

## **ABSTRACT**

*Nowaday, we cannot avoid the development of an increasing rapid era accompanied by increasing fierce competition in the industrial world. Likewise with globalization which encourages companies to continuously find innovations in order to maintain the company's existence. Where in this case, human resources are the main actors. Thus, human resources must be managed and planned as well as possible which can be done by determining the ideal number of employee needs in accordance with the needs of the company. PT Lantana experienced the problem of a shortage of workers where there was an imbalance between task demands and the number of employees so that employees at PT Lantana did double jobs. The work of employees becomes more than it should be and there is a buildup of tasks. The job stacking that occurs causes employees to have to do overtime which indicates a high level of workload, in addition to the overlapping duration of project work between one project and another which also causes a high level of workload for PT Lantana employees. Therefore, it is necessary to design the workforce needs for PT Lantana employees.*

*In the problems that occur at PT Lantana, it is necessary to design workforce requirements with a mental workload approach using the NASA-TLX method to find out how to analyze the existing workload and provide suggestions regarding the ideal number of employees needed by the company so that it can overcome the problems that occur at PT Lantana. NASA-TLX is a method of measuring mental load developed by Hart and Staveland that uses six subscales, namely Mental Demand, Physical demand, Temporal Demand, Performance, Effort, and Frustration Level. This method is easy to do which is also considered effective in examining the mental burden of employees who carry out many activities.*

*In this study, the NASA-TLX method was used because NASA-TLX was considered appropriate to achieve the objectives of this study. NASA-TLX has also been translated into various languages, managed and modified in various ways, has been evaluated for sensitivity, reliability, utility so that NASA-TLX is considered more reliable. The results showed that it was necessary to add 1 employee to the ME Estimator section, add 2 employees to Supervisor, add 2 employees to Project Manager, add 1 employee to Project Administration, add 1 employee to Drafter, add 2 employees to Civil Executor, and adding 1 employee to Project Logistics. The proposal to increase the number of workers is made to optimize the project completion time so that project delays do not occur again.*

*Keywords: Mental Workload, Manpower Needs, NASA-TLX*