

**Sustainable
Urban Transport
in Less
Motorised
Countries:
Research and
Training**

**FUTURE
URBAN
TRANSPORT**

programme supported by


VREF
VOLVO RESEARCH & EDUCATIONAL FOUNDATIONS



A word cloud graphic containing terms related to urban transport and sustainability, including: energy, air, train, safety, bus, job, roads, mobility, passenger, goods, water, cars, subway, and trees.

Transportation Research and Injury Prevention Programme

- ❑ An interdisciplinary programme focussing on the reduction of adverse health effects of road transport
 - ❑ TRIPP attempts to integrate all issues concerned with transportation in order to promote safety, cleaner air, and energy conservation
-
- ➔ Transportation planning and traffic flow analysis for optimising access and minimising road traffic injuries and pollution
 - ➔ Vehicle crash modeling, road safety studies, safer vehicle and helmet design
 - ➔ Studies related to public transport, traffic management, road design and land use planning
 - ➔ Epidemiology of factors associated with road traffic injuries, injury analysis and pre hospital care

The logo for the Transportation Research and Injury Prevention Programme (TRIPP) is located on the left side of the slide. It consists of a vertical blue bar with the word "TRIPP" written in white, bold, capital letters. Above the bar, there is a white circle and a grey triangle pointing downwards.

Transportation Research and Injury Prevention Programme

TRIPP attempts to integrate expertise in transportation planning, road safety, computer sciences, biomechanics, epidemiology, medicine, social sciences and econometrics for work on transportation issues

SUSTAINABLE URBAN TRANSPORT IN LESS MOTORISED COUNTRIES: RESEARCH AND TRAINING

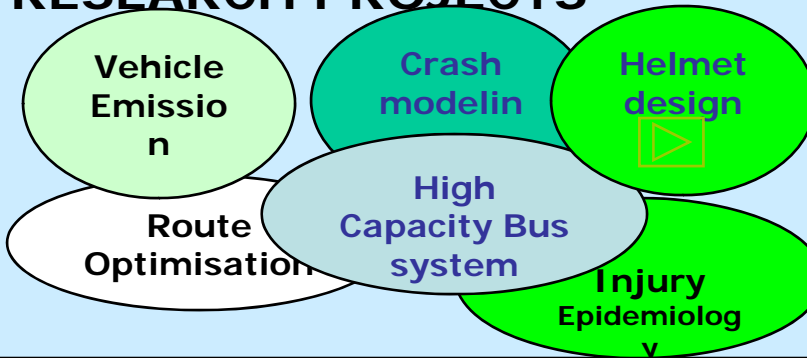
EDUCATION

- Student projects
- Masters Programme
- Ph.D. Scholars

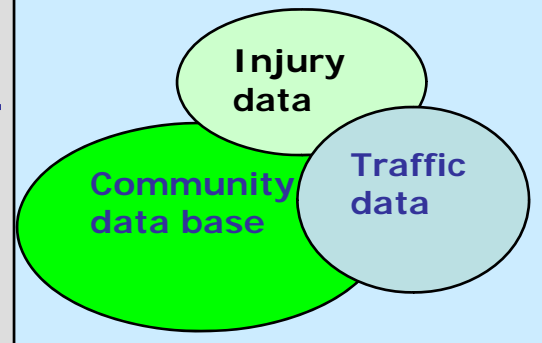
NETWORKING

- Community Meetings
- Annual training course
- Visiting scholars
- Seminars/workshops

