

**Mobility:
The Inescapable Urban Challenge**
The Annual North West Transportation Lecture 2009



**Mobility:
The Inescapable Urban Challenge**

Urban Challenges

Complete Mobility Solutions

Progress to Complete Mobility

Megatrends Pose Urgent Challenges to Urban Areas

Demographic change

- Until 2030, 90% of the world's population growth will occur in urban areas (Source: UN)

Urbanization

- Mid-2007, 50% of the world population are living in cities

Increasing mobility

- Traffic congestion on city streets in Western Europe will increase 188% by 2010

Growing demand for health and elderly care

- Urban air pollution causes an estimated 130,000 premature deaths each year in developing countries (Source: WHO)

Increasing scarcity of natural resources

- Cities directly or indirectly account for 60% of world's water use

Growing demand for safety and security

- Malfunctions of critical infrastructures pose high risks to urban economies: in 2003 3-day power outage in New York City caused loss of 1 bn USD

Growing need for environmental care

- Cities cause 80% of the greenhouse gases, but they cover only 0.4% of the earth's surface

Survey of Megacity Officials and Influentials



(n=522 across 25 cities during Oct./Nov. 2006)

- mobility as major emphasis to attract investment
- holistic solutions desired but difficult to achieve
- Silo thinking / governance major barrier

Megacity Challenges

500
25

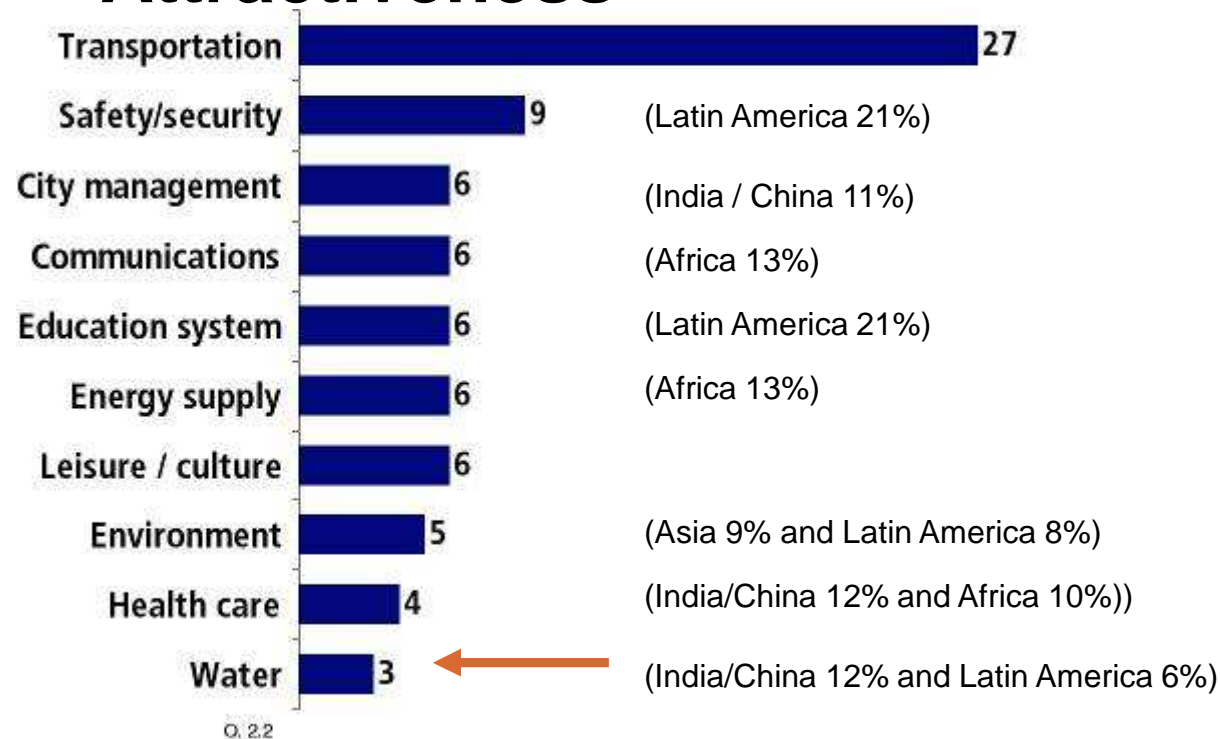
Megacity Challenges
A stakeholder perspective

