

ABSTRACT

The recommended parts process in overhaul activities at PT XYZ Plant Rebuild Center (PRC) is still carried out manually using part books and spreadsheets, which may lead to information delays, recording errors, and increased work lead times. This study aims to develop DIGIMOL (Digitalization Mechanic Order List), a web-hosting-based system designed to support the digitalization of the mechanic order list process and evidence management in overhaul activities. The research employed the Plan-Do-Check-Action (PDCA) method, with data collected through observation, interviews, literature reviews, and field studies. The system was developed using PHP as the programming language and MySQL as the database management system. It was evaluated through Black Box Testing, White Box Testing, the System Usability Scale (SUS), and time-efficiency analysis before and after system implementation. The results indicate that the DIGIMOL system successfully supports parts order management, order list monitoring, evidence uploading, and data export processes in a more integrated manner compared to the previous manual method. The SUS evaluation showed that the system falls within the acceptable category, indicating that it is easy to use for mechanics and group leaders/supervisors. Furthermore, the implementation of DIGIMOL improved the efficiency of the mechanic order list process by 37%–44%, reducing the average processing time from 0.995 minutes per part to 0.598 minutes per part. The system also enhanced the efficiency of the evidence upload process by 17%–29%, reducing the average processing time from 1.670 minutes per part to 1.285 minutes per part. Therefore, DIGIMOL can serve as an effective solution for improving data integration, reducing the potential for human error, and increasing the efficiency of the recommended parts process in overhaul activities at PT XYZ Plant Rebuild Center.

Keyword : overhaul, web hosting, php, mysql

INTISARI

Proses *recommended parts* pada kegiatan *overhaul* di PT XYZ *Plant Rebuild Center* (PRC) masih dilakukan secara manual menggunakan *part book* dan *spreadsheet* sehingga berpotensi menimbulkan keterlambatan informasi, kesalahan pencatatan, serta meningkatnya *lead time* pekerjaan. Penelitian ini bertujuan mengembangkan sistem DIGIMOL (Digitalisasi *Mechanic Order List*) berbasis *web hosting* untuk mendukung digitalisasi proses *mechanic order list* dan pengelolaan *evidence* pada kegiatan *overhaul*. Metode penelitian yang digunakan adalah *Plan-Do-Check-Action* (PDCA) dengan teknik pengumpulan data berupa observasi, wawancara, studi literatur, dan studi lapangan. Sistem dikembangkan menggunakan bahasa pemrograman PHP dan basis data MySQL, kemudian dievaluasi melalui *Black Box Testing*, *White Box Testing*, *System Usability Scale* (SUS), serta analisis efisiensi waktu sebelum dan sesudah penerapan sistem. Hasil penelitian menunjukkan bahwa sistem DIGIMOL berhasil mendukung proses pengelolaan *order parts*, pemantauan *order list*, unggah *evidence*, dan ekspor data secara lebih terintegrasi dibandingkan metode manual. Pengujian SUS menunjukkan bahwa sistem berada pada kategori *acceptable* sehingga mudah digunakan oleh *mechanic* dan *group leader/supervisor*. Selain itu, penerapan DIGIMOL mampu meningkatkan efisiensi waktu proses *mechanic order list* sebesar 37%–44% dengan penurunan rata-rata waktu dari 0,995 menit/part menjadi 0,598 menit/part, serta meningkatkan efisiensi proses unggah *evidence* sebesar 17%–29% dengan penurunan rata-rata waktu dari 1,670 menit/part menjadi 1,285 menit/part. Dengan demikian, sistem DIGIMOL dapat menjadi solusi yang efektif untuk meningkatkan integrasi data, mengurangi potensi *human error*, serta meningkatkan efisiensi proses *recommended parts* pada kegiatan *overhaul* di PT XYZ *Plant Rebuild Center*.

Kata Kunci: *overhaul*, *web hosting*, php, mysql