



CREATING CHILD-FRIENDLY COMMUNITIES

HOUSTON-GALVESTON AREA COUNCIL | FALL PLANNING WORKSHOP 2021



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WHY FOCUS ON CHILDREN?



ROAD COLLISIONS: BIGGEST KILLER OF YOUNG PEOPLE



Globally, road traffic injuries are the **#1** cause of road collisions among children aged 5-14 and young adults aged 15-29

Low-income and middle-income countries account for 93% of child road traffic deaths.

Rank cause of death among children under 18 years of age, worldwide

	<5 years	5-9 years	10- 14 years	<15 -17 years
Rank 1	Preterm birth complications	Diarrhoeal diseases	HIV/AIDS	Road traffic injury
Rank 2	Lower respiratory infections	Lower respiratory infections	Diarrhoeal diseases	Self - harm
Rank 3	Birth asphyxia/trauma	Meningitis	Road traffic injury	Interpersonal violence
Rank 4	Diarrhoeal diseases	Road traffic injury	Lower respiratory infections	HIV/AIDS

Source: World Health Organization, Global Health Estimates, 2014.

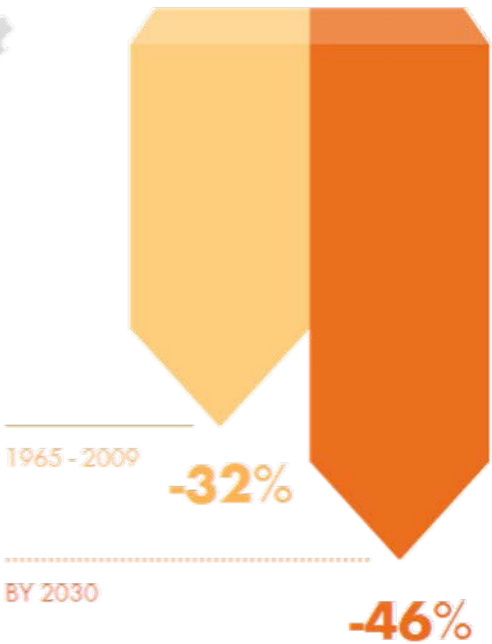
AIR POLLUTION: AN UNSEEN THREAT TO CHILDREN'S HEALTH

Air pollution is one of the leading threats to child health, accounting for almost 1 in 10 deaths in children under five years of age.

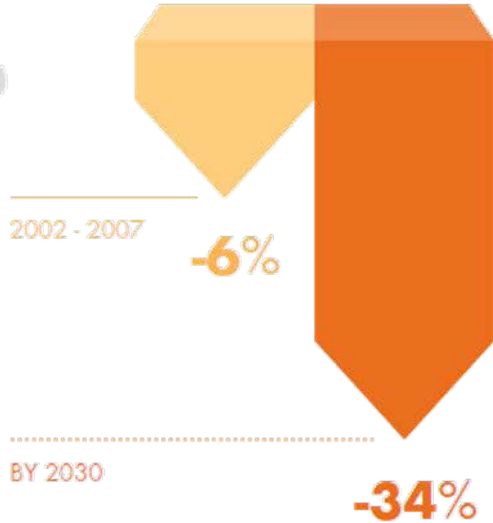


PHYSICAL INACTIVITY

USA



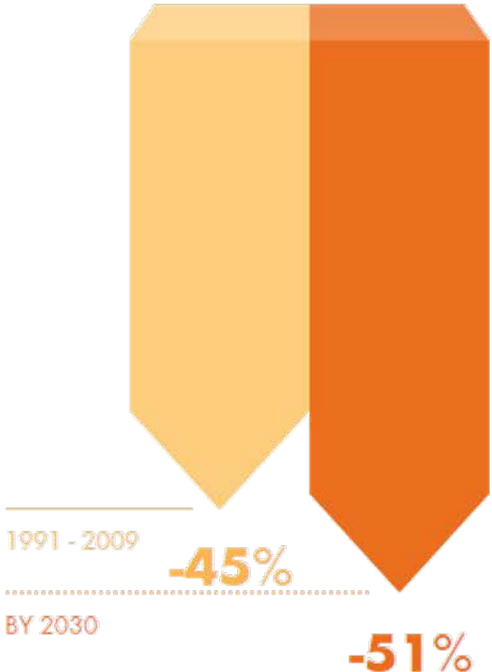
BRAZIL



GREATER CHINA *



*Data represents Mainland China only

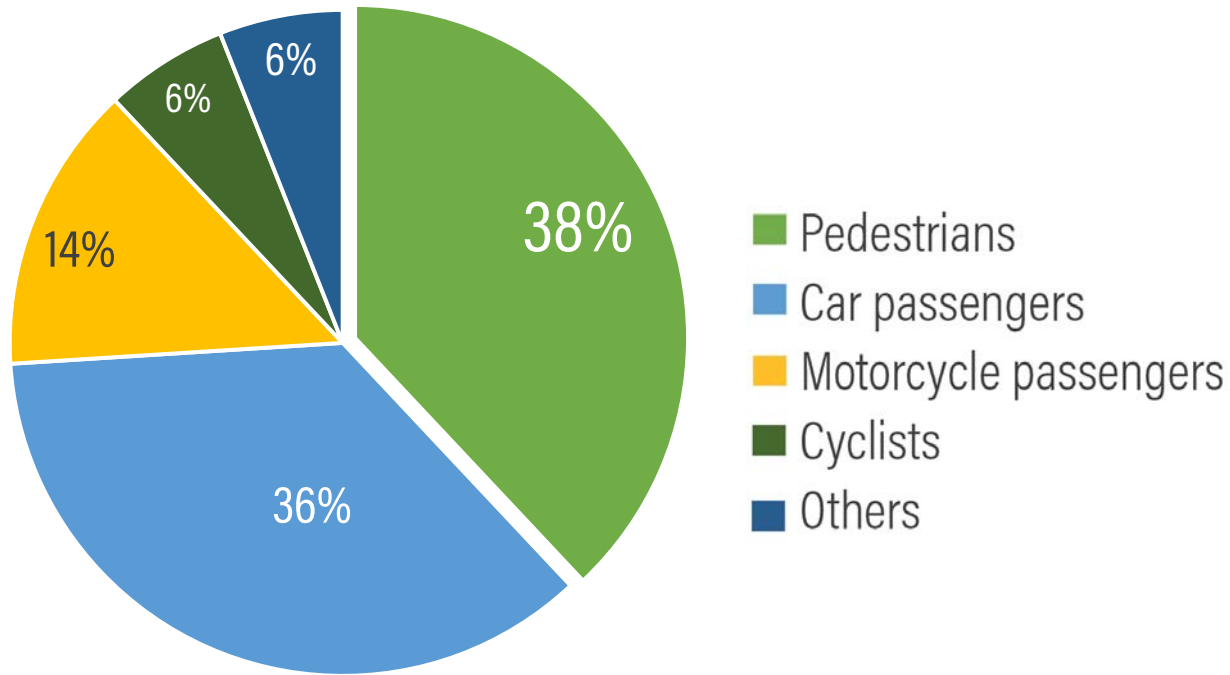


OUR STREETS ARE NOT DESIGNED FOR CHILDREN



TYPE OF ROAD USER INVOLVED IN ROAD TRAFFIC CRASH

Worldwide, almost 60% of the children killed in road traffic crashes are vulnerable road users (pedestrians, cyclist or motorcycle passengers)



Source: *Ten strategies to preserve the safety of children on the roads*, World Health Organization, 2015



Foto: Jorge Alberto Mendoza, Guadalajara, Jalisco, México,

Why are children considered vulnerable?

