Digital India
Power To Empower
सत्यमेव जयते
GOVERNMENT OF INDIA
MINISTRY OF HOUSING AND URBAN AFFAIRS
150 YEARS OF CELEBRATING THE MAHATMA
स्वच्छ भारत
एक कदम स्वच्छता की ओर

PLANNING FOR GENDER EQUALITY IN URBAN MOBILITY

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UP METRO
12th Urban Mobility India Conference & Expo 2019
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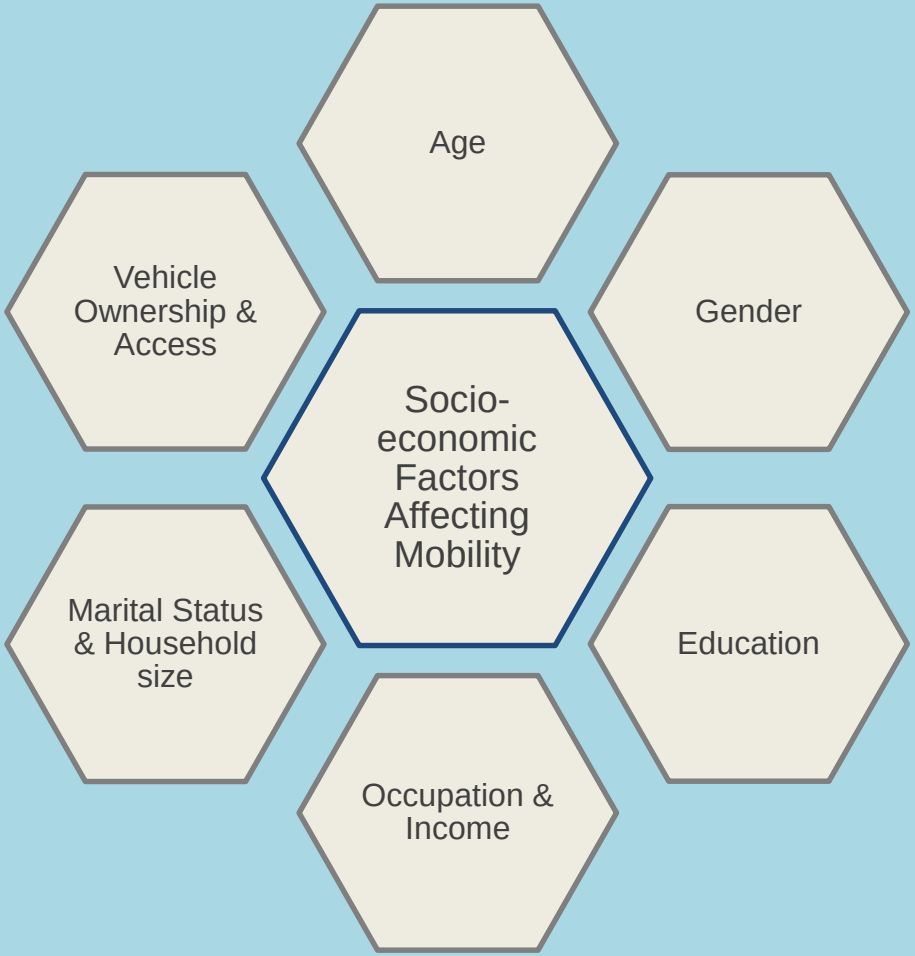
Contents

Background of Study

- Transport Connectivity is neither planned nor designed to be gender perspective in most cases.
- Women experience unequalled time and resource constraints as a result of systemic differences in access to resources, household responsibilities, travel preferences and social norms surrounding mobility of women.
- Transport sector needs more women in transport-based jobs in order to design transport systems that fully consider women's needs when travelling.



Aim & Objectives

"To understand factors impacting women's mobility in urban areas."

