

# Road Safety and Big Data: Youth Voices

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iRAP

DECADE OF ACTION FOR  
**ROAD SAFETY**  
2021 - 2030

SUSTAINABLE  
DEVELOPMENT  
**GOALS**

[www.irap.org](http://www.irap.org)



A WORLD FREE OF HIGH-RISK ROADS – PROGRESS BY JUNE 2023



**128**  
COUNTRIES  
REACHED

US\$  
**100**  
BILLION OF  
INFRASTRUCTURE  
INVESTMENT  
MADE SAFER

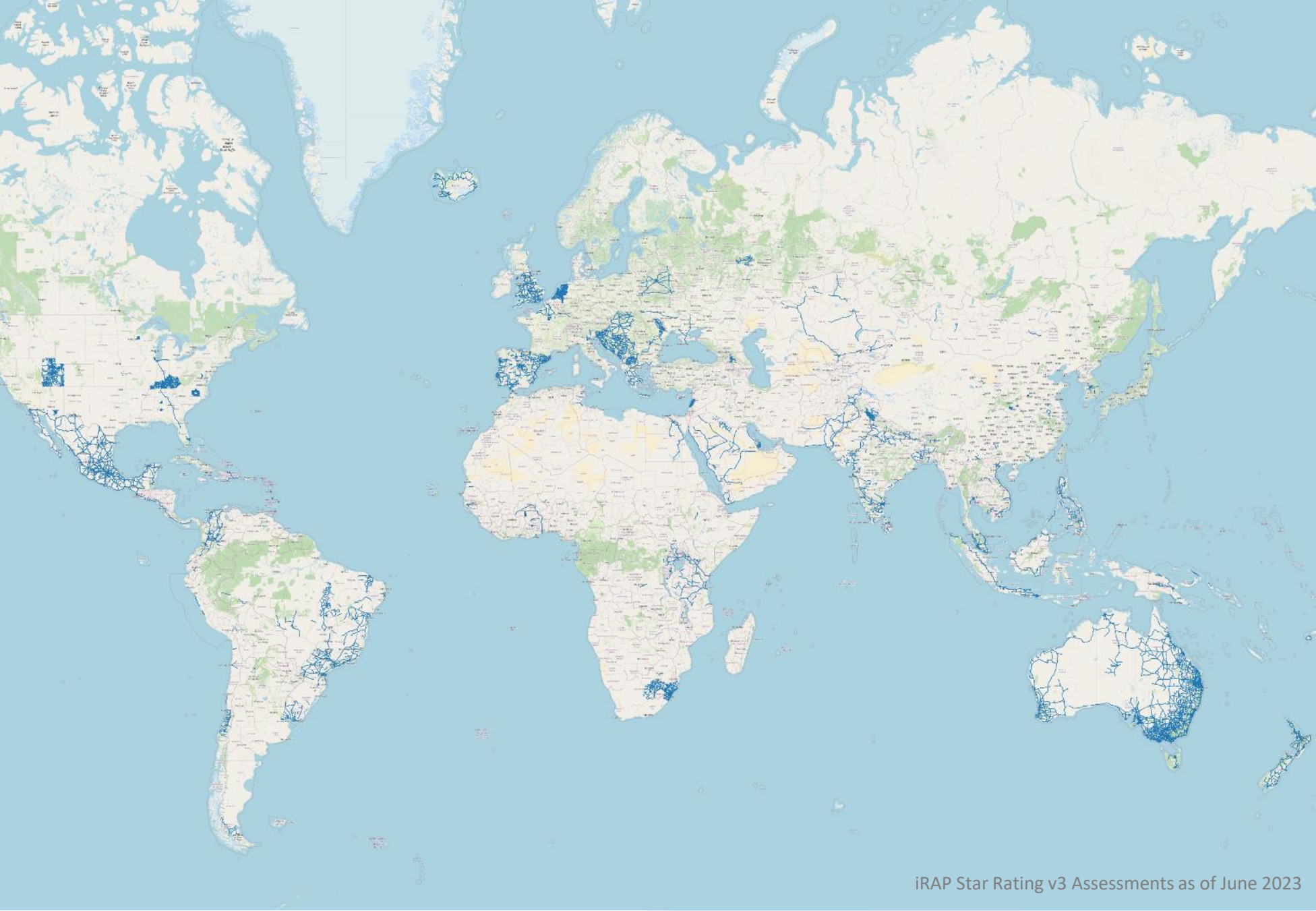
