

Uganda Road Safety in Uganda: Status, Challenges, and Audit Practices

Engineering-Led Interventions and
the Role of Road Safety

4 August 2026



SESSION OVERVIEW



1. Global & National Stats

Uganda's position within the UN Decade of Action 2021–2030 and economic burden.



2. Road Safety Trends

Who is dying on Kampala's roads, when, where, and hospital data linkage findings.



3. Policy & Laws

The National Road Safety Action Plan, speed regulations, and legislative pillars.



4. Road Safety Audits

Proactive engineering checks across the 5 project stages from feasibility to post-opening.



5. iRAP & School Zones

Designing 3-star roads, the 38.8 BCR return business case, and 2025 Safe School Zone guide.



6. Delivery Lessons

Overcoming operational challenges and lessons for infrastructure investment in LMICs.

GLOBAL ROAD SAFETY PROFILE AT GLANCE

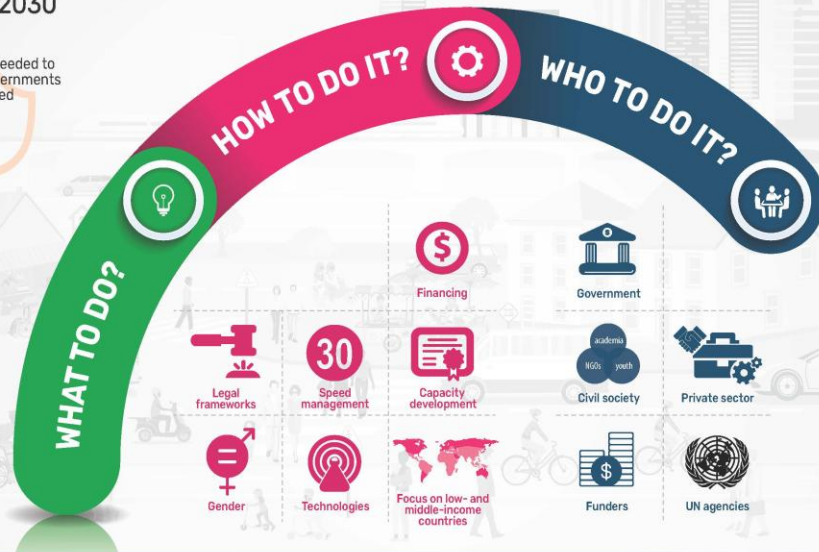
Globally, road crashes kill an estimated 1.19 million people. Road crashes are the leading cause of death for children and young adults aged 5–29, and rank as the twelfth leading cause of death for people of all ages.

GLOBAL PLAN

DECADE OF ACTION FOR ROAD SAFETY
2021–2030

The **Global Plan** describes what is needed to achieve that target, and calls on governments & partners to implement an integrated

SAFE SYSTEM APPROACH



UN General Assembly Resolution 74/299 declared a **Decade of Action for Road Safety 2021–2030**, with the target to reduce road traffic deaths & injuries

BY AT LEAST 50% during that period



1.19 Million

Approximately 1.19 million people die each year as a result of road traffic crashes.



3%

Road traffic crashes cost most countries 3% of their gross domestic product.



19%

The Africa region accounts for 19% of global road deaths despite having lower motorisation rates.

THE NATIONAL PICTURE

Uganda Carries One of the Region's Heaviest Burdens.



UGANDA

The roads sub-sector moves more than 90% of Uganda's freight and passenger traffic.



26,044

Road crash fatalities reported by police in 2025



8,879

Serious injuries recorded in the same year



80%+

Of road crashes attributed to human factors



~5% GDP

Estimated annual economic cost of road crashes



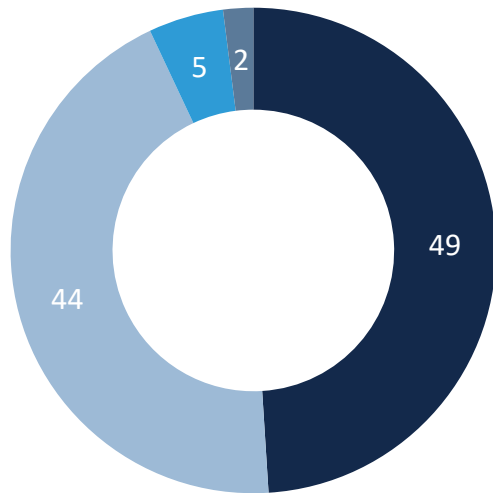
Rapid motorisation combined with a youthful population and a transport system dominated by “boda bodas” (commercial Motorcycles) and pedestrians, places the highest crash risk on those least protected.



WHO BEARS THE BURDEN

Vulnerable road users account for 94% of deaths

Share of 2024 fatalities



49% of all deaths are **motorcyclists**

Motorcyclists are also 59% of serious injuries. Correct helmet use across riders sits at just 34%, and only 2% among passengers.



44%

Pedestrian deaths increased by 6.6%, from 1,666 in 2024 to 1,776 in 2025.



81%

of fatalities are male, most aged 20–29, the economically active core

■ Motorcyclists ■ Pedestrians ■ Vehicle occupants ■ Cyclists

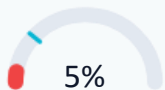
NATIONAL INFRASTRUCTURE STATISTICS

Road Infrastructure Safety Dashboard

Safety star ratings & Key Performance Indicators (KPIs) benchmarking infrastructure standards

★ ROAD LENGTH RATED 3-STAR OR BETTER

Pedestrians



5%

Bicyclists



10
%

Motorcyclists



12
%

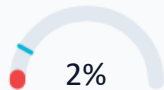
Vehicle Occupants



15
%

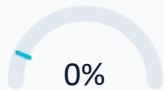
♦ INFRASTRUCTURE SAFETY KEY PERFORMANCE INDICATORS (KPI)

Pedestrians have formal
sidewalks



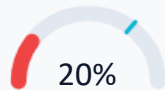
2%

Pedestrians have a crossing



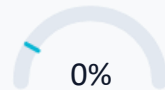
0%

Pedestrian crossings in good
condition



20%

<40km/h (25mph) or bicyclists
have facilities



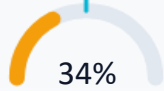
0%

<60km/h (40mph) or
motorcyclists have facilities



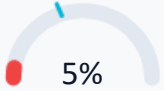
19
%

<60km/h or protected turn
at intersections



34%

Railway crossings have
signals



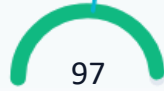
5%

<80km/h (50mph) or no
sharp curves



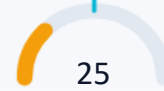
99
%

<80km/h (50mph) or
divided road



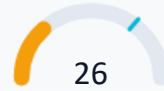
97
%

<80km/h or no roadside
hazards



25
%

<80km/h or overtaking
provision



26
%

— Global Average Benchmark

■ Low Performance (<20%)

■ Moderate Performance (20-50%)

■ High Performance (>90%)

KAMPALA CITY CRASH TRENDS

Kampala's population changes between night and day, with an official resident night population of about 1.8 million people and a daytime population of 4.0 and 4.5 million people.



Fatal crashes peak 4 p.m. – midnight

Evening and low-light hours drive severity



Deaths cluster on Sundays and Saturdays

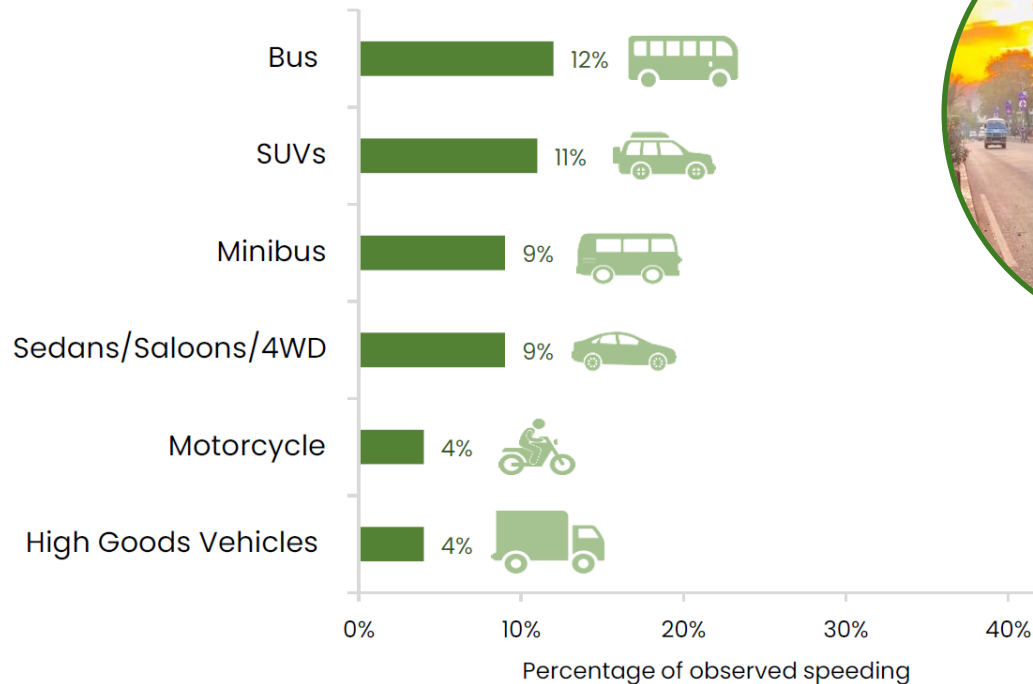
Weekend travel and reduced enforcement



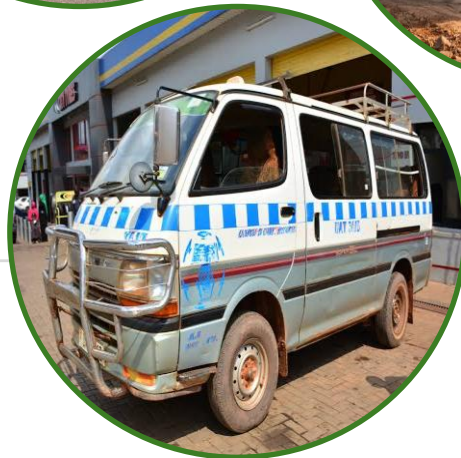
Source: Vulnerable Road Users in Kampala: Trends and Insights, 2019-2024

BEHAVIOURAL RISK FACTORS

Speeding remains one of the most critical risk factors for Vulnerable Road Users in Kampala.



Source: Vulnerable Road Users in Kampala: Trends and Insights, 2019-2024



IMPLEMENTING SAFETY STANDARDS IN A LOW-INCOME SETTING



Mixed traffic

Cars, boda bodas, pedestrians and cyclists share the same space at incompatible speeds and masses



Rapid urbanisation

A resident population of 1.8m swells to 4.5m by day, outpacing infrastructure and planning



Enforcement capacity

Overwhelmed enforcement agencies that are understaffed



Alignment with Political priorities

There is a tendency of the political wing and decision makers priority misalignment



Awareness and education

Majority of the road users, implementors of infrastructure projects are not aware of what needs to be done



Under reporting

The population and authorities under-report and mix up the reporting hence the misrepresentation

NATIONAL ROAD SAFETY ACTION PLAN 2021/22–2025/26



Governance

- Led by the Ministry of Works and Transport (MoWT) as the coordinating entity across national and local agencies.
- Delivers Uganda's first five-year plan under the UN Decade of Action 2021–2030.
- National target: cut road deaths and injuries 25% by 2026, contributing to the global 50% goal by 2030.
- Grounded in the Safe System approach philosophy of road safety as a shared responsibility.

STRATEGIC OBJECTIVES



Ensure safe roads by design and through road safety audits along the network



Strengthen enforcement of the road-traffic regulatory framework

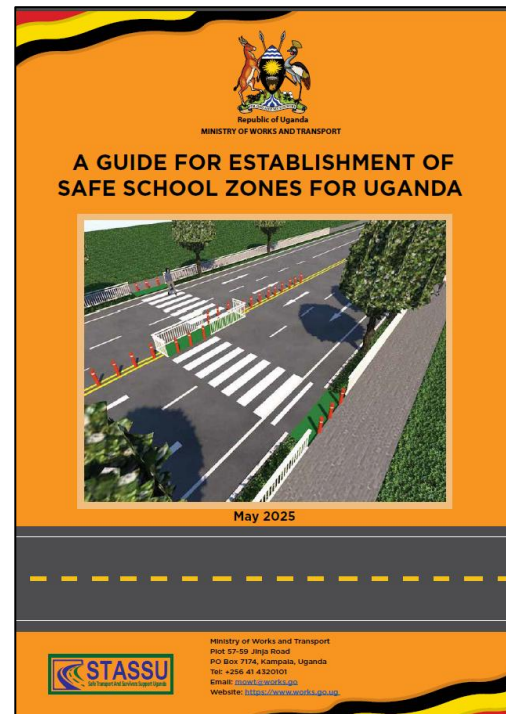
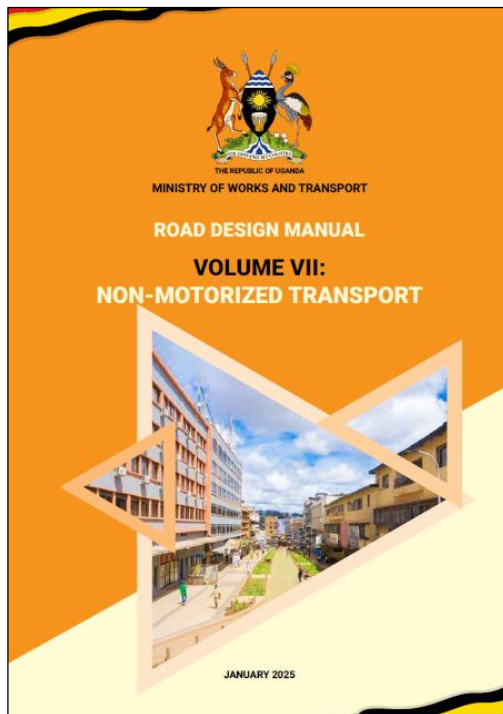
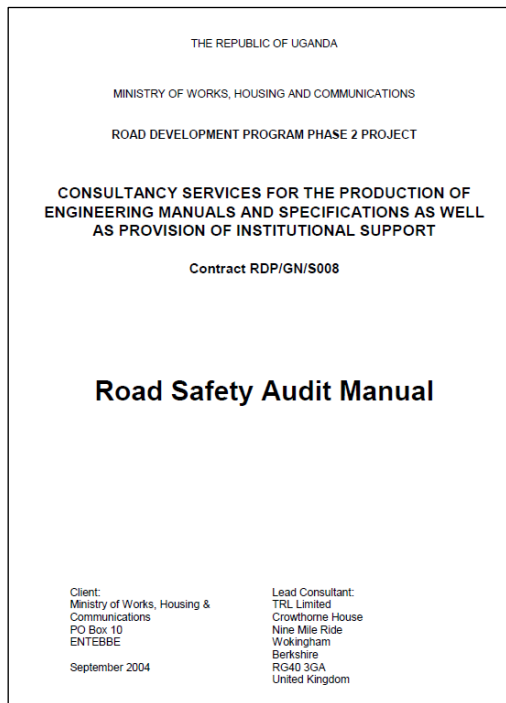


Build the Ministry's capacity to coordinate road safety



Strengthen planning, implementation and coordination of interventions

MANUALS AND GUIDELINES



International Manuals: GG 119 Road safety audit, Austroads: Guide to Road safety

THE SAFE SYSTEM APPROACH



Road Safety Management

Lead agency, data, coordination and funding



Safe Road Infrastructure

Audits, star ratings, forgiving design



Vehicle Safety

Standards, inspection and roadworthiness



Safe Road Use

Speed, helmets, seatbelts, enforcement



Post-Crash Response

Emergency care and trauma systems

Safe System principle: humans make mistakes and are physically fragile. The infrastructure must be forgiving enough that error does not equal death. Today's focus is Pillar 2, safe road infrastructure.

iRAP APPLICATION FRAMEWORK

01

Road Network Survey

High-definition, geo-referenced video collection and spatial mapping of road corridors using vehicle-mounted cameras & GPS.