1. Appreciate importance of gender equality in urban transport.

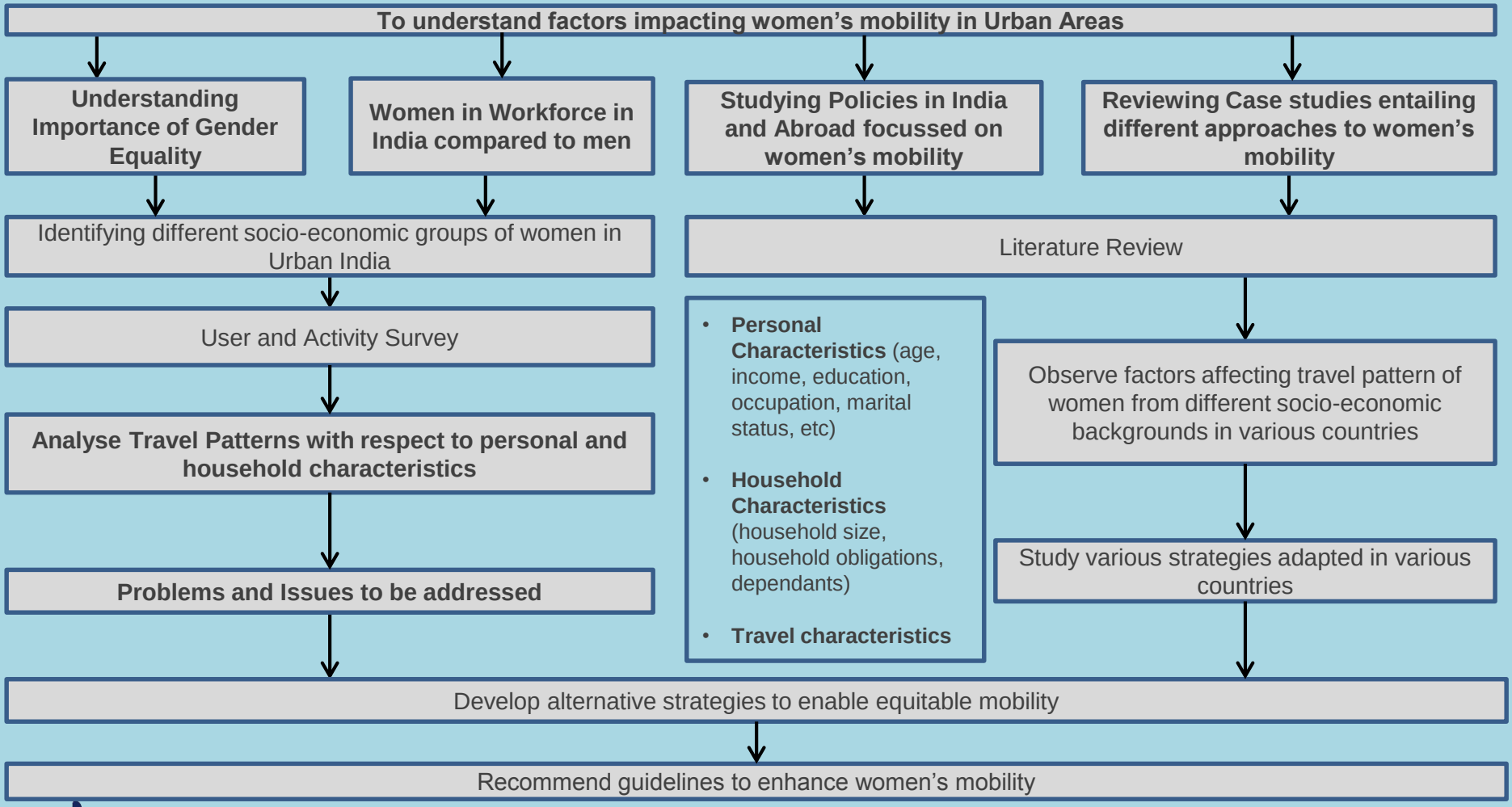
2. Study various approaches and policies regarding women's mobility.

3. Assessing personal characteristics and attitudinal response for both genders and identify issues affecting their mobility

4. To identify alternative strategies for enabling equitable mobility environment for women

5. Recommend suggestive guidelines for enhancing women's mobility

Methodology



Literature Study

Buenos Aires

- Women with children in the labor force, look for jobs on average in a commute shed within a **radius 20% lower than corresponding men**.
- This smaller commute shed translates to as much as **900,000 or fewer jobs.**

Netherlands

- The men's ages fit a normal bell curve, but in the case of women, the curve was more of a u shape, with those ages 26 through 35 and age 55 or greater **more likely to use transit**.
- Women were found to be less time starved and had smaller families.

- Overall studies show that even though women make more trips than men on an average
- Men make much more work trips and women make more non work trips.
- Men travel a larger distance than women, but women spend more time on travel than men. And hence have lesser mobility speed than men.

Data Collection

DELHI PROFILE

- Population - 16 million
- Density - 1,484.0 sqkm
- Density - 11,312/km^2
- Sex ratio - 868 /1000
- Employment (2001) - 28.3% Male, 4.4 % Female

