

**APPLICATION OF ARTIFICIAL INTELLIGENCE (AI) IN TELEVISION INDUSTRY MANAGEMENT STRATEGY USING GROUNDED THEORY ANALYSIS: A CASE STUDY ON TVONE****Dadang Ridwan<sup>1</sup>, Jerry Heikal<sup>2</sup>**Universitas Bakrie, Jakarta<sup>12</sup>[dadang.ridwan@gmail.com](mailto:dadang.ridwan@gmail.com)<sup>1</sup>, [jerry.heikal@bakrie.ac.id](mailto:jerry.heikal@bakrie.ac.id)<sup>2</sup>

INFO ARTIKEL	ABSTRAK
<b>Diterima</b> : 07-09-2023 <b>Direvisi</b> : 20-09-2023 <b>Disetujui</b> : 25-09-2023	Industri televisi telah mengalami banyak perubahan dari waktu ke waktu, terutama dengan kemajuan teknologi yang terus meningkat. Salah satu teknologi yang telah memberikan dampak signifikan pada industri ini adalah kecerdasan buatan (AI). Tujuan dari penelitian ini adalah untuk memahami penerapan kecerdasan buatan (AI) dalam strategi manajemen industri televisi dengan studi kasus di tvOne. Penelitian ini menggunakan metode kualitatif untuk memahami dan menggambarkan situasi yang terjadi di lingkungan penelitian. Sampel dalam penelitian ini adalah lima responden dari manajemen puncak tvOne. Analisis dimulai dengan tahap pengkodean data yang berasal dari hasil wawancara yang telah ditranskripsikan menjadi teks menggunakan pendekatan grounded theory. Kesimpulan dari penelitian ini adalah peluang yang diberikan AI untuk industri televisi adalah produksi konten. Peluang untuk menerapkan teknologi AI di tvOne, melalui integrasi AI dalam produksi konten, diarahkan untuk meningkatkan efisiensi dan kualitas produksi program dengan memanfaatkan analisis dan otomatisasi data yang lebih canggih. Kemudian, tantangan yang dihadapi dalam penerapan AI di industri televisi adalah sumber daya. Tantangan penerapan teknologi AI di tvOne adalah dalam hal sumber daya manusia dan sumber daya fisik yang dibutuhkan, yang meliputi keahlian teknis yang diperlukan dan ketersediaan sumber daya keuangan dan infrastruktur yang memadai.
<b>Kata kunci:</b> Kecerdasan buatan, grounded theory, industri televisi, strategi manajemen	<b>ABSTRACT</b> <i>The television industry has experienced numerous transformations over time, particularly due to the continual advancements in technology. One technological innovation that has exerted a substantial influence on this sector is artificial intelligence (AI). The aim of this research is to comprehend the utilization of artificial intelligence (AI) within the management strategy of the television industry, using a case study of tvOne. Qualitative methods were employed in this investigation to gain insight into and describe the circumstances prevailing in the research</i>

*environment. The study's sample consisted of five participants from the top management of tvOne. The analysis commenced with the coding phase of the data, which was obtained from transcribed interviews, using a grounded theory approach. The study's conclusion highlights that AI presents a significant opportunity for the television industry, particularly in the realm of content production. The prospects for implementing AI technology at tvOne, by integrating AI into content production, are geared towards enhancing program production efficiency and quality through the utilization of more advanced data analysis and automation techniques. However, the challenges encountered in the adoption of AI in the television industry primarily revolve around resources. The impediment to implementing AI technology at tvOne pertains to the availability of human resources and physical resources, including the requisite technical expertise, sufficient financial resources, and suitable infrastructure.*

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## **Introduction**

The television industry has experienced numerous transformations over time, particularly due to the continuous advancements in technology. One technological advancement that has left a substantial imprint on this industry is artificial intelligence (AI) (Bao, 2022) (Khan et al., 2018). Citing information sourced from Tempo.co, a prime example of a television program harnessing AI technology is the Apa Kabar Indonesia program by tvOne, which debuted on Instagram and TikTok platforms on April 21, 2023. Karni Ilyas, serving as tvOne's chief editor, announced that "the presenter who appeared during that time was generated by a machine, marking a pioneering moment as the first AI-powered presenter in Indonesia." TvOne proudly touts this as a technological innovation, claiming to be the first media outlet in Indonesia to be AI-driven (Tempo.co, 2023) (Newman et al., 2019). Karni also presented two human digital hosts for similar products, named Sasya and Nadira. Both are characterized as women above 25 years old, each having unique qualities and looks.

Television stations in Indonesia will face competition not only from existing broadcasters but also from new entrants holding broadcasting licenses, intensifying competition within the industry (Barberis Canonico et al., 2018) (Bachtiar et al., 2020). As a result, the struggle for market dominance among these stations is expected to intensify. To secure their market positions, each television station must strive to develop a competitive edge and offer unique value propositions leveraging their available resources (Zhou & Li, 2020).

