Tbilisi Transport Plan

თბილისის სატრანსპორტო გეგმა

თბილისის მერია

Tbilisi Transport Plan

2023 - 2043

თბილისის სატრანსპორტო გეგმა

თბილისის მერია

ADB

Contents

Foreword

Dear Citizens of Tbilisi,

It is with great pride and excitement that I present to you the Tbilisi Transport Plan. This is a truly transformative sustainable urban mobility strategy designed to shape the future of our beloved city. As Mayor of Tbilisi, I recognise that our vibrant capital faces both incredible opportunities and unique challenges as we continue to grow and evolve.

With a population of approximately 1.25 million and counting, Tbilisi's allure lies not only in its rich history and cultural heritage but also in its dynamic and diverse community. Our city's picturesque setting, nestled between hills and along the banks of the Mtkvari River, makes it truly one of a kind. However, as we witness increasing urbanisation and transport needs, it becomes imperative for us to craft a forward-looking Transport plan that addresses the needs of our people while preserving the essence of Tbilisi.

This comprehensive Transport Plan aims to prioritise accessibility, sustainability, and inclusivity, all of which are central to creating a thriving urban environment. By reimagining our transportation system and embracing innovative solutions, we seek to reduce traffic congestion, lower air pollution, and enhance overall connectivity while meeting the challenges posed by climate change. Our goal is to provide efficient, safe, and environmentally-friendly mobility options that cater to the diverse needs of our residents and visitors.

Throughout the development of the Tbilisi Transport Plan, we have focussed on the needs of stakeholders, businesses, tourists, and most importantly, you – the citizens of Tbilisi – to ensure that your voices and aspirations are at the core of our vision. We believe that sustainable urban mobility is not merely about roads and infrastructure but about our commitment to a better quality of life for everyone who calls Tbilisi home.

As we move forward with the implementation of the Tbilisi Transport Plan, I invite each and every one of you to actively participate in this transformative journey. Together, let us shape a city where efficient transportation coexists harmoniously with environmental stewardship, economic prosperity, and social equity.

I am confident that with collective determination and solidarity, we can build a Tbilisi that is a beacon of sustainable urban living and a source of inspiration for cities around the world.

Kakha Kaladze,
Mayor of Tbilisi

Newly rehabilitated Melikishvili avenue
Source: TUDA

Acknowledgements

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Project Core Team

Transport and Urban Development Agency of Tbilisi City Hall

Davit Jaiani, Deputy Head, TUDA

Giorgi Maisuradze, Head, International Relations and Projects Department

Iva Vasadze, Senior Specialist, International Relations and Projects Department

Torben Heinemann, International Integrated Transport Expert

ADB Project Team

Ramola Naik Singru, Principal Urban Development Specialist, Central and West Asia Department

Lloyd Wright, Senior Urban Development Specialist, Central and West Asia Department

Tea Papuashvili, Associate Project Officer, Georgia Resident Mission

International Experts

Annie Weinstock, President, BRT Planning International (ADB)

Vidhi Mohan (AFD and ADB)

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The Core Team thanks the following for their support, in-depth comments, reviews, and technical inputs.

TUDA Staff (including former staff)

Viktor Tsilosani (Head of TUDA), Elene Khundadze, Nino Soselia, Tamar Lobjanidze, Salome Sharashenidze, Irakli Zhozhuashvili, Giorgi Asatiani, Elisabed Archvadze, Beka Kakabadze, Alexander Targamadze, Mzevar Gogilava and Nino Shanidze.

Tbilisi Development Fund

Ucha Samkharadze

Ramboll Consultant Team

Adeyemi Adedokun, Varun Atluri, Søren Mikkel Berg, Viktoriia Betina, Alexia Marris Binet, Darius Colin, Robin van der Griend, Marta Havåg Ranestad, S J Keerthana, Diane Kefalas, Andrea Elisabeth Landsverk, John Mcdaniel, Jean-Marc Mirailles, Katja Mo, Sophia My Anh Nguyen, Thaddaeus O'Higgins, Johnny Ojeil, Elodie Papin, Tim Parris, Torsten Perner, Amalia Plana, James Ramsey, Aino Ropponen, Erica Roselius, Ian Sacs, Eero Salminen, Gilles Verbauwhede, Jens Vogel, Jamie Ward.

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Other Stakeholders

Mar Mikhelidze (Caucasus Cycling Network)

Glossary of Terms

ADB	Asian Development Bank
AFD	Agence Française de Développement (French Development Agency)
CDIA	Cities Development Initiative for Asia
EBRD	European Bank for Reconstruction and Development
EUR	Euros
GEL	Georgian Lari
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit (German Development Agency)
ITS	Intelligent Transport Systems
KfW	Kreditanstalt für Wiederaufbau (German Development Bank)
LUMP	Land Use Master Plan
NMT	Non-Motorised Transport
PPP	Public Private Partnerships
PT	Public Transport
SEIA	Social and Environmental Impact Assessment
TBT	Tbilisi Bus Transit
TCH	Tbilisi City Hall
TDF	Tbilisi Development Fund
TDM	Travel Demand Management
TOD	Transit-Oriented Development
TTC	Tbilisi Transport Company
TUDA	Transport and Urban Development Agency
USD	US Dollar

Executive Summary

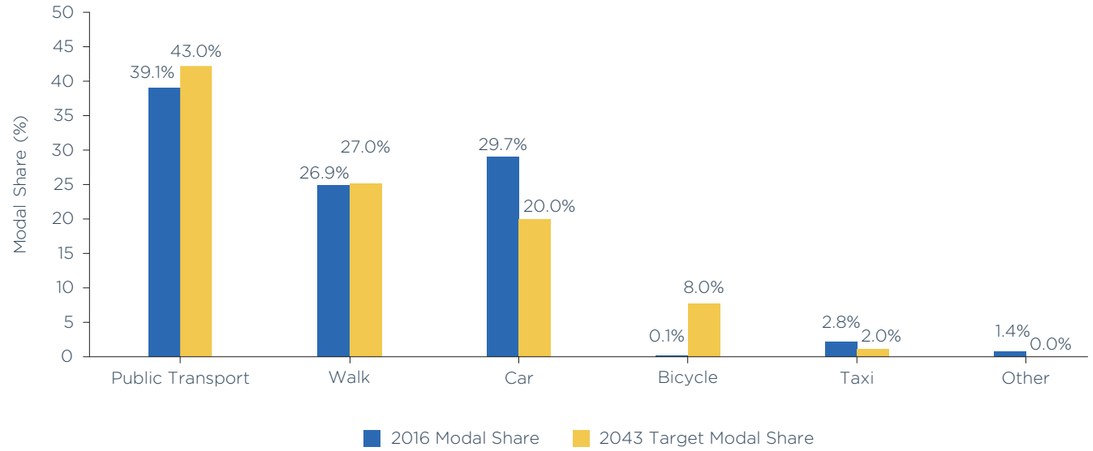
The Tbilisi Transport Plan is a concerted effort between city officials, key stakeholders, and the citizens of Tbilisi to improve mobility in Tbilisi. It is an opportunity to consider what the city can and should look like over the next 20 years. Through a consultative process, and with much consideration, the following vision statement was crafted:

> *"To deliver to the citizens of Tbilisi an effective, efficient, safe and sustainable urban transport system that is accessible and affordable for all and contributes to a better quality of urban life and environment."*

This important vision underpinned the development of the Tbilisi Transport Plan. To ensure that Tbilisi can realise this vision, Tbilisi City Hall undertook a multi-year process to develop this Transport Plan.

Process for developing the Tbilisi Transport Plan

To lay the groundwork upon which to build the plan, the first step was to analyse what mobility looks like in Tbilisi today and identify the biggest barriers towards achieving the vision. Tbilisi's public transport system is extensive, with bus routes and the metro together serving much of the city. The use of public transport has been generally increasing in recent years. Yet car ownership – and preference for car use – also continues to grow.



2016 Modal Share Vs 2043 Target Modal Share.
Source: 2016 Household Survey

The vision for mobility in Tbilisi by 2043 is ambitious and far-reaching. It encompasses many aspects of the mobility system. To distil these aspects into more concrete terms, a set of more specific goals were developed:

#1 Reduce car dependency in favour of more sustainable transport modes

#2 Improve accessibility and connectivity at city and regional level

#3 Improve the efficiency and level of service in the mobility system

#4 Provide inclusive transport solutions

#5 Improve safety and security in urban areas and the mobility system

#6 Provide high quality urban spaces

#7 Reduce impacts on health & environment

Next, concrete transport-related actions were proposed, packaged into three future scenarios and tested in a transport model. One scenario emerged as the most likely to achieve the Vision and Goals by 2043. It was then further refined into a "Retained Scenario" to include several critical actions from the other scenarios.

Retained Scenario

Strategic areas Inputs comparison

Scenario	Urban Development	Urban Liveability	Walk & Bike	Travel Demand Management & Parking	Public Transport
Retained Scenario This scenario focuses on managing travel demand while significantly improving the **public transport offer**	●●◐	●●◐	●●◐	●●●	●●●

Other areas

- Sustainable Infrastructure
- Clean Vehicles
- Tourism
- Road Traffic & Safety
- Urban Logistics
- Intelligent Transport Systems (ITS)

The Retained Scenario includes a long list of actions to be implemented over 20 years. With the completion of those projects, Tbilisi will be much closer to realising its long-term vision. Yet even in the short-term, the city will begin taking important steps towards reaching the final vision. To that end, a five-year Action Plan has been developed, to be seen as a sub-set of the larger 20-year action plan and representing those actions that will be started within the next five years.

5-Year Action Plan (Page 56)

The 5-Year Action Plan, once implemented, will represent a significant positive change for how Tbilisi's citizens move around the city. Over the course of the next **five years**, it is estimated that between **$505 million** and **$515 million** will be invested to make this plan a reality. The following is the set of actions that are expected to have kicked off within the next five years. By 2028, the majority of these actions will already be showing progress on the ground.

Superblocks (Page 58)

A Superblock is a geographical space that covers several city blocks, in which priority is given to pedestrians and cyclists. The physical design prevents through-travel for private motorised vehicles. As a pilot project, three Superblocks will be built in Tbilisi: **Sololaki Superblock, Kiacheli Superblock,** and **London Park Superblock.**

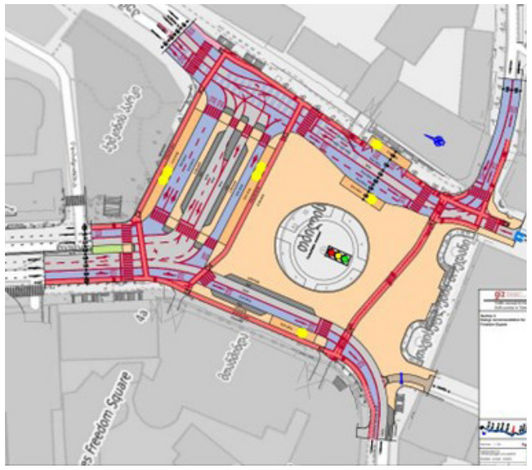
Waterfront Revitalisation (Page 62)

The waterfront revitalisation project aims to rejuvinate and enhance Tbilisi's waterfront, to increase the attractiveness of walking and cycling along the river. This short-term action includes the area around the Public Service Hall and the following specific actions:

- Continuous green space and pavement from the **Alexander Griboedov Statue** to **Saarbrucken Square** on the left bank
- New **park and green space** next to the Public Service Hall
- New **pedestrian bridge** across the river from the Public Service Hall
- A new **linear skate park** on the left bank of the river, opposite the Public Service Hall

Freedom Square and Rustaveli (Page 66)

This project focuses on redesigning Freedom Square and Rustaveli Avenue as places for people. In Freedom Square, the existing roundabout will be replaced by two-way streets with bicycle lanes along the edges of the square and safer crossings. The entire centre of the square will be converted to a **plaza** with places to sit, greenery, and human-level streetlighting. On Rustaveli Avenue, the existing high-speed arterial road will be converted into a **boulevard**, more fitting of a modern international city.

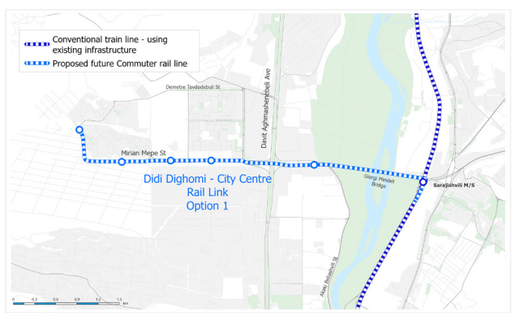


Pedestrian-Oriented Kote Afkhazi Street (Page 70)

Kote Afkhazi Street is a key route through Old Tbilisi. This project will include a major 'façade-to-façade' re-design of Kote Afkhazi Street, giving less room to private cars and more room to people walking and cycling. There will be **public plazas**, including an improved Meidan Square at the southern end of the street. The re-design will also provide **more green space** throughout and will **better organise car parking** so that it is less chaotic.

Didi Dighomi – City Centre Rail Link (Page 74)

In the long-term, as the population in the area continues to grow, a **rail-based system** will be studied between Didi Dighomi and the city centre. Three options are under consideration: a tram-train which travels as a train up to Sarajishvili and as a tram to Didi Dighomi, in a one-seat ride; or a traditional tram from either Didube Transport Hub to Didi Dighomi or Saburtalo to Didi Dighomi.



Commuter Rail (Page 78)

A proposed commuter rail system will run services between Tbilisi Airport and the city centre, between Tbilisi and Rustavi, and between Tbilisi and Mtskheta. The railway station at Station Square will serve as the main interchange hub, though in the long run through services may be run between Mtskheta and Rustavi, as well as extending services to the cities west of Mtskheta such as Kaspi and Gori. This action will require upgrades to the existing infrastructure, new and/or refurbished stations, new trains, and a depot. Additionally, a new rail link between Tbilisi Airport and Rustavi will be explored.

Metro Modernisation (Page 82)

This action will progress the modernisation of the metro system including: new station entrances at **Akhmeteli Theatre** and **Marjanishvili Stations**; station modernisation and **improved accessibility**, including new lifts and escalators as well as gap reduction at the boarding platforms; outdoor accessibility to stations, including the bus transfer terminal at Akhmeteli Theatre Station; and train **car modernisation.**

Tbilisi Bus Transit (Page 86)

To create a faster and more comfortable bus riding experience, ten **'Tbilisi Bus Transit' (TBT)** routes have been selected. The TBT routes will include 18-metre articulated buses which will run every four minutes. The main streets on which these routes operate will receive **infrastructure upgrades**, including dedicated lanes and improved bus stops and stations.

Better Buses and Minibuses (Page 90)

This project focuses on providing a higher quality of bus and minibus service, and reducing reliance on subsidies, through:

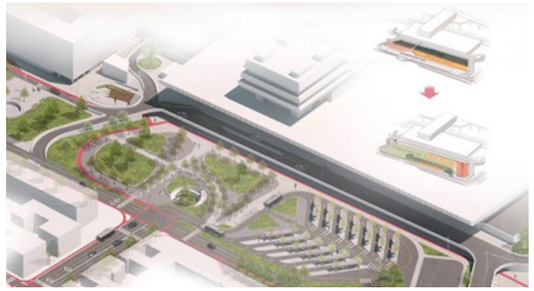
- **Improved bus and minibus stops**, including faster and more accessible boarding
- **Higher quality of bus service**, including reformed contracts with operators and better bus lane enforcement
- **Improved passenger information** both at stops and online
- **Bigger and cleaner buses**

Cable Cars (Page 94)

The unique geography of Tbilisi, being located in a valley, with many of the residential areas located higher up, enables the development and use of urban cable cars as a means of getting people from the residential districts to the business districts. Urban cable cars have been identified for the following six corridors: **Route 1**: Isani – Vasizubani; **Route 2**: Sarajishvili – Zghivisubani; **Route 3**: Vasha Pashvela - Nutsubidze Plateau; **Route 4**: Didi Dighomi – Delisi; **Route 5**: Station Square – Varketili; and **Route 6**: Rehabilitation of the Samgori Ropeway.

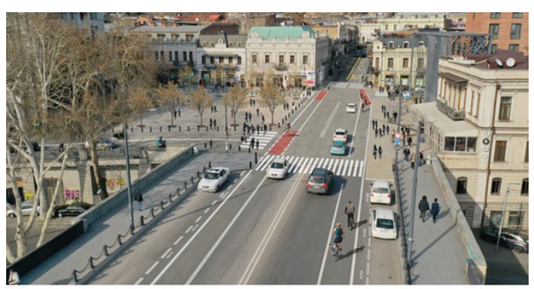
Station Square Upgrade and Bus Priority Crossing (Page 98)

This project focuses on redesigning the space in front of Station Square as a safe and efficient interchange, with attractive public space and enhanced storefronts. To ensure the smooth operation of the TBT network, a new East-West crossing over the railway line will be built. This bridge will give priority to buses; and options for including bicycles and pedestrians are being studied.



Pedestrian- and Cycle-Friendly River Crossings (Page 102)

This project aims to redesign four existing river crossings in Tbilisi, to become safer and more attractive for people walking and cycling: **Metekhi** Bridge, **Saarbrucken/Dry** Bridge, **Galaktioni** Bridge, and **Baratashvili** Bridge. The project also aims to build one **entirely new pedestrian and cycle-only river crossing** connecting the Public Service Hall to a new park on the opposite side of the river. Finally, the project will redesign Saarbrucken Square at the foot of the Saarbrucken Bridge, as a public space with more efficient traffic operations.



Pedestrian Streets (Page 106)

Pedestrian-only streets are streets where people, and especially children, can move freely, without worry for their safety. Tbilisi already has several successful pedestrian streets. The following streets have been identified as a priority for pedestrianisation: **Vashlovani Street; Vladimer Kankava Street; Mikheil Lermontovi Street** (one section); **Ivane Machabeli; Gudiashvili Street; Mosashvili street** (eastern section).

Bicycle Network (Page 110)

This action focuses on a two-fold strategy for completing Tbilisi's cycling network, and consists of the following:

- **Master Network**: A master network of connected, safe and attractive cycling routes. The network will cover around 30 additional kilometres of cycling routes in the short-term and 325 total kilometres in the long-term.
- **Velo Ubani**: Neighbourhoods with self-contained bicycle networks such that it is possible to safely cycle to any part of the neighbourhood. The near-term pilot Velo Ubani will be in the Marjanishvili neighbourhood, followed by Saburtalo.

On-Street Parking Management (Page 114)

In many international cities, parking acts as a control on the amount of congestion and growing car use. In Tbilisi, parking is still relatively cheap and is free in many places. Furthermore, illegal parking is a major issue. Meanwhile, subsidies to the public transport system have grown to 150 million GEL per year ($46 million). This action aims to develop and implement a **comprehensive on-street parking plan**; physically paint and separate parking spaces with greenery; modernise parking contracts, possibly through the use of public-private partnerships; and explore **opportunities** for using the new revenue.

Parking Levy (Page 118)

A parking levy is a daily fee placed on the owners of off-street, non-residential parking spaces, such as shopping malls, office parks, etc. within a designated zone, regardless of whether the parking space is utilised or not during the day. It is an entirely new **revenue stream** for a city, which can be used to reduce public transport subsidies as well as to **expand the public transport system.**

Vision Zero (Page 122)

This project puts forward the critical goal of reducing road deaths to zero, an approach developed in Sweden and used around the world. Tbilisi's Vision Zero programme seeks to **reduce speed limits** citywide, build out a **safe cycle network**, develop 15km of "**complete streets**" every year; **improve 12 junctions** by the end of 2024 and **5 per year** thereafter; and **increase enforcement.**

Transit-Oriented Development (Page 126)

Transit-Oriented Developments (TOD), are highly walkable developments, built around public transport, with a mix of uses, including housing, offices, restaurants, shops, and entertainment. In the short-term, the city will begin implementation towards the **Isani TOD**. In the longer term, additional TODs will be developed around the following 4 transport hubs: **Station Square, Didube, Sarajeshvili and Ghrmaghele.**

Intelligent Transport Systems (Page 130)

A single modular Intelligent Transport System (ITS) will cover all road-based traffic in Tbilisi. The main elements of the ITS system are likely to include: a single **traffic control centre** for the whole city; permanent on-site **traffic detectors** (radars or cameras) to record real-time traffic levels; **incident detection cameras** (AID); **CCTV** for real-time visual monitoring of the traffic incidents; fixed **Variable Message Signs** to provide real-time information about traffic conditions and incidents and **bus priority** at traffic lights.

Urban Freight Logistics (Page 134)

This action consists of several measures which will improve the sustainability of freight logistics in Tbilisi. They include: international, regional, and hyperlocal **freight hubs** for consolidating shipments and directing them to neighbourhoods, using smaller, cleaner vehicles; designated **on-street loading zones** throughout Tbilisi; and zones where **access for heavy vehicles is restricted.**

Next Steps

The Tbilisi Transport Plan is a critical first step towards realising the vision of the city. However, it does not end with a plan. To translate the plan into real action, the following next steps will be taken:

1. The plan must be **adopted** into formal city policy.
2. A **dedicated team** will be established within TUDA's International Relations and Projects Department, with a **full-time** Tbilisi Transport Plan Officer.
3. The team will lead **annual updates** to the Tbilisi Transport Plan.
4. The team will ensure frequent coordination with **stakeholders and the public** and will establish topic-level **working groups.**
5. Progress towards implementation will be measured through the **Annual Scorecard.**

In this way, the government, the project stakeholders, and the general public will continue to be key participants in the evolution of the Tbilisi Transport Plan and together, will help to usher in a more sustainable Tbilisi.

01.

Introduction

Introduction

Lying on the banks of the Mtkvari River in central Georgia, Tbilisi is home to approximately 1.25 million people. The city has developed over centuries to become a thriving capital city with strong historical, cultural, educational and economic significance which attracts businesses and visitors from around the world. Rapid growth within the last 30 years has led to sprawling urban development, which combined with steep topography, has led to a fragmented and inefficient transport system that struggles to suit the needs of modern Tbilisi.

The Tbilisi Transport Plan is a 20-year plan that aims to change the mobility paradigm in the city from car-oriented metropolis to a city with cleaner air, safer streets and access for all. This plan builds on several city plans such as the Land Use Master Plan, the Local Economic Development Plan, the Green City Action Plan, Resilient Tbilisi and the Sustainable Urban Transport Strategy. The Tbilisi Transport Plan was commissioned by the City of Tbilisi with funding from the Asian Development Bank.

The Tbilisi Transport Plan defines what kind of city we want Tbilisi to be in 5, 10 and 20 years from now, from a transport perspective, and how transport projects and polices will work towards delivering the kind of city we want.

Between 2011 and 2016, households with access to at least one car grew from 19% to 30%, with 20% of car trips made for distances of less than 1.5 km. To accommodate these car trips, the city has given over the majority of street space to cars, resulting in degradation of the walking and cycling environment, creating traffic congestion, increasing air and noise pollution, and worsening road safety.

The Tbilisi Transport Plan provides a clear action plan for creating a greener, healthier, safer and more attractive Tbilisi. The Tbilisi Transport Plan seeks to reduce car dependency, through investment in high quality, accessible public transport, walking and cycling infrastructure, and safe and attractive public spaces. The Plan represents a clear roadmap for taking Tbilisi into the mid-21st century, placing it firmly on the world's stage as a modern, sustainable and liveable city.

