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Analisis Tingkat Kinerja Aplikasi Safety Railway Information (SRI) Di PT Kereta Api Indonesia (Persero) Berdasarkan ISO 25010:2011 Menggunakan Importance Performance Analysis
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Universitas Gadjah Mada, 2026 | Diunduh dari http://etd.repository.ugm.ac.id/

INTISARI

Aplikasi *Safety Railway Information* (SRI) merupakan sistem informasi pelaporan keselamatan PT Kereta Api Indonesia (Persero) yang berperan strategis dalam mendukung implementasi Sistem Manajemen Keselamatan Perkeretaapian (SMKP) dan budaya keselamatan proaktif. Sejak diluncurkan tahun 2016, aplikasi ini belum pernah dievaluasi secara terstruktur menggunakan standar kualitas perangkat lunak internasional, sehingga menciptakan kesenjangan informasi bagi manajemen dalam pengembangan sistem berbasis data. Penelitian ini bertujuan menilai tingkat kinerja Aplikasi SRI, mengidentifikasi kesenjangan antara tingkat kepentingan dan kinerja aktual, serta menyusun rekomendasi perbaikan strategis. Pendekatan kuantitatif deskriptif digunakan dengan metode *Importance Performance Analysis* (IPA) dan *Gap Analysis*, berlandaskan enam karakteristik ISO/IEC 25010:2011 yaitu *functional suitability*, *performance efficiency*, *compatibility*, *usability*, *reliability*, dan *security*. Data dikumpulkan melalui kuesioner terhadap 100 pengguna aktif Aplikasi SRI di Daerah Operasi 1 Jakarta dan Direktorat Keselamatan PT KAI, dipilih melalui *purposive sampling*, serta diperkuat wawancara mendalam dengan tiga narasumber manajerial.

Hasil penelitian menunjukkan kinerja Aplikasi SRI secara umum berada dalam kategori baik (*grand mean* kinerja $\bar{X}$ = 4,31; *grand mean* kepentingan $\bar{Y}$ = 4,45), namun seluruh 23 variabel evaluasi menunjukkan nilai *gap* negatif. Pemetaan *Importance Performance Matrix* (IPM) mengidentifikasi dua variabel prioritas utama di Kuadran I, yaitu *Functional Appropriateness* (A3, *gap* = −0,170) dan *Resource Utilization* (B3, *gap* = −0,220), serta tiga variabel tambahan dengan *gap* signifikan: *Functional Completeness* (A1, *gap* = −0,220), *Accessibility* (D5, *gap* = −0,210), dan *User Error Protection* (D6, *gap* = −0,090). Penelitian ini menyimpulkan bahwa peningkatan kualitas Aplikasi SRI perlu diprioritaskan pada kesesuaian informasi yang dihasilkan sistem dan efisiensi penggunaan sumber daya perangkat, mengingat keduanya berdampak langsung pada efektivitas pelaporan potensi bahaya di lapangan. Temuan ini diharapkan menjadi dasar empiris bagi PT KAI dalam mengembangkan Aplikasi SRI secara lebih terarah guna memperkuat budaya keselamatan proaktif dan mendukung keberlanjutan program *Zero Accident*.

Kata kunci: *Safety Railway Information* (SRI), ISO/IEC 25010:2011, *Importance Performance Analysis*, *Gap Analysis*, kualitas perangkat lunak, budaya keselamatan, Sistem Manajemen Keselamatan Perkeretaapian, PT Kereta Api Indonesia

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ABSRACT

The Safety Railway Information (SRI) application is a safety reporting information system of PT Kereta Api Indonesia (Persero) that plays a strategic role in supporting the implementation of the Railway Safety Management System (SMKP) and a proactive safety culture. Since its launch in 2016, the application had never been evaluated in a structured manner using internationally recognized software quality standards, creating an information gap for management in making data-driven development decisions. This study aims to assess the performance level of the SRI Application, identify the gap between user-perceived importance and actual performance, and formulate strategic improvement recommendations. A descriptive quantitative approach was employed using Importance Performance Analysis (IPA) and Gap Analysis, grounded in six characteristics of ISO/IEC 25010:2011: functional suitability, performance efficiency, compatibility, usability, reliability, and security. Data were collected through a questionnaire administered to 100 active users of the SRI Application in Operational Region 1 Jakarta and the Directorate of Safety of PT KAI, selected via purposive sampling, and reinforced by in-depth interviews with three managerial informants.

The findings indicate that the overall performance of the SRI Application falls within the good category (performance grand mean $\bar{X} = 4.31$; importance grand mean $\bar{Y} = 4.45$); however, all 23 evaluation variables exhibited negative gap values. Mapping through the Importance Performance Matrix (IPM) identified two primary priority variables in Quadrant I: Functional Appropriateness (A3, gap = −0.170) and Resource Utilization (B3, gap = −0.220), along with three supplementary variables with significant gaps: Functional Completeness (A1, gap = −0.220), Accessibility (D5, gap = −0.210), and User Error Protection (D6, gap = −0.090). This study concludes that quality improvements to the SRI Application should be prioritized on the relevance of information produced by the system and the efficiency of device resource utilization, as both directly affect the effectiveness of hazard reporting in the field. These findings are expected to serve as an empirical basis for PT KAI in developing the SRI Application more strategically, thereby strengthening the proactive safety culture and sustaining the Zero Accident program.

***Keywords**: Safety Railway Information (SRI), ISO/IEC 25010:2011, Importance Performance Analysis, Gap Analysis, Software Quality, Safety Culture, Railway Safety Management System, PT Kereta Api Indonesia*