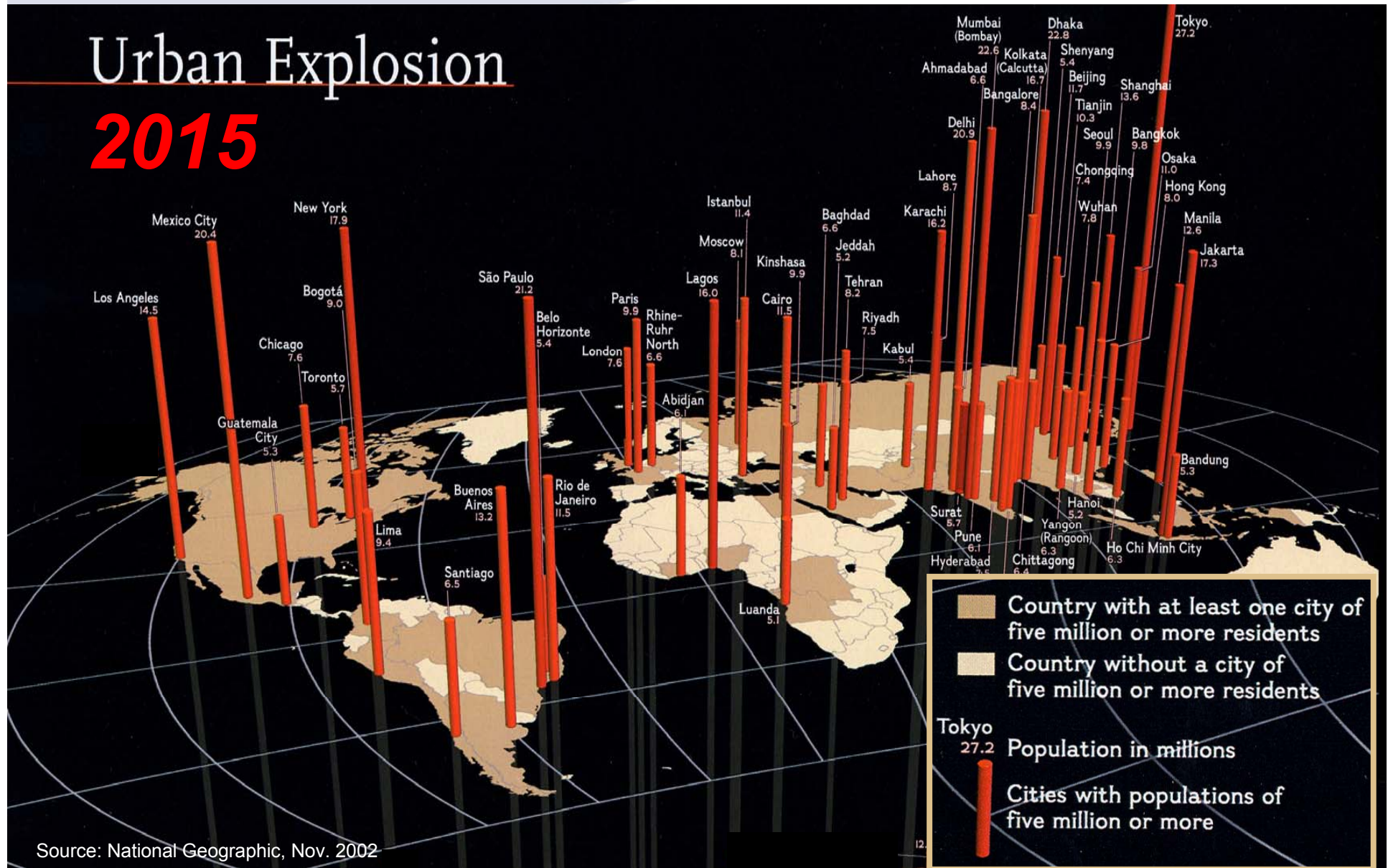
**If transport and buildings  
are  
not addressed properly  
there will be NO progress in  
reducing the risks of climate  
change**

