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GOVERNMENT OF INDIA
MINISTRY OF HOUSING AND URBAN AFFAIRS
11th Urban Mobility India Conference & Expo 2018

Assess the accessibility to Public Spaces using Public Transport

Case of Ahmedabad

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FLOW OF PRESENTATION

- Need of the Study
- Introduction
- Methodology
- Literature Review
- City Profile
- Site Selection
- Assessing Accessibility
- Key Findings

NEED OF THE STUDY

- Lack of accessibility and poor quality pedestrian infrastructure has decreased accessibility to transit network and pedestrian accessibility which has been a key concern in planning .
- Cyclists have to fight for the right of way with fast moving motorized modes of transport, many a times risking their lives.
- The Public Transport (PT) users face long waiting periods, uncertainty in travel time and difficult travel conditions.
- While planning for public transport & road network, accessibility has to be kept in mind to get the maximum benefits to the user.
- It should encourage the people of different income groups to use the system and the accessibility to different modes gets better.

INTRODUCTION

"What defines the character of a city is its public space, not its private space."

-Dr. Joan Clos, Former Executive Director, UN Habitat

Aim

The aim of the study is to assess how the accessibility of selected public spaces is affected by the availability of transport options in the city.

Objective

The main objective is to understand whether great public spaces have great public transport.

1. To understand the concept of accessibility.
2. To recognize the qualities of a successful public space which reflect upon the accessibility.
3. To examine the impacts of public transport on public spaces in Ahmedabad through the lens of accessibility.

METHODOLOGY

Stage 1
Define the problem

Stage 2
Literature Review

Stage 3
City Profile

Stage 4
Selecion of Site

Stage 5
Field surveys and data collection

Stage 6
Key Findings

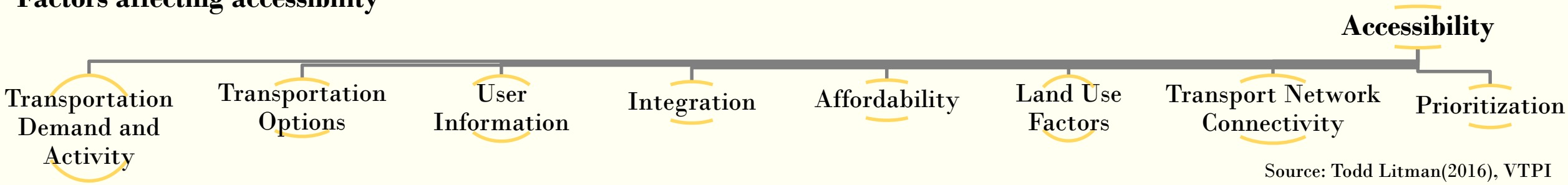
01	Understanding the issue and defining the problem
02	Aim and objective of the study is set along with research framework.
03	Understanding the concept of accessibility and public spaces through secondary data.
04	Study the access and linkages of successful public spaces from across the world.
05	Study and selection of accessibility analysis tools and framework.
06	Introduction to the city i.e. Ahmedabad and a short overview of transport options.
07	Identification of city level public spaces in Ahmedabad.
08	Selection of public spaces to be reviewed in detail for analysis.
09	Transit walks, OD data collection, People perception survey.
10	Key findings and conclusion.

LITERATURE REVIEW

ACCESSIBILITY

"Accessibility refers to ease of reaching goods, services, activities and destinations, which together are called opportunities. "

Factors affecting accessibility



Source: Todd Litman(2016), VTPI

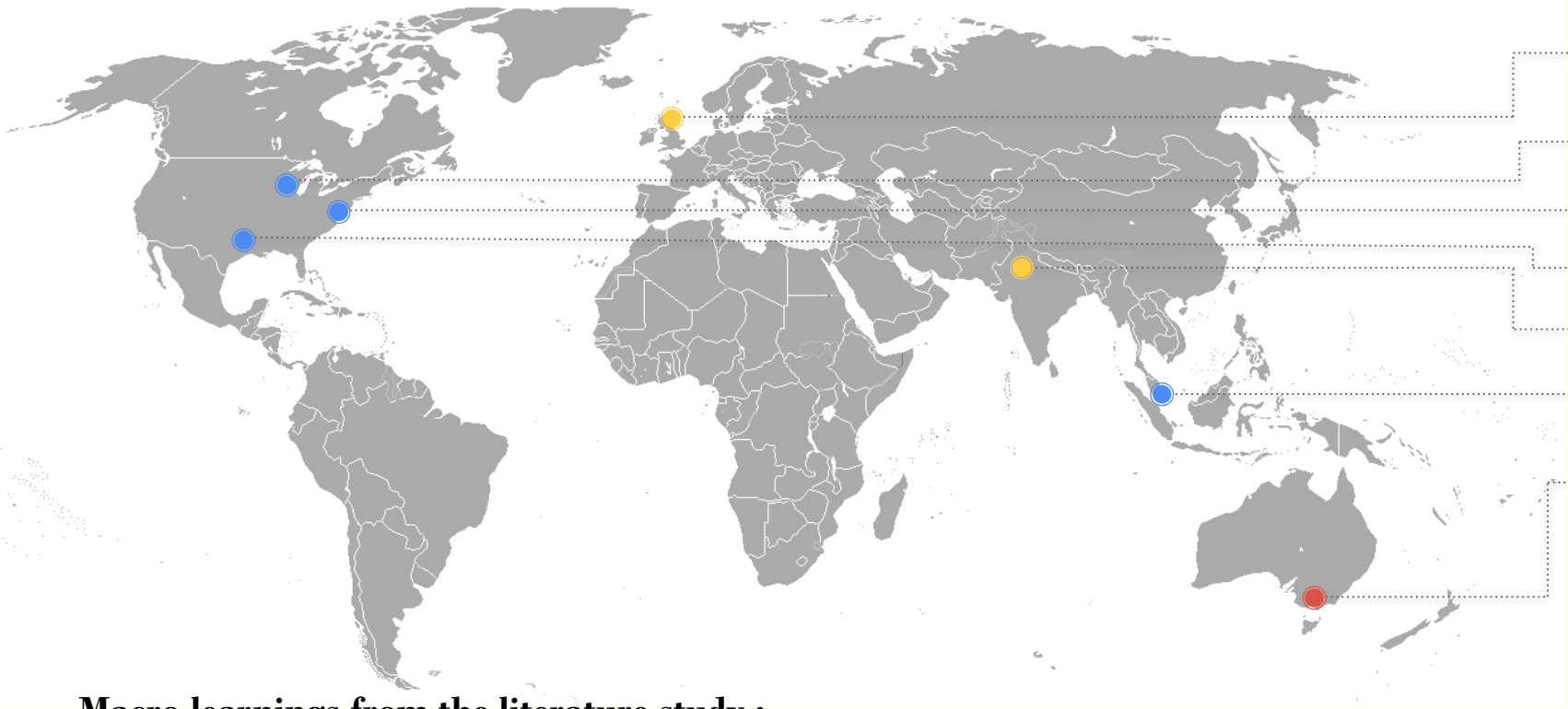
PUBLIC SPACES

"Public spaces refer to a spot or an area reserved for the formal or informal gatherings. It is a place open and accessible to all regardless of their gender, ethnicity, age, race or socio-economic level."

