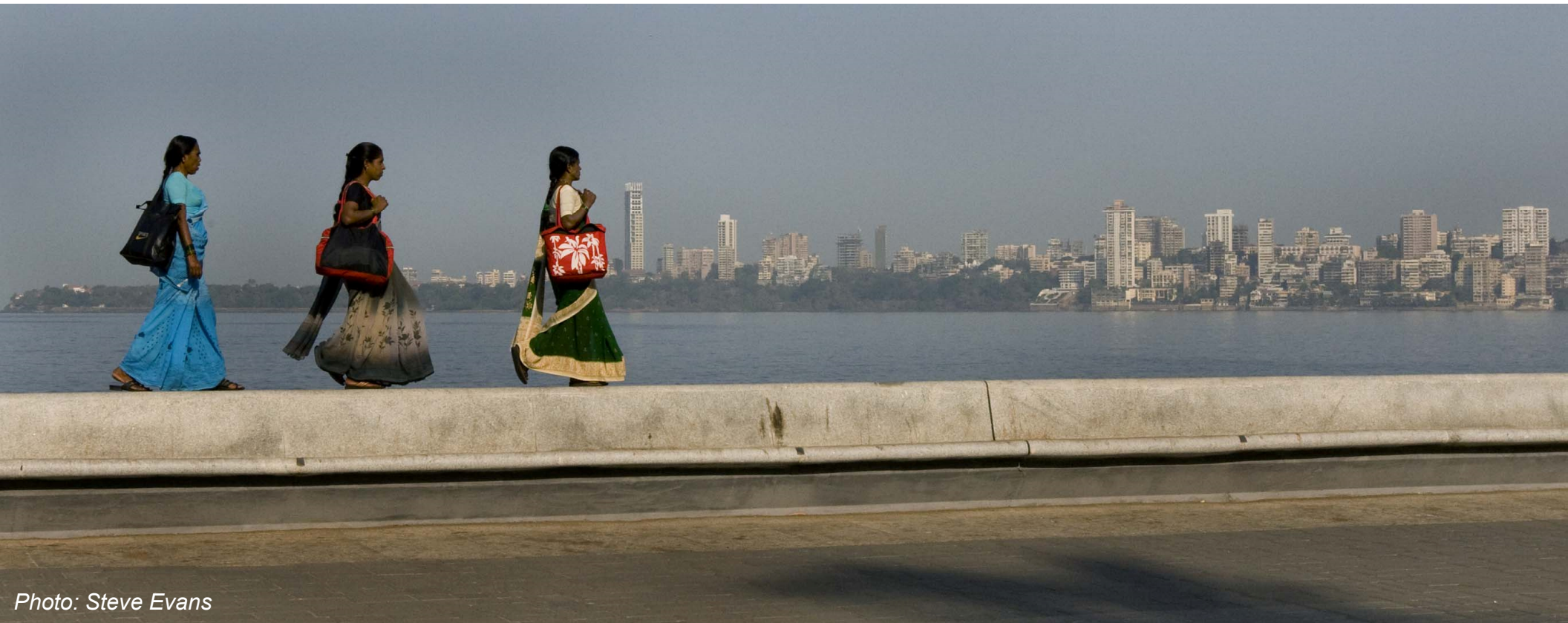


# Gender and Urban Transport



*Photo: Steve Evans*

Sonal Shah

Senior Programme Manager

24 April 2018



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**100+ members**

in 7 regions:

Africa, Brazil, China, India, Indonesia, Mexico, U.S.

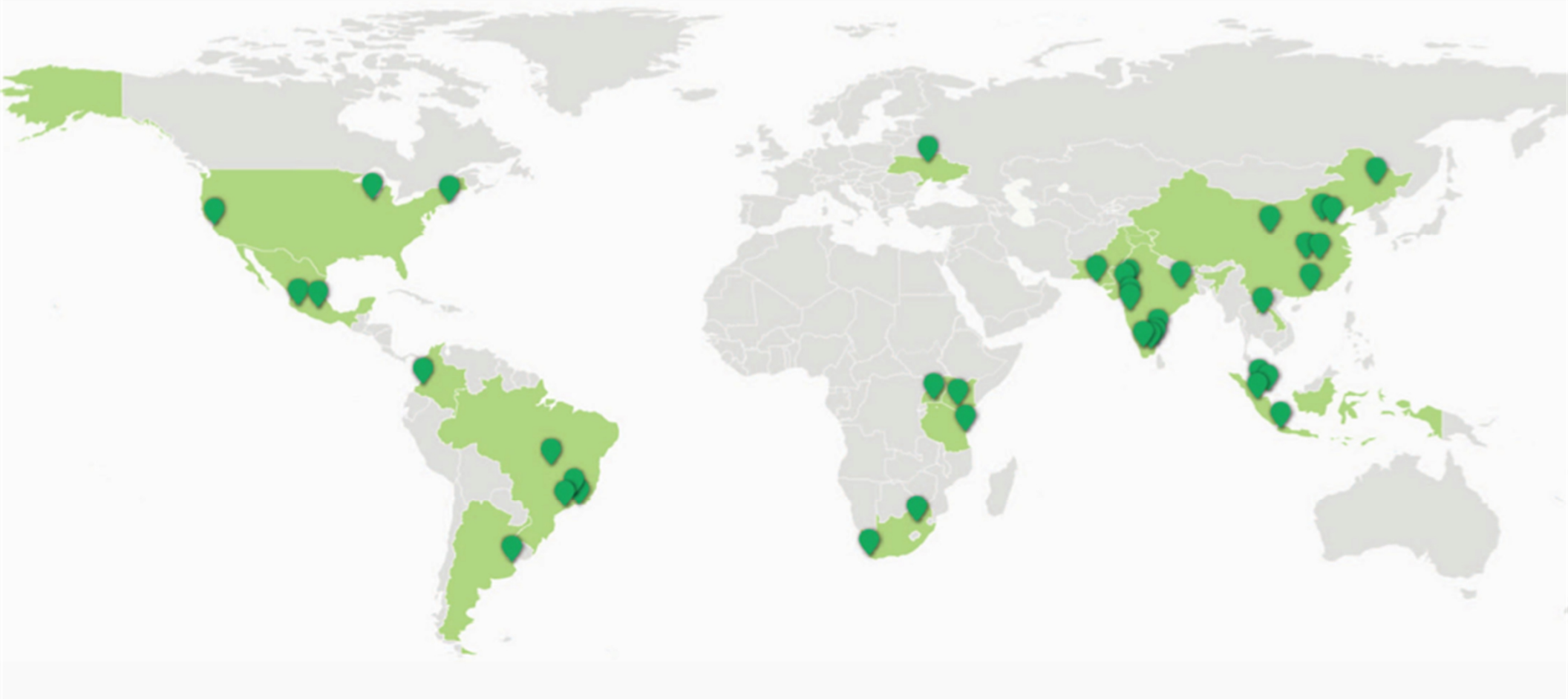
**50 cities**

Active engagements

**30 years**

of results





**PROMOTING SUSTAINABLE & EQUITABLE  
TRANSPORTATION WORLDWIDE**

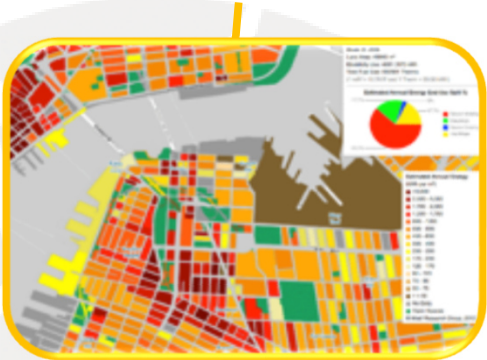




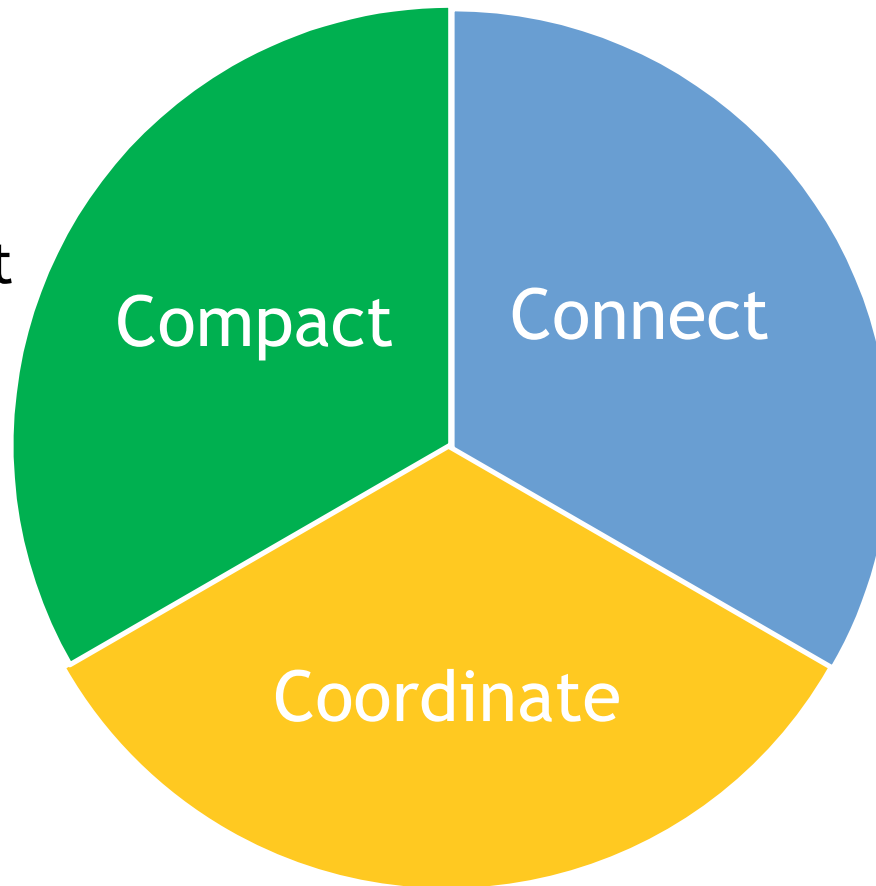
Transit Oriented Dev't



Travel Demand Mgmt



Mobility Planning & Data



Public Transit



Walking & Cycling



Shared Mobility



# How we work

## **INSPIRE**

Advocacy and  
communication

## **CREATE**

Demonstration  
projects

## **EMBED**

Inputs on  
Policy &  
Standards

## **EXPAND**

Capacity  
building





# THIRD BILLION





*‘Women have inferior access to both private and public means of transport while assuming a higher share of their household’s travel burden’*

