

Mastering Mobility: How walkable and bicycle-friendly is your city?

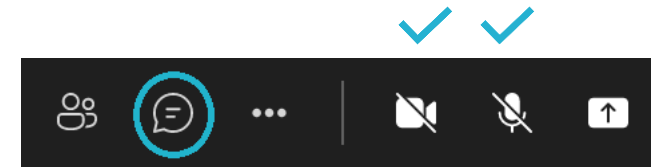
Learn to conduct a diagnosis of active mobility

March 24, 2022

Some General Notes on this Session



Make sure you are muted and your camera is turned off



This session will be recorded. You will not appear in the recording if your camera is kept off



Include your questions in the chat, we will pose them in the Q&A at the end of the session



Please introduce yourself in the chat (Name, organization, city)

MobiliseYourCity - a truly global Partnership with members on 4 continents

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On behalf of:
Federal Ministry
for the Environment, Nature Conservation
and Nuclear Safety

of the Federal Republic of Germany



MINISTÈRE
DE LA TRANSITION
ÉCOLOGIQUE
*Liberté
Égalité
Fraternité*





Contents

- 1 Intro: Active Transport Diagnosis (25')
- 2 Diagnosis Tools + Activity (40')
- 3 Case Studies of Using Diagnosis (20')
- 4 Conclusion / Discussion (5')

Objectives of the session

After participating in this webinar, you should be able to:

- Understand the importance of diagnosing active transport as part of sustainable mobility planning
- Diagnose active transport modes, using different data sources, data types, and at different scales
- Apply the results of diagnosis to active transport planning and broader urban planning efforts

Speakers



Jacob Mason
ITDP Global



Ghani Antasaputra
ITDP Indonesia



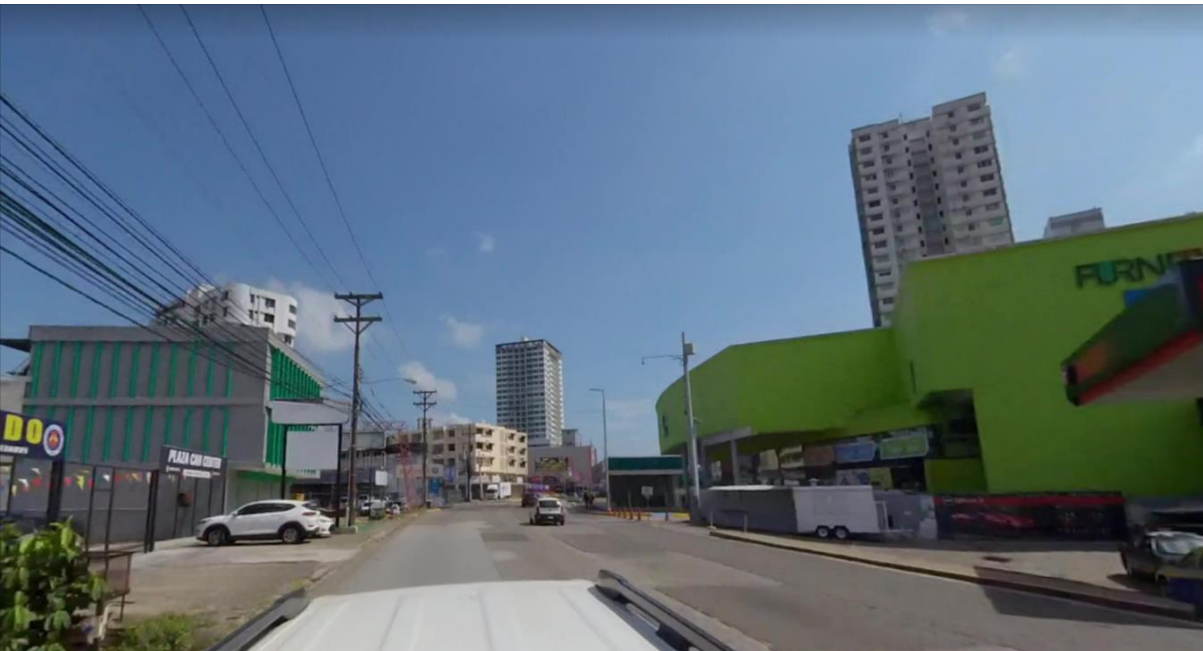
Regatu Solomon
ITDP Africa

Introduction

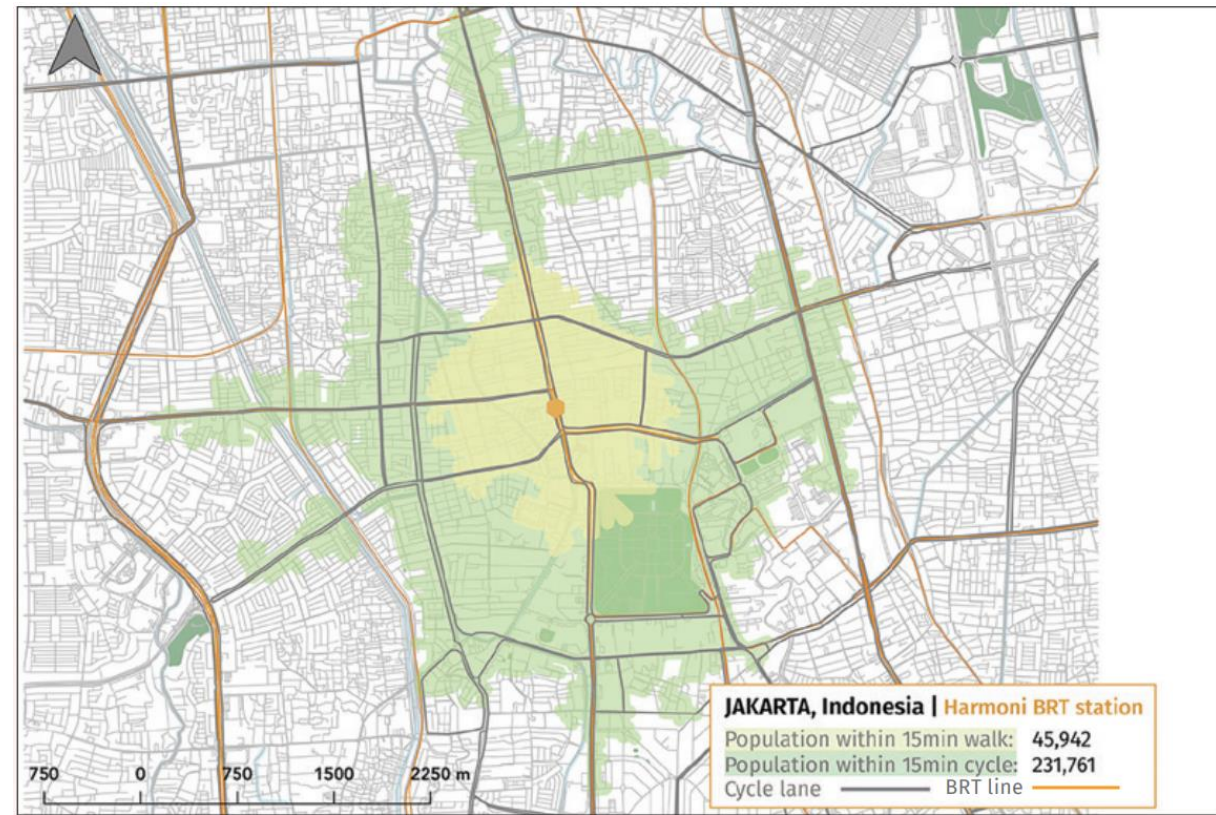
Why do we need active transport diagnosis tools, and how can they inform SUMPs?

1

Walking and cycling are vital to an integrated transport system



Metro station in Panama lacks usable sidewalks and cycle lanes
Source Google Streetview



Walking and cycling are low-cost extensions of public transport
Source ITDP

Walking & cycling are vital to the transport system



Old footpaths in Pune. Source ITDP



Improved footpaths in Pune. Source ITDP

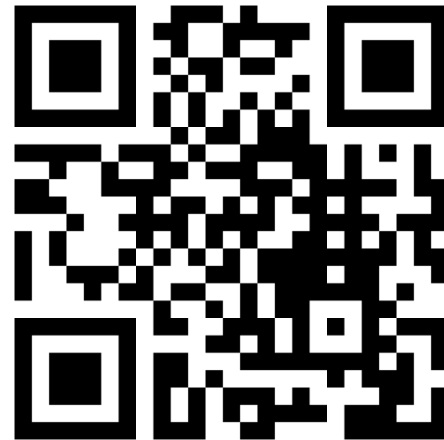
You can't figure out where to go, if you don't know where you are.



Street scene near the CBD Nairobi, Kenya
Source: ITDP

What percent of trips in your city are made by walking?

<https://www.menti.com/gprri3xpfc>



What percent of trips in your city include walking?

<https://www.menti.com/gprri3xpfc>



Diagnosis can draw attention to walking and cycling and their importance



Lack of sidewalks and cycle paths Ahmedabad, India. Source: Google Streetview

Ahmedabad, India

Partner city

Status of the project: ongoing technical assistance



Basic Information

Urban area: 1,866 km²

Population: 7,800,000 | Growth rate: 2.54%

GDP per capita: USD 2,771

Modal Share:

(Source: Metro DPR)

Formal public transport: 11.4%

Informal public transport: 6.1%

Walking: 37.2%

Cycling: 9.1%

Private cars: 3.9%

Private motorbikes or 2-wheelers: 25.9%

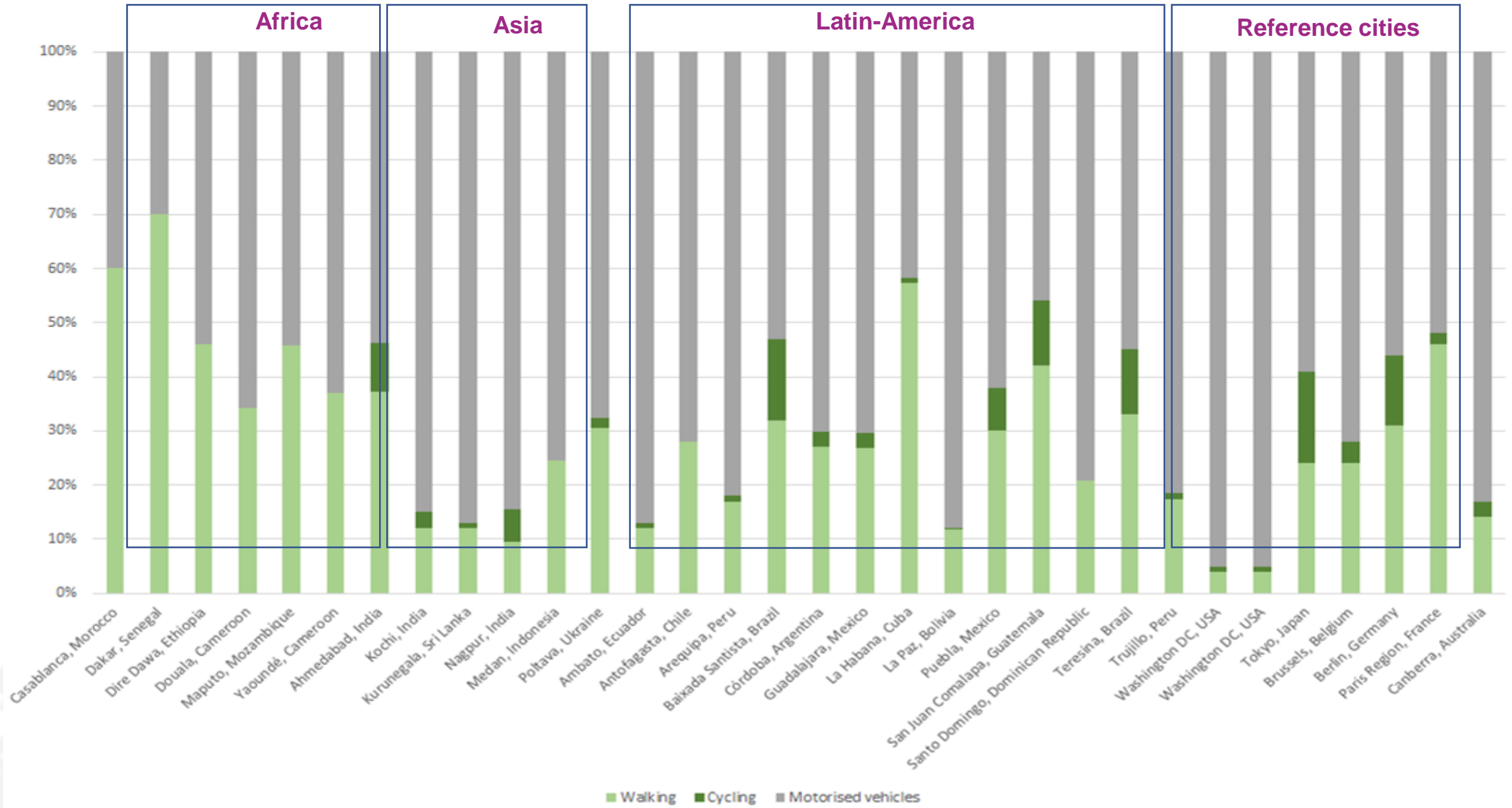
Other: 6.3%

National GHG emissions per capita: 2.41 (tCO₂eq)

