Request for proposal (RfP)

Development of a preliminary feasibility study to assess the alignment and demand for a medium- or high-capacity public transport system along the Transuburbana corridor, as well as to design a business model for implementing a Multimodal Ecoterminal within the corridor.

August, 2025

Breathe Cities Rio de Janeiro

1. Background and institutions

a) Background

Breathe Cities
Breathe Cities is a first-of-its-kind initiative financed by **Bloomberg Philanthropies** and implemented by **Clean Air Fund** in partnership with **C40 Cities**; its objective is to clean our air, cut CO2 emissions, and enhance public health in cities around the world. It was launched in June 2023 by Michael R. Bloomberg, UN Secretary-General's Special Envoy on Climate Ambition and Solutions and Bloomberg Philanthropies founder, and Sadiq Khan, then London Mayor and C40 Cities Co-Chair. The initiative brings together air quality data, communities, and city leaders to reduce air pollution and planet-warming emissions by 30% across participating cities by 2030 compared to 2019 levels. This effort will prevent 55,000 premature deaths and 111,000 new cases of asthma in children, save $147 billion in avoided hospitalizations and deaths and avoid 394 megatonnes of CO2e emissions.

Breathe Rio de Janeiro
Rio de Janeiro is one of the cities participating in the Breathe Cities initiative. The city faces significant challenges related to air pollution, which negatively affects public health, the environment, and economic productivity. Activities with high vehicle emissions contribute to 51% of PM2.5 emissions. The most affected areas of the city, such as the Center and the North Zone, have high levels of pollution, resulting in respiratory diseases and a reduced quality of life for residents.

To address air pollution and climate change issues, priority areas were selected based on the 2021 Plan for Sustainable Development and Climate Action in Rio de Janeiro, with 45 sustainable corridors throughout the city aimed at increasing well-being, economic engagement, and reduce social inequality by improving access to public services such as health, education, and social assistance. The priorities of these corridors related to air quality focus on urban densification and infrastructure development aligned with the principles of Transport Oriented Development (TOD), green infrastructure, and social and economic actions to combat poverty and improve public infrastructure.

For this reason, Breathe Cities is issuing this **Request for Proposals** to obtain an assessment of the expected scope of technical assistance, as well as to estimate the cost and compliance capacity of potential service providers in Rio de Janeiro. Please read carefully the objectives and expected results of the consultancy described belo w.

b) **Institutions**

Bloomberg Philanthropies.
Bloomberg Philanthropies invests in 700 cities and 150 countries around the world to ensure better, longer lives for the greatest number of people. The organisation focuses on five key areas for creating lasting change: the Arts, Education, Environment, Government Innovation, and Public Health.

Clean Air Fund
Clean Air Fund is a philanthropic organisation that supports partners to create a future where everyone breathes clean air. To achieve this, it funds and partners with organisations across the globe that promote air quality data, build public demand for clean air and drive action while influencing and supporting decision makers to act on air pollution.

C40 Cities Climate Leadership Group Inc.
C40 Cities is a network of nearly 100 mayors from the world's leading cities, who are working to take the urgent action needed to tackle the climate crisis and create a future where everyone, everywhere can thrive. C40 city mayors are committed to using a science-based, people-focused approach to help the world limit global warming to 1.5°C and build healthy, equitable and resilient communities.

2. Summary, objective, and background of the project

2.1. Project Summary

Development of a business model for the implementation of a Multimodal Ecoterminal along the Transuburbana corridor; and a preliminary feasibility study assessing the alignment and demand for a medium- or high-capacity public transport system in the corridor.

The project aims to provide robust studies through research and analysis to identify, prioritize, and design urban interventions to reduce air pollution and improve quality of life. Recognizing the challenges posed by social vulnerability and the need for additional assistance in key areas, the project focuses on the northern zone of Rio. This area, characterized by high population density, existing urban infrastructure, and social importance, presents significant opportunities to improve the well-being of residents and stimulate economic growth by supporting sustainable urban development initiatives.