Source: GRHS, 2013



Photo: Rajarshi Mitra



→ USD 28 trillion could be added to the global economy by 2025

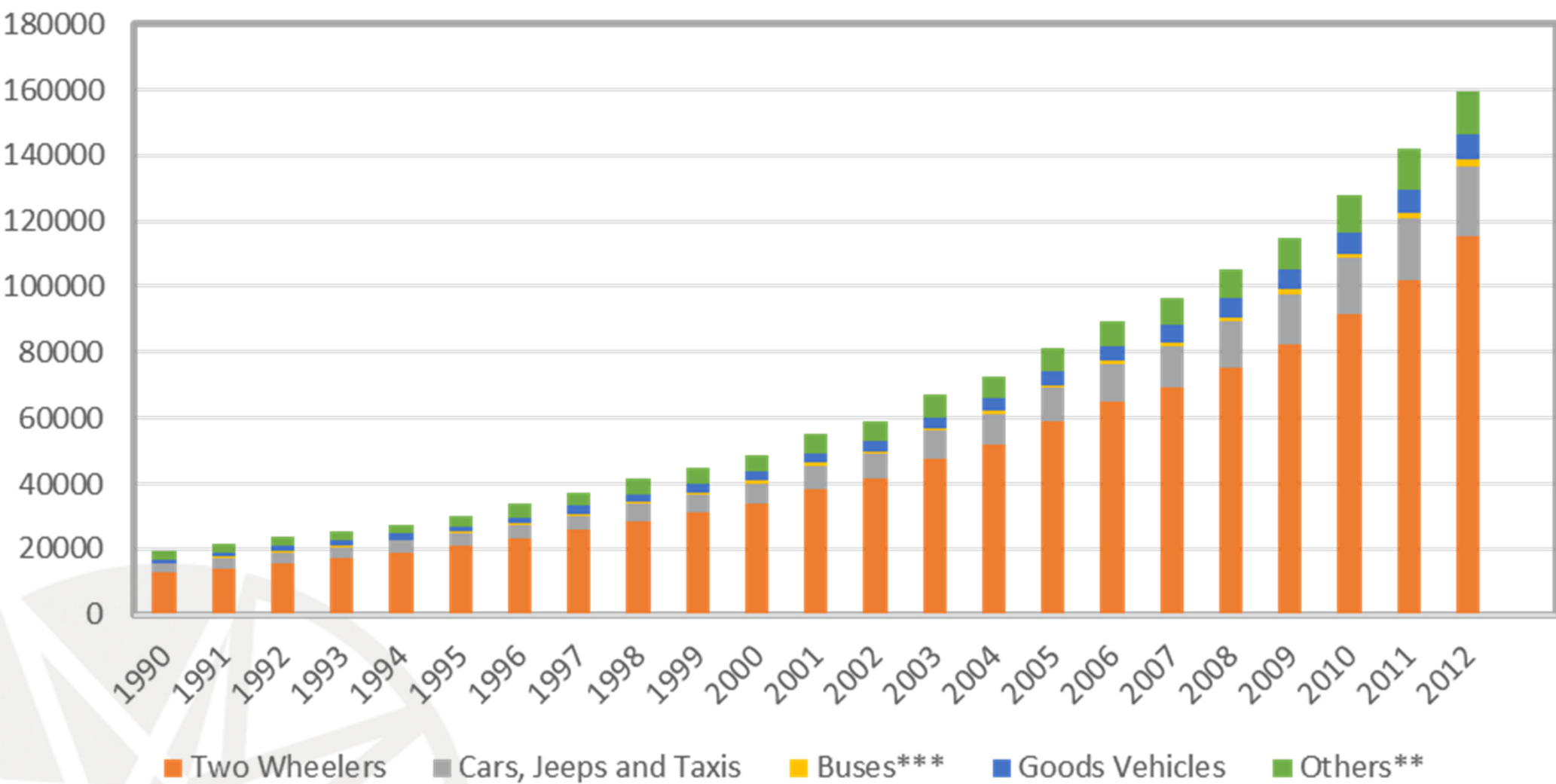
Source: McKinsey Global Institute



Photo: Santhosh Loganaathan

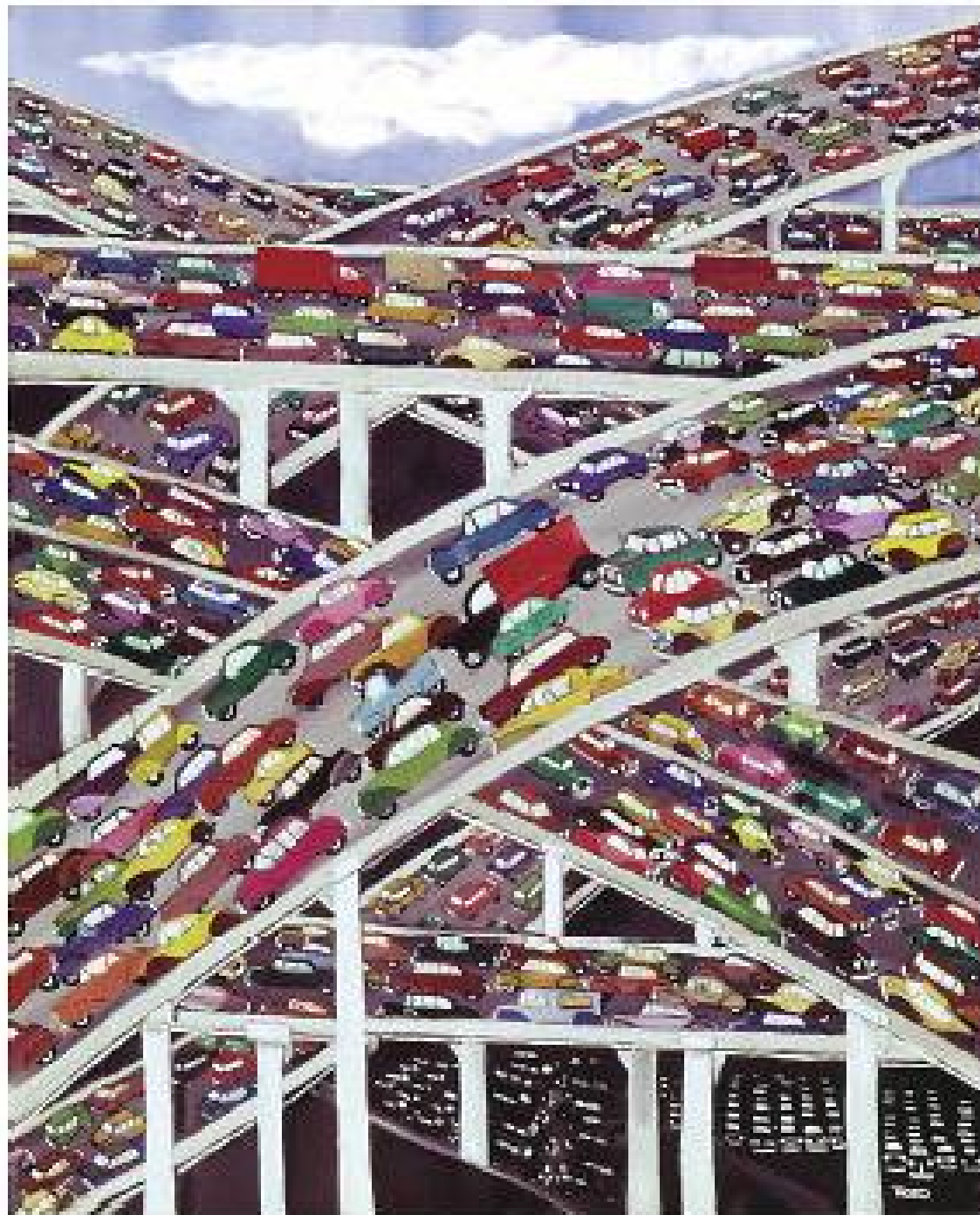



# Urban Transport









A brown leather book cover with white stitching and a blue textured background.

**You can't  
cure obesity  
with bigger pants**

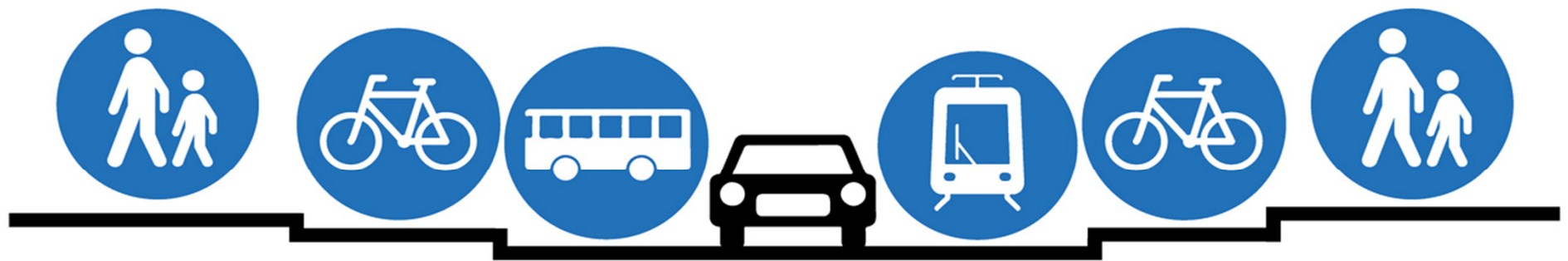


# Streets for cars



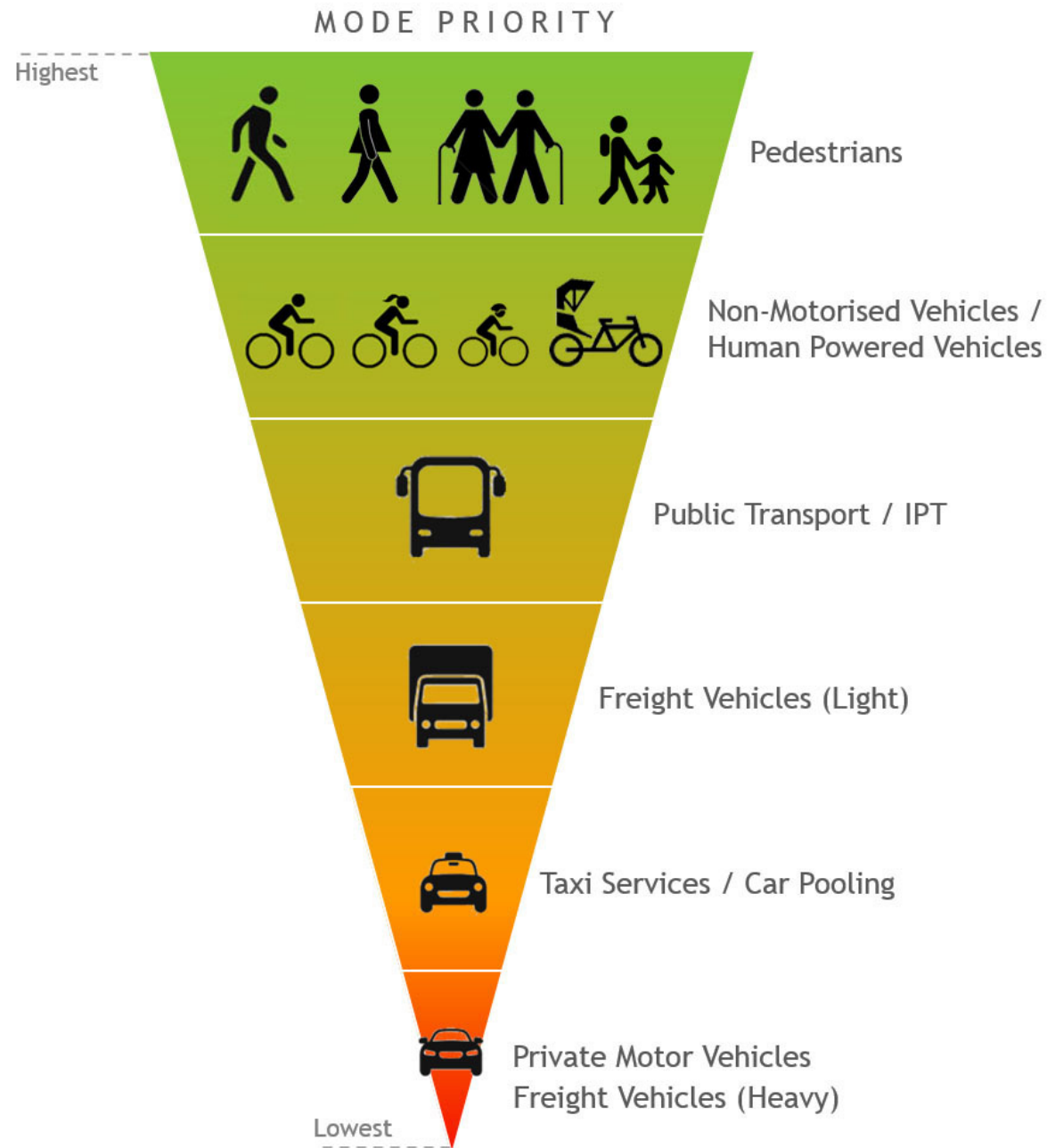
**How most traffic engineers see your city**

