

# Human Resource Strategy Development in Facing Challenges Digital Transformation: Case Study of PT Telkom Indonesia

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**Abstract:** Digital transformation is a strategic challenge for PT Telkom Indonesia in the midst of global technological disruption. This study aims to evaluate the human resource (HR) development strategy implemented by the company in supporting the transformation process. Through the literature study method, this research highlights various approaches taken by Telkom, such as strengthening digital competencies through Telkom Corporate University, implementing a digital work culture, developing digital leadership, and adaptive and sustainable talent management. However, the implementation of these strategies faces various challenges, including intergenerational competency gaps, resistance to change, and limited training budgets. The results of the study provide a comprehensive overview of the importance of integration between technology and HR readiness in facing digital transformation, and offer best practices for the SOE sector and other industries.

**Keywords:** Digital Transformation, Digital Competencies, Human Resources, Organizational Culture, Talent Management

## Introduction

The development of information and communication technology (ICT) in the last two decades has created fundamental changes in business patterns, work processes, and social interactions around the world. Today's business world is not only competing in terms of products and services, but also in the speed of adaptation of digital technology. In the midst of the wave of the industrial revolution 4.0 and now entering the era of society 5.0, business organizations are required to carry out digital transformation in order to remain relevant and competitive. Digital transformation is no longer an option, but a primary need to maintain business existence amidst global disruption. In the past two decades, advances in information and communication technology (ICT) have reshaped business, work, and social environments globally. Today, business competition is no longer just about products and services but also about the ability to adapt quickly to digital technologies. Amid the wave of Industrial Revolution 4.0 and the emergence of Society 5.0, digital transformation has

become a primary need for organizations to remain competitive (Setiawan, 2021; Nasution & Wibowo, 2022). PT Telkom Indonesia, as the largest state-owned telecommunications company in Indonesia, is confronted with these digital disruption challenges. The company is required to evolve from traditional voice-based services towards digital platforms, cloud computing, big data analytics, the internet of things (IoT), and artificial intelligence (AI). In this context, human resources have become central to the company's success, serving as the main driving force for its digital transformation efforts (Purwanto & Lestari, 2021).

PT Telkom Indonesia (Persero) Tbk, as the largest State-Owned Enterprise (BUMN) in the Indonesian telecommunications sector, faces similar challenges. Along with the development of digital technology, the telecommunications business which was previously based on voice and conventional networks has now shifted towards data services, digital platforms, cloud computing, big data analytics, internet of things (IoT), and artificial intelligence (AI). If Telkom does not adapt immediately, it risks being left behind amidst the highly dynamic global telecommunications industry competition.

Digital transformation is not merely about procuring new technological devices. Furthermore, the digital transformation process involves fundamental changes in the organization's mindset, work systems, and corporate culture. This is where the role of human resources (HR) becomes very central. HR is the main driving force that determines the success or failure of the digital transformation process in a company. Without the support of competent, adaptive HR, and having a digital mindset, the implementation of technology, no matter how sophisticated, will not provide optimal results.

PT Telkom Indonesia realizes the importance of the strategic role of HR in facing digital transformation. The company has set a vision to become The Most Preferred Digital Telco Company to Empower the Society. In realizing this vision, developing employee digital competencies, establishing a culture of innovation, strengthening digital leadership, and managing organizational change are the main pillars of HR development strategy. Telkom is also actively developing external collaborations with universities, innovation centers, and technology startups to accelerate the strengthening of digital talent.

However, the implementation of digital transformation in HR management is not free from challenges. PT Telkom Indonesia faces the reality of a skills gap between generations of employees, from baby boomers, X, to millennials and Z. In addition, some senior employees experience resistance in accepting changes in new digital-based work patterns. Other challenges include the need for relatively large HR development investment costs and the imbalance between the speed of technology adaptation and the internal capacity of the organization.

On the other hand, the COVID-19 pandemic that has hit since 2020 has accelerated the need for digital transformation in all sectors, including in the management of human

resources at PT Telkom Indonesia. Hybrid-based work systems, digital remote working, and digital upskilling are inevitable and can no longer be postponed. Companies must be able to develop an adaptive, sustainable, and relevant human resource development model to the demands of the digital technology-based job market.

