



Urban public transport reform in Tbilisi

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This publication has been financed by the Swedish International Development Cooperation Agency, Sida. Responsibility for the content rests entirely with the creator. Sida does not necessarily share the expressed views and interpretations.

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Acronyms

ADB – Asian Development Bank

CNG – compressed natural gas

DKTI - Deutsche Klima- und Technologieinitiative (German Climate and Technology Initiative)

E5P - Eastern Europe Energy Efficiency and Environment Partnership

EBRD - European Bank for Reconstruction and Development

GCAP – Green City Action Plan

KfW - Kreditanstalt für Wiederaufbau (Credit Institute for Reconstruction)

LGBTI - lesbian, gay, bisexual, transgender, and intersex

MFF - multi-tranche financing facility

NDC - nationally deter-mi-ned con-tri-bu-tion

SDG - Sustainable Development Goal

SOGIE - sexual orientation, gender identity and expression

SOGIESC - sexual orientation, gender identity, gender expression and sex characteristics

SUMP - Sustainable Urban Mobility Plan

SUTIP - Sustainable Urban Transport Investment Program

TBT – Tbilisi Bus Transit

TTC - Tbilisi Transport Company

UNFCCC - United Nations Framework Convention on Climate Change

Executive summary

Residents of Georgia's capital Tbilisi have been struggling with the city's beleaguered public transport network, related air pollution, road congestion and inadequate access to schools and workplaces for years now. With the number of private cars in the capital growing exponentially, automobiles have been taking over Tbilisi's streets and neighbourhoods and depriving its residents of public and green spaces.

In response, urban activism has swelled in recent years. Public pressure and mounting evidence of decades-long car-centric urban planning failures have compelled City Hall (the city's government) to start rolling back outdated urban planning policies and reforming Tbilisi's public transport system.

Between 2015 and 2019, several strategic documents were prepared with the involvement of international financial institutions, namely the Asian Development Bank (ADB) and the European Bank for Reconstruction and Development (EBRD), to outline the future development of mobility and transport in Tbilisi. Since 2015, and more actively since 2018, City Hall has been working on several reforms. Funding from international financial institutions has also remained crucial to implementing some policy prescriptions and projects that aim to remedy the mass transit network's problems.

Nevertheless, none of the proposed reforms have been completed, nor are they entirely consistent with the policy overhaul's goals, including prioritising pedestrians, enhancing mobility opportunities for the city's residents and improving air quality in the capital.

The backbone of the new public road network – transport corridors with bus lanes – should improve the speed and reliability of the public transit system in Tbilisi. These changes were recommended to the city in 2018. As of July 2022, only a few of the lanes have been installed, with over 60 per cent of the works yet to be executed. The bus lanes are a critical priority measure that could significantly improve daily journeys for commuters.

In 2016, City Hall began overhauling the city's bus network, pledging to update and expand the fleet with vehicles powered by compressed –natural gas (CNG). However, it did not keep its promise to make the new fleet relatively eco-friendly. Of the 860 new buses, 370 are CNG-fuelled, and the rest are diesel-powered. Notably, the CNG buses were bought through loans from the EBRD.

With regards to the Tbilisi metro system, its extension and the opening of a new station in 2017, as well as the upgrade of its power distribution cabling and ventilation in 2021, were financed by the ADB's multi-tranche financing facility (MFF). The EBRD and the Green Climate Fund also issued a loan for purchasing additional metro sets. Yet, to date, the metro system lacks a coherent vision for development. City Hall has also exploited the issue for political campaigning by announcing ambitious plans for the metro, only to later backtrack on them.

Meanwhile, the reform of the deregulated taxi network has been limited to the introduction of license permits and mandatory car inspections. Cab drivers are not yet subject to additional tests to scrutinise their knowledge of the Tbilisi environs or subject to substantive background checks that would increase the safety standards of their service.

All the while, City Hall's continued efforts to retain streets with unidirectional traffic and higher than necessary speed limits, as well as its pursuit of controversial large road infrastructure projects, have proven inconsistent with its declared commitment to move away from car-centric planning.

As of July 2022, deep-seated problems in Tbilisi's public transport system remain. Overcrowding in mass transit and congestion on roads during peak hours are common, public road transport services are unreliable, and easily accessible information about routes and timetables is limited. Meanwhile, the average interval between buses is 18 minutes – just like it was nearly four years ago. Gendered aspects of mobility are constantly overlooked in policy and operations, while sexual harassment of women and discrimination against lesbian, gay, bisexual, transgender and intersex (LGBTI) people in public transport is widespread. Public transport accessibility for people with disabilities also remains elusive.

City Hall must urgently deliver on its promises and finalise these reforms. Devising a sustainable urban transport system requires a strong political will and a comprehensive, well-thought-out long-term vision, as well as a roadmap for implementation. These are yet to be developed in Tbilisi's Sustainable Urban Mobility Plan (SUMP). The draft SUMP that must be shared with the public in autumn 2022 thus represents an opportunity for City Hall to forego its reluctance to communicate with the public openly and encourage citizens to participate in coming up with policy solutions for the city's mass transit problems. Public participation is vital for developing a people-oriented, environmentally friendly and economically viable transport system and increasing City Hall's accountability en route.

The city and international financial institutions also owe it to the public to reflect on the shortcomings of the ongoing reforms process, re-evaluate their respective efforts where necessary and take more robust actions to improve public transit for hundreds of thousands of Tbilisi residents who rely on its services day in and day out.

Introduction

The urban mobility and public transport issues in Tbilisi have been neglected for decades. The city, with a population of about 1.2 million, has consequently struggled with air pollution, congestion, and traffic jams, as well as inadequate access to schools and workplaces on a daily basis.

The political and economic mayhem of the 1990s, followed by increasingly ideologised, car-centric urban planning since the early 2000s, corroded the public transport system and contributed to soaring private car ownership. At this time, investments in public transport development were scarce. The bus fleet update in 2005, also marking the first involvement of international financial institutions in Tbilisi's urban mobility projects, proved a failure.^{1,2} In 2006, old trolleybus and tram lines were closed, yet the metro was left in limbo for over a decade.

The lion's share of air pollution in Georgia – 71 per cent – is caused by vehicle operation.³ In Tbilisi, which hosts 34.2 per cent of the country's fleet,⁴ vehicles account for some 90 per cent of the city's air pollution.^{5,6} Georgia's outdated fleet – 84 per cent of which is 10 years old or older – poses a primary challenge to air quality.

According to the 2022 Environmental Performance Index, Georgia ranked 124th among 180 countries regarding air quality.⁷ Meanwhile, in 2016, the World Health Organization's age-standardised mortality rate attributed to household and ambient air pollution determined Georgia's rate to be 101.8 people per 100,000.⁸

A 2019 public opinion poll showed that 76 per cent of Tbilisi residents considered air pollution the most acute environmental problem in Georgia, nearly 20 per cent more than the figure recorded for the entire country.⁹

The decaying public transport system and overemphasis on automobility have also had significant social and gendered repercussions. Women, low-income populations, students, marginalised groups and the unemployed in Tbilisi tend to rely more on public transportation than other groups.¹⁰ Evidence across countries

¹ Manana Kochladze, [Green City Action Plan for Tbilisi – A Mere Formality?](#), CEE Bankwatch Network, 3 August 2020.

² In 2005, with financial support from EBRD, used buses (which were still better than existing ones) were imported, and several new itineraries were added. In 2009, ownership and management of city bus infrastructure were transferred to the company Tbilisi Metro, property of the municipal government. In 2010 the minibus system was modified – old vehicles were replaced with new ones, now exclusively owned, operated and managed by the private company Tbilisi Minibus. Fares for single transfer by minibus increased by 60 percent and for those by bus and metro by 250 per cent.

Nino Siradze, [‘Transportation and Smart Mobility Systems in Tbilisi’](#), IGLUS - Innovative Governance of Large Urban Systems, 29 May 2018.

³ State Audit Office of Georgia, [Audit report on the effectiveness of measures to reduce atmospheric air pollution caused by vehicle emissions across Tbilisi](#), State Audit Office of Georgia, 2018.

⁴ Police.ge, [Annual Statistics on Georgia's auto park](#), Police.ge, accessed 3 August 2021.

⁵ Tbilisi City Hall, [Tbilisi Green City Action Plan \(GCAP\)](#), Tbilisi City Hall, 2017, 20.

⁶ Meanwhile, between 2011 and 2021, the number of registered vehicles in Tbilisi nearly doubled from 288,000 to 523,000. This led to the deterioration of air quality, an increase in noise pollution, more congestion on roads, expanded demand for parking spaces and the overall loss of urban space to automobiles.

⁷ The Environmental Performance Index (EPI), [‘Air Quality’](#), Yale Center for Environmental Law and Policy, 2022.

⁸ World Health Organization, [World Health Statistics 2022](#), WHO, 2022, 101.

⁹ OC Media, [‘NDI: Air pollution top environmental concern in Georgia’](#), OC Media, 28 January 2019.

¹⁰ Giorgi Babunashvili, [Adopting Car Alternatives: Who needs encouragement?](#), The Caucasus Research Resource Center Georgia, 2021.

suggests that lower-income people suffer more from restricted transport options: lack of access or poor access to transportation prevents them from taking advantage of better job opportunities and hampers access to health facilities, education and other spaces.¹¹

Women as a group are also more likely to experience these shortcomings, compounded by the lack of consideration for women's specific mobility patterns and needs in transport policy-making and design.¹² Gender minorities, LGBTI people and people with disabilities are some other vulnerable groups that have been largely ignored during policymaking, but who have to bear the brunt of poorly developed public transit.

Growing public discontent, coupled with the increased expert evidence of Tbilisi's transport policy failures and international involvement, including that of international financial institutions (primarily the EBRD and the ADB) in Tbilisi's transport sector, has compelled City Hall to reverse its decades-long car-centric urban transport planning policy. Between 2015 and 2019, the city prepared several strategic documents on the future development of mobility and transport in Tbilisi.

Since 2015, and more actively since 2018, City Hall has been implementing a set of reforms and initiatives – a metro extension, bus rapid transit development, and bus fleet upgrades, among other initiatives – to improve public transit services in the Georgian capital. These policies have also enjoyed widespread public support. According to a 2021 opinion poll, Tbilisi residents are more likely to support initiatives targeted at improving public transport than they are to support building more roads or parking spaces, and they overwhelmingly back installing bus lanes, even if that means slowing car traffic.¹³ Despite this, the city administration has lagged behind in carrying out the necessary reforms and continued supporting controversial road infrastructure projects, raising questions about its commitment to overhauling its outdated car-centric urban planning policy.

As of July 2022, deep-seated problems in Tbilisi's public transport system remain. Overcrowding in mass transit and congestion on roads during peak hours are common, public road transport services are unreliable, and easily accessible information about routes and timetables is limited. Meanwhile, the average interval between buses is 18 minutes¹⁴ – just like it was nearly four years ago.¹⁵ Sexual harassment of women and discrimination against LGBTI people in public transport is widespread, and public transport accessibility for people with disabilities remains elusive.

The following report looks at how Tbilisi City Hall has developed and implemented the city's urban transit reforms over the past years. Those reforms were first outlined in Tbilisi's Green City Action Plan (GCAP) adopted in 2017.¹⁶ The report takes the GCAP, developed within the framework of the EBRD Green Cities programme, as

¹¹ OECD, [Income Inequality, Social Inclusion and Mobility](#), *OECD International Transport Forum*, 2016, 11.

¹² Anastasia Loukaitou-Sideris, 'A Gendered View of Mobility and Transport,' in *Engendering Cities Designing Sustainable Urban Spaces for All*, eds. Bylnés Sánchez de Madariaga, Michael Neuman (New York: Routledge, 2020).