Characteristics of a Successful Public Space

Source: www.planning.org – Characteristics and guidelines of Great Public Space

CASE STUDIES



Trafalgar Square, London

Millennium Park, Chicago

Prospect Park, Brooklyn

Klyde Warren Park, Dallas, Texas

Connaught Place, New Delhi

Gardens by the Bay, Singapore

Hosier Lane, Melbourne, Australia

Legend
Streets
Public Parks
Common Squares

Macro learnings from the literature study :

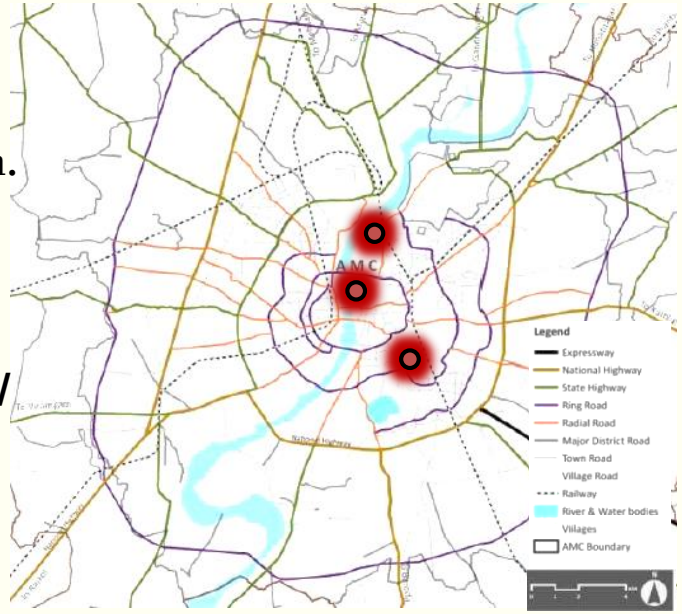
- Each public space has a unique image of its own which makes it easy for people to connect to the space.
- There is a wide range of activities and usage of each space which attracts people from around making it a key attraction.
- All places has a common characteristic i.e. they provides a space for social interaction which promotes community development.
- All successful places are connected with well developed public transit at walkable distance.

CITY PROFILE: Ahmedabad

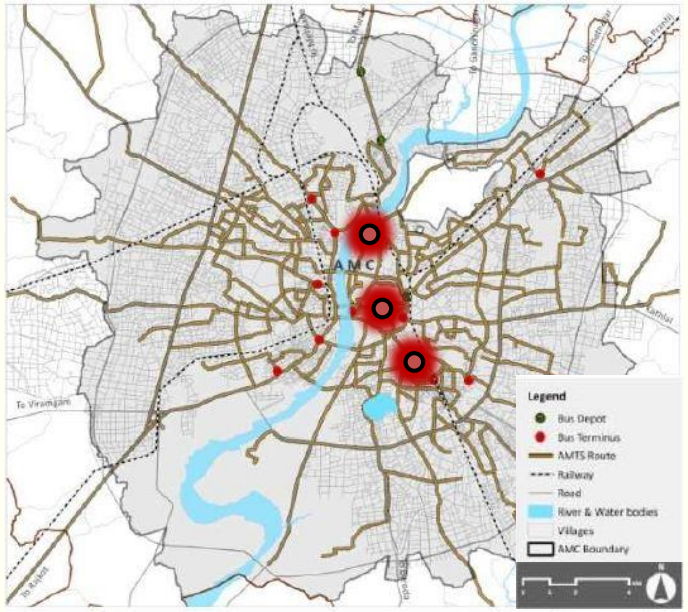
Introduction

Area: **464 sq. km.**
Population: **6 M**
Average population density: **12,000 / square km.**

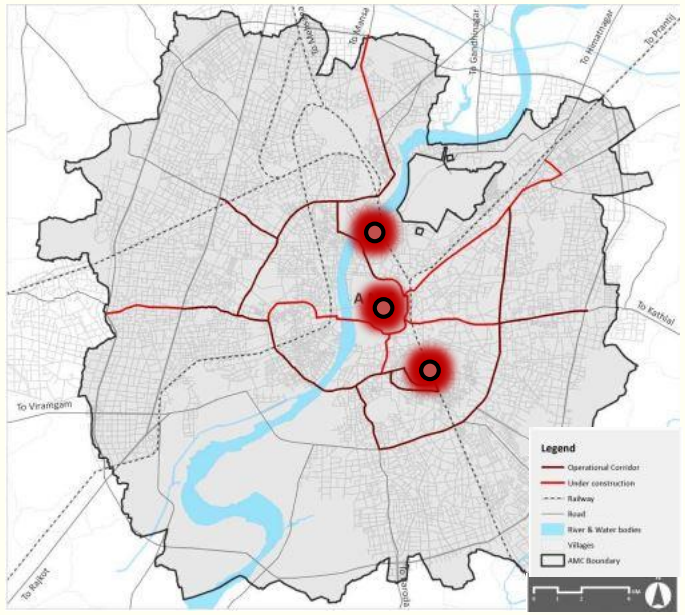
Road Network



AMTS Network



BRTS Network



Source: AUDA DP, 2011

City level Public Spaces

1% of the total land developed is under open space use.

760.6 ha → **1.12 sq. m.** per capita

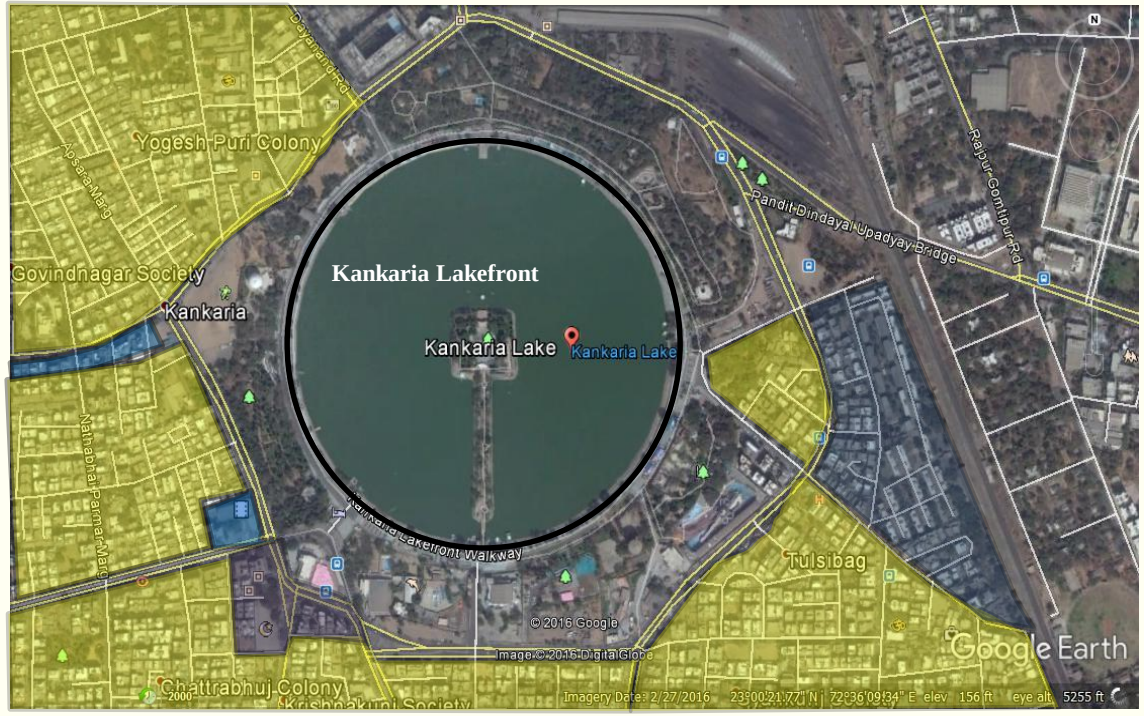
Kankaria Lakefront

Bhadra Plaza

Riverfront Garden

STUDY AREA

Kankaria Lakefront



Area: **31 ha.** (periphery)

