

## Design of a Mobile Agricultural Clinic for Rural Applications in India



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**Keywords:** Agricultural Laboratory Testing, Soil Testing, Usability, Ergonomics

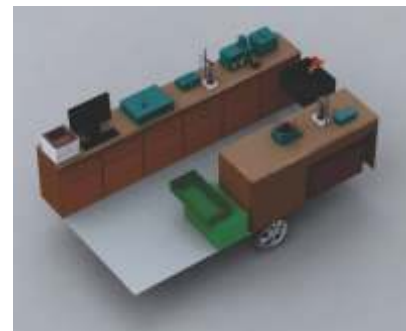
**Abstract:**

Agriculture is backbone of Indian economy and which is providing 58.1% of employment. With use of modern agricultural techniques, India is ensuring its food security. But the agricultural industry is facing issues such as loss of soil fertility, excessive use of fertilizers etc. These issues are increased due to lack of timely access to the information and assistance to Indian farmer. As laboratory testing is providing key assistance required Indian former to adopt scientific and modern agricultural techniques. An attempt is made to develop a mobile agricultural clinic (mobile chemical and agricultural-related testing lab) used in the rural application for better usability, functionality, ergonomics and aesthetics.

For the design of a mobile agricultural clinic, the process starts with study of various methods for agricultural soil testing, product study and market study. User study carried to know the users requirements and aspiration. By analyzing these data, quality function deployment (QFD) matrix and product design specification (PDS) were made. Based on the PDS, five concepts were generated by considering the better functionality, ergonomics and aesthetics. Final concept was selected by weighted ranking method. A mock-up model of 1:12 scale is created to get verifies the finalized design. It is concluded that the product is looking better in terms of its usability, functionality, ergonomics and aesthetics.



**Concepts**



**Final concept**



**Mock-up model**