TRANSPORTATION RESEARCH PROJECTS



Research Data Resource

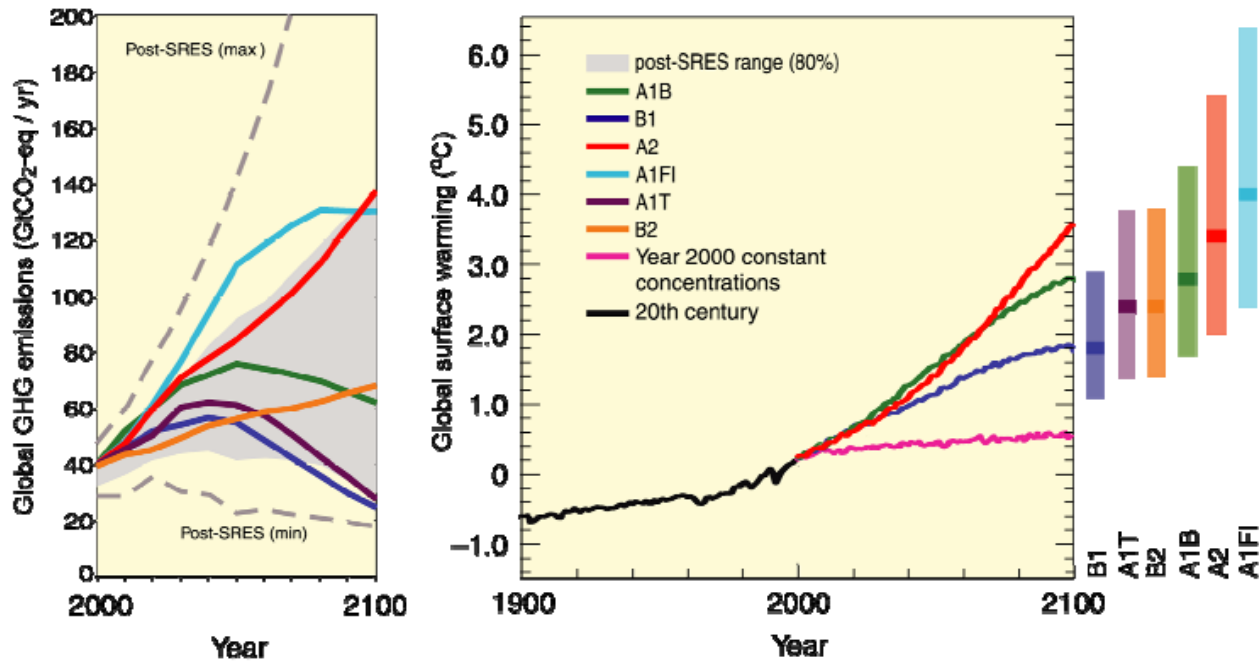


Research dissemination/ Publication Unit

- Community transport-health monitor
- Journal
- Scientific papers

Global warming, transport and CO2

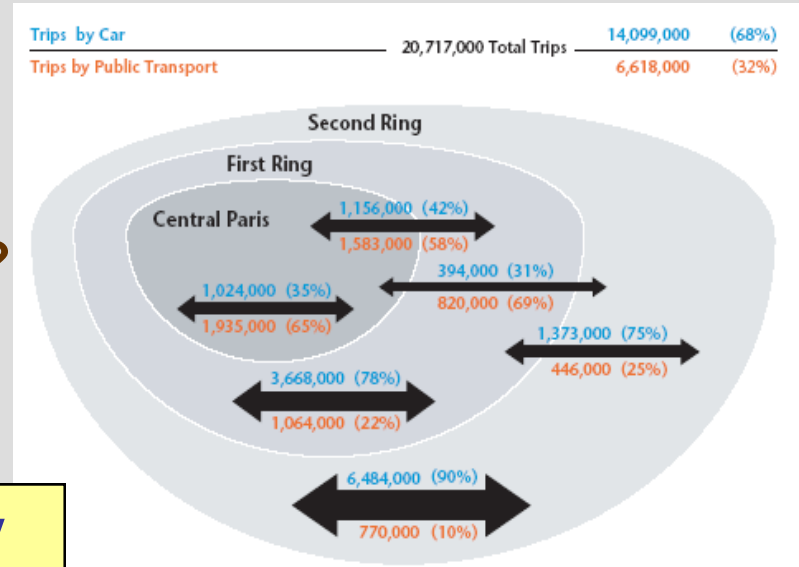
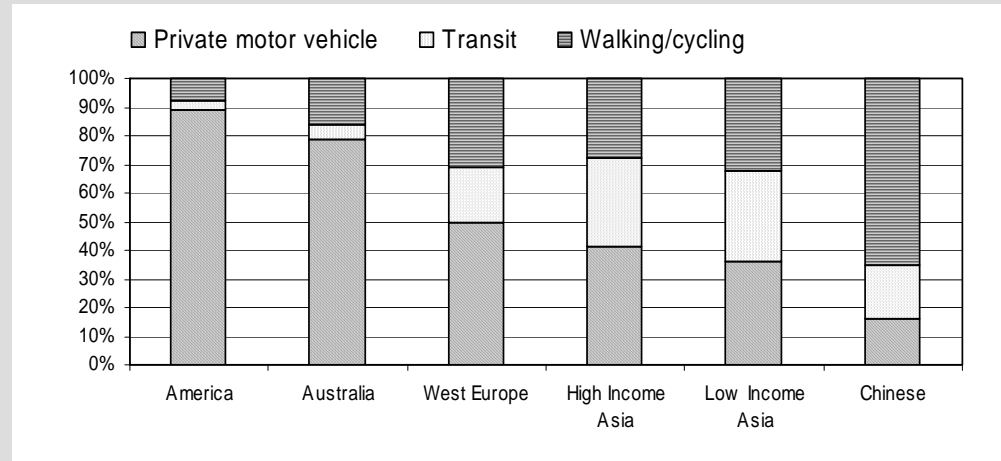
Scenarios for GHG emissions from 2000 to 2100 (in the absence of additional climate policies) and projections of surface temperatures



Access and mobility vs technological fixes

How do we

- Reduce trip lengths ?
- Reduce number of trips ?
- Reduce motor vehicle use ?
- Increase walking and bicycling ?
- Increase public transport use ?
- Select public transport technology ?