Operational Timings: 8.00 a.m. to 10.00 p.m.
Use of Space: Recreational, Cultural and Social activities
Footfall: 80,000 (weekends) | 10,000 (weekdays)
Parking Space: 200 two wheelers | 50 four wheelers

Riverfront Garden

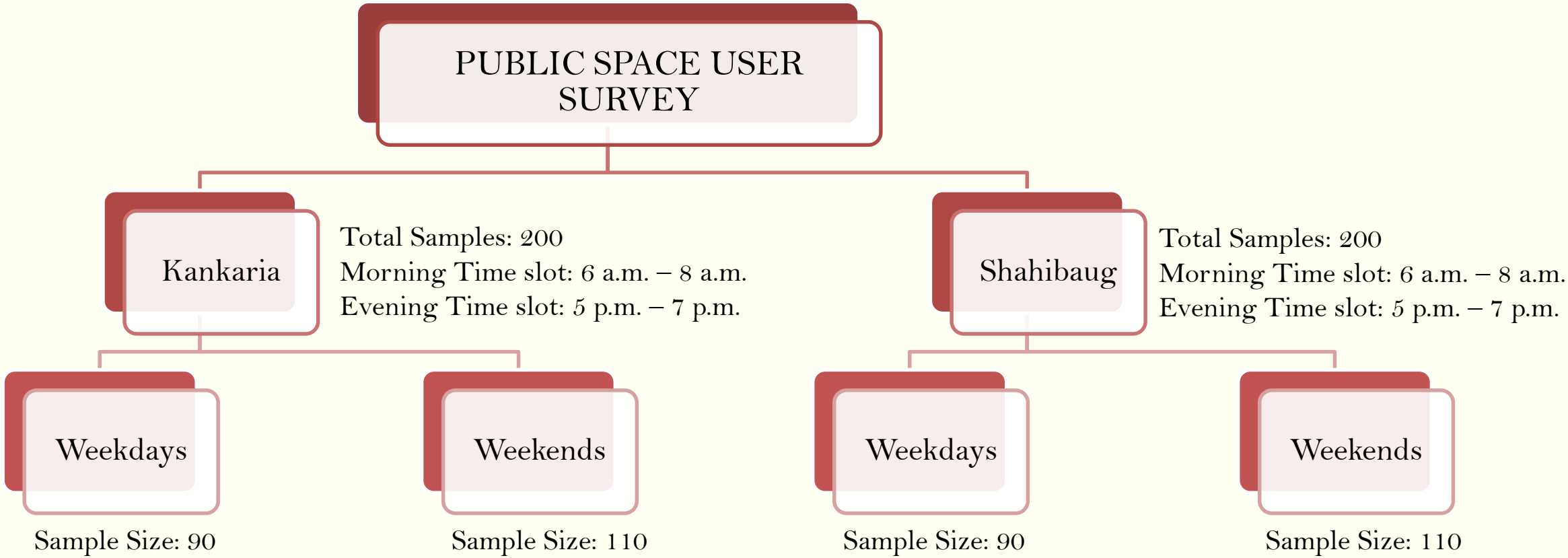
Operational Timings: 6.00 a.m. to 9.00 p.m.
Use of Space: Recreational activities
Footfall: 2,000 (weekends) | 200 (weekdays)
Parking Space: 400 two wheelers | 80 four wheelers

Area: **10 ha.**

Source: Primary Survey

ASSESSING ACCESSIBILITY

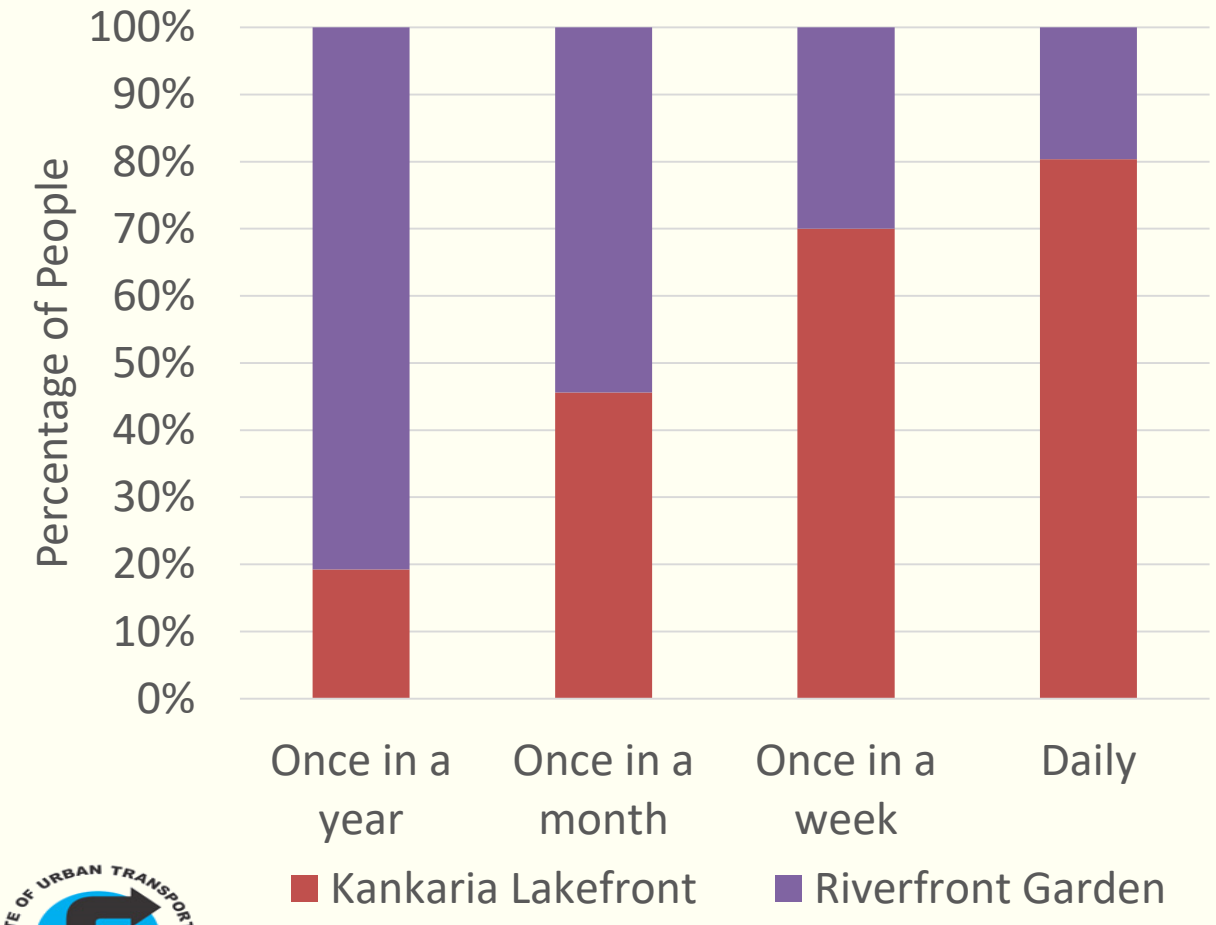
SAMPLING


PUBLIC SPACE USER SURVEY
Kankaria
Total Samples: 200
Morning Time slot: 6 a.m. – 8 a.m.
Evening Time slot: 5 p.m. – 7 p.m.
Shahibaug
Total Samples: 200
Morning Time slot: 6 a.m. – 8 a.m.
Evening Time slot: 5 p.m. – 7 p.m.
Weekdays
Weekends
Weekdays
Weekends
Sample Size: 90
Sample Size: 110
Sample Size: 90
Sample Size: 110