Tbilisi Transport

20 year plan

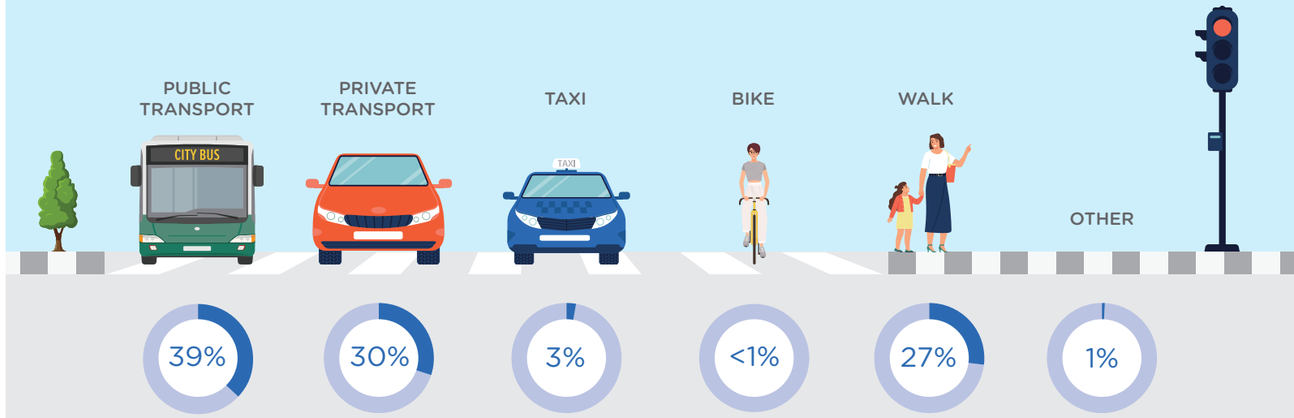


Figure 1.1: Travel Behaviour as of 2016. Source: 2016 Household Survey

02.

Main Stakeholders

Main stakeholders

There are a number of stakeholders who have an interest in, or influence over, the implementation of the Tbilisi Transport Plan. It is, therefore, important that stakeholders are engaged in the whole process from initial development through to implementation.

There are three overarching categories of stakeholders:

Primary stakeholders
those groups directly affected by the plans, such as local residents, commuters, lobby groups and funding agencies.

Key stakeholders
the key decision-makers with political power to approve and implement the plans, such as the Tbilisi City Mayor, and the key technical bodies needed to develop transport policies and projects, such as TUDA and TDF.

Intermediary stakeholders
other companies, public bodies and groups who have some impact on or interest in the plans, from employers and retailers to national ministries, transport operating companies and the media.

Eight main stakeholder groups have been identified, as shown in Figure 2.1:

1. Civil society
2. Government
3. Transport operators
4. Transport employees
5. Suppliers and vendors
6. Investors
7. The wider economy
8. Mass media

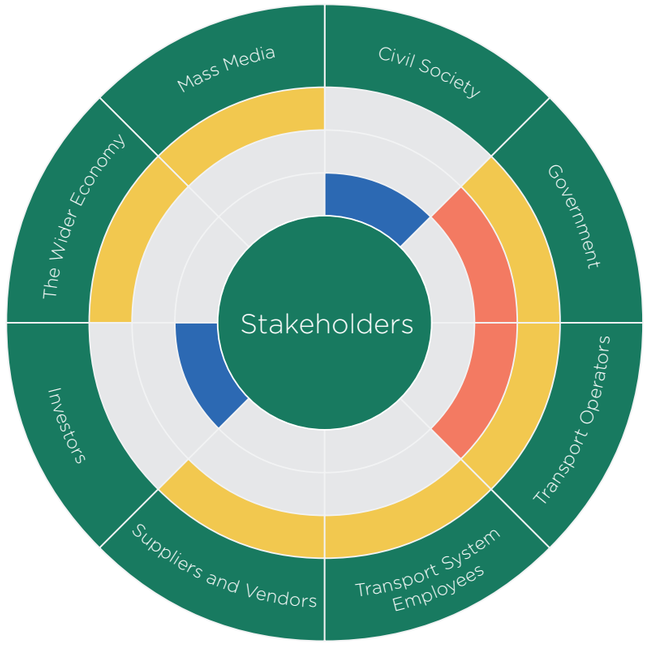


Figure 2.1: Summary of stakeholders

Throughout development of the Tbilisi Transport Plan, the stakeholders have been engaged in various ways depending on their individual needs, such as through regular progress meetings, informal conversations, public events, technical reports, brochures, television/ radio, and social media. For example, engagement took place during annual Mobility Weeks since 2021; and various expert groups have been closely consulted since work began on the Tbilisi Transport Plan. On August 30th 2023, a larger stakeholder engagement meeting was held with around 50 interested partners, institutions and individuals from funding agencies, non-governmental organisations and public sector institutions.

03.

Mobility in Tbilisi Today

Mobility in Tbilisi Today

A good understanding of how people move around Tbilisi today, and what types of challenges they face, has been critical to the development of the Tbilisi Transport Plan. To gain this understanding a comprehensive data collection, mapping, modelling, and analysis exercise has been undertaken. This has also included policy and legal reviews, site visits, stakeholder interviews, and focus groups.

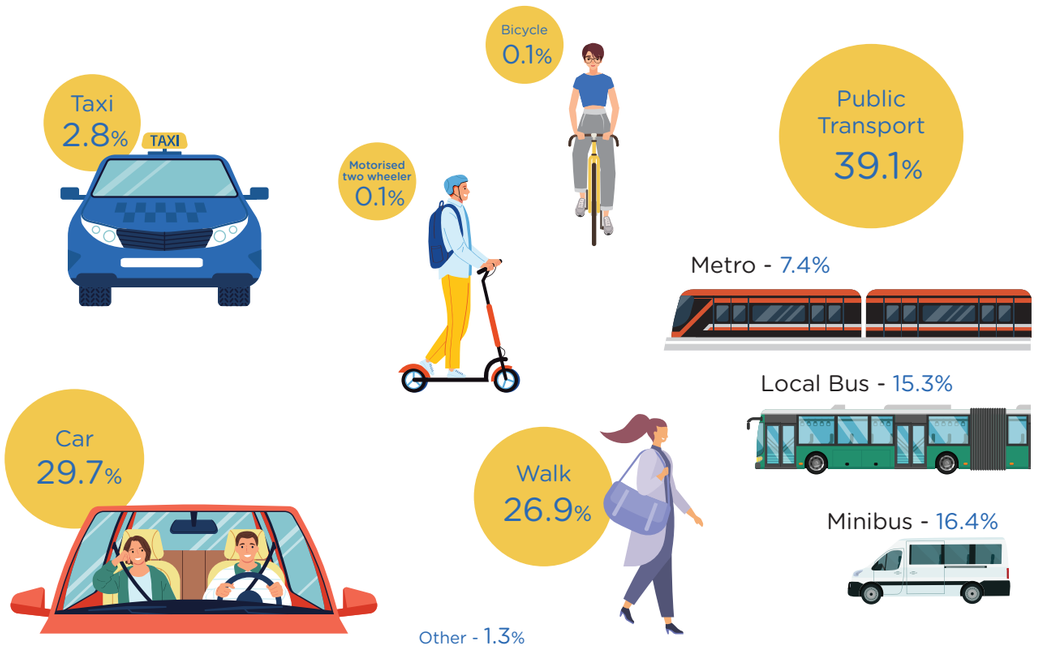


Figure 3.1: Travel Behaviour as of 2016. Source: 2016 Household Survey

Basic Facts

Tbilisi's public transport system is extensive, with bus routes and the metro together serving much of the city. The use of public transport has been increasing since the COVID-19 pandemic. While minibus ridership data is not available before 2021, bus and metro ridership have shown an increase since even before the pandemic. Yet car ownership – and preference for car use – continues to grow. Car use is higher in Tbilisi than many other cities, while use of sustainable options (especially cycling) is substantially lower.
The growth in car use has led to growing traffic congestion which affects buses as much as cars. Slower bus trips, together with a lack of bus shelters and other amenities in the waiting areas, make bus travel less attractive, adding to the number of cars on the road.

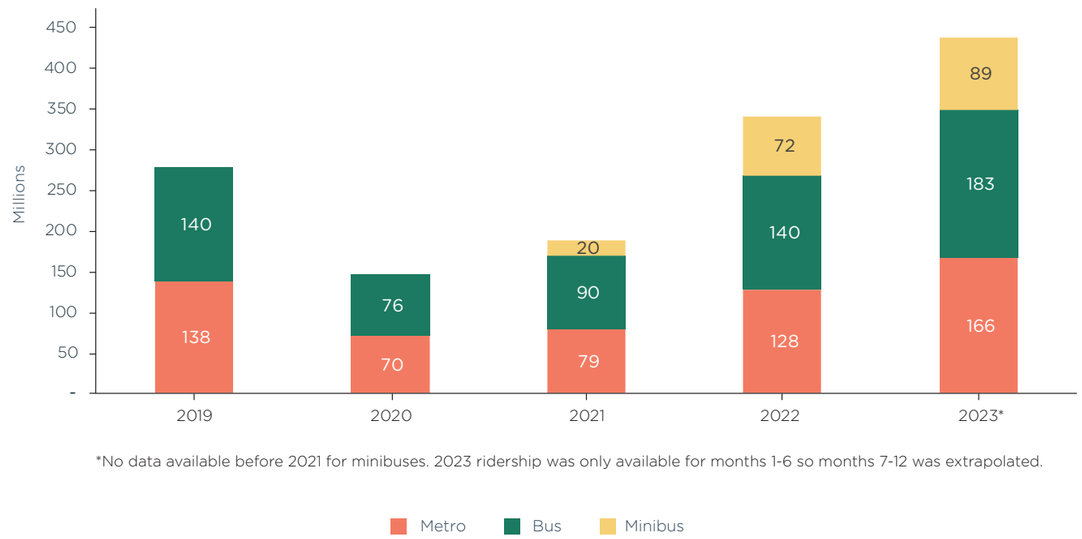


Figure 3.2: Annual public transport trips, by mode 2019 – 2023.
Source: Tbilisi Transport Company

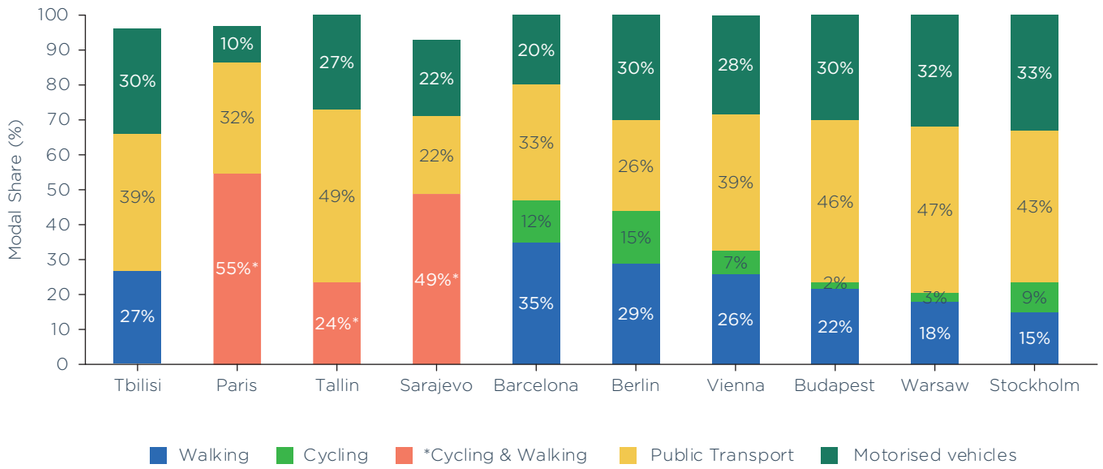


Figure 3.3: Comparison of travel behaviour between Tbilisi and other cities.
Source: Kyiv city council.

Analysis of transport patterns in Tbilisi was undertaken through a Household Survey in 2016 - key findings from this survey are:

- Journeys between home and work make up the largest proportion of all trips (31%), and most of these commuting journeys are made by car;
- Most journeys are between areas with a high density of office space (attracting significant morning rush hour traffic) and 'dormitory' districts where many people live;
- Car ownership varies across the city, between 0.38 and 0.72 vehicles per household – in 2016 around 30% of households had access to at least one car, up from 19% in 2011;
- Men are more likely to drive, and women are more likely to walk or use public transport;
- 20% of road traffic is made up of vehicles making journeys of less than 1.5 km;

Tbilisi is undergoing expansion, with development of more distant amenities and services. This increases dependency on cars, as the outskirts of the city are even less accessible by other travel options.

Mobility in Tbilisi – Key Travel Options

Walking

Tbilisi is a city of walking. People walk to get to their local grocery store, to go to the park, to enjoy their neighbourhood, to get to the bus or the metro, or even to go to work. Yet street design in Tbilisi prioritises motorised vehicles over walking, making walking often difficult, unsafe, or unpleasant. The streetscape is dedicated to cars and, in many places, lacks footpaths. Where footpaths do exist, they are often too narrow, cracked, or obstructed. On many busy streets there are no zebra crossings and pedestrians must use underpasses. Where zebra crossings do exist, there are often no traffic signals and cars do not stop, even when someone is crossing. There are few opportunities for crossings across the river, the railway line or major roads. Tbilisi is a beautiful city and a safer, more pleasant walking environment could make a big difference for its citizens each day.

Metro

The Tbilisi Metro has two lines:

- The Akhmeteli-Varketili Line and
- The Saburtalo Line

It consists of a total of 27.3 kilometres of track and 23 stations. Following a pandemic lull, metro ridership has been steadily increasing, even above pre-pandemic levels. In the first six months of 2019, metro ridership was 68,535,907 while in the first six months of 2023 ridership reached 75,277,232. It is a popular system and an iconic part of Tbilisi. Yet the train cars are aging and, in order for the metro to operate punctually and efficiently, the signalling system needs an upgrade. Additionally, while some parts of the system are accessible to people with disabilities, as a whole, the metro system is impossible to use by those who are mobility impaired. Access to metro stations at the street level can also be quite difficult for anyone, due to difficult street crossings, broken pavements, and occasional stairs. Rehabilitation of the metro system is needed, and in particular, the system needs to be made accessible for all.

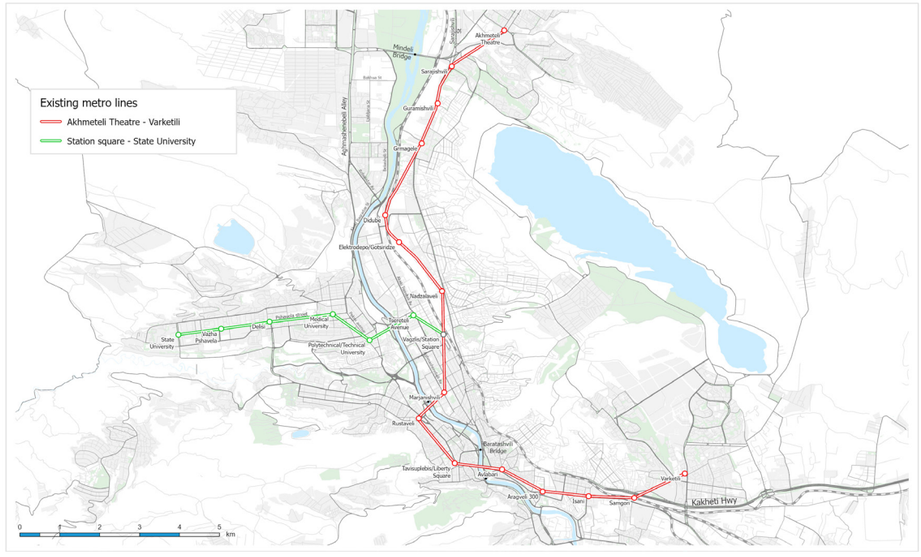


Figure 3.4: Map of existing Metro lines in Tbilisi

Bus

Public buses and minibuses are the most well-used form of public transport in Tbilisi. It is likely to remain so in the short and medium term as the bus network is extensive and covers most of the city.

However, buses get stuck in traffic congestion caused by over-reliance on private cars. To solve this, bus lanes are being built along with an extensive rollout of the dedicated Tbilisi Bus Transport (TBT) network, allowing buses to move quickly past traffic.

Many of the biggest bus stops already have shelters, seating, and real-time arrival signs. But the smaller stops, where many citizens wait for the bus every day, consist only of a sign. Contracts with the bus and minibus operators are in need of modernisation. Finally, larger buses are needed on the main corridors.

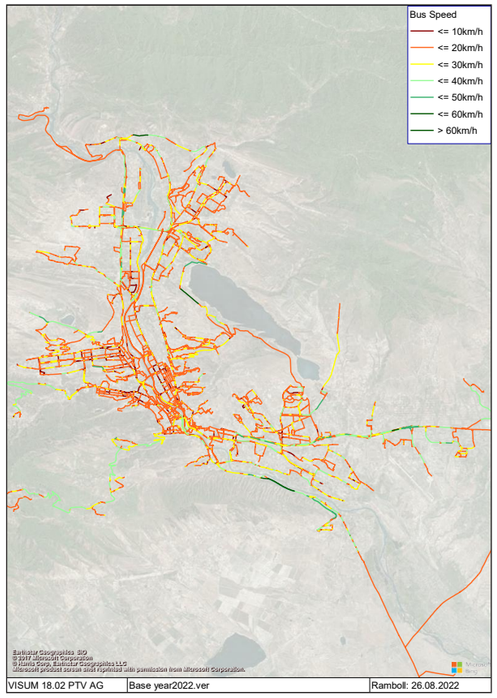


Figure 3.5 Bus speeds in many parts of Tbilisi have fallen below 20 km/h. Source: Ramboll, Analysis of Existing Transport Conditions, 2022 model base year.

View of the Europe Square
Source: Walter_D - stock.adobe.com

Cable Cars

In the past, Tbilisi had six cable car routes. Currently, only three routes operate. Of these, only one route is used as a public transport service – from Bagebi to University (connecting Bagebi district to the State University in Saburtalo). The other two lines – (i) Rike Park to Narakala Fortress, and (ii) Vake Park to Turtle Lake – are primarily used by tourists.

The geography of Tbilisi is unique in that the city is located in a valley, with the main business and commercial districts and the Old Town located in the bottom of the valley (adjacent to the Mtkvari River), while many of the residential areas are located higher up in the valley. This enables the development and use of urban cable cars as a means of getting people from the residential districts to the business districts. Designing cable car routes to take advantage of Tbilisi's unique topography will result in substantial travel time savings and better access to the public transport network for some neighbourhoods.

Pre-feasibility work has already been undertaken on two routes: Isani to Vazisubani, and Samgori to Zghivisubani.

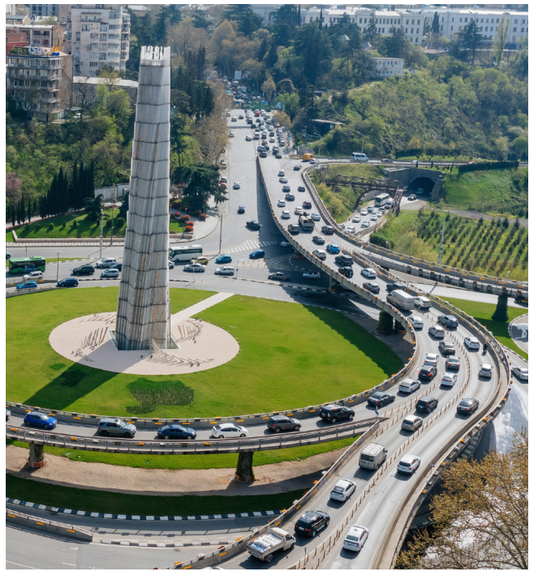
View of cable car above Tbilisi
Source: Susan Vineyard - stock.adobe.com

Travel by Private Car

While car travel is growing fast in Tbilisi, there is clear dissatisfaction with the condition of the roads, with users highlighting open manholes, damaged road surfaces, faulty or missing signage, faded road markings, etc. Despite extensive road infrastructure, congestion is a significant problem, with traffic exceeding the available road capacity in many areas, leading to air pollution and noise.

There is also a significant road safety issue in Tbilisi. Because roads have been designed to prioritise motorised vehicles over all other modes, as well as tendencies for drivers to speed, collisions in which people are killed or seriously injured are a significant problem in Tbilisi.

Georgia has a national annual road safety action plan, but Tbilisi City has no comprehensive, holistic, short- or long-term action plan to address road safety. Collision data is also not released regularly to the public.



Ring Road junction near Square of Heroes
Source: Mulderphoto - stock.adobe.com

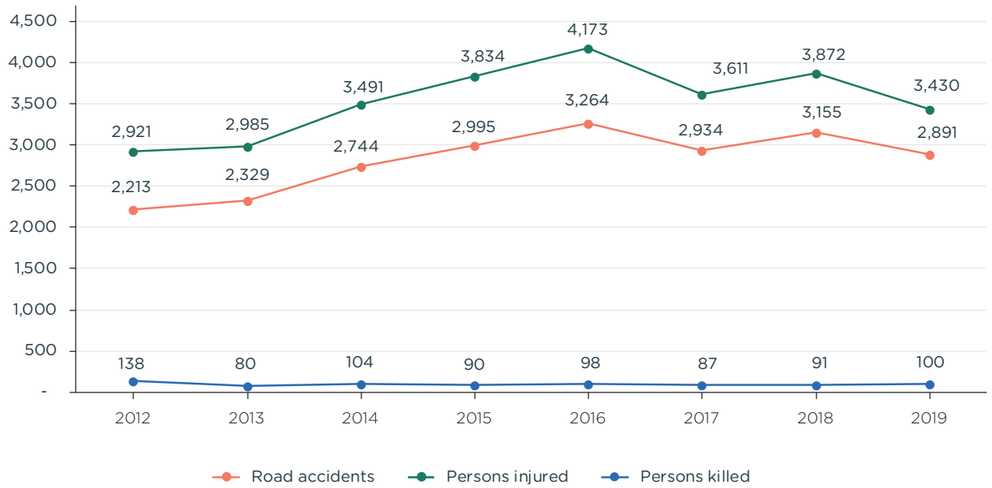


Figure 3.6: Road accidents in Tbilisi. Source: Ministry of Internal Affairs of Georgia, 2020

Parking

There are roughly 30,000 legal on-street parking spaces in Tbilisi. However, illegal parking on sidewalks and in public spaces is rampant.

A zonal parking programme currently exists in Tbilisi. Under this programme, drivers pay GEL1.00 ($0.39) per hour to park within a designated parking zone, though a higher hourly charge of up to GEL3.00 ($1.17) in higher-demand neighbourhoods is to be implemented in 2023. The zonal parking programme is currently managed by Tbilisi Parking, under TTC, although there are plans that management of parking will move to TCH. Though the world is moving quickly towards high-tech solutions for enforcing on-street parking, often implemented through a public-private partnership (PPP), minimal technology is employed to enforce on-street parking fees in Tbilisi. Fee payment is enforced simply by roving staff. Additionally, even the highest possible fee of GEL3.00 per hour is low by international standards.

There are also many non-residential off-street car parks across the city. These include shopping malls, stadiums, office buildings, etc. In most of these cases, parking is free or very cheap. Free or cheap off-street parking does little to discourage driving and shift people onto cleaner, greener modes. It is also a missed opportunity for revenue.

