

## INTISARI

Manajemen kontrak yang efisien merupakan faktor krusial dalam menjamin keberlangsungan operasional serta kepatuhan terhadap regulasi di industri minyak dan gas. Namun, hingga saat ini, masih banyak perusahaan, termasuk salah satu perusahaan minyak dan gas nasional besar di Indonesia, yang mengandalkan sistem manual dalam proses *monitoring* kontrak. Ketergantungan terhadap sistem manual tersebut mengakibatkan keterbatasan akses informasi kontrak yang bersifat kritical, keterlambatan dalam penanganan permintaan amandemen mendesak, serta proses manajemen kontrak yang berjalan kurang efisien.

Penelitian ini bertujuan untuk merancang sistem *monitoring* berbasis *web* yang dapat meningkatkan efisiensi proses manajemen kontrak pada perusahaan minyak dan gas. Pengembangan sistem dilakukan dengan pendekatan *Rapid Application Development* (RAD), serta didukung oleh pemodelan sistem menggunakan *Use Case Diagram* dan *Data Flow Diagram* (DFD) yang disusun berdasarkan kebutuhan pengguna dan proses bisnis yang telah diidentifikasi. Sistem yang dirancang menghasilkan *dashboard digital* yang memungkinkan pengguna untuk mengakses ringkasan informasi kontrak, indikator penting seperti sisa nilai dan durasi kontrak, serta visualisasi data secara *batch-time*.

Hasil implementasi awal menunjukkan peningkatan kinerja yang signifikan. Sistem *monitoring* berbasis *web* yang dikembangkan mampu meningkatkan efisiensi waktu akses informasi hingga sebesar 92,26%, menurunkan jumlah permintaan amandemen mendesak yang melebihi batas waktu layanan (*SLA*) dari 20% menjadi 8%, serta meningkatkan rasio permintaan *close-out contract* sebesar 3%. Hasil ini menunjukkan bahwa rancangan sistem *monitoring* berbasis *web* memiliki potensi besar dalam mendukung efisiensi proses manajemen kontrak pada perusahaan minyak dan gas.

**Kata Kunci:** *Digital Dashboard, Rapid Application Development* (RAD), *Data Flow Diagram* (DFD), *Monitoring* kontrak, Efisiensi Waktu

## ABSTRACT

*Efficient contract management is a crucial factor in ensuring operational continuity and compliance with regulations in the oil and gas industry. However, to this day, many companies, including one of the major national oil and gas companies in Indonesia, still rely on manual systems in the contract monitoring process. This reliance on manual systems results in limited access to critical contract information, delays in handling urgent contract amendment requests, and inefficient contract management workflows.*

*This research aims to design a web-based monitoring system that can improve the efficiency of contract management processes in oil and gas companies. The system development was carried out using the Rapid Application Development (RAD) approach, supported by system modeling tools such as Use Case Diagram and Data Flow Diagram (DFD), which were created based on User requirements and identified business processes. The designed system produces a digital dashboard that enables Users to access contract information summaries, key indicators such as remaining contract value and duration, as well as data visualization in batch-time.*

*The initial implementation results show a significant performance improvement. The developed web-based monitoring system was able to increase the efficiency of information access time by 92.26%, reduce the number of urgent contract amendment requests exceeding the Service Level Agreement (SLA) from 20% to 8%, and increase the close-out contract request ratio by 3%. These results indicate that the designed web-based monitoring system has significant potential to support the efficiency of contract management processes in oil and gas companies.*

**Keywords:** *Digital Dashboard, Rapid Application Development (RAD), Data Flow Diagram (DFD), Contract Monitoring, Time Efficiency*