**63**  
THOUSAND  
PEOPLE TRAINED

**1.5** MILLION  
KM ROADS  
AND  
DESIGNS  
STAR RATED

**1.8** MILLION  
KM  
RISK MAPPED

**1,229**  
SCHOOLS STAR RATED  
USING SR4S IN  
67 COUNTRIES

**6.6** MILLION  
KM  
OF ROAD IN VIDA



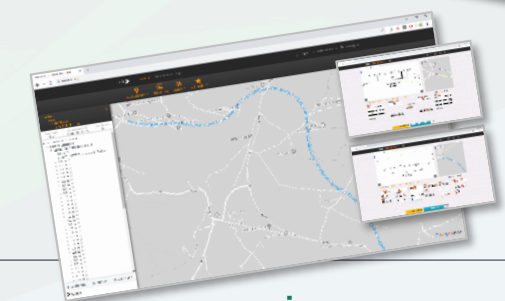
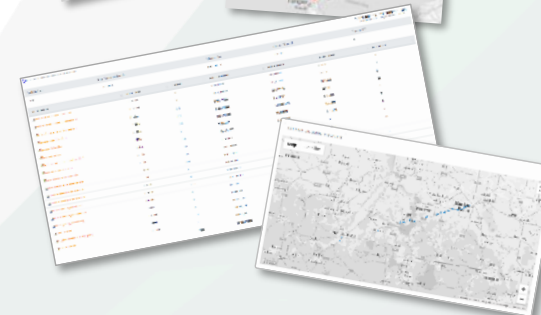
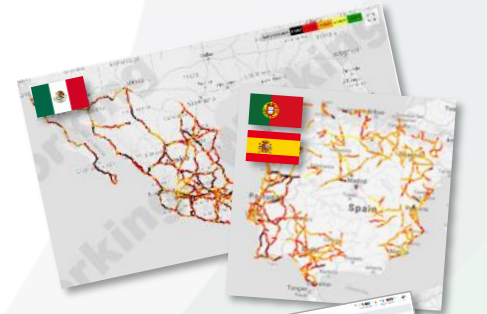
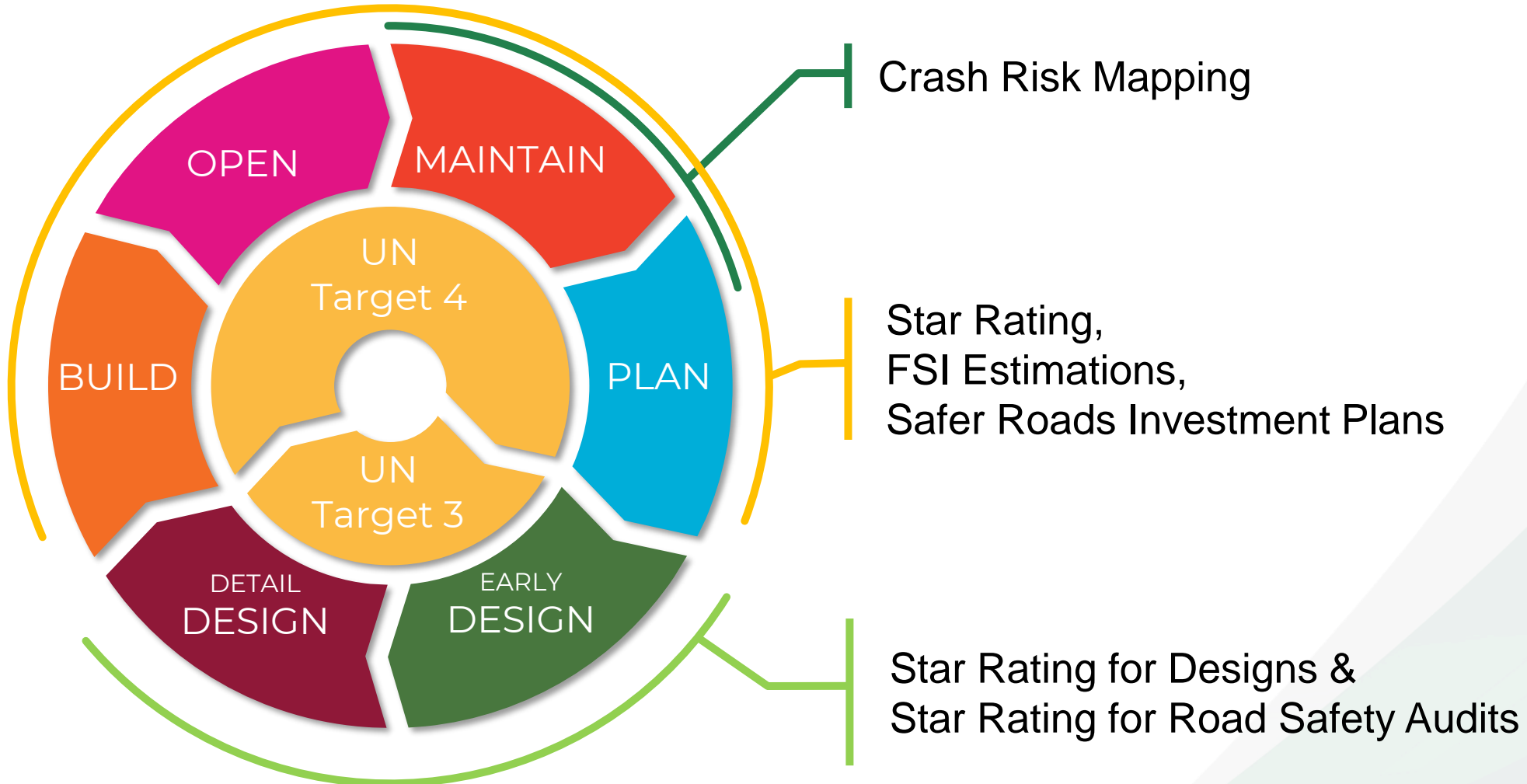
iRAP Star Rating v3 Assessments as of June 2023



