



## Montevideo

Urban Pathways has been working with Montevideo since September 2018, when city and national officials joined the Transport and Climate Change Week 2018 in Berlin and it was clear to the UP team that Montevideo could be a great partner city for the implementation of sustainable urban mobility projects. As a result of these initial discussions, a representative of the Public Transport Department of the Municipality of Montevideo joined the UP Action Planning Days in February 2019, where the first ideas for sustainable mobility solutions were discussed, which led to the e-mobility pilot project now being funded by SOL+. Moreover, more than 10 start-ups working on passenger and freight 2- and 3-wheelers have been identified and will participate in the SOL+ call for innovators. All this building on the work conducted by the MOVÉS project (GEF 7 project) that has been promoting the integration of e-buses, e-cargo-vehicles and e-taxis in Montevideo's transport system. Finally, with regard to waste, the team is working jointly with Compost Ciudadano, a local NGO devoted to organic waste collection at the neighbourhood level, to fund the conversion of a diesel waste collection vehicle to electric. The Intendencia of Montevideo has participated in a webinar Organic waste treatment.

### **Pilot and Demonstration Action**

#### Installation of charging infrastructure for e-buses

The demo action consists of assisting Montevideo with the installation of charging equipment in a high-capacity bus depot to charge the existing 30 e-buses overnight, taking advantage of the electricity oversupply and a reduced electricity price at night. The high-capacity bus depot will integrate efficient and cost-effective smart charging solutions compliant with Combined Charging Standard (CCS) and Open Charge Point Protocol (OCPP). This will allow charging of up to 3 buses with 1 charger, i.e., 3 compact boxes powered by one charge cabinet that will charge 3 buses sequentially (up to 150 kW per bus) with all buses being charged within 6 hours. The main advantage of implementing this type of equipment is that the required grid connection is smaller, reducing initial investments and operational costs. Moreover, the possibility of installing fast chargers in the most travelled streets for buses to charge for 3-6 minutes on-route will be explored. These solutions can easily be integrated in existing operations by installing inverted pantographs and chargers at terminals and intermediate stops. Finally, a real-time platform for reliable and secure operation of electrical power networks, ranging from generation, transmission and distribution to e-buses will be developed to improve the system management. In addition to e-bus charging equipment, SOL+ will support local start-ups and SMEs to assemble electric 2- and 3-wheelers locally with Valeo and Bosch drivetrains. Besides enhancing local capacities and generating economic opportunities, the locally produced vehicles will serve to decarbonise last mile deliveries and passenger transport.

The proposed demonstration project concept was submitted on 25 April 2019 as a part of EC H2020 proposal for funding. It will be implemented by SOLUTIONSplus project (project duration 01/2020 – 12/2023) together with local public transport operators.

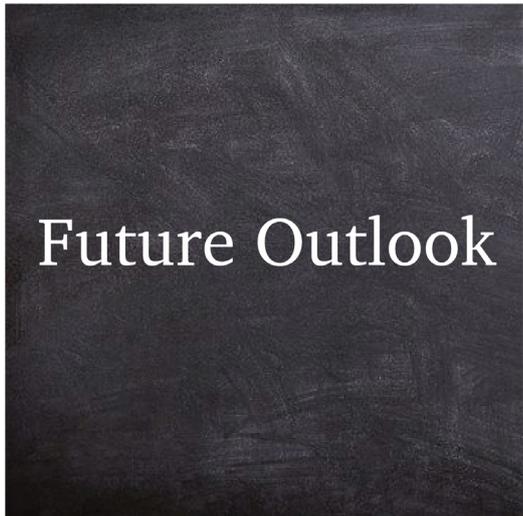
Budget: 1,500,000 EUR

Estimated direct GHG emissions reduction: 2,300 tCO<sub>2</sub>/year

## Outlook: Planned and/or Possible Future Action

### Integrating e-mobility in waste collection (pilot with composting NGO)

Compost Ciudadano is a local initiative that started in 2018 in order to reduce the amount of organic waste that ends in landfills, raise awareness and promote urban agriculture. At present, Compost Ciudadano collects the organic waste from 50 families in Montevideo's Old Town once a week. The families are given a 6 liter container, where they are supposed to collect all the organic waste produced at home. After 3 months, each household receives a bag of compost and the rest is commercialized. Their short-term goal is to increase the number of households to 100, with the potential of up to 2,000 homes that have shown interest in participating in the initiative. In order to reach their goal and at the same time maintain the project's emissions as low as possible, Compost Ciudadano is looking forward to hiring a local company to convert a diesel pick-up into an electric vehicle. This project will be supported by SOL+ by the provision of an electric drivetrain from the SOL+ consortium member, Valeo. Urban Pathways aims to support this Compost Ciudadanos by financing the residual value of the vehicle conversion.



Estimated budget: 20,000 EUR

Estimated direct GHG emissions reduction: 3 tCO2/year

Implemented by:



In cooperation with:



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based on a decision of the German Bundestag