Innovative and Pro-poor Modal Integration :

Integrating NMT into Public Transport System

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Outline

- Status quo
- What needs integration?
- Challenges

Status quo – Urban Transport

Developing cities often still increasingly invest in automobile friendly infrastructure

This is where we're getting to, following the current trend… is it this what we want?

Perception on NMT in many cities

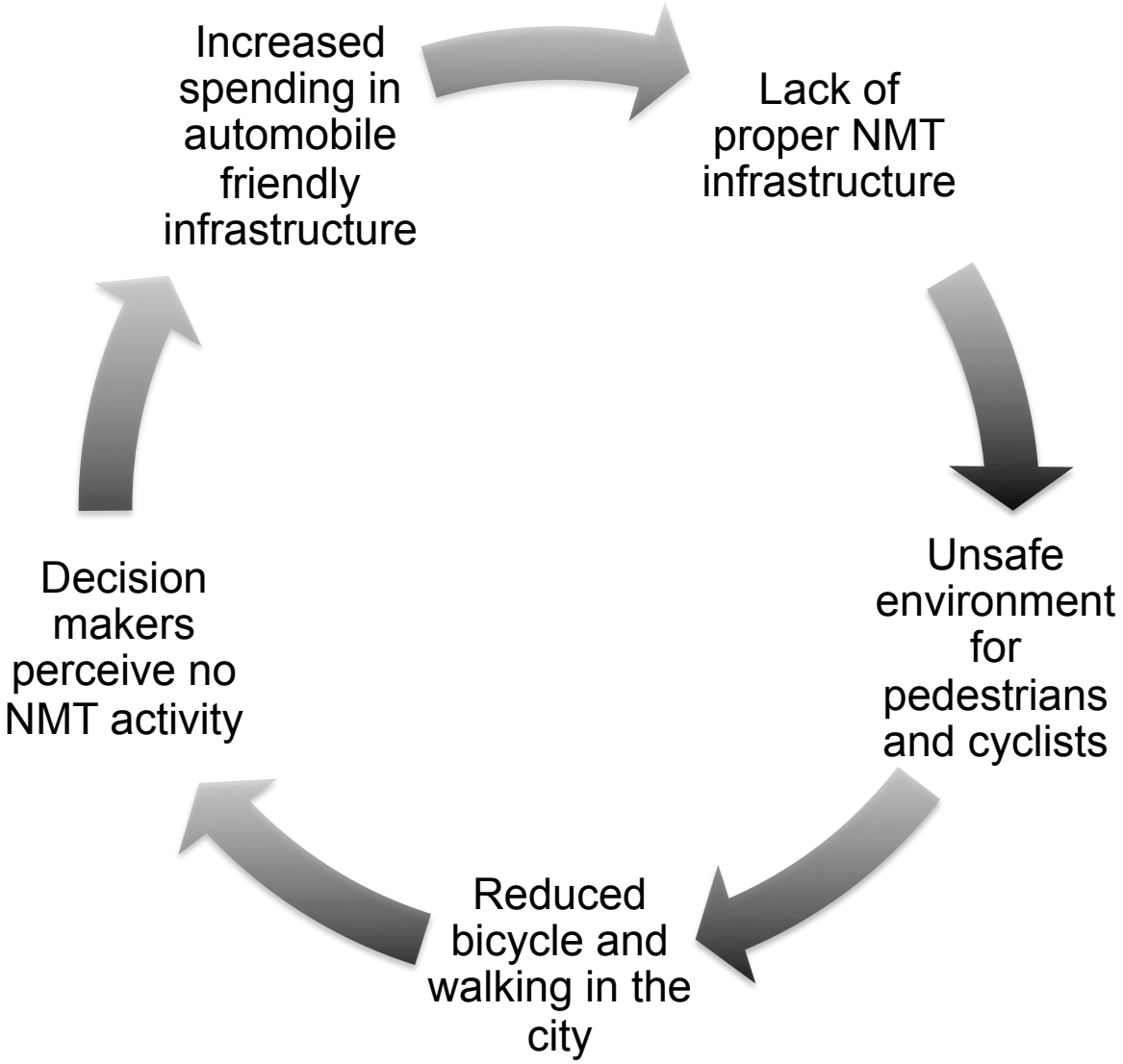


Illustration by Santhosh Kodukula, 2011

SPACE

- S = Safety

SPACE: Safety (2)

Are we mountain climbing in the city

SPACE: Safety (3)

"I bet I can cross the road alive"

SPACE

P = Priority

From Michael King study developed with SUTP January 2004

SPACE: Priority

Question:
Where is the footpath?
and
Whose is the footpath?