*ITF Leipzig 2008; MEET Japan  
2009 many other occasions.....*

# Population trends - the role of cities and metropolitan areas (cities with more than 5 m)

## Urban Explosion

2015



Source: National Geographic, Nov. 2002

# New urban dynamics and how to capture and deliver Social, Environmental and Economic Value?



**Economic development**



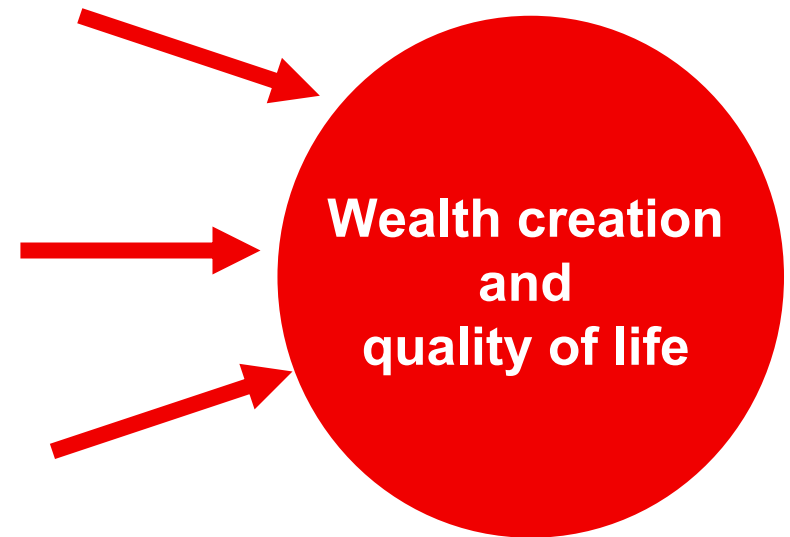
**Competitiveness and employment**



**Resource use**

**New investments (infrastructure)**

**System efficiencies and manage demand**



**Wealth creation and quality of life**

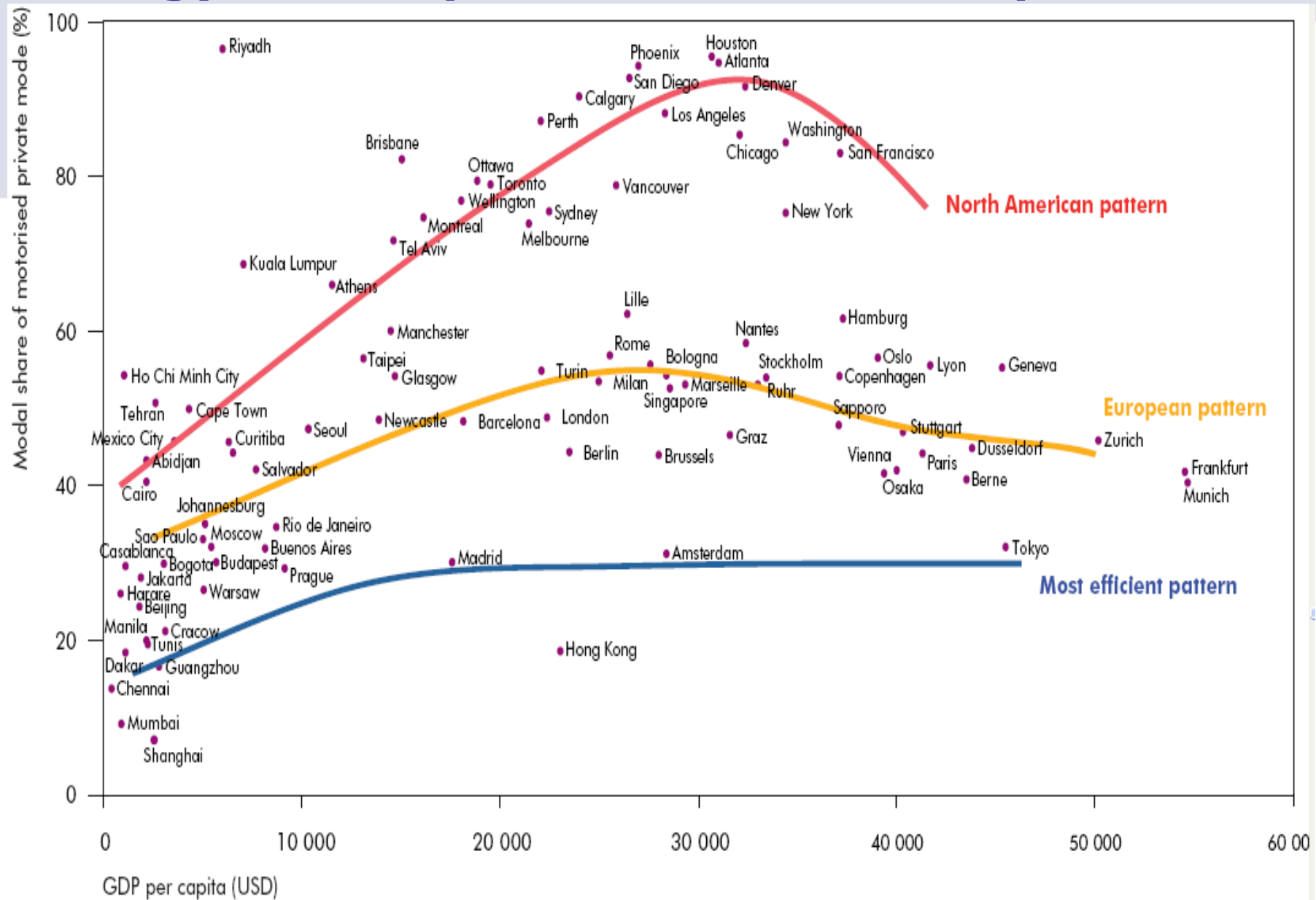
# Cities generate higher than national averages of GDP



