

CAD/CAM Executive Summary

Computer Aided Design (CAD) and Computer Aided Manufacturing (CAM) hold a strong place in the manufacturing and production industry. This report summarizes and emphasizes the need to explore various types of manufacturing processes in consumer and aerospace industry. It is critical to compare the conventional and new technologies in the CAD/CAM manufacturing processes. The focus of the report considers the needs of the consumers as well as cost reduction in the CAD/CAM processes. The approach adopted in building the report was to first understand the history of CAD/CAM systems in aerospace and the consumer industry and focusing on the direct impact of these systems in terms of efficiency, utilization and performance. Following the same approach, this report forecasts the state of CAD/CAM in the future and the direction CAD/CAM is heading. It is evident that CAD/CAM plays a huge role in the operations management in the industry, as it shortens the time of designing and manufacturing from days to minutes and the precision benefits of this system are endless. However, this report discusses the disadvantages to this system as well, as the benefits of this system also have some limitations. Lack of standardization and maintenance in the system can become a reason of big losses for the industry, and the recommendations and actions suggested in this document can improve and change the world of CAD/CAM to a massive extent. Integration of Virtual Reality and Artificial Intelligence is highly emphasized for user friendly environment. Incorporation of 3D printing machines and industry 4.0 advancements are recommended as they assist in the production of high quality products with lesser manufacturing difficulties.