02

50 Attribute Coding

Standardized inspection and coding of 50 safety attributes every 100m (geometry, speed, intersections, roadsides, flows).

03

Data Upload & Processing

Ingestion into ViDA platform with local speed distributions, traffic volumes (AADT), and historical crash data calibration.

04

Star Rating Scores

Calculation of Star Rating Scores (SRS) across 13 crash types for 4 distinct road user groups using multiplicative models.

05

FSI Casualty Modeling

Estimation of expected Fatalities & Serious Injuries (FSI) every 100m by combining Star Ratings with road user exposure.

06

Safer Roads Investment

Automated testing of 100+ proven countermeasures to output prioritized investment plans (SRIP) with Benefit-Cost Ratios.

Star Rating Bandings (1 to 5 Stars)

The Objective is measurement of built-in infrastructure safety:

1 Star

2 Star

3 Star

4 Star

5 Star

Decimal Star Ratings

Subdivides whole-star bands into tenths (e.g., **3.2 vs 3.8 Stars**) to track subtle design improvements and micro-variations.

Assessed Road User Groups:



Vehicle Occupants



Motorcyclists



Bicyclists



Pedestrians

KOBOKO – YUMBO – MOYO ROAD 103.8 KM

The star Rating Before Design Review



	Vehicle Occupant		Motorcyclist		Pedestrian		Bicyclist	
	Length (kms)	Percent	Length (kms)	Percent	Length (kms)	Percent	Length (kms)	Percent
5 Stars	14.4	13%	11.1	10%	11.5	11%	22.8	21%
4 Stars	12	11%	9.2	8%	11.4	10%	0.1	0%
3 Stars	83.6	76%	84.4	77%	19.8	18%	79.1	72%
2 Stars	0	0%	5.3	5%	1.8	2%	4.8	4%
1 Star	0	0%	0	0%	10.2	9%	0	0%
N/A	0	0%	0	0%	55.3	50%	3.2	3%
Totals	110.0	100.0%	110.0	100.0%	110.0	100.0%	110.0	100.0%

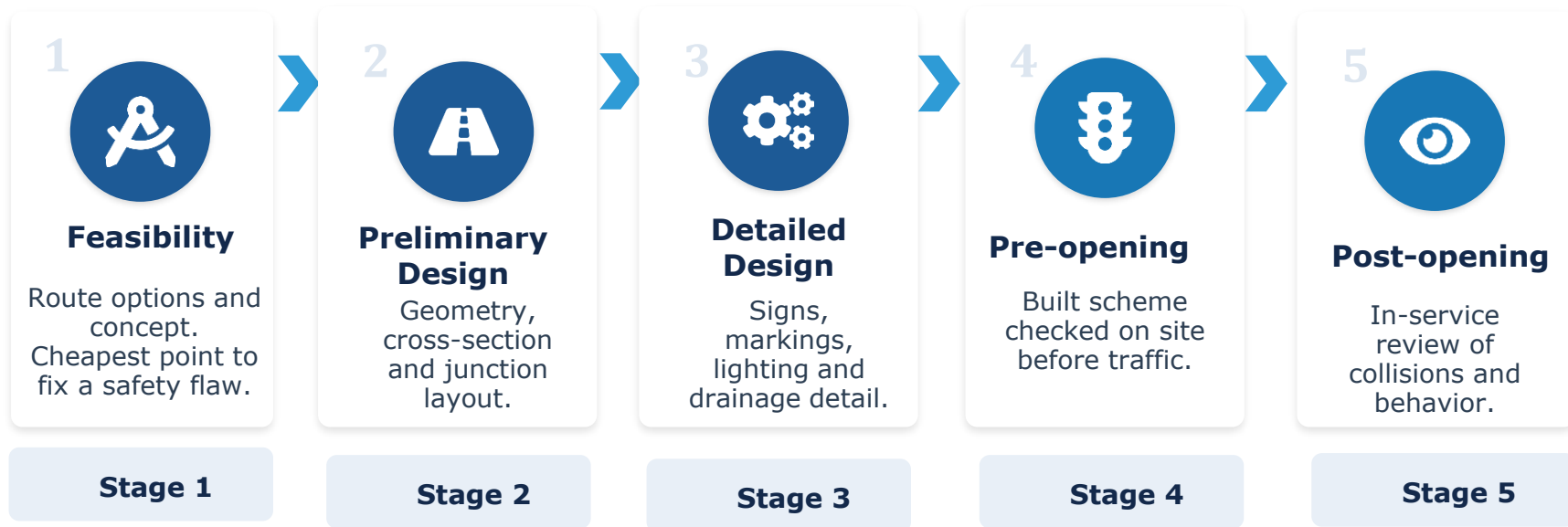
The star Rating after Application of the Safer Roads Investment Plan