- ✓ **Wealth generation relies on having a skilled and mobile workforce, able to contribute to economic development.**
- ✓ **A city that does not have a well functioning transport network is simply not competitive**
- ✓ **No city today (500 000 +) is able to function properly without a public transport network of some sort.**



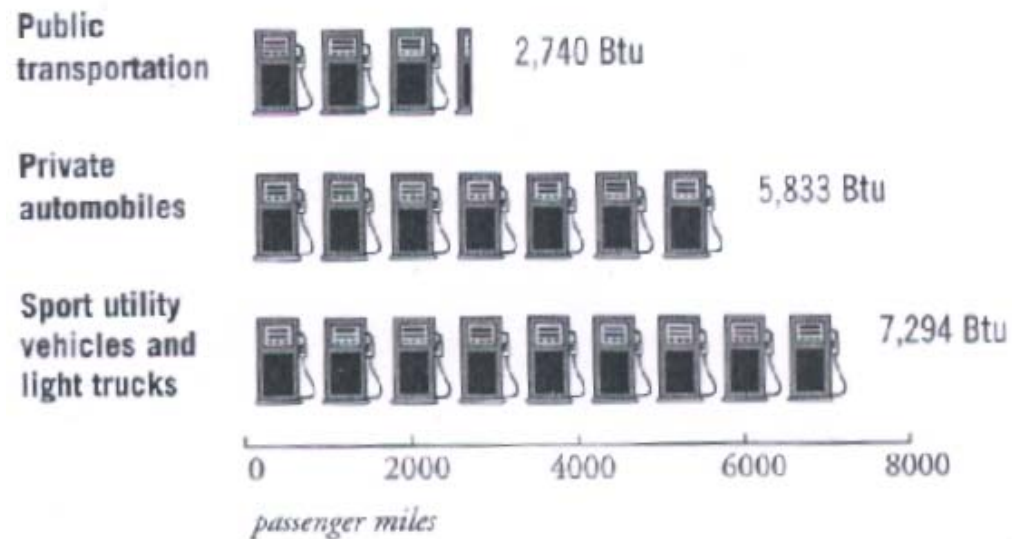
# Energy consumption and urban transport



Source: UITP, 2006 (Courtesy of SYSTRA).