A research project conducted by Gopaldas and MRC McLean-Parks
Sponsored by Siemens

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HAZEL

Transportation - Major Driver of Urban Competitiveness

• Importance for Economic Attractiveness

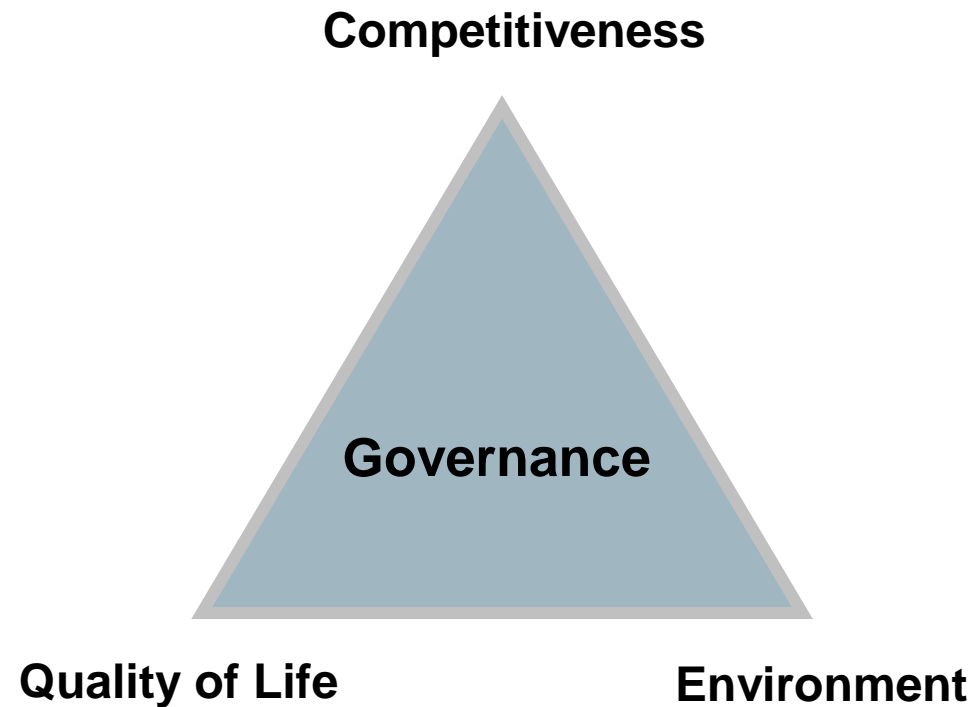


Key Challenges

- **Mobility outstrips every other infrastructure concern – has the biggest impact on urban competitiveness**
- **Environment needs to be seen as a contributor to economic competitiveness**
- **Governance needs to move from passive administration of infrastructure to active management of services and the city region**
- **Evolve new models for public / private partnerships on infrastructure**
- **Technology is the key that opens the door**

The Triangle for Success

More than just infrastructure



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A Paradigm Shift in Urban Mobility: Complete Mobility

1 End User-Focused

It is integrated with modern lifestyles and evolving demands and expectations for **personalized mobility options** for people and goods.

It allows for **informed decisions**, is **simple**, and **mode neutral**.

Information and communication is the key interface between the user and transport service as well as for **personal connectivity**.

2 Seamless

Seamless transportation is the **physical and virtual integration** of modes to ensure **coordinated transfer** between modes.

It is the creation of a “**zero-wait state**” where delay to the user, before, during and after their journey is minimized.

3 Valued

It delivers **trusted services** that have **perceived value**, allowing informed decisions that will **make a difference**.

There is a **transparent value proposition** and simple and flexible **payment mechanism**.

It provides an **attractive mobility package** built on priorities (eg safety, comfort, environmental cost).

