Gender and Urban Transport: the Mumbai experience
What this presentation is about?

• A study to understand women’s urban transport needs and recommend steps to make transport services more inclusive.
• Are there any gender issues that need to be understood and integrated into urban transport planning and services?
• If yes, how to address/ integrate gender aspects in an urban transport project? Do we understand well men and women's travel patterns, and their use of public transport, which should be a starting point for urban transport design
• What key considerations can help to make urban transport inclusive in the context of improving women's mobility?
• How to (use city-level findings ) reflect on the logic/need/relevance for linking up the “national gender inclusion strategy” with “transport planning & service delivery?”
Study Context and Background

• What This Presentation is About?
• Significant learning from MUTP on gender issues
  – Travel costs and supplementary incomes
  – Transport and Drinking Water
  – Role in self management of RR sites
  – Women’s Economic Participation
• Move to identify/address gender issues in follow up urban transport project (MUTP-2A)
• JIT funds tapped for study and dialogue
• Objective: Understand gender issues in urban transport to initiate a policy dialogue
• Prepare and implement a GAP for MUTP2A
India is a signatory to the Committee on Elimination of Discrimination against Women (CEDAW); Its urban transport policy is gender blind.

Why Policy Dialogue

“Men and women have varying transport needs and constraints and are affected differently by transport interventions…

The Urban Transport Systems that transport people to and from employment centers are sometimes inadequate for women, who must combine income-generating activities with household and familial activities, such as taking children to school and health centers and visiting the market.

Poor women, who balance productive, social, and reproductive roles in societies, often have higher demands on their time than poor men.

Recommendations include:

1. Ensuring that women are represented in the planning and design of transport investments, including on user panels, fund boards, and so on.
2. Improving the dissemination of information on transport investments and related employment opportunities.
3. Considering women’s transport needs, such as better route planning or the provision of special buses or increased off-peak hours or services on less-traveled routes.
Methodology

- **Literature review** and FGDs with women and girls – slums, households, colleges
- Stakeholder Interviews: with gender experts, transport officials and practitioners (women commandos, journalists, transport authorities and Railway police).
- Hypothesis from FGDs tested through surveys
- Sample: 231 women and girls and 121 men, mostly in slums
- 80% of sample surveyed earn <Rs. 9,000 – study focused more on poorer travelers.
- Average monthly income in Mumbai: Rs. 8,467 (Public Transport Subsidies and Affordability in Mumbai, India”, Cropper and Bhattacharya, 2007)
## Population and Transport in Mumbai

<table>
<thead>
<tr>
<th></th>
<th>Western Suburbs</th>
<th>Eastern Suburbs</th>
<th>&lt;30%</th>
<th>30%-40%</th>
<th>40%-50%</th>
<th>50%-60%</th>
<th>60%-70%</th>
<th>&gt;70%</th>
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</thead>
<tbody>
<tr>
<td>Population Density (/sq. km.)</td>
<td>48,581</td>
<td>24,400</td>
<td>22,111</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of Wards</td>
<td>9</td>
<td>9</td>
<td>6</td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Average Ward Population</td>
<td>372,530</td>
<td>571,372</td>
<td>578,559</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of Railway Stations</td>
<td>17</td>
<td>10</td>
<td>8</td>
<td></td>
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*Map showing transport infrastructure*
Public Transport in Mumbai

Driving forces in developing cities’ transportation systems: Insights from selected cases”, MIT, 2006
What are the gender needs of Mumbai’s urban transport?