Cycling

Approximately 35 kilometres of bicycle lanes have been built in Tbilisi over the last few years which is an important start to building out a bicycle network. More and more cyclists are appearing on Tbilisi's streets each year. However, the network is not yet extensive enough to create a truly safe environment for people to cycle around the city. Other issues around cycling include:

- There are very few routes with dedicated separate space for cyclists;
- Cycle routes are not connected, which limits the distance and areas in which cyclists can travel safely;
- Cycle facilities, especially at junctions, are not always protected, clear or well signed, causing potential for conflicts between different street users;
- High speed limits and a lack of speed control cause unsafe cycling conditions on local streets;
- Very few cycle parking opportunities are provided, other than some racks along the main bicycle corridors and in commercial areas.

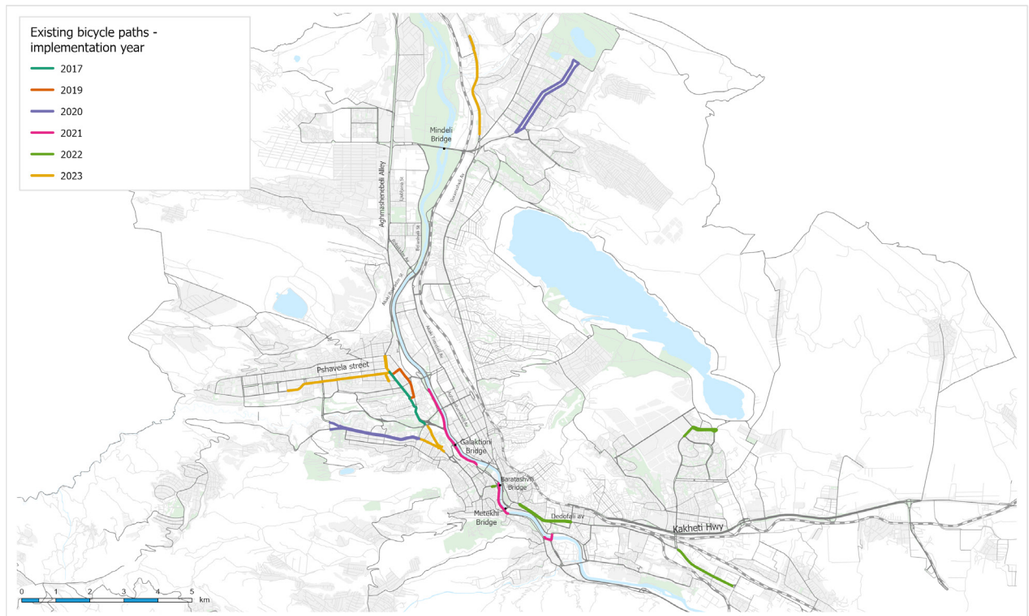


Figure 3.7: Map of existing bicycle paths in Tbilisi. Source: TUDA

04.

Vision & Goals

Vision & Goals

The review and consideration of existing mobility conditions for Tbilisi (Chapter 3) identified a set of key transport-related issues for the Tbilisi Transport Plan to address. The Tbilisi Transport Plan is based on the following vision statement:

“To deliver to the citizens of Tbilisi an effective, efficient, safe and sustainable urban transport system that is accessible and affordable for all and contributes to a better quality of urban life and environment.”

Pillars	Strategic Goals	List of Selected Indicators
#1 Effective and efficient mobility system with improved access	#1 Reduce car dependency in favour of more sustainable transport modes	Sustainable/Active Travel modal share (public transport / cycling / walking)
	#2 Improve accessibility and connectivity at city and regional level	Share of people with appropriate access to high quality public transport station or stop
	#3 Improve the efficiency and level of service in the mobility system	Improvement in public transport average commercial speed (for commuter rail, metro, TBT, buses)
#2 Safe & accessible mobility system for all	#4 Provide inclusive transport solutions	Accessibility of public transport for mobility-impaired groups
	#5 Improve safety and security in urban areas and the mobility system	Reduction in road deaths
#3 Enhanced quality of urban life and environment	#6 Provide high quality urban spaces	Urban functional diversity
	#7 Reduce impacts on health & environment	Ambient noise levels and air quality at key locations

Figure 4.1:Strategic Goals and Indicators

Tbilisi Transport Plan
Key Indicators & Targets for 2043

01.
Mode Share

Fewer journeys by car, and more journeys by public transport, cycling and walking

(see overleaf)

02.
TBT Network

160 km
of dedicated bus lanes

03.
Bicycle Lanes

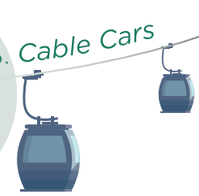
325 km
of bicycle lanes

04.
Road Fatalities

50% reduction in road fatalities

05.
Commuter Rail

50 km
of commuter rail network



6
new cable car lines

06. *Cable Cars*

07.
Didi Dighomi to City Centre

New high quality and fast public transport link between Didi Dighomi and the city centre

08.
Fully Accessible Metro Infrastructure

70%
of Metro stations fully accessible

09.
Superblocks

3
Superblock areas on a pilot basis

2043 Target Mode Share

Taxi
2%

Bicycle
8%

Public
Transport
43%

Metro

Local Bus

Car
20%

Walk
27%

Minibus

Freedom Square
Source: Uldis Laganovskis - stock.adobe.com

05.

Scenarios Tested and Assessed

Scenarios Tested and Assessed

There are many possible interventions which could address the challenges identified in chapter 3, which accord with the stated chapter 4 Vision and Goals. As part of the process of developing the Tbilisi Transport Plan, several packages of actions were developed, compared and assessed. A final 'retained' scenario was then selected and agreed upon by all involved stakeholders as the most suitable for Tbilisi.

The following two baseline scenarios were established, to give a benchmark against which to compare the estimated impacts of alternative packages:

- **"Do Nothing"** - In this scenario, no interventions are made at all. This gives a baseline scenario against which to compare the estimated impacts of alternative packages; and
- **"Business As Usual"** – In this scenario, sustainable mobility actions already programmed (prior to the implementation of the Tbilisi Transport Plan) are implemented.

The following "Do Something" scenarios were then developed and tested in the Tbilisi Transport Model. The results were compared using a multi-criteria analysis:

- **"Public Transport (PT)-Oriented"** – This package of measures has a stronger focus on public transport, including increased levels of service, multi-modal integration and accessibility;
- **"Non-Motorised Transport (NMT)-Oriented"** – This package focusses on promoting and improving conditions for cycling and walking as viable modes of transport in the city; and
- **"Travel Demand Management (TDM)-Oriented"** – This package focusses on lower-cost interventions aimed at regulating traffic and influencing mode choice through interventions which do not rely on significant infrastructure investment.

Scenario	Urban Development	Urban Liveability	Walk & Bike	Travel Demand Management & Parking	Public Transport
PT-Oriented Scenario This scenario puts an emphasis on significantly improving the **public transport offer**	●●●	●◐○	●◐○	●◐○	●●●
NMT-Oriented Scenario This scenario puts an emphasis on significantly improving the **walking and cycling** offer, by focusing on the rehabilitation of streets and footpaths.	●●○	●●○	●●●	●●○	●○○
TDM-Oriented Scenario This scenario puts an emphasis on controlling and decreasing car traffic, by focusing on **speed reductions and a parking policy.**	●●○	●●○	●●○	●●●	●○○

Figure 5.1: Areas of focus for each of the 'Do Something' scenarios

There is some overlap in the packages, where interventions are common to all three "Do Something" scenarios. These include improvements to urban liveability and sustainable infrastructure, road traffic and safety, clean vehicles, urban logistics, tourism and intelligent transport systems.

Multicriteria Analysis Evaluation areas

A = Best E = Worst

Scenario	Effectiveness & Efficiency	Safety & Accessibility	Quality of Life & Environment	Challenges in Governance & Ownership	Finance costs
PT-Oriented Scenario	A	A	C	D	D
NMT-Oriented Scenario	B	A	B	D	B
TDM-Oriented Scenario	A	A	A	E	A

Final score

PT-Oriented Scenario - C NMT-Oriented Scenario - B TDM-Oriented Scenario - A

Figure 5.2: Results of the multi-criteria analysis

Testing and comparison of the scenarios identified that:

- Public transport interventions are essential, but cannot alone fully unlock the city's potential for sustainable mobility; and
- The Travel Demand Management (TDM) scenario has the highest benefits and the lowest costs, and so is the most beneficial scenario for encouraging mode shift away from cars and towards more sustainable mobility, if adequately supported by ambitious parking management and speed limit policies.

Based on the findings of the analysis, a package of measures was established which blended elements from each of the three "Do Something" scenarios. This **"Retained Scenario"** aims to provide a balanced package of measures to address the previously identified range of challenges and opportunities, in accordance with aspirations for the future of sustainable urban mobility in Tbilisi. The package of measures added to the TDM scenario to form the Retained Scenario includes:

- Targeted investment in strengthening the Public Transport offer; and
- Targeted investment in improvements to Non-Motorised Transport infrastructure.

The new transport Action Plan (Chapter 6) is based on this **Retained Scenario**.

Scenario	Urban Development	Urban Liveability	Walk & Bike	Travel Demand Management & Parking	Public Transport
Retained Scenario This scenario focuses on managing travel demand while significantly improving the **public transport offer**	●●◐	●●◐	●●◐	●●●	●●●

Other areas

- Sustainable Infrastructure
- Clean Vehicles
- Tourism
- Road Traffic & Safety
- Urban Logistics
- Intelligent System

Figure 5.3: Areas of focus for the Retained Scenario.

Old Tbilisi
Source: Anna Bogush - stock.adobe.com

06.

Action Plan

Action Plan

The Action Plan sets out how the city of Tbilisi plans to implement the Tbilisi Transport Plan over the next 20 years to respond to existing problems and achieve the Vision and Goals. The Action Plan includes a comprehensive list of programmes and projects to be implemented over the next 20 years, as defined in the Retained Scenario. It also includes a more focused set of short-term projects, to be implemented within the next five years.

The actions are organised around the following themes which ensure there is an overarching framework to support specific infrastructure, technology and policy changes.

The full 20-year Action Plan, with descriptions of each project and programme, is included in Appendix A. It is important to note, however, that some new projects may come into play over the years that are not in the Action Plan. Nonetheless, any new projects will conform to the Tbilisi Transport Plan's Vision and Goals, as well as to the Street Design Guidelines.

Themes

LEGAL

Since 2018, ambitious transport reform has been initiated by city authorities in Georgia to make mobility more sustainable, but this lacks a robust legal framework. To promote the Tbilisi Transport Plan, recommendations made to embed the vision and goals within Georgia's planning laws, for example through a new road hierarchy, road typology, and street design guidelines for Tbilisi. Similarly, recommendations of the Land Use Masterplan (LUMP) should be aligned with the Tbilisi Transport Plan and embedded in national and local policy. Finally, some amendments to national laws will also be required.

INSTITUTIONAL

At national and local level, there is a need to update and clarify responsibilities for delivering the Tbilisi Transport Plan to ensure the vision and goals are met. This requires strengthening the resources and capabilities of key institutions in Tbilisi including Tbilisi City Hall (TCH), the Transport and Urban Development Agency (TUDA), Tbilisi Transport Company (TTC) and the Municipal Property Management Agency.

DATA COLLECTION

Data collection related to traffic, public transport, environment, and noise should be vastly improved to monitor the implementation of the Tbilisi Transport Plan. This data will also be useful for monitoring the performance of transport services more generally as well as for planning any future projects.

EDUCATION

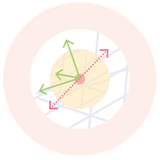
To ensure the success of the Tbilisi Transport Plan, it is important that users of the transport system are better educated on the benefits of sustainable travel; rules for how drivers, cyclists and pedestrians should behave when sharing the road; and rules around car parking. This will not only support better enforcement of traffic rules, leading to improved road safety for all; but also encourage positive changes in the way citizens travel day-to-day, to use healthier and more sustainable travel options such as cycling instead of taking the car.

COMMUNICATION

To help spread the word about the Tbilisi Transport Plan and gain support from the population for sustainable mobility in Tbilisi, efforts will be made to ensure accessible, thorough information is made available to all through good communication practices.

SUSTAINABLE INFRASTRUCTURE

To achieve the vision and goals, it is important that Tbilisi's transport infrastructure is suited to sustainable mobility options including public transport, walking and cycling. This will start at the city level by developing street design guidelines which ensure good practice and consistency across all future transport infrastructure schemes and embedding an asset management system which helps the city authorities monitor and maintain the infrastructure. There is also an ambition to create new infrastructure for people walking, cycling and using public transport to easily and safely cross the railway, major roads, and the river by the most direct routes possible.



URBAN DEVELOPMENT

"Transit-oriented development" (TOD) is an urban planning concept which aims to locate major areas of development near key transport hubs. This means people will be better able to access job opportunities, schools, shops, healthcare and leisure facilities from where they live.

URBAN LIVEABILITY

To make Tbilisi a healthier and happier city, some interventions focus on creating places for people rather than vehicles. In practice, this means the city will be easier and more attractive to get around by walking, cycling and using public transport, have more green space, and have nicer areas for people to relax and socialise. This will be done through a set of citywide programmes, as well as place-specific improvements.

PARKING

Management of car parking is critical to clearing sidewalks and public space, discouraging driving when other, more sustainable modes are available, and raising revenue. The Tbilisi Transport Plan includes different policy mechanisms to better manage car parking Tbilisi.

ROAD SAFETY

To make Tbilisi a safer city for all road users, the Action Plan includes a programme to reduce speed limits and better enforce traffic laws and rules. This will be combined with a wider programme of measures to promote road safety such as better crossings, redesigned junctions, and streets redesigned as "complete streets" with equal emphasis on all users. This will contribute to the wider "Vision Zero" ambition of reducing the number of traffic-related deaths on Tbilisi's roads to zero.

PEDESTRIANS

The Tbilisi Transport Plan includes a range of measures to make the sidewalks safer and more comfortable, as well as safe and direct routes for people walking, which will improve accessibility for all and promote a more friendly, healthier and happier city in which to live and work.

TRAVEL DEMAND MANAGEMENT

“Travel Demand Management” (TDM) refers to different tools which can be used to encourage people to travel in different ways and at different times to make best use of the transport infrastructure and help the whole system operate in a more sustainable way. This involves a diverse range of initiatives targeting different groups of people.

BICYCLES AND SCOOTERS

To help people travel longer distances without using the car, it is important that cycling is made a safe, attractive and reliable option to get around Tbilisi. Therefore, the Action Plan includes a range of programmes creating safer bicycle infrastructure, as well as creating more awareness around cycling, and making shared bicycles and scooters more widely available.

PUBLIC TRANSPORT

For journeys which are too long for people to walk or cycle, public transport is key to enabling people to travel without using a car. This means developing and maximising existing public transport services in Tbilisi is essential, including rail, metro, bus and cable car. This involves a number of different programmes related to making public transport trips shorter, on-time, and more comfortable for everyone, including women and the mobility impaired.

TOURISM & RECREATION

Tbilisi is a city which attracts tourists from across Georgia and the world; and the Tbilisi Transport Plan seeks to make Tbilisi more attractive to tourists, in order to benefit the local economy.

INTELLIGENT TRANSPORT SYSTEMS

“Intelligent Transport Systems” (ITS) refers to a set of innovative technologies which help manage the transport system in a safer, more efficient and more sustainable way. ITS can be deployed within the general traffic system to manage congestion, as well as within public transport systems to manage bus schedules and emergencies, and to collect data. The Tbilisi Transport Plan includes a set of ITS interventions to improve the overall transport system using technology.

URBAN LOGISTICS

The mobility system in Tbilisi does not only move people, but also goods and waste, meaning urban logistics is an important component of the Tbilisi Transport Plan. This system must enable goods to reach Tbilisi from across the world, and then move through the city to their final destination, without disrupting the daily lives of local people.

CLEAN VEHICLES

The world is moving away from dirty petrol and diesel towards electric vehicles. Electric cars and chargers are already appearing on Tbilisi’s streets. The Tbilisi Transport Plan aims to electrify every part of our transport system, from private cars, to buses, to trucks.

5-Year Action Plan

While the 20-year Action Plan described above represents the vision of Tbilisi for where it hopes to be in the next twenty years, this section defines the specific actions the city plans to take in the coming years. The following twenty Action Sheets represent the list of projects and programmes the city plans to initiate within the next five years.

Over the course of the next **five years**, it is estimated that between **$505 million** and **$515 million** will be invested to make this plan a reality[1]. These Action Sheets contain detailed information about each specific project; a timeline for completion; capital costs; social and environmental impacts; gender impacts; and a description of who in government will be responsible for implementing it.

It is important to note that the inclusion of these Action Sheets does not necessarily mean that the action will be completed within five years; only that the action will be at least initiated within the next five years. It is also important to note that there may be actions from the larger Action Plan, not included in this section, which could be initiated within the next five years. The purpose of this section is simply to highlight Tbilisi's main planning and implementation objectives over the next five years.

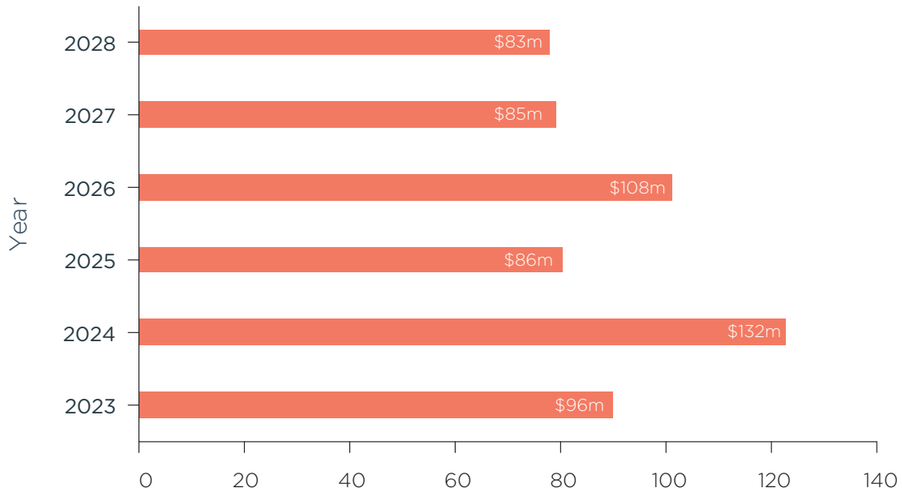


Figure 5.1: 5-Year Action Plan, Estimated Annual Cost, millions of USD

[1]The total investment cost for all the twenty actions is between $1.30 billion to $1.40 billion. The $505 million to $515 million estimate only represents spend during the first five years. Some of the larger infrastructure projects will take more than five years to complete.

Social and Environmental Impact Assessment (SEIA)

A SEIA was undertaken for each of the proposed actions, focussing on the following 4 broad criteria where the projects are expected to have an impact.

- Social Impact – focussing on land acquisition, displacement of people, loss of agricultural land, loss of property, and displacement of minorities
- Environmental Impact – whether the project is adjacent to an environmentally sensitive area, and the potential environmental impacts of the project
- Economic Impact – focussing on the impacts on transport mode choice, jobs, productivity, regional GDP, and health
- Accessibility – improvements to public transport accessibility, as well as impact on the mobility impaired

Under each of these criteria a series of specific impacts have been identified and scored. These scores have been aggregated to give a final score under each criteria for each project/action. The scores are as follows:

- A: weakest benefit/impact
- B: medium benefit/impact
- C: strongest benefit/impact

A further qualitative (descriptive) **Gender Impact** of each action has also been described in the Action Sheets.

Superblocks

The “Superblock” concept is a relatively new urban planning idea which has been implemented in some European cities such as Barcelona and Valencia. A Superblock is a geographical space that covers several city blocks, in which **priority is given to pedestrians and cyclists**. Private **cars have limited access** and **speeds are restricted to below 20 kph** through both policy and design. The physical design prevents through travel for private motorised vehicles. By giving more space to the residents and visitors who walk within the area, the street comes alive in a new way. Children can play more freely, benches and trees can take the place of parking, and interactive spaces can be installed. Superblocks embody the idea of “complete streets”, which recognise the rights of people over just cars.

Superblocks in Tbilisi will be a paradigm shift towards people-centred planning. As a pilot project Superblocks are proposed in the following three neighbourhoods of Tbilisi:

- **Sololaki**
- **Kiacheli (Giorgi Akhvlediani and Leo Kiacheli Streets Area)**
- **London Park**

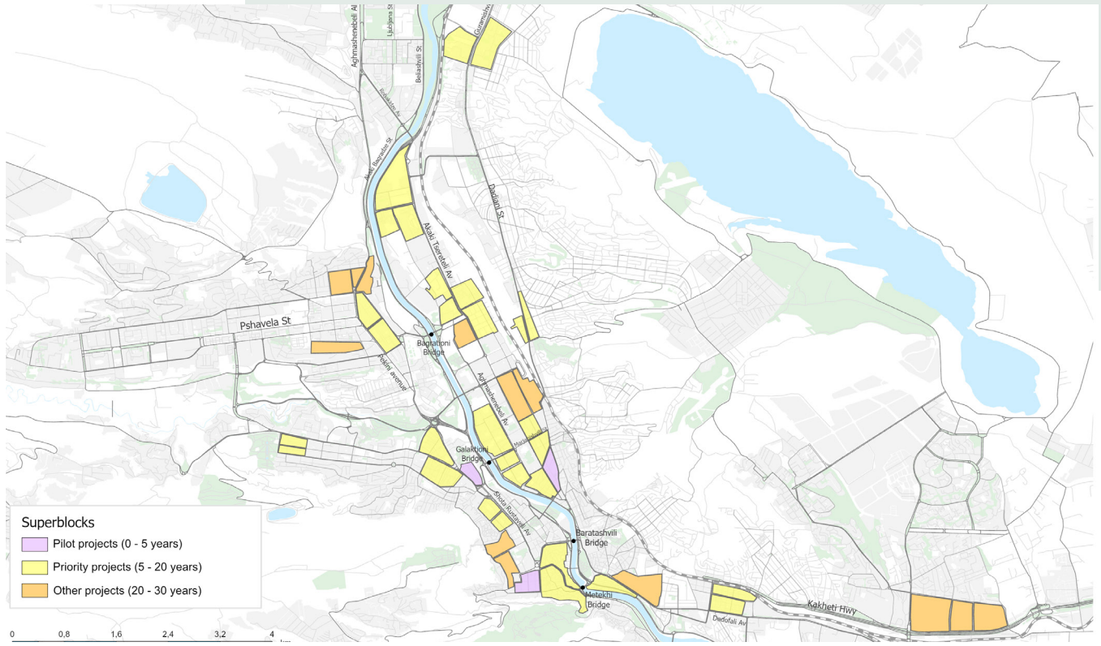
Feasibility studies and concept design, funded by the ADB, have been undertaken for these three pilot Superblock projects. The concept designs for the three pilot Superblocks each include at least one fully pedestrianised street, several local access streets, and several reduced traffic streets.

The perimeter of each Superblock is made up of “primary” streets, on which motor vehicles may travel. However, even the primary streets will adhere to Tbilisi Street Design Guidelines, providing a safer walking and cycling environment.

