



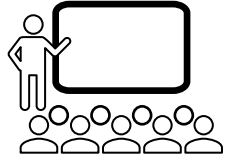
Ghana's Two-Wheel ed Journeys to School



Presenting:
Manuel Nii Martey Mensah



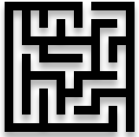
Digital Transport
for Africa



Presentation Outline



Background of the Study



Problem Statement



Research Objectives



Methodology



Findings and Discussions



Recommendations



Background of the Study



Gap in service provision by formal public transport operators (Cervero, 2000).



A conscious move towards creating cities and human settlements which have a more sustainable urban transportation system (SDG Target 11.2).



The Coronavirus pandemic (COVID-19) hastened the move towards sustainable mobility (Department of Transport, 2021; Doubleday et al., 2021; Bernardes et al., 2020, p. 6; Trek Bicycle Corporation, 2020).



Provision of policies that promote built environments and safe roads (Rayaprolu & Venigalla, 2020).



Ghanaian school-going children's likelihood to adopt these **micromobility modes** as a means to school, brings to fore the availability of a built environment and road safety policies to support their use in Ghana.

Problem Statement



Micromobilities - a fast-spreading mobility alternative globally



Despite the benefits they contribute, safety and regulations confront its usage.



Globally, between May 2018 and October 2019, e-scooter related deaths mostly involved vehicles (International Transport Forum (ITF) on Safe Micromobility, 2020).



Children and young adults constitute the casualty majority globally (Heineke, Kloss, & Scurtu, 2020).



Dearth of knowledge and information on micromobility use in Ghana.

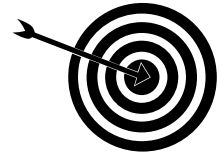
Problem Statement – Cont.

The study therefore raises concerns of children's tendency to use these modes based on:

1. Their perception on the importance and safety of micromobility use
2. The role of key stakeholders in ensuring that an influx of these micromobility modes will guarantee children's safety should they use it.



Source: Mensah (2021)



Research Objectives



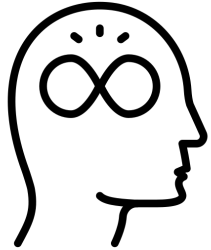
Establish child cyclists' perception of the riding environment in Kumasi and Cape Coast.



Explore policies and regulations that have been developed by transport governing institutions on the possible influx of micromobility modes in urban spaces.



Methodology



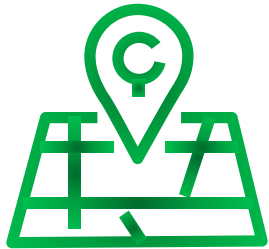
Epistemology

- Interpretivist
- Positivist



Research Design

Embedded Mixed Method



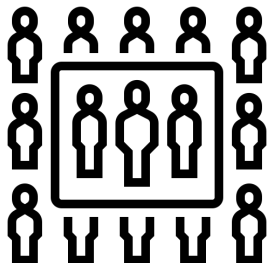
Study Area

Kumasi and Cape Coast



Population

School children - Cyclists
Policy makers and planners



Sampling Procedure

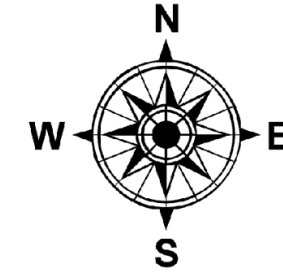
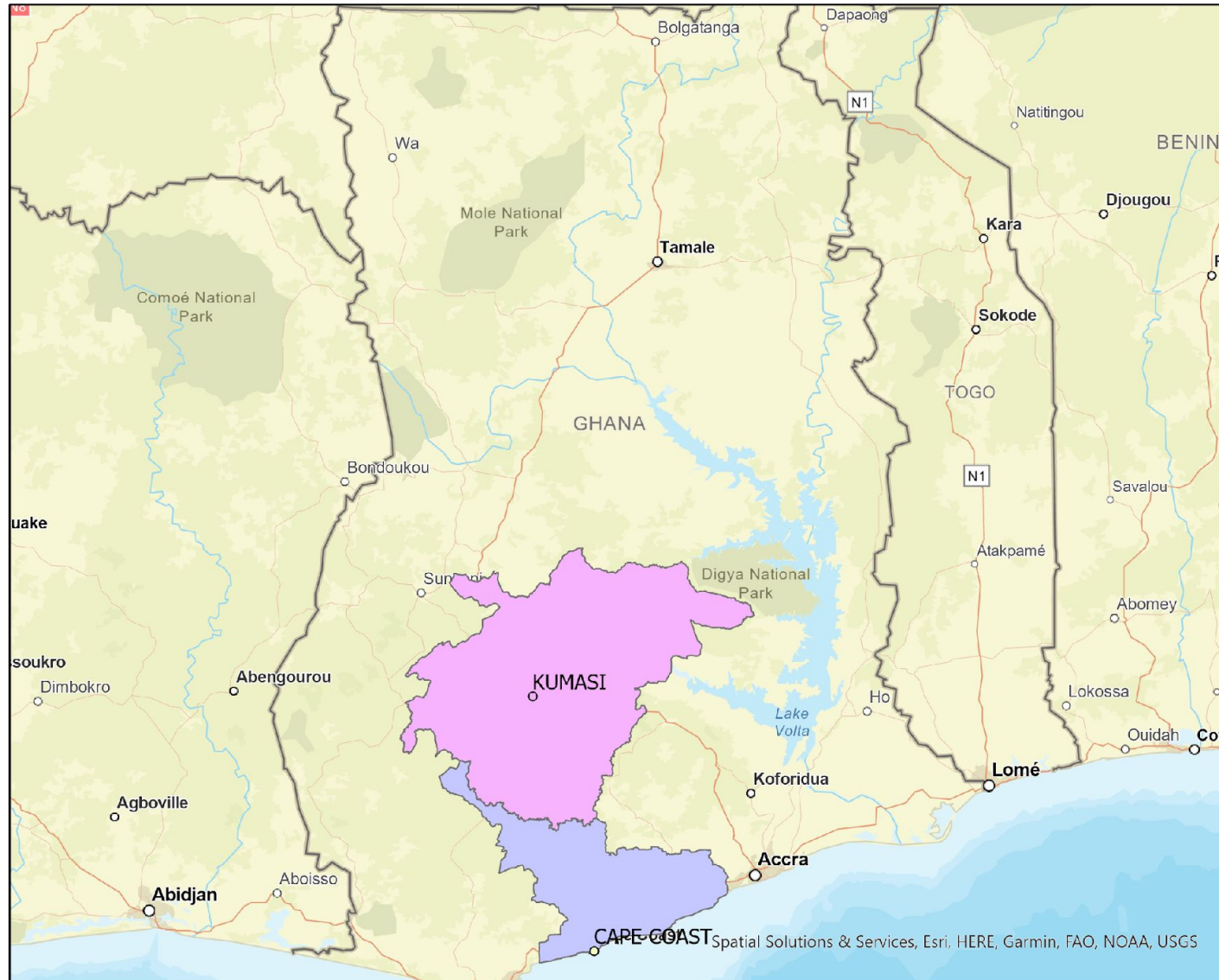
Multi-stage sampling technique
for schools and children



