

New Product Development of Modular Storage Unit for Office Environment using Design for Six Sigma



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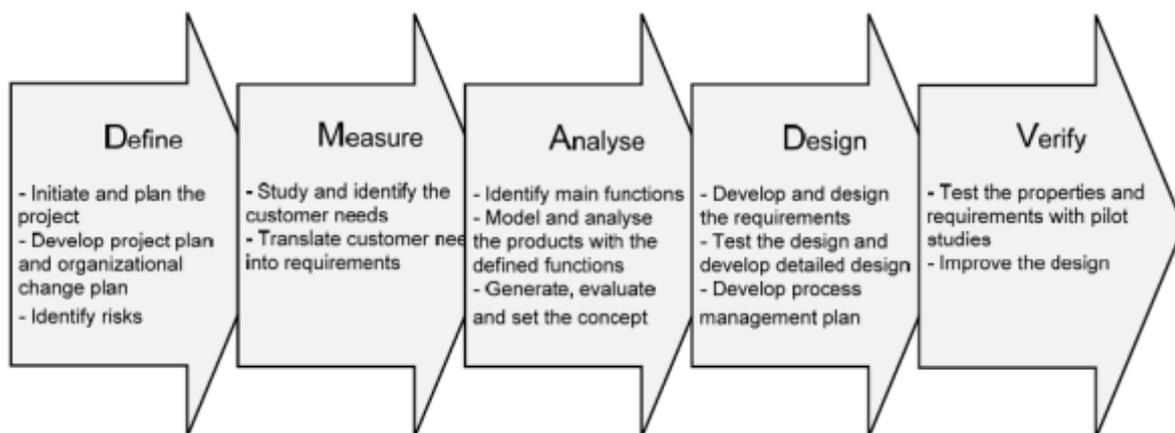
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Abstract:

In future, new modular storage unit will be introduced with new features like different colors, finishes, sizes with automatic locking mechanism at reasonable cost for global market. Performance, Quality and Cost are the three important factors in the design and development of the storage unit. Performance deals with the efficiency and effectiveness of the storage unit. Quality deals with the standards and by improving the cost of quality increases the company's earnings. Proper office storage is a great investment and keeps the office organized and efficient. There is more demand in the market for office storages. It is essential and important to work in this area as it's going to benefit the society and company.

Design for Six Sigma methodology called **DMADV** was used effectively in this project. Project goals were defined to ensure that customer expectations and needs are completely read before an invention is made out. Customer demands were translated into measurable technical specifications using QFD and benchmarking design tools. Generated the concepts through Brainstorming and all the new concepts were reviewed through Pugh matrix. Best concept was selected based upon the ability of the design to produce value for the customer. The detailed plan of the selected concept was completely modeled using Pro-e followed by Tolerance Analysis and Design for manufacturing methodology. The design was verified for its performance through testing and the final cost of the product was evaluated.

It was observed that the results obtained from testing and final costing were in total agreement with the goal setting reported in the project charter. Unit contribution margin ratio was improved from 40% to 52.75% and touched all the strength and stability requirements for the storage unit for the office environment. Design project was completed on time using DMADV approach and produced robust design storage unit. Based on the test results SOP was developed for horizontal deployment.



DMADV Approach used in the project