The project will develop a business model for the creation of a Multimodal Ecoterminal for the Public Bus Transport System (SPPO) in the vicinity of the Transuburbana corridor. An ecoterminal is a public transport terminal designed to promote environmental sustainability, energy efficiency, and urban comfort, going beyond the basic functions of boarding and integration. It can incorporate green infrastructure, such as green roofs and sustainable drainage; use renewable energy sources and lighting and thermal efficiency solutions; promote proper waste management and the use of sustainable materials in construction. In addition, it is designed to integrate different modes of transport, encourage active mobility, and ensure universal accessibility, all with the support of smart technologies focused on the user experience.

This initiative aims to improve connectivity between the existing light rail network in the Low Emission District of Downtown Rio and the Transcarioca BRT corridor (with a light rail study already in place). The project also includes a pre-feasibility study for the implementation of a medium- or high-capacity corridor and a Connected Transport Zone in the North Zone. These two initiatives would increase connectivity with the existing light rail network in the Low Emission District of Downtown Rio through a multimodal transport terminal, improving public transport efficiency and reducing emissions, while providing a reliable, more accessible, and efficient transit solution for residents. This provides a much-needed convergence between the different infrastructure projects in the Low Emission District in the city center and the North Zone Transport Center.

The Transuburbana line was included in Rio de Janeiro's Sustainable Urban Mobility Plan (PMUS) in 2016. This initiative seeks to integrate and modernize the city's transport system. The line aims to improve connections between suburban and central areas, increasing accessibility and promoting more efficient and sustainable travel. The Sustainable Urban Mobility Plan (PMUS) was developed by the City of Rio, through the Municipal Transportation Secretariat (SMTR), to guide public investments in the city's transportation infrastructure. In addition to being a strategic project of the City Hall, it seeks to promote more sustainable mobility, in line with the UN Sustainable Development Goals (SDGs) and the National Urban Mobility Policy. The PMUS should integrate motorized and non-motorized modes into a cohesive and sustainable system, prioritizing public transportation, walking, and cycling, and taking into account greenhouse gas emissions.

Figure 1 illustrates the connectivity provided by the Transuburbana corridor, which connects the existing light rail system in the central area of the city to the Transcarioca BRT corridor. The map highlights the existing BRT and SPPO terminals and new terminals planned by the Municipal Transportation Secretariat. All terminals are within an area directly impacted by the corridor, which is 1.5 km from its axis.

