“Application of Geospatial Technology for Sustainable Public Transport – North Western Karnataka Road Transport Corporation Hubli Initiatives”

Dr K.N. Ingalagi
Chief Systems Manager

25-01-2017
## NWKRTC – At a glance

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Particulars</th>
<th>1997-98</th>
<th>2015-16</th>
<th>2016-17 (up to Jan - 2017)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>No. of Districts</td>
<td>7</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>2</td>
<td>No. of Divisions</td>
<td>7</td>
<td>8</td>
<td>8</td>
</tr>
<tr>
<td>3</td>
<td>No. of Depots</td>
<td>36</td>
<td>48</td>
<td>49</td>
</tr>
<tr>
<td>4</td>
<td>No. of Divisional Workshops</td>
<td>5</td>
<td>8</td>
<td>8</td>
</tr>
<tr>
<td>5</td>
<td>Regional workshop</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>6</td>
<td>No. of Bus stands</td>
<td>136</td>
<td>164</td>
<td>165</td>
</tr>
<tr>
<td>7</td>
<td>Regional Training Institute</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>8</td>
<td>No. of schedules</td>
<td>2907</td>
<td>4581</td>
<td>4654</td>
</tr>
<tr>
<td>9</td>
<td>No. of trips</td>
<td>23129</td>
<td>36340</td>
<td>37340</td>
</tr>
<tr>
<td>10</td>
<td>No. of buses</td>
<td>3227</td>
<td>4735</td>
<td>4816</td>
</tr>
<tr>
<td>11</td>
<td>Daily Kms operated (in lakhs)</td>
<td>9.58</td>
<td>16.46</td>
<td>15.51</td>
</tr>
<tr>
<td>12</td>
<td>Passengers Carried (in lakhs)</td>
<td>11.25</td>
<td>22.65</td>
<td>23.00</td>
</tr>
<tr>
<td>13</td>
<td>Total revenue (Rs. in crore)</td>
<td>368.73</td>
<td>1733.80</td>
<td>1715.47</td>
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<tr>
<td>14</td>
<td>Margin (Rs. in crore)</td>
<td>0.22</td>
<td>-38.70</td>
<td>-4.93</td>
</tr>
</tbody>
</table>
STAKEHOLDERS EXPECTATIONS

• Government: Meet the demands of public and get positive return on investments

• Management: Prevent wastage of resources, maximum utilisation of inputs like fuel, staff, capital, spares, finance and technological advancement

• Passengers: Zero waiting time, services at door step, accessibility to information, first and last mile connectivity and hassle free travelling

• Employees: Periodical wage revision, Security and welfare
APPLICATION OF GEO SPECIAL TECHNOLOGY

Vehicle Tracking & Monitoring System (VTMS):

• Dash Board
• Daily Report
• Monthly Report
• Speed Report
• Stop & Halt Report
• Engine Report
• Current Tracking Info
• Geotag Location Report
• Fence Violation Report
• Panic Alert Report
• Fuel Graph Report
• Fuel Report
• Travel Replay Report
• Track History Report
APPLICATION OF GEO SPECIAL TECHNOLOGY
CONTD..

VEHICLE TRACKING SYSTEM

<table>
<thead>
<tr>
<th>Select Vehicle</th>
<th>Date: 2017-01-18</th>
<th>From Time: 10:26:9</th>
<th>To Time: 15:26:10</th>
<th>Running</th>
<th>Select Vehicle</th>
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</thead>
<tbody>
<tr>
<td>130</td>
<td></td>
<td></td>
<td></td>
<td>13:40:42</td>
<td></td>
</tr>
<tr>
<td>150</td>
<td>14:07:54</td>
<td>Unnamed Road, Karnataka 591114, India</td>
<td>14:07:54</td>
<td>88.16</td>
<td></td>
</tr>
<tr>
<td>162</td>
<td>14:57:43</td>
<td>Kunnal Chippalakatti Road, Kunnal, Karnataka 591114, India</td>
<td>14:57:43</td>
<td>92.25</td>
<td></td>
</tr>
</tbody>
</table>

Map

NORTH WESTERN KARNATAKA ROAD TRANSPORT CORPORATION
CONT'D..

VEHICLE MONITORING SYSTEM

Bus Driver Console (BDC)  Single Control Unit (SCU)

Security Network and Camera PIS Display
Voice announcement system: Next stop, arrived bus stop (Bilingual)

Passenger Information Display System: Destination, next bus stop, arrived bus stop and slogans
Contd..

Public Address System at Hubli new bus station
Contd..

Route rationalisation

Online grievance application
BENEFITS OF GEOSPATIAL TECHNOLOGY IN PUBLIC TRANSPORT

- Prevention of Operational Indiscipline
- Vehicle Health Monitoring System
- Improvement in fuel performance
- Reduction in accidents and breakdowns
- Real time passenger information
- Prevention of Wastage of Resources
- Maximize utilisation of resources
- Accountability of management and employee
THANK YOU..