



Africa Urban Mobility Observatory Action Plan - Blantyre

Big Data to Enable Inclusive, Low-Carbon Mobility

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Africa Urban Mobility Observatory/40001

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Abstract	
The key objective of the Africa Urban Mobility Observatory (AUMO) research project is to promote inclusive, low-carbon mobility in African Low-Income Country (LIC) cities, by piloting Big Data applications to generate data, benchmark performance, and draw policy insights in six African cities. These insights will be used to develop Action Plans in two of these cities, and catalyse broader uptake via a Web Data Platform, workshops, and research. This document is the first draft of the Blantyre City level action. It is informed by the data collected during the AUMO project implementation process and supplemented by other trusted data sources and existing policy frameworks. This living document is intended to support and inform future policy development and investment in inclusive, low-carbon mobility in Blantyre City.	
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ACRONYMS AND ABBREVIATIONS

AUMO	African Urban Mobility Observatory
BCC	Blantyre City Council
BRT	Bus Rapid Transit
CBD	Central business district
GDP	Gross Domestic Product
GHG	Green House Gas
HVT	High Volume Transport
ICT	Information Communication Technologies
MHC	Malawi Housing Corporation
MoTPW	Ministry of Transport and Public Works
MOAM	Minibus Owners Association of Malawi
MW2063	Malawi 2063
NGO	Non-Governmental Organisation
NMT	Non-Motorized Transport
NPC	National Planning Commission



NRA	National Roads Authority
NRSCM	National Road Safety Council of Malawi
NSP	National Settlement Policy
NTMP	Malawi National Transport Master Plan
NTP	National Transport Policy
NUA	New Urban Agenda
SDG	Sustainable Development Goals
SUMP	Sustainable Urban Mobility Plan
TOD	Transit-Orientated Development
UEMI	Urban Electric Mobility Initiative
UN	United Nations
USSD	Unstructured Supplementary Service Data
UMA	User Movement Analytics
WHO	World Health Organisation



1. Introduction

1.1 Report objectives

This action plan falls under Activity Stream 4 of the HVT Africa Urban Mobility Observatory (AUMO) project. The primary objective of this living document is to define policy measures, processes, and packages of projects to be developed, which correspond to the sustainable mobility vision of Blantyre, including time frame and responsibility of each measure, impact assessment, and relations between measures. It also includes detailed descriptions of activities and tasks ready to be implemented during a defined timeframe.

1.2 Research background and objectives

The Africa Urban Mobility Observatory (AUMO) research project is a component of the second phase of the United Kingdom's Foreign, Commonwealth and Development Office (FCDO) High Volume Transport (HVT) Applied Research Programme. More specifically, in the context of the impact that urban transport planning has on climate change and inclusion in LIC (Low Income Countries) in Africa, this research intends to address the following three research questions:

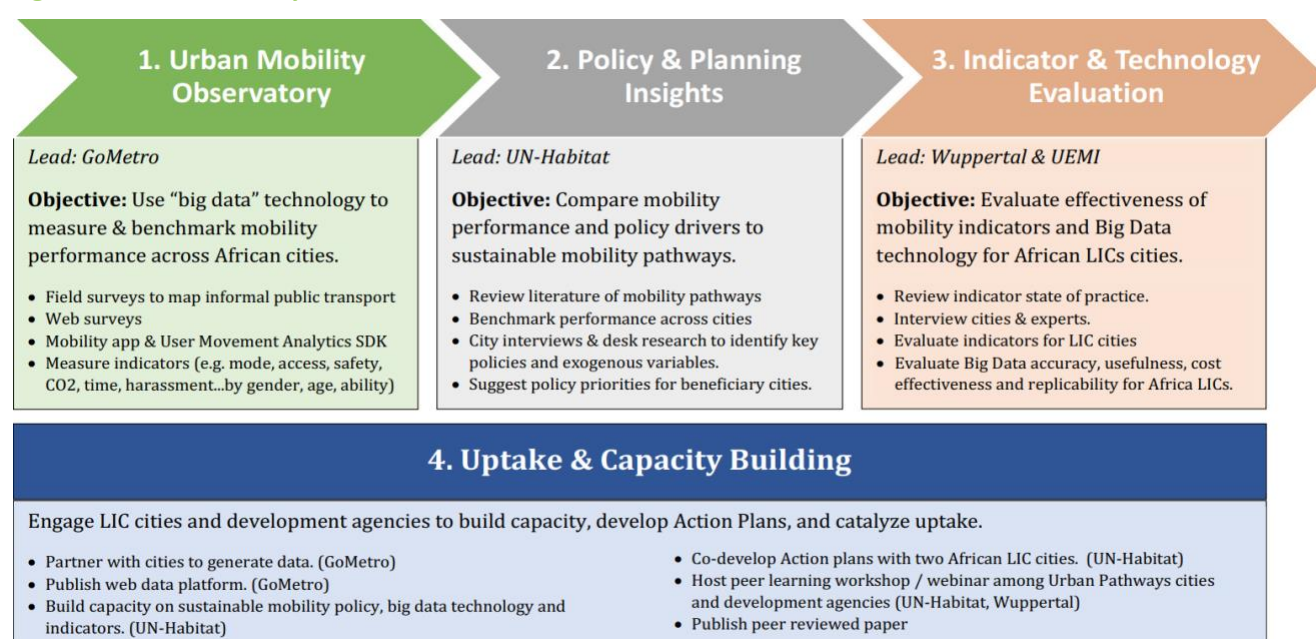
1. Big Data Technology: What are the opportunities and risks of big data applications in HVT cities?
2. Informal Paratransit: What is the role of informal transport in the global South and how to enable transition towards a clean, affordable, and efficient solution for HVT?
3. Policy Levers: What are the main levers for mode share and what is the role of data?

1.3 Project activity streams and deliverables overview

This project comprises of four interlinked Activity Streams (see Figure 1). Activity Streams 1, 2 and 3 are led by GoMetro, UN-Habitat, and Wuppertal/UEMI, respectively. Activity Stream 4 is led collaboratively. These Activity Streams run in parallel, and the outputs generated under one Activity Stream are used as inputs to the others. This report, Deliverable 8, falls under Activity Stream 4. A total of 10 deliverables are associated with the four Activity Streams (see

).

Figure 1: Research activity flow





2. City Action Plan on Inclusive Low Carbon Mobility

2.1 Action plan development

In August 2022, government officials, civil society, and partners of the African Urban Mobility Observatory Project (AUMO) met in Blantyre, Malawi, to discuss the present and possible futures of mobility in the country's second largest city. During the two-day workshop and subsequent validation meetings, stakeholders co-developed desired pathways to sustainable mobility, and developed a draft work plan that prioritises inclusive, low-carbon mobility, data generation and evidence-based decisions, contained in this document. The goals, targets and action items identified in this action plan are informed by the data collected during the AUMO project implementation process and supplemented by other trusted data sources. This document is intended to inform future policy development and investment in inclusive, low-carbon mobility in Blantyre City.

The action plan outlines key focus areas related to inclusivity, climate change, and data management systems. It includes measures to be implemented and monitoring processes to track outcomes. Although this action plan has been co-developed, Blantyre City is responsible for its coordination and implementation. Blantyre City will consider annual updates to the action plan, ensuring that they continue to drive innovation in data-driven decision-making to solve local mobility challenges.

Table 1: Action plan timeline

Date	Item
August 2020	Key meetings with stakeholders
7 th and 8 th April 2021	Data collection in Blantyre begins with Field Survey Pilot
February 2021	Web Data Platform Launched
18 th to 20 th August 2021	Blantyre Field Survey Main Phase 1
19 th to 22 nd November 2021	Blantyre USSD Survey Pilot
29 th March to 1 st April 2022	Blantyre USSD and WhatsApp Survey Main Phase
31 st March to 6 th April 2022	Blantyre Field Survey Main Phase 2
7 th to 21 st June 2022	Blantyre UMA Survey Campaign
August 2022	Action Planning Workshop The workshop entailed 6 sessions key to delivering inclusive low-carbon mobility for Blantyre City. The first session was on defining a vision for a sustainable future for the city. The successive sessions were on action planning for inclusiveness and road safety, climate change mitigation opportunities and adaptation need, the role of paratransit, validating indicators reflected in the AUMO platform, and the identification of strategies and actions towards sustaining data collection and monitoring initiatives.
September 2022	Action planning validation meetings
October 2022	Draft Action plans finalised

AUMO is a research project that aims to generate and publicly avail urban mobility data using big data applications. The goal of the initiative is to promote inclusive, low-carbon mobility policies and action plans, catalyse broader uptake via web data platforms, workshops, and research across urban areas in low-income African countries. The project promotes engagement and discussion in mobility-related issues and enhances the capacity to develop, implement, and monitor transport policies locally. The AUMO activities in Malawi aim to support Blantyre City in planning, regulating, and financing more inclusive, safe, and climate-friendly mobility.