Complete Urban Mobility Solutions

Focus on User: a retail model of choice and incentives relating to a segmented market

Seamless Travel: zero-wait state

Valued Service: choices make a valued difference

Use Technology: the glue that makes it happen

Governance: cross-sector cross-boundary



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Complete Mobility Index

Scoring based on 11 Indicators

Five Quantitative (UITP Millennium Database)

Road Length

Accident Fatalities

Energy Use

Pollution

Costs of Transport

Six Qualitative (Global Expert Rankings)

Public Transport Service Levels

Transport Management, Control and Security

Transport Information and Payment Systems

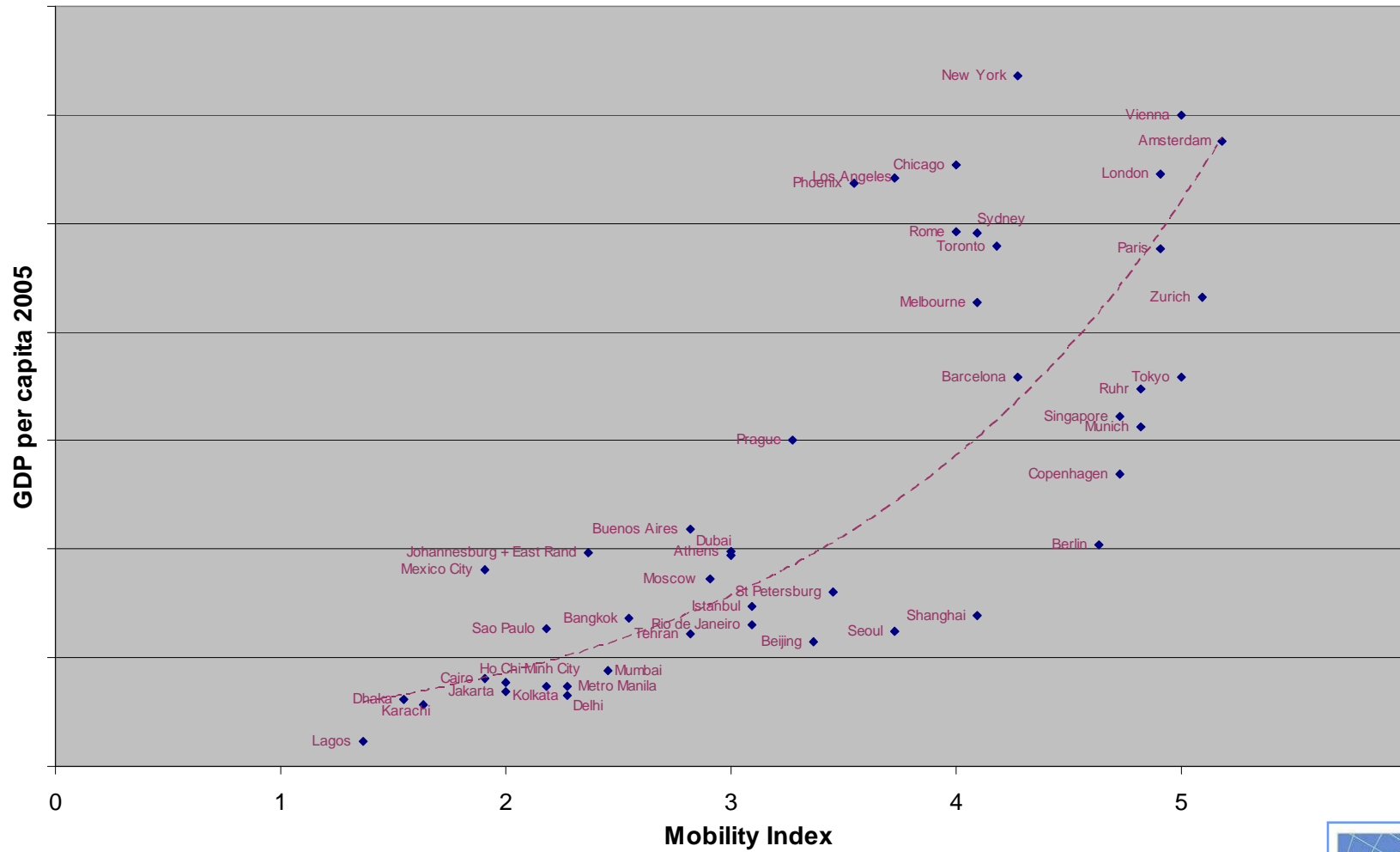
External Road and Rail Connectivity

Air Transport

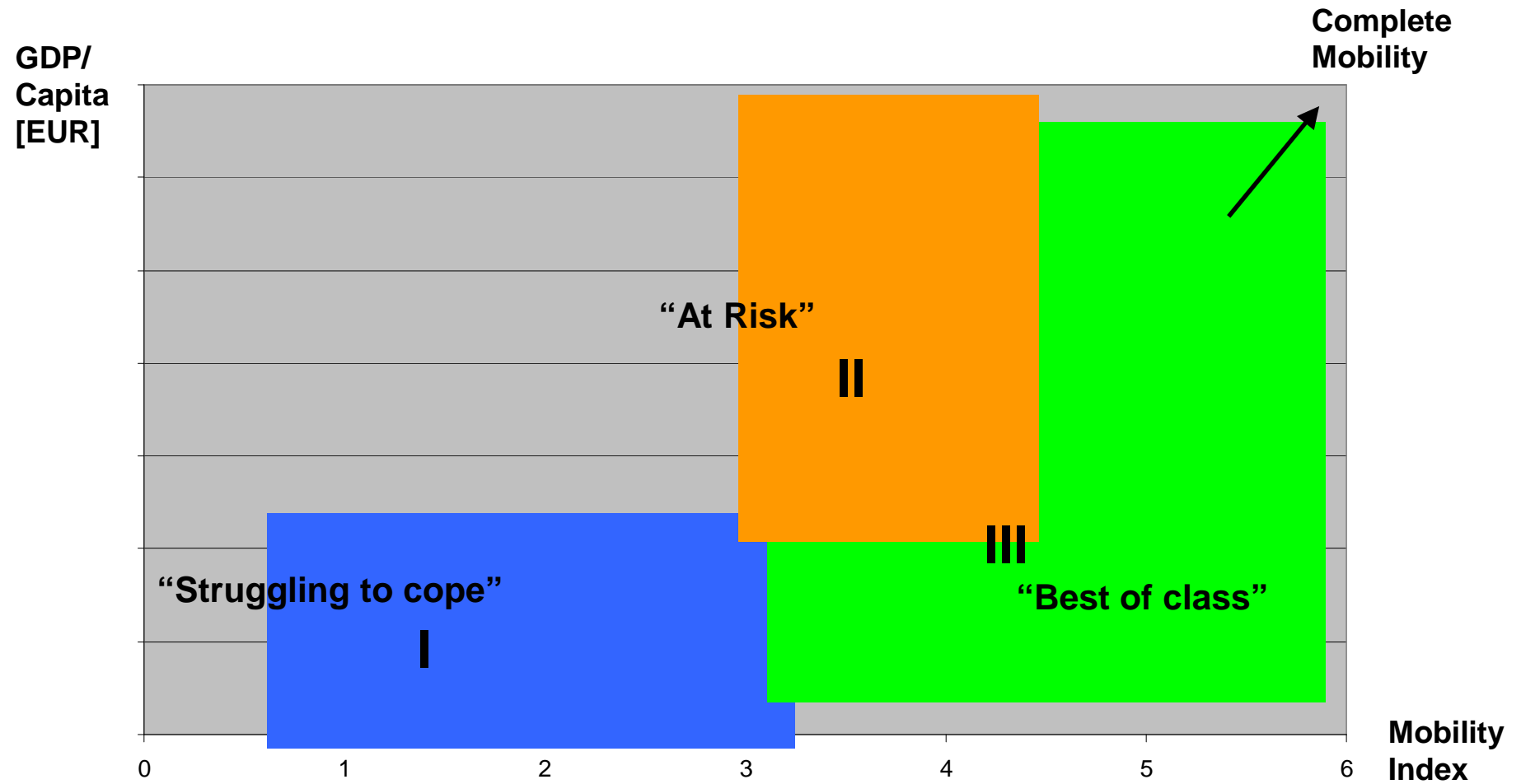
Sea Transport

Related to City GDP (City Mayors Database)

Mobility Scores and GDP



Mobility Clusters on Mobility Pathway



Conclusions

Mobility is the main challenge to urban competitiveness

Urban mobility is the key area where global economic, environmental and quality of life issues will be clustered

Complete Mobility provides a holistic reference point, grounded in undeniable mega trends, around which city solutions can be developed

The pathway to Complete Mobility can be defined: essential to help cities/regions understand their current positions and their pathway to a better future

Complete Mobility follows the trends, is attractive, politically achievable, incrementally deliverable, balances the mobility systems and provides significant new revenue streams and business models

“Some people see things that are and say why ?
I see things that never were and say why not?”

George Bernard Shaw

A Presentation by

Prof. George Hazel OBE

