SAFE KIDS WORLDWIDE. PREVCON

Safe Systems Approach to Road Safety

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The Safe Systems Approach

- The National Roadway Safety Strategy adopted in the United States in February 2022
- Safe Systems
  - Safer people
  - Safer roads
  - Safer vehicles
  - Safer speeds
  - Post-crash care

Star Rating for Schools

A Word about RSF

- **Roadway Safety Foundation**
  - 501(c)3 in Washington, DC dedicated to promoting road design improvements, safe roadsides, and enhanced operating conditions
  - Through cooperative agreement with FHWA, promotes usRAP as appropriate tool for data-driven safety analysis in Every Day Counts
  - Part of global family of “RAPs” coordinated by iRAP, which manages the Star Rating for Schools application and database

Before We Start…

- **Imagine that…**
  - You read a news item about somebody who was seriously injured falling off a balcony while at a party
    - Who/what gets blamed?
    - How sympathetic is the victim?
    - What actions do we demand in response?

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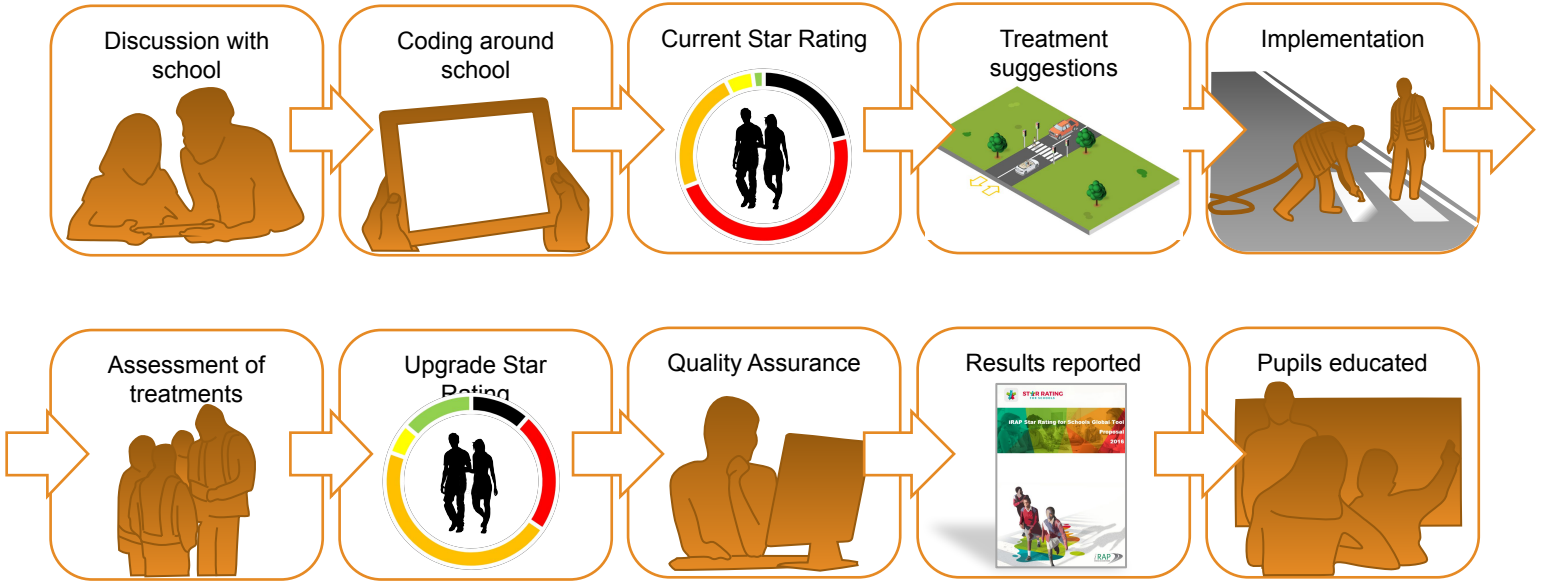
Star Rating for Schools



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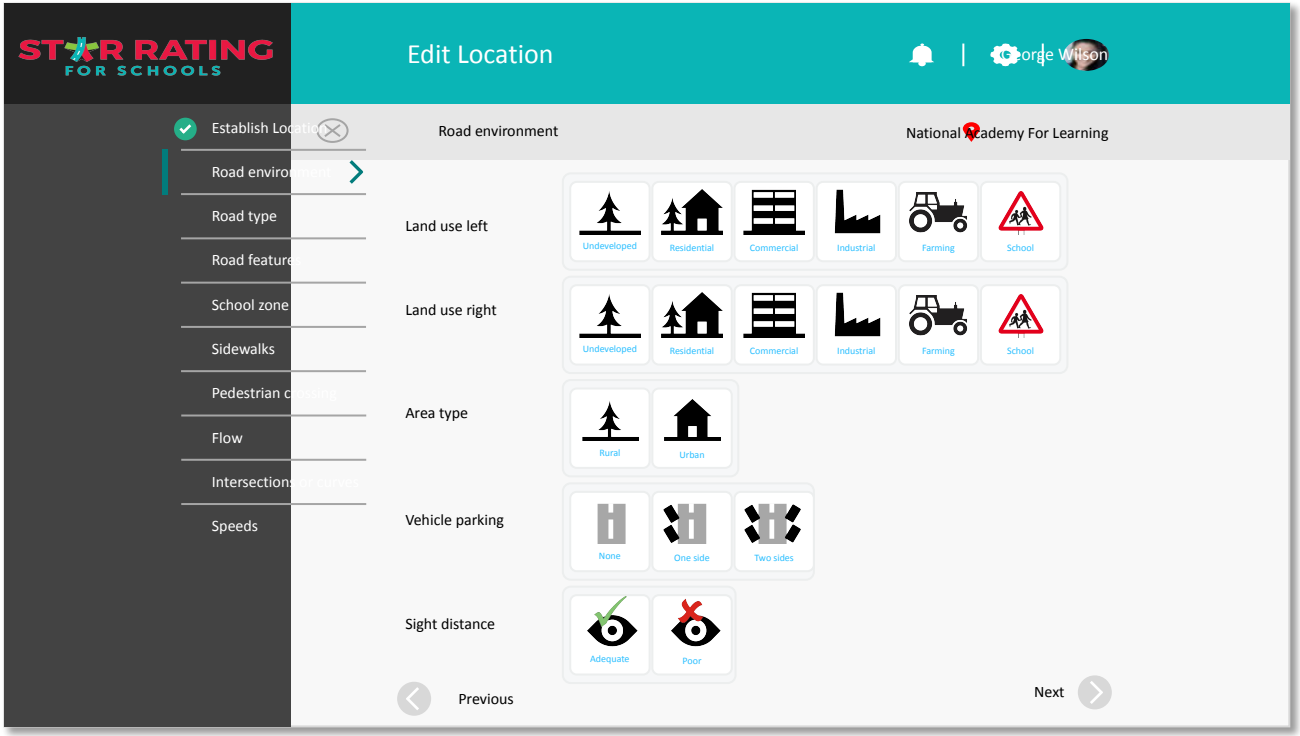
Collecting Data