In the field of strategic management, can artificial intelligence (AI) play a role in helping companies gain a competitive advantage, increase market competition, or promote more intense business rivalries (Deni, 2023) (Kuncoro, 2020).

This study aims to offer a comprehensive examination of the influence of AI technology on the television sector, with a specific focus on its impact within the Indonesian context. It seeks to pinpoint the precise advantages that TV networks can gain from the integration of AI technology, including enhancements in broadcast quality, the diversification of content offerings, and increased operational efficiency. Furthermore, this research strives to illuminate prospective entrants in the television industry about the potential opportunities and obstacles when competing with established rivals. The primary objective of this investigation is to analyze the utilization of AI within the Indonesian television sector, especially concerning content creation and broadcasting. Additionally, it intends to assess how the incorporation of AI can yield competitive advantages in an increasingly competitive television landscape.

In the age of digital transformation and the Analog Switch-off (ASO), the strategic management of the television industry must adapt to maintain its relevance and competitiveness. A crucial aspect of this adaptation is enhancing broadcast capacity and quality through digitization (Tapsell, 2017). Digital broadcasting offers significant benefits in terms of picture and sound quality. Additionally, it enables the provision of a greater number of channels, thereby facilitating the broadcast of a more diverse range of content tailored to various target demographics (Ridwan & Heikal, 2023) (Picard, 2014). Concurrently, it's imperative for companies to ensure that all operational processes and organizational structures are effective and efficient. In the realm of strategic management, there is a growing interest in the potential of Artificial Intelligence (AI) to help companies gain a competitive edge and navigate the intensifying landscape of business competition (Sirithumgul, 2023).

Given this background information, the author was keen on conducting a study titled "Utilization of Artificial Intelligence (AI) in Television Industry Management Strategies through Grounded Theory Analysis: Case Studies on tvOne."

## **Methods**

This research employed qualitative methods to gain insights into and describe the dynamics within the research environment. The qualitative approach in this study was guided by constructivist grounded theory (Chopra, 2019) (Yun, 2020). which directed the trajectory of the research, data collection, and subsequent analysis. Primary data collection primarily relied on interview techniques. The study's sample consisted of five participants who held key positions within tvOne's top management. The initial phase of analysis involved coding the data extracted from transcribed interview results. The focal point of this investigation was PT. Lativi Media Karya, commonly known as tvOne. To align with the case study methodology applied to tvOne, the research was conducted at the tvOne office premises, situated at Rawa

Terate II Street Number 2, Pulogadung Industrial Estate, East Jakarta. The research timeline adhered to the academic schedule established by Bakrie University for this particular study, spanning from June 1, 2023, to July 30, 2023. As part of this research endeavor, inquiries directed towards the respondents revolved around several key aspects: identifying the opportunities presented by Artificial Intelligence (AI) within the television industry, understanding the challenges encountered in the implementation of AI in the television sector, and discerning how AI has been incorporated into the overall management strategy of the television industry.

## Results and Discussion

### *Current Condition at tvOne*

**Table 1 Coding of current condition at tvOne**

Coding	Category	Themes		
		Financial	Resources	Rivalry
<b>Analogue to digital transition; shifting to digital; the transition from conventional media to new media; the technology transition from analogue to digital; decreased revenue due to ASO.</b>	Digitisation	5		
<b>Changes in the competitive map; competition with social media; sources moving to private podcasts; the market advertising shifts to international platforms; changes in market tastes.</b>	Competition			5
<b>tvOne's conditions are not as bright as in the early days; the pandemic has affected the economy; reductions in advertising budgets by installers; the impact of digitisation on ratings; decreased income; struggling conditions.</b>	Decreased Income	6		
<b>The need for strategic and organisational overhaul; loss of trust self.</b>	Organisational Structure Reshuffle		2	
<b>Total</b>		11	2	5

The author's interview question was, "What is the current status of tvOne?" The interview results revealed several key findings, including the shift from analog to digital transmission, changes in the competitive landscape, the need for strategic and organizational restructuring, a decline in tvOne's fortunes compared to its early days, the economic impact of the pandemic, reduced advertising budgets from advertisers, competition with social media platforms, the migration of content sources to private

podcasts, the shift of advertising to international platforms, the influence of digitization on viewership ratings, changing market preferences, the transition from traditional to digital media, and the technological shift from analog to digital. These factors led to decreased income, reduced revenue due to ASO (Analog Switch-Off), challenging operational conditions, and a loss of self-trust. Subsequently, four main categories emerged from the interview analysis: digitalization, competition, decreased revenue, and organizational restructuring. The most frequently discussed category in the interview was "Decreased Income," and the predominant theme was "Financial."

