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ROLE OF CHILDREN IN SCHOOL AREA PLANNING AND DESIGN

ROHIT TAK,
MANAGER: URBAN TRANSPORT AND ROAD SAFETY, WRI INDIA

A product of WRI Ross Center for Sustainable Cities

CHILDREN AND ROAD SAFETY IN INDIA

- India is a home to about 472 Million children between age 0-18.
- Currently 128.5 Million (27%) of these children live in urban areas.
- This number is bound to increase, as 40% of India's population will live in cities by 2030.

1. *Source: ADSI 2015, NCRB; Status of Children in Urban India 2016, NIUA and BVLF*

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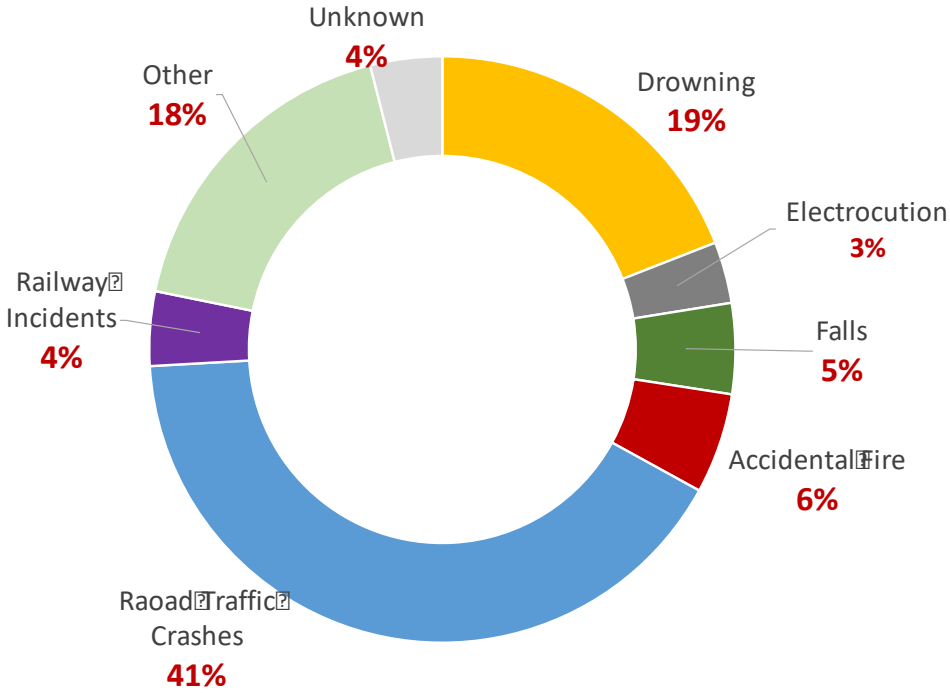
CHILDREN AND ROAD SAFETY IN INDIA

- Children are more prone to crash risks, given their smaller size, limited vision, and risk perceptions.
- Data suggests that, **road traffic crashes are the leading cause of death for children** below age 18[1]
- Everyday, **43 children die**, due to vehicle crashes on Indian Streets[2]



1. *ADSI, National Crime Records Bureau, 2015*
2. *MORTH, Govt. of India*

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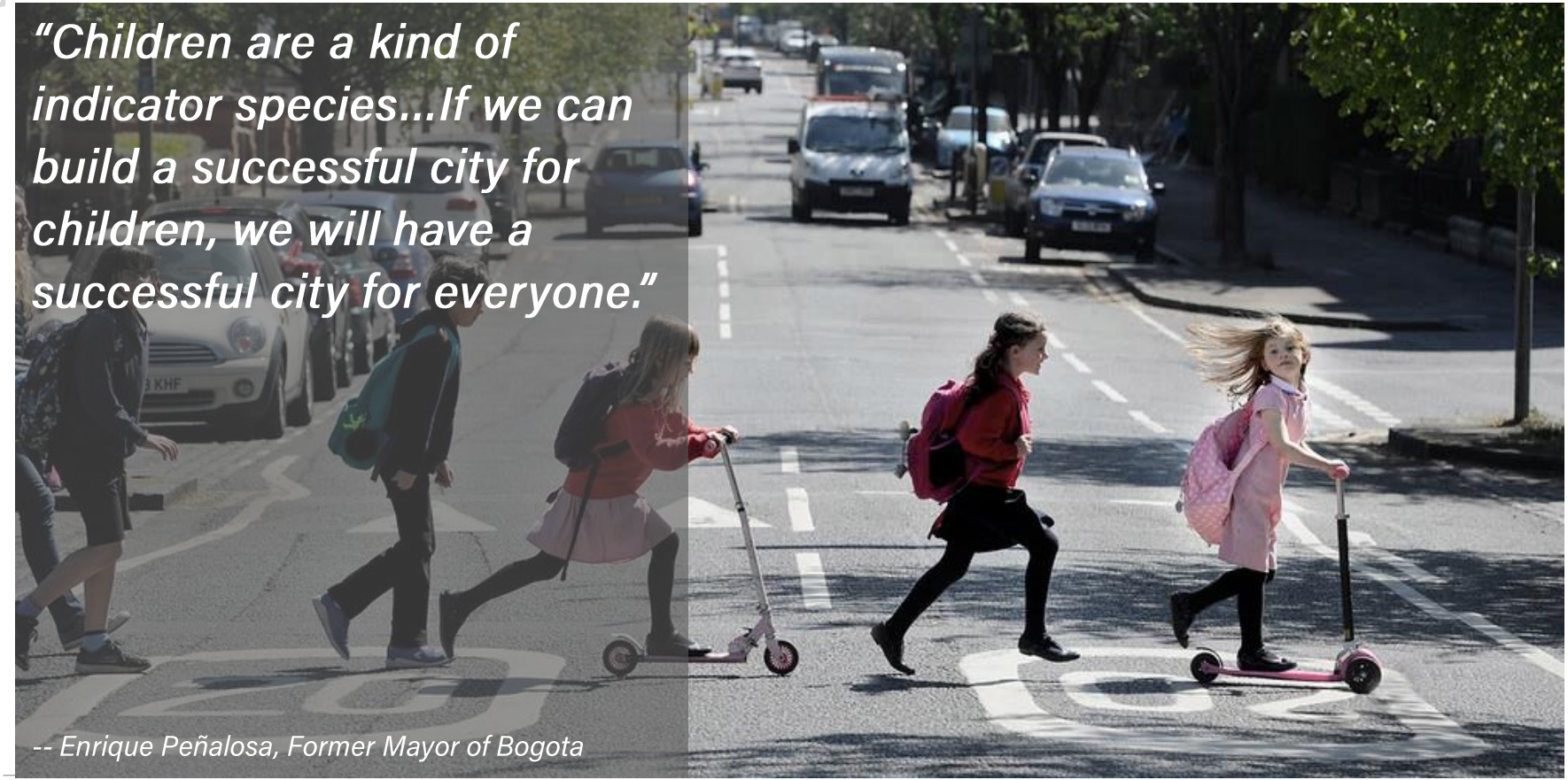
SAFER STREETS FOR CHILDREN=SAFER STREETS FOR ALL



CHILDREN AND ROAD SAFETY

- Everyday, **43 children die**, due to traffic crashes on Indian Streets[1]
- Children who face or even witness road crashes go through travel anxiety and many other post-traumatic consequences[2]