ASSESSING ACCESSIBILITY

Transportation Demand and Activity

Frequency of Visit

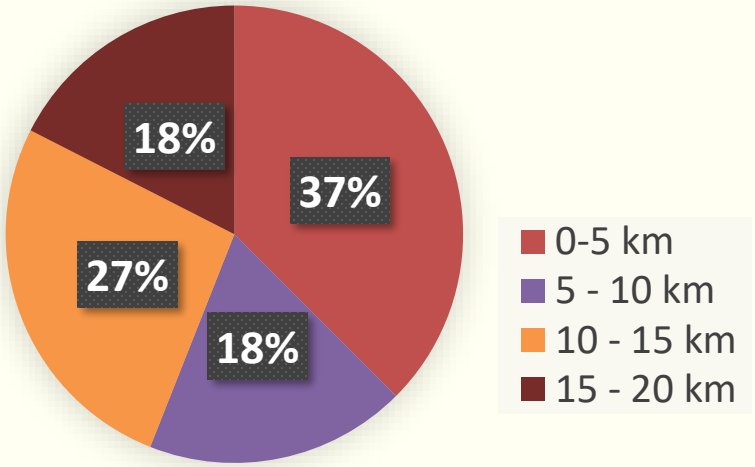


Origin

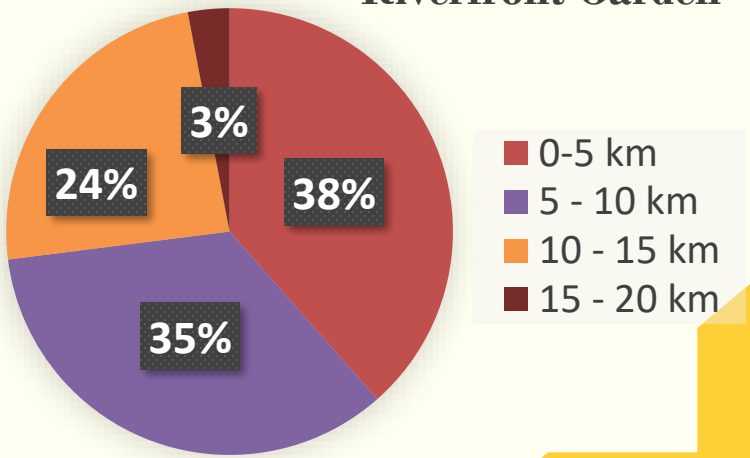
Distance (km)