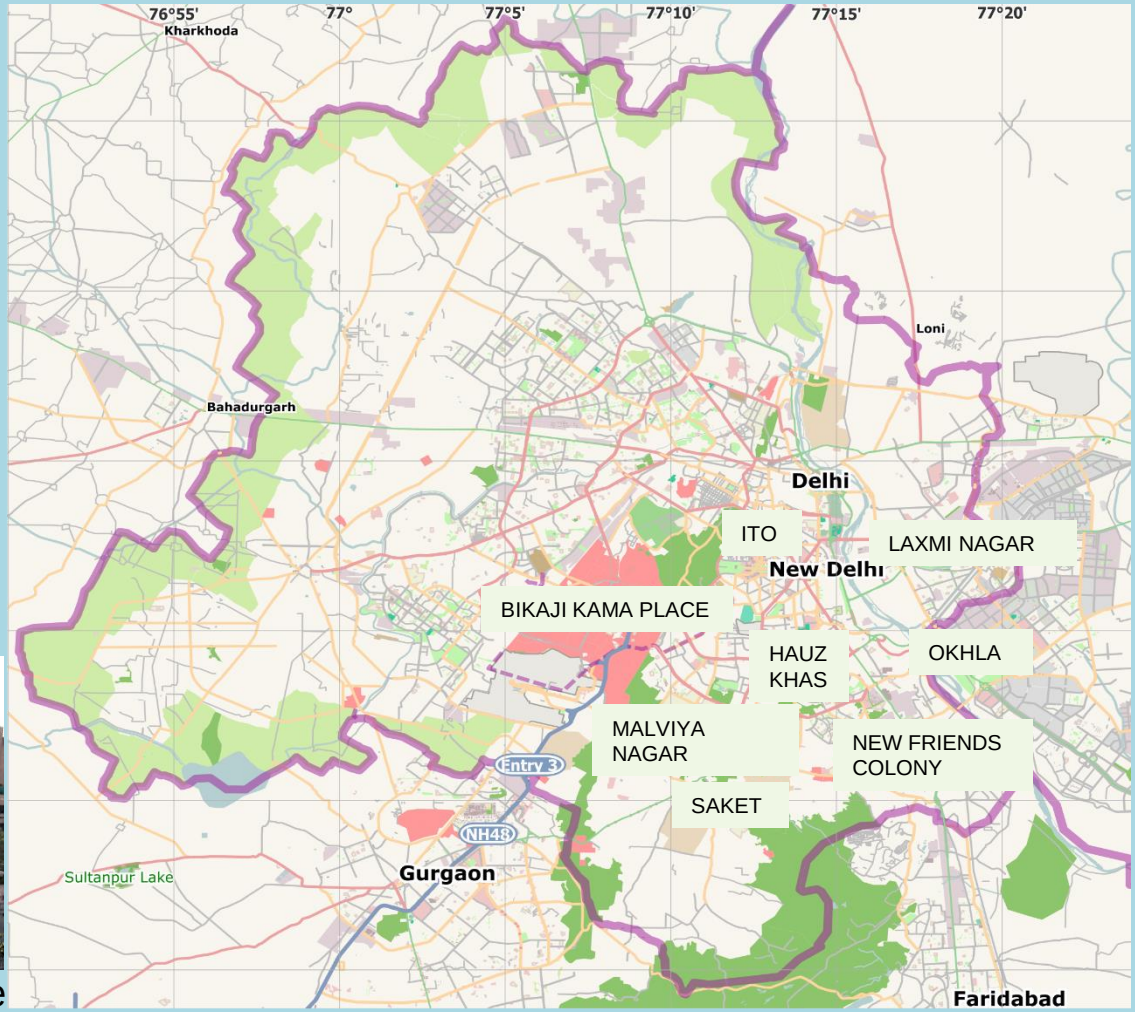
Samples Collected : 112

ITO

Laxmi Nagar

Bikaji Kama Place

SURVEY LOCATIONS



Socio-economic Characteristics of Women in Delhi

- 68% of the women surveyed were graduates or above.

- 25% of the women surveyed were homemakers, retired or unemployed and 21% were students

- 43% of women live in a 3-4 member household.
- 64% of the women surveyed were married and 10.5% of married women live with their parents in-law.

- 62% women have no household help.

Mobility Patterns of Women in Delhi

Average Trip Length - 10km
Average Trip Time - 24mins
Average Travel Cost - Rs 22

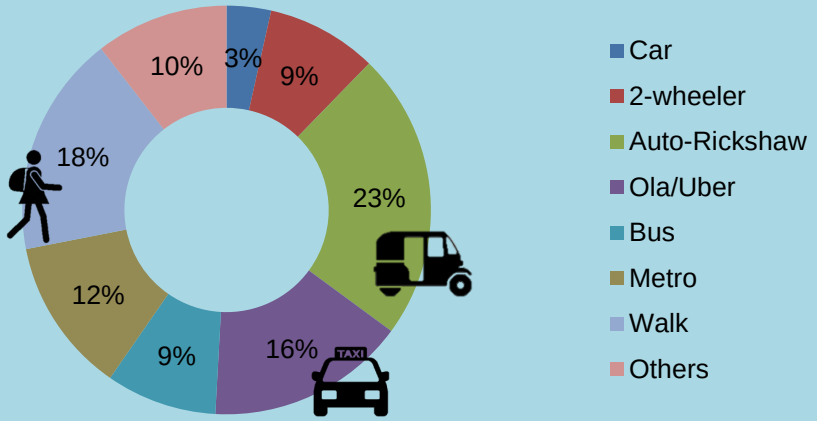
30% of the women possess Driving License

Out of which only 24% have access to vehicles

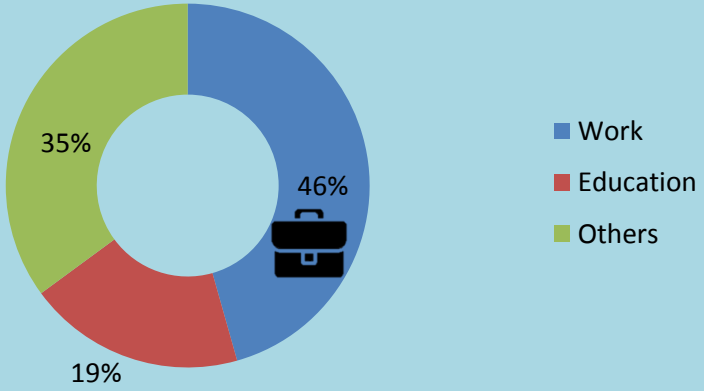
13% women make trips accompanied by dependants

