

# Re-interpretation of TVS XL Design Outlook for the Year 2020



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**Abstract:**

TVS XL is a classic moped, first introduced into the Indian market by TVS Motors Ltd. in 1978. It is the only moped that has survived the current two wheeler market. Although it has shown stable sales for the past few years, there is no upward trend, which is not a good sign in a market that is expanding so rapidly. This project was undertaken to re-interpret the design of TVS XL, so that the customers of 2020 can consider it relevant and useful for their needs. This would attract more customers towards buying the re-interpreted version.

The main aim of the project is to expand the customer market of TVS XL in the year 2020. This means that the concept moped should be aesthetically more appealing and it should be designed exactly to suit the needs of present and future users. Relevant information from the available literature was used to establish the need for this reinterpretation. All the required features to fill the gap between the customer need and the proposed product were recognised by conducting Gemba study. Required QFD and PDS were developed and concepts were generated using manual sketching and rendering techniques. Final concept was selected using weighted ranking method and virtual model was built in Autodesk Alias software. The Ergonomic analysis of the final concept was done in CATIA V5 software. Power and battery specifications were derived to replicate the current performance of TVS XL moped. Digital renderings were done using Keyshot and product posters were prepared in Sketchbook Designer software.

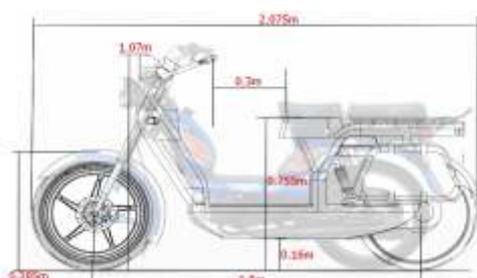
The studies have shown that the cargo space and safety are two main concerns that the original TVS XL moped lags. The final concept of reinterpreted moped for the year 2020, named as 'TVS XLR', has an electric drive through a rear wheel hub motor, a larger cargo mounting area, and enhanced safety features. The aesthetic appeal of the 'TVS XLR' moped is improved in the final concept such that it maintains the moped DNA and still has a futuristic appeal. A scale-down (1:5) mock up model is prepared using wood and steel to physically visualise the final concept.



**Current usage of TVS XL in India**



**Possible usages of the final TVS XLR concept for 2020**



**Comparison of final concept with current TVS XL moped**



**Product poster of TVS XLR concept**