Destination

Kankaria Lakefront



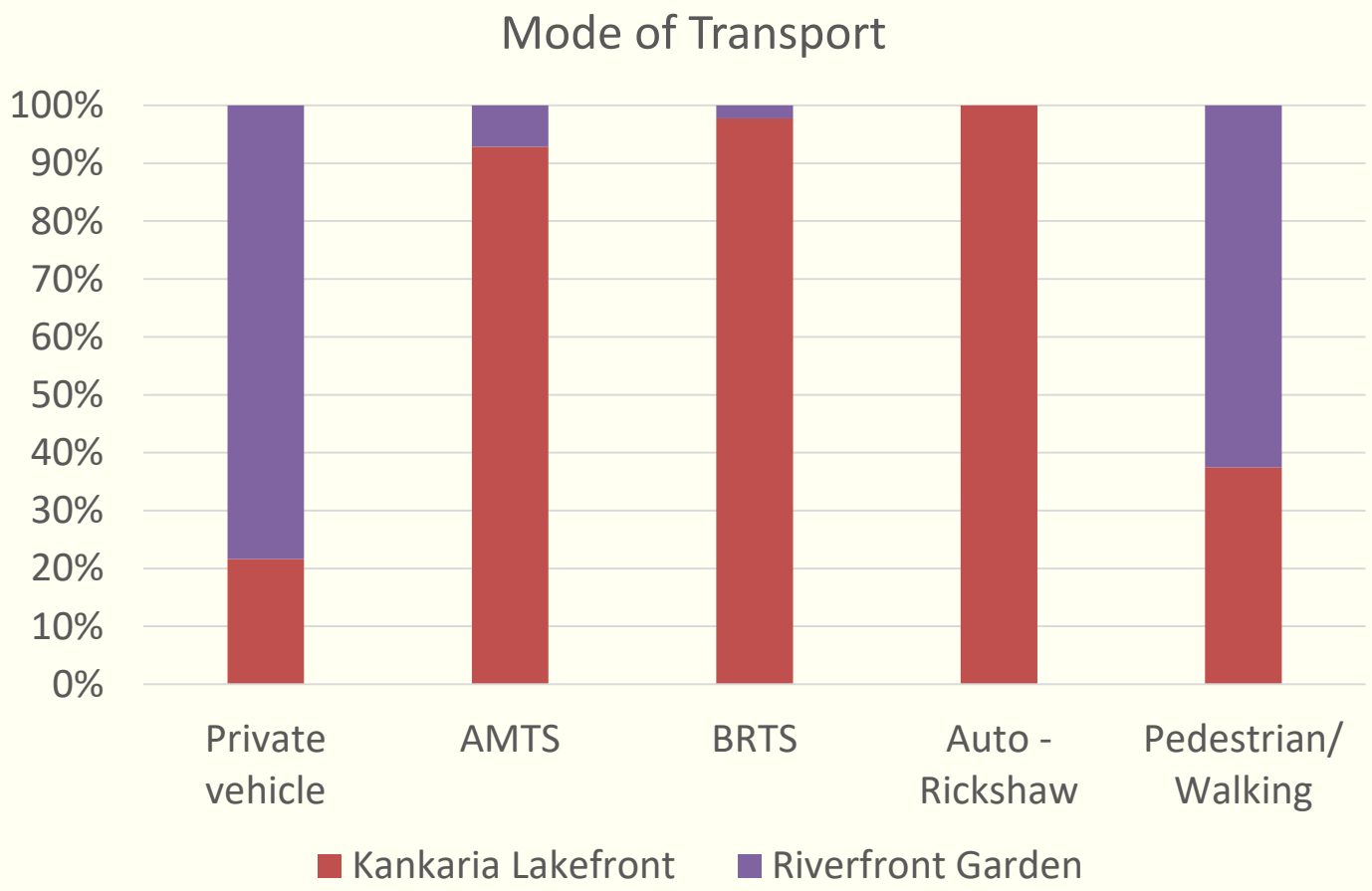
Riverfront Garden



Source: Primary Survey

ASSESSING ACCESSIBILITY

Transportation Options



Kankaria Lakefront Riverfront Garden

BRTS

AMTS

Para - transit

Private Vehicle

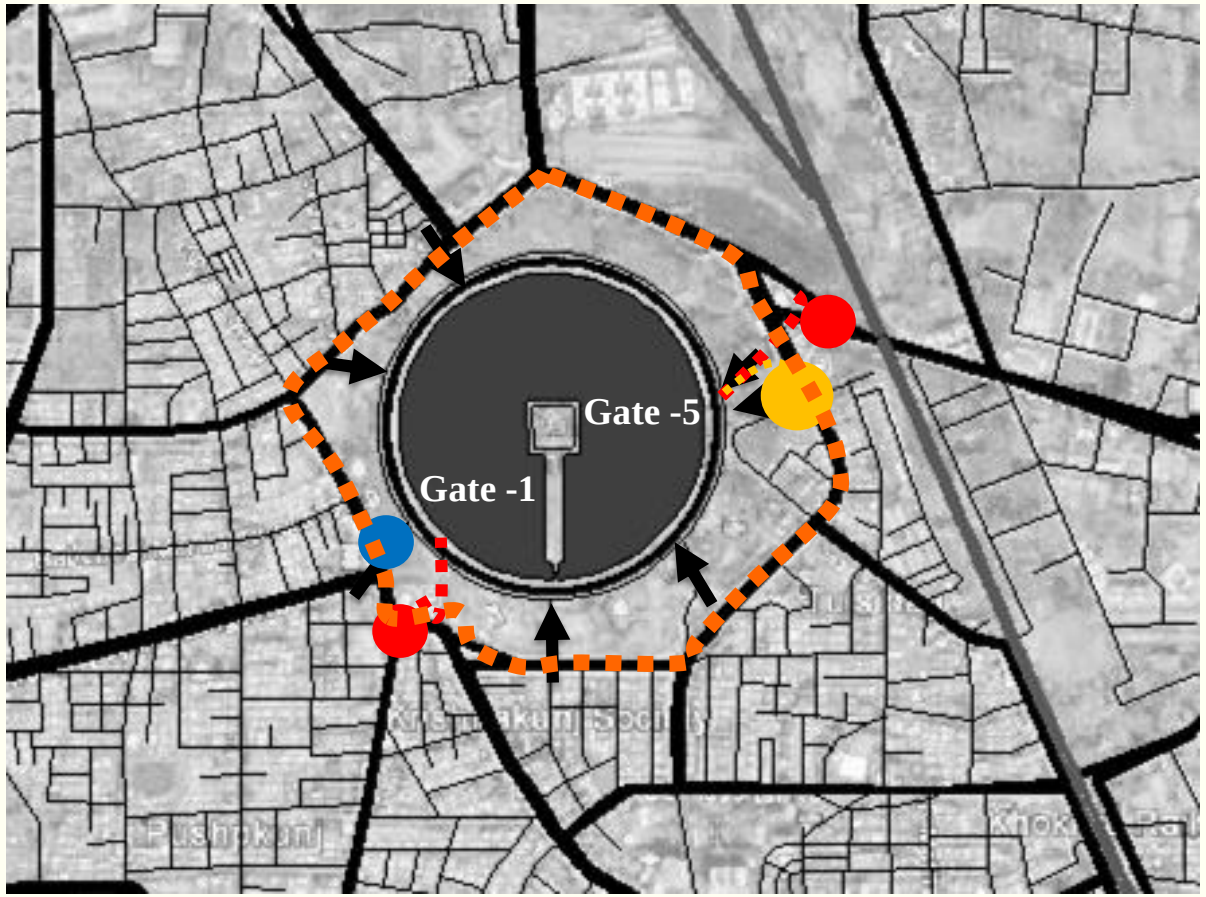
NMT

Limited transportation options act as barriers to access the space.

