

# DAR ES SALAAM, TANZANIA: ENHANCING SMART MOBILITY THROUGH THE DAR CITY NAVIGATOR

Dar es Salaam is one of Sub-Saharan Africa's largest and fastest growing cities. With significant numbers of people living in informal settlements on the ever-expanding urban edge, the majority of its citizens have to travel vast distances between their homes and areas of economic opportunity. The bulk of trips are either on foot or via dangerous and unreliable dala-dalas, but the City is investing heavily in a new BRT system to better meet the needs of its citizens. The Dar City Navigator will provide an integrated information and trip planning platform to assist commuters to travel in and around the city, improving their public transport experience so as to make it a more appealing alternative to travelling by private car.

### ABOUT DAR ES SALAAM

Dar es Salaam is one of the largest cities on the eastern coast of Africa covering a total land area of 1590 km², and is the economic capital of Tanzania. With a population of over 4.3 million and popular tourist destination Zanzibar just off its coast, the City needs to cater to the mobility needs of large numbers of local commuters and foreign travelers each day. With congestion on the city's roads rising dramatically, the City needs to provide and support public and non-motorized transport (NMT) options as the backbone of its mobility system.



Map data © Sémhur / Wikimedia Commons

Population 4,364,541 (2012)

Area: 1,590 km<sup>2</sup>

Density: 2,745 persons/km<sup>2</sup>

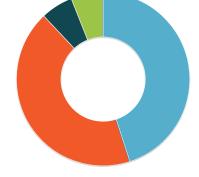
#### **MODAL SPLIT**

45% NMT

43% Public transport

6% Personal Motor Vehicles (PMV)

6% Other



Source: Dar es Salaam BRT Phase 1 Corridor Development Strategy, 2018

#### **TARGETS**

- · Encourage the use of NMT to Dar es Salaam
- Use ICT to improve the user's experience of public transport
- · Adopt electric buses in the future

# **MOBILITY IN DAR ES SALAAM**

Dar es Salaam is dealing with the effects of the 'urban crisis' of the 1980s, during which its population increased rapidly. This has resulted in numerous social challenges including shortages in public transport, housing and employment. The transport-related challenges include:

- · a lack of capacity to serve the demands of the growing population
- · a lack of traffic control signage, road markings and maintenance
- congestion on most roads (e.g. Kilwa, Bagamoyo and Morogoro Roads)
- · heavy-goods vehicle traffic in some major wards
- · low quality, unpaved, and poorly maintained streets outside the city center
- poor parking management
- · inadequate road widths
- little provision of facilities for walking or cycling outside the city center.

With the city being as large as it is, and its expansion taking place in the form of sprawling informal settlements mainly on its periphery, it is extremely difficult for citizens, particularly the poor, to move in and around it. Residents need to travel large distances to get to and from work, school, shops, and other destinations. Forty-five percent of these trips are via non-motorized means, which results in lengthy and dangerous commutes. The necessary infrastructure to facilitate safe walking and cycling is mostly absent in Dar es Salaam (UN Habitat, 2009). The city is in urgent need of safe areas for pedestrians and cyclists, and integrated land-use and transport planning to reduce the length of commutes.

Although 43 percent of daily commutes is via public transport, the current system and infrastructure are quite limited, with a low number of available buses and a lack of formal schedules to allow commuters to plan their journeys. This market gap is filled by privately-owned dala-dalas (minibus taxis), which currently provide the bulk of public transport in the city. The service they offer is valuable: coverage is extensive, fares are low, and frequency is high along main corridors. However, their network is inefficient, drivers often disregard road rules, vehicles are old, and services are crowded. Integration with city planning is poor, and cooperation is difficult with ownership split between numerous individual vehicle owners.

Having realized the need for improved public transport in recent years, the City has made significant progress in providing urban public transport (UPT) through the implementation of a city-wide bus rapid transit (BRT) system.



By providing fast and safe buses for citizens, quality of life can be improved, especially for lower income groups who have more options as a result. The co-benefits will see the improvement of road infrastructure, in addition to the reduction of pollution and greenhouse gas emissions from private cars. A fully functional BRT system will also help to reduce traffic congestion, saving time and fuel that is wasted in traffic, and produce associated benefits for the economy and urban air quality.



## DAR CITY NAVIGATOR

The Dar City Navigator aims to provide the citizens of Dar es Salaam with "information and transport at their fingertips". The tool will function as a multi-modal trip planning and information platform for public transport users, and is expected to enhance mobility by improving their experience of the city's public transport systems.

The immediate beneficiaries of the Navigator are expected to be local commuters (the majority of whom are dependent on public transport), tourists and other visitors to the city, and other stakeholders in urban public transport. The project will also accommodate the integration of other forms of mobility such as walking and cycling, and will be mobile phone compatible as it will comprise an application linked to a smart ticketing system. The platform beta version is expected to be operational by May 2019.

#### **RELATED MOBILITY INITIATIVES**

The Dar City Navigator will play a significant role in encouraging a shift toward EcoMobility by making the experience of walking, cycling and using public transport more convenient, thus improving the lives of citizens and helping the city to become more sustainable.

The City of Dar es Salaam is continuously working towards the improvement of mobility in and around the city. Its current key focus areas are:

- · improvement of the BRT phase I services to suit the desired standards and needs of the growing population
- · construction of phases 2-6 of the BRT system, towards a total of 141.1 kilometers
- construction of a standard gauge railway from Dar es Salaam to upcountry areas
- enhancement of NMT facilities within Dar es Salaam
- campaigns to raise public awareness about different modes of transport
- · improved integration of land use and urban transport initiatives
- implementation of the Dar es Salaam City Master Plan 2012-2032
- · enforcement of smart mobility and public transport policies
- · adoption of more environmentally friendly vehicle technologies (e.g. Euro 3 Fuel)





### **KEY CONTACTS**

#### **Dar Rapid Transit Agency (DART)**

Ng'wanashigi Gagaga, ICT Manager Faustine Luhemeja, ICT Officer

## **ICLEI Africa Secretariat**

Ryan Fisher - ryan.fisher@iclei.org africa.iclei.org | @ICLEIAfrica @ecomobility\_

#### **TUMI Initiative**

Daniel Moser - daniel.moser@giz.de transformative-mobility.org | @TUMInitiative

# **ACKNOWLEDGMENTS**

Author: Ryan Fisher Contributors: Ng'wanashigi Gagaga

and Faustine Luhemeja Layout: Matteo Franceschi Photos: Dar Rapid Transit Agency (DART) and GIZ

Icons: Gregor Cesnar and Google /

Flaticon.

# **ADDITIONAL READING**

Dar Rapid Transit Agency (DART) website: www.dart.go.tz

The Transformative Urban Mobility Initiative (TUMI) 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

The ICLEI Case Stories series (iclei.org/en/publications.html) focuses on urban sustainability activities of cities, regions, and towns that are part of ICLEI projects across the world. Email: urban.research@iclei.org © TUMI/ICLEI 2018-2019.