¹³ The Caucasus Research Resource Centers (CRRC), [A policy agenda for Tbilisi: What voters want](#), *The Caucasus Research Resource Centers (CRRC)*, 2021.

¹⁴ Tbilisi Transport Company (TTC), Letter to Green Alternative N01/4773, 17 June 2022.

¹⁵ Systra, [Restructuring of the bus network and introduction of an integrated automated fare collection system](#), *Tbilisi City Hall*, 23 November 2018, 17.

¹⁶ A part of the EBRD Green Cities programme, the GCAP is a document that helps cities outline strategic directions and priority measures for responding to urgent environmental challenges, including those caused by the transport sector.

a point of departure for the evaluation, since the GCAP monitoring plan provides a rare insight into the city's performance indicators and timeframes for reaching its transport sector objectives.

The EBRD and ADB's financial backing of Tbilisi's public transport policy-related projects laid the initial conceptual groundwork for the GCAP – its policy orientation and prescriptions. Furthermore, the banks' funding was instrumental in carrying out several recent public transport-related initiatives. This points to the financial institutions' impact on policy development and operational reforms. Considering the myriad persistent problems and inconsistencies in developing Tbilisi's public transport system, this raises questions about the integrity and sustainability of the actions of both the city administration and the international financial institutions.

Devising a sustainable urban transport system requires a comprehensive and integrated approach to policymaking and the political will to carry out necessary reforms swiftly, but with diligence and care for the public. Public participation is also vital for developing an environmentally friendly, people-oriented and economically viable transport system. Greater public outreach and citizen participation, therefore, are paramount for increasing the city administration's accountability amid the ongoing changes and maintaining and further expanding Tbilisi residents' support for reforms that prioritise people and public transit over private cars.

The commitments Tbilisi City Hall made in the GCAP and subsequent strategic documents in relation to public transport are promising, but they have to be followed through and carried out properly. Currently, the lack of public outreach, citizen participation and above all the dearth of tangible progress risks undermining the legitimacy and continuity of the public transit overhaul.

The city and international financial institutions thus owe it to the public to reflect on the shortcomings of the ongoing reforms process, re-evaluate their respective efforts where necessary and take bolder actions to develop sustainable public transit that responds to Tbilisi residents' daily needs. This study and its accompanying recommendations provide suggestions for a way forward.

Policy rollback: public pressure and the emerging new public transit vision

After over a decade of car-centric planning, in the late 2010s, public discontent with Tbilisi's environmental problems and transport infrastructure was telling. Although environmental pollution had been at the top of public concerns, the perception of other infrastructure-related issues had changed. In 2015, Tbilisi residents were much more likely to consider poor roads an issue than poor public transport,¹⁷ suggesting that perhaps the city's decades-long pursuit of car-centric planning had also made inroads into the public's mindset. Two years later, however, in December 2017, another public opinion poll painted a different picture. The respondents were much more likely to consider public transport a problem than roads,¹⁸ pointing to the

¹⁷ Laura Thornton and Koba Turmanidze, [Public Attitudes in Georgia 2015](#), National Democratic Institute (NDI), August 2015.

¹⁸ Laura Thornton and Koba Turmanidze, [Public Attitudes in Georgia 2017](#), National Democratic Institute (NDI), December 2017.

realignment of priorities among the public. It is hard to pin down a single reason for the change, but several factors in combination may explain the shift.

What are the most important infrastructural issues in your city/village? Name up to three (q5) Tbilisi

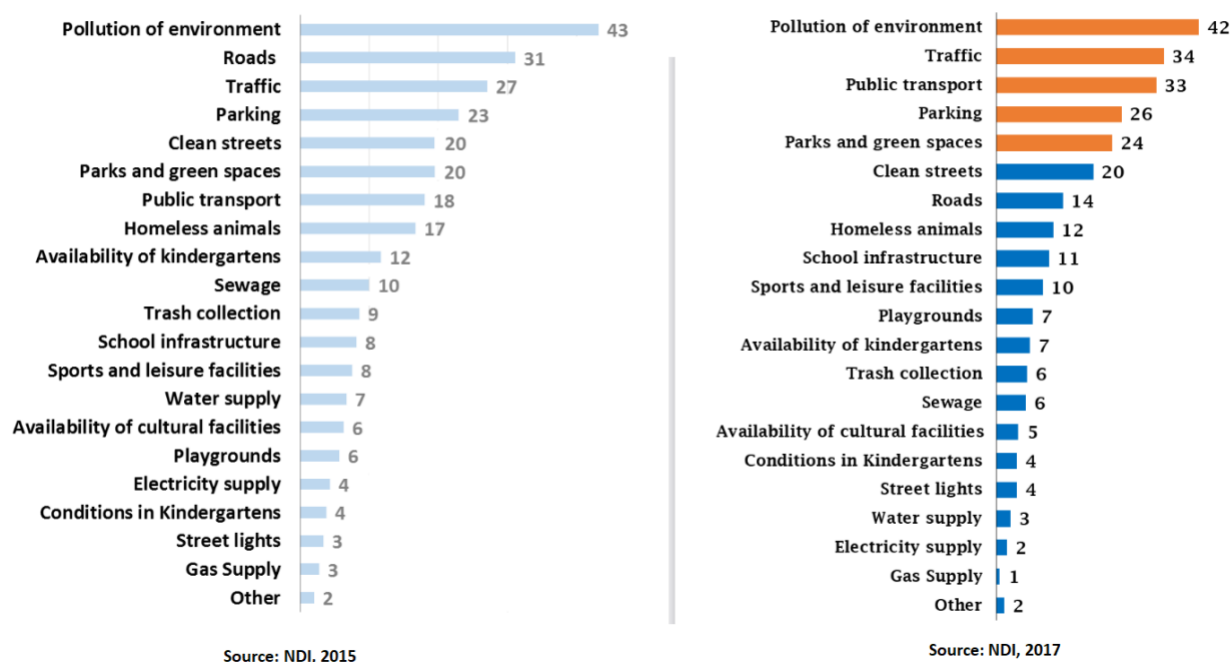


Figure 1. The numbers are in percentages.¹⁹

Around 2015, Tbilisi City Hall increased its cooperation with international financial institutions, particularly the ADB and EBRD. The development banks embarked on an ambitious expedition – to examine the shortcomings of Tbilisi’s public transport and provide the Georgian capital with transit solutions.²⁰ In 2015, the ADB-funded Tbilisi Sustainable Urban Transport Strategy found that additional infrastructure for private cars would not remedy bottleneck- and congestion-related problems in the Georgian capital. Instead of road construction, the strategy recommended developing an intermodal public transport network.²¹ In line with this recommendation, City Hall declared in the EBRD-supported GCAP (2017) that it would prioritise road use for mass transit and that it intended to expand and upgrade the bus fleet with CNG buses to reduce air pollution.

The cautious upgrades to the public transport network between 2015 and 2017 included the metro extension, piloting bus lanes²² and multi-modal street design, as well as kick-starting the bus fleet update. These efforts, however, were minuscule compared to the mass transit problems in the Georgian capital. Meanwhile, City Hall

¹⁹ Figure reproduced from Thornton and Turmanidze, [Public Attitudes in Georgia 2015](#) and [Public Attitudes in Georgia 2017](#).

²⁰ Kochladze, [Green City Action Plan for Tbilisi – A Mere Formality?](#).

²¹ Tbilisi City Hall, [Tbilisi Sustainable Urban Transport Strategy](#), *Municipal Development Fund*, December 2015.

²² Luka Pertaiia, [‘Buses will run on a separate route from Turtle Lake to Vake Park’](#), *Netgazeti*, 27 September 2016.

also reported rehabilitating and constructing over 4.5 million square metres of roadways, including new highways and overpasses between 2014 and 2017.²³

These contradictory developments only increased citizens' concerns. Urban activist groups,²⁴ out of frustration with the worsening air quality, destruction of green spaces and other urban problems, became active, increasing public awareness of environmental issues and pressuring the city administration. One of the key drivers behind the growing citizen movement was the 2015 Tbilisi flood, which claimed the lives of over 20 people and tens of zoo animals and caused damage to over 200 households.²⁵ Questions have remained over the high number of casualties, in particular whether the loss of human life might have been avoided if the construction of a new road in 2010 had not put the Vere river into a pipe and destroyed the floodplain forest.

The city administration (from 2016 onwards) has tried responding to environmental and mobility concerns. However, its insistence on retaining streets with unidirectional traffic and higher-than-necessary speed limits has proven inconsistent with the declared commitment to move away from car-centric planning.

Moreover, City Hall has continued the construction of massive new roads, albeit to a lesser extent than previous administrations. In 2018, for instance, it pushed through and built a contentious overpass – worth GEL 3 million (more than EUR 900 000)²⁶ – near Tbilisi's main urban recreational space despite public opposition.²⁷ An activist group claimed that the need for and benefits of the project were not properly examined.²⁸

In 2019, it commenced work on another significant road infrastructure project – costing some GEL 15 million (more than EUR 4.5 million)²⁹ – to provide a rapidly developing high-end suburb with an additional roadway to the arterial highway leading to the city centre.³⁰ A landslide where the roadworks were taking place in 2021 has also raised concerns about the appropriateness of the project.³¹

In 2019, the new Tbilisi Master Plan, a key long-term strategic document that provides a conceptual layout for Tbilisi's future urban development, officially declared pedestrians at the top of the city's transport policy hierarchy, prioritising public transport over private cars and opting for transit-oriented development. Later that year, Tbilisi City Hall finalised works on the Tbilisi Resilience Strategy, which deals with transport issues, among others. As a result, currently, the vision and operational objectives of the mass transit reform in Tbilisi are governed by three strategic documents: the GCAP, the Tbilisi Master Plan and the Resilience Strategy. Transport priority measures under the GCAP and Resilience Strategy are largely identical, except for some ambitious,

²³ Tbilisi City Hall, [2014-2017 Report](#), Tbilisi City Hall, November 2017.

²⁴ Prathap Nair, '[Tbilisi Comes Up for Air](#)', Bloomberg, 1 June 2018.

²⁵ Nino Tarkhnishvili, '[June 13 - An Example of Coming Together](#)', Radio Liberty, June 13, 2017.

²⁶ Exchange rate estimated from [InforEuro](#), January 2018.

²⁷ Nino Bidzinashvili, '[Kaladze Unveils an Overpass Near the Hippodrome](#)', Netgazeti, 23 November 2018.

²⁸ '[Hippodrome Overpass' Without Rose-Colored Glasses](#)', At.ge, accessed July 28, 2022.

²⁹ Exchange rate estimated from [InforEuro](#), January 2019.

³⁰ '[The construction of a new road connecting Marshal Gelovani Avenue and Mukhran Machavariani Street has started](#)', Tbilisi City Hall, 31 July 2019.

³¹ Nino Bidzinashvili, '[Half a million cubic meters of soil is moving, it is impossible to contain it - Tea Godoladze](#)', Netgazeti, 11 March 2021.

now-abandoned metro extension goals laid out in the latter document that envisioned building seven new metro stations between 2021 and 2022.³² At the same time, all three documents acknowledge the importance of developing a mobility-specific, long-term strategic outlook in Tbilisi's Sustainable Urban Mobility Plan.

