

ABSTRACT

PT XYZ is a private company engaged in manufacturing, which produces products for manufacturing companies made of plastic such as tubes, pipes, spiral tubes, profiles, rods, tape, and many other products. PT. XYZ is not spared from goods procurement activities. Companies need raw materials to produce their products with various types of raw materials as well. To obtain raw materials with quality according to company needs, the criteria determined by the company are important aspects that will be used as a measuring tool in selecting raw material suppliers. Currently, PT. XYZ experienced a problem, namely delays made by selected suppliers. This indicates that the criteria currently in force have not been adapted to the needs of the company. The way that PT XYZ can do to determine the criteria and sub-criteria for selecting their suppliers, as well as calculating the weight value of the criteria and sub-criteria is to use the Fuzzy Analytical Hierarchy Process (FAHP) method. After calculating the weight values of the criteria and sub-criteria, a decision system design using *excel* will then be built to assist companies in determining the best supplier for the company.

Keyword—Fuzzy Analytical Hierarchy Process, criteria, Sub-criteria, supplier system selection.