Technological fixes alone may not provide solutions

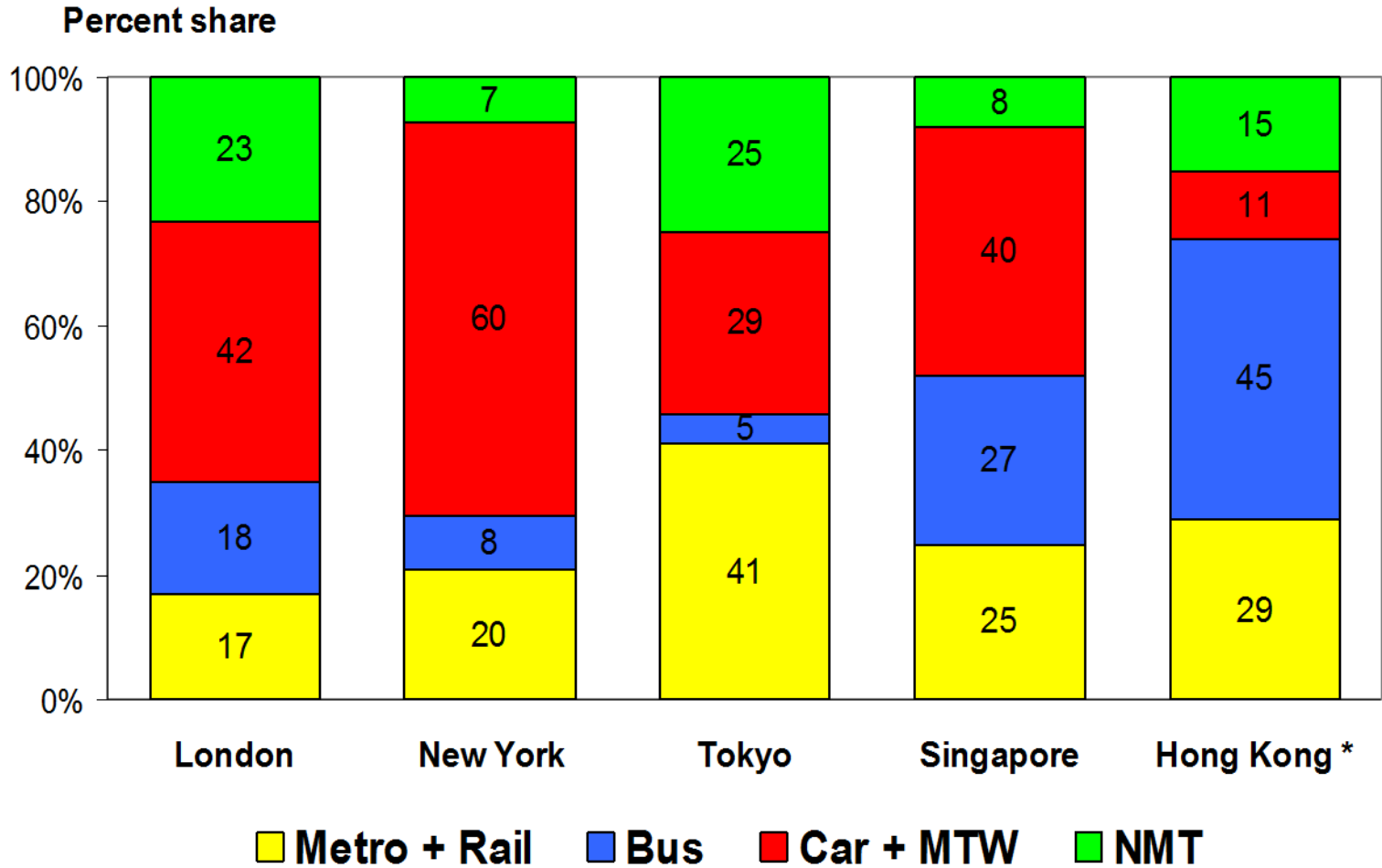
Consequences of change

- Air-conditioned, comfortable, safe and quiet travel in cars with music in hot and tropical climates cannot be matched by public transport:
 - *Public transport closer to home, small walking distances, very predictable - favour high density networks, lower capacity, surface transport systems, predictable arrival and departure times aided by ITS information systems*

- Availability of m/c reduces middle class demand for public transport, pegged the fare levels for public transport:
 - *Need for very cost efficient public transport systems that match motorcycle operating cost*

- New cities do not have dense and attractive central business districts
 - *Radial lines into the city do not attract very high ridership. Capacities above 20,000 pphpd generally not necessary – dense surface middle capacity networks adequate*