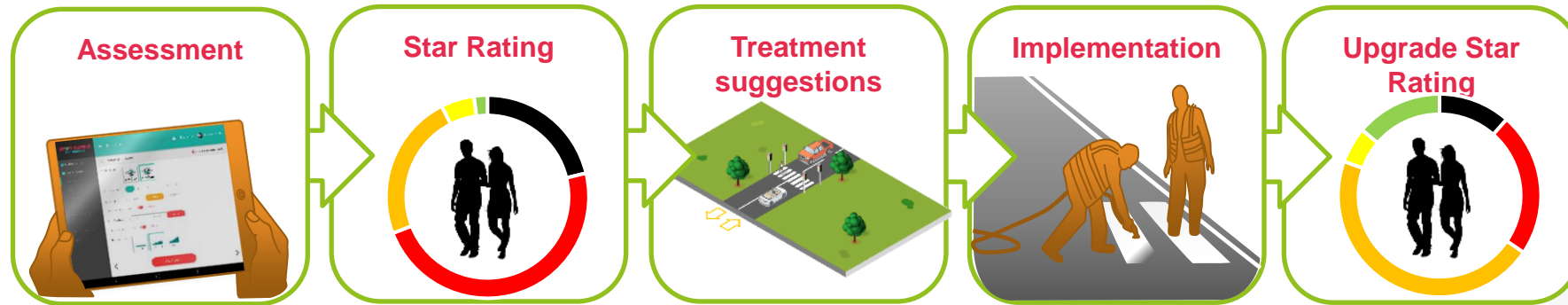
A World Free of High Risk Roads

[www.irap.org](http://www.irap.org)

# iRAP Road safety management tools



# Star Rating for Schools



# Star Rating for Schools

BEFORE



AFTER



Project funders  
fondation  
**BOTNAR**

**FIA** FOUNDATION

Project partners

**AIP** FOUNDATION  
SAFE ROADS FOR LIFE

**iRAP**

**ANDITI**

# Ai&Me Project Challenge

There are not enough resources to assess and build changes in all the schools.

Which schools should I prioritize?



# Automatic, scalable, evidence-based approach

## 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.

## Measure of success:

- The AI and Big Data components may generate at least one attribute of interest (e.g. speed of traffic around schools) for government use.
- Identify the list of high-risk schools that need to be prioritize to detailed road safety assessments

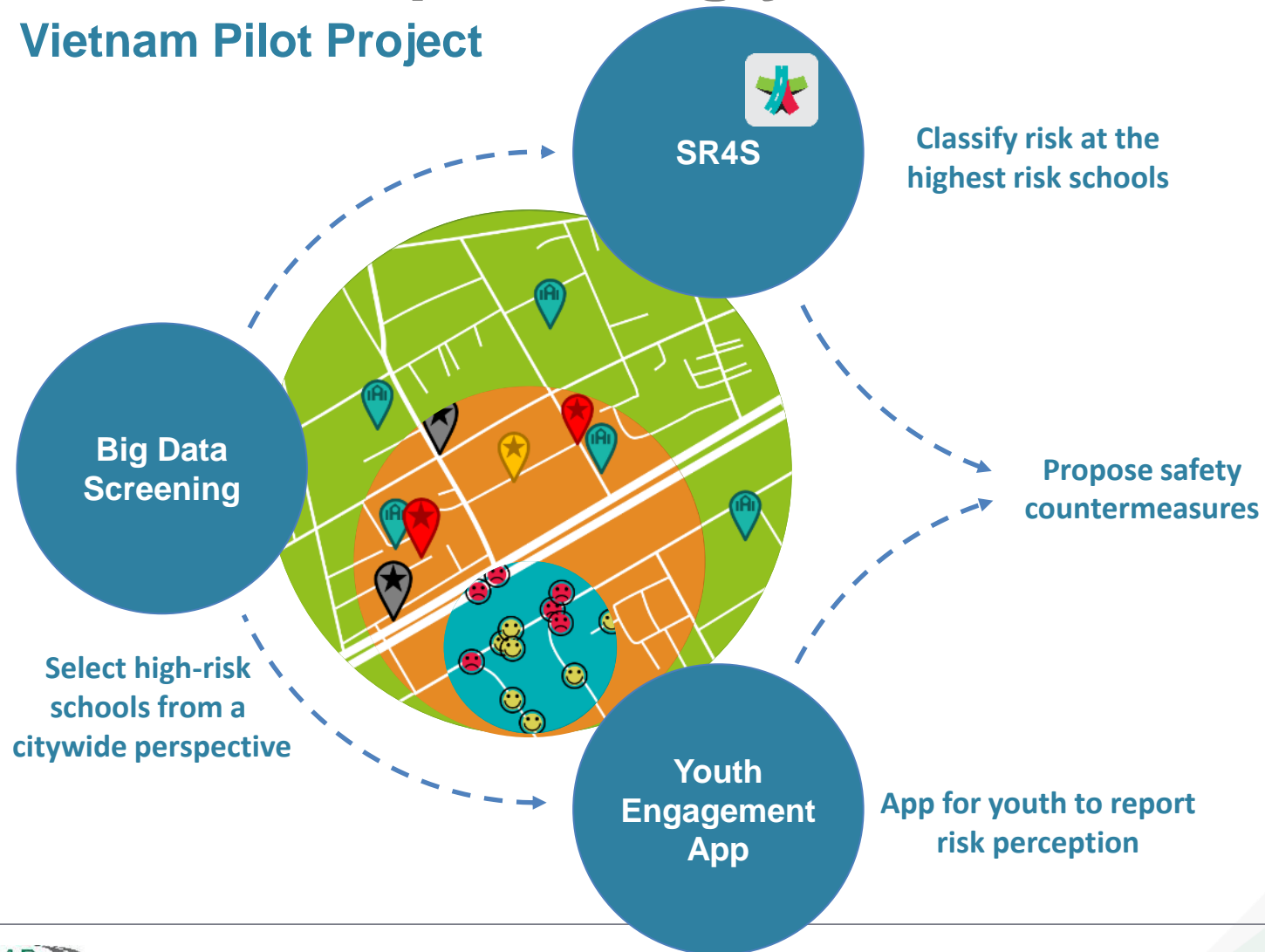
## Pilot:

- Three cities in VietNam: Ho Chi Minh City, Pleiku and Yen Bai.