In the three pilot areas, there are numerous historical and heritage buildings which are in a poor state of repair and may need to be rehabilitated. Utilities in these areas will also have to be modernised. The undertaking of these works should ideally be co-ordinated with the Superblocks-related works.

Prior to the roll-out of the Superblocks, each will undergo a “tactical urbanism” phase. In this phase, the city puts out temporary materials, such as large planters, painted pavement, and temporary traffic signs to simulate the look and feel of the permanent build-out. Opportunities for play and entertainment are also provided. This gives the neighbourhood an opportunity to experience the Superblock before it is built out more permanently.

By beginning with three pilot areas, the concept can be tested before it is rolled out more widely across Tbilisi. A long-term vision has been developed for 45 superblocks in total, covering over 600 hectares and 76km of streets. These are spread across Old Town, the Tsereteli area, the Melikishvili area, Mtatsminda, Pekini area, Vake, the Didube area, the Grmagele area, the Isani area, and the Varketili area.



Tbilisi Transport Plan long-term vision for superblocks deployment

With lowered curbs, differentiated materials, new road hierarchy, and lower speed limits, Nikoladze Street will be one of the main streets with traffic calming measures in the “Kiacheli” Superblock. Source: Leku Studio

5-Year Action Plan and Cost Estimate

Time period	Measure	Cost estimate
2022 - 2023	Feasibility study and concept design for pilot Superblocks	$700,000
2024	Preliminary and detailed design for all three Superblocks	$1,000,000
2024	Kiacheli Superblock: Tactical urbanism and feedback phase	$708,437 [1]
	Kiacheli Superblock: Implementation	$5,449,515 [1]
2025	Sololaki Superblock: Tactical urbanism and feedback phase	$1,695,095 [1]
	Sololaki Superblock: Implementation	$13,039,190 [1]
2026	London Park Superblock: Tactical urbanism and feedback phase	$1,260,752 [1]
	London Park Superblock: Implementation	$9,698,092 [1]
2027	Feasibility study and concept design for next set of Superblocks	$700,000
2028	4th Superblock: Tactical urbanism and feedback phase	$1,221,428 [2]
	4th Superblock: Implementation	$9,395,599 [2]
	Total	$44,868,107

[1] Costs estimated as part of the Tbilisi Superblocks Study. Source: JV TYPSA-LEKU with the collaboration of NTi-engineering and E-Idea Architects.
[2] Average cost of the first 3 Superblocks

Responsibility

TUDA will be responsible for managing the feasibility study and outline design. The Municipal Department of Infrastructure Development will be responsible for detailed design and construction and the district administrations will be responsible for their maintenance and upkeep. If historical buildings need to be refurbished, then that will be the responsibility of TDF. Financing for the pilot Superblocks is likely to come from the ADB, with combined funds from Tbilisi City Hall and central government.

Social and environmental impact assessment

No major adverse social and environmental impacts are expected and there will be improvements to local accessibility. Public spaces will become safer for all. Superblocks are not expected to increase local jobs and will not reduce overall government transport expenditure, and have economic score of B. Accessibility for women is expected to improve, outdoor spaces will be more inclusive, and new public spaces for children will be created. There is some risk of additional congestion on the perimeter streets which could affect air quality, safety, and travel times.

Criteria	Score
Social	C
Environmental	C
Economic	B
Accessibility	C

Waterfront Revitalisation

The Mtkvari River flows through the heart of Tbilisi and provides attractive scenery especially in the historic Old Town. Though the river is one of Tbilisi's strongest natural assets, it is somewhat neglected, with the bulk of the space on the riverbanks dedicated to cars rather than people.

The waterfront revitalisation project aims to rejuvinate and enhance Tbilisi's waterfront, to increase the attractiveness of walking and cycling along the river, and to unlock opportunities for recreational activities for locals and tourists alike. This revitalisation will also contribute to the wider efforts to improve bus, walking and cycling infrastructure across the city.

Tbilisi's Waterfront Strategy and Vision Plan (funded by the ADB) makes a strong strategic and economic case for the development of a high-quality waterfront, with the integration of public spaces alongside walking and cycling routes. This may include development of walking and cycling infrastructure, reducing space for private cars, upgrading of nearby public transport stations, and development of a waterbus network.

Though the waterfront revitalisation is a long term plan, in the short term, the following actions will be proritised, focussing on the area around the Public Service Hall.

- **Improve the stretch from the Alexander Griboedov Statue to Saarbrucken Square** along the left bank, creating a continuous green space and pavement
- Create a **new park and green space next to the Public Service Hall,** at the site of the current car park
- Construct a **new pedestrian bridge across the river from the Public Service Hall[1].** This will allow easy access to the Public Service Hall from the left bank of the river, especially for those coming there by bus
- A **new linear skate park on the left bank** of the river, opposite the Public Service Hall[1]

Revitalisation of the Mtkvari waterfront will begin in the central area focusing on the sections shown in the image above.
Source: Royal Haskoning, "Waterfront Strategy and Vision Plan."

[1]See Pedestrian and Cycle-Friendly River Crossings Action Sheet

5-Year Action Plan and Cost Estimate

Time period	Measure	Cost estimate
2024	Griboedov Statue to Saarbrucken Square - Detailed design	$100,000
2025	Griboedov Statue to Saarbrucken Square - Project implementation	$600,000 [1]
2026	Griboedov Statue to Saarbrucken Square - Project opening	-
2025	Dedaena Park Extension - Detailed design	$250,000
2026	Dedaena Park Extension - Project implementation	$1,400,000 [1]
2027	Dedaena Park Extension - Project opening	-
2026	Green pedestrian space - Detailed design	$100,000
2027	Green pedestrian space - Project implementation	$600,000 [1]
2028	Green pedestrian space - Project opening	-
	Total	$3,050,000

[1]Source: Tbilisi Waterfront Strategy and Vision Plan, August 2022, Royal HaskoningDHV (for ADB)

Responsibility

TUDA was responsible for managing the feasibility study and will be responsible for managing the preliminary design, as well as monitoring of the project post-implementation, while the Municipal Department of Infrastructure Development will be responsible for detailed design and construction.

Social and environmental impact assessment

No major adverse social, environmental or economic impacts are expected, and the project will improve local accessibility. Public spaces will become safer for all.

Accessibility for women is expected to improve, outdoor spaces will be more inclusive, and new public spaces for children will also be created.

Criteria	Score
Social	C
Environmental	C
Economic	C
Accessibility	C

Freedom Square and Rustaveli Avenue

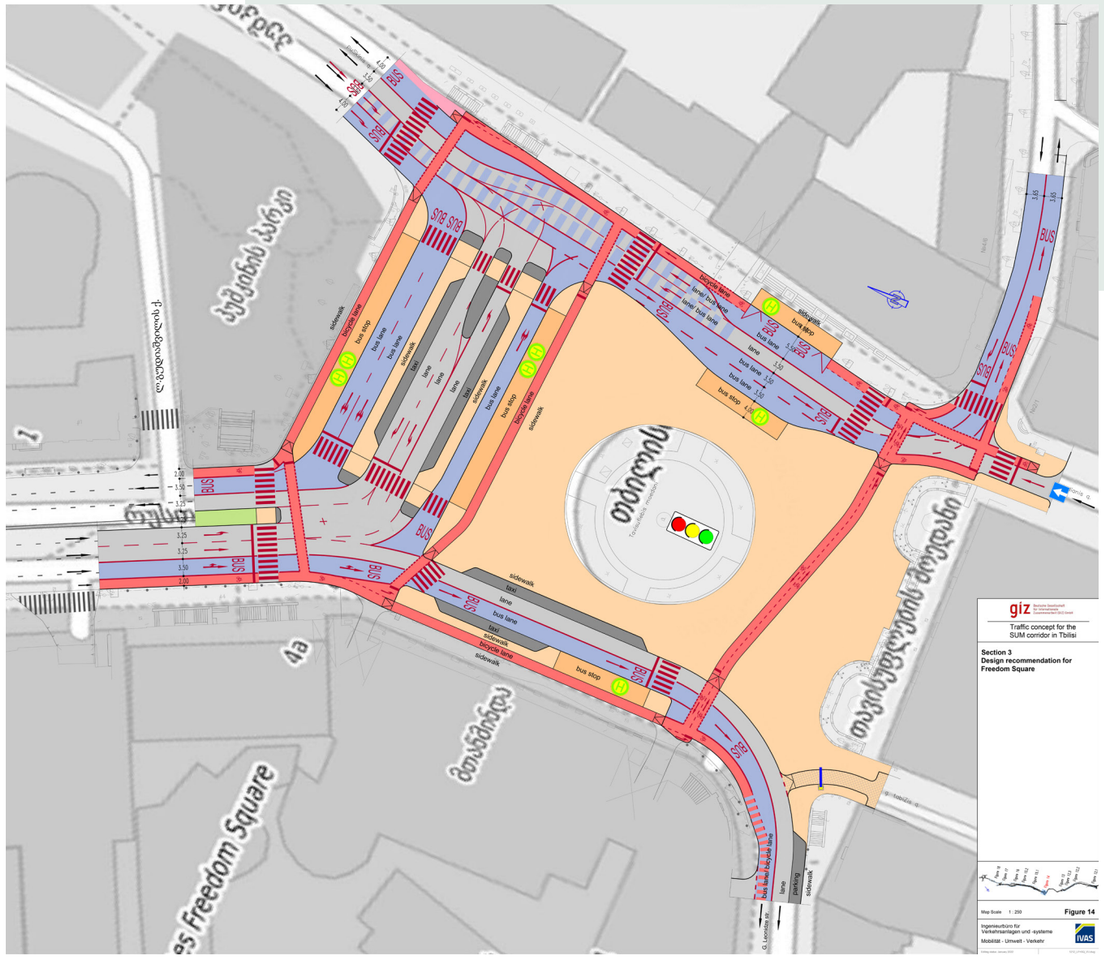
Freedom Square is a landmark in the centre of Tbilisi of both historical and national significance. It sits at the edge of the Old Town and is frequently traversed by residents and tourists alike. Despite its prominent location, Freedom Square functions as a traffic free-for-all. Walking, cycling, or simply sitting outside to enjoy the square are largely seen as unsafe and unpleasant activities. Other cities are reclaiming their main squares for people. In the last twenty years, Times Square in New York City and Trafalgar Square in London were semi-pedestrianised.

Rustaveli Avenue is perhaps Tbilisi's most important thoroughfare. It runs between Republic Square in the north and Freedom Square in the south. In addition to carrying significant volumes of car traffic each day, Rustaveli Avenue is among the most heavily foot-trafficked streets in Tbilisi. Yet, the majority of Rustaveli is allocated to cars while pedestrians walk along the footpaths. Without traffic signals anywhere along Rustaveli, cars travel at high speeds and pedestrians are forced to cross at inconvenient and often inaccessible underground crossings. There are no cycle lanes.

This project focuses on **redesigning Freedom Square and Rustaveli Avenue as a place for people.** In Freedom Square, the existing roundabout traffic pattern will be replaced by normal two-way streets with bicycle lanes along the edges of the square, and traffic signals to control traffic and create much safer pedestrian crossings. The entire centre of the square will be reclaimed for people. This will include far more seating, green spaces, and enhanced street lighting.

On Rustaveli Avenue, the existing high-speed arterial will be converted into a **boulevard**, more fitting of a modern international city. Traffic signals and street level crossings will be provided at most intersections. The design will also include bicycle lanes and bus lanes.

Both designs, as they are currently envisioned, meet the Tbilisi Transport Plan's Vision and Goals and align with the principles included in the new Street Design Guidelines[1].



Concept design for new Freedom Square. Source: IVAS

[1]Under development in 2023/2024

5-Year Action Plan and Cost Estimate

Time period	Measure	Cost estimate
2022	Completion of concept design alternatives for Rustaveli and Freedom Square	-
2023	Select concept for Rustaveli	-
	Tender for design-build of Rustaveli	$11,500,000 [1]
2023 - 2024	Public engagement for Rustaveli	
2024	Rustaveli design and sewage upgrades	
	Construction of street redesign for Rustaveli	
2025	New Rustaveli opens	-
2026	Public engagement for Freedom Square	$3,960,000 [2]
	Option selection and tender for design-build of Freedom Square	
	Construction for Freedom Square	
	New Freedom Square opens	
	Total	$15,460,000

[1]Municipal Department of Infrastructure Development estimate (30M GEL)
[2]Based on costs for Indautxu St in Bilbao, Spain which received a full redesign but is 40% larger than Freedom Sq.

Operating Costs

Maintenance of Freedom Square and Rustaveli Avenue, once constructed, will fall under Tbilisi's normal road maintenance budget. However, additional budget will need to be allocated for lighting, street furniture and landscaping. Precise costs for these maintenance activities are to be determined with a more detailed design.

Responsibility

TUDA will be responsible for managing the concept design of both Freedom Square and Rustaveli Avenue, as well as monitoring the projects post-implementation, while the Municipal Department of Infrastructure Development will be responsible for detailed design and construction. Because they both go through historical areas, the designs will be reviewed by the Historical Heritage Council, a department under City Hall.

The Environmental Protection Department will manage the physical works with regard to landscaping, including planting, water, and drainage. Utility works will be the responsibility of the respective utility company. Maintenance of greenery will be managed by Ecoservice while maintenance of all other aspects of the public space will be managed by Tbilservice Group.

Social and environmental impact assessment

No major adverse social, environmental or economic impacts are expected, and the project will improve local accessibility, air quality, and accessibility for women.

Criteria	Score
Social	C
Environmental	C
Economic	C
Accessibility	C

Pedestrian-Oriented Kote Afkhazi Street

Kote Afkhazi Street is a key route through Old Tbilisi, connecting Freedom Square with Meidan Square, the site of some of the oldest architecture in Tbilisi. Not only is Kote Afkhazi Street a key commercial and residential street in Tbilisi, it is also a major tourist thoroughfare, attracting hundreds of thousands of visitors each year.

However, the street suffers from vehicular traffic congestion, air/noise pollution, and a poor experience for anybody outside of a car. There are few pedestrian crossings and no dedicated cycle lanes. Both sides of the street are dedicated to on-street parking, which consumes a lot of space, crowding the people onto narrow sidewalks.

In 2022, with the assistance of the German development agency (GIZ), a study was undertaken to identify options to re-design the street, ranging from full pedestrianisation to a bus priority corridor. The project is a demonstration of the power of public consultation: residents and businesses along Kote Afkhazi Street contributed their visions for the street, and a pedestrian-oriented design emerged.

The project will include a major 'façade-to-façade' re-design of Kote Afkhazi Street, giving less room to private cars and more room to people walking and cycling. There will be public plazas, including an improved Meidan Square at the southern end of the street. The re-design will also provide more green space throughout and will better organise car parking.

Preferred option for the re-design of Kote Afkhazi Street.
Source: Buro Happold (September 2022).

5-Year Action Plan and Cost Estimate

Time period	Measure	Cost estimate
2022	Completion of architectural design alternatives and community engagement	-
2023 - 2024	Community engagement	-
2024	Selection of design alternative, including bus routing	-
2024 - 2025	Preliminary and detailed design	-
2025	Construction of the new Kote Afkhazi Street	$3,685,000 [1,2]
	Total	$3,685,000

[1]Based on conservative average cost of high-quality street redesign of 12 million GEL per km. Source: Municipal Department of Infrastructure
[2]Cost does not include historic building rehabilitation

Responsibility

TUDA will be responsible for managing the feasibility study and concept design. The Municipal Department of Infrastructure Development will be responsible for detailed design and construction. TDF will be responsible for any upgrades of historic buildings. Because Kote Afkhazi Street is in a historical area, the designs will be reviewed by the Historical Heritage Council, a department under City Hall. The Environmental Protection Department will manage the physical works with regard to landscaping, including planting, water, and drainage. Utility works will be the responsibility of the respective utility company. Maintenance will be managed by either Ecoservice or Tbilservice Group, which manages public spaces in Tbilisi.

Social and environmental impact assessment

No major adverse social, environmental or economic impacts are expected, and the project will improve local accessibility, air quality, and encourage active mobility. Accessibility for women is also expected to improve.

Criteria	Score
Social	C
Environmental	C
Economic	C
Accessibility	C

Didi Dighomi - City Centre Rail Link

Didi Dighomi is the fastest growing residential neighbourhood in Tbilisi, with the population expected to grow by nearly 55% between 2022-2042 – by far the highest growing area in Tbilisi.

Neighbourhood	Projected Population Growth (2022-2042)
Didi Dighomi	54.6%
Navtlughi	36.0%
Varketili	32.8%
Wavkisi, Shindisi, Tabakhmela	20.6%
Nutsibidze Mikorayons	18.0%

Areas with Highest Population Growth (2022-42)

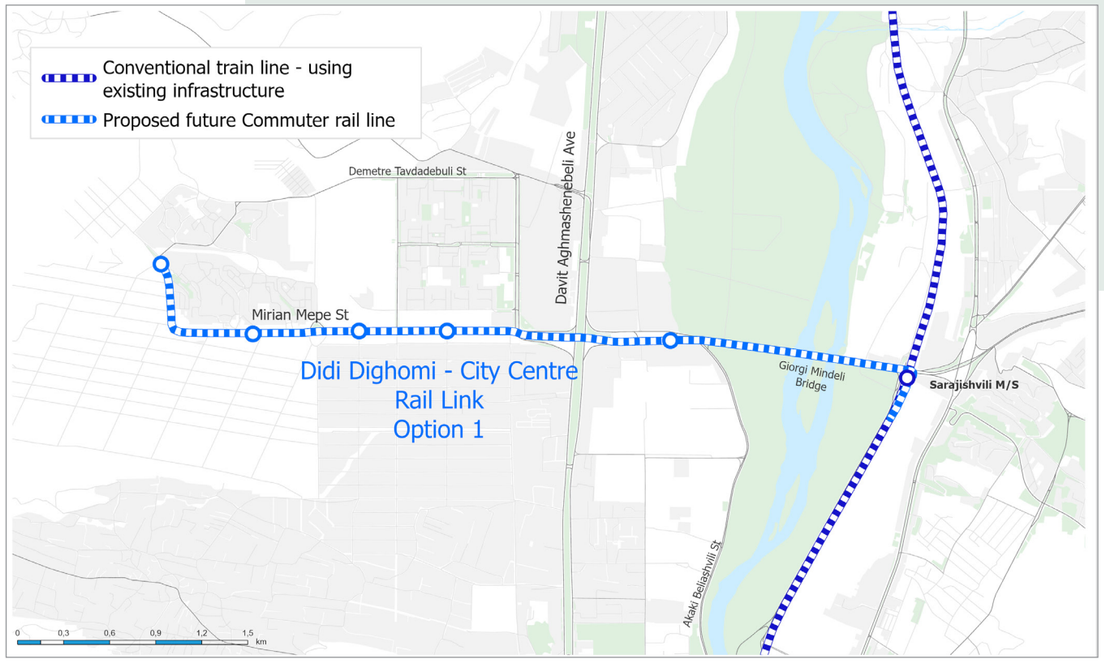
Source: Urban Growth Scenarios report, Ramboll, 2022 - organic growth scenario.

Built as a new housing area in the north of the city during the Soviet era, Didi Dighomi has always suffered from poor public transport connectivity. Currently the area is served by buses and minibuses, which are crowded, resulting in a large number of trips to the city centre being undertaken by car. In the short and medium terms, the proposed TBT network will connect Didi Dighomi to the rest of Tbilisi. As the population in the area continues to grow, **a rail-based system would better serve the trips between Didi Dighomi and the city centre**. This is in line with Tbilisi's long-term vision of a strategic transition to a rail-based public transport in the city, which is perceived to be more comfortable and efficient.

The following alignment options for a rail link to Didi Dighomi could be considered:

- **Option 1**: Central Railway Station to Didi Dighomi via Sarajishvili – this will take the form of a tram train, which will travel along the mainline rail network up to Sarajishvili Station, and then along a dedicated tram line. This will be linked to the proposed commuter rail network[1].
- **Option 2**: Didube Transport Hub to Didi Dighomi – this will be a more traditional tram service.
- **Option 3**: Saburtalo District to Didi Dighomi – this will be more traditional tram service.

In the short term an optioneering and feasibility study will have to be undertaken to identify the most optimal and feasible options in terms of route alignment, catchment area, technology to be adopted, and levels of service. The project should proceed to implementation only when the level of passenger demand on the TBT routes to Didi Dighomi exceeds capacity, to justify the significant investment required, ensuring affordability and value for money. In the long term, other extensions to the line could be explored to further improve rail-based connectivity in Tbilisi.



Didi Dighomi – City Centre Rail Link Option 1

[1]See Commuter Rail Action Sheet

5-Year Action Plan and Cost Estimate

Time period	Measure	Cost estimate
2024	Establishing stakeholder working group & initiating discussions (GR, TUDA, MOF, TTC)	-
2025	Alternatives analysis and pre-feasibility study, including ridership forecasting	$500,000
2026 - 2028	Feasibility study, concept design, and ridership modelling of preferred option	$1,000,000
2029 - 2030	Preliminary and detailed designs	$10,800,000
2033	Tentative start of project construction	$154,000,000 [1]
2034	Rolling stock procurement	$110,000,000 [2]
2035	Tentative start of operations	-
	Total	$276,300,000

[1]Based on 7km of tram route, @ EUR 20 million per km - Source: Sustainable Transport for the City of Tbilisi – Concept Proposals for Urban Transport Components, August 2020, GOPA Consultants (for KfW)
[2]Based on average market costs

Responsibility

TUDA will be responsible for managing the feasibility study and preliminary design. The specific agency responsible for the detailed design, construction, and the operating and maintenance of the new rail-based system will have to be determined. However, TTC, TUDA, and the Infrastructure Department of TCH will all have some degree of responsibility. Close cooperation with Georgian Railways will be required especially, if the tram train option is selected, as well as the newly established Rail Transport Agency under the Ministry of Economy. Utility works will be the responsibility of the respective utility company. The project will be funded by a combination of funds from Tbilisi City Hall, central government and international financial institutions.

Social and environmental impact assessment

No major adverse social and environmental impacts are expected. The project will improve local accessibility, and encourage mode shift away from cars. However the project is not expected to increase access to active mobility, and will not reduce overall government transport expenditure, hence it has an economic score of B. Increased subsidies to public transport could impact on the quality of the system overall. Accessibility for women is also expected to improve.

Criteria	Score
Social	C
Environmental	C
Economic	B
Accessibility	C

Commuter Rail

Tbilisi has one main long-distance railway line running through the centre of the city, which, in addition to serving distant cities in Georgia and beyond, also runs through the suburbs of Rustavi and Gardabani in the south, and Mtskheta and Gori in the north. There are also branch lines connecting Marneuli, Sagarejo and Tbilisi Airport. The railway network is entirely owned, operated and maintained by Georgian Railways. Most of the traffic on these lines is freight, with only limited passenger service.