Travel patterns – old world cities

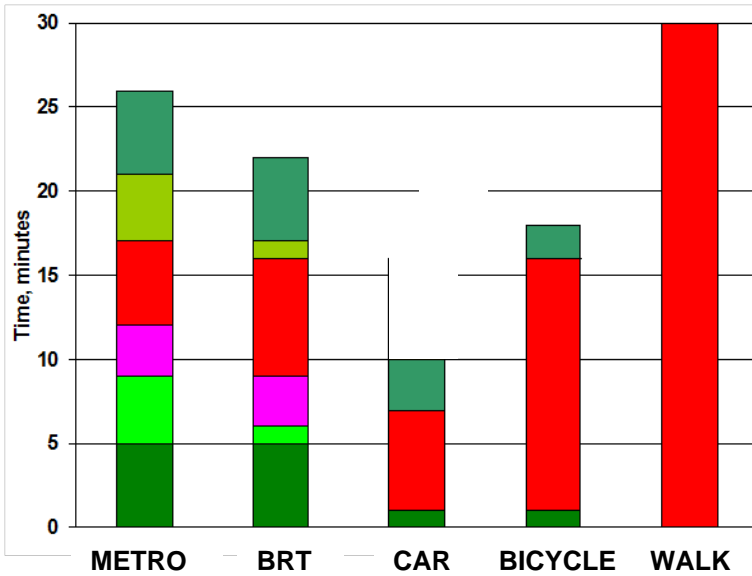


Conundrum – Public transport

City	Modal share, percent		
	Car + MTW	Public Transport	Walking and bicycling
Bristol, UK	65	12	23
Leeds, UK	61	36	3
Nantes, France	58	14	28
Helsinki, Finland	54	20	26
Marseille, France	53	12	35
Edinburgh, UK	52	29	19
Newcastle, UK	48	19	33
Brussels, Belgium	44	18	38
Frankfurt, Germany	42	21	37
Stuttgart, Germany	36	25	39
Amsterdam, Neth's	32	16	52

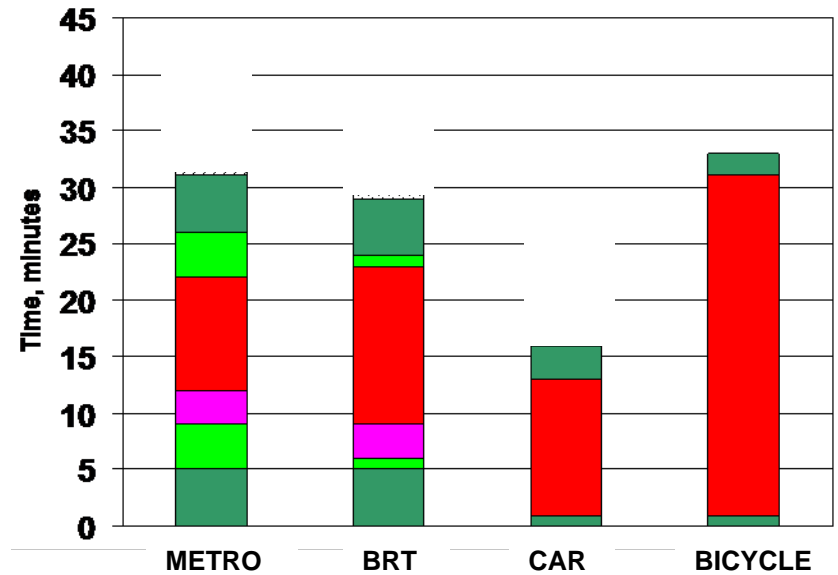
MTW- motorized two-wheeler, PT – Public transport
W&C – Walking and cycling

