ABSTRACT

This paper presents the development of a special purpose simulation (SPS) template for the capital planning on large-scale infrastructure construction projects. The template targets outputs of greatest interest to the planner: project duration and cost estimate, using the Box Jenkins method of forecasting. The developed tool was then tested in a case study involving roadway restructuring in Edmonton, Canada. The case study is detailed here for purposes of illustration. Seven models were simulated and analysed, showing the relative influence of fixed rates and mean rates on forecasting, and that subjective analysis procedures can cause disadvantageous decision-making. The case study was also used to perform risk analysis for the City of Edmonton.

Simulation models; intelligent forecasting; capital projects; construction project planning
REFERENCES


