

ABSTRAK

PT. XYZ menghadapi tantangan administratif dalam penerapan *Contractor Safety Management System* (CSMS) yang selama ini dikelola secara manual mulai dari penilaian risiko, pra-kualifikasi, hingga seleksi kontraktor yang berimbas pada keterlambatan validasi, duplikasi berkas, dan keterbatasan pemantauan. Penelitian ini bertujuan: (1) mengidentifikasi kendala CSMS manual di PT. XYZ; (2) merancang aplikasi *electronic-CSMS* (e-CSMS) yang sesuai kebutuhan pengguna internal; (3) menganalisis kontribusi e-CSMS terhadap efektivitas pengelolaan dokumen; dan (4) menilai kesesuaian rancangan dengan prinsip SMK3 sebagaimana PP No. 50 Tahun 2012. Metode yang digunakan adalah *Research and Development* (tahap awal) dengan pendekatan kualitatif deskriptif melalui wawancara, observasi, dan studi dokumen.

Hasil perancangan menghasilkan: (i) formulir digital terpadu yang mengintegrasikan input data pengadaan, isian penilaian risiko (*severity* dan *probability*), serta unggah dan penilaian dokumen pra-kualifikasi/seleksi dalam satu alur; (ii) *dashboard monitoring* dengan fungsi penyaringan dan ekspor; serta (iii) pengaturan akses internal pada portal HSSE PT. XYZ. Secara fungsional, rancangan ini mengatasi hambatan utama pada proses manual dengan membuat alur verifikasi lebih ringkas, terstruktur, dan terdokumentasi, sehingga pengelolaan dokumen menjadi lebih efisien dan mudah ditelusuri. Dari sisi kepatuhan, e-CSMS mendukung implementasi elemen SMK3 pada ranah administrasi penetapan kebijakan, perencanaan, dan pelaksanaan rencana K3 melalui mekanisme pencatatan dan verifikasi yang konsisten. Rekomendasi pengembangan meliputi perluasan ke fase implementasi lapangan, otomatisasi perhitungan tingkat risiko, serta opsi pengisian awal oleh kontraktor dengan verifikasi tetap oleh tim internal.

Kata kunci: e-CSMS, CSMS, SMK3, HSSE, pengelolaan dokumen, PT. XYZ

ABSTRACT

PT. XYZ faces administrative challenges in implementing the Contractor Safety Management System (CSMS), which has traditionally been managed manually—from risk assessment and pre-qualification to contractor selection—resulting in delayed validation, document duplication, and limited monitoring capabilities. This study aims to: (1) identify constraints in the manual CSMS implementation at PT. XYZ; (2) design an electronic Contractor Safety Management System (e-CSMS) application aligned with internal user requirements; (3) analyze the contribution of e-CSMS to the effectiveness of document management; and (4) evaluate the conformity of the system design with Occupational Safety and Health Management System (SMK3) principles as stipulated in Government Regulation No. 50 of 2012. The study employs an early-stage Research and Development (R&D) method using a qualitative descriptive approach through interviews, observations, and document analysis.

The design outcomes include: (i) an integrated digital form that consolidates procurement data input, risk assessment entries (severity and probability), and the upload and evaluation of pre-qualification and selection documents within a single workflow; (ii) a monitoring dashboard equipped with filtering and export functions; and (iii) internal access control settings within the PT. XYZ HSSE portal. Functionally, the proposed system addresses key limitations of the manual process by streamlining verification workflows into a more concise, structured, and well-documented process, thereby improving efficiency and traceability in document management. From a compliance perspective, the e-CSMS supports the implementation of SMK3 elements within the administrative domains of policy establishment, planning, and execution of occupational safety and health programs through consistent recording and verification mechanisms. Future development recommendations include expanding the system to cover field implementation phases, automating risk level calculations, and enabling preliminary data input by contractors while maintaining verification by internal teams.

Keywords: e-CSMS, CSMS, SMK3, HSSE, document management, PT. XYZ