1. *National crime bureau records*
2. *WHO, World report on child injury prevention*
3. *Image source: New Indian Express Article, Sept 2017*

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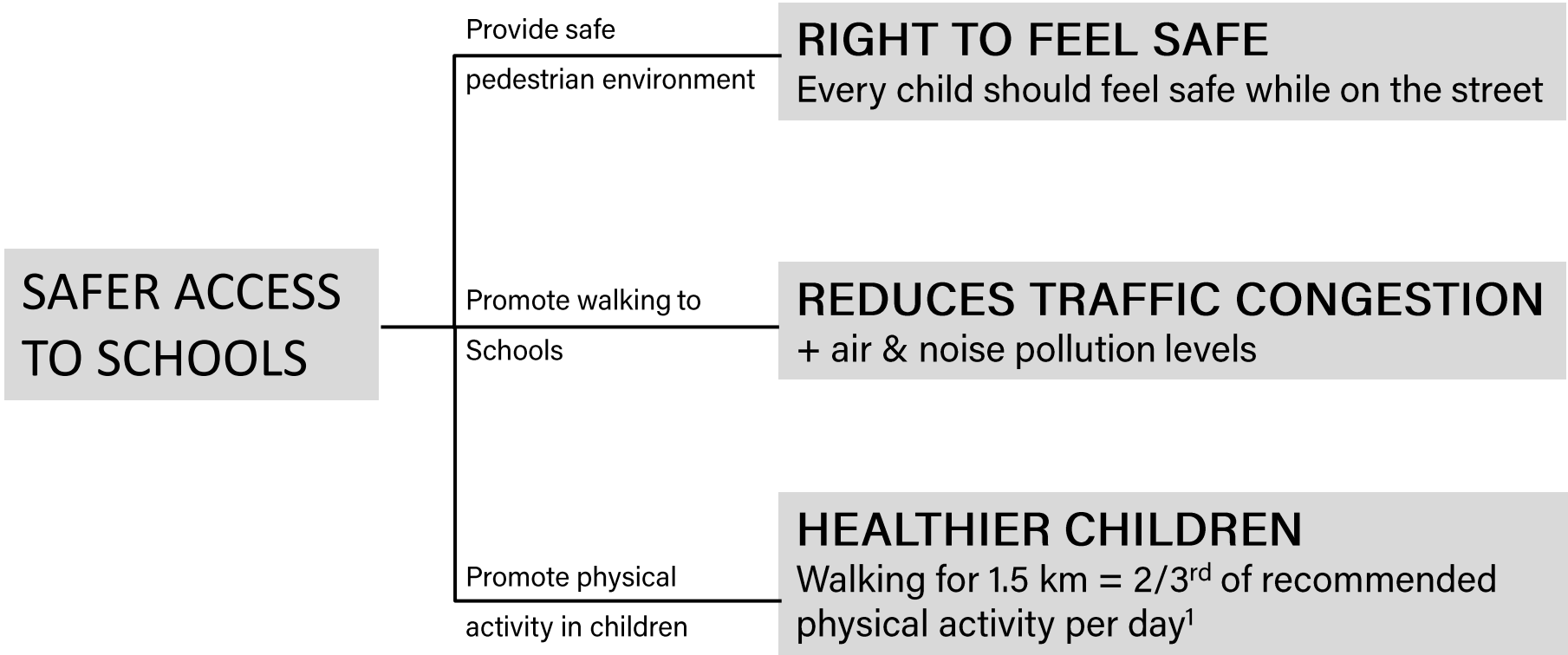
WHY FOCUS ON ACCESS TO SCHOOLS?

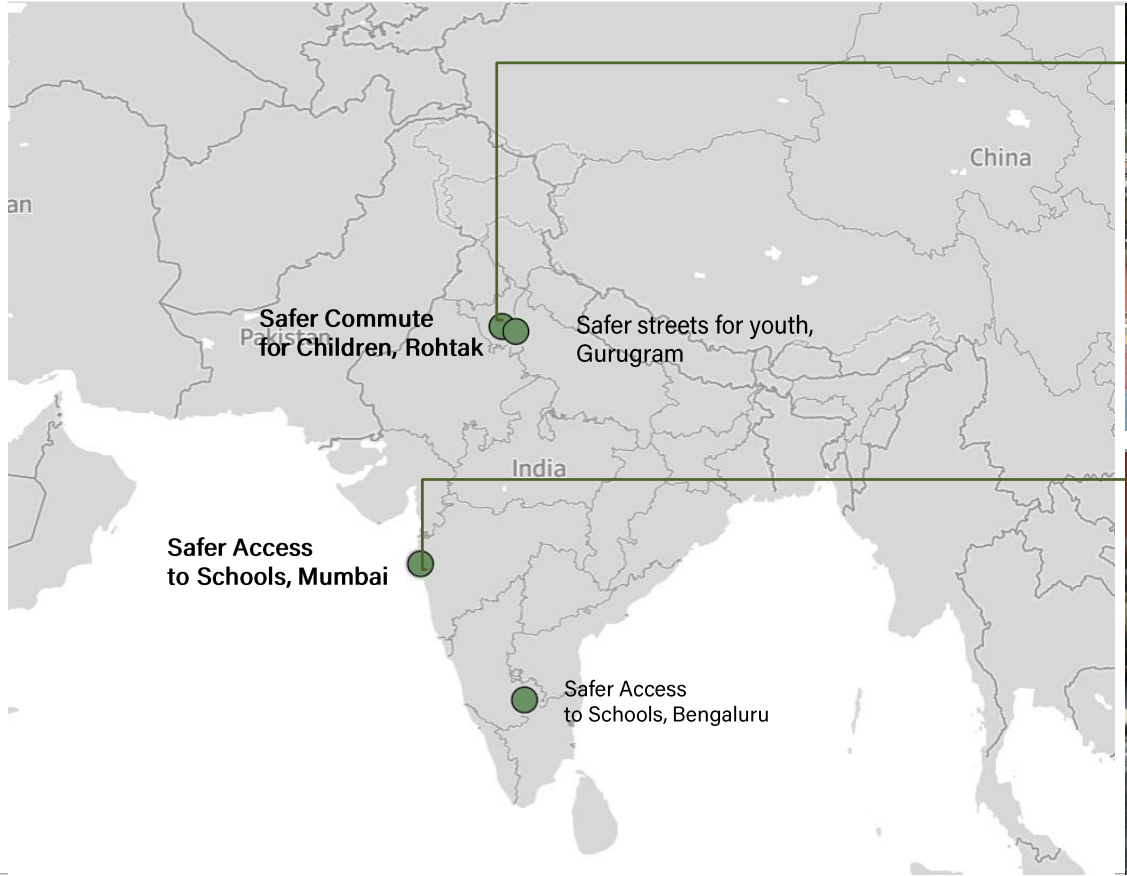
- Children spend a minimum of 6 hrs per day in school for nearly 250 days a year, that translates to around 1,500 hrs per child per year .
- A significant amount of time is also spent while **commute to and from schools**

As access to education is a right of every child, so should be the safer access to schools!

