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How BIM Works

Sarabjit Singh, Architectural Designer and Founder of Villa Ortiga in Delhi, explains how BIM works and how digitalization has transformed the face of architecture.



Sarabjit Singh. Photo courtesy of Villa Ortiga.

Building Information Modeling (BIM) is a process that significantly improves the manner in which architects and engineers design and thereby construct buildings. It is a comprehensive CAD model that uses CAD mock-ups to broaden the scope of information that is provided to the system. Furthermore, because the quantum of information provided to the software has been increased, the construction time of the project is reduced and thus the overall efficiency is increased.

BIM helps create an ecosystem wherein all the involved agencies can work simultaneously and share real-time information from the very first day till the very last day of construction and design. With BIM authoring tools, architects can create a digital 3D model of the building, allowing them to understand better how the building will look and operate in reality. Likewise, with the intel provided by this intelligent system, architects can now design at a much faster pace and with much greater efficiency. It is also greatly helpful in monitoring and thus modifying the design to eliminate human errors that would have otherwise been hard to predict ahead of time. The system enables one to make informed decisions which too can easily be conveyed to the clients or investors in a very detailed fashion and with high accuracy.

The BIM system helps forecast the costs, project timelines and errors, thereby mitigating the extra time that would otherwise be spent on rework. It helps companies lower their insurance costs and minimises the opportunity of claims. It also helps prevent wastage of material and human resources by predetermining mistakes and presenting us with a much more effective workflow.

This smart system helps clients such as developers, high earning professionals and investors better understand the intricacies of the project cost in accordance with real-time changes and modifications made in the design such that they can plan their finances in tandem with it.

BIM helps create an ecosystem wherein all the involved agencies can work simultaneously and share real-time information from the very first day till the very last day of construction and design.

This revolutionary process provides individuals with the opportunity and the platform to enhance their design skills and receive hands-on experience related to the various stages of design and construction. It has laid the foundation for a digital transformation and is the foreseeable future of design and project management.

About the author

Sarabjit Singh is the Founder and Architectural Designer at Villa Ortiga, a leading multi-disciplinary boutique architecture and interior design firm based in Delhi that creates experiences in the form of high-end, refreshing new spaces with an international appeal. In 1992, he was handpicked by Prince Charles to study at his premier Prince of Wales's Institute of Architecture in London. Thereafter, he continued his architecture and design education from the highly revered Oxford School of Architecture in Oxford, UK. Seeking to creatively bridge the gap between the demand and supply of unique global architectural and interior design styles, Sarabjit established Villa Ortiga in 1997. Since then, the practice has thrived exceedingly with hundreds of projects spread across India and abroad. (<https://villaortiga.com>)