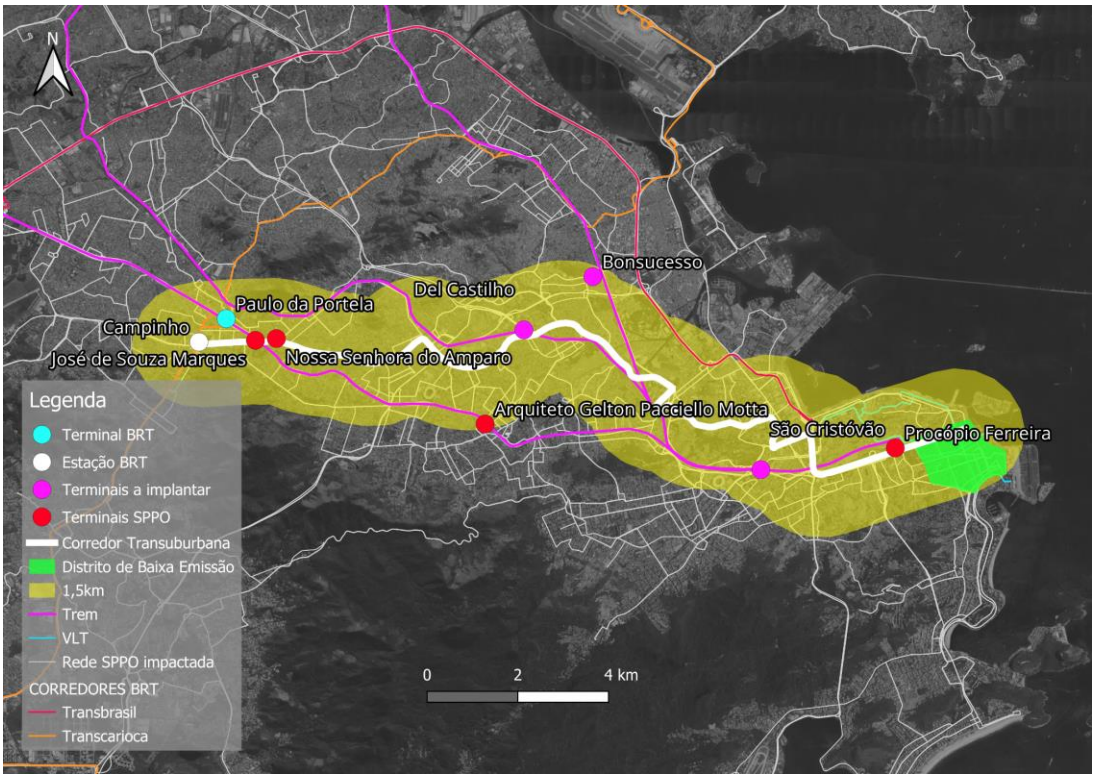

Figure 1 - Illustration of the proposed connection between the Low Emission Zone in the city center and the Connected Transport Zone

Figure 2 illustrates the route of the Transurban Corridor, where a study is planned for a multimodal transport terminal located between the neighborhoods of Madureira, Campinho, Cascadura, and Centro.

The project aims to research, identify, prioritize, and design interventions through studies that significantly reduce air pollution and improve quality of life. By focusing on the study for a medium- or high-capacity corridor, the project will contribute to improving air quality while supporting sustainable urban development and stimulating economic growth in the northern part of the city. The study for the medium- or high-capacity corridor will enable the municipality to develop a plan for the future implementation of a light rail or electric BRT line in the northern part of the city.

This RfP aims to hire a service provider to carry out surveys, analyses, studies, modeling, road design, architectural and urban design, and engineering (as described below) for the specified areas, in dialogue with the City of Rio de Janeiro and the Breathe Cities team.

3. Project activities, results, and schedule

Work Package: Development of a preliminary feasibility study to assess the alignment and demand for a medium- or high-capacity public transport system along the Transuburbana corridor, as well as to design a business model for implementing a Multimodal Ecoterminal within the corridor.

The preliminary studies will be evaluated and must be approved by the following municipal agencies: Municipal Transportation Secretariat (SMTR), Municipal Secretariat for Urban Development and Licensing/Subsecretariat for Urban Planning (DU/SUBPU), Traffic Engineering Company (CET-Rio), Carioca Partnership and Investment Company (CCPar) in their respective responsibilities and coordinated by the Planning Office of the Municipal Secretariat of the Chief of Staff (CVL/SUBPAR/EP), which will promote the final approvals.

The service provider will perform the following activities:

- **Medium- or high-capacity public transportation system - the Transuburban corridor:** Preparation of preliminary feasibility studies on route design and demand for a sustainable mobility solution that connects the North Zone to the city center, with the potential to transform mobility patterns, promoting accessibility and reducing pollutant emissions. The study should consider the evaluation of data from users who already use the system through the collection of ticketing and GPS information, as well as the analysis of pent-up demand through household interviews.

- **Executive project and business model for the implementation of a Multimodal Ecoterminal along the Transuburban corridor:** Preliminary architectural/engineering studies are needed to assess the conditions for adapting bus terminals to electric charging infrastructure. The construction potential should be considered to enable the construction and maintenance of this public infrastructure and the sale of electric charging to other modes of transport, such as urban freight vehicles. This enables the energy transition of the bus system in this region. Solution to improve sustainable road traffic in the project area with the potential to transform mobility patterns, assessing the surroundings of the terminal area and proposing measures. The following table shows the existing or planned terminals within the direct impact area of the Transuburbana corridor, which is 1.5 km from its axis.