SAFE ACCESS TO SCHOOL



WRI INDIA'S CHILDREN'S SAFETY WORKS



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PROJECT APPROACH

COUNT IT

Comprehensive assessment of child safety in cities

CHANGE IT

Enhancing safety in a school district through trials and demonstrations

SCALE IT

Create buy-in and positively impact decision-making to scale up efforts

1. SAFER ACCESS TO SCHOOL, MUMBAI.

PROJECT VISION:

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

PROJECT PARTNERS:

Knowledge Partner and Lead:

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Under:

Bloomberg Philanthropies
INITIATIVE FOR GLOBAL ROAD SAFETY

With:

Municipal Corporation of Greater mumbai

thirty.square
architecture | urbanism

1. SAFER ACCESS TO SCHOOL, MUMBAI, INDIA

METHODOLOGY:

ROLE OF CHILDREN!

Identification of School For Pilot

School Precinct Assessment

Stakeholder Engagement and Data Collection

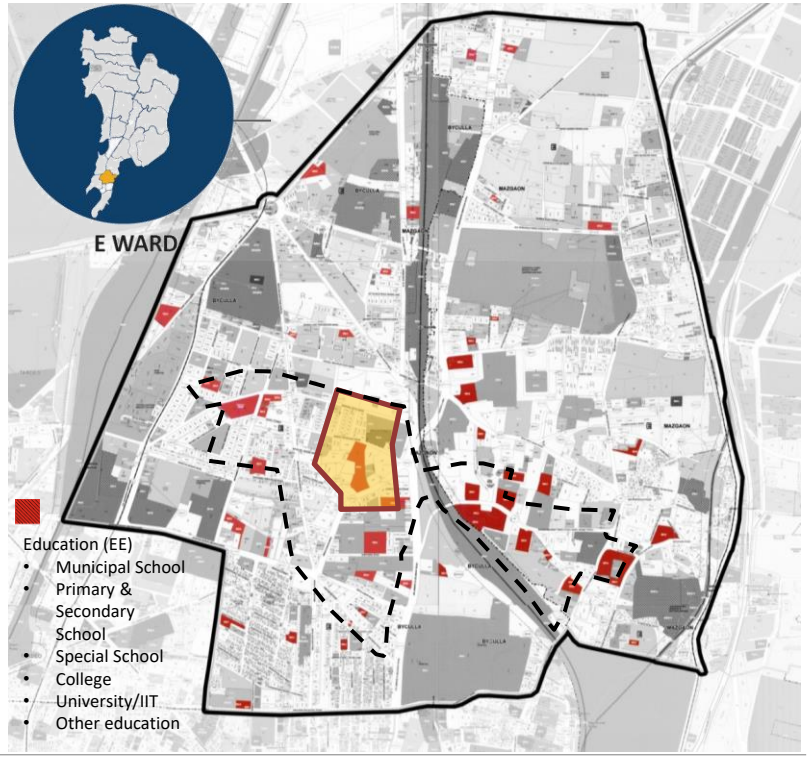
Designing School Zone

Implementation, Monitoring & Evaluation

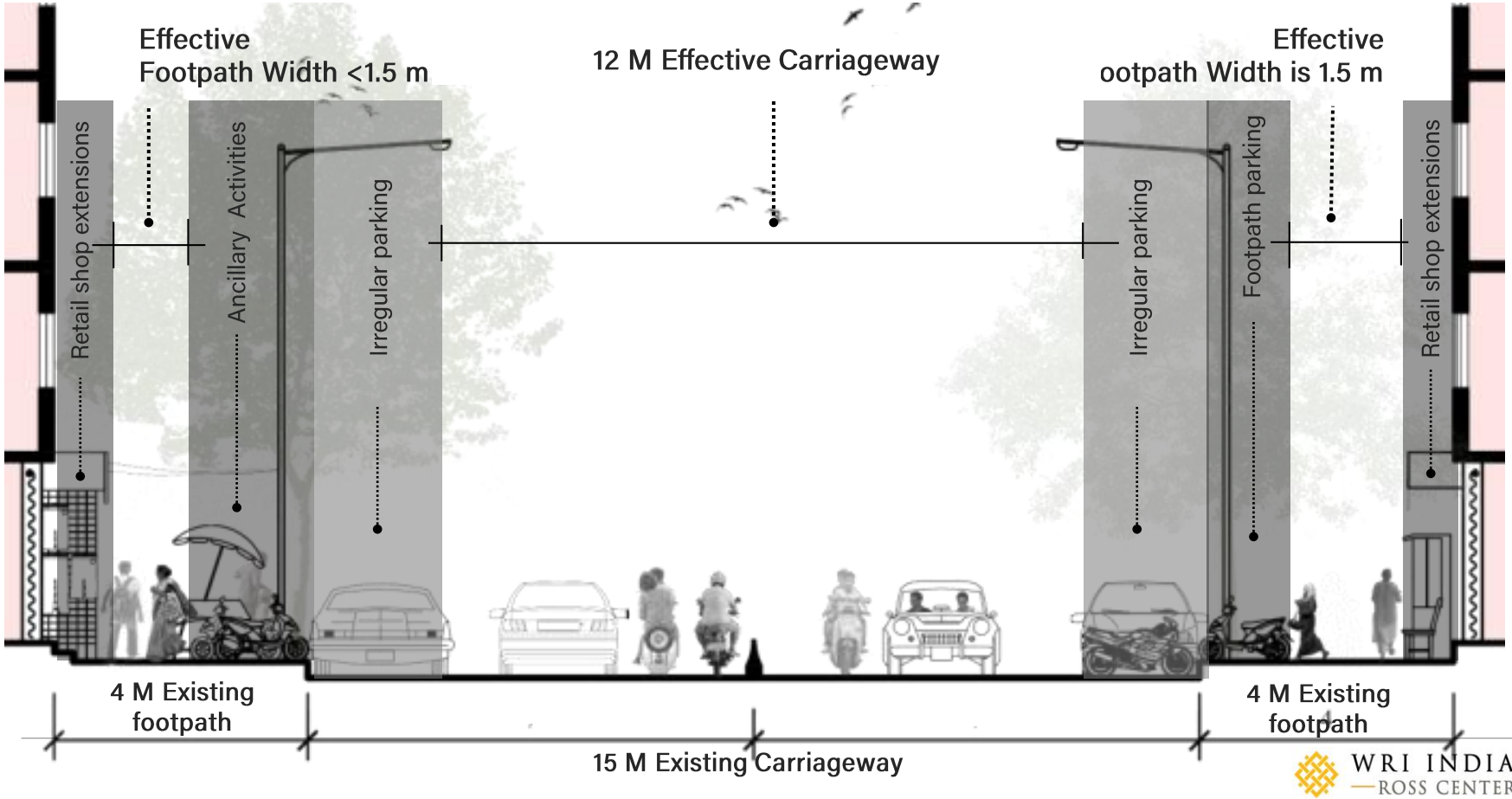
SCHOOL IDENTIFICATION

CHRIST CHURCH SCHOOL PRECINCT - BYCULLA, MUMBAI

Parameters studied	Observation
Number of Students	*3600*
Proximity to High Risk Intersections	*Khada Parsi Junction, Unsafe for pedestrians*
Connectivity Via Public Transit	*Well connected via public transport*
Informal Activities	*Present*
Footpath width	*2- 4M/ 1.5m Effective*
Travel Lanes	*2.5 Each Side/ 2 Effective*
Land Use Around	*Mixed*
Traffic Condition on Road	*Heavy to medium traffic*
Curb-side Parking	*Present in most parts*



