UNECE

Sustainable Transport Action Plan **for Azerbaijan**

Improving sustainable urban mobility

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UNITED NATIONS ECONOMIC COMMISSION FOR EUROPE

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I. BACKGROUND

The objective of the Sustainable Mobility and Smart Connectivity project is to help member States of the United Nations Economic Commission for Europe (UNECE) move towards sustainable mobility and smart connectivity.

The first phase of the project involved the development of the Inland Transport and Trade Connectivity e-Learning Platform (LearnITC). The platform includes training materials on sustainable mobility and connectivity linked to the relevant legal instruments and to the development of the appropriate policy tools to implement the requirements of relevant legal instruments, standards and guidelines.

Following the launch of the platform, the second phase has been initiated. The main focus of this phase is the development of national action plans in selected countries in Central Asia, Caucasus and the Western Balkans, with the purpose of building the capacity of national stakeholders to implement sustainable mobility and smart connectivity policies.

The extension of the initiative is fundamental to facilitating a shift to a transport system that aids in the achievement of the Sustainable Development Goals. It is also aimed at developing the capacity of UNECE member States to implement sustainable mobility and connectivity policies, in particular by building the knowledge base and increasing the skills of institutional and sectoral stakeholders in relation to the inland transport and trade legal instruments of the United Nations.

Azerbaijan is one of the nine selected countries and the goal is to develop sustainable mobility and smart connectivity action plans that are aimed at creating national strategies to move towards sustainable, inclusive and safe transport.

This report was initiated by the Transport Networks and Logistics Section, Sustainable Transport Division, UNECE. Representatives from the Sustainable Transport Division provided guidance and advice.

The UNECE National Consultant, Nargiz Gulmaliyeva, supported the review of publicly available transport and logistics policy documents and, in cooperation with the Ministry of Digital Development and Transport of the Republic of Azerbaijan and other relevant State agencies, identified areas in which to provide support and helped develop the proposed action plan for sustainable urban mobility 2024-2025.

The following have been identified as development priorities:

- Enhancing urban mobility
- Establishing Azerbaijan as a transport and logistics hub
- Strengthening the national legislative framework
- Addressing data gaps in the transport sector
- Promoting road safety.

II. OVERVIEW OF SUSTAINABLE URBAN MOBILITY

A. Literature review on sustainable mobility

Sustainable mobility, a relatively recent concept, has garnered considerable attention in academic and policy circles because of its critical importance in addressing the multifaceted challenges of modern transportation. Over the past three decades, in literature on the subject, sustainable transport has been explored from diverse perspectives, including social, economic, environmental, cultural and technical aspects, contributing to a comprehensive understanding of the complexities involved.[1]

During the mid-1990s, members of the Organization for Economic Co-operation and Development made the significant realization that prevailing transportation patterns were inherently unsustainable. They recognized that, under existing policy frameworks, the prospects of transitioning towards more sustainable transportation systems were uncertain. Consequently, it became evident that a fundamental rethinking of transportation policies was necessary, aligning them with the broader concept of sustainable development.[2]

The phrases "sustainable mobility" and "sustainable transport" are used interchangeably, with regional preferences leading to the use of "sustainable transportation" in North America and "sustainable mobility" in Europe. Both terms embrace the core idea of mobility, encompassing both the actual physical displacement of individuals (revealed mobility) and the attribute of being mobile (prospective mobility).[3]

Transitioning to sustainable transportation involves significant adjustments in societal behaviours, urban planning and policy formulation. Existing literature highlights four major challenges that need to be comprehensively addressed. These challenges include unplanned rebound effects or unintended consequences arising from sustainability measures, a lack of consensus on the precise definition of a sustainable mobility system, path dependencies hindering transformative changes and the need to develop distinct strategies catering to the diverse needs of various societal groups.[4]

The influential work of Banister on the sustainable mobility paradigm poses two fundamental questions that challenge the principles of conventional transport planning. The first questions derived demand and travel cost minimization as underlying principles of the current paradigm, suggesting that flexibility is necessary for the sustainable mobility agenda to become a reality. The second examines the availability of policy measures to enhance urban sustainability in the transport sector, emphasizing the importance of addressing the conditions required for transformative change.[5]

Traditionally, developed countries in Europe and North America have tackled private mobility problems such as congestion and accessibility by emphasizing infrastructure development, increasing opportunities for private cars, and managing transit demand, while technology advancement and modal changes have been proposed as solutions for mitigating the adverse social and environmental effects of increasing motorization rates.[6, 7]

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1 Erling Holden and others, "Sustainable Mobility at Thirty", *Sustainability*, vol. 7, No. 11 (April 2019).

2 Peter Wiederkehr and others, "Environmentally Sustainable Transport (EST): Concept, Goal, and Strategy – The OECD's EST Project", *European Journal of Transport and Infrastructure Research, vol. 4, No. 1 (February 2024).*

3 Erling Holden and others, ""Sustainable Mobility at Thirty".

4 Gerald Berger and others, "Sustainable Mobility – Challenges for a Complex Transition", *Journal of Environmental Policy and Planning, vol. 16, No. 3 (July 2014).*

5 David Banister, "The sustainable mobility program", *Transport Policy, vol. 15, No. 2 (February 2008).*

6 Glenn Lyons, "Visions for the future and the need for a transport in society perspective", in *Automobility in Transition? A Socio-Technical Analysis of Sustainable Transport, Frank W. Geels, Rene Kemp, Geoff Dudley and Glen Lyons, eds. (New York and Oxon, Routledge, 2012).*

7 Jonathan Köhler and others, "A transition model for sustainable mobility", Ecological Economics, vol. 68, No. 12 (October 2009).

However, some previously successful strategies, such as the "predict-and-provide" approach for infrastructure investment to solve congestion, have been deemed ineffective and unproductive in some European countries.[8] These challenges persist, especially in light of global trends, including population growth and the adoption of private passenger cars as the primary mode of individual transportation in developing countries in Asia and South America. The resulting burden on natural and social surroundings necessitates a paradigm shift in transportation policy, urging the adoption of novel approaches and frameworks to ensure greater sustainability.[9, 10]

In recent years, the United Nations has been at the forefront of promoting sustainable urban mobility as a key element of sustainable development. Recognizing the growing challenges posed by rapid urbanization and its impact on transportation systems, Member States of the United Nations have been actively encouraged to adopt policies and initiatives that prioritize sustainable mobility solutions. The approach of the United Nations to sustainable urban mobility encompasses various elements, including improved public transportation systems, enhanced infrastructure for non-motorized modes of transport such as walking and cycling, and the promotion of shared mobility services. By emphasizing the importance of integrated and efficient transportation networks, it is the aim of the United Nations to create cities that are more accessible, inclusive and environmentally friendly.

One of the significant initiatives undertaken by the United Nations is the adoption of the New Urban Agenda at the United Nations Conference on Housing and Sustainable Urban Development (Habitat III) in 2016. This agenda provides a road map for achieving sustainable urbanization and fostering sustainable mobility solutions. It encourages urban planning that prioritizes the needs of communities and promotes sustainable transportation options to address the challenges posed by rapid urban growth and to improve the overall quality of life for urban residents. Furthermore, the United Nations has been actively involved in facilitating knowledge-sharing and capacity-building efforts among Member States to address the unique mobility challenges faced by cities in different regions. Through international collaborations and partnerships, the United Nations promotes the exchange of best practices, innovative solutions and policy frameworks that can be adapted and implemented in diverse urban contexts.

In light of the pressing challenges related to urban mobility, action plans have emerged as practical solutions, offering concrete steps to transition towards more sustainable, efficient and equitable urban mobility systems. Key elements of these action plans often include improved public transportation, enhanced infrastructure for non-motorized transportation, and the promotion of shared mobility services to reduce overall reliance on private vehicles and to curb emissions. However, there can be obstacles to implementing action plans, such as financial constraints, political will and stakeholder resistance. To meet these challenges, researchers and experts recommend integrated planning, public engagement, evidence-based decision-making and pilot projects to test and demonstrate the feasibility of new mobility solutions.

The policy implications derived from existing literature underscore the need for long-term vision and commitment from Governments, supported by financial incentives, regulatory measures and public-private partnerships. These measures are essential to creating a conducive environment for sustainable urban mobility and to enabling successful action plans. By incorporating these insights and adopting well-crafted action plans, Governments and city authorities can steer policy and development towards creating more sustainable, efficient and equitable urban mobility systems, fostering a greener and more livable urban future. Embracing these principles collectively will ultimately contribute to a global shift towards sustainable mobility that has a positive impact on both the environment and society.

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[8] Phil Goodwin, "Providing road capacity for automobility: The continuing transition", in *Automobility in Transition? A Socio-Technical Analysis of Sustainable Transport, Frank W. Geels, Rene Kemp, Geoff Dudley and Glen Lyons, eds. (New York and Oxon, Routledge, 2012).*

[9] Herb Castillo and David E. Pitfield, "ELASTIC – A methodological framework for identifying and selecting sustainable transport indicators", *Transportation Research Part D: Transport and Environment, vol. 15, No. 4 (June 2010), pp. 179-188.*

[10] Todd Litman, "Developing Indicators for Comprehensive and Sustainable Transport Planning", *Transportation Research Record: Journal of the Transportation Research Board, 2017, pp. 10-15.*

B. Sustainable Development Goals and urban mobility

The link between the Sustainable Development Goals and urban mobility lies in the potential for well-planned, sustainable transportation systems to positively affect multiple areas of sustainable development. The following outlines how urban mobility aligns with various Sustainable Development Goals:

1. Sustainable Development Goal 11: Sustainable cities and communities

Sustainable Development Goal 11 is focused on the creation of sustainable cities and communities. By promoting sustainable urban mobility, city authorities can achieve several targets linked to this goal. Ensuring access to safe, affordable, accessible and sustainable transport systems for all can be accomplished through the implementation of robust public transportation networks, cycle lanes and pedestrian-friendly infrastructure. These measures not only reduce congestion but also improve air quality and enhance overall livability in cities.

2. Sustainable Development Goal 13: Climate action

Transportation contributes significantly to greenhouse gas emissions, particularly in urban areas. Sustainable urban mobility practices play a crucial role in mitigating climate change. Shifting towards electric and hybrid vehicles, promoting shared mobility services and investing in clean energy sources for public transit are essential steps towards achieving the targets outlined in Sustainable Development Goal 13.

3. Sustainable Development Goal 3: Good health and well-being

Urban mobility has a direct and an indirect impact on public health. Encouraging active modes of transportation, such as walking and cycling, not only reduces air pollution but also promotes physical activity, leading to improved health and well-being for people who live in urban areas. Efficient and accessible public transportation also enhances health care access, ensuring that people can reach medical facilities easily.

4. Sustainable Development Goal 10: Reduced inequalities

Transportation plays a pivotal role in ensuring equal access to opportunities and resources. Sustainable urban mobility can reduce transportation costs for low-income individuals, providing them with better access to jobs, education and essential services. It can also improve social inclusion by connecting marginalized communities to wider society and reducing barriers to participation.

5. Sustainable Development Goal 9: Industry, innovation and infrastructure

Urban mobility solutions are essential to achieving Sustainable Development Goal 9, which is focused on building resilient infrastructure and promoting sustainable industrialization. Investments in modern, efficient transportation infrastructure can enhance connectivity, promote economic growth and attract investment in urban areas. Smart city initiatives that integrate technology with transportation systems can lead to more efficient, data-driven urban mobility solutions.

6. Sustainable Development Goal 7: Affordable and clean energy

Urban mobility accounts for a significant share of energy consumption in cities. Transitioning to clean energy sources for public transportation and promoting the adoption of electric vehicles can contribute to the achievement of Sustainable Development Goal 7. Reduced reliance on fossil fuels for transportation leads to lower emissions and a cleaner, more sustainable urban environment.