They act impulsively



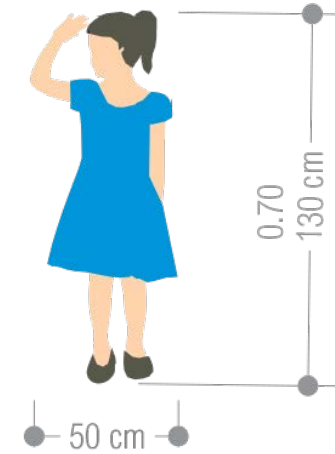
Visual limitations

1.6 m/s

0.8 m/s



Short Stature



Low speed while walking

CHILD'S RIGHTS & EXPECTATIONS FROM CITIES

Every Child has the right to:

- Safe streets
- Clean air
- Education and access to schools
- Play and explore urban settings freely
- Personal safety in public spaces
- Equity to use the city and thrive
- To be heard!

WHAT MAKES A CHILD-FRIENDLY CITY?

**Accessible
Green Space**



**Safe Walking/Cycling
Infrastructure**



**Low Speed
Zones**



Car-Free Streets



Clean Air



**Eye Level and
Cognitive Abilities**



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ACCESSIBLE GREEN SPACE



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Car-Free Streets



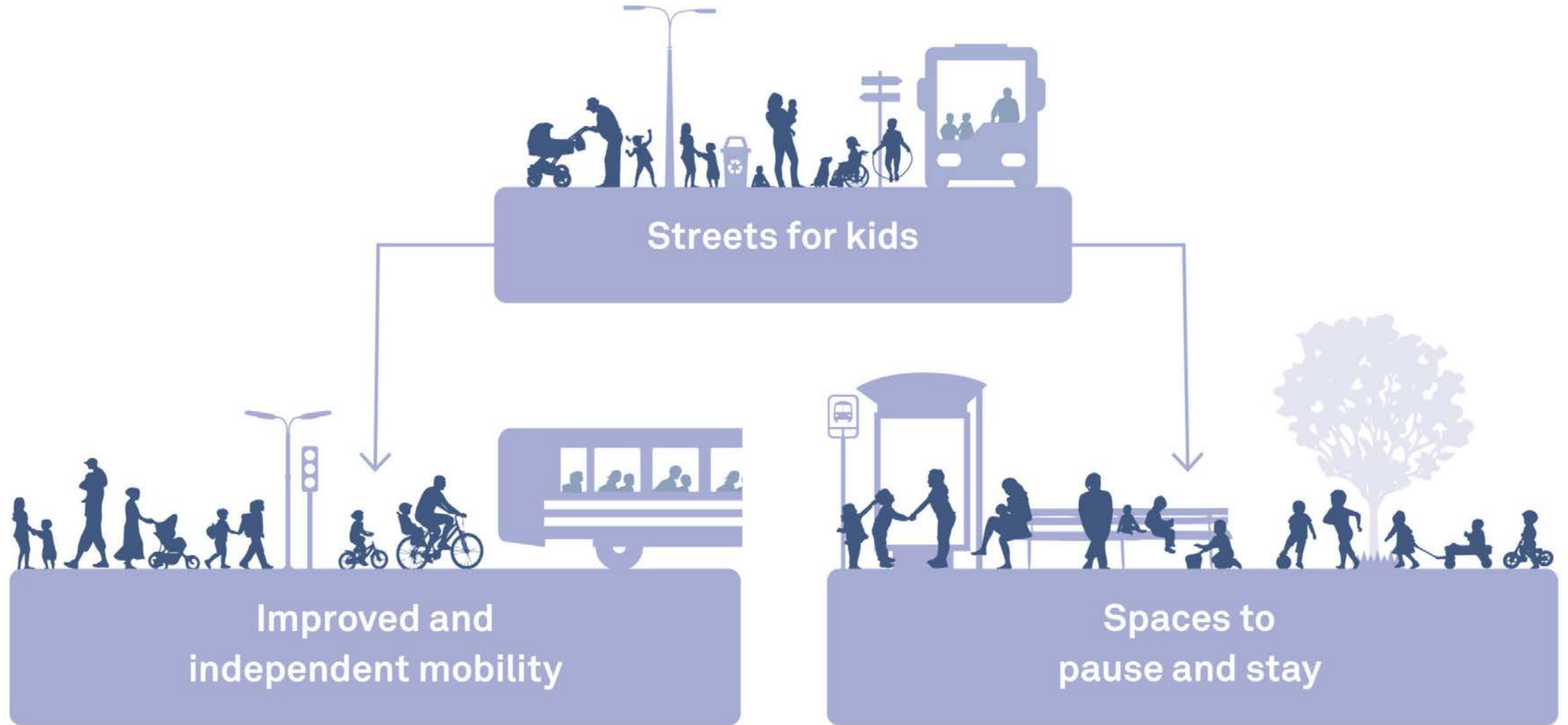
Clean Air



Eye Level and
Cognitive Abilities



SAFE WALKING AND CYCLING INFRASTRUCTURE



USA

1. **33%** of parents think the roads are not safe enough for their child to walk or cycle to school.
2. **50%** of adults are concerned about air quality in their local area.
3. **55%** of adults support road closures, speed reduction, and restrictions on cars near schools.
4. **47%** of parents would change children's school journeys to walking and cycling as part of COVID 19 social distancing measures, but only if streets are safe.