DOOR TO DOOR TRIP TIMES

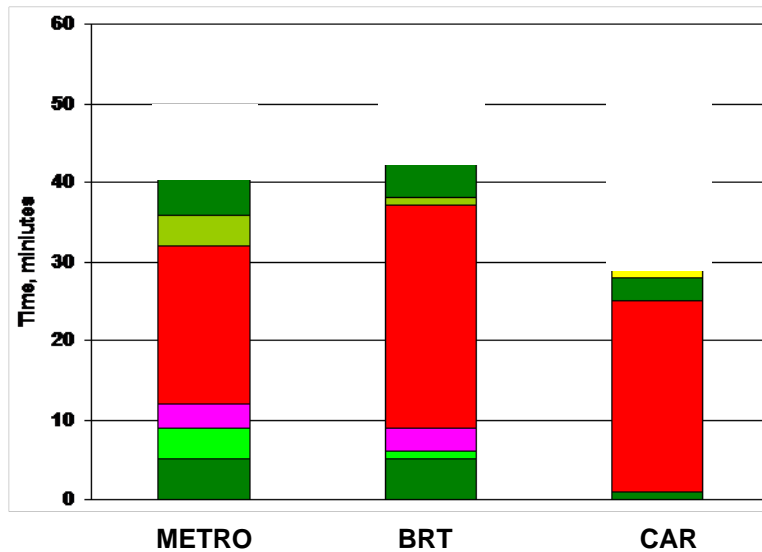


3 KM

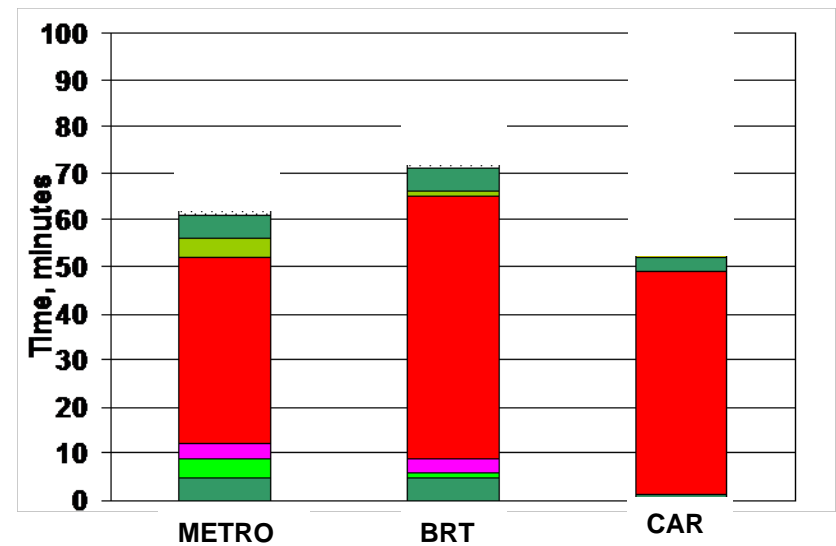
- Walking to station/veh
- Journey in vehicle
- Congestion (car)
- Walking in station - in
- Walking in station - out
- One change
- Waiting at station
- Walking to destination