# Streets for people



**How cities should be designed**

# Urban Transport



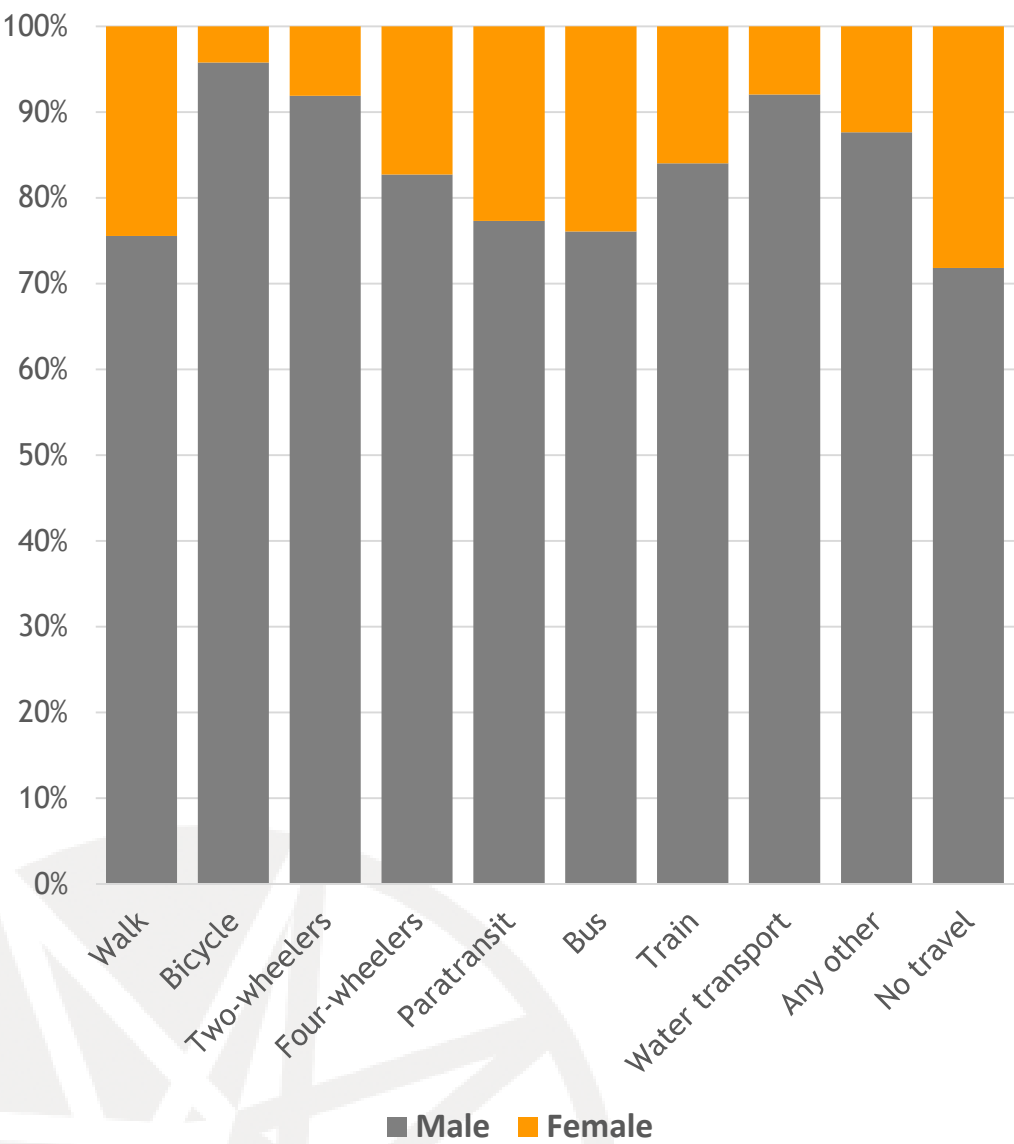


# Gendered Travel

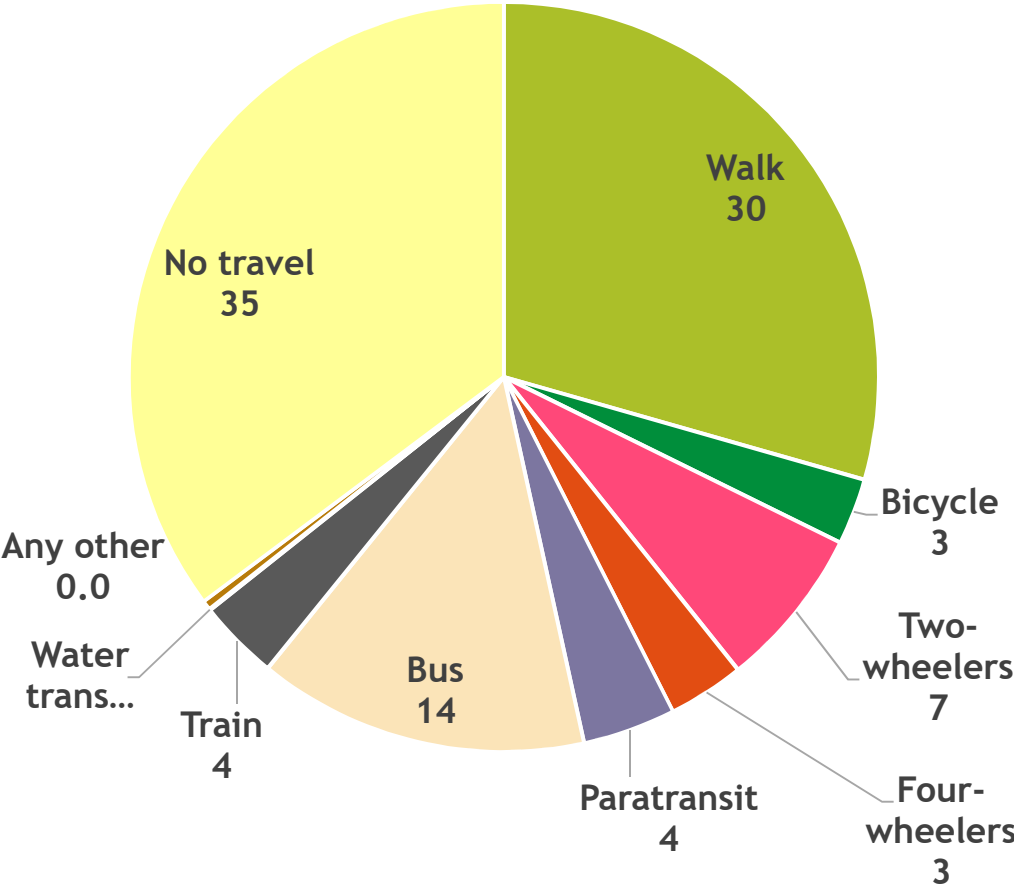


# Gendered Travel: Mode of travel to place of work

Mode share by gender



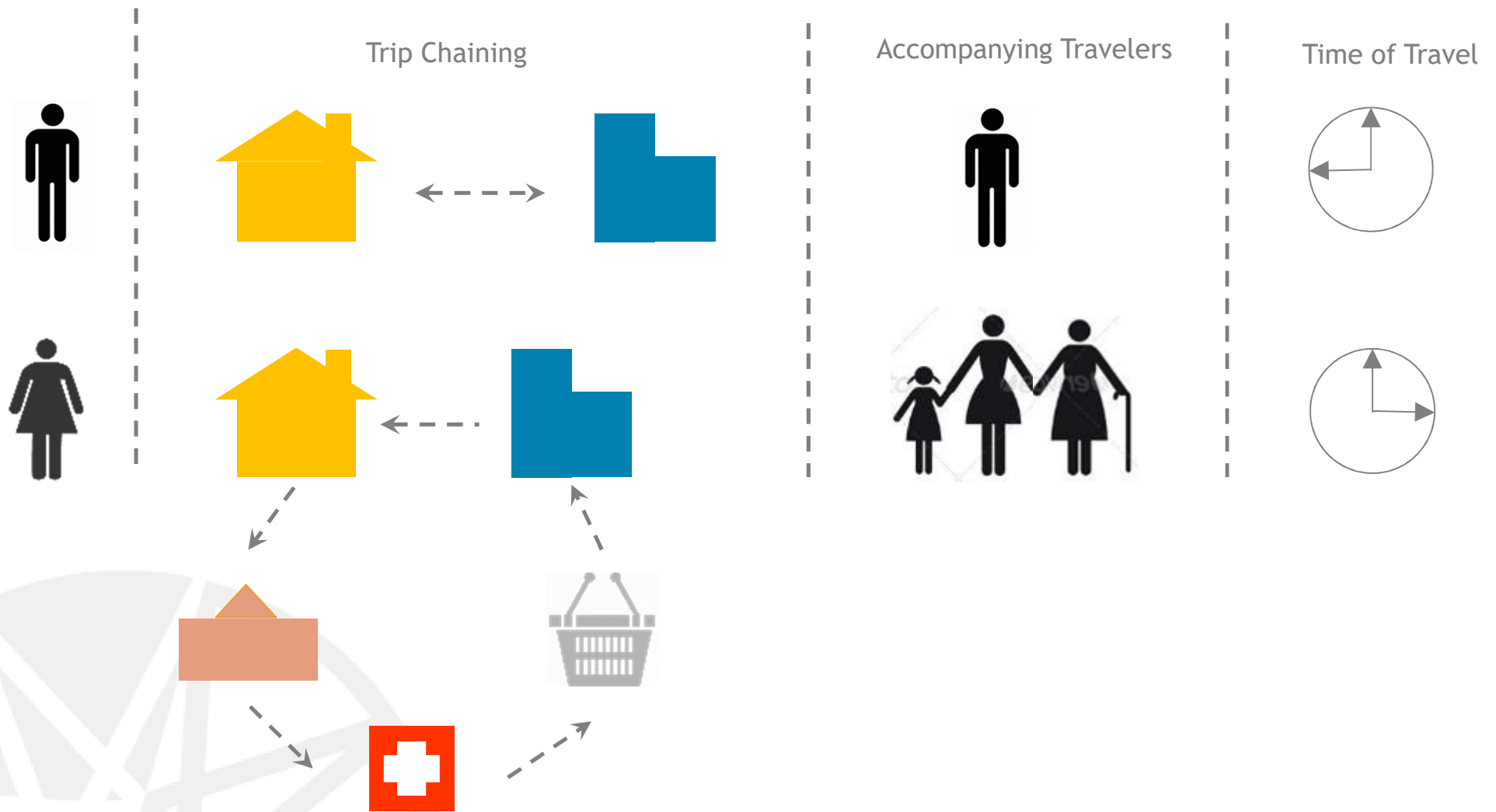
Mode share amongst women



Source: Census of India, 2011

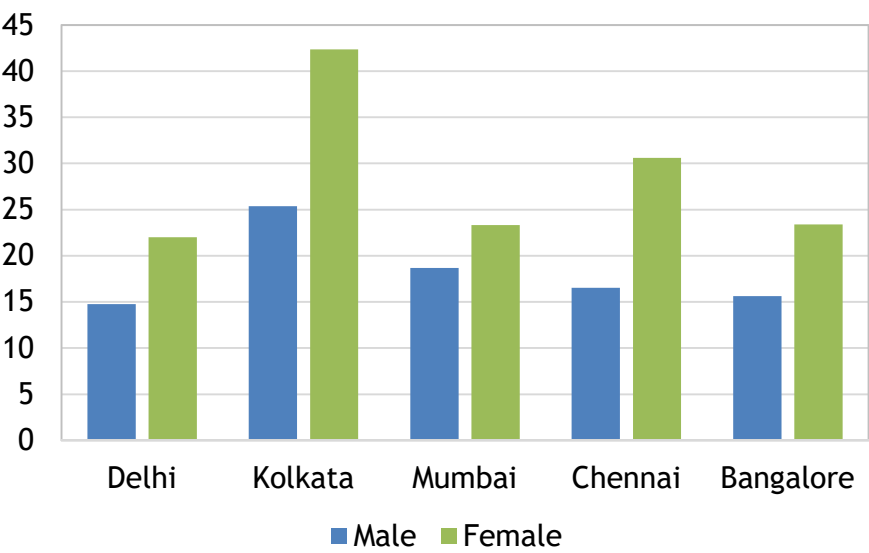


# Gendered Travel

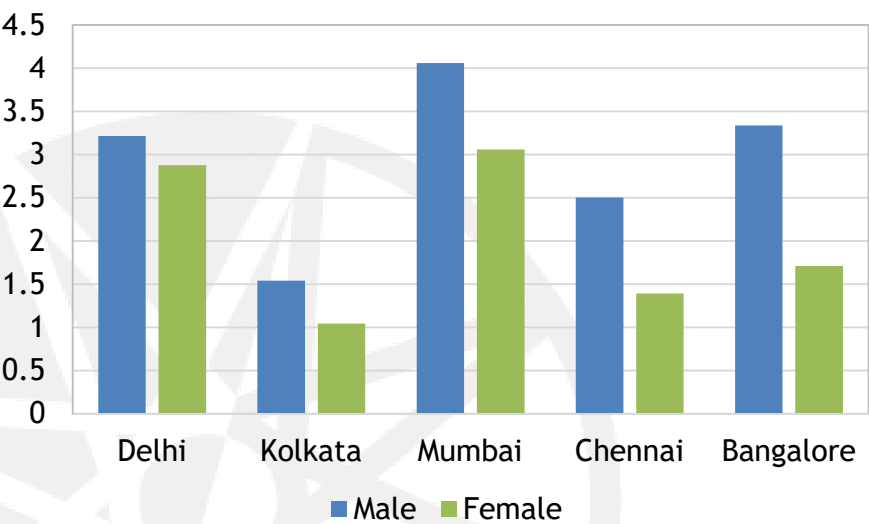


# Gendered Travel

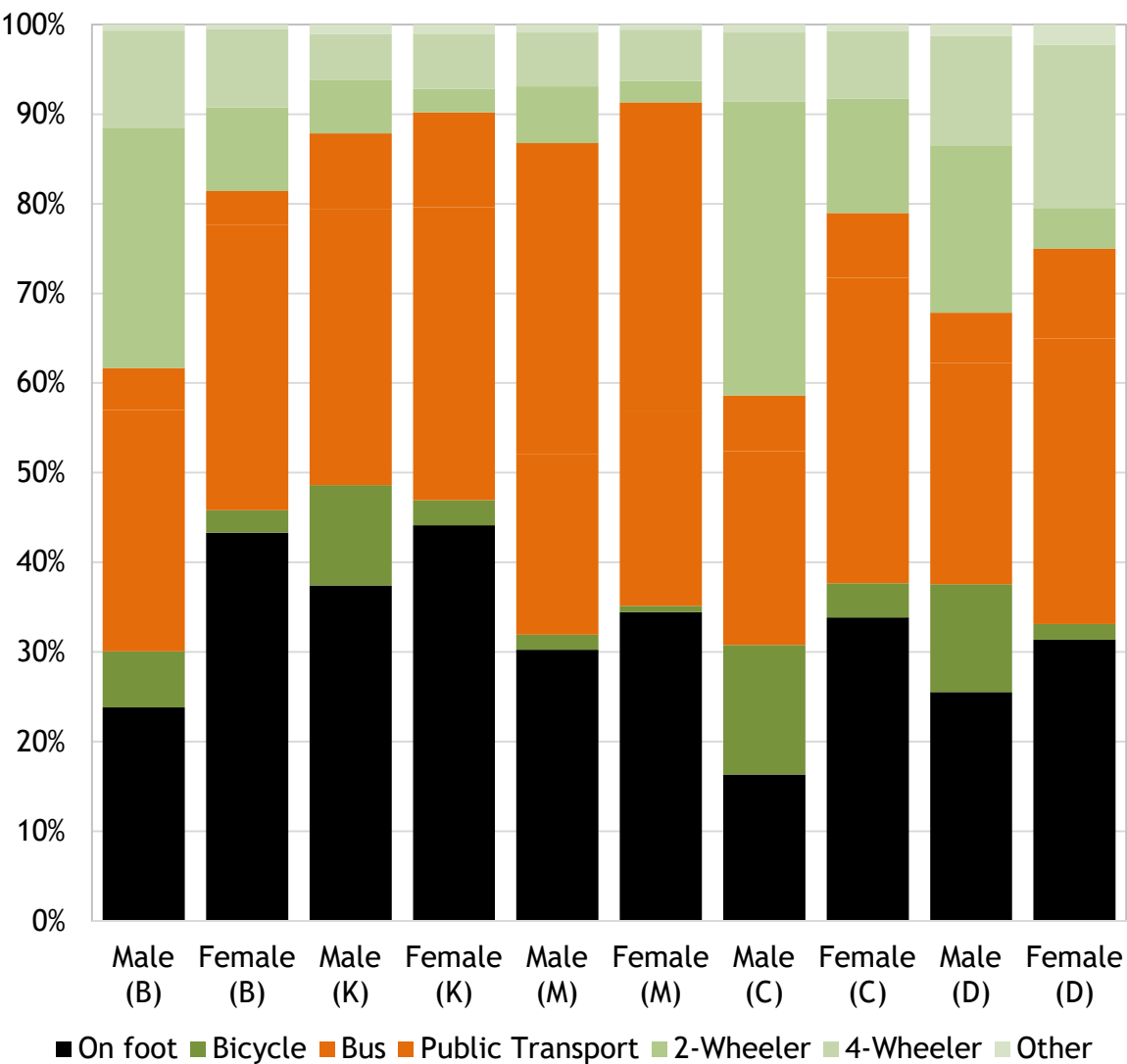
Persons Working From Place of Residence



Average Travel Distance By Gender



Mode of Transport



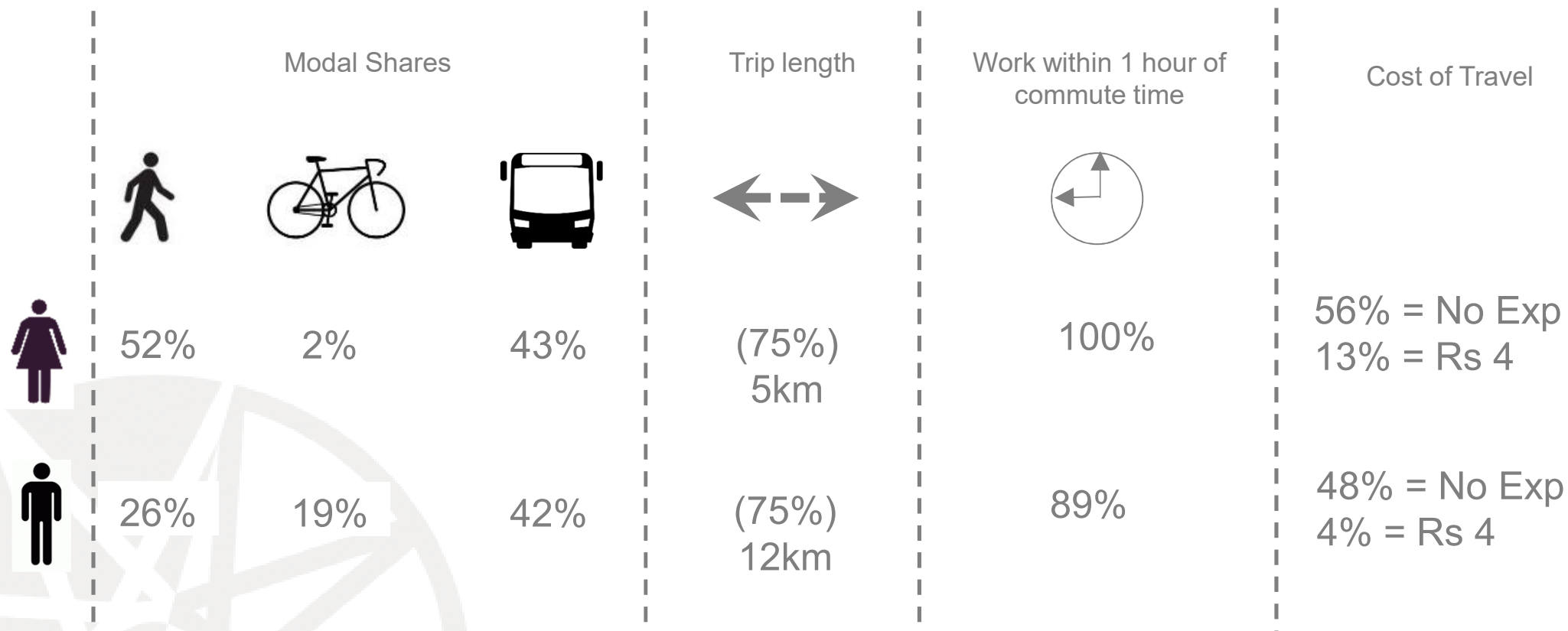
Source: Census, 2011



# Gendered Travel

- Greater sensitivity to the *shelter-transport-livelihoods* link