GUIDANCE FOR SAFE AND HEALTHY JOURNEYS TO SCHOOL

DURING THE COVID-19 PANDEMIC AND BEYOND

unicef 
for every child

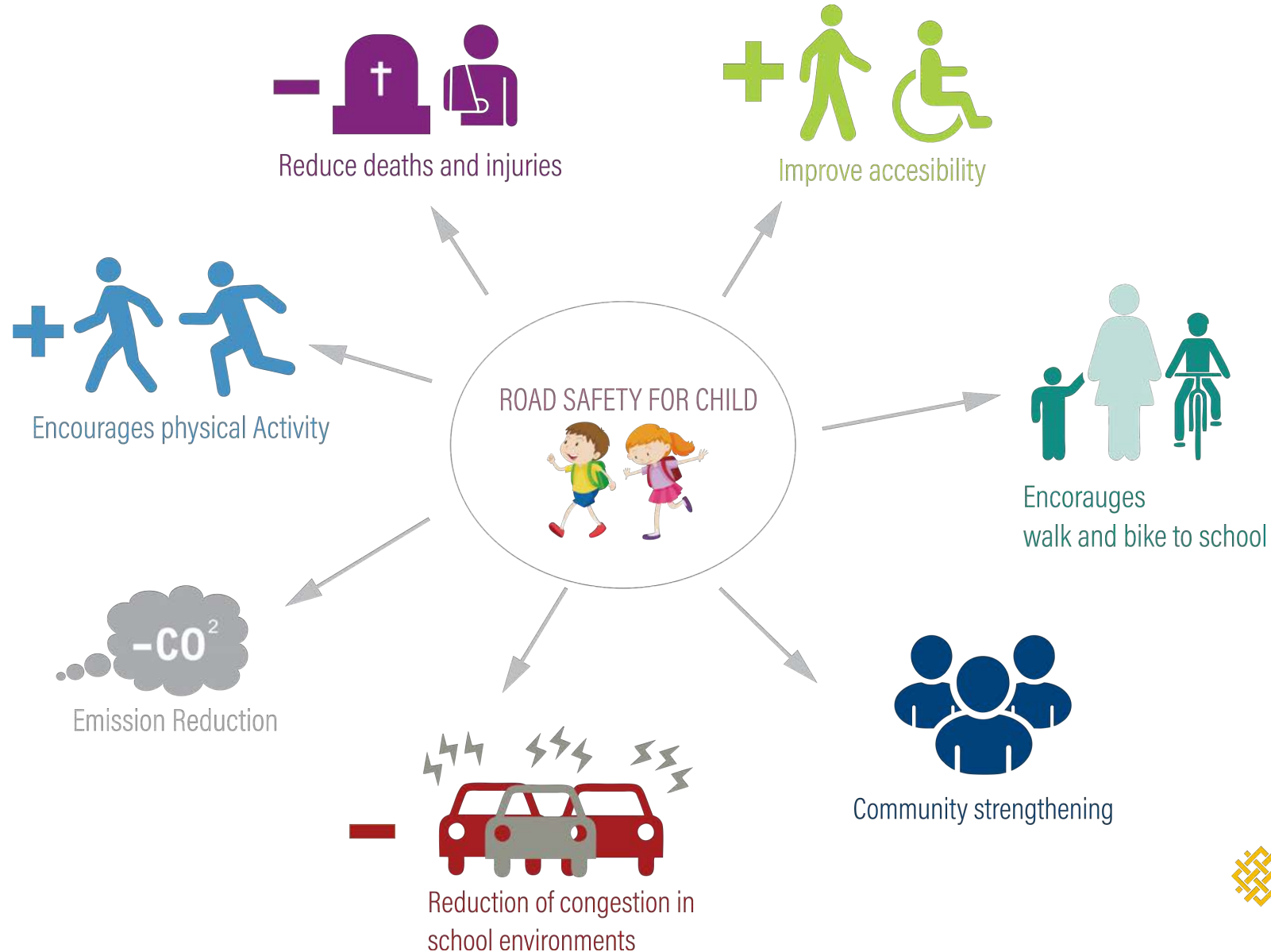
 FOUNDATION

 CHILD HEALTH
INITIATIVE



WORLD RESOURCES INSTITUTE

HOW DOES IMPROVED WALKING AND CYCLING INFRASTRUCTURE BENEFIT CHILDREN?



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LOW SPEED ZONES

» When a vehicle is traveling at...



» this is the driver's field of vision.



» It takes...



» and pedestrians hit at this speed have a...



WHAT ARE LOW SPEED ZONES?

A low-speed zone is a defined area – such as a school zone, neighbourhood or commercial district – that aims to **improve the safety of vulnerable users through traffic-calming measures.**

Target Speed – 30KM/H or Lower





Commercial Streets
30 km/h



Residential Streets
25 km/h



School Zone Streets
20 km/h

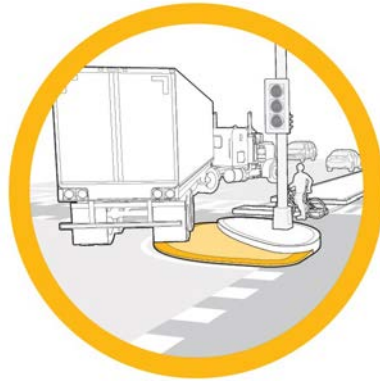


Shared Streets
10-15 km/h

DESIGN ELEMENTS THAT CAN BE USED ACHIEVE TARGET SPEEDS



Protected Intersections



Truck Aprons



Speed Cushions



Chicanes



Curb Extension



Raised Intersection



Raised Crosswalk



Chockers



Narrowing of
Vehicular Travel Lane



Speed Feedback Sign

LOW SPEED ZONES



**Driver compliance of posted speed limits went from 29% to 86% overall
36% to 97% in front of the school**



**More than 90% of adults and 86%
minors reported feeling safer on their journeys.**

TRIAL IMPLEMENTATION

LOW SPEED ZONE/ SAFE SCHOOL ZONES



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Safe Walking/Cycling
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Car-Free Streets



Clean Air



Eye Level and
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CAR FREE STREETS



WORLD RESOURCES INSTITUTE





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Car-Free Streets



Clean Air



Eye Level and
Cognitive Abilities



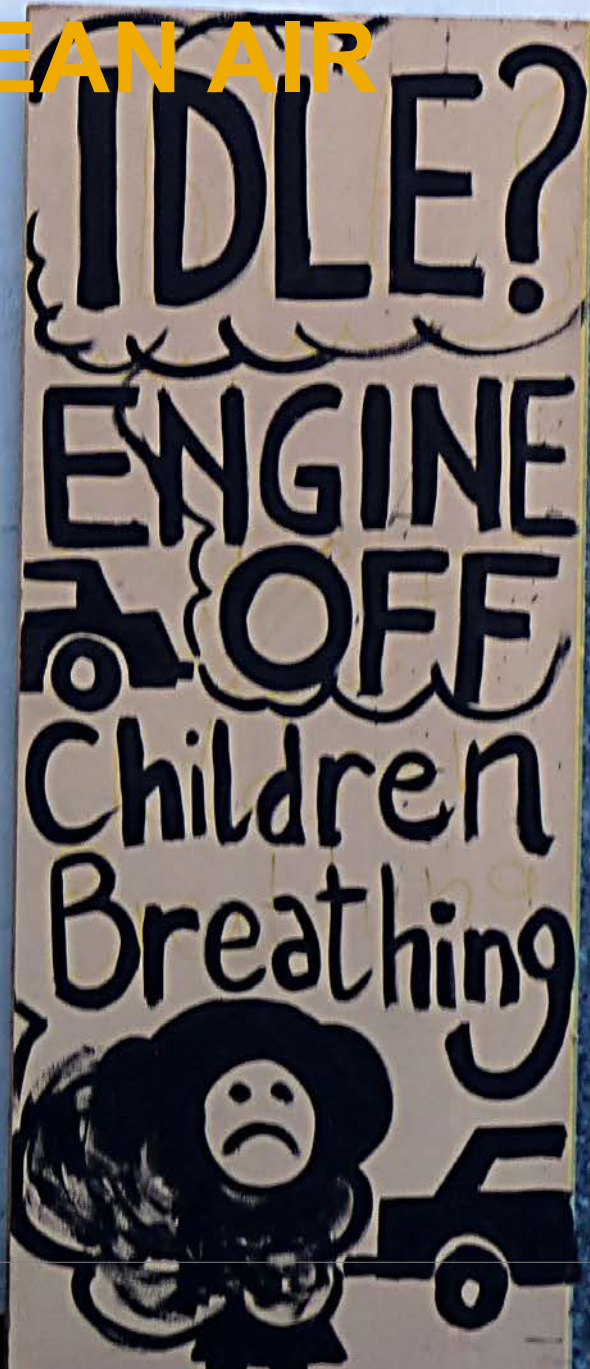
CLEAN AIR

1 in 10 deaths from air pollution are children under the age of 5

Due to their height, young children are exposed to 30% more black carbon from vehicle exhaust than adults.