SPACE: Priority (2)

Senior citizens are often deterred from walking

SPACE

A = Accessible

SPACE: Accessible (2)

Basic principles of NMT Design are not Rocket Science.

Which do you prefer to cross?

SPACE

C = Comfort

SPACE: Comfort (2)

Pedestrian overpasses uncomfortable
and people seldom use them.

SPACE: Comfort (3)

SPACE

E = Enjoyable

Do you think a person would enjoy walking on this “footpath”

SPACE : Enjoyable (2)

It is a footpath not a stair case

Urban transport modal split in India

City	Modal Split for Travel, Percent of Trips					Vehicle Ownership	
	Population (2001 Census)	Public Transport	Private Transport	Bicycling & Walking	Average Trip Length km	Vehicles Per 1000	Passenger Cars Per 1000
Ahmedabad	4,500,000	30	38	32	5.4	371	55
Bangalore	8,625,000	36	39	25	9.6	283	50
Bhopal	1,433,000	28	19	53	3.1	189	24
Chennai	7,014,000	39	30	31	8.6	226	45
Delhi	13,840,000	48	19	33	10.2	355	117
Indore	1,759,000	16	37	47	5.6	257	27
Jaipur	2,032,000	17	39	44	5.4	359	55
Mumbai	17,702,000	52	15	33	11.9	54	24
Mysore	787,000	26	23	51	2.5	380	40
Pune	4,200,000	12	54	33	6.1	335	48
Rajkot	1,002,000	13	38	49	3.7	403	33
Surat	2,430,000	13	31	55	5.3	492	55

Indian cities have mostly still high NMT and Public Transport Modal Shares!!

Time to act is now, while private vehicle numbers are still low

Source: Compiled by EMBARQ - URL: http://www.embarq.org/sites/default/files/12-Indian-Cities-Transport-Indicators-Database.xls

Integrating NMT and PT

- Improved accessibility for users; very important for last mile(s)
- Higher ridership – benefit for the operators
- Less dependence on motorized transport
- Innovative business options are possible
- Wider group of society (including the urban poor) is benefited
- here is a large potential for Public Bike Systems

What needs to be integrated for…

- Pedestrians
  - Proper,unobstructed ,footpaths
  - Better and safe access and egress to the stations
  - Better bus shelters
  - Street furniture

Santhosh Kodukula, 2009

Main aim is to make walking as pleasurable and relaxing as possible

Pedestrians - footpaths

- Footpaths need to be
  - consistent throughout the route
  - without obstacles on the footpaths
  - without encroachment by vehicles
  - shaded whenever possible
  - adequately lit
  - properly linked to the PT stations

Santhosh Kodukula, 2011

“Walking in a city is like going to a party, the invitation is a proper footpath”

Santhosh Kodukula, 2011

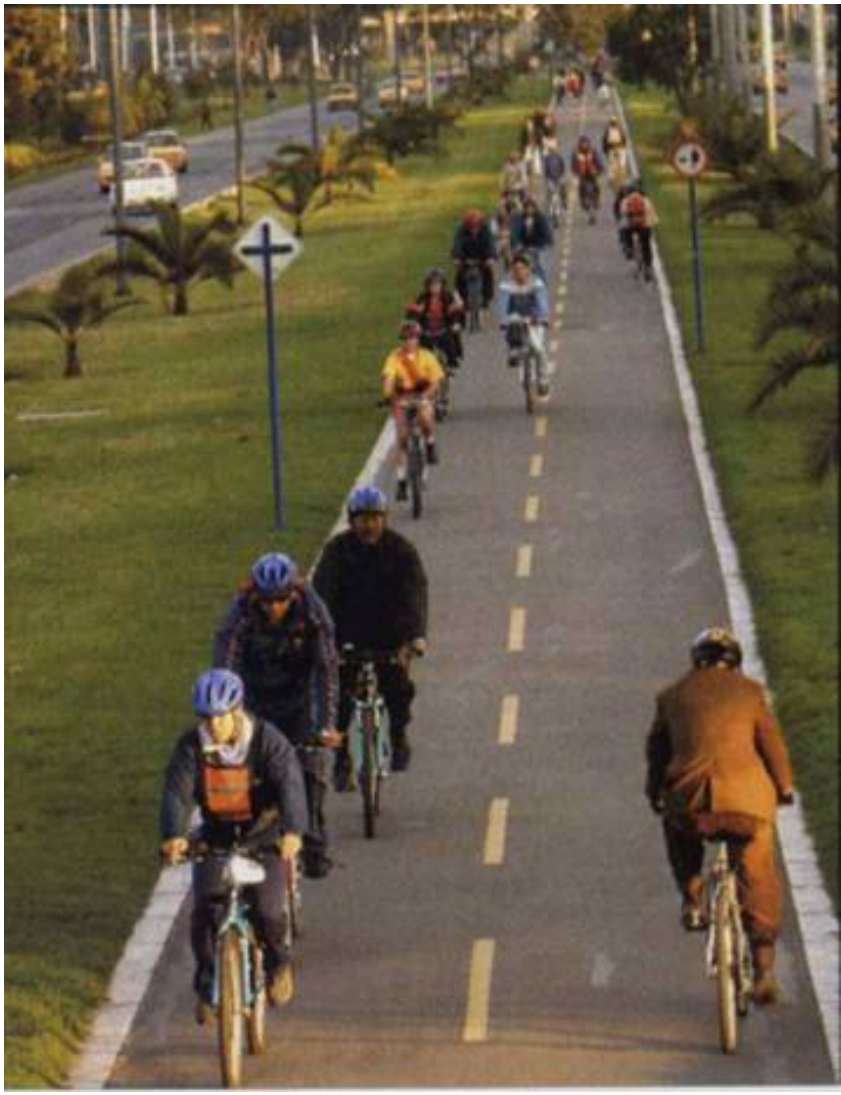
What needs to be integrated for Cyclists