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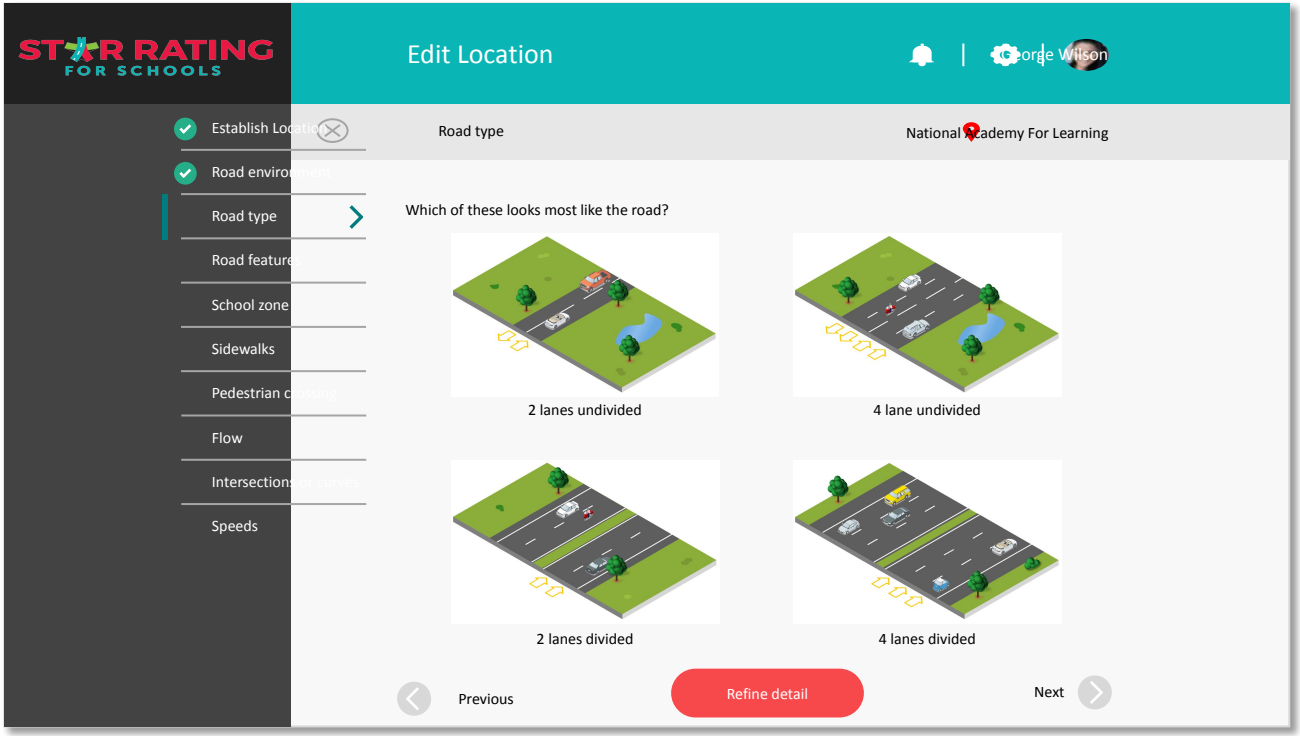
Collecting Data (continued)



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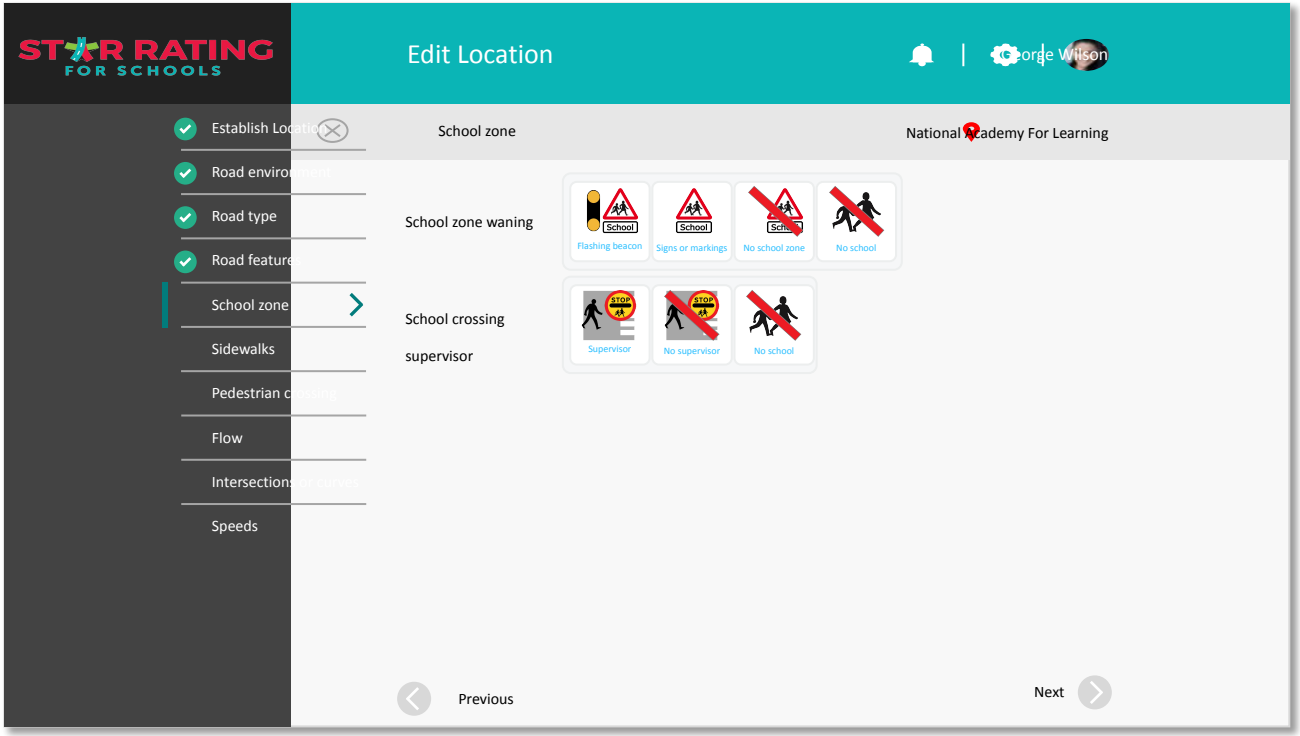
Collecting Data (continued)