Data Collection Instruments

- User Perception Survey
- Interview Guides
- Field notebooks and visual-recording devices



Map of Ghana Showing Study Areas



Regions

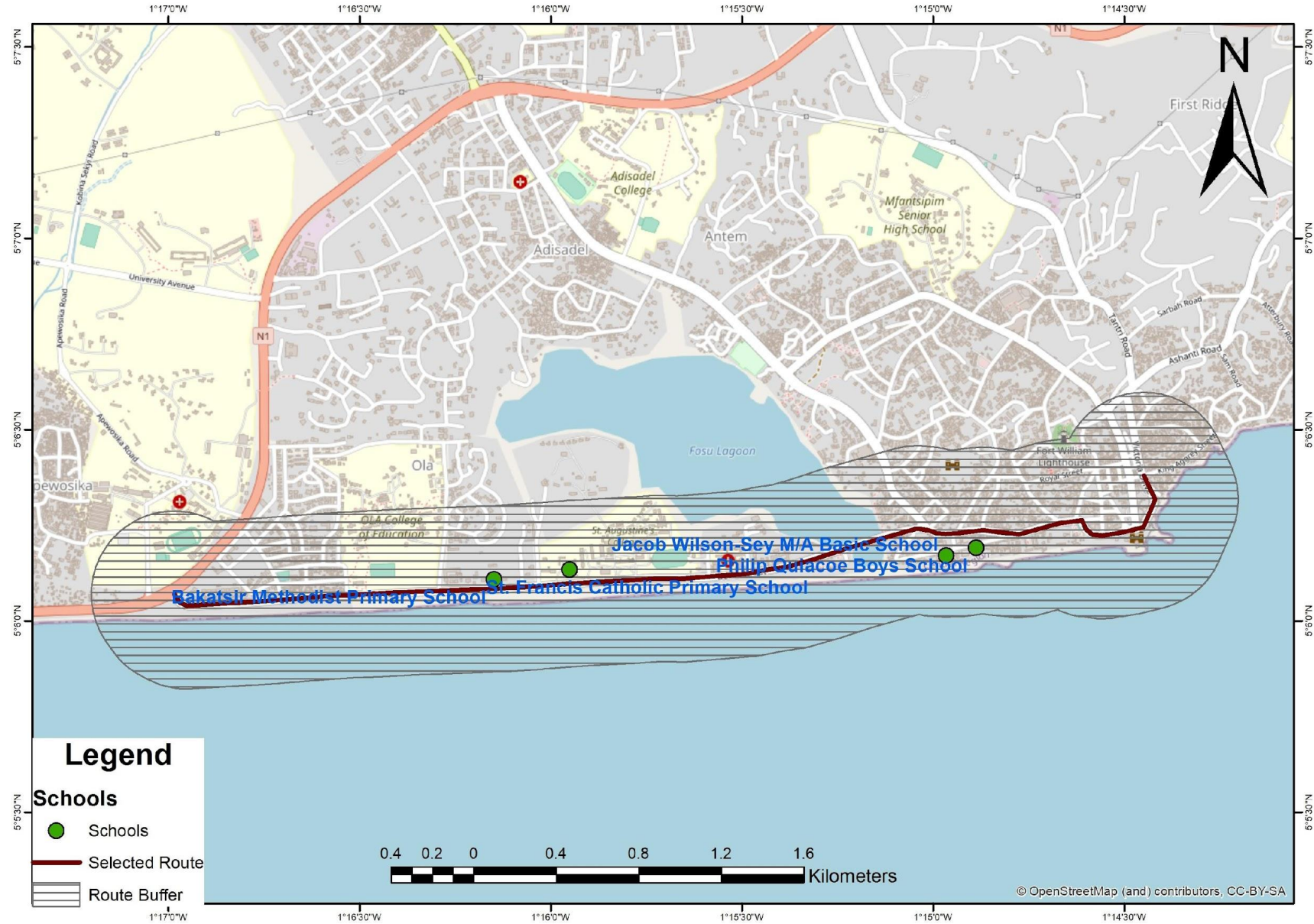
-  Ashanti
-  Central

Study Points

-  CAPE COAST
-  KUMASI



Buffered and Selected Schools in Cape Coast



Source: Mensah (2021)