- Cycle lanes that are
  - Minimum 2m wide
  - Grade separated (especially on road with speeds >30 kmph)
  - No encroachment by motorised vehicles (parked or moving)
  - Appropriate cycle parking facilities

Neglecting the needs for cycling in cities will increase the risk for cyclists, especially among the poor as many depend on cycling for their daily living

Characteristics of a good cycle lane

- Direct i.e. not tortuous
- No/least interference with motorised traffic
- Properly demarcated lanes and signage
- Preferably priority at signals (especially at junctions)
- Adequately illuminated



Good Cycle lanes vs. bad/no Cycle lane

VS

Build "proper" cycle lanes and cyclists will appear. Building more roads favors even more automobiles and motorbikes

Protection against rain

Cycling is for everyone

- For the rich (data 1995)

Country	Percentage of the trips in bicycle	*Order in EU (+ Switzerland)*	Income per capita	Order in EU (+ Switzerland)
Netherlands	27	1	EUR 25.000	7
Denmark	18	2	EUR 32.000	3
Switzerland	15	3	EUR 38.000	2
Spain	1	14	EUR 15.000	14
Greece	<1	15	EUR 12.000	15
Portugal	<1	16	EUR 11.000	16

- Only in developing countries the idea exists that the bicycle is for the poor

Cycling for everyone

- For men and women:
  - Netherlands: 55% of trips by women
  - Germany: 49% of trips
  - United States: 25% of trips
  - Australia: 21% of trips
- For all ages:
  - Netherlands 65+ 24% of trips by bicycle

Cycling is for everyone

- For all kinds of people

Public Bike Schemes

- Provides an opportunity for people without a bicycle to experience riding a bicycle
- Creates a social equity among various users
- Important for last mile connectivity

Public bike schemes integrated with bus system

- Bicycles provides at public transport stations
- Distinct image for the PT system
- Single fare facility, so that people using the PBS wont need to pay more

What needs to be integrated on the PT end (1)

- Access and egress to the stations need to be comfortable with sufficient space. Incl ramps, benefiting all the user groups
- Off board ticketing (helps to reduce delays when buying ticket on the bus)
- Level boarding is very helpful for people with special needs and also enables rapid boarding and alighting

Just because poor use the public transport in any form does not mean that they need to be deprived of quality transit

What needs to be integrated on the PT end (2)

- Bicycle parking at the stations, supports cyclists to use public transport
- Attractive fare structure and fares could also include the bicycle parking charge
- When there are more than one routes or systems they need to be properly integrated for easy interchanges

PT systems with fares that are easy to understand are more attractive to passengers than systems with complex fare structures

Challenges in Integration

- Integration also has to be done regarding institutions responsible for UT
- Many cities lack the capacity, often also resources and and prepardeness for better integration
- Integration is considered a “slippery-slope” by decision makers, but experience shows that its one of the most important success factor for PT acceptance
- Political will is **the most** important factor, it is hard but not impossible.

