Project Details
Asia BRTS Conference

29th Sept to 1st Oct 2014
Twin cities separated by about 20 km.

Single Municipal area: 202 Sq.km

Population: 0.94 million (2011)
Density: 4678 persons per sq.km.

**Hubli**: Commercial centre and business hub of the region.

**Dharwad**: Administrative seat of District and Educational hub of the region.

Hubli-Dharwad the 2nd largest urban agglomeration.
GROWTH DIRECTION: ALONG THE CORRIDOR BETWEEN THE TWO CITIES
• 22.25kms
• Existing ridership 1.76 lakhs passengers per day
• Dedicated BRT lanes
• 33 Bus shelters.
• 3 Depots, 1 Workshop, 2 Terminal, ITS, NMT infrastructure.
• Project cost 692INR Cr
**PROJECT PARTNERS**

- Implemented by Hubli-Dharwad BRTS Company Ltd
- Acquisition of Land and Development of BRTS corridor by KRDCL
- Key Partners
  - NWKRTC (Bus Operator)
  - HDMC (Municipal Corporation)
  - HDUDA (Urban Development Authority)
- Guidance and Support from DULT, MOUD, GOK, & World Bank
POPULATION GROWTH IN HUBLI-DHARWAD

Population in Lakhs

- 1981: 5.4
- 1991: 6.5
- 2001: 8
- 2011: 9.4
- 2021: 12.1 (projected)
- 2031: 14.5 (projected)
VEHICULAR GROWTH

Around 80 vehicles are added daily to Hubli-Dharwad’s traffic

Yearly Vehicle Registration

- 75,000 (2008)
- 2,07,030 (2010)
- 83,430 (2012)
- 98,550 (2013)
- 2,44,550 (2012)
- 10,6380 (2013)
- 2,63,980 (2013)

***Vehicle Registration***
More Vehicle and More Congestion
PT operator: **North Western Karnataka Road Transport Corporation (NWKRTC)**, a state government undertaking.

<table>
<thead>
<tr>
<th>Numbers</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.15 lakh</td>
<td>daily bus passengers</td>
</tr>
<tr>
<td>279</td>
<td>city buses operated</td>
</tr>
<tr>
<td>62%</td>
<td>intercity commuters</td>
</tr>
<tr>
<td>5270 INR</td>
<td>average earnings per bus</td>
</tr>
<tr>
<td>92%</td>
<td>fleet utilization</td>
</tr>
<tr>
<td>1.75 lakh</td>
<td>corridor passengers</td>
</tr>
<tr>
<td>1 minute</td>
<td>corridor NWKRTC frequencies</td>
</tr>
<tr>
<td>&gt;6,000</td>
<td>corridor peak hour peak direction passengers</td>
</tr>
<tr>
<td>30%</td>
<td>Overall PT mode share for the twin cities</td>
</tr>
</tbody>
</table>

- Buses with 7% vehicle share carry around 70% of the people on PB

![Commuter Preferences Graph](image)
BRTS PROJECT - RIGHT ON TIME

- State Govt. sanctioned proposal for 2 LANE TO 4 LANE WIDENING of Hubli-Dharwad highway in 2009.
- Mobility Plan recommended BRTS
- SUSTAINABLE URBAN TRANSPORT PROJECT (SUTP) INITIATED BY GOVT OF INDIA – Funding available for improvements to public transport.
PROPOSED TRANSIT INFRASTRUCTURE DEVELOPMENT

Legend
- Workshop
- Depot
- Terminal

BRT depot + workshop

Jubilee circle
Terminal + Interchange (Only BRT)

Dharwad OCBS
For other Services

Navanagar

Navanagar

Central workshop depot, Interchange,

Industrial Area

Nevalur

BRT Depot

Hubli CBT

Central Workshop

Terminal, Interchange

BRTS Trunk

Hosur circle

Airport

NMT
BRT FEATURES

Branded Median bus stops bus stations

Level boarding & alighting

Off-board ticket collection

ITS for BRTS and ATCS for traffic management along the corridor.