AUMO has collected data on several mobility, travel experience and efficiency related indicators to support Blantyre City in making data-driven decisions about the city's mobility future (the data can be viewed at mobility.observatory.go-africa.org). The indicators include distance travelled, mode share, period of travel, transfers, condition of public transport vehicles and driver behaviour, crime and sexual harassment levels and vehicle occupancy amongst others. The data, comprehensive policy analysis and stakeholder engagement activities have been used to develop this action plan for Blantyre City. The success of the action planning process stems from robust engagement throughout the project with stakeholders from Malawi and Blantyre City, who have strategic roles in mobility policy and planning. The stakeholder identification and mapping exercise carried out at the start of the project identified individuals from the national and local governments, e-mobility and road safety organisations, women and people with special mobility needs, climate change and environment experts, non-governmental organisations, and academia.

The project and this plan aim, amongst other things, to enable better cooperation among authorities, professionals, social organisations, and users, and to engage development agencies and Blantyre City around transport data. It is intended that this work assists Blantyre City to access finance for sustainable mobility projects in the future.

3. Mobility Landscape

Blantyre is one of the four main cities in Malawi. In 2018, it had a population of 800,264 and recorded a growth rate of 2.0% between 2008 and 2018. The city has an average density of 3,334 persons per km² (1). As one of Malawi's commercial and industrial centres, together with Lilongwe, it contributes to approximately 31% of the national GDP (2). Blantyre is also the second largest employment destination after Lilongwe, making it a particularly important location for rapid, sustainable urban development (2).

Although Malawi actively engages in spatial and infrastructural planning, the plans lack effective implementation mechanisms and are often not enforced urban jurisdictions. Consequently, there has been a surge in unplanned settlements, illegal developments, and an increase in urban sprawl, further catalysed by rapid urbanisation.

Ninety percent of goods and 70% of passengers use road-based modes of transport in Malawi. The country's mobility policy and planning are coordinated at the national level. The National Transport Policy (NTP) (developed by the Ministry of Transport and Public Works in 2019) and the National Transport Master Plan 2017-2037 (NTMP), guides the national transport policy framework. The NTP was developed to also align to the Sustainable Development Goals (3). The NTP aims "to ensure the development of a coordinated and efficient transport system that fosters the safe and competitive operation of viable, affordable, equitable and sustainable transport and infrastructure services". The NTMP is a clear guiding framework for delivering sustainable interventions to enhance the transport sector across Malawi and promote safe, affordable, equitable and sustainable transport services and support the enhancement of the country's economy (2).

Blantyre City has several urban mobility challenges. Some of the key urban mobility challenges include traffic congestion, a lack of multi-modal mobility options, and a lack of access to safe public transport, especially for vulnerable groups. The city is yet to develop a local strategy or plan to support the realisation of national transport goals to address these challenges. There are, however, some recommendations outlined in the NTMP. The main interventions of the NTMP specified for Blantyre are:

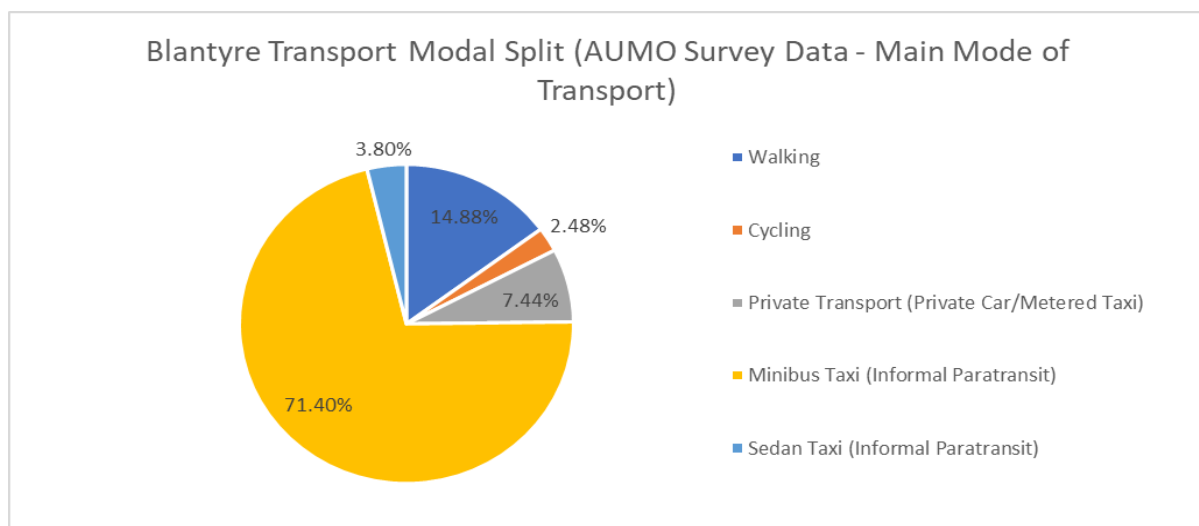
- Maintenance of the road network;
- Introduction of new roads;
- Blantyre Inner relief Road, a two-lane new road of 10 kilometres;

- Blantyre elevated expressway, a new road of 8 km above an existing highway;
- Introduction of segregated Non-Motorised Transport (NMT) lanes to protect active mobility.

3.1 Status of mobility in Blantyre City

According to the Malawi Ministry of Transport and Public Works (MoTPW), NMT (Non-Motorised Transport or walking and cycling) is the primary mode in all urban areas across the country. According to the data collected for the AUMO platform, informal paratransit is the central transport mode for the respondents in Blantyre City. 71.4% of the population rely on informal paratransit, 14.88% rely solely on walking and 2.48% on cycling. It should be noted that those that rely on minibus taxis or sedan taxis rely on walking as their last- and first-mile modes. On average, women walk for 37.3 minutes a day and men, 57.3 minutes (4). Despite NMT being the most dominant mode of transport and that NMT interventions are presented in the NTMP, there is a lack of NMT infrastructure in Blantyre City, which poses a threat to the safety of pedestrians and cyclists utilising infrastructure that gives motorised traffic the right of way.