**Main area of focus**

1. Is gender inclusion part of the government’s agenda?
2. Are there women policy makers at national, state and city levels?
3. Is there a mechanism to incorporate gender-inclusion feedback?
4. How do men use transit differently from women and girls?
5. What are women and girl’s unmet needs?
6. What services are women and girls not using?
7. Have gender experts been involved in transport planning, design?
8. What proportion of transportation staff (management and operation) are women?
## Survey Sample

<table>
<thead>
<tr>
<th>Category Surveyed</th>
<th>F</th>
<th>M</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>23</td>
<td>53</td>
<td>208</td>
</tr>
<tr>
<td>Home Maker</td>
<td>48</td>
<td>15</td>
<td>63</td>
</tr>
<tr>
<td>Office/Business</td>
<td>19</td>
<td>17</td>
<td>36</td>
</tr>
<tr>
<td>Professional</td>
<td>34</td>
<td>1</td>
<td>35</td>
</tr>
<tr>
<td>Street/Market</td>
<td>55</td>
<td>20</td>
<td>75</td>
</tr>
<tr>
<td>Vendor</td>
<td>22</td>
<td>12</td>
<td>34</td>
</tr>
<tr>
<td>Student</td>
<td>7</td>
<td></td>
<td>7</td>
</tr>
<tr>
<td>Domestic Worker</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Laborer</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Others</td>
<td></td>
<td></td>
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</tbody>
</table>

### Per Category Surveyed

<table>
<thead>
<tr>
<th>Category</th>
<th>F</th>
<th>M</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eastern Suburb</td>
<td>8.2%</td>
<td>50%</td>
<td>58.2%</td>
</tr>
<tr>
<td>Western Suburb</td>
<td>17.5%</td>
<td>16.6%</td>
<td>34.1%</td>
</tr>
<tr>
<td>City Proper</td>
<td>33.3%</td>
<td>25%</td>
<td>58.3%</td>
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</table>
Findings:
Weekly mobility patterns

- Public transport (Bus and Train): 22 (Women) and 20 (Men)
- Walk: 12 (Women) and 16 (Men), with +30% increase for Women
- Other: 7 (Women) and 5 (Men)
Income and Mobility

Proportion of Women Across Expenditure Categories who Walk as Main Mode of Transport

- Monthly Household Expenditure (Rs.)
  - <5K: 40%
  - 5-10K: 39%
  - 10-15K: 34%

Non-Work Trips per Week by Gender

- 30% more trips by women
  - Men: 13%
  - Women: 21%

- Tasks
  - Transport dependents: 49%
  - Errands: 41%
  - Other: 11%
Incomes and Travel Patterns

Exhibit: Proportion of Workers Whose Main Mode to Work is Walking by Income (% distribution, Mumbai, 2005)

Exhibit: Main Modes of Transport by Gender (% distribution, 1998)

Monthly Household Income
- <5K
- 5K-7.5K
- 7.5K-10K
- 10K-20K
- >20K

Length of Trip to Work
- 1-2KM
- 2-3KM
- 3-5KM
- 5KM<


Trip patterns:
Men and Women
Women travel more with/for dependents

London

<table>
<thead>
<tr>
<th></th>
<th>Women</th>
<th>Men</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>67</td>
<td>27</td>
</tr>
</tbody>
</table>

+148%

Mumbai

<table>
<thead>
<tr>
<th></th>
<th>Women</th>
<th>Men</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;5k</td>
<td>386</td>
<td>250</td>
</tr>
<tr>
<td>5-10k</td>
<td>558</td>
<td>471</td>
</tr>
</tbody>
</table>

+54%

+18%

Monthly Household Expenditure (Rs.)

London Case Study: Number of annual education related trips for child dependents (National Travel Survey, London, 2005)

Average Monthly Transport Expenditure on Dependents in Mumbai (Survey, 2010)
Women and Men’s Travel in Peak and Off-Peak Hours in Trains and Buses

Women travel more than men during daytime off-peak hours.

Note:
1) Omits all surveyed users who did not report traveling aboard either buses or trains.
When do women feel most unsafe?