Designed for ~12000 PHPDT

Bus fleet – 12m, 900 mm standard buses and Articulated buses.
### PROJECT CORRIDOR – 35M SECTION

<table>
<thead>
<tr>
<th>Width</th>
<th>Distance</th>
<th>From</th>
<th>To</th>
</tr>
</thead>
<tbody>
<tr>
<td>35 m</td>
<td>4.2 km</td>
<td>Hosur Cross, Hubli</td>
<td>Naveen Hotel, Hubli</td>
</tr>
<tr>
<td>35 m</td>
<td>2.9 km</td>
<td>Gandhinagar Cross, Dharwad</td>
<td>Jubilee Circle, Hubli</td>
</tr>
</tbody>
</table>

**Typical Cross Sections for 35m Row @ Mid-Block Location (With Passing)**
## PROJECT CORRIDOR – 44M SECTION

<table>
<thead>
<tr>
<th>Width</th>
<th>Distance</th>
<th>From</th>
<th>To</th>
</tr>
</thead>
<tbody>
<tr>
<td>44 m</td>
<td>11.87 km</td>
<td>Naveen Hotel, Hubli</td>
<td>Gandhinagar Cross, Dharwad</td>
</tr>
</tbody>
</table>
PROJECT FUNDING

- Estimated cost of project – 692 Crores INR
- Funded under the Sustainable Urban Transport Project (SUTP)
- Support from World Bank and GEF
- World Bank funding – USD 55 million
### DETAILS OF LAND ACQUISITION

<table>
<thead>
<tr>
<th>Sl No</th>
<th>Details</th>
<th>Extent as per JMC</th>
<th>Total-Private Land to be acquired</th>
<th>Govt Land/Dept/</th>
<th>HDUDA</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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</table>

#### Area in Acres and Gunta

<table>
<thead>
<tr>
<th>Project Affected Persons</th>
<th>&gt;Title Holders</th>
<th>Squatters &amp; Kiosk</th>
<th>Tenants</th>
<th>Community Assets</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>920</td>
<td>87</td>
<td>324</td>
<td>17</td>
</tr>
</tbody>
</table>
PRICE NEGOTIATION MEETINGS OF HUBLI CITY
DATE: 14.07.2014
COMMUNITY ASSETS SHIFTED

Hanuman Temple at FCI
Bhairidevarakoppa

Place of within COI

Shifted Place
Ganapati Temple
Bhairidevarakoppa

Dismantling partially affected part

Place of within COI
Income Generation Activities Training

On : 06.08.2014, at : RUDSET Training Institute, Dharwad
Free Health Checkup Camp
On: 17.07.2014, at: SDM Medical College
BRTS BUS SHELTER

Model Image of BRT Bus Stand

Fixing of Barricade under progress.
BRT DEPOT AT HUBLI

Model Image of BRT Depot Hubli

Work Under progress
DIVISIONAL WORKSHOP AT HUBLI

Model Image of Divisional Workshop

Work is under progress
BRTS DEPOT AT DHARWAD

Model Image of BRTS Depot at Dharwad

Footing works under progress
OCBS (PW – 9)

Site clearance under progress

Model Image of OCBS
PROCUREMENT OF BUSES FOR BRTS

- 12 mtr Premium AC Buses: 100 Nos
- 18 mtr Articulated Buses: 30 Nos
- Work Order issued.
TRANSIST ORIENTED DEVELOPMENT

Nature of Streets

- BRTS
- Roads with Dedicated Cycle Track
- Roads without Dedicated Cycle Track
- Pedestrian-and-Cycle-only Streets
- Project Area

Source: EMBARQ India
2. Design of Plaza - ಪ್ಲೇಜಾ ಪಟ್ಟಣ ಅಧಿಕಾರ

Proposed View of Central Plaza
TRANSIST ORIENTED DEVELOPMENT

3. Design of Temple & Pond - ತಮ್ಮವರು ಸಮಯವು ಮಾಡುಕೊಂಡ
3. Design of Temple & Pond - वास्तुकला नवजीवन मंदिर और पुलिन
PROJECT CHALLENGES

COMPETING PRIORITIES OF THE STATE GOVERNMENT OVER PUBLIC TRANSPORT AND ALLOCATION OF FUNDS FOR THE PROJECT

- Presentations to key decision makers
- Visits to Janmarg, Ahmadabad by political leaders
- Sourcing funds through value capture, stakeholder contributions, JNNURM etc.