Findings and Discussions

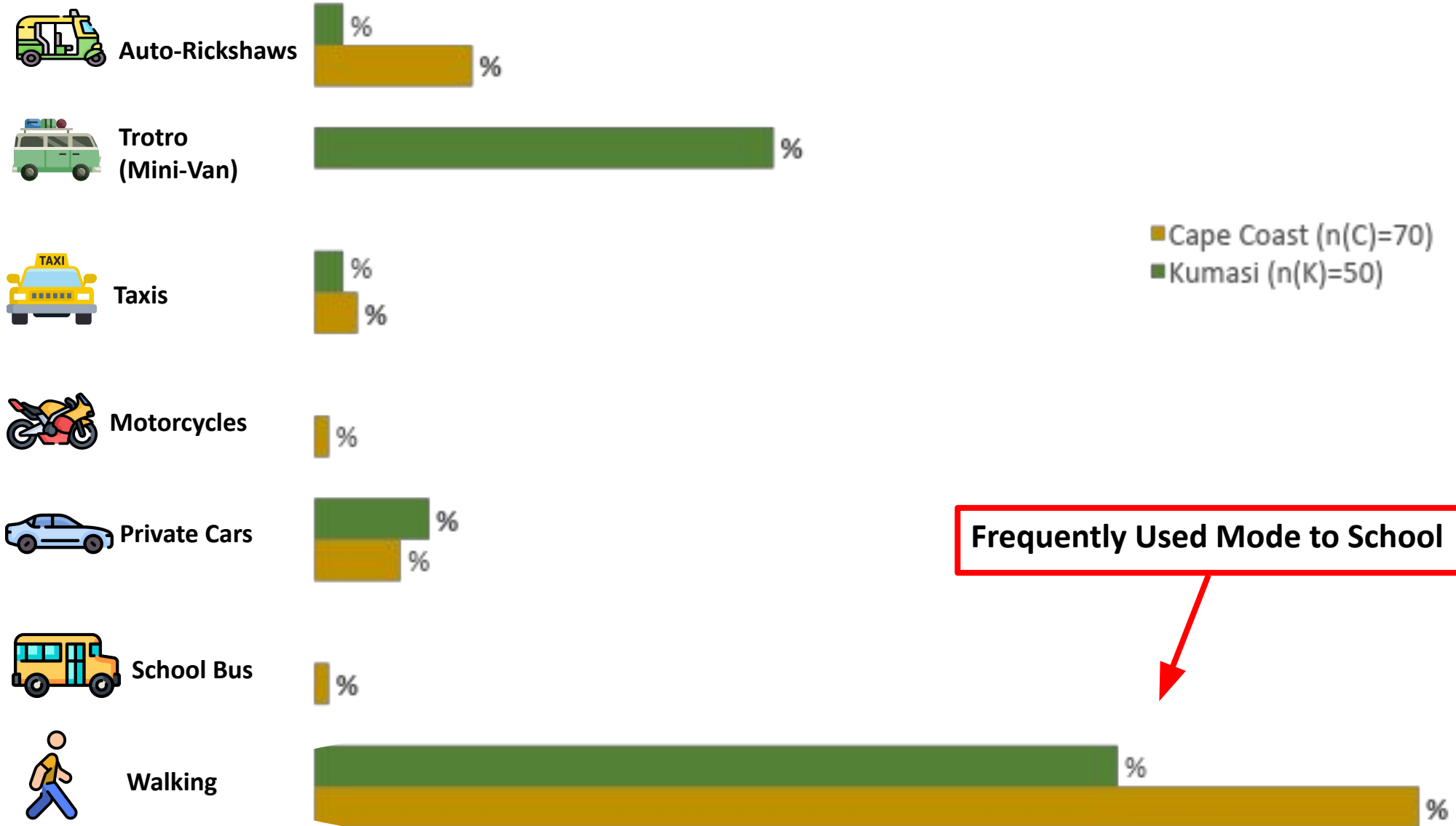


Socio-Demographics

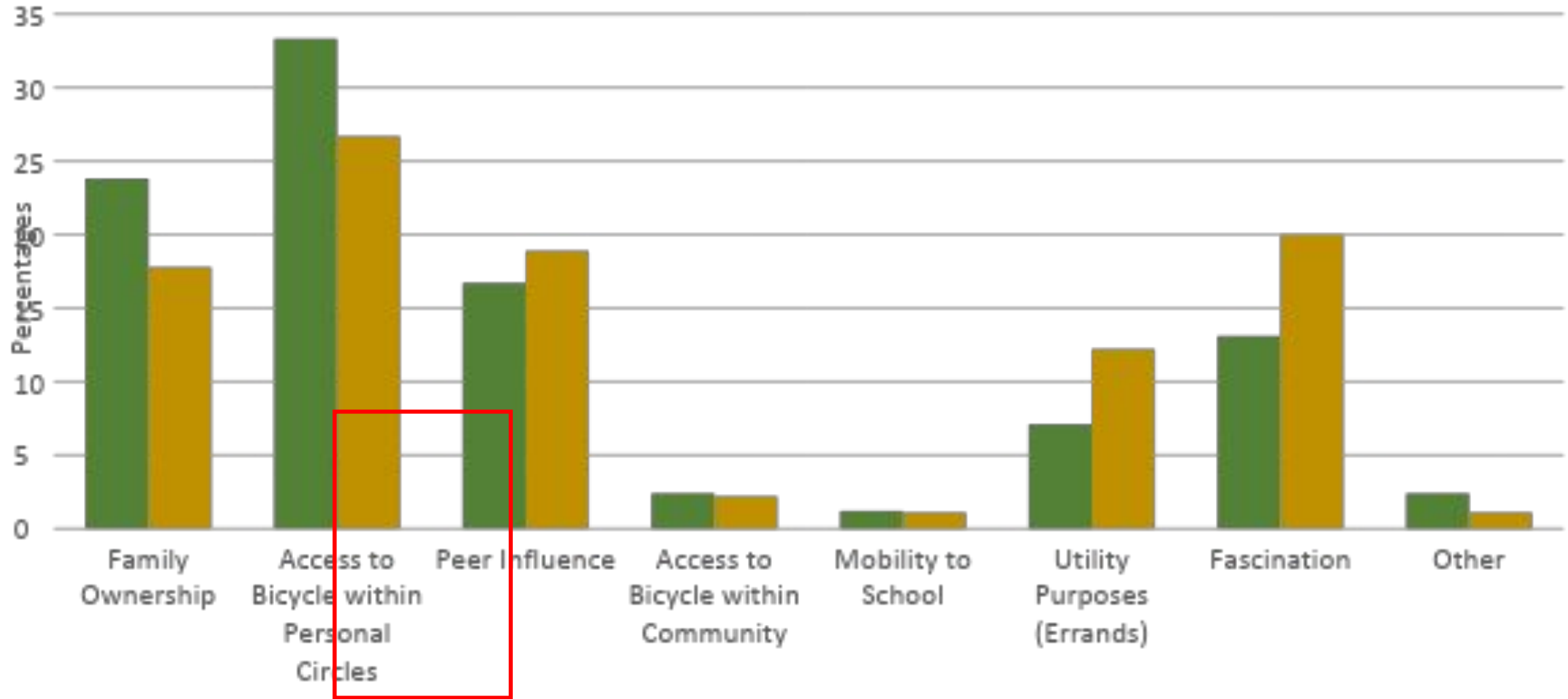
Variable	Cape Coast	Kumasi
	(n(C)=70)	(n(K)=50)
	%	%
Sex		
Male	80	66
Female	20	34
Age		
8	4	0
9	20	7
10	18	13
11	22	19
12	22	24
13	10	17
14	4	13
15	0	6
16	0	1