EXISTING CONDITION OF APPROACH ROAD



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SCHOOL PRECINCT AT ASSEMBLY/ DEPARTURE HOURS

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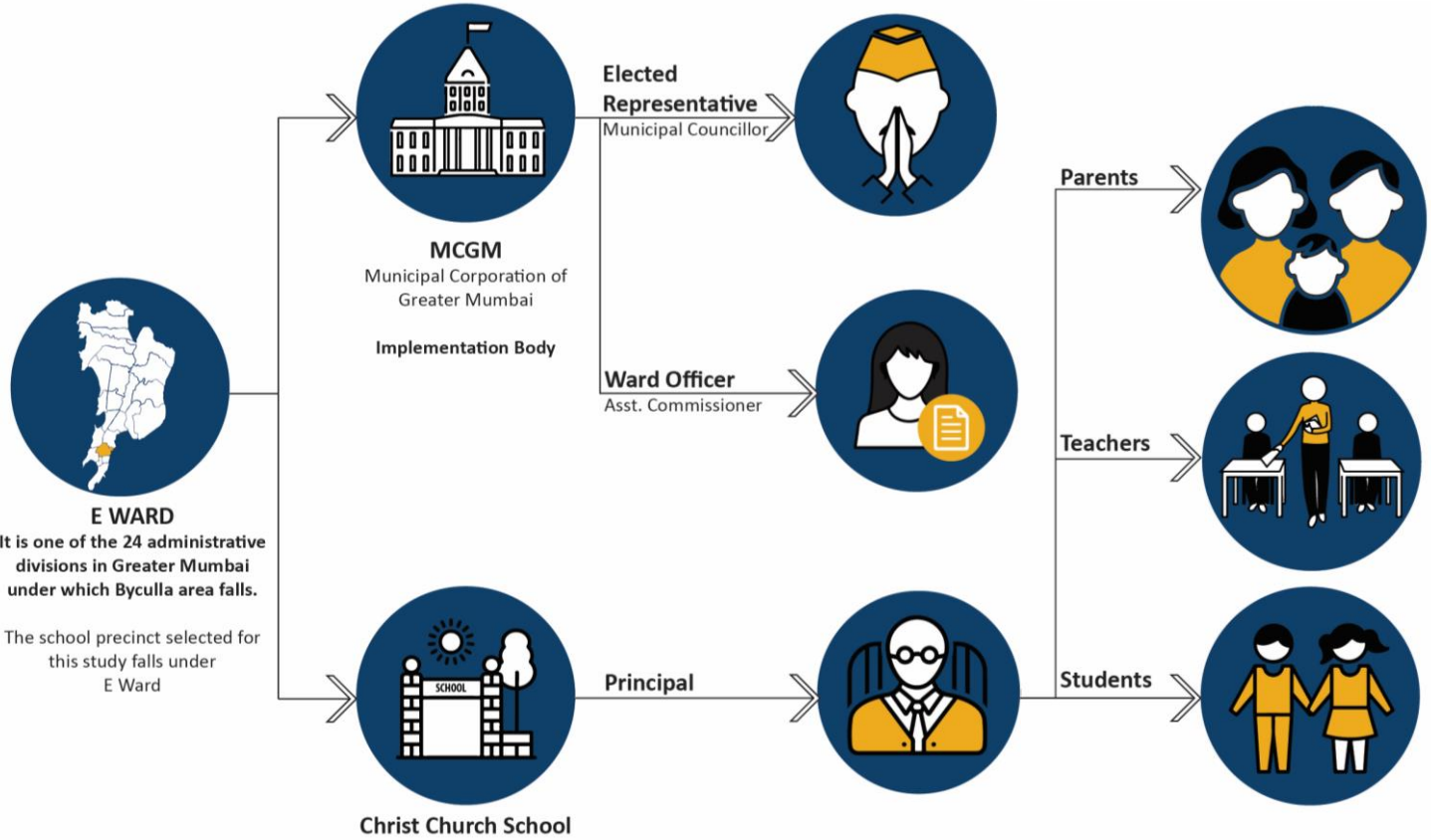
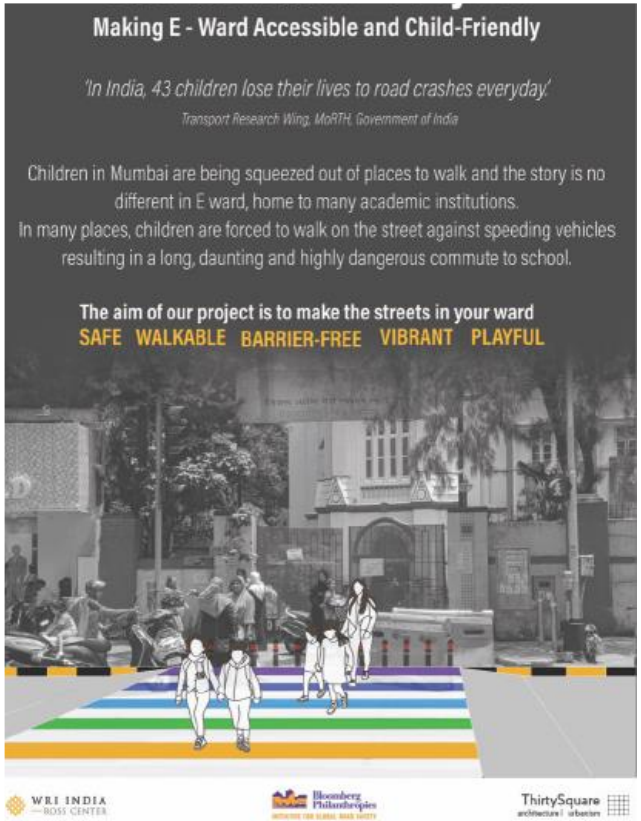
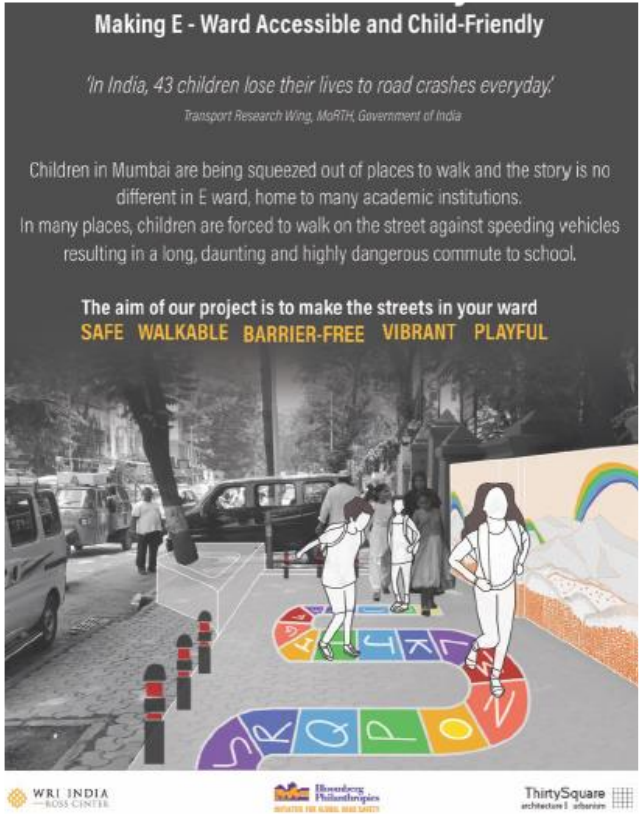
IDENTIFYING KEY PLAYERS



