

Swift Rising Pattern of Emerging Construction Technology Trends in the Construction Management

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Abstract : Modern Construction Technology (CT) includes a broad range of advanced techniques and practices that bound the recent developments in material technology, design methods, quantity surveying, facility management, services, structural analysis and design, and other management education. Adoption of recent digital transformation technology is the need of today to speed up the business and is also the basis of construction improvement. Incorporating and practicing the technologies such as cloud-based communication and collaboration solution, Mobile Apps and 5G, 3D printing, BIM and Digital Twins, CAD / CAM, AR/ VR, Big Data, IoT, Wearables, Blockchain, Modular Construction, Offsite Manifesting, Prefabrication, Robotic, Drones and GPS controlled equipment expedite the progress in the Construction industry (CI). Resources used are journaled research articles, web/net surfing, books, thesis, reports/surveys, magazines, etc. The outline of the research organization for this study is framed at four distinct levels in context to conceptualization, resources, innovative and emerging trends in CI, and better methods for completion of the construction projects. The present study conducted during 2020-2022 reveals that implementing these technologies improves the level of standards, planning, security, well-being, sustainability, and economics too. Application uses, benefits, impact, advantages/disadvantages, limitations and challenges, and policies are dealt with to provide information to architects and builders for smooth completion of the project. Results explain that construction technology trends vary from 4 to 15 for CI, and eventually, it reaches 27 for Civil Engineering (CE). The perspective of the most recent innovations, trends, tools, challenges, and solutions is highly embraced in the field of construction. The incorporation of the above said technologies in the pandemic Covid -19 and post-pandemic might lead to a focus on finding out effective ways to adopt new-age technologies for CI.

Keywords : BIM, drones, GPS, mobile apps, 5G, modular construction, robotics, 3D printing

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