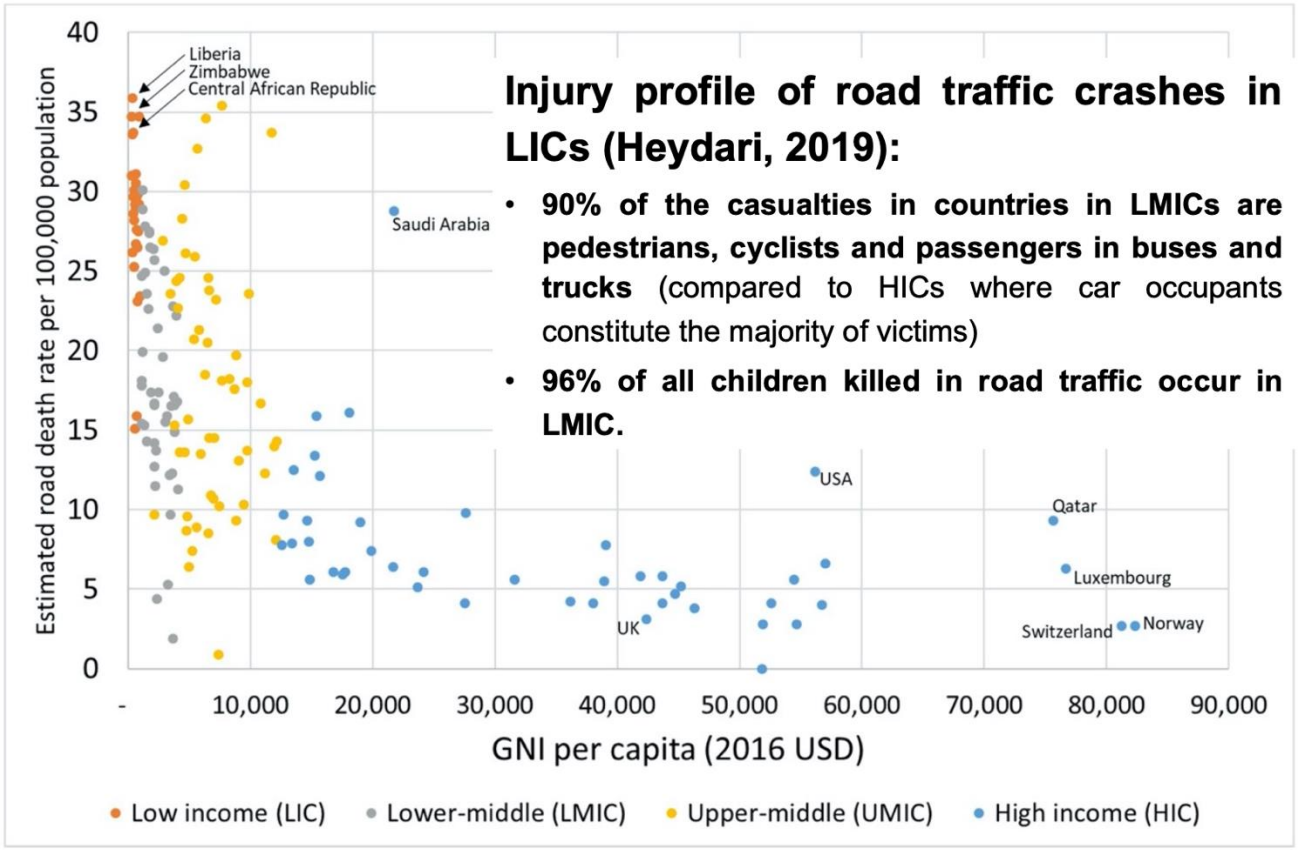
iRAP: Safe & sustainable transport

SUSTAINABLE DEVELOPMENT GOALS

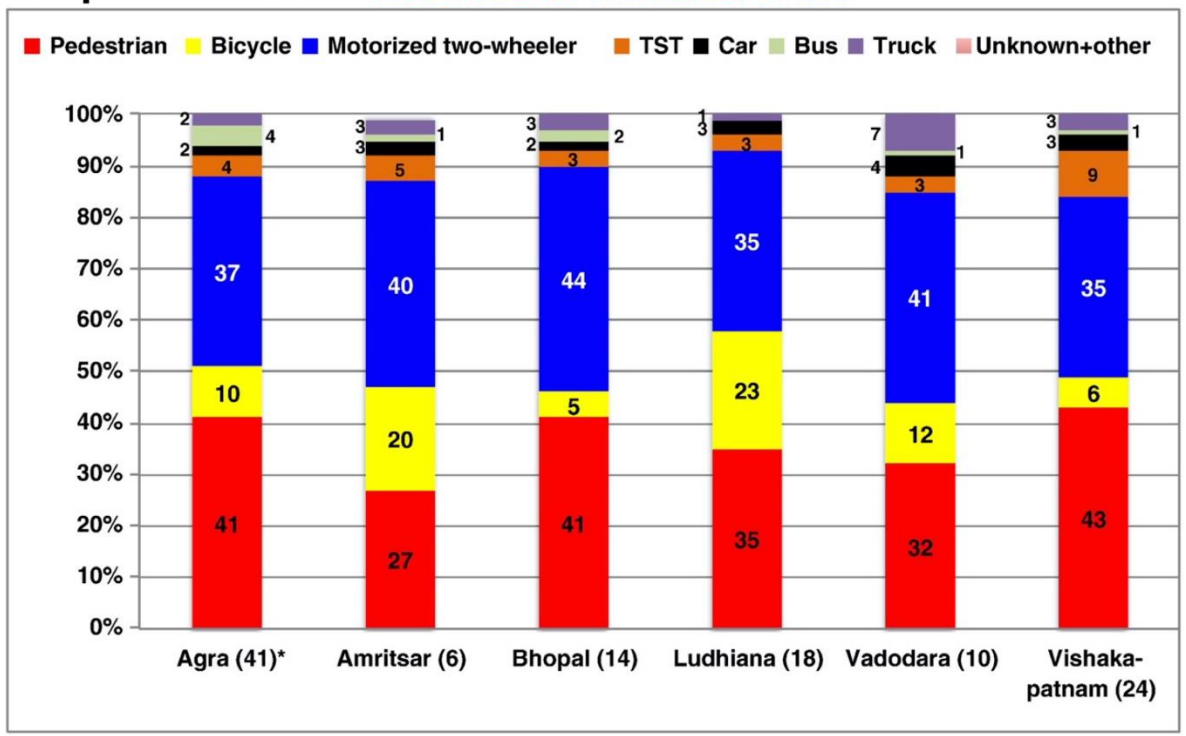
SDG Target 3.6 aims to **halve** the number of road deaths and injuries by 2030