Based on this background, this study attempts to comprehensively review how the HR development strategy is carried out by PT Telkom Indonesia in facing digital transformation. This discussion is expected to provide a real picture of effective HR management practices in the digital era, especially in national telecommunications companies, and can be a reference for HR development in BUMN environments and other private sectors.

Based on the formulation of the problem above, the objectives of this study to 1) systematically describe the HR development strategy implemented by PT Telkom Indonesia in facing digital transformation; 2) identify various challenges and obstacles that arise in HR management during the digital transformation process; 3) describe the competency development and innovation programs carried out by the company in preparing digital talent; and 4) provide an overview of the role of digital work culture and leadership in supporting the success of HR transformation.

## Literature Review

### A. Digital Transformation: Concept, Scope, and Urgency

Digital transformation is a strategic process that integrates digital technology into all aspects of an organization's operations. It is not just about procuring sophisticated devices, but rather a comprehensive change that includes work culture, mindset, organizational structure, and business models (Setiawan, 2021). Companies that successfully carry out digital transformation are able to increase efficiency, service effectiveness, speed of decision-making, and expand market share.

In a global context, the development of digital transformation was triggered by the emergence of the industrial revolution 4.0 which introduced big data-based automation, artificial intelligence (AI), internet of things (IoT), machine learning, and cloud computing. It doesn't stop there, the era of society 5.0 expands the role of technology as a social solution to improve people's welfare through optimal use of data (Nasution & Wibowo, 2022).

For telecommunications companies such as PT Telkom Indonesia, digital transformation is a necessity. Changes in people's data consumption patterns, the shift from voice-based services to data services and digital platforms, and the emergence of over-the-top (OTT) competitors such as Netflix, YouTube, WhatsApp, and others require Telkom to continue to innovate and expand its digital business portfolio (Wahyudi, 2021).

PT Telkom Indonesia currently carries a vision as The Most Preferred Digital Telco to Empower the Society, which means that the company no longer relies solely on the network business, but also becomes an enabler of Indonesia's digital ecosystem (Telkom Annual Report, 2023). Therefore, digital transformation is not just a business choice, but a company's sustainability strategy.

## **B. Human Resources as a Key Pillar of Digital Transformation**

In the midst of digital transformation, the role of human resources (HR) becomes crucial. Technology is only a tool; the spearhead of success lies in its people (Purwanto & Lestari, 2021). A successful organization is an organization that is able to build the digital competence of its employees. Digital competence is not just technical ability, but also includes:

1. Digital Literacy: Basic understanding of digital technology and its wise use.
2. Digital Mindset: An open mindset towards change and innovation.
3. Digital Collaboration: The ability to work across divisions, across generations, and across locations through digital platforms.
4. Agility: The ability to adapt quickly to technological changes and market dynamics.

According to Sulistiyani & Rosidah (2020), digital human resource development covers two large spectrums, namely:

1. Upskilling: Improving existing skills to be relevant to new technological developments.
2. Reskilling: Learning new skills that employees have not previously mastered.

The HR development program at PT Telkom Indonesia has been directed at the formation of a digital talent factory through Corporate University, strengthening Telkom Future Leaders, and collaborating with various universities (Telkom CorpU, 2023).

## **C. PT Telkom Indonesia's Strategy in Digital HR Development**

Based on various studies, the digital HR development strategy implemented by PT Telkom Indonesia can be broken down into several main pillars:

### **1. Reskilling and Upskilling Programs Based on Digital Learning**

Telkom Indonesia has made extensive use of a Learning Management System (LMS). All employees can access cloud-based training materials anytime, anywhere (Telkom Annual Report, 2023). International certification programs are also provided, such as AWS Cloud, Google Cloud, and Microsoft Azure certifications for the IT and data divisions.

## 2. Digital Leadership Development

Digital transformation requires leaders who are able to read change. PT Telkom developed the Leadership Development Program (LDP), as well as the Digital Transformation Office (DTO) which is tasked with accelerating digital adaptation in all business units (Rachman, 2022).