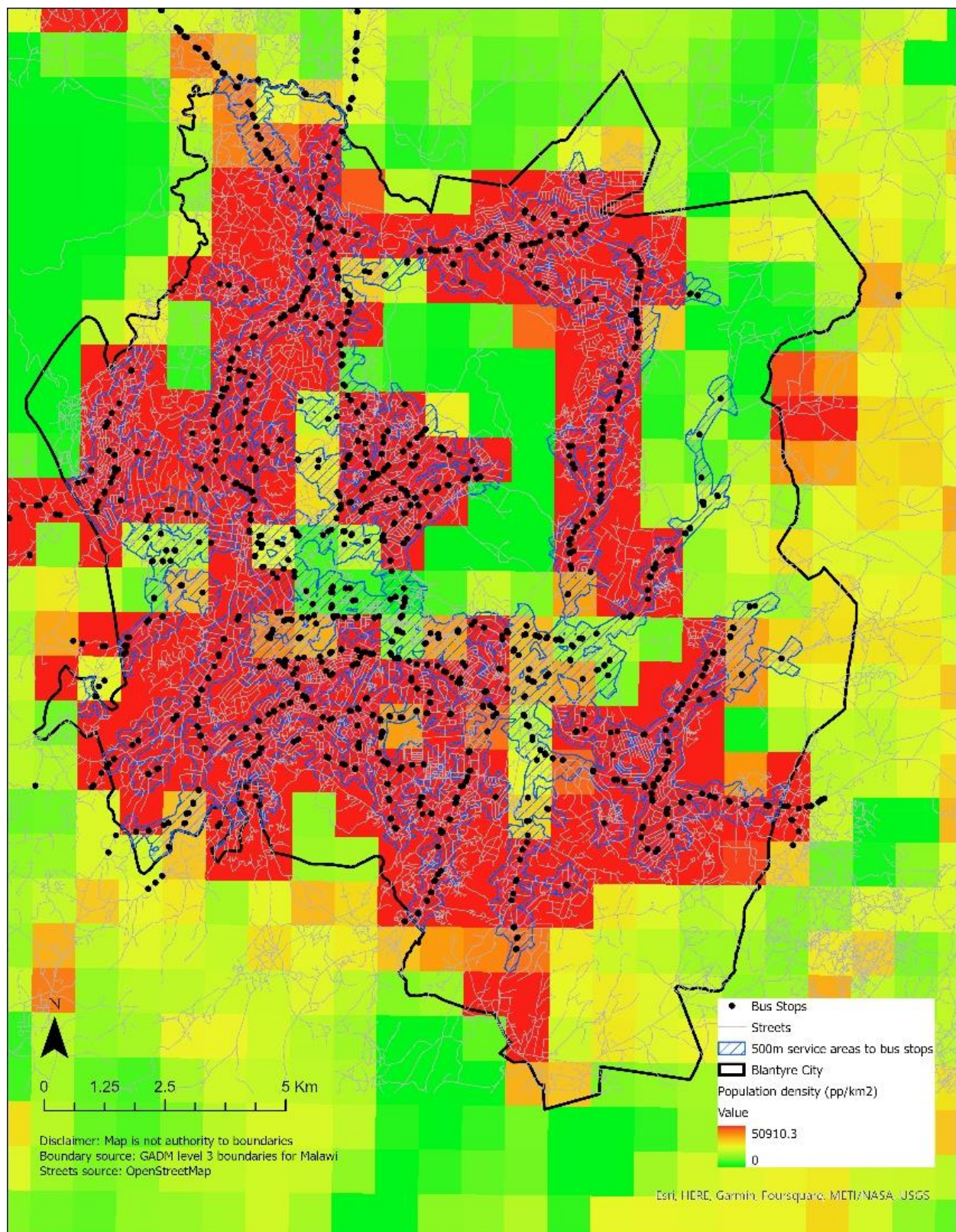
Figure 2: Blantyre transport modal split according to the AUMO database (Q2 2022)



Road infrastructure in Blantyre is generally of poor quality, with untarred roads being in especially poor condition, with dusty, uneven surfaces, and potholes especially on the urban periphery. New roads often lack universal design elements and safe crossings for people that walk and cycle. Plans are underway for constructing a new Blantyre bus terminal, and passenger rail services are also being investigated under the NTMP.

Data from UN-Habitat paints a relatively fair situation in access to public transport in Blantyre, measured as the proportion of population with convenient access of public transport within 500 metres of a stop for low-capacity public transport and 1000 metres for high-capacity public transport. Based on an analysis of mapped data comprising public transport stops and street networks, 41% of the Blantyre City area is within 500m walking distance along a street network to a bus stop. As shown in figure 2, majority of the areas within 500m walking distance to a public transport stop are also the highly populated parts of the city, which translates to 72% of the urban population having convenient access to public transport (5).

Figure 3: Distribution of bus stops and bus stations in Blantyre (5)



While the mapping of public transport is based on existing open-source data, and while all attempts were made to ensure as many stops as practical were captured (including through visual interpretation high resolution imagery), it should be noted that this proportion would likely have been much higher, were all the informal public transport routes (along which minibuses collect and drop

off passengers in the absence of formal facilities) integrated into the computation. According to the data collected as part of the AUMO project, informal paratransit (minibuses) fulfils an essential role in the city, accounting for 71.4% of all trips. According to insights drawn from the AUMO mobility survey, there are few dedicated informal paratransit facilities in Blantyre, of which the majority are in the CBD and Limbe. Due to the limited facilities, minibuses and sedan taxis mostly use open spaces as makeshift ranks.

Figure 4: Informal paratransit terminal in Blantyre (6)



The high proportion of physical proximity to public transport in the city does not reflect the poor quality and condition of the facilities, their comfort, or the reliability of the transport system. For example, based on the field mapping undertaken during the AUMO project, it was noted that the existing paratransit and minibus facilities are in poor condition, and lack pedestrian access infrastructure, shelter, or seating infrastructure. The lack of fare regulation leaves queue marshals with the power to dictate fares, which may lead to excessive prices and unfair practices.

Traffic congestion and the lack of effective law enforcement are significant transportation problems identified by key Blantyre City stakeholders. Congestion continues to increase in severity due to the increasing vehicle population in Malawi (7), demographic changes (8), as well as the cumulative result of other identified urban mobility challenges which includes dispersed urban growth and residential patterns (this increases the cost of building infrastructure and public transport service provision, making public transport systems less convenient for users (9).

The city has developed several strategies to address its congestion challenges. Designated parking spaces have been set aside in the city centre, and various road network and traffic flow improvement strategies have been introduced, including the construction of bypasses and roadway dualling projects. However, parking initiatives have failed to curb congestion, due to a lack of enforcement and increased illegal parking. Typically, additional parking, roadway dualling and construction of bypasses increases congestion, as it makes private vehicle use more convenient. It can be observed that recent interventions have been very much automobile oriented, which will only encourage a shift to private automobiles, and increase congestion over time. Additionally, the lack of multi-modal integration of the road network limits accessibility and increases congestion at intersections.

Figure 5: Although there are some sidewalks present in the city, they often lack universal design and are used as parking infrastructure for private vehicles.



In 2016, the average travel speed at peak hours was 29 km/h (18 mph) and was projected to steadily decline to 27 km/h in 2021, and 20 km/h by 2031 (10). During peak periods, traffic congestion in Blantyre is so severe that average speeds can be as low as 19 km/h (12 mph) (11). It is understood that users and the urban economy are affected by such low speeds. However, more comprehensive data collection is needed to measure the exact impacts of road congestion in detail (8). Dispersed urban growth and residential patterns increase the cost of building infrastructure and public transport service provision making public transport systems inconvenient to support urban mobility (9).

The lead road safety agency in Malawi is the Directorate of Road Traffic and Safety Services, which is funded by the national budget. The road safety strategy is only partially funded. Road fatalities remain unacceptably high, at 31 deaths per 100,000 people, the second worst rate among the six AUMO project countries (12). Road safety is an issue especially as walking and cycling infrastructures are incomplete or lacking. 50% of road traffic victims in Malawi are pedestrians and 19% are cyclists (13). Many minibux taxis are unroadworthy and unsafe, and there is very little compliance with the UN Vehicle Safety Regulations, contributing to the unacceptably high number of road fatalities in Malawi.

In terms of environmental considerations, the country's Nationally Determined Contributions (NDC) indicate an intention to use biodiesel technologies to meet emission targets. Malawi is Africa's second country to adopt a carbon tax, but the impact is unclear. The country has no vehicle emission standards or restrictions on used vehicle imports, with the average age of imported used petrol and diesel vehicles being 9 years and 18 years, respectively. There is at this juncture, a great opportunity to invest in electric mobility and other cleaner and more inclusive modes of transport.

It is understood that users and the urban economy are affected by such low speeds. However, more comprehensive data collection is needed to measure the exact impacts of road congestion in detail.



BLANTYRE ACTION PLAN

Blantyre City will promote inclusive low-carbon mobility and evidence based-decision making. The city will:

- Take steps to achieve the sustainable and inclusive mobility vision for Blantyre City;
- Implement localised actions identified in this document and others aimed at both climate change mitigation and adaptation;
- Address the main challenges in paratransit and co-develop solutions with relevant stakeholders;
- Sustain data collection and monitoring efforts;
- Promote safe and inclusive multi-modal mobility.

4. Vision for Sustainable Mobility in Blantyre

Noting Malawi 2063's vision, and the NTP's goal to ensure the "development of a coordinated and efficient multimodal transport system that fosters safe and competitive operation of viable, affordable, equitable and sustainable transport and infrastructure services", Blantyre City has developed a vision for inclusive low carbon mobility.

At a city level, Blantyre aims to "provide environmentally friendly, high quality, efficient and effective demand-driven municipal services in partnership with the individual and corporate residents to attain better quality lives for all residents in the City". In line with the city's aims and the core values identified in the Malawi 2063 Vision, and other national guiding documents, the vision is:

"A congestion-free city with an integrated multi-modal, safe, clean, smart, inclusive, efficient, affordable transport system powered by renewable energy."