The question "What is the current state of affairs at tvOne?" signifies an interest in comprehending the present circumstances and developments occurring at the tvOne station. "Current conditions" pertain to events and occurrences currently unfolding within the tvOne domain, encompassing program content, viewership, and other factors influencing the station. According to the analysis findings, the category most closely associated with "Decreased Income" indicates that, within the context of the current situation, a primary concern revolves around the decline in income. This decrease could encompass reduced advertising revenue, corporate earnings, or other sources of income linked to tvOne. Such a revenue decline can have ramifications across multiple facets of the station's operations.

Meanwhile, the recurring theme of "Financial" suggests that discussions at tvOne predominantly revolve around financial matters. These conversations encompass an assessment of the repercussions of declining revenue on the station's financial well-being, the strategies implemented to address financial challenges, and considerations regarding fund allocation and expenditures. Given the prevalent category and the prevailing financial themes, it can be inferred that tvOne currently confronts challenges stemming from a revenue decrease that has a direct impact on its financial aspects. The intended interview seeks to provide a more comprehensive understanding of how tvOne is navigating this situation, the measures being taken to mitigate the effects of reduced revenue, and the forthcoming plans designed to ensure the station's financial stability and ongoing operational success.

In general, the interview aimed to obtain insights into the economic and financial effects of the current circumstances at tvOne, along with the strategies employed to address these challenges, by aligning the interview questions with the category "Decreased Income" and the theme "Financial."

The present situation at tvOne is characterized by a significant level of apprehension concerning the decreasing revenues, which is seen as a primary challenge. There is a strong focus on financial matters to address the economic consequences and ensure the station's operational sustainability.

*Opportunities for Implementing AI at tvOne***Table 2 Coding of opportunities for implementing AI at tvOne**

Coding	Category	Themes		
		Content Production	Revenue Optimisation	Marketing
<b>Creating content from AI.</b>	Content Production	1		
<b>Location flexibility; voice optimisation; multilingualism with AI; artificial reality.</b>	AI Technology Integration	4		
<b>Global market expansion.</b>	Market Expansion			1
<b>Digital media; social media platforms.</b>	Content Diversification	2		
<b>Revenue opportunities; cost efficiency; revenue opportunities.</b>	Revenue Optimisation		3	
<b>Brand loyalty; brand awareness.</b>	Marketing			2
	<b>Total</b>	7	3	3

During the interview, the author asked the following question: "What are the possibilities for implementing artificial intelligence (AI) at tvOne?" The interview results revealed several key aspects, including the use of open coding to create AI-powered content, flexible location choices, optimizing voice capabilities, multilingual AI capabilities, expanding into global markets, utilizing augmented reality, exploring revenue-generating opportunities, digital media, integrating with social media platforms, cost-effectiveness, building brand loyalty, and increasing brand awareness. As a result, the generated categories encompassed content creation, integrating AI technology, expanding into new markets, diversifying content, optimizing revenue, and marketing. In the field of data analysis, the dominant category was "AI Technology Integration," while the primary theme centered around "Content Production."

Interview questions inquiring about potential applications of AI at tvOne reflect a keen interest in grasping the potential utility of AI technology within the network. This query underscores the eagerness to delve into innovative prospects that could enhance tvOne's operational effectiveness.

Based on the findings of data analysis, it is evident that tvOne is recognizing significant potential in the integration of AI technology across a wide spectrum of its operations and production processes. This category, which predominantly pertains to "AI Technology Integration," encompasses the utilization of automation systems, advanced data analysis techniques, and the deployment of AI-driven solutions to enhance both the efficiency and quality of work.

Meanwhile, the frequent recurrence of the theme "Content Production"

indicates that the primary objective of implementing AI at tvOne is to enhance and evaluate the content production procedures. This encompasses employing AI for gathering and analyzing audience data to create more fitting programs, streamlining content editing and processing, and utilizing AI for forecasting viewer trends and preferences.

With "AI Technology Integration" as the prevailing category and a theme revolving around "Content Production," tvOne recognizes substantial potential in harnessing AI technology to augment efficiency and creativity in content production. This interview query has been crafted to delve deeper into the specific strategies for implementing AI and the potential impact they could exert on the production process and the ultimate quality of the produced content.

Generally, the data suggests that tvOne sees significant potential in integrating AI technology into content production to improve the efficiency, quality, and relevance of their broadcast programs.

The opportunity to utilize AI technology at tvOne, by incorporating AI into content creation, aims to enhance program production efficiency and quality through the utilization of advanced data analysis and automation.