7. Sustainable Development Goal 17: Partnerships for the goals

Collaboration between Governments, private sector stakeholders and civil society is crucial to achieving sustainable urban mobility. Public-private partnerships can lead to innovative financing models, technology integration and effective policy implementation. By fostering partnerships, cities can accelerate progress towards sustainable development and towards achieving the targets of the Sustainable Development Goals related to urban mobility.

In conclusion, the connection between Sustainable Development Goals and urban mobility underscores the critical role transportation plays in shaping sustainable, inclusive and resilient cities. By prioritizing sustainable urban mobility solutions, cities can make significant strides towards simultaneously achieving multiple targets of the Sustainable Development Goals. These efforts, from reducing emissions and improving public health to promoting economic growth and social equity, pave the way for a brighter and more sustainable future for people living in urban areas and the planet as a whole.

C. Key global trends in urban mobility

1. Sustainability

In response to the pressing issues of global warming and environmental pollution, environmentally friendly and more efficient transportation methods are being adopted by more and more countries. One notable trend is the increasing use of alternative fuels, particularly in relation to electric vehicles, which have been gaining popularity worldwide. According to a study by the International Energy Agency,[11] the number of electric cars on the road surpassed 10 million globally in 2022, marking a significant milestone in the transition towards sustainable transportation.

As part of the efforts to support the growing number of electric vehicles, the global charging infrastructure is being expanded. In a 2020 report by BloombergNEF,[12] it was revealed that the number of public electric-vehicle charging stations worldwide was more than one million, showcasing the commitment of various countries in promoting electric vehicle adoption. In the same report, growth in charging infrastructure was forecast to continue, with an estimated annual increase of between 30 per cent and 40 per cent in both the number of charging stations and electric vehicles until 2030.

Moreover, in addition to electric vehicles, another emerging trend in sustainable transportation is the adoption of compressed natural gas as an alternative fuel option. Compressed natural gas has been gradually gaining traction because of its lower emission profile in comparison to conventional fossil fuels. According to data from the United States Department of Energy, the number of compressed-natural-gas vehicles on roads in the United States of America increased by over 50 per cent between 2011 and 2018.

In the wake of the coronavirus disease (COVID-19) pandemic, the shared mobility sector also experienced shifts. The online taxi-hailing service space witnessed notable consolidation in reaction to COVID-19, while another trend was the acquisition of smaller car-sharing firms by large car companies looking to capitalize on growing demand for flexible and sustainable mobility solutions.

Climate change and environmental concerns are driving cities to adopt ambitious sustainability goals, leading to the implementation of low-emission zones and strict emission standards for vehicles. The C40 Cities global network, comprised of major cities worldwide, has been instrumental in promoting sustainable urban mobility policies. The network encourages the adoption of low-emission zones that restrict high-polluting vehicles from entering certain areas, therefore curbing air pollution and promoting the use of cleaner transportation options. Cities are also working towards setting stringent emission standards for public and private fleets to accelerate the transition to electric and other alternative fuel vehicles, contributing to a more sustainable urban mobility landscape.

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[11] International Energy Agency, *Global EV Outlook 2023: Catching up with climate ambitions (2023).*

[12] BloombergNEF, *Electric Vehicle Outlook 2020 (2020).*

2. Digitalization

Digitalization is playing a transformative role in shaping urban mobility trends, driving increased efficiency and convenience. One significant aspect is the integration of digital technologies and smart solutions to enhance transportation services. According to a 2018 report by the World Economic Forum,[13] digitalization has facilitated the development of smart transportation systems, enabling real-time data collection, analysis and optimization of traffic flow. These systems have paved the way for innovative mobility solutions, such as ride-hailing and ride-sharing platforms, making urban transportation more accessible and reducing the need for private car ownership. Additionally, in a 2019 study,[14] the potential of digital platforms to support multi-modal transportation, allowing users to seamlessly plan and pay for their journeys using a single application, was highlighted by the International Transport Forum. The integration of digitalization into urban mobility is anticipated to continue evolving, offering solutions to address issues relating to congestion, emissions and accessibility in cities worldwide.

In addition to improving transportation services, digitalization is also fostering the emergence of new and sustainable mobility options in urban areas. One notable trend is the rise of electric micromobility solutions, such as e-scooters and bikes, powered by digital platforms. These convenient and eco-friendly options have gained popularity as a first- and last-mile transportation solutions. According to a 2020 study by Deloitte,[15] the global e-scooter market is projected to grow substantially in the short term, driven by advancements in battery technology and the integration of e-scooters into existing mobility ecosystems. Furthermore, digital platforms have enabled the seamless integration of public transportation with micromobility services, encouraging more people to opt for environmentally friendly modes of transport for short distances. As digitalization and sustainable mobility solutions continue to be embraced in cities, the future of urban transportation appears increasingly dynamic, accessible and green.

3. Legislation

Urban mobility policy and regulation trends are shaping the future of transportation in cities, with a focus on creating integrated and sustainable mobility systems. One prominent trend is the development of unified urban mobility policies that bring together various transportation modes under a cohesive framework. The World Bank, in its 2017 report on sustainable mobility for all,[16] emphasized the importance of integrating public transport, non-motorized transport and shared mobility services to create efficient and accessible urban mobility. Unified policies are aimed at reducing congestion, promoting multi-modal transportation and addressing environmental concerns, which are all vital to creating a more seamless and interconnected urban transportation network.

Moreover, the establishment of mobility standards is becoming crucial to ensure safety, interoperability and consistency in urban mobility services. The International Organization for Standardization has been actively involved in developing standards for intelligent transport systems to guide the implementation of emerging technologies in urban transportation. These standards address aspects such as data exchange, vehicle-to-infrastructure communication and autonomous vehicle safety protocols. By adhering to these standards, cities can ensure that mobility solutions are compatible and efficient, facilitating the integration of new technologies while meeting safety and performance requirements.

Urban mobility policy and regulation trends are evolving to support integrated, sustainable and technologically advanced transportation systems. Unified urban mobility policies, mobility standards and targeted regulations for ride-hailing services and autonomous vehicles are crucial components of the broader effort to create efficient, safe and inclusive urban transportation networks. By incorporating insights from various stakeholders and adhering to international standards, city authorities can navigate the complexities of urban mobility and unlock the potential for a greener, more connected future of transportation.

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[13] World Economic Forum, *Reshaping Urban Mobility with Autonomous Vehicles: Lessons from the City of Boston (2018).*

[14] International Transport Forum, *ITF Transport Outlook 2019 (2019).*

[15] Rasheq Zarif, Ben Kelman and Derek Pankratz, "Small is beautiful: Making micromobility work for citizens, cities, and service providers", Deloitte Insights, 15 April 2019.

[16] World Bank, *Sustainable Mobility for All: 2017-2018 Annual Report (2019).*

4. Other trends

In addition to unified urban mobility policies and mobility standards, inclusive mobility regulations have emerged as a significant trend to ensure equitable access to transportation for all residents. As cities strive to address issues of accessibility and social equity, they are implementing policies that cater to the diverse needs of their populations. In its 2019 paper on equity in urban transport,[17] the importance of equity-focused transportation planning was highlighted by the World Resources Institute. Inclusive mobility regulations encompass measures such as improving public transit accessibility, providing paratransit services for people with disabilities and addressing the transportation needs of underserved communities. By prioritizing inclusivity, cities are aiming to create transportation systems that promote social inclusion, economic opportunity and enhanced mobility for everyone.

In addition, some cities have established mobility innovation sandboxes (environments for testing solutions) to encourage the testing and piloting of new transportation technologies and services in controlled environments. These sandboxes provide a regulatory framework that allows startups and companies to experiment with innovative mobility solutions while collaborating closely with local authorities. The National League of Cities published a report in 2020[18] in which the concept and implementation of mobility innovation sandboxes in cities across the United States are examined. By facilitating testing and regulatory oversight, mobility innovation sandboxes enable cities to evaluate the impact and effectiveness of emerging technologies, identify potential challenges and refine regulations to support sustainable and efficient urban mobility solutions.

Cities worldwide are reevaluating their approach to transportation planning by prioritizing people-centric and place-based mobility strategies. The National Association of City Transportation Officials has been at the forefront of advocating for such strategies, emphasizing the need for streets that prioritize pedestrians, cyclists and public transit over private vehicles.[19] This trend involves adopting street design concepts such as "complete streets" and "shared spaces", which prioritize safety, accessibility and placemaking over vehicular throughput. By embracing these people-centric principles, cities are aiming to create more vibrant and livable urban spaces that cater for the needs of residents, visitors and businesses.

Furthermore, as urban transportation becomes increasingly influenced by technology and data, cities are implementing open data policies to promote transparency and innovation. In its 2019 report on open data in transport, the World Bank emphasized the potential benefits of sharing transportation data openly. Open data policies encourage public and private stakeholders to share mobility data, fostering collaboration and enabling the development of innovative mobility solutions. By making transportation data publicly available, cities encourage the creation of new applications, services and analyses that can lead to more informed decision-making and improved urban mobility for all.

In conclusion, a range of trends is reshaping urban mobility regulations, reflecting a growing emphasis on inclusivity, innovation, sustainability and data transparency. By embracing people-centric planning, open data policies and ambitious sustainability initiatives, transformative steps are being taken in cities towards creating accessible, efficient and environmentally friendly urban transportation systems. Through collaborative efforts and evidence-based policymaking, urban mobility regulations are poised to create thriving cities that prioritize the well-being and mobility of their inhabitants.

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[17] Christo Venter, Anjali Mahendra and Dario Hidalgo, "From Mobility to Access for All: Expanding Urban Transportation Choices in the Global South", Working Paper (World Resources Institute, 14 May 2019).

[18] National League of Cities, *State of the Cities 2020 (2020)*.

[19] National Association of City Transportation Officials, *Streets for Pandemic Response & Recovery (2020)*.

D. Urban mobility strategy in Azerbaijan

Urban transportation is playing a crucial role in the growth of the economy of Azerbaijan by supporting economic development. In the country, the Government is prioritizing the reduction of carbon emissions while also ensuring the provision of high-quality, accessible and sustainable transportation services in order to achieve overall sustainability in the transport sector. In 2019, 53 per cent of the population of Azerbaijan (9.9 million people) resided in urban areas, with the capital city Baku home to 2.2 million people (23 per cent of the total population). Apart from Baku, there were only two other cities with more than 300,000 inhabitants – Ganja and Sumgayit.

The urban population of Azerbaijan has been increasing at an annual rate of 1.6 per cent over the past decade. At the same time, the use of urban transportation has grown substantially, at an estimated rate of five per cent between 2009 and 2018. In 2018, out of the two billion recorded passenger journeys, 77 per cent took place in urban areas, while 20 per cent were in suburban areas and three per cent involved interurban travel. Of the transport journeys in urban areas, 80 per cent were on buses, 15 per cent on the metro and five per cent in taxis. Bus journeys increased by five per cent, taxi journeys by seven per cent and metro journeys by one per cent. In 2018, there were 1.37 million registered vehicles in Azerbaijan: 84 per cent were cars, of which the vast majority were privately owned.[20]

Baku holds a significant position in Azerbaijan, playing a pivotal role in the country's economy, culture and politics. The city has been a focal point for transforming the country into a major tourist destination and economic hub, which has led to substantial investments in various infrastructure and development projects.[21] This growth has been driven by the pursuit of improved living standards, the necessity to address the needs of internally displaced individuals and the influx of people from rural to urban areas, resulting in an increased in population density in Baku and its surrounding suburbs.[22, 23] It is worth noting that the average salary in Baku is reported to be three to five times higher than in rural regions.[24] The population of Baku is forecast to reach 3.8 million by 2030 according to the State Committee on Urban Planning and Architecture. Baku accounted for 71 per cent of national gross domestic product in 2011,[25] while according to the Asian Development Bank,[26] Baku and the surrounding Absheron economic region are responsible for 92 per cent of the country's industrial output.