A time of paradigm shift – the Sustainable Urban Mobility Plan

In 2010, the ADB approved a multi-tranche financing facility (MFF) for the Sustainable Urban Transport Investment Program (SUTIP) for an aggregate amount not exceeding USD 300 million.³³ Its first tranche financed the development of Tbilisi's Sustainable Urban Transport Strategy in 2014. The ADB-funded strategy underlined the need to create a Sustainable Urban Mobility Plan (SUMP) for the Tbilisi metropolitan area as early as 2015.³⁴ The work on it, however, commenced years later in 2019. The SUMP serves as an umbrella document and outlines concrete measures for improving sustainable mobility, reducing air pollution, and boosting the accessibility and quality of public transit in the Georgian capital.³⁵ It assesses diverse development scenarios, defines investment priorities and provides a clear roadmap for implementation.

The ADB has financially backed the preparation of the SUMP, with a loan of USD 1.8 million under the Livable Cities Investment Program financing over 80 per cent of the contract costs for the document.³⁶ In total, the agreement with Ramboll – a Denmark-based international consultancy company tasked with preparing the SUMP – is valued at USD 2.2 million. In addition, Ramboll should provide training to Tbilisi City personnel to develop the city's capacity for urban transport planning and implementation and for updating the SUMP later on.³⁷

The SUMP was supposed to be finalised by the end of 2020. However, it is still under development. The draft plan is to be shared with the public in autumn 2022.³⁸ The challenges associated not only with the COVID-19 pandemic but also systemic problems in City Hall, such as frequent turnover of its staff – including department-level leadership – have resulted in a long, drawn-out development process.³⁹

Since the SUMP is still being prepared, a clear action plan with concrete measures, timelines, milestones and commitments for moving towards sustainable mobility remains non-existent. Nevertheless, Tbilisi City Hall has already developed a sustainable urban mobility project and is securing a concessional loan worth EUR 57 million from Germany's KfW development bank to carry it out.⁴⁰ The project, funded under the German Climate and Technology Initiative (DKTI), has set the reduction of greenhouse gases as its primary objective. Specific

³² Tbilisi City Hall, [Resilient Tbilisi A Strategy for 2030](#), Tbilisi City Hall, 2019, 56-57.

³³ Asian Development Bank, [‘Georgia: Sustainable Urban Transport Investment Program’](#), ADB, accessed 29 August 2022.

³⁴ Tbilisi City Hall, Tbilisi Sustainable Urban Transport Strategy, Tbilisi City Hall, 2015.

³⁵ Tbilisi City Hall, GCAP.

³⁶ Asian Development Bank, [‘Georgia: Livable Cities Investment Program’](#), ADB, accessed 29 August 2022.

³⁷ Ramboll, [‘Preparing the Sustainable Urban Mobility Plan for Tbilisi’](#), Ramboll, accessed 29 August 2022.

³⁸ Author correspondence with the ADB, 25 May 2022.

³⁹ Mamuka Salukvadze, Head of the City Institute, interview by the author, 30 May 2022.

⁴⁰ Natia Taktakishvili, [‘Tbilisi Gov’t To Spend A Loan Of EUR 57 Million On Sustainable Urban Mobility Project’](#), Georgia Business Media, 20 May 2022.

measures under the programme include expanding the intelligent traffic management system and environmentally friendly modes of transport (public transport, cycling and pedestrian networks).⁴¹ The project was preceded by a 2019 KfW-funded study that identified priority areas for developing the intelligent traffic management system.⁴²

The city administration has also devised its vision for developing a new transit system based on initial studies of Tbilisi's road network and has started carrying out infrastructure and procurement activities.

Mass transit reforms: an overview of operational dimensions

Restructuring the public road transit network

In April 2018, Tbilisi City Hall received an EBRD-administered EU grant of EUR 500 000 for a road transport network restructuring and modelling study. The total project was valued at EUR 800 000, with City Hall paying for the rest of its costs.⁴³ SYSTRA, a multinational public transport and mobility consulting firm, conducted the research.

The key finding from the study, which produced seven consecutive reports between 2018 and 2020, was that the Tbilisi public transport network lacked hierarchical divisions. The multiple routes connecting remote parts of the city overlapped on major roadways, such as the Rustaveli thoroughfare, causing an excessive concentration of mass transit vehicles on these routes. This arrangement also pitted public buses and privately managed and operated minibuses as competitors for ridership.⁴⁴ Overcrowding was also identified as a problem, as 51 per cent of total daily boardings on the bus network happened on 20 of the city's 102 routes.⁴⁵

To develop a better-coordinated and integrated public road network, the study recommended that City Hall establish public transport corridors – Tbilisi bus transit (TBT) lines – on the 10 most in-demand routes in Tbilisi. Covering some 110 kilometres, the interconnected lines should link the capital's most remote and densely populated areas with each other and the city centre. In total, 44 city and 185 local lines should start operating to move people shorter distances or to the TBT lines from various parts of the city.⁴⁶

The TBT lines require bus-only lanes on roads so they can function unhampered. Despite their undeniable importance for the transit system, four years after the project to install bus lanes was greenlit by the study and

⁴¹ KfW, '[Consulting Services \(Urban Transport/Implementation & Accompanying Measures Consultant\)](#)', KfW Tender for Consulting Services, accessed 26 August 2022.

⁴² Tbilisi City Hall, '[Tbilisi starts developing Intelligent Traffic Management from 2020](#)', *Tbilisi City Hall*, 13 December 2019.

⁴³ Tbilisi City Hall, '[A grant of 500,000 euros will be allocated for the Tbilisi's transport network restructuring and modeling project](#)', *Tbilisi City Hall*, 4 April 2018.

⁴⁴ Systra, '[Restructuring of the bus network and introduction of an integrated automated fare collection system](#)', 17.

⁴⁵ Systra, '[Restructuring of the bus network and introduction of an integrated system of automated payment for travel](#)', *Tbilisi City Hall*, 17 May 2018, 27.

⁴⁶ Tbilisi City Hall, '[Tbilisi bus transit corridor](#)', *Tbilisi City Hall*, August 2020, 14.

endorsed by City Hall, as of July 2022, only 36.1 kilometres – about 33 per cent – of the necessary length of lanes had been laid.⁴⁷ A year ago, City Hall hoped to have 60 kilometres of bus lanes ready by the end of 2021.⁴⁸

In addition, the existing bus lanes are highly fragmented and not continuous. Consequently, although buses and minibuses can travel faster on dedicated routes, the discontinuities force them to move to mixed traffic roadways, hampering their speed and contributing to slower arrivals and a less reliable service.⁴⁹ According to the Tbilisi Transport Company (TTC), on average buses drive at a speed of 19 kilometres per hour in bus-only lanes and 16.5 kilometres per hour on city and local lines.⁵⁰ Consequently, there have been hardly any sizable improvement in the reliability, frequency and speed of the public road network. The average interval between buses is 18 minutes, just like it was four years ago. By the mayor of Tbilisi's own admission, a year ago in June 2021, people still had to wait 30 or 40 minutes for a bus in some cases.⁵¹

To better coordinate relations between buses and minibuses, City Hall opted for to relegate minibuses into a supporting role for bus and metro networks. To this end, the municipality has struck a deal with the four private minibus operators and their managing company, changing their operational model. Previously, the four Tbilisi minibus operators rented out their minibuses to drivers for a daily fee, and drivers kept the revenues from ticket sales. Under the new model, drivers receive monthly salaries, and the city itself hires the company that manages the minibus service.⁵²

Revamping the public road vehicle fleet

Due to the dire state of its buses, Tbilisi City Hall began updating the fleet in 2016. One of the bigger commitments it officially made later in the GCAP pertained to the fleet update: the city administration pledged to have some 1,000 buses powered with CNG instead of diesel by 2025. Even though CNG is not the most environmentally friendly option for public transport, the city leadership has still failed in its commitment to keeping the fleet relatively eco-friendly.

Since 2016, City Hall has spent some EUR 157 million⁵³ to purchase 860 new buses. Out of these, 672 make daily rounds on the streets as of July 2022. Although the actual number of buses in service daily has increased by 158 since 2016, City Hall's intention to purchase some 200 more 18-metre buses shows that the existing fleet cannot cope with the ridership. On average, buses facilitate 328,211 rides daily.

⁴⁷ Tbilisi Transport Company, Letter to Green Alternative N01/4773, 17 June 2022.

⁴⁸ Tbilisi City Hall, '[A three-kilometer bus lane was installed on Rustaveli Avenue](#)', *Tbilisi City Hall*, 16 May 2021.

⁴⁹ Giorgi Babunashvili, Chair at Urban Laboratory, author interview, 24 May 2022.

⁵⁰ Tbilisi Transport Company, Letter N01/4773.

⁵¹ Kakha Kaladze, '[Tbilisi Transport Policy](#)', *kakhakaladzeofficial*, Facebook, 1 June 2021, 16:00.

⁵² Irakli Khmaladze, '[What and how will the Tbilisi's transport scheme, ride fares and zone parking change within the reform](#)', interview with *Interpressnews*, 16 March 2021.

⁵³ Out of EUR 157 million, EUR 92 million was paid out from the EBRD loans: EUR 7 million from the E5P grant and about EUR 58 million from municipal funds. The total amount includes not only the sum of bus prices, but also the price of associated services, such as bus maintenance guarantees.

The EBRD has been involved in the fleet update from the very beginning, and its loans allowed for the purchase of the CNG vehicles. In 2016, it provided a EUR 27 million sovereign loan and a EUR 7 million capital grant from the Eastern Europe Energy Efficiency and Environment Partnership (E5P).⁵⁴ The funding enabled the Tbilisi transport authorities to procure 144 low-floor CNG buses. In 2019, the Bank once again issued a sovereign loan worth EUR 80 million to Tbilisi.⁵⁵ This time around, EUR 65 million was allocated to purchasing 226 CNG buses,⁵⁶ while EUR 15 million was set aside for rehabilitating a bus depot.⁵⁷

Furthermore, in October 2021, the EBRD signed a loan for an additional EUR 83 million to the city. The loan envisaged the purchase of some 200 18-metre CNG low-floor buses (EUR 70 million) and the construction of a new depot (EUR 13 million) for their maintenance.⁵⁸ The 18-metre buses are seen as critical for the city's newly restructured bus network, as these vehicles with a passenger capacity of about 120 people are best suited for transferring commuters on TBT lines. In September 2022, the Georgian government cancelled the loan and announced that the purchase would be financed by the city.⁵⁹ The buses' introduction into the Tbilisi network was first planned for 2020.⁶⁰ According to City Hall's updated timeline, they will debut on Tbilisi streets sometime in 2023.

Apart from the 370 CNG buses purchased through EBRD-supported projects, City Hall spent its own funds – some EUR 58 million – to buy 490 Euro 6 diesel-powered buses. It justified the decision by citing the affordability of the Euro 6 buses compared to CNG vehicles, which allowed for the purchase of more buses. Transport experts have largely rallied behind the decision, insisting that the Euro 6 buses guarantee similar emission reductions.⁶¹ However, from an environmental standpoint, the decision was to the detriment of the city. Euro 6 emissions standards for diesel do not take into account many pollutants – including particulate matter, ammonium and nitrogen dioxide – that are characteristic of diesel but not of gas.⁶²

The city administration has also convinced the private minibuses companies to update and reduce their own fleet. However, the new minibuses are also diesel-fuelled and only meet Euro 5 emission standards, lower than that of the diesel buses.

⁵⁴ European Bank for Reconstruction and Development, '[Tbilisi Bus Project](#)', EBRD, accessed 29 August 2022.

⁵⁵ European Bank for Reconstruction and Development, '[GrCF2 W2 - Tbilisi Bus extension](#)', EBRD, accessed 29 August 2022.