## 3. Corporate University & Future Ready Talent

Through Telkom Corporate University, HR development is focused on digital curriculum, data science, cybersecurity, and digital marketing. Telkom also developed the Indigo Creative Nation program to encourage startup innovation in the company's internal and external environments (Telkom CorpU, 2023).

## 4. Agile & Flexible Working Culture

Agile work culture is implemented through scrum team-based projects, design sprints, and collaborative task forces across divisions. In addition, the implementation of remote working during the pandemic is used as a more efficient hybrid working system model (Nasution, 2021).

## 5. Employee Engagement & Digital Wellbeing

Telkom also pays attention to employee welfare in the digital era by providing an internal myIndiHome HRIS application, digital psychology consultation services, and a digital employee community forum (Wahyudi, 2021).

## D. PT Telkom Indonesia's Challenges in Digital HR Development

Even though various programs have been implemented, Telkom Indonesia still faces several major challenges, including:

### 1. Digital Competence Gap between Generations

Baby boomers and generation X tend to have a harder time adapting to new technologies than millennials or generation Z (Putri & Yuliana, 2021). Cross-generational mentoring programs are one solution.

### 2. Resistance to Old Organizational Culture

Some employees still have a bureaucratic, hierarchical mindset, and minimal innovation. In fact, digital culture demands openness, experimentation, and failure as part of the learning process (Sulistiyani, 2020).

### 3. Speed of Technological Change

Digital technology is developing very rapidly. The competencies taught today could be obsolete in the next 2-3 years. Therefore, learning programs must be dynamic and sustainable (lifelong learning).

#### 4. Limited Digital Talent Budget

Digital training investment requires large costs, especially to participate in international certification programs and develop adequate LMS infrastructure (Rachman, 2022).

#### 5. Employee Mental Unpreparedness

Not all employees are mentally prepared to leave their comfort zone, face uncertainty, and work in a complex virtual environment.

### E. Ideal Model for Digital HR Development at PT Telkom Indonesia

Referring to a study by Rachman (2022), the ideal model for digital HR development in state-owned telecommunications companies includes:

1. Personalized Digital Learning Path: Each employee has a digital competency development plan based on individual needs.
2. Integrated LMS & AI Based Training: Using an AI-based adaptive learning system.
3. Digital Talent Incubation: Internal digital talent development through project-based learning.
4. Continuous Coaching & Mentoring: Intensive support from superiors and digital coaches.
5. Cross-Generational Collaboration Program: Combining the strengths of the senior generation with the digital capabilities of the younger generation.

### Methodology

This study uses the library research method or literature study as the main approach, because it does not involve primary data collection but relies on literature such as journals, books, company reports, and government policy documents. The object of the study focuses on PT Telkom Indonesia's HR development strategy in facing digital transformation, considering the important role of this company as a BUMN that is active in digital initiatives such as Telkom Corporate University and Digital Transformation Office. The type of data used is secondary data obtained from scientific books, journals since 2020, Telkom's annual report, ministry documents, and official company publications. Data collection techniques are carried out through documentation and systematic literature review, including identification, selection, collection, and classification of information. Meanwhile, the data analysis technique uses thematic analysis methods with five main themes: digital learning strategies, work culture transformation, strengthening digital leadership, developing digital talent, and implementation challenges. Data is analyzed narratively and critically, connecting theory with practice to produce a comprehensive and valid academic understanding.



## Results and Discussion

**Table 1.** Results of Literature Study

No.	Source	Research Focus	Key Findings
1	Setiawan (2021)	Digital Transformation	Digital transformation needs an adaptive mindset and work structure.
2	Purwanto & Lestari (2021)	HR Role	HR with strong digital competencies significantly contributes to digitalization.
3	Nasution & Wibowo (2022)	Society 5.0	Technology can optimize human well-being by aligning digital literacy and behavior.
4	Putri & Yuliana (2021)	Generational Gaps	Tailored training and mentoring can bridge digital literacy across generations.
5	Rachman (2022)	HR Development Model	Adaptive training and personalized learning paths enable digital talent.