- Time Poverty

Sanjay Camp, Delhi

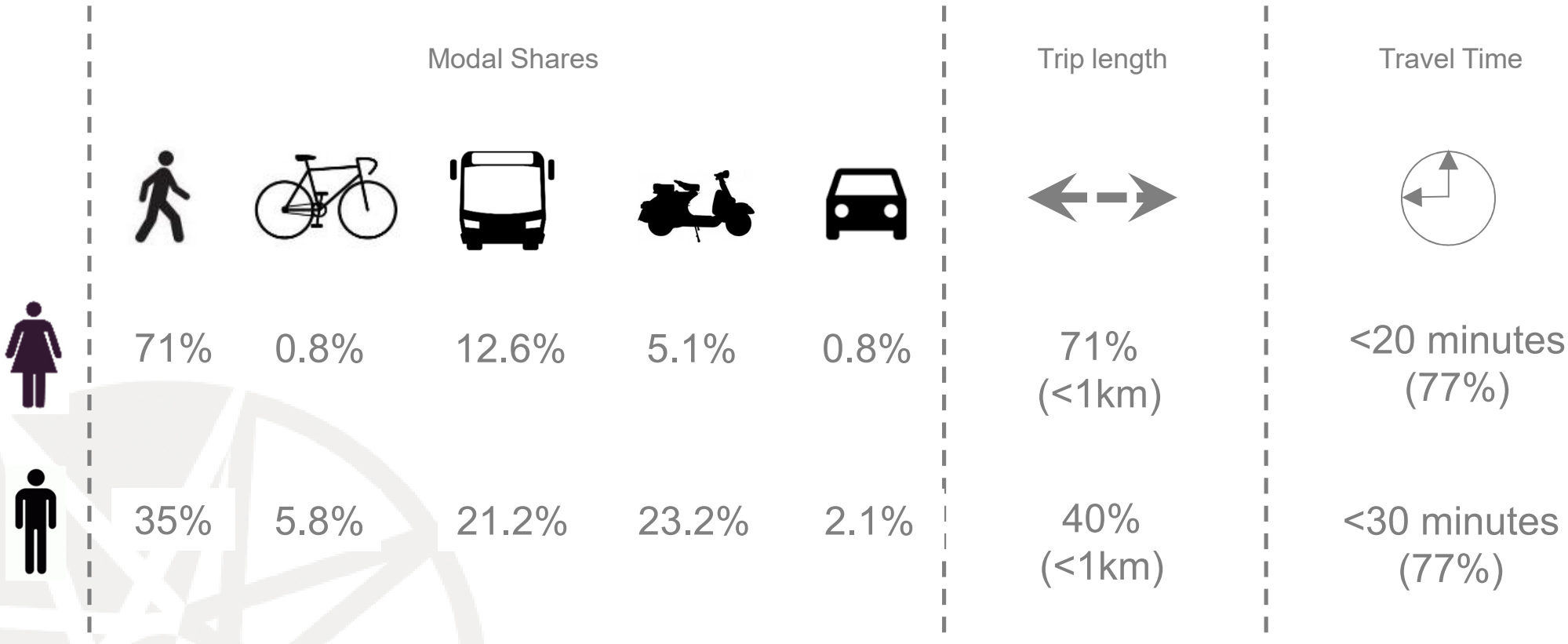


Source: Anand and Tiwari, 2005

# Gendered Travel

## Time Poverty

Visakhapatnam

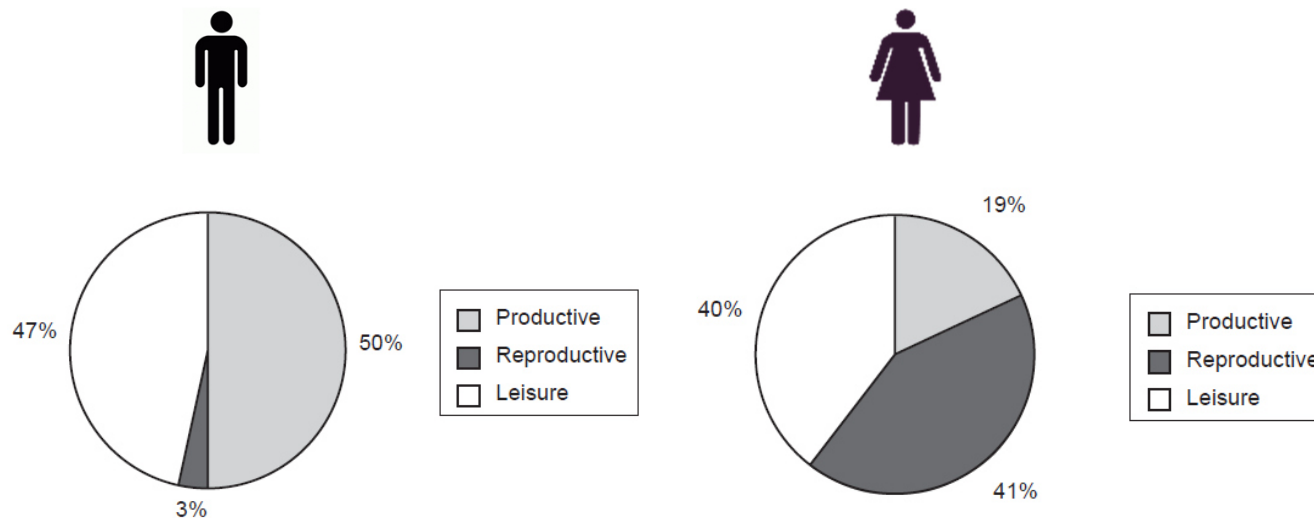


Source: ITRANS, 2012)



# Gendered Travel

## ➤ Mobility of Care (and leisure)



Source: Anand and Tiwari, 2005

*“A careful appraising and labeling of care-related travel would provide a much clearer and more precise understanding of the gender differences in transport”*

Source: Madariaga, 2013

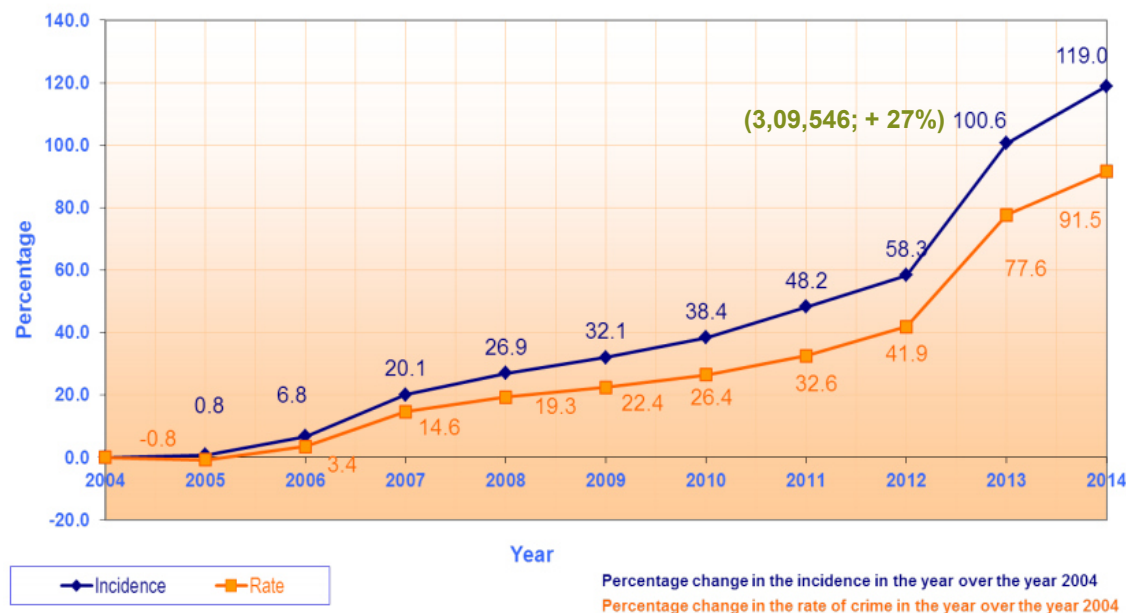
# Gendered Travel

- Forced Mobility: When functions that are taken for granted in some places are absent in others
- Forced Immobility: Constrained or unpermitted travel; latent demand for journeys not made