CLEAN AIR



- Discouraging vehicle idling
- Restricting entry for dirtier vehicles
- Encouraging cleaner transport modes
- Green infrastructure.

WHAT MAKES A CHILD-FRIENDLY CITY?

Accessible
Green Space



Safe Walking/Cycling
Infrastructure



Low Speed
Zones



Car-Free Streets



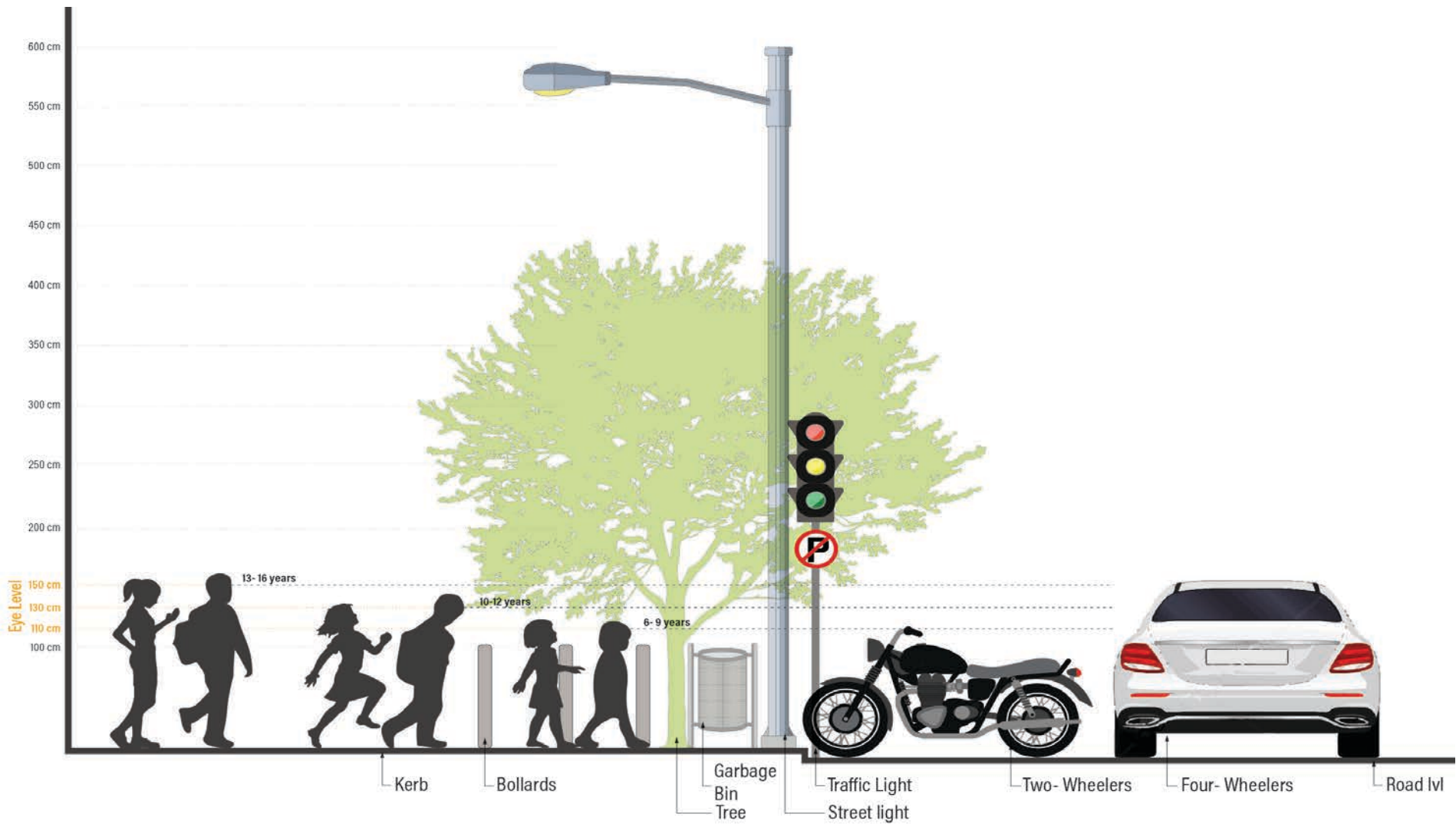
Clean Air



Eye Level and
Cognitive Abilities



CHILDREN'S ANTHROPOMETRY & COGNITIVE DEVELOPMENT



6- 9 years

150 cm

130 cm

110 cm

Eye Level

PREOPERATIONAL*

Uses intuitive reasoning,
Understands symbols

10-12 years

CONCRETE OPERATIONAL*

Uses logical reasoning
Has objective/rational reasoning

13- 16 years

FORMAL OPERATIONAL*

Understands hypothetical ideas
Aware of ethical, political, and social issues

WRI PROJECT : MUMBAI, INDIA

SAFER ACCESS TO SCHOOLS INITIATIVE

SAFER ACCESS TO SCHOOLS IN MUMBAI

PROJECT VISION

**To provide a safer environment
for children commuting to schools
through child friendly street design
interventions.**

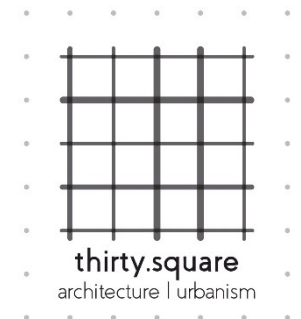
Knowledge Partner and Lead:



Under:



With:



METHODOLOGY



**Identification of
School For Pilot**



**School area
Assessment**



**Stakeholder
Engagement
and Data
Collection**



**Designing
School Zone**



**Trial
Implementation
+
Monitoring &
Evaluation**

METHODOLOGY



**Identify a
School**



**School area
Assessment**



**Stakeholder
Engagement
and Data
Collection**



**Designing
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Location: Mirza Ghalib Road, Mumbai, India

Christ Church School

St Agnes High School

METHODOLOGY



Identify a
School



**School area
Assessment**



Stakeholder
Engagement
and Data
Collection



Designing
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Implementation
Monitoring &
Evaluation