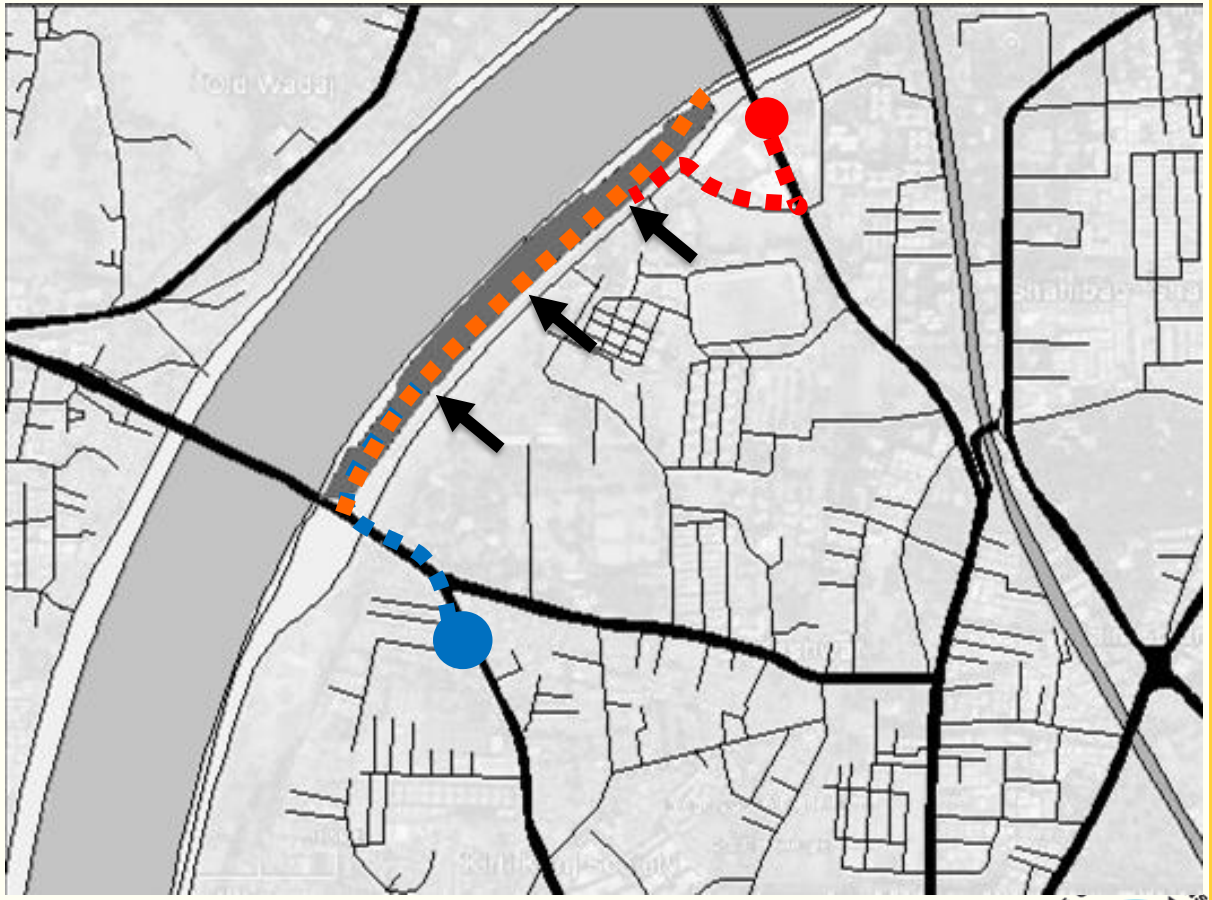
Source: Primary Survey

ASSESSING ACCESSIBILITY
Integration

Kankaria Lakefront



Riverfront Garden



AMTS Stop — Gate
BRTS Stop — Gate
Auto Stand — Gate
Pedestrian Path — Gate

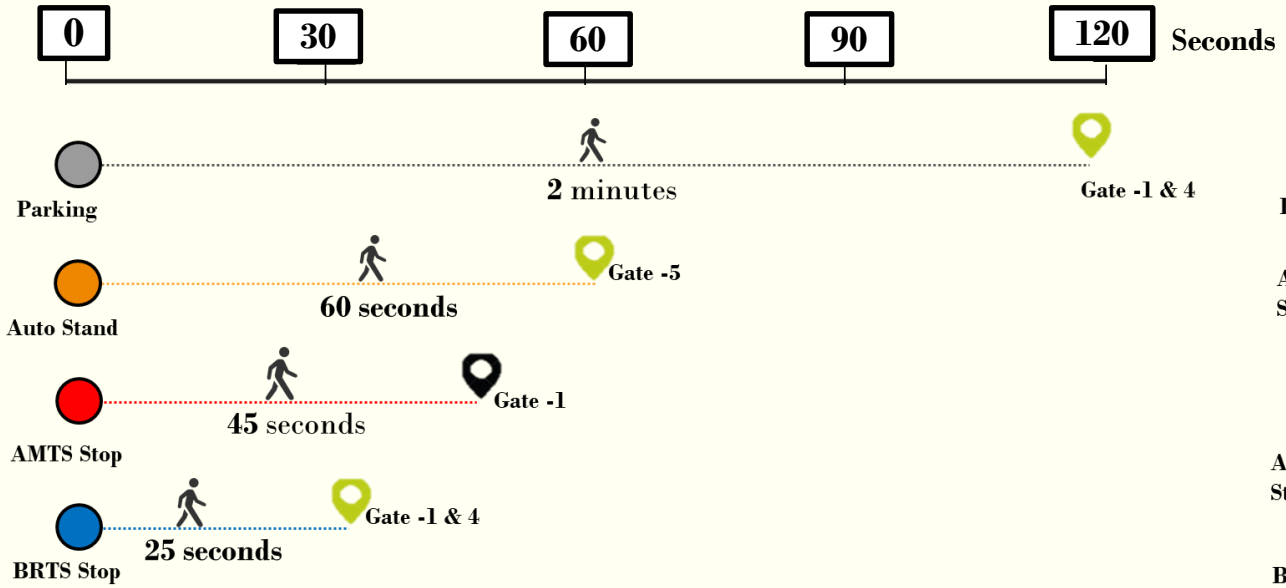
Source: Primary Survey

ASSESSING ACCESSIBILITY

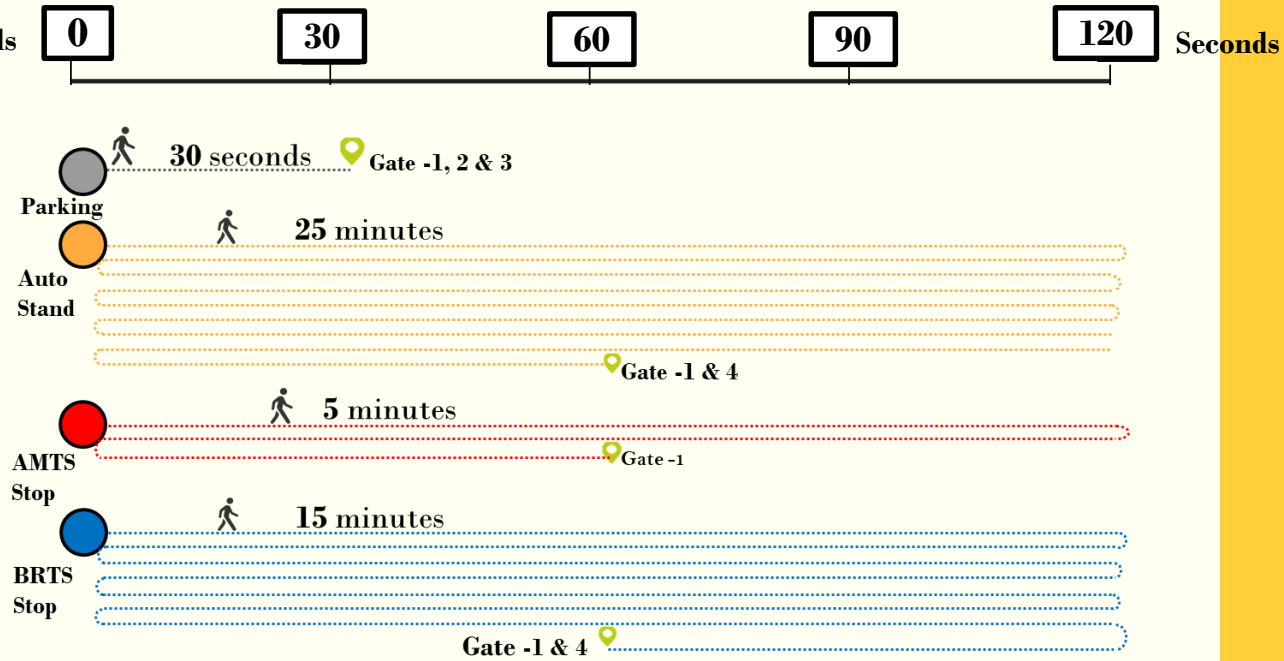
Integration

Time taken to access nearest entry points of the space from different transportation stops.

Kankaria Lakefront



Riverfront Garden



Lack in integration of different **transport systems** of the city, creates conflicts for accessibility.