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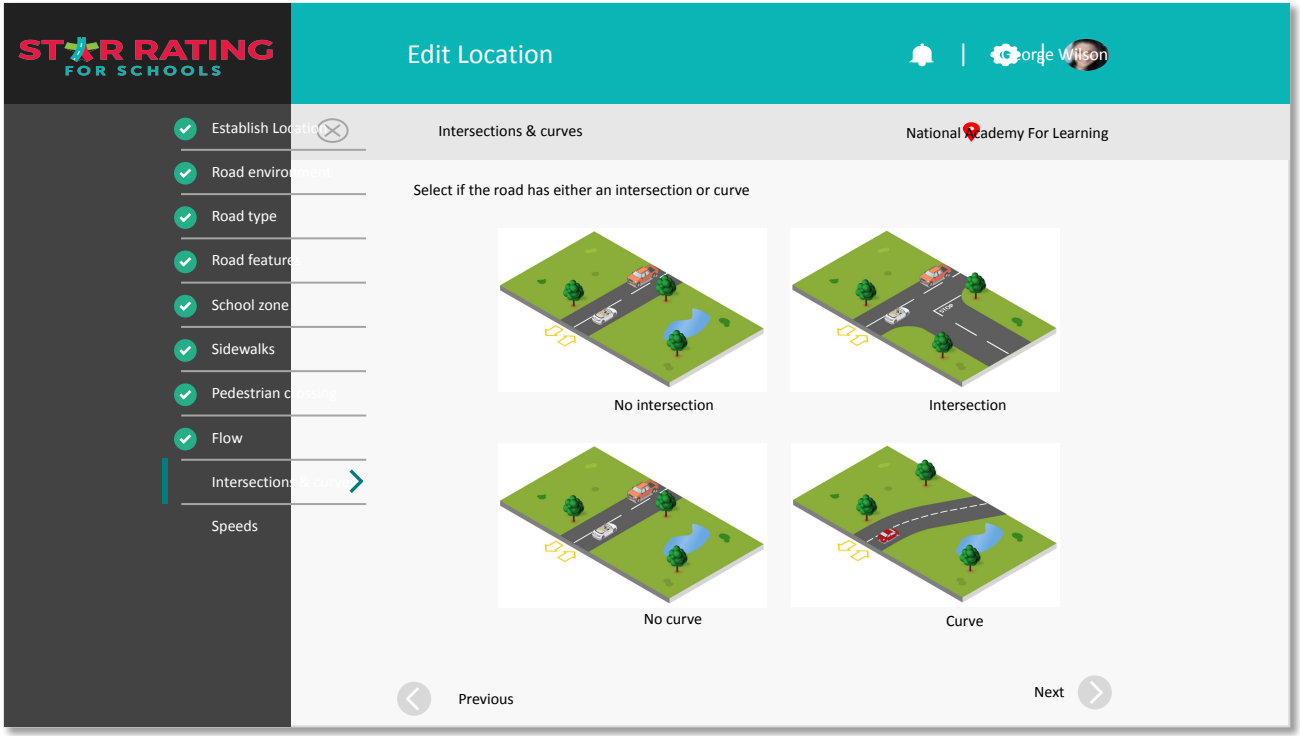
Collecting Data (continued)



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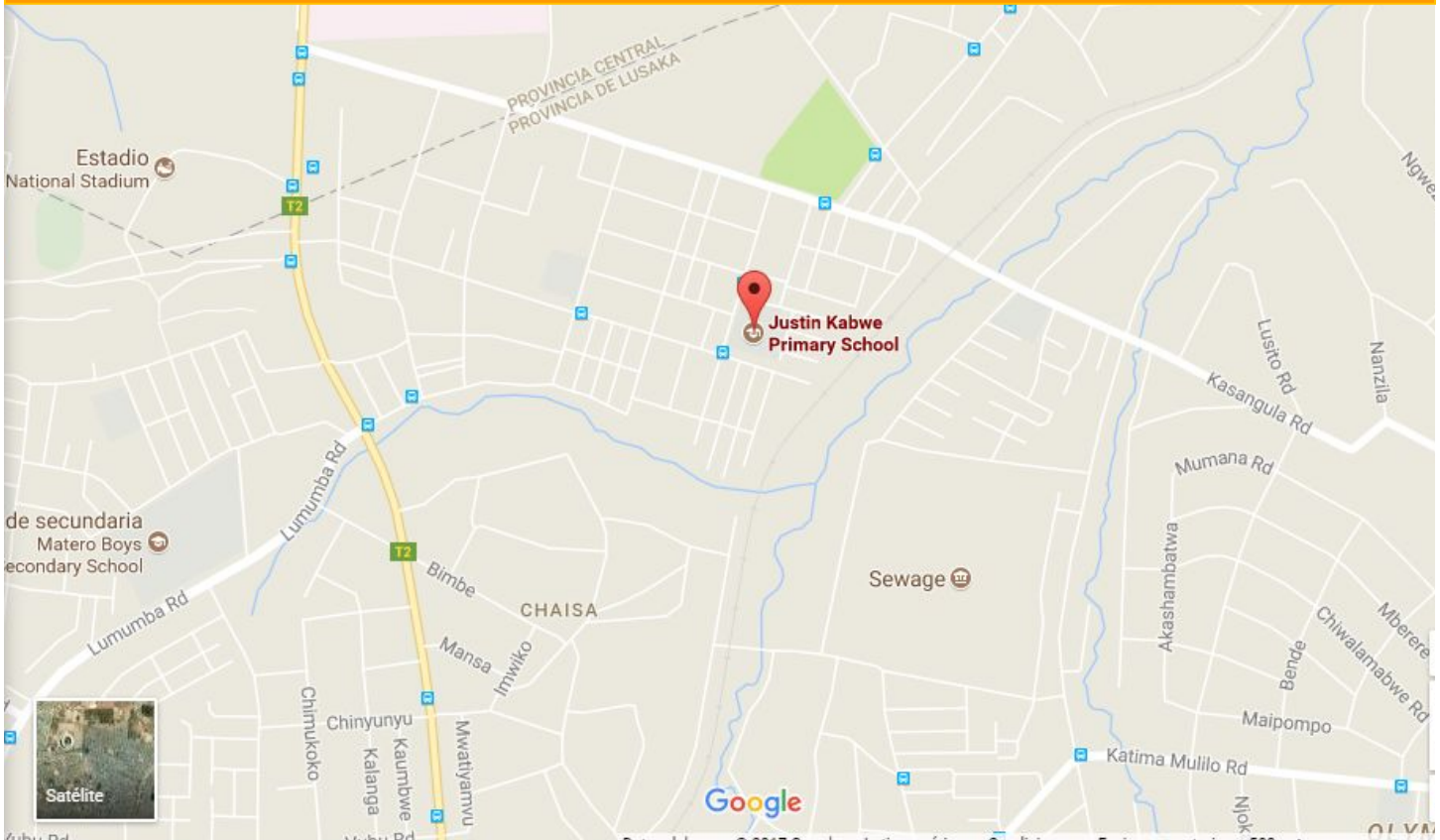
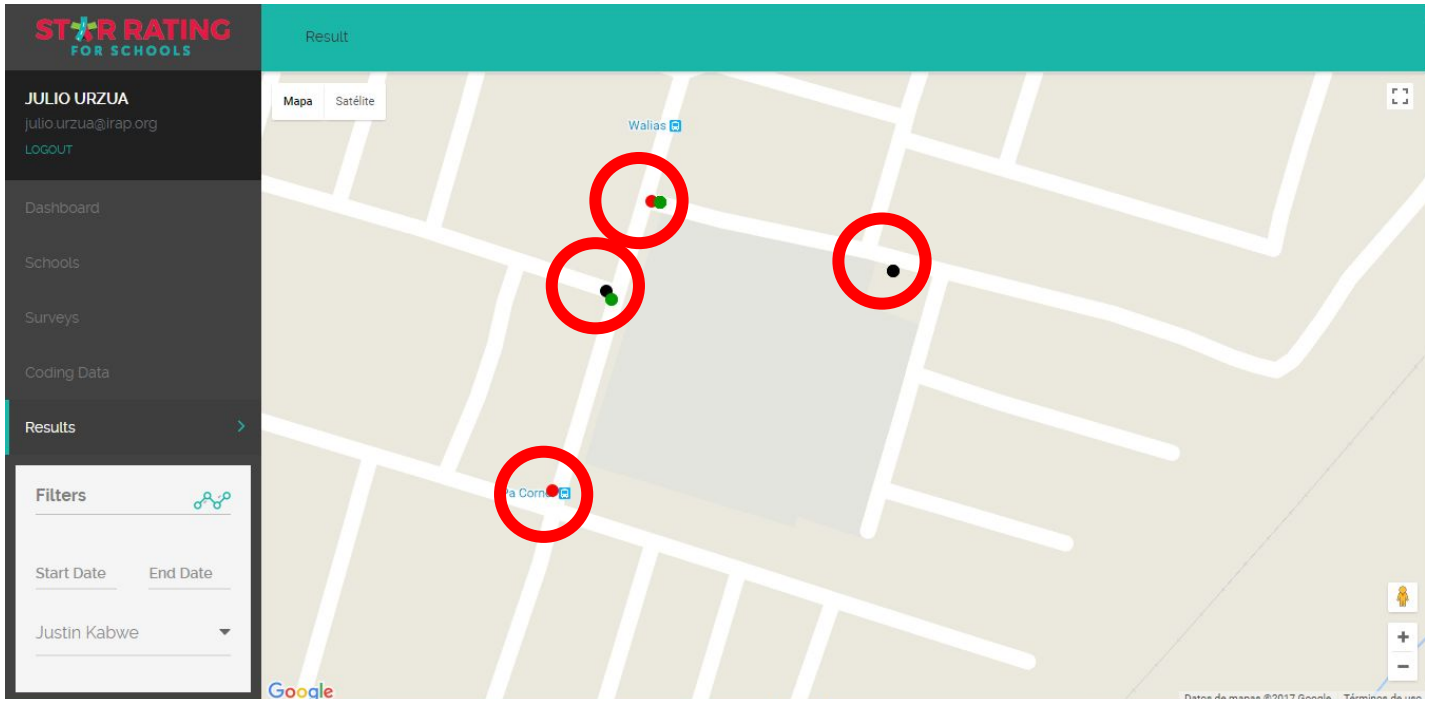
CASE STUDY: Justin Kabwe Primary School, Lusaka, Zambia