UNSAFE CROSSINGS

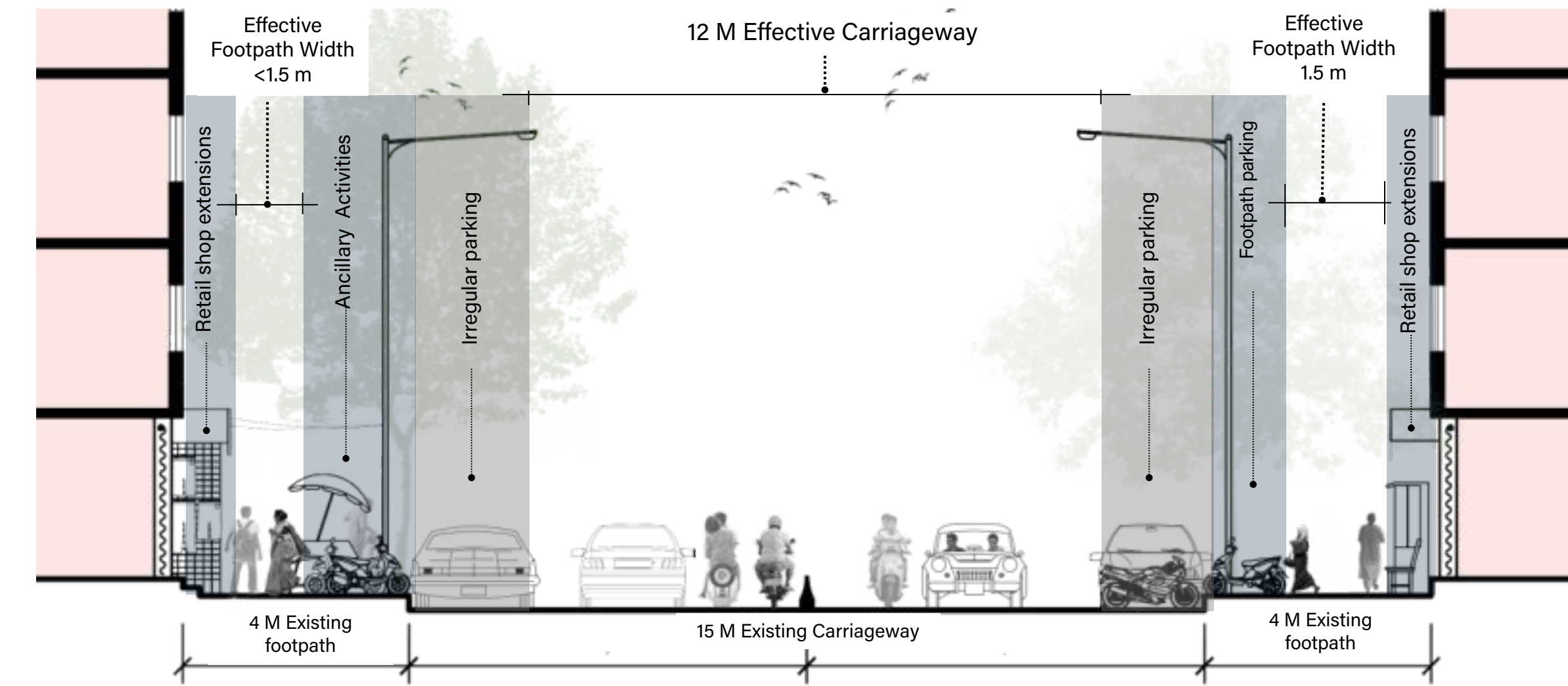


EXISTING SCHOOL ZONE



EXISTING CONDITION OF APPROACH ROAD

Road Condition Study: Mirza Ghalib Road



METHODOLOGY



Identify a
School



School area
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**Stakeholder
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BUY IN AND STAKEHOLDER ENGAGEMENT



Introducing the project to MCGM Ward Officer
(**Implementation Authority**)

Introducing project to Municipal Councilor,

Introducing project to Principal & PTA,
Christ Church School

Parents/ Guardian Survey
(> 430)

Focused Group Discussion
(60 Students 6-16 Age)



DATA COLLECTION | PHOTOVOICE TOOL

A walk with each age group was organized **to understand what children see at their eye level** and if they like it or dislike.

Green Frame = Like

Red Frame = Dislike



PHOTOWALK: SCHOOL CHILDREN'S RESPONSES



School Bus



Colourful plants



Street Sweeper



Sun



Garbage



Narrow alley



Parking on footpath

DATA COLLECTION | VISUALIZATION EXERCISE

FOR 6-9 AGE:

To understand what change children want to see on their school street.

6- 9 years

MY STREET

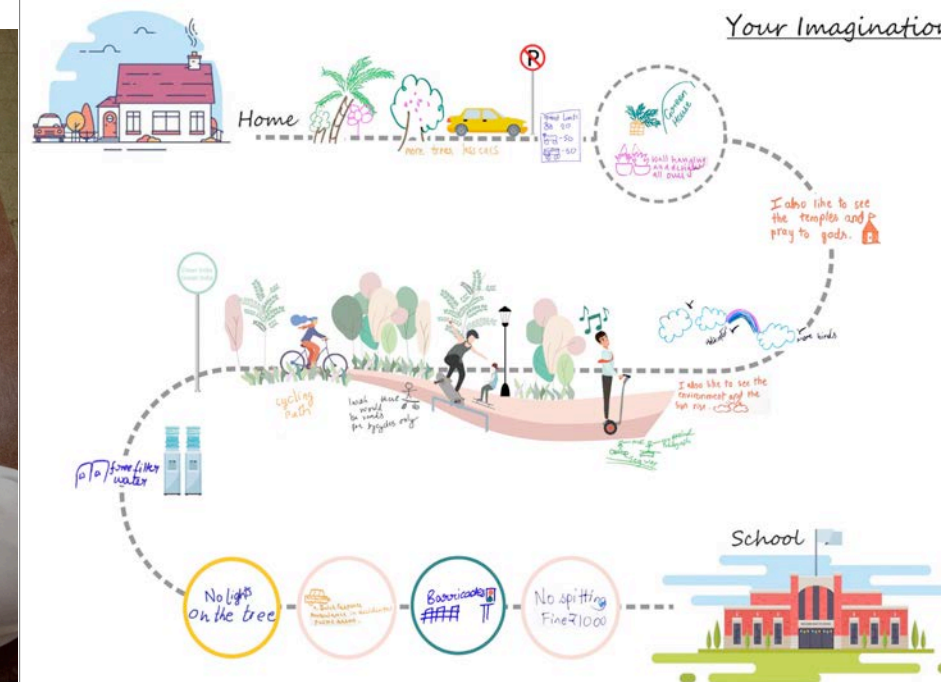
What I like to see on my street?



FOR AGE GROUP 10-12

10-12 years

What I observe? vs What I imagine?



VISUALIZATION EXERCISE

FOR AGE GROUP 13-16

To understand road safety related **barriers, causes and solutions** from **children's point of view**.

