

Competition FEST and HDC cohost Urbanscape2022



First place team members



Second place team members

Faculty of Engineering, Science and Technology (FEST) of the Maldives National University (MNU) and Housing Development Corporation Limited (HDC) co-hosted a design competition titled 'URBANSCAPE 2022' for the design students of FEST. The competition was conducted from the 15th of Oct to 29th Oct 2022. The main objective of the competition was to create urban settings and furniture for various public spaces in Hulhumale'. With this competition, students got an opportunity to hone their skills, learn new things and got the opportunity to work in a real life problem while pursuing their education in the field of architecture and interior design. The proposed designs included site specific solutions which address the physical, natural and social context and provide creative designs to enhance public engagement and interaction aimed at strengthening the social fabric of the community

Sixty students from FEST participated in groups of five and each group selected a site of their choice and proposed a design for the selected location. The locations were identified by HDC, which includes three sites from Hulhumale' phase one and three sites from Hulhumale' phase two. With the guidance of industry professionals from HDC & FEST academic staff, students of FEST researched and explored new urban development concepts and developed unique conceptual designs for urban furniture to be located in Hulhumale'.



Third place team members





Winning Team Project "Alivaru" urbanscape competition 2016



The first canopy in Hulhumale' Central Park was designed by MNU Architecture students at a design competition held by HDC

The competition concluded over a two-day intensive workshop held from 28th – 29th Oct, where the teams gathered in a set venue to resolve their ideas, developed presentation boards and models and presented it to a panel of judges from HDC.

This is the second installment of such a competition conducted in collaboration with HDC. The first one was conducted in 2016 in which architecture students of FEST developed designs for a canopy for Central Park in Hulhumale'. The winning design has since been constructed in Central park and serves as a shelter for visitors as well as a playful installation at the park. Similarly, the best three designs of Urbanscape Design Competition 2022 will also be developed and installed by HDC in the specific locations of Hulhumale', to contribute to the vision of creating a vibrant, inclusive and sustainable city. Winning teams were also awarded with certificates and monetary tokens.

Electric Vehicles: A Hope for a Greener Future



The issues of climate change, understanding the magnitude and adaptation challenges have been rigorously discussed for decades. The rapidly growing transportation sector has a significant contributions to the effect of greenhouse gases and air pollution in congested cities like Male'. Electrifying transportation is a promising approach to mitigate the climate change issues. Nearly half of the world's oil resources are consumed by the ever-growing transportation sector in various forms leading one of the major challenge in mitigating climate change. Therefore, adaptation of electric vehicle and moving to other sources of renewable energy resources are utterly important. This article highlights the EVs, adaptation challenges for a country like Maldives and an ongoing electric vehicle prototype.

An Electric Vehicle (EV) is a vehicle that is powered by a battery source and employs a motor for propulsion. Electric vehicle technologies and its impacts on various fields have been researched extensively. Hybrid Electric Vehicles (HEVs), Plug-in Hybrid Electric Vehicles (PHEVs), and Battery Electric Vehicles (BEVs), are the most prevalent types of EVs. Unlike a BEVs which is powered only by a battery, a Hybrid Electric Vehicles (HEV) combines both a combustion engine and an electric motor. HEVs improve the short range and performance issues at the cost of high complexity of two energy sources. PHEVs are similar to a Hybrid vehicle, but with a larger battery and an electric motor.

Despite the significant advancements in the development of electric vehicles over the past decades, it had never gained much public acceptance due to various reasons. Mainly due to the short driving range and high cost comparing to its reliability and

durability. Mass production (in multi scale like conventional cars) could lower the prices of electric vehicles but perhaps the technologies are not matured for such a consideration. The advancements in technologies of energy sources would resolve the short range issues or the idea of hybrid electric vehicle could be an instant solution. However, hybrid electric vehicle could still be a hindrance in going for a zero emission goal.

Efforts are underway to alleviate and improve EV problems including energy management units, power converters, electric motors etc. Besides the issues with sub-systems, charging facilities and replacement of batteries could be burden for a congested city like Male'. Rather than installing charging facilities and adding congestion to the roads, Maldives could consider companies renting battery packs to EV owners and other means of incentives to increase adoption of EVs as an alternative. In fact, renting battery on the basis of exchanging the discharged battery packs with charged battery packs could make EVs more affordable and economical. With the tremendous ongoing research in EV sub-systems, it is not far that EV could compete with the conventional vehicles in performance, reliability, range and price.

As part of an ongoing final year project, a solar powered EV is under development at FEST, with an aim to analyze the feasibilities of potential EV technologies in Male' region. The prototype is built using the available resources and it is expected to give an average speed of 17mph featuring a heavy 30W solar panel. Further studies are needed to determine the performance on reducing the weight of the panels and the battery size requirements to give average range adequate for Male' region.

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