Points Assessed (see printouts)



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Before

After

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DATA POINT	SITUATION BEFORE	SITUATION AFTER
(1) Intersection	School on the left side Residential on right side Urban area Vehicle parking No School zone warning No sidewalk left No sidewalk right Pedestrian fencing not present Speeds limit 50k/h Operating speed 60k/h	School on the left side Residential on right side Urban area No vehicle parking School zone warning Sidewalk 1 to 3 m away Sidewalk 0 to 1 m away Pedestrian fencing present Speeds limit 50k/h Operating speed 40k/h

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DATA POINT (2) School entrance	SITUATION BEFORE	SITUATION AFTER
	School on the left side	**School on the left side**
	Residential on right side	**Residential on right side**
	Urban area	**Urban area**
	Vehicle parking	**No vehicle parking**
	No School zone warning	**School zone warning**
	No sidewalk left	**Sidewalk 0 to 1 m away**
	No sidewalk right	**Sidewalk 0 to 1 m away**
	Pedestrian fencing not present	**Pedestrian fencing present**
	Pedestrian crossing not present	**Pedestrian crossing present on the main road**
	Speed management not present	**Raised pedestrian crossing** **Marked pedestrian crossing** **Speed management present**
	Speeds limit 50k/h	**Speeds limit 50k/h**
	Operating speed 60k/h	**Operating speed 40k/h**

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COUNTERMEASURE	Current situation	Proposal 1	Proposal 2	Proposal 3	Proposal 4	Proposal 5
Paved Shoulder driver side	Not Present	Present	Present	Present	Present	Present
Paved Shoulder passenger side	Not Present	**Present**	Present	Present	Present	Present
Traffic calming	Not Present	Not Present	**Present**	Present	Present	Present
Operating speed	45km/h	45km/h	**35km/h**	35km/h	35km/h	35km/h
Delineation	Poor	Poor	Poor	**Adequate**	Adequate	Adequate
Center rumble strips	Not Present	Not Present	Not Present	**Present**	Present	Present
Pedestrian fencing	Not Present	Not Present	Not Present	**Present**	Present	Present
Pedestrian crossing facility	No facility	No facility	No facility	No facility	**Refuge only**	Refuge only
Side walk passenger side	Informal path	Informal path	Informal path	Informal path	Informal path	**Physical barrier**
Side walk driver side	None	None	None	None	None	**Physical barrier**
STAR RATING	★★	★★	★★★	★★★	★★★	☆☆☆☆
Star Rating Score	**75.38**	**66.62**	**33.31**	**30.24**	**15.33**	**9.08**

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SR4S & the Safe System Approach

- **Principles:**
  - Death & serious injury unacceptable
    - *SR4S and all "RAPs" focus on fatal and serious-injury crash prevention, not property damage, and especially view injuries to children to be particularly unconscionable*
  - Humans are vulnerable and make mistakes
    - *This is why the built environment needs to be as well-engineered as possible!*

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SR4S & the Safe System Approach

- **Principles:**
  - Responsibility is shared
    - *Gets away from the "nut behind the wheel" blaming the end user and refocuses on planning, design, and operations – and involves community members!*
  - Safety is proactive and redundancy is critical
    - *Star ratings are forward-looking based on risk models, and previous slides show how you can layer safety treatments!*

