

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

TUGAS AKHIR



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JAKARTA
2025**

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



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BAKRIE**

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Telah berhasil dipertahankan di hadapan Dewan Penguji 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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3 September 2025

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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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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.

DAFTAR ISI

HALAMAN PERNYATAAN ORISINALITAS	<i>i</i>
HALAMAN PENGESAHAN	<i>ii</i>
UCAPAN TERIMA KASIH	<i>iii</i>
HALAMAN PERNYATAAN PERSETUJUAN PUBLIKASI	<i>v</i>
ABSTRAK	<i>vi</i>
ABSTRACT	<i>vii</i>
DAFTAR ISI	<i>viii</i>
DAFTAR TABEL.....	<i>x</i>
BAB 1 PENDAHULUAN	<i>1</i>
1.1 Latar Belakang	<i>1</i>
1.2 Rumusan Masalah	<i>3</i>
1.3 Tujuan Penelitian	<i>4</i>
1.4 Manfaat Penelitian	<i>4</i>
1.4.1 Manfaat Teoritis	<i>4</i>
1.4.2 Manfaat Praktis	<i>4</i>
1.4.3 Manfaat Kebijakan dan Industri	<i>5</i>
BAB 2 TINJAUAN LITERATUR	<i>6</i>
2.1. Transformasi Digital	<i>6</i>
2.1.1. Transformasi Digital dalam Industri Pertambangan	<i>8</i>
2.2. Artificial Intelligence (AI) dalam Transformasi Digital.....	<i>10</i>
2.3. Studi Terdahulu tentang AI dan Grounded Theory	<i>12</i>
BAB 3 METODE PENELITIAN	<i>28</i>
3.1 Pendekatan Penelitian.....	<i>28</i>
3.2 Lokasi dan Subjek Penelitian.....	<i>28</i>
3.3 Teknik Pengumpulan Data	<i>29</i>
3.3.1 Sumber Data	<i>29</i>
3.3.2 Teknik Pengumpulan Data.....	<i>30</i>
3.4 Teknik Analisis Data.....	<i>30</i>
3.4.1. Grounded Theory sebagai Pendekatan Penelitian	<i>30</i>
3.4.2. Coding	<i>31</i>

3.4.3. Category	32
3.4.4. Themes	33
BAB 4 TEMUAN DAN ANALISIS	34
4.2. Coding, Category dan Themes	34
4.2.1. Apa alasan utama PT KPC untuk melakukan transformasi digital ?	35
4.2.2. Bagaimana strategi yang dikembangkan oleh PT KPC dalam melaksanakan transformasi digital ?	42
4.2.3 Bagaimana Implementasi Transformasi Digital yang Telah Diterapkan PT KPC dalam Kegiatan Operasionalnya?	46
4.3. Pembahasan Hasil	50
4.3.1. Alasan Utama PT KPC Melakukan Transformasi Digital.....	50
4.3.2. Strategi yang dikembangkan oleh PT KPC dalam Pelaksanaan Transformasi Digital	52
4.3.3. Implementasi Transformasi Digital yang telah diterapkan PT KPC dalam Kegiatan Operasional	53
BAB 5 KESIMPULAN DAN SARAN.....	55
5.1. Kesimpulan	55
5.2. Saran	56
DAFTAR PUSTAKA.....	58
LAMPIRAN.....	60
Wawancara 1.....	60
Wawancara 2.....	80
Wawancara 3.....	87
Wawancara 4.....	93

DAFTAR GAMBAR

Gambar 2 1 Kerangka Berfikir	26
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DAFTAR TABEL

Table 2 1 Penelitian Terdahulu	12
Table 4 1 Coding Alasan PT KPC Melakukan Transformasi Digital.....	36
Table 4 2 Category Alasan PT KPC Melakukan Transformasi Digital	38
Table 4 3 Themes Alasan PT KPC Melakukan Transformasi Digital.....	40
Table 4 4 Coding Strategi Transformasi Digital PT KPC	42
Table 4 5 Category Strategi Transformasi Digital PT KPC	43
Table 4 6 Themes Strategi Transformasi Digital PT KPC	45
Table 4 7 Coding Implementasi Transformasi Digital PT KPC.....	46
Table 4 8 Category Implementasi Transformasi Digital PT KPC	47
Table 4 9 Themes Implementasi Transformasi Digital PT KPC	49