SSATP — Resilient Road Asset Management

Safety within Climate-Resilient and Sustainable Transport Systems

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Why active mobility matters in Africa

Walking and cycling are not a niche — they are how the majority of Africans actually move. Yet the infrastructure that serves them remains the most neglected layer of the road network.

Dominant mode

Walking & cycling

> 40%

of all daily trips are made on foot or by bicycle in Abidjan, Addis Ababa, Nairobi, Dar es Salaam and Lagos.

Active modes carry the majority of trips to school, work, market and clinic — a share that rises further once the walking legs of public-transport journeys are counted.

Source: ITDP, Streets for Walking and Cycling in African Cities.

Equity

Access for the poorest

29%

of rural Sub-Saharan Africans live within 2 km of an all-season road — the Rural Access Index.

The poorest households depend on walking and cycling for jobs, schools and healthcare. Every all-season kilometre of safe path closes the access gap.

Source: World Bank, "Measuring Rural Access" (WPS 8746).

Climate & health

Zero-carbon mobility

~23%

of global energy-related CO_2 comes from transport — and roughly three-quarters of that is road transport.

Every trip shifted from a private vehicle to walking or cycling cuts CO_2 at source, reduces local air pollution and delivers public-health co-benefits.

Source: IPCC AR6 WG3 ch. 10; IEA Transport (2023).

Resilience & risk

Africa's exposed pedestrian

38%

of all African road traffic fatalities are pedestrians — the highest pedestrian-death share of any region.

Footpaths, tracks and shoulders are the last-mile network connecting villages to the paved system — and the front line of road-safety risk for those who walk.

Source: UNECA, Road Safety in Africa.

A safety crisis for vulnerable road users

Global road traffic deaths · WHO 2023

1.19M

people killed on the world's roads every year.

More than half of those fatalities are pedestrians, cyclists and motorcyclists — the road users with the least protection.

Who carries the burden

Pedestrians

Walking on roads designed only for cars; no sidewalks, no crossings, no lighting.

Cyclists

Sharing carriageways with high-speed traffic; no separated lanes; degraded shoulders.

Motorcyclists

Mixed with heavy vehicles; absent or unenforced lane discipline.

Africa — the region with the lowest motorisation, yet the highest road-death rate per capita.

Takeaway

Road safety in Africa is, above all, a vulnerable-road-user safety problem — and therefore an infrastructure problem.

04 · Policy shift

The World Bank shift toward Safe Systems

From a road-engineering add-on to a portfolio-wide mandate — a decade of mainstreaming road safety into transport lending.

Cumulative World Bank commitment · mid-2013 → mid-2023

US$ 3.34 billion to road safety

≈ 8.3% of about US$ 40 billion

in road and urban transport financing.

Pre-2015

Engineering-led

Road safety treated as an add-on to highway projects — typically a standalone "black-spot" component. No portfolio-wide rule.

2015 – 2020

Scaling investment

Road safety embedded in major lending operations. Capacity building begins at scale — **~22,000 professionals trained 2015 – 2023**.

2020 – 2025

Mandatory integration

Since 2020, **every** transport investment with a road component must include road safety in the economic analysis and target fatality reduction.

Today · Feb 2024

A Safe-Systems portfolio

Over **50 projects worth ~US$ 11 billion** under preparation with road safety as a key objective. **65 million people** gained access to safer roads in 2018 – 2023.

Safety is a maintenance issue, not just a design issue

A well-designed crossing fails the moment its paint fades, its lamp dies, or its drain blocks. Network-level upkeep is what keeps vulnerable users alive — every day, every kilometre.

Why this matters

From reactive repair → proactive, safety-led upkeep.

Maintenance regimes that treat the carriageway as the only "asset" leave pedestrians, cyclists and school children exposed. A Safe-Systems maintenance regime treats every element that protects a vulnerable user — markings, lights, crossings, drains, barriers as a **safety-critical asset**.

Eight maintenance interventions that protect VRUs

01 — Markings & striping
Renewing crosswalks, edge lines and bike-lane delineation.

02 — Signs & signals
Replacing faded signs; servicing pedestrian signals.

03 — Sidewalks
Patching footways, kerbs and ramps; clearing obstructions.