Roadway Safety FOUNDATION

Website:

schools.irap.org

Roadwaysafety.org

brucehamilton@roadwaysafety.org

Roadway Safety FOUNDATION






SAFE SYSTEMS: STARTING WITH SCHOOLS

NATALIE DRAISIN

NORTH AMERICA DIRECTOR &
UNITED NATIONS REPRESENTATIVE

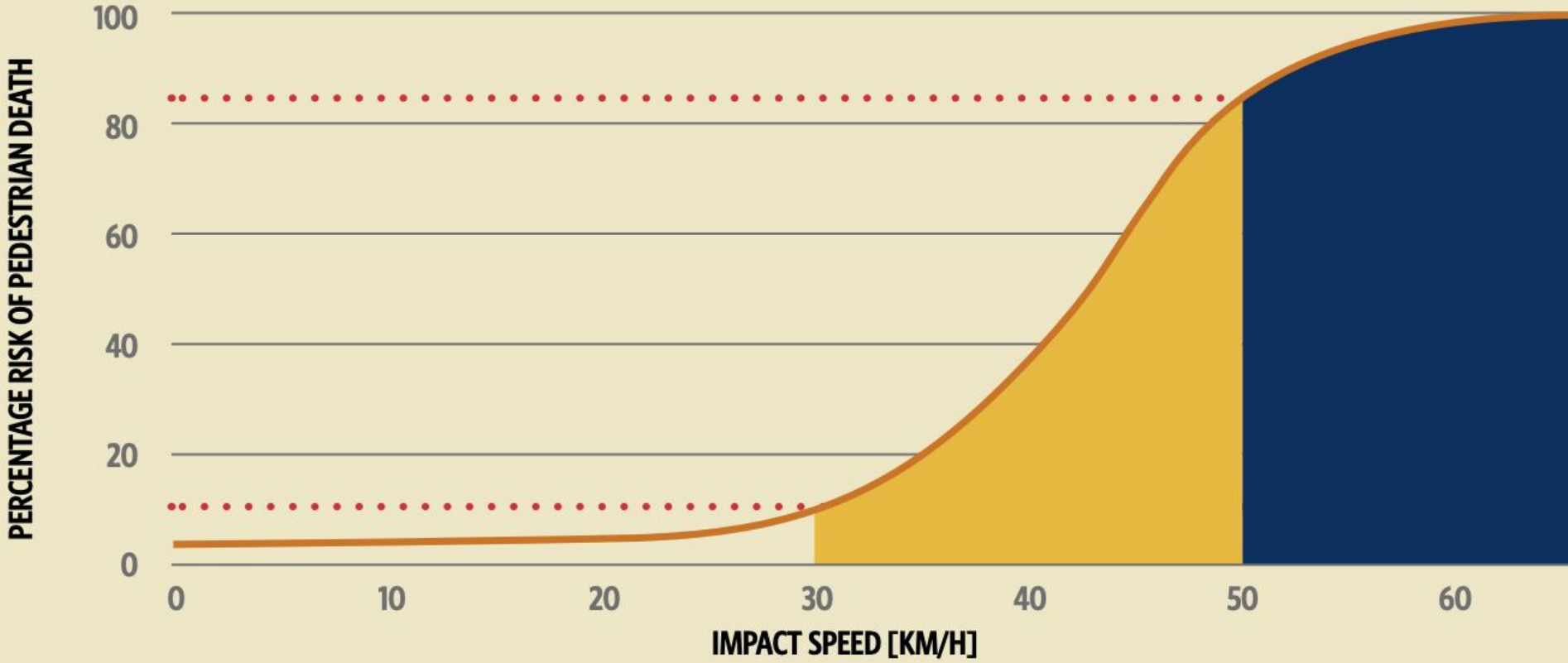
FIA FOUNDATION


#SaveKidsLives
with road safety

Domestic & international alignment

FIA FOUNDATION

THE RELATIONSHIP BETWEEN PEDESTRIAN SAFETY AND THE IMPACT SPEED OF VEHICLES



Based on crash data results, Tingvall and Haworth, 1999

Vision Zero for Youth

- Prioritize safety improvements where kids walk or bike
- Rooted in Safe Routes to School
- Launched in 2016

www.visionzeroforyouth.org

FIA FOUNDATION

vision zero FOR youth

SafeRoutes
National Center for Safe Routes to School

Safe system alignment

- Children are not responsible for unsafe environments
- Humans make mistakes, children are children
- Proactive, not reactive
- Includes children in planning process

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vision zero FOR youth

SafeRoutes
National Center for Safe Routes to School

Seattle

- School streets
- 20 mph non-arterials
- 25 mph arterials
- Speed cushions, road narrowing, protected bike lanes, etc
- Bike education: 3rd, 4th, 5th grade

☐ NACTO best practice

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SafeRoutes
National Center for Safe Routes to School

Philadelphia

- Children walk in different places, at different times than adults
- Stratify high injury networks: age & race
- Proactively identify crash sites

☐ Focus on youth in Vision Zero

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vision zero FOR youth

SafeRoutes
National Center for Safe Routes to School

Botogá, Colombia

- Walk & bike bus: 9,000+ students, 100+ schools
- “Plazoletas Bogotá:” 92,000 peds
- 20 mph school zones
- 350+ mile bike network

- City of 8 million: months with 0 child fatalities on roads
- Historically low fatalities

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Gia Lai, Vietnam

- All schools 3+ stars (most 5 stars)
- Speeding decreased by 15 mph

- Scale to all school zones nationwide
- All new national highway provincial roads and 75% of highway network = 3+ stars

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SafeRoutes
National Center for Safe Routes to School

Mexico City & Monterrey, Mexico

- Design streets with students & community
- Ask even youngest children for opinion
- Public-private partnership

- Spread nationally & to Costa Rica
- Mobility law
- 21% decrease in road traffic fatalities

FIA FOUNDATION

Resources

- Build bridge between youth and leaders
- Case studies
- Guidance on integrating advocacy into high school Safe Routes to School programs
- Coming in August: Recommendations to engage youth to advance safety

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VISION zero FOR youth

SafeRoutes
National Center for Safe Routes to School

Leadership awards

- 20 mph
- Focus on school zones and nearby arterials
- Quick build improvements and School Streets
- Link to equity goals and climate plans

2023 Award: Lincoln, NE
Source: Lincoln Transportation & Utilities

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Applications open this Fall!

www.visionzeroforyouth.org/awards/us

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SafeRoutes
National Center for Safe Routes to School

SAFE SYSTEMS APPROACH

Source: Dr. Matts-Ake Belin, Swedish Transport Administration, Vision Zero Academy