Moreover, during the review conducted as part of the action plan development process, it was observed that there has been a lack of a unified strategy to tackle transportation challenges, in particular those relating to urban mobility, in Azerbaijan. Nevertheless, there have been notable advancements according to recent information from the Ministry of Digital Development and Transport of the Republic of Azerbaijan. At present, the Ministry is actively collaborating with international consultancy firms to undertake projects centred around urban mobility. The Ministry is also working on the development of a national strategy for unified transport and logistics. This initiative is being led by the Ministry in partnership with major stakeholders in the transportation sector.

The national strategy on unified transport and logistics, which is still under development, is aimed at leveraging technological applications to unlock and maximize the country's logistic and transport potential. Its core objectives are to drive economic growth, bolster international trade capabilities and ensure the safety and sustainability of passenger transportation. It is envisioned that the strategy will lead to the creation and development of an efficient, reliable and predictable transportation system that fosters optimal conditions for progress. Furthermore, it will outline comprehensive policy directions for the short-, medium- and long-term advancement of the transport and logistics sectors in Azerbaijan until 2030.

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[20] State Statistical Committee of the Republic of Azerbaijan, *Transport in Azerbaijan: Statistical Yearbook 2023 (Baku, 2023).*

[21] Anar Valiyev, "Baku", *Cities, vol. 31 (April 2013), pp. 625-640.*

[22] Turkhan Sadigov, "A Clash of Cultures: How Rural Out-Migrants Adapt to Urban Life in Baku", *Caucasus Analytical Digest*, vol. 101, 2018, pp. 11-15.

[23] Asian Development Bank, "Azerbaijan: Baku Sustainable Urban Transport Investment Program: Completion Report", September 2017.

[24] State Statistical Committee of the Republic of Azerbaijan, *Transport in Azerbaijan: Statistical Yearbook 2023.*

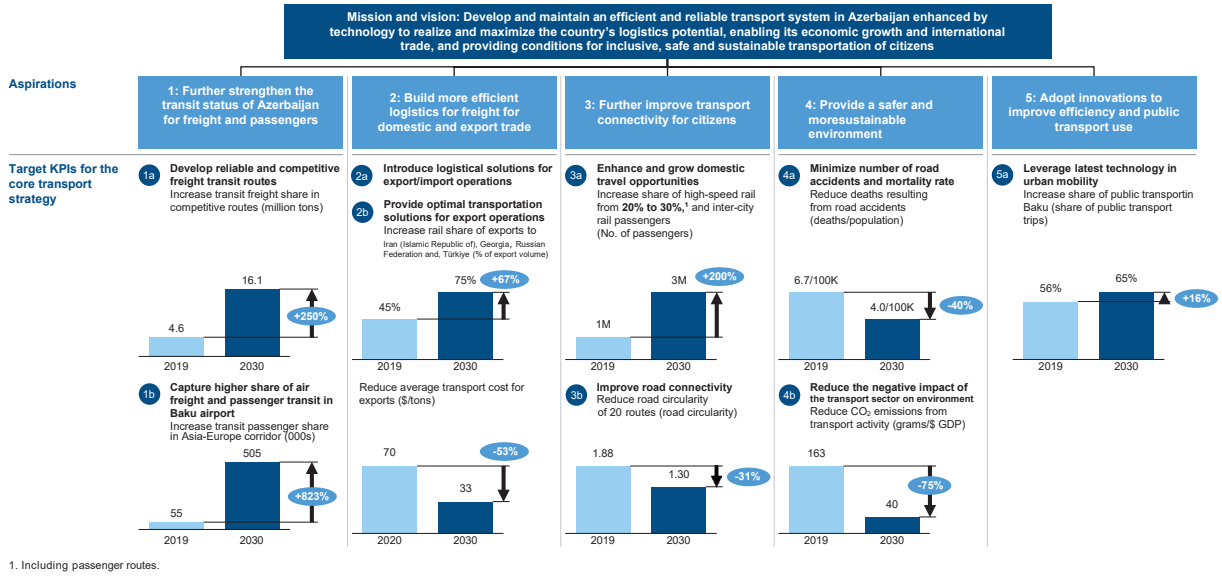
[25] Anar Valiyev, "Baku", *Cities.*

[26] Asian Development Bank, "Azerbaijan: Baku Sustainable Urban Transport Investment Program: Completion Report".

A set of policy directions that are connected with urban mobility, either directly or indirectly, is detailed in figure I. The targets of objective 4 on providing a safer and more sustainable environment (minimize the number of road traffic accidents and the related mortality rate, reduce the negative impact of the transport sector on the environment) are nationwide goals, but can also be applied to urban environments. The target of objective 5 on adopting innovative solutions to improve efficiency and public transport use (leverage latest technologies in urban mobility) is directly linked to urban mobility.

Figure I

National transport and logistics strategy in Azerbaijan



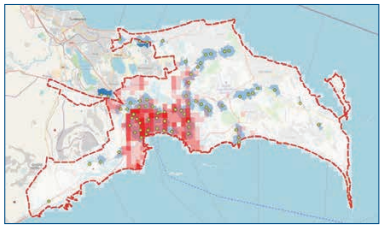
Source: Ministry of Digital Development and Transport of the Republic of Azerbaijan (2023).

As part of the strategy development process, comprehensive studies were undertaken, including a comparative analysis of urban transport. Urban transport in Baku was compared with that in six other cities that have similar sized populations and that are also situated at the heart of large, densely populated areas consisting of a city and its suburbs (see figure II).

Figure II

Key urban transport indicators for Baku and selected other cities

Key indicators for Baku



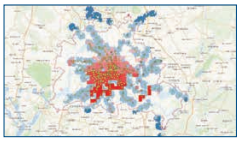
Population: 2.3 million
GDP per capita PPP $:[1] 56.2 k
Density (people per km²): 1,074
Car penetration (per '000): 316

Cities with a similar population to Baku areselected as benchmark cities

Most of these benchmark cities are in the centre of larger agglomeration areas

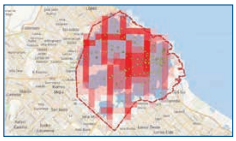
Key indicators for the benchmark cities

Berlin



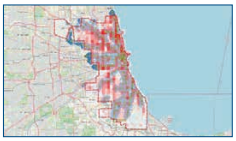
Population: 3.8 million
GDP per capita PPP $: 41.0 k
Density (people per km²): 4,229
Car penetration (per '000): 390

Buenos Aires



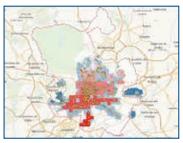
Population: 3.1 million
GDP per capita, PPP $: 33.3 k
Density (people per km²): 14,581
Car penetration (per '000): 317

Chicago



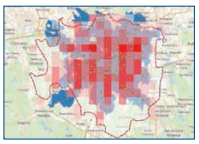
Population: 2.7 million
GDP per capita, PPP $: 65.7 k
Density (people per km²): 4,341
Car penetration (per '000): 436

Madrid



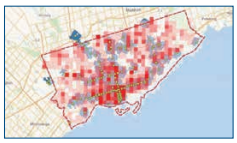
Population: 3.3 million
GDP per capita, PPP $: 46.9 k
Density (people per km²): 7,999
Car penetration (per '000): 573

Milan



Population: 3.3 million
GDP per capita, PPP $: 48.3
Density (people per km²):2,102
Car penetration (per '000): 523

Toronto



Population: 3.0 million
GDP per capita, PPP $: 51.2 k
Density (people per km²): 4,556
Car penetration (per '000): 607

Source: Ministry of Digital Development and Transport of the Republic of Azerbaijan (2023).

The comparative analysis relies on 13 indicators across five key areas: accessibility, affordability, efficiency, comfort and safety. The results, depicted in figure III, show where Baku outperforms, falls behind or is on par with the benchmark cities. For each indicator, the dark blue line shows where benchmark cities rank (the lowest value city and the highest value city are noted) and for purposes of comparison, Baku is marked as a diamond.

The analysis reveals that Baku has the most significant potential for improvement in the areas of accessibility, efficiency and safety. The following stand out as the most in need of improvement:

- Enhancing the accessibility of public transportation
- Improving the connectivity of pedestrian infrastructure
- Addressing traffic congestion and reducing wasted time associated with private transport use
- Enhancing traffic safety measures to reduce the number of fatalities resulting from road traffic accidents.

Figure III

Urban transport target metrics for Baku and comparative benchmark analysis

Baku objective metrics benchmarking across 6 benchmark cities		Baku	Above benchmark average / Lags behind benchmark cities / Below benchmark average	Comparison	Gap with average
			Baku		
Availability	Mass transit accessibility (residential)		52%	Toronto Madrid	32%
	Mass transit accessibility (commercial)		65%	Toronto Madrid	31%
	Road network area		14%	Milan Buenos Aires	11%
	Car roads infrastructure connectivity index		1.56	Berlin Madrid	-6%
	Pedestrian roads infrastructure connectivity index		1.66	Buenos Aires Berlin	-17%
Affordability	Monthly public transport cost as share of average income		1.88%	Milan Madrid	N/A
Efficiency	Personal transportation driving time losses in peak hours, mins		14.0	Chicago Berlin	-60%
	Average public transportation driving time in peak hours, mins		41.0	Milan Berlin	N/A
Convenience	Public transport Wi-Fi accessibility index		1	Berlin Madrid	1
	Transport card availability index (physical and virtual)		3	Madrid Chicago	3
	Average age of busses, years		7	Berlin Buenos Aires	N/A
Safety	NO_2 concentration in atmosphere, tons per capita		1.02	Buenos Aires Toronto	N/A
	Number of fatalities in road traffic accidents per 100 000 population		8.4	Madrid Buenos Aires	-69%

Source: Ministry of Digital Development and Transport of the Republic of Azerbaijan (2023).

Furthermore, to gauge the significance of various factors to residents and their current satisfaction levels, a survey of 500 people was conducted by the Ministry of Digital Development and Transport of the Republic of Azerbaijan on urban transport issues (see figure IV).

Based on the survey results, several areas were identified where there is notable potential for improvement. These include:

- Safety aspects concerning road, public transport and COVID-19-related measures
- The environmental impact of transportation
- Passenger congestion experienced in public transport
- Parking services, including aspects like availability, quality, and payment methods
- Traffic congestion and the ability to predict travel times
- The state of pedestrian infrastructure.

The findings from the survey reveal a strong correlation between resident satisfaction and the results derived from the metric-led comparative analysis. Notably, the metrics where Baku falls below the benchmark average are in line with the areas identified by citizens as requiring urgent improvement. These results provide valuable feedback from the perspective of the city's residents, helping policymakers and stakeholders in prioritizing initiatives that align with the needs and expectations of the population. By addressing these key issues, it is possible to enhance the urban transport system in Baku to better serve residents, ensuring safety, efficiency and overall satisfaction in the city's transportation services.