Variable	Cape Coast	Kumasi
	(n(C)=70)	(n(K)=50)
	%	%
Child's Living Arrangement		
Both Parents	59	58
Father Only	1	2
Mother Only	29	28
Guardian	11	12
Travel Time to School		
10 mins or less	23	10
11 - 20 minutes	19	18
21 - 30 minutes	40	34
31- 40 mins	7	6
51 - 60 minutes	11	32

Travel Mode Options to School



Motivating Factors



Source: Fieldwork (2021)

Cyclists' Perceived Safety of Use of Micromobility Modes

Cyclists' Perception of Riding Environment

	Kumasi (n(K)=50)	Cape Coast (n(C)=70)
	%	%
Safe	64	70
Unsafe	36	30
Total	100	100

Acceptance of Micromobility Modes on Roads

	Kumasi (n(K)=50)	Cape Coast (n(C)=70)
	%	%
Safe	42	54
Unsafe	58	46
Total	100	100

Sources: Mensah (2021)

Safe Environment Indicators	Kumasi (n(K)=50)	Cape Coast (n(C)=70)
	(%)	(%)
Presence of dedicated lanes	1.1	1.1
Provision bicycle crossing points	1.1	-
Routes are level and undulating	7.9	4.6
Drivers are considerate to me	6.7	5.7
My path does not have loose gravels/sand/puddles	12.4	2.3
The roads do not have many vehicles (heavy traffic)	21.3	12.6
My path does not have other hazards.	12.4	18.4
I ride on community roads that are less busy	18.0	25.3
The use of helmets is enforced	-	2.3
None of the above	10.1	25.3
Other	9.0	2.3



Pictorial Evidence of some Riding Routes
Source: Mensah (2021)

