



TUMI INITIATIVE'S TRANSFORMATIVE STORIES

MUNICIPALITY OF NITERÓI, BRAZIL: CREATING MOMENTUM TOWARDS A WALKABLE AND BIKEABLE CITY

In response to mobility challenges like traffic congestion, city leaders in Niteroi are working to make the city pedestrian- and cyclist-friendly and are building low carbon mobility solutions into their new Sustainable Urban Mobility Plan. By improving infrastructure as well as promoting a walking and cycling culture, the city is paving the way for a paradigm shift from a car-oriented to a people-oriented transport system.

ABOUT NITERÓI

The Municipality of Niterói is the former capital of the State of Rio de Janeiro in the southeast of Brazil and is home to approximately 480,000 inhabitants. Niterói is the main urban center in the east side of the metropolitan region and serves as a transportation hub to reach Rio de Janeiro by bus and ferry.

Since the construction of Rio-Niterói Bridge in 1976, Niteroi has experienced major population growth and increased urban sprawl. This has led to a soaring number of personal cars on the road, heavy traffic congestion and long travel times. As such, there is an urgent need to reduce reliance on private cars by improving public transport system while increasing walking and cycling.

The National Urban Mobility Policy mandates Brazilian cities to create long-range urban mobility plans towards safe, accessible and low emission transport systems. In compliance with the policy, Niterói is currently preparing the Sustainable Urban Mobility Plan (called "Plano de Mobilidade Urbane Sustentavel de Niterói", PMUS), which aims to prioritize public transport and encourage non-motorized transport.



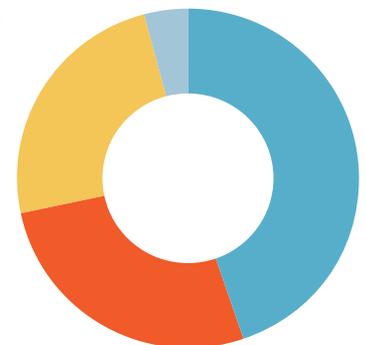
Population (IBGE forecast): 511,786 (2018)

Land area: 133,9 km²

Density: 3,684.4 in/km²

MODAL SPLIT* (2015)

- 44.8% public transport
- 26.9% walking
- 24.3% car
- 4% cycling



**Modal split of the Metropolitan Region of Rio de Janeiro*

TARGETS by 2030:

1. Increase cycling to well over 10 percent of the modal split by 2030
2. Electrify 25 percent of the municipal bus fleet by 2030
3. Increase connectivity so that 100 percent of all residents have a public transport stop within 10 minutes' walk from their home by 2030

ENHANCING PEDESTRIAN COMFORT AND CONNECTIVITY

To date, 26.9 percent of all trips taken in Niterói are made on foot. Still, improving pedestrian connectivity, ensuring safety and improve accessibility at all levels are key considerations of the city. Together with WRI Brasil, Niterói has developed a complete street pilot project on Visconde do Rio Branco Avenue in the city center. To make walking more comfortable in the tropical weather, the city plans to build sheltered and wider sidewalks as well as create rest areas. Further areas for improvement include: redistribution of public spaces, reformation of traffic signal system and traffic calming measures to enhance pedestrian safety. The pedestrian network and connectivity will also be enhanced through revitalization of the waterfront.

CREATING AN INTEGRATED CYCLING NETWORK

Cycling is an inclusive, affordable and efficient means of transport that has little adverse impact on the environment. In response to the challenges related to mobility, urban development and environment, Niterói launched the Niterói Bike Program in 2013, which is one of the projects defined in its municipal strategic plan “Niterói que Queremos” (2013-2023). This highlights the growing importance of cycling in Niterói’s transport planning process by complementing the public transport network, closing the first and last mile gap, and more importantly, reducing car use for short trips.

Improve cycling infrastructure

Niterói’s cyclists face daily road safety problems and a lack of adequate infrastructure. Recognizing the need to create a safe cycling environment and increase its viability for residents, the city is working to improve cycling infrastructure and promote a cycling culture. To date, the city has constructed 40 kilometers (km) of bicycle paths and has plans to increase the cycling network to 100 km by 2020. With cycling accounting for 4 percent of all trips, Niterói seeks to increase its modal split to well over 10 percent by 2030. Regular maintenance is managed by its Transport and Traffic Department (“Niterói Transporte e Trânsito”, called NitTRANS) to ensure bicycle paths are utilized.

Beyond bicycle paths, much attention has been given to bicycle parking facilities in Niterói. Guided by an integrated transport and land use planning approach, the city requires shopping malls, universities and newly constructed residential and commercial buildings to provide bike parking spaces. Local authorities plan to install parking spaces at all strategic locations across the city, including public transport interchanges, several stations, and other public spaces. In order to enhance the overall user experience of integrated mobility options, the city initiated the “Bicicletário Araribóia” project in 2017. This public bicycle parking station is located next to the ferry station in the city center and has 470 parking spaces. In average 1,500 cyclists use the Niterói -Rio ferry system each day.