Name	Type	Status
Paulo da Portela	Terminal	Existing (BRT)
José de Souza Marques	Terminal	Existing (SPPO)
Nossa Senhora do Amparo	Terminal	Existing (SPPO)
Architect Gelton Pacciello Motta	Terminal	Existing (SPPO)
Procópio Ferreira	Terminal	Existing (SPPO)
Del Castilho	Terminal	Under construction (SPPO)
Bonsucesso	Terminal	Under construction (SPPO)

São Cristóvão	Terminal	To be built (SPPO)

Component 1: Prepare a demand study for the Transuburban Corridor and surrounding area, considering medium- or high-capacity transport systems and eco-terminals.

Responsible for managing component 1: Breathe Cities team, SMTR and CCPar

Activity 1.1 Demand studies:

- Conduct research and analysis of current demand in the corridor's area of influence, considering public and private (active and motorized) modes of transport.

- Conduct research and analysis of current levels of emissions and pollutants based on identified mobility patterns.
- Calculate passenger flow for each existing and proposed terminal, including user profile information and future demand projections, considering factors that influence the attractiveness of ecoterminals, such as the implementation of associated developments and the redevelopment of the surrounding area.
- Conduct modeling activities to project future demand based on the current network load and projections of socioeconomic and air quality impacts variables for the project horizon.
- Generate origin/destination (O/D) matrices in the corridor's areas of influence for the base year and for future years up to the project horizon.

Deliverable 1.1.1: *Demand study and emissions analysis report.*

Deliverable 1.1.2: *Future Demand Modeling and Sensitivity Analysis Report*

Deliverable 1.1.3: *Georeferenced Origin-Destination (O/D) Matrix Database – Base Year and Future Horizons.*

Component 2: Develop a feasibility study for the implementation of a medium- or high-capacity public transport system in the Transuburban Corridor

Responsible for managing component 2: Breathe Cities team,SMTR and CCPar

Activity 2.1 Feasibility study for the implementation of a medium or high-capacity corridor:

- Conduct a diagnosis (traffic flow, existing infrastructure, maintenance, interference, air poluttion hotspots, open spaces and public land, among others) and identify potential routes for accommodating an exclusive lane for the medium or high-capacity corridor.
- Develop scenarios for the layout and location of stops and terminals for the Transurburbana Corridor, considering the existing physical infrastructure, such as roads, intersections, and social restrictions along the corridor, subdividing it into three sections:
    - Sulacap – Cascadura;

    - Cascadura – Triagem; and
    - Triagem – Gentileza Terminal.
- Develop a preliminary traffic and air quality impact study for pedestrians, cyclists, and motor vehicles, focusing on crossings and intersections along the corridor.
- Assess the feasibility of implementing bike lanes, widening sidewalks, burying wires, standardizing utility poles, and expanding tree planting along the corridor.
- Present a preliminary proposal for the phasing of the corridor's implementation, taking into account the physical constraints of implementation and the progress of the works.

Deliverable 2.1.1: Technical Diagnosis and Mapping of Existing Road Infrastructure. This deliverable is expected to include a physical characterization of the roads; existing road infrastructure; sidewalk conditions and accessibility; land use and immediate surroundings; urban infrastructure elements; traffic and operating conditions, including traffic information; Identification and estimation of pollution hotspots based on mobility patterns and traffic intensity

Deliverable 2.1.2: Report on the route, location of stops, typical sections, implementation phases, and traffic and air quality impact. Consider a feasible study that meets the requirements for future implementation of both a light rail line and a possible electric BRT.

Deliverable 2.1.3: Integrated Urban Planning and Green Infrastructure Study Along the Corridor. Develop and list proposals for urban redevelopment, bicycle infrastructure, universal accessibility, street furniture, and road safety.