The implementation of the action plan requires multidisciplinary coordination and action and community engagement. Achieving the objectives of the plan will require strong support from all council departments, national, city and local policymakers, transport operators and citizen groups. Stakeholder engagement and community participation ensures that the benefits of transport projects are not accrued to the detriment of environmental and social aspects (14), and should be initiated early to ensure its effectiveness. It is imperative that Blantyre City Council makes adequate preparation to facilitate interdepartmental, intergovernmental and community and stakeholder engagement as an integral part for assessment, implementation, and monitoring of the action plan.

Baseline information is necessary to enable monitoring of the progress toward accomplishing the targets set out in the action plan. Blantyre City currently lacks the technology and monitoring mechanisms to gather, and sufficiently update, maintain, and disseminate mobility data on a regular basis. This makes it difficult to monitor precisely in the long term. Therefore, as part of the vision to sustain data collection and monitoring efforts, targets to improve data collection, data management and dissemination efforts have been set in the short and medium-term time frames.

This Action Plan is intended to support the eventual development of a Sustainable Urban Mobility Plan (SUMP) (15). Noting that Blantyre does not yet have a localised guiding document framed by the national policy framework, the action plan will provide a roadmap to develop policies that localise national targets for sustainable mobility and programs that deliver safe, inclusive, efficient, and multi-modal transport for all. A SUMP for Blantyre would help the city enhance connectivity, improve accessibility, reduce air pollution and congestion, improve public health, social cohesion, and quality of life for all residents. The summary plan is indicated on the next page.



4.1 Summary Action Plan



Figure 6: Summary Action Plan for Blantyre City



4.2 Governance and strategy

4.2.1 Form a dedicated non-motorised transport unit within the Blantyre City Council

In Blantyre, NMT is the primary mode of transport in all urban areas. There are interlinkages with the lack of coordination on NMT related issues and the congestion challenges faced in the city, owed particularly to the fact that many city departments work in silos even though the challenges are cross cutting (16).

Noting that the NTMP emphasizes the introduction of over 500 km of segregated cycle/pedestrian facilities (a NMT network) on high trafficked roads, together with the plans to develop a new urban expressway in Blantyre. It is imperative that city authorities dedicate time, resources, and efforts to mainstreaming the needs of people that walk and cycle. Blantyre City Council should create an NMT unit to strengthen its in-house capacity to design, plan, and manage NMT facilities.

Targets:

- i. Establish a Non-motorised transport unit in the Blantyre City Council Planning Department; by 2024;
- ii. Develop a Non-motorised transport strategy for the city by 2025.

Activities:

- A. Identify focal points within the city council to guide the NMT unit's activities;
- B. Develop supporting documents, policies and legal instruments that guarantee provision of NMT facilities;
- C. Ensure comprehensive engagement with both local and national level stakeholders including civil society organisations and groups representing people with unique mobility needs;
- D. Facilitate inter-agency coordination.

Stakeholders involved:

Blantyre City Council, Town Planning and Estates Management department, Works and Engineering Department, Ministry of Transport and Public Works, Ministry of Local Government and Rural Development.

4.2.2 Commit to improve the road networks in the city, ensuring the inclusion of safe, continuous, and efficient routes for low carbon mobility.

Blantyre is yet to tailor its own path towards sustainable mobility in line with the national vision. The NTMP addresses cross-cutting transportation issues in terms of physical infrastructure improvements as well as necessary changes in the regulatory, policy, and institutional framework. According to the MoTPW, the plan seeks to promote a transport system that can be resilient to current and future challenges. Blantyre has several untapped opportunities in resolving its own transportation challenges, one of which is creating an enabling environment for low carbon mobility.

The NTMP has anchored walking and cycling among the principles guiding the development of sustainable urban transport in Malawi. The plan emphasises the importance of dedicated walking and cycling infrastructure, with protected right of ways, in creating inter and intracity transport and improving road safety for all. Blantyre City has the mandate to align its mobility initiatives with the aspirations of the national transport master plan, to improve road safety, promote bicycle commuting, and encourage modal shift to non-motorised transport through developing a connected and sustainable transport network for low carbon mobility (17).



Target:

- i. Introduce an annual road safety or placemaking week, for community engagement and advocacy on road safety and people-centric urban and mobility planning and design, by 2023;
- ii. Prepare a street design manual for the city that prioritises universal design and accessible public transport by 2025.

Activities:

- A. Citizen participation workshops to develop street design processes and plan mobility interventions specific to the realities of Blantyre City;
- B. Ensure alignment between mobility policies, plans and programs to deliver on the needs of constituents;
- C. Ensure budget processes provide incentives for inclusion-based decarbonising transport policies.

Stakeholder engagement:

Blantyre City Council, BCC Legal Services department, Ministry of Transport and Public Works, Ministry of Lands, Ministry of Finance, Economic Planning and Development, National Planning Commission, Transport sector operators, special interest groups, private sector.

4.3 Inclusivity in urban mobility

4.3.1 Identify inclusive urban mobility champions to steer activities at a city level and ensure accountability.

Community champions of inclusivity are essential to advocate for transport policies and plans that promote accessible, affordable, and comfortable mobility for all within Blantyre City. A champion for inclusivity will ensure that the stakeholder engagement process is comprehensive and complete in all phases of project implementation. The champions (who may be from within Blantyre City or a representative of a CSO) will advocate for effective, well-coordinated, and sustained engagement, focusing on vulnerable groups, in all mobility planning and development processes. Sustained advocacy will ensure that mobility initiatives in the city adequately respond to its residents' needs, including the needs of women, youth, children, the elderly, and other special interest groups.

Targets:

- i. Identify 2 inclusive urban mobility champions by 2023;
- ii. Set up a working group on inclusive mobility that meets quarterly by 2024,
- iii. Training provided to 50 different and relevant stakeholder groups in the development of urban mobility plans, infrastructure projects and strategies by 2025.

Activities:

- A. Identify gaps and blockages in the stakeholder engagement process;
- B. Develop a database of stakeholders representing vulnerable groups;
- C. Set up a working group comprising government, NGOs, community leaders, and the private sector, dedicated to ensuring inclusive urban mobility;
- D. Develop reports on stakeholder engagement activities, capturing lessons learnt;



- E. Share regular updates on mobility plans, infrastructure projects, and strategies with stakeholder database.

Stakeholders involved:

Blantyre City Council, Ministry of Local Government and Rural Development, Ministry of Information Communication and Technology, Ministry of Gender, Community Development and Social Welfare, Civil Society Organisations and Special Interest Groups.

4.3.2 Establish clear stakeholder engagement guidelines and strategies

Blantyre City recognises that inclusive transport can be defined as transport that is “planned, designed, managed, and operated so the system can be used by everyone irrespective of income, race, age, gender, or ability.” As stakeholder engagement is a mandatory requirement on all transport related matters, stipulated by existing regulatory and planning bylaws, Blantyre City seeks input from government authorities, the private sector, and other related interest groups on policy formulation, strategic planning, budgeting, and road design.

There is however a need to improve consultations with key stakeholders and establish mechanisms that meaningfully consider the views of those impacted by transportation projects and plans. Although consultants are hired to engage with different stakeholders, and understand their needs, there is a lack of in-depth and continuous consultations. Consequently, there is a lack of data on local conditions. Furthermore, communication systems for sharing information could be improved and representatives from all transport/mobility user groups could be better engaged within Blantyre City Council processes.

Targets:

- i. Establish a mobility centred outreach and communications strategy for engagement with stakeholders by 2023;
- ii. Establish a monitoring system that ensures the availability of information to the public is consistent and provides meaningful opportunities to give feedback on how the local government's responds to demands and needs by 2026.

Activities:

- A. Develop a stakeholder engagement framework underpinned in Malawian law and policy to guide and ensure effective engagement and participation in projects for all residents of Blantyre;
- B. Establish transport/mobility user groups at the ward level to strengthen engagement, communications, and facilitate consultation of a wider range of public and private stakeholders;
- C. Fully implement the Blantyre City Council Strategy for external communication to effectively disseminate information about the council's operations and facilitate informed and meaningful participation in urban development.

Stakeholders involved:

Blantyre City Council, BCC Legal services department, Ministry of Local Government and Rural Development, Ministry of Information Communication and Technology, Ministry of Gender, Community Development and Social Welfare, Civil Society Organisations and Special Interest Groups.



4.3.3 Adopt universal access and street design standards to improve road safety

In Malawi, road traffic crash (RTC) trauma makes up almost half of the cases dealt with in hospitals (18). Poor road infrastructure and driver behaviour are often cited as the most common causes of the accidents in Malawi, reducing up to 3% the country's GDP (19). According to iRAP, in 2022, the national government committed to safer roads by 2030 through, amongst other things, working towards the establishment of a Road Safety Authority to regulate traffic safety in Malawi (19).