Further measures have been taken to facilitate the increased up-take of cycling, including: 217 bicycle racks (“Paraciclo”) have been provided, 10 bike repair stations (“Totem”, such stations are equipped with spanner, wrench, screwdriver and other tools necessary for minor bicycle repairs) have been installed in the city centers and are free for use; bicycle lifts have been provided in some bicycle stations in the ocean region.

Make cycling inclusive through public participation

Public participation forms a key component in planning and developing a sustainable transport system. For example, the Pedal Sonoro collective, a local cycling interest group, has participated in the preparation of PMUS through the BICICLETA NOS PLAN campaign. The Cycling Infrastructure Manual (“Manual para elaboração de infraestrutura cicloviária”), which defines the requirements for the planning and operation of the cycling network, is also an outcome of active engagement with residents and collaborative efforts with groups of civil society. This ensures that interventions and proposals align with cyclists’ needs at an early stage.

“The “U” Project is an example of how Niterói is investing in bike lanes and other mobility options to connect urban renovation areas, improve communities, and advance towards sustainability and climate responsibility”.

Axel Graef
General Secretary at Niterói City Hall

Cultivating a cycling culture

To make cycling more attractive, experts and cycling campaigners have highlighted the importance of creating a cycling culture and changing travel behavior. To encourage the use of bicycles as a daily mode of transport, Niterói has implemented various campaigns and programs, including intercultural cycling tours, car-free day as well as educational campaigns aimed at the general public and specific groups such as school children. The city has also embraced social media to gather feedback and disseminate information to help motorists, cyclists and pedestrians coexist in harmony.

FUTURE PROJECTS

What is in store for pedestrians and cyclists in Niterói in the years to come? One of the key projects is the “U” project, which aims to build an integrated and high-quality cycling network that will connect the northern region and the city center, complementing the bus and ferry system. This will be partially funded by CAF - Development Bank of Latin America through the Transoceânica project. To further encourage cycling, the city is also planning to create a bike share system through a public-private partnership, by taking into account the demand for such services, its urban context, and traffic characteristics. The city seeks to bring new financing opportunities from international and national institutions.

RESULTS AND LESSONS LEARNED

Active mobility options have become increasingly popular in Niterói. In a public consultation held in 2018, 47 percent of survey respondents said they would consider cycling for their daily commute. The infrastructure and design enhancements depend not only the commitment of the City Council to its vision for non-motorized transport but also meaningful engagement with local organizations and interest groups. However, car usage remains high in the city, making up 24.3 percent of all trips and changing people’s mindsets to be less dependent on cars can be challenging. This hinders the implementation of projects that attempt to reclaim the public space for people.



Moving forward, significant improvements are needed in walking, cycling, and public transport to bring about a paradigm shift. Above all, they must be consistently promoted as healthy, low carbon means of transport that can revitalize the urban environment and provide a wide spectrum of benefits for all.





“Like many cities in developing countries, Niterói faces mobility challenges in both non-motorised qualification on its compact and dense zone and in providing high-quality transport accessibility on its recent car-based suburban neighborhoods”.

Renato Barandier

Municipal Secretary for Urban Planning and Mobility at Niterói City Hall

KEY CONTACTS

Municipal Secretary of Urban Planning and Mobility Department of Urban Planning

José Renato da Gama Barandier Jr.
www.niteroi.rj.gov.br

ICLEI World Secretariat

EcoMobility Team - ecomobility@iclei.org
www.iclei.org | @ICLEI @ecoMobility_

TUMI Initiative

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

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Author: Yiqian Zhang

Contributors: Rogério Gutierrez Gama,
Valéria Augusta Braga

Editor: Dana Vigran, Tu My Tran

Layout: Matteo Franceschi

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ADDITIONAL READING

José Renato da Gama Barandier Jr. (2016). *Niterói's central area urban redevelopment project: Planning to achieve sustainable mobility in the metropolitan area of Rio de Janeiro*. World Conference on Transport Research - WCTR 2016 Shanghai. 10-15 July 2016. Retrieved from <https://doi.org/10.1016/j.trpro.2017.05.341>

José Renato da Gama Barandier Jr. (2014). *Applying the 'Backcasting' method to achieve sustainable mobility: the case of Niterói*. European Transport. Conference 2014 – from Sept-29 to Oct-1, 2014. Retrieved from: https://ac.els-cdn.com/S2352146515001131/1-s2.0-S2352146515001131-main.pdf?_tid=fb17be2b-c155-4a6f-89ee-8060df2214e0&acdnat=1552476057_98600888c04486358480b91b79dfdf0a

Niterói's Geoinformation Management System ("Sistema de Gestão de Geoinformação", called SIGEO), including a detailed cycling infrastructure map. Retrieved from <http://geo.niteroi.rj.gov.br/portal/apps/webappviewer/index.html?id=7fb16fc38c5745e28ed34c22f0902940>

Niterói Bicycle Program website:
www.niteroidebicicleta.rj.gov.br

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

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