Exposure to climate change: MEDIUM

Region capital city

MYC Fact sheet for Ahmedabad, India.
Source: Mobilise Your City



Diagnosis can show new perspectives of a problem



Pedestrian bridge in Erode, India.
Source ITDP

Diagnosis can show issues that are not always evident



15 minutes: direct path vs on the street network in Washington, DC

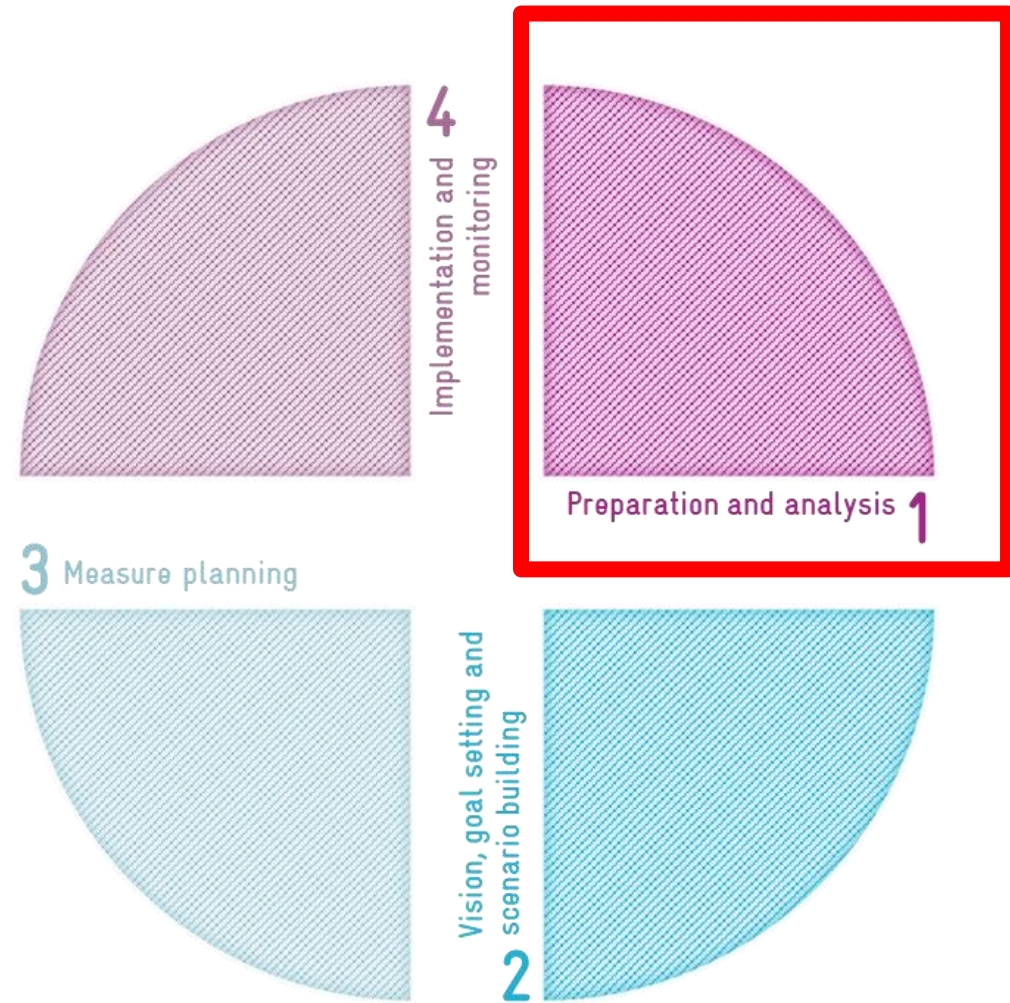
Source: [PlanItMetro](#)

Data collection is also a chance to engage and build trust with people which can lead to better plans and SUMP's



Household survey in Nashik, India. Source ITDP

Diagnosis is the first step to creating a SUMP



SUMP Toolkit

Annotated Outline for Sustainable Urban Mobility Plans (SUMP)

SUMP development guidance resources for developing and transition countries

Walking and Cycling diagnosis are essential to creating effective SUMP

3.5 Mobility and transport

Description of the local and regional transport network (road, public transport lines, parking facilities, cycling network etc.).

3.5.3 Active Mobility

Walking and Cycling:

Including an inventory of main routes/passages for pedestrians/NMT (location, quality of infrastructure) in relation with pedestrian/NMT flows

Results of walkability study and non-motorised transport surveys:

Including analysis of historic and current use as well as potential/ easiness of walking and cycling



New metro station in Panama lacks usable sidewalks and cycle lane. Source Google Streetview

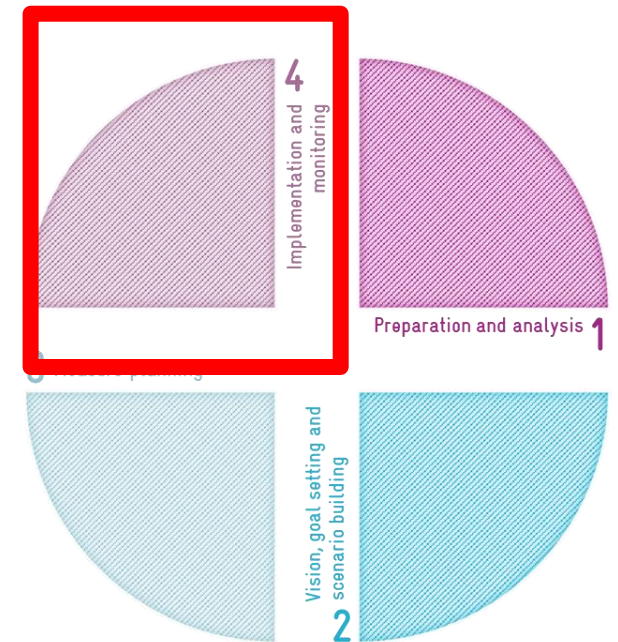
Diagnosis helps establish a baseline

- What works well?
- What does not work well?

Basic element 10. Analysis of the status (baseline analysis) of the transport system (Template)

Functions/ Transport mode	Modal share	Quality of infra- structur e	Safety and liveability	Environmen t and health	Equitable accessibility	Status of measure implementation	Main recommen dations
Walking	12%	<i>Poor</i>	<i>Many accidents on road crossings near schools</i>	<i>Less and less pupils walking to school</i>	<i>Some areas lack walkable access to parks and sports facilities</i>	<i>Low activity. New "walk to school" campaign</i>	<i>Traffic safety measures are needed</i>
Cycling	7%						

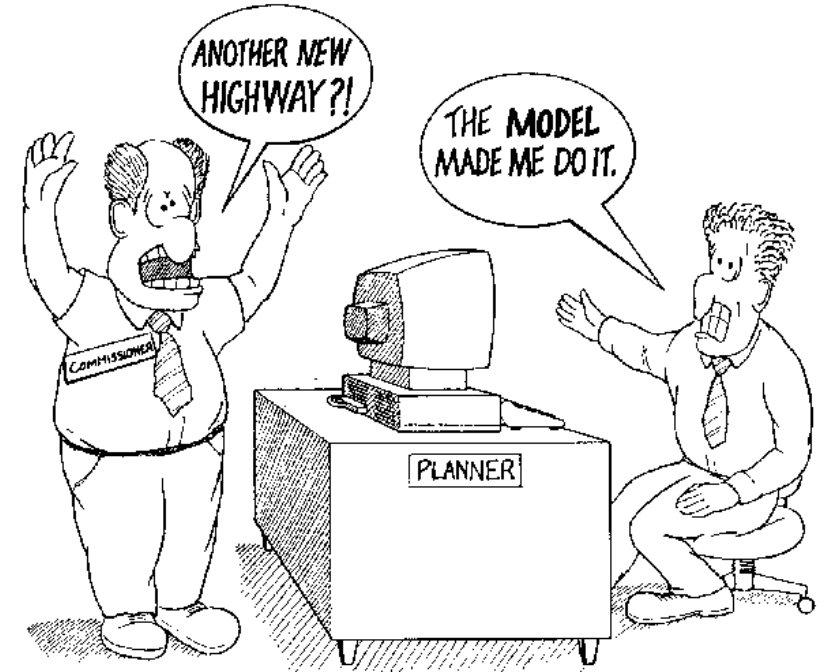
Also to set targets and monitor and evaluate progress towards those targets that should be in SUMP's



Data can fit into the 4-Step Model

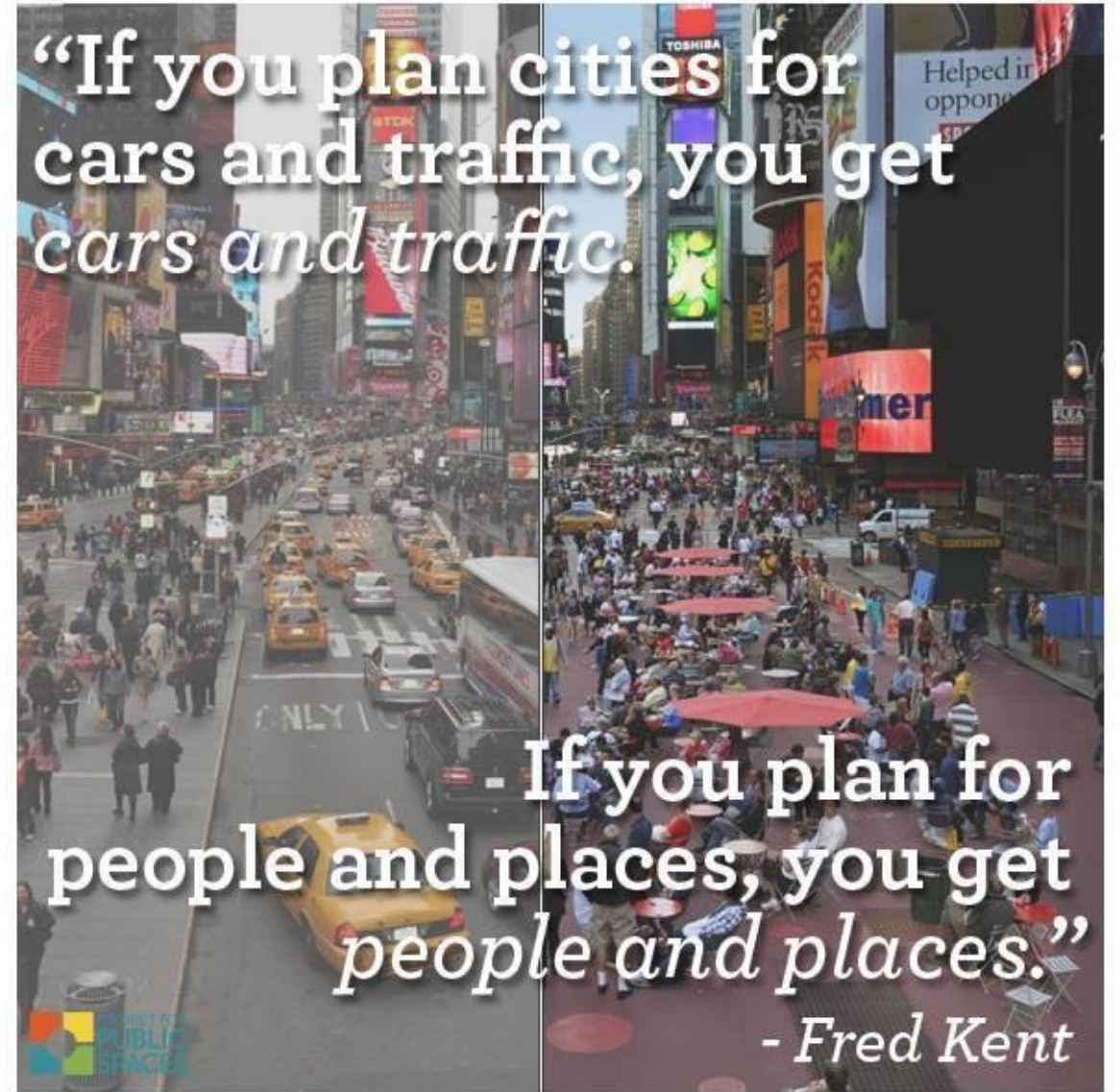
BUT:

- Model must include walking and cycling explicitly
- Setting good goals is critical (Access, not speed)
- Model must be careful about the size of zones to show impact of walking - zones often are too large and the model does not look at local trips
- Pro-car assumptions can be self-fulfilling prophecies



Source: <https://www.edthefed.com/>

You get what you
diagnose and plan for



Source: Project for Public Spaces

Why is diagnosis not done for walking/cycling?