### A. Strategic Challenges of Digital Transformation at PT Telkom Indonesia

The ongoing digital transformation globally has created great pressure for telecommunications companies, including PT Telkom Indonesia. In today's digital era, customer expectations are shifting towards fast, personalized, and technology-based services. Customers now want not only stable internet connectivity, but also an integrated digital ecosystem, including digital financial services, streaming entertainment, cloud services, and smart cities. This demand requires Telkom Indonesia to expand its business far beyond conventional telecommunications services.

In addition to customer demands, the development of disruptive technologies such as Artificial Intelligence (AI), Internet of Things (IoT), Blockchain, and Big Data Analytics also add to the complexity of business challenges. The existence of more agile digital startups such as Gojek, Grab, and global players such as Google and Amazon pose a serious threat to conventional companies that are late to adapt. This forces Telkom Indonesia to accelerate its digital transformation agenda to remain relevant amidst global competition.

The internal challenges faced by Telkom are no less severe, including the existence of legacy systems of old technology that are difficult to integrate, resistance of some employees to changes in digital culture, limited number of digital talents, and organizational bureaucracy that tends to be slow in decision making. The regulatory aspect from the government is also a the digital skills gap between employees is also a serious problem. There are groups of senior generation employees who are still accustomed to conventional ways of working, while the younger generation is quicker to adopt new technologies. This gap has the potential to hinder internal collaboration if not addressed systematically through a planned digital HR development strategy.

## **B. Structured Employee Digital Competency Development Strategy**

PT Telkom Indonesia recognizes that its people are central to digital transformation. As stated by Purwanto & Lestari (2021), technology serves as a tool, and an adaptable digital mindset is the key to making it successful. Similarly, Rachman (2022) emphasizes the significance of creating personalized learning paths and adaptive training to foster digital competencies. The results of this review highlight Telkom's focus on digital upskilling, talent incubation, and digital culture as pivotal strategies. Yet, resistance from older generations and the rapid evolution of digital technologies remain persistent challenges.

The training program at Telkom CorpU is not only formal in the classroom, but also adopts the concept of blended learning and microlearning. Employees can access thousands of online modules, take part in hybrid training, and even participate in capstone projects to apply knowledge practically in their respective work units. The personalized learning pathway approach is also applied, so that the development program is tailored to the needs of the position and individual competencies.

The digital certification program is another important pillar. Telkom aggressively encourages its employees to obtain certification from global institutions such as AWS Certified, Google Cloud Certification, Cisco Networking, and Microsoft Azure. This certification strengthens the professional credibility of employees while increasing the competitiveness of corporations globally.

Not only technical skills, Telkom also equips its employees with strengthening 21st century skills such as critical thinking, creative problem solving, virtual collaboration, to the ability to adapt in a fast-paced digital work environment. Through this holistic development approach, Telkom seeks to produce digital human resources who are not only technologically proficient, but also mentally ready to lead change.

## **C. Organizational Culture Transformation as the Foundation of Digitalization**

Rapid technological change will be difficult to implement if it is not balanced with organizational cultural transformation. PT Telkom Indonesia positions cultural transformation as a fundamental priority in its corporate digitalization program. The old rigid, bureaucratic, and hierarchical work culture is overhauled into an agile, open, and adaptive culture.

Telkom's cultural transformation is outlined in the philosophy of The Telkom Way which includes three main values: Integrity, Enthusiasm, and Totality. These values are the main guide in building employee professionalism that is in line with digital culture. In addition, the company also adopts the Agile Organization principle, by implementing a squad, tribe, and chapter-based work model that emphasizes cross-functional collaboration, speed of execution, and decentralized innovation.



Telkom also created a cultural internalization program such as the Digital Culture Acceleration Program to accelerate the adoption of digital behavior. This program includes digital mindset training, case study simulations, and instilling a data-driven decision-making culture. Top management actively becomes a role model for cultural change, so that the change process is not only top-down, but is organizational in nature.

