

## Process Framework of Fast-Track Construction Projects: Case Study of Administrative Buildings in New Administrative Capital in Egypt

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### Abstract

The construction industry in Egypt has witnessed significant growth driven by the country's need to accommodate rapid urbanization and infrastructure development. This growth, however, has brought to light several challenges, particularly in fast track construction projects. In Egypt, the construction sector faces many challenges that are particularly critical in the national projects such as the New Administrative Capital (NAC), where rapid development is essential.

This research aims to propose a process framework for fast-track construction projects for the administrative buildings in NAC in Egypt. The developed framework aims to guide projects' teams to efficiently implement the concepts of "Building Information Modeling" (BIM) and the "Design-Build" (DB) approaches to improve project efficiency and reduce cost and time overruns. This was achieved through a two-phased research. In the first phase, the authors have developed a systematic literature review on influencing factors of cost and time overrun of fast-track construction projects in Egypt. While this paper introduces the current second phase of the research based on the outcomes of the first phase of the dissertation. In the second phase, the proposed framework has been developed through defining its main aspects that include phases, stages, activities, outcomes, stakeholders, and modeling technique.

The proposed process framework defines the potential challenges of each phase of fast-track construction projects in Egypt. In addition, it offers applicable solutions via the implementation of BIM and structured management processes to overcome the expected challenges and eliminate cost and time overrun.

### Keywords

Process framework, fast-track construction, administrative buildings, Building Information Modeling (BIM), Design-Build (DB), New Administrative Capital, Egypt