

ABSTRAK

Penelitian ini bertujuan untuk mengelola manajemen risiko operasional di PT Pelabuhan Indonesia (Persero) Regional 1 dengan mengintegrasikan metode House of Risk (HOR) dan Failure Mode and Effect Analysis (FMEA) melalui sistem pendukung Aplikasi Prima. Proses identifikasi risiko difokuskan pada kategori piutang macet yang mencakup tujuh indikator utama, seperti kondisi pailit pelanggan, sengketa tarif, dan kesalahan administrasi penagihan. Berdasarkan hasil pengolahan data menggunakan HOR Fase 1, ditemukan bahwa keterlambatan atau ketidaklengkapan pengiriman faktur (A4) merupakan agen risiko dengan nilai Aggregate Risk Potential (ARP) tertinggi sebesar 320, sehingga menjadi prioritas utama dalam aksi mitigasi. Sementara itu, analisis FMEA menghasilkan nilai Risk Priority Number (RPN) rata-rata sebesar 23,3928, di mana risiko kebangkrutan dan pelanggan menghilang memiliki tingkat keparahan (severity) tertinggi. Implementasi Aplikasi Prima terbukti efektif dalam mempermudah dokumentasi, perhitungan exposure inherent maupun residual, serta pelaporan risiko secara sistematis untuk mendukung keberlangsungan operasional di lingkungan pelabuhan.

Kata Kunci: *Manajemen Risiko Operasional, House of Risk, FMEA, Aplikasi Prima, PT Pelabuhan Indonesia.*

ABSTRACT

This research aims to manage operational risk management at PT Pelabuhan Indonesia (Persero) Regional 1 by integrating the House of Risk (HOR) and Failure Mode and Effect Analysis (FMEA) methods through the Prima Application support system. The risk identification process focuses on bad debt categories involving seven main indicators, such as customer bankruptcy, rate disputes, and billing administrative errors. Based on the data processing results using HOR Phase 1, it was found that delays or incompleteness in invoice delivery (A4) is the risk agent with the highest Aggregate Risk Potential (ARP) value of 320, making it the top priority for mitigation actions. Meanwhile, the FMEA analysis yielded an average Risk Priority Number (RPN) of 23.3928, with customer bankruptcy and missing customers having the highest severity levels. The implementation of the Prima Application has proven effective in facilitating documentation, calculating inherent and residual exposure, and providing systematic risk reporting to support operational continuity within the port environment.

Keywords: *Operational Risk Management, House of Risk, FMEA, Prima Application, PT Pelabuhan Indonesia.*