Blantyre City faces similar challenges to most cities in the region, with vehicle collisions impacting mostly pedestrians, cyclists and those using paratransit services (20). In 2019, the district registered more road accidents in the first half of the year as compared to the same period in 2018. In total, the district registered 720 road traffic accidents compared to 58 in 2018 (21). Noting the ambitions of the Health Sector Strategic Plan II (2017-2022) and Malawi's upcoming 2030 Strategic Plan aligned to the Global Plan for the Second Decade of Action for Road Safety, Blantyre City will take active steps to reduce road fatalities and injuries in the city by prioritising the safety and comfort of all.

Targets:

- i. Produce a map of motor vehicle collision and road related injury and fatality hotspots throughout the city by 2024;
- ii. Limit speeds up to 30km/h in built up areas along main roads and all one-way streets in cities 2025;
- iii. Pedestrian and cyclist fatalities reduced by 80% below 2022 levels by 2028.

Activities:

- A. Engage with local research centres and universities on road safety data management;
- B. Increase opportunities for safe active transportation in all neighbourhoods, with a priority on pedestrian priority zones;
- C. Adopt an integrated land use planning approach that gives priority to cyclists and pedestrians;
- D. Mainstream the safe systems approach.

Stakeholders involved:

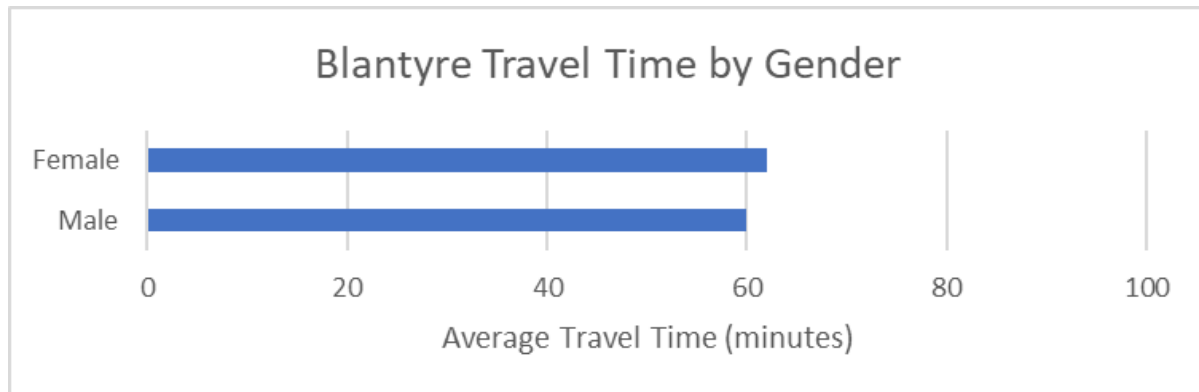
Blantyre City Council, BCC Legal Services, Town planning and Estate Management and Works and Engineering Services departments, Ministry of Local Government and Rural Development, Ministry of Transport and Public Works, Ministry of Finance, Economic Planning and Development, Ministry of Lands, Ministry of Information Communication and Technology, Ministry of Gender, Community Development and Social Welfare, Civil Society Organisations, Special Interest Groups, public transport operators; insurance companies; research community and traffic engineers.

4.3.4 Address personal security concerns.

Based on the data collected for AUMO (11), 44.96% of the respondents in Blantyre reported experiencing or witnessing crime while travelling in the city while 42% had experienced sexual harassment (11). The insights from the survey indicate that crime and sexual harassment is relatively prevalent on public and informal paratransit in Blantyre City. Insights drawn from the AUMO mobility survey data indicate that women spend slightly more time traveling than men. Typically, women make more frequent, shorter distance trips by public transport this is unsurprising. This usually means that women must pay more for their transport, unless there is an integrated ticket which allows transfers between routes and modes. According to a report on women, safety, and security (22), women have less access to private vehicles, and therefore rely more on public transport compared to men.

Additionally, they are more risk averse. Consequently, women are more likely to avoid traveling on public transport, due to the perception of risk, which can limit their mobility options and in turn exclude them from accessing social and economic opportunities, as well as health care and education (21).

Figure 7: Blantyre travel time by gender



Blantyre City recognises that in the AUMO sister project, EMPOWER, 80% of respondents in Blantyre City indicated that they had witnessed sexual harassment, while 66% had personally experienced sexual harassment (23). The results have revealed that when respondents are provided with a contextual definition of sexual harassment, they tend to relay higher incidences of its occurrence as opposed to when asked questions related to harassment in the context of several other questions. This among other things, results in an under reporting of sexual harassment and an unsafe environment for women and others exposed to harmful behaviours. Blantyre City council accepts the UN definition for sexual harassment (24). The city will align to the following definition in local policy documents: “the unwanted advances of a sexual nature given by someone to another. This can be verbal, visual, physical and /or psychological, such as intimidation or stalking” (24). The city is committed to ensuring that all future policy frameworks are based on the four A’s. These are:

- Accessibility;
- Affordability;
- Availability; and
- Acceptability.

Targets:

- i. Rehabilitate and construct streetlights in crime hot spots, along cycling lanes and pedestrian walkways by 2025;
- ii. Adopt and enforce city level regulations that define sexual harassment in public space and facilitate efficient reporting of incidents and conviction of offenders by 2026.

Activities:

- A. Collect disaggregated data on the needs and requirements of all transport users as part of wider data collection efforts to build a robust evidence base;



- B. Assess training needs, develop a training package(s) for security personnel on sexual harassment, and develop clear operation procedures to swiftly address cases of sexual harassment.
- C. Ensure mechanisms (e.g., surveys, public forum, telephone hotline) are in place to ensure that people's safety, security, quality, and accessibility needs are met;
- D. Through interagency cooperation, establish clear protocols for reporting and monitoring progress;
- E. Conduct awareness and media campaigns targeting transport workers and the public, to establish a culture of zero tolerance of discrimination, violence and /or sexual harassment;
- F. Use the EMPOWER SHE CAN tool to determine a strategy and collect relevant data.

Stakeholders involved:

Blantyre City Council, BCC Health and Social Services, Town planning and Estate Management and Works and Engineering Services departments, Ministry of Local Government and Rural Development, Ministry of Transport and Public Works, Ministry of Lands, Ministry of Information Communication and Technology, Ministry of Gender, Community Development and Social Welfare, Malawi Police Services, Civil Society Organisations, Special Interest Groups, public transport operators.

4.4 Climate change and environment

4.4.1 Strengthen local governance for climate change

The Malawi Updated Nationally Determined Contribution (NDC) highlights that fossil fuel dependent transport accounts for 11% of total greenhouse gas emissions in the country (25). Malawi is Africa's second country to adopt a carbon tax, which acts as a carbon pricing mechanism to raise funds to drive climate change mitigation and adaptation actions at the national and community levels (26). While there are several national policies and programmes geared towards urban climate change mitigation and adaptation in Malawi, implementation on a city level is a challenge (27).

Climate change scenarios forecast that by 2040 Blantyre City will be hotter, drier, and with fewer, but heavier rainfall events. Among its climate-sensitive sectors, the city has selected energy and water supply as its priority areas threatened by climate change (28). Insights from the AUMO mobility survey on informal paratransit indicate that motor vehicles are key contributors to CO₂ emissions in the country. Blantyre, being the second largest city in Malawi, fulfils a critical role in supporting the country's climate change adaptation and mitigation goals, and implementing climate change policies. It is imperative for the city to incorporate climate considerations in existing policies, plans and projects, identify implementable actions to increase resilience, embrace collaboration and coordination across sectors, and establish a climate finance framework that draws upon a combination of sources.

Targets:

- i. Clear-cut guidelines on authority and delegation of responsibilities of the Blantyre City Council, in partnership with national government to localise the national climate change strategies and develop a monitoring system to provide feedback on delegated tasks by 2026;
- ii. Train all local government and urban development personnel on issues related to climate change through and regional networks and knowledge exchange opportunities by 2026.

Activities:

- A. Coordinate with the Department of Climate Change and Meteorological Services (DCCMS) to develop capacity development materials;



- B. Conduct research on the impact of the carbon tax on Blantyre City level;
- C. Enact and ratify bylaws and policies that promote urban transport resilience and climate justice.