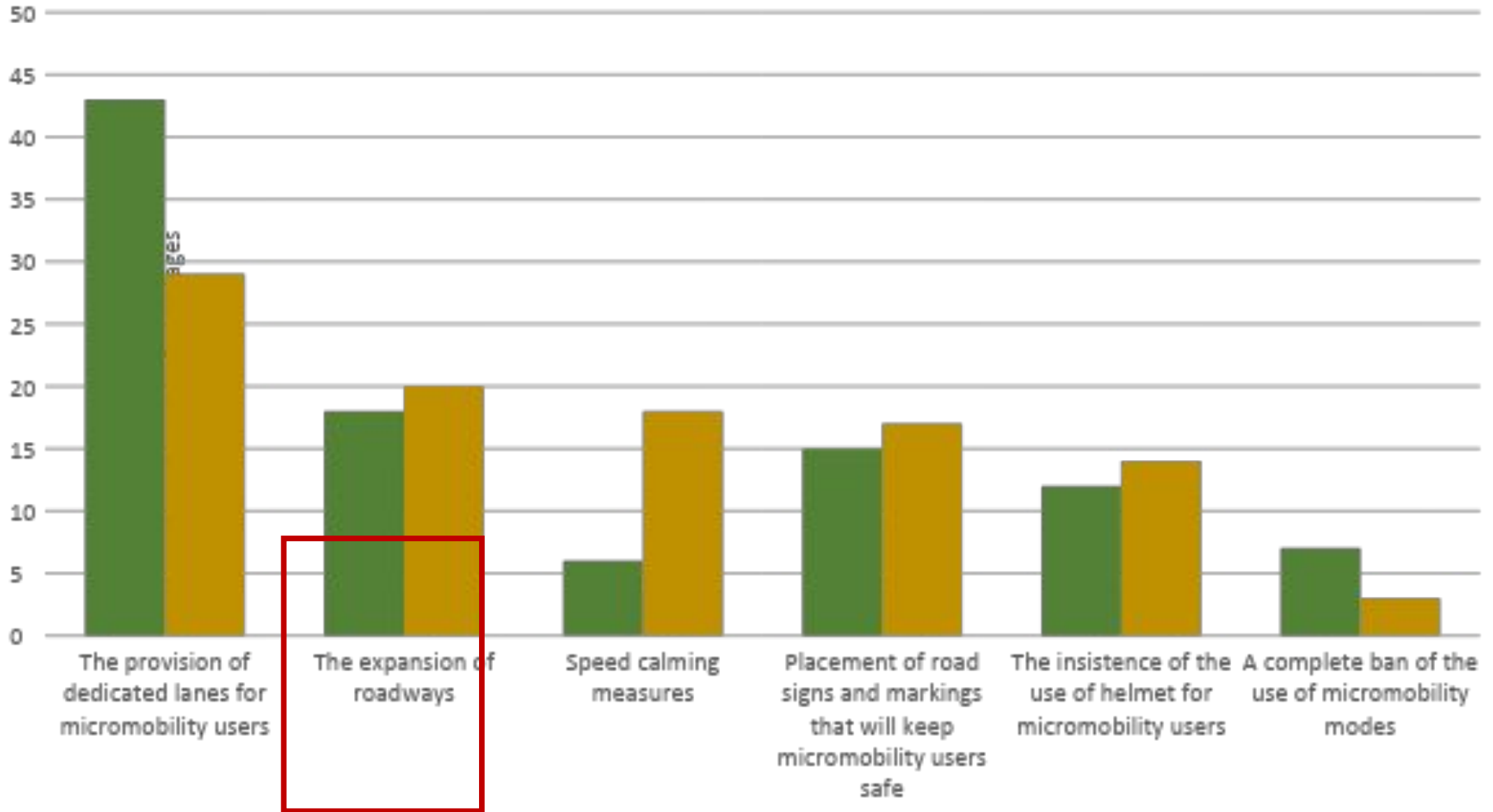


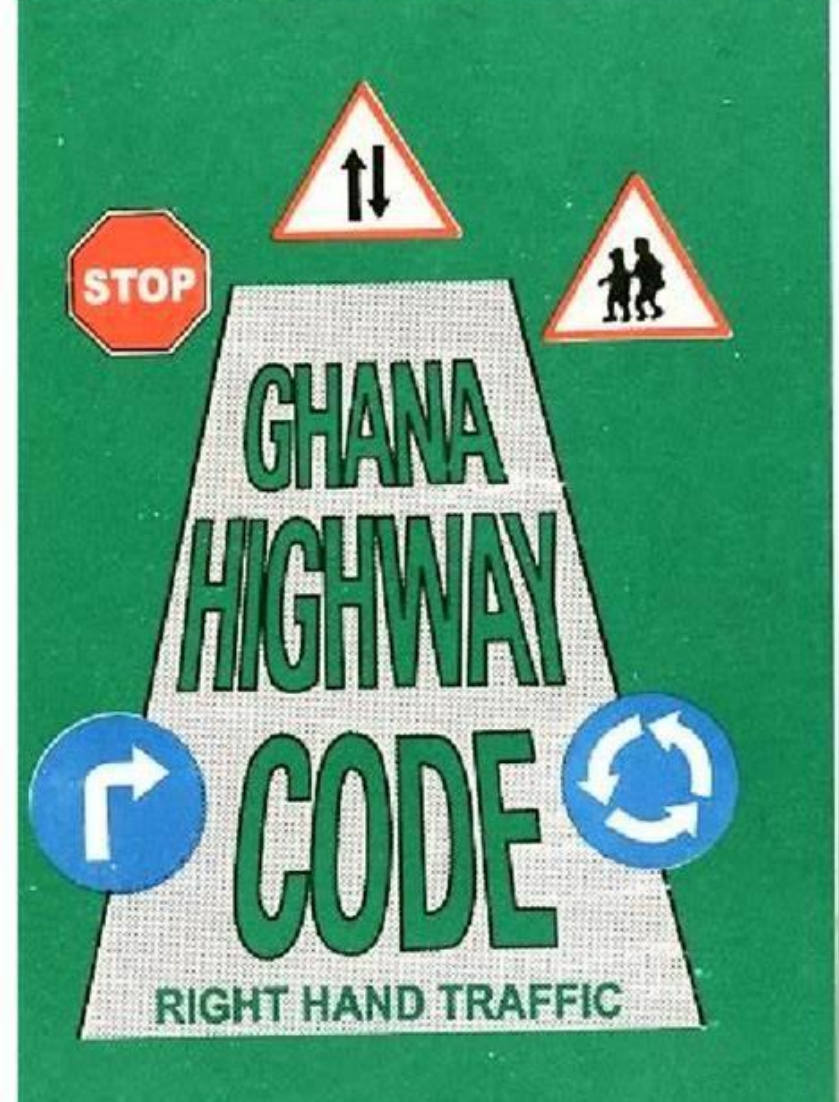
Driver Treatment	Kumasi (%)	Cape Coast (%)
	(n(K)=50)	(n(C)=70)
Regarded as a road user	13%	8%
Treated as a vulnerable road user	30%	41%
Treated Indifferently	12%	12%
Treated as a hazard	12%	8%
I am avoided	12%	11%
I am insulted	21%	19%

Perceived Suitability of Roads for Micromobility Modes	Kumasi (%)	Cape Coast (%)
	(n(K)=50)	(n(C)=70)
Road environment does not support micromobility	42	54
Road environment supports micromobility	58	46