*“Good girls from respectable families do not step out in the night”*



# Gendered Travel: Violence



Source: NCRB, 2014

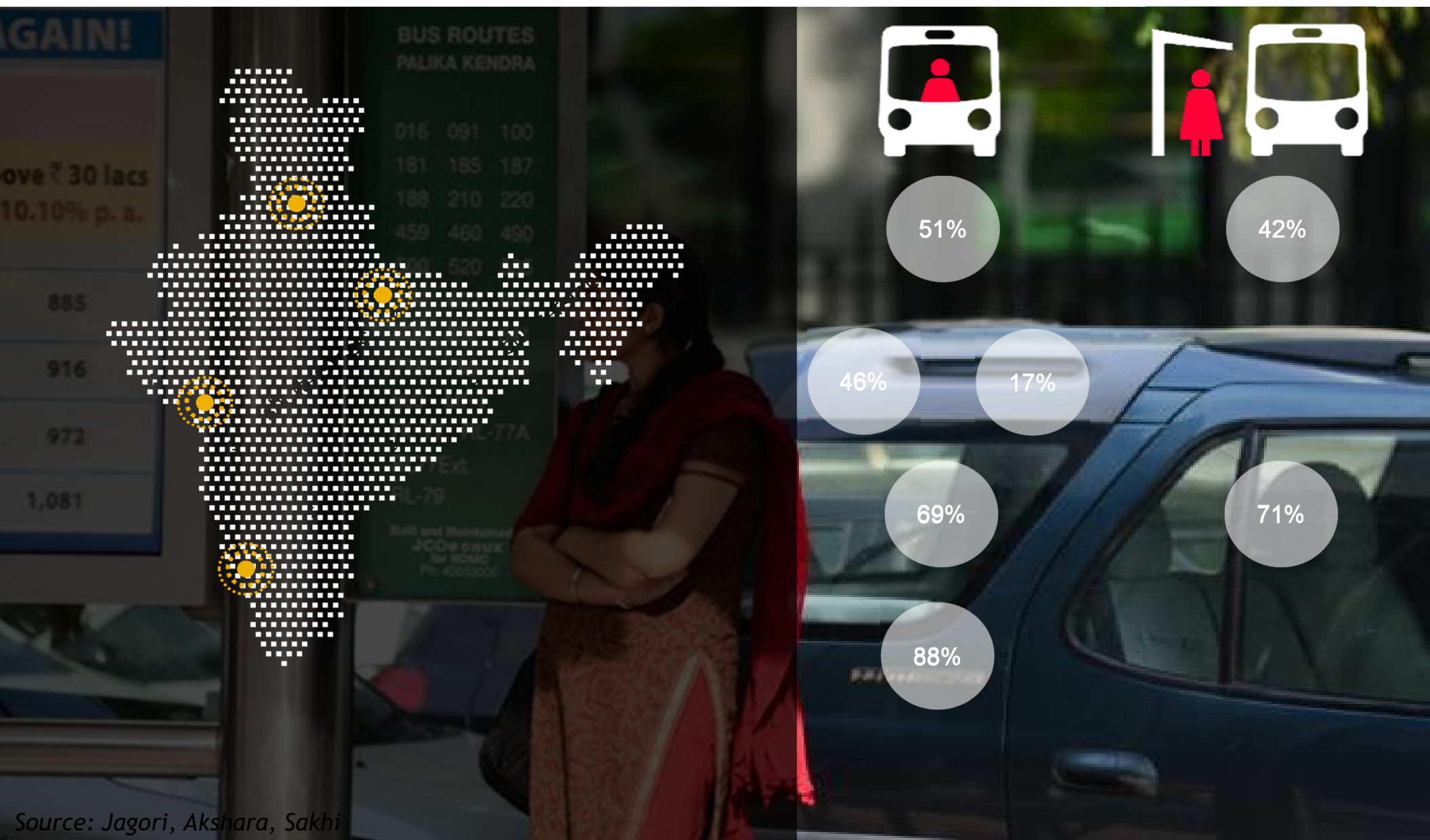
# 40:25

Rate of crimes against women in million-plus cities versus the national average. Source: NCRB, 2015

- IPC crimes against women: 8.8% (2007) - 9.4% (2011) - 11.4% (2014)
- Normalization, ordinary, continuous nature (Source: Viswanath 2013; Viswanath and Mehrotra 2007)
- Daily acts of violence are not linked to brutal forms such as rape (Phadke 2010)



# Gendered Travel: Violence



# Gendered Travel: Violence

- City, loitering and risks (*Source: Ranade 2007; Phadke 2010*)
- Safety as a protectionist concern or causing self-restraint
- Shift in perception – from the woman to the environment
- Safety of belongings



