

## COMPLETION REPORT

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### Understanding Japan's Approach on Addressing Techno-Socio-Economic Challenges for Successful Electric Vehicle Development: Lessons for Malaysia

As the members in the historic Paris Agreement, Japan and Malaysia share the same mission to cap the global temperature rise at 2°C above pre-industrial levels. To realize neutral-carbon societies, one of the efforts taken is to promote the global adoption of electric vehicle (EV). Despite Japan and Malaysia sharing the same vision to deploy EV to reduce the national carbon emission, the EV adoption in Malaysia is still relatively low if compared to Japan. This research studied and learned the strategies implemented in Japan to alleviate the techno-socio-economic challenges of EV deployment.

The EV techno-socio-economic factors in Malaysia and Japan were assessed and analyzed. Researches had found several key factors that led to the success of EV deployment in Japan, which include the affordability of EV, well developed EV charging infrastructure, and the significantly cheaper energy cost of EV. An EV social acceptance study was also conducted to further understand the Malaysian public awareness, user behavior, and customer preferences regards to EV technology. The investigation was conducted via a social survey using online quantitative methodology with 22,793 participations. These participants are adults stratified to represent the Malaysian adult population profile. Approximately 25% of Malaysian express their interest to purchase an EV in the near future. However, the interest of EV purchase is strongly affected by the EV price. The majority of Malaysian that show great interest in buying an EV has the characteristics of: (i) younger generation age between 18 to 34 years old, (ii) lives in a landed property, (iii) passenger car as the most common mode of transportation, and (iv) their daily travel distance is averagely 12.7 km.

Based on the Japanese experience and EV social acceptance study, the recommended development strategies for the Malaysian EV industry include but not limited to increase the competitiveness of EV price, provide EV purchase incentive and tax exemption, promote city drive EV, promote home charger, construct more EV chargers, provide greater variety of public EV charger type, strategically placement of public charging facilities, introduce special charging rate, strengthen the EV-related technologies, and introduce penalty for using conventional car.

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