Children's Suggestions for Safe Micromobility Modes





NATIONAL TRANSPORT POLICY

REPUBLIC OF GHANA



MINISTRY OF TRANSPORT
MINISTRY OF ROADS AND HIGHWAYS
MINISTRY OF RAILWAYS DEVELOPMENT
MINISTRY OF AVIATION
ACCRA, GHANA

AUGUST 2020

ROAD TRAFFIC REGULATIONS, 2012

L.I. 2180

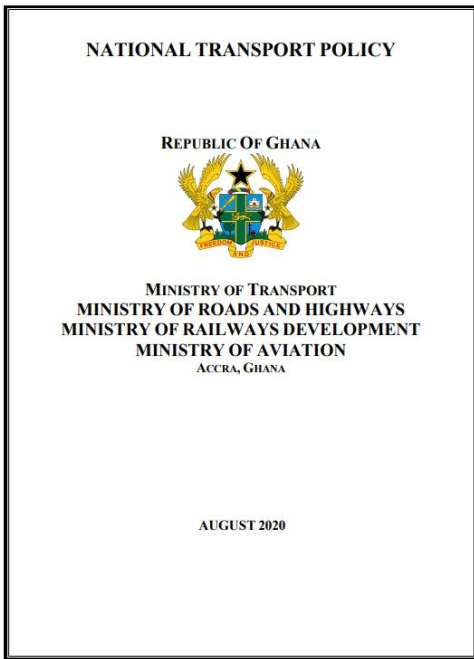
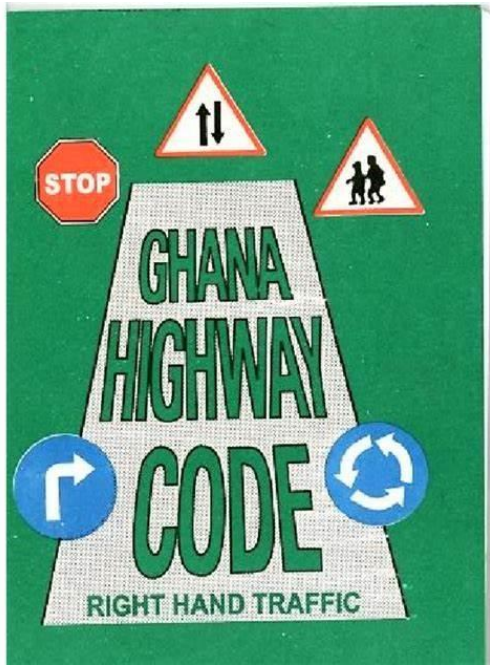
ARRANGEMENT OF REGULATIONS

Regulations

Registration

1. Register
2. Application to register
3. Verification of weights
4. Registration of vehicle and trailer
5. Tests of condition of motor vehicle
6. Person to conduct examination of motor vehicle
7. Road use certificate
8. Issue of road use certificate
9. Exemption from requirement for road use certificate
10. Vehicle registration number plate
11. Refusal to fix registration number plate

Ghana's Policies and Regulations on Road Transport



ROAD TRAFFIC REGULATIONS, 2012		L.I. 2180
ARRANGEMENT OF REGULATIONS		
Regulations		
Registration		
1.	Register	
2.	Application to register	
3.	Verification of weights	
4.	Registration of vehicle and trailer	
5.	Tests of condition of motor vehicle	
6.	Person to conduct examination of motor vehicle	
7.	Road use certificate	
8.	Issue of road use certificate	
9.	Exemption from requirement for road use certificate	
10.	Vehicle registration number plate	
11.	Refusal to fix registration number plate	

	Policies and Regulations			
Guidelines	Ghana Highway Code	National Road Safety Policy	Road Traffic Regulation (L.I. 2180)	National Transport Policy
Year Formulated	1974	2008	2012	2020
Mention of Micromobility	×	×	×	×
Age Requirements	×	×	×	×
Max. Speed Requirement	×	×	✓	×
Carrying Capacity	✓	×	✓	×
Rider Education	×	×	×	×
Rider Safety Regulations	✓	×	✓	×
Weight and Dimension (Max.)	×	×	×	×
Technical Requirement	✓	×	✓	×
Insurance Requirement	×	×	×	×
Personal Safety Equipment	×	✓	×	×
Infrastructure and Interaction	✓	✓	✓	✓

Efforts by Responsible Agencies and Authorities towards Sustainable Mobility

Infrastructure

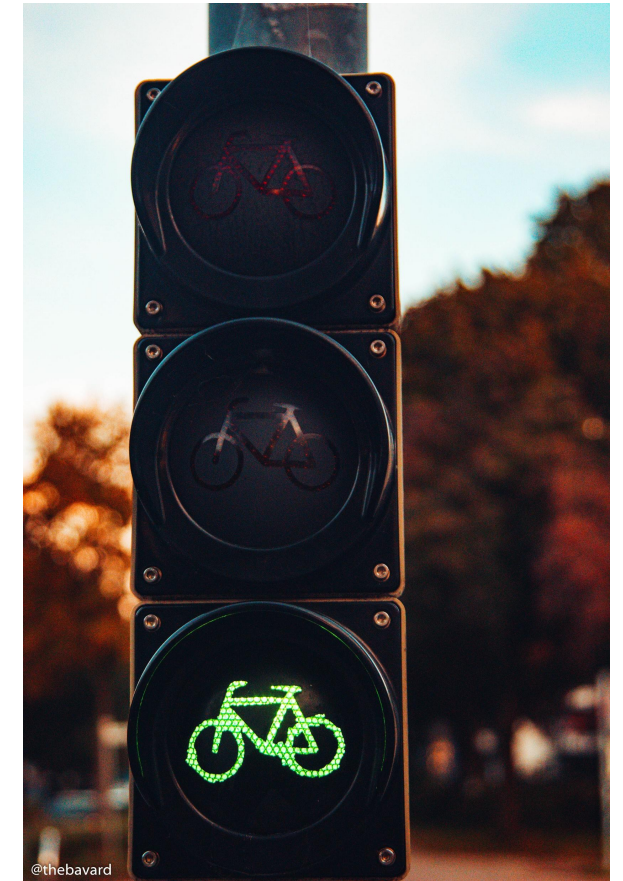
*“With regards to bikes and skates, it is a matter of provision of infrastructure. In the matter of planning, everything has been done. Even if it is a 20ft road, we are supposed to provide for bicycle lanes if we want them. For this to happen it must include Department of Urban Roads and Government. It is not a part of our system. If anything at all in areas like the North where people ride on bicycles to farms and other places, that should have been done and it can be replicated in other parts of the country... **Currently a carriageway is the priority not the other infrastructure as bicycle lanes, pedestrian lanes**”*