# Women in the Transport sector



Transport Sector

6.85 % | 19 %



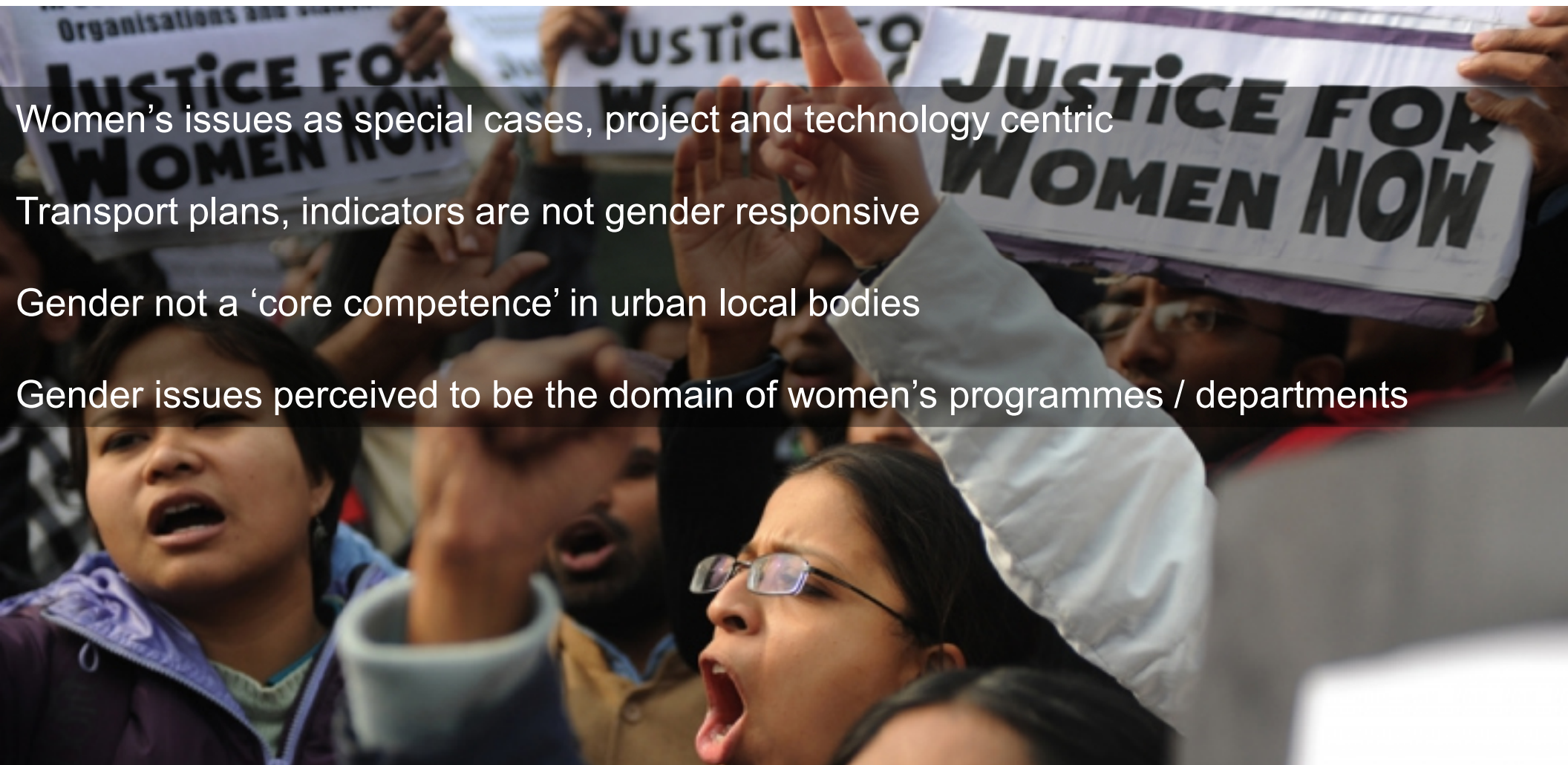
*“No place for women”*

*(Turnbull, Lear, & Thomas, 2009)*

Source: ILO



# Policy Responses



Women's issues as special cases, project and technology centric

Transport plans, indicators are not gender responsive

Gender not a 'core competence' in urban local bodies

Gender issues perceived to be the domain of women's programmes / departments



# Policy Recommendations



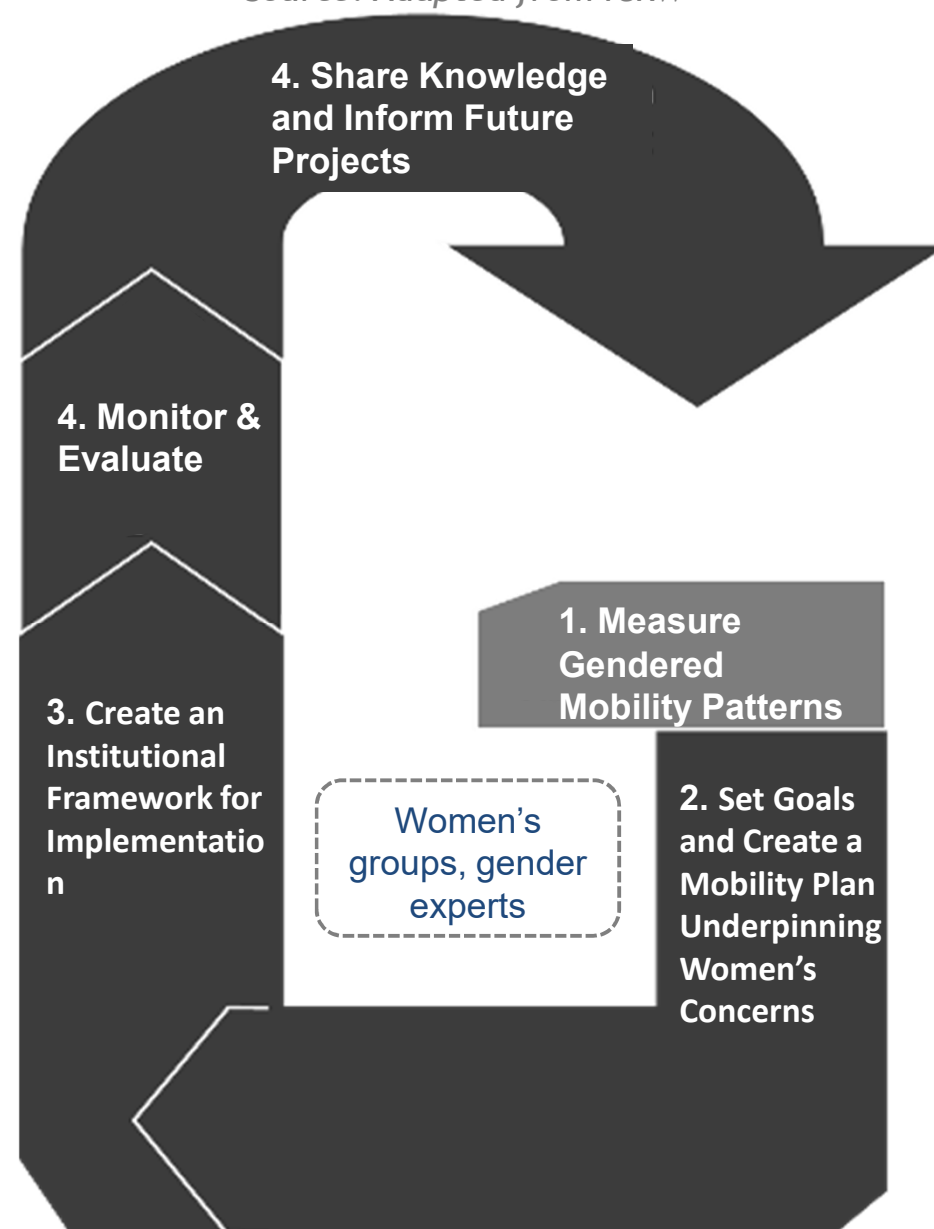


# R1-4: Gendered Mobility Plans

Source: Adapted from ICRW

Table 1: Outcome indicators for comprehensive mobility plans

Indicator	Measure	Recommended Benchmarks
1 People near transport (PNT), disaggregated by gender	Percentage of women and girls living within 500m walking distance of public transport in the city and metropolitan region, with a frequency of at least 6 schedules per hour	At least 80 percent of women and girls
2 Mode shares, disaggregated by gender	Percentage of walking, cycling, public transport (buses and metro-rail separately), intermediate public transport, motorized two-wheeler and four wheeler trips by women and girls	At least 80 per cent of all trips are by public and non-motorized transport  At least 40 percent of all public and non-motorized transport trips are by women and girls
3 Median non-motorized trip time, disaggregated by gender	Women and girls' median walking and cycling trip time	Women and girls' walking trips are less than 15 minutes  Women and girls' cycling trips are less than 25 minutes
4 Median motorized trip distances, disaggregated by gender	Women and girls' median motorized trip distances	Stabilized at 2017 levels or lesser
5 Cost on transport per month	Monthly household expenditure on transport	Not more than 10 per cent for low-income households
6 State and city transport allocations and expenditures on transport	State and city transport budget that benefits women and girls	Specific allocations and expenditures in the state and city transport budget for women's safety in urban transport
7 Improved air quality	Reduction in air pollutants (to achieve CPCB ambient air quality norms) due to women and girls' use of sustainable transport	City achieves or exceeds air quality standards set by the CPCB. 50 percent of the reduction in air pollutants from transport because of women and girls' use of sustainable modes of transport





# Mode Specific Recommendations



Source: Shreya Gadepalli



# R5: Create safer and comfortable walking environments for women and girls





Table 2: Indicators for street network and pedestrian infrastructure

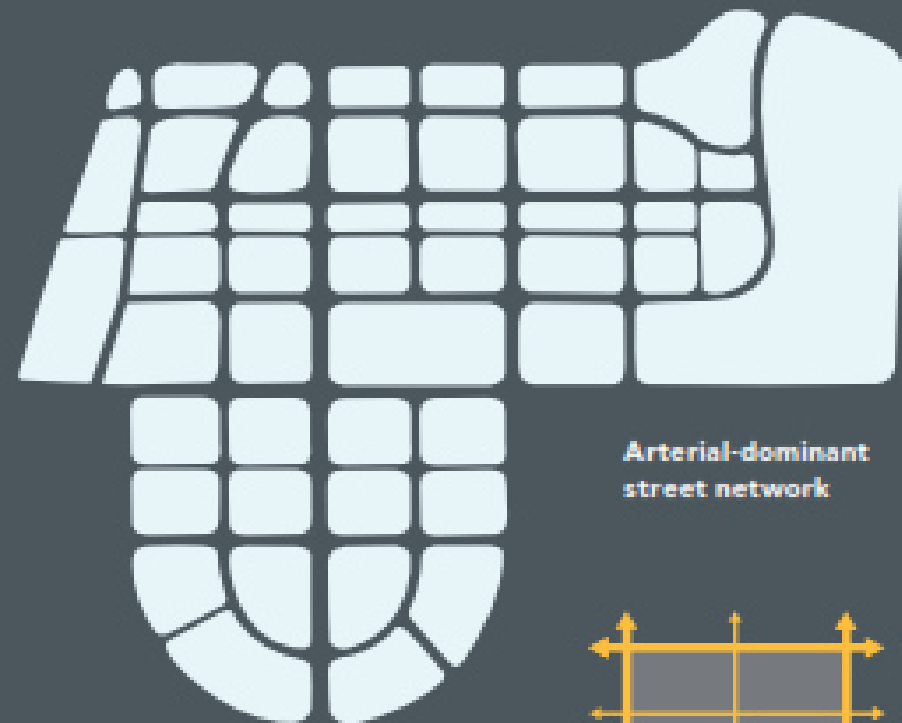
Indicator		Measure	Recommended Benchmarks
Street Network			
1	Median block length	Median block length bounded by publicly accessible roads on all sides	100 – 150m
2	Level and perception of safety, comfort and convenience, disaggregated by gender	Experience and perception of safety, comfort and convenience of walking	At least 80 per cent of women and girls perceive the street network to be safe, comfortable and convenient. Each aspect will be evaluated separately.
Pedestrian Infrastructure			
3	Walking friendly streets	Percentage of city roads with right of way greater than 12m with universally accessible, shaded footpaths with minimum 3.5m width or Level of Service B (as per IRC 103: 2012 Guidelines for Pedestrian Facilities), whichever is greater	At least 80 per cent
4	Well-lit streets	Percentage of street network with uniform and consistent lighting for footpaths and cycling infrastructure <ul style="list-style-type: none"> <li>• 25 lux for shopping areas</li> <li>• 30-40 lux for non-shopping areas</li> </ul>	Entire street network



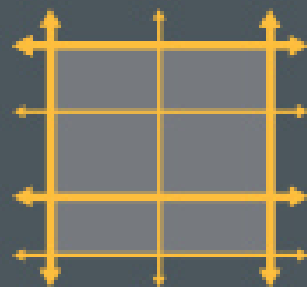




# Pedestrian Connectivity



Arterial-dominant  
street network



Network of arterials  
and superblocks

**Car oriented**



Preferred street  
network



Network of varying street  
widths and block sizes

**People oriented**



# Pedestrian Infrastructure





# R6: Increase women and girls' cycling mode shares



Table 3: Indicators for cycling network and infrastructure

Indicator		Measure	Recommended Benchmarks
Cycling Network and Infrastructure			
1	Streets with dedicated, continuous, even, shaded, well-lit cycle tracks without encroachment	<p>Percentage of streets 20m and above with dedicated, continuous, even, shaded, well-lit cycle tracks without encroachment. The following are recommended:</p> <ul style="list-style-type: none"> <li>• Minimum 2m for one-way cycle tracks</li> <li>• Minimum 2.5m for one-way cycle tracks with cycle rickshaws</li> <li>• Minimum 3m for two-way combined cycle tracks</li> </ul>	At least 80 per cent
2	Shared streets with traffic calming elements	Percentage of shared streets with design speeds less than 30kmph	At least 80 per cent





Shaded, well lit and continuous lane

Buffer zone

Concrete 2m wide cycle track

Delhi



# Santiago, Chile

## Case: Santiago, Chile

In a survey conducted by the Ministry of Transport and Telecommunications in Santiago, it was observed that women constituted 10 per cent of cyclists in Santiago. A cycling master plan was created and the number of cycle tracks quadrupled from 2007-12. The cycling mode shares increased from 3 per cent in 2006 to 6 percent a decade later.

