

Abstract

The bridge is an important aspect as well as a connecting element between closely related with the flow of traffic. Highways Agency of West Java Province is a government agency that is responsible and carry out its duties in terms of development and maintenance of public infrastructure such as roads and bridges. Not a few bridges that should get the attention does not get the attention it should, in the form of bridge maintenance scale mainly economic pathways that have a high level of authority that are in the province of West Java. In determining priority of bridge maintenance, keep in mind the assessment criteria for determining the bridge to be treated. For the Highways Agency of West Java province should be able to take the decision to determine the priority of bridge maintenance which are effective in accordance with the bridges in need of improvement of the existing criteria.

In this study required an application to support decision-making method Preference Ranking Organization Method for Enrichment Evaluation (Promethee) and Analytical Hierarchy Process (AHP). Promethee method used for the index calculation preference to get a value comparison between alternatives. From the calculation of the index values obtained preference leaving and entering the flow to get the priority ranking of bridge maintenance. While on AHP performed weighting process on each of the criteria.

The results of this study found that the average accuracy of the test data using methods Promethee and AHP is 75% and research has resulted in a system that is optimal to have a four-stage process, and with 30 minutes to generate suggestions of information supporting the decision-making priority bridge maintenance.

Keywords: bridge maintenance, decision support applications, Promethee, AHP.