

Case Study on 3D Printing Implementation Strategies

The construction industry is one of the slowest to adapt and utilize new technologies. As a result, the construction industry has remained stagnant while almost all others are improving efficiency. It is becoming incredibly important for the construction industry to adapt to new technologies in order to counter the current worldwide shortage in skilled labor. 3D printing is one of the most advanced technologies that can help increase efficiency and reduce cost across all sectors of the construction industry. This paper will analyze implementation strategies used on three different construction projects using 3D printing and will evaluate what made them successful and what challenges were faced. When analyzing the implementation strategies, this paper will focus on what collaboration between the design and construction team was most effective, and how the use of 3D printing changed the construction process. The purpose of this paper is to provide suggestions regarding which of the strategies are most effective for differing project types.

Key words: 3D Printing in Construction, Implementation Strategies, Cal Poly

Three Projects Compared:



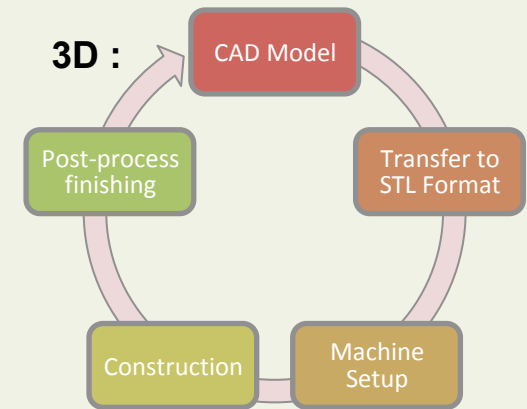
HuaShang Tengda Mansion
China



MX3D: Steel Bridge
Amsterdam



6 Bevis Mark Skyscraper
England



Pros

Increased Efficiency

Reduced Cost

Provides Design Complexity

Cons

Technology Challenges

Coordination Challenges

Design Challenges

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