More than 70% women spend more than 10% of their monthly income on travel

Mode Choice

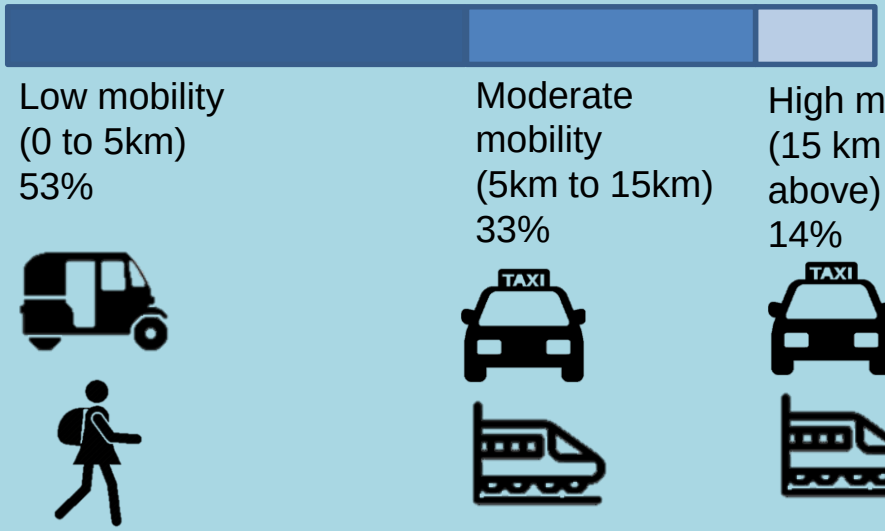


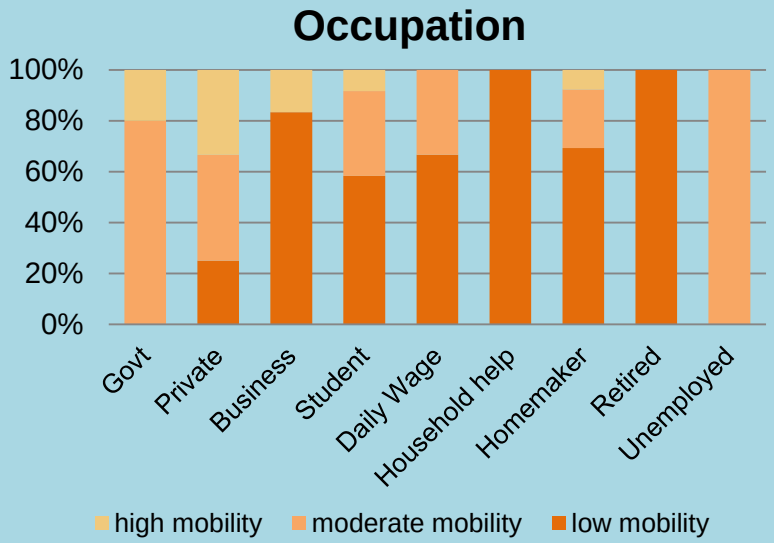
Trip Purpose

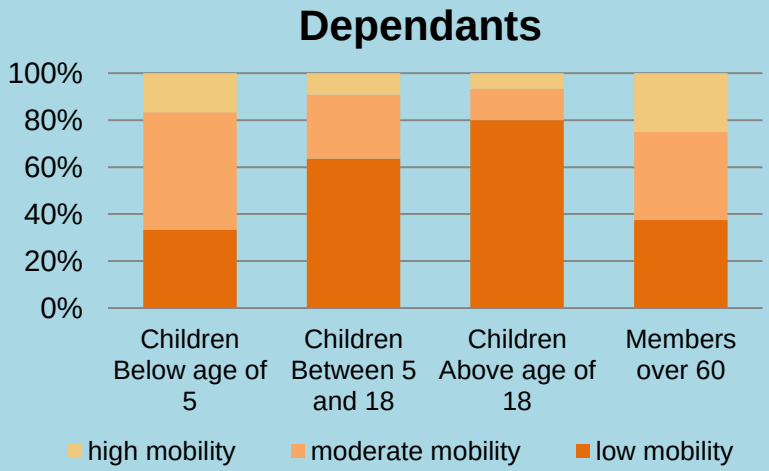


Mobility Patterns of Women in Delhi

- Average Trip Length of women : 10km



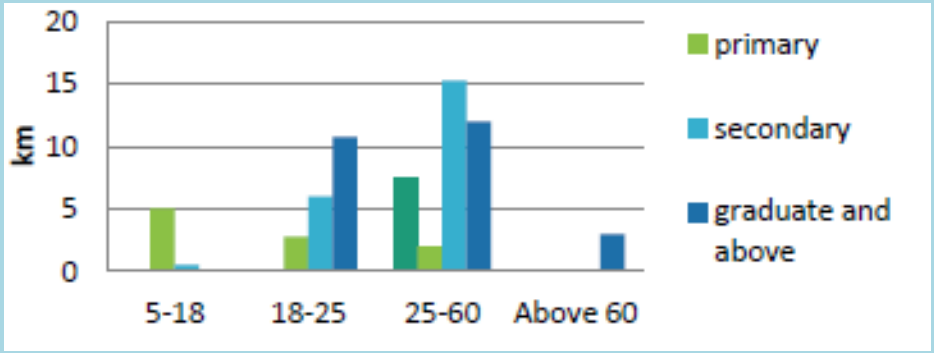




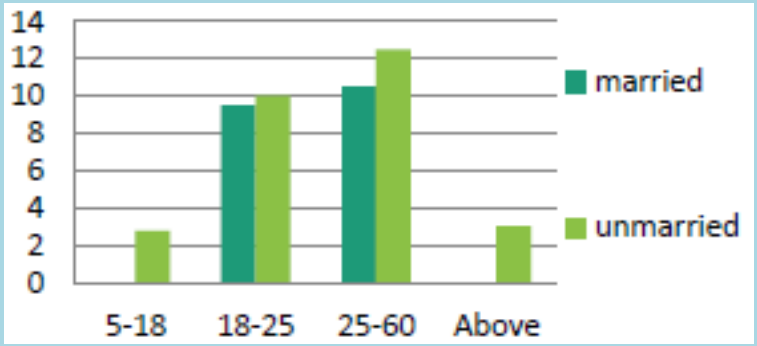
- Trip Rates decrease as mobility increases
- Lowest Rates of mobility are shown in household sizes from 3-6
- Mobility increases with income

Impact of Socio-Economic Factors on Women's Mobility