⁵⁶ In 2021, after procuring the buses, Tbilisi City Hall faced accusations of corruption after reports emerged that per bus it paid much more money than other cities that also opted for the same buses had. Tbilisi City Hall has denied the allegation. Veriko Sukhiashvili, '[Tbilisi City Hall bought 12-meter buses at a much higher price than other cities of the world](#)', *Factcheck.ge*, 28 May 2021.

⁵⁷ European Bank for Reconstruction and Development, '[Stakeholder Engagement Plan updated revision 2020 Tbilisi Metro Project and Tbilisi Bus Extension](#)', EBRD March 2020, 4.

⁵⁸ European Bank for Reconstruction and Development, '[GrCF2 W2 - Tbilisi Bus Phase III](#)', EBRD, accessed 29 August 2022.

⁵⁹ Shota Tkeshelashvili, '[Taking on new loans is reduced by GEL 711 million - what projects did the government reject this year?](#)', *Business Media Georgia*, 14 September 2022.

⁶⁰ Anuka Jokhadze, '[Why was the introduction of 18-meter buses delayed in Tbilisi?](#)', *Business Media Georgia*, 12 April 2022.

⁶¹ Manana Kochladze, '[Tbilisi Green City Action Plan - from formality to reality](#)', *Green Alternative*, 12 January 2021.

⁶² Kochladze, '[Tbilisi Green City Action Plan - from formality to reality](#)'.

The next move in this process was downsizing the minibus fleet from around 1,500-1,700 to 1,000 and adjusting the number of bus and minibus lines between February and June 2022. Currently, there are 110 bus routes and 155 minibus lines⁶³ on the Tbilisi road network. For comparison, in 2018 there were 102 bus and 195 minibus lines.⁶⁴ The integration of bus and minibus networks was also reflected in yet another update, which came in the form of bus and minibus route renumbering in March 2022.⁶⁵

The most problematic aspect in this process was the way City Hall completely disregarded citizens as it downsized and renumbered the routes. The reduction of the number of lines in February led to a terrible transport crisis, manifested in more than usual overcrowding on the road network that made even entering buses and minibuses impossible.⁶⁶ The city administration should have been aware of the problems it would cause without first introducing alternative routes and additional bus lines that came only later in April and June 2022. The route renumbering in March also caused havoc, as most people learned about new numbers for over 70 lines on the day they were introduced. City Hall communicated about the change only on its website and via the media, while information about the changed numbers appeared only at a handful of seemingly random bus stops.

Information about routes and schedules

The availability of information about routes and schedules remains a problem, despite some attempts at making improvements. TTC has developed a mobile navigation application that provides information about bus and minibus arrival times at bus stops and an overview of bus schedules. This helps riders plan journeys and view the whereabouts of buses in real time. However, the extent of its user-friendliness has been subject to debate. Most recently, a journalistic report suggested that the application has several shortcomings, from overly small fonts to limited opportunities for identifying destination points, rendering the assistance it provides debatable at best.⁶⁷

The app represents another issue with City Hall's approach to sharing information on public transit. Currently, it relies on digital or technological solutions – such as the app, messaging services and digital tableaus – while completely ignoring low-tech ways of sharing details about mass transit. For instance, although there are ways to learn about bus departure and destination points at bus stops, it is impossible to know what route the buses take and what stops they pass through without having a phone or asking bystanders.

Although the digital developments are necessary, they do not remove the need for old-fashioned, paper-printed timetables and maps that should be placed at bus stops and inside public transport vehicles. After all, not everyone has access to the internet around the clock, or to smart phones to use the app. Mobile phones can run out of battery, while digital tableaus have a history of malfunctions and system failures, not to mention that

⁶³ Tbilisi City Hall, 'Detailed routes of the new blue minibuses integrated into the transport system,' *Tbilisi City Hall*, 28 September 2022.

⁶⁴ Systra, [Restructuring of the bus network and introduction of an integrated system of automated payment for travel](#), 16.

⁶⁵ Tbilisi Transport Company, [Bus route numbers have been changed](#), *Tbilisi Transport Company*, 21 March 2022.

⁶⁶ Giorgi Babunashvili, author interview.

⁶⁷ Tea Topuria, [I have not even glanced at the 5th micro of Vazisubani that day – or how I traveled with TTC-navigator](#), *Radio Liberty*, 24 June 2022.

the system is not always accurate. While the paper-printed schedules and maps will not remedy the problem with the accuracy of information (linked to far more complicated processes), they can at least provide more details and help commuters plan journeys and receive information in greater detail at all times.

Metro upgrade: stochastic improvements

Although the Tbilisi metro, with its two lines and 23 stations, represents one of the most significant modes of transport in the capital, moving some 305,000 passengers daily, it arguably is not given enough attention in the GCAP. Its monitoring plan failed to identify specific key performance indicators for improvement and only focused on the extension of the metro and construction of a new University station as a primary goal. In line with this tendency, the ambitious but now seemingly faltering idea of expanding the metro with seven new stations was part and parcel of City Hall's transit-orientated development in the Tbilisi's Resilience Strategy. The lack of overall vision for the metro's services could explain these shortcomings. Meanwhile, stochastic improvements primarily implemented through projects funded by international financial institutions also point to the fact that the Tbilisi metro depends on securing external finances to substantially advance its services.

Out of five total tranches from the ADB's SUTIP, two were administered for projects related to the Tbilisi metro. Between 2015 and 2017, the first tranche of USD 37 million covered the 2.6-kilometre extension of metro line 2 and the reconstruction of the University station.⁶⁸ Meanwhile, the fifth and final tranche, worth USD 14 million, allowed for the replacement of 500 kilometres of power distribution cabling and the installation of 32 new ventilators in 2021, removing fire hazards and improving air quality in the metro system.⁶⁹

After concluding that the project aligned with the Tbilisi GCAP's objectives, other international financial institutions – the EBRD and the Green Climate Fund – also supported the Tbilisi metro's rehabilitation with a EUR 75 million loan.⁷⁰ The project, aiming to improve public transport's reliability, safety and efficiency, envisioned acquiring 44 new metro cars (11 train sets) to replace outdated rolling stock and rehabilitate a metro depot and a tunnel. In 2021, the EBRD selected Metrowagonmash, a Russian engineering company, as the winner of its tender for procuring the train sets. In March 2022, however, after Russia's invasion of Ukraine, the Bank stopped financial payments to the company, leaving the project in limbo. In the meantime, City Hall has reported rehabilitating its existing stocks – 79 metro cars have been restored and 27 rehabilitated cars have been added to its rolling assets.⁷¹

The ADB's involvement in the Tbilisi metro's rehabilitation has continued with its Livable Cities Investment Program and Livable Cities Investment Project for Balanced Development. Under the former, the Bank funded a feasibility study and detailed design for the Akhmeteli metro station with USD 1.1 million.⁷² Meanwhile, under

⁶⁸ Asian Development Bank, [Georgia: Sustainable Urban Transport Investment Program - Tranche 1 Initial Environmental Examination](#), ADB, December 2014.

⁶⁹ Tbilisi Transport Company, [‘Tbilisi metro electricity system was upgraded’](#), Tbilisi Transport Company, 21 February 2021.

⁷⁰ EBRD, [GrCF2 W1 - Tbilisi Metro Project](#), EBRD, accessed 29 August 2022.

⁷¹ Irakli Khmaladze, [‘Tbilisi Transport Policy’](#), Facebook, 1 June 2021, 20:28.

⁷² Asian Development Bank, [Georgia: Livable Cities Investment Program Procurement Plan](#), Asian Development Bank, 26 August 2021.

the latter programme, the ADB allocated USD 16 million for upgrading metro station access and public spaces in the Akhmeteli Theatre, Liberty Square and Marjanishvili stations. Tbilisi City Hall has also pursued station upgrades with municipal funds.

Notably, the Georgian government and the municipality of Tbilisi have used the metro for campaigning purposes. For instance, in 2018, they announced the construction of an above-ground metro system starting in 2019 to improve air quality in Tbilisi. The ground-based metro would connect Samgori station with the Lilo market, the largest open-air commercial centre in Georgia, and Tbilisi Airport. In total, seven new stations and the renovated Samgori station should have been in operation by 2022.⁷³ Despite appearing in the Tbilisi Resilience Strategy, like many other controversial promises that have been made over the years, the above-ground metro system never materialised.

Taxi reform

In line with the priorities set forth in its GCAP, Tbilisi City Hall has gradually begun to regulate the city's extremely deregulated taxi network. In October 2018, the reform began with the introduction of a registry and the requirement of a taxi licence to perform taxi work legally. A year later, in October 2019, City Hall started issuing two types of taxi licences: A and B.

Even though traffic in Georgia drives on the right side of the road, both left- and right-hand drive cars are allowed on the streets. Type A licences, therefore, can be obtained only by drivers who own left-hand drive cars, which are better suited to traffic rules in Georgia. For this permit type, there is an additional requirement for an automobile to be white, as the colour supposedly increases the visibility of the car.

Type B licences are available to drivers of any type of automobile. However, the requirement for drivers to undergo and pass mandatory car inspections twice a year stands for both types of licences. Drivers with a type A permit have certain privileges: they are allowed to be identified as taxis, use municipal taxi parking slots and pick up customers directly from the street. Cab drivers with type B licences are only allowed to service customers who request a ride via an app or a phone call.

As of 1 July 2022, there were 15,515 cab licences issued to drivers in Tbilisi. Among them, 12,233 were type A and 3,282 were type B. Notably, only a fraction of taxi licences (408) were issued to women.⁷⁴ The data suggests that the number of taxis has been declining; in October 2019, 18,200 taxi licence holders were reported.⁷⁵

Cab drivers are not subjected to additional tests that scrutinise their knowledge of the Tbilisi environs, nor do they have to undergo substantive background checks. Independent taxis are not metered either, and the price

⁷³ Nino Bidzinashvili, '[Airport and Lilo market - how far will the new underground metro reach?](#)', *Netgazeti*, 22 October 2018.

⁷⁴ Tbilisi City Hall, Letter to Green Alternative N 16-0122189667, 1 July 2022.

⁷⁵ Veriko Sukhiashvili, '[From today, only 4,368 taxis will be able to pick up passengers from the street in Tbilisi](#)', *Factcheck.ge*, 1 October 2019.

of each ride has to be negotiated beforehand with the driver. Although City Hall has been considering a third wave of reforms, as of summer 2022 it had not yet disclosed the exact content of these changes.⁷⁶

The city administration has claimed that the authorities are holding consultations with all relevant stakeholders – including the ride-hailing industry – to prepare the new reforms package.⁷⁷ However, the secrecy and ambiguity of City Hall's actions raise questions about its willingness to be transparent and involve the public or broader groups of stakeholders in the process. It also makes it hard to figure out what is coming next for cab drivers and provides them with short timeframes to adjust to new regulations.

The private fleet in Tbilisi

Due to their inconsistency and accompanying controversies, City Hall's reforms have failed to influence levels of private car ownership in Tbilisi. Over the past few years, as citizens have remained unconvinced about using more public transport, the number of private cars in Tbilisi continued its significant growth. As of June 2022, there are more than 425,000 private vehicles registered in the Georgian capital, with most of the fleet – over 75 per cent – being 10 years or older.

