“Smart Eco Mobility: Public Bicycle System integrated to the new metro system in Hyderabad, India”

D V MANOHAR
Board Member, World Cycling Alliance
Chairman, All India Bicycling Federation
Chairman, Hyderabad Bicycling Club
Chairman, Shri Shakti Group
Past Chairman, Confederation of Indian Industry
India’s Population Explosion

**Population Explosion**

**The City Dream**

Depicted below are some major states with population equal to many leading countries:

- **Rajasthan**
  - Population: 68 mn
  - Thailand

- **Uttar Pradesh**
  - Population: 200 mn
  - Brazil

- **Madhya Pradesh**
  - Population: 77 mn
  - Iran

- **Gujarat**
  - Population: 60 mn
  - Italy

- **Maharashtra**
  - Population: 127 mn
  - Japan

- **Karnataka**
  - Population: 64.1 mn
  - U.K.

- **Andhra Pradesh & Telangana**
  - Population: 80 mn
  - Germany

- **Tamil Nadu**
  - Population: 74 mn
  - Turkey

Source: RICO PwC-UBS report

*In these states, majority of the population is concentrated in and around the major urban cities.*

**India’s Adding a Brazil Every Decade**

17.6% = 181 mn

Decadal growth from 2001 to 2011

Nearly equals the population of Brazil
Good afternoon sir... Horrible traffic jam sir!! I will be coming bit late for the meeting sir...
Govt. of India promoting 100 Smart cities
How do we make our cities cycle friendly?

Infrastructure is the key

General Perception that cycling is safe

Bike facilities

Serious advocacy & social acceptance
Bike Sharing

Bike-Sharing Is Taking Off Around the World
Number of cities worldwide that offer bike-sharing systems (as of December 31, 2014)

Biggest Bike-Sharing Fleets
Number of bicycles

<table>
<thead>
<tr>
<th>Country</th>
<th>Number of Bicycles</th>
</tr>
</thead>
<tbody>
<tr>
<td>China</td>
<td>753,508</td>
</tr>
<tr>
<td>France</td>
<td>42,930</td>
</tr>
<tr>
<td>Spain</td>
<td>25,084</td>
</tr>
<tr>
<td>United States</td>
<td>22,390</td>
</tr>
<tr>
<td>Germany</td>
<td>12,474</td>
</tr>
</tbody>
</table>

Source: MetroBike’s Bike-Sharing Blog
Supporting Infrastructure

Cycle sharing systems can achieve greater success when complimented with dedicated infrastructure for cycling. These facilities can improve safety and convenience for all cyclists, including users of the cycle sharing system.

<table>
<thead>
<tr>
<th>City</th>
<th>Bike infrastructure with Bike share System</th>
</tr>
</thead>
<tbody>
<tr>
<td>Guangzhou, China</td>
<td>46 Km of segregated bike lanes</td>
</tr>
<tr>
<td>Paris, France</td>
<td>68 Km of segregated bike lanes in addition to 371 existing kilometres</td>
</tr>
<tr>
<td>London, United Kingdom</td>
<td>37.8 Km of 4 cycle superhighways</td>
</tr>
<tr>
<td>Barcelona, Spain</td>
<td>150 Km of segregated bike lanes</td>
</tr>
<tr>
<td>Boston, United States</td>
<td>80 Km of segregated bike lanes</td>
</tr>
<tr>
<td>Rio de Janeiro, Brazil</td>
<td>300 Km physically separated, painted lanes and signalized shared routes (either with traffic or pedestrians)</td>
</tr>
</tbody>
</table>
Hyderabad, India

Population of 10 million

City of pearls

Tourism

IT Hub
Member:

ECF
EUROPEAN CYCLISTS’ FEDERATION

World Cycling Alliance
Vision → Making India

Mission

Changing Mindsets of people that cycle is not a poor man’s vehicle

Creating infrastructure
Tripartite MOU

MEMORANDUM OF UNDERSTANDING

BETWEEN

THE HYDERABAD BYCYCLING CLUB

THE HYDERABAD METRO RAIL LIMITED

AND

THE UNITED NATIONS HUMAN SETTLEMENTS PROGRAMME

TO

SETUP SOLAR CHARGED BIKE STATIONS TO PROVIDE LAST MILE CONNECTIVITY TO HYDERABAD METRO RAIL PROJECT
## Task, Status & Target

<table>
<thead>
<tr>
<th>Task</th>
<th>Status</th>
<th>Target</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td>Feasibility study and DPR in progress. Model/Demo Bike Station commissioned in October, 2016.</td>
<td>To complete the project fully by 2019.</td>
</tr>
</tbody>
</table>

300 Bike Stations with a total inventory of 10000 bikes including e bikes in 63 Metro Stations along with feeder stations in residential & commercial clusters.
Location of the bike station at each metro station

Right next to the escalator
What makes HMR unique? Project Insights…

• To handle 1.8 million passengers per day by 2018 & 2.2 million per day by 2024.

• Total cost of US $2.25 billion.

• Not a simple Metro, but an urban redesign & rejuvenation effort to transform Hyderabad into a people friendly green city.
Mitigation through this project

This project with 10,000 bikes will generate around 20 million trips/year which will result in reduction of 2500 tons of CO²/year.

This project is a great fit under ‘100 SMART CITIES PROGRAM’ of Govt. of India as it aims at promoting smart mobility with NMT through Public Bike Sharing.

India’s NDC commitments

Reduce emissions by 20% to 25% by 2020 below 2005 levels

Increase non-fossil capacity to 40% of installed electric power capacity by 2030
Creating Awareness

Cycling is so difficult when you have to and so easy when you want to.

The bicycle is a simple solution to some of the world’s most complicated problems.

Let’s have a moment of silence for all those who are stuck in traffic on their way to the gym to ride stationary bicycles.
The only hotel lobby with a cycling message.

@ Hotel The Manohar, Hyderabad