Travel by Train
- Journey to and from the station: 22%
- Waiting at the platform: 21%
- Boarding the train/getting off the train: 64%
- On the train: 17%

Travel by Bus
- Journey to and from bus stop: 18%
- Waiting at the bus stop: 19%
- Boarding/getting off the bus: 48%
- On the bus: 19%

Mumbai stations have 1 toilet each for 5000 men and 9000 women commuters; meet 5% of women’s and 9% of men’s standard needs; most women’s toilets are defunct.
Sanitation facilities for Women: 93% toilets closed, dysfunctional

Currently present:
- Women: 174
- Men: 854

Recommended by Indian Railways for A,B stations:
- Women: 10,500
- Men: 31,500

Recommended by Indian Railways for C,D stations:
- Women: 7,095
- Men: 21,284

Recommended by Intl. Plumbing Code:
- Women: 3,150
- Men: 9,450

Note:
1) Men’s toilet figures includes urinals
2) We have assumed that 25% of Mumbai’s 6.3 million daily train passengers are women
3) Formula for A, B stations: 4 \* N(db)/200 where N(db) = 0.3 maximum passengers a day, formula for C,D stations: 4 \* N(db) where N(db)=0.45 maximum passengers a day
Key Recommendations

- Introduce off-peak unlimited ticket
- Women-only bus doorways
- Train bus conductors
- Deploy more women commandos
- Reserve more train compartments for women
- Improve women’s toilets at train stations
- Improved lighting of bus and train stations
- Recruit women drivers and conductors
- Provide and maintain footpaths
- Reserve more train compartments for women

Level of Impact vs. Ease of Implementation graph:

- Low to High (from left to right)
- Low to High (from bottom to top)
## Recommendations

<table>
<thead>
<tr>
<th>Recommendation</th>
<th>Description</th>
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<tbody>
<tr>
<td>Consider instituting women only bus doorways</td>
<td>To address women’s difficulties in getting on and off buses, Mumbai can follow Bangalore’s example of reserving the front door of the bus for women</td>
</tr>
<tr>
<td>Assess how best to implement additional and improved women’s toilets at train stations</td>
<td>Increase the number of and improve the condition of women’s toilets at all suburban stations</td>
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<tr>
<td>Assess the viability of improved lighting of skywalks, stations and stops</td>
<td>Increase and improve station and stop lighting to increase the comfort and safety of women travelling outside of daylight hours</td>
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<tr>
<td>Consider additional gender sensitivity training for bus conductors</td>
<td>Conduct “gender sensitization” training for BEST bus drivers and conductors to enable them to better serve the needs of their women customers</td>
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<tr>
<td>Consider increasing availability of information aboard transport</td>
<td>Introduce microphones in buses so that conductors can announce stops for new passengers</td>
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<tr>
<td>Assess the viability of reserving additional train carriages for women</td>
<td>As part of the ongoing MUTP Phase II improvements, consider increased women-only carriages for peak hours</td>
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<tr>
<td>Consider expansion of women commandos program</td>
<td>Maintain the cadre of women commandos on Mumbai suburban train platforms and trains as women commuters feel more comfortable approaching them</td>
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<tr>
<td>Assess the viability of providing and maintaining better footpaths</td>
<td>Launch a city-wide initiative to build and maintain pedestrian walkways especially along roads connecting train stations to bus stops and neighborhood centers</td>
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<tr>
<td>Assess benefits of recruiting women drivers and conductors</td>
<td>Launch a recruitment scheme to recruit women conductors and drivers with morning shifts, special training and mentoring support from senior conductors</td>
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Answers to questions we raised

• Are there gender issues that should be integrated in urban transport planning and services? YES.

• How to integrate gender in urban transport?
  – Assess travel patterns/ differential mobility needs as a starting point ; should be a starting point for urban transport design

• Key steps for inclusive urban transport: 1. off-peak ladies pass; 2. women-only buses; increased and improved toilets; 3. women security staff; 4. Improved lighting

• Link up “national gender strategy” with “transport planning & service delivery”:
  – Multi study analysis: to capture the linkage between gender, transport, income, and empowerment in urban India, especially in emerging cities
  – Engage with Ministry of Women and Child Welfare to initiate dialogue on gender sensitive urban transport services planning
  – Engage with “Planning Commission-Task Team” currently formulating the national transport sector policy.
Thank you