NATIONAL INVESTMENT PROGRAM ON BUS BASED PUBLIC TRANSPORT

Need for support from Central and State Governments
Share of transport sectors in the total passenger kilometres performed in 2012-13

- **85%** Roads
- **13%** Rail
- **2%** Air
- **75%** Private Buses
- **10%** Public Buses
- **15%** Other modes

Buses are the predominant mode of public transport in India
PASSENGER TRANSPORT IN INDIA

- 3,400 bpkm in 2003
- 10,375 bpkm in 2017 (P)


Billion Passenger Kilometre: 0, 50,000, 100,000, 150,000, 200,000
Even when the passenger kilometers travelled has increased exponentially, the number of buses has remained almost stagnant.
Share of buses in the total vehicle fleet

• **0.74%** of the total vehicle fleet are buses

• **0.06%** of the total vehicle fleet are public buses

Source: Annual Report 2018-19, Ministry of Road Transport and Highways
Provision of Public Bus Transport is largely a responsibility of the state owned bus agencies:

- State Road Transport Corporations (eg: BMTC, APSRTC)
- Transport Departments (eg: CTU, ST Haryana)
- Municipal Undertakings (eg: BEST, AMTS)
- Special Purpose Companies (eg: PMPML, AICTSL, CRUT)
PUBLIC BUSES – OVERVIEW

139,386 public buses were owned by STUs in 2016-17

- **20,800** buses added in last 10 years
- Major support came in from **Jawaharlal Nehru National Urban Renewal Mission**

*Does not include buses hired from the private sector

Source: State Transport Undertaking Profile and Performance, 2016-17 CIRT Pune
## PUBLIC BUSES - JNNURM SUPPORT

### Bus Funding Scheme I

One time financial support to states (mission cities) for purchase of buses for city bus services and BRTS

<table>
<thead>
<tr>
<th>Year</th>
<th>Buses</th>
<th>Cities</th>
</tr>
</thead>
<tbody>
<tr>
<td>2009 – 2012</td>
<td>15,260</td>
<td>61</td>
</tr>
</tbody>
</table>

### Bus Funding Scheme II

Procurement of buses and ancillary infrastructure to all cities/towns/urban agglomerations

<table>
<thead>
<tr>
<th>Year</th>
<th>Buses</th>
<th>Cities</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013 – 2014</td>
<td>9532</td>
<td>111</td>
</tr>
</tbody>
</table>

**Total number of buses purchased = 24,792**
Availability of buses or extent of supply is measured as number of buses per lakh population.

**Existing bus supply**

10.4 buses per lakh population  
*(at national level)*

**Proposed bus supply as per standards**

40 – 60 buses per lakh population

*Source: Schipper, Lee 2008  
Source: Ministry of Housing and Urban Affairs*
The number of buses/lakh population has remained constant over the last decade, even though there has been steep increase in the population.
The availability of buses in states varies greatly with up to 54 buses per lakh population in Chandigarh and less than 1 bus per lakh population in Bihar.
22% (31276 buses) of the existing total fleet are over aged*

*as per aging criteria of various transit agencies

Source: State Transport Undertaking Profile and Performance, 2016-17 CIRT Pune
### URBAN BUS SECTOR – OVERVIEW

<table>
<thead>
<tr>
<th>Category</th>
<th>Number</th>
<th>Number with organised bus service</th>
<th>Total Population (millions)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Urban Settlements</td>
<td>7935</td>
<td>-</td>
<td>377</td>
</tr>
<tr>
<td><strong>Class I Towns/UAs</strong></td>
<td>468</td>
<td>127 (27%)</td>
<td>264.9</td>
</tr>
<tr>
<td>(population &gt; 100,000)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Million plus cities</td>
<td>53</td>
<td>52 (98.1%)</td>
<td>160.7</td>
</tr>
<tr>
<td>(population &gt; 1,000,000)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- 98.1% million plus cities and 27% Class I Towns/UAs have organised bus services
- In remaining cities - public transport services are unorganised often provided by private bus operators or Intermediate Public Transport (IPT)
BUS SERVICE LEVELS IN URBAN AREAS
CASE - MILLION PLUS CITIES

