IMPLEMENTATION OF TECHNOLOGY ASSESSMENT IN AIR TRAFFIC CONTROL SYSTEM AT JUANDA INTERNATIONAL AIRPORT USING TECHNOMETRIC AND MCDM APPROACH

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ABSTRACT

This research discusses technology assessment on Air Traffic Control (ATC) system conducted at PT Angkasa Pura I Juanda International Airport. ATC is responsible to monitor and controlling air traffic, which includes giving guidance and directions to pilot before plane taking off, monitoring and control air space traffic of airlines during flight and gives clearance before the plane lands.

Technology Assessment is able to capture the existing process of ATC system thoroughly. Technometric approach will also be used in this research as a tool of technology assessment. Technometric will investigate each component contribution to ATC technology, based on four components; Technoware, Humanware, Inforware and Orgaware through its Technology Contribution Coefficient (TCC).

Results indicate Orgaware weighted 0.111 for overall technology element weight and is the lowest weight among other, while Humanware holds the greatest weight, 0.362. Consistent with TCC results, Humanware value 0.899 while Orgaware 0.288 and are the biggest gap to state of the art sophistication level. For improvement preferences using ELECTREE III method, results shows the company prefer to renewed implementation of power distribution rather than improving employee’s qualification and improve work seniority.

Keywords: management of technology, technology assessment, ATC System, Technometric.