INTEGRATION OF THE PROJECT WITH ONGOING ROAD WIDENING PROJECT / MULTI-AGENCY CO-ORDINATION

- Onsite consultant team
- Weekly Coordination meeting with KRDCL
- Technical issues solved by Technical Advisory Committee, KRDCL
- Service level agreement between SPV and KRDCL
INSTITUTIONAL ARRANGEMENTS

- **Special purpose vehicle created for implementing the project:** Hubli-Dharwad BRTS Company Limited

- **Key Stakeholders represented on the Board of Directors**
  - HDMC - Local Body
  - HDUDA - Urban Development Authority
  - NWKRTC - PT Operator
  - KRDC (4-laning project)
  - Traffic Police Dept
  - PWD

- **BRT bus operations by NWKRTC.**
  
  Service level agreement between NWKRTC and SPV
PROJECT CHALLENGES

- **LAND ACQUISITION**
  - RoW
    - RoW in City built up area: 35m
    - RoW in undeveloped areas: 44m
  - Consent Award
    - RAP, Grievance Redresal, Public consultations, FGD, Public Outreach

- **ENVIRONMENTAL IMPACT - EMP and GREEN BRTS Programme**

- **INTEGRATED TICKETING – TRUNK and FEEDER - Exploring options**

- **CHANGING BEHAVIOUR AND ATTITUDE TOWARDS PUBLIC TRANSPORT -** Communication and Outreach strategy for promoting public transport and NMT
SPECIAL ATTRIBUTES

COMPREHENSIVE DEVELOPMENT OF THE CITY TRANSPORT INFRASTRUCTURE

- TRANSIT INFRASTRUCTURE DEVELOPMENT
- HIGH QUALITY BUSES
- BRTS PROJECT
- ITS DEVELOPMENT
- NMT DEVELOPMENT

TRUNK AND FEEDER INTEGRATION

- Interchange facilities between sub-urban and city service.
- Integrated ticketing: Trunk – feeder.
- Route rationalization
DEVELOPING A CITY PLAN FOR HUBLI-DHARWAD

- Planning framework for the City
- Developing Urban design guidelines for the BRT corridor
- Identifying Urban renewal projects

TRANSIT ORIENTED DESIGN

- Demonstration Project for ToD – Shaping Hubli-Dharwad as a CONNECTED CITY
- Improving BRT station accessibility, developing public plaza
- Integrating NMT, IPT facilities with BRT stops and NMT improvements
GREEN BRTS PROGRAMME

Around 3500 trees cut for the Project

Action plan prepared for GREEN BRTS

18,000 saplings to be planted

- Avenue Plantation
- Transit infrastructure plantation
- Plantation in Schools, Colleges, Parks and other Public Spaces.

GREEN BRTS Committee set up consisting of representatives of local environmental groups

Incentivizing planting in schools –Namma Thota @ GREEN BRTS

GREEN COUNTER on Website
SPECIAL ATTRIBUTES

WORKING WITH COMMUNITY

FGD’s and Public consultation
Relocating community structures
Discussion on BRT Designs/ TOD Designs
Income generation activity training

PUBLIC OUTREACH ACTIVITES

Campaign Plan for BRT
Presentation in colleges, schools etc
Organizing, competitions, events campaigns, street plays, etc
Information dissemination through Public information centre, Monthly news letter, website, press releases, media conferences,