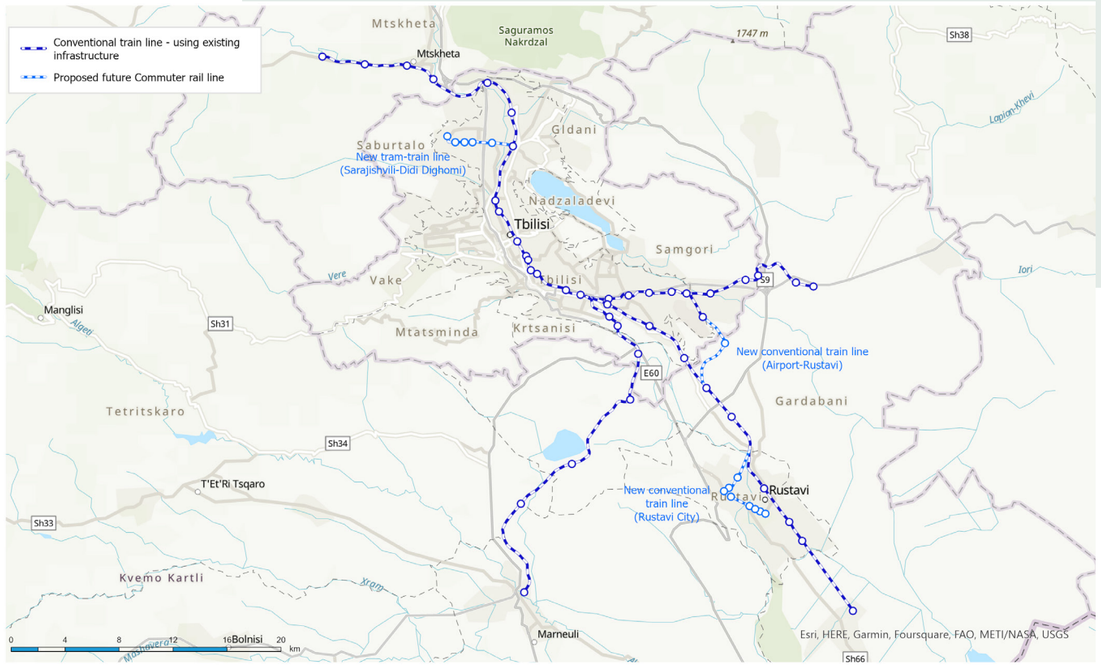
The fact that the existing railway line already connects Tbilisi with commuter towns both to the north and south of the city, and already includes station platforms at Tbilisi's main transport hubs (Station Square, Isani, and Didube), means that much of the infrastructure is already in place for **a high-frequency commuter style railway service**. Such a service could connect these commuter towns, and even the international airport, with the centre of Tbilisi. In the long run, rail-based links could be built from the main railway line to other rapidly developing areas in Tbilisi including Didi Dighomi[1].

The proposed commuter rail system will run **services between Tbilisi airport and the city centre, between Tbilisi and Rustavi, and between Tbilisi and Mtskheta**. The railway station at Station Square will serve as the main interchange hub, although in the long run through services may be run between Mtskheta and Rustavi, and extended to the cities west of Mtskheta such as Kaspi and Gori.

The main elements of the proposed commuter rail network are as follows:

- **Upgrade existing infrastructure**: Upgrade existing railway infrastructure including track, signalling, traction power, and other civil works
- **Stations**: New and/or refurbished stations at many new suburbs
- N**ew trains**: Procurement of new rolling stock suitable for operating commuter rail services – preferably Electrical Multiple Units (EMUs)
- **Depot**: New depot and maintenance facilities
- **Tbilisi Airport to Rustavi**: Potential new rail link between Tbilisi Airport and Rustavi
- **Didi Dighomi**: Potential new rail-based link to Didi Dighomi.

While construction and operations of a commuter rail system is a medium- to long-term action, preparatory work should begin sooner. Preliminary discussions need to take place between TUDA and Georgian Railways regarding all the practical, operational, and financial implications of introducing such a service. The institutional and commercial arrangements need to be developed covering the legal and regulatory model, determining who pays for and operates the system, how track access charges are defined, and how the revenue raised is shared between all parties. This may require legislative changes.



Proposed Commuter Rail Network.

[1]See Didi Dighomi-City Centre Rail Link Action Sheet

5-Year Action Plan and Cost Estimate

Time period	Measure	Cost estimate
2024	Preliminary working group discussions between all stakeholders	-
2025	Pre-feasibility study, including Institutional arrangements	$500,000
2026	Ridership forecasting study	$750,000
2027	Feasibility study	$1,200,000
2029 - 2030	Detailed design and operational plan	$8,000,000
2031 - 2032	Upgrade of existing line	$133,000,000 [1]
2032	Procurement of rolling stock (20 train sets)	$31,000,000 [1]
2033	Phased beginning of operations	-
2032 - 2034	Construction of new alignmnet - Rustavi to Airport	$114,000,000 [1]
2035	Full service in operation	-
	Total	$288,450,000

[1] Source: Sustainable Transport for the City of Tbilisi – Concept Proposals for Urban Transport Components, August 2020, GOPA Consultants (for KfW)

Responsibility

This will be complex project with seven main stakeholders:

- Georgian Railways
- TUDA
- Municipality of Rustavi
- Municipality of Mtskheta
- Central government
- Rail Transport Agency
- Spatial Urban Development Agency

The institutional arrangements and the relationship between TCH, Georgian Railways, and the central government need to be clearly defined. TUDA and Georgian Railways will be jointly responsible for managing the feasibility study, design, implementation and operation/monitoring stages, in close consultation with the other stakeholders given above. The project will be funded by TCH, Georgian Railways, central government or international donors where appropriate.

Social and environmental impact assessment

No major adverse social and environmental impacts are expected. The project will improve local accessibility, and will encourage mode shift away from cars. However the project is not expected to increase access to active mobility and will not reduce overall government transport expenditure, hence it has an economic score of B. Accessibility and mode choice for women is expected to improve.

Criteria	Score
Social	C
Environmental	C
Economic	B
Accessibility	C

Metro Modernisation

Tbilisi Metro carries over 150 million passengers per year, providing a sustainable alternative to the car. Unlike in most other cities, where increasing car ownership is leading people to abandon public transport, in Tbilisi all public transport ridership, including metro, has been increasing. Yet, poorly maintained infrastructure that is inaccessible to people with disabilities, has led to an unsatisfactory passenger experience. A modernised metro system would lead to a much-improved passenger experience, ensuring that the positive trajectory of metro ridership continues.

In 2017, an investment was approved to progressively upgrade and refurbish the existing metro stations as well as purchase over 200 new metro cars as part of a long-term contract. From that plan, so far, the Gotsiridze Metro station has undergone refurbishment.

This programme will progress the modernisation of the metro system including stations, infrastructure and trains, covering 4 broad areas:

New Station Entrances
New fully accessible entrances will be added at **Akhmeteli Theatre** and **Marjanishvili** Stations, providing much closer access to the metro for thousands of passengers. This will reduce overcrowding and improve accessibility at these stations. Following on from a CDIA-funded feasibility study, the schemes are now moving to detailed design, with Asian Development Bank (ADB) funding.

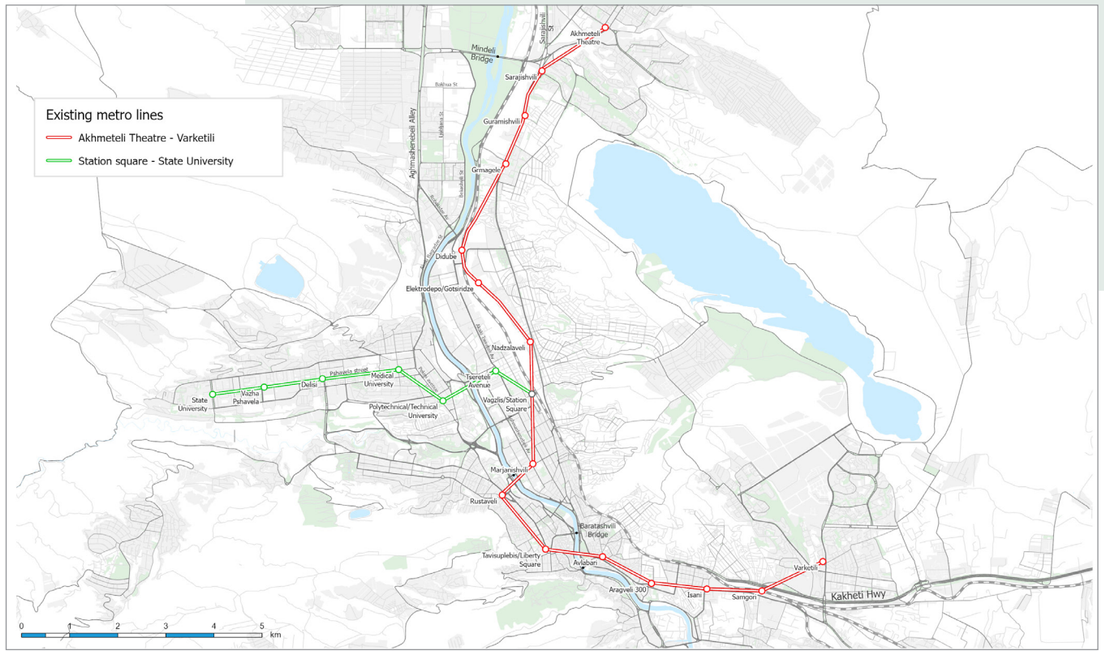
In the longer term, an additional new station entrance will be added at Freedom Square on the opposite side of the square, which will dramatically increase access to Old Town, and the waterfront.

Station Modernisation and Improved Accessibility
Twelve metro stations[1] will receive modernisation and accessibility upgrades and are currently moving forward with a combination of ADB and EBRD financing. The key elements of the station modernisation programme vary by station but include:

- **Indoor accessibility**: Improved interior accessibility, including new lifts and escalators, better access facilities for the mobility impaired, and gap reduction at the boarding platform
- **Outdoor accessibility**: Improved outdoor accessibility, including streets, adjacent public space, and a better transfer terminal for buses at Akhmeteli Theatre Station.
- **Structural upgrades**: Structural refurbishment of the stations including platforms, ceilings, building structure, entrances, lobbies, and asbestos removal

Train Car Modernisation
The city plans to procure ten 4-car train sets (40 metro cars) in the next 2 years. In the medium and long terms the entire metro fleet will be replaced with more modern train sets.

Network Rehabilitation
Additional modernisation works will include refurbishment of the workshop and training centre; new IT systems; and refurbishment of the main electromagnetic systems covering pumping, drainage and ventilation.



The two metro lines in Tbilisi

[1]The final decision on which stations will be upgraded is pending.

5-Year Action Plan and Cost Estimate

Time period	Measure	Cost estimate
2024	Conceptual design and feasibility of 2 new station entrances	$1,200,000
2025 - 2027	Construction of 2 new station entrances	$14,000,000 [1]
2025 - 2027	Detailed design for upgrade of 12 stations	$3,700,000
2026 - 2031	Upgrade of 12 stations (assumed 2 stations per year)	$53,000,000 [2]
	Total	$71,900,000

[1]Source: Universal Access and Inclusive Mobility to the Tbilisi Metro System, Final Report, May 2022, CDIA
[2]Source: Tbilisi Metro Station Refurbishment Project Main Reports, October 2022, Egis Consultants (for EBRD)

Responsibility

TTC is managing the feasibility study, project design, implementation, and the operation and maintenance of the assets. The project will be funded by a combination of Tbilisi City Hall, central government and international donors. Loans have been signed with both the EBRD and the ADB, in 2023 and 2021, respectively, for metro modernisation. TDF is managing the loan funds.

Social and environmental impact assessment

No major adverse social, environmental or economic impacts are expected, and the project will improve local accessibility, including for the mobility impaired, and mode choice. Accessibility and safety for women is also expected to improve.

Criteria	Score
Social	C
Environmental	C
Economic	C
Accessibility	C

More information

Project Preparation Study for Livable Cities Investment Program in Tbilisi: Universal access and inclusive mobility to the Tbilisi metro system Final Report : https://cdia.asia/wp-content/uploads/2023/03/GEO_LivableCities_May2022.pdf

Tbilisi Bus Transit (TBT)

Buses have the highest ridership of all public transport in Tbilisi. The bus network is extensive, and recent renewal of large portions of the bus fleet has meant that the buses are cleaner, newer, and more comfortable. But on many streets, although buses are carrying upwards of 90 people each, they are stuck in the same traffic as cars. On the main corridors some of the buses are neither large enough nor frequent enough to handle the demand.

To create a faster and more comfortable bus riding experience, **ten 'Tbilisi Bus Transit' (TBT) routes** have been selected. The TBT routes will be upgraded to feature **18-metre articulated buses running every four minutes.** The main streets on which these routes operate will receive infrastructure upgrades, including **dedicated lanes and improved bus stops and stations**. Not only will the TBT routes benefit from the improvements on these streets but every bus route that uses these streets, will receive those benefits as well.

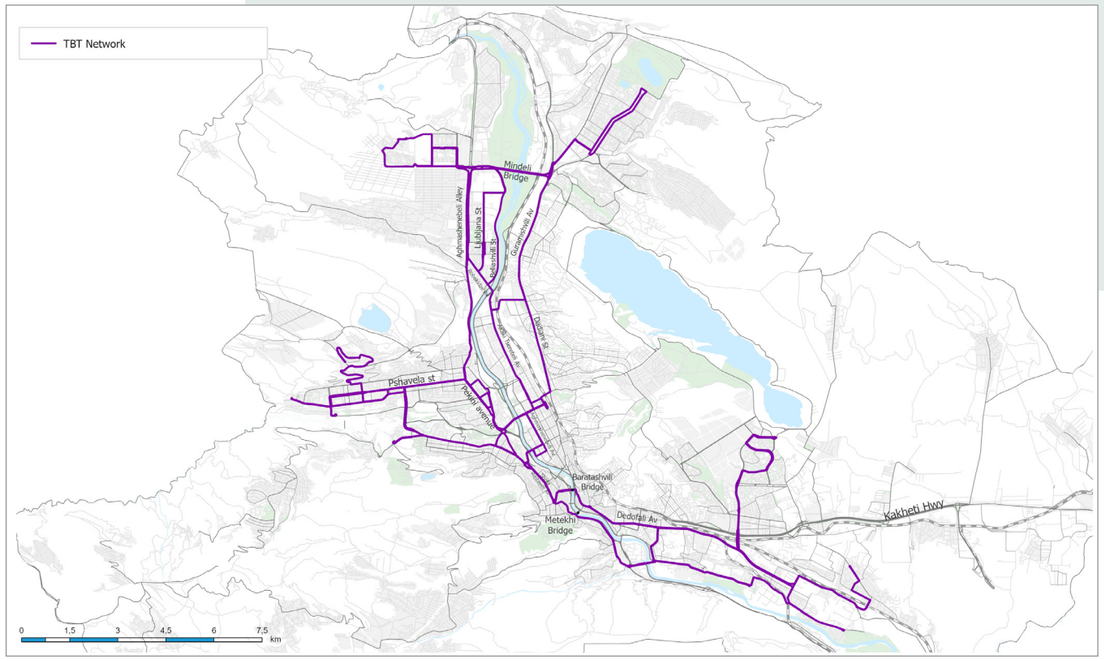
The re-design of the streets on which TBT will operate will range in scale and type; from painted curbside bus lanes to higher-quality centre-aligned bus lanes (such as on Chavchavadze and Tsereteli Avenues), closer in kind to full Bus Rapid Transit[1].

TBT will be considered as the highest level, or backbone, of the Tbilisi bus network. Once implemented, the bus network will also include second-tier, or city routes, as well as local/feeder routes.

Some TBT infrastructure has already been built: Chavchavadze Avenue was built as a centre-aligned full BRT corridor and was completed in 2020. Melikishvili Avenue and Ketevan Tsamebuli (Queen Ketevan) Street were completed in 2023. Works on Tsereteli Avenue began in 2023. Additionally, a bus depot for 18m buses is to be constructed by 2024.

The following is a list of all TBT routes:

- Gldani – Saburtalo
- Didi Dighomi – Saburtalo
- Samgori – Vake
- Samgori – Saburtalo
- Gldani – Ortachala
- Samgori - Didi Dighomi
- Samgori - University Str
- Samgori - Vake – Saburtalo
- Gldani – Vake
- Africa - Nutsubidze Plateau



Map of TBT routes

TBT infrastructure on Chavchavadze Avenue. Source: TUDA

[1]See brtstandard.org

5-Year Action Plan and Cost Estimate

Time period	Measure[1]	Cost estimate[2]
2020 - 2023	TBT infrastructure on Chavchavadze, Melikishvili, Queen Ketavan (1st part) - COMPLETE	$12,669,112
2023 - 2024	Tsereteli TBT infrastructure construction and opening	$15,356,500
2023 - 2024	Burjanadze St TBT infrastructure construction and opening	$3,455,212
2024	Mindeli Bridge rehabilitation and opening for TBT	$2,303,475
2024 - 2025	Rustaveli TBT infrastructure construction and opening	Costs included in Freedom Square and Rustaveli Action Sheet
2024 - 2025	Beliashvili St TBT infrastructure construction and opening	$8,466,075
2025 - 2026	Vazha-Fshavela infrastructure construction and opening	$15,356,500
2025 - 2026	Queen Ketavan (Kachinski St. to Mevele St) infrastructure construction and opening	$5,758,687
	Total	$63,365,561

[1]18m buses and bus depot included in the Better Buses and Minibuses Action Sheet
[2]All costs provided by the TCH Municipal Department of Infrastructure and converted from GEL into USD

Responsibility

TUDA managed the design of the bus routes, branding design and maps, as well as the conceptual design for the infrastructure. The Municipal Department of Infrastructure Development will be responsible for detailed design and construction. TTC is responsible for procurement of infrastructure, including new buses and a new depot. TTC is also responsible for operating the buses.

Social and environmental impact assessment

No major adverse social, environmental or economic impacts are expected, and the project will improve local accessibility, including for the mobility impaired, and deliver faster journey times. Accessibility for women is also expected to improve.

Criteria	Score
Social	C
Environmental	C
Economic	C
Accessibility	C

Better Buses and Minibuses

Tbilisi is seeking to significantly improve its bus and minibus system to ensure faster and more reliable services, accessible to all, with enhanced passenger amenities and information. By improving the efficiency of bus and minibus operations, the Tbilisi public transport system can reduce its costs and thus, its reliance on subsidy. By becoming more accessible and attractive to users, more people will use the system, again reducing the need for subsidy. A system that relies less on subsidy can put more money back into new infrastructure and better services.

This project focuses on providing a higher quality bus and minibus service through various measures:

Improved Bus and Minibus Stops

- **New Shelters**: New, attractive bus shelters at bus and minibus stops, both where existing lower quality shelters currently exist and where no shelter currently stands. As of 2023, 141 have been procured and will be fully delivered by the end of 2024. An additional 141 will continue to be procured each year.
- **Faster and more accessible boarding**: Off-board ticket validation kiosks at the highest volume bus stops to reduce delays while passengers board. Raised boarding platforms and kerb treatments to level boarding, providing greater accessibility for all passengers and reducing overall boarding times and ultimately, subsidies to the system.
- **Better transfer points**: Where bus-bus or bus-rail transfers are needed, walking paths and facilities will be upgraded to make the transfer smoother.
- **Bus stop size and location**: Bus stops resized to accommodate varying numbers of passengers and buses. Some stop locations shifted for better access.

Higher Quality of Bus Service

- **Contracts with operators**: New transparent Public Service Contracts (PSC) with bus operators to incentivise them to deliver an improved service
- **Enforcement**: Bus lane enforcement using cameras, both stationary and on-board buses
- **Tbilisi Bus Transit (TBT)**: Full rollout of TBT network[1]

Greater Information

- **Live information**: Live information through digital displays at an increased number of bus stops, and audio announcements at bus stops and onboard buses.
- **Buses at your fingertips**: Improved website and mobile app providing updated live travel information, including the ability to purchase bus passes on the app.
- **New brand**: New branding, including logo and colour scheme for the bus and minibus network, including renumbering bus routes
- **Maps**: Maps of the full bus system online and at bus stops. Zoomed in area maps of the bus network at bus stops in specific areas.

Bigger, Cleaner Buses

- **Bigger buses**: 18-metre buses on TBT corridors[2]
- **Electric buses**: Electrification of the bus and minibus fleet, leading to a much improved air quality
- **Modern Bus Depot**: A new modern bus depot to service the growing and changing fleet of buses.

Possible design for new bus shelters. Source : Mott MacDonald, "Tbilisi Bus Project – Support for Bus Reform"

[1]See TBT Action Sheet
[2]https://bm.ge/en/news/tbilisi-city-hall-to-buy-160-new-18-m-long-buses/132501

5-Year Action Plan and Cost Estimate

Time period	Measure	Cost estimate
2023	Tbilisi Bus Project study	$548,000 [1]
2023 - 2024	Production & installation of new maps and signage at stops and on buses	$677,221 [2]
	Installation of 141 bus shelters	$740,226 [3]
2023	Contract signed for provision of 160 18-metre buses	$99,433,337 [4]
2024	Arrival of 160 new 18-metre buses	
2023 - 2024	Tender and construction of new bus depot for 18m buses	$23,800,000 [5]
2023 - 2024	Reform of existing bus operating contracts	-
2025	Feasibilty study for Faster and More Accessible Bus and Minibus Boarding	$548,000 [6]
2025	Installation of 141 additional bus shelters	$740,226 [7]
2026	Construction and equipment related to Faster and More Accessible Boarding	Cost TBD in feasibility study
	Total	$126,487,010

[1]Source: Tbilisi City Hall
[2]2,450 bus stops at 720 GEL per sign
[3]Tender for bus shelters, NAT230013010, https://tenders.procurement.gov.ge/public/?go=523529&lang=ge
[4]Source: https://bm.ge/en/news/when-will-man-18-m-long-buses-enter-georgia/136773
[5]Source: https://bm.ge/en/news/tbilisi-city-hall-to-announce-bus-depot-construction-tender/132495
[6]Assumed similar costs to Tbilisi Bus Project Study
[7]Assumed similar costs to 2023 bus shelter procurement and installation

Responsibility

TUDA will be responsible for managing the implementation and operation/monitoring stages. The Municipal Department of Infrastructure of TCH shall take the lead on all infrastructure works, beginning with the feasibility study. TTC will have responsibility for the operating and maintaining of the new infrastructure. The project will be funded by Tbilisi City Hall from the municipal budget. However, procurement of new electric buses will have to be funded by international financial institutions.

Social and environmental impact assessment

No major adverse social and environmental impacts are expected, and the project will improve local accessibility. However the project is not expected to increase access to active mobility, and will not reduce overall government transport expenditure, hence it has an economic score of B. The project will improve accessibility for the mobility impaired and deliver improved journey quality. Accessibility and safety for women is also expected to improve.

Criteria	Score
Social	C
Environmental	C
Economic	B
Accessibility	C

Cable Cars

Urban Cable Cars have a role to play as a mode of public transport in Tbilisi, given both the size and the topography of the city. The geography of Tbilisi is unique in that the city is located in a valley, with the main business and commercial districts and the old town located in the bottom of the valley adjacent to the river, while many of the residential areas are located higher up in the valley. This enables the development and use of urban cable cars as a means of getting people from the residential districts to the business districts.

The city has had cable car systems operating since the 1950's, although most of the lines were built to link the tourist destinations with the centre of the city. However, there is a strategic case to be made for the development of **modern, efficient cable car systems** as a mode of urban commuter transport:

- The **unique topography** of the city, where numerous residents live in the hilly areas above the city centre, mean that a direct cable car route will always be faster than buses which have to use long and windy roads;
- On average urban cable cars have **a carrying capacity** of around 2,500 to 3,000 passengers per hour per direction (pphpd), which is ideal for the specific corridors being proposed in Tbilisi;
- Cable cars provide a **clean, green and emission-free** form of public transport, which fits into Tbilisi's vision of being a modern, green and sustainable European city; and
- Cable car systems are **cheaper to build** than metros or trams, especially in terrain where developing other modes of public transport poses significant technical challenges.

