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# Safe System Intervention in Lusaka School Zones: Quantified Results from 15 Pilot Sites

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(Experiences from the Lusaka Living Lab)

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## Background

Road traffic injuries (RTIs) represent a severe and escalating public health crisis in Zambia, with a disproportionate burden concentrated in its capital. In 2024, Lusaka Province accounted for over 53% (19,180) of the nation's 35,731 recorded road traffic accidents (RTSA, 2024). Vulnerable road users, particularly children, face the greatest risk. National statistics for 2025 revealed 1,310 casualties involving children under 16, including 201 preventable fatalities (RTSA, 2025). Many of these incidents occur during the daily school commute, especially in low-income, high-density communities where road infrastructure is inadequate and vehicle speeds are dangerously high (ZRST, 2024). This context underscores the urgent need for evidence-based, scalable interventions that move beyond traditional road safety measures (post crash analysis) to create a protective system for the most vulnerable (i.e., children, women, youths and PWDs).

## Aim

This paper presents the results of a multi-year initiative in Lusaka aimed at demonstrating the effectiveness of a data-driven, community-led Safe System approach in reducing child road traffic injuries and fatalities. The central research question was: To what extent can the implementation of a multi-faceted Safe System intervention—encompassing evidence-based infrastructure modifications, targeted community engagement, and data-led policy advocacy reduce the incidence of fatal and serious injuries among child pedestrians in selected high-risk school zones in Lusaka, Zambia?

## Method

A quasi-experimental, before-and-after study design was employed across 15 high-risk school zones in Lusaka through the "Safer Journeys to School" project, a flagship initiative of the Zambia Road Safety Trust. The multi-faceted intervention was structured around three core pillars of the Safe System approach:

- Safe Infrastructure: Low-cost, high-impact infrastructure modifications ("safe road furniture") were implemented, including the installation of 30 zebra-crossings, 30-

speed humps, and comprehensive signage establishing 30km/h school zones. The objective was to upgrade pedestrian routes to a minimum 3-star safety rating according to the International Road Assessment Programme (iRAP) methodology.

- **Safe Road Users (Education):** A standardized, five-session road safety curriculum was delivered to over 24,000 primary school students. The training focused on practical skills such as hazard identification, the "Stop, Look, Listen, Think" principle, and understanding traffic signs.
- **Community Ownership & Data Systems:** *To ensure sustainability and local ownership, 15 School Safety Committees were established, alongside peer-led "Road Safety Champions" clubs. The data-driven nature of the project was enhanced through the "Green & Digital Safe School Corridors Living Lab" model, which involves creating digital corridor profiles and using smart technology to monitor traffic and pedestrian behavior.*

Effectiveness was measured using pre- and post-intervention data, including traffic speed surveys, structured non-intrusive observation of student road-crossing behaviors, and knowledge assessment tests administered to students.

## Results

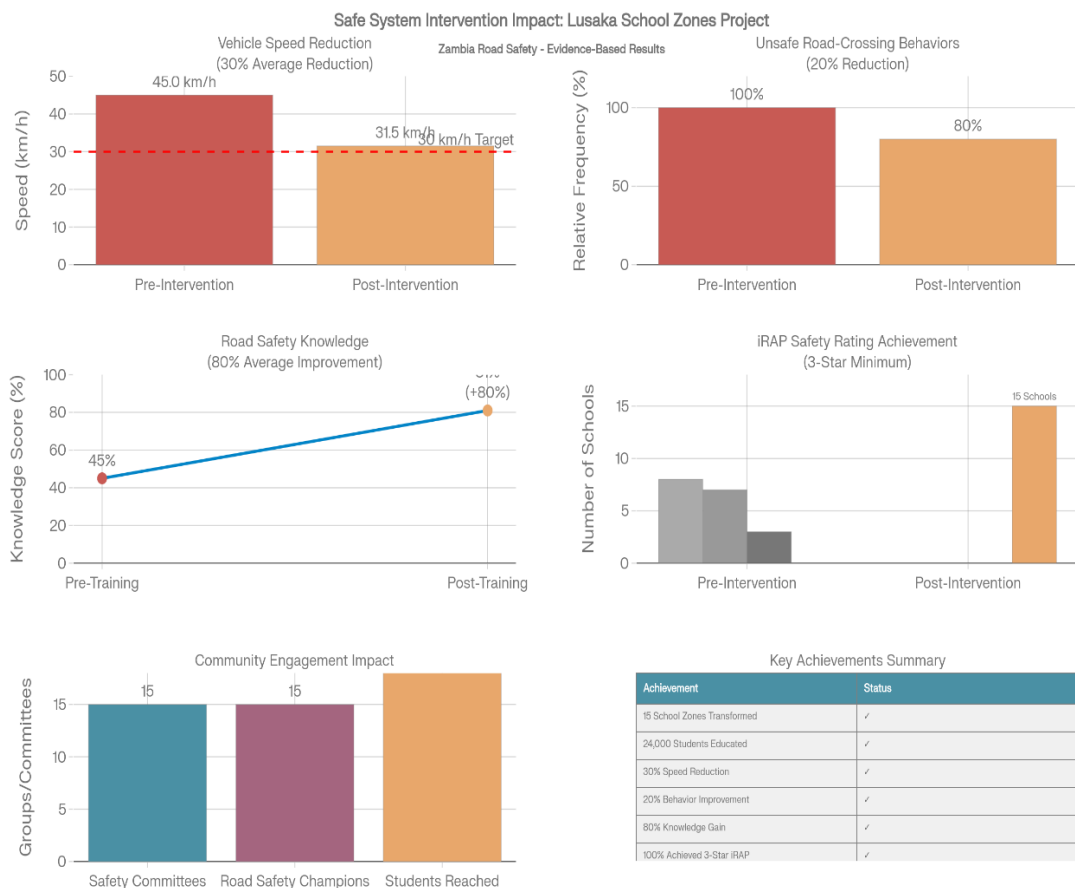


Figure 1: Community-led safe system approach impact in Zambia. Source: ZRST, 2025

The Safe System intervention led to clear safety gains in all 15 participating school zones. Key quantitative results include:

- Post-intervention traffic surveys recorded an average reduction in vehicle speeds of over 30% within the newly designated 30km/h school zones, directly mitigating the risk of severe injury.
- Structured observations confirmed a targeted 20% reduction in unsafe road-crossing behaviors (e.g., failure to look both ways) among students post-intervention.
- Pre- and post-training assessments among the 24,000 participating students demonstrated an average improvement of 80% in road safety knowledge and risk perception scores.
- All 15 school zones were successfully upgraded with the planned infrastructure, achieving a minimum 3-star iRAP safety rating for pedestrians. Furthermore, 15 active School Safety Committees and "Road Safety Champions" clubs were established, creating a sustainable framework for ongoing safety advocacy and peer education.

## **Conclusions**

- A localized community-centric Safe System approach can substantially reduce exposure and risk for child pedestrians in high-risk urban school zones.
- Combining low-cost, evidence-based engineering measures with structured education produces measurable gains in speed reduction, safety knowledge, and crossing behaviour.
- Embedding Road Safety Champions clubs and School Safety Committees fosters community ownership that supports long-term maintenance and enforcement of safer school zones.