Component 3: Prepare an executive project study and business model for the implementation of a Multimodal Ecoterminal

Ecoterminal: Bus terminal or final stop with infrastructure for recharging electric vehicles, which adopts sustainable practices, aiming to minimize environmental impact, and can absorb other modes of transport (freight, cars, bicycles).

Responsible for managing component 3: Breathe Cities team,SMTR and CCPar

<u>Activity 3.1 Business model for the implementation of a new multimodal ecoterminal for the Public Bus Passenger Transport System (SPPO):</u>

- Define, among the existing terminals or those to be built in the Transuburbana corridor, which has the greatest construction potential to be chosen as a Multimodal Ecoterminal, using air quality impacts and socioeconomic indicators as key selection criteria.
- Evaluate adjacent commercial areas as a possible source of additional revenue to cover the maintenance costs of the new Multimodal Ecoterminal.
- Assess the situation of the terminal, if existing, including the physical integration infrastructure with other modes of transport and the state of repair of the surrounding sidewalks, from the point of view of universal accessibility.
- Market study identifying potential uses for the Multimodal Ecoterminal, such as retail, education, health, entertainment, parking (park and ride), advertising, etc.
- Prepare architectural designs for the multimodal station, including charging areas for electric buses, as well as considering the various possible uses of the terminal (bicycle parking, charging for private vehicles, etc.) and possible integration with medium and high-capacity transport systems, including an assessment of the need for expansion and expropriation, if applicable.

- Develop projects for the necessary infrastructure, including energy, water, and sewage networks.
- Prepare preliminary architectural studies for the Multimodal Ecoterminal, considering charging areas for electric buses, cargo vehicles, bicycles, etc., spaces for commercial exploitation (ABL), and the possible implementation of associated developments.
- Lead interaction with other mode concessionaires to define possible interventions to connect the means of transport.
- Mobility proposals: People flows, integration, intermodality, intersections, accessibility, bike lanes.
- Assess the feasibility of implementing distributed generation (DG) or purchasing energy on the open market (ACL).
- Propose a governance model for managing the Multimodal Ecoterminal, including the roles of public agencies, operators, and private agents.
- Preliminary technical project for electrification through an analysis of electricity demand; selection of transformers, generators, panels, cables, distribution system.

Deliverable 3.1.1 – Technical and institutional report on the Ecoterminal (including site definition, market study, governance alternatives, air quality impact and modal integration).

Deliverable 3.1.2 – Preliminary architectural study (volumetry, uses, gross floor area, accessibility, phases).

Deliverable 3.1.3 – Preliminary technical infrastructure design (electrical, sanitation, recharging, GD, ACL).

Deliverable 3.1.4 – Technical design for electrical infrastructure.

Activity 3.2 Economic feasibility study. *Report containing a business model for the implementation of a Multimodal Ecoterminal, including market research and feasibility assessment of associated projects.*

- Benchmarking of projects associated with transport terminals and stations.
- Develop a detailed business plan for the initial investments to implement the project (CAPEX).
- Develop a detailed business plan indicating operating and ongoing costs over the project horizon (OPEX).
- Perform a financial analysis with presentation of the project's cash flows based on estimates of operating revenues and ancillary revenues.
- Develop a detailed business plan for ancillary revenues, such as advertising, commercial exploitation, associated ventures, real estate development, fiber optics, 5G antennas, naming rights, among others.
- Develop business model scenarios and project structuring alternatives.
- Analysis of merit figures, such as Net Present Value (NPV), Internal Rate of Return (IRR), and project payback.

- Urban analyses and detailed information on land use and occupation, as well as existing and proposed building parameters for the terminal area involved in economic and financial modeling.

Deliverable 3.2.1 – Economic and financial analysis report and business model structuring (CAPEX, OPEX, NPV, IRR, payback, ancillary revenues, structuring scenarios).

Deliverable 3.2.1 – 2D and 3D urban simulations of the proposed multimodal eco-terminal and associated developments, considering the projected land use and occupation.

