

# Perancangan Strategi untuk Meningkatkan Indikator Kinerja pada Proses Inbound Logistic Di Industri Tambang, Indonesia = Designing Strategies for Inbound Logistics Performance Indicator Improvement in the Indonesian Mining Industry

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## Abstrak

Aktivitas inbound logistic dalam pertambangan memiliki peran penting untuk menerima, menyimpan, dan menyebarluaskan input dari pemasok ke titik penggunaan dalam operasi produksi. Dalam studi kasus salah satu perusahaan tambang di Indonesia, kinerja proses inbound logistic belum mencapai target yang optimal. Untuk meningkatkan indikator kinerja dalam proses inbound logistic tersebut, penelitian ini membangun metode yang tepat untuk mengukur proses inbound logistic dan merancang strategi berdasarkan hasil indikator kinerja yang paling penting. Penelitian dimulai dengan pengumpulan indikator kinerja dan kriteria yang akan digunakan dalam pengukuran kinerja proses inbound logistic perusahaan tambang. Pengolahan data kemudian dilakukan setelah pengisian kuesioner I untuk menentukan indikator kinerja yang akan digunakan dalam penelitian. Selanjutnya, kuesioner II disebarluaskan untuk menilai hubungan keterkaitan antar indikator kinerja. Kuesioner II kemudian diolah menggunakan metode Decision making Trial and Evaluation Laboratory (DEMATEL) dan Analytical Network Process (ANP) untuk mendapatkan hubungan kausal dan indikator kinerja yang akan diprioritaskan dalam perancangan strategi. Indikator kinerja yang diprioritaskan adalah utilisasi kapal (31,24%), ketersediaan material ketika dibutuhkan (12,18%), waktu siklus pengiriman (12,01%), dan performa dalam pembuatan purchase order (10,92%). Strategi yang diusulkan antara lain optimasi ruang kontainer, pembuatan standar operasional khusus untuk barang fast moving, penggunaan teknologi Radio Frequency Identification (RFID) pada setiap handling unit dan diferensiasi strategi proses pembelian berdasarkan purchasing portofolio.

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Inbound logistic activity in the mining company has an essential role in receiving, store, and disseminate input from suppliers to the point of use in production operations. In the case of one of the mining companies in Indonesia, inbound logistic performance has not yet reached the optimal target. This research builds an appropriate method to measure inbound logistic processes and then design strategies based on the results of the most critical performance indicators to improve performance indicators in the inbound logistic processes. The study begins with the collection of performance indicators and criteria for measuring the performance of the mining company's inbound logistic processes. The first questionnaire is filled and processed to determine the chosen performance indicators for the study. The second questionnaire is then filled to assess the relationships among the performance indicators. The results are then processed using Decision Making Trial and Evaluation Laboratory (DEMATEL) and Analytical Network Process (ANP) to confirm the causal relationship, identify the major performance indicators, and develop strategies accordingly. Based on the result, vessel capacity utilization (31.24%) is the first performance indicator that should be the priority, followed by material availability (12.18%), delivery cycle time (12.01%), and performance in making purchase orders (10.92%). The proposed strategies recommendations are container space optimization, a specialized standard operating procedure for fast-moving goods, implementation of

Radio-Frequency Identification (RFID) technology for each handling unit, and differentiation in purchasing strategy based on purchasing portfolio.<i/>