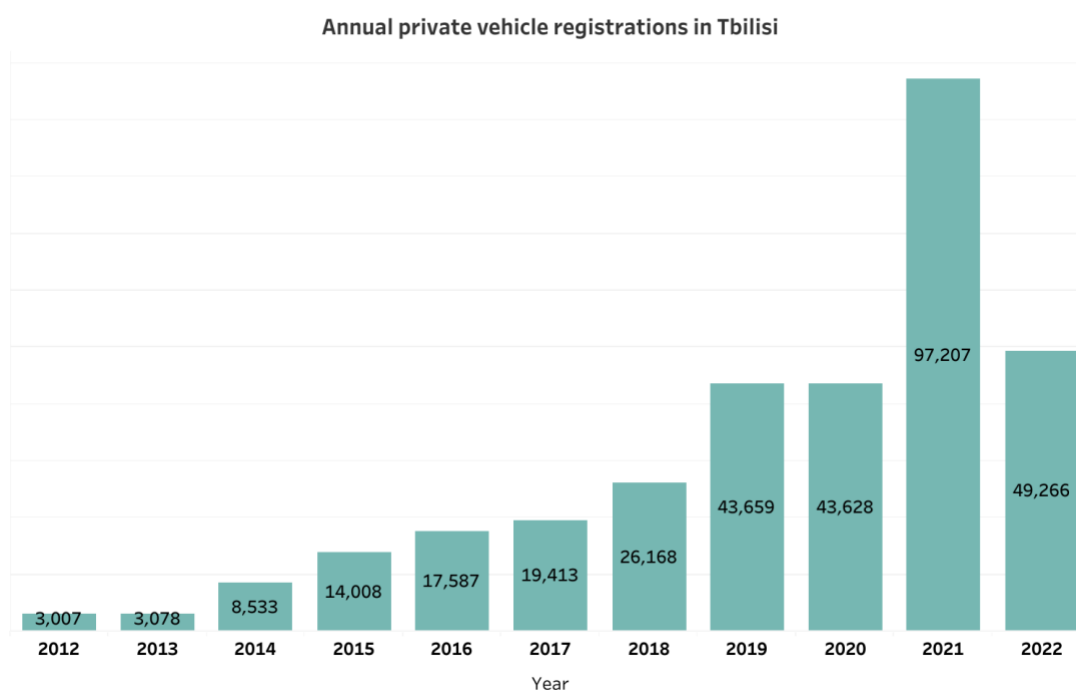


Figure 2. Source: *bihub.ge* | Author's graph⁷⁸

The enforcement of mandatory technical inspection introduced on 1 January 2018 was marred by controversies; its adoption had been postponed multiple times, it became mandatory for private cars only a

⁷⁶ Inga Murusidze, 'Tbilisi City Hall set to announce third wave of taxi reform in Summer', *Business Media Georgia*, 9 February 2022.

⁷⁷ Mariam Bogveradze, 'Taxis will be allowed to pick up passengers from bus lanes — Kaladze', *Netgazeti*, 9 February 2022.

⁷⁸ Bihub.ge, 'Autopark analytics', *Bihub.ge*, accessed 29 August 2022.

year later in 2019, and some key technical directives were not enforced until 2020.⁷⁹ According to current legislation, cars are entirely exempt from checks in the first four years after their production, then become subject to biannual examination within eight years of production. Those older than eight years are subject to annual checks. Notably, the specific emission requirements for cars are significantly lower than those in EU Member States.

Already in 2019, the Thematic Inquiry Report on Air Quality in Tbilisi, issued by the Environment Protection and Natural Resources Committee of the Georgian Parliament, stated that vehicle exhaust is the main cause of air pollution in the Georgian capital.⁸⁰

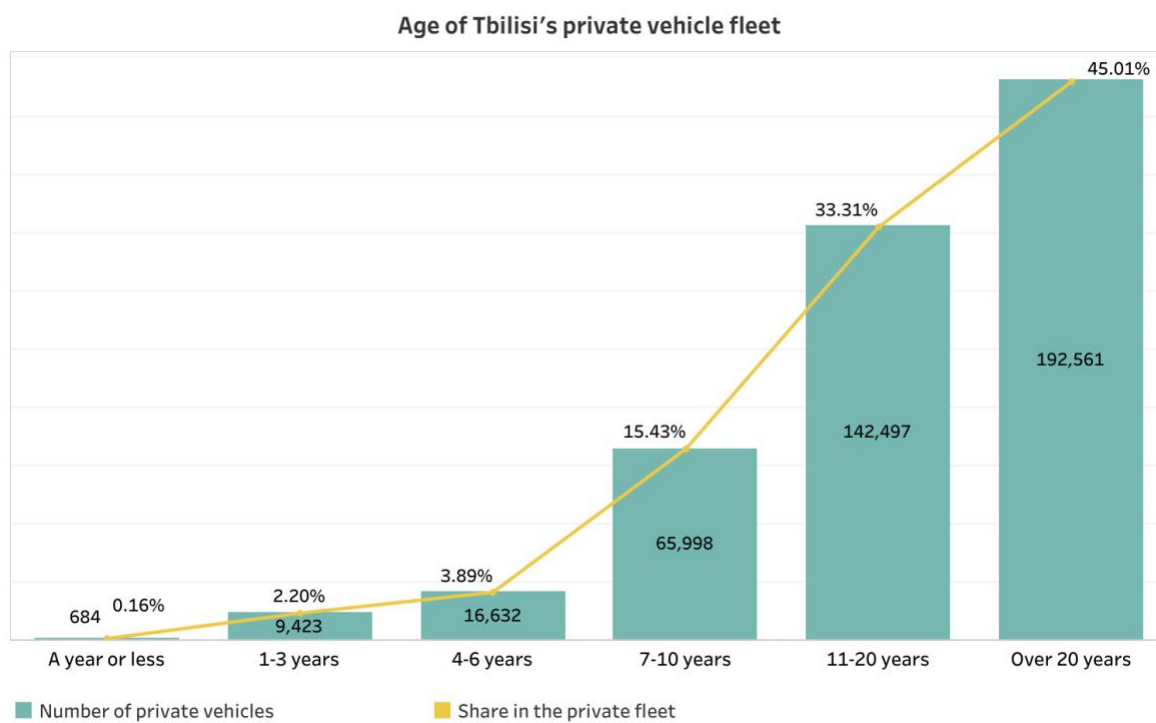


Figure 2. Source: bihub.ge | Author's graph⁸¹

The COVID-19 pandemic in 2020 was also illustrative in convincing Tbilisi residents that cars emit a significant amount of pollution. To combat the spread of the virus in spring 2020, Georgia, like many other countries, imposed a national lockdown, introduced mandatory social distancing and restricted the use of automobiles, as well as the work of industrial enterprises. This resulted in reduced human activity and the decline of primary air pollutant emissions, leading to improved air quality.⁸² The question 'Have you ever seen Kazbegi mountain

⁷⁹ Public Defender's Office, '[Public Defender Echoes Amendments concerning Technical Inspection of Vehicles](#)', Public Defender's Office, 26 December 2017.

⁸⁰ Environmental Protection and Natural Resources Committee of the Georgian Parliament, '[Air Quality in Tbilisi](#)', Parliament of Georgia, 2019 (Tbilisi).

⁸¹ Bihub.ge, '[Autopark analytics](#)', Bihub.ge, accessed 29 August 2022.

⁸² Avtandil G. Amiranashvili, Darejan D. Kirkidze, and Eliso N. Kekenadze, '[Pandemic of Coronavirus COVID-19 and Air Pollution in Tbilisi in Spring 2020](#)', *Journal of The Georgian Geophysical Society* 23, no. 2 (July 2020).

from Tbilisi?’ was answered affirmatively by the city’s residents for the first time in ages during the spring of 2020.⁸³ This, however, has not encouraged Tbilisi residents to forego their dependence on automobiles and swap private transport for the public kind.

There have been many promises from the government and local municipality about improving air quality⁸⁴ across Tbilisi, including through the introduction of electric car-sharing vehicles,⁸⁵ parking zones and multimodal street design. But these attempts have so far been underwhelming; electric car-sharing, for example, was piloted by a private company in April 2022 but catered more to the needs of tourists than those of the local population. Meanwhile, parking zones and multimodal streets, as of now, are primarily concentrated in the areas around city centre, limiting their effectiveness. Some multimodal streets also remain unidirectional.

Mass transit reform: public perceptions, gender and impact on vulnerable groups

Public perceptions and reception of the reforms

Tbilisi residents think public transit in the capital has improved over the past few years. According to a public opinion survey undertaken within the present research, 54.5 per cent of respondents think public transport has improved over the past four to five years.⁸⁶

However, there is an important caveat regarding the overall perception and reception of the ongoing transport reforms. When asked if the existing policy and ongoing changes addressed the respondents’ own needs, 47.2 per cent of those surveyed said they did not (and fewer than 30 per cent said they did), suggesting that while most commuters view the changes positively overall, their effects are felt less on an individual level.

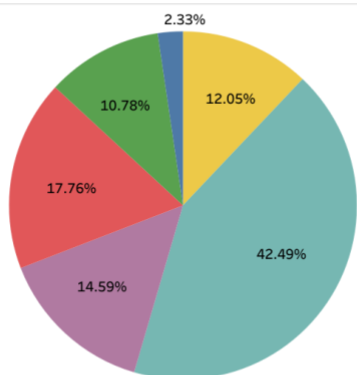
⁸³ Jimsher Rekhviashvili, ‘Is Kazbegi visible from Tbilisi?’, *Radio Liberty*, 16 October 2019.

⁸⁴ ‘Georgian government presents new policy to prevent air pollution’, *Agenda.ge*, January 26, 2019

⁸⁵ ‘Kakha Kaladze presented a sample of the electric car planned to be produced in Kutaisi’, *Georgian Public Broadcaster*, 6 June 2019.

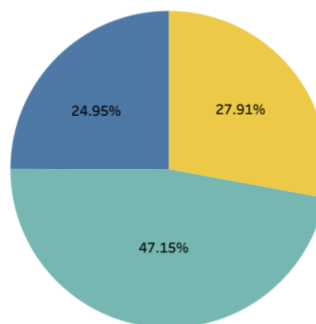
⁸⁶ The survey was conducted by Green Alternative from 16 May to 6 June 2022 online. The survey questionnaire was published on Green Alternative’s Facebook (<https://www.facebook.com/greenalt>) and Twitter (<https://twitter.com/GreenAltOrg>) accounts. In order to increase its overall reach and survey the general population of Tbilisi residents, the survey was promoted using Facebook advertising with Tbilisi specified as the location for the targeted audience (i.e. individuals living in Tbilisi). It reached around 17,000 users and generated 1,625 engagements. Out of those reached, 80 percent were women and 20 percent men. Overall, 473 people participated. Among them, 382 were women, 87 men, and four indicated ‘other’ or that they preferred not to respond. In terms of age, 165 were 18 to 35 years old, 179 were between 36 and 60, 126 were 61 or over, and three did not specify. The survey relied on the convenience/availability sampling and aimed to investigate Tbilisi residents’ attitudes towards the city’s transport (buses, minibuses, metro and taxis). The results, however, cannot be generalised to the entire population of Tbilisi with statistical validity. The value of the survey stems from the understanding it provides about public transport riders’ attitudes toward mass transit and on their experiences as commuters.

In your opinion, how has public transport service (bus, minibus, metro) changed in the last 4-5 years?



Has improved significantly
Has improved
Has not changed
Has worsened
Has worsened significantly
Don't know/Prefer not to respond

In your opinion, does the existing transport policy and ongoing changes take into account your needs?



Yes, it does
No, it does not
Don't know/Prefer not to respond

Figure 3. n=473

Overcrowding remains the primary concern for Tbilisi's residents. This was one of the most frequently faced problems for 74.4 per cent of respondents. Long waits, missed schedules and the fact that public transport stops working too early were also seen as some of the more problematic aspects of the public transit network.