Injury profile of road traffic crashes in LICs (Heydari, 2019):

- **90% of the casualties in countries in LMICs are pedestrians, cyclists and passengers in buses and trucks** (compared to HICs where car occupants constitute the majority of victims)
- **96% of all children killed in road traffic occur in LMIC.**

Proportion of VRU fatalities in 6 Indian cities



Source: Dinesh Mohan, D., Tiwari, G. and S. Mukherjee. (2016). Urban traffic safety assessment: A case study of six Indian cities. IATSS Research 39 p.95–101. URL: https://www.sciencedirect.com/science/article/pii/S0386111216000054

WHAT DOES iRAP DO FOR ROAD SAFETY?

Provides methods and models to measure:

- Road infrastructure risk (both retroactive and proactive).
- Estimation of future rates of FSI accidents.
- Proposes safety solutions to reduce the likelihood and severity of accidents.
- Provides the business case for investment (cost-benefit ratio).

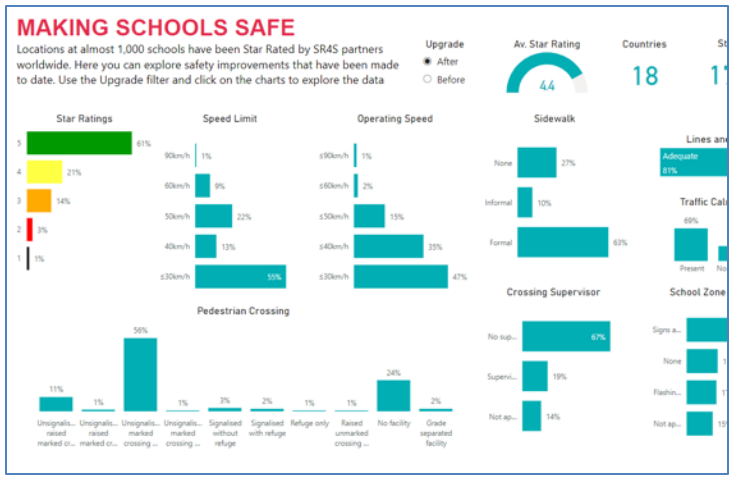
Based on extensive global research + globally applicable.

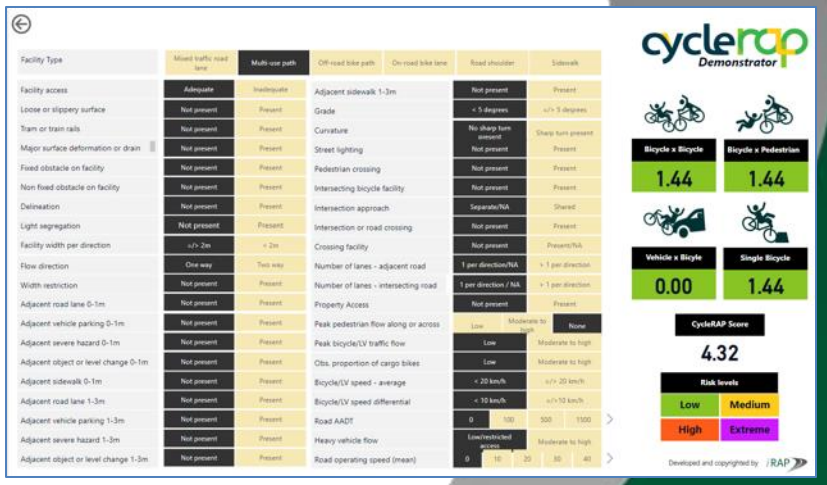
Wide Range of Applications: Supports objectives, policies, investment decisions and prioritization, improved designs, and tracking safety performance over time.

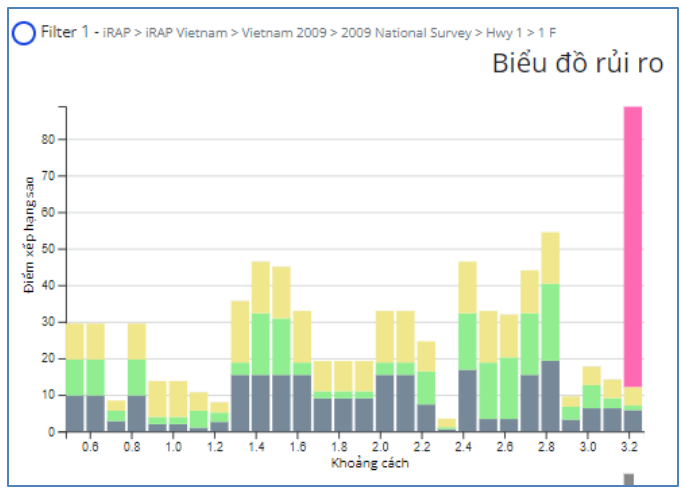
iRAP's risk models are supported by the research of its Centers of Excellence and the models are managed by a Global Technical Committee (GTC).

