

EVALUATION OF THE ESTIMATION OF QUANTITIES FOR THE COSTS OF THE DEPARTURE OF ARCHITECTURE OF A RETAIL WORK IN LIMA IN 2019 WITH THE IMPLEMENTATION BIM

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ABSTRACT

In the retail works of the turnkey process execution type and executed with the conventional method, they generate diverse errors, delays, surcharges in the works, and revisions in the stage of execution and with it delays in the estimation of quantities, obtaining a low efficiency and increase of costs, time and bad quality. It was determined the efficiency achieved by the implementation of BIM in the architectural item of a retail work, evaluating two retail executed with the conventional method and two retail implementing BIM, estimating the quantities and identifying the excess or deficit of the quantities, time and costs it takes to perform a review. Efficiency was determined through the evaluation of three indicators (cost, time and quality), generating scales with scores from 0 to 5 for each indicator and a table of efficiency percentages, determining ranges from 0% to 100%, representing graphically through the Benchmark the score of indicators for each retail. The BIM implementation in the estimation of costs in the architecture item is efficient, since in both retail with BIM 95% efficiency was obtained, and in the two retail without BIM reached values of 43% and 33%. Also, two flow diagrams were implemented for the comparison of both methods (traditional and BIM), demonstrating that there is a difference of 8 days between both, being the BIM method the most efficient, since it only had 3 days to perform the entire process of quantities and revision.

Keywords: BIM, Quality, Time, Cost, Quantification, Metrics.

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