

Design of Commuter Vehicle for Passengers at Railway Terminals



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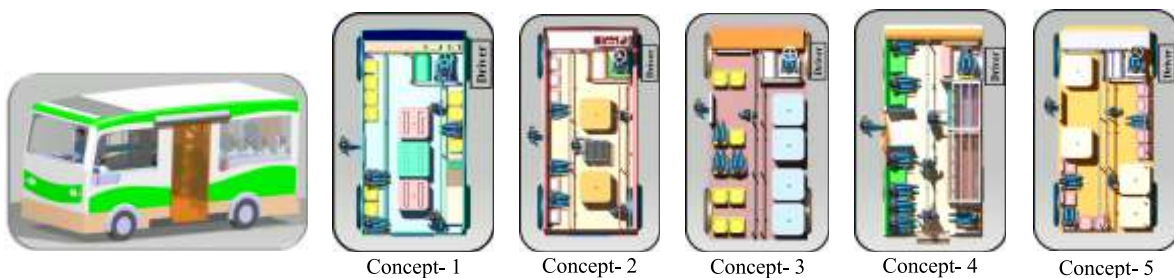
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Abstract:

Transportation is a non separable part of any society, which has a very close relation to our daily life. In India trains has always been an affordable and quick mode of transportation. The main problem faced by the people is the lack of affordable and safe mode of transportation outside the railway station for further commuting to their desired destinations. In India many of the bus stands or other affordable mode of transportation facilities are far from the railway station, so people have to walk 200 to 500 meters for getting transportation with their family and luggage because common man cannot afford a taxi or auto rickshaw for daily travelling. The people mainly affected by this are the old people, late returning working women, people with more luggage, blind people and other. People find it more difficult during the night and rainy seasons to carry their luggage in regular passenger bus. This project is an attempt to provide a safe and affordable commuter bus transport at railway station, for the common people.

The design started by understanding the main problems faced by the people in railway station while travelling to their destinations after arriving at the railway station. Data collection was done with the help of literature review, Ethnographic research, market study. The user study was done to know the basic problems of the people, with the help of questionnaire survey and personal interview. The proposed design on existing benchmarked traveller buses were studied for basic concept. The data collected was helpful in forming the QFD, and the PDS was generated to include the features to be implemented in the product. Concept was generated by using the derived PDS. The final concept was selected by using weighted ranking method.

The 3D model of the final concept was made in CATIA and the detailed design of the product was made with the drawing to determine the actual structure of the product. A mock-up model of the product was made in 1:12 scale. The validation of the product was done on its ergonomics, usability and aesthetics of the commuter bus, with the help of manikins in CATIA and the results were satisfactory.



Interior layout of the commuter bus



Final concept

Prototype