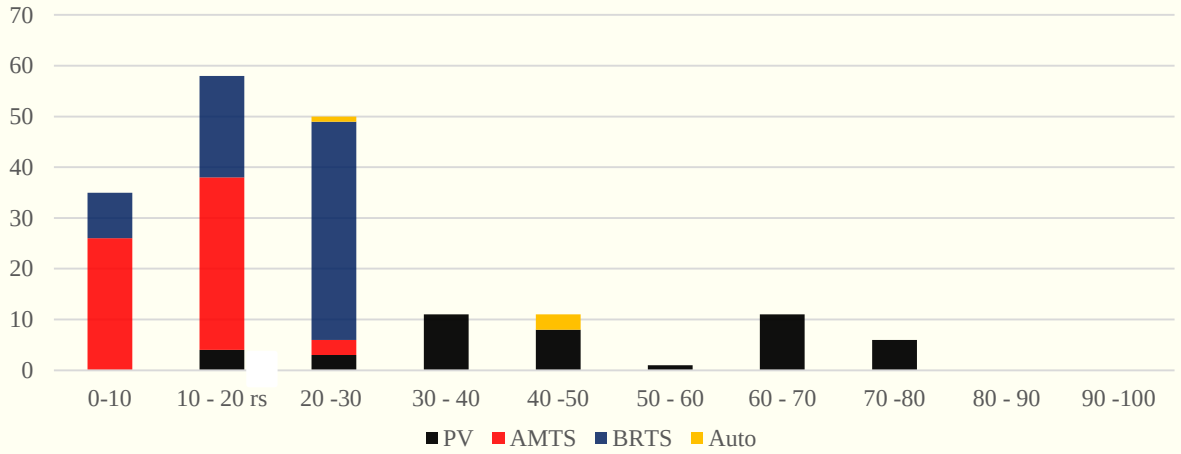
Source: Primary Survey

ASSESSING ACCESSIBILITY

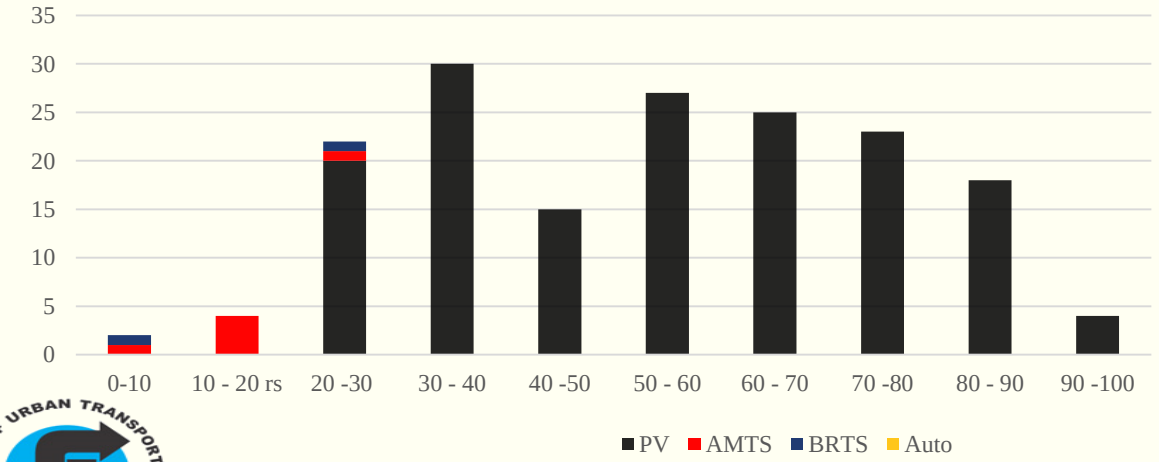
Affordability & Transport Network

Affordability

Kankaria Lakefront

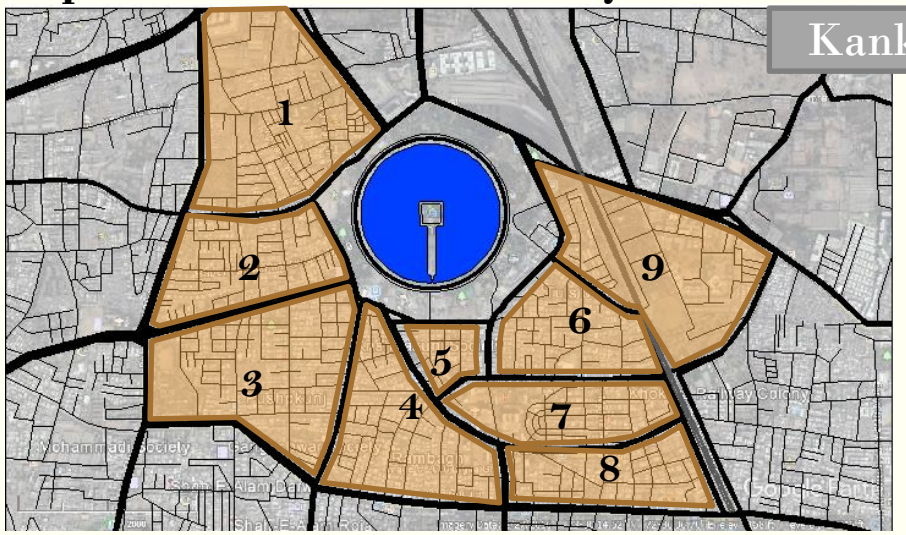


Riverfront Garden



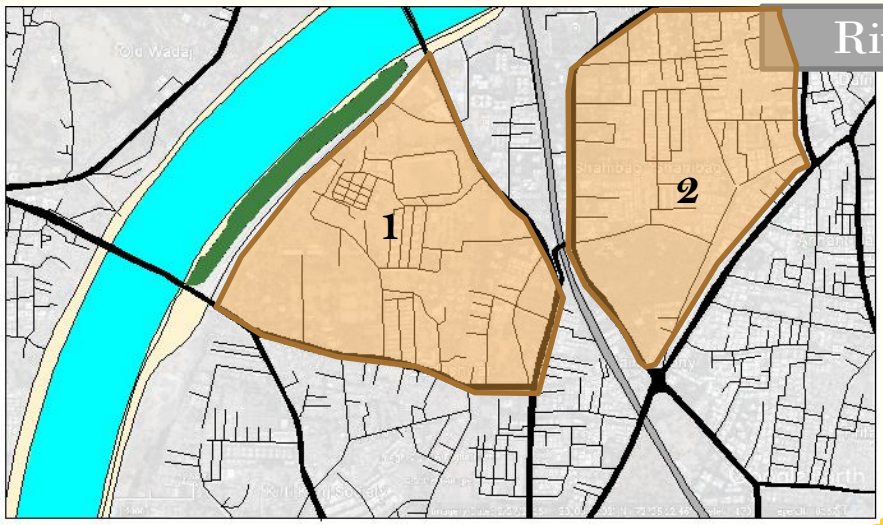
Source: Primary Survey

Transport Network & Connectivity



Number of Blocks within 1 km = 9

Block Size = 700 x 800 (m)



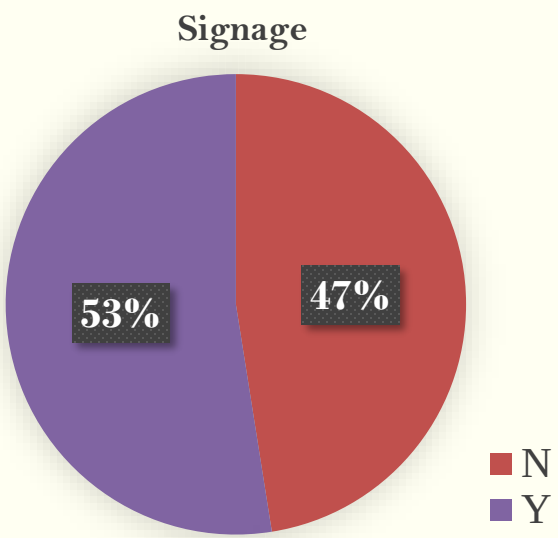
Number of Blocks within 1 km = 2

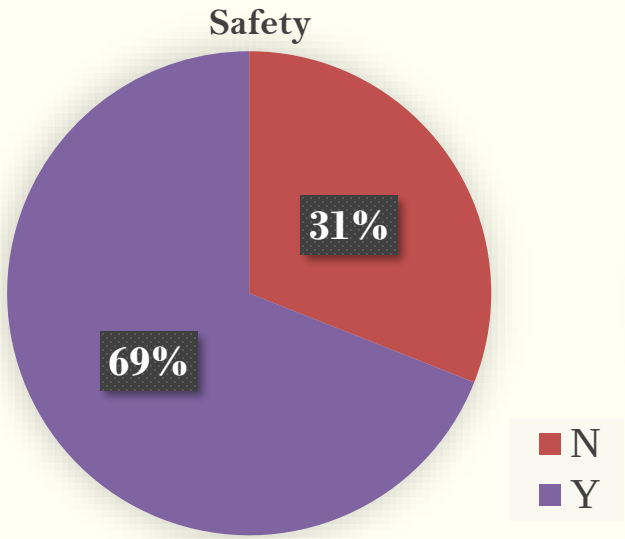
Block Size = 1100 x 800 (m)