- (Head of the Physical Planning Department, Ashanti Region 16-03-2021)

Education

*“Personally, road safety should not be something you must grow up and meet but as you start to understand things as a child, you should be able to start getting the road safety culture, so we always try to make sure children in schools have some kind of culture. We don't wait for them to get to the university before teaching them about traffic indicators and speed calming measures and seat belts. It is also examinable so now it is in the Curriculum. **We have textbooks for basic schools too as well as teachers' guides. As part of our workplan we make sure we don't educate less than 50,000 children in the region.**”*

- (Ashanti Regional Head, NRSA)



Source: Mensah (2023)

Challenges Towards Micromobility Approach

Number of Users

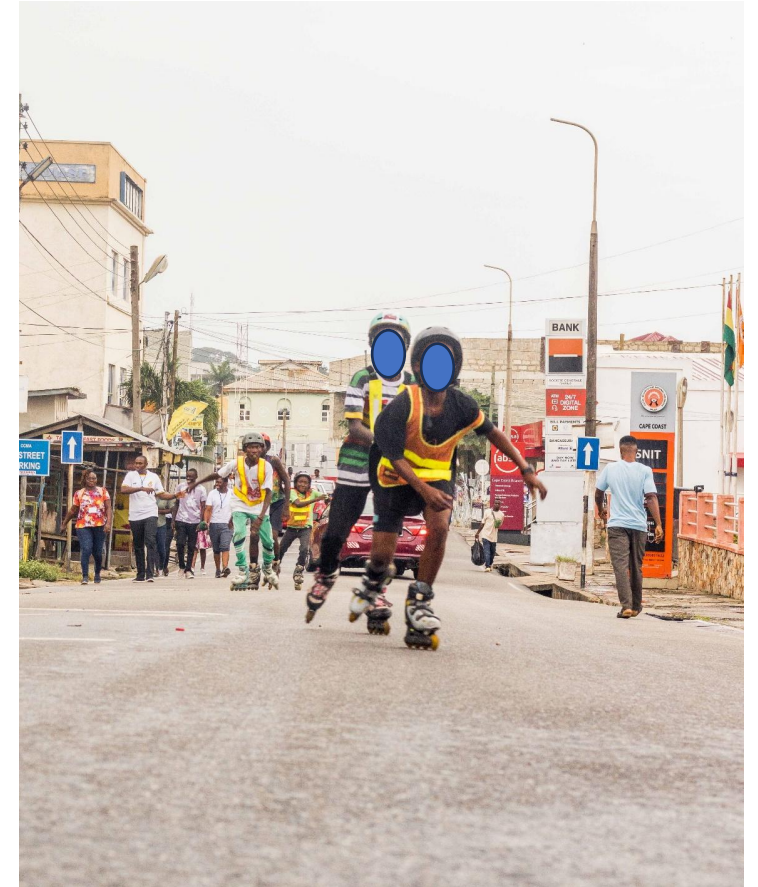
“They are very minimal. It is in existence but they are very minimal. Most of the time, once we see a rising trend in our transport system, our major challenge will be accessibility to these people. Now how soon can we get these groups of skaters or scooters or people who are using these e-bicycles to inform them or educate them on road safety? Now day in-day out we are seeing these things in our system so road safety can quickly come out to educate them.”

- Ashanti Regional Head, NRSA (2021)

Position of the Law

*“They are already in the system and the law does not come out exquisitely to say these particular kinds of people have this kind of punishment. But when it comes to the enforcing of their operation and usage it becomes a challenge because **the law at the time of preparation did not take note of these things but as it comes out**, we try to find ways and means to massage the law and enforce certain things to ensure they are safe and other road users are also safe.”*

- Central Regional Head, NRSA (2021)



Source: Mensah (2022)

Identification on the need of having dedicated lanes for NMTs.

- Highway Code regulation 132 states:
“If there is an adequate cycle path beside road ride on it.”
- The Road Safety Policy identifies the lack of dedicated bicycle spaces for the movement of cyclists and encroachment of the few dedicated lanes by traders as challenges causing riders to share the road with other motorised transport (pp. 16).
- The National Transport Policy aims to provide and maintain dedicated lanes for IMTs and, construct and upgrade roadways to minimize modal conflict (pp. 28).



The Identification of Threats

The National Transport Policy strategizes to “**provide dedicated safe, reliable and appropriate facilities** for NMT users across all transport Modes; and maintain and free-up all existing NMT facilities from **encroachment** (pp. 43).”



Regulation for use of lanes and parking of bicycles

“A rider must not deliberately ride on a footpath by the side of any road made or street apart for the use of foot passengers.”- L.I. 2180 Reg. 151 (6)

It also states that one must not leave the cycle on any road in such a way that is likely to cause danger to other road users. Furthermore, it is forbidden to leave a cycle where waiting is prohibited (pp. 41)”.



Restrictive Use of Micromobility

Modes:

LI. 2180 (151):

- (4) A person shall not operate a roller skate or skateboard on a road.
- (5) A person may operate a roller skate or skateboard at a designated playground authorised by the appropriate Metropolitan, Municipal or District Assembly.
- (6) A person on a roller skate, bicycle or skateboard or riding in or by means of a coaster, toy vehicle, or similar device shall not interfere with the intended use of a sidewalk, a parking lot, or a court area.

Except for the bicycle, sub-regulations 4, 5 and 6 restrict the use of roller skates and skateboards to the playground as they are barred from using the road, sidewalk, parking lots or a court area.



Classification of Micromobility Usage as a Recreational Activity

The use of micromobility modes is recognised as a recreational activity rather than an alternative mode of transport or an active and sustainable mode.