Stakeholders involved:

Blantyre City Council, BCC Legal Services, Town planning and Estate Management and Works and Engineering Services departments, Ministry of Local Government and Rural Development, Ministry of Natural Resources and Climate Change, Ministry of Transport and Public Works, Ministry of Lands, Ministry of Information Communication and Technology, Ministry of Gender, Community Development and Social Welfare, Civil Society Organisations, Special Interest Groups, and public transport operators.

4.4.2 Promote compact city development and mixed land use

The NTMP emphasizes that both the adoption of sustainable urban transport policies, and the introduction of design guidelines for urban roads, are priorities. The plan also recommends adoption of integrated traffic and land use planning, that considers the effects of transport on development control, and the effects of improved accessibility and transport reliability on land use.

Targets:

- i. Kilometres travelled by private motor vehicles are no more than 10% of levels recorded in 2023, by 2026.

Activities:

- A. Develop a land use master plan that integrates mixed-use, transit-oriented development and affordable housing as development concepts to reduce vehicle miles travelled;
- B. Increase connections between residential areas, workplace, and commercial zones, to encourage active modes of transportation and promote effective land use;
- C. Develop zoning ordinances, building control regulations and land use policies and by-laws to align with TOD concepts;
- D. Develop a comprehensive traffic management system.

Stakeholders involved:

Blantyre City Council, BCC Town planning and Estate Management and Works and Engineering Services departments, Ministry of Local Government and Rural Development, Ministry of Natural Resources and Climate Change, Ministry of Transport and Public Works, Ministry of Lands, Ministry of Gender, Community Development and Social Welfare, Built environment professional associations, Civil Society Organisations, Special Interest Groups, and public transport operators.

4.4.3 Increase the mode share for walking and cycling

Currently, Blantyre City is not walking and cycling friendly. Pedestrians and cyclists face many challenges including safety hazards from high-speed traffic, few and inadequately sized cycling lanes, dangerous crossings, inadequate street lighting, and poorly maintained infrastructure. Further, bicycles are expensive and not many people can afford them. Increased use of NMT is likely to bring benefits to the city and residents of Blantyre, that include improved access to social and economic activities and opportunities; improved public health due to physical activity; reduced emissions of dangerous pollutants; and a reduced burden of injuries on limited healthcare resources, and traffic fatalities.



The NTMP aims to improve accessibility and mobility, roads, and road safety in Malawi, by promoting road designs that accommodate NMT users, and prioritise safety for walking and cycling, by segregating and safeguarding NMT users. The plan prescribes the application of universal design principles for NMT infrastructure, outlines the need for integration of Bus Rapid Transit (BRT) planning with pedestrian and bicycle routes with appropriate NMT infrastructure, and includes NMT as a road safety focus for road and road safety authorities. According to the National Local Government Finance Committee in the 2022-2023 financial year, Blantyre City has allocated 6,120,000,000 Malawian kwacha (US\$5,997,060) from the development fund for 17.6 kilometres of approved city road construction fund projects (29). It is vital that the city is deliberate in dedicating its fiscal resources to the construction, improvement, and maintenance of dedicated NMT infrastructure that is inclusive for all. Blantyre City is committed to establishing a financing mechanism that ensures NMT projects are continuously financed within the city council budget.

Targets:

- i. Hold at least 4 car free days by January 2024;
- ii. Women constitute 50% of cyclists by 2030;
- iii. Mode share of walking and cycling is 55% or above by 2031.

Activities:

- A. Identify pedestrian priority zones in the city and neighbourhoods, by evaluating pedestrian attractors, pedestrian generators, and pedestrian detractors;
- B. Identify opportunities to support bicycling for first/last mile, and micro-transit opportunities, to improve connectivity in underserved areas in the city;
- C. Develop a bicycle master plan.

Stakeholders involved:

Blantyre City Council, BCC Legal Services, Town planning and Estate Management and Works and Engineering Services departments, Ministry of Local Government and Rural Development, Ministry of Transport and Public Works, Ministry of Finance, Economic Planning and Development, Ministry of Lands, Ministry of Information Communication and Technology, Ministry of Gender, Community Development and Social Welfare, Civil Society Organisations, Special Interest Groups, and public transport operators.

4.4.4 Increase knowledge and awareness on the impact of poor air quality

Malawi ranks among the top 20 countries on the ambient air pollution index at 67.38 ug/m³ (30). Blantyre City lacks the technology and institutional framework to conduct continuous air quality monitoring, and sufficiently update, maintain, and disseminate air quality data. The city commits to allocating resources towards sustained annual air quality monitoring programs and the establishment of an air quality unit, within an existing suitable city department, to spearhead the continuous monitoring, processing, storage and dissemination of air quality data, and coordination with the department of environmental affairs.

Targets:

- i. WHO ambient air quality norms are met 360 days a year by 2030.



Activities:

- A. Carry out baseline city air quality assessment to understand the problem and inform priority actions;
- B. Assess the operational, financial, and human resource capacity needs for an air quality monitoring unit;
- C. Adopt World Health Organisation (WHO) air quality standards as city targets;
- D. Draft a concept on establishing a city air quality database, with guided procedures on collection, storage, and dissemination of air quality data;
- E. Prepare a strategic plan for transportation and air quality that identifies opportunities to improve air quality, and prescribes their consideration at the plan-making level;
- F. Engage directly with residents to raise awareness on the effect of air pollution on public health and the environment and assess existing capacities to identify areas for additional training and priority, to facilitate sustained results.

Stakeholders involved:

Blantyre City Council, BCC Town planning and Estate Management and Works and Engineering Services departments, Ministry of Local Government and Rural Development, Ministry of Natural Resources Energy and Mining, Ministry of Transport and Public Works, Ministry of Finance, Economic Planning and Development, Ministry of Lands, Ministry of Information Communication and Technology, Environmental management and built environment professional associations, Special Interest Groups and public transport operators.

4.4.5 Prioritise clean and efficient mobility

Malawi does not impose any age restrictions on the import of used vehicles and has no vehicle emission standards. The stakeholders in the nation's transport sector have however proposed the implementation of Euro-4 emission standards in the country (31).

There are no known passenger e-mobility initiatives in Malawi. Since 94% of electricity in Malawi is generated through hydropower (6), a transition to e-mobility would dramatically reduce transport and energy related emissions. The NTMP takes cognizance of increased global manufacturing and uptake of electric vehicles, and notes that import of second-hand electric vehicles will increase within the NTMP period. The master plan calls for strategic introduction of fiscal measures to encourage the import of second-hand electric vehicles, and energy demand assessments and projections to guide provision of charging stations and assess the feasibility for domestic charging within 10 years.

Targets:

- i. Electric motorcycles constitute 20% of the *Kabazas* (motorcycle taxis) by 2027;
- ii. Electric vehicles constitute 25% of motor vehicles by 2028;
- iii. At least 50% of the city council motorised fleet to be electric by 2030.

Activities:

- A. Scoping and pre-feasibility study for the provision of electric mobility charging infrastructure;
- B. Coordinate with the Ministry of Transport and Public Works to assess future demand for motor vehicles, to establish a baseline that will guide priority actions;
- C. Formulate fiscal policies that favour use of electric vehicles and support associated industries;



- D. Implement an institutional framework with a fully-fledged and funded institution responsible for the coordination of an integrated public transport system, and its transition to electric vehicles;
- E. Build awareness on fuel economy and electric mobility options;
- F. Review and update the public procurement regulations to require that EVs be used to renew the council's fleet.

Stakeholders involved:

Blantyre City Council, BCC Legal Services, Town planning and Estate Management and Works and Engineering Services departments, Ministry of Local Government and Rural Development, Ministry of Transport and Public Works, Ministry of Finance, Economic Planning and Development, Ministry of Lands, Ministry of Education, Science and Technology, Ministry of Information Communication and Technology, E-mobility start-ups, Civil Society Organisations, Special Interest Groups and public transport operators.

4.5 The role of paratransit

4.5.1 Map and improve public transport access

During peak periods, minibuses, and sedan taxis load passengers at informal paratransit ranks, and typically run on a fill-and-go basis. Traffic congestion during peak periods is severe, with typical average speeds as low as 19 km/h. There are few dedicated informal paratransit facilities in Blantyre, most of which are in the CBD (Central Business District), and Limbe. Minibuses and sedan taxis mostly use open spaces as makeshift ranks. The few existing facilities are in poor condition, and lack pedestrian infrastructure, shelter, or seating.