6 KM

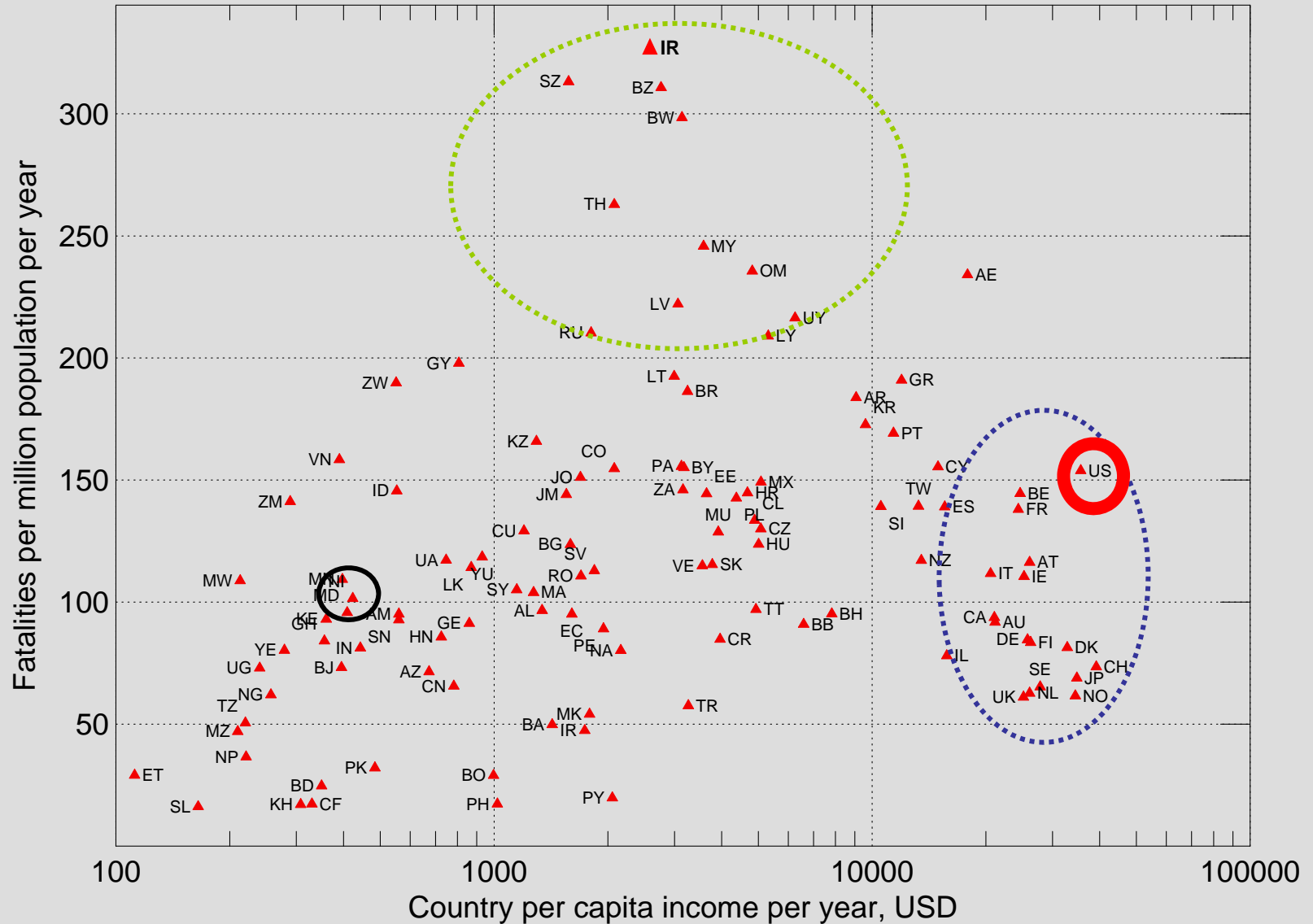


12 KM

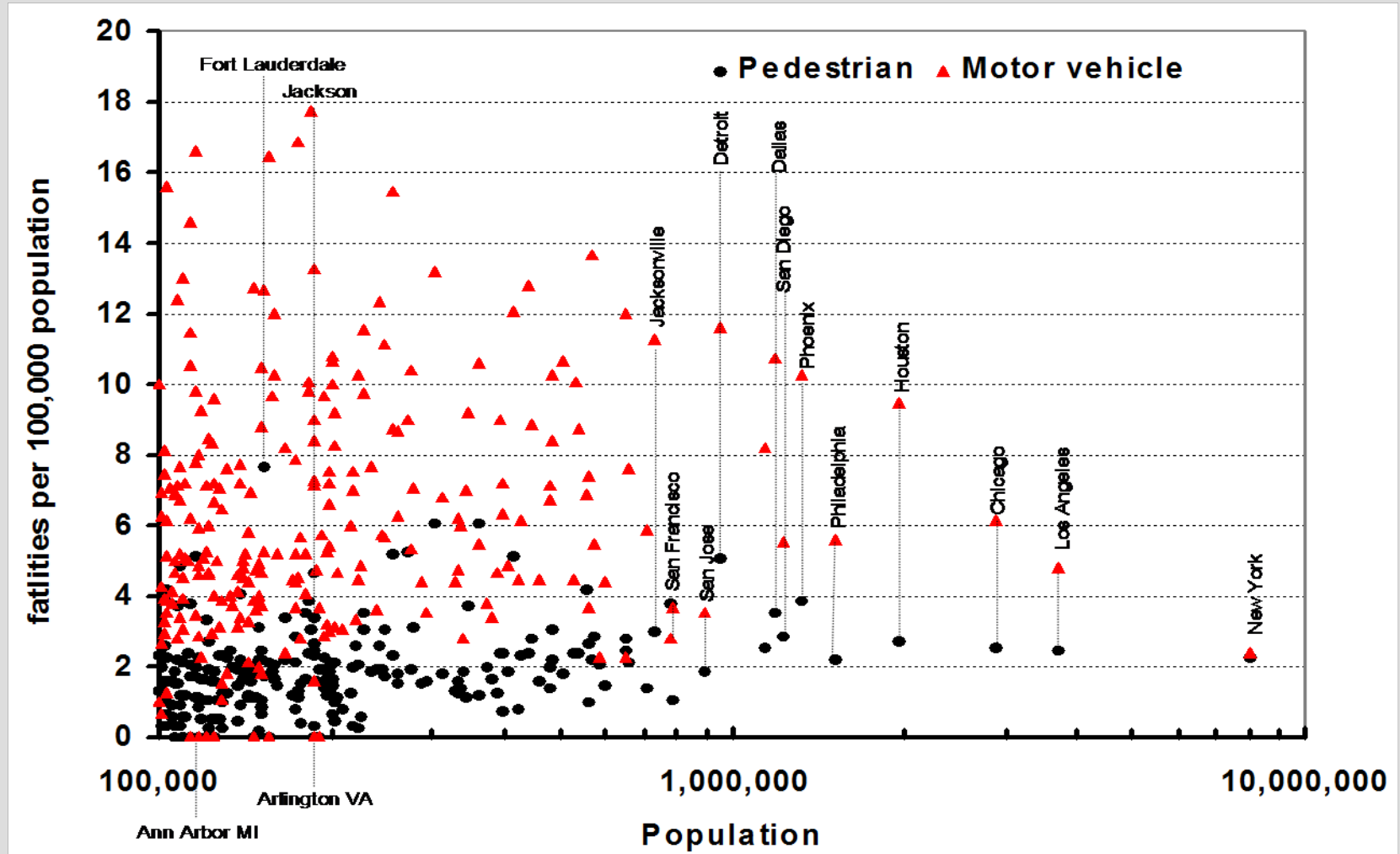


24 KM

Urban form, infrastructure and life style greater impact than technologies ?