# Cost of transport and energy consumption

## *Public Transportation Uses Less Fuel*



- Energy savings between cities with a high modal share of public transport and cities where most trips are made by private car represent around **500 to 600 litres of petrol per inhabitant per year.**

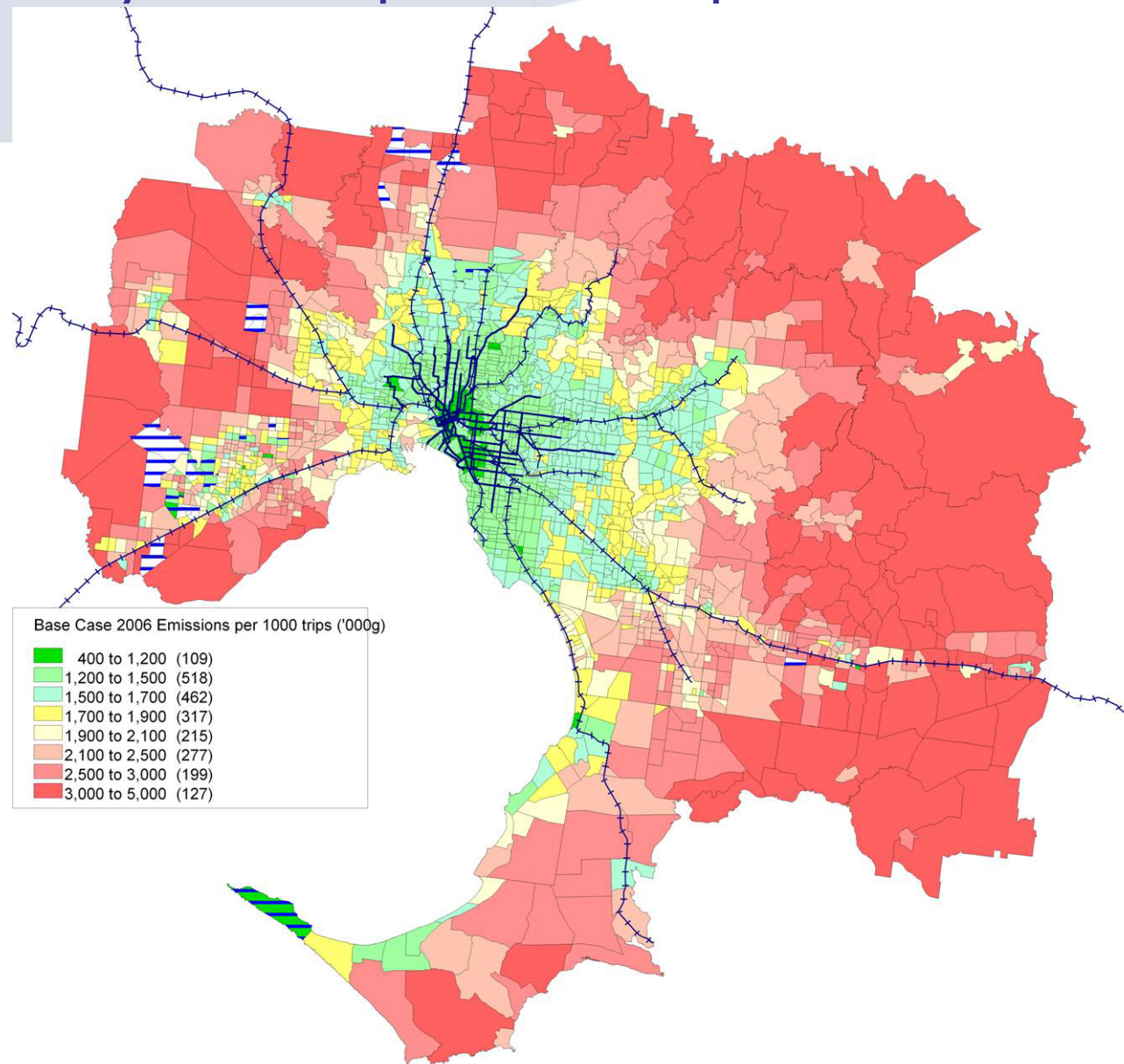
## **Land use and urban sprawl – mean higher costs and increase the need for more infrastructure**