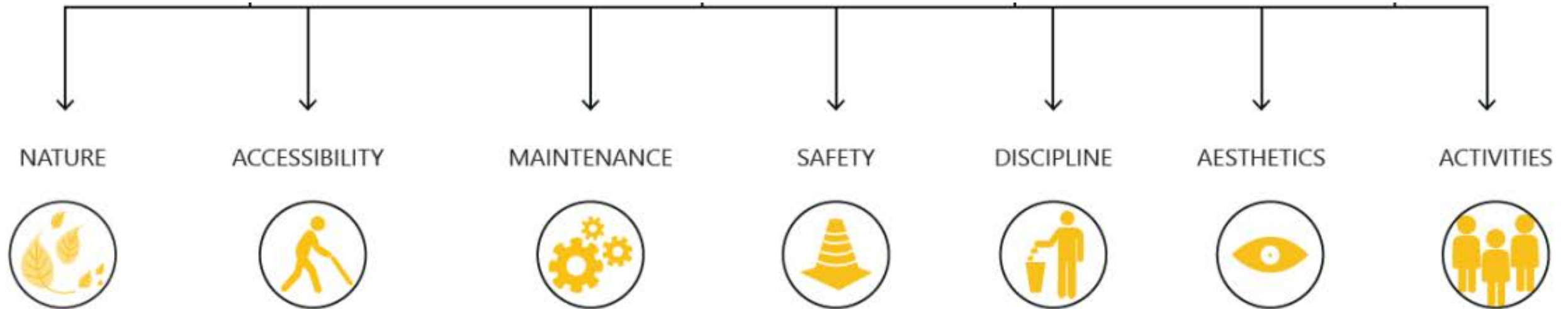
13- 16 years

BARRIER AND CAUSE ANALYSIS

Listing barriers, causes and solutions to make pedestrian environment safer.



BROAD CATEGORIES



METHODOLOGY



Identify a
School



School area
Assessment



Stakeholder
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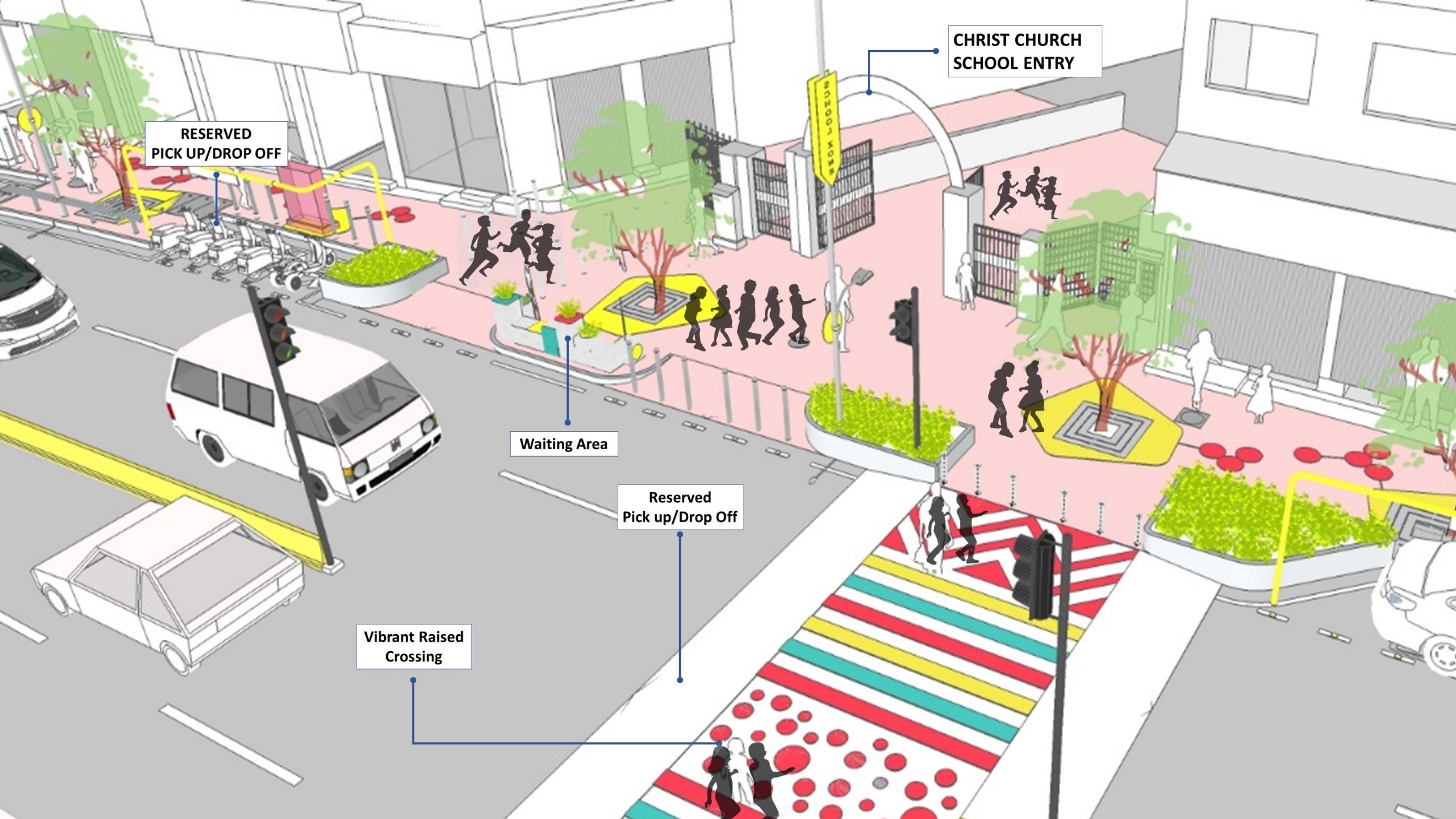
**Designing
School Zone**



Trial
Implementation
+
Monitoring &
Evaluation

EXISTING SCHOOL ZONE





CHRIST CHURCH
SCHOOL ENTRY

RESERVED
PICK UP/DROP OFF

Waiting Area

Reserved
Pick up/Drop Off

Vibrant Raised
Crossing

ELEMENTS WITHIN PROPOSED SCHOOL ZONE

1. WALKABLE FOOTPATH

REALITY



POSSIBILITY



ELEMENTS WITHIN PROPOSED SCHOOL ZONE

2. BARRIER FREE INFRASTRUCTURE

REALITY



POSSIBILITY



ELEMENTS WITHIN PROPOSED SCHOOL ZONE

3. SAFE, VIBRANT AND RAISED PEDESTRIAN CROSSINGS

REALITY



POSSIBILITY



ELEMENTS WITHIN PROPOSED SCHOOL ZONE

4. VIBRANT AND PLAYFUL ELEMENTS

REALITY



POSSIBILITY



ELEMENTS WITHIN PROPOSED SCHOOL ZONE

5. ACCESS TO NATURE

REALITY



ELEMENTS WITHIN PROPOSED SCHOOL ZONE

POSSIBILITY



ELEMENTS WITHIN PROPOSED SCHOOL ZONE

6. ORGANIZED PICK AND DROP AREA

REALITY



POSSIBILITY



ELEMENTS WITHIN PROPOSED SCHOOL ZONE

7. ACTIVITIES ENHANCING CHILDREN'S EXPERIENCE

REALITY



POSSIBILITY



METHODOLOGY





TACTICAL URBANISM + MONITORING & EVALUATION

- To enhance safety around schools through trials of safer school zones.
- To demonstrate the transformation and create a buy-in and positively impact decision-making to scale up efforts.