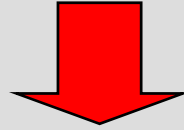


Fatality risk in traffic crashes in US cities



City structure, safety & public transport

- Actual area devoted to road space may not vary much
- Residential block/development size can vary in size
- Width of roads are different across cities



Large blocks → Wide arterial roads → More fatalities
Large blocks → Long walk to bus → Less use

Pop: 116,278

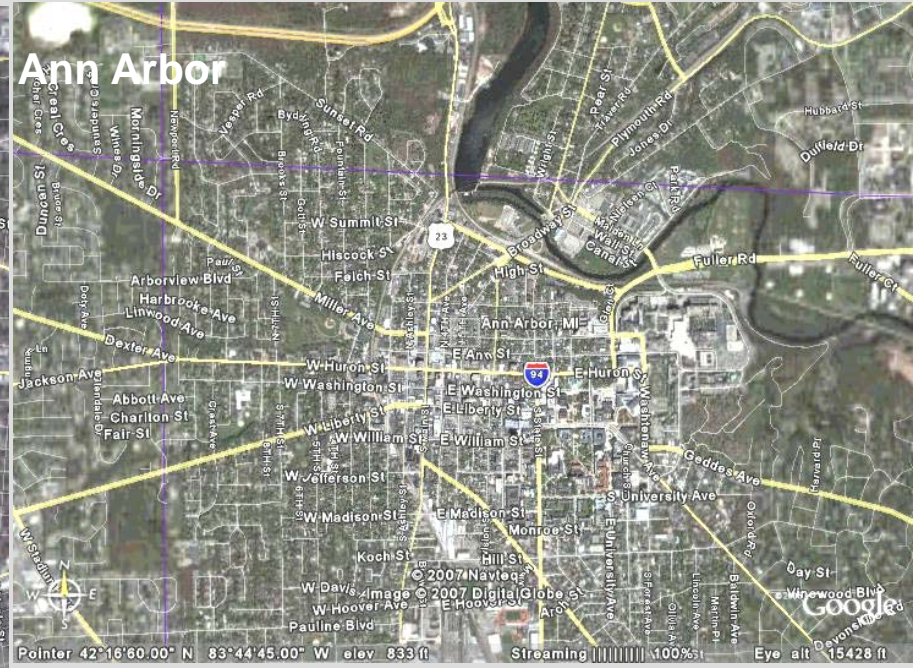
Ped: 5.16

MV: 16.63

Pop: 114,024

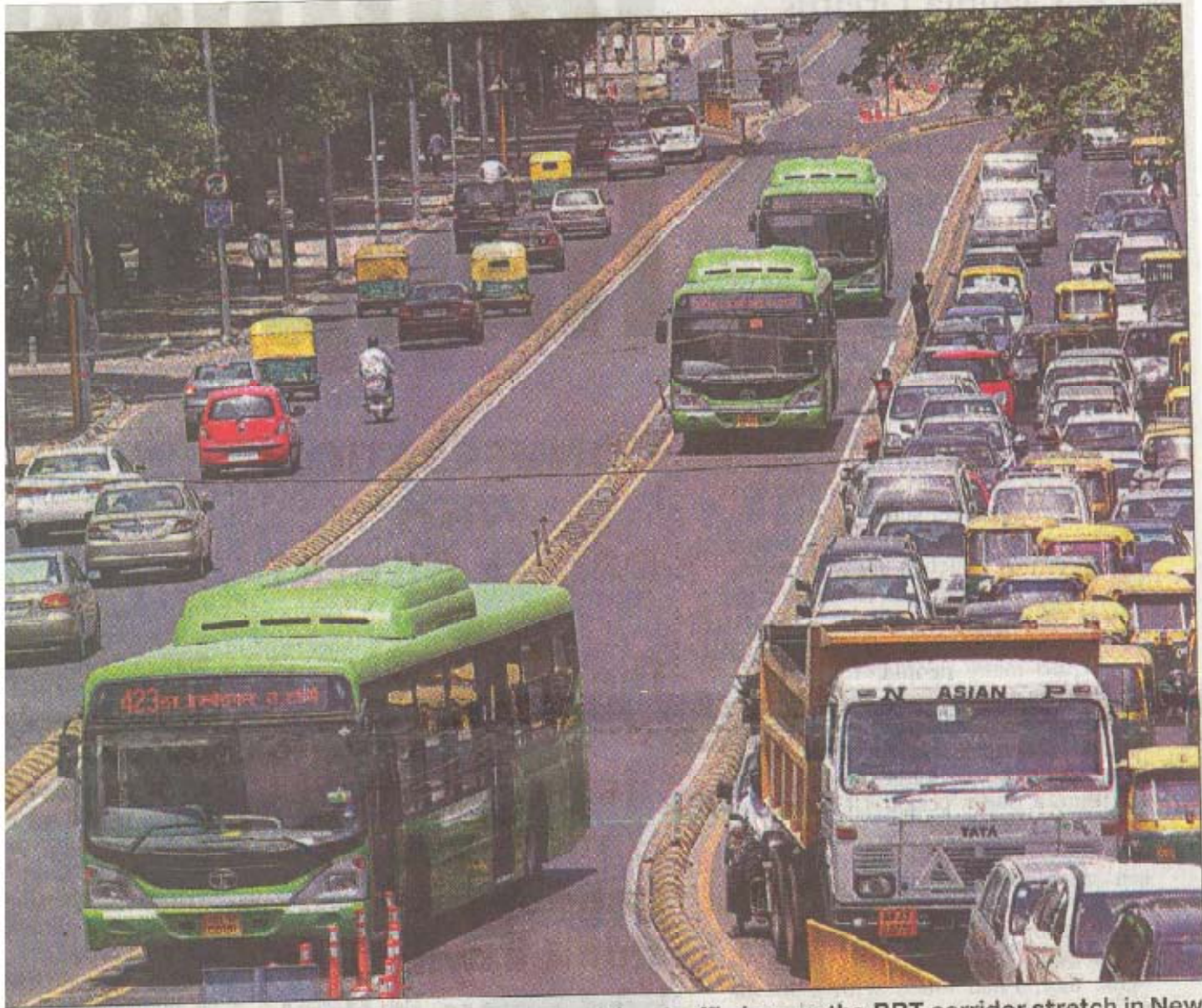
Ped: 0

MV: 0.0



DELHI BRT CORRIDOR - BEFORE





NEW DELHI: Buses ply on the road as commuters are stuck in a traffic jam on the BRT corridor stretch in New Delhi on Sunday. (AFP)

'Experts' order serial rape of Delhi roads

Mindless HCBS plan derails traffic, destroys greenery, leaves city gasping

A Pioneer Investigation

It is only time ordained "Hindu fatalism" that has prevented a public revolt against a hare-brained road transit project in Delhi that has caused untold misery to commuters along one of the city's principal arterial corridors. For the last 18 months or more, a lunatic plan to introduce the so-called High Capacity Bus System (HCBS) between ISBT in the north and Ambedkar Nagar (Khanpur) on Mehrauli-Badarpur Road in the south, has resulted in incredible



Mastermind of mayhem:
Dinesh Mohan

.....
mayhem, wanton damage to
the environment, insuffer-

able traffic snarls and a sharp rise in road accidents.

But the worst is yet to come. Once this demented project is completed, one of the Capital's best traffic corridors will be in a shambles forever. Already the journey time of 45 minutes from ITO to Khanpur, a distance of 17 km, touches two hours at peak time. This despite the fact that the dedicated bus lanes are incomplete and all traffic currently uses the under-construction bus corridor, separated from the rest of the road

by concrete dividers. When the project is finally implemented and the bus corridor becomes out-of-bounds for other vehicles, the congestion on the narrow lanes left for them can only be imagined.

Brainchild of IIT Professor Dinesh Mohan who has never concealed his visceral hatred for private cars and flyovers, besides romanticising pre-liberalisation China's dependence on bicycles as the principal mode of urban transport, HCBS is only at its incipient stage. If such

experts have their way, 13 other arterial corridors spanning the entire city shall be subjected to gangrape by greedy contractors with the benign blessings of rootless "experts" and supine babus. Four more have already been finalised although work is yet to begin on those. Although the political leadership is not blameless, it was probably tricked into approving this ludicrous idea mooted by the "experts" in the name of 'aam admi', rather than proactively promoting it.