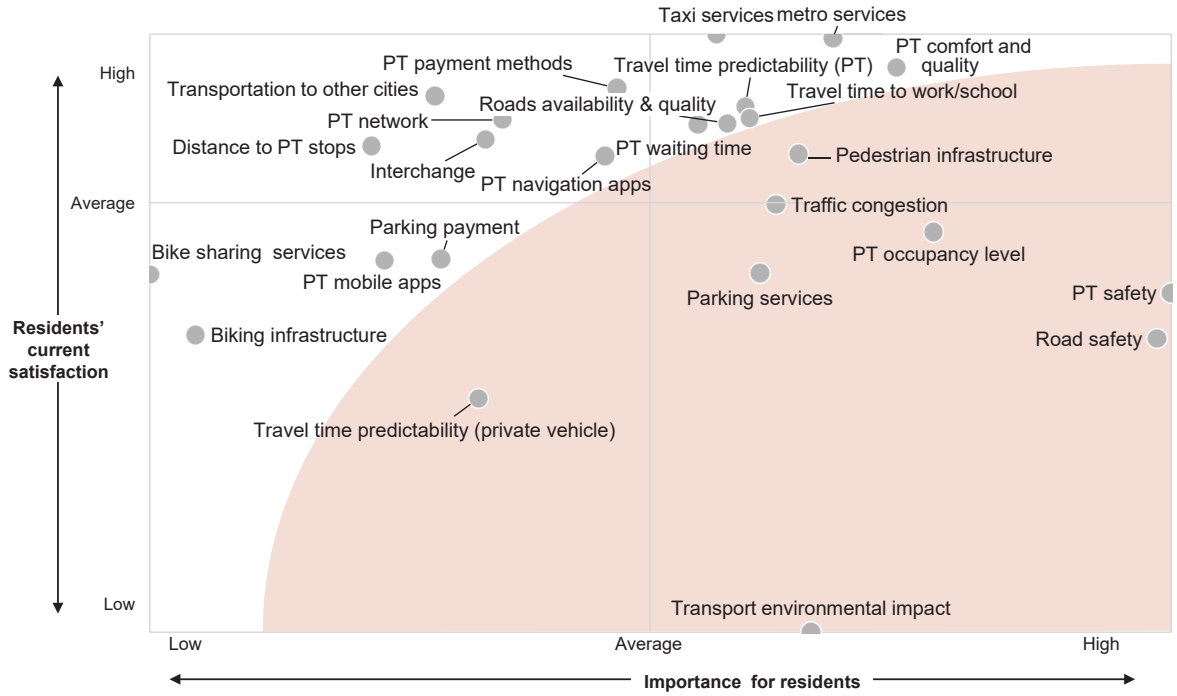
The survey also revealed opportunities for the improvement of the urban transport system in Baku (see figure III). There is potential in both residential and commercial areas for enhancing mass transit capacity when compared to the benchmark cities. Furthermore, the pedestrian connectivity index in Baku stands at 1.66, well behind that in the benchmark cities, making walking an inconvenient option for city residents.

The concentration of NO_2 emissions is a cause for concern, at 1.02 tons per capita, making it one of the highest among the benchmark cities. This raises potential health issues for citizens. The high level of emissions can be attributed to the ageing vehicle fleet, with 81 per cent of vehicles older than 10 years, which is a significant contributory factor to pollution levels. Moreover, the road traffic fatality rate in Baku is three to four times higher than that in the benchmark cities, which necessitates the implementation of more stringent traffic control and regulation measures.

In Baku, during peak hours, the average time lost in traffic is 14 minutes, which is 60 per cent higher than in the benchmark cities. This points to the need for improved traffic management and infrastructure planning to reduce congestion and travel delays.

Figure IV

Results of Baku traffic survey



Source: Ministry of Digital Development and Transport of the Republic of Azerbaijan (2023).

The transportation system in Baku is less efficient compared to those in other major global cities. As such, the city is at a crucial juncture, with strategic choices needed to make a shift towards a more balanced and efficient mobility system in order to promote socio-economic advancement.

Against this backdrop and using information provided by the Azerbaijan Land Transport Agency (under the auspices of the Ministry of Digital Development and Transport of the Republic of Azerbaijan), a comprehensive urban mobility strategy has been jointly developed with the Boston Consulting Group.

In this strategy document, the compelling need for a well-structured and thorough approach to improving mobility in Azerbaijan is highlighted, in line with the focus of the Baku General Master Plan 2040 (which is aimed at delivering balanced growth of the city). The promotion of multimodal transportation, increasing the popularity of public transit and reducing dependence on private vehicles are strongly emphasized in the urban mobility strategy. Given the extended process of refining and coordinating these plans, there is a clear necessity to update the portfolio of mobility initiatives.

The development of a strategic development plan for the integrated railway system in the Absheron region has also proved a catalyst for extensive activity. However, further modelling and evaluation of proposed initiatives remain imperative. There is also a portfolio of significant road infrastructure projects, developed by various government organizations. It is crucial for the Government to make informed decisions about investment priorities.

Furthermore, a specific directive from the President underscores the commitment of the Government to addressing issues such as traffic congestion, the regulation of taxis and the enhancement of the transportation and road infrastructures.

To effectively address these multifaceted challenges, it is clear that a comprehensive national mobility development system is paramount. This system should be designed to promote multimodal transportation in line with the approved Baku General Master Plan 2040. It should also incorporate a robust analytical tool for guiding strategic and investment decisions. An integrated approach is vital for consistently addressing mobility issues across Azerbaijan. To achieve this, it is crucial to systematically address key issues within the mobility ecosystem, with activity aimed at having a positive socio-economic impact on the entire country.

Various strategies can be employed to achieve these goals. These include reducing the use of private vehicles, broadening the appeal of public transport, improving access to public transport and improving road infrastructure.

The expected results of this activity are multifaceted. They include reducing traffic congestion, which will result in shorter commute times, and improving travel safety measures, which will lead to a decrease in road traffic accident-related fatalities, creating safer roads for all. The activity will also help reduce CO_2 emissions, the targets for which are aligned with global environmental concerns, resulting in a cleaner and more sustainable environment. Furthermore, these initiatives are expected to stimulate economic growth, with a positive impact on national gross domestic product. Development could also have a positive influence on the attractiveness of the city, making it a more appealing and sustainable destination for residents and visitors.

At present, there are a range of significant challenges related to the transportation system in Azerbaijan, particularly in the Baku region and surrounding areas. These challenges include:[27]

1. Challenges at the national level:

- There are over 3,400 bus operators in the country. Service use is such that operators are forced to keep fares low. Schedules are inconsistent. The financial strain makes it unappealing for private operators to participate in the industry.
- The national bus fleet is predominantly outdated, with many buses having been in service for more than 20 years and lacking modern features such as electronic payment systems.
- Public transportation services are either insufficient or absent in numerous villages, resulting in limited mobility options for the residents of these areas.
- Direct transportation connections between major cities are limited, with just 10 per cent of the 60 largest cities in the country having direct links to other urban centres.
- The use of passenger railway services is limited, with only 450 kilometres of the existing 2,900-kilometre railway network being used for passenger transport (primarily along the Baku-Ganja route).

[27] Sources include the Azerbaijan Land Transport Authority, the International Association of Public Transport, TomTom Traffic Index, Numbeo, the Baku General Master Plan 2040 and the Boston Consulting Group.

2. *Challenges in the Baku-Absheron region:*

- Traffic speeds are slow in Baku, averaging just 15 kilometres per hour during rush hours, significantly below the 30 kilometres per hour average seen in more developed cities.
- The region has a high rate of road traffic accidents, with eight cases per 100,000 people per year, which is double the European average.
- There is a glut of taxis, with 60,000 operating in the region (far surpassing actual demand, estimated at around 10,000). Of this total, 95 per cent are operating illegally.
- Approximately 34 per cent of residents in the region lack adequate access to public transport, which leads to accessibility issues.
- Despite a substantial investment of 200 million manat in intelligent transportation systems, these systems are underutilized.
- Traffic congestion is a persistent issue in the region, exacerbated by the radial road network, which routes major highways through the city centre.

A concerted effort is required to address these issues. In taking such steps, national mobility and overall quality of life would be improved.

Based on the information provided in the Boston Consulting Group report, which is drawn from various sources,[28] it is possible to make several key observations about the transportation infrastructure in Baku in 2019 and 2022 (see figure V).

3. *Public transport:*

- The number of bus journeys fell significantly, by approximately 40 per cent, as a result of impact of COVID-19, with a corresponding increase in the use of private transport.
- The number of metro journeys fell slightly during COVID-19, as did light rail system use. These modes accounted for less than one per cent of overall transport system use.

4. *Private transport and taxi/ride hailing:*

- There was a remarkable surge in the use of taxis, which quadrupled in number. This growth significantly increased the role of private transport in society, to 52 per cent of transport use from a previous level of between 25 per cent and 35 per cent.

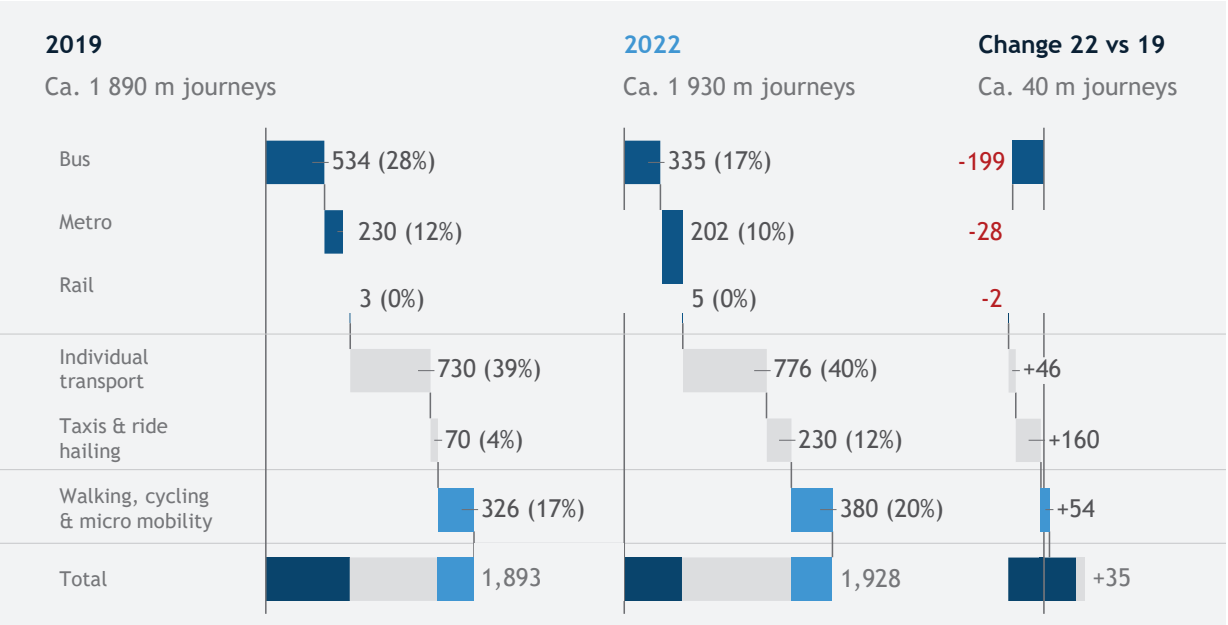
5. *Walking, cycling and micromobility:*

- Although the Government wanted walking, cycling and micromobility to represent between 30 per cent and 40 per cent of total transportation use in Baku, this goal was not achieved. The category achieved a share of 20 per cent.

[28] These sources include an EY study, a taxi survey conducted by the Technical University of Azerbaijan, the Baku General Master Plan 2040, the Azerbaijan Land Transport Authority and Azerbaijan Railways.

Figure V

Transport use in Baku by type of transport, 2019 versus 2022



Source: Boston Consulting Group (2023).

Notably, the urban mobility projects that are currently under way are predominantly focused on Baku, with a strong emphasis on improving transportation within the city. It is important to highlight that the developments and advancements made with regard to urban mobility in Baku will serve as a model for other cities, guiding their own urban mobility initiatives in the future.

