



DESIGNING SAFE ROADS FOR CYCLISTS AND PEDESTRIANS

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PRESENTATION OVERVIEW



Outline

1. HUMAN COST OF DESIGN DECISIONS

2. ROAD SAFETY AUDIT /CRASH ANALYSIS

3. SAFE DESIGN VS COMPLIANT DESIGN

4. ENGINEERING DECISIONS

5. DESIGNING SAFE INFRASTRUCTURE

6. CALL FOR ACTION



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HUMAN COST OF OUR DESIGN DECISIONS

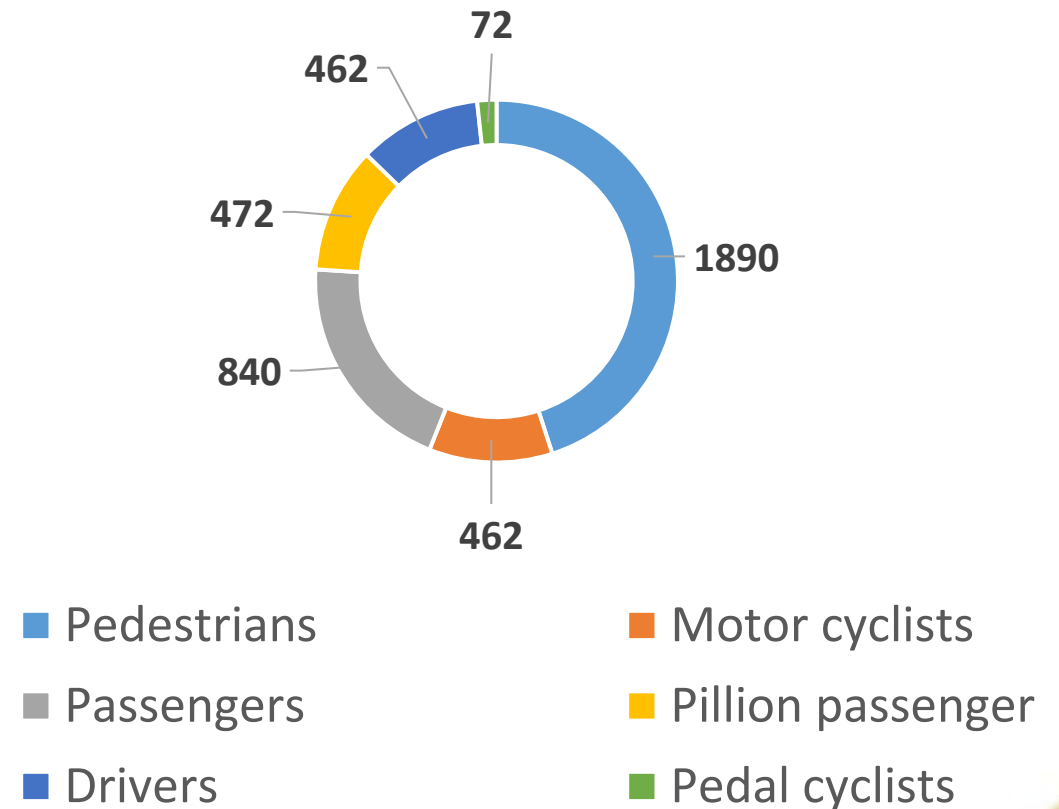


SIX STUDENTS KILLED IN HIT AND RUN IN KIBWEZI

Three of the students were going to Primary while the other three Secondary school.



TRAFFIC FATALITIES BY VICTIM CATEGORY 2025

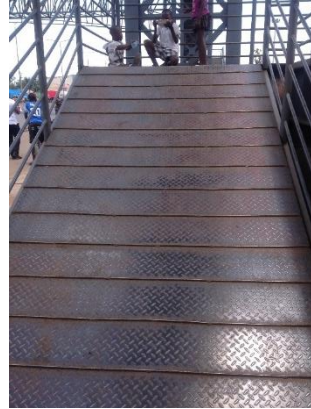


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WHAT AUDITS /CRASH ANALYSIS REVEAL

Engineering Decisions Matter

How user-friendly is this ramp for PWDs?
Why is the footbridge not used fully?
Why are children walking on the road?



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NMT CRASH ANALYSIS

When similar crashes recur at the same locations, the issue is no longer individual behaviour alone- it is systemic design failure

- Fatalities near schools, markets, bus stops, and settlements
- High vehicle operating speeds despite posted speed limits
- Long distance between safe crossing opportunities
- Missing pedestrian continuity ; Inadequate lighting
- Poorly positioned speed calming measures
- Cyclists operating in mixed traffic without protection
- Safety facilities designed as afterthoughts



SAFE DESIGN vs COMPLIANT DESIGN

COMPLIANT DESIGN

- Meets Design Standards
- Assume perfect Behaviour
- Focus on traffic flow
- Relies on signs

SAFE DESIGN

- Protects lives
- Expect mistakes
- Focus on people
- Uses forgiving Design

“A road can comply with standards and still be unsafe.”