If you have had to travel from the Moolchand flyover along JB Tito Marg and further to Khanpur down the Dr Ambedkar Marg, any time during the last one-and-a-half years it must have been a harrowing experience. But what about people who live in highly congested residential colonies like Sheikh Sarai, Pushp Vihar, Madangir, Dakshin Puri or the much-maligned Sainik Farms? Here goes a typical example:

You opt to drive along the divider-demarcated single lane

after descending from the Moolchand flyover because the narrow strip on the left is already choc-a-bloc with traffic. After negotiating a treacherous path which is barely four feet wide and winds incomprehensibly along, taking care to gingerly follow sputtering three-wheeled delivery vans and unruly two-wheelers (for there is no way you can overtake them with such a narrow opening), you confront complete chaos at the Archana crossing. Everybody uses the break from the

Printed from

THE TIMES OF INDIA

The Times of India -Breaking news, views, reviews, cricket from across India

IIT dept behind BRT gets funds from bus makers

25 Apr 2008, 0123 hrs IST, Abantika Ghosh, TNN

NEW DELHI: As questions are being raised vigorously by citizens' groups, traffic experts and MPs across party lines over the controversial BRT corridor, what seems to have slipped notice is that the patrons of the IIT-Delhi department behind the concept include bus manufacturing majors Volvo and Tatas.

The BRT project, which has turned the lives of thousands of south Delhi commuters into a nightmare of nerve-wracking jams, pedestrian chaos, and cycle and two-wheeler tailbacks, is essentially meant to segregate traffic in a manner that provides a dedicated corridor to buses. The road space for non-bus motorized traffic has been reduced by about half.

What makes the decision of the city government to appoint Dinesh Mohan and Geetam Tiwari from IIT-D's Transport Research and Injury Prevention Programme as independent experts for the project curious is that the department's patrons include Volvo Education Research Foundations (VERF) and Ford Motor Company. The experts deny any conflict of interests.

Collaborations – networking – lessons from organic and self organizing systems

- Need to understand role of approaches other than technological fixes
- Forces against development of sustainable futures?
- Safety issues up front
- Researchers on sabbatical leave
- Research student exchange
- Short term visits: