



A GENDER ASSESSMENT OF MUMBAI'S PUBLIC TRANSPORT

MUMBAI, JUNE 2011



This report was prepared as a part of the Mumbai Urban transport Project-2A by the World Bank in consultation with the Mumbai Rail Vikas Corporation (MRVC) with the help of Dalberg Global Advisors in 2010-2011.

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Acknowledgements

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The Bank team sincerely appreciates the efforts made by Dalberg Global Advisors in carrying out the study. The task team also acknowledges the support received from various institutions including the Mumbai Rail Vikas Corporation (MRVC), the Brihanmumbai Electric Supply and Undertaking (BEST), the Indian Railways, Indian Railways Police, and Mumbai Metropolitan Regional Development Authority (MMRDA). We specially thank Mr. Om Prakash Gupta, Mr. R. Pradhan and Mr. R.R.Deshpande of BEST, Mr. Raj Khilnani of Indian Railway Police, Mr. Vaishali Jagtap at International Centre for Research on Women, Mumbai and Professors Ochaney, George and Unnikrishnan of St. Xaviers Statistics Department, Mumbai for their support and cooperation for this study. Finally, the team would like to thank all the surveyors and survey respondents who took a keen interest in this study.

Note from the Study Team

The importance of transport infrastructure in spurring the economic development of a city is accepted as a truism. However, with a few noted exceptions, scholarship and expertise on the role public transport plays in the improving the lives of the poor and less privileged is less widely available. This difference is also reflected in the ways in which public policy often treats transport in most cities of the world.

Thankfully, Mumbai is not one of those cities. Mumbai has, in our opinion, a justified national reputation for affordable, efficient and widely available public transport. Images of crowded suburban trains and double-decker red BEST buses are not only icons of the energy and movement of the city but of the ways in which Mumbai public entities strive to enable the social and economic development of its people.

Against this background, an analysis of the ways in which public transport does and does not meet the needs of women and girls is timely. Mumbai women and girls are held to be far more mobile than their counterparts in other Indian cities (a belief voiced by everyone we spoke with, including gender experts in other cities of the country) and use Mumbai's trains and buses day and night, alone and with family, for work and for household errands. Their use of public transport and the degree to which their use meets their needs should be understood and documented as a first step towards developing an institutionalized gendered response.

The study team would like to note a few important caveats. This project was designed to initiate debate and act as a first step towards developing a Gender Action Plan for Mumbai's public transport- it is not a comprehensive academic study. The survey data, while targeted, is limited in coverage:

- Small sample size
- Limitations on geographic coverage

Hence, the study provides a birds' eye view of what women want and do not want from public transport – and given some guidance on what their priorities are. Although the study offers high-level recommendations, it recognizes several constraints facing public transport service providers including BEST Undertaking and the Mumbai Suburban Railways. The recommendations identified through the study have been positioned as *actions in order to be considered further by the transport authorities*.

The study team is grateful to have been involved in this very interesting study, which perhaps is the first of its kind in the country. The study is but a first step and will require further study and consultation for preparing a policy note on gender mainstreaming of the urban transport in the country.

Executive Summary

Our mandate for this study is to assess the public transport needs of women and girls in Mumbai with a view to identifying their priorities in using Mumbai public transport namely, Brihanmumbai Electric Supply and Undertaking buses (henceforth known as BEST) and Mumbai Suburban Railways (consists of three lines: Western, Central and Harbour).

We conducted a literature review (a bibliography is available at the end of the report) as well as focus group discussions among women and girls – in slums, households and among college students. To test the hypotheses we developed through these conversations, we then conducted surveys where we recorded responses from 231 women and girls and 121 men. Given the focus on poor women, most of our survey respondents are men and women who live in slums. 80% of our surveyed sample's monthly expenditure is less than Rs. 9,000 – suggesting that it is more representative of the needs of poorer travelers¹.

We believe that this gender assessment of Mumbai's public transport is an essential aspect of social inclusion – and commend the MUDP-2A authorities for commissioning it. It is heartening to note that even though Mumbai's public transport system is already regarded as one of the most accessible and efficient in the country, they are still considering opportunities for improvement. This assessment is the first step towards developing a Gender Action Plan for Mumbai's transport entities, a long-term undertaking that is critical to institutionalize gender-inclusive and responsive transport planning and provision.

This report provides:

- A high-level understanding on women's travel patterns that builds the foundation for understanding the ways in which they use public transport and the degree to which this is met by the public transport systems
- A first-cut view on women's priorities in public transport and potential ideas for addressing them

We have summarized below six ideas that Mumbai transport entities can consider:

1. **Off-peak Ladies Daily Pass:** Given women's travel patterns (walking is the most preferred mode of transport, more bus trips than train trips, more off-peak travel than men's), we suggest that BEST consider an off-peak ladies only version of their 24 hour unlimited daily pass
Next Steps: An in-depth pricing analysis based on current and potential women's bus usage patterns
2. **Women-only Bus Doors:** Highlighted as the most uncomfortable/ unsafe step of bus journeys, boarding and alighting buses can be made more women-friendly by separating doorways for men and women
Next Steps: Assess the impact of Bangalore buses in making boarding and alighting more comfortable for women through their women-only front doors

¹ A 2007 World Bank study found that the average monthly income in Mumbai is Rs. 8,467 (Public Transport Subsidies and Affordability in Mumbai, India", Cropper and Bhattacharya, 2007)

3. **Increased and Improved Women's Toilets:** The poor provision of women's toilets should be addressed not only to provide this basic facility (and human right) but to signal to women that Mumbai entities place equal value on their men and women customers. Initiatives such as public-private partnerships, advertising and outsourced toilet management have proven successful in the provision of toilets in some stations and public areas of Mumbai
Next Steps: Prioritize our suggested recommendations on the basis of cost and ease of implementation
4. **Gender-training for Bus Conductors:** Women spoke in great numbers and detail on discourteous bus conductors who harass women and further, condone their harassment by men passengers. We suggest gender-training and sensitization for these bus conductors and have highlighted a case study (Delhi Transport Corporation and Jagori, a women's NGO) that might provide further ideas **Next Steps: Assess the success of Jagori training in improving DTC bus-conductors' behavior towards women**
5. **Women conductors and drivers (especially bus-conductors):** Women want to travel with women bus conductors and drivers and many would consider applying for these jobs as well. Already in place in Mumbai (train drivers only), Delhi, Bangalore and Chennai, we encourage a scaling up of the initiative not only to improve the gender balance of BEST's and Indian Railways' employees profile but to signal their support for women's empowerment through these powerful symbols
Next Steps: Understand what is required to make bus conductor jobs viable and attractive to women like morning shifts, less-busy or shortened "starter routes")
6. **More women commandos:** Given the positive response to this scheme that was only launched this year, we suggest a thorough assessment of the performance of this initiative that can be used to both refine and scale up the deployment of women commandos in train stations and on trains across the city
Next Steps: Conduct an impact assessment of the initiative with a view to understanding its successes and challenges

The above findings and recommendations were discussed in a workshop held on June 7th, 2011 and was attended by transport experts, BEST and Indian Railways officials, civil society representatives, NGOs and World Bank members. Workshop participants raised additional issues and areas of research which have been recorded (details are provided in the Annex).

Structure of the Report

Our analysis is divided into two sections:

Section 1: Key Findings

In our understanding, this is the first gender assessment of Mumbai's public transport. There is a need, therefore, to develop a baseline understanding of the travel patterns of women and girls – how do they travel, when do they travel, do they travel alone or with dependents, what modes of transport do they use and for what purposes and to what destinations? We have developed initial answers to these questions in Section 1, identifying, in the process, areas where improvements can be made in meeting the transport needs of women and girls.

Section 2: Suggested Recommendations

We see this assessment as the first step in creating a Gender Action Plan, in itself a long-term process of institutionalizing a gender mandate and strategy to meet the transport needs of women and girls. Towards this end, we identify ten public transport priorities of women and girls that our work has revealed. We then prioritize these recommendations based on our understanding of implementation challenges and suggest six measures that are not only impactful from the perspective of women and girls but also, in our view, somewhat easier to consider for implementation.

The Gender Imperative

In any social, political or business context, gender is an important consideration. In the context of developing cities like Mumbai, gender considerations in the provision of public services is crucial because it is the ability to uptake or utilize these services that often determines the location of households on the poverty line.

In fact, gender analyses have become particularly relevant to the provision of public services. First, developing countries have increasingly recognized the importance of promoting universal human rights for all human beings². For India, a signatory to the Committee on the Elimination of the Discrimination against Women (CEDAW), gender analysis is particularly relevant. Second, developing countries are also recognizing that enabling women and girls to utilize public services to become more empowered citizens has ancillary benefits for sustainable social and economic development.

Transport is key to social and economic development especially in the way it mobilizes – literally – the poor who cannot afford private transport. Additionally, with rapid rates of urbanization, increased densification of cities and bottle necks in private road transport, the pressure on public transport continues to grow. Mumbai's development agencies from MMRDA to BMC are developing new transport strategies to meet this challenge – from new roads to a new metro to more trains and buses. In this process, many lessons have been learned by assessing the effectiveness and efficiency of Mumbai's current transport service.

However, to date, no assessment has been done on Mumbai's public transport that looks specifically at women and girls. Yet mobility is the first building block in enabling women to take up their rights and opportunities (especially in taking up non-traditional gender roles). Is such a gender assessment necessary? Do we have a good understanding of the transport needs of women and girls? Do they use public transport differently from men and boys? Are Mumbai's trains and buses meeting the needs of women and girls? What needs remain unmet? What improvements would lead to increased usage?

The purpose of this report is to initiate a dialog on these questions and begin to develop a picture of the role transport currently plays in women's lives with an understanding of the further role it can play, given women's specific needs.

²UNFPA. (2010). "The Rights Based Approach." United Nations Population Fund. <http://www.unfpa.org/public/publications/pid/4919>.

Mandate

Our mandate for this study is to develop recommendations on a set of measures that can be taken to better meet the public transport needs of women and girls in Mumbai. These recommendations are based on a granular view of the public transport needs of women and girls in Mumbai including:

- A high-level understanding of the kinds of trips women make and the modes, frequency and timings of transportation they prefer
- Identification of the ways in which women's trips differ from men's
- An understanding of what portion of women's public transport needs remains unmet by existing public transport services
- A view on women's public transport priorities with regard to safety, affordability, convenience and comfort. We have assessed these priorities based on the degree to which they specifically impact women and girls. Therefore, we have not assessed issues like the punctuality, reliability and comfort of trains and buses (except where they make women feel less safe) because these issues affect men and women
- A high level understanding of the degree to which gender inclusiveness is part of the agenda of Mumbai public transport

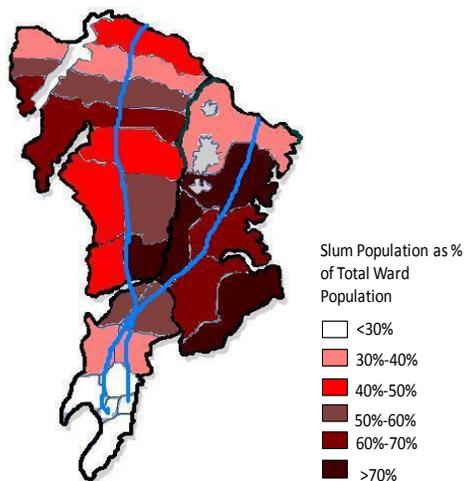
Scope of Analysis

Exhibit: Mumbai's Population³

	Mumbai City	Western Suburbs	Eastern Suburbs
Population Density (/sq. km.)	48,581	24,400	22,111
Number of wards	9	9	6
Average Ward Population	372,530	571,372	578,559

This study was carried out in Mumbai. Mumbai, formerly known as Bombay, is the capital of the Indian state of Maharashtra and is the commercial and entertainment capital of India. It is the most populous city in the country and is home to important financial institutions such as RBI (Reserve Bank of India), BSE (Bombay Stock Exchange) and headquarters numerous Indian companies. Mumbai is a highly congested city due to the large number of vehicles (personal cars, taxis, autos, buses, trucks and two-wheelers), hawkers and parked vehicles on the road.

Mumbai's Prevalence of Poverty⁴



³ *Mumbai Human Development Report 2009*, Municipal Corporation of Greater Mumbai, UNDP, Oxford University Press

⁴ *Mumbai Human Development Report 2009*, Municipal Corporation of Greater Mumbai, UNDP, Oxford University Press

The scope of our analysis is women in the greater Mumbai area (that is covered by the suburban trains and buses). Because of our client's desire for a specific focus on poor women and girls, we have conducted a majority of our research in the slums in Western and Eastern suburbs of Mumbai – where the majority of the poor in Mumbai live.

Throughout this report we have used the term “women” to refer to women and girls above the age of 16 as several of our survey respondents are students between the ages of 17 and 21. However, there is a need for a deeper understanding of the public transport needs of school-children, many of them use public transport to go to better schools that are farther away from their homes. An interesting and important gender analysis in this regard would be to compare the education outcomes of girls who use public transport to go to schools farther away from home with those of girls who walk to their neighbourhood school.

Our focus for the study was on public buses and trains, however, other modes of public transport available in the city but not included in the study are black and yellow metered taxis and auto- rickshaws (allowed to operate only in suburban Mumbai).

Methodology

We followed a three step process for this study:

Step 1: Conducting a literature review

We started by conducting a comprehensive literature review of available literature on women and public urban transport, both in Indian cities and in other cities in the developing world. In this step, we identified established findings on women's urban public transport needs and uncovered key trends in what is being done to meet those needs by transport authorities. This enabled us to develop hypotheses

Overview of Literature Review

We undertook a literature review of scholarship and expertise on women and public urban transport available in the public domain.

Both the *World Bank Gender and Transport Resource Guide* and GTZ' *Sustainable Transport: A Sourcebook for Policy-Makers in Developing Cities* serve as good starting points, not only to understand the themes that are central to this field but in obtaining references to other studies that these organizations have supported or contributed to. United Nations Commission for Europe Gender and Transport Projects also deserves mention in this category.

In India, we drew strongly from four studies:

- Baker, J. (2005). "Urban Poverty and Transport: The Case of Mumbai." World Bank Policy Research working paper.
- Maunder, D. et al. (1997). "Attitudes and Travel Behavior of Residents in Pune, India." Transportation Research Board, 76th Annual Meeting, D.C.
- Peters, D. (1998). "Breadwinners, Homemakers and Beasts of Burden: A Gender Perspective on Transport and Mobility." Institute for City and Regional Planning (ISR), Berlin, Germany.
- Srinivasan, S. (2004). "Influence of Residential Location on Travel Behavior of Women in Chennai, India." Conference Report - Research on Women's issues in Transportation, Vol1

The main findings of these studies were common: women tend to use public transport less than men, tend to walk more than men and undertake a greater share of non-work trips than men. These findings were borne out by our survey results as well. As such, we have shown them together in our Key Findings section, drawing on examples from the literature review and our survey, as appropriate. A notable mention in this section is a paper by Geetam Tiwari and Anvita Anand (IIT Delhi, 2005) Gendered Perspective of the Shelter–Transport–Livelihood Link: The Case of Poor Women in Delhi that shows the impact of poorly available affordable transport on women's abilities to earn their livelihood.

We also drew on the 2009 Mumbai Human Development Report by MMRDA to develop an understanding of Mumbai's public transport infrastructure and plan.

A comprehensive bibliography is available in the end of the report.

that we could then test in Steps 2 and 3.

Step 2: Conducting Interviews

Interviews: We conducted interviews with gender experts, transport officials and practitioners to understand the relevant issues, obtain data and further develop our hypotheses. For example, to understand all the nuances of the issue of safety on trains and buses, in addition to surveying customers, we also interviewed women commandos on railway platforms, discussed the issue with transport journalists and with transport authorities like BEST and the Railway police.

(A list of selected interviews is available in the Annex).

Exhibit: Images from a Focus Group Discussion (Sahaydri Nagar, Vashi Naka – 19th October, 2010)



Step 3: Developing and administering our research instruments (focus groups and surveys)

Focus Groups: To test our hypotheses, we ran two focus groups among slum-dwelling women in Mumbai. We developed a set of general talking points that the facilitator then discussed with a group of 10-12 women. This enabled us to form some hypotheses on the main issues important to women and girls in Mumbai and brainstorm solutions that we could then

What is a slum?

*There are two widely used definitions of slums in Maharashtra:
A compact settlement of at least 20 households with a collection of poorly built tenements, mostly of temporary nature, crowded together usually with inadequate sanitary and drinking water facilities in unhygienic conditions – National Sampling Survey Organization (part of Ministry of Statistics and Programme Implementation)*

Any area is or may be a source of danger to health, safety or convenience of the public of that area or of its neighbourhood, by reason of that area having inadequate or no basic amenities, or being unsanitary, squalid overcrowded or otherwise; or

*the buildings in any area, used or intended to be used for human habitation area i) in any respect, unfit for human habitation; or
ii) by reason of dilapidation, overcrowding faulty arrangement and design of such buildings, narrowness or faulty arrangement of streets, lack of ventilation light or sanitation facilities or any combination of these factors, detrimental to the health, safety or convenience. – Maharashtra Slum Areas (Improvement, Clearance and Redevelopment) Act, 1971*

For the purpose of our study, we interviewed people who live in tenements that are referred to as slums in common parlance or in some cases, chawls.

test in greater detail through our survey.

Survey: We developed a survey based on our learnings from the literature review, interviews and focus groups. The survey was orally administered to 223 women and 121 men almost all of whom live in slums (and were aged from 17 and up). We worked with two sets of surveyors:

Surveyors associated with International Centre for Research on Women: Five surveyors who have experience conducting surveys for gender and reproductive rights issues went to households in slums in the Eastern Suburbs between 4pm and 6pm to orally administer the survey in Hindi and Marathi. They also went to train stations and bus stations to interview women public transport users who do not live in slums.

Students from St. Xaviers Statistical Department: Fifteen 2nd year MSc Honours students orally administered 73 surveys to women and 21 surveys to men in their neighbourhoods (all of them live in Western Suburbs). The only criterion they were given is that the women and men must be slum-dwellers.

Exhibit: Demographic breakdown of survey sample

		Home-Maker	Office/ Business Professional	Street/ Market Vendor	Student	Domestic Worker	Laborer	Others	Total
Per Category Surveyed	F	23	48	19	34	55	22	7	208
	M	-	53	15	17	1	20	12	118
		Home-Maker	Office/ Business Professional	Street/ Market Vendor	Student	Domestic Worker	Laborer	Others	Total
Eastern Suburb	F	8.2%	28.3%	7.5%	15.1%	27.7%	11.9%	1.3%	100% (159)
	M	-	50%	12.2%	14.3%	-	17.3%	6.1%	100% (98)
Western Suburb	F	17.5%	7.5%	17.5%	20%	20%	7.5%	10%	100% (40)
	M	-	16.6%	16.6%	8.3%	-	25%	33.4%	100% (8)
City Proper	F	33.3%	-	-	22.2%	33.3%	-	11.2%	100% (9)
	M	-	25%	12.5%	25%	12.5%	-	25%	100% (12)

The above methodology was supplemented by a workshop held on June 7th, 2011 and attended by transport experts, BEST and Indian Railways officials, civil society representatives, NGOs and World Bank members. A detailed write-up on the participants' thoughts and views is presented in the Annex.

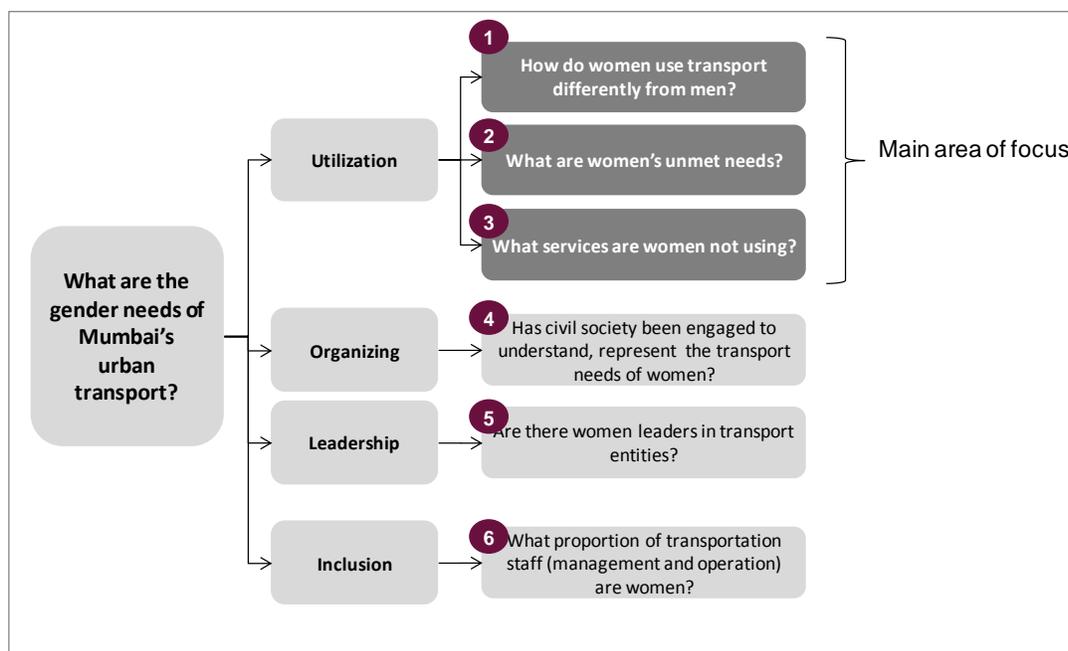
Key Findings

To conduct a needs assessment of public transport needs of women and girls in Mumbai, we asked six questions organized around the following four principles of gender-inclusion:

- A) utilization of existing services,
- B) organizing and representation of the needs of women through grass-roots and civil society organizations,
- C) leadership by women in the sector,
- D) inclusion of women employees.

These principles have been drawn from a synthesis of gender-responsive frameworks⁵.

Exhibit: Four Principles and Six Key Questions



A) Utilization of Existing Services: This principle explores the extent to which women utilize existing services and their degree of satisfaction with them. It also assesses whether all women's transport needs are met.

B) Organizing and Representation of Women's Needs through Civil Society Organizations: This principle examines the degrees to which the voices of women's organizations are heard in policy-making and their organizing power leveraged to disseminate information and services. The importance of this

⁵ These principles have been selected from a review of guidelines on gender-inclusion in the developing world from the following organizations: World Bank, (Gender and Transport) <http://www4.worldbank.org/afr/ssatp/Resources/HTML/Gender-RG/module1/index.html>; Office of the Special Advisor on Gender Issues and Advancement of Women, <http://www.un.org/womenwatch/osagi/conceptsanddefinitions.htm>; United Nations Development Fund for Women, http://www.unifem.org/gender_issues/women_poverty_economics/gender_budgets.php; United Nations Population Fund, http://www.unfpa.org/webdav/site/global/shared/documents/publications/2010/hrba/module_5.pdf

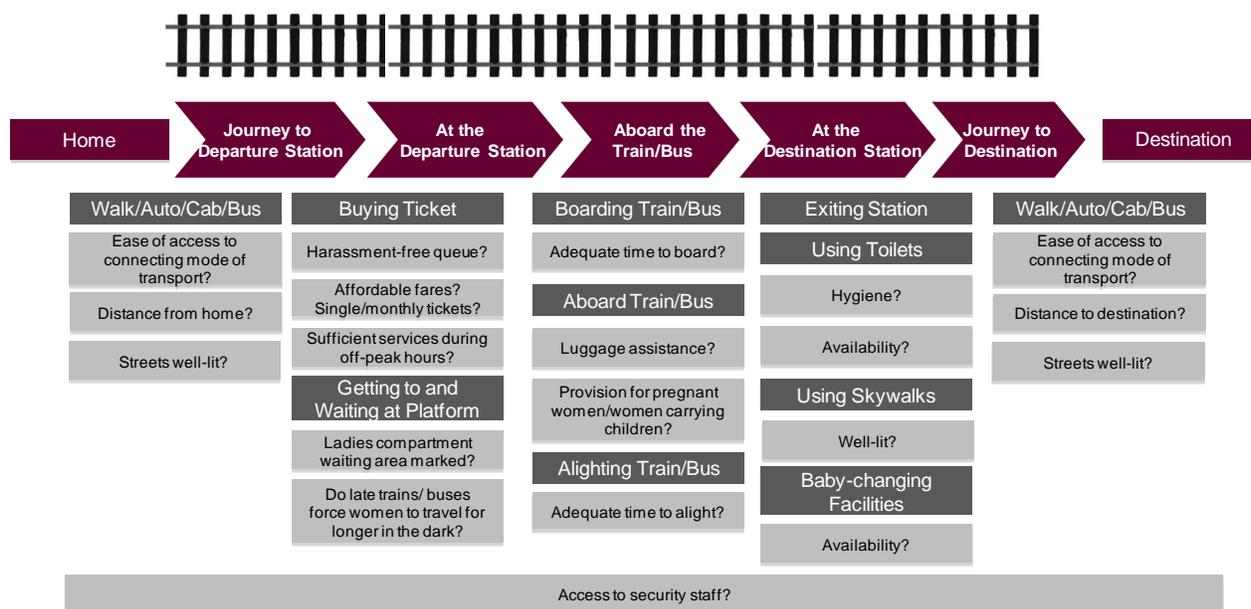
principle lies in connecting policy-making and service provision to citizenry through civil society organizations that already have the trust, knowledge and interest of the communities they represent.

C) Leadership by Women in the Transport Sector: This principle assesses the degree to which women are represented in senior management and leadership of transport entities and transport policy.

D) Inclusion of Women Employees in Transport Entities: This principle assesses the representation of women in transport entities in order to develop a view on the degree to which they are open to and encouraging of women’s recruitment and retention.

We defined trips as all destination-oriented travel between home and the destination. To understand the nuances and particular challenges of women’s trips, we asked questions about every step of the trip, as shown below:

Exhibit: Analysis across All Steps of Bus and Train Trips

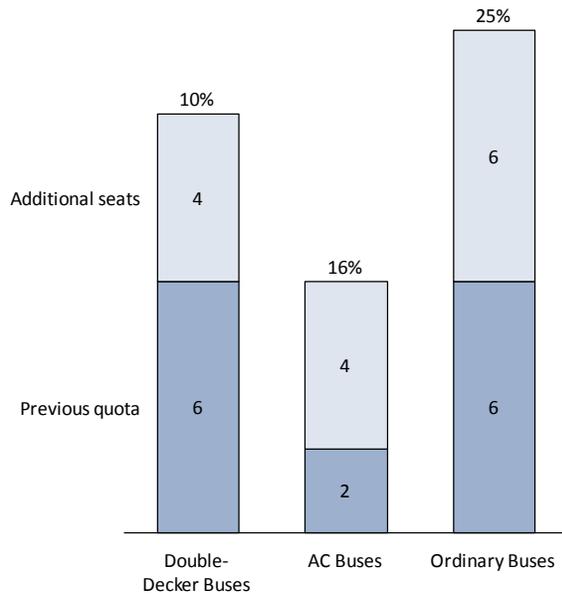


Before we present our findings, we would like to note that **consideration of women’s needs certainly seems to be part of the agenda of Mumbai transport entities**. Newspaper articles on transport reveal a keen interest in promoting women’s utilization of public transport. We have summarized below some recent efforts in this regard⁶:

⁶ “Mumbai’s Ladies Special leaves the commuter sex pests behind”, The Sunday Times, September 19, 2009; “Women commandos to crack down on crime in Mumbai trains”, Earth Times, September 4, 2007, <http://timesofindia.indiatimes.com/city/mumbai/More-seats-for-women-sr-citizens-on-BEST-buses/articleshow/6193505.cms>

Exhibit: Measures Taken by BEST and Indian Railways to Meet Women’s Transport Needs

Reserved Seats for Women on BEST buses in Mumbai
(% of all seats, 2010)



Efforts to meet Women’s needs on Trains

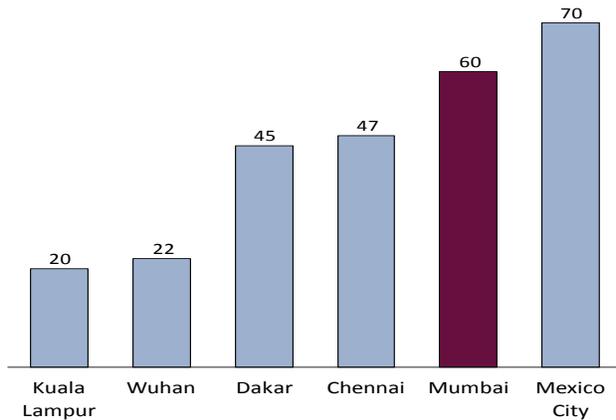
- **Women’s only compartments:** Two out of twelve carriages (each carriage has 2 compartments) are currently reserved for women on every train
- **Female Commando Railway Protection Force (2010):** A team of Mumbai policewomen trained in unarmed conflict & martial arts (also handling carbines & AK-47) have been trained & assembled to tackle “crimes committed against women commuters on suburban railway network of the metropolis”
- **“Ladies’ Special Trains”:** There are currently six Ladies’ Special trains in the Mumbai suburban train network, two on each of the three routes



A) Utilization of Transport Services

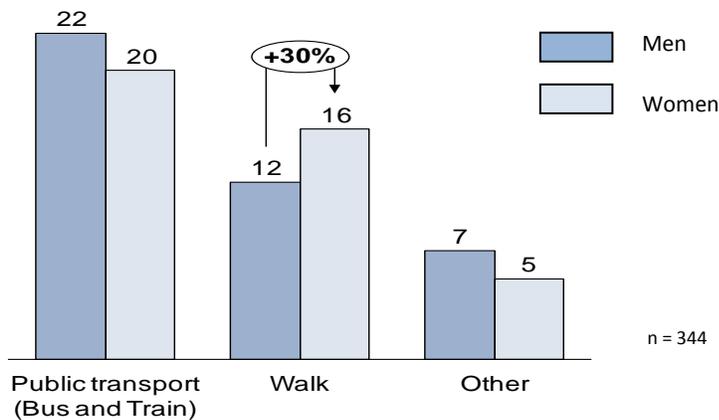
Finding: Mumbai fares well amongst developing country peers on the utilization of public transport in general.

Exhibit: Developing Cities' Use of Public Transport- percentage share of public transport in daily trip-making ⁷



Finding: Women walk more than men across household expenditure categories.

Exhibit: Average Number of Trips Made per Person per Week, by Gender ⁸



This is especially true for poorer women who walk more than women from higher income households. Our survey additionally revealed that women are responsible for a greater number of non-work related trips involving household duties, performing 30% more non-work related trips than men.

⁷ "Driving forces in developing cities' transportation systems: Insights from selected cases", MIT, 2006.

⁸ Survey done for this study, Mumbai, 2010

Exhibit: Proportion of Women Across Expenditure Categories who Walk as Main Mode of Transport ⁹

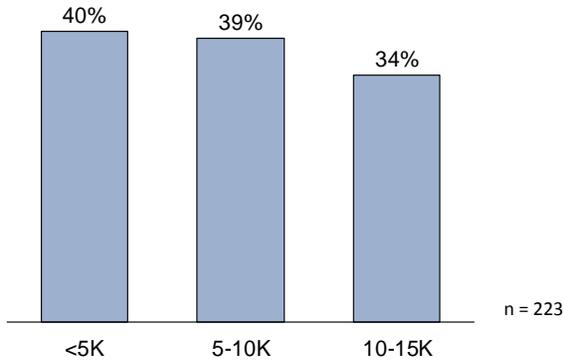
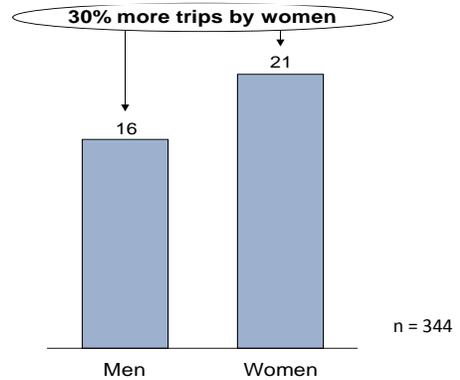
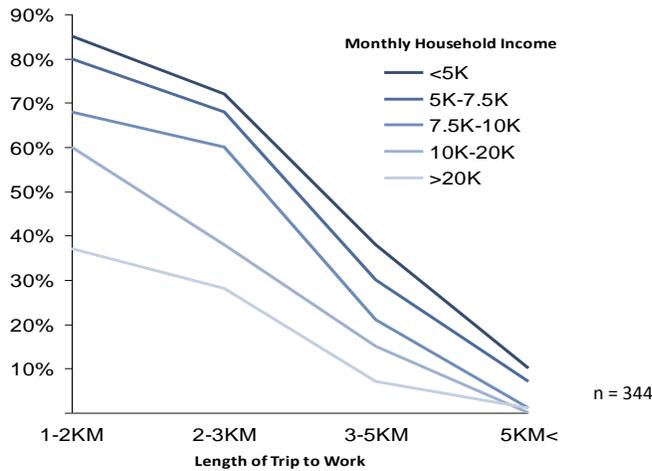


Exhibit: Non-Work Trips per Person per Week by Gender ¹⁰



This is in keeping with earlier studies which show that the poor walk more than non-poor, and that, women walk more than men.

Exhibit: Income-Disaggregated Proportion of Workers Whose Main Mode to Work is Walking ¹¹

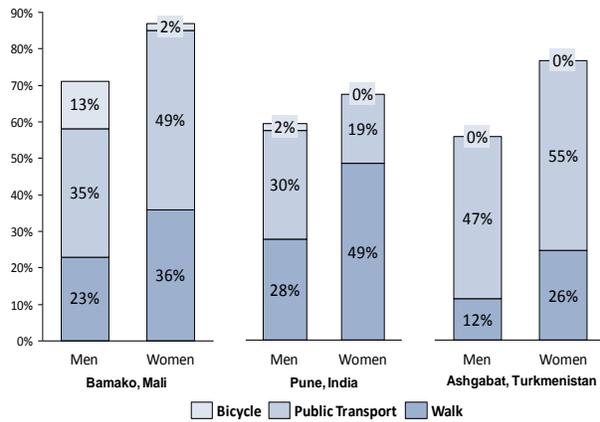


⁹ Survey done for this study,, Mumbai, 2010

¹⁰ Survey done for this study,, Mumbai, 2010

¹¹ "Urban Poverty and Transport: The Case of Mumbai", Judy Baker et al. World Bank Policy Research working paper, 2005.

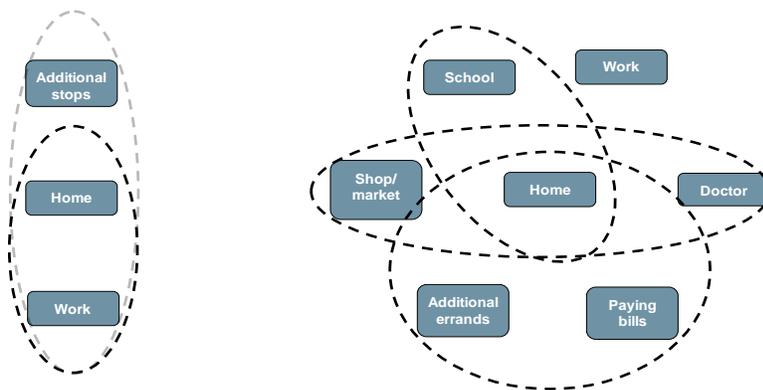
Exhibit: Main Modes of Transport by Gender¹²



Finding: Women travel to a greater number of destinations for a more diverse range of purposes.

Gender and transport studies across the world have shown that women make more trips than men – for a more diverse set of reasons. Men tend to travel from home to work and back with one additional trip in some cases. Most women travel to several destinations per everyday as they run household errands, escort children and other dependents to school, doctors and on social/ religious visits. Women’s trips are known as trip-chains because they tend to go to more than one destination when they travel and often they go from one destination to the next on the same trip.

Exhibit: Men & Women’s Trip Patterns¹³

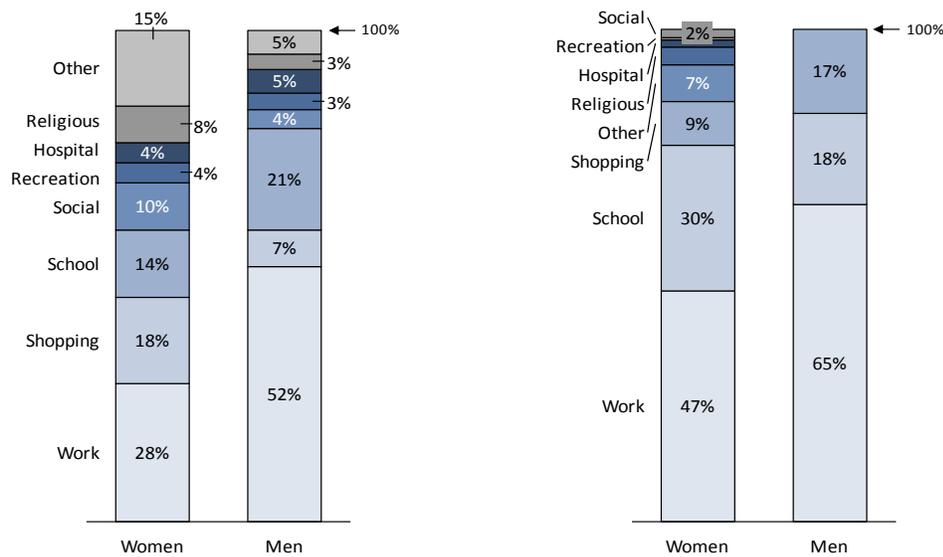


Previous studies have already established that Indian women trip-chain more than Indian men.

¹² “Breadwinners, Homemakers and Beasts of Burden: A Gender Perspective on Transport and Mobility”, ICR, Berlin, Germany, 1998.

¹³ Survey done for this study,

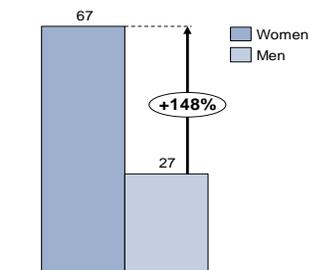
Exhibit: Trip Destination Diversity by Bus and Train Respectively¹⁴



Finding: Women travel with dependants more than men do.

International case studies show that women travel more with dependents (usually children but sometimes with senior citizens as well) than men. In London, for example, 67% of women’s trips are with children compared with 27% of men¹⁵.

Exhibit: London Case Study: Number of Annual Education Related Trips with Child Dependents¹⁶



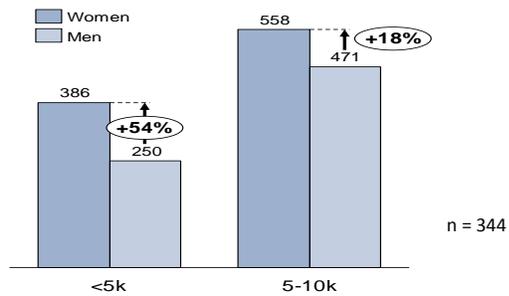
Our survey revealed that not only do women make more trips with dependents, they also spend more on dependents’ travel than men. Conversations with focus group women revealed that women usually have less to spend on themselves out of a given budget because they must provide for children’s transport out of that budget as well.

¹⁴ “Gender and Urban Transport: A Guide for Policy Makers”, GTZ, 2007; “Gender and Transport in Developed Countries”, Working Paper on Gender Perspectives for Earth Summit, UNED, 2002

¹⁵ Gender Equity Scheme 2007-2010, Transport for London, Mayor of London, 2006

¹⁶ National Travel Survey, London, 2005

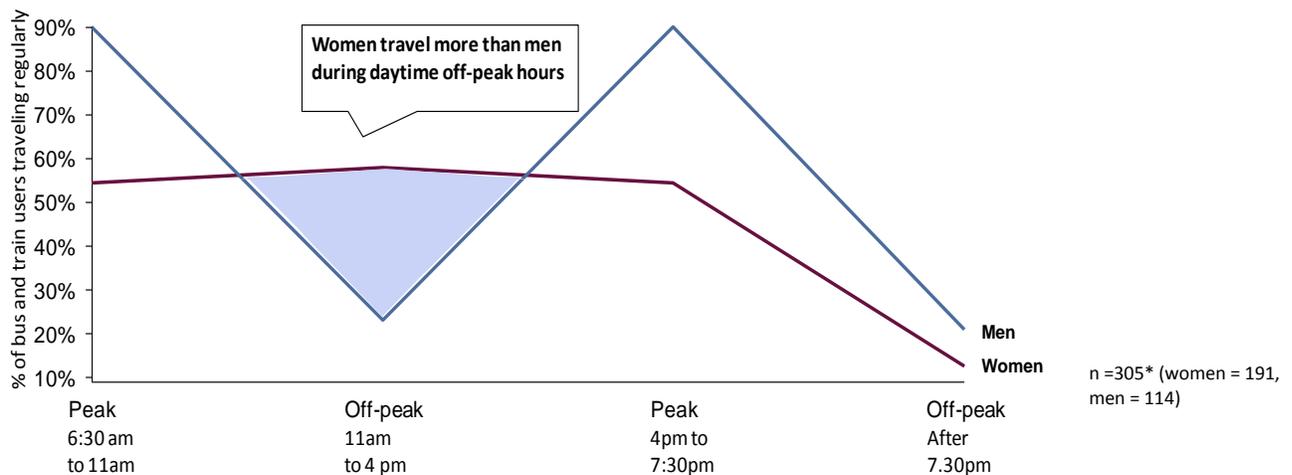
Exhibit: Average Monthly Transport Expenditure on Dependents, in Rupees ¹⁷



Finding: Women travel more during off-peak hours than men.

A review of existing literature suggests that women tend to travel more during off-peak hours than men (for part-time jobs, household errands, escorting of children and other dependents, social visits). However, there is little literature looking at gender and time of travel. Our survey revealed that, in fact, a majority of women travel during the afternoon off-peak hours of 11am and 4pm.

Exhibit: Women and Men’s Travel in Peak and Off-Peak Hours in Trains and Buses (% of daily trips by public transport)¹⁸



* Note:
1) Omits all surveyed users who did not report traveling aboard either buses or trains.

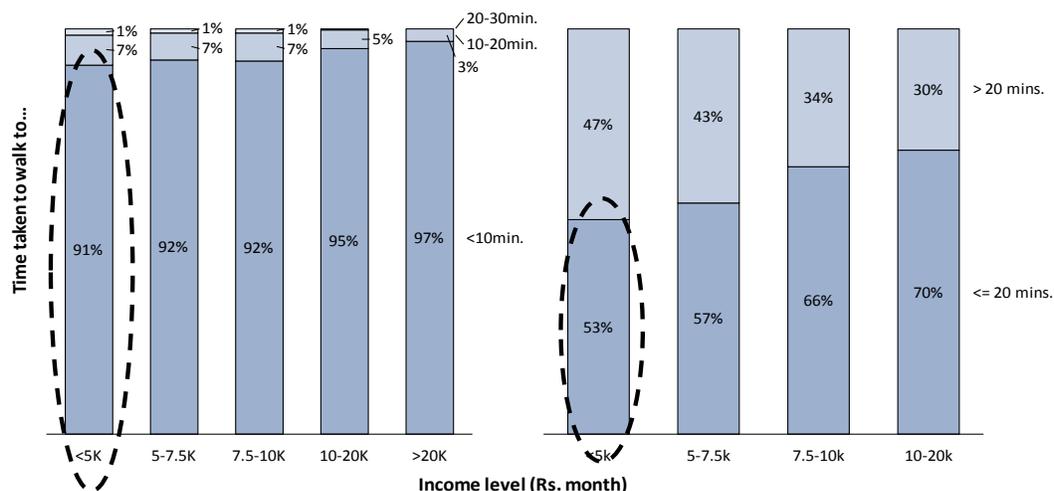
Finding: Women use buses more than trains.

Mumbai is unique in offering both bus and a local train service. We hypothesized that women would use buses more than trains partly because they are more easily available (especially to households with lower income as shown below) and partly because the neighbourhood/locality coverage of buses is greater than that of trains.

¹⁷ Survey done for this study,, Mumbai 2010

¹⁸ Survey done for this study,, Mumbai 2010

Exhibit: Income-disaggregated Average Walking Time from Household to Bus Stop and Train Station Respectively¹⁹



Our hypothesis was confirmed when we found that women made 45% more trips by bus than train, across income categories. This difference increased to 67% for households with incomes less than Rs 5,000 a month. Buses also form a greater portion of women’s total trips than men’s total trips.

Exhibit: Income-disaggregated Ratios of Average Number of Bus vs. Train Trips per Week by Women²⁰

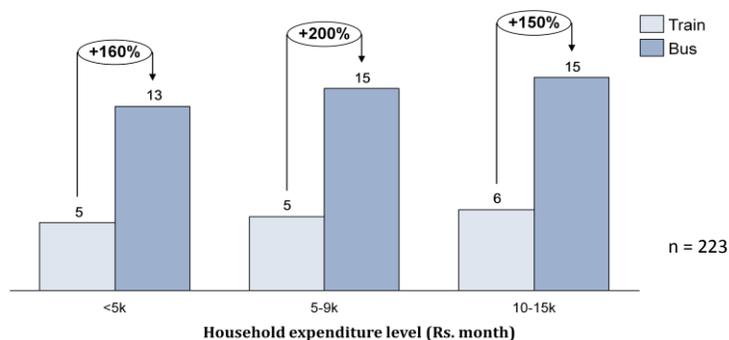
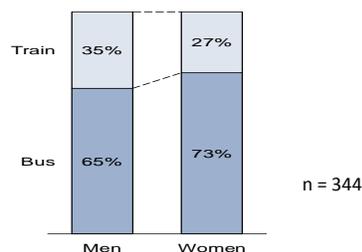


Exhibit: Bus Trips as a Proportion of Total Trips by Gender²¹



¹⁹ “Urban Poverty and Transport: The Case of Mumbai”, Judy Baker et al. World Bank Policy Research working paper, 2005.

²⁰ Survey done for this study,, Mumbai, 2010

²¹ Survey done for this study,, Mumbai 2010

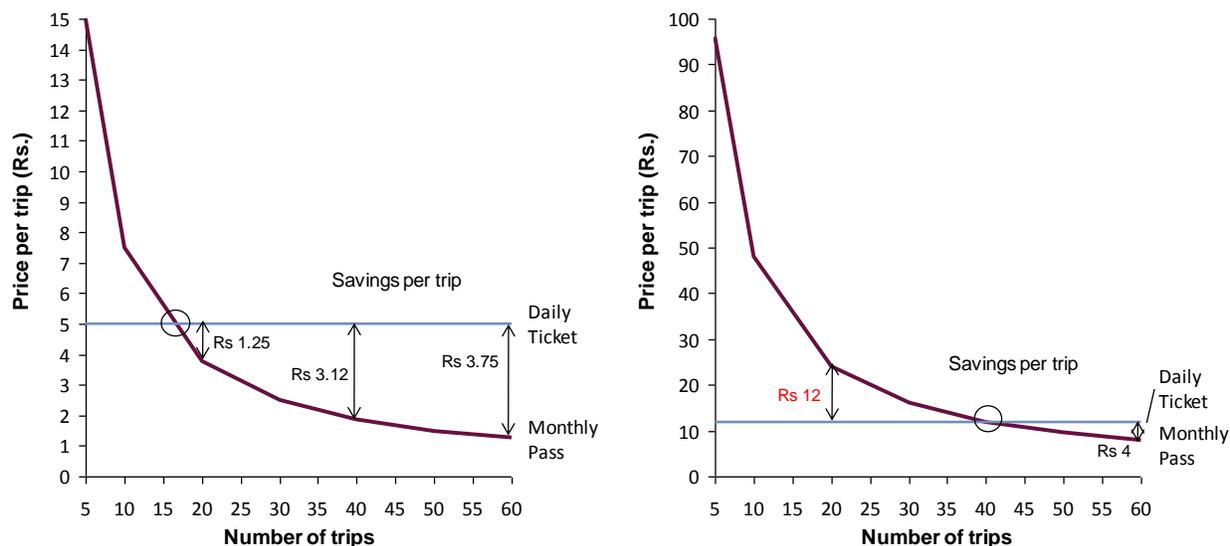
Finding: Bus travel is significantly more expensive than train travel.

Both BEST and Indian Railways offer monthly passes that provide discounts on daily tickets to passengers. However, train tickets are subsidized far more than bus tickets: a monthly train pass is 15 times the price of a daily ticket whereas a monthly bus pass is 40 times the price of a daily ticket.

In the figures below we have compared the price of a monthly pass for a distance of 10-12 km. In the case of the train (left hand side figure), 15 trips is the break-even point where the price of a daily ticket equals the price of the monthly pass. This means that if a person makes more than fifteen trips, it is cheaper for him or her to buy a monthly pass.

In the case of the bus (right hand side figure), the break-even point is forty trips. Until a person makes forty trips a month, it is cheaper for him or her to buy daily tickets. A monthly pass holder making twenty trips a month pays an additional twelve rupees a trip (over the price of a daily ticket).

Exhibit: Comparison of Monthly Pass Affordability for a 10-12km Trip – Suburban Train and Bus (IRCTC and BEST websites, 2010)



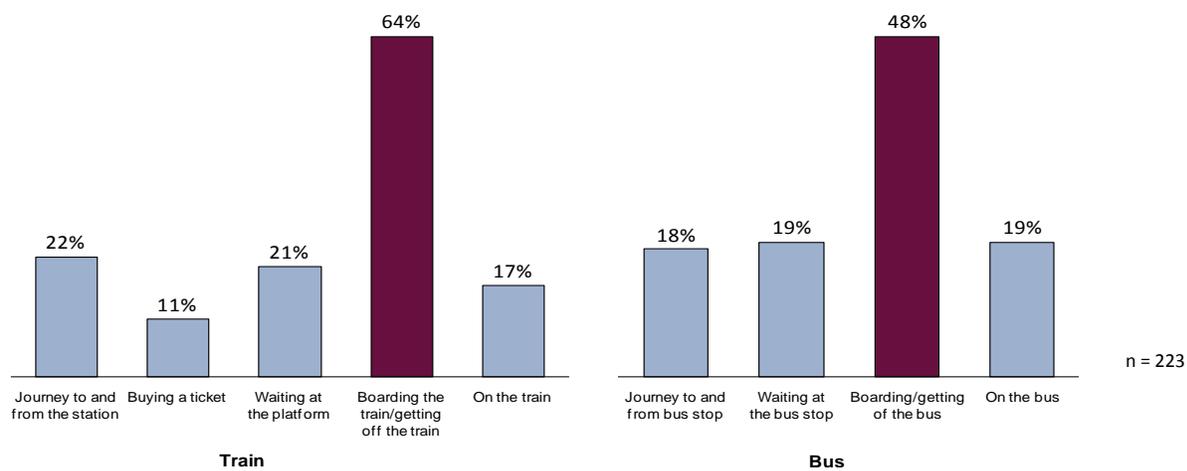
That the high price of bus passes can be prohibitive for bus travel was confirmed by conversations with focus groups we conducted in two slum neighbourhoods in the Eastern Suburbs. Several women noted that they would use the bus much more for travel if it was made affordable. They also pointed out that cheap bus travel would enable them to better access the local trains which in turn could connect them to better paying jobs in South and Central Mumbai.

Please note: we have not made an assumption that buses compete with trains for the same passengers.

Finding: 80% of women feel safe at all steps of bus and train journeys – except when boarding and alighting.

We found that safety is not the biggest concern for women in Mumbai when it comes to transport. More than 80% of women feel safe at all stages of their journeys – except for boarding and alighting where 64% of women train users and 48% of women bus users feel unsafe. Our focus group discussions also brought up the discomfort of crowded trains and buses. Conversations with transport gender experts revealed that Mumbai is considered one of the safest Indian cities in terms of public travel for women. This was echoed in our conversations with the women we surveyed and had focus group discussions with.

Exhibit: Women Respondents Indicating Particular Steps of their Public Transport Journeys are “Unsafe”²²



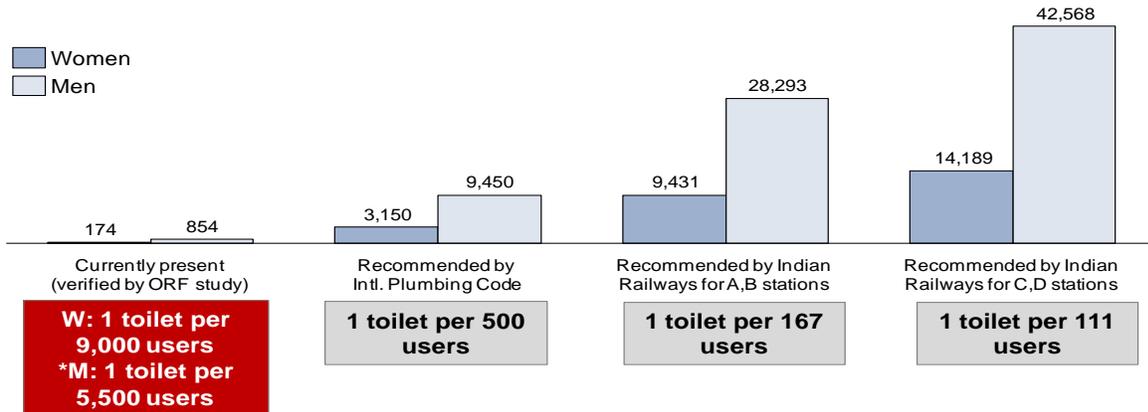
Finding: There are not enough women’s toilets and a greater proportion of them are non-functional.

Assuming that 25% of Mumbai’s 6.3 million daily train users are women, Mumbai train stations currently have 1 men’s toilet per 5,500 men users and 1 women’s toilet per 9,000 women users²³. According to the International Plumbing Code, public service areas like train stations should provide at least 1 toilet per 500 users. Interestingly, Indian Railways standards for stations are even higher with 1 per 111 for smaller stations and 1 per 167 for bigger stations.

²² Survey done for this study,, Mumbai, 2010

²³ Observer Research Foundation. (2010). “Sanitation Facilities at Mumbai Suburban Railway Stations.” <http://www.observerindia.com/cms/sites/orfonline/modules/report/ReportDetail.html?cmaid=19162&mmacmaid=19163>

Exhibit: Comparison of Present Toilet Availability with International and Indian Railways Standards²⁴



Note:

- 1) *Men's toilet figures includes urinals (Women and Men have 125 toilets each in Central Railways, Men have 56 toilets in Western Railways)
- 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; C,D stations: $4 * N(db) / 200$ where $N(db) = 0.45$ maximum passengers a day

In addition, the study found that 93% of toilets that are closed or out of service are women's toilets.

Exhibit: Selected Pictures of Out-of-Service Women's Toilets at Mumbai Railway Stations²⁵



²⁴ ORF Study on Sanitation on Mumbai's Suburban Railways, Ministry of Railways, "Work Manual- Minimum Amenities- Passenger Amenities, Stations and Yards http://indianrailways.gov.in/financecode/IRWM/worksmmanualCh4_data.htm#ANNEXURE.

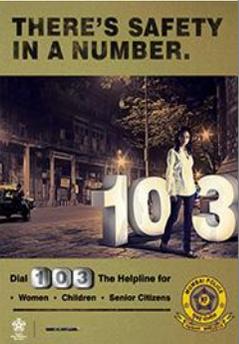
²⁵ Ibid.

B) Organizing and Representation of Women's Needs through Civil Society Organizations

Finding: Mumbai entities already leverage women's NGOs – BEST and Indian Railways can do this to a greater extent and through a more institutionalized process.

India has a strong network of women's organizations that represent the needs and rights of women. Some of these organizations are already working with transport authorities:

Exhibit: Examples of Mumbai entities working with Women's NGOs²⁶

EXAMPLE: Mumbai Police's engagement with the Campaign against Violence against Women and Girls (VAW)	EXAMPLE: Indian Railways' engagement with National Railway Users Consultative Committee (NRUCC) and the Mumbai Rail Pravasi Sangh (MRPS)
<p>• In 2007, 13 women's organizations, along with social activist Shabana Azmi, approached the Commissioner of Police to protest against a molestation case, and to demand police action for dealing with violence against women</p> <p>• In 2008, the Mumbai Police and the Campaign against Violence against Women and Girls (VAW Campaign) launched the 103 helpline- women in any kind of distress or threat of violence can call this helpline and expect police to arrive on the spot instead of having to go to the police station</p> <p>• To date, the helpline has received 3462 actionable calls, most of which were made by women.</p>  <p><i>"Buses in Mumbai are soon going to have TVs installed on board- we are pushing for 15% of screentime to be dedicated to social messaging, including raising awareness about the 103 helpline"</i></p> <p>-Nandita Shah, Akshara (a women's NGO involved in the Campaign against Violence against Women and Girls) (Dalberg interview Oct 2010)</p>	<p>• In 2010, Central Railways agreed to build 10 new foot over-bridges (FOB) to reduce trespassing incidents and cope with increasing crowds</p> <p>• They identified key stations where crowding has increased and plan to build new foot over-bridges at a cost of Rs. 10 crore</p>  <p>• Following an incident at Vikhroli station where 4 people were run over by local trains, the NRUCC met with the CR general manager, who assured them that a footbridge at Vikhroli would be completed in the next 6 months, at that the finances had already been sanctioned</p> <p>• The MRPS has been following this issue as well, and had sent written requests to the authorities about this problem.</p> <p><i>"So far, 325 people have been killed at Vikhroli station this year"</i></p> <p>- Subhash Gupta, NRUCC (<i>"Rly promises FOB at Vikhroli by next year"</i>, Times of India, Monday 22nd Nov 2010)</p> <p><i>"We hope the work begins soon and goes on at a good pace so that it can benefit commuters"</i></p> <p>- Ramchandra Karve, MRPS (<i>"Thane st. FOB gets green signal"</i>, Mumbai Mirror, Friday 26th Nov 2010)</p>

Mumbai transport authorities can improve their utilization of and coordination with women's NGOs who are well-placed to understand, represent and conduct outreach to Mumbai women. For example, Transport for London, in preparation for their 2007-2010 Gender Equality Scheme, took several steps to ensure maximum engagement with as many stakeholders as possible, including:

- Holding a London-wide event for **150 key stakeholders, including women's NGOs**, local authorities, and the voluntary sector (designed to gather views of key transport issues for women and men)
- Conducting one-on-one interviews with key opinion formers, such as local authorities

²⁶ <http://www.aksharacentre.org/prog18.2.htm>; http://findarticles.com/p/news-articles/times-of-india-the/mi_8012/is_20101123/commuters-fury-boils-4-run/ai_n56356009/
<http://mumbaiimirror.com/index.aspx?Page=article§name=CITY%20-%20Briefs§id=35&contentid=20101126201011261132438456f632fb4>

- Consulting with the TfL's Women's Staff Network Group

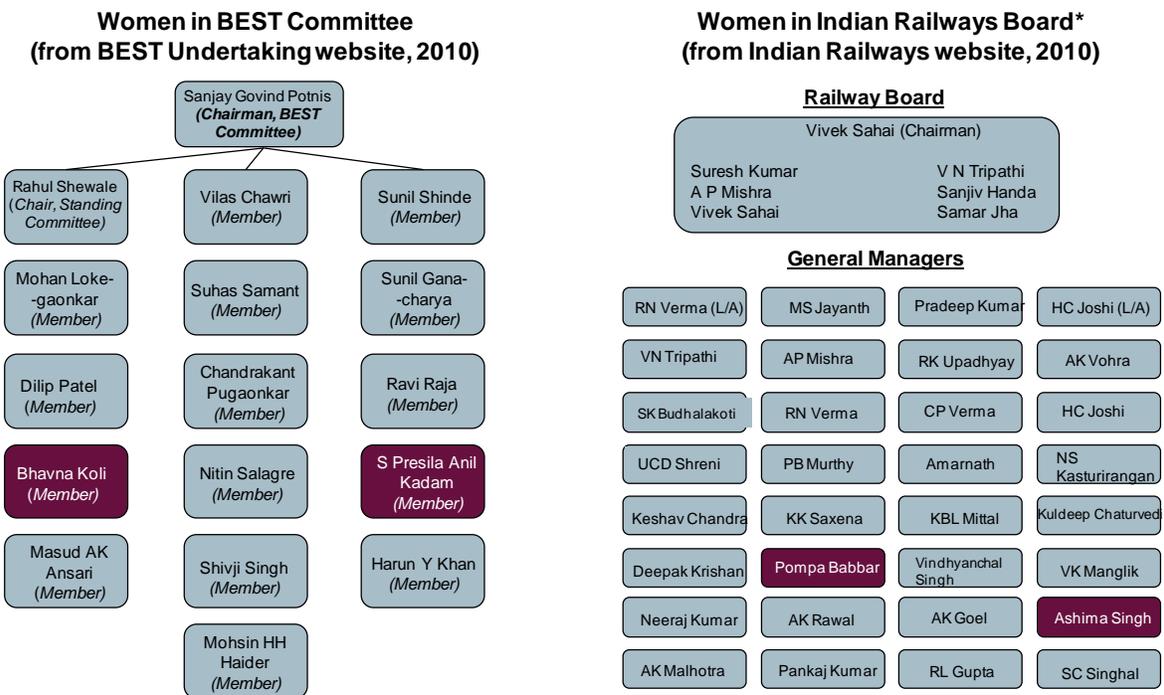
C) Leadership by Women in Transport

Finding: There are very few women leaders and in senior positions in most government entities, including BEST and Indian Railways and MMRDA.

We have pieced together some insights from interviews with senior staff at Indian Railways and BEST:

- 2 out of 16 BEST committee members are women (12.5%)
- 1 out of 34 Indian Railways Board members is a woman
- Women constitute less than 10% of Officer and above levels
- Of the roughly 500 engineers at BEST, less than 10 are women

Women in Leadership Roles at BEST and Indian Railways



Note: * Used Indian Railways leadership as a proxy for Mumbai Suburban Railways

D) Inclusion of Women Employees in Transport

Finding: There is limited gender-disaggregated information available on employment in transport bodies, though it appears that there are very few women employed in the transport sector.

The representation of women employees in the bodies that provide transport services is as important as having women in leadership positions.

Our interviews with senior officials at BEST and Indian Railways suggest that gender-disaggregated information on employees is not collected, making it difficult to conduct an assessment of the degree to which women are represented.

However, there are indications that representation of women is not as high as it should be, especially at higher levels:

Exhibit: Selected Statistics on Representation of Women Among BEST and Indian Railways Employees²⁷

Percentage of women employees in Indian Railways (75,091 out of 1,412,434 employees)	5.3%
Percentage of women in Indian Railways Board (1 out of 34)	3%
Percentage of women in BEST Committee (2 out of 16)	12.5%
Percentage of women engineers (estimated at 5 out of 500)	1%
Percentage of women in Officer+ grades (estimated)	10%

²⁷ Interviews with officials, websites

A Gender Action Plan: Recommendations and Next Steps

An examination of existing expertise on making public transport more gender-inclusive and responsive makes clear the importance of having a Gender Action Plan –an institutionalized, well-championed and well-publicized gender mandate and strategy²⁸. Recognizing that women and girls have different transport needs is the first step towards this end – developing an institutionalized response that **sets targets** (increasing the utilization of public transport by women and girls, for example) and **measures impact** (e.g. are women using public transport more?, are previously-excluded women now using public transport?) is crucial.

Undertaking this gender assessment is an excellent first step towards this end. We commend MUTP-2A for including this assessment in their agenda and have suggested some next steps towards institutionalizing this work.

As first steps in the Gender Action Plan, we have identified, based on our research and analysis, ten recommendations that have been identified as most popular in meeting the **gender specific** transport needs of women and girls. A key point to remember here is that women and girls want and prioritize several points that men and boys do – including a greater number of trains and buses, better pedestrian infrastructure (pavements and roads), better taxi and auto service (greater reach and more reliability) and cheaper fares. The first of these – a greater number of trains and buses – has been, in fact, the first response from everyone we have spoken with and has been widely discussed and documented in transport related news articles as well. However, given the mandate of our study, we have selected the ten recommendations below based on their importance to women and girls specifically.

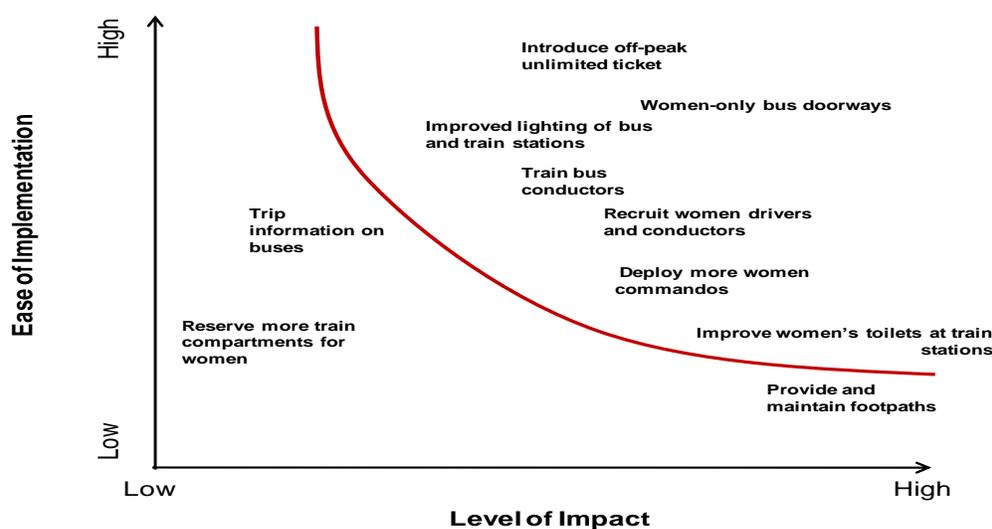
²⁸ World Bank Gender and Transport Resource Guide (<http://www4.worldbank.org/afr/ssatp/Resources/HTML/Gender-RG/index.html>), GTZ Gender and Urban Transport: Smart and Affordable Module 7a Sustainable Transport: A Sourcebook for Policy-makers in Developing Cities (<http://www.itdp.org/documents/7aGenderUT%28Sept%29300.pdf>) United Nations Commission for Europe Gender and Transport Projects (http://www.unece.org/trans/theme_gender.html), Inter-American Development Bank Socially Inclusive and Gender-Responsive Transport Projects (<http://www.adb.org/Documents/Reports/Gender-Responsive-Transport-Projects/default.asp>) International Forum for Rural Transport and Development (IFRTD) Gender and Transport (<http://www.ifrtd.org/new/issues/gender.php>)

Recommendations

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

Keeping in mind the challenging constraints both BEST Undertaking and Mumbai Suburban Railways are under, we undertook a prioritization process where we ranked these 10 recommendations as an initial exercise and made some estimates on what is likely to be high impact and relatively easy to implement (Please note: this would need significant further analysis and are only thought starters at this stage):

Exhibit: Prioritization of Recommendations



This enabled us to identify the **six** most actionable recommendations that we believe Mumbai transport authorities should focus on:

- 1. Conduct a feasibility assessment of off-peak unlimited family tickets for women and their dependents –**
 - a. Women use buses more than men, make more off-peak and non-work trips than men
 - b. **Next steps:** An in-depth pricing analysis based on bus usage patterns of women
- 2. Consider making bus front-doors women-only -**
 - a. Women find boarding and alighting the most unsafe steps of bus and train journeys
 - b. **Next steps:** assess the success of Bangalore’s buses with their women-only front doors
- 3. Explore public-private partnerships, advertising revenues to increase and improve women’s toilets -**
 - a. Women have proportionally fewer toilets than men; 93% of out-of-order toilets are women’s toilets
 - b. **Next steps:** Prioritize the recommendations we have suggested by the ease and cost of implementation
- 4. Assess measures like gender-training to improve bus conductors’ behaviour towards women -**
 - a. An alarming proportion of women report harassment by conductors who also don’t defend women-only seats
 - b. **Next steps:** Assess the success of Jagori’s gender-training of DTC bus conductors
- 5. Consider hiring women as train and bus drivers, conductors, especially as bus conductors -**
 - a. Women reported both preferences for women in these jobs; and also strong interest in these jobs
 - b. **Next steps:** Identify and develop measures to recruit and retain women in these jobs like starter-routes that are shorter, less-crowded, child-care options for women with children who want to work
- 6. Assess the success of the women commandos initiative with a view to expanding it -**
 - a. Women feel safer and more comfortable with women security personnel
 - b. **Next steps:** Assess the impact of the women commando initiative on safety and perceptions of safety

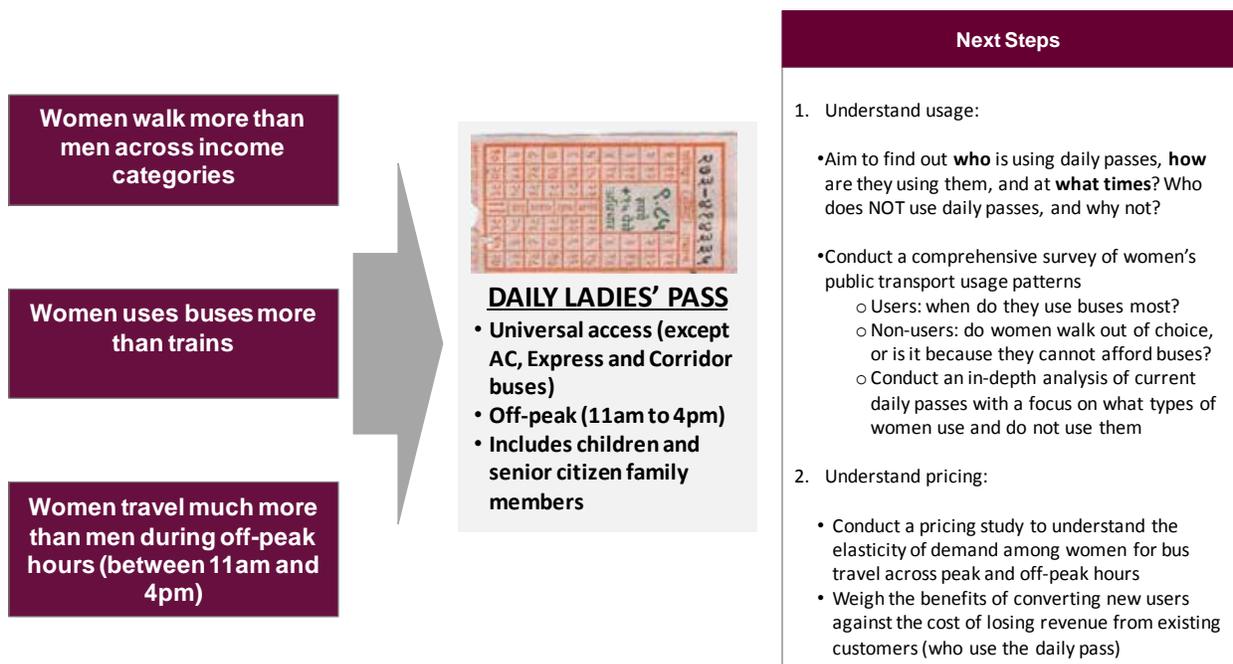
Recommendation 1: Introduce unlimited family tickets for women for off-peak use.

The following facts have emerged about women's travel patterns in Mumbai:

- Women travel more by bus than by train
- Bus passes are much more expensive than train passes
- Women travel more during off-peak hours than men
- Spend on dependent travel is a large percentage of women's spend on transport, especially for poor women

Thus an unlimited off-peak ticket that enables women to travel with their dependents on as many buses as they like can be useful to women. When we tested this idea with our surveys and focus groups, we received a strong positive response to the idea but given the scope and financial ramifications of this initiative, we have focused this recommendation on some suggested next steps to explore this possibility further.

Exhibit: Explore the revenue potential of a daily ladies' pass allowing unlimited use during off-peak hrs



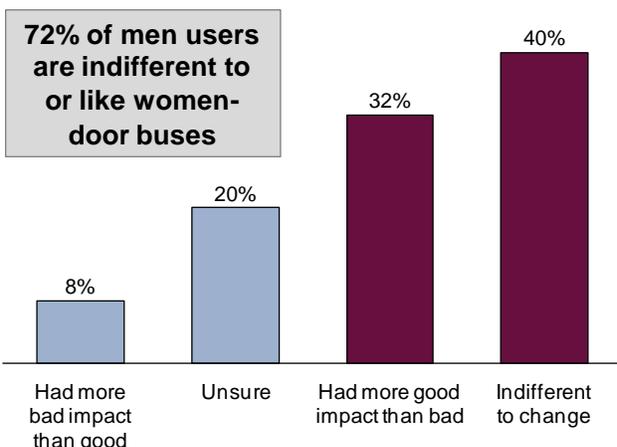
Recommendation 2: Introduce women-only doors in BEST buses.

We found that the section of the journey that is most uncomfortable for women is the boarding of and alighting from buses and trains. Women-only doors emerged as a very high impact intervention that women and girls we surveyed and spoke with felt very strongly about (see some quotations on exhibit below). In addition, having women-only doorways also addresses a popular request: more stopping time on buses as there are usually fewer women boarding and alighting buses than men. One concern is around men users not taking well to the scheme but a short survey we conducted in Bangalore where buses have women-only front doors, revealed that 72% of men either like the initiative or are indifferent to it.

Exhibit: BEST can consider women-only bus doors to address unsafe/ uncomfortable boarding and alighting

Responses by Men to Gender-Segregated Bus Doorways (Bangalore, 2010)

The implementation of separate entrances for men and women for boarding/exiting buses in your city has:



Selected Quotes from Respondents (2010)

- From Mumbai Focus Groups with Women**
- "I will go to temple every day to thank you and the Goddess Durga if you can do this for us" (implement women-only bus doors)
 - "When I finally get off the bus at my destination, I feel like I have won a fight!"
 - "I have to wait from 3-5 or 6 pm everyday for a bus that I can get on"
- From Bangalore Survey of Men**
- "It is more organized and women feel comfortable and safe in choosing the bus as their mode of transportation"
 - "in Bangalore guys used to hang on the bus entrance even when there was space inside, so a woman that wishes to enter the bus would think twice before boarding since she has to fight through these men. I believe a separate entrance will always help."

Next Steps

- Conduct a more in-depth study of the Bangalore experience to assess the degree to which it met women's needs without disrupting bus time schedules
- If promising, conduct a workshop with Bangalore officials to learn implementation dos and don'ts

Recommendation 3: Increase and appropriately utilize the budget for toilets to meet the strongly expressed need for toilets by women.

Toilets at train stations were identified by women as a key priority. Clean and safe toilets signal a concern about women’s needs that is picked up by and is important to all women we interviewed, even those who are not frequent users of trains.

Exhibit: Urgent Need for Improved Toilets for Women should be met with Increased Budget

<p>Mumbai specific Governance</p>	<ul style="list-style-type: none"> • Empower Mumbai Suburban Railway to make more Mumbai-specific decisions by: <ul style="list-style-type: none"> ○ Devolving budgets for Mumbai trains to a city-level ○ Adjusting organization and reporting structure to enable faster decision-making ○ Introducing city and station performance management targets into suburban railway roles and responsibilities
<p>Public Private Partnerships</p>	<ul style="list-style-type: none"> • Introduce more public-private partnerships in the operation and management of toilets at stations: <ul style="list-style-type: none"> ○ Open up advertising opportunities on all station toilets ○ Consider outsourcing of toilet operation and management for smaller stations
<p>Limited Period Passenger Amenities Cess</p>	<ul style="list-style-type: none"> ▪ Consider levying a limited period cess on railway passes to build up an endowment for passenger amenities including toilet operation and management that will pay for the maintenance of toilets ▪ Engage citizens’ groups like Mumbai Rail Pravasi Sangh to serve as Board members
<p>Leveraging CBOs (Dattak Vasti Yojana)</p>	<ul style="list-style-type: none"> ▪ Brihanmumbai Corporation’s unique agreement with community-based organizations (CBOs) to manage waste management in their own slums has led to the creation of 490 CBOs that serve 91 lakh people ▪ The ambit of successful CBOs under this scheme can be increased to include neighbourhood railway stations
<p>Next Steps</p>	<ul style="list-style-type: none"> • Develop a devolved decision-making structure and budget for Mumbai Suburban Railways to present to the Board • Assess and rank suggested recommendations for implementation based on cost and ease/ time of implementation

Recommendations 4: Conducting gender-training of bus conductors

One of the chief complaints amongst the women we interviewed and surveyed was the lack of support they received from bus conductors. Only 53% of women respondents had any faith that their complaints on sexual harassment on the bus or men sitting on women's seats would be addressed by bus conductors. Thus we believe that conducting gender-training of bus conductors and hiring women bus conductors are interesting possibilities for BEST to consider to meet this need.

This is an area in which the expertise of women's NGOs can be leveraged. In the case study below, we provide an example of gender-sensitization training that Jagori, a women's NGO in New Delhi conducted with Delhi Transport Corporation bus conductors:

Exhibit: Case Study of Gender-Training of Bus Conductors

Safety in New Delhi: Statistics	
<ul style="list-style-type: none"> • Delhi accounts for 1/3rd of all reported rape cases and 1/4th of all molestation cases in major Indian cities • A survey done by Delhi Police (2004) showed that almost 45% of reported cases of molestation took place in public places, such as on buses 	
Jagori's Public Perception Survey creates opportunity to work with DTC	
<ul style="list-style-type: none"> • As part of their <i>Safe Delhi</i> campaign, Jagori conducted a survey of women around the city that revealed that 80% of 500 women respondents had faced harassment in public transport • Impressed with the work, the Chairman of the Delhi Transport Corporation (DTC) decided to partner with Jagori to make buses safer for women. In September 2007, the Chief Minister of Delhi, and Minister of State for Transport, announced the partnership between DTC and Jagori 	
Phase 1: Bus Conductor Training Sessions	Phase 2: Instructor Training Workshop
<ul style="list-style-type: none"> • From September to December 2007, trainers from JAGORI conducted sessions at the DTC training school for bus drivers and conductors • The JAGORI team would go thrice a week to discuss the issue of sexual harassment • Sessions were conducted inside a stationary DTC bus to get out of the "classroom" situation and to place the drivers and conductors in the shoes of passengers • The focus of these sessions was to understand that sexual harassment is a punishable offence, and is not playful and frivolous (as the terms "eve-teasing" or "chedkhani" would suggest) • In 3 months, 3,500 bus drivers and conductors were trained 	<ul style="list-style-type: none"> • In June 2010, Jagori and the DTC organized a 3-day training workshop for 50 DTC instructors on how to educate bus drivers and conductors about sexual harassment • The focus of this workshop was to improve their understanding of why sexual harassment is so pervasive, and the need to find ways to eliminate it, so that they could communicate their message more effectively • The interactive methodology included having women talk about their experiences to facilitate understanding of the issue • The training curricula was divided into different sessions and ranged from building conceptual understanding of gender, masculinity and violence against women to enhancing communication skills
 <p>Bus conductors being trained on a DTC bus</p>	

Recommendation 5: Hiring women drivers and conductors

Women in focus groups and surveys responded very positively to the question “Would you be interested in a job as a train driver/ bus driver/ bus conductor” with 19%, 24% and a whopping 35% of survey respondents responding “Yes” respectively. We asked women in our focus groups to raise their hands if they would consider these jobs – more than 80% did. An elderly lady said, *“If rich women can work in offices, why can’t we work in buses and trains?”* When we asked if the focus group women knew about the two women train drivers who currently serve on the Mumbai suburban train network²⁹, not only were the women aware of it but proud of those women’s achievement – *“Women are going to the moon, women are driving trains – nothing is difficult for women anymore!”* The image of women in BEST and Indian Railways clearly has great signaling power.

Our interviews with BEST suggest that the corporation instituted women bus conductors a few years ago but all seven of the first batch of women bus conductors asked to be shifted to desk jobs. We have sought interviews with these women to understand what their particular hardships were as women bus conductors but were unable to obtain any further information. In spite of this less than encouraging start that BEST had with the seven women bus conductors, we encourage both BEST and Indian Railways to consider women conductors and drivers, with a special focus on identifying how other cities have recruited and retained women bus conductors. Not only can this be an important way to boost women employment numbers, it sends very positive signals to the citizenry on the importance placed on gender equality by these government owned and run organizations.

Several cities already have women bus conductors and drivers, among them Bangalore, Chennai and New Delhi. In addition, women are becoming more and more prominent as security guards and policewomen across the country, including Mumbai. The increasing number of women in these professions can serve to dislodge notions of gender-appropriate work and spark aspirations among young girls across the city.

²⁹ Conversations with MRVC staff at MUTP-2A launch, October, 2010

Exhibit: Hiring Women Bus Conductors

EXAMPLES: Delhi Transport Corporation and Bangalore Transport System champion women bus conductors



Women bus conductor in Delhi

- Facing a shortage of bus conductors, the DTC issued ads for positions
- To encourage more women to apply for jobs, the DTC placed women on morning shifts running from 7:30AM to 3:30PM
- Passenger, conductor, and DTC official feedback has been strongly positive:
 - Women passengers feel safer and more comfortable
 - Convenient shift hours have helped women conductors get support from their families
 - DTC officials say they perform their duties better than their male colleagues

"I used to take tuitions at home, as I couldn't work full-time. When I saw this vacancy, I applied for it and got the job. I think more women should come forward and make use of this opportunity,"

-Anita, bus conductor

"Senior DTC officials claimed that compared to male conductors' women conductors were more sincere and performed better too."

- "DTC hires women conductors", *Hindustan Times*, October 20, 2010

"I got to know about the job through Employment News and I applied. I was a housewife, but with this job I am able to do household work, too, as the shift ends at 3:30PM,"

- Namita, bus conductor



Women bus conductor in Bangalore

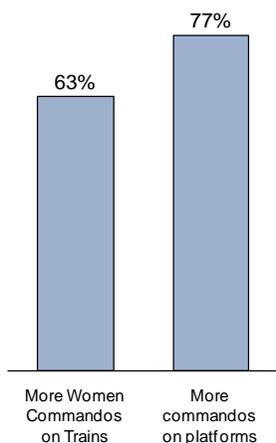
Recommendation 6: Recognizing the positive response women users have to women commandos, conduct an in-depth assessment of the initiative’s performance in improving safety (and perceptions of safety) with a view to scaling up.

Our interviews with women users as well as with Indian Railways Police suggest that this new initiative (it is less than a year old) is perceived as successful with positive responses on their availability and approachability of these women. Completing a year might be a good milestone for conducting an assessment on the performance of this initiative – do users approach women commandos more than railway police? Do women commandos have a higher rate of addressing these issues than railway police? Most important, can we associate the deployment of women commandos with a decrease in crime and an increase in perceptions of safety?

Evidence-based answers to these questions will go a long way towards meeting the budget and logistics requirements for maintaining and scaling up this initiative.

Exhibit: Assessing the Impact of Women Commandos with a View to Refining and Scaling Up

% of Women respondents rating potential women commando initiatives as “High Impact” (Dalberg Survey, 2010)



Women Commuters Relate to Women Commandos

Women commandos have been part of the Government Railway Police for a while now but in 2009, Mamata Banerjee, the woman railways minister of India, increased the number of women commandos as a way of combating rising crimes against women (199 reported on running trains nationally in 2009 versus 174 in 2008 – a 14% increase).

Mumbai women commuters have responded positively to the move, finding it easier to complain about harassment to women than men commandos who were sometimes reported to harass women themselves.

Conversations with our focus groups and surveys suggest that women find women commandos more approachable and more empathetic than general railway police constables.

“I’ve never approached the police even when my dabbas were stolen because I didn’t think police men would care.” Focus group respondent in Rahul Nagar



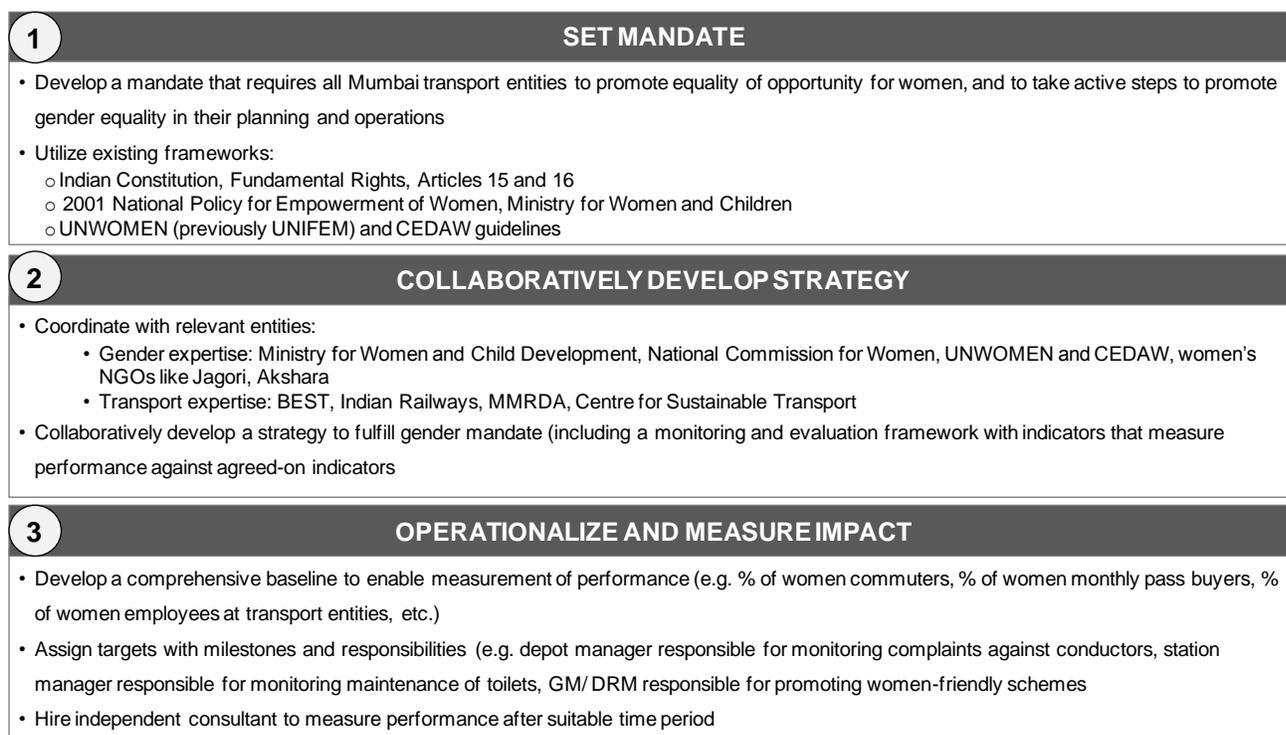
Next Steps

- **Conduct an impact assessment of the deployment of women commandos:**
 - Do women feel safer in train stations where they are deployed? Do they receive more women’s complaints than railway police?
 - Has their deployment seen a decrease in crime?

Next Steps

Both BEST and Indian Railways have instituted several measures in recent years to make public transport safer and more comfortable for women - from women commandoes on railway platforms, women-only trains during rush-hours to 30% of bus seats reserved for women. To institutionalize this approach, the Gender Action Plan should start with defining a mandate and strategy to achieve that mandate. The six recommendations we have presented in the earlier section can be great starting points around which to develop this mandate and strategy. Would women prefer to have gender-segregated bus doors than reserved seats for example? Is the Ladies Special meeting as many needs as more reserved compartments in general trains would? A lack of planning also means an absence of measurement – to what extent is this measure meeting the need we wanted it to?

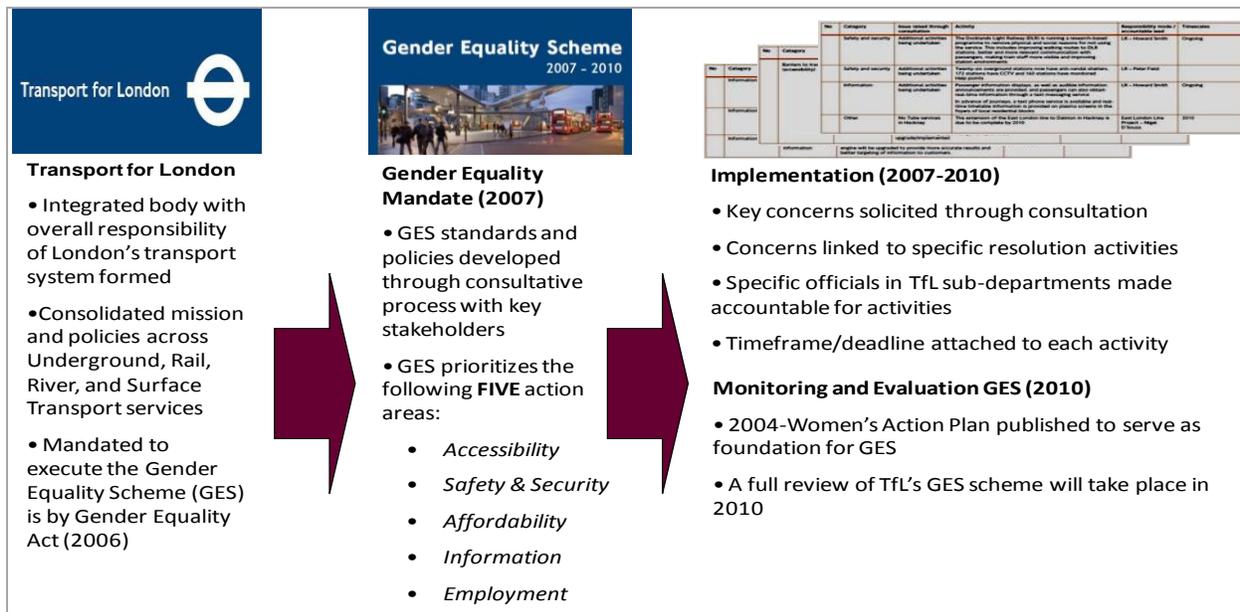
We have shown below a schematic representation of what developing a gender mandate and strategy can look like:



Source: Dalberg Research.

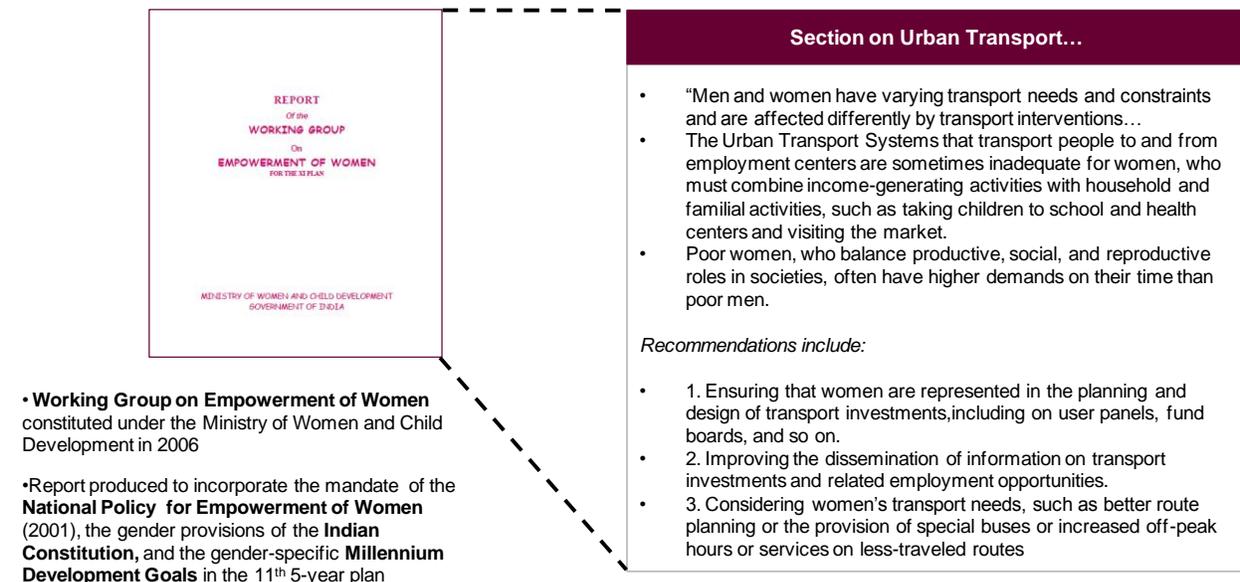
Clearly articulated gender mandates and agendas have been used by cities in developed countries to fully incorporate gender needs into every stage of the planning and provision of public transport. For example, Transport for London developed a Gender Equity Scheme whose mandate for meeting the specific transport needs of women and girls is implemented through every step of the transport planning and provision process.

Exhibit: Case Study on Making Transportation Planning and Provision Gender Inclusive³⁰



India has a national gender inclusion strategy that provides strategies and recommendations on institutionalizing processes to meet the needs of women and girls across all sectors. This report also has recommendations for the public transport sector (described in the exhibit below).

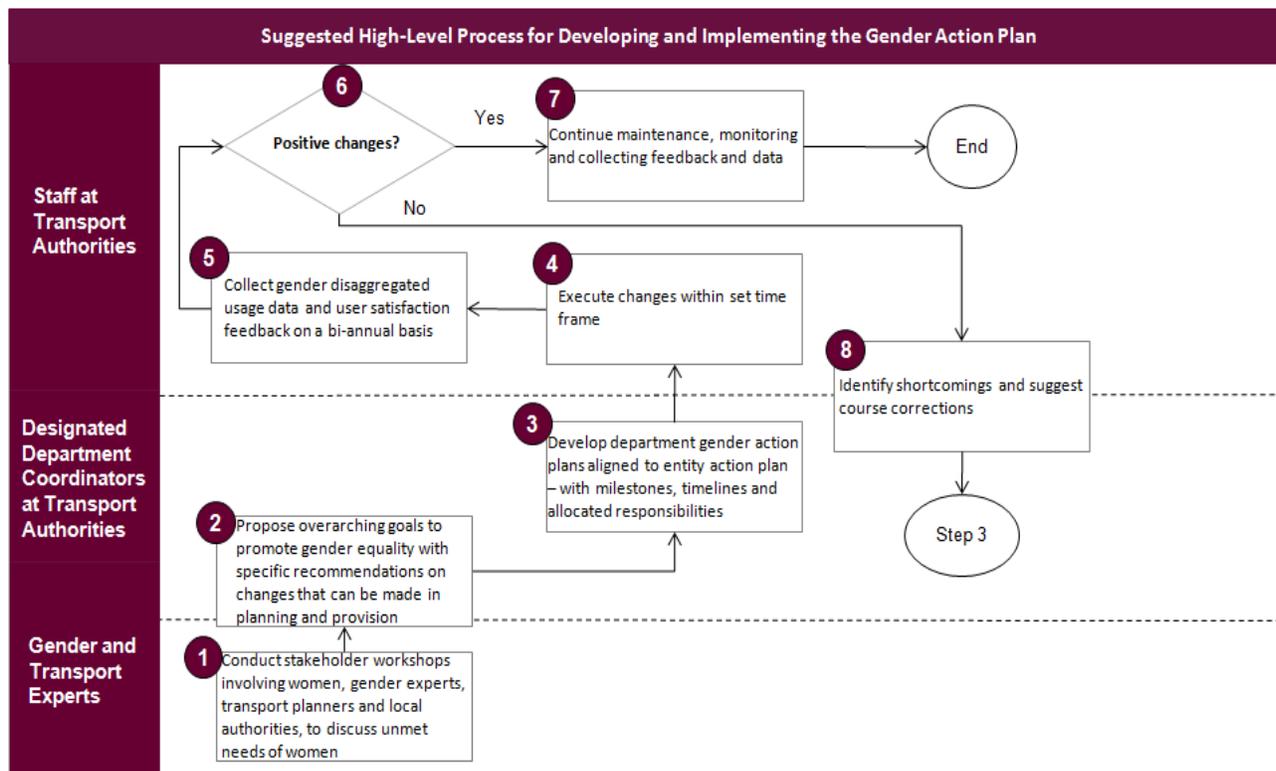
Exhibit: India's National Gender Inclusion Strategy³¹



³⁰ Transport for London website (www.tfl.gov.uk)

³¹ Report of the Working Group on the Empowerment of Women, Ministry of Women and Child Development, 2006 (wcd.nic.in/wgfinalreport.pdf)

A clear mandate and strategy will help mobilize resources (staff, funding, etc.) and develop the right relationships and networks between the different transport entities – this is important for moving forward successfully on the six recommendations we have highlighted in this report . We have shown below a high level view on the process for doing so:



We are happy to discuss this process with Mumbai transport entities and if required, strategize further the best way forward.

We believe that these Next Steps are actually the First Steps towards institutionalizing a Gender Action Plan. We hope that this report has served as a conversation-starter rather than a tool-kit on developing gender-responsive public transport and we hope to see several new ideas and initiatives take flight from this first step.

We are grateful to have had the opportunity to work on this study, which we believe is the first of its kind in the country. We are excited about the results we have shown here and would be happy to discuss them further.

Bibliography

KEY REFERENCES:

Oxford University Press (2010). Mumbai Human Development Report 2009.

Baker, J. (2005). "Urban Poverty and Transport: The Case of Mumbai." World Bank Policy Research working paper.

Municipal Corporation of Greater Mumbai (MCGM). (2005). "Strategy for Transportation." Mumbai City Development Plan 2005-2025.

Maunder, D. et al. (1997). "Attitudes and Travel Behavior of Residents in Pune, India." Transportation Research Board, 76th Annual Meeting, D.C.

Peters, D. (1998). "Breadwinners, Homemakers and Beasts of Burden: A Gender Perspective on Transport and Mobility." Institute for City and Regional Planning (ISR), Berlin, Germany.

Srinivasan, S. (2004). "Influence of Residential Location on Travel Behavior of Women in Chennai, India." Conference Report - Research on Women's issues in Transportation, Vol1

COMPLETE LIST OF REFERENCES:

Geetam Tiwari and Anvita Anand (2005) "Gendered Perspective of the Shelter-Transport-Livelihood Link: The Case of Poor Women in Delhi" IIT Delhi

Riverson, J. et al. (2005). "The Challenges in Addressing Gender Dimensions of Transport in Developing Countries: Lessons from World Bank's Projects." World Bank

Baker, J. (2005). "Urban Poverty and Transport: The Case of Mumbai." World Bank Policy Research working paper.

Municipal Corporation of Greater Mumbai (MCGM). (2005). "Strategy for Transportation." Mumbai City Development Plan 2005-2025.

Zegras, P. et al. (2006). "Driving Forces in Developing Cities' Transportation Systems: Insights from Selected Cases." WBCSD.

Maunder, D. et al. (1997). "Attitudes and Travel Behavior of Residents in Pune, India." Transportation Research Board, 76th Annual Meeting, D.C.

Peters, D. (2002). "Gender and Transport in Less Developed Countries: A Background Paper in Preparation for CSD-9." UNCSO

Peters, D. (1998). "Breadwinners, Homemakers and Beasts of Burden: A Gender Perspective on Transport and Mobility." Institute for City and Regional Planning (ISR), Berlin, Germany.

- Srinivasan, S. (2004). "Influence of Residential Location on Travel Behavior of Women in Chennai, India." Conference Report - Research on Women's issues in Transportation, Vol1.
- McGuckin, N., et al. (2005). "Differences in Trip Chaining by Men and Women." Conference Report - Research on Women's issues in Transportation, Vol2.
- Cropper, M., Bhattacharya, S. (2007). "Public Transport Subsidies and Affordability in Mumbai, India." World Bank Policy Research Working Paper.
- Thakuriah, P. (2009). "Transportation and Employment Accessibility in a changing context of Metropolitan Growth: The Case of Delhi, India." MIT Journal of Planning (Projections) Vol9.
- Municipal Corporation of Greater Mumbai (MCGM), UNDP. (2010). "Mumbai Human Development Report – 2009." Oxford University Press
- MMRDA (Government of Maharashtra). (2005). "TRANSPORTATION Study FOR the region of Mumbai." Comprehensive Transportation Study (CTS) for MMR.
- Mahadevia, D. (1999). "Metropolitan Employment in India." Centre for Development Alternatives.
- Takeuchi, A. et al. (2007). "Measuring the welfare effects of slum improvement programs: The case of Mumbai." Journal of Urban Economics 64 (65-84).
- Phadke, S. (2005). "You can be Lonely in a Crowd: The Production of Safety in Mumbai." Indian Journal of Gender Studies.
- Kumar, P. et al. (2009). "Design Approach for Multi Modal Transport System." Architecture – Time & Space.
- Nimbalkar, M. "Urban Transportation Problems in a Million City: A Case Study of a Pune Urban Area."
- Hanlon, S. "Where do women feature in Public Transport?" TransAdelaide Australia
- Observer Research Foundation. (2010). "Sanitation Facilities at Mumbai Suburban Railway Stations." <http://www.observerindia.com/cms/sites/orfonline/modules/report/ReportDetail.html?cmaid=19162&mmaid=19163>
- Hannon, E. "Culturally Correct Transportation for Women." Journey Woman. <http://www.journeywoman.com/travel101/CulturallyCorrectTransportationforWomen.htm>
- World Bank. (2004). "Inspection Panel Report & Recommendation." World Bank. <http://go.worldbank.org/18XY9KIR30>
- World Bank. "Mumbai Urban Transport Project Overview." World Bank. <http://go.worldbank.org/KRD33QYAK0>

The Sunday Times. (September 19, 2009). "Mumbai's Ladies Special leaves the commuter sex pests behind."

Earth Times. (September 4, 2007). "Women commandos to crack down on crime in Mumbai trains."

The Times of India. (July 21, 2010). "More seats for Women, Sr. Citizens on BEST buses."
<http://timesofindia.indiatimes.com/city/mumbai/More-seats-for-women-sr-citizens-on-BEST-buses/articleshow/6193505.cms>

The Times of India. (August 16, 2010). "World Bank will lend Women a helping hand."
<http://timesofindia.indiatimes.com/city/mumbai/World-Bank-will-lend-women-a-helping-hand/articleshow/6316451.cms>

Mumbai Suburban Railway Fares. http://www.indianrail.gov.in/mst_fares_km.html

Annex

A) Selected interviews:

Designation	Entity	Date of Interview
General Manager	BEST	12 th October, 2010
Chief Traffic Manager	BEST	30 th September, 2010
Additional Director General of Police	Railways	5 th October, 2010
Urban Planner	Center for Sustainable Transport	14 th September, 2010
Project Associate	Jagori	21 st September, 2010
Transport Specialist	Sustainable Urban Transport Project (GTZ)	20 th September, 2010
Founder & Co-director	Akshara NGO	25 th October, 2010
Author – Walking in Mumbai	Retired Journalist	15 th October, 2010
LT constable at BCT	Railway Police Force	2 nd September, 2010

B) Dissemination Work Shop: Discussion on Study on Gender Assessment of the Mumbai Public Transport

Date: 7 June 2011; Location: MRVC Conference Hall, 2nd Floor, Churchgate Station, Mumbai

Please note the following sections on the workshop discussion reflect the views of the workshop participants and not of Dalberg Global Advisors or the research conducted.

Workshop Participants:

<u>Name</u>	<u>Organization</u>	<u>Designation</u>
R.R. Deshpande	BEST Undertaking Mumbai	Chief Manager – BEST
George Eaper	Central Railways	Sr. DOM/GENL Mumbai/CRLY
Gaurav Gupta	Dalberg Global Advisors	Director- Asia
Gayatri Datar	Dalberg Global Advisors	Consultant
Nupur Kapoor	Dalberg Global Advisors	Consultant
Yaquta Kanchwala	Dalberg Global Advisors	Intern
Akshay Dedimane	DNA	Correspondent
Chhari Dhingra	GIZ SUTP	Senior Project Officer
Shailesh Goyal	Gujarat and Rajasthan Rail User Association	National Rail User consultative Council, I-RLY
Neha Ghatpande	Hindustan Times	Reporter
K Vijaya Lakshmi	MMRDA	Add. Chief (UMMTA)
Shama Sawant	MMRDA	
Naresh Chandra	MRVC	Director (Tech)
Ravi Agarwal	MRVC	CEE/Plg
Prakash Rao V.	MRVC	COM
Subhash Nage	MSRDC	CE MSRDC
Avatika Akerks	Prana Worldwide	CEO
Maria Lobo	SPARC	Consultant
Mitali Ayyangar	SPARC	Urban Planning Consultant
Sandeep V.	STUP Consultants	
Asreer D.	Timosora	
Atul Agarwal	World Bank	Transport specialist
Nupur Gupta	World Bank	Sr. Transport Specialist
Satya Mishra	World Bank	SD SP.
Subhash Gupta	Yatri Sangh Mumbai	Member, N.R.U.C.C. Rail Board
Vidhyadhar Date		Author

Workshop participants were asked to keep the following questions in mind while the findings of the report were presented:

1. Are all major issues faced by women and girls covered?

2. What further areas of analysis do you propose?
3. Are there additional recommendations?
4. How would you prioritize the recommendations?

Additional Issues Highlighted at the Workshop:

<u>Issue</u>	<u>Specific issue</u>	<u>Potential solutions</u>	<u>Challenges</u>
Needs of pregnant women	Boarding and alighting the train	Allow pregnant women to ride in handicap compartments, add rows reserved for pregnant women in train compartments	Monitor appropriate use of rows reserved for pregnant women and handicap compartments; overcrowding
Medical safety		Include first aid boxes in buses and train conductors on how to use them; similar set up on trains	
Access to public transportation	Transit to and from train stations/ bus stops	Feeder services such as shared vehicles; parking for auto rickshaws; multilinked transport solutions such as a bus stop at all train station e.g. Bandra station	Spaces around train stations are extremely congested
Women in leadership	Inclusion of more women in the Indian public transport system at the institutional level	Incentivize women to be involved in public transport at both operational and institutional levels; gender audit to be included in long term organizational assessment and strategy; assessment by a gender expert	Existing perceptions of women at the organization/ institution; lack of support at organization/ peer or community level; transport organizations not considered a women-friendly environment
Toilets facilities	Quality and appearance of toilets versus quantity at train stations	Ensure privacy, water supply, electricity and dustbins inside toilets; strategic location of toilets on railway platforms	Funding; design of existing toilet structures with men and women toilets on adjacent sides
Bus stop design	New bus stops which use stainless steel are not comfortable or convenient and do not serve their purpose		Persons designing and making high-level decisions do not explore the usability of these new designs

Addressing Foot over bridges (FOBs)			
Complaint Redressal System	Information dispersion and awareness	Increase awareness of helpline numbers, SMS system availability; train call operators on gender issues; gender sensitization training for BEST conductors, train station personnel	Helpline numbers in trains are scratched out (paper sticker version) and placed in one corner of a train compartment (i.e. not visible to all)

Areas Which Require Additional Research (Raised by Workshop Participants):

1. Transport organizations gender-assessment: carry out a gender policy audit at the organizational level to better understand gender dynamics at the workplace.
2. Data analysis on recorded complaints (sent by SMS, brought to attention via the call helpline): this rich source of information will give further insights into the issues faced by women travelers.
3. Differences between perceptions of loyalist bus and train travelers.
4. Usage patterns of toilets by women in public spaces and studying issues of privacy, safety, and availability of water, electricity and dustbins inside toilets.
5. Effectiveness of bus conductor trainings on gender sensitivity (monitoring and evaluation of conductors while on the job).
6. Gender assessment of other forms of public transportation e.g. taxis, auto rickshaws and bicycles.
7. Feeder systems: shared vehicles, parking area for auto rickshaws, explore multilinked/ multi-modal transportation e.g. bus stations at train stations to allow easy access to train stations.
8. Ideas and structures for community-level governance for enhancing improvements in public transportation systems.
9. Surveys with larger number of respondents (random, representative sample with n >350) and further disaggregation of data such as distribution of weekly trips by gender by bus, by train and by destination.
10. Analysis of cost-effective infrastructure investments for public transport.
11. Disaggregated analyses of gender and transportation and of poverty and transportation.
12. Views of non-peak and weekend travelers.
13. Need for gender friendly street furniture such as benches for tired/pregnant women.

14. Walking patterns among low income groups (number of kilometers covered per trip destination and in trip-chaining).
15. Differential male and female accident/injury rates.
16. Segment analysis of gender needs for Western, Central and Harbor lines (an observation was made that the number of lowest-income workers differs per railway line).
17. Needs of relocated and migrant women/ first-time users of train services.
18. Perceptions of frontline staff (conductors, drivers, station masters, ticketing clerks etc) on interacting with women and behavior changes through the day (changes in behaviour can be studied through perception and feedback surveys).

This concludes the discussions held at the workshop.

C) Survey questionnaire (English):

Survey to Understand Public Transport Needs of Women and Girls in Mumbai (FOR WOMEN)			
1	<i>Gender</i>	Male	1
		Female	2
2	<i>Where do you live?</i>	South Mumbai	1
		Eastern suburbs	2
		Western suburbs	3
		Other	777
3	<i>What is your profession?</i>	Home maker	1
		Office/business professional	2
		Street/market vendor	3
		Student	4
		Domestic worker	5
		Laborer	6
		Other	777
4	<i>How much do you spend on your own travel on buses and trains per month?</i>	Rs. 160/-	
5	<i>How much do you spend in a month on bus and train travel for dependants (children and elderly)?</i>	Rs.350/-	
6	<i>How do you travel for the following?</i>		

7	<i>If bus monthly passes were cheaper, would you use them to travel more for work?</i>	Yes	1
		No	2
8	<i>Would you feel more/less/same comfortable if you boarded a bus/train with:</i>		
	<i>A) Woman bus driver</i>	More	1
		Same	2
		Less	3
	<i>B) Bus with a woman bus conductor</i>	More	1
		Same	2
		Less	3
	<i>C) Train with a woman train operator</i>	More	1
		Same	2

Activity	1) Train (# boarded per week)	2) Bus (# boarded per week)	3) Walking (# of +15min journeys a week)	4) Other (# boarded per week)
A) Go to work / Return from work	x			
B) Run household and personal errands			x	
C) Go to/ transport dependants to school/ college/ doctor			x	
D) Other			x	

		Less	3
9	<i>Would you be interested in any of the following jobs?</i>		
	<i>A) Bus driver</i>	OK	1
		Not OK	2
	<i>B) Bus conductor</i>	OK	1
		Not OK	2
	<i>C) Train driver</i>	OK	1
		Not OK	2
10	<i>Please report your frequency of travel in each of these time slots:</i>		
	<i>A) Morning off-peak (11am-4pm)</i>	Regularly	1
		Once in a while	2
		Never	3
	<i>B) Peak (6:30am-11am; 4-7:30pm)</i>	Regularly	1
		Once in a while	2
		Never	3
	<i>C) Night Off peak (Anytime after 7:30pm)</i>	Regularly	1
		Once in a while	2
		Never	3
11	<i>If there was a bus ticket offering unlimited use between 11 am and 4 pm, will you use buses more in this time period?</i>	Yes	1
		No	2
12	<i>How much would you pay for this ticket?</i> <i>(A current round trip bus ticket is Rs. 14 for ~10 KM of travel)</i>	Rs. 10/-	

13	<i>Do you buy monthly passes</i>	Yes	1 >> Go to Q15
		No	2
14	<i>Why do you not buy monthly passes?</i>	Passes are expensive	1
		Don't have documents	2
		Don't know how to apply/don't know about it	3
		I don't need monthly tickets	4
15	<i>Please report your perception of your own safety at each of the following steps of a journey:</i>		
<i>Journey Steps: Train</i>			
	<i>A) Journey to and from the station</i>	Safe	1
		Somewhat safe	2
		Unsafe	3
	<i>B) Buying a ticket</i>	Safe	1
		Somewhat safe	2
		Unsafe	3
	<i>C) Waiting at the platform</i>	Safe	1
		Somewhat safe	2
		Unsafe	3
	<i>D) Boarding the train/getting off the train</i>	Safe	1
		Somewhat safe	2
		Unsafe	3

	<i>E) On the train</i>	Safe	1
		Somewhat safe	2
		Unsafe	3
	<i>Journey Steps: Bus</i>		
	<i>F) Journey to and from bus stop</i>	Safe	1
		Somewhat safe	2
		Unsafe	3
	<i>G) Waiting at the bus stop</i>	Safe	1
		Somewhat safe	2
		Unsafe	3
	<i>H) Boarding/getting off the bus</i>	Safe	1
		Somewhat safe	2
		Unsafe	3
	<i>I) On the bus</i>	Safe	1
		Somewhat safe	2
		Unsafe	3
16	<i>Please rate the following by their impact on travel by women and girls?</i>		
	<i>For TRAINS:</i>		
	<i>A) Better lighting of skywalks and overhead passes</i>	High impact	1
		Medium impact	2
		Little impact	3
		No impact	4
	<i>B) Better lighting of train stations</i>	High impact	1

		Medium impact	2
		Little impact	3
		No impact	4
	<i>C) Increased presence of women commandos in stations</i>	High impact	1
		Medium impact	2
		Little impact	3
		No impact	4
	<i>D) Increased presence of women commandos on trains</i>	High impact	1
		Medium impact	2
		Little impact	3
		No impact	4
	<i>E) Additional women-only carriages (Peak)</i>	High impact	1
		Medium impact	2
		Little impact	3
		No impact	4
	<i>F) Additional women-only trains</i>	High impact	1
		Medium impact	2
		Little impact	3
		No impact	4
	<i>G) Longer stopping times for trains to help women, children and elderly safely board and exit</i>	High impact	1
		Medium impact	2
		Little impact	3
		No impact	4
	<i>H) Baby changing facilities in</i>	High impact	1

	<i>bathrooms/provisions made for pregnant women</i>	Medium impact	2
		Little impact	3
		No impact	4
	<i>I) More and better maintained women's toilets</i>	High impact	1
		Medium impact	2
		Little impact	3
		No impact	4
	<i>J) Bus stop/auto-stand/taxi stand within 100m of every train station</i>	High impact	1
		Medium impact	2
		Little impact	3
		No impact	4
For BUSES:			
	<i>A) Women only buses</i>	High impact	1
		Medium impact	2
		Little impact	3
		No impact	4
	<i>B) Additional reserved seats on buses</i>	High impact	1
		Medium impact	2
		Little impact	3
		No impact	4
	<i>C) Better enforcement of women-only seats on buses by conductors</i>	High impact	1
		Medium impact	2
		Little impact	3
		No impact	4

	<i>D) Separate bus entrances for men and women</i>	High impact	1
		Medium impact	2
		Little impact	3
		No impact	4
	<i>E) Better lighting of bus stops</i>	High impact	1
		Medium impact	2
		Little impact	3
		No impact	4
	<i>F) Clear routes and timings at bus stops and on buses</i>	High impact	1
		Medium impact	2
		Little impact	3
		No impact	4
	<i>G) Longer stopping times for buses to help women, children and elderly safely board and exit</i>	High impact	1
		Medium impact	2
		Little impact	3
		No impact	4
17	<i>Do you believe Mumbai is a difficult city to walk due to its poor roads and lack of sidewalks?</i>	Yes	1
		No	2
18	<i>If the immediate areas surrounding bus stops and train stations were improved would you use trains and buses more?</i>	Yes	1
		No	2
19	<i>Do you use toilets at train stations</i>	Yes	1
		No	2
20	<i>Please circle the option that most applies to toilets at train stations:</i>		

	A) Dirty/clean	Dirty	1
		Clean	2
	B) Not working/in working order	Not working	1
		In working order	2
	C) Plentiful/ Lacking in number	Plentiful	1
		Lacking in number	2
	D) Expensive/ Affordable	Expensive	1
		Affordable	2
21	<i>If you had a problem (e.g. harassment, overcrowding, theft) on the bus, would you raise it with...</i>		
A) Bus conductor	Yes	1	
	No	2	
B) The railway police	Yes	1	
	No	2	
22	<i>If raised, do you think your concerns would be addressed?</i>		
A) Bus conductor	Yes	1	
	No	2	
B) Railway police	Yes	1	
	No	2	
24	<i>What is your age?</i>	26 Years	
25	<i>What is your monthly household expenditure?</i>	Less than Rs. 5,000	1
		Rs. 5,000-9,000	2
		Rs.10,000-15,000	3
		Rs. 16,000-30,000	4

		More than Rs. 30,000	5
26	<i>How much of the household expenditure is spent by you?</i>	Less than 50%	1
		50%	2
		More than 50%	3
27	<i>What do you most appreciate about bus and train services in Mumbai</i>		
28	<i>If there is one thing you would like to see changed about the bus and train services in Mumbai, what would it be?</i>		
	Trains and buses on time		
29	<i>Is there anything you would like to tell the transport service authorities?</i>		

D) Fare structure:

Bus Fares are Higher per Kilometer Traveled than Rail Fares.

Cost of Rail (Second Class) and Bus (Regular Service) in 2005-2006; all fares in Indian Rupees

Distance(km)	Rail Fare		Bus fare	
	Monthly	One way	Monthly	One way
1-3	60	4	180	3
3-5	60	4	210	4
5-7	60	4	240	5
7-10	60	4	390	6
11-15	75	5	480	9
16-20	90	6	-	10
21-25	105	7	-	11
26-30	105	7	-	12
31-35	120	8	-	13
36-40	135	9	-	15
41-45	150	10	-	17
46-50	165	11	-	19
51-55	180	11	-	21
56-60	195	12	-	23

Source: Indian Railways and BEST Undertaking; Date: 2005-2006