PROGRAM PROPOSAL





STAKEHOLDER ENGAGEMENT

Introducing the project to Ward Officer, Smt. Alka Sasane

Introducing project to Municipal Councilor, Mr. Rais Sheikh

Introducing project to Principal & PTA, Christ Church School

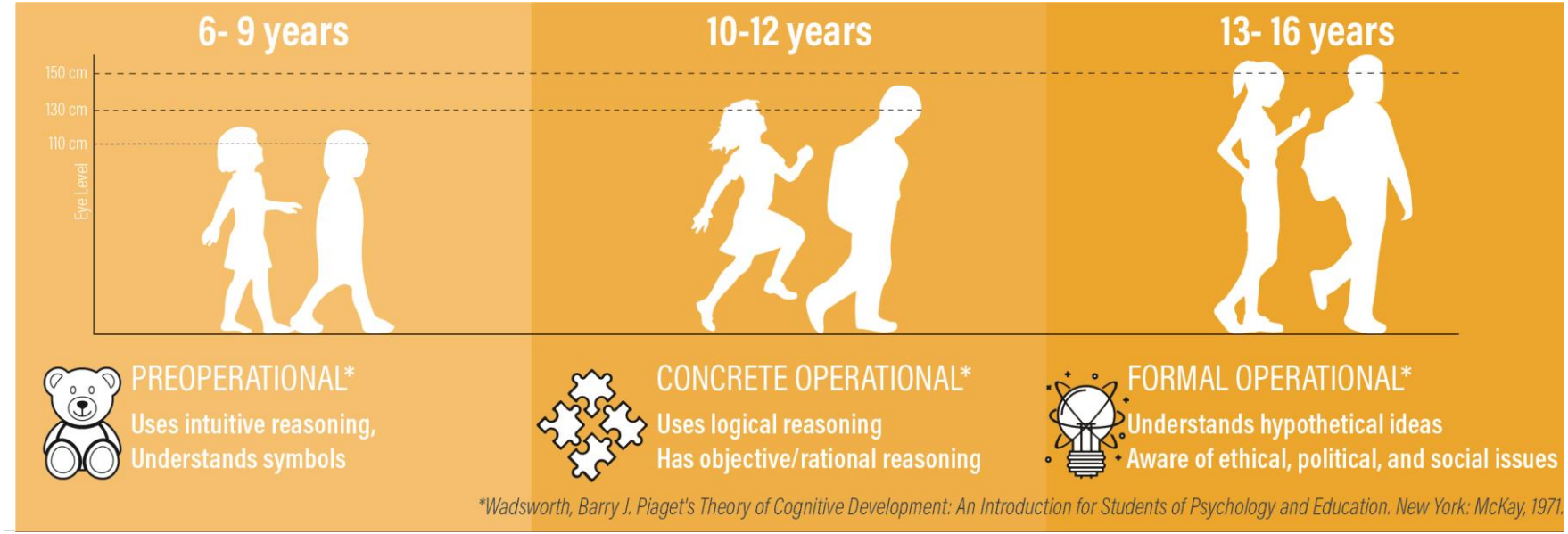
Parents/ Guardian Survey **(> 430)**

Focused Group Discussion **(60 Students 6-16 Age)**

UNDERSTANDING CHILDREN

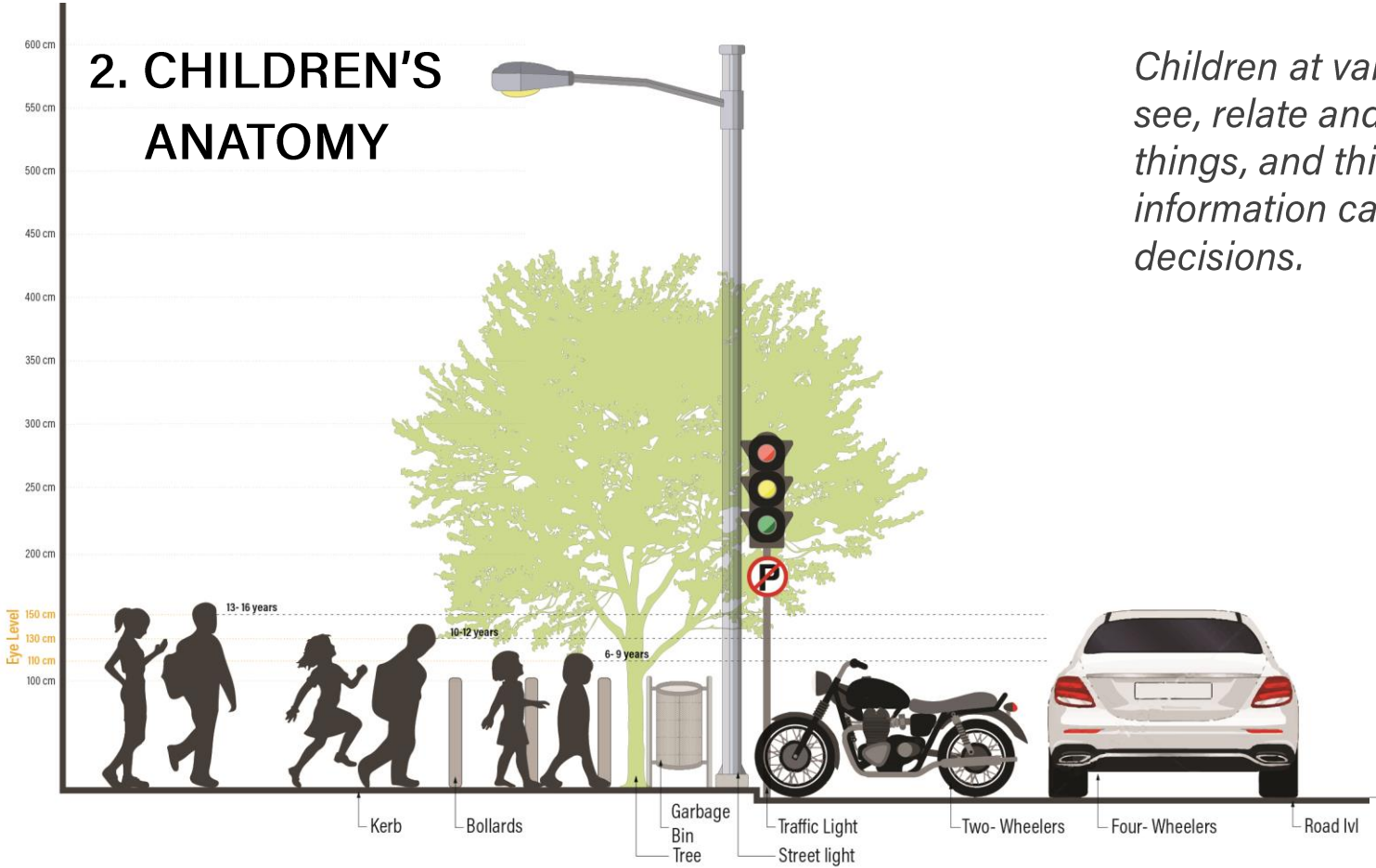
1. CHILDREN'S COGNITIVE DEVELOPMENT

Children at young ages have varied cognitive skills and the focused group interaction has to be designed by considering it.



UNDERSTANDING CHILDREN

2. CHILDREN'S ANATOMY



Children at varied heights can see, relate and identify different things, and this qualitative information can inform design decisions.