4. Budget

The total contract value for this project shall not exceed US$ 170,000, including applicable taxes. Proposals above the established budget will not be evaluated.

5. RfP and project schedule

RfP schedule

Deadline for submission of proposals	29 August 2025
Deadline for questions	22 August 2025
Decision on selection	12 September 2025
Notification of results to all applicants	15 September 2025
Start of project	As soon as the contract is signed

Project Schedule

The following table presents an indicative schedule for the last week in which the final results are to be presented, considering a total duration of 12 months for the entire project. However, a different distribution may be presented and justified in accordance with the technical proposal, and the final schedule will be agreed between the service provider, C40, the Clean Air Fund, and the city during the initial phase.

Component	Activity	Deliverable	Deadline
Component *Prepare a demand study for the Transuburban Corridor and surrounding area, considering medium- and high-capacity transport systems and eco-terminals.*	***Activity 1.1*** *Demand studies.*	***Deliverable 1.1*** *Demand study report.*	*1-4 month*
		Deliverable 1.2: *Future Demand Modeling Report.*	*1-4 month*
		Deliverable 1.3: *Georeferenced Origin-Destination (O/D) Matrix Database – Base Year and Future Horizons.*	*1-4 month*
Component 2 *Develop a feasibility study for the implementation of a medium- or high-capacity public transport system in the Transuburban Corridor.*	***Activity 2.1*** *Feasibility study for the implementation of a medium or high-capacity corridor:*	***Deliverable 2.1:*** *Technical Diagnosis and Mapping of Existing Road Infrastructure.*	*4-8 month*
		Deliverable 2.2: *Report on the route, location of stops, typical sections, implementation phases, and traffic impact.*	*4-8 month*
		Deliverable 2.3: *Integrated Study of Urban Planning and Green Infrastructure Along the Corridor. Develop and list proposals for urban redevelopment, bicycle infrastructure, universal accessibility, street furniture, and road safety.*	*4-8 month*

Component 3 *Prepare an executive project study and business model for the implementation of a Multimodal Ecoterminal.*	***Activity 3.1*** *Business model for the implementation of new ecoterminals and the redevelopment of existing urban terminals of the Public Bus Transport System (SPPO).*	***Deliverable 3.1.1*** *Technical and institutional report on the Ecoterminal (including location definition, market study, governance alternatives, and modal integration).*	*8-12 month*
		Deliverable 3.1.2 – *Preliminary architectural study (volumetry, uses, gross floor area, accessibility, phases).*	*8-12 month*
		Deliverable 3.1.3 – *Preliminary technical infrastructure design (electrical, sanitation, charging, GD, ACL).*	*8-12 month*
		Deliverable 3.1.4 – *Technical design for electrical infrastructure.*	*8-12 month*
	Activity 3.2 *Economic feasibility study.*	***Deliverable 3.2.1 –*** *Economic and financial analysis report and business model structuring (CAPEX, OPEX, NPV, IRR, payback, ancillary revenues, structuring scenarios).*	*8-12 month*
		Deliverable 3.2.2 – *2D and 3D urban simulations of the multimodal eco-terminal proposal and associated developments, considering the projected land use and occupation.*	*8-12 month*

6. Proposal Evaluation Criteria

Proposals will be evaluated against the following criteria:

Evaluation criteria	Weight
Understanding of the project, work plan, and methodology The work plan demonstrates understanding of the project requirements and risks; soundness of project execution and appropriateness of methodology; ability to meet the listed requirements.	40%
Experience, knowledge, and references Capacity, experience, and availability of the proposed team, along with references from other clients, including nonprofit clients.	30%
Overall integration of equity, diversity, and inclusion	10%
Cost-benefit ratio Economy, efficiency, effectiveness, and equity	20%

7. Proposal Guidelines

This Request for Proposal presents the requirements for an open and competitive process. Proposals will be accepted until **5:00 pm Brasilia Time (GTM-3), August 29, 2025.** Any proposals received after this date and time will not be accepted. All proposals should include clear timetables, a description of how you will work with Breathe Cities, clear costs, and details on your experience in this area.

