



“Gheorghe Asachi” Technical University of Iasi, Romania



BUSINESS PROCESS ANALYSIS FOR RISK MANAGEMENT IN PAV3M

Dan Benta¹, Sergiu Jecan², Lucia Rusu^{2*}, Oana Dines²

¹*Agora University of Oradea, Romania, 8 Piata Tineretului Street, Oradea, 410526, Romania*

²*Babes Bolyai University, 1M. Kogalniceanu Street, Cluj-Napoca, 400591, Romania*

Abstract

Risk management forecasts those situations that can damage the proposed goals or jeopardize the completion of projects in time. The aim of this paper is to highlight risk management tailored practices for pavement roads maintenance projects. All presented practices and risk management analysis are consistent with international standards, processes and assets. Present work also describes a particular analysis and prioritization of risk factors for their implementation in a web application. For risk mitigation we used the k-nearest neighbors (k-NN) algorithm, which is based on mathematical kernel density estimates nonparametric alternative method for reference class forecasting. This method helps project managers and planners to estimate durations in pavement management and maintenance systems and provides more realistic alternative dates and critical paths.

Key words: k-NN implementation, project management, reference class forecasting, risk management

Received: February, 2016; Revised final: January, 2017; Accepted: March, 2017

*Author to whom all correspondence should be addressed: e-mail: lucia.rusu@econ.ubbcluj.ro