

Living Labs Update

Quito, Ecuador

SOLUTIONSplus



The SOLUTIONSplus project received funding from the European Union Horizon 2020 research and innovation Programme under grant agreement no. 875041

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The SolutionsPlus project aims to advance sustainable urban mobility through innovative e-mobility solutions. Partners established Living Labs in Quito to test these solutions, focusing on technology, information, and inspiration to enhance project impact.

Key Objectives:



Inform: Enhance the capabilities of local authorities, public transport operators, and entrepreneurs by providing tools for planning, assessing, implementing, and operating e-mobility solutions.



Inspire: Promote e-mobility innovations by inspiring stakeholders through peer exchanges on new products and services.



Initiate: Foster policy and business collaboration by forming partnerships and developing new e-mobility business models.



Implement: Create reference models for e-mobility through demonstration projects, ensuring long-term sustainability and replication.



10 e-cargo bikes



154
recycled materials
collection points



16 Tons



491.74 kg CO₂e



2 months
(7 nov- 6 jan)



229 trips



956
packages



1,071 km



Impact: Integrate innovative concepts into policy, funding, and business practices to support global sustainability and climate goals.

Quito, with a population of 2.8 million, has an integrated BRT system with five lines, one of which uses trolleybuses. The system, however, is at capacity and needs new zero-emission units. In December 2023, Quito launched its first subway line and is modernizing its public transport system.

The city has committed to reducing GHG emissions by 30% by 2030 and achieving climate neutrality by 2050 through the Climate Action Plan for Quito (PACQ). Priorities include zero-emissions public transport, an emissions-free historic center, integrated public transport, active mobility, and low-carbon freight transport. The Sustainable Mobility Master Plan 2023-2042 will guide these efforts.

Demonstration Action in Quito

The Quito demonstration focused on advancing e-mobility in three key areas:

1. **Multimodal E-Mobility Hub:** Implemented in the Historic Center of Quito, this hub introduced locally designed Light Electric Vehicles (LEVs) to improve last-mile logistics. The project included two phases: testing 10 e-cargo bikes and later 4 e-mini vans, 2 for cargo and 2 for passengers, and 4 e-quadracycles.
2. **Capacity Building:** Provided technical assistance on e-buses to municipal representatives, enhancing their expertise in e-mobility.
3. **Mobility-as-a-Service (MaaS) Solutions:** Developed a MaaS app in collaboration with local agencies. Tested from November to December 2022, the app helped students plan trips and pay for public transport, with positive feedback on its functionality and potential.

Inform: Conducted virtual training on low-carbon logistics, LEV regulations, charging infrastructure, and e-buses, addressing identified technical gaps.

Inspire: Held workshops and meetings in 2022 with national and local stakeholders, and presented logistics model results in November 2023. Quito also participated in the Latin American e-Mobility Forum 2024 in Bogotá.

Initiate: Supported local start-ups with seed funding for LEV design and assembly. Provided technical support from European and local partners for vehicle design and charging infrastructure.

Implement: Launched e-cargo bikes and e-quadracycles in August 2022. The pilot led to significant environmental benefits, including reduced CO2 emissions.

Replicability: The tested vehicles are suitable for cities globally, especially in historic districts and congested areas. Similar projects have been replicated in various Latin American cities and Buenos Aires districts.

The demonstration phase showed notable economic, environmental, and social benefits, suggesting substantial improvements with broader implementation.

