

## ABSTRAK

*PT Sahabat Unggul Internasional (PT SUI) merupakan subkontraktor garmen kostum boneka dengan sistem Make to Order (MTO) yang menghadapi masalah ketidaktercapaian target produksi harian. Penelitian ini bertujuan mengukur kapabilitas proses awal serta merancang strategi mitigasi risiko operasional rantai pasok dan tenaga kerja menggunakan integrasi metode Lean Six Sigma (LSS) dan House of Risk (HOR). Berdasarkan data historis produksi satu tahun, performa eksisting berada pada tingkat 2,81 Sigma dengan nilai 94.660 DPMO. Fase Analyze menggunakan HOR Fase 1 dan Diagram Pareto mengidentifikasi tiga agen risiko kritis (vital few): kesenjangan keahlian operator ( $A_3$ ), ketidakseimbangan lini jahit ( $A_4$ ), dan tingkat absensi operator ( $A_2$ ). Melalui matriks HOR Fase 2, dirumuskan lima tindakan mitigasi berdasarkan rasio Effectiveness to Difficulty (ETD). Program Pelatihan Silang (Cross-Training) Terjadwal ( $PA_1$ ) terpilih sebagai prioritas utama dengan nilai ETD tertinggi sebesar 3.613,52. Implementasi strategi ini didukung rancangan fase Control visual dan standardisasi SOP untuk mendorong stabilitas proses menuju target 3,0 Sigma.*

**Kata kunci:** *lean six sigma, house of risk, DPMO, supply chain risk management, garmen*

## ABSTRACT

*[PT Sahabat Unggul Internasional (PT SUI) is a doll costume garment subcontractor operating under a Make to Order (MTO) system that consistently faces failure in meeting daily production targets] This study aims to measure baseline process capability and design operational supply chain and manpower risk mitigation strategies using an integrated Lean Six Sigma (LSS) and House of Risk (HOR) approach. Based on one year of historical production data, the baseline performance stands at 2.81 Sigma with 94,660 DPMO. The Analyze phase using HOR Phase 1 and Pareto Diagram identifies three critical risk agents (vital few): operator skill gap ( $A_3$ ), line imbalance ( $A_4$ ), and operator absenteeism rate ( $A_2$ ). Through the HOR Phase 2 matrix, five preventive actions are formulated based on the Effectiveness to Difficulty (ETD) ratio. Scheduled Cross-Training Program ( $PA_1$ ) is selected as the top priority with the highest ETD score of 3,613.52. The implementation of these strategies is supported by a structured Control phase using visual controls and SOP standardization to push process stability toward a 3.0 Sigma target.*

**Keywords:** *lean six sigma, house of risk, DPMO, supply chain risk management, garment*