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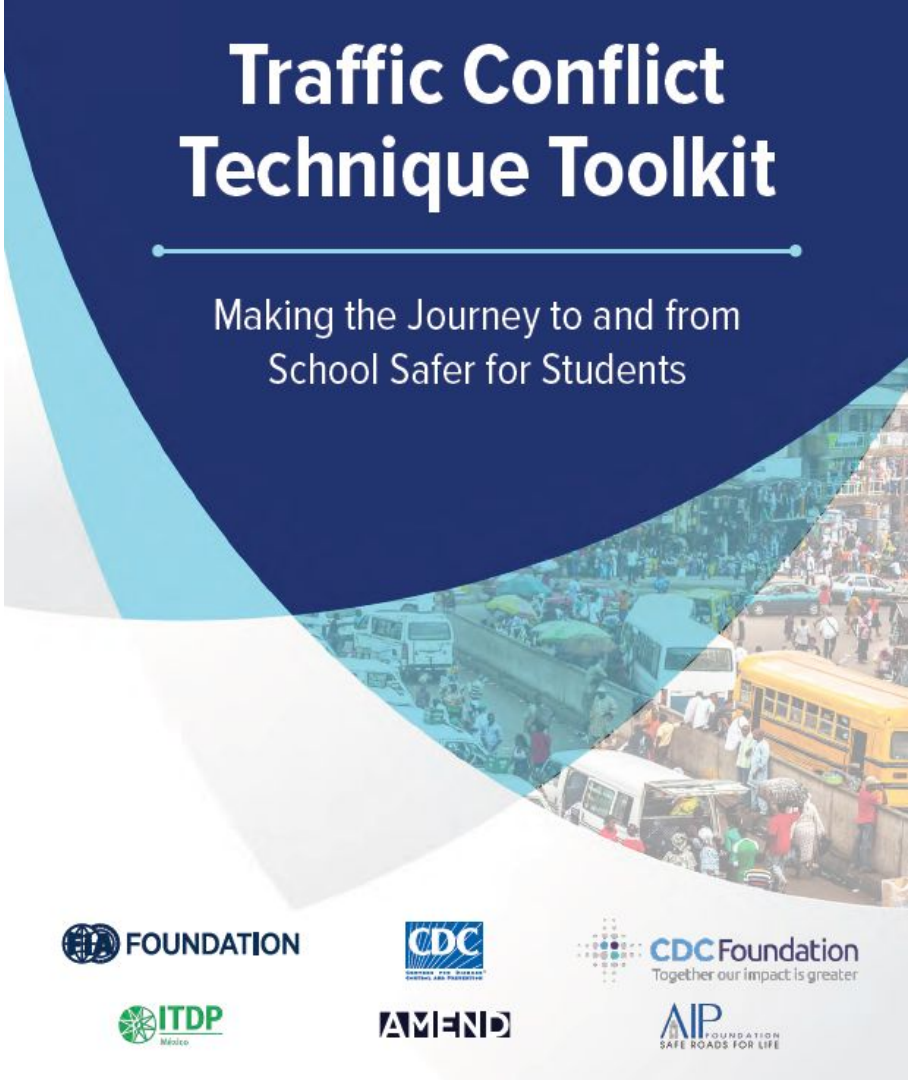