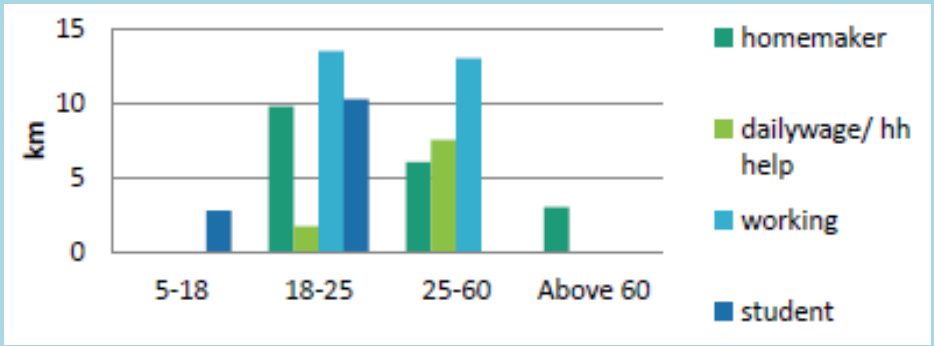
ATL of women of different age groups by Educational Qualification



ATL of women of different age groups by Marital Status



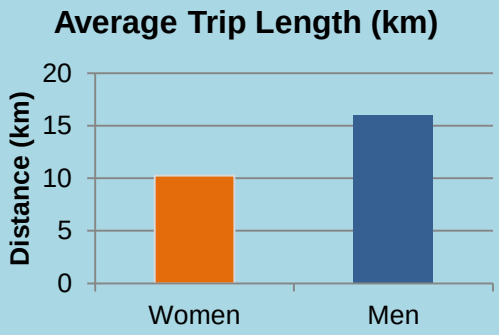
ATL of women of different age groups by Occupation

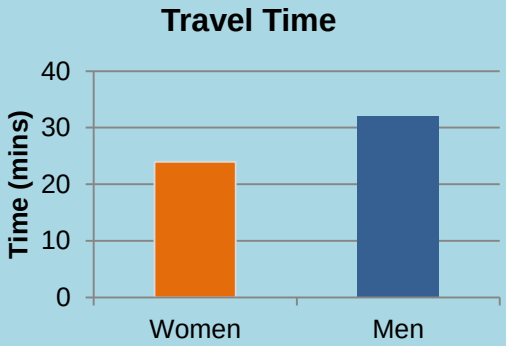


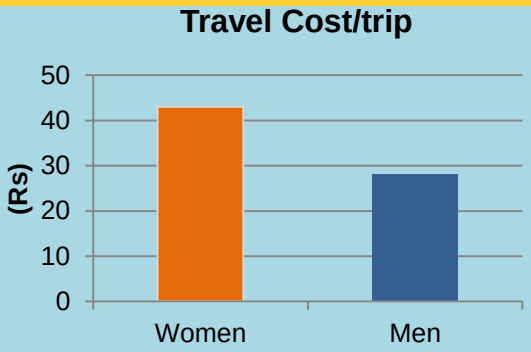
The statistically significant relationships were found between

- Mode Choice by Occupation
- Mode Choice by Personal Income
- Travel Distance by Personal Income
- Travel Time by Purpose
- Travel Distance by Household Income.