Collaborative technology-based work environments such as the use of internal cloud systems, digital collaboration tools (e.g. Microsoft Teams, Trello, Slack), and the use of real-time performance dashboards accelerate data-driven decision making. Thus, the organizational culture is gradually transforming from mere formality to a truly internalized digital culture.

#### **D. Strengthening Visionary Digital Leadership**

In the digital era, the success of organizational transformation is largely determined by the quality of its leaders. Telkom Indonesia has designed a digital leadership development program that targets all levels of management, from supervisors, middle managers, to executives. The flagship Digital Leadership Development Program (DLDP) is the main driver for developing the digital capacity of company leaders.

Through DLDP, prospective leaders are not only taught traditional management concepts, but are also equipped with the ability to manage uncertainty, make data-based decisions, and lead highly heterogeneous multigenerational teams. This digital leadership development curriculum was built through collaboration with international institutions such as MIT Sloan, Harvard Business School, and Singapore Management University.

Leaders are also trained to build ecosystem thinking, namely the ability to see business not just as a company line, but as part of the national and regional digital ecosystem. With this perspective, Telkom encourages its leaders not to be afraid to innovate, build collaborations with digital startups, venture capital, universities, and the government.

Technology-based coaching & mentoring programs are also run internally through smart coaching applications that facilitate monitoring of leadership competency development in real time. This allows for more precise personalization of leadership development according to the needs of each individual.

#### **D. Sustainable and Competitive Digital Talent Management**

In the digital industry ecosystem, the existence of digital talent is now a strategic commodity that is fought over by many companies. PT Telkom Indonesia has built a digital talent management system based on Talent Lifecycle Management that is integrated from recruitment, competency development, to retention.

Telkom's recruitment strategy focuses on digital-based employer branding, utilizing professional social media, AI-based recruitment tools, to hackathon competitions to recruit young talents in the digital field. Collaboration with well-known technology campuses both at home and abroad is also intensified to recruit human resources who have cutting-edge skills.

After entering, talent development is directed at a cross-digital unit rotation system to expand business insights end-to-end. Digital talents who have leadership potential are included in the Telkom Future Leaders program to prepare them as future digital leaders.

In terms of retention, Telkom provides performance-based incentives, innovation bonuses, opportunities for global exposure development, to ownership programs based on employee stock option plans (ESOP) for superior digital talents. This step aims to make digital talents feel appreciated professionally and financially, while minimizing the risk of migration to competing global companies. In addition to internal development, Telkom also builds strategic partnerships with digital startups through the MDI Ventures, Indigo Creative Nation, and Digital Amoeba programs, where employees have the opportunity to do secondment to fostered startups to broaden their innovation insights practically.

## Conclusion

The digital transformation faced by PT Telkom Indonesia is not just a matter of adopting technology, but rather a comprehensive transformation that involves strengthening human resources as the core of change. With the challenges of technological disruption, global competition, and changes in customer behavior, Telkom places the development of employee digital competencies as a very crucial main strategy. Telkom's efforts include developing continuous learning through Telkom Corporate University, implementing a value-based work culture called The Telkom Way, strengthening digital leadership, and comprehensive management of digital talent from upstream to downstream. All of these strategies demonstrate the company's seriousness in ensuring the sustainability of its business in the highly competitive digital era. With this systematic and comprehensive approach, PT Telkom Indonesia demonstrates the organization's readiness to manage change and strengthen its competitiveness at the national and global levels.

Telkom Indonesia needs to continue to expand strategic collaboration with the global digital ecosystem, update competency development programs based on the needs of the industry that continue to move dynamically, and build an organizational culture that is increasingly adaptive to new learning. Reskilling and upskilling programs based on precise competency needs mapping can be a priority. In addition, companies are also advised to strengthen the digital talent retention system by strengthening attractive employee value propositions, providing wider innovation space for employees, and maintaining consistent

digital leadership across all lines of the organization. Thus, PT Telkom Indonesia's digital transformation can continue to run sustainably, effectively, and have a positive impact on business growth and national economic contribution.

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