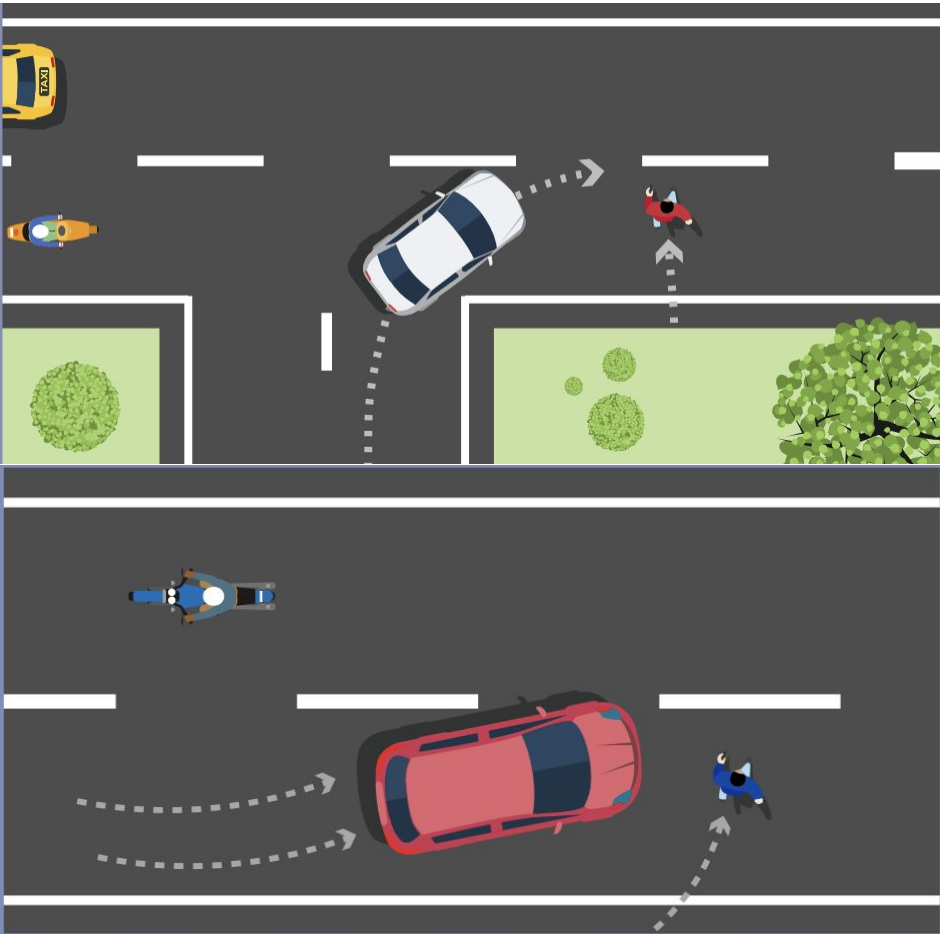
Toolkit: childhealthinitiative.org

https://www.childhealthinitiative.org/media/791406/tct_toolkit_final_508.pdf

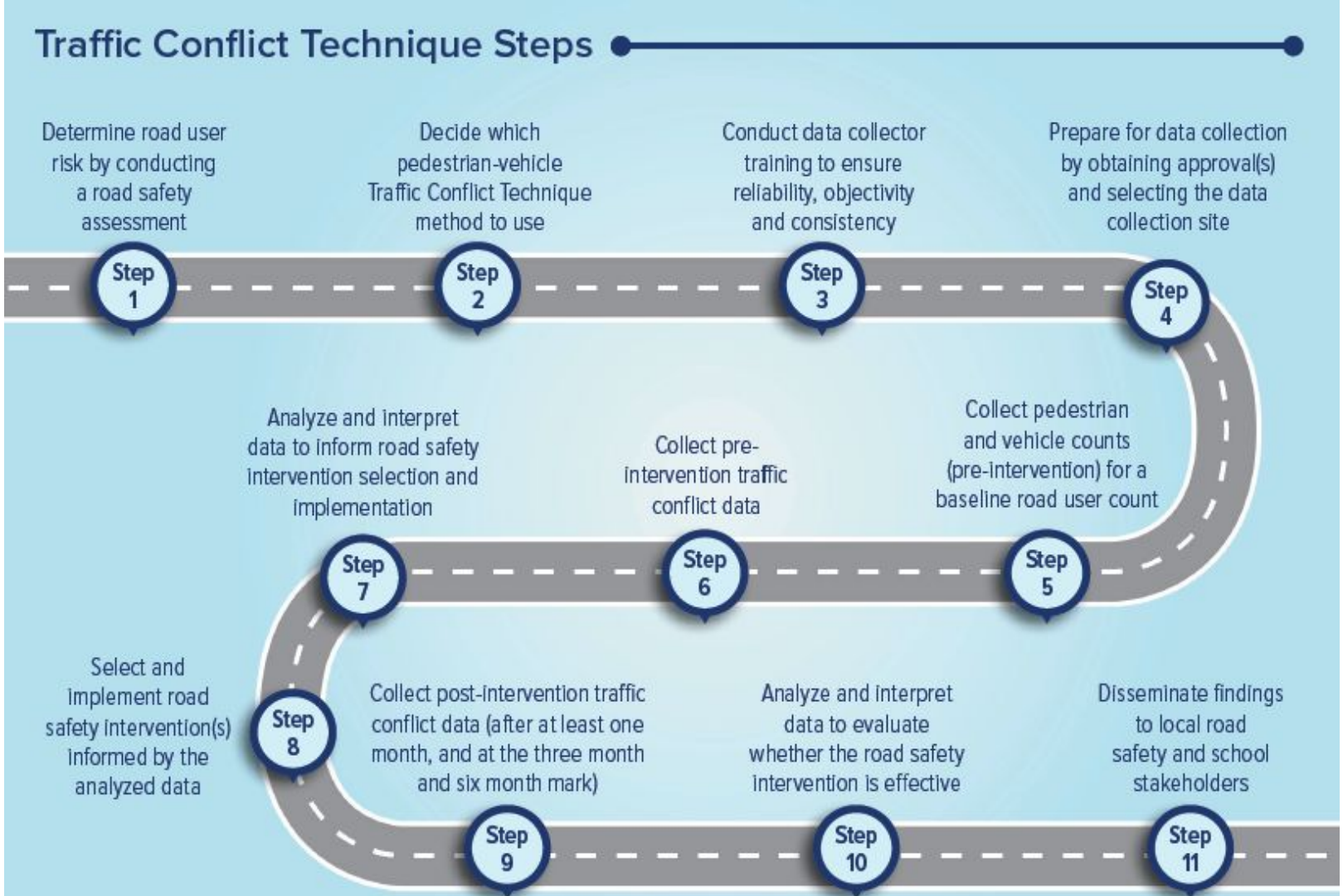
Webinar:
https://www.youtube.com/watch?v=JKuVImDBXJU


TAXI
PERU
AJI-109
AGENDA

Traffic Conflict Technique Toolkit



- Free
- 5 methods based on your experience and resources
- 11 steps, 8 months
- Pre & post monitoring
- Includes data collection forms
- Video analysis optional


Traffic Conflict Technique Steps
Determine road user risk by conducting a road safety assessment
Step 1
Decide which pedestrian-vehicle Traffic Conflict Technique method to use
Step 2
Conduct data collector training to ensure reliability, objectivity and consistency
Step 3
Prepare for data collection by obtaining approval(s) and selecting the data collection site
Step 4
Collect pedestrian and vehicle counts (pre-intervention) for a baseline road user count
Step 5
Collect pre-intervention traffic conflict data
Step 6
Analyze and interpret data to inform road safety intervention selection and implementation
Step 7
Select and implement road safety intervention(s) informed by the analyzed data
Step 8
Collect post-intervention traffic conflict data (after at least one month, and at the three month and six month mark)
Step 9
Analyze and interpret data to evaluate whether the road safety intervention is effective
Step 10
Disseminate findings to local road safety and school stakeholders
Step 11

Traffic Conflict Technique Toolkit Results

	Method 1 (Ghana)		Method 2 (Vietnam)		Method 3 (Mexico)	
	Pre-intervention	Post-intervention	Pre-intervention	Post-intervention	Pre-intervention	Post-intervention
Road User Counts	929 vehicles (average per peak hour)		6,202 vehicles (average per peak hour)		1,149 vehicles (afternoon peak hour)	
# traffic conflicts (4-hour period)	80	62	390	96[10]	147	35
Traffic conflict rate (per hour per 1,000 vehicles)	21.5	16.7	15.7	7.7	32.0	7.6
95% CI	(17.1, 26.8)	(12.8, 21.4)	(14.2, 17.4)	(6.3, 9.5)	(27.0, 37.6)	(5.3, 10.6)

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Source: CDC

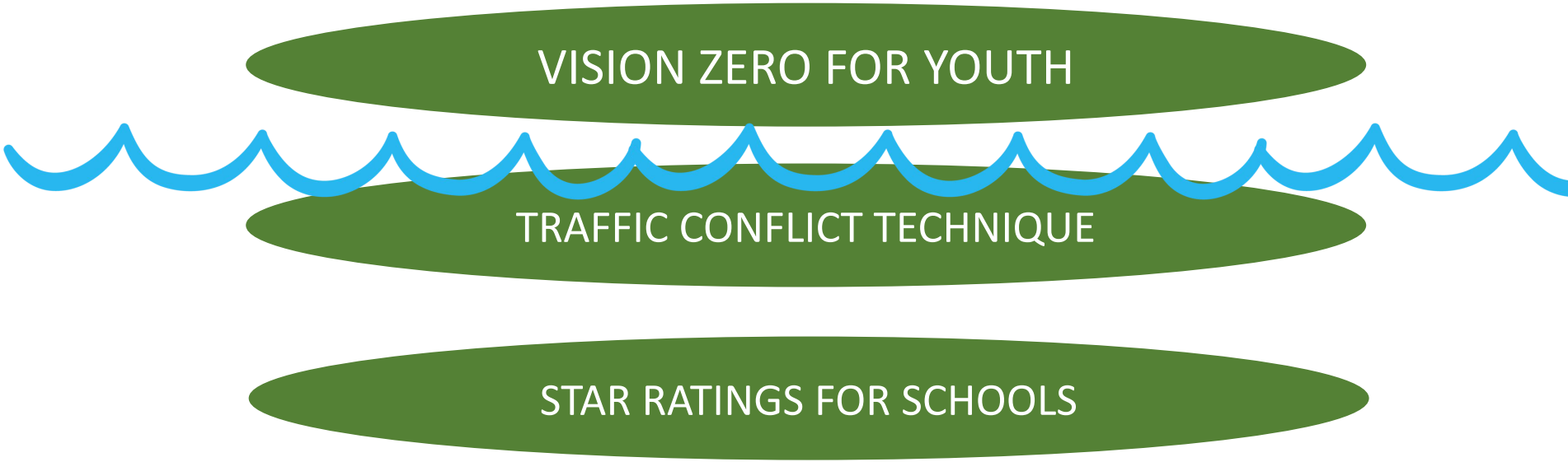
Traffic Conflict Technique Toolkit Results

- Mexico: 70% decrease in conflicts among 9,000 students
  - Governor authorized use in 200 dangerous crossings
  - Mayor authorized it in 20 dangerous crossings
  - Updated transit operations and infrastructure guidelines
- Costa Rica: Spanish version
  - 20 intersections and 5 tactical urbanism interventions
- US: USDOT Safe Streets for All grant in East End District, Texas
  - How will you use the toolkit?