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FGD SESSION 1 PHOTOVOICE TOOL

PHOTO WALK

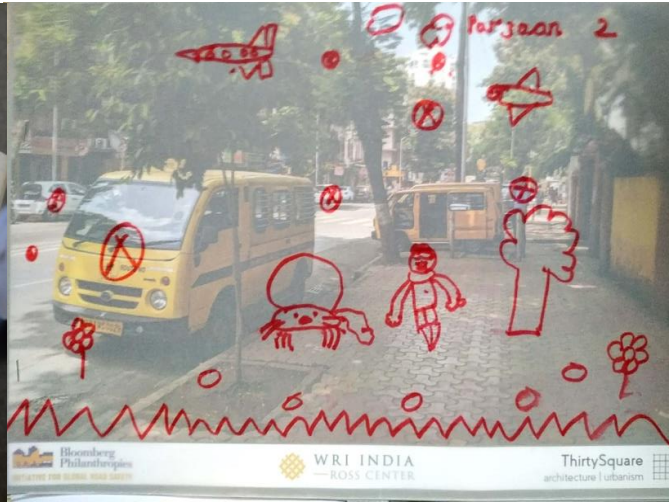
A walk with **each age group** was organized to understand **what children see at their eye level and if they like it or dislike.**

- *Green Frame = Like*
- *Red Frame = Dislike*

FGD SESSION 2: VISUALIZATION EXERCISE

A. FOR 6-9 AGE

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



FGD: 2. VISUALIZATION EXERCISE

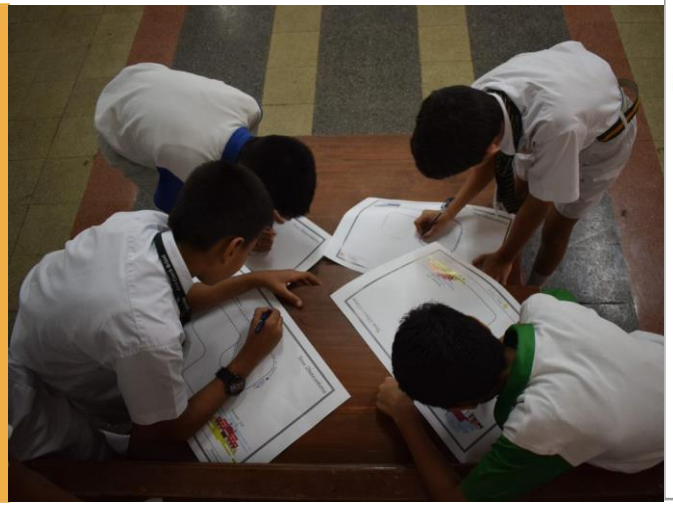
B. FOR AGE GROUP 10-12

To understand **what children see and want to see on their commute to school.**

10-12 years

MAKING A MIND MAP

What I observe? vs What i imagine?



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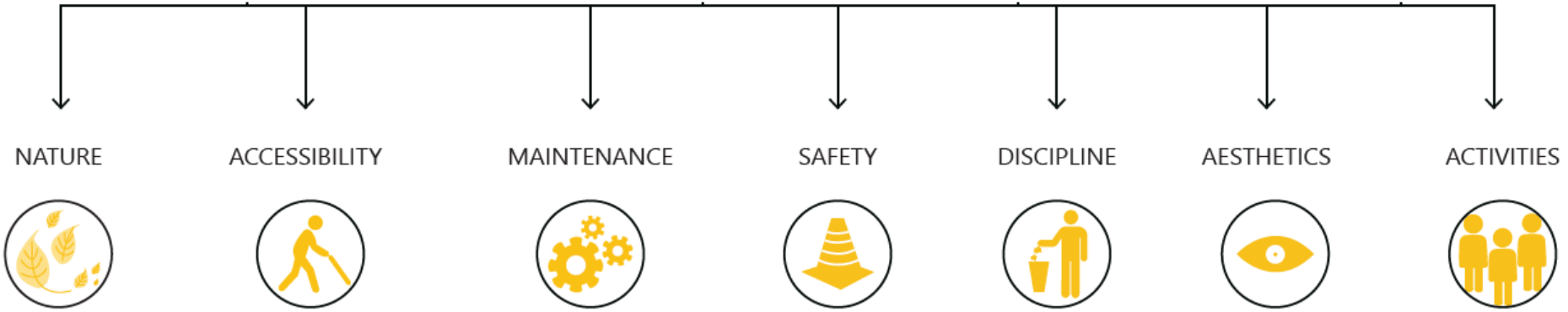
FGD: 2. VISUALIZATION EXERCISE

C. FOR AGE GROUP 13-16

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

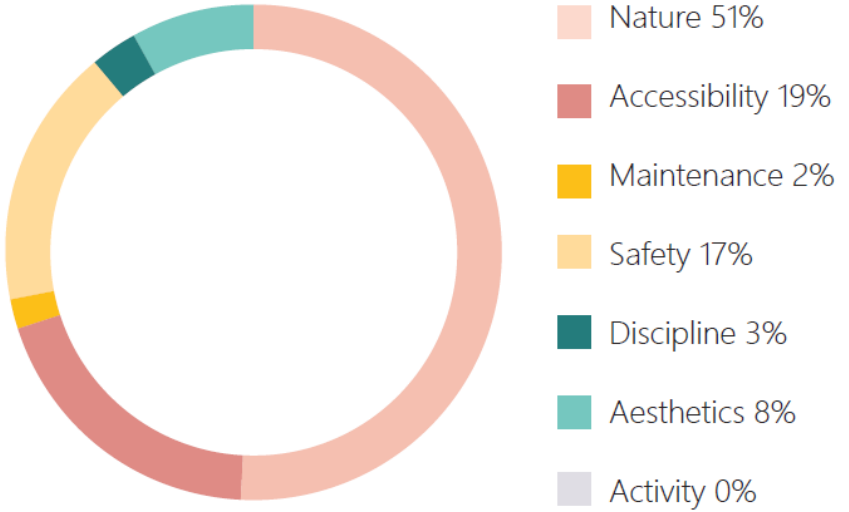
ANALYZING QUALITATIVE DATA FROM FGD

BROAD CATEGORIES



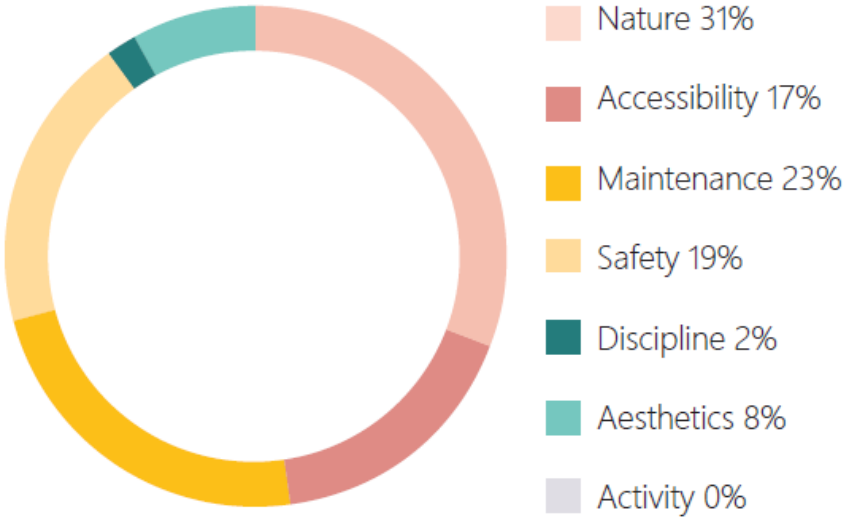
FINDINGS – AGE GROUP 6-9

- Visual reference frame is mostly horizontal.
- Liking for natural elements such as plants, birds, skies, trees etc.
- Few had understood road safety risks.
- Aesthetics include bright colored objects: signal colors, yellow school bus, candy shop logo, flowering plants