***Challenges in Implementing AI at tvOne***

**Table 3 Coding of challenges in implementing AI at tvOne**

Coding	Category	Themes			
		Audience Adaptation	Disinformation	Resources	Journalist Ethics
<b>People need to adapt to accept AI; people are not familiar; need education.</b>	Audience Adaptation	3			
<b>Fake news; voice cloning.</b>	Fake News		2		
<b>The results are still rigid; several phases are prepared; technology readiness; AI is not perfect.</b>	Technology Readiness			4	
<b>Creativity is needed; reduce reporters; reduce a job in the news industry; another business alternative; requires a new team; new</b>	Human Resources			7	

<b>knowledge; an expensive initial investment.</b>					
<b>Journalistic ethics.</b>	Journalist Ethics				1
<b>Total</b>		3	2	11	1

The author posed the following interview question: "What are the obstacles to implementing AI at tvOne?" The results of the interview led to open coding, revealing that people need to embrace and adapt to AI, but there is still resistance. Several preparatory phases were identified, including technology readiness, the challenge of dealing with fake news, recognition that AI is not infallible, considerations of journalistic ethics, concerns about voice cloning, and the fact that people are not yet familiar with AI, necessitating educational efforts. Additionally, creativity is deemed essential, and there may be a reduction in the number of reporters, impacting the news industry. Alternative business strategies may need to be explored, requiring the formation of a new team and the acquisition of new knowledge. This transition also involves a significant initial financial investment (Pawar & Vispute, 2023). As a result, the identified categories include audience adaptation, fake news, technology readiness, human resources, and journalist ethics. Upon analyzing the data, it was found that the most frequently occurring category is "Human Resources," with the prevailing theme being "Resources."

The interview questions demonstrate a keen interest in comprehending the limitations and hurdles faced during the AI technology implementation process at tvOne. These inquiries aim to gain insights into the difficulties that could potentially impact the progress and integration of AI within the tvOne setting.

Based on the data analysis results, the category most closely associated with "Human Resources" reveals that one of the primary obstacles in implementing AI at tvOne pertains to the human resources aspect. These hurdles may encompass a deficiency in essential technical expertise and the know-how required to operate and advance AI technologies. Furthermore, the potential shifts in job roles and responsibilities resulting from AI integration can also pose a formidable challenge.

On the other hand, the recurring theme of "Resources" indicates that the primary obstacle to implementing AI at tvOne is associated with the accessibility of resources. These resources encompass financial support, hardware, software, and the necessary infrastructure to facilitate AI technology. In certain instances, the substantial investment essential for the deployment and administration of AI technologies can pose a significant impediment on a larger scale.

Taking into account the category "Human Resources" and the theme "Resources," it can be inferred that tvOne is encountering difficulties in assembling a team equipped with the essential technical skills and guaranteeing the presence of adequate financial and technical resources for the successful execution of AI initiatives. This interview inquiry seeks to delve deeper into this challenge and inquire



about tvOne's strategies for surmounting it.

In general, the data suggests that tvOne encounters significant obstacles when it comes to deploying AI technology, primarily concerning the necessary human and physical resources. These hurdles have the potential to impact the rate of success and the efficiency of AI integration within the tvOne setting.

While implementing AI technology at tvOne, the primary challenges revolve around human resources and physical resources requirements. These encompass the need for specialized technical expertise and ensuring the availability of sufficient financial resources and infrastructure.

## **Conclusions**

Based on the author's discussion regarding the utilization of artificial intelligence (AI) in the management strategy of the television industry, as analyzed through grounded theory with case studies conducted on tvOne, the key findings in this domain revolve around the opportunity AI presents for content production within the television industry. The potential for integrating AI technology at tvOne is primarily focused on enhancing the efficiency and quality of program production. This is achieved through the utilization of advanced data analysis and automation techniques. However, the implementation of AI in the television industry also poses certain challenges. A major obstacle faced by tvOne in adopting AI technology pertains to resource allocation. Specifically, the challenges revolve around securing the necessary human resources, technical expertise, financial resources, and infrastructure needed to effectively integrate AI into their operations.

Based on the findings from direct research interviews with tvOne's top management, there are several critical considerations. Firstly, tvOne should encourage close collaboration among its technical, creative, and managerial teams. This collaboration is crucial to ensure a shared understanding of how AI can effectively benefit all aspects of the television industry. Secondly, tvOne should prioritize the collection of accurate and representative data regarding viewer preferences and behaviors. This data is essential for the development of AI models that deliver high accuracy and relevance. Thirdly, tvOne should initiate an AI pilot project focused on a specific area of production or audience engagement. For example, implementing a content recommendation system would be an excellent choice. This pilot project should serve to assess its impact and facilitate necessary improvements. Lastly, it is vital for tvOne to uphold ethical and privacy standards when using data and AI technology. Maintaining transparent communication with viewers about the use of AI to enhance their experience is equally important.

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