Implementing Grey Model and Value Analysis in QFD Process to Increase Customer Satisfaction and Enhancing Airport Quality: Case Study at Juanda International Airport-Surabaya

Student Name : Anggi Indra Pamungkas  
NRP : 2505 100 153  
Department : Industrial Engineering FTI - ITS  
Supervisor : Dr. Ir. Moses L. Singgih, MSc. MReg.Sc

Abstract

Juanda International Airport is one of the most important airports in Indonesia. Located in the second largest city of the country, this airport is playing a very important role as the gate of Indonesia in the east part where all of the economic, government, education, information as well as trading distribution hub are promptly accommodated.

The increasing number of passenger in Juanda International Airport each year would meant the increasing number of airport customer, thus it is essential for the airport management to achieve customer satisfaction in delivering their services and enhancing their airport quality. This improvement effort is having obvious relations with the amount of passenger, airlines occupancy, and rented tenant space which significantly contributed to the airport’s overall profit.

The voice of customer is useful to understand the existing condition and giving suggestions for airport’s future development. In this paper, the voice of customer queries will be gathered from the questionnaire and made up into the House of Quality (HOQ) as part of Quality Function Deployment (QFD). This method will reveal the importance and performance level of Juanda International Airport along with other necessary measurement.
Grey Modeling will be used in this activity to prioritize the attributes. Grey model, which considered as one of the best method to make decisions under business environment will provide a simple and straightforward calculations process while the result achieved is based upon the original data.

Further, the customer top priority attributes would be also analyzed its worth using value analysis by comparing the grey total score with cost from the airport’s management point of view. This complete package of process will give an idea on how such improvement would gain if particular scenario is being implemented.

*Keywords: Quality Management, Airport Management, Grey Relational Analysis, Quality Function Deployment, House of Quality, Value Analysis.*