

ABSTRACT

Delays in construction projects are common issues that negatively impact cost, time, and project quality. Project A experienced a deviation of 12,73% between planned and actual progress, resulting in a delay in the development of healthcare product. The delay was caused by the presence of waste activities, including waiting, defect, and overprocessing. To address this issue, a schedule acceleration was carried out using the crashing method and the lean principles approach, while also determining the optimal project duration and cost. The crashing method was implemented through two alternatives, which are overtime and additional labor, while lean principles was applied to improve the workflow processes. The results indicate that the project duration was reduced by 37,22% days with a cost increase of 0,34%, waste was reduced by 40%, and process improvements was achieved by analyzing dependency activity. This study contributes to accelerating project duration and offers a systematic model for implementing lean principles in project scheduling.

Keyword — schedule overrun, crashing, lean principles, construction