III. PROPOSED ACTION PLAN FOR SUSTAINABLE URBAN MOBILITY 2024-2025

A. Design of the Action Plan 2024-2025

The documents provided by the Azerbaijan Land Transport Authority outline a comprehensive vision for an urban mobility system in Azerbaijan. The plan is based on strategies and actionable steps aimed at strengthening the country's transportation system, in particular that in Baku. These goals are to be achieved through targeted initiatives.

The plan has five focal areas:

- Public transport
- Private cars/taxis
- Non-motorized transport
- Infrastructure
- Governance.

1. Public transport

The current state of public transport system in Baku is such that urgent action is required. This is because of several critical factors.

According to the document presented by relevant authorities, the dramatic fall in the number of bus journeys caused by COVID-19 (at around 300 million, equal to a 70 per cent decrease compared to 2019) has had a severe financial impact on bus operators. As a result of this steep decline in use, approximately 70 per cent of bus routes are unprofitable. To maintain profitability, operators are reducing the number of buses in operation. This compromise in service quality and reliability is a serious concern. Notably, this change has laid bare inefficiencies in the operational infrastructure of the bus transportation system and makes clear the need for a thorough reassessment of the operational strategies and financial structuring required to sustain the public transport system.

In addition, the identification of a high level of traffic congestion in areas of Baku highlights the immediate need for implementing priority bus lanes to address delays and to better cater to zones with a high demand for bus use. Such action is crucial in enhancing the overall efficiency of the public transport system, potentially alleviating overcrowding and improving service reliability. An analysis of current public transportation system use also revealed challenges with regard to overcapacity on certain bus routes and underutilization on others. This imbalance in service distribution necessitates a reevaluation and rebalancing of resources to optimize operational efficiency.

Notably, achieving a return to pre-COVID-19 public transport system use levels could generate surplus capacity, which could be leveraged to improve service provision and operational performance. The existence of approximately 3,400 bus operators is an indicator of a fragmented and inefficient model for effective bus system operation in the country. The number of operators leads to a lack of standardized services, inconsistent quality and logistical complexities across the public transportation network. It also contributes to operational inefficiencies, making it challenging to implement standardized rules, maintenance protocols and service quality standards.

With regard to the metro in Baku, two key factors are hindering the potential expansion of the growth of system capacity: security checks (which are considered necessary by the Government) that restrict throughflow at four high-demand stations, and insufficient peak train frequency because of infrastructural constraints. While security

measures are vital, they contribute to a reduction of approximately 10 per cent in throughflow at these stations. As such, addressing the bottlenecks caused by the security check process and increasing passenger flow while maintaining security standards is imperative. Furthermore, infrastructural limitations, such as an approximate 10 per cent incline between Elmlar Akademiyasi and Nizami and a lack of turning points at Icherisheher and Nizami, are resulting in infrequent metro services and are subsequently limiting the capacity of high-demand stations.

At present, the plan for developing the metro system does not comprehensively address all travel demand needs. Numerous densely populated areas remain either disconnected or are linked via suboptimal routes, leading to extended travel times. Additionally, the stations planned for construction do not have an adequate impact on congested areas and there is a low level of integration with other modalities, in particular relating to suburban commuters on arterial routes into the city. To effectively address these issues and maximize the capacity of the metro network, a thorough review of the system and development strategy, including the optimization of the fleet, is required.

2. Private cars/taxis

At present, there is a pronounced reliance on taxi services in Baku, with use significantly surpassing that in benchmark cities such as London, New York and Singapore. This level of reliance can be attributed to the relatively low prices of ride-hailing services in the city. As a result, the number of taxis in operation (approximately 60,000) far exceeds estimated demand (10,000). Notably, the vast majority of taxis (approximately 95 per cent) are operated illegally. This situation is an indicator of a lack of regulation and control in the transportation sector.

The prevalence of private cars and the disproportionately high number of taxis contribute to severe traffic congestion, leading to an average rush hour speed of merely 15 kilometres per hour in Baku. This stands in stark contrast to more developed cities, where average rush hour speeds are around 30 kilometres per hour. The significant disparity in traffic speed highlights a critical need for better management of private car use and taxi services in Baku. Furthermore, the Baku-Absheron region has a higher rate of road traffic accidents, with eight cases per 100,000 people per year, which is double the European average. This higher rate might be linked to congestion and the high number of private vehicles on the road.

Addressing the issues of an excessive number of taxis and the high level of private vehicles, and the traffic congestion that this causes, is crucial not only for improving road safety but also for improving overall traffic flow and ensuring the availability of efficient transportation for people in Baku.

3. Non-motorized transport

The lack of non-motorized transport infrastructure in Baku and other major cities in Azerbaijan is an impediment to effective city connectivity, restricting transportation options for residents. While some progress has been made in introducing micromobility solutions such as e-scooters and cycling infrastructure, the current network remains insufficient to adequately meet the transportation requirements of these cities. This inadequate infrastructure hinders the development of a safe, interconnected and accessible non-motorized transport system, serving as a barrier to achieving sustainable urban mobility.

4. Infrastructure

The primary road infrastructure challenges in Baku are linked to a number of pivotal issues. These include the interconnectivity of streets, the inadequate presence of public transit hubs, misalignment between road layouts and user travel habits, and the notable absence of park and ride facilities at the entrances of the city. Moreover, there are a number of areas where severe traffic congestion is a critical issue, most notably downtown Baku, the roads linking Khirdalan and Sumgayit to Baku, and the routes serving outlying districts and municipalities such as Mardakan, Sabunchu and Zabrat.

In the long term, fostering polycentric development is essential. Baku is currently a monocentric city, with the majority of its population commuting daily to the city centre. Notably, journeys to the central area of Baku and the Khatai district account for over 60 per cent of all transport journeys. The primary reasons for these journeys is commuting to work (approximately 50 per cent), with education accounting for 25 per cent and leisure activities for another quarter. Critically, constructing a ring road around Baku is unlikely to significantly alleviate congestion on the major highways leading to the city centre.

In the short and medium term, the primary solution involves enhancing the capacity of existing transportation routes by augmenting the role of public transport. Around 40 per cent of traffic jams occur on just five roads leading to the city centre. This congestion, despite the vast network of more than 10,000 roads, results primarily from traffic density during the day, which is mainly because private vehicle use accounts for 60 per cent of traffic.

5. Governance

The primary concern with regard to governance is the insufficient enforcement of regulations.

In contrast to the benchmark cities, in Baku, there is a lack of automatic detection systems for various violations, such as those relating to pedestrian access, crossroad use, compliance with road signs and markings, and the use safety belts and mobile phones. Violations are currently detected only by traffic patrol officers, who possess the authority to nullify recorded violations. This use of manual cameras by traffic police officers leads to the incomplete registration of violations. Furthermore, cameras are not used for all forms of violations. Notably, there are considerably lower penalties for violations related to parking and road markings, in particular in relation to bus priority lanes.

Moreover, the absence of a comprehensive urban mobility plan at both local and government levels is a significant obstacle to effective governance. Although the Government, as communicated by the Ministry of Digital Development and Transport of the Republic of Azerbaijan, is in the process of developing an overall transportation strategy, the absence of a complete framework, concept or policy at the national level is adversely affecting urban mobility.

Through the action plan, decision-makers and stakeholders can effectively target and address different aspects of urban mobility, working towards a comprehensive and transformative transportation system that is sustainable, technologically advanced and tailored to meet the mobility needs of Baku and its residents.

Guidelines for formulating, implementing, monitoring and evaluating State programmes, including action plans, are outlined in the Decree of the President of the Republic of Azerbaijan dated 6 March 2021 No. 1294. The decree provides detailed instructions on the procedures and requirements that need to be followed when preparing action plans. As per the decree, an action plan refers to a comprehensive document outlining the specific actions, responsible parties (main and other executors) and timeframes for implementing each action defined within the State programme. The action plan should also include anticipated outcomes and result indicators for each priority activity identified in the programme.

Based on the information shared in this document, the decision has been made to prepare the action plan.

B. Details of the Action Plan 2024-2025

Focal points	Main executive body	Other stakeholders	Period	Outcome indicators		
				Preliminary results	Interim results	Final results
Public transport						
Evaluate and establish strategies to enhance the efficiency of the bus network by examining the current network and analysing frequency as part of the Digital Twin project: • Formulate improvement measures for Baku, with an emphasis on the top 10 most significant routes based on traffic volume and importance • Create route patterns for specific regional, intra-city and inter-city areas to optimize bus routing	Azerbaijan Land Transport Authority	Ministry of Digital Development and Transport Ministry of Internal Affairs Bus operators	2024	An analysis of the top 10 most significant routes in Baku has been conducted through the Digital Twin project, identifying key areas of congestion and high passenger traffic.	Improvement measures for the identified routes have been proposed, including adjustments to schedules, potential route modifications and the introduction of higher-capacity buses in critical areas.	An optimized and more efficient bus network in Baku has been established, resulting in reduced congestion, improved frequency and enhanced connectivity within the city and its surrounding regions.
Assess the implementation of bus priority lanes (implemented by Azerbaijan Land Transport Authority) on specific high-demand bus routes and routes experiencing the most significant delays throughout the city.	Azerbaijan Land Transport Authority	Ministry of Digital Development and Transport Ministry of Internal Affairs Intelligent Transport Systems Center	2024	The implementation of bus priority lanes in Baku has shown promising initial results in reducing travel time and congestion on selected high-demand bus routes.	Observations indicate improved bus speed and reliability on targeted routes with priority lanes, reducing delays and enhancing the overall efficiency of the transportation system in these critical areas.	The bus priority lanes, strategically introduced on high-demand routes in Baku, have significantly alleviated congestion, decreased travel times and improved the overall commuting experience, contributing to increased use and greater satisfaction among city residents.

Focal points	Main executive body	Other stakeholders	Period	Outcome indicators		
				Preliminary results	Interim results	Final results
Develop and implement a comprehensive strategy for funding and restructuring bus operators, establishing a subsidy model to cover their costs, while concurrently working towards consolidating the current pool of operators into a more manageable number (ideally 5-10) by 2030. This integrated approach is aimed at ensuring financial sustainability through strategic subsidies and fostering streamlined operations, with clear responsibilities and consistent standards in the long term. The allocated budget will be determined based on the financial needs of the operators and the costs associated with the consolidation process.	Azerbaijan Land Transport Authority	Ministry of Digital Development and Transport Ministry of Finance Ministry of Economy Bus operators	2024	The successful identification and assessment of the financial needs of bus operators. Through collaborative efforts with stakeholders, a comprehensive understanding of the current operational landscape and associated costs has been achieved. At the same time, initial steps have been taken to engage with bus operators and introduce the concept of the subsidy model, garnering feedback and insights into their unique challenges and requirements.	The phased implementation of the subsidy model for bus operators. Funding mechanisms have been initiated to cover their operational costs, leading to increased financial stability within the sector. At the same time, efforts to consolidate the existing pool of operators are progressing, with ongoing talks and negotiations to streamline operations and encourage voluntary collaboration. The interim outcome reflects a transition towards a more structured and manageable network of bus operators, laying the foundation for long-term sustainability.	The successful implementation of the comprehensive strategy. Bus operators are now operating within a subsidy model that ensures their financial viability. The consolidation efforts have resulted in a more streamlined network, with a reduced number of operators (ideally 5-10) by 2030. This reduction has led to clear responsibilities and consistent standards across the network, enhancing overall operational efficiency. The final outcome represents a sustainable and well-organized bus transport system, meeting the long-term goals of financial stability, streamlined operations and improved service quality.

