

**ANALISIS TRANSFORMASI DIGITAL BERBASIS AI DI PT
KALTIM PRIMA COAL MENGGUNAKAN *GROUNDED
THEORY***

TUGAS AKHIR



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UNIVERSITAS BAKRIE
JAKARTA
2025**

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**Diajukan sebagai salah satu syarat untuk memperoleh gelar Sarjana
Manajemen**



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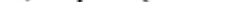
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Prima Coal Menggunakan Grounded Theory

Telah berhasil dipertahankan di hadapan Dewan Pengaji dan diterima sebagai bagian persyaratan yang diperlukan untuk memperoleh gelar Sarjana S1 pada Program Studi Manajemen, Fakultas Ekonomi dan Ilmu Sosial, Universitas Bakrie.

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Pembimbing Dr. Jerry Heikal, ST, MM *jheikal*)

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Penguji 2 Arief Bimantoro Suharko, Ph.D. ()

Ditetapkan di Jakarta

3 September 2025

UCAPAN TERIMA KASIH

First and foremost, praises and thank to Jesus the Lord God, Almighty, for His showers blessings throughout my research work to complete the research successfully. Father, in all things, I give thanks to you for the abundant blessings you bestow upon me. From the smallest moments of grace to the biggest triumphs, I am grateful for all that you provide and all that you are. May this day and every day be filled with a spirit of gratitude and praise.

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Colossians 3:15-17

“Let the peace of Christ rule in your hearts, since as members of one body you were called to peace. And be thankful. Let the message of Christ dwell among you richly as you teach and admonish one another with all wisdom through psalms, hymns, and songs from the Spirit, singing to God with gratitude in your hearts. And whatever you do, whether in word or deed, do it all in the name of the Lord Jesus, giving thanks to God the Father through him.”

Jesica Florencia

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(Jesica Florencia)

ANALISIS TRANSFORMASI DIGITAL BERBASIS AI DI PT KALTIM PRIMA COAL MENGGUNAKAN GROUNDED THEORY

Jesica Florencia

ABSTRAK

Perkembangan teknologi digital, khususnya Artificial Intelligence (AI), mendorong transformasi signifikan di berbagai industri, termasuk sektor pertambangan. PT Kaltim Prima Coal (KPC), sebagai salah satu perusahaan tambang batu bara terbesar di Indonesia, menghadapi tantangan efisiensi, keselamatan, serta tuntutan regulasi dan pasar global yang mendorong kebutuhan transformasi digital. Penelitian ini bertujuan menganalisis alasan, strategi, dan implementasi transformasi digital berbasis AI di KPC dengan menggunakan pendekatan kualitatif Grounded Theory. Data diperoleh melalui wawancara mendalam dengan manajer dan karyawan dari berbagai divisi, serta dokumentasi internal perusahaan. Hasil penelitian menunjukkan bahwa alasan utama transformasi digital di KPC meliputi peningkatan efisiensi operasional, kepatuhan terhadap regulasi, adaptasi terhadap perkembangan teknologi, dan peningkatan keselamatan kerja. Strategi yang dikembangkan berfokus pada tata kelola data, migrasi bertahap sistem, serta pengembangan sumber daya manusia dan budaya digital. Sementara itu, implementasi yang telah berjalan mencakup digitalisasi proses operasional, penggunaan teknologi keselamatan berbasis AI (seperti radar geoteknik, IoT, CCTV analitik, dan drone), integrasi sistem, kolaborasi digital, serta pelaporan berbasis regulasi. Penelitian ini menyimpulkan bahwa transformasi digital KPC didorong oleh kebutuhan efisiensi dan daya saing, dijalankan melalui strategi penguatan SDM dan budaya digital, serta diwujudkan dalam implementasi operasional dan keselamatan yang berkelanjutan. Temuan ini memberikan kontribusi teoritis dalam kajian transformasi digital di sektor pertambangan dan manfaat praktis bagi perusahaan dalam merancang strategi digital yang adaptif.

Kata Kunci: Transformasi Digital, Artificial Intelligence, Pertambangan, Grounded Theory, PT Kaltim Prima Coal.

**AI-BASED DIGITAL TRANSFORMATION ANALYSIS AT PT KALTIM PRIMA
COAL USING GROUNDED THEORY**

Jesica Florencia

ABSTRACT

The advancement of digital technology, particularly Artificial Intelligence (AI), has driven significant transformation across industries, including the mining sector. PT Kaltim Prima Coal (KPC), one of the largest coal mining companies in Indonesia, faces challenges related to efficiency, safety, regulatory compliance, and global market competition, which necessitate digital transformation. This study aims to analyze the reasons, strategies, and implementation of AI-based digital transformation at KPC using a qualitative Grounded Theory approach. Data were collected through in-depth interviews with managers and employees from various divisions, as well as company documents. The findings reveal that the main reasons behind KPC's digital transformation include improving operational efficiency, complying with regulations, adapting to technological development, and enhancing workplace safety. The strategies developed focus on data governance, gradual system migration, and human resource development alongside digital culture building. Implementation has been realized through the digitalization of operational processes, the application of AI-based safety technologies (such as geotechnical radar, IoT, CCTV analytics, and drones), system integration, digital collaboration, and regulatory reporting. The study concludes that KPC's digital transformation is primarily driven by efficiency and competitiveness, supported by strategies to strengthen human capital and digital culture, and manifested through operational and safety-focused implementations. These findings contribute theoretically to the study of digital transformation in the mining sector and provide practical insights for companies in designing adaptive digital strategies.

Keywords: Digital Transformation, Artificial Intelligence, Mining Industry, Grounded Theory, PT Kaltim Prima Coal.

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