iRAP'S APPROACH TO SYSTEMIC SAFETY MANAGEMENT

iRAP ACCREDITED







PARTNERSHIPS FOR 2030 IMPACT

A WORLD FREE OF HIGH-RISK ROADS – PROGRESS BY DECEMBER 2024

132 COUNTRIES ASSESSED

180 COUNTRIES INFLUENCED

USD$ **111** BILLION OF INFRASTRUCTURE INVESTMENT MADE SAFER

700 THOUSAND LIVES AND SERIOUS INJURIES SAVED*

1.9 MILLION KM ROADS AND DESIGNS STAR RATED

1.9 MILLION KM RISK MAPPED

1,940 SCHOOLS STAR RATED USING SR4S IN 76 COUNTRIES

76 THOUSAND PEOPLE TRAINED

DECADE OF ACTION FOR ROAD SAFETY 2021 - 2030

iRAP

34 THOUSAND PARTNERS

iRAP ACCREDITED **273** PRACTITIONERS

142 INNOVATION PARTNERS

★★★+ **86** 3-STAR OR BETTER POLICIES

8.4 MILLION KM OF ROAD IN VIDA

FIA FOUNDATION

irap.org irapsavinglives iRAPfb

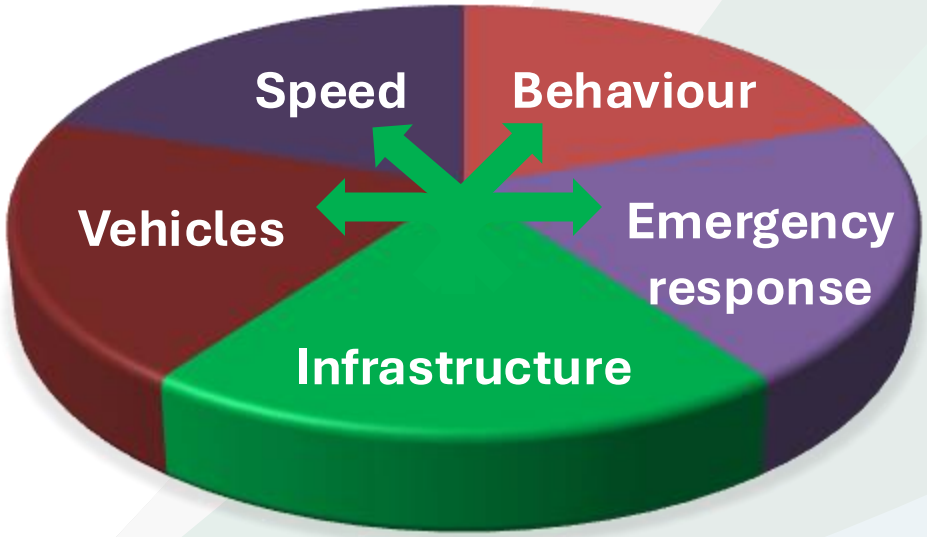
* From 2016 to December 2025. Johns Hopkins University research published in PLOS ONE

TARGET 3 2030

Target 3: By 2030, all new roads achieve technical standards for all road users that take into account road safety, or meet a three star rating or better.

TARGET 4 2030

Target 4: By 2030, more than 75% of travel on existing roads is on roads that meet technical standards for all road users that take into account road safety.



SAFE SYSTEM

iRAP Safety Insights Explorer

Country

All

Region

Region - Asia

- Region - Africa
- Region - Asia
- Region - Caribbean
- Region - Central America
- Region - Europe
- Region - Middle East
- Region - North America

All

Vehicle Flow

All

Carriageway

All

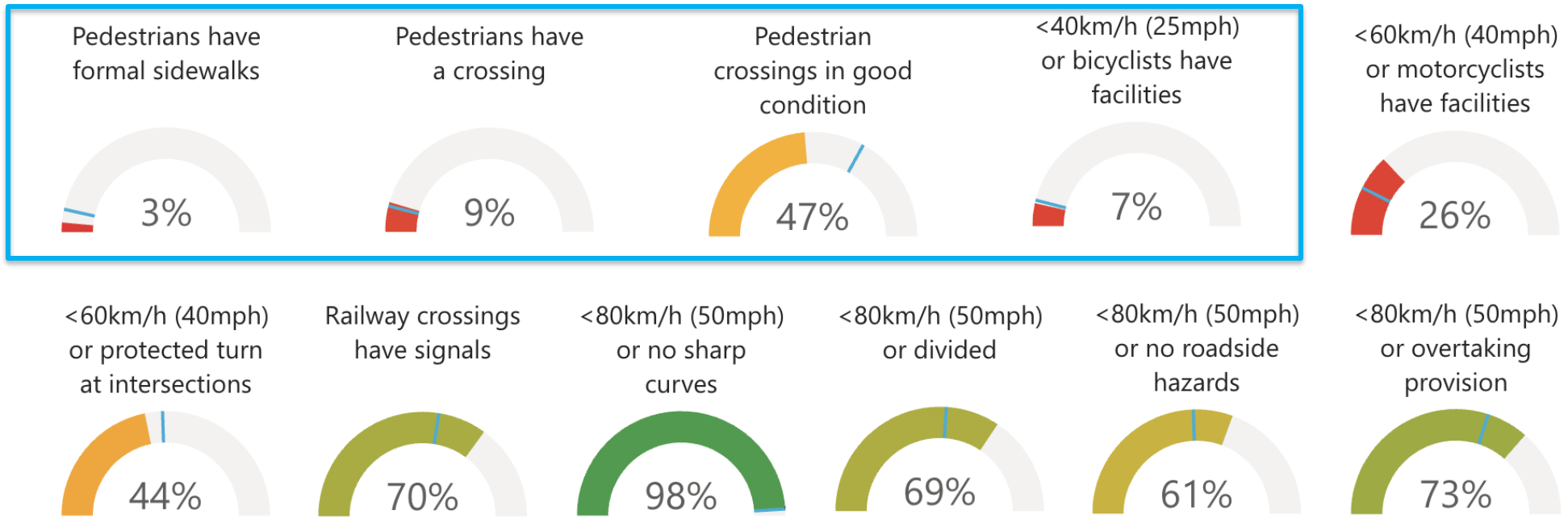
Clear Filters

Filters Applied

Length	Countries
97190	21

Road length rated 3-Star or better

Infrastructure safety key performance indicators (KPI)