- **TIME:** Time-intensive data collection / limited staff resources
- **MONEY:** Expensive data collection / lack of money for them
- **SUPPORT:** Not enough value placed on diagnosis or aspects of diagnosis
- **RESTRICTIONS:** Some governance related restrictions may prevent diagnosis efforts
- **BIASES** in existing tools

Diagnostic tools can help overcome those challenges

- Make existing work more comprehensive
- Get new data quickly from open sources
- Visualize data
- Understand and quickly collect important data on walking and cycling

Tools exist to bridge that gap - some you already use and some that are new

- Surveys (online / digital, mail, interviews, census, Household surveys, focus groups)
- Traffic Counts (Automated, manual)
- Big Data (phones, social media)
- Spatial data

Putting the data to use

- Incorporating into SUMP's and local area planning
- Fixing problems, finding solutions,
- Building political will
- Understanding constituency needs

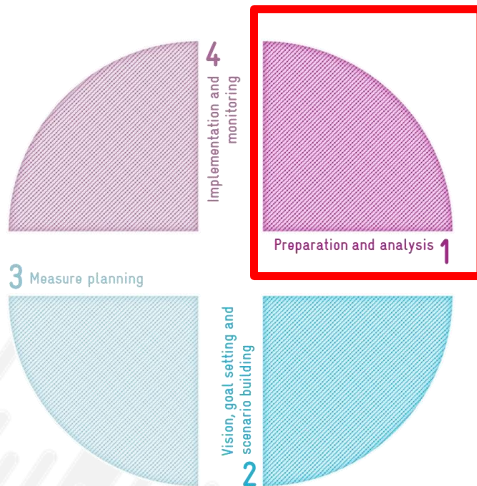
Diagnosis Tools

Walking and Cycling are Fundamental to sustainable transport

2

Mode Share Data

- Collect as part of citywide household surveys
- Must include explicit questions on walking and cycling



Follows a very similar approach to developing SUMP



Surveyors conducting household survey in Nashik, India
Source: ITDP

Mode Share Data

- Trips often include multiple modes, including walking
- Hard to remember exact distances, so times may be more important
- Hard to remember trips from more than a few days earlier
- Trips can be chained together, so it's important to ask for a full day of trips.

FORM 2: HOUSEHOLD MEMBER INFORMATION

Interviewer: _____ Household ID: _____

Instruction : To be completed by an adult in the household, for each of the member of the household whose travel patterns are known

Household Member #: (circle one) - 2 - 3 - 4 - 5 - 6 - 7 - Age _____ Sex _____

Travel information: Please ask whether the trips listed below refer the last week day trip or normally what the person's trips look like in

Trip No.	Purpose of the Trip (circle one) W - go to Work M - go to Market S - go to School F - meet Friends H - go back Home O - Other	What time did you leave?	Where did you start the trip? (area name)	Where did you go? (area name)	STAGE #	What mode did you use for each stage? (circle one)				How many minutes?		How far did you travel for each stage? (circle m or km)	Public transport: How much did you pay? (local currency)			
						W - Walk	C - Cycle	B - Bus	AR - Auto Rickshaw	2 - 2 wheeler	4 - 4 wheeler			waiting (public transport)	traveling	
EXAMPLE TRIP	<input checked="" type="radio"/> W M <input type="radio"/> S F <input type="radio"/> H <input type="radio"/> O _____	Time 630 <input checked="" type="checkbox"/> am <input type="checkbox"/> pm	Govind Nagar	Panchvati	1	<input checked="" type="radio"/> W	C	B	<input checked="" type="radio"/> AR	2	4	3		150 <input checked="" type="radio"/> m km		
					2	W	C	B	<input checked="" type="radio"/> AR	2	4	5	2	1	<input checked="" type="radio"/> m km	15
					3	W	C	<input checked="" type="radio"/> B	AR	2	4	45	5	10	<input checked="" type="radio"/> m km	35
					4	<input checked="" type="radio"/> W	C	B	AR	2	4	3		100	<input checked="" type="radio"/> m km	
					5	W	C	B	AR	2	4				<input type="radio"/> m km	
1	<input type="radio"/> W M <input type="radio"/> S F <input type="radio"/> H	Time _____ <input type="checkbox"/> am			1	W	C	B	AR	2	4			m km		
					2	W	C	B	AR	2	4			m km		
					3	W	C	B	AR	2	4			m km		

Survey form developed by ITDP
Source: ITDP

Mode Share Data



- Good opportunity to collect qualitative data on perceptions of conditions for walking and cycling

FORM 3: ADDITIONAL QUESTIONS

Interviewer: Date:

*The form shall be administered firstly to the main respondent in the household.
If other members of the households would want to answer separately, repeat the process afterwards.*

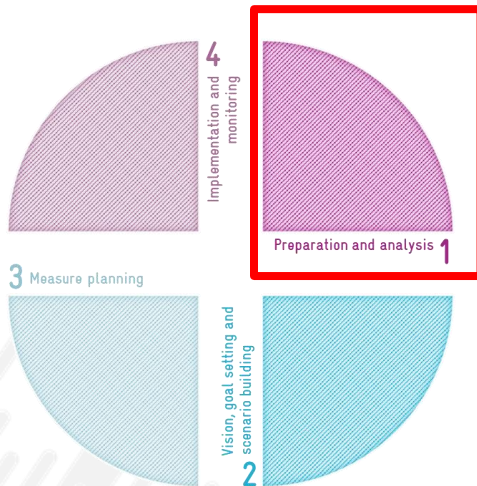
Question 1: What are your attitudes about transportation in your city ? (read out the choices - circle the response)

	 strongly disagree		 neutral	
a The streets in my area have usable footpaths.	1	2	3	4
b I feel safe walking in my area.	1	2	3	4
c It is easy for me to reach places by walking.	1	2	3	4
d The streets in my area are shaded and pleasant.	1	2	3	4
e I feel safe crossing the street.	1	2	3	4
f Only poor people bicycle in my area.	1	2	3	4
g I feel safe bicycling.	1	2	3	4
h Secure bicycle parking is available in my area.	1	2	3	4
i It is easy for me to reach many places by bicycle.	1	2	3	4
j Public transport access was important factor in choosing where my family lives.	1	2	3	4

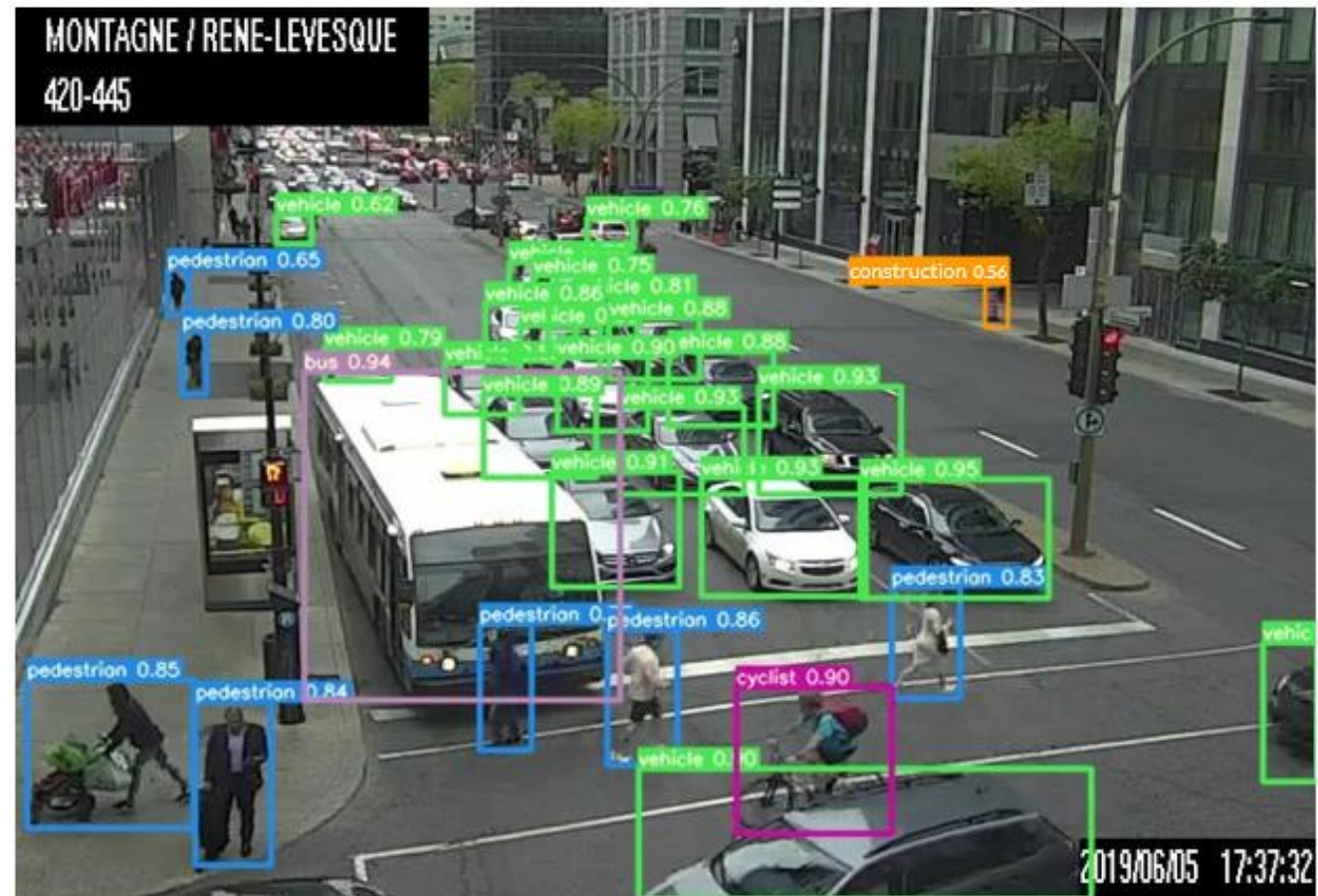
Survey form developed by ITDP
Source: ITDP

Traffic Counts

- Gain understanding of walk & bicycle volumes
- New technologies may reduce costs & time



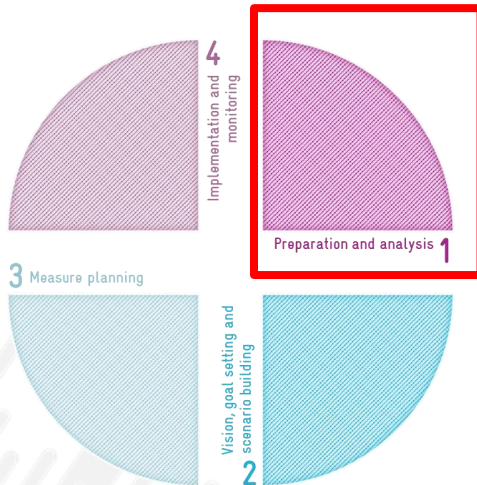
Follows a very similar approach to developing SUMP



Automatic pedestrian and bicycle detection in Montreal, Canada
Source: Jean-Sébastien Grondin in [Towards Data Science](#)

Focus Group Discussion

- Gain qualitative information
- Include voices that are harder to reach in big surveys



Follows a very similar approach to developing SUMP



Group discussion in Mexico City
Source: ITDP

Citywide Measurements



Can help with analysis, goal setting and measure planning for SUMPs



Institute for Transportation & Development Policy

PEDESTRIANS FIRST

TOOLS FOR A WALKABLE CITY

Pedestrians First measures walkability for babies, toddlers, their caregivers, and everyone in cities.

VIEW CITY MEASUREMENTS

See maps and measurements of walkability for cities around the world.

[About](#) [GO →](#)

MEASURE INCLUSIVE TRANSIT

Assess the inclusivity of a transit system. Transit connects neighborhoods.

[About](#) [GO →](#)

EXAMINE A NEIGHBORHOOD

Use indicators to measure neighborhood walkability in detail.

[About](#) [GO →](#)

VISIT A STREET

Walk a street with a checklist of design solutions for walkability.