# AI&Me: Empowering youth for safer roads

## Vietnam Pilot Project



Robust data to make targeted choices when prioritizing infrastructure investment or policy change.

Young people's voices as the heart of the design



# AI&Me: Big Data Screening



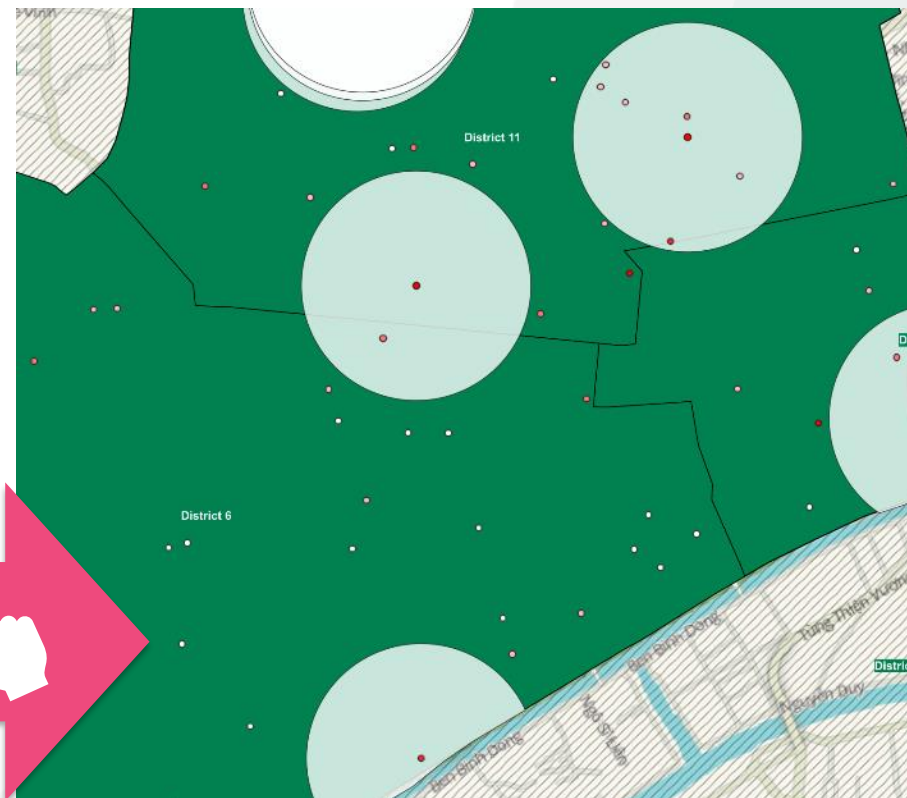
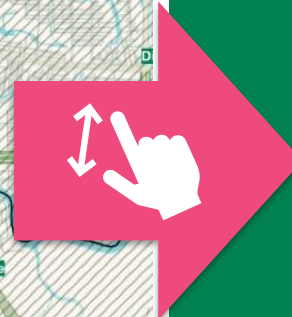
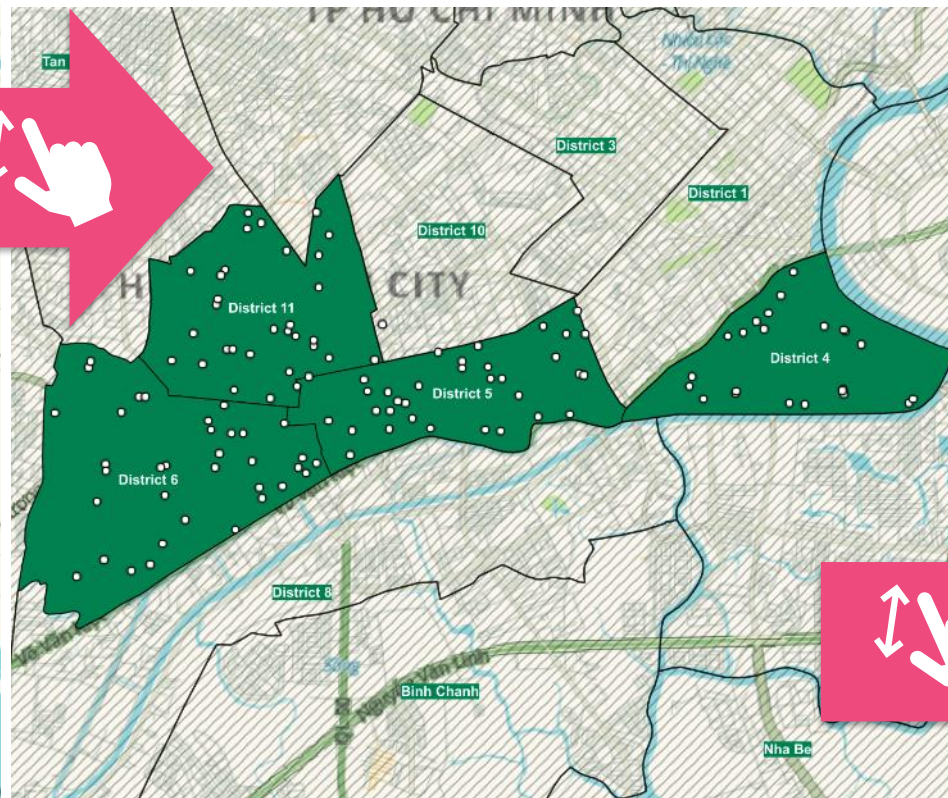
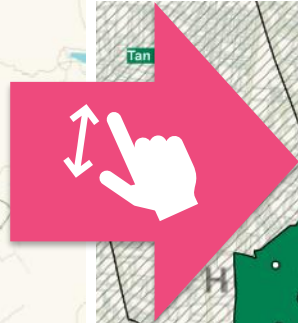
**Level 1:**  
Target community



