

FACTSHEET PASIG



Demonstration City

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Pasig - Philippines

The City of Pasig is a highly urbanized city within the heart of Metro Manila, Philippines. It has a population of 755 thousand which is about 5% of the total population of Metro Manila, according to the 2015 National Census. Its land area covers 34.32 sq. km. which is comprised of 30 barangays – smallest administrative division in the Philippines. The calculated urban population density is 22,008 inhabitants per sq.km (Pasig City, 2019).

Shared Use of E-cargo Quadricycles

The demonstration in Pasig will focus on integrated and shared urban logistics solutions, as well as investigate the potential for public charging solutions. The activities on-the-ground will also include those that aim at improving the enabling conditions for e-mobility, and enhancing local capacities related to e-mobility.

Locally Developed/Assembled E-Cargo Quadricycles

Locally appropriate solutions addressing urban logistics are deemed to be quite important, as conventional vehicles that are currently being used are not particularly effective in conducting efficient movements considering the local conditions in the urban areas. The SOL+ demo will aim at producing and testing urban cargo quadricycles that are suited to the local conditions and can potentially transform how urban deliveries are done in the country.

These quadricycles combine the nimbleness of smaller vehicles and the carrying capacity of larger vehicles that are currently being used in conducting urban deliveries in Pasig (e.g. motorcycles, cargo tricycles, and mini vans). An example of a small L6 cargo quadricycle is provided on the picture on the right.

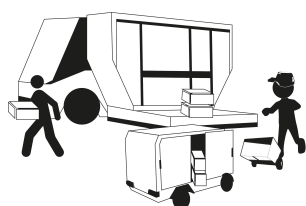
Potential Use Cases

The electric quadricycle vehicles to be developed will primarily be used for delivering parcels and letters within the City of Pasig. Other use cases will be explored as well, such as the shared use with the nearby public market, as well as waste collection.

A “shared vehicle use” concept will be investigated for feasibility in the Pasig pilot. This concept would centre on the shared use system that would feature the use of the vehicles by PHLPPost during the normal delivery hours of the day, and the conduct of last-mile deliveries for the Pasig City public market during the early hours of the morning (e.g. 3 am to 5 am). This concept is being explored as such shared usage would lead towards optimised total costs of ownership. This concept is also seen as a solution that can significantly alleviate urban congestion around public markets.

Flexible Electric Van

SOL+ will also be supporting a proposal being led by the De Lasalle University to a funding mechanism of the Department of Science and Technology to develop a “flexible electric van” (FLEV proposal) which features a chassis that can be used for multiple purposes (e.g. passenger/ cargo). Essentially, the vision is to make the FLEV also compatible for handling the cargo boxes to be used in the SOL+ quadricycles. SOL+ can provide a couple of units of the Valeo motors to the FLEV proposal. SOL+ (through the city equipment budget) can also purchase a unit of the FLEV for the use of PHLPPost, which can replace one of their dilapidated minivans.



Test category: The development of the quadricycle prototypes (and the charging facility/ies) will involve simulations, tests in controlled environments, and testing under real operational conditions. These technologies will be assessed as part of the activities.

Vehicles involved: 20 e-cargo 2/3 wheeler

Integration with PT system: Currently, investigations for pursuing the Mobility-as-a-Service concept are ongoing. In such a case that the national government is interested in pursuing the MaaS discussions, the integration of the geolocation of the SOL+ Pasig vehicles will be investigated.

Time span: June to December 2021