



Deep Dive City Rio de Janeiro Brazil

General Information about the City¹

Population
6.78 million
(estimated population, 2021)

City area
1,200.33 km²



Average temperature
23.7 °C

Annual rainfall
1500 mm/year

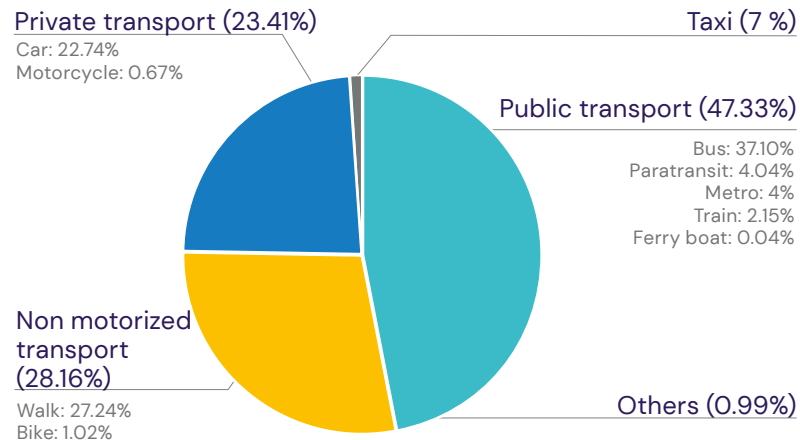
Climate risks
Extreme temperature (hot) (heat waves, water scarcity)
Flood (coastal flood, flash and surface flood)
Storm (rain storm, severe wind)

Number of car ownership
2,116,678 car fleet
312 cars per 1000 inhabitants

GDP (US Dollars)
364.05 billion

Urban Mobility System

Modal split



Public transport modes

- Conventional Municipal Bus
- Conventional Metropolitan Bus
- Bus Rapid Transit (BRT)
- Paratransit
- Metro
- Train
- Light Rail Transit (LRT)
- Taxi + Ride-Hailing Apps
- Motorcycle Taxi
- Ferry boat
- Bike sharing

Carried passengers
(Avg. daily demand)

2019: 2.76 M pax/day
2020: 1.51 M pax/day
2021: 0.95 M pax/day

Gender equity
(Share of women of all public transport passengers)

53.98%

Total no. of routes / buses

2019
- 408 routes
- 5,369 buses

2021
- 493 routes
175 (35.5%) are suspended
- 6,525 licensed vehicles
Average Operating Fleet: 2,873



Climate and Urban Mobility Policies



Vision for net zero urban mobility

- Implementing Cycling Master Plan
- Cycling infrastructure maintained and requalified
- Cycle routes expanded by 160km, and connected to other transport modes
- Expanding bike sharing system
- Implementing neutral districts through concepts of walkability, smart cities, environmental education, healthy cities, public participation, adoption of clean technologies, and carbon neutral

Experiences

2011: Testing of two hybrid technologies, a serial and parallel bus, under the C40-CCI Hybrid & Electric Bus Test Program.

Electric Summer Pilot Project by the Municipal Transport Secretariat

The project aims to demonstrate the feasibility and competitiveness of using electric buses in the city. For the summer of 2021/2022, the operation of a tourist line was planned, on which vehicles from different manufacturers were used.

Political commitments

- Sustainable Development and Climate Action Plan (2021)
- City for Climate Program (2019)
- Municipal Decree - Green and Healthy Street Declaration (2019)
- Municipal Sustainable Urban Mobility Plan (2019)
- Master Plan for Sustainable Urban Development (2011)
- Municipal Policy on Climate Change and Sustainable Development (2011)

References:

1. - <https://www.c40.org/cities/rio-de-janeiro/>
- <https://cidades.ibge.gov.br/brasil/rj/rio-de-janeiro/panorama>
- <https://www.gov.br/infraestrutura/pt-br/assuntos/transito/conteudo-denatran/frota-de-veiculos-2021>
2. - <https://www.ebusradar.org/en/>

Electric Buses

Targets for electric bus adaption

- 1 In 2024, Rio will have at least 69 electric buses in operation, however it is under discussion.
- 2 From 2025, any concession/permission contract for the delegation of public transport service by bus can only be entered into with contractual provision of zero-emission buses operation.
- 3 By 2030, replace 20% of the public transport fleet with zero-emission buses, reducing air pollution and urban noise.

Business model

The prospected business model is based on separation between fleet provision and system operation, which is considered in the international literature as the best way to align incentives, mitigate risks and increase public transport concessions attractiveness.

Bus technology share²



6525

ICE – Buses

0

Hybrid-Buses

0

E-Buses

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