The most frequently encountered problems in public transport

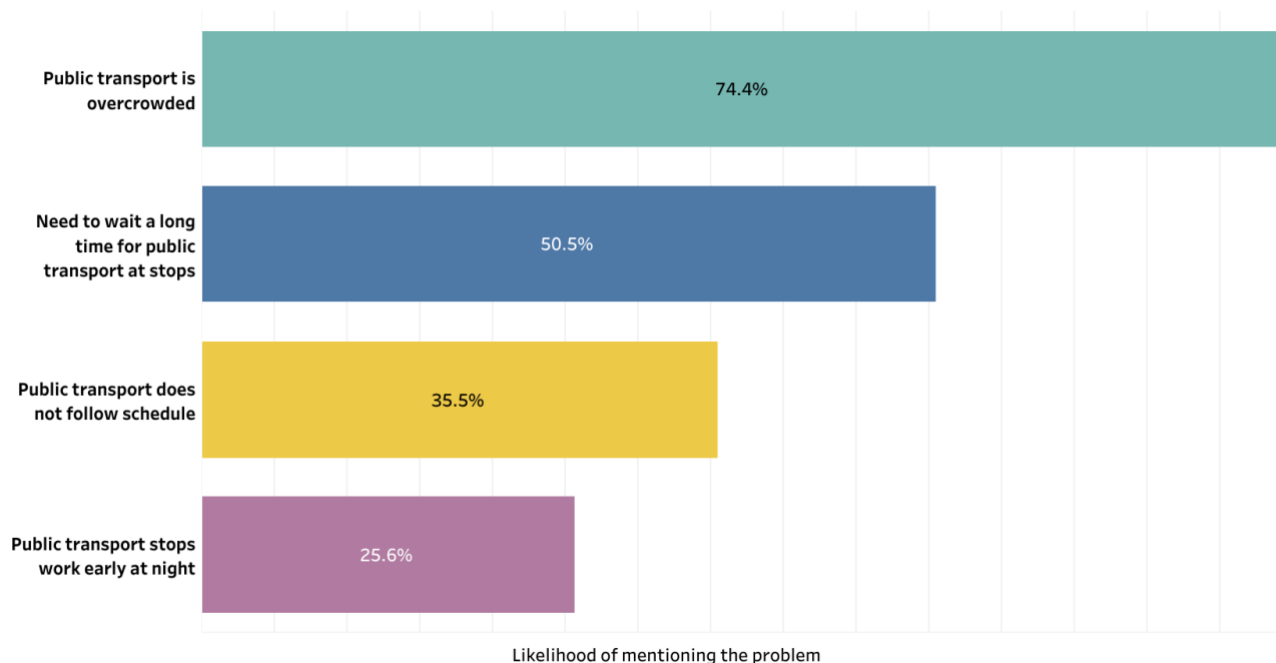


Figure 4. n=473

Gender and public transit in Tbilisi

The increasing numbers of women relying on public transport worldwide experience gendered inequities in their daily use of mass transit. For instance, women, often primary caretakers with more domestic responsibilities than men, tend to commute more often than men⁸⁷ on public transit networks that do not consider their needs and gendered practices. They are also often forced to take more precautions to avoid sexual harassment and gender-based violence.⁸⁸

Gender minorities and LGBTI people also face heightened security concerns and fear of discrimination and violence.⁸⁹ Accessibility and safety issues on public transport are also routine for Georgian women and LGBTI people. Addressing their concerns – how best to reach their destination, what will be the safest way to get to the bus stop and others – has to be integrated into the design, planning, and operation of transport systems.

As is the case elsewhere in the world, when examining Tbilisi residents' mobility patterns from a gendered perspective, one finds that women rely on public transit, walk and use taxis more often than their male counterparts.⁹⁰ This underpins the importance of considering women's needs and mobility patterns in creating public transit networks and promoting women's participation in developing public transit policies and solutions. In contrast, looking at the history of the decline of public transit in Tbilisi indicates how public decision-makers have chosen policies that disadvantaged women by limiting their mobility opportunities. Such constraints on mobility ultimately hamper women's access to better job opportunities, as well as to public spaces for learning and recreation.

To this day, neither Tbilisi City Hall nor the TTC have taken substantial action to demonstrate their willingness to encourage public participation, including that of women in developing transit policy and new modes or routes for public transport.⁹¹ Evidence suggests that adopting a gender perspective in mobility policy and operations contributes to increased safety and security, reduces gender disparity and opens up access to better job opportunities.⁹²

Safety and security – often primary factors influencing women's mobility preferences – pose another glaring challenge for the capital's public transit system. The recent daytime murder of a woman in a Tbilisi public bus has highlighted the issue against the backdrop of widespread gender-based violence in the country.⁹³ Cases of such extreme violence in public transit, rare as they are, grab headlines and make society grapple with their

⁸⁷ Jo Adetunji, '[Gender makes a world of difference for safety on public transport](#)', *The Nation*, 17 July 2017.

⁸⁸ Adetunji, '[Gender makes a world of difference for safety on public transport](#)'.

⁸⁹ Amos Weintrob, Luke Hansell, Martin Zebracki, Yvonne Barnard and Karen Lucas, '[Queer mobilities: critical LGBTQ perspectives of public transport spaces](#)', *Mobilities* 16 (August 2021), 775-791.

⁹⁰ Sysra, '[Tbilisi household study on Transport](#)', *Tbilisi City Hall*, 5 August 2016, 33.

⁹¹ Kochladze, [Green City Action Plan for Tbilisi – A Mere Formality?](#), 8.

⁹² Directorate General for Internal Policies, '[The Role of Women in the Green Economy: The Issue of Mobility](#)', *European Parliament*, May 2012 (Brussels).

⁹³ Nino Tarkhnishvili, '[Murder on the bus - femicide statistics remain unchanged - what is the state not doing](#)', *Radio Liberty*, 23 May 2022.

consequences. Meanwhile, widespread sexual harassment on public transport, from lingering to unwanted deliberate touching and groping, often stays below the radar.

In 2014, the ADB funded the first-ever study – conducted solely among female respondents – on sexual harassment on Tbilisi public transport. It revealed that 45 per cent of the surveyed women had been subjected to unwelcome sexual advances in metro cars or in and around stations.⁹⁴ In 2019, Georgia’s parliament adopted a law on sexual harassment, laying out some legal protections for the victims.

In the survey conducted for this report, 35.34 per cent of women said they had experienced offensive sexual advances while using public transit. Among both men and women, 31.29 per cent reported they had experienced sexual harassment while using public transport. The majority also indicated that they did not reach out to anyone after the harassment.

While using public transport (bus, metro, microbus) or at bus/metro stations, have you ever been touched, followed or stared at in a way that made you feel uncomfortable or scared?

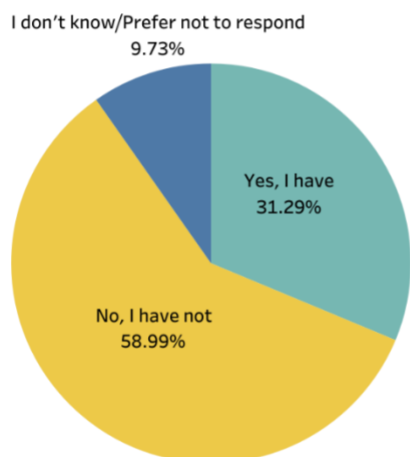


Figure 5. n=473

Whom did you reach out to about the incident?

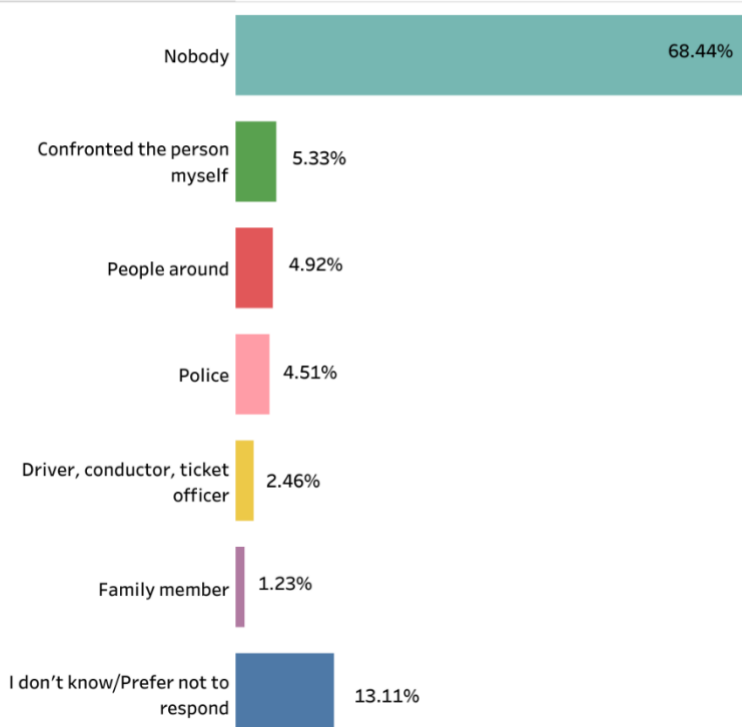


Figure 6. n=244

⁹⁴ Women's Information Center, [Georgia: Rapid Assessment of Sexual Harassment in Public Transport and Connected Spaces in Tbilisi](#), Women's Information Center, December 2014.

Breaking down the data according to age and gender also shows that most younger women have experienced sexual harassment. A greater share of younger men than their older counterparts had also reported experiencing offensive and unwelcome sexual advances. While the data might indicate that younger people may encounter sexual harassment more often, the responses also point to the fact that there is greater awareness among young people, especially young women, in recognising instances of harassment for what they are, as well as a greater willingness to speak up about the experience.

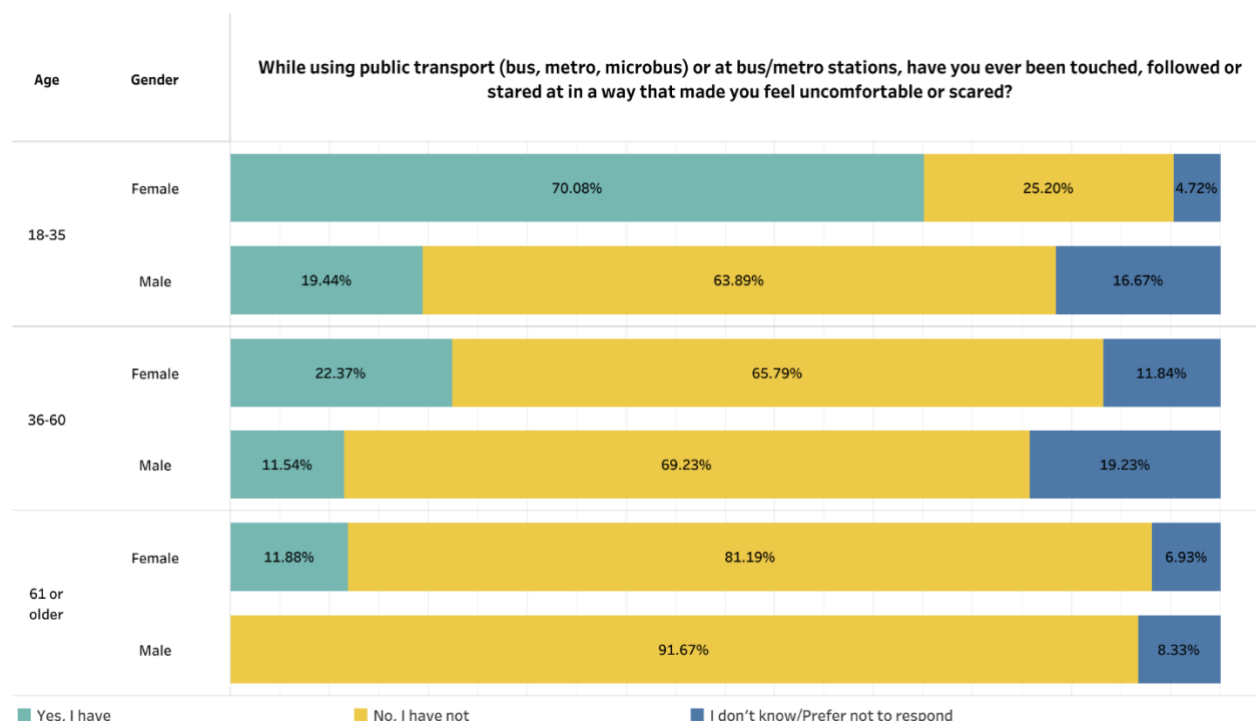


Figure 7. n=466 - respondents who indicated other/prefer not to respond were removed for greater clarity.

