



TUMI
Transformative Urban Mobility Initiative

UN HABITAT
FOR A BETTER URBAN FUTURE



TUMI INITIATIVE'S TRANSFORMATIVE STORIES

NAIROBI, KENYA: ACCELERATING CHANGE IN THE TRANSPORT SECTOR

Nairobi's residents typically use a combination of walking and minibuses (locally referred to as 'matatus'), to get around the city. Although matatus form the backbone of public transport, journey times are often long and unpredictable, and commuters are exposed to a number of hazards. With the resultant rise in the use of private vehicles, the city is suffering from increased traffic congestion, air and noise pollution, road injuries and fatalities. Nairobi needs a reliable, affordable integrated public transport and non-motorized transport (NMT) network that is safe and accessible to all income groups. The Mobility Accelerator aims to support youth startups that offer transformative, practical, well researched and tested solutions to urban mobility challenges, with the aim of improving the commuting experience in African cities.

ABOUT NAIROBI

Nairobi, Kenya's capital, is a rapidly growing city with an estimated population of 3.36 million inhabitants in 2014. With Kenya's rapid urbanization rate of approximately 4.36 percent per annum, 75 percent of newcomers to the city will end up in informal settlements such as Kibera that lack many basic infrastructure services and amenities. This contributes to high levels of inequality between those who can afford to live in serviced areas, and those who cannot. The City is largely unprepared for rapid growth, and this is most apparent on its roads.



Map data ©Uwe Dederig [CC BY-SA 3.0]

Population: 3,300,000 (2014)

Area: 696 km²

Density: 4,741 people/km²

MODAL SPLIT

39.7% on foot

28.4% matatu

13.5% private car / taxi / truck

12.2% bus

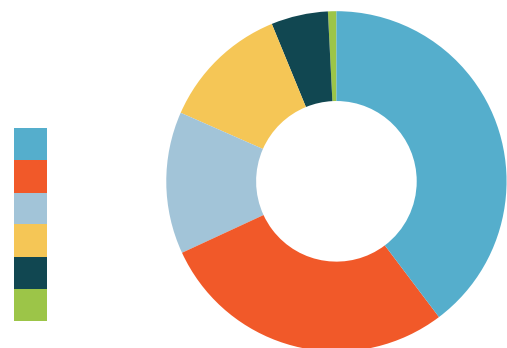
5.4% two wheeler

0.8% other

Source: JICA 2013

VISION

"A congestion-free Nairobi County where public transport is orderly and flows seamlessly, where private car use becomes less necessary and where pedestrians especially children have safe walkways across the city." (Nairobi County Manifesto, 2017)



MOBILITY IN NAIROBI

The high number of trips made by foot, as can be seen in the modal split above, is admirable from an environmental perspective. However, most people walk out of necessity due to the prohibitive cost of other modes of transport. The city has very few sidewalks or other NMT facilities, which means that pedestrians and cyclists risk their health and safety by sharing the road with motorized vehicles. In 2014, 723 people died on Nairobi's roads, and of these, 70 percent were pedestrians (Transportation Unit, Nairobi City County, 2014 in: Nairobi NMT Policy, 2015). Despite the recent adoption of an NMT policy that aims to create 1000 km of footpaths by 2020, and provides regulations to prevent the abuse of and encroachment into NMT areas, there has been a lack of government support in NMT investment. Promises to allocate 18.2 percent of the infrastructure budget to NMT have not been approved by the cabinet. There is also a lack of capacity within the City to design good NMT facilities, and European consultants have recently been hired to develop NMT Design Guidelines for it.