SAFE SCHOOL ZONE ELEMENTS

Colorful Guidestrips

Safe Waiting Spaces

Vibrant Pedestrian Crossing

Signage & Road markings

CHILD-FRIENDLY SCHOOL ZONE, MUMBAI

MIRZA GHALIB ROAD, BYCULLA



बृहन्मुंबई महानगरपालिका
Municipal Corporation of Greater Mumbai

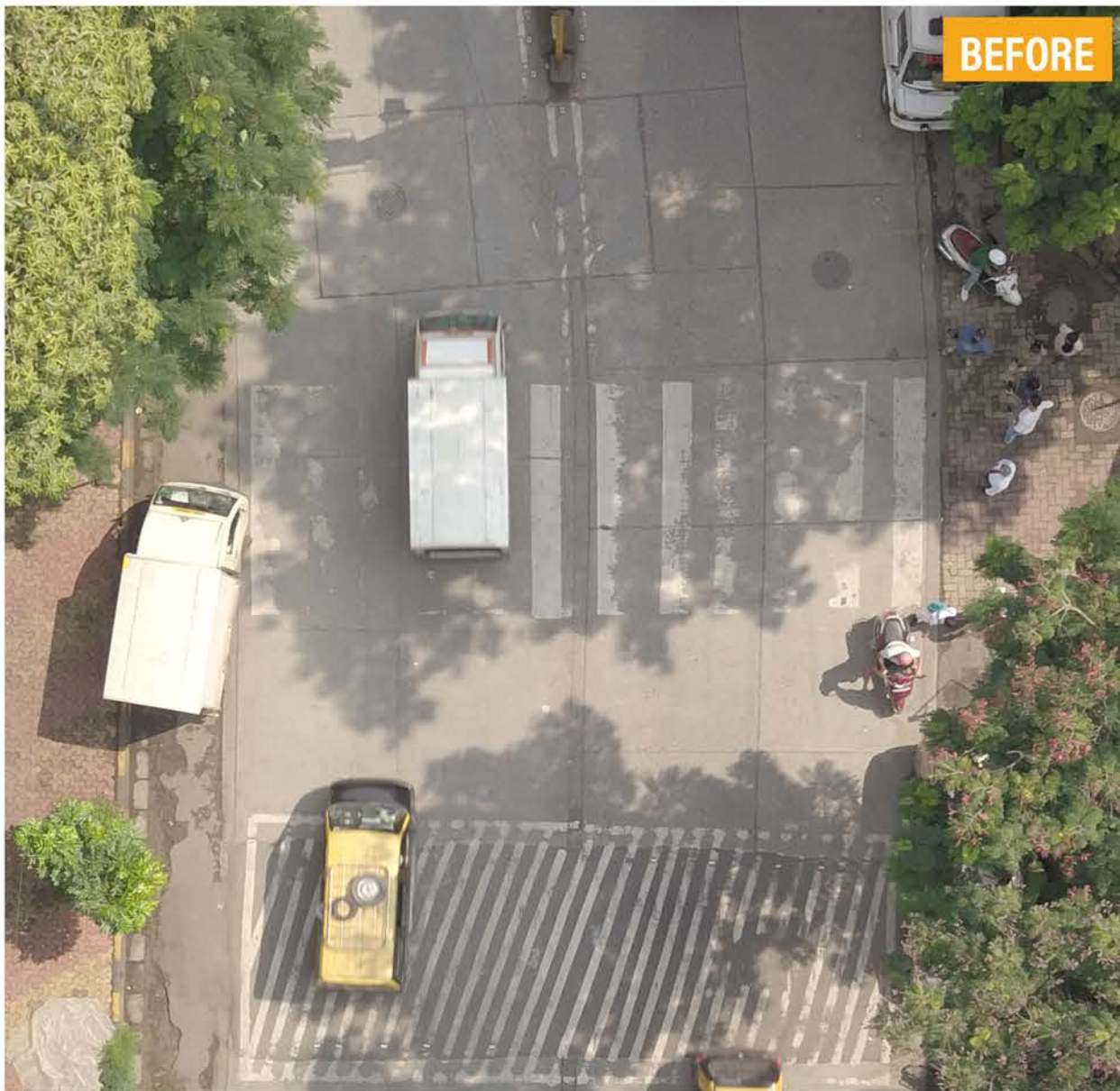


Bloomberg
Philanthropies
INITIATIVE FOR GLOBAL ROAD SAFETY



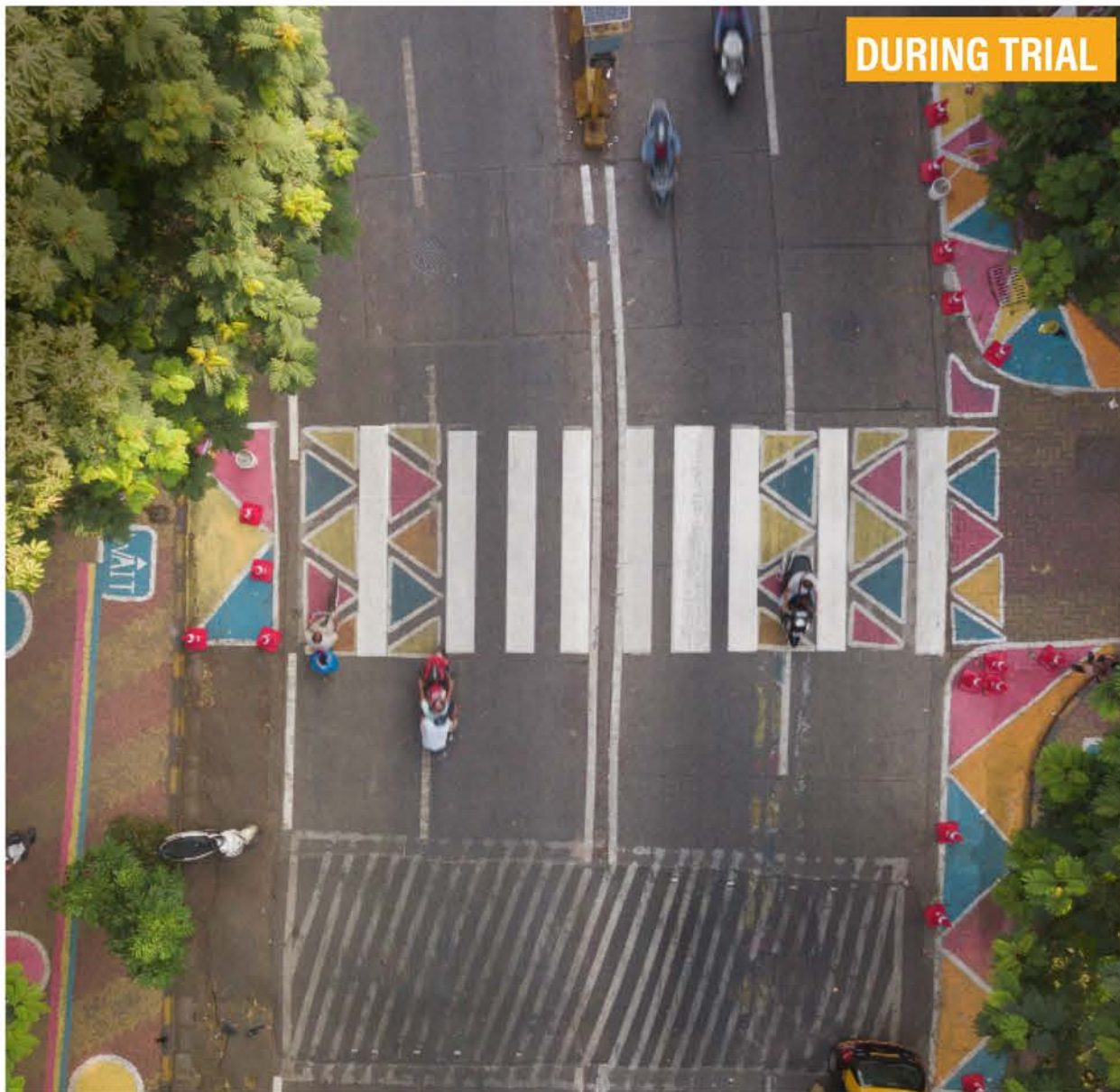
WRI INDIA

10
YEARS



BEFORE

CHILD-FRIENDLY SCHOOL ZONE, MUMBAI
MIRZA GHALIB ROAD, BYCULLA



DURING TRIAL



बृहन्मुंबई महानगरपालिका
Municipal Corporation of Greater Mumbai



Bloomberg
Philanthropies
INITIATIVE FOR GLOBAL ROAD SAFETY



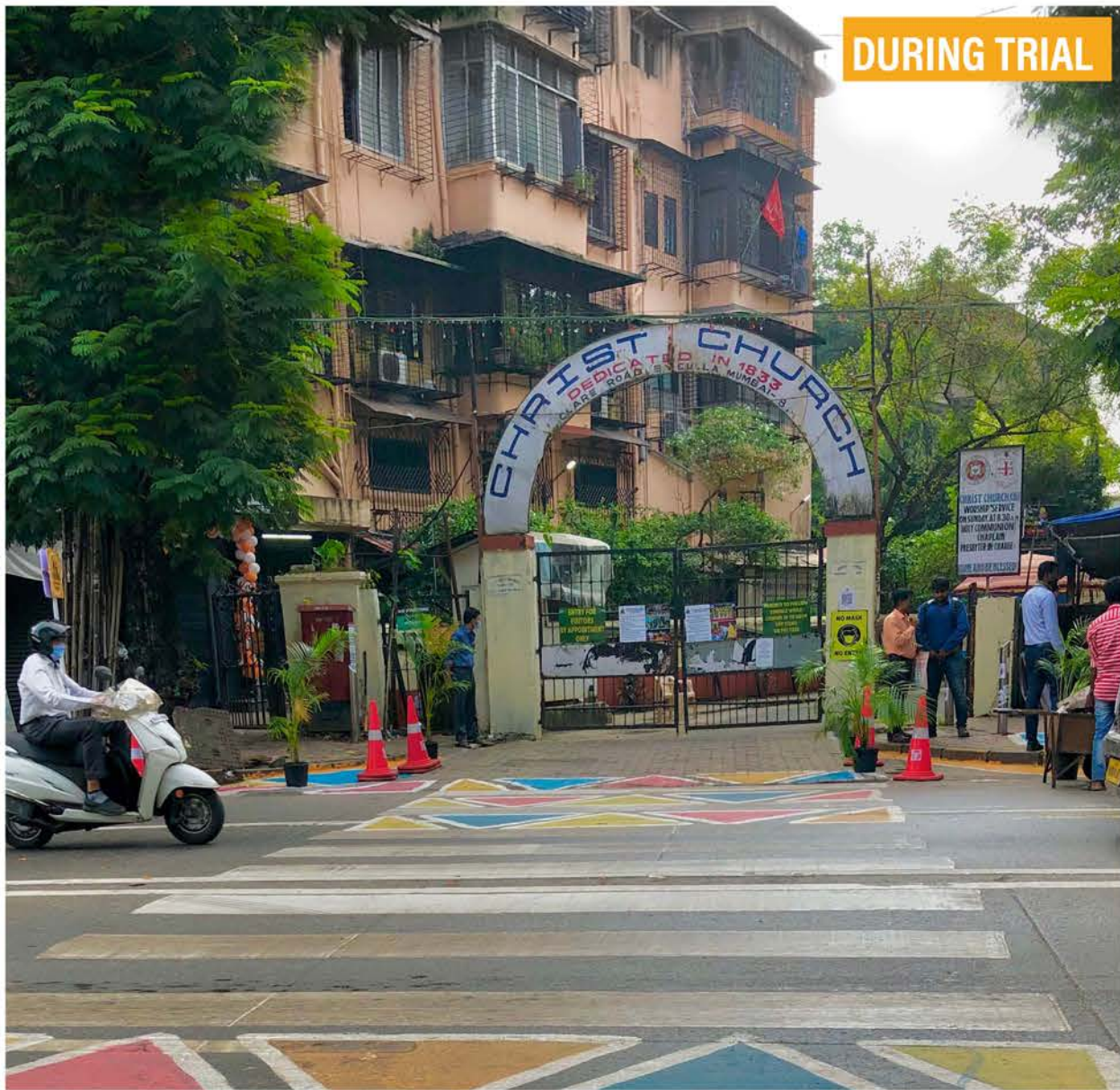
WRI INDIA

10
YEARS

BEFORE



DURING TRIAL



CHILD-FRIENDLY SCHOOL ZONE, MUMBAI

MIRZA GHALIB ROAD, BYCULLA



युहमुंबई महानगरपालिका
Municipal Corporation of Greater Mumbai



Bloomberg
Philanthropies
INITIATIVE FOR GLOBAL ROAD SAFETY

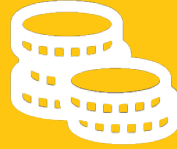
WRI INDIA
ROSS CENTER

10
YEARS

BENEFITS OF CHILD FRIENDLY CITIES



**Health
and Well-being**



Economy



Safety



**Nature and
Sustainability**



Equity




**Catalyst for
improving cities**



**Stronger
Communities**



A vibrant urban park scene where three children are performing handstands on a green artificial turf surface. The child in the center is wearing a white t-shirt and grey shorts, while the two children on either side are wearing blue shirts and shorts. In the background, other children are playing on colorful structures made of stacked tires and wooden pallets. A large, colorful mural of a face is visible on the left, and a green and white striped canopy covers the area. The overall atmosphere is lively and community-oriented.

“Children are a kind of indicator species. If we can build a successful city for children, we will have a successful city for all people.”
Mayor Enrique Peñalosa