Design of a Commuter Shuttle Vehicle for Use in Hospitals

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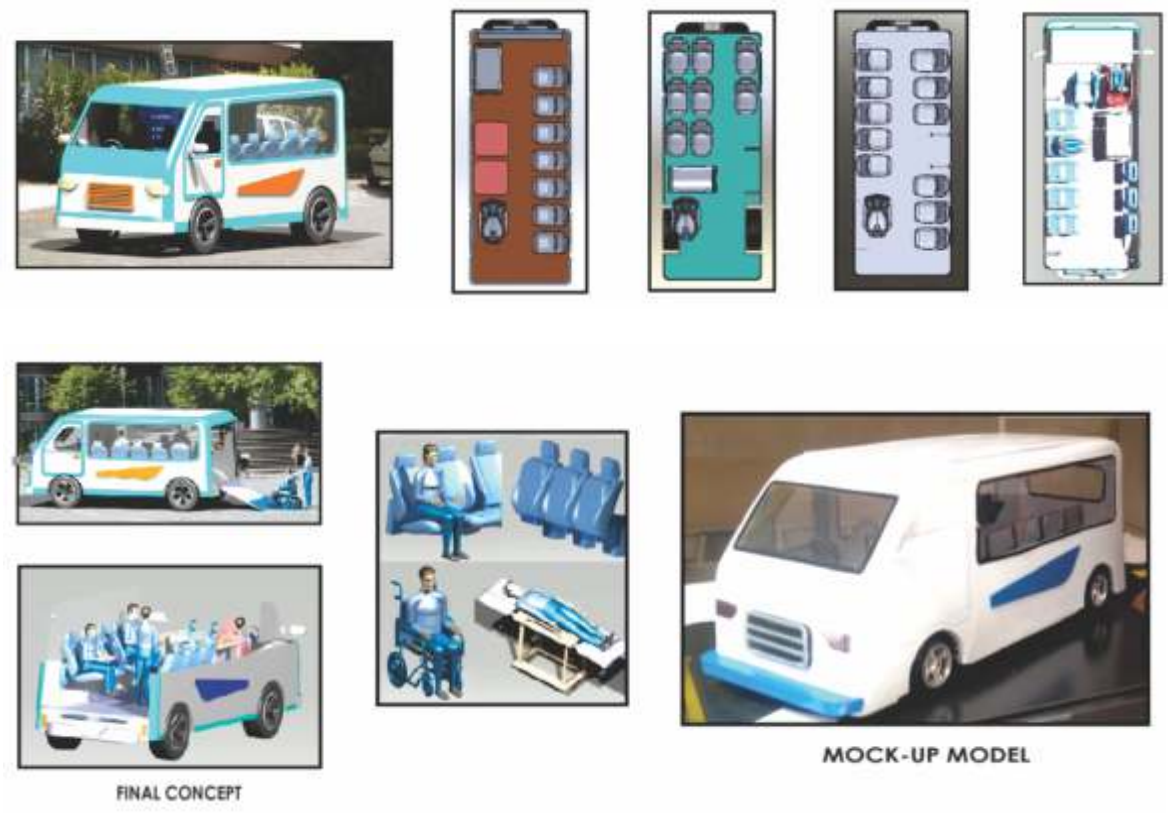
Abstract:

Mobility and transportation are the most fundamental requirement for a society and a basic need of human day today life. A bad transportation system can result in a poor quality of life of the society. In this project we are focusing on the transportation and commuting problems in hospitals premises. The private vehicles and the taxis are causing pollution and traffic in the hospital premises which is creating problem for the admitted patients and other visitors. There should be a commuter vehicle in the hospital to solve these issues.

Literature review, Ethnographic research and Market study has been carried to collect data and understand the transport requirement of human and material in the hospital premises. The QFD House of Quality was created which converts the voice of the customer into technical voice. The Product Design Specification is created which is driven by the customer requirement and shows what the design is trying to achieve and list-out the features to be implemented in the product. Many concepts were generated and final concept was selected by using weighted ranking method.

The 3D model of the final concept was made in CATIA and Solid Works. A mock-up model of the product was made in 1:10 scale. The validation of the product was done on its ergonomics, usability and aesthetics by displaying it to customers and using manikins in CATIA and the results were satisfactory.



Concepts and mock-up model of commuter shuttle vehicle