Implementing Public Bicycle Share (PBS) Systems in India

- Ashwin Prabhu & Ranjana Menon
Public Bicycle Sharing (PBS) systems are a flexible public transport service that involves the creation of a dense network of cycle rental stations. Users can take a cycle from any station and return it to any other station in the system.
There has been significant growth in PBS Systems worldwide in the past decade, particularly in China and Europe.
Proposed Indian Systems

- Pune
- Panaji
- Bangalore
- Chennai
- Mysore
Lesson 1: Go Big or Go Home
Planning Principles

I. System Coverage

10-30 bicycles for every 1,000 people

II. Size of the system

III. Station Density
## Existing Indian Systems

<table>
<thead>
<tr>
<th>System</th>
<th>No: of Stations</th>
<th>No: of Cycles</th>
<th>Coverage</th>
<th>Avg rides/cycle/day</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>New Delhi – Planet Green Bikes</strong></td>
<td>8</td>
<td>80</td>
<td>Only along the BRT corridor</td>
<td>-</td>
</tr>
<tr>
<td><strong>Mumbai – Cycle Chalao</strong></td>
<td>2</td>
<td>30</td>
<td>Connectivity only between two points</td>
<td>0.14</td>
</tr>
<tr>
<td><strong>Bangalore - ATCAG</strong></td>
<td>9</td>
<td>45</td>
<td>Sparse, spread across the city</td>
<td>0.15</td>
</tr>
</tbody>
</table>
Stations Proposed: Panjim

I. Stations Location

II. Station Density
Lesson 2: You get what you pay for
1. Custom Designed Bicycles

Non-Negotiable(s)

II. Automated Systems

III. Smart Payment

IV. Real Time Data
Existing Indian Systems

I. Off the rack cycles

II. Manually Operated Stations

III. Poor Quality Infrastructure
Next Bike for Chennai
Lesson 3: Merge the Financials
In general, PBS Systems are not financially self-sufficient. But cities around the world have been willing to subsidise these systems due to the magnitude of positive externalities generated.
Common Financial Model

PBS Supplier
- Procures and Installs the System
- Central Govt.
- State Govt.
- Capital Fund
- State Assistance
- Subsidy
- Ad Revenue + Sponsorship

PBS System

PBS Operator
- Operates & Maintains the System
- Fare box Revenue
- Users
- Ad Agency + Sponsors

Local Authority
- Subsidy
- Ad Revenue + Sponsorship
- Users
Recommended Financial Model

- **Independent Engineer**
  - Evaluation Reports
  - Fee

- **Service Provider**
  - Installs and Operates PBS System
  - Monthly Fees

- **Users**
  - Fare box Revenue

- **Ad Agency**
  - Ad Revenue

- **Sponsors**
  - Sponsorship

**Corporation of the City of Panaji**

**EMBARQ India**
Lesson 4:
Evolve or Disappear
I. Systems which are
   • Fully Automated
   • Only Card Payments
Difference in Indian cities

I. Payment Landscape

II. Ease with Automated Systems
Proposed Retail Outlets

Hong Kong

London

India
Proposed - Marketing & User Education
Lesson 5: Connect across borders
## Indian v/s International Expertise

<table>
<thead>
<tr>
<th>Type of Service Provider</th>
<th>Experience in operating prior systems</th>
<th>Local Knowledge of Indian cities and conditionalities</th>
</tr>
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<tbody>
<tr>
<td>International Service Provider</td>
<td>![Checkmark]</td>
<td>![X]</td>
</tr>
<tr>
<td>Indian Service Provider</td>
<td>![X]</td>
<td>![Checkmark]</td>
</tr>
</tbody>
</table>

**Indian Service Provider**
- Experience in operating prior systems: **Failed (X)**
- Local Knowledge of Indian cities and conditionalities: **Passed (✓)**

**International Service Provider**
- Experience in operating prior systems: **Passed (✓)**
- Local Knowledge of Indian cities and conditionalities: **Failed (X)**
Summary:
5 lessons for Indian cities

1. Go Big or Go Home
2. You get what you pay for
3. Merge the Financials
4. Evolve or Disappear
5. Connect across borders
Questions?