Data from UN-Habitat paints a relatively fair situation in access to public transport in Blantyre, measured as the proportion of population with convenient access of public transport within 500 metres of a stop for low-capacity public transport and 1000 metres for high-capacity public transport. Based on an analysis of mapped data comprising public transport stops and street networks, 41% of the Blantyre City area is within 500m walking distance along a street network to a bus stop. Majority of the areas within 500m walking distance to a public transport stop are also the highly populated parts of the city, which translates to 72% of the urban population having convenient access to public transport (5).

Targets:

- i. 85% of the city population has access of public transport stops within 500 metres by 2028.

Activities:

- A. Ensure that all bus terminals have shelter from the weather, seating, and accessible sidewalks;
- B. Utilize Sustainable Development goal SDG 11.2.1 to map public transport access at regular intervals;
- C. Partner with the Minibus Owners Association of Malawi (MOAM) to map public transport stops and mobility needs;
- D. Improve accessibility to areas on the periphery of the city;
- E. Formalise make-shift ranks.



Stakeholders involved:

Blantyre City Council, BCC Legal Services, Town planning and Estate Management and Works and Engineering Services departments, Ministry of Local Government and Rural Development, Ministry of Transport and Public Works, Ministry of Finance, Economic Planning and Development, Ministry of Lands, Ministry of Information Communication and Technology, Ministry of Gender, Community Development and Social Welfare, Civil Society Organisations, Special Interest Groups, public transport operators.

4.5.2 Professionalisation and modernisation of the paratransit transport operations

According to the 2016 National Transport Masterplan of Malawi (7), minibus taxi fares are far higher than in neighbouring countries. Many users spend up to 40% of their gross income on transport. Further, fares are not regulated, and can increase depending on the time of travel. The uncertainty around the availability of services and the price places undue pressure on commuters who rely on paratransit services in their everyday lives. Vehicles wait to fill up before departing, resulting in delays for passengers. Vehicles are often old, polluting, poorly maintained, and inaccessible for people with unique mobility needs.

Blantyre City should aim to provide improved public transport services, which are effectively managed through intelligent government regulation. It is essential that the city dedicates financial, institutional, and human resource to the modernisation of its informal paratransit.

Targets:

- i. Establish dedicated bus service, motorcycle, and bicycles taxi routes by 2025;
- ii. Develop a preliminary public transport policy and strategy for Blantyre City by 2027 (to be embedded in SUMP);
- iii. Cashless fare payment and system integration by 2028.

Activities:

- A. Coordinate with minibus operators and cooperatives to improve route planning;
- B. Engage with transport operators and stakeholders through workshops and dialogues to spread awareness on the benefits of joining an association;
- C. Coordinate with the national government to establish an integrated licensing system;
- D. Coordinate with the national government to waive or subsidize importation taxes for electric high-capacity buses, and create loan facilities for the association;
- E. Fully integrate road based public transport with rail networks;
- F. Establish training programmes to teach operators on the revamped system, offer them licences and certificates of good conduct.

Stakeholders involved:

Blantyre City Council, BCC Legal Services, Town planning and Estate Management and Works and Engineering Services departments, Ministry of Local Government and Rural Development, Ministry of Transport and Public Works, Ministry of Finance, Economic Planning and Development, Ministry of Information Communication and Technology, Ministry of Gender, Community Development and Social Welfare, Civil Society Organisations, Special Interest Groups, public transport operators, national and international development partners, private sector, e-mobility companies.



4.5.3 Construction and maintenance of paratransit support infrastructure

Data from UN-Habitat shows a promising situation regarding access to public transport in Blantyre. 41% of the city area is within 500m walk to a public transport stop (where 72% of the urban population reside). According to the AUMO survey on informal paratransit, Blantyre City has few dedicated paratransit facilities, which are mostly in poor condition. Consequently, minibuses and sedans use makeshift ranks and open spaces (11).

Blantyre City is dedicated to allocating resources to ensure the provision of adequate paratransit facilities, that adhere to universal design standards, which support universal access to public transport services.

Targets:

- i. Establish a public transport upgrade and maintenance strategy by 2024;
- i. Provide shelter, adequate waiting areas, security installations and legible information to improve quality of 50% of bus stops and lay-bys as of 2022 by 2029;
- ii. Construct 4 terminals for the bus network by 2031.

Activities:

- A. Identify sufficient terminal space for the city's bus network;
- B. Upgrade existing bus stops and lay-bys to conform to prevailing universal design standards.

Stakeholders involved:

Blantyre City Council, BCC Town planning and Estate Management and Works and Engineering Services departments, Ministry of Local Government and Rural Development, Ministry of Transport and Public Works, Ministry of Finance, Economic Planning and Development, Special Interest Groups, public transport operators, national and international development partners, private sector.

4.5.4 Facilitate the transition to cleaner and safer paratransit vehicles.

Over the next 20 years, it is estimated that informal paratransit demand will grow by 3.2% per annum (10). Road infrastructure in Blantyre is poor, especially on the urban periphery in low-income areas. Minibus taxis are the dominant informal paratransit service operating in Blantyre, although sedan taxis are becoming increasingly common. Motorcycle taxis and bicycle taxis are not permitted to operate in the city centre. However, they operate on the periphery of the city, providing essential supplementary feeder service to the main informal paratransit modes.

Noting the challenges linked to informal transport systems with regards to both emissions and levels of safety, Blantyre City is committed to working together with local stakeholders to formalise the minibus public transport sector.

Targets:

- i. 100% formalisation of the minibus public transport sector by 2030.

Activities:

- A. Organise minibus operators into cooperatives and companies;
- B. Engage with the paratransit operators and stakeholders through workshops and dialogues to spread awareness on the benefits of joining the cooperative and companies;



- C. Coordinate with the national government to award operating contracts to the established cooperatives that guide on quality of service, routes, and bus specifications among others;
- D. Coordinate with the national government to waive or subsidize importation taxes for high-capacity buses and create loan facilities for the companies;
- E. Establish training programmes to teach drivers and conductors on the revamped modern system, offer them licences and certificates of good conduct.

Stakeholders involved:

Blantyre City Council, BCC Legal Services, Town planning and Estate Management and Works and Engineering Services departments, Ministry of Local Government and Rural Development, Ministry of Transport and Public Works, Ministry of Finance, Economic Planning and Development, Ministry of Lands, Ministry of Information Communication and Technology, Ministry of Gender, Community Development and Social Welfare, Civil Society Organisations, Minibus Owners Association of Malawi (MOAM), Special Interest Groups and public transport operators.

4.6 Sustaining data efforts

According to national policy documents, Malawi has significant gaps in the definition, collection, and analytical methodology for transport related data and statistics. The country lacks capacity to undertake large-scale surveys and analytical exercises, limiting the ability to develop evidence-based policies and plans (NTMP 2017-2037).

4.6.1 Prepare policy and regulation to guide data collection, management and sharing

The NTMP recommends that the MoTPW develops a strategic framework and repository for all transport related data including processes, surveys, statistics, and analytical systems.

Blantyre City commits to establishing its own frameworks and repositories for the city's transport-related data. Clear policies and regulations are pertinent to guide in identifying required key transport datasets, defining appropriate data classification, collection, storage and reporting standards for the city and data gaps to inform key areas for research, development, and benchmarking. Blantyre City Council will adopt data policies and strategies, and delivery mechanisms that promote mobility data collection and sharing between and amongst private and public stakeholders, especially those that advance safe, accessible, inclusive, efficient, and green urban mobility systems.

Targets:

- i. Establish a city level local data collection policy and strategy by 2024;
- ii. Establish baseline datasets on key sustainable mobility indicators on a city-level by 2024;
- iii. By 2027, have robust data collection, sharing, and digitalisation mechanism to support mobility systems.

Activities:

- A. Assess the current gaps in data and capacity for data collection, analysis, dissemination, and storage;
- B. Awareness and capacity development campaigns on the role of data in decision making;
- C. Upgrade information and communications technologies (ICT);



- D. Prioritize skill development and capacity building in areas such as artificial intelligence, machine learning, and cloud computing, which are required for advanced data processing and sharing capabilities;
- E. Seek harmonisation of data across national, regional, and local levels to streamline scaling and data sharing and improve interoperability and cost efficiency;
- F. Adopt a collaborative approach for data sharing between policy makers, governments, citizens and civil-society members, businesses, and academia;
- G. Fully adopt the use of e-government tools, including Information Management Systems in Blantyre City Council operations.