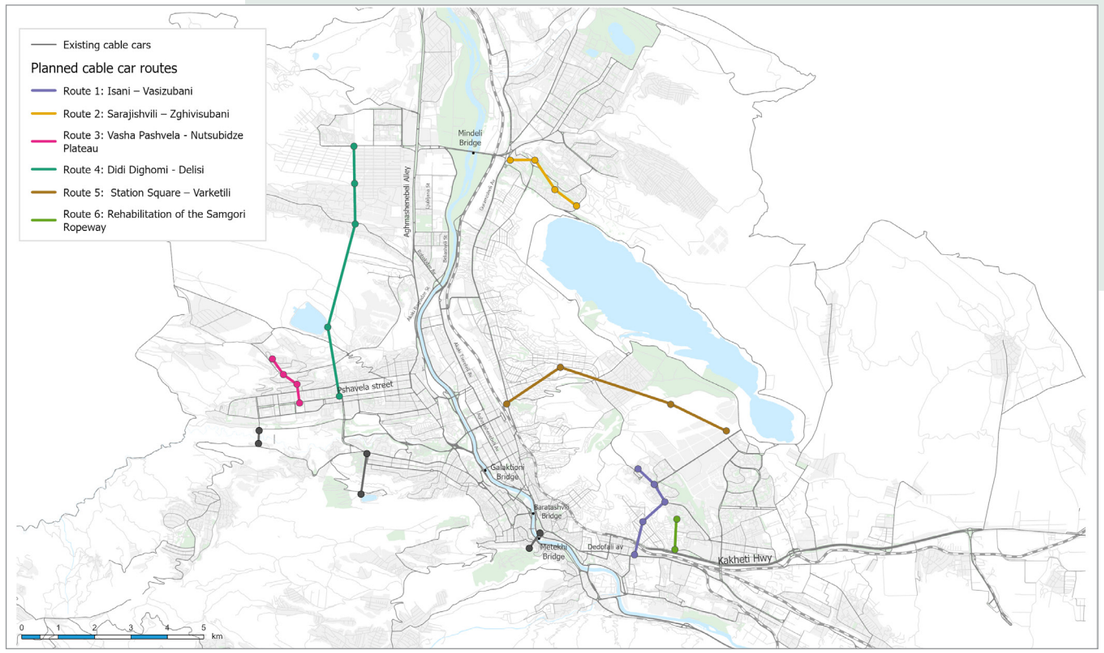
Urban Cable Car in Tbilisi

Urban cable cars would be most impactful on the following **six corridors** (in the order of priority):

- **Route 1**: Isani – Vasizubani
- **Route 2**: Sarajishvili – Zghivisubani
- **Route 3**: Vasha Pashvela - Nutsubidze Plateau
- **Route 4**: Didi Dighomi - Delisi
- **Route 5**: Station Square – Varketili
- **Route 6**: Rehabilitation of the Samgori Ropeway

AFD have undertaken a detailed technical analysis and pre-feasibility study on Route 1 and Route 2 and have had detailed discussions with TUDA and the Ministry of Finance around the possibility of financing these two lines in the near future.

On all the proposed routes it is essential that land for the proposed stations and the route alignments are protected from any future commercial or residential developments.



Urban cable cars routes

5-Year Action Plan and Cost Estimate

Time period	Measure	Cost estimate
2024	Feasibility Studies for Routes 1,2 and 3	$3,000,000
2025	Detailed design and public engagement for Routes 1,2 & 3	$9,100,000 [1]
2026 - 2029	Construction of Routes 1,2 & 3	$129,500,000
2030	Commencement of operations - Routes 1 & 2	-
2029	Feasibility Studies for Routes 4 & 5	$2,000,000
2030	Detailed design and public engagement for Routes 4 & 5	$6,200,000
2031 - 2033	Construction of Routes 4 & 5	$87,900,000 [2]
2034	Phased commencement of operations - Routes 4 & 5	-
	Total	$235,700,000

[1]Source: AFD Pre-Feasibility Study, 2021
[2]Assumed cost of €40 million per route

Operating Costs

The operating and maintenance cost per line has been estimated as follows[1]:

- **Route 1:** $2 million per annum (2023 prices)
- **Route 2:** $2.3 million per annum (2023 prices)
- **Routes 3, 4 & 5:** $2.2 million per annum each (2023 prices)

Responsibility

TUDA will be responsible for managing the feasibility study stage in close consultation with TCH. After this TTC will be responsible for the tendering process and project construction and supervision. The operating and maintenance of the cable car system will be the responsibility of TTC, unless it is decided that operations will be done by a private entity. In that case, TTC would manage the contract with the private entity. Routes 1 and 2 will most likely be financed by the AFD through a loan, as they have already undertaken much of the preparatory work. TDF would be responsible for managing the loan funds.

Social and environmental impact assessment

No major adverse social and environmental impacts are expected, and the project will improve local accessibility, especially to more remote part of Tbilisi. The project is not expected to increase access to active mobility and will not reduce overall government transport expenditure, hence it has an economic score of B. However the project will improve accessibility for the mobility impaired and deliver improved journey quality. Accessibility for women is also expected to improve.

Criteria	Score
Social	C
Environmental	C
Economic	B
Accessibility	C

[1]Source: Tbilisi Cable Car – Project Preparatory Study, Pre-Feasibility Study Report, 2021.

Station Square Upgrade and Bus Priority Crossing

Station Square is the most important transport interchange in Tbilisi, connecting metro, railway, city bus, and inter-city bus services. However, the current space is being used in a haphazard manner, leading to traffic congestion, poor interchange facilities, and an unsafe pedestrian environment. Furthermore, the large area in front of Station Square suffers from a brutalist concrete design. Buses, taxis, and other vehicles move chaotically through the area, often creating traffic jams. The shops, below the main square, are constantly vandalised and are more or less abandoned.

The proposed scheme would constitute a major redesign, beautification, and upgrade of the Station Square area, including the following elements:

- **Public space**: A beautiful, green and sustainable public space in front of the main gateway into the city.
- **Multimodal interchange**: A smooth, seamless, and accessible interchange for passengers between the metro, railway, buses, and taxis.
- **Bus terminal**: An upgraded bus terminal which will cater to the needs of the TBT network[1].
- **Safer for walking and cycling**: Safe and comfortable spaces for cycling and walking in the area.
- **Better storefronts**: Enhanced local market and shops, without leading to any displacement of local businesses or adversely affecting people's livelihood.

To ensure the smooth operation of the TBT network, a **new East-West crossing** over the railway line will be built. This bridge will give priority to buses and options for including bicycles and pedestrians are being studied. This bridge is expected to make journeys shorter on the TBT network, improve bus journey times, and reduce bus operating costs. It may also provide new connections for cyclists and walkers who today must either use a dark and uncomfortable footbridge or face a long diversion to make the crossing.

Rendering of the Station Square public plaza developed by the winner of the Station Square student competition. Source: ARKINEA, Georgian Technical University.

[1]See Tbilisi Bus Transit (TBT) Action Sheet

5-Year Action Plan and Cost Estimate

Time period	Measure	Cost estimate
2023	Alternatives Analysis	$500,000
2024	Bus Priority Bridge: Detailed design and public engagement	$2,500,000
2025 - 2027	Construction of bus priority bridge	$23,000,000 [1]
2027	Opening of bridge to traffic	-
2024	Station Square Upgrade: Detailed design and public engagement	$1,000,000
2025 - 2027	Implementation of Station Square upgrade	Cost to be determined at design stage
2028	Opening of upgraded Station Square	-
	Total	$27,000,000

[1]Source: Tbilisi East-West Crossing Alternative Analysis Study, 2023, ITP Consultants (for World Bank)

Responsibility

TUDA is responsible for managing the feasibility study and preliminary design, as well as monitoring of the project post-implementation, while the Municipal Department of Infrastructure Development will be responsible for detailed design and construction. TDF will likely be responsible for procurement of infrastructure and works. The Environmental Protection Department will manage the physical works with regard to landscaping, including planting, water, and drainage. Utility works will be the responsibility of the respective utility company. Maintenance of the new bridge will be carried out under the normal bridge maintenance procedures or it may be carried out via contract to a third-party maintenance company, similar to maintenance of the Bridge of Peace. Maintenance of the public space in front of Station Square will likely be managed by a combination of Tbilservice, Ecoservice (for greenery) and the Municipal Department of Infrastructure Development.

Georgian Railways will be a key stakeholder as the owner of a large part of the land, and the need for the bridge to cross the railway line. The project will likely be funded by a combination of funds from Tbilisi City Hall, central government and international financial institutions.

Social and environmental impact assessment

No major adverse social, environmental or economic impacts are expected, and the project will improve local accessibility, especially for public transport. Moreover the project will improve interchange at Station Square, accessibility for the mobility impaired, and deliver faster journey times. Accessibility and safety for women is also expected to improve.

Criteria	Score
Social	C
Environmental	C
Economic	C
Accessibility	C

Pedestrian and Cycle-Friendly River Crossings

Today there are 11 bridges over the Mtkvari River within Tbilisi City. While it is possible to walk across many of them, getting to and from the bridges on foot can be a challenge as their primary function is to move motorised vehicles across the river. Only the Bridge of Peace qualifies as a fully pedestrian-oriented bridge, with no provision for cars at all.

This project aims to **redesign**[1] four **existing river crossings** in Tbilisi, to become safer and more attractive for people walking and cycling:

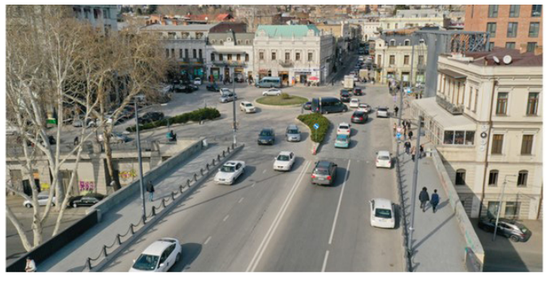
- **Metekhi** Bridge
- **Saarbrucken/Dry** Bridge
- **Galaktioni** Bridge
- **Baratashvili** Bridge

While preliminary work will be needed to define the scope of these projects, elements such as protected cycle lanes, safe and direct pedestrian access and egress, universal accessibility, bus-only lanes, traffic calming, and integration with public transport and waterbus stops on either end, will be key components of the upgraded bridges. Placemaking elements will also be installed along the bridges, including benches, attractive lighting, and shade.

The project also aims to build one **entirely new pedestrian and cycle-only river crossing** connecting the Public Service Hall to a new park on the opposite side of the river. A new river crossing will shorten walking distances, especially between the left and right riverbanks, including the revitalised Public Service Hall area, Dadaena Park, the new linear parks on the left riverbank and the redesigned Saarbrucken Square[2]. It will also benefit the bus users that embark and disembark on the opposite side of Public Service Hall.

Finally, where the upgraded Saarbrucken Bridge terminates in Saarbrucken Square, a new, people-oriented square will be created. Where today, there is a traffic circle, difficult to traverse by bicycles and pedestrians, the new Saarbrucken Square will remove the traffic circle and create a public plaza.

Location for new pedestrian and cycle-only river. Source: TCH



Before/after vision for Saarbrucken Square. Source: 'Waterfront Vision Plan', Royal HaskoningDHV, August 2022.

[1]While a redesign of the surface of the bridges is anticipated under this action, structural rehabilitation would happen separately, under the city's standard bridge rehabilitation procedures.
[2]See Waterfront Revitalisation Action Sheet.

5-Year Action Plan and Cost Estimate

Time period	Measure	Cost estimate
2023	Restripe Metekhi Bridge to include cycle lanes and pedestrian space (currently unstriped)	-
2024	Feasibility study & concept design for 5 bridges & Saarbrucken Sq	$500,000
2025	Preliminary and detailed design for 5 bridges & Saarbrucken Sq	$728,738 [1]
2025	Metekhi Bridge: Implementation	$394,766 [2]
2026	Saarbrucken Bridge and Square: Implementation	$315,778 [2]
2027	Galaktioni Bridge: Implementation	$350,000 [3]
2028	Baratashvili Bridge: Implementation	$350,000 [3]
2028 - 2029	New pedestrian-only bridge: Implementation	$9,000,000 [4]
	Total	$11,639,282

[1]7% of total estimated construction costs
[2]Source: Tbilisi Waterfront Strategy and Vision Plan, August 2022, Royal HaskoningDHV (for ADB)
[3]No costing currently available from 3rd party sources so assumed similar costs as Metekhi and Saarbrucken and averaged the 2
[4]Assumed similar cost (plus inflation) to Bridge of Peace which was completed in 2010

Responsibility

TUDA will be responsible for managing the feasibility study and preliminary design, as well as monitoring of the project post-implementation, while the Municipal Department of Infrastructure Development will be responsible for detailed design and construction. The Environmental Protection Department will manage the physical works with regard to landscaping, including planting, water, and drainage.

Utility works will be the responsibility of the respective utility company. Maintenance of the bridges will be carried out under the normal bridge maintenance procedures by relevant departments of TCH. Maintenance of Saarbrucken Square and of the new pedestrian bridge will be managed by either Ecoservice or Tbilservice Group, which manages public spaces in Tbilisi.

Social and environmental impact assessment

No major adverse social and environmental impacts are expected and the project will improve local accessibility. The project is not expected to reduce overall government transport expenditure, and hence it has an economic score of B. The project will encourage active mobility and improve accessibility for the mobility impaired; and accessibility for women is also expected to improve.

Criteria	Score
Social	C
Environmental	C
Economic	B
Accessibility	C

Pedestrian Streets

While most of the streets in Tbilisi give a majority of space to cars, there have been several efforts over the past few years to **create streets that are for pedestrians only.** These streets provide people with an entirely new way of experiencing their city, free of worries for their safety. They will also encourage active mobility and provide pollution-free spaces within the city.

To increase the number of people and places that benefit from these treatments, this action focuses on developing more pedestrian-only streets in Tbilisi. The following streets, totalling approximately 800 m in length, have been identified as a priority for short-term re-design, as shown on the map:

- Gudiashvili Street
- Vashlovani Street
- Vladimer Kankava Street
- Mikheil Lermontovi Street (one section)
- Ivane Machabeli
- Mosashvili street (eastern section)

A longer list – also shown on the map – are priorities for the medium-to longer-term.

New pedestrian streets will incorporate lessons learned from existing pedestrian streets to help usher in a new generation of pedestrian streets in Tbilisi. In particular, new designs will prevent encroachment of illegal vehicles and will ensure that any cafes that are already on the streets will not exceed a given amount of space. This way, pedestrians will always have sufficient space for moving around freely.

Vibrant pedestrian-only street in Old Town, Tbilisi.
Source: Annie Weinstock, BRT Planning International

Map of existing and proposed pedestrian-only streets in Tbilisi, for both the short- and medium/long terms.

5-Year Action Plan and Cost Estimate

Time period	Measure	Cost estimate
2024	Implementation of Vashlovani pedestrian-only street (part of Kiacheli Superblock)	Incl. in cost of Kiacheli Superblock [1]
2025	Implementation of Kankava pedestrian-only street (part of London Park Superblock)	Incl. in cost of London Park Superblock [1]
2026	Implementation of Machabeli & Lermontov pedestrian-only streets (part of Sololaki Superblock)	Incl. in cost of Sololaki Superblock [1]
2027	Detailed design and implementation of Gudiashvili pedestrian-only street	$1,151,737 [2]
2028	Detailed design and implementation of Mosashvili pedestrian-only street	$1,343,693 [2]
	Total	$2,495,430

[1]See Superblocks Action sheet
[2]Calculated by the Municipal Department of Infrastrutucture applying costs of similar projects and scaling to this street.

Responsibility

TUDA will be responsible for managing the feasibility study and concept design for each street. The Municipal Department of Infrastructure Development will be responsible for detailed design and construction. TDF will be responsible for any upgrades of historic buildings. For streets in historical areas, the designs will be reviewed by the Historical Heritage Council, a department under City Hall. The Environmental Protection Department will manage the physical works with regard to landscaping, including planting, water, and drainage. Utility works will be the responsibility of the respective utility company. Maintenance of greenery will be managed by Ecoservice while maintenance of all other aspects of the public space will be managed by Tbilservice Group.

Social and environmental impact assessment

No major adverse social and environmental impacts are expected, and the project will improve local accessibility. The project is not expected to reduce overall government transport expenditure, and hence it has an economic score of B.

However the project will encourage active mobility and improve local air quality. Accessibility for women is also expected to improve.

Criteria	Score
Social	C
Environmental	C
Economic	B
Accessibility	C

Bicycle Network

For much of the year, Tbilisi has ideal weather conditions for cycling. Over the last decade or so, it has begun to capitalise on this by building out its cycle network. However, Tbilisi is a big city and the 35 kilometres of cycle lanes that have been built to date cover only a very small portion of the city. Most do not meet the safety standards needed to create a truly safe cycling environment. Furthermore, they are piecemeal, rather than forming a connected network. Cycling on the street where no cycle lanes exist can be extremely dangerous and frightening.

This action focuses on a two-fold strategy for completing Tbilisi's cycling network, and consists of the following:

Master Network
A master network of connected, safe and attractive cycling routes. The network, conceived through assistance from the German Development Agency (GIZ), will cover around 30 additional kilometres of cycling routes in the short-term and 325 total kilometres in the long-term. In the short-term, high-quality cycle lanes will continue to be built along the TBT corridors[1], as well as along riverfronts and throughout Vake and Saburtalo. The network was developed in 2022 and already, 20 kilometres of cycling routes have been built in Tbilisi.

The aim will be to create cycle lanes which are fully separated from motorised traffic, to provide the necessary level of comfort and safety. In the short term, buffered cycle lanes will be implemented while in the long term, these cycle lanes will be built as raised concrete at the same level as the sidewalks for optimal safety.

Velo Ubani
In addition to the master cycling network, Tbilisi has the goal of creating 'Velo Ubanis', or cycling districts. These are neighbourhoods with self-contained bicycle networks such that it is possible to safely cycle to any part of the neighbourhood. The near-term pilot Velo Ubani will be in the Marjanishvili neighbourhood with a second possible near-term Velo Ubani in Saburtalo. Plans are also in place for 1-2 additional Velo Ubanis (locations TBD) in the medium term.

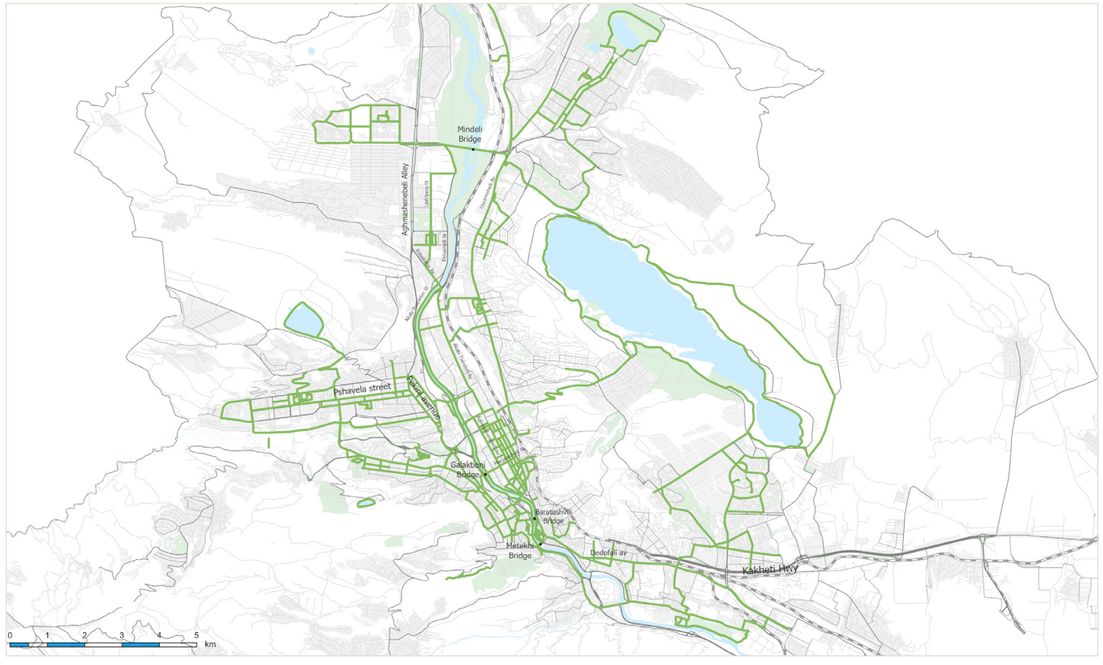
For both strategies, complementary infrastructure will be built. This will include high-quality lighting, signage to help navigation, dedicated traffic lights which give priority to cyclists, and new river and railway crossings. Additional infrastructure will be built alongside the bicycle network, such as bicycle parking along the network and near major bus and metro stations, and bicycle repair stations.

It is important to note that the master network and Velo Ubanis are only the first steps in a larger citywide cycle priority network. It is the city's long-term vision that all urban streets be designed to be safe for cyclists. Therefore, the safety of cyclists will be considered in all street redesigns going forward.

[1]See TBT Action Sheet

Tsabadze Avenue reimagined with safe cycle lanes.
Source: Mobycon/SBS "Cycling Masterplan Report", July 2022.

Rendering of cycle-friendly streets: Kote Marjanishvili and Giorgi Chubinashvili St. Source: Mobycon/SBS "Cycling Masterplan Report", July 2022.



Map of the proposed bicycle network, based on the plan developed by Mobycon in 2022 which may have changed somewhat in the intervening period. Source: Mobycon/SBS "Cycling Masterplan Report", July 2022.

5-Year Action Plan and Cost Estimate

Time period	Measure	Cost estimate
Ongoing	Community engagement around Velo Ubani in Marjanishvili and Saburtalo	-
2024	Preliminary and detailed design for Velo Ubani in Marjanishvili and Saburtalo	-
2025	Implementation of Velo Ubani in Marjanishvili	$249,806 [1]
2026	Implementation of Velo Ubani in Saburtalo	$81,493 [2]
2024 - 2028	30 km (6km per year) safe, high-quality bike lanes from the Master Network	$27,641,700 [3]
	Total	$27,972,999

[1]Mobycon, Tbilisi Cycling Master Plan Pilot Area, plus 18% for inflation over 2 years and 5% additional for paint
[2]Mobycon, Tbilisi Cycling Master Plan Pilot Area, based on Marjanishvili costs and scaled to the size of the Saburtalo Velo Ubani (2.86km)
[3]This represents upper limits of the total cost of 6km of full street rehabilitation, which includes bike lanes. It is not possible to separate it out.

Responsibility

TUDA will be responsible for managing the design and implementation of most bicycle lanes, where paint and light construction is required. Where heavier construction is required, such as with bike lanes that are built as raised concrete, the Municipal Department of Infrastructure Development may be responsible for detailed design and construction. TUDA will manage post-implementation monitoring.

Social and environmental impact assessment

No major adverse social, environmental or economic impacts are expected, and the project will improve local accessibility, encourage active mobility, and help reduce vehicular pollution. Women will benefit from a safer and more independent form of travel.