**Level 2:**  
Schools' characteristics environment



**Level 3:**  
Pedestrian exposure risk



# AI&Me: Big Data Screening

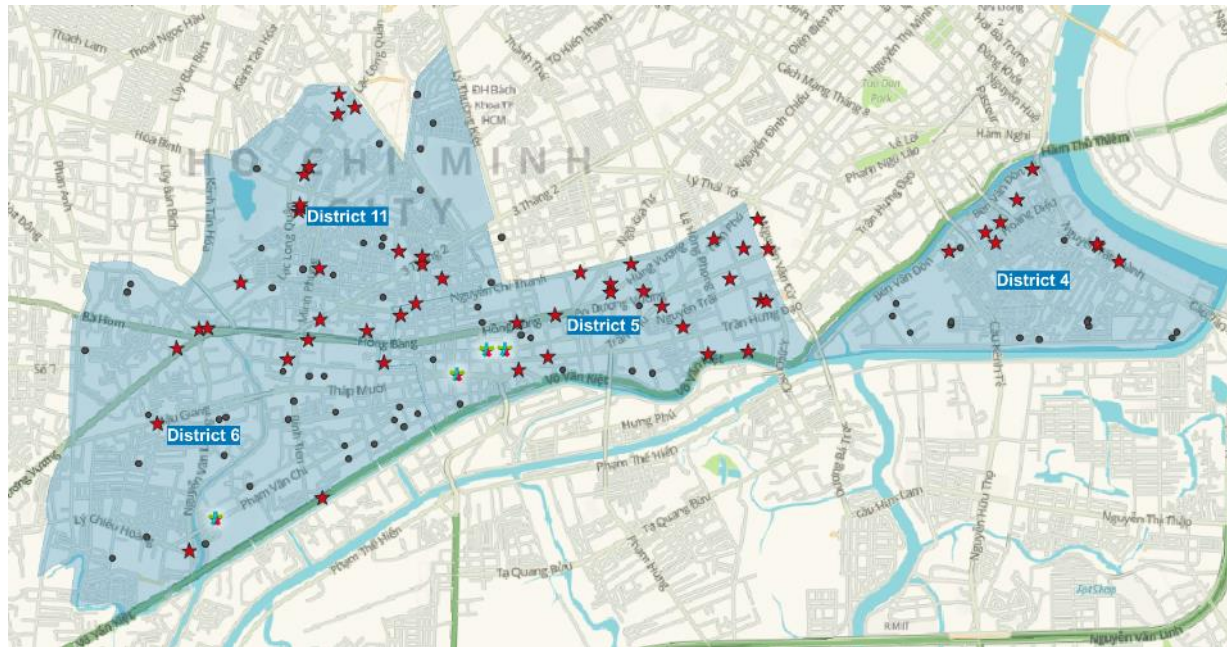