iRAP FIA FOUNDATION TAC DECADE OF ACTION FOR ROAD SAFETY 2021 - 2030

iRAP Safety Insights Explorer

Country
All

Region
Region - Asia

Income Level
All

Road Safety Observatory
All

Land Use
All

Area Type
All

Vehicle Flow
All

Carriageway
All

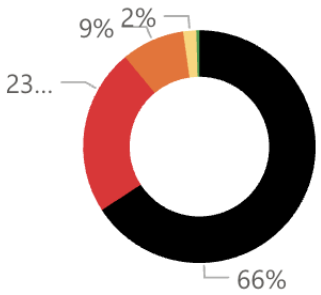
Clear Filters

Filters Applied

Length	Countries
97,190 km	21

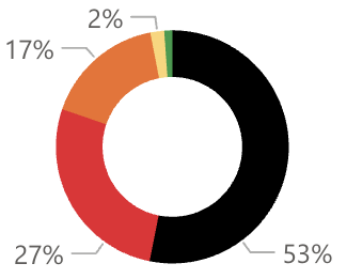
Star Ratings by road length (km)

Pedestrians



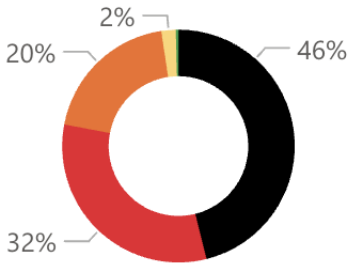
67,349 km

Bicyclists



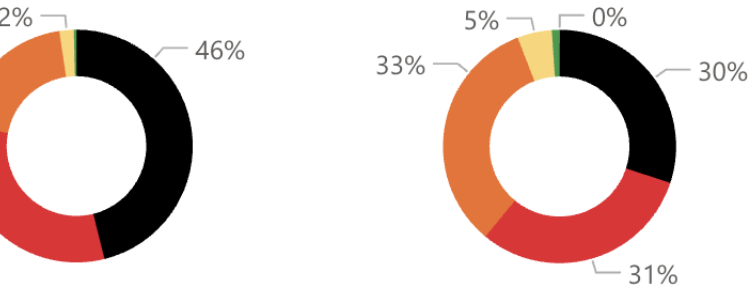
63,966 km

Motorcyclists



95,479 km

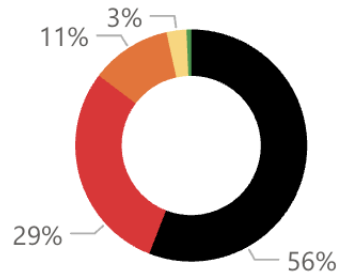
Vehicle occupants



97,190 km

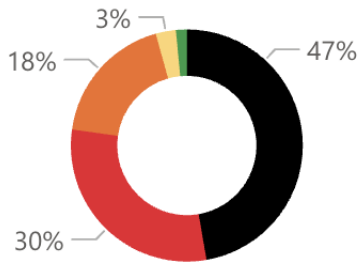
Star Ratings by distance travelled (km)