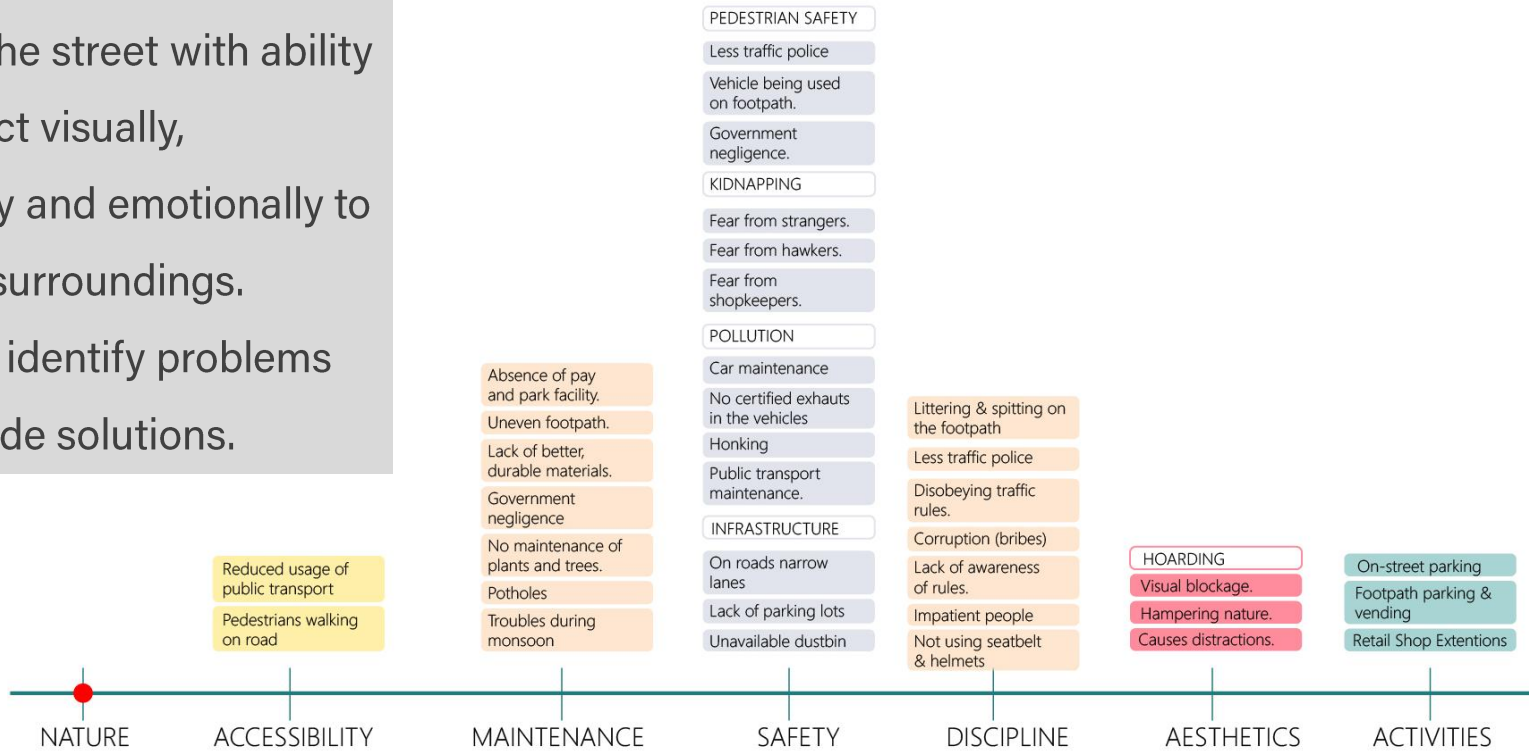
FINDINGS – AGE GROUP 10-12

- Their classifications of likes and dislikes are driven by their learnings in school.
- Visual reference frame is horizontal.
- They were also able to identify environmental issues they face such as air and noise pollution.
- Some of them were able to highlight the road safety issues they face for e.g. difficulty while crossing the street