**56**  Ho Chi Minh City   

**25**  Pleiku City  

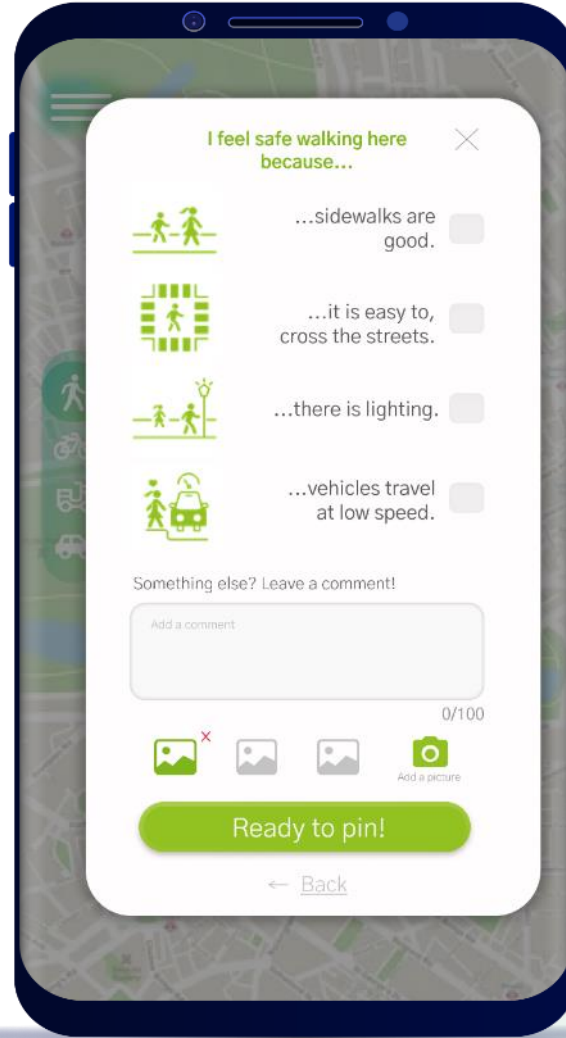
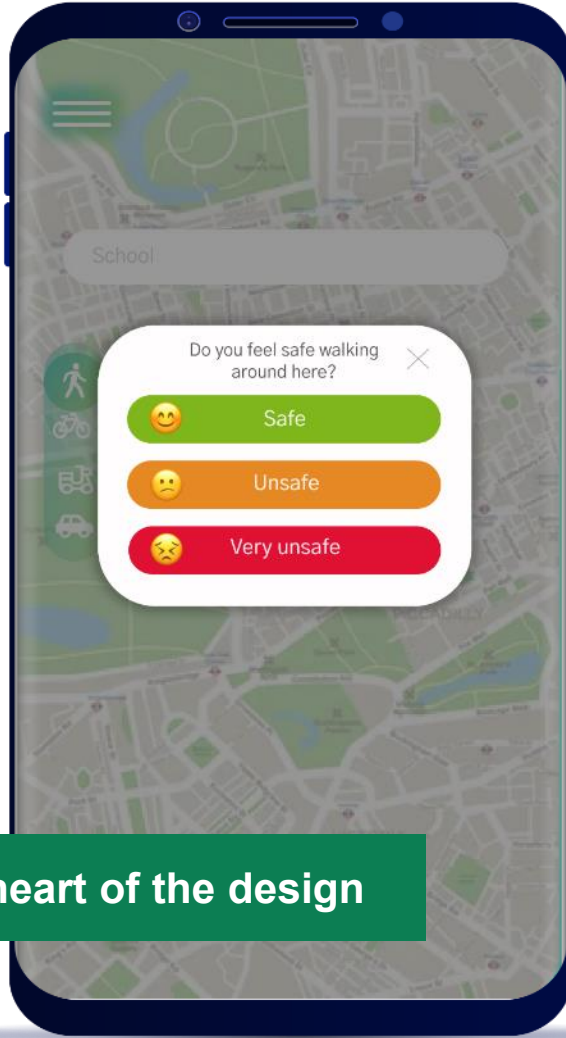
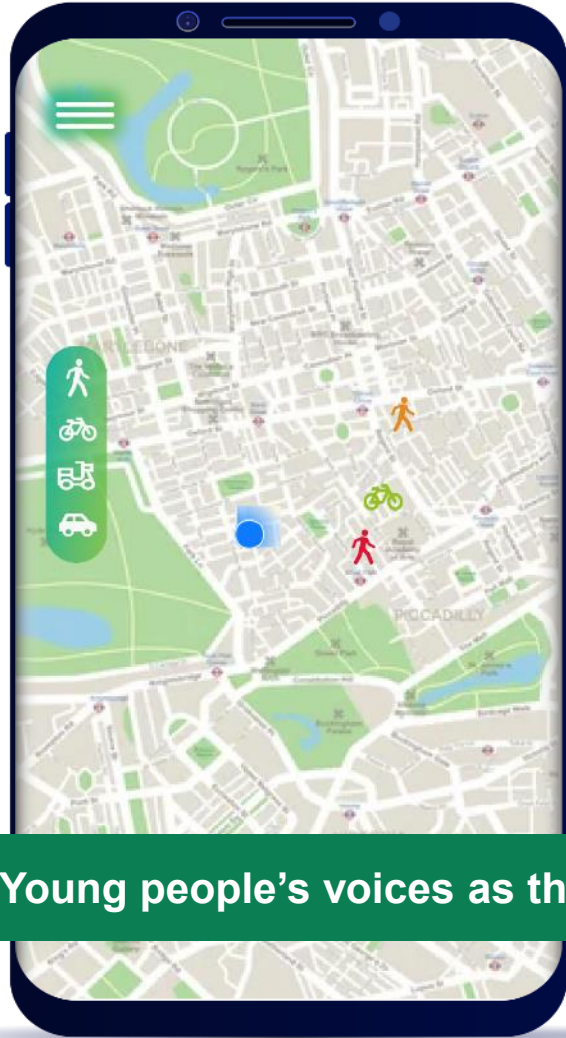
**25**  Yen Bai City  