Criteria	Score
Social	C
Environmental	C
Economic	C
Accessibility	C

On-Street Parking Management

Car ownership in Tbilisi is growing fast and the streets are becoming more and more congested every day. In many international cities, parking acts as a control on the amount of congestion and growth in car use. In Tbilisi, parking is still relatively cheap and is free in many places. Furthermore, **illegal parking is a major issue.** Footpaths, as well as many valuable plazas and courtyards, are now used more for vehicle storage than for people's enjoyment. Streetscape investments to encourage economic growth and tourism are being undermined by illegal parking.

Meanwhile, subsidies to the public transport system have grown to 150 million GEL per year ($46 million). As a result, there is less funding available for bus and metro system improvements and proper maintenance of public transport infrastructure is becoming more of a challenge. A new source of revenue is badly needed.

Tbilisi has made progress on managing its on-street parking. In 2009, the city rolled out a paid parking scheme. In 2019, the city introduced a new scheme in which drivers pay 1 GEL ($0.38) per hour to park within a designated parking area. This programme became a "zonal parking programme" with the aim of charging higher hourly fees in zones where parking is more desirable. In 2023, the fee in some zones will be increased to 3 GEL ($1.15), which is still low by international standards. Further, much of the city continues to have free parking. Illegal parking also continues – potentially a missed opportunity for additional revenue. An **improved on-street parking management system** could provide a check on car travel, as well as a new source of revenue for the public transport system which can, in turn, offer a real alternative to driving.

This project aims to take the following actions:

- **Comprehensive on-street parking implementation**: Develop and implement a comprehensive, citywide on-street parking management plan, considering appropriate pricing in all districts, as well as a plan for managing illegal parking.
- **Physical painting and green separation of parking spaces**: Design and stripe physical parking bays throughout the city and separate every few bays with greenery.
- **Employ modern technology**: Bring in state-of-the-art parking technology, including roving camera enforcement, parking sensors for real-time occupancy, and real-time parking vacancy signs.
- **Parking contract modernisation**: This action will look to modernise parking management, possibly through the use of a public-private partnership (PPP) model, a practice adopted in many international cities. Parking management companies with international experience in managing parking can often be more effective than the public sector alone and can bring in the technology needed for a modern parking system.
- **Revenue opportunities**: Opportunities for using the new revenue will be explored with a focus on public transport system maintenance and expansion.

Parked cars take over newly renovated public space. Source: Lloyd Wright, ADB

5-Year Action Plan and Cost Estimate

Time period	Measure	Cost estimate
2023	Tender for on-street parking management feasibility study (combined with parking levy study)	-
2024	On-street parking management feasibility study (combined with parking levy study)	$750,000
2024 - 2025	Public outreach	Included in feasibility study costs
2024	Institutional restructuring for on-street parking management	-
2025	On-street parking management tender and contract signing	Included in operating costs
2025 - 2026	Painting and infrastructure for designated parking spaces	To be determined in feasibility study
	Total	$750,000

Operating Costs

The main cost of operating the on-street parking system is typically the ongoing fee associated with the parking concession. This cost varies depending on the specifics of the parking concession. Assuming a citywide rollout of on-street parking management, the revenues could reach up to GEL 36.5 million (USD 14 million) per annum[1].

Responsibility

TCH/TUDA will be responsible for managing the feasibility study, implementation and management of operating contracts, as well as monitoring the programme. TTC will be a close partner in the programme, as they currently manage on-street parking in Tbilisi. The private sector may also be a key player if the decision is to use a PPP. The feasibility study is being funded by the ADB and TDF is managing the loan.

Social and environmental impact assessment

No major adverse social and environmental impacts are expected, and the project will improve local accessibility. The project is not expected to reduce overall government transport expenditure, hence it has an economic score of B. It will, however, increase revenue to the City, which is likely to fund public transport. The project will also encourage mode shift away from cars and help improve road safety. Women will have a better and safer walking environment and improved public transport.

Criteria	Score
Social	C
Environmental	C
Economic	B
Accessibility	C

[1]Current annual revenue for zonal parking (including 9,400 spaces) is 4.8M GEL. Assuming full rollout of 30,000 spaces and an average price of 2 GEL per hour citywide (with a range of 1 – 3 GEL per hour per space), the revenue from zonal parking could be ~30.6 million GEL. The current annual revenue from the release of impounded vehicles is ~1.1 million GEL. Assuming enforcement is stepped up, this could reach 2 million GEL annually. The annual revenue for non-zonal parking subscriptions is 3.788 million GEL. Assuming this does not change, the estimated total possible revenue is ~36.5 million GEL

Parking Levy

The public transport system in Tbilisi carries over a million passengers every day. Yet it operates with a growing subsidy which is limiting the ability of the city to expand, modernise or even maintain the existing system. Meanwhile, motorised traffic and parking come with external costs to the city in terms of worsening air quality, significant land consumption, and time lost by its citizens.

The City of Tbilisi is, therefore, exploring new ways of offsetting these external costs, while also raising revenue which could be used to reduce the subsidy to public transport, fund new public transport projects, or maintain/reduce current public transport fares.

One of the most straightforward means of raising revenue is through a parking levy. A parking levy is a daily fee placed on the owners of off-street, non-residential parking spaces, such as shopping malls, office parks, etc. within a designated zone, regardless of whether the parking space is utilised or not during the day. It is an **entirely new revenue stream** for a city, which can be allocated to specific uses.

As practiced in cities in Australia and the UK, a parking levy can be instrumental in reducing car travel into a city's densest areas. A parking levy can also result in a reduction in the overall number of parking spaces in those areas, which releases space to be converted to other uses.

Off-street parking
Source: Алексей Закиров - stock.adobe.com

5-Year Action Plan and Cost Estimate

Time period	Measure	Cost estimate
2024	Parking levy feasibility study (combined with on-street parking management study)	$750,000
2024	Presentation of parking levy feasibility to mayor	-
	Additional outreach to affected non-residential property owners	$200,000
2025	Parking levy implementation	Covered in the planning work above
	Total	$950,000

Operating Costs

The costs of maintaining a parking levy are typically that of 1-2 new full-time staff positions. Assuming a citywide parking levy, the revenues could reach up to GEL 16.4 million (USD 6.4 million) per annum[1], which will more than cover the cost of full-time staff.

Responsibility

TUDA is responsible for managing the feasibility study and implementation of the parking levy, including public outreach. The feasibility study is being financed by the ADB. Subject to the results of the parking levy feasibility study, once the parking levy is implemented, TUDA could also become the institutional lead responsible for maintaining the system. This responsibility will include keeping the database of property owners and their parking lots up to date and continuing outreach. Invoicing to property owners and keeping track of accounts receivable, late payments, etc., will likely be the responsibility of the Ministry of Finance, but this is to be determined in the Feasibility Study.

Social and environmental impact assessment

No major adverse social and environmental impacts are expected. The project is not expected to reduce overall government transport expenditure, hence it has an economic score of B. It will, however, increase revenue to the City which is likely to fund public transport. Also, the project is not expected to have any impact on accessibility, but will encourage mode shift away from cars and help improve road safety. Women will have a better and safer walking environment and improved public transport.

Criteria	Score
Social	C
Environmental	C
Economic	B
Accessibility	B

[1]Annual estimate based on GEL 1.5 per day per space, with approximately 30,000 affected spaces.

Vision Zero

The number of people who walk in Tbilisi is high by international standards. Yet, due to chaotic road traffic and failure to prioritise the needs of people walking and cycling in road design, it can often be unsafe for people to walk around the city. Cycling is only just emerging as a mode of transport in Tbilisi but safe bicycle infrastructure lags behind much of the world. The result is that there are often collisions resulting in injury, and sometimes even death, between motorists and pedestrians or motorists and cyclists. In 2019 alone, there were 2,891 road accidents and 100 road deaths in Tbilisi.[1]

This project puts forward the critical goal of reducing road deaths to zero. "However this is a very long term aspiration, and for the purposes of this Plan, the more realistic target is to reduce road deaths by 50%. This 'Vision Zero' approach, developed in the 1990's in Sweden, is rooted in the principle that no one should be killed or seriously injured through a road traffic crash. It requires safer streets that allow all people, including children, the elderly, and people with disabilities, to move around the city freely without fear of getting hit by a car. Indeed, development of street safety programmes at the local level are required by national law.[2]

Tbilisi's Vision Zero programme seeks to accomplish the following:

- **Speed Limit Reduction:** The city will develop a new speed limit map, aiming to reduce speed limits citywide. Smaller neighbourhood streets would have the lowest speed limits while larger arterials would have higher speed limits.
- **Safe Cycle Network:** In the short-term, the city will develop 30 additional kilometres of safe cycle lanes to the existing 35 kilometre network, ensuring even greater safety than those already built. They will also develop cycling neighbourhoods, or "Velo Ubani"[3] .
- **Complete Streets:** As part of the creation of this Tbilisi Transport Plan, a document entitled "Street Design Guidelines" has been developed, specifically to guide the design of Tbilisi streets for optimal safety, accessibility and equitable use by all road users. Through its normal road rehabilitation programme, rather than rebuilding streets the way they were, the city will rebuild streets as "Complete Streets." This means that the designers will follow Tbilisi's new Street Design Guidelines, to lead the city towards its goal of Vision Zero.
- **Safer Junctions:** Junctions are where the majority of dangerous collisions happen. In 2023, the Mayor committed to redesign 12 junctions to ensure "safe movement of pedestrians."[4] Through the Vision Zero programme, the city will follow through on this commitment and additionally, redesign five of the most dangerous junctions per year. Junction improvements may include raised and signalised crosswalks, curb extensions to shorten crossing distances, reduction in turning radii so that cars slow down when turning, safety islands midway through crossings, optimal lane width, and reduction of parking near junctions ("daylighting") to increase visibility.

The Vision Zero programme relies on a robust data collection programme, which records the location, time, and cause of road traffic collisions, including the casualties involved. Critically, the data must be made fully transparent so that it is easy to monitor by anyone.

Vision Zero also requires stepped-up enforcement. This will take place through speed and red light cameras, mobile patrol units, and an escalating scale of penalties.

Akhvlediani Street reimagined as a safe corridor for all.
Source: Leku Studio.

[1]https://agenda.ge/en/news/2023/1348
[2]See Article 9 – Programmes for ensuring traffic safety in https://matsne.gov.ge/ru/document/download/2169396/5/en/pdf
[3]See Bicycle Network Action Sheets
[4]https://agenda.ge/en/news/2023/648

5-Year Action Plan and Cost Estimate

Time period	Measure	Cost estimate
2023	Analysis of crash data to select 12 junctions to redesign	-
2023 - 2024	12 dangerous junctions redesigned as safe intersections	$7,102,000 [1]
2024	Street hierarchy and speed limit development	$100,000
2024 - 2025	Speed limit changes	-
2025 - 2028	5 junctions redesigned as safe intersections each year, beginning with crash data review	$2,879,000 [1]
2023 - 2028	75 km of complete streets (15km per year) as part of normal road rehabilitation, including design	$69,000,000 [2]
	Total	$79,081,000

[1]Based on a cost of 1,500,000 GEL per intersection, using Amirejibi Highway as an example
[2]Average cost of "complete street" style road rehabilitation is 9,000,000 GEL - 12,000,000 per kilometre. To be conservative, 12,000,000 GEL per kilometre was used and converted to USD

Responsibility

TUDA will be responsible for coordinating the Vision Zero programme, with commitments from the highest levels of city government. TUDA will also develop the road hierarchies and associated speed limit changes. Design and construction of complete streets and new junctions will be carried out by the Municipal Department of Infrastructure Development. The Environmental Protection Department will manage the physical works with regard to landscaping, including planting, water, and drainage. Utility works will be the responsibility of the respective utility company. The Police Department will be responsible for enforcement of unsafe driving, and collection and release of collision data.

Social and environmental impact assessment

No major adverse social and environmental impacts are expected, and the project will improve local accessibility. The project is not expected to result in a reduction in transport expenditure, but will help improve road safety, with better streets for the mobility impaired. Women will also have better and safer access to streets and public spaces.

Criteria	Score
Social	C
Environmental	C
Economic	B
Accessibility	C

More information

https://visionzero.global/

https://visionzeronetwork.org/

Transit-Oriented Development (TOD)

Tbilisi has an extensive bus network, as well as a two-line metro system that carries around 500,000 passengers per day. Yet both systems face growing subsidies and are losing passengers each year to private cars. This problem is exacerbated by ongoing urban sprawl, where new developments built on the edge of the city have limited accessibility to sustainable forms of travel, creating greater car dependency and adding to the cars on Tbilisi's streets.

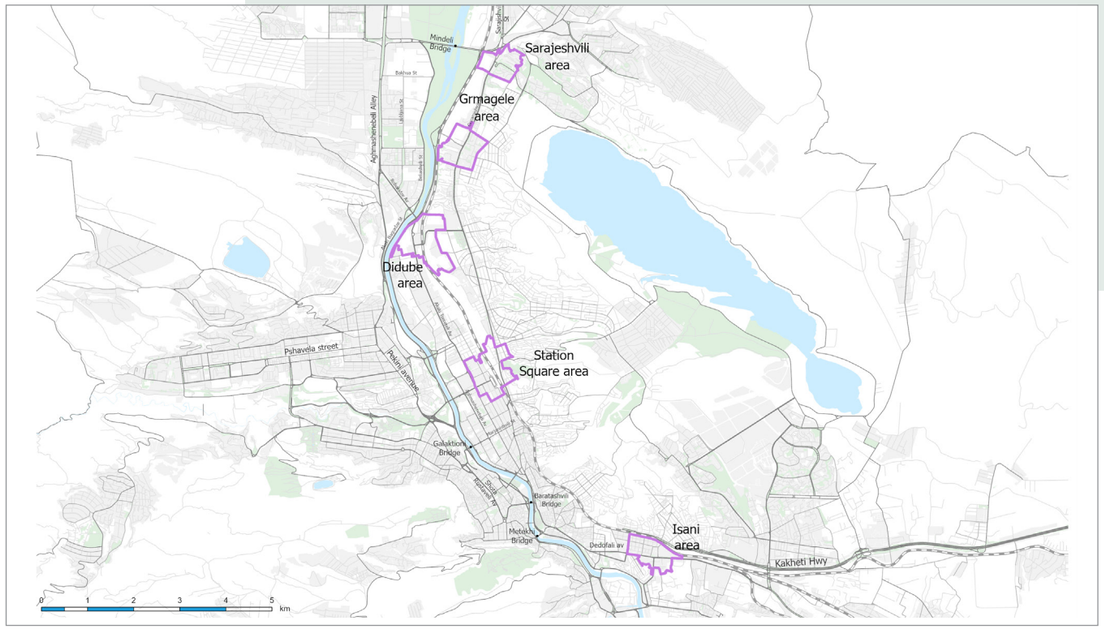
One way to overcome this is by orienting new development around key transit stops and stations. Transit-Oriented Developments (TOD), are **highly walkable developments** with a **mix of uses,** including housing, offices, restaurants, shops, and entertainment. By locating these places them **directly adjacent to public transport stations,** people from all over Tbilisi will be better able to access job opportunities, schools, shops, healthcare and leisure from where they live, without the use of a car.

The city of Tbilisi will develop a TOD programme focused around five key transport hubs: Isani, Station Square, Didube, Sarajeshvili and Ghrmaghele.

A detailed feasibility study will be required for each site, before developments are designed, built and implemented. However, as part of the Tbilisi Transport Plan development process, a masterplan for the **Isani TOD** site has been developed which can be used as a template for masterplan development at other sites.

The Isani TOD, a 52-hectare site, will be oriented around the Isani Metro Station and a major stop on five TBT lines, with no development more than 400m from the metro station. A future cable car will also serve this site, for which land will be reserved. Streets will be redesigned to be safer and more comfortable for pedestrians and cyclists, there will be green spaces between buildings, and the heights of buildings will be specifically planned to ensure a human scale, while still adding density to the area. The targeted increase in population at this site is 11,400, while the targeted increase in jobs is 9,400.

Vision for a TOD hub in Isani. Source: LOCA/Ramboll, 'TOD Concept Plan Isani'



Location of the 5 key transport hubs retained for developing TOD hubs. Source: LOCA/Ramboll

5-Year Action Plan and Cost Estimate

Time period	Measure	Cost estimate
2021	Site Selection (completed)	Carried out as part of the larger Tbilisi Transport Plan
2022	Conceptual Design of Isani site (completed)	
2025	Creation of dedicated team within TUDA to facilitate TOD development	-
2025 - 2026	Detailed Regulation Plan (DRP) for Isani	$230,347 [1]
2026	Stakeholder engagement	-
2027	Regulatory changes (zoning, land readjustment, etc)	-
2028 - 2030	Implementation of TOD at Isani	Cost to be determined in DRP
	Total	$230,347

[1]Eliava Market Revitalisation Master Plan, CNT200000050, https://tenders.procurement.gov.ge (600,000 GEL)

Responsibility

TUDA is responsible for managing the planning and design of the five TOD sites, as well as making the necessary changes to the zoning code. It may be the case that a separate entity is needed in order to manage the assembly of land, brownfield cleanup, and marketing/implementation of the sites; however, this is still to be determined. The Municipal Department of Infrastructure Development will be responsible for any road or utilities works. TDF will likely be responsible for procurement of infrastructure and works. The Environmental Protection Department will manage the physical works with regard to landscaping, including planting, water, and drainage. Utility works will be the responsibility of the respective utility company. Additional participation by other city departments, for example, the Municipal Department of Culture, Education, Sport and Youth Affairs could be needed for sites where new schools are planned. There will also likely need to be significant private sector involvement.

Social and environmental impact assessment

No major adverse social and environmental impacts are expected, and the project will improve local accessibility. The project is not expected to reduce overall government transport expenditure, and hence has an economic score of B. The project will result in urban regeneration and improve accessibility to transport at key nodes. Accessibility and safety for women is expected to improve accordingly.

Criteria	Score
Social	C
Environmental	C
Economic	B
Accessibility	C

More information

ITDP, The TOD Standard:
todstandard.org

Intelligent Transport System (ITS)

Tbilisi currently lacks an integrated traffic management system, leading to traffic congestion, slow journey times for both cars and buses, as well as environmental pollution resulting from slow moving and idling traffic. A single modular Intelligent Transport System (ITS) will cover all road-based traffic in Tbilisi, creating a safer, less congested city. The main elements of the ITS system are likely to include[1]:

- A single **traffic control centre** for the whole city
- Permanent on-site **traffic detectors** (radars or cameras) at strategically selected points in the city to record real-time traffic levels
- **Incident detection cameras** (AID) to record real-time traffic incidents
- **CCTV** for real-time visual monitoring of the traffic incidents
- Fixed **Variable Message Signs** at selected points to provide real-time information about pertaining traffic conditions and incidents, as well as alternative routes
- **Bus priority measures**, including priority at traffic lights.

GIZ, together with TUDA, have undertaken a feasibility study into the implementation of an ITS system. In Q4 2022 the Government of Georgia signed a $50 million funding package to implement an ITS system in Tbilisi. The system will be delivered within the next five years.

Traffic in Tbilisi will be better managed with a new ITS system
Source: metamorworks - stock.adobe.com

[1]To be verified by an ITS expert, already on board as of 2023

5-Year Action Plan and Cost Estimate

Time period	Measure	Cost estimate
2023 - 2024	Planning, detailed design, and procurement	$1,500,000
2024 - 2029	Installation and implementation	$47,000,000 [1]
2030	Full operation of ITS new system	-
	Total	$48,500,000

[1]Source: As per loan agreement between KfW and Govt of Georgia

Operating Costs

The operating and maintenance of the entire ITS system has been estimated as follows:

- $360,000 per annum[1]

The operating costs cover the cost of running the control centre, periodic upgrading of software, and costs to maintain and replace the equipment and hardware.

Responsibility

TUDA was responsible for managing the feasibility study stage. Implementation and operation/ monitoring of the ITS system will be managed by the Department of Automated Traffic Management under TUDA. KfW has signed a loan agreement with the Government of Georgia for $50 million to fund the ITS system in Tbilisi. TDF is responsible for managing the loan.

Social and environmental impact assessment

No major adverse social, environmental or economic impacts are expected, and the project will improve local accessibility while reducing traffic congestion, vehicular pollution and public transport journey times. Road safety is expected to improve, and women will benefit from safer travel and improved accessibility.

Criteria	Score
Social	C
Environmental	C
Economic	C
Accessibility	C

[1]Source: GOPA Study for KfW: "Georgia Sustainable Transport for the City of Tbilisi – Pre-Feasibility Report, April 2020"

Urban Freight Policy

The mobility system in Tbilisi does not move only people, but also goods and waste. Urban freight movement is, therefore, an important component of the Tbilisi Transport Plan. This system must enable goods to reach Tbilisi from across Georgia and internationally, and then move through the city to their final destination, without disrupting the daily lives of local people or causing undue air pollution or safety problems.

Currently, the vast majority of shipments to/from Tbilisi transit through warehouse facilities and distribution centres located in the city centre. This generates significant impacts on traffic congestion, air quality, noise pollution and road safety in the city due to the large volume of heavy trucks.

Therefore, this action consists of several measures which will improve the sustainability of freight logistics in Tbilisi.

- **International logistics centre**: This centre is to be located in Kumisi, and will receive goods bound for Tbilisi and Rustavi, providing an international logistics hub for East Georgia and the South Caucasus countries. The identified site is located about 25km from Tbilisi and 22km from Rustavi, is directly connected to Tbilisi-Yerevan railway line, and is also about 30km south of Tbilisi airport. The site provides a great opportunity to consolidate deliveries inbound to Tbilisi, allowing more deliveries to be made using fewer, smaller vehicles.
- **Municipal distribution centres**: Once the deliveries have been consolidated at the international logistics centre, several municipal distribution centres will be required to further consolidate freight and direct it to the appropriate neighbourhoods in Tbilisi. This may include the development of a municipal distribution centre in the northwest of Tbilisi, potentially within Zahesi or Avchala neighbourhoods.
- **Micro hubs**: In addition to international and municipal distribution centres, many cities are building micro hubs. These are small logistics centres located within neighbourhoods whose purpose is to ensure efficient and clean “last-mile delivery”. “Last-mile delivery” is the very last leg of a freight delivery trip to individual homes or businesses. Micro hubs are well-integrated into the neighbourhood and often include facilities for electric cargo bike and small electric vehicle deliveries.
- **On-street loading zones**: In the short- to medium-term, it will still be necessary for delivery vehicles to drive into Tbilisi to make deliveries. Currently, there are few safe places for delivery vehicles to stop and unload. Therefore, the City should focus on creating designated loading/unloading zones. This allows businesses to receive goods, without disrupting traffic or posing safety risks to pedestrians and cyclists.
- **Heavy vehicle restriction zones**: Heavy vehicles pose the greatest danger to people walking and cycling on Tbilisi’s streets. They also contribute significantly to air quality and noise issues. Therefore, the introduction of a central zone where heavy vehicles are not permitted is a key part of this Action Plan. There are various ways of implementing and enforcing the restricted zone, which will be explored through a feasibility study.

