

***HUMAN RELIABILITY ASSESSMENT PADA PROSES PENGIRIMAN  
BARANG MENGGUNAKAN METODE HEART (HUMAN ERROR  
ASSESSMENT AND REDUCTION TECHNIQUE) DAN SHERPA  
(SYSTEMATIC HUMAN ERROR REDUCTION AND PREDICTION  
ANALYSIS)  
(STUDI KASUS: EKSPEDISI ANTERAJA GERAJ XYZ)***

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**ABSTRAK**

Dalam industri logistik, keandalan manusia memainkan peran penting dalam keberhasilan proses pengiriman barang. Kesalahan manusia dapat berdampak signifikan pada kualitas layanan dan citra perusahaan. Anteraja merupakan salah satu ekspedisi di Indonesia yang masih belum mampu bersaing dengan ekspedisi-ekspedisi lainnya. Setelah ditelaah lebih lanjut, hal tersebut disebabkan oleh banyaknya keluhan dari customer yang menyebabkan ketidakpuasan pelanggan akan pelayanan yang diberikan Anteraja. Keluhan-keluhan customer ini dipengaruhi oleh adanya kesalahan kerja (human error) kurir selama proses pengiriman barang. Oleh karena itu, penting untuk melakukan penilaian keandalan manusia (Human Reliability Assessment/HRA) guna mengidentifikasi dan mengurangi potensi kesalahan. Penelitian ini menggunakan metode HEART dan SHERPA untuk menganalisis keandalan manusia dalam proses pengiriman barang di ekspedisi Anteraja. Berdasarkan hasil pengolahan data, metode HEART menunjukkan nilai HEP tertinggi jatuh kepada subtask (Kurir menuju Buyer) dengan nilai HEP sebesar 0.638, adapun berdasarkan analisis lebih lanjut menggunakan metode SHERPA menunjukkan terdapat 3 subtask yang memiliki nilai HEP tinggi (lebih dari 0.5) diikuti dengan nilai ordinal probabilitas tinggi yaitu subtask Kurir menuju buyer, kurir konfirmasi alamat dan penerima, dan kurir menuju staging. Berdasarkan hasil tersebut, diketahui bahwa akibat krusialnya adalah kurang jelasnya SOP, syarat dan ketentuan paket kirim, dan kurang adanya pelatihan pada karyawan baru.

**Kata kunci:** Human Error, Human Reliability Assessment, Human Error Probability (HEP), Human Error Assessment And Reduction technique (HEART), *Systematic Human Error Reduction and Prediction Technique* (SHERPA)

**HUMAN RELIABILITY ASSESSMENT IN THE DELIVERY PROCESS  
USING HEART (HUMAN ERROR ASSESSMENT AND REDUCTION  
TECHNIQUE) AND SHERPA (SYSTEMATIC HUMAN ERROR  
REDUCTION AND PREDICTION ANALYSIS)  
(CASE STUDY: ANTERAJA XYZ BRANCH)**

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**ABSTRACT**

*In the logistics industry, human reliability plays a crucial role in the success of the delivery process. Human errors can significantly impact service quality and the company's image. Anteraja, one of the logistics companies in Indonesia, has been struggling to compete with other expeditions. Upon further examination, it was found that this issue stems from numerous customer complaints, leading to customer dissatisfaction with Anteraja's services. These customer complaints are influenced by work errors (human errors) made by couriers during the delivery process. Therefore, it is essential to conduct a Human Reliability Assessment (HRA) to identify and reduce potential errors. This research utilizes the HEART and SHERPA methods to analyze human reliability in Anteraja's delivery process. Based on the data analysis results, the HEART method indicates that the highest Human Error Probability (HEP) value falls under the subtask (Courier to Buyer) with an HEP value of 0.638. Further analysis using the SHERPA method reveals that there are three subtasks with high HEP values (greater than 0.5), along with high ordinal probability values. These subtasks include the courier traveling to the buyer, the courier confirming the address and recipient, and the courier traveling to the staging area. The analysis suggests that the critical cause of these issues is the lack of clear SOPs, parcel terms and conditions, and insufficient training for new employees.*

**Keywords:** *Human Error, Human Reliability Assessment, Human Error Probability (HEP), Human Error Assessment and Reduction Technique (HEART), Systematic Human Error Reduction and Prediction Technique (SHERPA).*