LGBTI people also encounter discrimination on public transport and view mass transit as unsafe. According to various surveys, most LGBTI interviewees name public transport as a space of discrimination, up from 44.23 per cent in 2012⁹⁵ to 53.8 per cent in 2020.⁹⁶ Queer women's experiences have also shown that while violence on the street is rare, sexual harassment in public transport and public spaces is widespread.⁹⁷

Legislation in Georgia prohibits discrimination against LGBTI people, but social perspectives are not on par with these legal guarantees.⁹⁸ Traditional gender norms and prejudices influence how LGBTI people are perceived, and intolerance – which can devolve into violence – has been encouraged by far-right extremist groups and the

⁹⁵ Women's Initiatives Supporting Group, *Situation of LGBT Persons in Georgia*, Women's Initiatives Supporting Group, 2012.

⁹⁶ Human Rights Education and Monitoring Centre (EMC), *Social Exclusion of LGBTQ Group in Georgia*, Human Rights Education and Monitoring Centre (EMC), 2020.

⁹⁷ Equality Movement, 'The Needs of Queer Women in Georgia', Equality Movement, 2019.

⁹⁸ The EU4GenderEquality: Reform Helpdesk, *Gender Equality in Georgia in Gap III Priority Areas: Country Review*, NIRAS, December 2021.

Georgian Orthodox Church.⁹⁹ Such antagonism and violence, studies have shown, leads to social exclusion, forcing compromises on identity expression coupled with heightened levels of fear while travelling.¹⁰⁰ LGBTI people, therefore, use more expensive travel alternatives, such as taxis, or take less direct routes to overcome their experiences of unsafe and inaccessible public transport options.¹⁰¹ Considering that in Georgia, LGBTI people tend to be marginalised both socially and economically, restricted mobility options also put a heavy burden on their budgets.

When asked about its efforts to counter gender-based sexual harassment in public transit and ensure the safety of its passengers, the TTC gave a routine response, underlining that existing surveillance cameras in metro, bus and cable cars, as well as patrolling police officers in metro stations, ‘reduce the risk of crime’.¹⁰²

Future projects funded by international financial institutions, therefore, should specifically follow the sexual orientation, gender identity and expression (SOGIE) principles, integrate sexual orientation and gender identity data, and incorporate requirements for project sponsors to continuously monitor the implementing organisation’s commitment to considering sexual orientation, gender identity, gender expression and sex characteristics (SOGIESC) in its operations.

Women’s economic empowerment in the transport sector

With the EBRD’s support, the TTC has made some progress when it comes to improving the working environment and opportunities for women in the company. In 2019, it adopted a sexual harassment prevention policy, an equal opportunity policy and an occupational health and safety policy.¹⁰³ It also trained and hired 25 women as bus drivers.¹⁰⁴ Through EBRD funding, the TTC also launched the Gender Advisory Services Programme in May 2022; it offers technical support for gender and economic inclusion and developing gender-oriented transport.

Accessibility for people with disabilities

Public transit access remains out of reach for many people with disabilities in the Georgian capital. The key attribute of any transport system – its accessibility – is hampered by several factors, including partly or entirely unmechanised access points, poor passenger flow, commercial encroachment and the absence of safety processes for people with disabilities.¹⁰⁵

⁹⁹ The EU4GenderEquality: Reform Helpdesk, [Gender Equality in Georgia in Gap III Priority Areas: Country Review](#).

¹⁰⁰ Amos Weintrob et al., ‘[Queer mobilities: critical LGBTQ perspectives of public transport spaces](#)’.

¹⁰¹ Amos Weintrob et al., ‘[Queer mobilities: critical LGBTQ perspectives of public transport spaces](#)’.

¹⁰² TTC, Letter N01/4773.

¹⁰³ Tbilisi Transport Company, Letter N01/4773.

¹⁰⁴ ‘[Equal Abilities](#)’, Tbilisi Transport Company, accessed 3 August 2022.

¹⁰⁵ Cities Development Initiative for Asia (CDIA), ‘[Making the Tbilisi Metro More Inclusive and Accessible](#)’, *Cities Development Initiative for Asia (CDIA)*, 22 June 2022.

Wheelchair users are able to use new buses that have been adapted for them, but overcrowding and lack of accessibility to bus stations still impair usability. They cannot use the metro or minibuses.¹⁰⁶ Those who are blind or visually impaired find using buses challenging, as there are currently no audio announcements in the vehicle or bus arrival alerts for each stop. Those who are deaf face problems with information accessibility, as only a handful of buses have information screens. The same applies to the metro. Private minibuses are not adapted at all.

In line with the ADB's inclusive city guidelines for Tbilisi,¹⁰⁷ the Cities Development Initiative for Asia (CDIA) worked on the Tbilisi metro case and examined the accessibility issues and gaps as the first step towards universal access and inclusive mobility.¹⁰⁸ The framework was presented to Tbilisi City Hall in May 2022 and is planned to be funded by the ADB under a programme called 'Georgia: Livable Cities Investment Project for Balanced Development'.^{109, 110}

Fare integration and fare change

In February 2022, Tbilisi City Hall launched a new integrated fare collection system, a much-welcomed development that it accompanied with – to the dismay of many – a twofold increase in ride fares. The new fare collection system established a GEL 1 (EUR 0.29)¹¹¹ flat fare for a 90-minute ride using any modes of mass transit: metro, bus, minibuses and some cable cars. At the same time, it introduced daily, weekly, monthly and three-, six- and twelve-month transit passes. The contactless payment system also allows payment by tapping a credit card. Previously, a 90-minute commute by bus or metro with an unlimited number of transfers used to cost GEL 0.5. The standard fare for minibuses was GEL 0.8 for a single ride.

The fare hike on 90-minute rides and fare integration had uneven repercussions across different groups of Tbilisi residents. It has been met by many with dismay, not only because it has affected their household expenses amid soaring inflation, but also because major problems – from overcrowding to accessibility and information availability – remain unresolved.

City Hall has managed to keep mass transit expenses largely intact for special groups, such as the socially vulnerable, students, pensioners and some municipal workers. For them, the fare integration has actually rendered private minibuses a more affordable option. However, the same does not hold true for regular fare users.

¹⁰⁶ Salome Chaduneli, '[Tbilisi - a city that limits opportunities](#)', *On.ge*, 23 May 2018.

¹⁰⁷ Asian Development Bank, '[Fair Shared City: Guidelines for Socially Inclusive and Gender-Responsive Residential Development](#)', ADB, January 2022 (Manila, Philippines).

¹⁰⁸ Fabienne Perucca, '[Ensuring Universal Access and Inclusive Mobility in Tbilisi Metro](#)', *Development Asia*, 1 June 2022.

¹⁰⁹ Cities Development Initiative for Asia (CDIA), 'Making the Tbilisi Metro More Inclusive and Accessible'.

¹¹⁰ Asian Development Bank, '[Georgia: Livable Cities Investment Project for Balanced Development](#)', accessed 26 August 2022.

¹¹¹ Exchange rate estimated from [InforEuro](#), February 2022.

Although Tbilisi's mayor has insisted that expenses would be reduced for the most active transit users, their number might be very limited.¹¹² The majority of commuters in Tbilisi take two trips per day.¹¹³ For these riders, only more expensive six- and 12-month cards offer substantial savings compared to the fare before the hike. Reluctance to invest in passes for fear they may not be used daily and other economic challenges is likely to prevent riders from purchasing these cards.¹¹⁴

Responses to the survey corroborate this assumption. They show that for special groups, expenses remained largely the same: 63.46 per cent reported no change in public transit costs. Meanwhile, for 81.22 per cent of regular fare users, public transport has become more expensive. Notably, discounted fare users are also more likely to say that public transit has become cheaper.

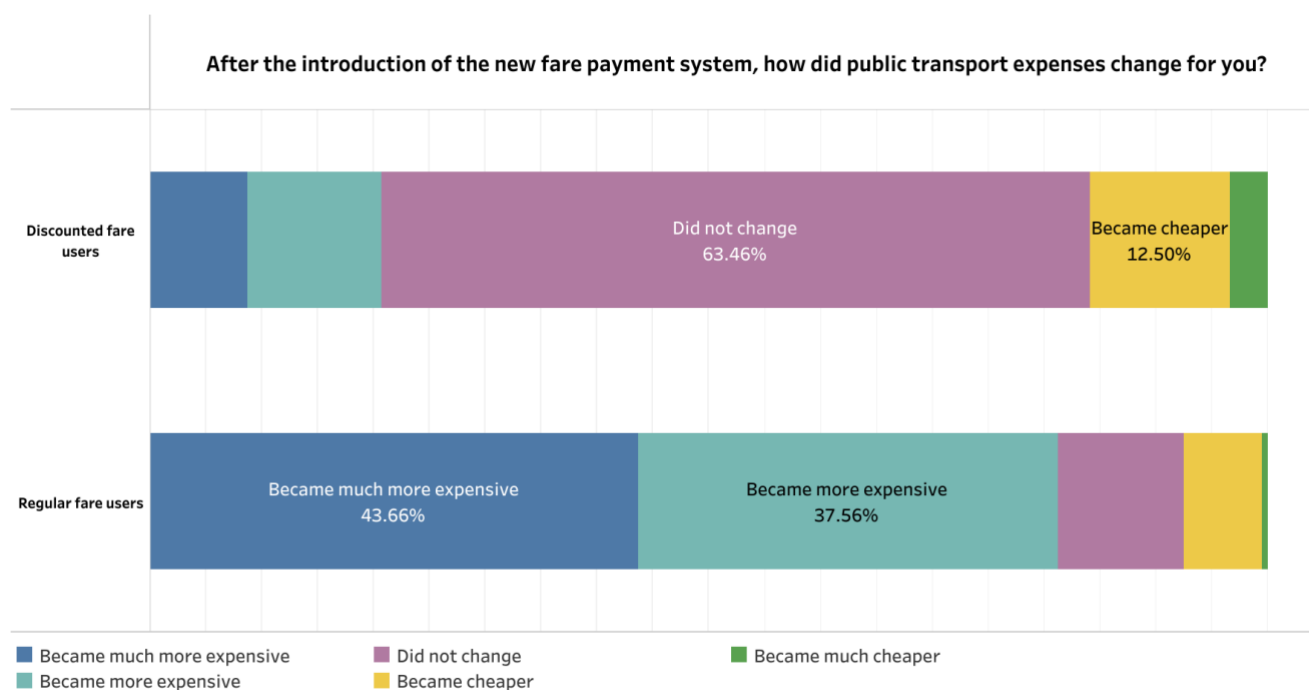


Figure 8. n=421

At the end of March, three months after the new passes became available for purchase, Tbilisi's mayor reported that 55,000 riders had bought the cards but did not specify the type of the passes purchased.¹¹⁵ In our survey, among regular fare users, 68.87 per cent responded that they did not use any of the passes available.

