



# The Relationship between Human Capital Readiness in the Era 4.0 and Digital Culture towards Employee Performance: A Case Study of Unit X in PT Telekomunikasi Indonesia

Frida Eka Setianingsih<sup>1</sup>, Achmad Fajar Hendarman<sup>2</sup>, Agnesia Candra Sulyani<sup>3</sup>, Niken Larasati<sup>4</sup>

<sup>1,2,3,4</sup> School Of Business and Management Institute Technology Bandung & Bandung, Indonesia

**ABSTRACT:** The present Industrial Revolution 4.0 will impact many aspects of human functioning. Companies in the sector must develop staff industry 4.0 knowledge and proficiency. Knowledge, abilities, and values found in human capital can be exploited to gain a competitive advantage. Strengthening digital culture is one of the elements that is thought to promote Telkom Group's digital transformation, which is now taking place as it transitions from a telecom firm to a digital telco. The company's corporate culture has an impact on how well its personnel perform. Performance among employees can be raised through a flexible and supportive business culture. SPSS 26 was used to process the quantitative research approach used in this study. The outcomes have a favorable and considerable impact on staff productivity and human capital preparation in the 4.0 era.

**KEYWORDS:** Digital Culture, Employee Performance, Human Capital Readiness.

## 1. INTRODUCTION

One of the state-owned technology and information companies in Indonesia, PT Telekomunikasi Indonesia, is currently implementing digital transformation in accordance with the Telkom Group CSS 2022–2024, which is related to implementing work activities in the digital era to meet the needs of the community in the industrial era 4.0. Telkom constantly strives to innovate in order to achieve these objectives, one of which is to cultivate digital talent in order to expedite society's digitization process. Additionally, as mentioned in the 2022–2024 FU HCM Strategic Master Plan, the Telkom Group is presently introducing work flexibility to further a culture of digitization with the purpose of boosting productivity. Strengthening digital culture is one of the elements that is thought to promote the Telkom Group's digital transformation, which is now taking place as it transitions from a telecom firm to a digital telco. To meet the needs of the community and the change in work culture caused by the COVID 19 pandemic, there has been a change in the corporate culture that must change, initially accustomed to working offline, must be able to adapt their work online. By utilizing existing technology, employees are required to be accustomed to using digital-based work tools to make it easier for employees to fulfill their work so that the work done can be completed properly and on time, now we have entered Industry 4.0. The industry is often also referred to as the era of digitalization. All aspects of life are required to be able to adapt to the times. Within the organization self-adjustment is done by changing manual processes to a comprehensive digital platform. Human resources, which are one of the key factors in dealing with the development of digital technology, cannot be separated from the impact of these developments and to fulfill the development of digital talent in the company, it is necessary to prepare employees to face the industrial era 4.0, measuring what competencies must be required by talents. this digital format so that it is in line with the company's goals in meeting these goals. Seeing the performance scores of employees in unit X which are currently in satisfactory condition, but the impact of industry 4.0 is still not felt by employees in unit X and to meet the company's needs in realizing digital transformation and meeting the needs of digital talent, digital cultural values It is felt that the company and employee readiness in facing the industrial 4.0 era need to be re-examined to see the extent of employee readiness in facing digital transformation in unit X.

## 2. INDUSTRY 4.0

Industry 4.0 is a new industrial revolution that stresses internet and digital technology for industrial transformation. According to Zimmerman (2018) that working on scientific, technology, engineering, and math abilities, the internet of things, and lifelong learning will account for up to 75% of tasks in the Industrial Revolution Era 4.0 and beyond. Human resources are viewed as an



investment for institutions or organizations from the perspective of human capital. (Eri Susan, 2019). The Industrial Revolution 4.0 forced management to decide between keeping human resources and putting efficiency first. Utilizing databases and information systems, new technology enables a sector or organization to build strategies in the most efficient, straightforward, and useful manner possible. (Faizal, 2020).

### 3. HUMAN CAPITAL READINESS

Hendarman et al., (2020) recommend that businesses in the sector improve staff knowledge and abilities linked to industry 4.0. Knowledge, skills, and values that can be applied to gain a competitive advantage make up human capital. The ability of human capital to carry out an organizational plan determines its value. The success of corporate performance is significantly influenced by human capital readiness. In this study, researchers conducted measurements of employee performance appraisals by using measurements through dimensions that refer to human capital questionnaire items developed based on Hendarman et al. (2020a, 2020b).

