



**NAIROBI CITY
COUNTY**

LOW COST, HIGH IMPACT INFRASTRUCTURE SOLUTIONS

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LET'S MAKE NAIROBI WORK

What Defines Low-Cost, High-Impact Infrastructure?

- Fast to implement
- Affordable to maintain
- Scalable across the city
- Labour-intensive and job creating
- Improves safety and mobility
- Delivers measurable public benefit

Nairobi's approach focuses on practical, people-centered interventions that maximize public value with limited resources.

Nairobi: The Green City under the Sun

Established in 1899 as a simple rail depot, Nairobi has evolved into East Africa's most prominent diplomatic, financial, and commercial hub.

It remains the only major capital city globally with a full national park located directly inside its boundaries.

Regional Hub for UN-Habitat & UNEP

Fastest growing economy in East Africa

Global leader in tech & mobile innovation



Key Demographic & Urban Metrics



4.9 Million

Population projection
for 2025 (KNBS)



260,000 Units

Annual housing deficit
across the city



50% Congestion

Standard trip time
increase over free-
flow



40-60 AQI

Air Quality Index
(Good to Moderate)

Road Infrastructure Surface Summary

Surface Type	Distance (KM)	Condition (%)
Paved (Asphalt/Cobble)	1,156.76	Fair to Good (42%)
Gravel	649.40	Poor to Fair (36%)
Earth/Track	1,190.20	Very Poor (11%)
Not Classified	856.18	Under Evaluation
Total Network	3,852.54	~56% Poor/Very Poor

Source: KRB Infrastructure Status Audit

These conditions require affordable, rapidly deployable and maintenance-friendly interventions rather than fully capital-intensive reconstruction.

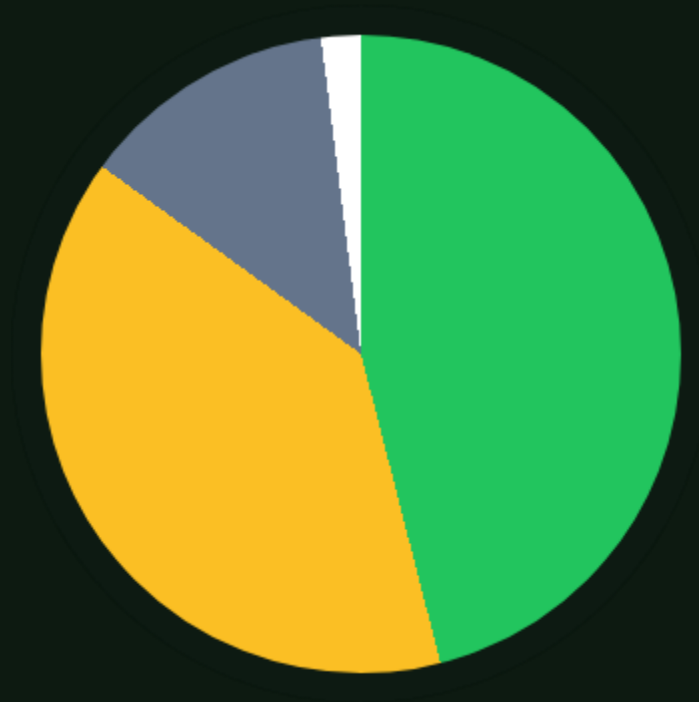
Identifying Critical Gaps



The Challenge

- **High Construction Costs:** Traditional asphalt roads are becoming prohibitively expensive.
- **Drainage Issues:** Frequent flooding in informal settlements destroys road foundations.
- **Safety & Security:** Poor lighting leads to increased accidents and insecurity at night.
- **Maintenance Gaps:** Budget constraints limit traditional heavy machinery deployment.

Urban Mobility Modal Split



Public Transport (46%)

Walking/NMT (39%)

Car (13%)

Cycling/Other (2%)

Strategy: Focus on NMT & Mass Transit

Innovative Delivery Methods

Hand-Packed Base Works

Utilizing labor-based construction methods that are stronger, more resilient, and durable for Nairobi's volcanic soil conditions.

- Creates local employment
- Lower carbon footprint
- Superior drainage integration

In-House Rehabilitation

Bypassing lengthy procurement for minor works to ensure prompt response to maintenance gaps and emergency repairs.

- 50% faster response time
- Direct oversight of quality
- Cost-effective resource use

Non-Motorized Transport (NMT) Success

Pedestrianization of CBD streets

Transforming congested streets into vibrant public spaces.

We reclaimed over 200 parking spaces to provide:

- Expanded high-quality walkways
- Integrated rest areas and greenery
- Dedicated bike lanes and improved lighting
- Over 50,000 metres sq of pedestrian space created

Result: Increased foot traffic and business turnover.



Energy Efficient Street Lighting

Energy

Savings

50%

Reduction in Monthly Electricity Bills

LED Retrofitting Program

Transitioning from 250W High Pressure Sodium (HPS) to 140W LED fittings while utilizing existing infrastructure.

- **Reach:** 50,000+ lights already replaced.
- **Lifespan:** Up to 10 years, reducing maintenance labor.
- **Safety:** Improved color rendering for better facial recognition and security.

Cost Efficiency Benefits:

- ***Reused existing poles and wiring***
 - ***Lower installation costs***
 - ***Reduced maintenance expenditure***
 - ***Long-term electricity savings***
-

Electric Vehicle (EV) Transition



Private Investment Partnership (PIP)

The county provides strategic land while private investors install and operate charging infrastructure.

- Accelerated rollout of charging network
- Zero upfront capital cost to the County
- Ensures accessible and affordable power for the transition to electric mobility.

This model shifts capital expenditure from government to private sector while accelerating infrastructure rollout.

Impact Assessment - Luthuli Avenue



"I use my inhaler less frequently" — Resident feedback on air quality improvement.

Impact Assessment



Luthuli avenue
Before and after



Non Motorised Transport



Haile Selassie before and after



Impact Assessment

Non Motorised Transport



Exclusive walkways
though PIP



Safe pedestrian spaces
– Tom Mboya Square



Improved lighting for
aesthetics and
security

Lessons learnt

- Public participation and stakeholder engagement is important for the success of any project-all interest groups must be accommodated
- involve all relevant sectors in the government, and the business community upstream.
- Political support is important in the success of any project



QUESTIONS?

Let's Make Nairobi Work Together

“Cities in the Global South do not always need expensive mega-projects to transform urban life. Sometimes the highest impact comes from practical, scalable, people-centered interventions implemented consistently and collaboratively.”



**NAIROBI CITY
COUNTY**

Thank You!

LET'S MAKE NAIROBI WORK

Image Sources



<https://www.wildsprings.co.ke/images/1777290771.jpg>

Source: www.wildsprings.co.ke



<https://basicneedskenya.org/wp-content/uploads/2025/04/Mathare-Flood-3.jpg>

Source: basicneedskenya.org



https://www.c40.org/wp-content/static/other_uploads/images/2505_Luthuli.original.jpg?1578060734

Source: www.c40.org



https://citizentv.obs.af-south-1.myhuaweicloud.com/122987/conversions/GLwoiRBXIAEUWcQ-og_image.webp

Source: citizen.digital