Pedestrians



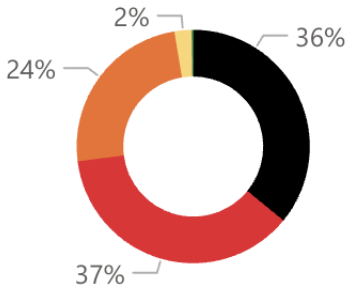
15.3 billion km

Bicyclists



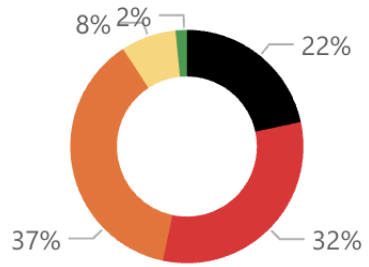
5.2 billion km

Motorcyclists



113.4 billion km

Vehicle occupants

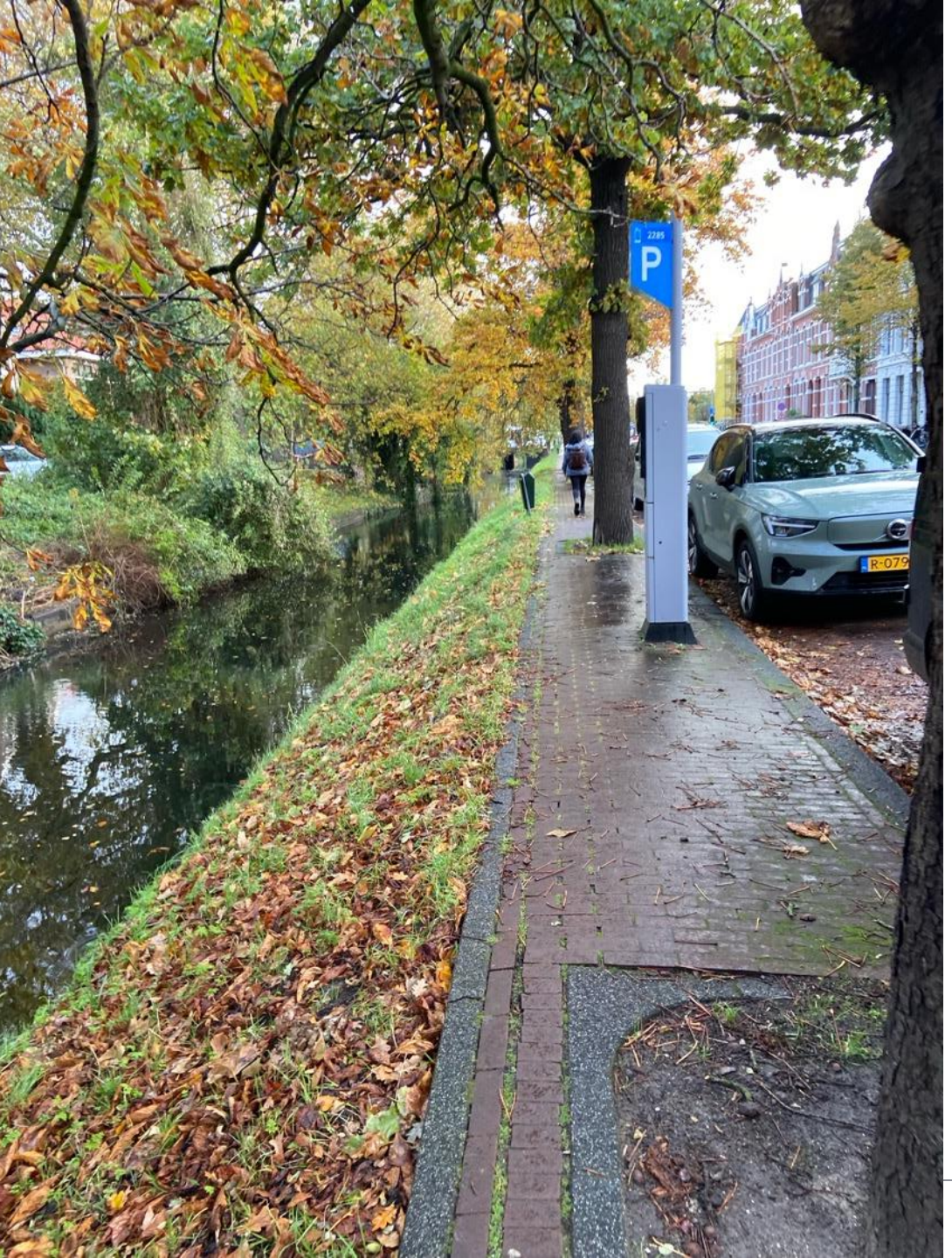


259.1 billion km

1-star | 2-star | 3-star | 4-star | 5-star

1-star | 2-star | 3-star | 4-star | 5-star

iRAP | FIA FOUNDATION | TAC | DECADE OF ACTION FOR ROAD SAFETY 2021 - 2030


P

WHAT DOES A 5-STAR STREET LOOK LIKE?

Central Two-Way Streets | 30m

Existing Conditions iRAP Star Rating

Street Only: 3 2 2 2

The Intersection: 1 1 2 1

Existing Conditions Description

This illustration depicts a central city street which has been widened over time to accommodate motorized traffic at the expense of pedestrian space.

Wide travel lanes facilitate speeding and hinder pedestrian safety and comfort. Cross-street traffic is not signalized, creating frequent and serious conflicts among motorists and pedestrians.

Narrow and inaccessible sidewalks result in unsafe walking conditions, which can lead to a decline in business activities.

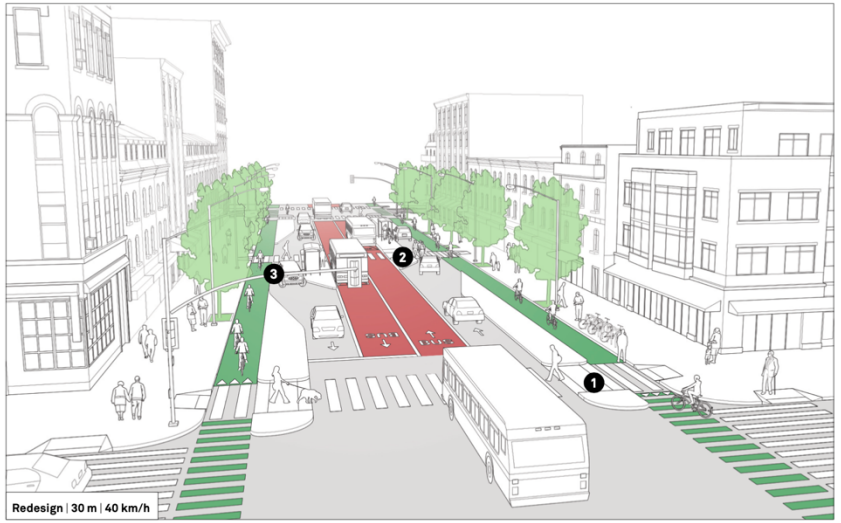
Central medians are equipped with barriers to restrict pedestrian crossing. This configuration often results in unsafe actions by the pedestrians, like jumping over or cutting through the barrier in order to cross the street.

Long crosswalk distances with no clear markings, lack of refuge islands, and high vehicular speeds expose vulnerable users to extremely unsafe conditions. Such streets act as pedestrian barriers and divide neighborhoods.

Redesign iRAP Star Rating

Street Only: 5 5 5 5

The Intersection: 4 4 5 5



NACTO-GDCI Design Guidance

Due to its central location, the street has the potential to transform the surrounding neighborhoods. Redesign this street to serve needs of all street users and increase its overall capacity.

Remove two travel lanes in each direction and provide accessible and wider sidewalks to support safe pedestrian movement and commercial activity.

1 Provide refuge islands, mark pedestrian crossings, and improve markings to make crossings safer and shorter.

Introduce a dedicated transit lane in each direction to increase transit capacity and efficiency.

2 Offset boarding islands provide for safe and efficient boarding and alighting for transit riders while reducing vehicle speeds at the bus stops.

3 Add a mid-block crossing to facilitate the access to the boarding islands on each side of the center-running transit-only corridor and shorten the crossing distance by providing safe refuge islands for pedestrians.

Offset the travel lane in correspondence to the boarding island to reduce speeds and improve motorists' yielding behavior.

Implement cycle tracks on each direction and planted buffers to provide safe facilities for cyclists.