Results



ID	School Name	District	School Type*	Big Data Screening Score	Priority Rank	Assessed on SRAS
124	Nguyễn Thị primary school	District 11	PS	190	1	-
35	Trường Trung Học Cơ Sở Phú Thọ	District 11	MS	227	2	-
121	Trường Tiểu Học, Trung Học Cơ Sở và Trung Học Phổ Thông Trương Vĩnh Kỳ	District 11	PS, MS, HS	236	3	-
22	Trường Trung Học Phổ Thông Chuyên Lê Hồng Phong	District 5	HS	263	4	-
13	Trường Trung Học Cơ Sở Văn Dôn	District 4	MS	267	5	-
64	Trường Tiểu Học Lê Đình Chinh	District 11	PS	272	6	-
46	Trường Tiểu Học Phùng Hưng	District 11	PS	281	7	-
122	Trần Văn Ch primary school	District 11	PS	283	8	-
91	Trường Trung Học Phổ Thông Thăng Long	District 5	HS	292	9	-
44	Trường Trung Học Cơ Sở Trần Bội Cơ	District 5	MS	306	10	****
58	Trường Trung Học Cơ Sở Lê Quý Đôn	District 11	MS	307	11	-
61	Trường Tiểu Học Đặng Trần Côn	District 4	PS	309	12	-
97	Trường Tiểu Học Lê Văn Tâm	District 5	PS	309	13	-
114	Trần Khai Nguyễn high school	District 5	HS	312	13	-
125	Dân lập Việt Mỹ	District 11	PS	323	15	-
50	Trường Trung Học Thực Hành Đại Học Sư Phạm	District 5	HS	330	17	-
77	Trường Trung Học Cơ Sở Hồng Bàng	District 5	MS	331	16	-
95	Trường Trung Học Phổ Thông Trần Hữu Trang	District 5	HS	334	18	-
85	Trường Tiểu Học Trần Quốc Toản	District 5	PS	340	19	-
38	Trường Tiểu Học Kim Đồng	District 6	PS	342	20	-
59	Trường Trung Học Phổ Thông Nguyễn Hữu Thọ	District 4	HS	344	21	-
67	Trường Trung Học Phổ Thông Hùng Vương	District 5	HS	359	22	-
52	Trường Trung Học Phổ Thông Trần Quang Khải	District 11	HS	361	23	-
79	Trường Phổ Thông Năng Khiếu - Đại Học Quốc Gia Thành Phố Hồ Chí Minh*	District 5	HS	365	24	-
62	Trường Trung Học Cơ Sở Nguyễn Huệ	District 11	MS	366	25	-
98	Trường Tiểu Học Phạm Văn Hai	District 11	PS	367	25	-
100	Trường Tiểu Học Dân Lập Thái Phiên	District 11	PS	377	27	-
43	Trường Trung Học Cơ Sở Nguyễn Đức Cảnh	District 6	MS	382	28	-
27	Trường Trung Học Cơ Sở Mạc Kiếm Hùng	District 5	MS	383	28	****
26	Trường Tiểu Học Bến Cảng	District 4	PS	386	30	-
123	Quang Trung Nguyễn Huệ secondary and high school	District 5	MS,HS	408	31	-
45	Trường Tiểu Học Anh Việt Mỹ	District 4	PS	409	31	-
71	Trường Tiểu Học Huỳnh Mãn Đạt	District 5	PS	427	33	-
96	Trường Tiểu Học Bàu Sen	District 5	PS	433	34	-
60	Trường Dự Bị Đại Học Thành Phố Hồ Chí Minh - Trường Trung Học Cơ Sở và Trung Học Phổ Thông An Đông*	District 5	MS, HS	439	35	-
80	Trường Tiểu Học Trần Bình Trọng-Khu A	District 5	PS	440	36	-
101	Trường Tiểu Học Hưng Việt	District 11	PS	481	37	-



Young people's voices as the heart of the design



The YEA received so far...

**12.398** pins

Filters

The pedestrians infrastructures are considered

55%	safe
22%	unsafe
23%	very unsafe

The cyclist infrastructures are considered

55%	safe
22%	unsafe
23%	very unsafe

The cars infrastructures are considered

55%	safe
22%	unsafe
23%	very unsafe

Filters

My pins

School

Country

Country/City

Country

City

Transport mode

Safety rank

Date range

12.12.2021 - 12.12.2021

Submit

[Reset Filters](#)