However, since women did not know how to ride or were afraid to use bicycles in the city, a local women's group, Macleta (Women on Bikes), initiated classes to encourage women to learn to ride bicycles. They had a 'Learn to pedal' course, which was for beginners, while 'Get off the sidewalk' was for women who knew how to ride a bicycle, but were too frightened to use it around the city. Women and girls now constitute 30 per cent of all cyclists in the city.

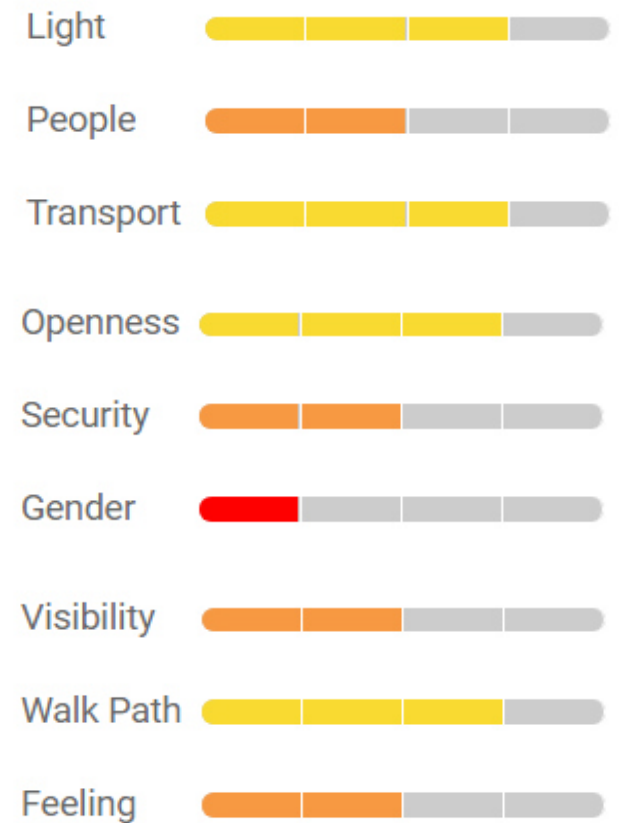
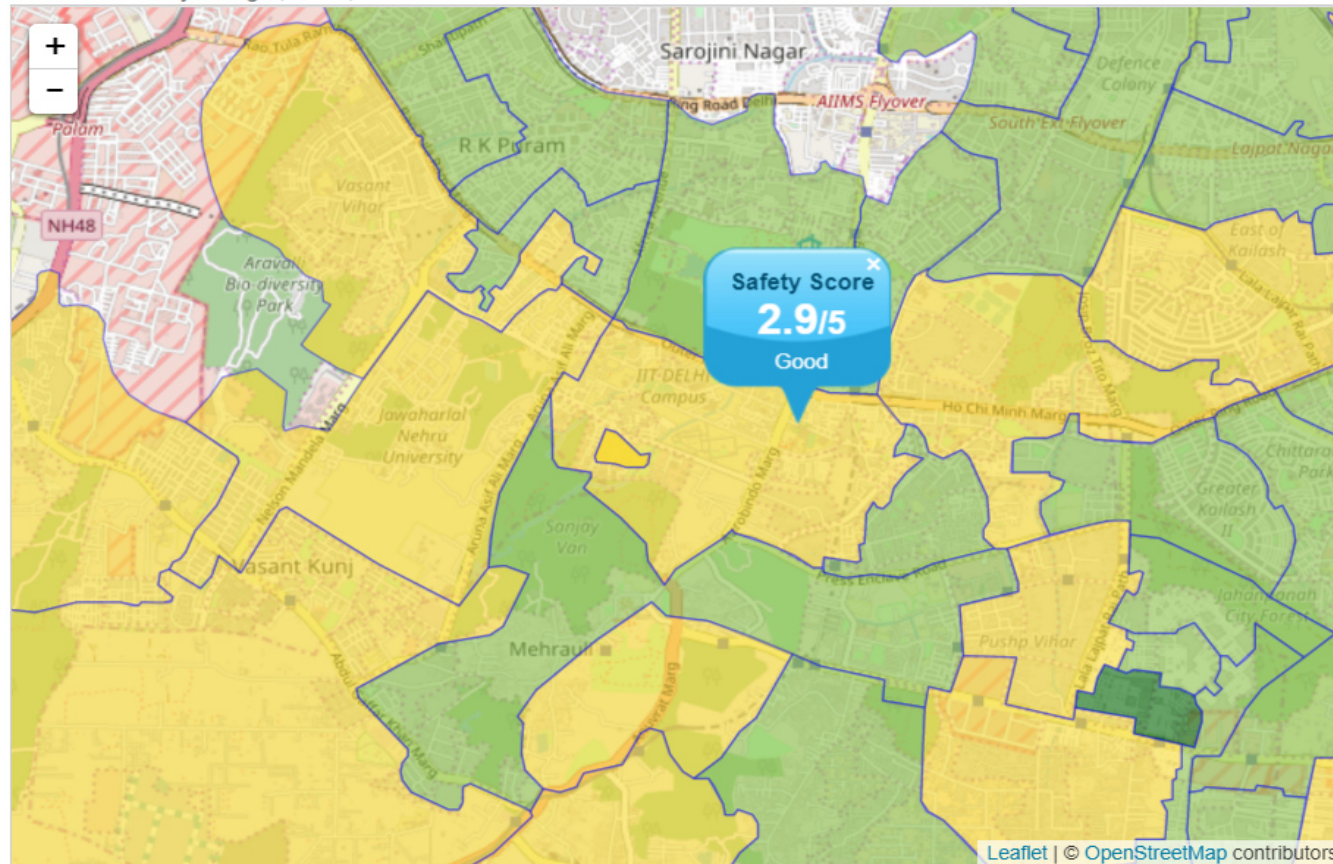
In addition, around 30,000-40,000 people are seen cycling across the streets of Santiago every Sunday as part of the CiclRecreoVia initiative where 40 kilometres of the city's roads are closed to vehicular traffic and made available for walking, running, cycling and other social activities (Cycling in Santiago 2014).



Figure 5: Women cyclists in Santiago increased from 10% to 30% of total cyclists in a decade

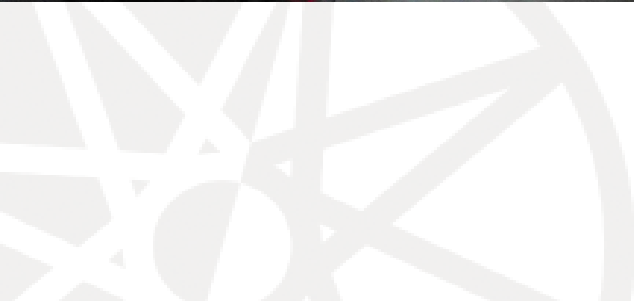
# Safety Audits

Address: Malviya Nagar, Delhi, New Delhi





# Safety audits with female students

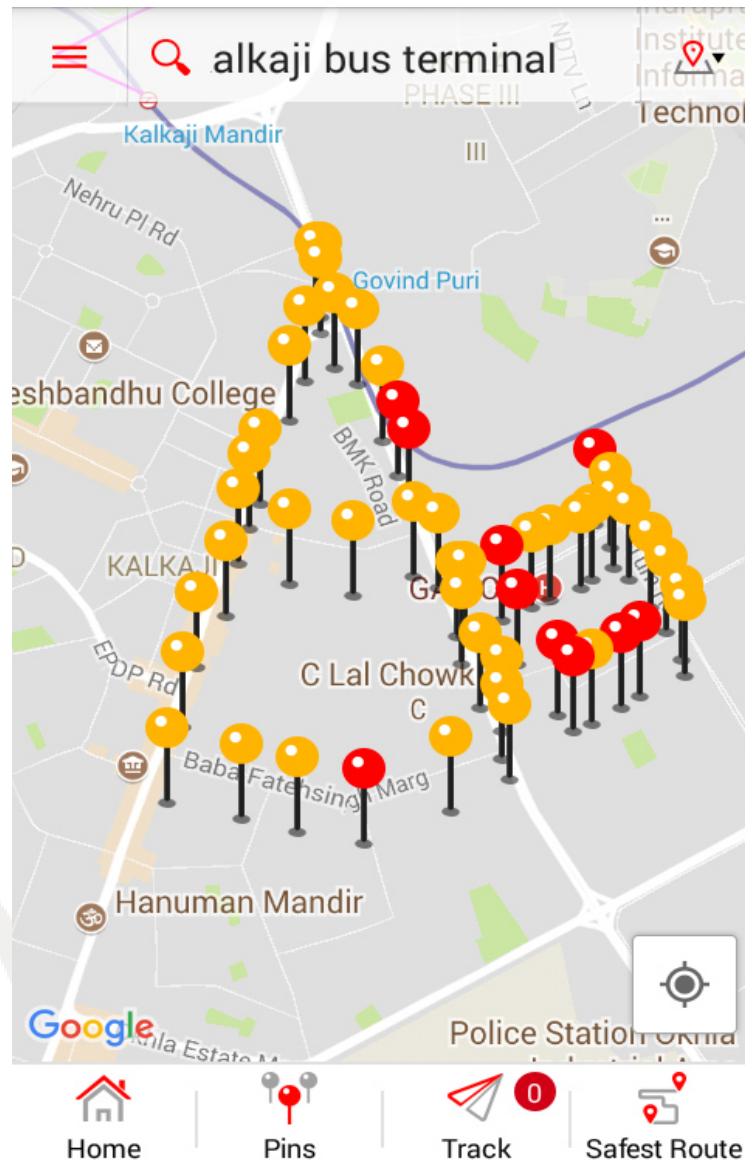




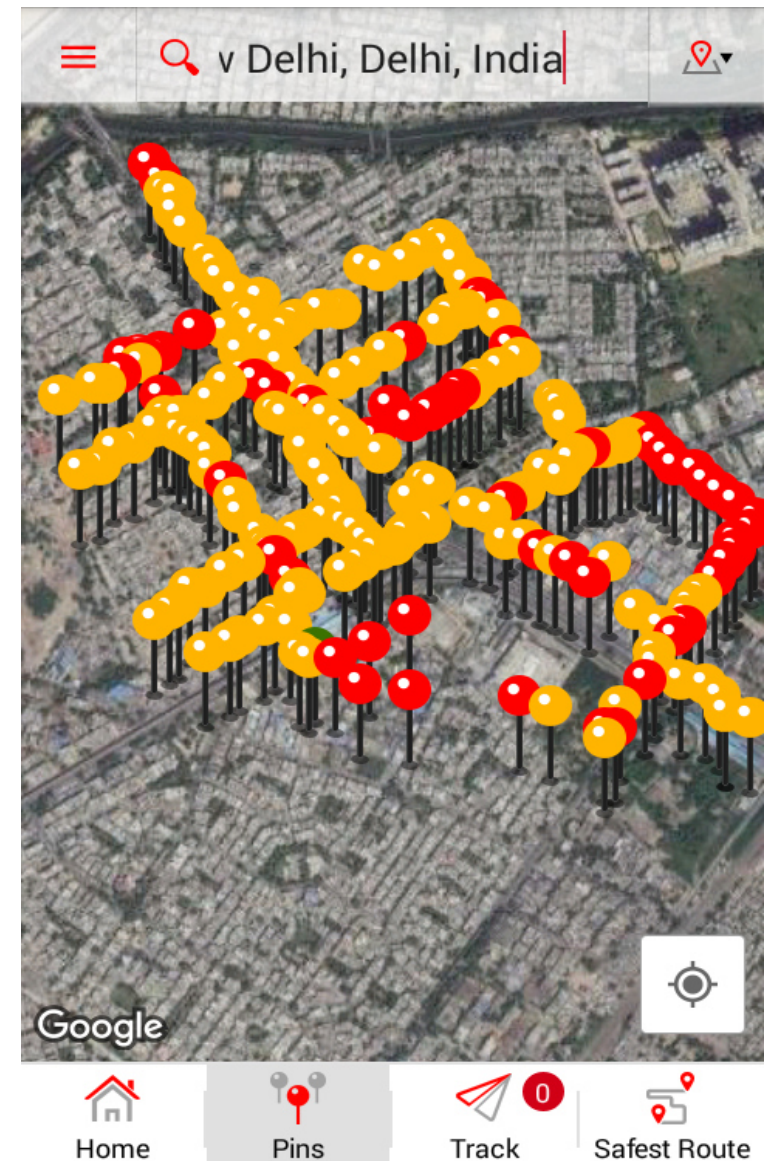
# Safety audits around bus terminals

- Quality of pedestrian infrastructure, street lighting
- Road safety
- Last mile connectivity
- Gender diversity
- Public toilets