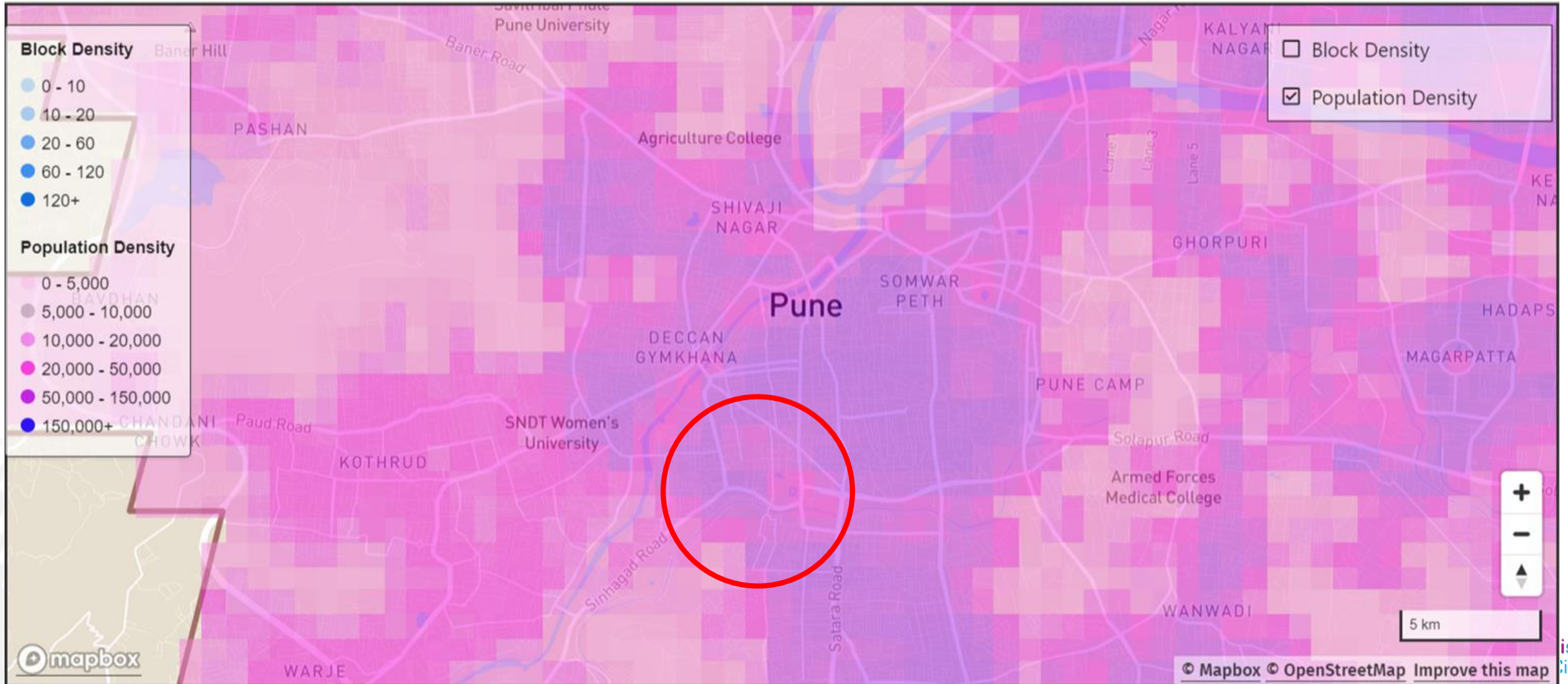
[About](#) [GO →](#)

Citywide Measurements

<https://pedestriansfirst.itdp.org/city-tool/step-1>

Weighted Population Density in Pune (Poona) [IND]:
The average resident lives in a neighborhood of 32,665 people per square kilometer.

32,665
Goal: 15,000 people or more per square kilometer

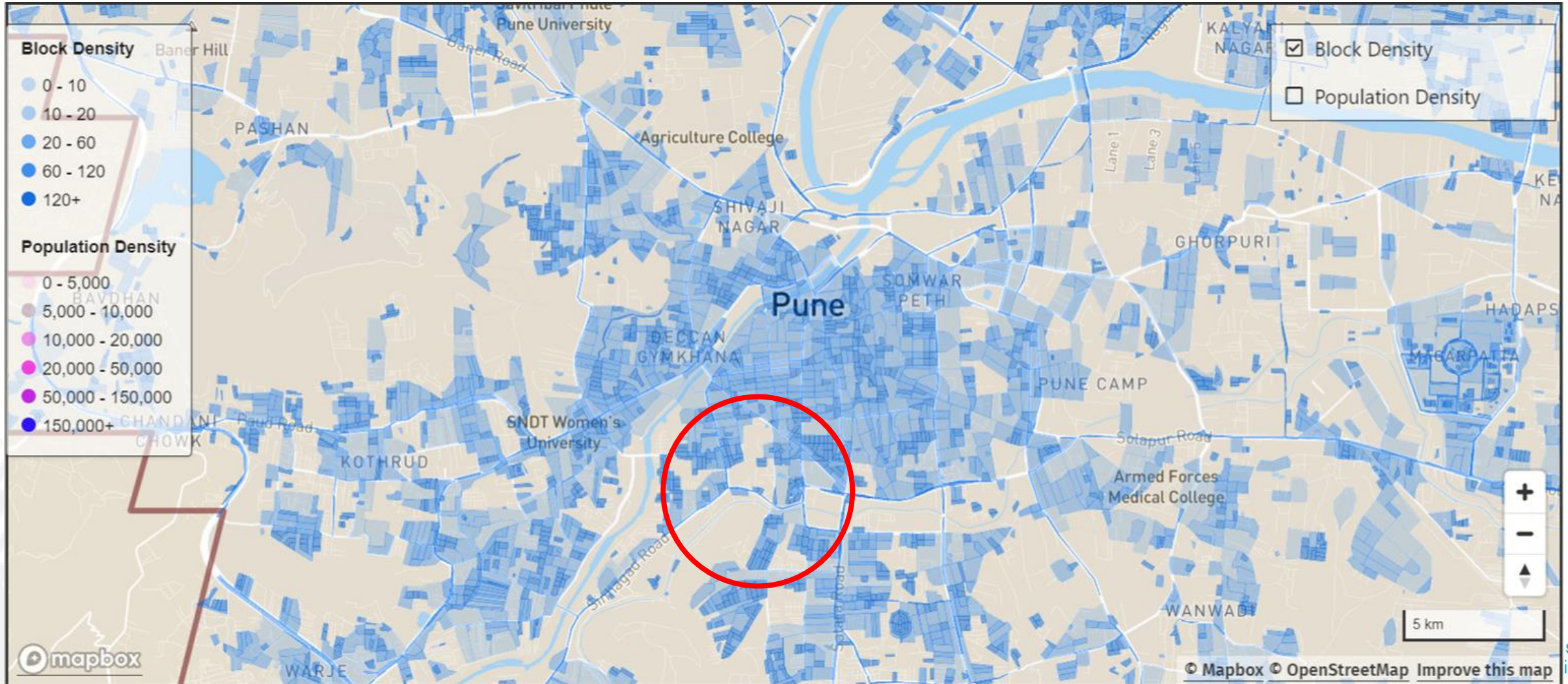


Citywide Measurements

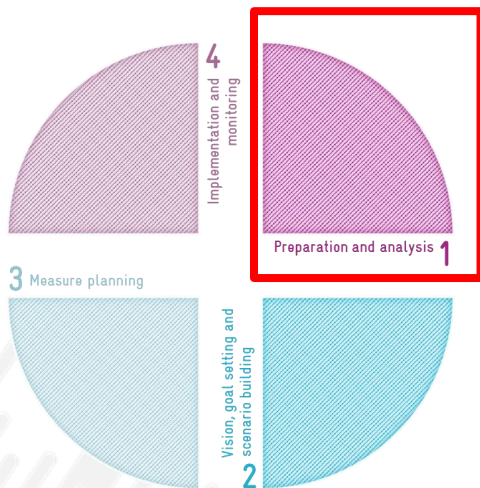
On average, there are 34 blocks per km² in Pune (Poona) [IND].



34 blocks per km²
Goal: 80 blocks per km² or more



Citywide Diagnosis



Overview

Take Action to Improve Cycling

City Assessment

Cycling is a powerful tool to improve transportation, increase access, and enhance the quality of life in cities around the world.

Action Plan

Metrics

Resources

Follows a very similar approach to developing SUMP

Overview

City Assessment

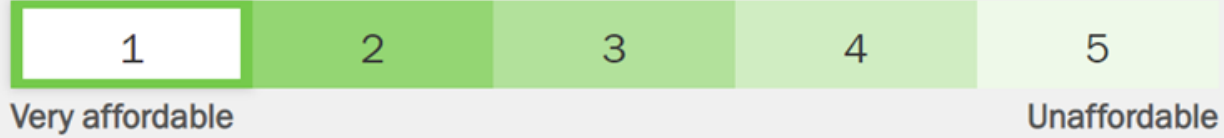
- Access
- Security
- Safety
- Awareness
- Physical Conditions
- Capacity
- Review Progress

Action Plan

Metrics

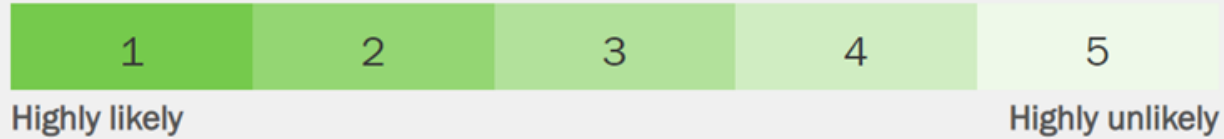
Resources

1. How would you describe bicycle access and affordability in test?

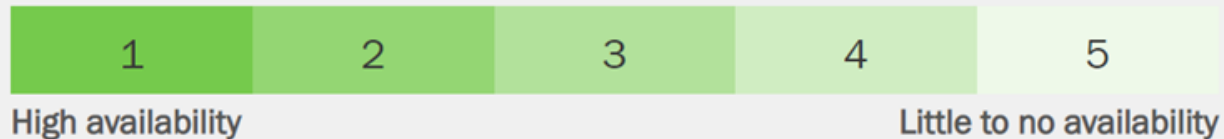


Range of bicycle types available, affordable and used bicycles are plentiful.

2. How likely is the average person to commute to work, school, or other daily destinations using a bicycle?



3. How would you describe the availability of bicycle retail, repair, and replacement parts locations?



Overview

City Assessment

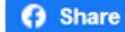
Action Plan

Metrics

Resources

Rapid Cycling Growth in Washington

Download as PDF



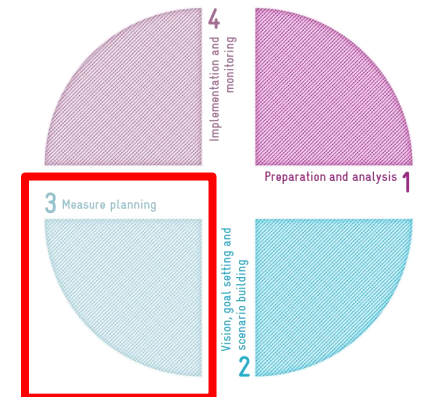
1. Connected network of bicycle infrastructure

Action Type: Infrastructure

- Install protected bicycle lanes and/or add protection to existing lanes
- Transition “quick build” or temporary cycle lanes to permanent design
- Ensure bicycle lanes connect with greenways, low-speed low-volume streets, and cycle highways to form a network throughout the city
- Ensure lanes are well-lit, well-maintained, and reflect city conditions

+ Read more

+ Resources



Follows a very similar approach to developing SUMP

Overview

City Assessment

Action Plan

Metrics

Resources

+ Goal: Increase Number and Diversity of People Cycling

+ Goal: Increase Access to Safe Cycling Infrastructure

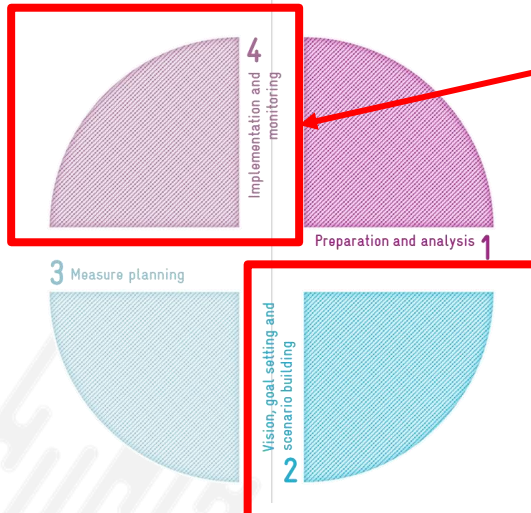
– Goal: Increase Access to Destinations

Indicators	Data sets needed	Collection details
Access to people by bicycle ^a	- Population - Road network	If access routes are restricted to streets with bicycle lanes, a geo-located bicycle lane shapefile will also be needed

^a Access to people is used as a proxy for access to destinations.