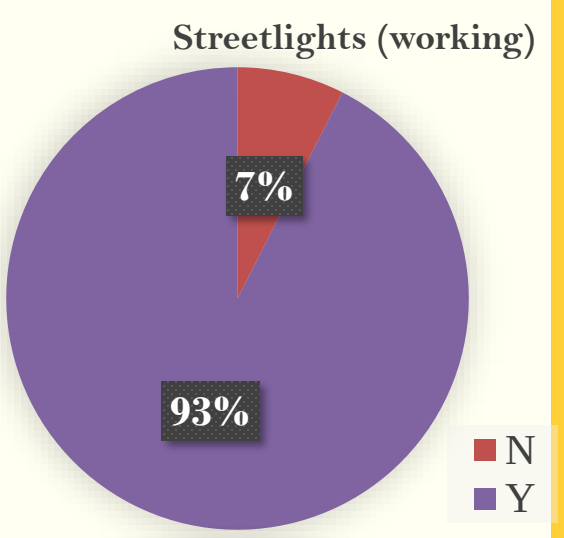
ASSESSING ACCESSIBILITY

User Information

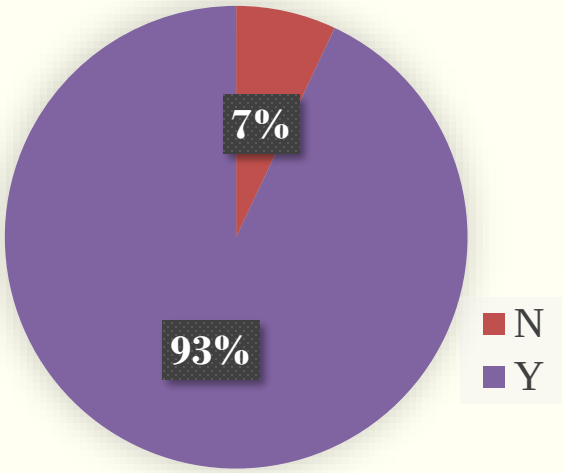
Kankaria Lakefront

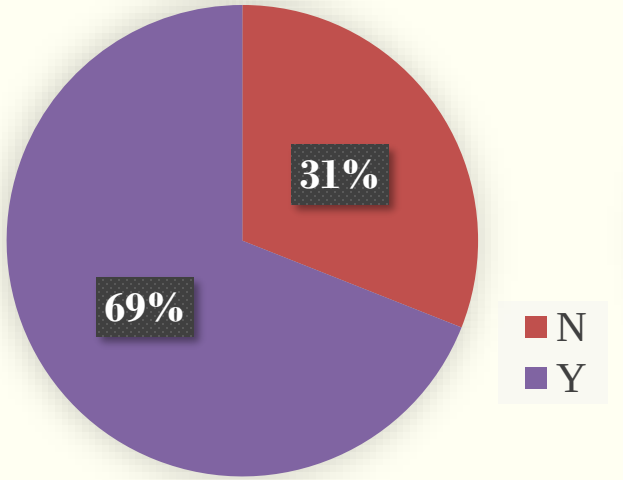


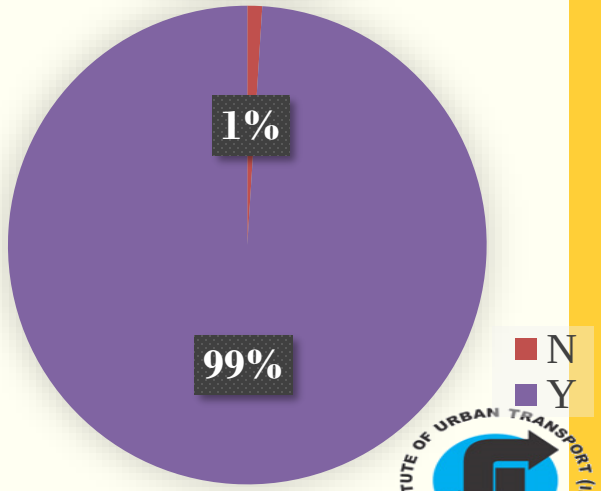




Riverfront Garden







N - No Y -Yes

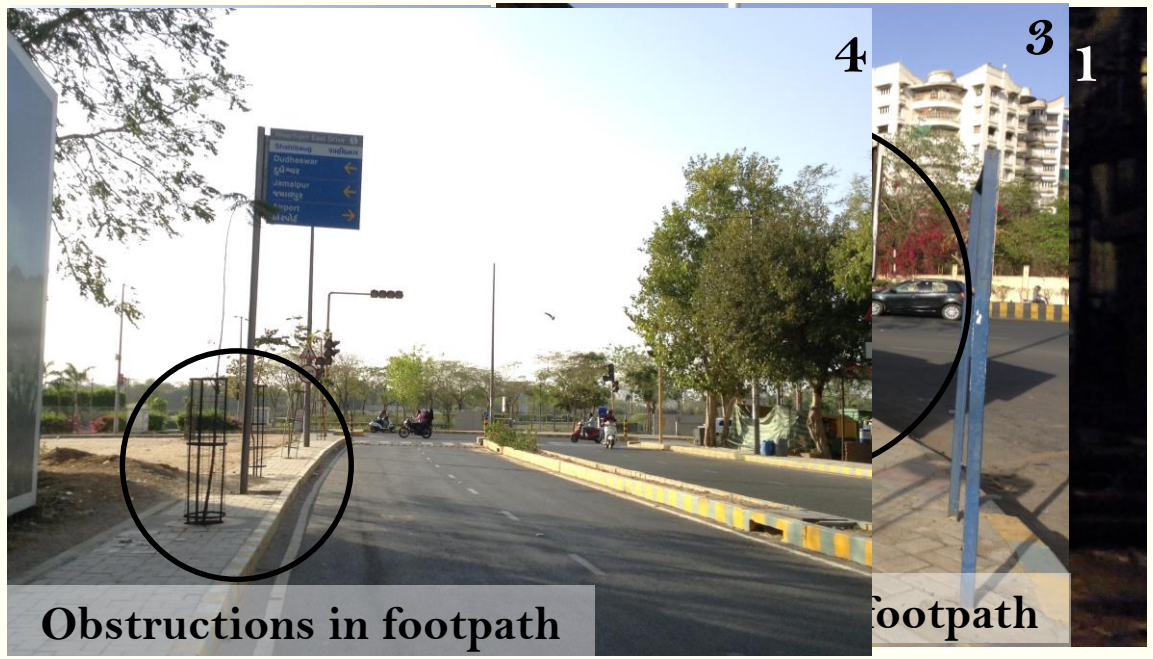
Source: Primary Survey

UNDERSTANDING ACCESSIBILITY
Prioritization

Kankaria Lakefront

Built form on the footpath

Riverfront Garden



Obstructions in footpath

Non-availability of accurate **user information** like signages, routes, timing and fares affects the decision making.

Larger block sizes, uncondensed road network and discontinuous access paths, decreases walkability and forces people to rethink upon using NMT or PT.

Source: Primary Survey

KEY TAKEAWAYS

CONCLUSION

Factors	Kankaria Lakefront	Riverfront Garden
Transport Demand & Activity		
Transport Options		
User Information		
Integration		
Affordability		
Transport Network Connectivity		
Prioritization		

User

Accessibility

Inaccessibility

Kankaria Lakefront is more accessible than Riverfront Garden.

INFERENCES

- Availability of limited transport options at the destination also **limits the diversity of user groups** that can access the space**.**
- **Un-availability of quality public transport services and system** not only at the destination but origin as well, acts as a deciding factor for the users while making mode choices. Thus a strong, integrated and quality network of public transport throughout the city can attract more users to depend on public transport facilities comfortably.
- Riverfront gardens are perfect example of spaces in a city where continuous efforts are being made to **increase automobility and not accessibility**.
- Justice is not being provided to the developed public spaces as they **lack in optimum utilization**, for all types of users are not able to access it.

It can be concluded that a **great public space** with a strong **public transport network** can give an impressive image to the city along with providing quality life to its residents.

THANK YOU