04 — Crossings
Refuge islands, raised crossings, school zones kept legible.

05 — Drainage
Cleared drains keep cyclists off flooded carriageways.

06 — Lighting
Lamps that work — proven to cut night-time pedestrian risk.

07 — Speed calming
Tables, chicanes and rumble strips — kept functional through the life cycle.

08 — Barriers & work zones
Guardrails kept intact; safe routing around construction.

Takeaway — Every maintenance schedule is a road-safety policy in disguise.

06 · The framework

SSATP RRAM — embedding safety into asset management

Resilient Road Asset Management (RRAM)

Launched **March 2025** as the **fourth pillar** of SSATP's Fourth Development Plan — moving African countries from reactive maintenance to proactive, climate-resilient asset management.

Four RRAM priority areas

01 · Climate

Climate-risk integration

Designing and maintaining assets — including the elements that protect pedestrians and cyclists — to withstand floods, heat and storms.

02 · Access

Rural accessibility

Last-mile connectivity for the populations that walk and cycle the most — keeping village-to-market corridors safe and passable year-round.

03 · Institutions

Institutional strengthening

Road agencies and road funds equipped to plan, finance and deliver safety-led maintenance at network scale.

04 · Innovation

Digital innovation

Data-driven asset condition monitoring, digital toolkits and risk-based prioritisation of safety-critical interventions.

RRAM knowledge package

Technical guidelines · Policy briefs · Digital toolkits · Case studies · Capacity-building materials

07 · Design questions

“How Might We”

Four design questions for safer, more inclusive active-mobility infrastructure in Africa.

Safety

“How might we ensure limited speeds around schools and health centers while preserving access and affordability?”

Gender

“How might we provide safe crossings and lighting that reduce GBV risks near markets and bus stops?”

Resilience

“How might we embed KPIs (hazard response times, etc.) so maintenance protects vulnerable users?”

Inclusion

“How might we make sure persons with disabilities have access and also benefit from the road improvements?”

Roadmap (lifecycle)

Six sequential stages — each one a decision point where safety for cyclists and pedestrians has to be designed in.

Policy making

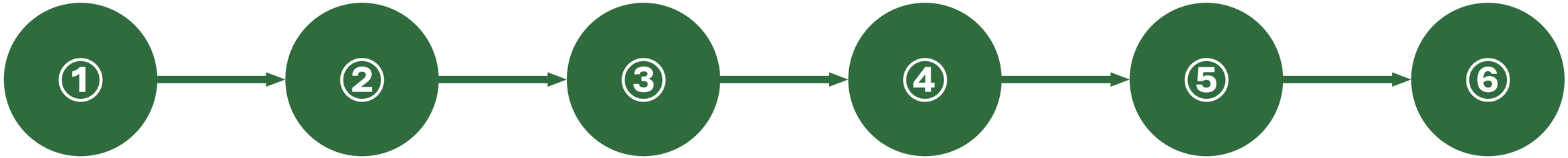
Integrate community needs and establish governance frameworks.

Financing

Predictable public budgets, targeted grants, and leveraged private and community co-financing.

Operations & Maintenance

Inspections, timely repairs and speed management, community reporting channels, and performance-based contracts.



Planning

Network-wise and matching with social infrastructure, to improve access and economic opportunity.

Regulation

Ensuring standards, protocols and appropriate mechanisms.

Construction

Context-appropriate designs, rigorous site supervision, worker training & community-sensitive traffic management.

09 · Call to action

Safer streets are built — and maintained — every day.

Africa's road-safety crisis is solvable when ministries, road agencies, road funds and development partners treat the network — not the project — as the unit of safety.

1 | Plan for the user who walks

Make pedestrian and cycling provision a default line item in every road and urban-transport operation — not an after-the-fact retrofit.

2 | Fund the maintenance

Earmark predictable funding for the safety-critical assets: markings, signs, sidewalks, lighting, drainage, crossings. Build them into road-fund work programmes.

3 | Scale RRAM, country by country

Adopt the SSATP RRAM framework as the operating standard for resilient, safety-led asset management across African road networks.

Every kilometre maintained is a life protected. Make Africa's roads safe by design and by default.