

# Building the Electric Mobility Ecosystem

Partner: Oyika

Location: Phnom Penh

## Background

The number of vehicles per year in Cambodia is growing at 14%, with 3.2 million vehicles registered in 2016. The Cambodia Climate Strategic Plan recognizes transportation as the highest consumption of energy and consequently a major driver of the carbon emissions in the Kingdom. Motorbikes are by far the greatest contributors to the pollution problem with almost 6 times more motorbikes than cars on the road in Cambodia. The objective of 'Building the Electric Mobility Ecosystem in Cambodia' is to mitigate the effects of climate change by reducing GHG emissions from fuel-powered motorbikes.



## Objectives

The objective of 'Building the Electric Mobility Ecosystem in Cambodia' is to **mitigate** the effects of **climate change** by **reducing greenhouse gas (GHG) emissions** from fuel-powered **motorbikes**.



## Key technologies and approaches introduced

- Data on electric ride share collected weekly through backend system: Demographic data including age, gender and also number of rides, kms ridden to calculate the distance travelled based on average speed.
- Over 400 local users and 300 foreign users of Go2 Bike share
- Approximately 25% of customers are female
- Survey conducted on general public in June 2021 to understand perception of electric vehicles. Over 100 people surveyed. Majority had heard of EVs but were yet to test drive them.
- Direct engagement with public through showcase event and online events. Ideally all events have opportunity for physical driving of EVs but this was not possible for events in April-Sept 2021 due to COVID
- Knowledge products and sharing conducted online via social media and primarily through educational videos in Khmer. Also shared through email campaigns to mailing list of 5000+ subscribers



## Outputs and key activities

Output	Activities
1.1. Establishment of electric motorbike ride sharing fleet in Phnom Penh	<ul style="list-style-type: none"> <li>• Modify 300 e-bikes</li> <li>• Launch of motorbike ride sharing pilot</li> </ul>
2.1. Validate understanding of barriers to electric vehicle uptake	<ul style="list-style-type: none"> <li>• Run 1 focus group workshop to validate</li> </ul>
2.2. General public have a greater understanding of the benefits of electric vehicles	<ul style="list-style-type: none"> <li>• Create 6 educational videos</li> <li>• Run 6 public sessions</li> </ul>
2.3. Increased visibility of careers in electric vehicle industry	<ul style="list-style-type: none"> <li>• Online marketing campaign</li> <li>• Recruit and train 2 interns</li> </ul>
2.4. Physical exposure for the public to view and experience electric vehicle technology	<ul style="list-style-type: none"> <li>• Organize an annual electric mobility showcase in 2020 and 2021</li> </ul>
2.5. MPWT, MEF and NCSD Officials have an increased understanding of the benefits of e-bikes for Cambodia	<ul style="list-style-type: none"> <li>• Run 4 workshops with government officials</li> </ul>

## Implementation progress

- 237,000 kms ridden on ride share and 120,000 km on electric food delivery (goal 484,000km by end Feb 2022)
- modified 75 e-bikes for electric bike sharing
- Successful event on 'Electrification of Vehicles for a Cleaner Cambodia' held with British Ambassador, Australian Ambassador, Senior Minister of MPWT and Minister attached to the Prime Minister Managing Director of EDC. Total almost 20k views and shared by MPWT and EDC
- Organised mobility showcase in 2021 with over 100 attendees and in progress for showcase 2022
- Released 5 videos about EVs
- Prepared 4 campaign posters on EV careers to be released end Nov to early Dec



## Key challenges and lessons learnt

- Knowledge and interest in electric vehicles is more widespread than anticipated. Most people in the focus group and that answered the survey are aware of EVs. During one public event where a convoy of EVs was ridden through Phnom Penh, there were many curious observers who knew the bikes were EVs.
- Additionally, the events on EVs are highly attended relative to other EnergyLab events. However key barriers identified at the start of the project are still the key barriers to uptake and most identified concerns (battery charging/infrastructure, cost, range)
- Challenges for technology deployment given that the project also included development of the ride-sharing technology (specifically battery and onboard computer). This means a longer timeline should be accounted for since it is not an existing product
- COVID-19 proved most challenging for the actual implementation of ride-share since during lockdown it was not possible to have ride-share system operating. This has meant the project pivoted some available e-bikes in to food delivery, where there is much greater riding capacity