Nairobi's bus system functioned well for six decades until the mid-1990s, when it collapsed. In the absence of public bus and rail services for longer distances, around 28.4 percent of the city's population use its estimated 20,000 matatus for their daily commute. Although matatus drive dangerously, charge inconsistent rates and are often unsafe for passengers and other road users, they have become the most popular mode of public transport as they cut corners and often transport passengers to their destinations quicker than other modes of transport. There is significant room for improving the current transport system in terms of network coverage and provision of dedicated facilities, but a lack of cooperation between government and matatu drivers stands in the way of improving the commuter experience. Compounding the problem is rapid growth in the use of 'boda boda' motorcycle taxis, which weave dangerously between moving vehicles.

There has also been an increase in car ownership rates and worsening traffic congestion, particularly during peak hours. Between 2004 and 2013, total traffic flows increased 1.69 times, while car ownership increased from 23.3 percent to 29 percent (integrated urban development master plan for the City of Nairobi (NIUPLAN, 2014). At current growth rates, journeys by car and motorbike are expected to triple from 2009 to 2030 (Transportation Unit, Nairobi City County, 2014). It is estimated that traffic congestion in Nairobi costs its economy \$361 million annually (Transport and Urban De-Congestion Committee Report, 2013). Kenya's growing middle class view private cars as status symbols, and those who can afford them are encouraged to adopt this mode of transport accessing cheap credit, aggressive marketing by car manufacturers, and investments in road infrastructure (e.g. flyovers). The trend toward the use of private cars threatens to move Nairobi in an unsustainable direction unless something is done to make public transport and NMT more user-friendly.





A MOBILITY ACCELERATOR TO SPARKLE INNOVATION

Nairobi's TUMI Challenge winning project is the Mobility Accelerator, which aims to support youth startups that offer transformative, practical, well researched and possibly tested solutions to urban mobility challenges in African cities. Participants in a previous mobility hackathon in Nairobi, organized by TUMI in April 2018, were encouraged to apply and position themselves as relevant innovators in the field.

The Accelerator is a partnership between the Center of Computing for Development (or C4Dlab, the University of Nairobi's innovation laboratory), UN-Habitat and TUMI who will incubate the startups for five months in the C4Dlab. During this period, they will receive coaching and mentorship from local and international transport experts including UN-Habitat's Urban Mobility Unit. The call for applications has been launched, and it is likely that winning solutions will address the matatu business, mobility-as-a-service options, shared mobility options, logistics, walking and cycling challenges, mobility data and other areas.

The startups nurtured by the Mobility Accelerator will have the potential to provide transformative urban mobility solutions that can offer more travel options, reduce travel times, costs and risks and provide greater comfort for users.

They can also improve inclusion by catering to the needs of women, children and people with disabilities, and help reduce harmful emissions by promoting efficient energy use.

NAIROBI'S NEW RAPID TRANSIT NETWORK

Nairobi is planning a 103 kilometer-long rapid transit network comprising five lines. Phase one will be implemented between 2018 and 2030, and will focus on bus rapid transit as a medium-term solution. Phase two will add a rail-based mass rapid transit system (MRTS) after 2030. The Nairobi Metropolitan Area Transport Authority (NAMATA) has been established to provide institutional support and coordinate Nairobi's wider public transport plans. By fostering startups that assist with planning journeys on these systems and linking them to other systems such as the University of Nairobi's pilot bike share scheme, the Mobility Accelerator will help make public transport more convenient, safer and appealing to commuters.



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Nairobi County Manifesto, 2017

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ADDITIONAL READING

TUMI Startup Accelerator website:
www.tumi.c4dlab.ac.ke

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The [Transformative Urban Mobility Initiative \(TUMI\)](http://transformative-mobility.org) enables leaders in developing countries and emerging economies to create sustainable urban mobility. It offers technical and financial support for innovative ideas. In TUMI the German Federal Ministry of Economic Cooperation and Development (BMZ) has brought together some of the world's leading institutions working on sustainable mobility with city networks and think tanks to implement projects on site where they are needed most. Partners include ADB, CAF, WRI, ITDP, UN-Habitat, SLoCaT, ITDP, ICLEI, GIZ, KfW and C40. transformative-mobility.org

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