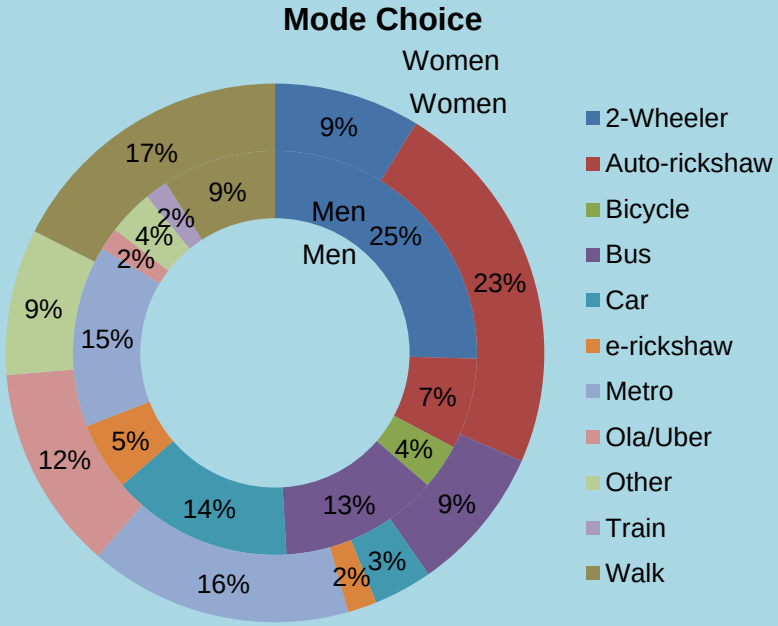
Gender Disaggregated Mobility Patterns in Delhi





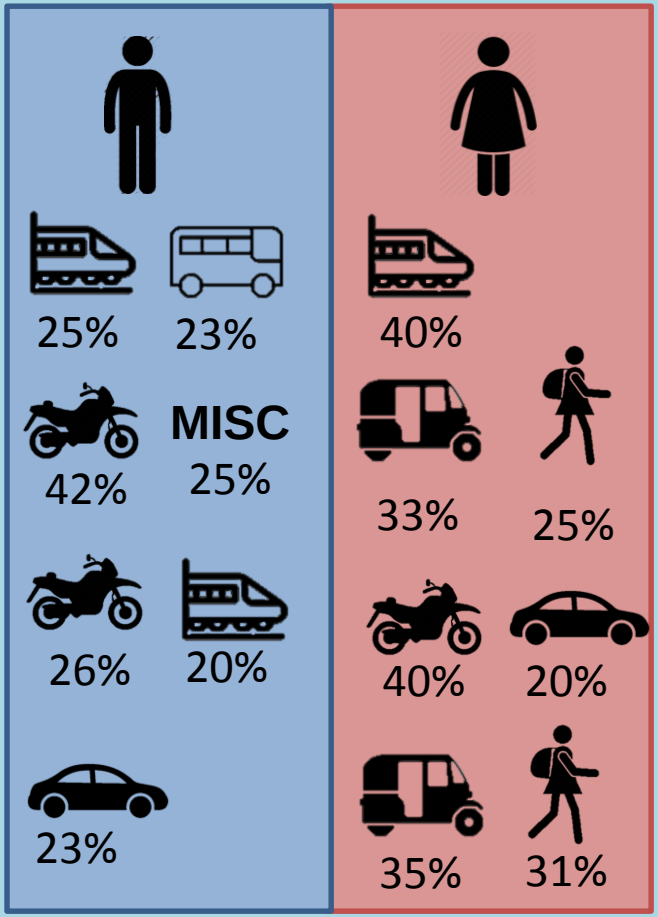


- Average Trip Length of women is 37.5% lesser than that of men
- Men's Travel Cost per trip is 35% lesser than women
- Personal modes like 2-wheelers and cars are more prominent in men
- Walk trips are much less common in men than women