Add trees and green infrastructure on the sidewalks and the medians to provide shade, reduce noise, improve air quality, and support stormwater management. *See 7.2: Green Infrastructure.*

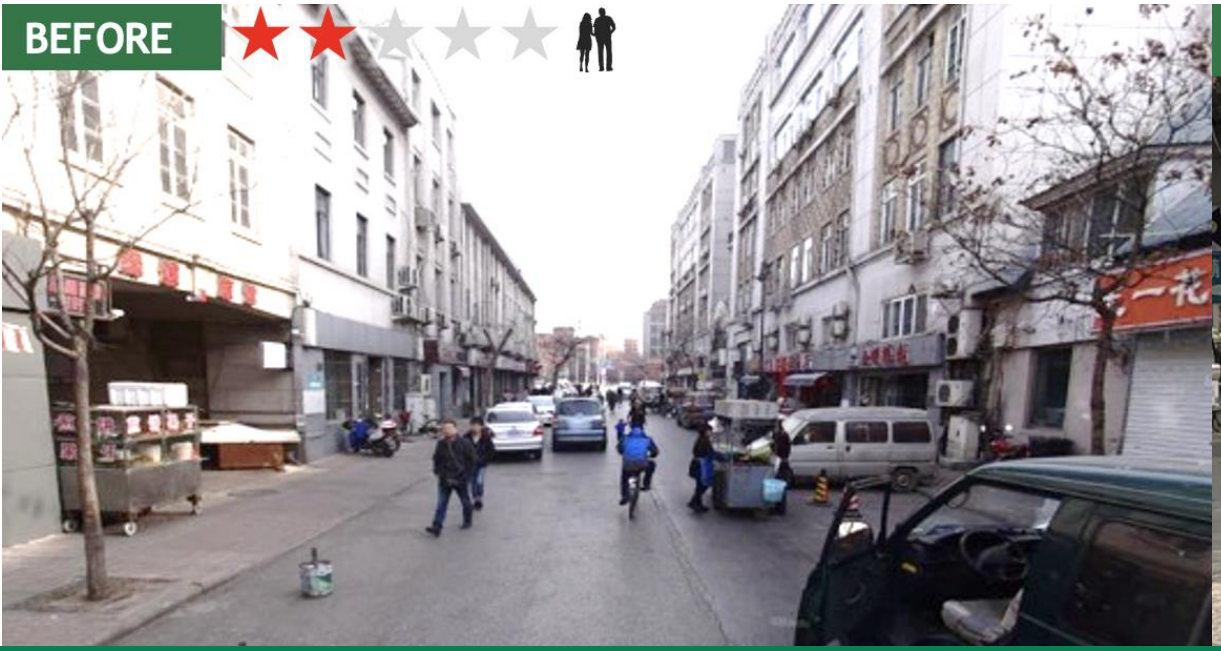
Making the street more aesthetically appealing and comfortable for pedestrian use can attract businesses and help to regenerate the district.

Images ©NACTO-GDCI

TIANJIN, CHINA

Tianjin Urban Transport Improvement Project

- Aimed to leverage the Tianjin metro system and promote walking and biking by improving infrastructure and connectivity
- Upgraded to 96 metro station areas, 190 streets (132 km), 216,000 m² of bike lanes, and 605,000 m² of sidewalks, with new bike parking, lighting, street trees, and intersection redesigns to prioritize active transport
- 70% increase in walking, biking, and public transport mode share in 2022.



BOGOTA, COLOMBIA

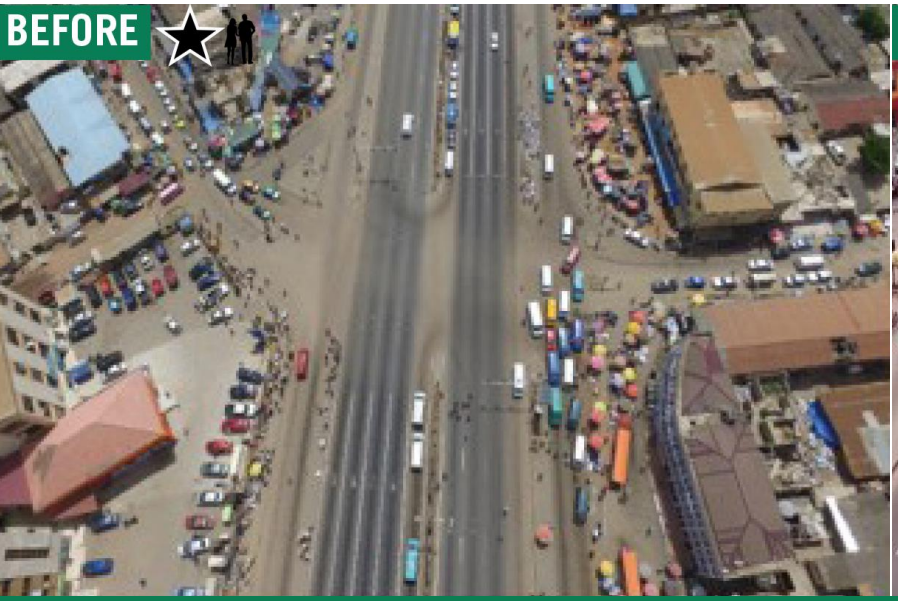
80th Street

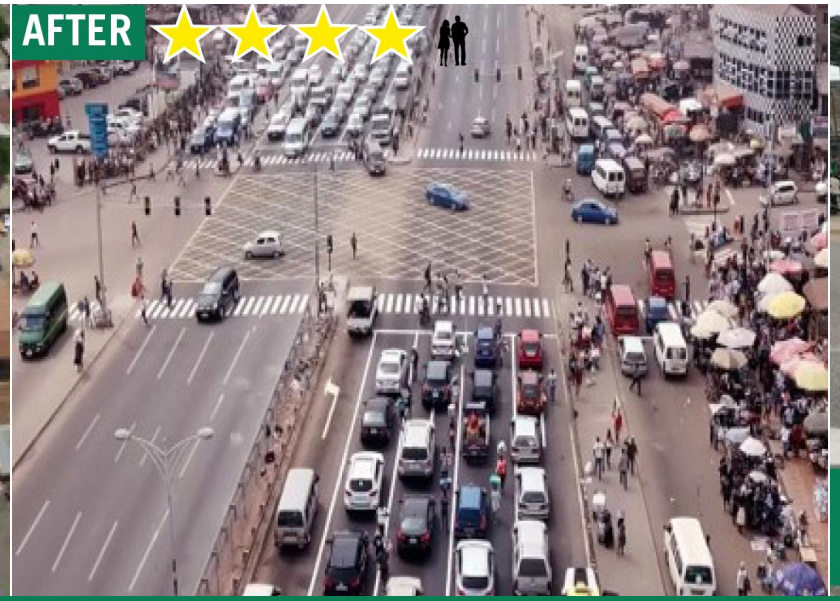
- In 2017, Bloomberg Philanthropies Initiative for Global Road Safety and iRAP worked together to upgrade a 2.7km stretch on 80th Street.
- The upgrade achieved 5-star safety for bicyclists.
- Vulnerable road users are a key priority of the Secretariat of Mobility.