Focal points	Main executive body	Other stakeholders	Period	Outcome indicators		
				Preliminary results	Interim results	Final results
Enhance the current digital bus service information system by extending its capabilities to the top 10 bus service providers. This expansion involves implementing live bus tracking through global positioning system technology where it is currently unavailable.	Azerbaijan Land Transport Authority	Ministry of Digital Development and Transport Intelligent Transport Systems Center	2025	Initial planning and coordination have begun to extend the existing digital bus service information system, identifying the top 10 bus providers and mapping out strategies to integrate live bus tracking technology using global positioning system technology in areas where it is currently unavailable.	Progress is noted in the expansion process, with successful implementation of live bus service tracking through global positioning system technology in several previously uncovered areas, leading to enhanced real-time bus service information for passengers using the top 10 bus providers.	The digital bus service information system has been successfully extended to the identified top 10 bus providers, with live bus service tracking functionality implemented across previously uncovered areas, resulting in improved passenger experiences, increased reliability and better overall management of the bus network.
Examine the prerequisites for initiating on-demand shuttle services tailored to rural areas. The initiative involves piloting this service in two or three rural or suburban areas, selected based on feedback from bus providers. The plan is to collaborate with one or two private bus operators to test the effectiveness of this service.	Ministry of Digital Development and Transport Azerbaijan Land Transport Authority	Bus operators	2025	Initial assessments have been conducted to identify the essential requirements for launching on-demand shuttle services in rural areas, including analysing the specific transportation needs, geographical layout and community feedback from bus providers regarding suitable pilot locations.	Collaborative efforts with one or two private bus operators have started, with selected rural or suburban areas for piloting the on-demand shuttle service identified. Preliminary plans have been established for testing service feasibility in these regions.	The on-demand shuttle service pilot in two or three rural or suburban areas, in collaboration with private bus operators, has been successfully implemented, resulting in improved accessibility and transportation options and enhanced community engagement. This has potentially laid the groundwork for the expansion of similar services in other regions.

Focal points	Main executive body	Other stakeholders	Period	Outcome indicators		
				Preliminary results	Interim results	Final results
Revamp bus stop designs to incorporate inclusive features that benefit pedestrians and cyclists, while maintaining ongoing engagement and monitoring to ensure that the layouts, including adjacent street infrastructure, are suitable and accessible for all individuals.	Azerbaijan Land Transport Authority Ministry of Digital Development and Transport	City Executive Powers	2024	Research and planning have commenced to redesign bus stops, aiming to incorporate inclusive features for pedestrians and cyclists, while initiating ongoing engagement with stakeholders to ensure the suitability and accessibility of both the bus stops and the surrounding street infrastructure.	Redesigned bus stop plans with inclusive features for pedestrians and cyclists have been developed (integrating feedback from ongoing engagement with stakeholders), aiming to create an environment suitable for all individuals, ensuring accessibility and safety.	The revamped bus stop designs have been implemented, providing inclusive features for pedestrians and cyclists, and ensuring that the surrounding street infrastructure is accessible to all, fostering a safer and more accommodating environment for diverse individuals within the community. Ongoing monitoring confirms sustained suitability and inclusivity.
Review and assess the schedules and frequency of metro trains, particularly during peak hours, while conducting capacity analyses to optimize traffic based on demand. This evaluation will also involve considering the implications of implementing a speed limit of a maximum of 40 km per hour between Icherisheher and Elmlar Akademiyasi.	Baku Metro	Ministry of Digital Development and Transport	2024	Metro train schedules during peak hours are under review, and capacity analyses are being carried out, to optimize traffic based on demand. The implications of implementing a speed limit of 40 km per hour between Icherisheher and Elmlar Akademiyasi are being considered.	Capacity analyses and schedule reviews have shown potential areas for optimizing peak-hour metro traffic. Discussions regarding the proposed speed limit change are ongoing, with the impact on travel time, efficiency and passenger capacity under consideration.	Peak-hour metro schedules have been adjusted to better align with demand, optimizing traffic flow and improving passenger experience. Implementation of the speed limit of 40 km per hour between Icherisheher and Elmlar Akademiyasi has been carefully assessed and executed, balancing efficiency with safety concerns, resulting in a more regulated and potentially safer travel route. Ongoing monitoring will gauge the overall impact of these changes.

Focal points	Main executive body	Other stakeholders	Period	Outcome indicators		
				Preliminary results	Interim results	Final results
Establish strategies to alleviate congestion and improve the on-the-ground infrastructure of metro stations through demand-driven actions, such as managing and redirecting the flow of people between stations. The initial emphasis will be on addressing concerns at the 28 May station.	Baku Metro	Ministry of Digital Development and Transport	2024	Strategies have been devised to alleviate congestion and to enhance on-the-ground infrastructure at metro stations, focusing on demand-driven actions such as managing and redirecting the flow of people between stations. The 28 May metro station has been identified as the initial focus area for addressing congestion concerns.	Implementation of crowd management measures at the 28 May station is under way. This includes the deployment of staff to direct passenger flow, infrastructure enhancements and the introduction of real-time information systems to regulate and guide commuter movement effectively.	The congestion at the 28 May station has significantly reduced as a result of the successful implementation of demand-driven strategies. The on-the-ground infrastructure improvements, crowd management measures and optimized passenger flow have enhanced the overall commuter experience, serving as a model for similar initiatives across other metro stations. This has led to a more efficient and smoothly operating public transport system. Continued assessment and potential adjustments remain ongoing to maintain and further improve these outcomes.

Focal points	Main executive body	Other stakeholders	Period	Outcome indicators		
				Preliminary results	Interim results	Final results
Develop and implement a comprehensive strategy to maximize commercial revenue for the metro system, focusing on advertising initiatives. This includes reorganizing the beneficiary system to ensure that the metro system is the primary recipient of revenue generated from advertisements or that these funds are directed towards essential transport infrastructure investments. Emphasis will be placed on optimizing the overall equipment effectiveness of the fleet. Concurrently, efforts will be made to enhance revenue streams through innovative advertising campaigns and partnerships. The goal is to create a sustainable funding source that directly benefits the metro system and supports strategic investments in transport infrastructure, promoting long-term financial health and growth.	Baku Metro	Ministry of Digital Development and Transport	2024	The successful initiation of a reorganized beneficiary system, ensuring that the metro system is positioned as the primary recipient of revenue generated from advertising initiatives. Initial efforts have been made to optimize the overall equipment effectiveness of the fleet, with assessments and early improvements under way. At the same time, innovative advertising campaigns and partnerships have been initiated, creating a foundation for enhanced revenue streams. The preliminary outcome reflects the early stages of establishing a sustainable funding source that aligns with metro system objectives.	The strategy has yielded tangible results. The reorganized beneficiary system has led to increased revenue directed towards the metro system or essential transport infrastructure investments. Ongoing efforts to optimize overall equipment effectiveness have resulted in noticeable improvements in fleet efficiency and availability. The innovative advertising campaigns and partnerships have gained momentum, contributing to a steady increase in commercial revenue. The interim outcome signifies a successful transition towards a more sustainable funding model, with a positive impact on the financial health and growth trajectory of the metro system.	The full implementation and success of the comprehensive strategy. The metro system is now the primary beneficiary of revenue generated from advertising initiatives, providing a consistent and substantial funding source. This financial stability has enabled strategic investments in transport infrastructure, fostering long-term growth and development. The overall equipment effectiveness of the fleet has been optimized, resulting in heightened efficiency and reliability. Innovative advertising campaigns and partnerships have become integral components of metro system revenue streams, contributing to sustained financial health. The final outcome represents a transformed financial landscape, where the metro system thrives thanks to a robust funding mechanism, supporting its continued expansion and improvement.

Focal points	Main executive body	Other stakeholders	Period	Outcome indicators		
				Preliminary results	Interim results	Final results
Evaluate and formulate strategies for interconnected schedules that align bus, metro and rail services within a designated pilot area (28 May, Koroghlu or Darnagul stations). At the same time, assess the prerequisites and needs for expanding this integrated scheduling system to cover the entire area of Baku.	Baku Metro Azerbaijan Land Transport Authority Azerbaijan Railways	Ministry of Digital Development and Transport	2025	Evaluation of integrated schedules for bus, metro and rail services within a designated pilot area (potentially the 28 May, Koroghlu or Darnagul stations) has commenced to formulate strategies for synchronization. The initial phase involves assessing the existing infrastructure, demand and operational feasibility for integrated scheduling.	Strategies for aligning schedules and services between bus, metro and rail services within the selected pilot area are being developed, aiming to streamline connections and improve intermodal transportation. At the same time, prerequisites for expanding this integrated scheduling system city-wide are being analysed, considering the infrastructure, technology and coordination required for a comprehensive network.	The integrated schedules between bus, metro and rail services within the pilot area (28 May, Koroghlu or Darnagul stations) have been successfully aligned, demonstrating improved connectivity and more seamless travel for commuters. The assessment for expanding this system city-wide has identified the necessary infrastructure, technology and coordination required for a comprehensive integrated network across Baku. Plans for expansion are in place, aiming to create a synchronized, efficient and interconnected public transportation system throughout the entire city. Continued evaluation and adjustments will be made to ensure the effectiveness and scalability of the system.
Conduct an analysis of public transport fares, which includes examining subsidization, by comparing it with similar cities and estimating the sensitivity to price changes. This analysis is aimed at establishing the pricing structure for an integrated tariff system for public transport. It will also aid in crafting policies aimed at reducing subsidies while maintaining an effective and fair pricing framework.	Ministry of Digital Development and Transport	Azerbaijan Land Transport Authority Azerbaijan Railways Baku Metro Bus operators	2025	Initial analysis compares public transport subsidies and price sensitivity with similar cities, aiming to establish a fair integrated tariff system.	Insights gained assist in formulating policies to reduce subsidies while maintaining a fair pricing structure for an integrated tariff system.	Implemented policies establish a balanced integrated tariff system, ensuring sustainability while providing fair pricing for passengers. Ongoing monitoring ensures a balance between sustainability and affordability.

Focal points	Main executive body	Other stakeholders	Period	Outcome indicators		
				Preliminary results	Interim results	Final results
Enhance traffic signal systems to provide increased priority for buses, pedestrians and cyclists.	Intelligent Transport System Center Azerbaijan Land Transport Authority	Ministry of Digital Development and Transport Ministry of Internal Affairs	2024	The planning and design phase for improving traffic signal systems to prioritize buses, pedestrians and cyclists is under way, with a focus on analysing current traffic patterns and infrastructure requirements.	Implementation of enhanced traffic signal systems has begun, aiming to provide increased priority for buses, pedestrians and cyclists, which will foster safer and more efficient transportation.	Completed upgrades to the traffic signal systems successfully prioritize buses, pedestrians and cyclists, enhancing safety and efficiency while encouraging the use of sustainable and alternative modes of transportation in the city. Ongoing evaluations ensure the continued effectiveness of these improvements.
Private cars/taxis						
Evaluate the efficacy of recently implemented taxi regulation in the country and appraise the current benchmarks concerning vehicle condition, driver behaviour, safety protocols and customer service to identify areas that need modification within a year.	Azerbaijan Land Transport Authority	Ministry of Digital Development and Transport Taxi operators	2025	Assessment of recently implemented taxi regulation in the country, examining benchmarks related to vehicle condition, driver behaviour, safety protocols and customer service, with the aim of identifying areas requiring modification within a year.	Appraisal of the effectiveness of the current taxi regulations concerning vehicle condition, driver behaviour, safety protocols and customer service, emphasizing areas that require modification within a year to enhance overall service quality and safety standards.	Comprehensive evaluation of the efficacy of the recently implemented taxi regulations, highlighting specific aspects in relation to vehicle condition, driver behaviour, safety protocols and customer service that necessitate modification within a year for the purpose of achieving improved compliance, enhanced service quality and elevated safety standards within the taxi industry.