+ Goal: Reduce Single-Occupancy Vehicle Trips

+ Goal: Reduce Cyclist Fatalities and Severe Injuries



Follows a very similar approach to developing SUMP

- Overview
- City Assessment
- Action Plan
- Metrics
- Resources

+ Read more

+ Resources

Global Street Design Guide (NACTO)

Streets for Walking and Cycling (ITDP + UN Habitat)

Design Manual for Bicycle Traffic (CROW)

Share the Road: Design Guidelines for Non Motorised Transport in Africa (UNEP + FIA Foundation)



2. Reduce vehicle speeds

Action Type: Policy

- Establish and enforce low speed limits for vehicles
- Implement traffic-calming infrastructure for self-enforcement

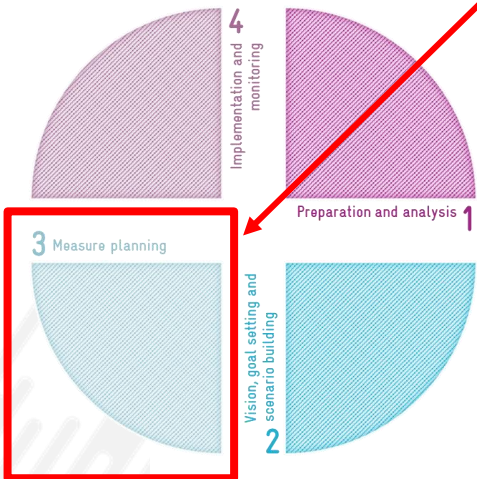
Impact:

Time:

Cost:

+ Read more

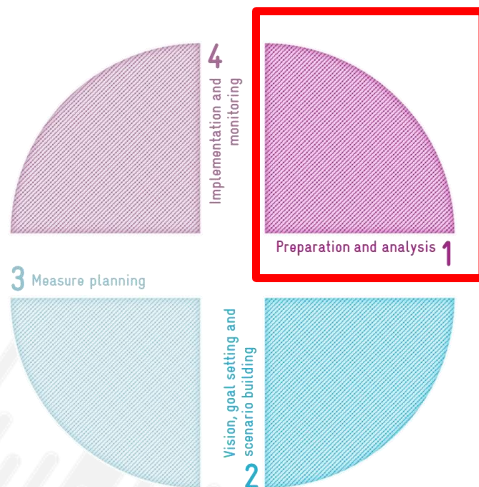
+ Resources



Follows a very similar approach to developing SUMP

Road Crash Data

- Data availability quality vary
- Cam highlight problem areas
- Must be used carefully



Directly related to activity 1 in developing SUMP



Location of road crashes in Kisumu, Kenya
Source: ITDP

TOD Data



ITDP'S PRINCIPLES OF URBAN DEVELOPMENT FOR TRANSPORT IN URBAN LIFE & TOD STANDARD KEY IMPLEMENTATION OBJECTIVES

WALK

DEVELOPING NEIGHBORHOODS THAT PROMOTE WALKING

- OBJECTIVE A.** The pedestrian realm is safe, complete, and accessible to all.
- OBJECTIVE B.** The pedestrian realm is active and vibrant.
- OBJECTIVE C.** The pedestrian realm is temperate and comfortable.

CYCLE

PRIORITIZE NONMOTORIZED TRANSPORT NETWORKS

- OBJECTIVE A.** The cycling network is safe and complete.
- OBJECTIVE B.** Cycle parking and storage is ample and secure.

CONNECT

CREATE DENSE NETWORKS OF STREETS AND PATHS

- OBJECTIVE A.** Walking and cycling routes are short, direct, and varied.
- OBJECTIVE B.** Walking and cycling routes are shorter than motor vehicle routes.

TRANSIT

LOCATE DEVELOPMENT NEAR HIGH-QUALITY PUBLIC TRANSPORT

- OBJECTIVE A.** High-quality transit is accessible by foot. (TOD Requirement)

MIX

PLAN FOR MIXED USES, INCOME, AND DEMOGRAPHICS

- OBJECTIVE A.** Opportunities and services are within a short walking distance of where people live and work, and the public space is activated over extended hours.
- OBJECTIVE B.** Diverse demographics and income ranges are included among local residents.

DENSIFY

OPTIMIZE DENSITY AND MATCH TRANSIT CAPACITY

- OBJECTIVE A.** High residential and job densities support high quality transit, local services, and public space activity.

COMPACT

CREATE REGIONS WITH SHORT TRANSIT COMMUTES

- OBJECTIVE A.** The development is in, or next to, an existing urban area.
- OBJECTIVE B.** Traveling through the city is convenient.

SHIFT

INCREASE MOBILITY BY REGULATING PARKING AND ROAD USE

- OBJECTIVE A.** The land occupied by motor vehicle is minimized.

10



WALK

measures support safety, independent mobility, universal & stroller access

VISUALLY ACTIVE FRONTAGE

SAFE, ALL ACCESSIBLE CROSSWALKS

SAFE, ALL ACCESSIBLE WALKWAYS

PHYSICALLY PERMEABLE FRONTAGE

SHADE AND SHELTER





WALK

Goal: 100% complete, all-accessible walkways



Sidewalks and crossings should be all-accessible in the pedestrian network like here in Guadalajara, Mexico



Follows a very similar approach to developing SUMP's

DATA SOURCES

Plans and designs; maps; up-to-date, high-definition aerial/satellite photography; site survey.

SCOPE

Within the development's boundaries and immediately adjacent within the public right of way.



WALKWAYS

Percentage of the walkway network that is complete:

100%	▶	3 POINTS
90% or more	▶	2 POINTS
80% or more	▶	1 POINTS
Less than 80%	▶	0 POINTS

EXERCISE

- Accessible Walkways
- Visually Active Frontage
- Physically Permeable Frontage
- Shade & Shelter

IN THE CHAT ENTER:
“+” followed by a positive observation

OR

“-” followed by a negative observation



CYCLE

measures encourage cycling amongst the caregivers (accompanied by kids) and among older children

SAFE AND COMPLETE CYCLEWAYS



CYCLE STORAGE AND PARKING

CYCLE

Goal: 100% buildings within 100m of safe cycle network



Follows a very similar approach to developing SUMP

DATA SOURCES

Plans and designs; maps; up-to-date aerial/satellite photography; local government transport data; site survey.



CYCLE NETWORK

100% of street and path segments are open and safe for cycling

2 POINTS

No building entrance is more than a 200 m walking distance from a safe cycling network segment

1 POINT

One or more building entrance are more than a 200 m walking distance from a safe cycling network segment

0 POINTS

EXERCISE

Safe cycling:

- protected cycleways
- slow streets (<30 km/hr)
- pedestrian-priority street (< 15 km/hr)
- Walk/cycle paths

IN THE CHAT ENTER:

“+” followed by a positive observation

OR

“-” followed by a negative observation



UD Photo Art

EXERCISE: Pedestrians First Data

IN THE CHAT ENTER:

- 1) The name of the city and country you're in or a big city near you.
- 2) The block density for that city
- 3) One observation of the city based on the blocks

GO TO:

<https://pedestriansfirst.itdp.org/city-tool/step-3>

Diagnosis: Case Studies

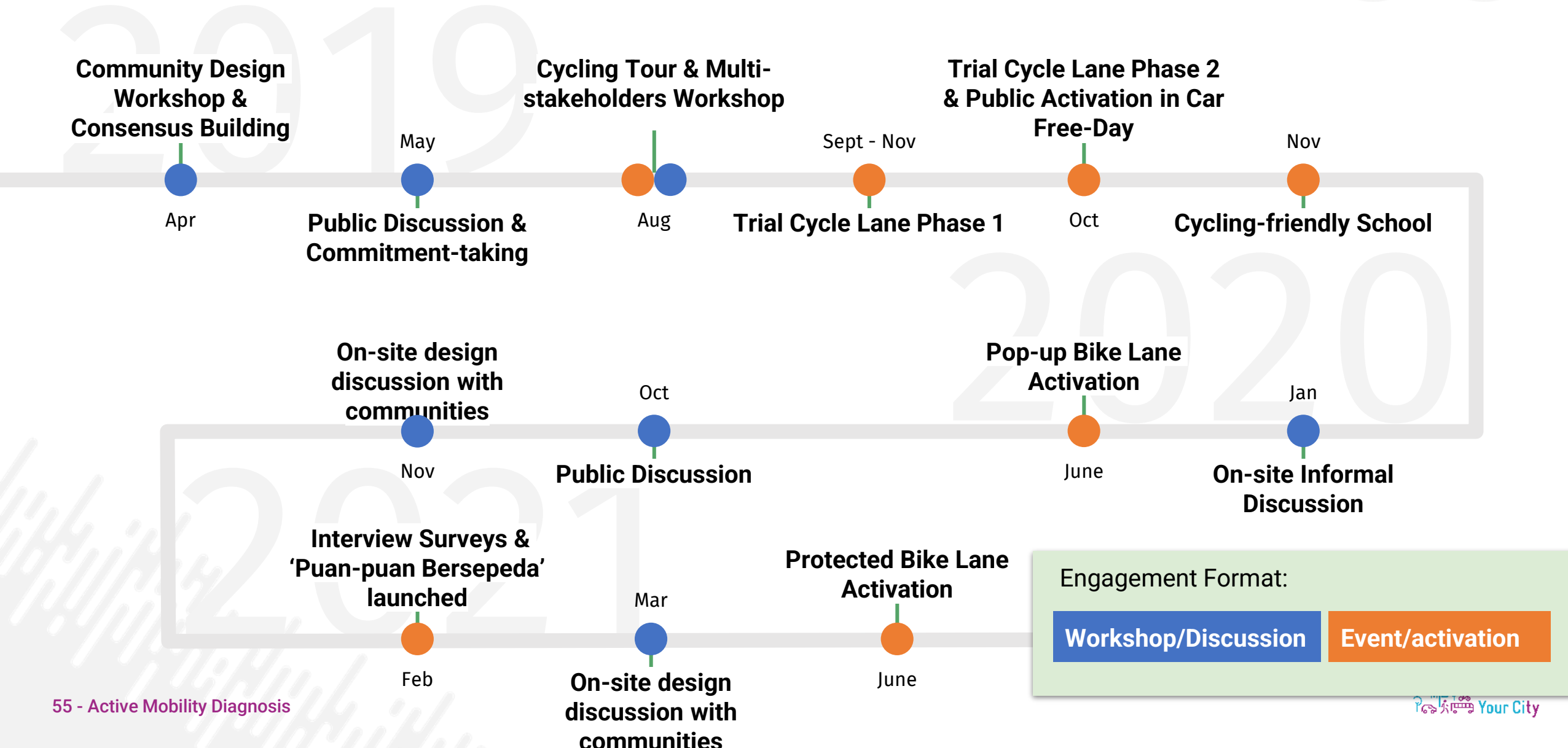
Examples of using diagnosis in planning
and decision making

5



The Importance of Public Participation in Development of Cycling Infrastructure in Jakarta, Indonesia

A continuous effort to engage public participation



Ensuring participation from all users



People on bicycles in Jakarta, Indonesia
Source: ITDP

Focus Group Discussion

Workshop/Discussion

Public/Community



Initial discussion with communities in Jakarta, Indonesia. Source: ITDP

Point of discussion:


- Physical and non-physical issue
- Action plan recommendation for the city
- Initial consensus draft

57 - Active Mobility Diagnosis




KONSENSUS

JAKARTA RAMAH BERSEPEDA



- Kami para pesepeda, pejalan kaki, serta warga Jakarta percaya bahwa kota Jakarta dapat menjadi kota lestari dan inklusif serta ramah terhadap pesepeda dan pejalan kaki.
- Kesadaran, perhatian serta upaya dalam membuat kota Jakarta sebagai "Kota Ramah Bersepeda" terus digalakkan dan karenanya, diperlukan penguatan secara berkelanjutan. Oleh karena itu, disusunlah konsensus untuk meneguhkan upaya perwujudan "Jakarta Ramah Bersepeda".
- Kami percaya Kota Jakarta Ramah Bersepeda dapat terwujud melalui:
 - 1 Adanya landasan dan kepastian hukum terkait bersepeda di Kota Jakarta yang mencakup infrastruktur, sanksi, prosedur penanganan kecelakaan, perilaku bersepeda, imbauan untuk mendorong budaya bersepeda, dan kewajiban penyediaan fasilitas bersepeda
 - 2 Adanya komitmen penganggaran infrastruktur bersepeda yang proporsional dengan anggaran untuk infrastruktur kendaraan bermotor
 - 3 Mudah nya akses terhadap penggunaan sepeda
 - 4 Lebih banyak anak-anak yang bersepeda di Kota Jakarta
 - 5 Terciptanya lingkungan bersepeda yang nyaman dengan kualitas udara yang baik
 - 6 Tersebar luasnya budaya bersepeda melalui pelibatan pemangku kepentingan
 - 7 Terciptanya rasa aman bagi masyarakat untuk bersepeda di Kota Jakarta
 - 8 Tersedianya jalur sepeda yang layak di sepanjang jalan arteri di DKI Jakarta
 - 9 Kondisi infrastruktur jalan yang baik dan fasilitas parkir sepeda yang aman di area publik
 - 10 Tersedianya fasilitas ruang ganti dan/atau kamar mandi untuk pesepeda

Dokumen lengkap dapat diakses di:



Results:

- Consensus
- Action plans for Government
- Dissemination to the government

Collaborative Workshop

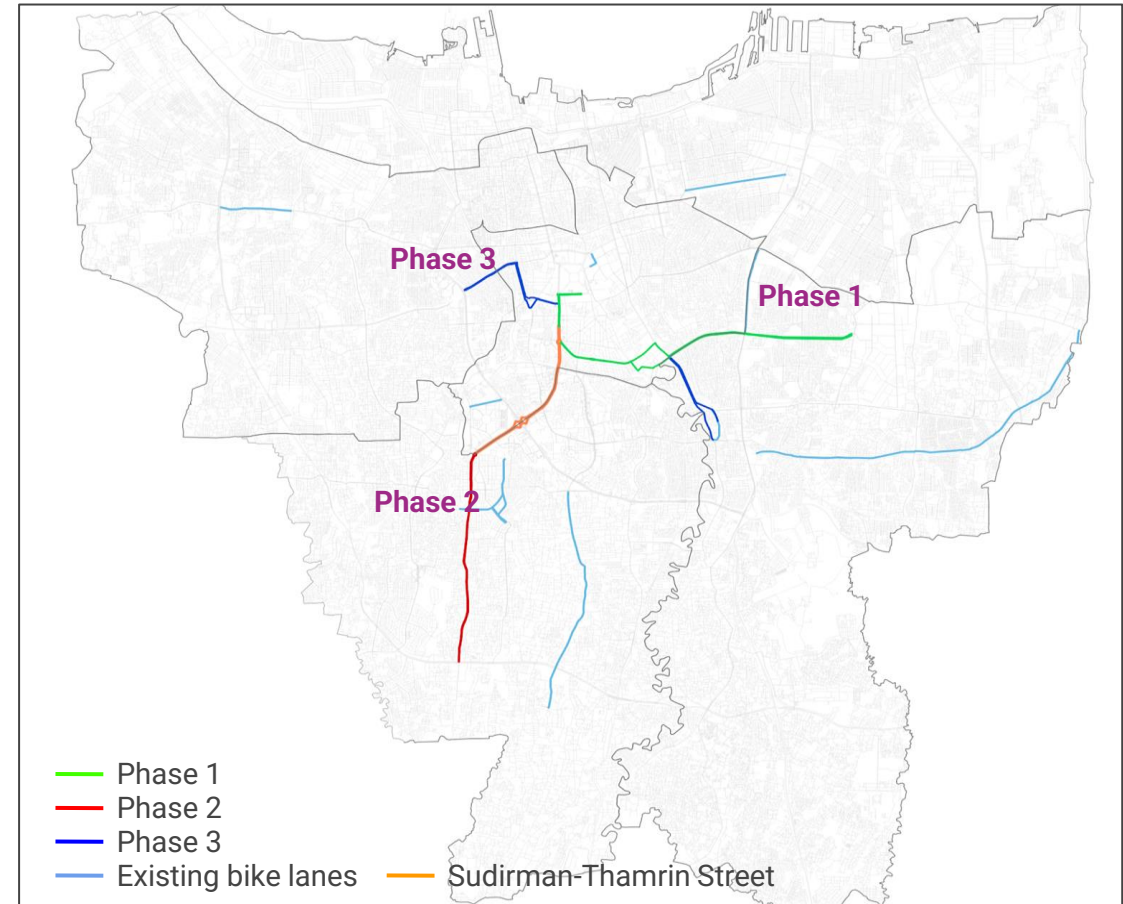


Workshop between public and government in Jakarta, Indonesia. Source: ITDP

Workshop/Discussion

Public/Community

Government



Results:

- Bike lane trial kick-off plan and stages
- Planning and design element
- Public awareness plan

Bike Lane Design Improvement and Implementation

Gathering Issues

Initial field surveys and trial implementation

Monitoring and evaluation

Permanent Implementation



Focus Group Discussion
(Source: ITDP Indonesia)



Field Installation
(Source: Public Works Agency)



Monitoring and Evaluation
(Source: Transport Agency)



Illustration of permanent bike lane in Sudirman-Thamrin
(Source: ITDP Indonesia)

Results:

- Consensus and action plans
- Element design ideas
- Bicycle network priority

Results:

- Field surveys
- Marking and traffic cones installation
- 63 km temporary bike lanes

Results:

- Field observations
- Cyclist counting
- Bicycle permanent design concept

Results:

- Technical assistance permanent bike lane development

‘Cycling tour’ inviting both public and the government - enabling the government to hear directly from the public and first-hand experience as a cyclist

Cycle Lane Volunteers - Involving local cyclists as a public volunteer to collect user experience issues

On-site design discussions with communities



Cycling Tour in Jakarta, Indonesia
Source: ITDP

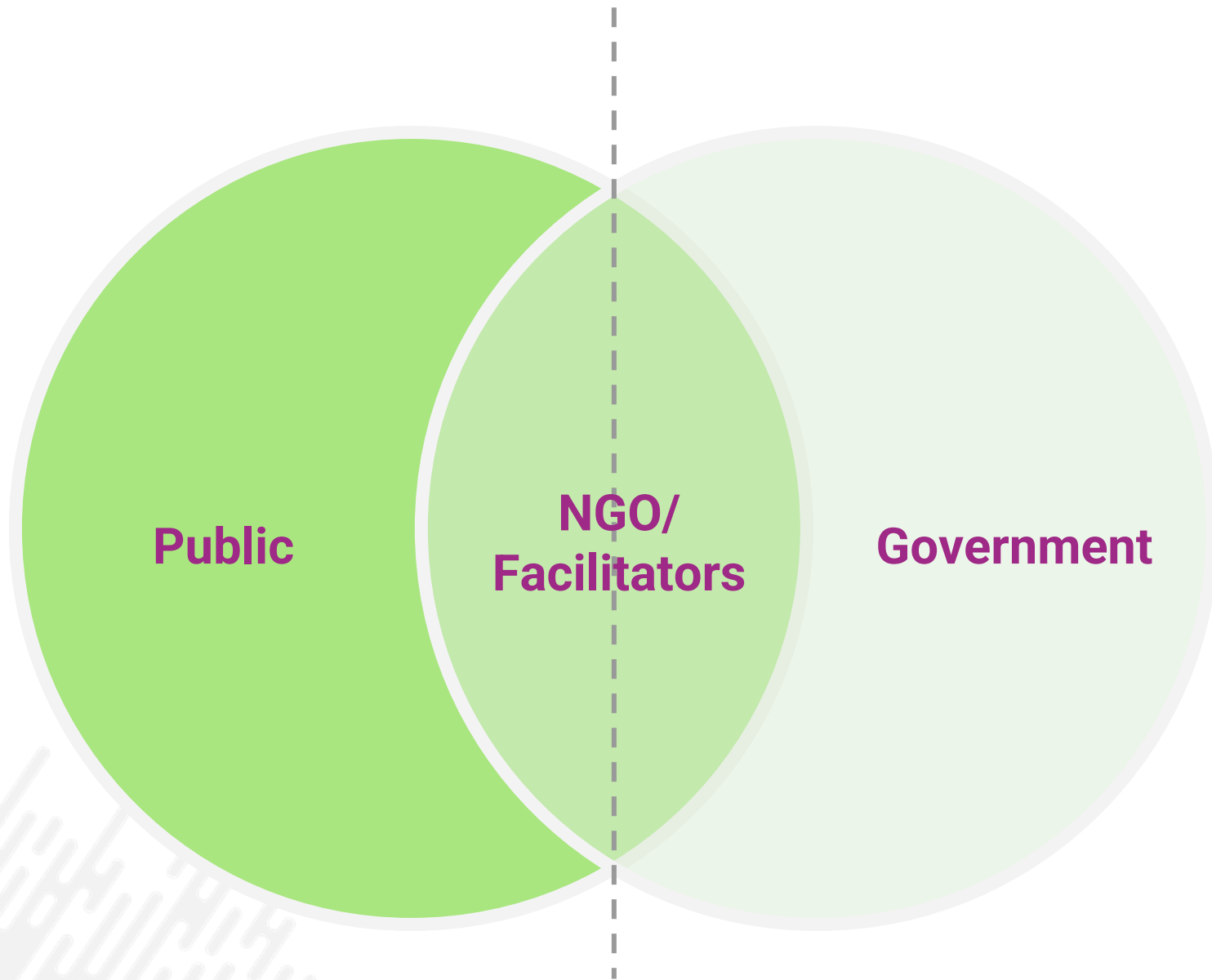


Cycle Lane volunteers in Jakarta, Indonesia. Source: ITDP

Public installation at a Car-Free Day - Engaging wider groups of citizen to gather their perceptions towards a cycling-friendly city



Public Engagement Installation in Jakarta, Indonesia
Source: ITDP



Why is needed - To gain experiential knowledge

Benefit - infuse with local values, common sense, and more inclusive planning

Main Goal - to create communication and dialogue

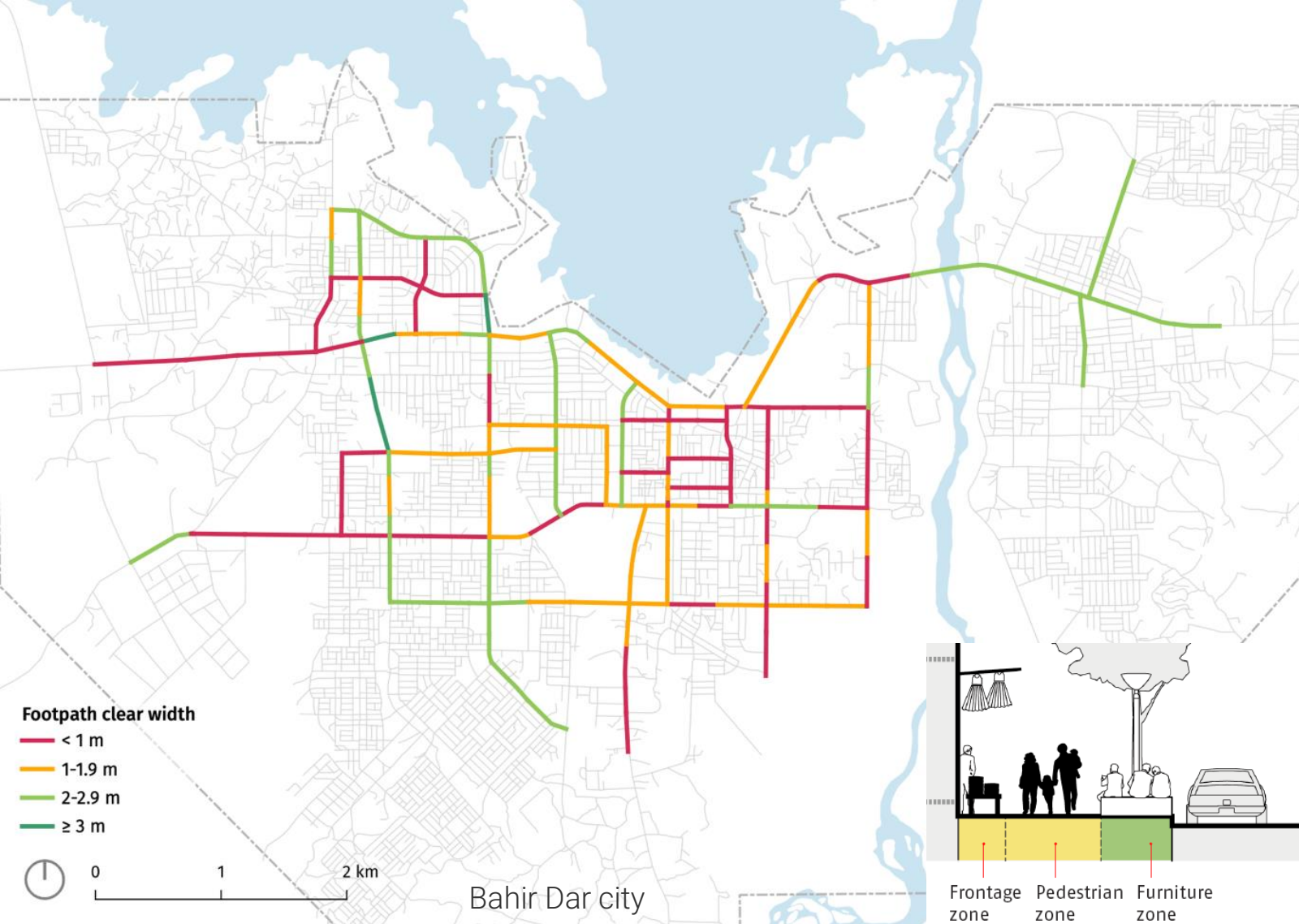
Beware of difficulties, challenges, and drawbacks

Example of Walkway facility diagnosis In African cities.



Footpath clear width, city wide

- Surveyors will have to measure the clear footpath width at the city level.
- Categories should be:
 - < 1 m
 - 1-1.9 m
 - 2-2.9 m
 - >3m
- Data should inform planners on the availability of clear walkway width, and to propose at least 2 m of clear width for streets that have lesser.





Pedestrian volume

- The pedestrian volume per hour, should be counted on multiple locations in the city.
- The count should include all groups of society.
 - Child
 - Adult male
 - Adult female
 - Disabled child
 - Disabled adult male
 - Disabled adult female

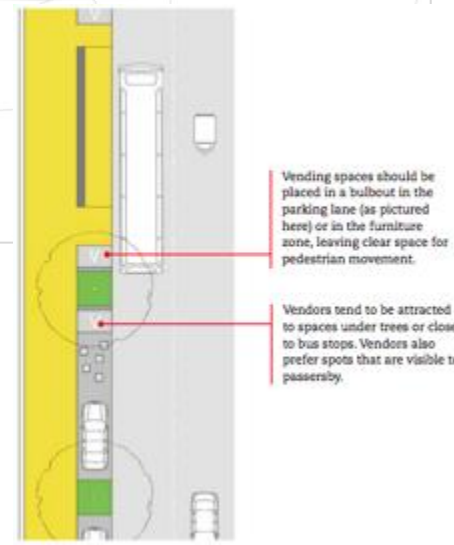
- The data should inform volume of pedestrians on the city, and to allocate appropriate walking infrastructure.