ACCRA, GHANA

Lapaz Intersection, N1 Highway

- In 2015, a person died every fortnight at the Lapaz intersection.
- Pedestrians and cyclists mixed in 14 lanes of traffic travelling at speeds of 90-120 kms/hr.
- An iRAP supported upgrade project vastly improved safety, funded by Accra Metropolitan Assembly (AMA) and the Bloomberg Philanthropies Initiative for Global Road Safety.





STAR RATING FOR SCHOOLS

FOUNDING SPONSOR: FedEx

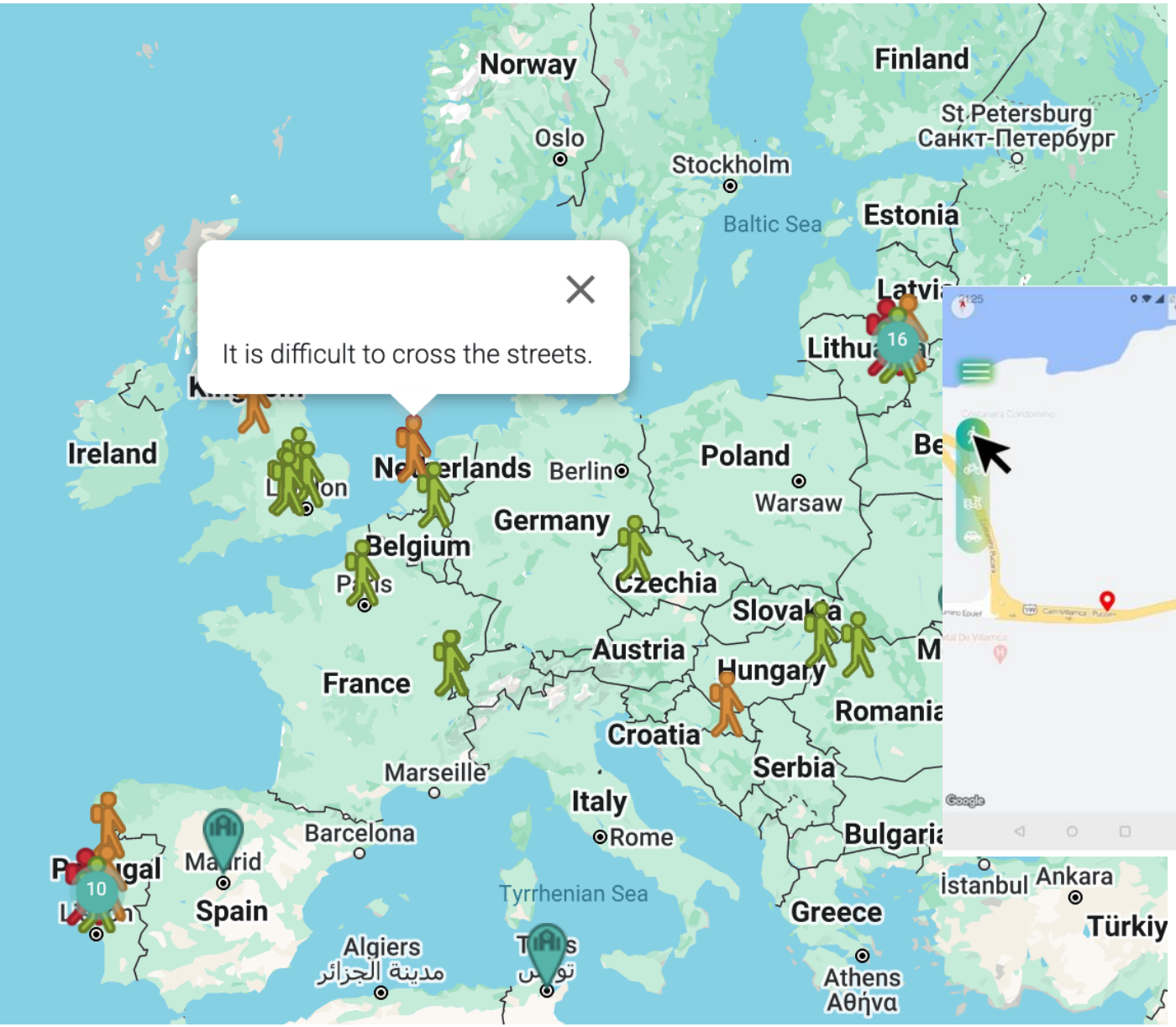
MAJOR DONOR: FIA FOUNDATION

MADE SAFER BY: iRAP

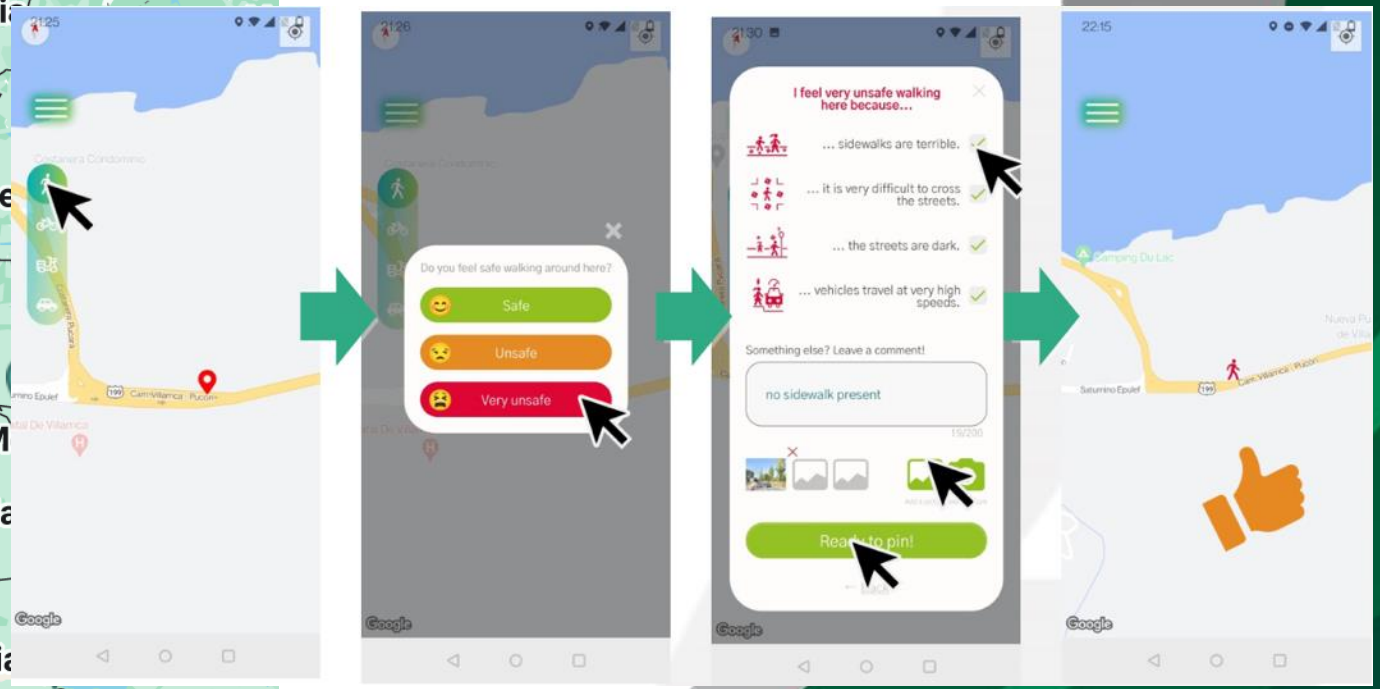
GLOBAL PROGRAMME PARTNER: 3M

STAR RATING FOR SCHOOLS

Evidence-based tool for measuring and managing risk children are exposed to on their school journeys.



yea!
YOUTH ENGAGEMENT APP



AI&Me: Empowering youth for safer roads project

Goal:

Harness the power of Big Data to focus community and youth action on road safety through user identification of high-priority, high-risk schools and community locations.