The proposal should give the Breathe Cities team evaluators all the information they need to assess your proposal. Proposals should be limited to 15 pages not including a cover page / letter and attachments. All applications must be submitted in PDF format with at least one-inch margins. The font size must be 11 points or larger. **The proposal should be submitted in English.**

Your proposal must include adequate information about how it responds to the evaluation criteria, assumptions about the project, risks you have identified, and appropriate mitigation measures. In addition, your proposal also needs to show that the costs were calculated to enable evaluation of cost reasonableness. Your proposal should be organised accordingly and should include (but is not limited to) the information below:

1. **Executive Summary**
   Brief overview of the approach.
2. **Organisational Profile and work team**
   a. Details of the organisation, including type (NGO, academia, consulting, private, etc.) and where the organization(s) is(are) based.
   b. Description of the proposed work team.
   c. General overview of the relevant experience related but not limited to the scope.
   Note: If the proponent is not based in Rio de Janeiro, it will be necessary to have a local partner and detail in the proposal how each partner will work to ensure the implementation of the project and on-the-ground support of field activities.
3. **Technical proposal**
   a. Indicate how your organization will accomplish each of the components, activities and deliverables outlined in this request for proposals.
   b. Indicate the different stages, milestones, and contact moments with the Breathe Cities team – adequate review periods should be included.
   c. Include a detailed Gantt chart outlining activities in Excel or PDF format.

4. **Management Plan**
   Explanation of how to work with and involve city government and Breathe Cities team - key roles and responsibilities, reporting, change requests, escalation of issues, sign-off of work stages and acceptance criteria.

5. **Risk Management Approach**
   Description of any risks and assumptions made in planning the project, along with appropriate management and mitigation strategies.
6. **Budget**
   The budget should provide a detailed cost breakdown in USD for each project component, including all applicable taxes/VAT. We encourage you to break down costs by activity.
   Please also attach a spreadsheet with a detailed breakdown of costs, including staff, consultants, meetings, travel, other related expenses, and indirect costs. Note that no more than 10% of the total budget may be allocated to overhead. You must include sufficient information on how the costs were calculated to allow for an assessment of cost reasonableness.
7. **References**
   At least two recent organizational references with phone numbers and contact details (name, position in the organization, email, city).

a. Supplier Diversity

Breathe Cities is committed to supplier diversity and inclusive procurement by promoting equity, diversity, and inclusivity in our supplier base. We believe that procuring a diverse range of suppliers gives us a wider range of experiences and thoughts from suppliers and thus best enables us to deliver to the whole range of our diverse cities and the contexts that they operate within.

We strongly encourage suppliers (individuals and corporations) that are diverse in terms of size, age, nationality, gender identity, sexual orientation, majority ownership and control by a minority group, physical or mental ability, ethnicity, and perspective to put forward a proposal to work with us.

Proposals from companies located outside of Rio de Janeiro will be considered; however, they must demonstrate association with a local partner. This will ensure their active participation in tasks requiring physical presence and in strategic meetings. If necessary, partnerships with local organisations, universities, companies and consultants are also recommended to strengthen collaboration and reduce the carbon footprint associated with travel.

b. Subcontracting

If the organisation submitting a proposal needs to subcontract any work to meet the proposal's requirements, this must be clearly stated. All costs included in proposals must be all-inclusive of any outsourced or contracted work. Any proposals that call for outsourcing or contracting work must include a name and description of the organisations being contracted.

8. Submission

Please submit proposals via email to:

Diego Blanc - City Advisor: dblanc@c40.org

Alexandre Batista - Breathe Cities Lead (Brazil): abatista@cleanairfund.org

Heloisa Ribeiro – Breathe Cities Analyst: hribeiro@cleanairfund.org