Focal points	Main executive body	Other stakeholders	Period	Outcome indicators		
				Preliminary results	Interim results	Final results
Examine trends in consumer demand and the various factors that affect decision-making within the taxi industry. Investigate the factors that drive customers to select specific transportation options, considering aspects such as convenience, pricing, service quality and technological advancements as well as emerging preferences.	Azerbaijan Land Transport Authority	Ministry of Digital Development and Transport Taxi operators	2025	Analysis of consumer demand trends within the taxi industry, exploring the multifaceted factors influencing decision-making, including convenience, pricing, service quality and technological advancements as well as evolving preferences.	Detailed investigation into the factors driving customer choices in transportation services, mapping the impact of convenience, pricing, service quality and technological advancements as well as emerging preferences on customer decision-making processes.	Comprehensive understanding of consumer demand trends and decision-making drivers within the taxi industry, highlighting the significant impact of convenience, pricing, service quality and technological advancements as well as evolving preferences. This understanding enables the adaptation of services to better align with customer needs and preferences, resulting in a more responsive and customer-centric transportation system.
Based on the assertion that Baku has the lowest taxi fares[29] among the benchmark cities, reassess the current pricing regulations for taxis. Estimate the costs associated with implementing new standards and integrating technological advancements.	Ministry of Digital Development and Transport	Azerbaijan Land Transport Authority Taxi operators	2025	Review and reassessment of the current pricing regulations for taxis in Baku, considering the comparison with fares in the benchmark cities. An initial estimate of the costs related to implementing new standards and integrating technological advancements.	Implementation of updated pricing regulations for taxis, considering the reassessed fare structure and the integration of technological advancements for improved service quality and efficiency, while assessing the initial costs associated with these changes.	Successful implementation of revised pricing regulations for taxis in Baku, reflecting a balance between competitiveness and sustainability, alongside the integration of technological advancements, resulting in improved service quality. The estimated costs associated with these changes have been accounted for and shown to be reasonable considering the enhancements made to the overall taxi service system.

[29] According to analysis by the Boston Consulting Group presented by Azerbaijan Land Transport Authority in 2023.

Focal points	Main executive body	Other stakeholders	Period	Outcome indicators		
				Preliminary results	Interim results	Final results
Outline collaborative initiatives with private companies to introduce car-sharing services involving multiple providers and assess the potential impact of these initiatives.	Azerbaijan Land Transport Authority	Ministry of Digital Development and Transport	2025	Establishment of collaborative initiatives with multiple private companies to introduce car-sharing services, fostering partnerships and making agreements to launch the programme in Baku.	Implementation of car-sharing services by collaborating providers, observing user adoption, assessing the impact on reducing individual car ownership and evaluating the contribution of the service to reducing traffic congestion and emissions.	Successful implementation of the collaborative car-sharing initiatives involving multiple providers, resulting in increased accessibility to shared vehicles, reduced individual car ownership, decreased traffic congestion, and a positive impact on the environment through lowered emissions. This demonstrates the effectiveness of the programme in offering alternative transportation options and promoting a more sustainable urban transportation system.
Require taxis to offer card and contactless payment options in order to simplify the payment process for customers (allowing drivers adequate preparation time) and collaborate with card payment providers to secure advantageous deals for drivers.	Azerbaijan Land Transport Authority	Taxi operators	2024	Mandating taxis to provide card and contactless payment options, with the intention of streamlining the payment process for customers, while offering drivers preparation time. Negotiating with card payment providers to secure favourable deals for drivers.	Implementation of the requirement for taxis to offer card and contactless payment methods, assessing the impact on customer satisfaction and driver preparedness. Initiating collaborations with payment providers to secure advantageous deals, visible through increased adoption of electronic payment methods.	Successful integration of card and contactless payment options in taxis, resulting in a streamlined payment process for customers, adequate preparation time for drivers and beneficial deals with payment providers. This leads to improved overall service quality and convenience for both passengers and drivers within the transportation system.

Focal points	Main executive body	Other stakeholders	Period	Outcome indicators		
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Implement pedestrian-friendly zones in the downtown area of Baku, focusing on the historic part of the city. This includes extending the pedestrian zone to the south (Khagani Street, east of Bulbul Avenue, including Malakan Park). Enhance walkability by creating car-free zones, promoting a safer and more enjoyable environment for pedestrians. Allocate resources to beautify and improve public spaces, fostering a vibrant atmosphere within the designated pedestrian zones.	Azerbaijan Land Transport Authority Baku Executive Power	Ministry of Digital Development and Transport Ministry of Internal Affairs State Committee on Urban Planning and Architecture	2025	Initial establishment of car-free zones, including an extended pedestrian area in the historic part of the city. Community feedback on development obtained. Preliminary beautification projects initiated.	Noticeable improvements in designated pedestrian zones, fostering increased foot traffic and community engagement. Ongoing beautification and infrastructure projects contribute to a more vibrant and people-centric downtown area.	Full implementation and success of the initiative, with transformed car-free zones becoming integral to the cityscape. The extended pedestrian zone is celebrated for its positive impact on safety, community engagement and urban aesthetics, contributing to the long-term sustainability of the historic part of the city.
Implement congestion charging zones and use the revenue collected to fund public transportation. Establish a congestion charging system in the city centre, incorporating variable charges based on daily or time-dependent criteria for vehicles entering designated charging zones. Use the funds generated from the congestion charging system to enhance public transportation services and to invest in critical infrastructure development within the region. This action is aimed at managing traffic congestion effectively, promoting sustainable transportation choices and supporting the improvement of public transit options, while generating funds for investing in essential infrastructure projects.	Azerbaijan Land Transport Authority	Ministry of Digital Development and Transport Ministry of Ecology and Natural Resources Ministry of Energy Ministry of Economy Ministry of Internal Affairs Intelligent Transport Systems Center	2025	Launch of congestion charging system in the city centre, with variable charges for designated zones. Initial signs of reduced congestion and increased awareness of sustainable transport options. Start of fund allocation for public transportation and critical infrastructure.	Visible improvements in traffic management and revenue increase from congestion charges. Funds contribute to better public transit and ongoing infrastructure projects. Public awareness campaigns highlight the positive impact on sustainable transportation. Early successes include improved traffic flow and initial infrastructure enhancements.	Successful implementation of congestion charging, significantly reducing city centre congestion. Substantial funds support enhanced public transit and critical infrastructure projects, resulting in a more sustainable and efficient urban transportation system. The transformed city centre reflects reduced congestion, improved transit and overall enhanced mobility.

Focal points	Main executive body	Other stakeholders	Period	Outcome indicators		
				Preliminary results	Interim results	Final results
Specify actions and model the potential impact of reducing speed limits to 50 km or 30 km per hour, focusing on areas with a high rate of road traffic accidents. Analyse and map over 1,000 road traffic accidents in Baku that took place in recent years to identify recurring patterns. Design initiatives to pilot slow zones as part of these measures.	Ministry of Internal Affairs Azerbaijan Land Transport Authority	Ministry of Digital Development and Transport Transport Coordination Council	2024	Identification and analysis of over 1,000 road traffic accidents in areas of Baku with a high incidence of accidents to map recurring patterns Use of this analysis to form the basis for reducing speed limits to 50 km or 30 km per hour and for designing initiatives for piloting slow zones.	Implementation of reduced speed limits in identified high-accident-rate zones and the initiation of pilot slow zones. Collection of data on the impact of these measures on road traffic accident rates and observing changes in traffic behaviour and safety outcomes.	Successful modelling of the potential reduction of road traffic accidents by implementing reduced speed limits in high-accident-rate areas, showcasing a significant decrease in accident rates and demonstrating the effectiveness of pilot slow zones as part of comprehensive measures to enhance road safety in Baku.
Non-motorized transport						
Create and advocate for planning tools that are aimed at achieving the balanced and efficient use of road space, such as the Strategic Cycling Analysis and other strategic data to facilitate healthy/green streets planning by 2030.	Azerbaijan Land Transport Authority	Ministry of Digital Development and Transport Ministry of Internal Affairs State Committee on Urban Planning and Architecture	2024	Development and promotion of planning tools, including the Strategic Cycling Analysis, to develop a balanced and efficient use of road space, aiding in healthy/ green street planning objectives by 2030.	Distribution and integration of the Strategic Cycling Analysis and associated planning tools, facilitating data-driven decision-making for healthy/green streets planning, and observing their influence on achieving a more balanced and efficient use of road space.	Successful advocacy and widespread adoption of the planning tools, notably the Strategic Cycling Analysis, leading to the implementation of healthy/green street planning strategies by 2030 that optimize road space use. This promotes healthier, environmentally friendly and more efficient street infrastructure in urban environments.

Focal points	Main executive body	Other stakeholders	Period	Outcome indicators		
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Extend the network of cycle paths in Baku to ensure that by 2030 approximately 30 per cent of city residents are situated within 400 metres of the network.	Azerbaijan Land Transport Authority Ministry of Internal Affairs State Committee on Urban Planning and Architecture	Ministry of Digital Development and Transport	2025	Expansion of the cycle path network in Baku with the objective of ensuring that a significant portion of residents will be within 400 metres of the network by 2030, thereby promoting increased accessibility to cycling infrastructure.	Mapping and construction of additional cycle paths in relation to progress towards the 30 per cent accessibility goal, aiming to bring a larger percentage of Baku residents within close proximity of the network by addressing infrastructure gaps and community needs.	Successful achievement of the 30 per cent accessibility target, ensuring that a substantial portion of Baku residents reside within 400 metres of the extended cycle path network by 2030. This promotes cycling as a convenient and accessible transportation option for a significant portion of city residents.
Increase the reach and intensity of bike-sharing company operations, focusing on areas with the most potential to increase cycling rates and on areas with the highest levels of deprivation.	Azerbaijan Land Transport Authority	Ministry of Digital Development and Transport	2024	Strategic expansion of bike-sharing company operations, targeting areas with the greatest potential for increasing cycling rates and regions with high levels of deprivation, and thereby laying the groundwork for enhanced bike-sharing services.	Implementation and assessment of bike-sharing operations in targeted areas, observing the impact on cycling rates and the effectiveness of the initiative in areas with high levels of deprivation, in order to encourage more extensive and equitable access to cycling options.	Successful amplification of bike-sharing company operations in selected regions, resulting in increased cycling rates and improved accessibility in deprived areas, contributing to greater overall community health and more extensive adoption of cycling as a viable transportation choice.

Focal points	Main executive body	Other stakeholders	Period	Outcome indicators		
				Preliminary results	Interim results	Final results
Collaborate with micromobility operators to enhance rental opportunities, ensuring a consistent service that complements sustainable transport options in Baku. This involves expanding dedicated parking spaces for micromobility vehicles to minimize congestion on walkways.	Azerbaijan Land Transport Authority	Ministry of Digital Development and Transport Baku Executive Power Micromobility vehicle operators	2024	Initiation of collaborations with micromobility vehicle operators to improve rental opportunities, aiming for a consistent service that aligns with sustainable transport options in Baku, while planning for the expansion of dedicated parking spaces for micromobility vehicles to reduce walkway congestion.	Implementation and assessment of the expanded dedicated parking spaces for micromobility vehicles, working in collaboration with operators to ensure the service aligns with Baku's sustainable transport goals and minimizes congestion on walkways.	Successful establishment of enhanced micromobility vehicle rental opportunities and dedicated parking spaces, contributing to sustainable transport initiatives in Baku and reducing walkway congestion, thereby offering a reliable and convenient alternative transportation method for residents and visitors.
Develop and implement pedestrian traffic monitoring systems to collect data on foot traffic, enabling data-driven decisions for urban planning and infrastructure improvements based on observed pedestrian patterns and use.	Ministry of Digital Development and Transport Azerbaijan Land Transport Authority	Intelligent Transport Systems Center	2025	Creation of pedestrian traffic monitoring systems to collect comprehensive data on foot traffic, laying the foundation for data-driven decision-making in urban planning and infrastructure enhancements based on observed pedestrian patterns and use.	Implementation and calibration of the pedestrian traffic monitoring systems, collecting and analysing data to identify patterns and trends in pedestrian movement for informed decision-making in urban planning and infrastructure improvements.	Use of robust pedestrian traffic data to enact strategic urban planning and infrastructure improvements, resulting in optimized pedestrian pathways and enhanced urban spaces, fostering safer, more efficient and user-friendly environments based on observed pedestrian behaviour and use patterns.