- Environmental Degradation (e.g downsizing of nature)
- Aesthetic Degradation and Loss of Cultural Sites (highways instead of streets)
- Social Impacts (roads instead of meeting points/market places)
- Public Service Costs (e.g longer sewer pipes, more schools)
- Increased Transportation Costs/Reduced Access
- Economic Productivity and Development compromised

**Some cities in the US have 5 times more roads than in Europe yet Vienna has recently been voted the 'most liveable' city - it has the highest modal split PT (35%) cf to IT(32%) in Europe**

# Transport Emissions per 1,000 trips

Work done by the Dept of Transport Melbourne, Australia



# Job creation with PT – Studies in Europe and the USA



Show that +/- 30 jobs are created for every 1 million € invested in public transport infrastructure and around 57 jobs for a similar investment in public transport operations.

From a study of 13 European public transport investments the regional economic effects of public transport investments costs were found to have a multiplier effect of 2 to 2.5.

In Switzerland the economy as a whole benefits from added value of 4.60€ for every 1 € spent on public transport. In addition, every direct job is linked to 4.1 jobs in other sectors of the economy.

*Source TRANSECON; Urban Transport and Local Socio-Economic Development Final Report 2003 & Public Transport and the Nation's Economy A quantitative analysis of public transportation's economic impact prepared by Cambridge Systematics Inc. with Economic Development Research Group October 1999*

**'Attack' on all fronts** with long-, medium- and short-term measures to make incremental efficiencies and long term infrastructure gains.

<u>Time horizon</u>	<u>Transport demand</u>	<u>Manage energy use</u>
Short term, within 5 years <b>Operational</b>	Better & more efficient use of existing modes and start land use strategies	Economies within existing means – behaviour and low cost technologies
Medium term, within 10 years <b>Systemic</b>	Vkm/Pkm balance through modal shifts	Energy efficiency of vehicles
Long term, 50 years <b>Structural</b>	Deep changes in habitats and efficiency levels	Different primary energy mix

## Areas of action



- Build **EXPERT** and operational capacity in the different areas of transport – regional centres of excellence/training and exposure to good practice
- Build **TACTICAL** capacity – institutional (national, regional, local and academic), fiscal reform, statistics and planning
- Build **GRASS ROOTS** capacity – knowledge and support for change

# Cost of reducing carbon per tonne

## Full life cycle – sustainable or economic ...

- Hybrid bus replacement – 20% energy gains



New buses US\$ 205k diesel / US \$ 380 hybrid (plus higher maintenance and energy use costs)  
- May save **256 322** metric tonnes CO2 = average cost of **US\$ 226/tonne**

Energy +/- 7% operating costs  
Assumptions Cost of Capital 6%  
Inflation 3.5% over 15 yrs



# A few points of reference

## Full life cycle – sustainable or economic ...



➤ An Eco efficiency programme to reduce energy use by 5% with reduction idle time; eco driving; engine tuning and maintenance (e.g. tyre pressure) but 10-15% is easily possible

Saved 61,000 metric tonnes of CO<sub>2</sub> = average cost of **US\$ 145 /tonne**

e.g. an Air-conditioned bus consumes +/- 5.5 litres per hour idling (KMB Hong Kong 4000 buses.....)

# UITP's role as an international organisation



- **Millennium Cities Database (100 cities), Mobility in Cities (50) and the Club of Cities.**
- **Fuel and Traction System Observatory (FTSO) set up in 2007 with a twofold goal: to compile experiences of different public transport into a database and to analyse major industrial trends**
- **Sustainable development Charter (150 signatories)**
- **Regional offices and regional events and trainings**
- **International congresses, conferences, publications and web site.**
  - e.g. Vienna 58th World Congress 2300 delegates; 150 sessions and 23,000 sq m Exhibition with 4000 professional visitors

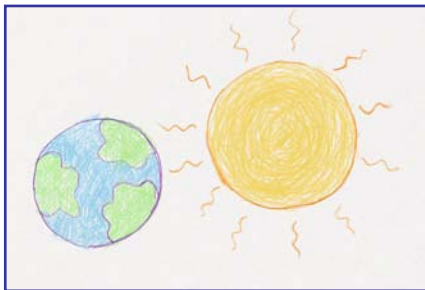
## Open questions (& answers to)

- We need to make more more progress in the next 20 years than in the last
- What are we going to do in the 'crisis' short term
- What incentives are required for the developing world to invest in sustainable transport **systems**?
- How might the **special needs of transport** as a sector and within the sector (e.g. urban transport) be better adapted in international agreements?
- How can new streams of financing e.g. carbon finance be brought into urban transport and vice versa?

