

Cloud-Based Computing System for Improving Collaboration During the Design Process: An Investigative Study

R. Rashad¹, F O Alamoudy^{2*}

¹Senior Student, Architectural Engineering Department, Faculty of Engineering, The British University in Egypt, Cairo-Suez Desert Road, Al-Shorouk, Cairo, Egypt.

²Teaching Assistant, Architectural Engineering Department, Faculty of Engineering, The British University in Egypt, Cairo-Suez Desert Road, Al-Shorouk, Cairo, Egypt.

[*Corresponding Author Email: Fatma.Othman@bue.edu.eg.](mailto:Fatma.Othman@bue.edu.eg)

Abstract. Architecture design process require efficient collaboration between multiple teams, as the information exchange is vital throughout the workflow. Thus, failure of collaboration between the different members of the project might result in poor planning, delays, and variations in project costs. However, the introduction of different methods was sought to cutdown on the final costs, reduce timeline, and improve quality by enhancing collaboration. This research will focus on one method that is Cloud-based computing systems (CBCS). Therefore, the aim of this research is to investigate the capability of CBCS in improving the collaboration between stakeholders. This will be achieved through 3 objectives. First, a literature review is used to investigate the nature of the design process and its challenges, outline the causes of poor collaboration, and finally present types of CBCS and their benefits towards collaboration. Second, relationship between CBCS and collaboration is deducted and outlined based on literature findings. Third, A case study is analysed showing how the implementation of CBCS into design process improves collaboration validating the deducted relationship. The goal of this research is to establish a base for a new paradigm where CBCS could enhance collaboration during the design process.

Keywords: Collaboration; Architecture Design Process; Cloud-Based Computing System.