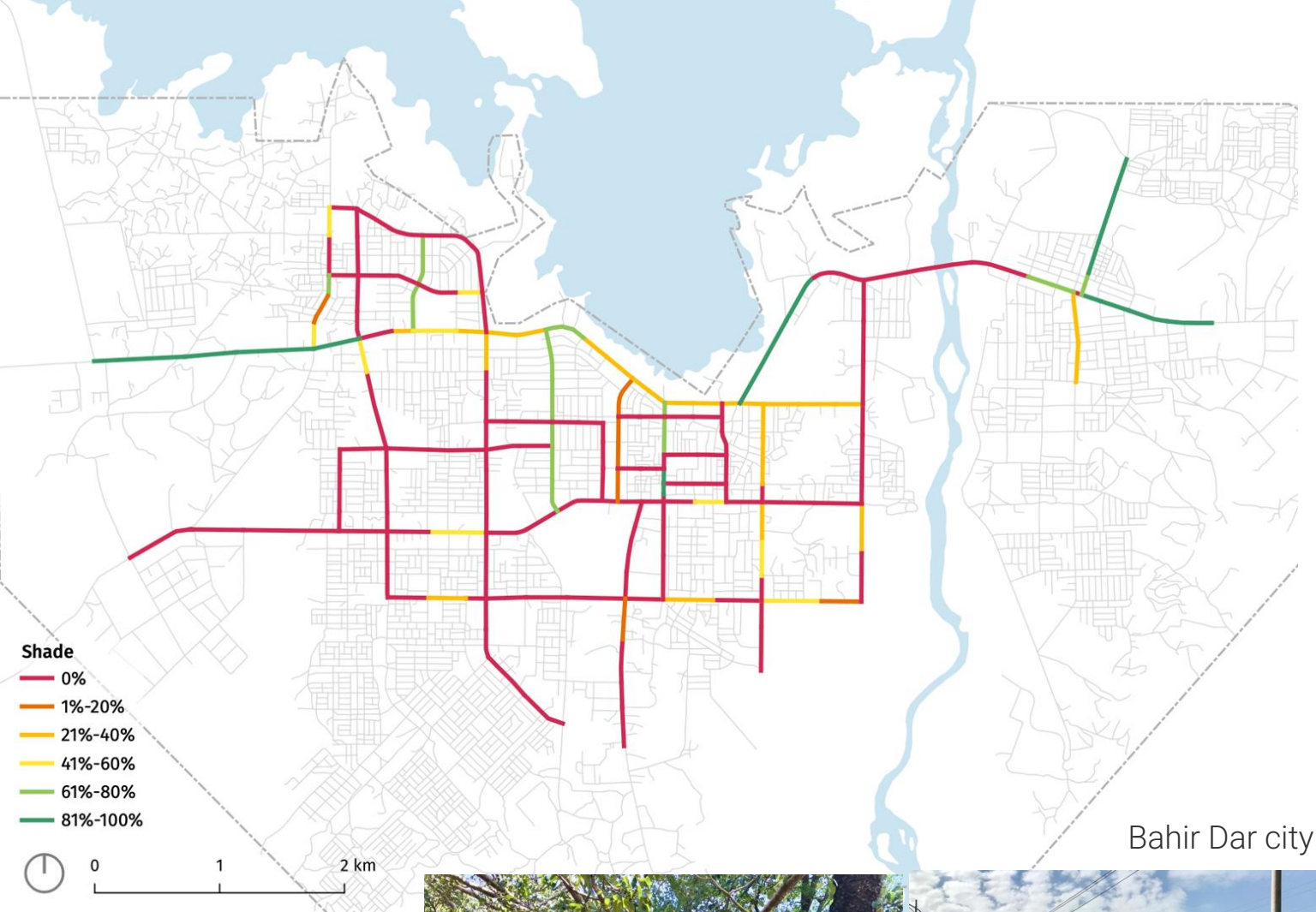
DATE (day/month):		Location									
Trip ID		SURVEYOR:									
Start time	End time	Weather									
Pedestrians				Bicyclists							
Time	School Children		Other Pedestrians		Cyclists		Taxi-Bodaboda				
0:00	Male	Female	Male	Female	Male	Female	O	F	M	FC	MC



Street Vending

- The survey should be conducted on major streets within the city center.
- Intensity of vending activities could be checked and could be categorized as.
 - Heavy
 - Moderate, or
 - Low
- The data will inform planners on the presence of street vendors and to include proper spaces for them.





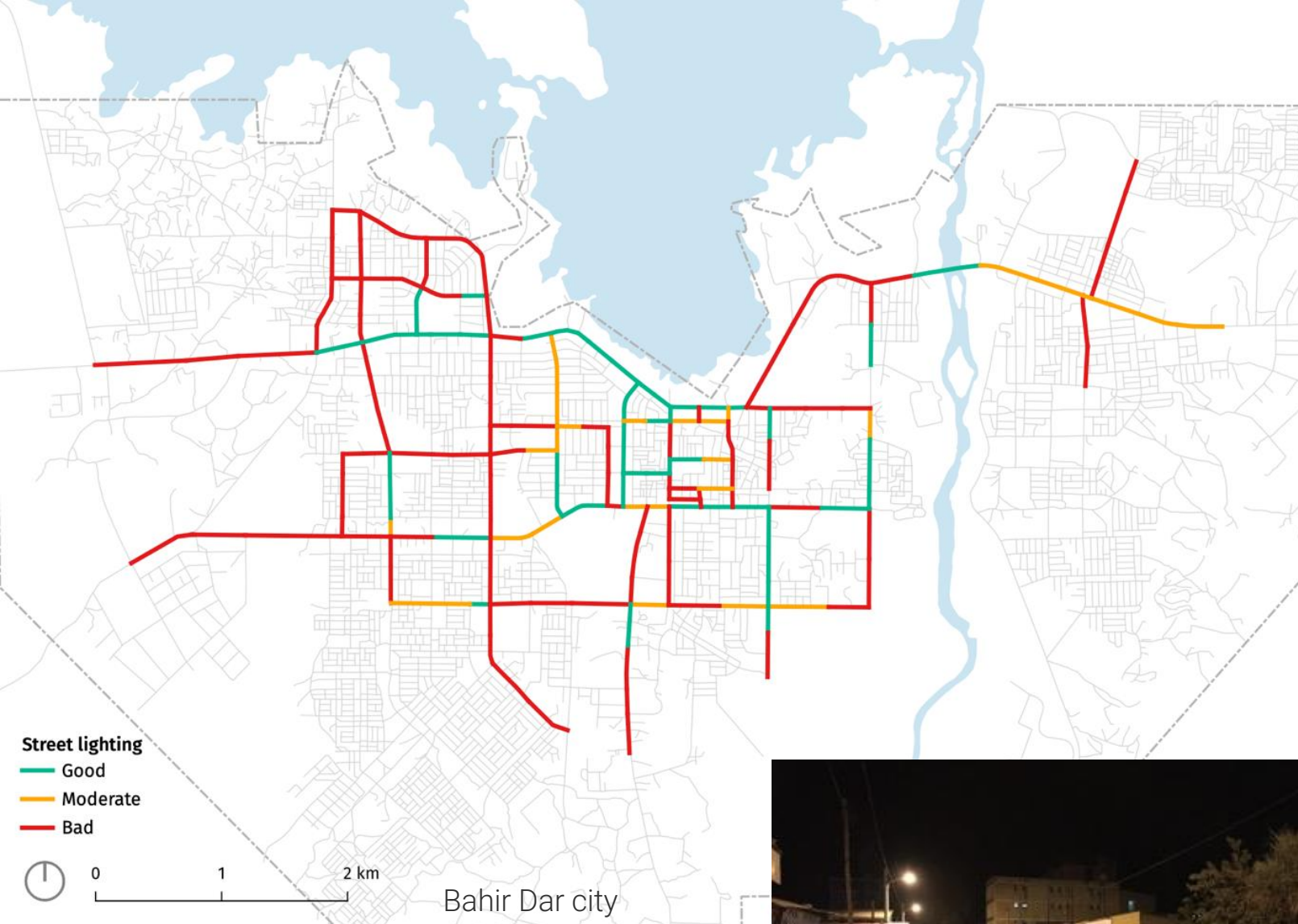
Shade

- Should be observed on the street during the high intensity sun light.
- Data should inform planners to decide to incorporate continuous street side trees.



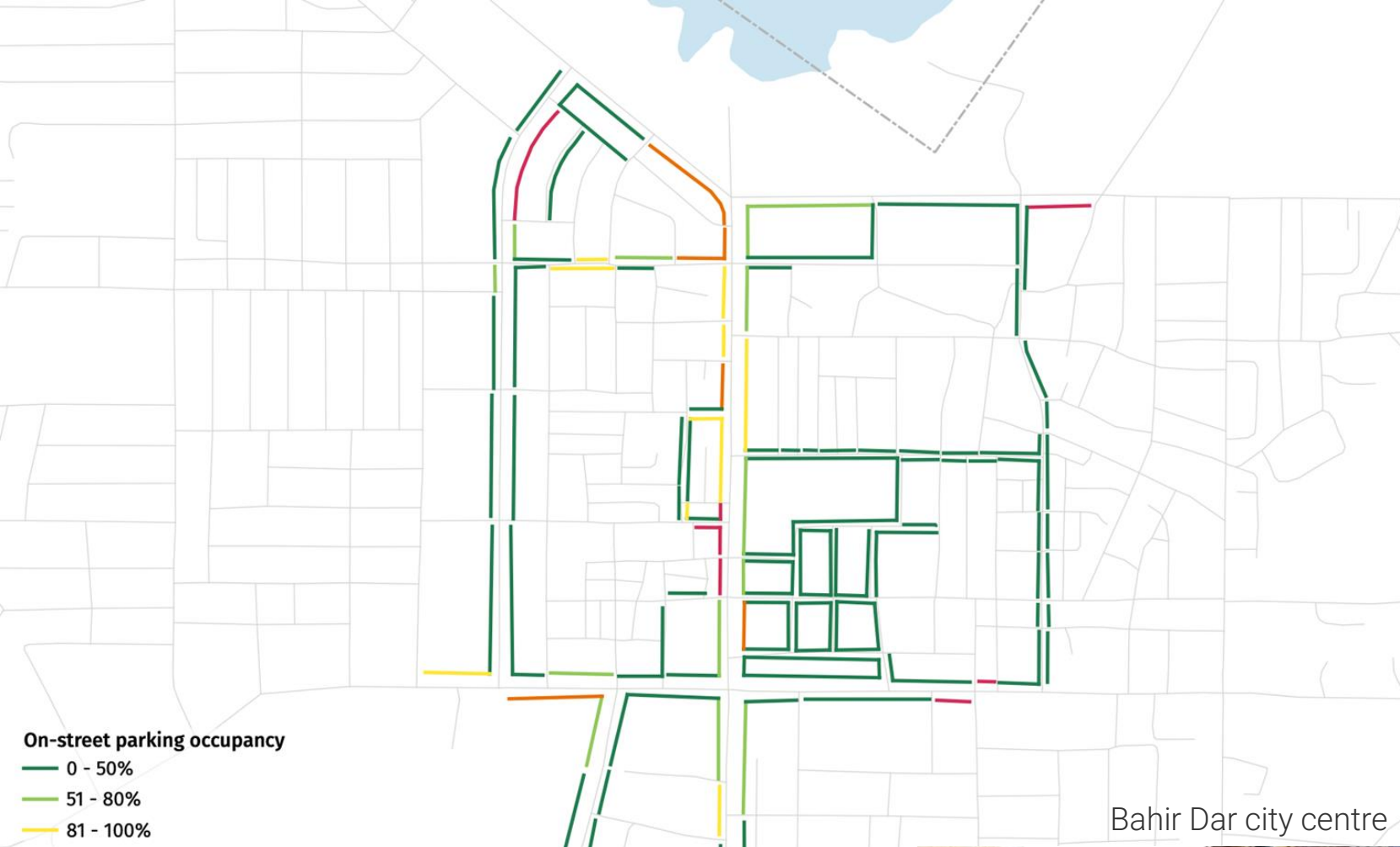
Street light

- Street light could be checked from the street light poles or lights from the buildings.
- Data will inform planners about the availability of street lights, and recommendation to incorporate or fixing the street lights.



On street parking occupancy

- Surveyed by measuring the spaces occupied by parked vehicles.
- Data informs planners on availability of car-parking spaces,
- Recommendation will include parking management and allocation of parking on the street.



Crossings

- Intersections and midblock crossings could be assessed by site visits and documented with photos and videos.
- Identify spots for intersection redesigns: incorporate traffic calmed crossings, reduce curb radii, universal access, and incorporate bollards.