¹¹² Georgian Public Broadcaster, '[The system of unlimited travel in public transport will be launched from February 1](#)', *Georgian Public Broadcaster*, 12 December, 2021.

¹¹³ Systra, [Tbilisi household study on Transport](#), 6.

¹¹⁴ Netgazeti, '[Is public transit in Tbilisi becoming more expensive or cheaper?](#)', *Netgazeti*, 22 December 2021.

¹¹⁵ Natia Tskipurishvili, '[As of today, up to 55 thousand transit passes have been sold – Kaladze](#)', *Netgazeti*, 29 March 2022.

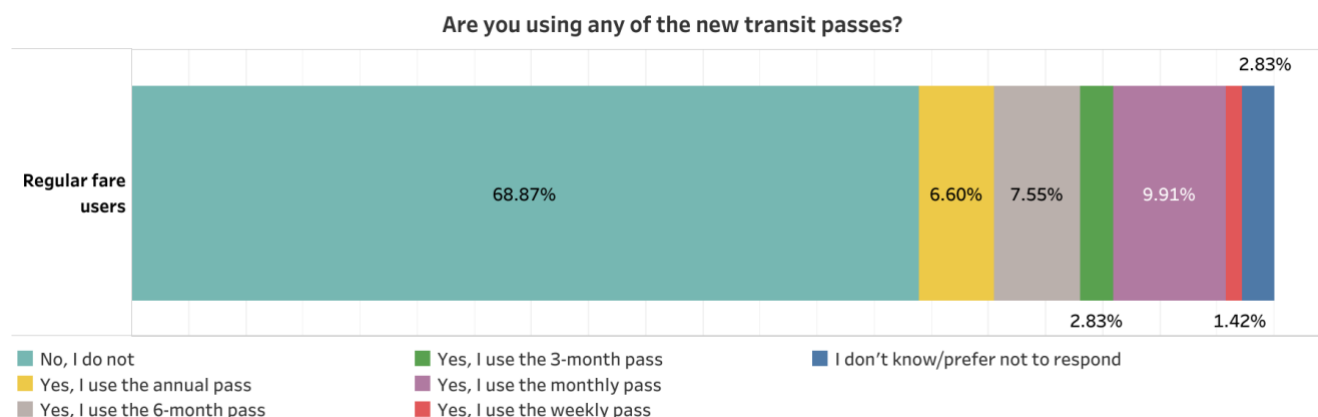


Figure 9. n=212

It is unclear from the publicly available data how the fare change and the introduction of subscription-based cards could have altered the revenue distribution for companies operating the mass transit networks in Tbilisi.¹¹⁶ The municipality needs to encourage the reduction of congestion, a broader reduction of fossil fuel use and resulting improvement of air quality through a well-defined cost-benefit analysis rather than through changes to public transport fees.

Urban mobility improvement in Tbilisi – linkages with Georgia's international commitments

Urban mobility improvement in Tbilisi is directly in line with Georgia's commitments towards the UN 2030 Agenda, Sustainable Development Goal (SDG) 11, target 11.2: By 2030, provide access to safe, affordable, accessible and sustainable transport systems for all, improving road safety, notably by expanding public transport, with particular attention to the needs of those in vulnerable situations. The implementation of this target also contributes to a number of other SDGs, including SDG 7 on health and wellbeing and SDG 13 on climate change mitigation: 'Through emission reductions in the urban mobility subsector, a range of positive externalities from mitigation or co-benefits can be achieved'.¹¹⁷

In April 2021, the government of Georgia approved an updated nationally determined contribution (NDC)¹¹⁸ under the United Nations Framework Convention on Climate Change (UNFCCC). The NDC includes unconditional (35 per cent) and conditional (50 to 57 per cent) mitigation targets for the reduction of greenhouse gas emissions by 2030 compared to 1990 levels. It defines targets for several sectors, including transport, construction, energy generation and transmission, agriculture, industry, waste management and forestry. The transport

¹¹⁶ Systra, 'Restructuring of the bus network and introduction of an integrated automated fare collection system', 27 July 2019, 73.

¹¹⁷ Swithin Lui and Eduardo Posada, *Landscape for mitigation and finance in Georgia's urban mobility sector*, New Climate Institute, April 2021.

¹¹⁸ *Georgia's Updated Nationally Determined Contribution*, 2021.

sector represents the biggest emitter and was responsible for at least 24 per cent of greenhouse gas emissions in 2015.

The updated NDC predicts that emissions will rise to 71 per cent by 2030 under the baseline scenario, with a planned reduction of 15 per cent. The urban mobility subsector represents one of the key areas for climate mitigation within the transport sector. The priorities include the promotion and development of non-motorised means of mobility and public transport, decarbonising the private car fleet and encouraging a reduction in the demand for fossil fuels.

As we have already stressed, the development of public transport and the reduction of the private fossil fuel car fleet also positively impacts the air quality within the city. The action supports the implementation of the Association Agreement between Georgia and the European Union. Article 301 of this agreement stresses that:

Cooperation shall aim at preserving, protecting, improving and rehabilitating the quality of the environment, protecting human health, sustainable utilisation of natural resources and promoting measures at international level to deal with regional or global environmental problems, including in the areas of... (b) air quality...¹¹⁹

The Eastern Partnership Policy beyond 2020 also supports moving towards climate neutrality and reducing carbon footprints as a major goal for the EU and partner countries through involvement in the EU Green Deal.¹²⁰

Taking these commitments into account, it is also crucial that urban mobility in Georgia, especially in Tbilisi, is studied and analysed from a decarbonisation point of view. This may require updating the GCAP and other relevant documentation for defining the goals for and structures of Tbilisi's public transport system.

Conclusion and recommendations

Despite new policy directions and reforms that have garnered public support, Tbilisi residents continue to struggle with the mass transit system and congestion. The city is still plagued by unreliable public transport and endless traffic jams. Meanwhile, the private vehicle fleet has increased significantly over the past two years; a study conducted in 2011 revealed that Tbilisi residents were increasingly adopting a car-oriented culture. Most of the survey respondents preferred owning private cars and avoided using public transport.¹²¹

Notwithstanding some recent changes in attitudes, altering this engrained outlook and the resulting travel behaviour requires making public transport options competitive against the perceived advantages of cars. Particularly important factors include time issues such as schedules and frequency, as well as comfort and safety. Tbilisi residents value their time and want to use it efficiently.¹²²

¹¹⁹ Article 302, [ASSOCIATION AGREEMENT](#) between the European Union and the European Atomic Energy Community and their Member States, of the one part, and Georgia, of the other part, 30 August 2014.

¹²⁰ European Council, [Eastern Partnership policy beyond 2020](#), consilium.europa.eu, accessed 26 August 2022.

¹²¹ Inga Grdzlishvili and Roger Sathre, '[Understanding the urban travel attitudes and behavior of Tbilisi residents](#)', *Transport Policy* 18, 2011.

¹²² Grdzlishvili and Sathre, '[Understanding the urban travel attitudes and behavior of Tbilisi residents](#)'.

As seen in the present study, Tbilisi City Hall's efforts so far have not addressed or solved the issues most closely associated with changes in travel patterns: reliability, scheduling and frequency. Apart from this, as noted, the public transport system is not user-friendly, and even accessing information about routes and schedules remains a problem for a large percentage of consumers. The accessibility of public transport for people with disabilities is appalling. Sexual harassment, discrimination against LGBTI people and disregard for gender issues in public transit policy pose other challenges.

In other words, despite some positive steps in the right direction, the transformation of the mass transit system in Tbilisi is still happening much more slowly than is required to rectify its deep-seated problems. The primary reason behind the persistent problems can be traced to the fact that City Hall, on many counts, has contradicted its own declared commitments and has failed to develop a consistent conceptual framework. Tbilisi City Hall has not yet properly planned out the future development of the transport sector and its reform based on coordinated, publicly scrutinised action plans. Despite the tens or hundreds of millions of dollars spent by international financial institutions, the city still has no comprehensive sustainable mobility plan, even as it continues developing new projects.

On the other hand, City Hall began reforming the transport network by opting to undertake easier parts of the reform – fleet update, minibus integration and route renumbering – without first constructing the spine of the new system: interconnected bus lanes on the 10 bus transit routes.¹²³ The bus lanes, while overwhelmingly supported by the general public, have found vocal opposition among car owners, who resist giving up the road space available to them. More prominently, there is not a unanimous commitment to the reform in City Hall and among the political leadership of the ruling party that can block the decisions and choices of transport professionals in the city administration.¹²⁴ However, even the development of 10 bus transit routes would not solve all of Tbilisi's transport issues.

City Hall has to deliver on its promises and finalise the reforms to remedy the city's beleaguered public transit network, improving air quality and mobility opportunities for the capital's residents in doing so. It has to pursue further reforms with diligence and care, considering the daily struggles citizens have to endure for every mistake and act of negligence or carelessness by City Hall. Going forward, we recommend the following to City Hall and the TTC:

- City Hall should finalise the SUMP as soon as possible, ensuring broad public participation in the discussions on its draft. Clear goals, including decarbonisation, timelines and measures for success should be shared and communicated clearly and widely with the public.
- The proposed investment plan for sustainable mobility developed through KfW's support should also be discussed and consulted with the public.

¹²³ Giorgi Babunashvili, author interview.

¹²⁴ Ibid.

- The SUMP and investment plan should become the primary work plan for the municipality of Tbilisi and should be adopted by the Tbilisi Sakrebulo (city assembly).
- City Hall should also make sure that the SUMP considers gender and SOGIE principles, undergoes such assessments and integrates them to develop an inclusive mobility system.
- The city administration and TTC should improve transparency and start issuing annual reports and updated statistics on ridership, subscription cards, revenues and expenses in the transport sector. This information should be updated and available online for everyone, not just be subject to freedom of information requests.
- TTC should improve communication with citizens about public road network routes and schedules. We recommend placing maps and timetables on every bus stop across the capital city.
- TTC should also make greater efforts to combat sexual harassment through appropriate measures, including installing CCTV cameras, disseminating and placing posters in buses, metro cars, minibuses and stations, and training drivers and conductors.

International financial institutions, bilateral agencies and funds interested in Tbilisi's air quality and public transport solutions should:

- Ensure the proper coordination of donors. It would be beneficial to develop a proper joint evaluation to understand why, despite the availability of funds, Tbilisi City Hall is behind schedule with the preparation and adoption of the SUMP, as well as with TBT lines. The evaluation could also propose solutions to the problems with donor coordination. The existing GCAP priorities do not encourage low-carbon, climate-resilient public transport development that is in line with the goals of the Paris Agreement. Therefore, it is important that the existing projects are reviewed and options for the introduction of more sustainable electric transport modes are introduced.
- Ensure electric public transport development and phase out fossil-fuel-based transport, especially considering recent global developments.
- Support the municipality of Tbilisi in developing incentives for reducing the private car fleet, including improvements of technical inspection legislation.
- Ensure that the projects they pursue are in line with best international practices and integrate sexual orientation and gender identity data, develop a Tbilisi-specific gender risk assessment in line with gender-based violence and SOGIE principles, elaborate upon the action plan for implementation and ensure it is carried out by respective project sponsors.¹²⁵

¹²⁵ The measures may vary from education and training on topics of sexual harassment and gender inequities and prevention in transportation systems to increased security (hiring more staff, body cameras, CCTV in transport and stops, better lighting, defined emergency protocols and complaint mechanisms, adapting routes, on-demand stops).