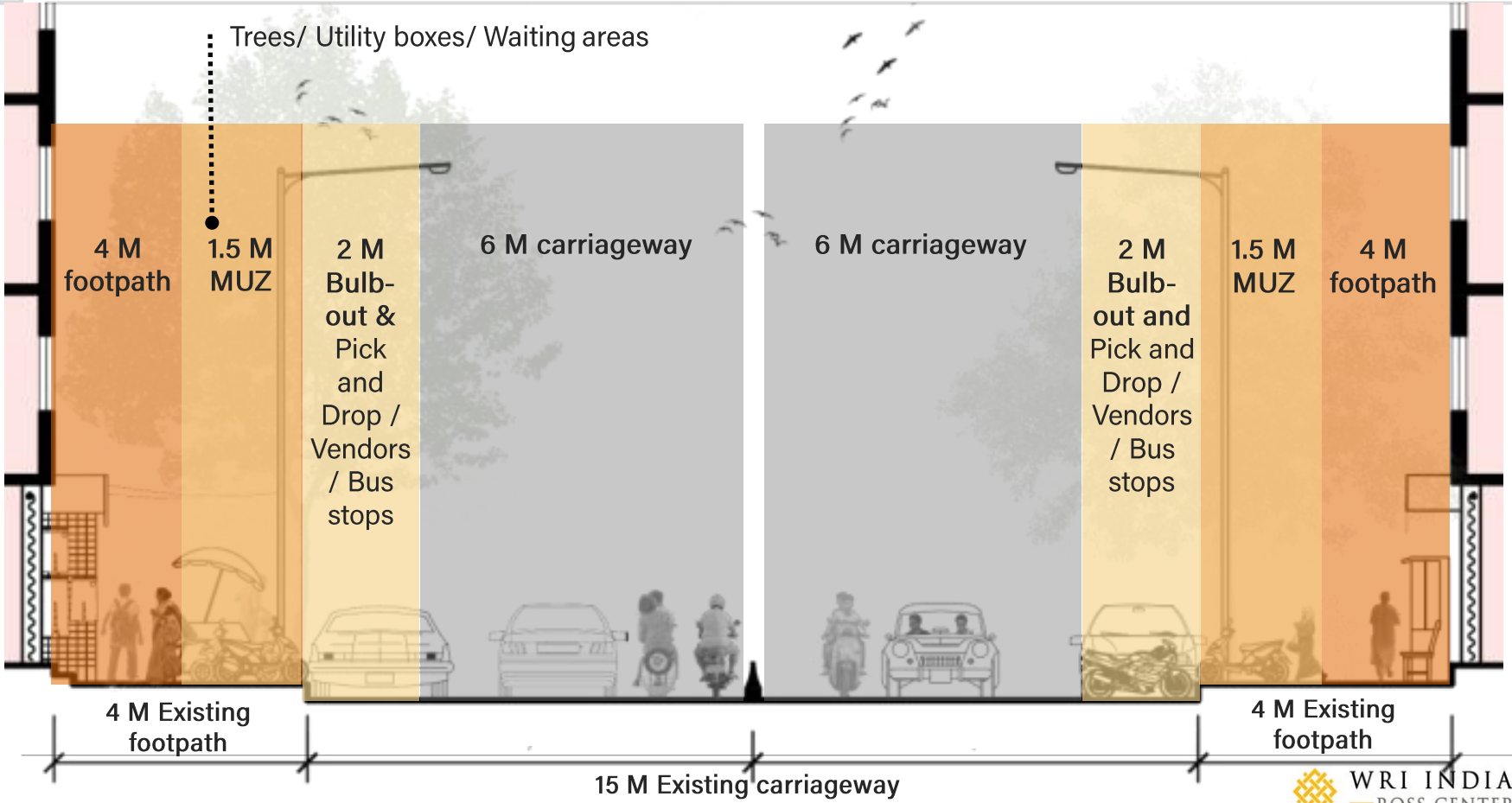


FINDINGS – AGE GROUP 13-16

- Visual reference frame is beyond the street with ability to connect visually, physically and emotionally to broader surroundings.
- Ability to identify problems and provide solutions.



DEMARCATION OF ROW WITHIN SCHOOL ZONE



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VIEW OF EXISTING SITUATION AT ENTRANCE

VIEW OF PROPOSED SCHOOL ZONE

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

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

MEDIA COVERAGE

Byculla hosts test case for child-friendly footpaths

Gargi Choudhury

WAY TO GO: CHILDREN FIRST

Where: Clare Road (Mirza Ghalib Road), Byculla

Why: There are two schools on one street and traffic conditions are chaotic here

Experiment area: 200 metres of road and footpath space

INTERVENTIONS PROPOSED

1. Vibrant raised crossing
2. Reserved pick-up and drop-off
3. Waiting area
4. Vibrant, colourful footpaths

Bulb-outs (extension of kerb into road area at certain crucial spots for benefit of pedestrians)

Richa.Pinto@timesgroup.com

Mumbai: Acknowledging that children are among the most vulnerable road users, BMC is planning to make footpaths child-friendly, starting out with an experiment at Clare Road, also known as Mirza Ghalib Road in Byculla, which has two schools.

The pilot project by the World Resource Institute (WRI) will include re-organising traffic flow to eliminate congestion, interactive footpath designs with colourful patterns (*see graphic*), 'School Zone' boards that will be visible to motorists from a distance and bulb-outs or raised curb extensions with dedicated pick-up and drop zones.

Local Samajwadi Party corporator Rais Shaikh said the project has been in the pipeline for months with surveys already conducted with the users, namely parents and students of Christ Church and St Agnes schools, to understand their difficulties. "The various age groups of students were considered so that the challenges of every child walking out from school can be taken into account. We want to make simple and basic interventions so that the area outside schools and, most importantly, the footpath is child-friendly," said Shaikh.

WRI is taking up the project under the Bloomberg Initiative for Global Road Safety along with the BMC and the local corporator.

Rohit Tak, manager of WRI India, said safer access to schools for students is critical. "We know the congestion problem may not be immediately solved but if certain interventions made in street design are followed, they could help in streamlining motorist and pedestrian movement. We are keen on taking up this pilot project which other areas can adopt in future," said Tak.

ThirtySquare, a consultant hired by WRI, has been studying the area in detail and has walked with school-children to understand the hurdles they faced. Fatema Master, from ThirtySquare, said their target group was 6-16 years and children with height ranging from 1.1 to 1.6 metres. "These kids mainly see only car door handles, dustbins and footpath layout as these are closer to their eyes. Therefore, we focused on how to make their walk to school and back easier," she said.

Christ Church School principal Ferdinand Bunyan said they are keen participants in the project. "I believe it is an amazing idea with tremendous potential. We are excited to be part of this venture. We have a meeting on Saturday in our school on the same subject," he said.

PROJECT STAGE

*As the **new normal demands more space for walking**, we are sure that this **child friendly school zone will not only benefit children but also all age groups**!*

Identification of School For Pilot

School Precinct Assessment

Stakeholder Engagement and Data Collection

Designing School Zone

Tactical Urbanism + Monitoring & Evaluation

THIS IS WHERE WE ARE AT!

2. SAFER COMMUTE FOR SCHOOL CHILDREN, ROHTAK

PROJECT VISION:

To transform Rohtak into a city where children can travel safely on the road, either by foot, cycle or transit, irrespective of whether they are accompanied by an adult or on their own.

PROJECT PARTNERS:

Botnar
Child Road Safety Challenge
Managed By: Global Road Safety Partnership

Knowledge Partner :

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With:

fondation BOTNAR

GLOBAL ROAD SAFETY PARTNERSHIP

WORK PLAN

Focus group discussions
(Age group: 11 -17)

Children's mobility
pattern assessment

Preparation of design &
traffic management solutions

Tactical urbanism intervemtions
at critical locations

Road Safety
Inspection
of priority roads

Permanent
Implementation

ENGAGEMENT ACTIVITIES

- To understand perception of safety while on the street.

28 Parents

11 Teachers

39 Students

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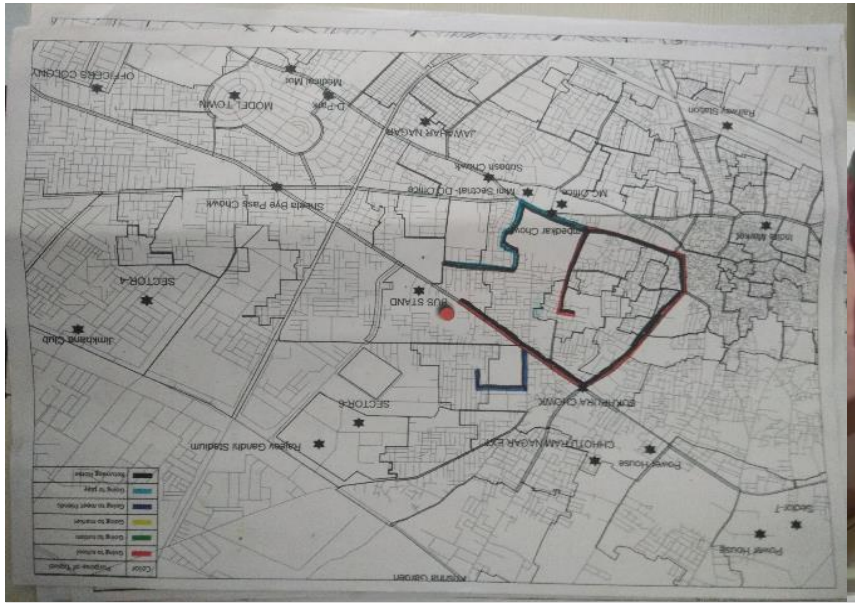
ENGAGEMENT ACTIVITIES

Children's mobility pattern assessment with trip diary/ mode share study.

>4000 Students

>19000 Trips



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CHILDREN GIVING SOLUTIONS

Preparation of design & traffic management solutions.

CHILDREN TRANSFORMING STREETS!

SHORT TERM IMPLEMENTATION

Short term implementations at critical locations

20% Reduction in vehicular speeds

75% Reduction in crossing distance and time

70% Reclamation of intersection area for vulnerable street users including school children

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