53 million plus cities
160.7 million population | 36,142 buses

9 Mega Cities
(population > 4 million)
• 56% Population
• 82% (29,519) bus fleet
• 32.9 buses/lakh population

44 Cities
(population b/w 1-4 million)
• 44% Population
• 18% (6,623) bus fleet
• 9.3 buses/lakh population

• 82% of the bus fleet in the 53 million plus cities is operational in only 9 cities
• Disparity in services – 32.9 Buses per lakh population in mega cities vs 9.3 buses/lakh population in other cities
• This service disparity will be more aggravated in Class I Towns/UA s
DECLINE IN BUS SERVICES

- Decreased access to a formal public transport system
- Uncomfortable travel options
- Increased waiting times
- Shift to alternate modes – IPT options and private vehicles
## BUS REQUIREMENTS – 2021 AND 2031

<table>
<thead>
<tr>
<th></th>
<th>Year</th>
<th>Urban Areas</th>
<th>Rural Areas (intercity)</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Population</strong></td>
<td>2021</td>
<td>530 million</td>
<td>856 million</td>
<td>1386 Million</td>
</tr>
<tr>
<td></td>
<td>2031</td>
<td>600 million</td>
<td>946 million</td>
<td>1546 million</td>
</tr>
<tr>
<td><strong>Buses required per lakh population</strong></td>
<td></td>
<td>60*</td>
<td>40**</td>
<td></td>
</tr>
<tr>
<td><strong>Number of buses required</strong></td>
<td>2021</td>
<td>318,000</td>
<td>343,000</td>
<td>661,000</td>
</tr>
<tr>
<td></td>
<td>2031</td>
<td>360,000</td>
<td>378,463</td>
<td>738,463</td>
</tr>
</tbody>
</table>

These are the number of buses to be operated as organised bus service.

KEY CHALLENGE TO IMPROVE BUS SYSTEMS

Financial burden of the STUs: Revenue earned by STUs is less than the operating cost

74% cost recovery  
for all STUs (2016-17)

47% cost recovery  
for urban STUs (2016-17)

Cost Recovery: Operational expenditure recovered from total revenue earned

Source: State Transport Undertaking Profile and Performance, 2016-17 CIRT Pune
<table>
<thead>
<tr>
<th></th>
<th>FAME I</th>
<th>FAME II</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>demand Incentive scheme for adoption of EVs</td>
<td>demand Incentive scheme for adoption of EVs</td>
</tr>
<tr>
<td><strong>2015 – 2019</strong></td>
<td>465 buses</td>
<td>5595 buses</td>
</tr>
<tr>
<td><strong>Year</strong></td>
<td>9 cities</td>
<td>64 cities</td>
</tr>
<tr>
<td><strong>2019 – 2021</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Country</td>
<td>Name of Program</td>
<td>Year</td>
</tr>
<tr>
<td>----------</td>
<td>---------------------------------------------------------</td>
<td>--------</td>
</tr>
<tr>
<td>Australia</td>
<td>Reform and Investment Program</td>
<td>2008</td>
</tr>
<tr>
<td>Chile</td>
<td>National system of Investment (SNI) urban Transport</td>
<td>1950s</td>
</tr>
<tr>
<td>Columbia</td>
<td>National and Mass Transit policy</td>
<td>1996</td>
</tr>
<tr>
<td>England</td>
<td>Local Major Transport Schemes</td>
<td>1968</td>
</tr>
<tr>
<td>France</td>
<td>Public Transport in dedicated rights of way</td>
<td>1994</td>
</tr>
<tr>
<td>Mexico</td>
<td>Federal Support programme for Mass Transit (PROTRAM)</td>
<td>2008</td>
</tr>
<tr>
<td>Netherlands</td>
<td>Multiple year Programme for Infrastructure – Spatial Planning and Transport (MIRT)</td>
<td>1960s</td>
</tr>
<tr>
<td>New Zealand</td>
<td>National Land Transport Programme</td>
<td>1997</td>
</tr>
<tr>
<td>Poland</td>
<td>Urban Transport in Metropolitan Areas</td>
<td>2004</td>
</tr>
<tr>
<td>China</td>
<td>Ten Cities Thousand vehicles</td>
<td>2009</td>
</tr>
<tr>
<td>USA</td>
<td>Federal Transportation Program</td>
<td>2016</td>
</tr>
</tbody>
</table>
KEY QUESTIONS

1. Should MoHUA also look at supporting buses, apart from metro rail projects?
2. What are the key funding and institutional considerations that should be considered for a new program?
3. What were the learnings from JNNURM and how other bus funding projects like electric buses by DHI?
4. What role can the stakeholders – national Government, State/City Government and the Private sector play?
5. How can new business models, private sector investments be leveraged in the new scheme?