Kalkaji BT



Karampura BT





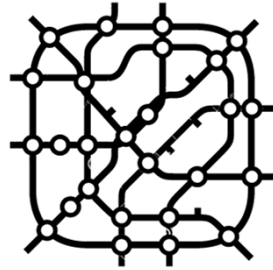
# R7: Increase women and girls' safety and use of public transport





# R7: Increase women and girls' safety and use of public transport

## Service Planning and Operations

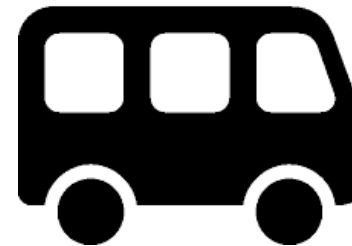


## Institutions

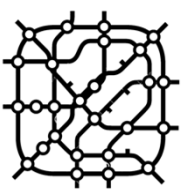
## Infrastructure



## Information & Communication



## Vehicles



# Service Planning and Operations

- Route Planning, Optimization or Feeder Services
- Operations: Ladies Specials, Reserved Seats, Women-only Doors, Hail / Request a Stop
- Frequency
- Fares

Table 10: Indicators and benchmarks for public transport

	Indicator	Measure	Recommended Benchmarks
Overall System			
1	Availability of buses	Number of buses per lakh population in the urban and peri-urban areas of the city/ metropolitan region with at least 35 per cent seats reserved for women or as per demand in peak hours, whichever is more	At least 50 buses per lakh population
2	Load factor of the bus	Ratio of the number of passengers in the bus to the capacity of the bus	Load factor should not exceed 100 per cent of the total capacity in peak hours
3	Level and perception of safety, comfort and convenience	Experience and perception of safety, comfort and convenience of the public transport journey i.e. from origin to public transport stop, waiting at the stop, boarding and alighting, traveling inside the vehicle and travel from public transport stop to destination, conducted annually or bi-annually	At least 80 per cent of women and girls perceive the public transport journey to be safe, comfortable and convenient. (Each aspect must be evaluated separately)
4	Waiting time, disaggregated by gender	Waiting time for public transport in peak and off-peak hours in urban and peri-urban areas of the city/metropolitan region	<5 minutes in peak hours <10 minutes in off peak hours



# Infrastructure



Access to and from  
the Public  
Transport Stop

Waiting at the  
bus shelter,  
interchange,  
terminal

Boarding and  
alighting the  
vehicle

Experience in the  
vehicle



# Infrastructure

Table 10: Indicators and benchmarks for public transport

	Indicator	Measure	Recommended Benchmarks
Infrastructure (Stations, Terminals, Interchanges)			
5	Universally accessible, sheltered stations	Percentage of sheltered stations/ stops with level boarding and alighting	At least 80 per cent of shelters/ stations All terminals and interchange stations
6	Well-lit stations	Percentage of sheltered stations/ stops with uniform and consistent lighting of 30-40 lux	All stations
7	Information and communication	Percentage of stations with real time information, route maps, functional help line numbers and emergency numbers	All stations
8	Public toilets	Gender disaggregated data on availability of adequate and universally accessible public toilets within 250m walking distance of a public transport stop <sup>[12]</sup>	<b>Terminal Stations and Bus Terminals</b> Men: 4 water closets for first 1000 persons and 1 for every additional 1000 persons or part thereof; Urinals: 6 for every 1000 person and 1 for every additional 1000 persons or part thereof Women: 10 water closets for every 1000 persons and then 1 per 1000 persons after  <b>Within 250m walking distance of a public transport stop</b> Men: 1 per 100-400 persons; For over 400 persons, add at the rate of 1 per 250 persons or part thereof. Urinals: 1 for 50 persons or part thereof Women: 2 for 100-200 persons; over 200 persons, add at the rate of 1 per 100 persons or part thereof





# Infrastructure

## Case: Safety Audits to assess Last Mile Connectivity

Toronto Transport Commission (TTC) has been a pioneer in addressing women's safety concerns in public transport, as early as the 1990s. They introduced the Between Stops Program to help women get off in between bus stops if they were travelling between 9pm and 5am. The Commission also created Designated Waiting Areas (DWAs) on subway platforms that provide a safe, well-lit space and access to an intercom that enables communication with station operators. Public telephones are located on all subway station platforms, at station entrances and in many bus and streetcar transfer areas. There is also an emergency button at the entrance of every train carriage. Montreal also has a between-stops service as well as transparent bus stops to provide visibility.



Figure 8 (above): Designated Waiting Areas (DWA);  
Figure 9 (below): Bus shelter in Toronto



## Vehicles

- Low, medium or high floor buses
- Single or double doors
- Aperture width and door width
- Width of the gangway
- Height of the supports

Vehicles			
9	Public transport fleet as per Urban Bus Specifications II	Percentage of the public transport fleet with space for persons on wheelchairs and strollers, lower grab bars, minimum 700mm gangway, doors with a clear width of at least 1000mm	Entire public transport fleet
10	Information and Communication	Percentage of public transport fleet with route maps, functional help line numbers and emergency numbers and real time information	Entire public transport fleet





# Information and Communication

- Information and Signage
  - Real time information
  - Maps: Public toilets, day care centres
  - Gendered signages



Source: Vienna Sees Differently



## Information and Communication

- Campaigns for perpetrators, victims and by-standers

**SNEAKING  
A PICTURE.**

IT'S NEVER OKAY AT  
THE POOL.  
IT'S NEVER OKAY ON ETS.

FOR IMMEDIATE HELP, PRESS A **PASSENGER ALARM**  
OR CALL **TRANSIT WATCH 780.442.4900**

ETS HAS **ZERO TOLERANCE** FOR **SEXUAL HARASSMENT.**  
Learn more: [takeETS.com/SafeRide](https://takeETS.com/SafeRide)

ETS EDMONTON POLICE SERVICE TRANSIT WATCH

Edmonton Transit System

**GROPING.**

IT'S A CRIME.

FOR IMMEDIATE HELP, CALL **9-1-1**  
OR PRESS A **PASSENGER ALARM.**

ETS HAS **ZERO TOLERANCE** FOR **SEXUAL ASSAULT.**  
Learn more: [takeETS.com/SafeRide](https://takeETS.com/SafeRide)

ETS EDMONTON POLICE SERVICE TRANSIT WATCH

Edmonton Transit System

**LEERING.**

IT'S NEVER OKAY AT WORK.  
IT'S NEVER OKAY ON ETS.

FOR IMMEDIATE HELP, PRESS A **PASSENGER ALARM**  
OR CALL **TRANSIT WATCH 780.442.4900**

ETS HAS **ZERO TOLERANCE** FOR **SEXUAL HARASSMENT.**  
Learn more: [takeETS.com/SafeRide](https://takeETS.com/SafeRide)

ETS EDMONTON POLICE SERVICE TRANSIT WATCH

Edmonton Transit System

**"HEY SEXY."**

IT'S NEVER OKAY AT  
THE MALL.  
IT'S NEVER OKAY ON ETS.

FOR IMMEDIATE HELP, PRESS A **PASSENGER ALARM**  
OR CALL **TRANSIT WATCH 780.442.4900**

ETS HAS **ZERO TOLERANCE** FOR **SEXUAL HARASSMENT.**  
Learn more: [takeETS.com/SafeRide](https://takeETS.com/SafeRide)

ETS EDMONTON POLICE SERVICE TRANSIT WATCH

Edmonton Transit System

Source: Edmonton Transit Service





## R8: Engender transport authorities



Table 11: Indicators and benchmarks for public transport authorities

Indicator		Measure	Recommended Benchmarks
Employees			
1	Women employees in the public transport authority	Percentage of women employees in the public transport authority at different levels	At least 50 per cent women at junior, mid and senior management levels across different functions (For example drivers, conductors, depot managers, engineering, planning etc) or reflecting the city's gender ratio, whichever is more
Trainings and Complaint Redressal			
2	Standard operating procedures	Standard operating procedures created for preventing and addressing sexual harassment	Public transport authority has created standard operating procedures, which is included in the core training curricula for drivers, conductors and depot managers
3	Drivers, conductors and depot managers, who have received gender sensitization trainings	Percentage of drivers, conductors and depot managers who have received training on gender sensitization and standard operating procedures last year, along with quarterly follow-ups to discuss challenges and share learnings	All drivers, conductors and depot managers
4	Create a complaints and redress mechanism	Gender disaggregated data on complaints filed and redressed by the public transport authority	At least 80 per cent of the complaints filed by men and women are addressed within 14 days





## R8: Engender Public Transport Authorities





# R9: Make intermediate public transport safer for women



Table 12: Indicators and benchmarks for intermediate public transport

Indicator	Measure	Recommended Benchmarks
<b>Overall Journey</b>		
1 Level of safety, comfort and convenience in the intermediate public transport journey, disaggregated by gender	Annual or bi-annual surveys to assess sexual harassment, comfort and convenience in the intermediate public transport journey i.e. from origin to shared IPT stop, waiting at the stop, boarding and alighting, traveling inside the vehicle and travel from IPT stop to destination. For direct auto-rickshaw or taxi services, travel inside the vehicle will be critical.	At least 80 per cent women and girls perceive the intermediate public transport journey to be safe, comfortable and convenient. (Each aspect is evaluated separately)
<b>IPT Infrastructure</b>		
2 Sheltered stops with consistent and adequate lighting	Percentage of sheltered stops with consistent lighting between 30-40 lux	All stops
<b>IPT Vehicles and Drivers</b>		
3 Intermediate public transport fleet	Percentage of intermediate public transport fleet with functional help line and emergency numbers and name and photograph of the driver published inside and outside the vehicle. The route maps must be shown where applicable (as in the case of mini buses etc.)	Entire intermediate public transport fleet
4 Drivers (and conductors) verified by the police	Percentage of drivers (and conductors) without criminal records, verified by the police	All drivers (and conductors)
5 Standard operating procedures	Standard operating procedures created for preventing and addressing sexual harassment	Standard operating procedures are created, which is a prerequisite for issuing permits
6 Drivers (and conductors) who have received gender sensitization trainings	Percentage of drivers (and conductors) who have received training on gender sensitization and standard operating procedures last year. This is accompanied with quarterly follow-ups to discuss challenges and share learnings	All drivers (and conductors)



# Thank You