Stakeholder engagement:

Blantyre City Council, Ministry of Information and Digitalisation, Ministry of Education, Ministry of Local Government and Rural Development, Ministry of Transport and Public Works, Ministry of Finance, Economic Planning and Development, academia and research institutions, special interest groups, public transport operators, national and international development partners, private sector.

4.6.2 Partner with local universities, research institutions and transport operators to conduct studies on sustainable transport systems for the city

According to the NTMP, research and development in transport is insufficient, and does not concretely contribute to strategy, new policies and practices, and adoption and innovation of new technology for transport management. The advancement of transport related knowledge is essential to support the building of better mobility systems in Blantyre. Blantyre City has respected universities capable of steering research and development in the transport field. For example, the Malawi University of Business & Applied Sciences has a transport department under the faculty of engineering. It is imperative that Blantyre City dedicates human and financial resources towards research and development in sustainable transport, by tapping into its abundant high education resources.

Targets:

- i. Set up a knowledge sharing platform/centre for urban mobility by 2026;
- ii. Establish at least 10 knowledge products on the status of mobility by 2028, in collaboration with research institutions by 2026.

Activities:

- A. Identify leading learning, and research institutions with transport faculties or transport hubs;
- B. Identify focal points within the city council to guide collaboration with academic and research institutions;
- C. Set up professional development programs for city officials on data-oriented sustainable transport planning.

Stakeholders involved:

Blantyre City Council, BCC Education and Sports department, Ministry of Information and Digitalisation, Ministry of Education, Ministry of Local Government and Rural Development, Ministry of Transport and Public Works, Ministry of Education, Ministry of Finance, Economic Planning and Development, academia and research institutions, Special Interest Groups, public transport operators and national and international development partners and the private sector.



5. Monitoring and Evaluation

To monitor the delivery of the Blantyre City Action plan, Blantyre City Council will conduct annual assessments of the public transport, walking, cycling, street lighting, safety, and other targets to establish the progress made and compare with expected targets. The results will be used to identify any gaps between existing and desired data, public transport, walking and cycling landscape. City authorities will review targets every second year and determine whether any updates are required. Data on the experience should be supplemented by citywide data collection initiatives that supplement mode shares and travel patterns obtained from periodic household surveys.

Table 2 summarises the targets contained in the Blantyre City Action Plan and comprises means of verification to enable tracking of the progress toward achieving the outlined targets.

Table 2: Means of verification for the Blantyre Action Plan

Goal	Target	Means of verification
4.1 Governance and strategy		
4.1.1 Form a dedicated non-motorised transport unit within the Blantyre City Council	Establish a Non-motorised transport unit in the Blantyre City Council Planning Department; by 2024.	Unit membership list
	Develop a Non-motorised transport strategy for the city by 2025.	Draft strategy document
4.1.2 Commit to improve the road networks in the city, ensuring the inclusion of safe, continuous, and efficient routes for low carbon mobility	Introduce an annual road safety or placemaking week, for community engagement and advocacy on road safety and people-centric urban and mobility planning and design, by 2023.	Newspaper articles, press releases or broadcasts on activities
	Prepare a street design manual for the city that prioritises universal design and accessible public transport by 2025.	Draft street design manual
4.2 Inclusivity in urban mobility		
4.2.1 Identify inclusive urban mobility champions to steer activities at a city level and ensure accountability.	Identify 2 inclusive urban mobility champions by 2023.	Informal acknowledgement of appointment from champions
	Set up a working group on inclusive mobility that meets quarterly by 2024.	Working group meeting minutes
	Training provided to 50 different and relevant stakeholder groups in the development of urban mobility plans, infrastructure projects and strategies by 2025.	Attendee lists for workshops and training activities



4.2.2 Establish clear stakeholder engagement guidelines and strategies	Establish a mobility centred outreach and communications strategy for engagement with stakeholders by 2023.	Draft communications strategy
	Establish a monitoring system that ensures the availability of information to the public is consistent and provides meaningful opportunities to give feedback on how the local government's responds to demands and needs by 2026.	Monitoring system terms of reference
4.2.3 Adopt universal access and street design standards to improve road safety	Produce a map of motor vehicle collision and road related injury and fatality hotspots throughout the city by 2024.	Number of motor vehicle collision hotspots reported
	Limit speeds up to 30km/h in built up areas along main roads and all one-way streets in cities 2025.	Number of low-speed traffic measures introduced
	Pedestrian and cyclist fatalities reduced by 80% below 2022 levels by 2028.	Police and hospital reports on road related incidents
4.2.4 Address personal security concerns	Rehabilitate and construct streetlights in crime hot spots, along cycling lanes and pedestrian walkways by 2025.	Percentage crime rates on public transport and active mobility routes
	Adopt and enforce city level regulations that define sexual harassment in public space and facilitate efficient reporting of incidents and conviction of offenders by 2026.	Number of reported incidents in police records
4.3 Climate change and environment		
4.3.1 Strengthen local governance for climate change	Clear-cut guidelines on authority and delegation of responsibilities of the Blantyre City Council, in partnership with national government to localise the national climate change strategies and develop a monitoring system to provide feedback on delegated tasks by 2026.	Outcome documents for engagement sessions with local and national authorities
	Train all local government and urban development personnel on issues related to climate change through and regional networks and	Percentage of trained personnel



	knowledge exchange opportunities by 2026.	
4.3.2 Promote compact city development and mixed land use	Kilometres travelled by private motor vehicles are no more than 10% of levels recorded in 2023, by 2026.	Block, weighted population, and land use density
4.3.3 Increase the mode share for walking and cycling	Hold at least 4 car free days by January 2024.	Newspaper articles, press releases or broadcasts on activities
	Women constitute 50% of cyclists by 2030.	Modal share disaggregated by gender
	Mode share of walking and cycling is 55% or above by 2031.	Total number of passenger trips by walking or cycling per inhabitant and per year
4.3.4 Increase knowledge and awareness on the impact of poor air quality	WHO ambient air quality norms are met 360 days a year by 2030.	Number of days per year on which WHO defined levels are exceeded
4.3.5 Prioritise clean and efficient mobility	Electric motorcycles constitute 20% of the Kabazas (motorcycle taxis) by 2027.	Percentage of the motorcycles that are electric
	Electric vehicles constitute 25% of motor vehicles by 2028.	Percentage of total vehicles that are electric
	At least 50% of the city council motorised fleet to be electric by 2030.	Percentage of the council motorised fleet that is electric
4.4 The role of paratransit		
4.4.1 Map and improve public transport access	85% of the city population has access of public transport stops within 500 metres by 2028.	Percentage of population with access to public transport within 500 metres using SDG indicator 11.2.1 methodology
4.4.2 Professionalisation and modernisation of the paratransit transport operations	Establish dedicated bus service, motorcycle, and bicycles taxi routes by 2025.	City endorsed map of transport routes
	Develop a preliminary public transport policy and strategy for Blantyre City by 2027 (to be embedded in SUMP).	Draft public transport policy



	Cashless fare payment and system integration by 2028.	Pricing and payment options provided by operators
4.4.3 Construction and maintenance of paratransit support infrastructure	Establish a public transport upgrade and maintenance strategy by 2024.	Draft strategy developed
	Provide shelter, adequate waiting areas, security installations and legible information to improve quality of 50% of bus stops and lay-bys as of 2022 by 2029.	Public transport customer satisfaction
	Construct 4 terminals for the bus network by 2031.	Terminals constructed
4.4.4 Facilitate the transition to cleaner and safer paratransit vehicles	100% formalisation of the minibus public transport sector by 2030.	Formalisation strategy
4.5 Sustaining data efforts		
4.5.1 Prepare policy and regulation to guide data collection, management and sharing	Establish a city level local data collection policy and strategy by 2024.	Draft strategic documents
	Establish baseline datasets on key sustainable mobility indicators on a city-level by 2024.	Baseline data with clear, measurable indicators
	By 2026, have robust data collection, sharing, and digitalisation mechanism to support mobility systems.	Terms of reference for data sharing system
4.5.2 Partner with local universities, research institutions and transport operators to conduct studies on sustainable transport systems for the city	Set up a knowledge sharing platform/centre for urban mobility by 2026.	Knowledge sharing platform
	Establish at least 10 knowledge products on the status of mobility by 2028, in collaboration with research institutions by 2026.	Knowledge products



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