Funders:

fondation BOTNAR

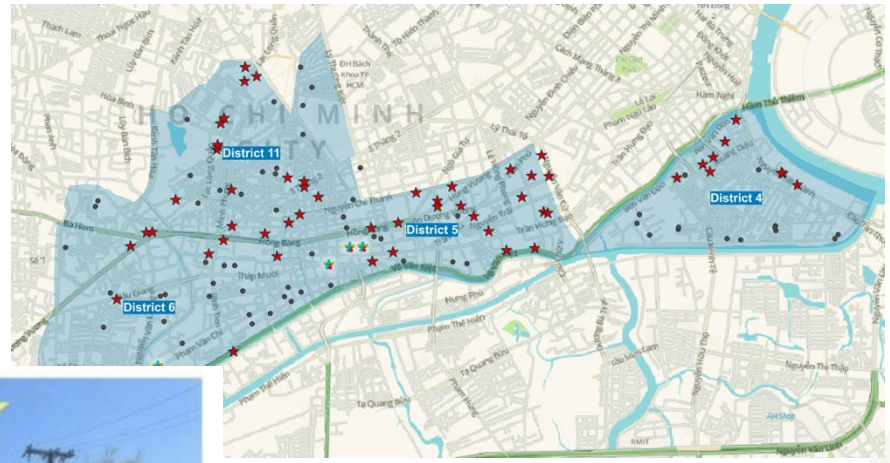
FIA FOUNDATION

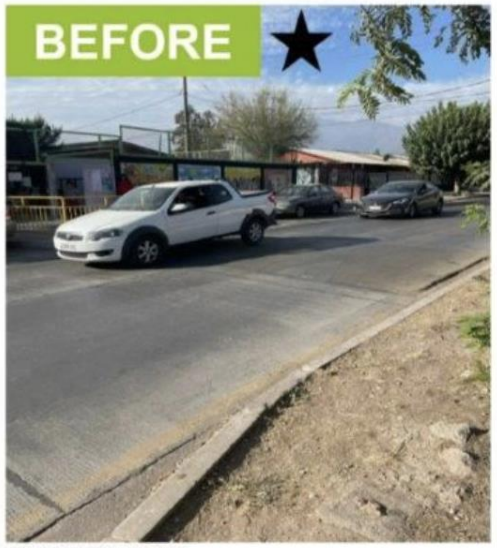
Partners:

AIP FOUNDATION SAFE ROADS FOR LIFE

iRAP

ANDITI





56 schools in Ho Chi Minh City

25 schools in Pleiku City

25 schools in Yen Bai City

cycleRAP

What is ‘CycleRAP’?

A risk evaluation model for bicyclists and light mobility vehicle users

Transport and urban planners

Bike share and micro mobility sharing service providers

Bicycle courier and food delivery companies

School communities

Policy makers and advocates for the environment, climate change and sustainability

Health services and insurance providers

Infrastructure and transport investors

Mapping and navigation providers

Conflicts with pedestrians

Crashes which do not involve others

Conflicts with vehicles

Conflicts between bicycles and/or light mobility vehicles

Thanks!

Let's connect...

www.irap.org

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