

ABSTRAK

Pengelolaan proses *Return Material Authorization* (RMA) untuk perangkat *Optical Network Terminal* (ONT) di PT PLN Icon Plus SBU Sumbagsel masih dilakukan melalui beberapa media yang berbeda, seperti *Microsoft Excel*, *WhatsApp*, *email*, dokumen PDF, dan pencatatan administrasi. Kondisi tersebut menyebabkan data RMA belum dikelola dalam satu sistem yang terintegrasi, sehingga pencarian informasi membutuhkan waktu lebih lama dan perkembangan status RMA sulit dipantau secara menyeluruh oleh bagian yang terlibat. Penelitian ini bertujuan membangun aplikasi manajemen proses RMA ONT berbasis web yang mampu mengintegrasikan seluruh tahapan pengelolaan ke dalam satu sistem. Pengembangan aplikasi dilakukan menggunakan metode *Rational Unified Process* (RUP) yang meliputi fase *Inception*, *Elaboration*, *Construction*, dan *Transition*. Hasil penelitian menunjukkan bahwa aplikasi yang dibangun mampu mengintegrasikan pengelolaan data pelanggan, penjadwalan kunjungan, hasil kunjungan, pemeriksaan ONT, pembuatan dokumen RMA, verifikasi, dan pemantauan status ke dalam satu sistem. Berdasarkan pengujian *black box testing* dan *User Acceptance Testing* (UAT), seluruh fungsi aplikasi berjalan sesuai dengan kebutuhan pengguna serta membantu PT PLN Icon Plus SBU Sumbagsel dalam memusatkan data, mempermudah pencarian informasi, dan memantau setiap tahapan proses RMA secara lebih terstruktur.

Kata kunci: Aplikasi berbasis *web*, *Optical Network Terminal*, PT PLN Icon Plus, *Rational Unified Process*, *Return Material Authorization*.

ABSTRACT

The management of the Return Material Authorization (RMA) process for Optical Network Terminal (ONT) devices at PT PLN Icon Plus SBU Sumbagsel is currently carried out using several separate media, including Microsoft Excel, WhatsApp, email, PDF documents, and administrative records. This condition has resulted in RMA data not being managed within an integrated system, causing information retrieval to take longer and making it difficult for the relevant divisions to monitor the overall progress of RMA statuses. This study aims to develop a web-based application for managing the ONT RMA process that integrates all management stages into a single system. The application was developed using the Rational Unified Process (RUP) method, which consists of the Inception, Elaboration, Construction, and Transition phases. The results show that the developed application successfully integrates customer data management, visit scheduling, visit results, ONT inspection, RMA document generation, verification, and status monitoring into a single system. Based on black-box testing and User Acceptance Testing (UAT), all application functions operated in accordance with user requirements. The application also assists PT PLN Icon Plus SBU Sumbagsel in centralising data, simplifying information retrieval, and monitoring each stage of the RMA process in a more structured manner.

Keywords: Web-based application, Optical Network Terminal, PT PLN Icon Plus, Rational Unified Process, Return Material Authorization.