Example of a small electric vehicle making deliveries
Source: Source: Mickis Fotowelt - stock.adobe.com

5-Year Action Plan and Cost Estimate

Time period	Measure	Cost estimate
2025	Tbilisi Urban Logistics Plan	$500,000
2026	Implementation of heavy vehicle restriction zones	$12,100 [1]
2026	Implementation of on-street loading zones	$60,500 [2]
2027	Preliminary and detailed design for 2 municipal distribution centres	-
2028	Land acquisition and implementation of 2 municipal distribution centres	TBD in further studies
2028	Preliminary, detailed design and business plan for 5 microhubs	-
2029	Implementation of 5 microhubs	TBD in further studies
	Total	$572,600

[1]Assumed 100 signs at $121 per sign.
[2]Assumed 500 signs at $121 per sign.

Responsibility

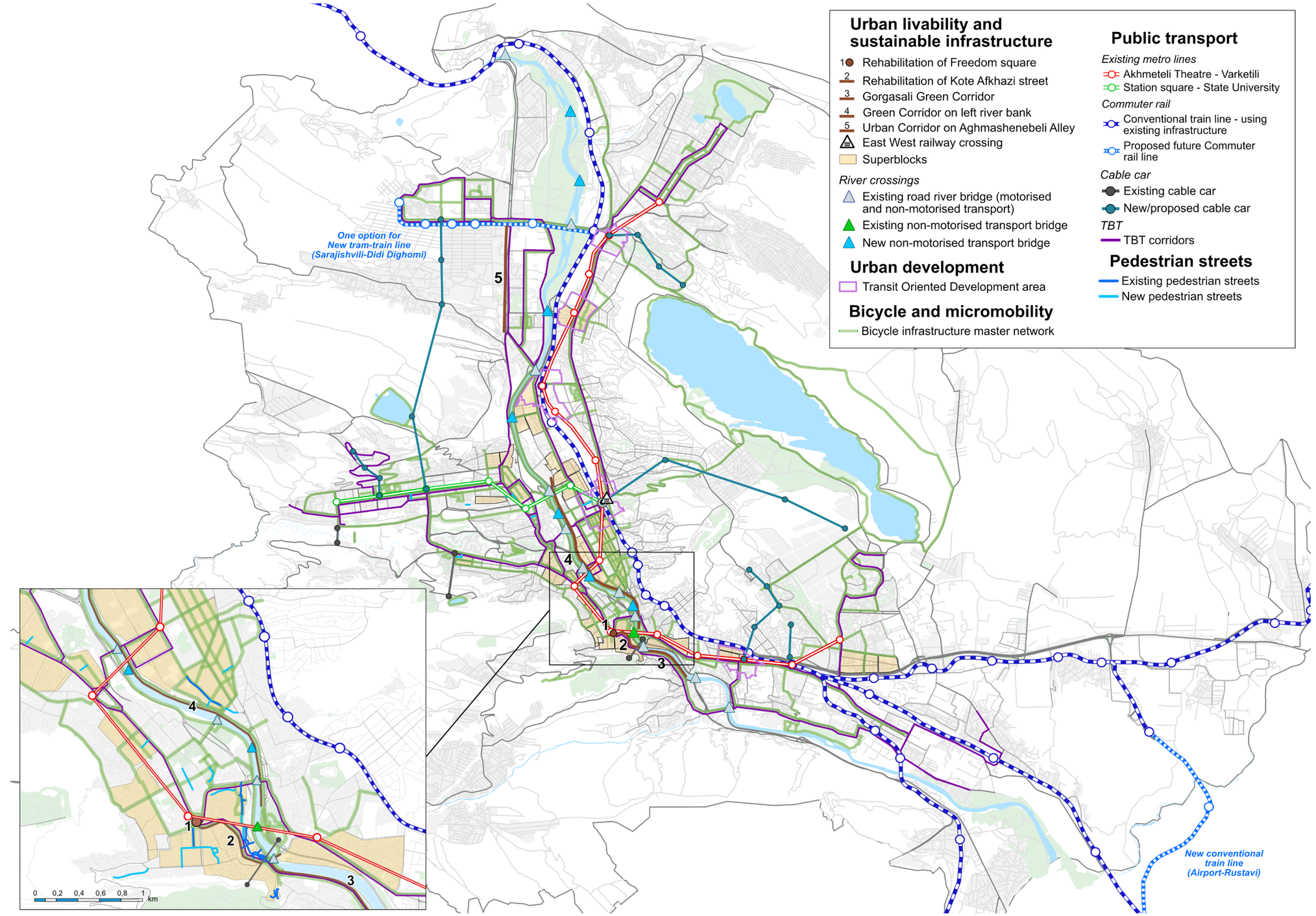
TUDA will be responsible for managing the feasibility studies for municipal distribution centres and micro hubs. During the feasibility stage, the institutional setup will be analysed to determine who will be responsible for building, operating, and maintaining the hubs. TUDA will be responsible for identifying and developing on-street loading zones, as well as for implementing the heavy vehicle restriction zones. The project will be funded by Tbilisi City Hall, central government or international donors where appropriate. Close collaboration will be required with freight operators and logistics firms.

Social and environmental impact assessment

No major adverse social and environmental impacts are expected. The project is not expected to reduce overall government transport expenditure, and hence it has an economic score of B. Also, the project is not expected to have any impact on accessibility. However, it will help reduce vehicular pollution and noise, and improve road safety. Women will benefit from safer streets and reduced pollution.

Criteria	Score
Social	C
Environmental	C
Economic	B
Accessibility	B

Key projects included in the Tbilisi Transport Plan



07.

Next Steps

Next Steps

The Tbilisi Transport Plan represents a collective vision for a greener, safer, more accessible, and vibrant city. To transform this vision into tangible action, it is essential that **the following concrete steps** are taken to move the process forward. This will ensure that the plan is a live and constantly improving document, and that citizens feel closely involved in its evolution and implementation.

Adopting the Tbilisi Transport Plan

The first crucial step is to have the Transport Plan adopted into formal city policy. A formal resolution outlining the key elements of the Transport Plan will be drafted and then adopted by the Tbilisi City Assembly. TUDA will work closely with relevant authorities, stakeholders, and city officials to ensure the integration of the Transport Plan's vision, goals and strategies into the city's policy framework. This adoption will solidify Tbilisi's commitment to sustainable mobility and empower the city to take decisive steps towards a more sustainable and people-centric urban environment.

Setting up a Dedicated Team

To manage and implement the Transport Plan, a dedicated team must be established under the International Relations and Projects Department of TUDA. This team will be led by a new, full-time **Tbilisi Transport Plan Officer** to manage and monitor progress and ensure regular updates.

Managing Updates and Continuous Improvement

Cities evolve, and so must the Transport Plan. The Plan must be regularly updated and improved based on the changing situation and needs. The dedicated team must also manage regular community engagement, stay connected with citizens and community groups, and keep the public informed about progress.

Annual Scorecard

An Annual Scorecard (Appendix B) will serve as an essential tool to measure progress and communicate it to the community. It will provide a clear, easy-to-read "traffic-light" summary of progress, allowing everyone to understand how the city is faring in its journey towards sustainable urban mobility. The Annual Scorecard can be used by all citizens, to monitor progress and tell the city how they are doing.

Setting up Working Groups

The Tbilisi Transport Plan recommends many actions which require various agencies and stakeholders to work together in close co-operation, to ensure effective implementation. It is therefore important that Working Groups are set up for each major policy area, composed of all relevant stakeholders. Examples of working groups could include:

- Commuter rail
- Cycling strategy (already existing)
- Pedestrianisation
- Transit-Oriented Developments

These working groups should meet regularly, and their recommendations need to be considered by TUDA and TCH while formulating policy.

Ensure Implementation of the Tbilisi Transport Plan

Most critical of all is ensuring that the Tbilisi Transport Plan gets implemented. To do this, a detailed implementation plan will be developed by the dedicated team at TUDA. It will include not only the timelines laid out in the 5-year Action Plan, but also every other step required to bring the plan to fruition. The city authorities, national government, local stakeholders, and international partner agencies will all have to work in a co-ordinated manner to deliver this crucial Plan, which is needed to improve the quality of life of all citizens and make Tbilisi one of the best global cities in which to live.

Source: efired - stock.adobe.com

08.

Appendices

Appendix A - 20 Year Action Plan

ACTION NAME	SUMMARY DESCRIPTION
LEGAL	
Sustainable Urban Mobility Resolution(s)	The resolution shall include Tbilisi Transport Plan principles, visions and goals, action plan and complementary information (Design Guidelines, Road/Street hierarchy, thematic maps, etc.) translated and adapted into a compact legal document.
Land Use Master Plan Municipal Resolution(s)	The resolution shall amend the existing LUMP resolution for the articles that cover mobility topics, in order to align them with the Tbilisi Transport Plan.
Amendment(s) of National Legislation	To support implementation of the Tbilisi Transport Plan, some amendments of national laws will be required – for example the Traffic Law of Georgia and Code of Administrative Offenses of Georgia.
INSTITUTIONAL	
Reorganisation and Capacity Building at TUDA, TCH & TTC	Strengthening the capacity of the Transport and Urban Development Agency (TUDA), Tbilisi City Hall (TCH), and the Tbilisi Transport Company (TTC), to deliver the Tbilisi Transport Plan, through institutional reorganisation, recruitment of staff, training, and building material and financial capacity.
Reorganisation and Capacity Building at Municipal Property Management Agency	Strengthening the Municipal Property Management Agency to enable takeover of responsibility for transit-oriented development.
Institutional Framework related to Data Collection	Implementing the institutional instruments needed for enabling, securing and unlocking a data collection and sharing strategy.
Participatory Platform for Piloting & Integrating Transport Policies	Creating a working group to integrate transport policies across the various transport institutional stakeholders at agglomeration level.
DATA COLLECTION	
Monitoring Implementation	Collecting, managing, and analysing the specific data required to monitor implementation of the Tbilisi Transport Plan.
Monitoring Passenger Service Contracts	Collecting, managing, and analysing the specific data required to monitor the various Passenger Service Contracts (PSCs) between the city of Tbilisi and public transport operators.
Supporting Transport Modelling	Collecting and managing the data required to develop and update the Tbilisi transport models on a regular basis.
URBAN DEVELOPMENT	
Transit Oriented Development	Densifying the urban environment around 5 key transport hub locations in Tbilisi to have a better match between transport offer and transport demand, supporting urban liveability.
Integrated Land-Use & Transport Planning	Development of recommendations for integrated land-use and transport planning to update the existing Land Use Master Plan.
URBAN LIVEABILITY	
Sustainability-driven Rehabilitation of Tbilisi Streets	Funding “façade-to-façade” rehabilitation of 1st, 2nd and 3rd class streets/ roads to improve urban liveability, walkability and safety in the city, in line with design guidelines to ensure sustainable and inclusive designs.
Superblocks	Deploy the superblock concept in various neighbourhoods of the city in order to improve urban liveability, walkability, accessibility and road safety conditions in these areas.
Waterfront Revitalisation	This project seeks to revitalise the city’s Mtkvari River waterfront by prioritising pedestrian and cycling-friendly spaces, contributing to improved urban infrastructure and recreational opportunities for both locals and tourists. This initiative is part of a broader strategy to improve urban connectivity, including the development of walking and cycling routes, reduced car space, upgraded public transport stations, and a potential waterbus network
Aghmashenebeli Alley	Implementing a façade-to-façade rehabilitation on a 2.5 km long section between Didi Dighomi interchange and Robakidze Avenue, to convert it into an Urban Boulevard prioritising public transport, walking and cycling.
Freedom Square and Rustaveli Avenue	Re-planning and re-designing Freedom Square and Rustaveli Avenue to give more room to sustainable modes such as public transport, walking and cycling, as well as quality public spaces.
Heroes Square	Re-planning and re-designing Heroes Square to give more room to sustainable modes such as public transport, walking and cycling, and create quality public spaces.
Pedestrian-Oriented Kote Afkhazi Street	Façade-to-façade rehabilitation of Kote Afkhazi Street to prioritise the needs of people walking, cycling and using public transport, including introduction of more green spaces.
Improving Accessibility to Main Public & Commercial Facilities	Developing and implementing a plan to improve accessibility to public and commercial facilities by public transport, walking or cycling.
Noise Reduction	Supporting the noise reduction effort through noise mapping, and promoting appropriate design practices and behaviours.

SUSTAINABLE INFRASTRUCTURE

Development of a White Book for Tbilisi Streets Design	Developing a White Book to set out detailed design standards for Tbilisi's streets, as a complement to the street design guidelines already set by the Tbilisi Transport Plan.
Asset Management	Developing a set of procedures for road and street asset management to support more efficient and effective use of road/street maintenance budget.
Station Square Upgrade and Bus-Priority Crossing	Major redesign, beautification, and upgrade of the Station Square area; and creation of a new railway crossing which prioritises public transport (as part of a TBT corridor), as well as pedestrians and bicycles.
Sustainable Crossing Infrastructure	Planning and implementing the upgrade of existing elevated and subterranean crossing infrastructure for people walking and cycling in Tbilisi, as well as introducing new crossings where needed.
Pedestrian and Cycle-Friendly River Crossings	Rehabilitation of the existing river crossing infrastructure to improve conditions for people walking and cycling. New pedestrian-only bridge near the Public Service Hall.

ROAD TRAFFIC & SAFETY

Optimizing Traffic Management	Defining the driving principles and recommendations for a multimodal traffic management policy.
Vision Zero	Enhancing road safety by supporting the implementation of a set of measures that follow the Vision Zero approach, which targets in an overall reduction of the number of road deaths to "zero" in the long-term.

PARKING MANAGEMENT

On-Street Parking Management	Defining and enforcing an ambitious strategy to better manage on-street parking in Tbilisi.
Parking Incentives	Implementing incentives to encourage more efficient use of the available parking supply.
Parking Levy	Implementing a Parking Levy for off-street, non-residential parking spaces, to create a new revenue stream for funding public transport and to reduce provision of off-street parking at shopping malls and office parks (for example), thereby encouraging a shift towards more sustainable transport options.
Developing Shared Parking (off-street)	Implementing an off-street shared parking offer to encourage improved use of existing and future parking supply and reduce overall parking requirements.
Improving Parking for Disabled People	Implementing an ambitious plan for rehabilitating existing parking spaces for disabled people, and increasing provision of parking for disabled people in line with international best practice.

TRAVEL DEMAND MANAGEMENT

'Mobility as a Service' Strategy	Defining and implementing a Mobility as a Service (MaaS) strategy, which enables multi-modal travel possibilities by allowing planning, booking and payment of multi-modal journeys. The most important backbone for a MaaS system is well-functioning public transport, and the availability and management of data.
New Speed Limits	Planning for and supervising the enforcement of new speed limits.
Employers-based Mobility Management	Promoting better commuting habits by encouraging public transport use, carpooling, bicycling, and walking directly with employees.
Car Sharing/Pooling	Promoting car sharing/pooling practices in Tbilisi to reduce the use of private cars.
Walk-to-School	Introducing schemes which enable children to safely walk to school, rather than being driven.
Mobility for Women	Developing and implementing a set of recommendations for improving transport options for women in Tbilisi.
Re-timing Municipal Services and Deliveries	Enforcing incentives or regulations to shift municipal services (e.g., garbage removal) and deliveries outside peak hours for traffic congestion.

PEDESTRIAN PROGRAMME

Creation of a Pedestrian Master Network	Coordinating and supervising the development of a network of streets with high quality pedestrian infrastructure, to ensure comfortable, safe, and barrier-free movement for people walking.
Pedestrian Accessibility at Neighbourhood Scale	Planning, designing, and implementing interventions to improve conditions for walking at neighbourhood scale, involving close coordination between district administrations and TUDA.
Pedestrian Streets	Supervising the design and implementation of new pedestrian-only streets in Tbilisi, supporting the creation of a master pedestrian network.
Promoting Walking	Implementing interventions to promote walking in Tbilisi such as advertising campaigns, temporary road closures, social media, and education about the health benefits.

BICYCLE & MICROMOBILITY PROGRAMME

Bicycle Network	Coordinating and supervising the development of a network of bicycle infrastructure across Tbilisi.
Bicycle Accessibility at Neighbourhood Scale	Planning, designing, and implementing interventions to improve conditions for cycling at neighbourhood scale, involving close coordination between district administrations and TUDA.
Promoting Bicycle and Public Transport Interactions	Introduction of bicycle parking, docking stations and infrastructure along the backbone of the public transport network (metro, TBT, cable car), to support use of cycling to access public transport.
Bicycle Sharing System	Supporting the introduction of a bicycle sharing system in Tbilisi.
Promoting Cycling	Implementing interventions to promote cycling in Tbilisi such as advertising campaigns, temporary road closures, social media, and education about the health benefits.
Micro-mobility	Investigating ways of regulating and optimizing the organisation of micro-mobility services in Tbilisi, such as e-scooters or electric-assisted bicycles.

PUBLIC TRANSPORT PROGRAMME

Didi Dighomi – City Centre Rail Link	A rail-based link will be introduced connecting Didi Dighomi to the city centre. An optioneering study will determine the most optimal and feasible route.
Commuter Rail	Developing a commuter rail offer as a passenger rail service.
Metro Modernisation	Progressively upgrading and refurbishing the existing metro system to be more modern, efficient, and fully accessible.
Tbilisi Bus Transit (TBT)	Supporting the planning, design and implementation of TBT infrastructure. The final outcome of the programme will be the “façade to façade” rehabilitation of the TBT corridor streets. This will contribute to more efficient bus services, but will also create benefits for people walking and cycling, enhance road safety, and make the streets more attractive to tourists.
Better Buses and Minibuses	Optimise and improve bus and minibus operations through faster and more accessible boarding, more comfortable shelters, better information, and priority for buses over mixed traffic.
Cable Cars	Planning, designing, and implementing new urban cable car routes, with a public transport function.
Promoting Intermodality	Planning for, designing and implementing rehabilitation projects to improve transfers between different modes of transport.
Improving Public Transport Accessibility	Supervising implementation of the existing plan for improving metro station accessibility; as well as planning and implementing a similar plan for the bus network.
Taxi	Improving the policies related to taxi operations.
Improving Passenger Information	Planning and implementing an integrated passenger information system throughout all the mobility networks.

URBAN LOGISTICS PROGRAMME

Freight Policy	Development of an international logistics centre in Kumisi to serve Tbilisi and Rustavi municipalities; planning for and developing other municipal and micro distribution centre(s) in Tbilisi; supporting the creation of loading zones for urban logistics purposes in Tbilisi; and implementing a restricted zone to heavy freight in the city centre.

CLEAN VEHICLES PROGRAMME

Fostering the Use of Low-Emission Vehicles	Fostering and strengthening the use of low-emission vehicles for individual trips, business/logistics trips, and public transport (e.g. exploring introduction of e-buses), for example by increasing the number of charging stations.

TOURISM & RECREATIONAL PROGRAMME

Improving Accessibility to Recreational Areas	Developing and implementing a plan for improving accessibility to recreational areas and facilities in the city.
Development of Designated Parking Areas for Tourist Buses	Developing and implementing designated parking areas for tourist buses in the city centre (especially in the old town areas), to avoid traffic congestion and limit air/noise pollution.
Rehabilitating Pedestrian Paths and Hiking Routes	Planning and implementing the rehabilitation of pedestrian paths and hiking routes in both urban and non-urban areas.

Developing Recreational Cycling Routes	Implementing recreational cycling routes especially around Tbilisi Sea Area.
Developing Water Transport	Planning and developing combined public transport and touristic water transport offer on the Mtkvari river.
Developing a Night Bus Offer	Planning and developing a night bus offer.

INTELLIGENT TRANSPORT SYSTEMS PROGRAMME

Single Urban Transport Platform	Creating a single mobility platform that unites all traffic management systems under one umbrella, to enhance the efficiency of the Traffic Management Control Centre.
Integrated Traffic Management System	Creating a system that serves the detection and dynamic management of traffic as well as contributing to the collection of environmental and incidents data.
Adaptative Traffic Light System	Creating a traffic signalisation system which responds to the pertaining traffic conditions, to improve traffic flow efficiency.
Enforcement Systems	Expanding existing systems to detect and penalise red-light, speed limit, parking and bus lane violators more effectively.
Dynamic Accident Database	Developing a centralised dynamic software platform for storing, processing and monitoring of road accident data, based on data collected on-site by police officers.
Dynamic Public Transport Information Signage System	Expanding and modernising the current coverage of dynamic/real-time information via electronic displays at public transport stops and stations, so that more passengers will be informed about the real-time arrival and departure of public transport services.
Single Asset Management System	Developing a planning and decision support tool for asset management.
HGV Access Control System	Creating a system that will enable trucks (and other authorised vehicles) to access pedestrianised or semi-pedestrianised areas such as superblocks within the city of Tbilisi, so that loading/unloading activities can be carried out safely.
Multi-Modal Journey Planner	Developing a system that will provide real-time information to travellers, including information about traffic incidents/disruption, to support planning of journeys using various modes of transport.
Integrated Traffic Management Control Centre	Building a new Integrated Traffic Management Control Centre to host and centrally manage the operation of the entire ITS ecosystem in Tbilisi.
Pedestrian & Cycling Priority	Developing a system that will provide traffic signal priority to vulnerable users such as pedestrians (including disabled people) and cyclists.
Open (Big-) Data Source Portal	Developing a single access point to collect and manage static and dynamic transportation-related data.
Variable Speed Limits System	Deploying a variable speed limits system, especially targeting the congested primary arterial roads, so speed limits can be dynamically modified according to traffic and weather conditions.
Integrated Bus Automated Vehicle Location System	Renewing the existing bus and mini-bus fleet management system in accordance with EU standards.
ITS in Logistics Sector	Increasing integration of advanced technologies to improve efficiency in the logistics sector.

EDUCATION PROGRAMME

Teaching Sustainable Mobility in Schools	Developing and implementing an educational programme to teach pupils about what sustainable mobility means and why it is important.
Teaching Sustainable Mobility to a Wider Audience	Developing and implementing educational programmes to educate different stakeholder groups on the benefits of sustainable mobility.
Teaching Cycling	Teaching cycling proficiency to Tbilisi's residents to promote the use of bicycles and create more responsible behaviours on Tbilisi's streets/roads. This includes educating users on traffic rules for bicycles and how cyclists should interact with other road users.

COMMUNICATION PROGRAMME

Communication programme	Implementing a communication strategy and campaign in Tbilisi to promote the Tbilisi Transport Plan to all stakeholders.

Appendix B - 2024 Annual Sustainable Transportation Scorecard

Indicator	Transport Plan Goal	2023 Baseline	2024 Goal	2024 Actual	2024 Score[1]
TBT Infrastructure	10 km per year	22 km	32 km		
Bicycle lanes	6 km per year	37 km	43 km		
Modern bike racks	30 per year	28	58		
Pedestrian-only streets	1 street per year	2 km	1 street		
Road Fatalities	50% reduction by 2042 3% reduction per year	8.5 per 100,000	8.2 per 100,000		
Superblocks	1 superblock every 2 years	0	0.5		
Bus Stops with Shelters & Passenger Information	150 bus stops per year	940	1090		
Commuter Rail km	50 km by 2035	0	0		
New Bus Fleet (all types)	100 new buses every 3 years	-	160		
Parking Levy	No parking levy until 2025	0	0		

[1]Scoring for each indicator is as follows: A = 100%, B = 75%; C = 50%; D = 25%; F = 0%

Transport and Urban Development Agency (TUDA)
Tbilisi City Hall
7 Zhiuli Shartava Street
Tbilisi 0160
Georgia

Email: info@tbilisi.gov.ge

Web

Facebook