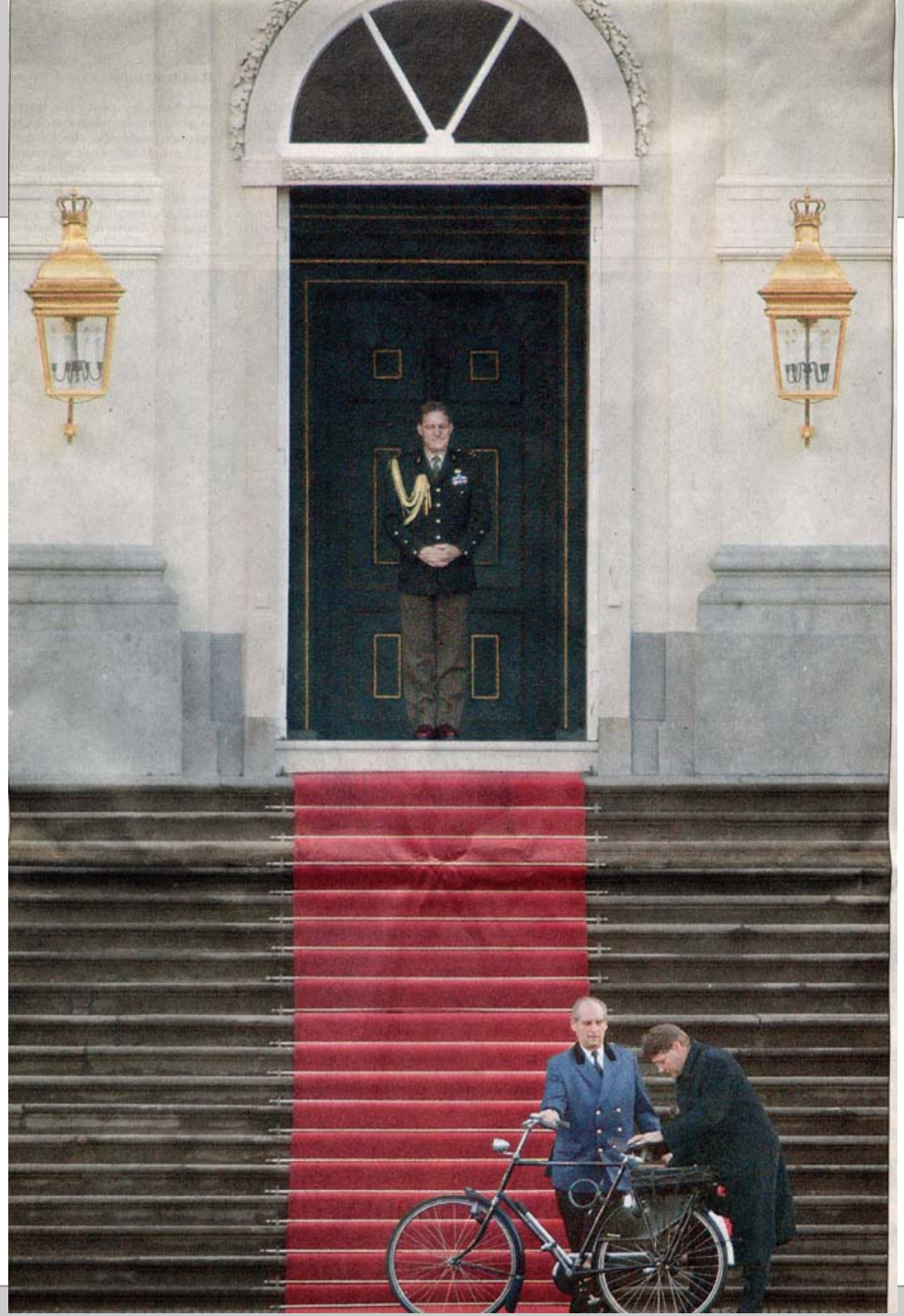
Jamie Lerner, Ex-Mayor of Curitiba, created the above pedestrian area in 72 hours!

Though there is much to achieve, Indian cities have embarked on the journey

- NUTP for India proposes Unified Metropolitan Authorities (UMTA), this is an important step forward towards institutional integration
- The JnNURM requires urban road projects to include bicycle lanes and pedestrian facilities
- Various Indian cities have new low floor buses with and some cities have level boarding options
- The central government is investing in capacity building activities for the transport professionals

A world renowned BRT system in Ahmedabad

Capacity building activities with international speakers and experiences



Dutch Minister visits the queen

Cycling is for everyone!
Not just for the poor.

All we need is implementation with the the mobility needs of citizens in mind.

Thank you for your attention!