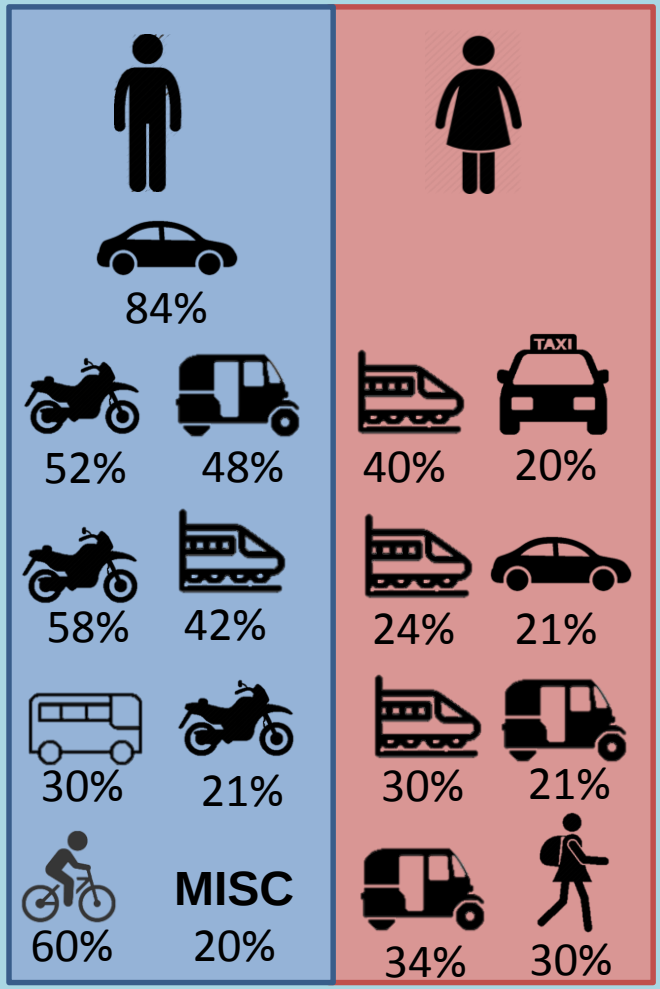


Gender Disaggregated Mobility Patterns in Delhi

Relationship Between Mode Choice & Purpose



Relationship Between Mode Choice & Income



Findings

- The difference in access of vehicles despite vehicle ownership in the household leads to women preferring public transit or hired modes

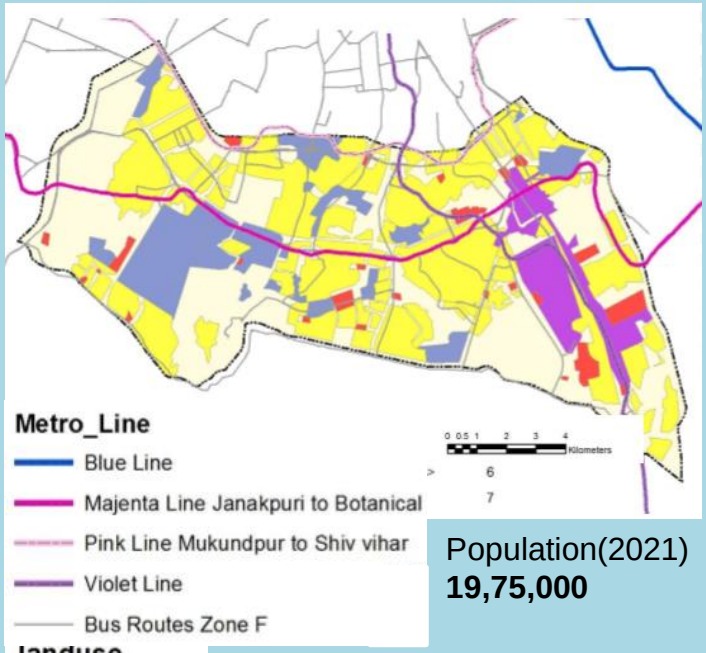
- Women are comfortable travelling in metros where they have a separate compartment which makes their travel comfortable and safe.
- Women are more inclined to use hired modes which provide them door to door services.
- Saving waiting time for public transit gives more time to devote to household responsibilities and childcare duties, even it comes at a higher cost

- Promoting higher education among women helps increase their mobility

- Women willing to travel longer distances for work has a higher income and thus metro becomes their choice of travel mode
- Unmarried women have few to none household responsibilities giving them the opportunity to travel more
- Married women living in joint families have other family members to help them with household responsibilities which allows them more mobility

Recommendations - 1

Zone F



Population(2021)
19,75,000

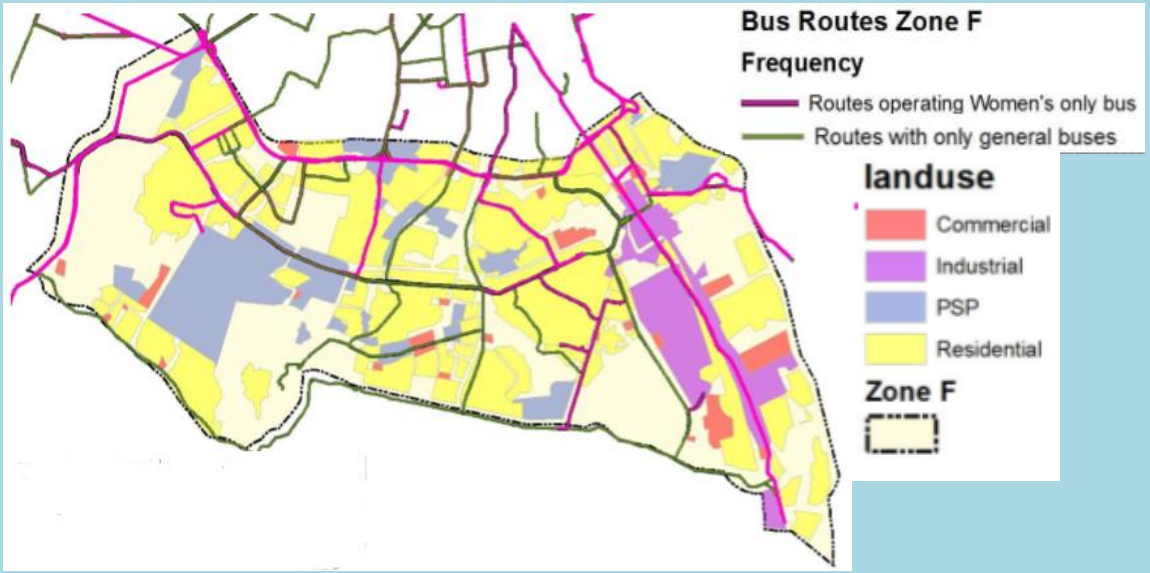
Present Metro Lines:

- Violet Line
- Pink Line
- Magenta Line

Present Bus Routes: **49**

PTAL ranges from Good to Excellent

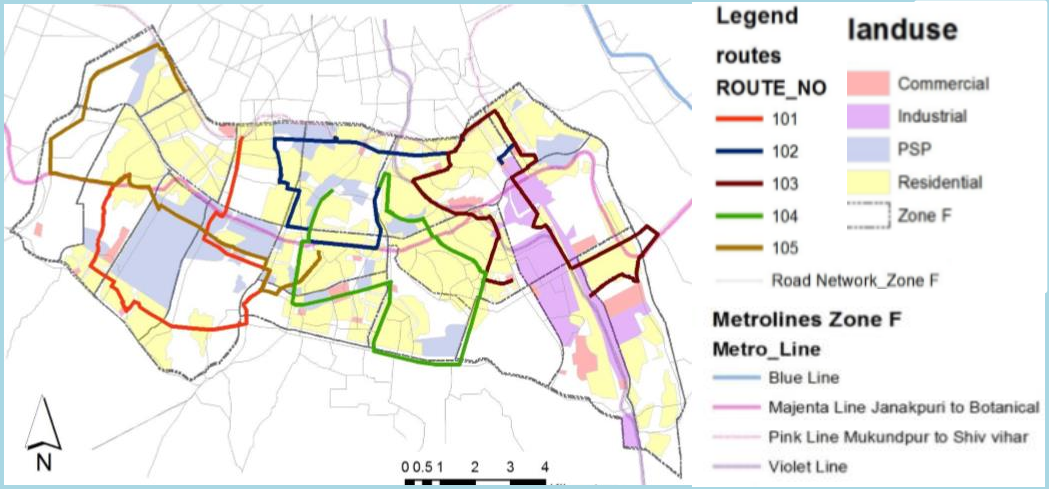
1. Provision Of Supplementary 10-15 Seater Buses On Existing Bus Routes



- Fixed route Based
- Routes with frequency over 10mins identified
- Provision of subsidized travel card for economically weaker sections, students, senior citizens
- Further subsidy for all during off-peak hours
- Wheelchair and pram friendly design
- Funding: Nirbhaya Fund

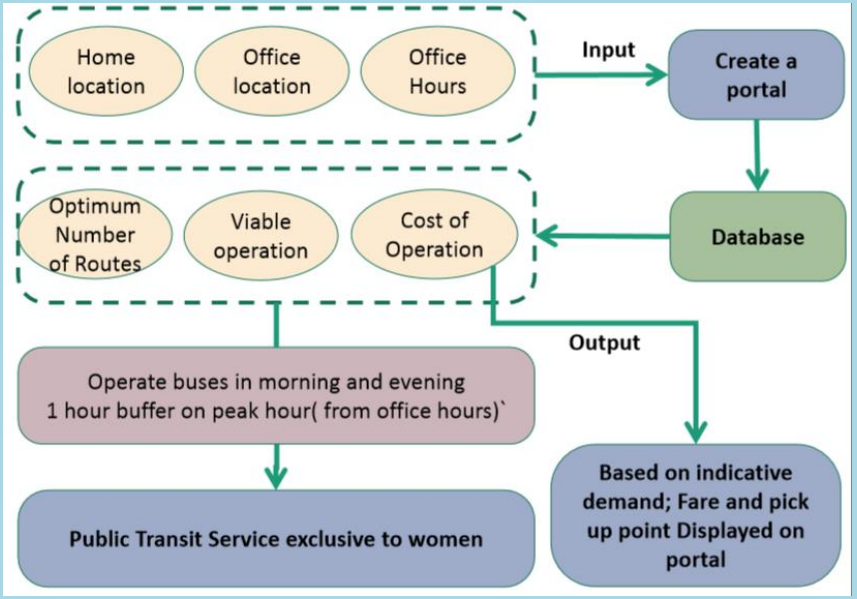
Recommendations – 2 & 3

2. Complimentary Last Mile Services For Ladies



- Local Area Based
- Fixed route
- RWA monitored
- Fare rates to be lower than auto/ola/uber
- Vehicles like Tata Magic
- Parking provided at nearby bus depot

3. App operated demand based service for working women



- App-based
- Subscription based
- All route related information to be found from portal
- Focussed on improving mobility of working women
- Government aided/owned
- Fare rates to be lower than auto/ola/uber

THANK YOU