## →=>=>..... **Some suggestions**

- **Information gathering and the use of statistics**
  - Standard ways of collecting data (city level can be interesting) and definitions
  - Frequency and availability
  - Show the flow of people and goods
- **Knowledge and know how transfer**
  - Centres of excellence and expertise
- Technology is a **tool to achieve a goal** – how can we use it better?
  - Making it **appropriate** and **affordable**
- Involvement of **stakeholders and general public**
  - Awareness raising and voluntary measures

# UITP/UNEP TV Campaign – The voice of reasons (aged 6)



**30 second TV campaign valuing the role of public transport in alleviating climate change.**

-build on the success of a first TV campaign launched in 2005 with slogan, 'The world is your home. Look after it'.

- launched on **22/02/08** at **UNEP 10th Special Session of the Governing Council/Global Ministerial Environment Forum**

# No excuses this time!



**How can we avoid applying  
'Old Thinking to New Opportunity'**

# Miracles do happen.....😊





# Thank you for your attention

**Heather Allen**

E-mail: [heather.allen@uitp.org](mailto:heather.allen@uitp.org)

[www.uitp.org](http://www.uitp.org)



JANUARY 2007  
A UITP position paper

## Focus

### A low carbon future with public transport

THE CONTRIBUTION PUBLIC TRANSPORT MAKES TO REDUCING CARBON USE AND THE MEETING THE NEEDS OF CUSTOMERS REMAIN THE MAIN CHALLENGES FOR THE PUBLIC TRANSPORT SECTOR. THIS POSITION PAPER PROVIDES A SHORT BACKGROUND ON CLIMATE CHANGE, THE URBAN AND RESPONSIBILITY FOR PUBLIC TRANSPORT AND PROVIDES RECOMMENDATIONS.

**Background**  
Human activities and increasing levels of carbon dioxide are changing the natural climate cycle, bringing warmer temperatures all over the world. The extent of the impact and how reversible these effects are may still be unknown, but the direct and indirect consequences of the changes that we are already experiencing pose a risk that will not be ignored. For example, the world's total economic losses of tropical rainforests, which in the United States is valued at \$200 billion, are estimated at \$150 billion. In addition, a warming of the world's oceans will melt 100 billion tonnes of ice, which will raise sea levels by 200m. In the long run, the risk of extreme weather and temperature rises caused by climate change is the result of several impacts.

**What is the Greenhouse Gas effect?**  
The world is surrounded from the sun by a blanket of gases. Some of the earth's energy processes this layer and the atmosphere allows energy to escape from space. In some ways, it's like a blanket that traps heat. The more greenhouse gases in the atmosphere, the more heat is trapped and the temperature around the planet rises. The Intergovernmental Panel on Climate Change (IPCC) believes that the warming of the earth should be limited to 2°C, this means limiting the concentration of CO<sub>2</sub> in the atmosphere to 550 ppm.

<sup>1</sup> Source: World Bank  
<sup>2</sup> Source: Intergovernmental Panel on Climate Change (IPCC) Working Group I Contribution Working Paper 1, 2001  
<sup>3</sup> Source: Intergovernmental Panel on Climate Change (IPCC) Working Group I Contribution Working Paper 1, 2001  
<sup>4</sup> Source: Intergovernmental Panel on Climate Change (IPCC) Working Group I Contribution Working Paper 1, 2001



Better mobility for people worldwide

**Making tomorrow today**  
Mapping the progress in sustainable development in the public transport sector 2005-07 (TBC)