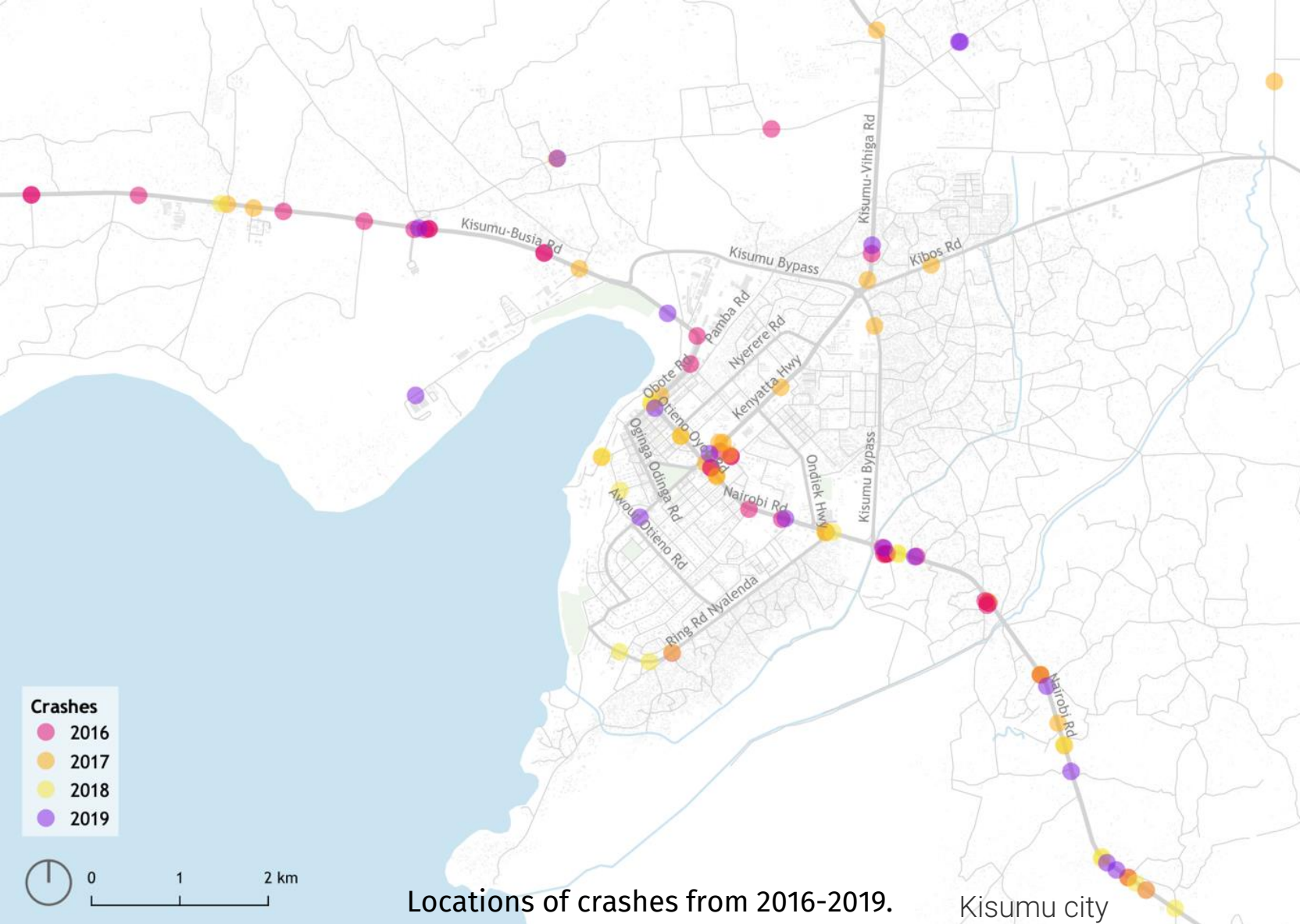


Wide turning radii at intersections encourage speeding by vehicles, thus making it unsafe for pedestrians to cross the road.



Newly constructed road need to incorporate safe crossings.

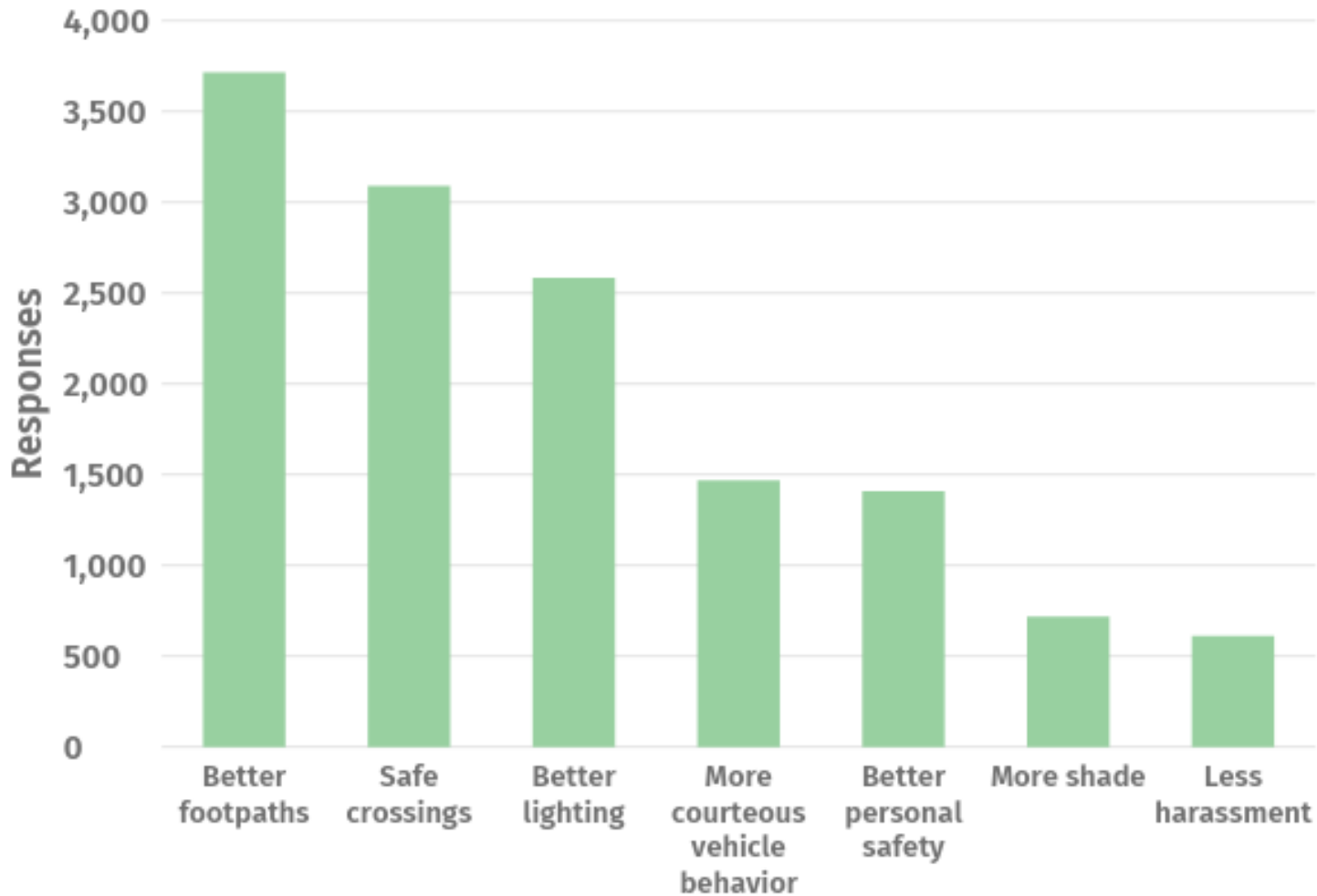
Kisumu city



Crash data

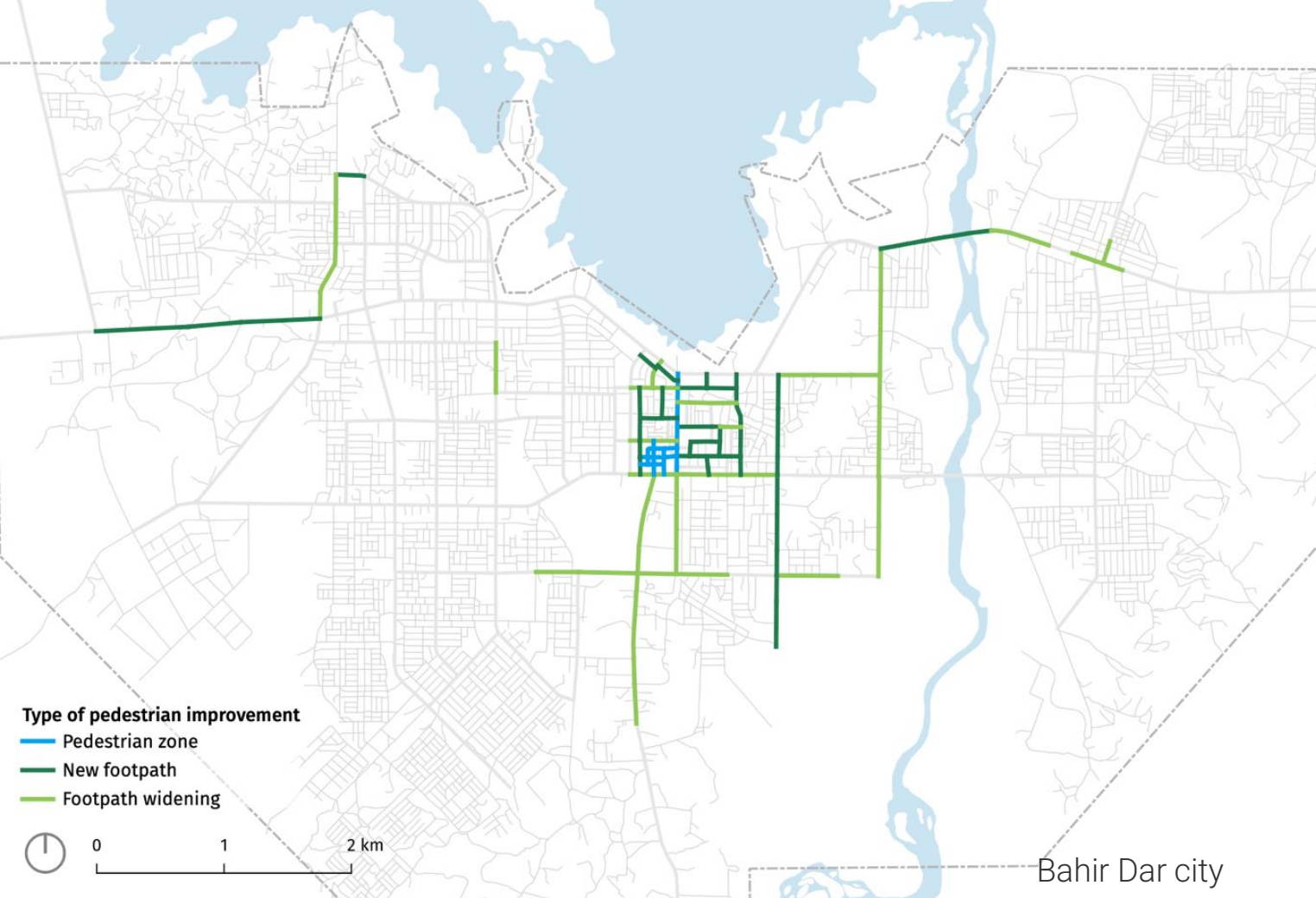
- According to crash data, most crashes occur on major roads.
- Used to prioritise locations for traffic calmed crossings and intersection redesigns.

Household survey



Kisumu city

- Survey could be done on the locations with high pedestrian activity.
- Data to be used to plan, design, prioritize different interventions, based on the challenges.



Prioritise possible interventions

- Pedestrian walkway improvements
- Intersection retrofit

BAHIR DAR SUSTAINABLE URBAN MOBILITY PLAN 2021-2030



JULY 2021



Kisumu Sustainable Mobility Plan

Institute for Transportation and Development Policy
June 2020

How these data used?

- Preparation of the Bahir Dar and Kisumu SUMP.

Key Takeaways

- Diagnosis leads to more complete understanding walking and cycling
- Diagnosis of walking and cycling is critical to the development of SUMPs
- Diagnosis tools reduce the burden on cities for collecting data, setting goals, and planning interventions

Questions



Join us for our upcoming Mastering Mobility Training Sessions

- ✓ Learn
- ✓ Exchange
- ✓ Connect

English	27.04.2022	Mobility for all? Integrating gender perspectives in SUMP and NUMP
	19.05.2022	Participation Matters: Who to involve and how to prepare a participatory process for mobility planning
	25.05.2022	It's all about the money: Secure the financing for walking and cycling in your city
French	31.03.2022	Cartographie numérique et biens communs numériques : Comblant le manque de données sur les transports publics informels au Maroc
Spanish	05.05.2022	Adaptando procesos de PMUS en tiempos de COVID-19: recolección de datos y modelación de transporte

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