PUBLIC BICYCLE SHARING

BHOPAL

Chandramauli Shukla
CEO
Bhopal Smart City Development Corporation Limited
• About 20 lakh trips are made in a day.
• 43% are by walk.
• 77% trips are for Work and Education.
• Average Trip Length: 4.75 km
• Average Travel Time: 21 min

Source: Comprehensive Mobility Plan for Bhopal, 2012
Bhopal Smart Public Bike Sharing is India’s first fully automated system.

- The stations are **unmanned** and linked to the **Central control system**
- This data is used to make decisions on **redistribution of cycles** around stations during the hours of operations.
- Fully **cashless** system
- Bhopal PBS Project is a Design, Procurement, Installation, Operation and Maintenance.
- Combination of global technology with local operational expertise
- 500 cycles and 50 stations
- 24/7
- Physically integrated with BRTS
SMART BIKE

- Board computer with NFC card reader
- GPS and WiFi Localisation
- Fork lock
- Parking function
- Mobile application and App

Rental via NFC or App
Rental with Smart Cards
PIN code entry
SMART BIKE COMPONENTS & FEATURES

1. LED Front Light (15Lux)
2. Aluminum Basket
3. Aluminum handle with bell, and gear
4. Break lever front and back
5. Locking pin with a holder at Basket
6. Aluminum frame silver grey
7. Quick release
8. Seat post with anti-theft protection
9. Water repellent heat resistant seat
10. Advertisement panel 0.6 sqm
11. On-board computer
12. LED backlight with stand light
13. Fenders with splash mud guard
14. Rear reflector
15. Puncture resistant tires
16. 3/7/8 gear hub from Shimano
17. Robust side stand
18. Aluminum pedals with reflectors
19. Rust free chain with plastic chain guard
20. Hub dynamo to power Board computer
21. 26" blade wheel with V profile rim
22. Still fork with electronic lock
FINANCIAL MODEL

PBS SUPPLIER → PBS SYSTEM

Procurement and installation of system

PBS SYSTEM → PBS OPERATOR

Operation & Maintenance

PBS OPERATOR

Fare box Revenue

MONTHLY SUBSIDIES ARE RELATED TO EFFICIENCY

20%
30%
40%

BSCDCL

PBS DPR cost

Capital Assistance

Users

Ad revenue & sponsorship

Capital Assistance

Centre, State, Sponsors
PROJECT COST & RECOVERY

CAPITAL COST
- Rs 2.95 Crs.
  - Cycles.
  - Cycle Stations.
  - Other initial Setups Expenses.
  - Paid in instalments

OPERATING COST
- Rs 6.70 Lacs / Mnt
  - Communication System
  - Maintenance, Theft and Damage
  - Spare Parts
  - Insurance
  - Employees Cost (Salaries)
  - Administrative and Office Expense

COST RECOVERY
- Fare box revenue
- Advertisement Revenue
- Annual Cycling Event
- CSR Funding
- Support from BSCDCL

VGF - Approx Rs. 10 per bicycle/day subject to SLA
FARE STRUCTURE

REGISTRATION (REFUNDABLE)

MEMBERSHIP (OPTIONAL)

<table>
<thead>
<tr>
<th></th>
<th>Non-Member (Rs)</th>
<th>Member (Rs)</th>
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<tr>
<td>YEARLY</td>
<td>999</td>
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<tr>
<td>QUARTERLY</td>
<td>299</td>
<td></td>
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<tr>
<td>MONTHLY</td>
<td>149</td>
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USER CHARGES

<table>
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<tr>
<th>Time</th>
<th>Non-Member (Rs)</th>
<th>Member (Rs)</th>
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<tbody>
<tr>
<td>0-30 Min</td>
<td>10</td>
<td>0</td>
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<tr>
<td>Till 60 Min</td>
<td>20</td>
<td>10</td>
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<tr>
<td>Till 90 Min</td>
<td>40</td>
<td>20</td>
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<tr>
<td>Till 120 Min</td>
<td>60</td>
<td>30</td>
</tr>
<tr>
<td>Every additional 30 min</td>
<td>30</td>
<td>15</td>
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</table>

YEARLY
- Rs. 500

MEMBERSHIP (OPTIONAL)
- Yearly: 999
- Quarterly: 299
- Monthly: 149

REGISTRATION (REFUNDABLE)
- Rs. 500
DOCKING STATION
MOBILE APPLICATION

- Easy to use interface
- Look for the nearest bicycle on the map
- Check real time availability of cycle
- Enter Bike Number and Rent a Bike
- Track your calories burnt, kms cycled
- Calculates CO₂ emission
- Easy Return on station or near by station
BICYCLE TRACK

5 METER WIDE
12 KM LONG
INTEGRATING
BRTS AND PUBLIC BIKE SHARE
REDISTRIBUTION
**PROGRESS REPORT**

**100 DAYS**

- **28922 KMS OF CLEAN RIDE**
- **119 REGULAR RIDERS**
- **4243 KG OF CO2 EMISSION OF SET EQUAL TO PLANTING 1800 TREES**

"*One passenger km on a bike offsets 220 g of CO$_2$ when compared to travelling in a passenger car"
While the entire country is discussing and partially implementing promotional programmes for healthier activities like cycling, Bhopal recently launched India’s first GPS-enabled bicycle structure, which has been appreciated by fitness and adventure loving people of the city.

On a pleasant Saturday evening, a bunch of friends got together to meet cycling amid lush green surroundings of Char Kulli. “If you are worried about falling off the bike, you’ll never get on. Cycling is the perfect way of fitness today and is my friend,” I used to be very fond of it when I was a kid and I still cycle at fitness. The best place to cycle in Bhopal is Vani Vihar, very close to nature and makes you feel alive,” says Pravesh Chandel, Pankaj, and Dr. Pradeep Chaudhary. While for Bhishu Srivastava, riding a bike is healthy and fun too: “It is a good way of exercise for all ages. Also good for straightening spines. Cycling has always been my favourite outdoor activity. It works as a great stress-buster. Char Kulli is the place to have cycling‘ the fun,' she says. The GPS-enabled cycles are being imported from Germany and Haplo. Bullock-drawn cycles and two-wheelers on the hire tracks.

I started cycling as a cardio exercise. Not only do I burn good calories but also enjoy different routes. I feel lucky to be living in this beautiful city which has so many green and scenic areas to cycle. While there are many cycling groups already in Bhopal, I would like to encourage more and go for long journeys in and around the city.

Sahil Saxdev

NATIONAL WORKSHOP CUM EXPO ON PUBLIC BIKE SHARING AT BHOPAL

32 CITY REPRESENTATIVES
12 INDUSTRY PARTICIPATION EXPERTS
CONSULTANTS
MOST FREQUENT RIDER

#PeopleofBhopal
THANKS

www.charteredbike.in
www.smartbhopal.city