Hi, Name

- Home
- My pins
- Statistics
- Settings
- Share the App
- Credit page
- Log out

**STAR RATING FOR SCHOOLS** Made safer by: **iRAP** Dashboard Establishments

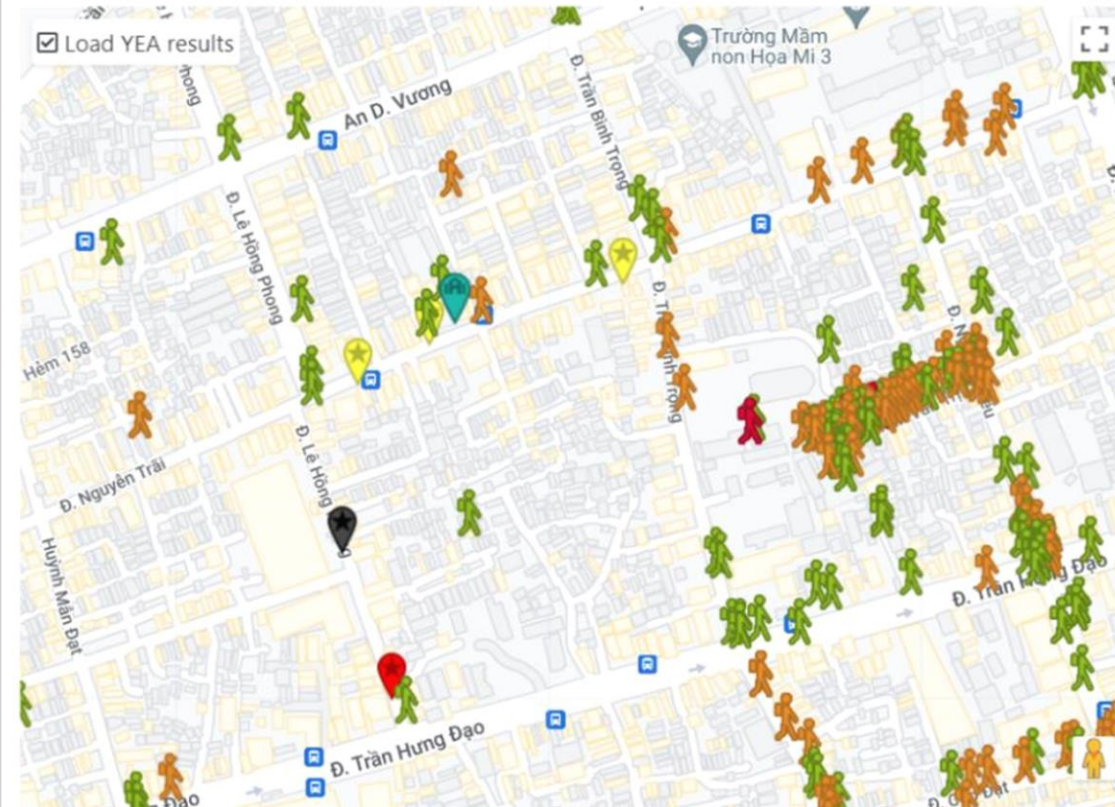
Search School... Project Country

« 1 2 3 ... 5 »  
1-10 of 47 schools

- W20S University of Social Sciences and Humanities**  
 District 1, Ho Chi Minh City, Viet Nam  
 8000 students, 0 published locations  
 YEA pins: 2 ● 100.00% ● 0.00% ● 0.00%
- Ba Dinh Secondary School**  
 District 5, Ho Chi Minh City, Viet Nam  
 1993 students, 0 published locations  
 YEA pins: 542 ● 62.18% ● 33.58% ● 4.24%
- Bau Sen Primary School**  
 District 5, Ho Chi Minh City, Viet Nam  
 1318 students, 0 published locations  
 YEA pins: 304 ● 64.80% ● 27.30% ● 7.89%
- Binh Tay Secondary School**  
 District 6, Ho Chi Minh City, Viet Nam  
 1921 students, 0 published locations  
 YEA pins: 6 ● 83.33% ● 16.67% ● 0.00%
- Binh Tien Primary School**  
 District 6, HCMC, Viet Nam  
 739 students, 0 published locations  
 YEA pins: 2 ● 50.00% ● 50.00% ● 0.00%

**Bau Sen Primary School**  
 District 5, Ho Chi Minh City, Viet Nam  
 1318 students, 0 published locations

Search as I move Load YEA results



The map displays a grid of streets in District 5, Ho Chi Minh City, Vietnam. Numerous pins are placed on the map, representing road safety data points. The pins are color-coded: green (64.80%), orange (27.30%), and red (7.89%). The map includes street names such as An D. Vương, D. Lê Hồng Phong, D. Trần Bình Trọng, D. Nguyễn Trãi, D. Lê Hồng, D. Trần Hưng Đạo, and D. Trần Hưng Đạo. A legend at the bottom indicates 'Mapa' and 'Satélite' options.

# AI&Me: Harnessing the data together

The screenshot displays the STAR Rating for Schools interface. At the top, it features the STAR Rating logo, the founding sponsor FedEx, and a navigation menu with options like Dashboard, Establish a Project, My Data, Demonstrator, Reviews, Admin, and My Account. The main content area is divided into two sections: a map and a list of locations.

**Binh Tay Secondary School**  
District 6, Ho Chi Minh City, Viet Nam  
1921 students, 0 published locations

**Map:** A Google Map showing the school's location in District 6, Ho Chi Minh City. The map includes street names like Đường Hậu Giang, Cao Văn Lầu, and Võ Văn Kiệt. Several colored pins (yellow, orange, red) are placed on the map, indicating different road locations. Below the map are six small thumbnail images showing street-level views of the area, with a "View All" button.

**Locations List:** A table-like view showing the details of the road locations. Each entry includes the location name, a star rating (with red stars indicating risk level), the survey name, the school name, and the last modified date. The locations listed are:

- Le Truc St:** 4.5 stars (2 red), Survey: BinhTay\_D6, School: [redacted], Last modified: Nov 26, 2020, Draft.
- Gia Phu st:** 2.5 stars (2 red), Survey: BinhTay\_D6, School: [redacted], Last modified: Nov 26, 2020, Draft.
- Binh Tay St:** 2.5 stars (2 red), Survey: BinhTay\_D6, School: [redacted], Last modified: Nov 26, 2020, Draft.
- Gia Phu st:** 4.5 stars (2 red), Survey: BinhTay\_D6, School: [redacted], Last modified: Nov 26, 2020, Draft.

Classify risk and propose countermeasures to the highest risk schools

# AI&Me: Where to now?

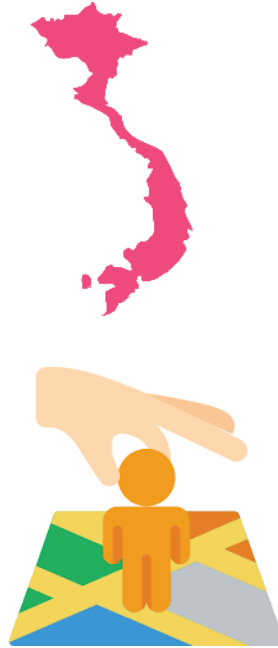


VIETNAM

## International Road Assessment Programme

Road traffic crashes are the leading cause of death among children and young people worldwide. The combination of poor road design and vehicle speeds puts children at risk on their daily journeys to school. Using AI and satellite imagery and street-view images to detect road safety risks, iRAP will provide a country-wide star-rating evaluation of road infrastructure around schools in Vietnam, with potential to scale to other countries. By making this data more accessible, they aim to inform new policies and investment in pedestrian-friendly roads that will minimize preventable harm.

[Learn more](#)



Screen the whole Vietnam

Collect StreetView spec images

Use AI models to collect data for SR4S assessments

# For more information

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 iRAPfb

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