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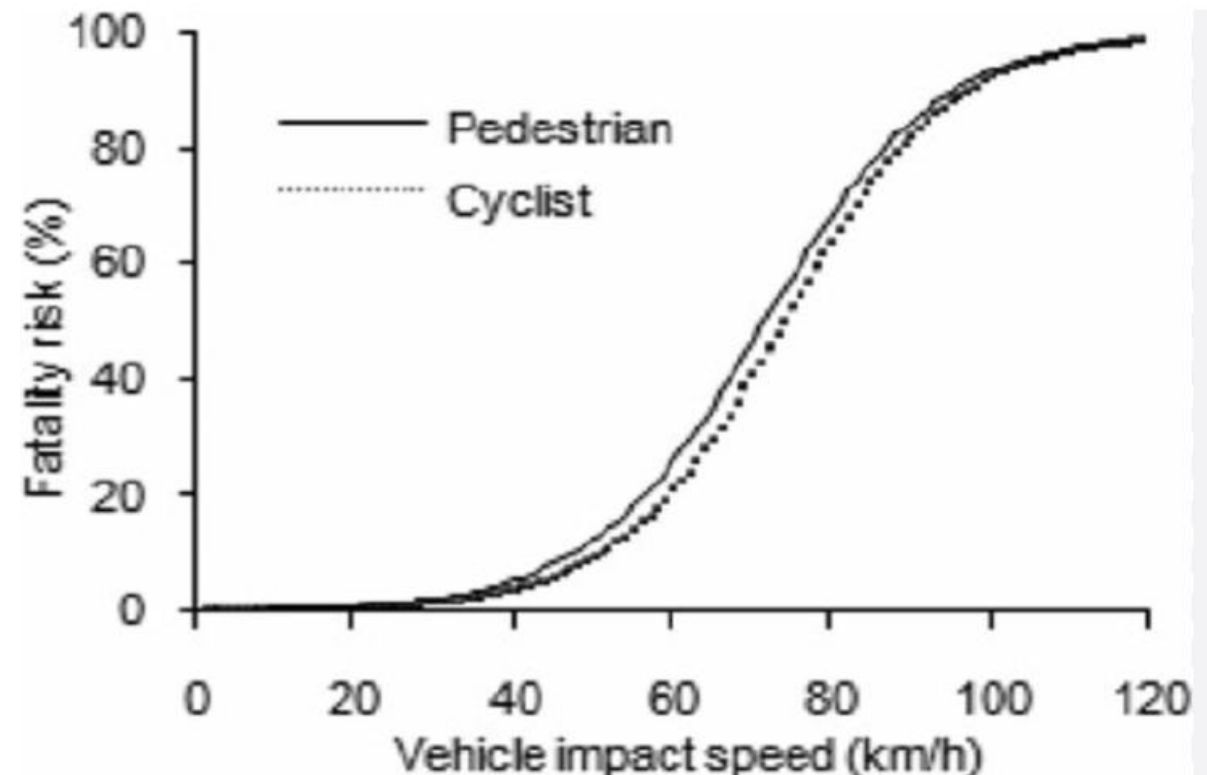
THE MOST IMPORTANT DESIGN DECISION - SPEED

Safe Roads begin with Safe Speeds

- Speed determines crash severity
- Speed determines survivability
- Speed determines whether a mistake becomes a fatality

Engineering Choices

- Lane width/ Road Geometry
- Raised crossings
- Traffic calming
- Protected cycling facilities



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DESIGNING FOR PEDESTRIANS & CYCLISTS

What does Safe Infrastructure look like?

- Continuous footpaths
- Safe crossings where people cross
- Protected / Dedicated Cycle tracks
- Refuge Islands
- Traffic Calming
- Good lighting
- Safe Intersections
- Surface Quality
- Lighting and Personal Security



“Safe Infrastructure makes the safe choice the easy choice.”

CALL TO ACTION

THE CHALLENGE

Before approving any design, before supervising/constructing any project road, ASK:

- Where will the pedestrian cross?
- Where will the cyclist ride?
- What happens when the driver is distracted
- What happens when someone makes a mistake?

“A road is safe when a child can cross safely, a cyclist feels protected, and human error does not result in death



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CASE STUDIES???



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