Focal points	Main executive body	Other stakeholders	Period	Outcome indicators		
				Preliminary results	Interim results	Final results
Enhance the method for maintaining pavements, emphasizing areas with the highest pedestrian traffic and busiest walkways. This might involve establishing an easy-to-use reporting system with a user-centric approach, ensuring accessibility for all and that anyone can report issues and damage.	Azerbaijan Land Transport Authority	Ministry of Digital Development and Transport Baku Executive Power	2025	Development of an improved pavement maintenance strategy focusing on high-traffic pedestrian areas, including the conceptualization of a streamlined reporting system for reporting issues and damages.	Implementation and testing of the reporting system, ensuring accessibility for all and that anyone can report damage. Assessing the initial impact on the maintenance efficiency of high-traffic walkways.	Establishment of an effective, customer-centric walkway maintenance approach, resulting in enhanced upkeep of high-traffic pedestrian walkways, thereby ensuring safety, accessibility and an improved walking experience.
Issue initial set of design recommendations for pedestrian-friendly walkways in Baku, helping stakeholders to deliver exceptional walkways by making use of the latest evidence and best practices and standards.	Ministry of Digital Development and Transport	Azerbaijan Land Transport Authority State Committee on Urban Planning and Architecture State Agency of Azerbaijan Automobile Roads Ministry of Economy	2025	Formulation of initial design recommendations that outline strategies to create pedestrian-friendly walkways in Baku, considering the latest evidence and best practices and standards.	Collaboration with stakeholders to refine and tailor the design recommendations, incorporating feedback and insights to ensure the creation of exceptional walkways.	Implementation of refined and comprehensive design guidelines that result in the establishment of exceptional pedestrian-friendly walkways in Baku, enhancing the walking experience for residents and visitors, and aligning with the needs and aspirations of all stakeholders.

Focal points	Main executive body	Other stakeholders	Period	Outcome indicators		
				Preliminary results	Interim results	Final results
Infrastructure						
Examine the challenges faced by current mobility hubs (such as bus stations and bike and car parking areas) and propose a detailed plan for implementing improvements. Expand the deployment of additional mobility hubs, assessing ongoing development plans of the Baku General Master Plan 2040 and testing one or two new hubs (such as basic parking areas with shuttle buses) on a trial basis. Conduct a location search based on demand and evaluate the capital expenditure required for the establishment of new mobility hubs.	Azerbaijan Land Transport Authority	Ministry of Digital Development and Transport	2025	Assessment of challenges faced by existing mobility hubs (such as bus stations and bike and car parking areas) and the formulation of a comprehensive plan detailing improvements needed. Identification of potential areas for deploying new mobility hubs, aligning with the Baku General Master Plan 2040. Selection of one or two new hub types, such as basic parking areas with shuttle buses, for trials.	Initiation of improvements to existing mobility hubs based on the detailed plan, alongside the deployment of one or two trial hubs to test their efficacy, using the insights gained from ongoing development plans of the Baku General Master Plan 2040.	Completion of improvements to existing mobility hubs and the successful trial of new hubs, including basic parking areas with shuttle buses. A location search based on demand reveals viable sites for new hubs, with an evaluation of the capital expenditure required for their establishment. The entire process contributes to an enhanced and efficient mobility system, aligned with the Baku General Master Plan 2040 development goals.
Re-evaluate the enhancement of ground transportation access at Heydar Aliyev International Airport (roads and rail connections to the airport) by assessing the initiatives proposed in the Baku General Master Plan 2040.	Ministry of Digital Development and Transport	Baku Metro Azerbaijan Railways Azerbaijan Land Transport Authority	2025	Assessment of proposed initiatives in the Baku General Master Plan 2040 that are aimed at enhancing ground transportation access at Heydar Aliyev International Airport, focusing on road infrastructure improvements and rail connections to the airport.	Evaluation of the progress and effectiveness of initiatives outlined in the Baku General Master Plan 2040 designed to enhance ground transportation access at Heydar Aliyev International Airport, analysing ongoing road infrastructure improvements and railway links.	Comprehensive assessment of the impact and success of initiatives from the Baku General Master Plan 2040 implemented to enhance ground transportation access at Heydar Aliyev International Airport, observing improvements in road infrastructure and railway links. The process leads to increased accessibility and smoother transit for passengers and visitors using ground transportation at the airport.

Focal points	Main executive body	Other stakeholders	Period	Outcome indicators		
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Assess the viability of initiatives on development linked to the 15-minute city concept, focusing on city zones that are already being analysed by the Azerbaijan Land Transport Authority. The 15-minute city concept is that residents can access important destinations within a 15-minute radius by walking, cycling or using public transport. Highlight examples of blank spots, indicating the need for the redistribution of points of interest.	Azerbaijan Land Transport Authority State Committee on Urban Planning and Architecture	Ministry of Digital Development and Transport Ministry of Internal Affairs State Agency of Azerbaijan Automobile Roads	2025	Assessing the viability of the impact of selected initiatives related to the 15-minute city concept, particularly transit-oriented development, which are aimed at enabling residents to access crucial destinations within a 15-minute radius by walking, cycling and public transport. Initial identification of areas lacking sufficient points of interest, creating blank spots where redistribution or addition of points of interest is needed.	Modelling and assessment of the impact of selected initiatives related to the 15-minute city concept, observing improvements in accessibility and mobility within the defined radius. Further identification and analysis of blank spots, indicating areas lacking adequate points of interest, thereby highlighting the necessity for redistributing or adding points of interest.	Comprehensive simulation indicating the positive impact of the selected initiatives related to the 15-minute city concept, delivering improved access to essential destinations by walking, cycling and public transport within the designated radius. Identification of blank spots and the redistribution or addition of points of interest within these areas, contributing to a more inclusive, well-connected and accessible urban environment aligned with the 15-minute city concept.
Governance						
Enforce stricter penalties for violations related to parking and road markings, particularly in relation to bus priority lanes. Eliminate the provision for manual annulment of violations recorded by cameras to ensure more consistent regulation enforcement.	Ministry of Internal Affairs Ministry of Digital Development and Transport	Azerbaijan Land Transport Authority Intelligent Transport Systems Center	2024	Formulation of a comprehensive strategy to strengthen enforcement of fines and violations (e.g. parking, speeding and towing) by aligning multiple authorities and optimizing camera use to enhance monitoring and enforcement efficiency.	Collaborative alignment and integration of different authorities and camera systems, leading to increased surveillance capabilities, visible through enhanced monitoring and more frequent penalties for violations.	Successful implementation of a rigorous enforcement strategy, resulting in improved compliance with traffic regulations, reduced violations and enhanced safety, achieved through optimized camera systems and coordinated efforts among various authorities to monitor and enforce fines and penalties.

Focal points	Main executive body	Other stakeholders	Period	Outcome indicators		
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Assess the possibility of changing office hours and promoting remote working to decrease peak-hour use of the road and transport systems.	Transport Coordination Council Ministry of Labour and Social Protection	Ministry of Internal Affairs Ministry of Digital Development and Transport Private sector	2025	Analysis of the feasibility of adjusting office hours or start times as a measure to reduce peak-hour use of the road and transport systems.	Evaluation of the potential impact and practicality of adjusting office hours or start times in order to reduce congestion during peak travel hours.	Determination of the viability and effectiveness of changing office hours to reduce peak-hour use of the road and transport systems, considering the practical implications and potential benefits of such adjustments.
Evaluate the potential impact of adjusting school/university start times to reduce peak-hour use of the road and transport systems.	Ministry of Digital Development and Transport Ministry of Education	Azerbaijan Land Transport Authority	2025	Examination of the potential impact of changing school/ university start times as a strategy to reduce congestion during peak travel hours.	Assessment of the possible impact of changing school/ university start times on reducing congestion during peak travel hours.	Evaluation of the feasibility and expected impact of changing school/ university start times to reduce peak-hour use of the road and transport systems, considering potential benefits and challenges.
Enforce a regulation requiring public transport companies to operate a certain number of eco-friendly vehicles, promoting a shift towards more sustainable and environmentally conscious transportation options.	Ministry of Digital Development and Transport	Azerbaijan Land Transport Authority Bus operators Azerbaijan Railways	2025	Development of a regulation mandating public transport operators to dedicate a specific portion of their fleet to eco-friendly vehicles, with the aim of encouraging the transition towards more sustainable and environmentally conscious transportation options.	Implementation of a regulation that requires public transport operators to dedicate a specific portion of their fleet to eco-friendly vehicles, encouraging a shift towards more sustainable transportation options. Assessment of the initial impact on the integration of eco-friendly vehicles within the public transport system.	Successful enforcement of the regulation requiring public transport companies to operate a certain number of eco-friendly vehicles This process leads to a notable increase in sustainable and environmentally conscious transportation options within the public transport system, and contributes to reduced emissions and an eco-friendlier urban transport infrastructure.

Focal points	Main executive body	Other stakeholders	Period	Outcome indicators		
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Enforce a government mandate on the provision of transport infrastructure inclusivity, including the installation of wheelchair ramps, the use of audio-visual announcements and the installation of designated seating areas by public transport providers. The mandate would help to ensure accessibility and inclusivity across all modes of public transportation for persons with disabilities.	Ministry of Digital Development and Transport	Azerbaijan Land Transport Authority Baku Metro Azerbaijan Railways Bus operators City Executive Powers State Agency of Azerbaijan Automobile Roads	2025	Development and enforcement of a government mandate that requires the installation of wheelchair ramps, the use of audio-visual announcements and the installation of designated seating areas by public transport providers, thereby ensuring accessibility and inclusivity for persons with disabilities.	Implementation and monitoring of the government mandate, ensuring public transport provider compliance with the measures designed to enhance accessibility for persons with disabilities.	Successful enforcement of the government mandate, significantly enhancing accessibility and inclusivity for persons with disabilities and creating a more accommodating and inclusive public transport system.

Sustainable Transport Action Plan **for Azerbaijan**

Improving sustainable urban mobility

The Sustainable Transport Action plan for Azerbaijan aims to promote sustainable urban mobility for 2024-2025, which is crucial for achieving sustainable cities, curbing negative impacts on climate, improving health and reducing inequalities. The Action Plan provides strategies and actionable steps aimed at strengthening the country's transportation system, in particular, that in Baku. The plan focuses on making improvement in the following five areas: public transport, private cars/ taxis, non-motorized transport (i.e. walking, biking), infrastructure, and governance.

Information Service
United Nations Economic Commission for Europe

Palais des Nations
CH - 1211 Geneva 10, Switzerland
Telephone: +41(0)22 917 12 34
Fax: +41(0)22 917 05 05
E-mail: unece_info@un.org
Website: http://www.unece.org

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