Star Ratings (BCR1)	Vehicle Occupant		Motorcyclist		Pedestrian		Bicyclist	
	Length (kms)	Percent	Length (kms)	Percent	Length (kms)	Percent	Length (kms)	Percent
5 Stars	15	14%	11.1	10%	16.3	15%	38.7	35%
4 Stars	49.6	45%	33.6	31%	24.3	22%	32.4	30%
3 Stars	45.4	41%	65.3	59%	14.1	13%	35.7	32%
2 Stars	0	0%	0	0%	0	0%	0	0%
1 Star	0	0%	0	0%	0	0%	0	0%
N/A	0	0%	0	0%	55.3	50%	3.2	3%
Totals	110.0	100.0%	110.0	100.0%	110.0	100.0%	110.0	100.0%

Source: Uganda Media Centre, x.com handle

THE ROAD SAFETY AUDIT LIFECYCLE



Cost-of-change principle: a hazard removed on a drawing at feasibility costs almost nothing. The same fix after opening means demolition, delay and, too often, a fatality first. Auditing early is the highest-return safety spend in the project.

THE ROAD SAFETY AUDIT LIFECYCLE

Engineering-led interventions currently being delivered



Pedestrian crossings & markings

Repainted lane edges, medians and crossings citywide to lift visibility of designated crossings



Junction Improvements

Re-design of junctions to make them inclusive, VRU friendly and forgiving



Traffic Control Centre

New centre to centrally manage signals and coordinate the network



School-zone treatments

Raised crossings, footways and speed calming at rated schools



City Speed Management Plan

Evidence-based guide for setting and enforcing safe urban speed limits



Safe System alignment

Design guidance and audits embedded into the road development process

EXAMPLES OF ENGINEERING-LED INTERVENTIONS

Junction Improvements:



Shared Space:



Safe school Crossings:



Street Lighting:



WHAT THE UGANDA EXPERIENCE SHOWS

Principles that Travel



Audit early, audit independently

Building safety audits into feasibility and design is the highest-return decision in the project. It is nearly free on paper and very expensive after opening.



Set measurable safety targets

A 3-star-or-better requirement in the brief turns “safe” from an aspiration into a contractual, verifiable design standard for every user group.



Design for the actual road user

Where 94% of deaths are vulnerable users, footways, crossings and speed management are core infrastructure, not landscaping add-ons.



Fund the data, not just the road

Geocoded crash surveillance is cheap relative to civil works and is the precondition for every other safety intervention.

Designing risk out of the road

Road trauma in Uganda is severe, but it is neither random nor inevitable. The deaths cluster in known places, among known users, from known causes. That is precisely what makes engineering-led audits and star ratings so powerful, they let us design the risk out before the crash occurs.



94%

of Kampala deaths are vulnerable road users. Design for them



Stage 1

is where safety is cheapest to build in. Audit early



38.8 BCR

return on safer-road investment. The case is made



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- Certified Road Safety Audit Team Leader, USA, International Road Federation.
- Registered Engineer - Engineers Registration Board- Uganda Reg Number: ERB 1723.
- Member of The Chartered Institution of Highways and Transportation UK (MCIHT) Membership No. P000079738 (CEng).

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Thank you · Questions and discussion