STAR RATINGS FOR SCHOOLS

TRAFFIC CONFLICT TECHNIQUE

STAR RATINGS FOR SCHOOLS


VISION ZERO FOR YOUTH
TRAFFIC CONFLICT TECHNIQUE
STAR RATINGS FOR SCHOOLS

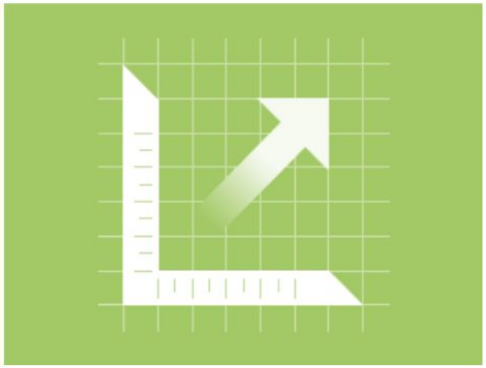
CHILD HEALTH
INITIATIVE TOOLKIT

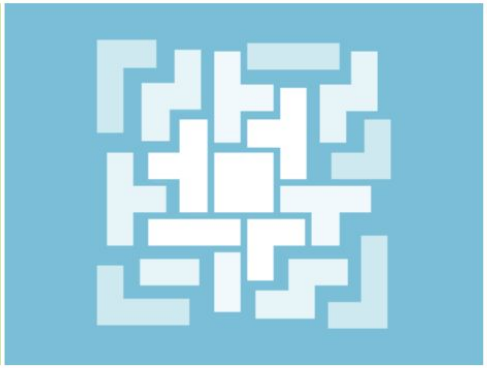
VISION ZERO FOR YOUTH

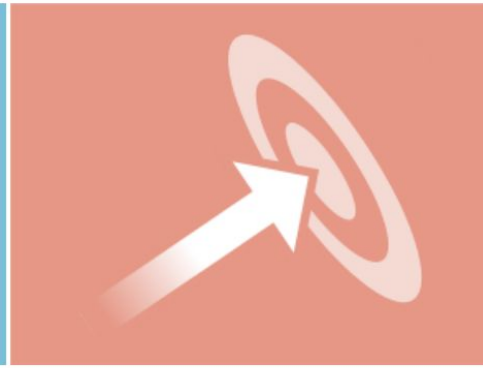
TRAFFIC CONFLICT TECHNIQUE

STAR RATINGS FOR SCHOOLS

CHILD HEALTH INITIATIVE



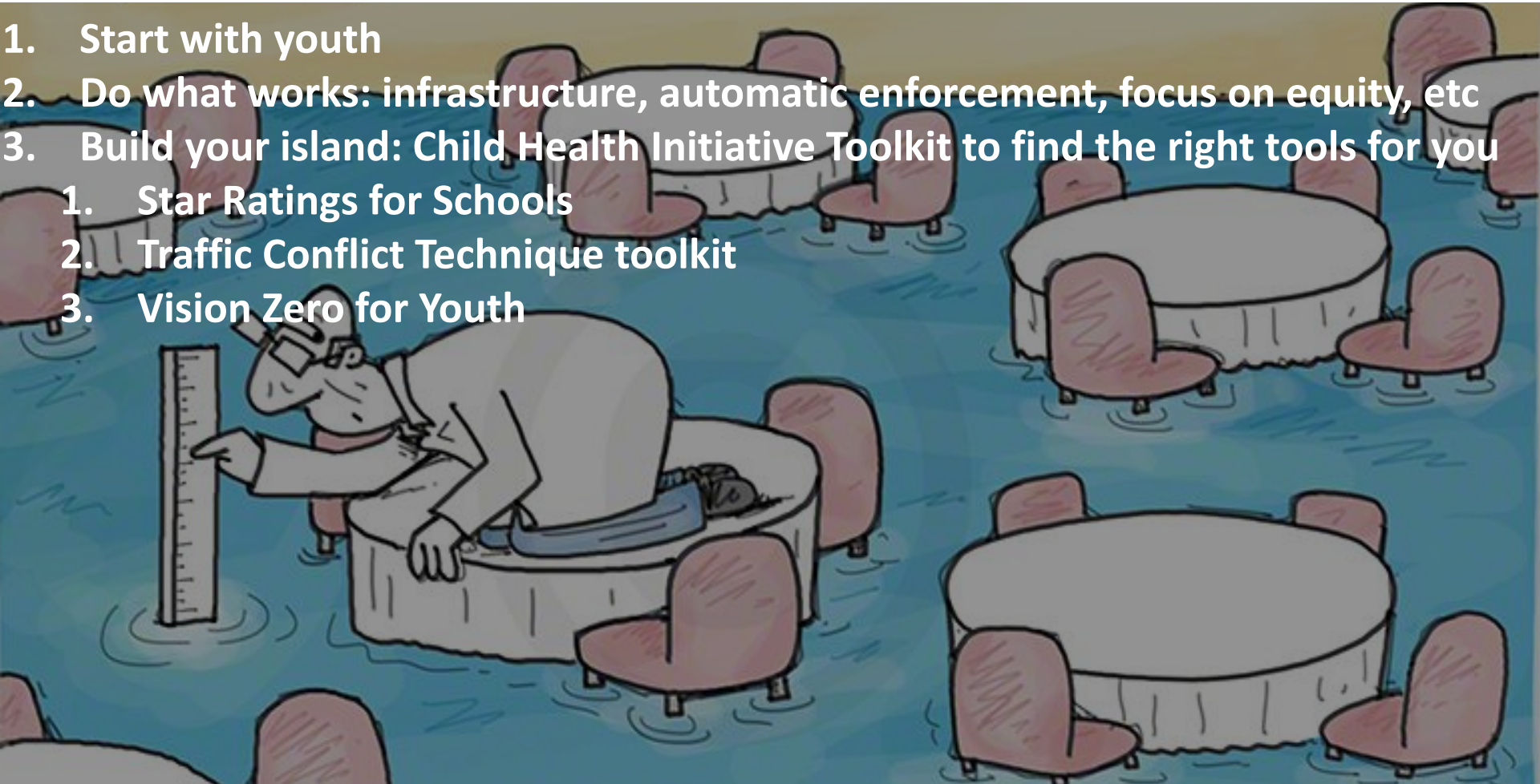




GATHERING DATA | DESIGN & IMPLEMENTATION | COALITION BUILDING | SCALING UP IMPACT

GLOBAL TOOLKIT

FROM ISLANDS OF SUCCESS TO A SEA OF CHANGE



1. Start with youth
2. Do what works: infrastructure, automatic enforcement, focus on equity, etc
3. Build your island: Child Health Initiative Toolkit to find the right tools for you
    1. Star Ratings for Schools
    2. Traffic Conflict Technique toolkit
    3. Vision Zero for Youth

Thank you

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Thank you.