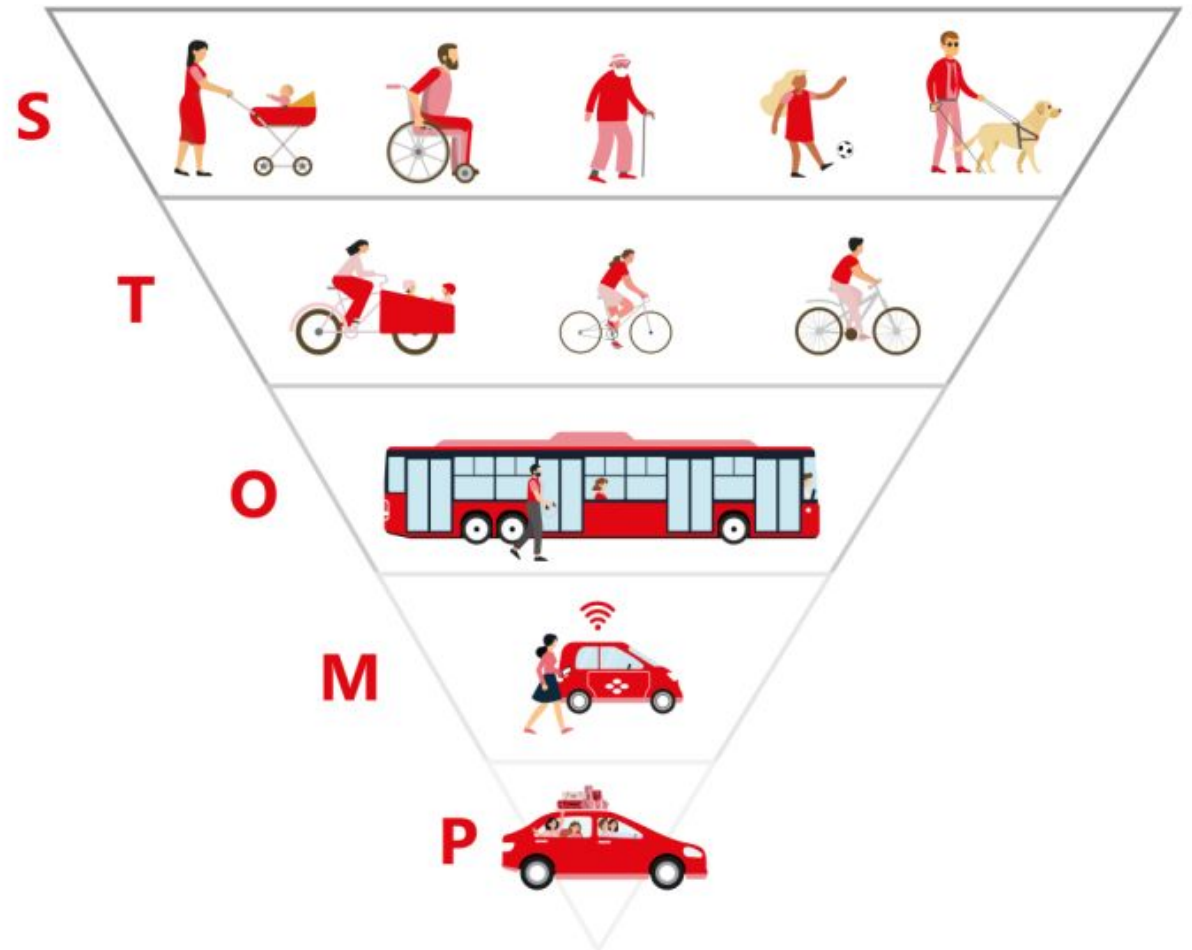
This means that children who only have roller skates and prefer to skate to school which will be a faster alternative to walking and could be the only affordable means to school will be breaking the law if they do.

This therefore discourages the use of micromobility modes as an alternative travel option.








The STOMP Approach

- **S** (Stappen) – **WALKING**
- **T** (Trappen) – **CYCLING**
- **O** (OV) – **PUBLIC TRANSPORT**
- **M** (Mobility as a service) – **MaaS**
- **P** (Priveauto) – **PRIVATE VEHICLE**



Modes

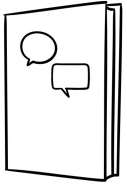
Things to Consider in the Planning Process

<p>S (Stappen)</p> 	<ul style="list-style-type: none">• How can we design an area where facilities are within walking distance?• How can we create public space with attractive walking routes and where people want to stay?• Where should these routes be?
<p>T (Trappen)</p> 	<ul style="list-style-type: none">• How can we connect the area with the rest of the city by bike?• How can we create direct and comfortable cycling routes?• Where should these routes be?
<p>O (OV)</p> 	<ul style="list-style-type: none">• How can we connect the area by public transport? A• How can public transport functions be combined with other needed functions in the area?
<p>M (Mobility as a service)</p> 	<ul style="list-style-type: none">• Which forms of MaaS can be/ are offered in the area?• Which MaaS services are offered in the area?• Where are mobility hubs (with shared mobility) placed in the area?
<p>P (Priveauto)</p> 	<ul style="list-style-type: none">• How to position use of private cars in such a way that other modes are more attractive (without 'bullying' car users)?• In which way should the area (and its sub-areas) be accessible by private car?• How should parking be organised?

Adopted from:

Ruxandra
Aelenei

RECOMMENDATIONS



Inclusion of Micromobility and active travel in the road safety lessons - NRSA



Children should be encouraged to cycle – Collective Effort (families – national)



The expansion of roads to accommodate other micromobility modes. – Ministry of Transport



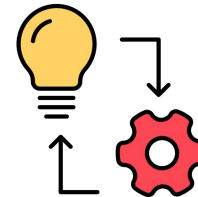
Further studies into sustainable and active travel within Ghana



Review and Amendment of Ghana Highway Code and LI 2180 – Ministry of Transport



A national sensitisation programme on the importance of active travel – Ministry of Transport



Conscious effort to implement the National Transport Policy. – All Transport Governing Institutions



Effective collaboration among transport institutions. – All Transport Governing Institutions