1. Knowledge, includes a performance-oriented intellectual capital through action (Sveiby, 2000) with a classification of knowledge in the form of tacit or explicit knowledge, and special or general knowledge.
2. Skills, part of competence as a physical and mental task, (Spencer and Spencer, 1993). Skills are grouped into hard skills and soft skills. Hard skills are technical skills (Rainsbury & Hodges, 2002), these skills include intellectual activities such as thinking, reasoning or remembering and are influenced by individual IQ (Rainsbury & Hodges, 2002; Hendarman & Cantner; 2017). Soft skills are skills both internally and interpersonally, which are needed for individual development, social participation and success in the workplace.
3. Attitude, behavior based on conscious and unconscious mental views, is developed cumulatively through experience (Venes, 2001) and as a tendency to perceive certain objects or behaviors as liked or disliked (Albarracin et al., 2005).

### 4. DIGITAL CULTURE

Improved communication technologies and virtual connections have opened the world to new ways of acquiring, developing and managing talent and jobs, including changing the way jobs are distributed. In addition, it also changes perceptions about work, the people in it and the work culture as a whole. Digital culture itself is likened to a set of seven key attributes, namely Innovation, Data-driven Decision-Making, Collaboration, Open Culture, Digital First Mindset, Agility and Flexibility, and Customer Centricity (Buvat et al., 2017). Based on the explanations from experts or the literature above, it can be concluded that digital culture is the values, beliefs, and norms adopted by an organization, and consists of various attributes or beliefs that encourage and support the use of technology to get work done effectively. In this study, researchers measured employee performance assessments using measurements through the dimensions proposed by (Buvat et al., 2017)

1. Innovation. Prevalence or habit of organizational behavior that supports employees to take risks and explore new ideas.
2. Data-Driven Decision-Making. It is an indicator where the organization uses data and analysis to make better business decisions or it can be said that the organization makes decisions based on the data it has.
3. Collaboration (Collaboration). The organization creates cross-functional and inter-departmental teams to optimize the company's expertise oriented towards achieving organizational goals.
4. Open Culture: is an indicator where an organization is open with external network partnerships such as third-party vendors, startups (new companies) or customers, which is essentially an open organization with the outside or external world.
5. Digital First Mindset (Digitalization), Organizations use a mindset in which digital solutions are the main way to solve problems or improve organizational performance going forward.
6. Agility and Flexibility. Is an indicator of where the organization is able to quickly and dynamically make decisions, as well as the ability of the organization to adapt to changing technological demands.
7. Customer Centricity (Customer Centrality or Customer Attention Center). Organizations use digital solutions to expand their customer base by changing the customer experience to create new products or it can be said that with the use of digital technology organizations are able to make customer engagement closer and stronger.

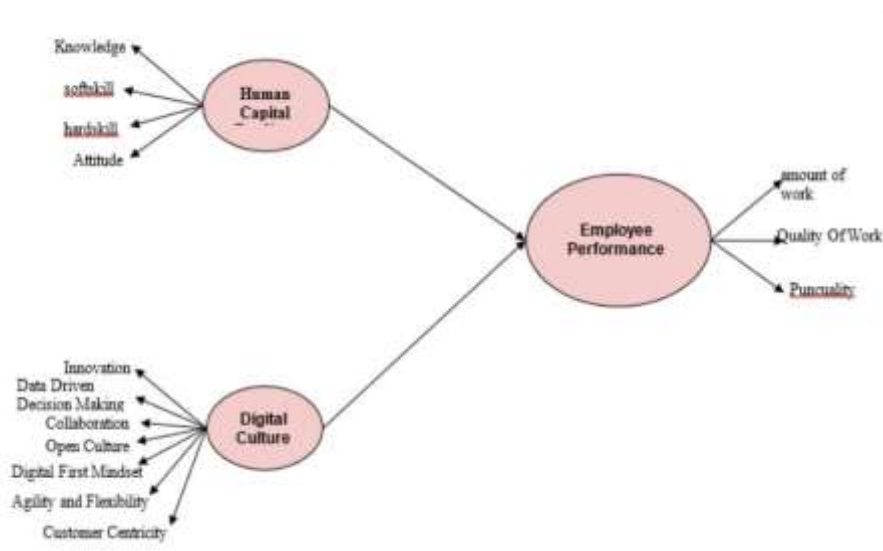


### 5. EMPLOYEE PERFORMANCE

Facing competition in the global era, organizations are required to work more efficiently and effectively. Increasingly fierce competition causes organizations to be required to be able to increase competitiveness in order to maintain the survival of the organization. Organizations bring together people who are commonly referred to as employees or human resources to carry out organizational activities (Chairunnisa, 2021). Employee performance is the result of work achieved by individuals in accordance with their roles or duties within a certain period of time, which is related to certain values or standards from the organization where the individual works (Umam, 2018). Based on the definition above, it is known that performance is defined as the work of an employee, to achieve good performance, a good element is human resources, even though the planning has been well and neatly arranged, if the people or personnel who do it are not qualified and do not have high morale, then organized planning would be useless. In this study, researchers measured employee performance assessments using measurements through the dimensions proposed by (Build 2012 in Danuarta & Nurul, 2021) Employee performance can be measured through performance indicators, including the following:

1. Number of jobs, The amount of work produced by individuals or groups as a requirement of the work standard. Each job has different requirements so that it requires employees to meet these requirements in terms of appropriate knowledge, skills and abilities. Based on the job requirements, it can be seen the number of employees needed to be able to do it, or how many units of work each employee can do.
2. Quality of work, every employee in the company must meet certain requirements to be able to produce work according to the quality demanded by a particular job. Each job has certain quality standards that must be adjusted by employees to be able to do it according to the provisions. Employees have good performance when they can produce work according to the quality requirements demanded by the job.
3. Timeliness: Each job has different characteristics, for certain types of work must be completed on time, because it has a dependence on other jobs. So, if work in a particular section is not completed on time it will hinder work in other sections, thereby affecting the amount and quality of work. In this dimension, employees are required to be able to complete work on time.

### 6. CONCEPTUAL FRAMEWORK



Source: Author 2020

H1: Human Capital Readiness has a significant effect on employee performance.

H2: Digital Culture has a significant effect on employee performance.



**7. QUANTITATIVE RESEARCH**

The Sampling Method was used to conduct a survey in order to obtain the data. The sampling technique is the process used to get samples from people who will serve as responders or study participants. The benefit of utilizing this sample technique is to lessen the possibility of systematic mistake and sampling bias (Datta, 2018). Because there are several genuine populations in Unit X, probability sampling is used in this study to obtain a sample that is representative of the entire population.

**8. GAP ANALYSIS**

The future analysis will reduce its emphasis to the construct's variable and concentrate exclusively on the final HDI level indicated by the HDI result. Only the final gap score will be used to establish the computation's minimum and maximum values. In this design, the attitude variable has a minimum value of 0.04, while the hard skill variable has a maximum value of 0.85.

**A. Gap Analysis HDI Levels**

<i>Sr. No.</i>	<i>Current Value</i>	<i>Expected Value</i>	<i>GAP</i>	<i>HDI</i>	<i>Summary</i>
<b>Knowledge</b>	3.08	3.28	0.2	0.20	OPTIMAL
<b>Hard Skill</b>	3.80	4,65	0.85	1.00	NOT READY
<b>Soft Skill</b>	3.95	4,34	0.39	0.43	READY
<b>Attitude</b>	4.05	4.09	0.04	0	OPTIMAL

The summation of all factor item gap scores that have been converted to HDI levels using the HDI formula can be seen in the table below. Unfortunately, the hard skill variable, one of these abilities, received a poor index based on the final computation. These findings suggest that this variable has to work on applying hard skills to cope with the modern world. In contrast, even though the knowledge and attitude factors had a higher index level than the soft skill variables, they also demonstrated to have far better conditions for implementing or coping with the industrial age 4.0 than hard skills. The ready index for soft skills indicates that the business has put in place the soft skills required to execute tasks in the industrial era 4.0, while the ideal index indicates that Unit X has successfully shaped employee behavior.

**9. DIGITAL CULTURE ANALYSIS**

As we can see, the category score of the digital culture scale places the average score for each dimension quite highly. No dimension receives less than 80%. The percentages vary from 81.56 to 89.25. Innovation, data-driven decision making, and open culture received the top three lowest marks in the poll on digital culture. With a rating of 81.56%, the Innovation dimension has the lowest score and is also in the top group. Digital First Mindset, Agility & Flexibility, and Customer Centricity received the three top ratings in the poll on digital culture. Digital First Mindset received the highest dimension score, with a score of 89.25%.

**B. Digital Culture Index**

<i>Sr. No.</i>	<i>Dimension</i>	<i>Average Score</i>	<i>Score (%)</i>
<b>1</b>	Innovation	16.31	81.56%
<b>2</b>	Data Driven Decision Making	16.62	83.12%
<b>3</b>	Collaboration	17.11	85.55%
<b>4</b>	Open Culture	16.68	83.43%
<b>5</b>	Digital First Mindset	17.85	89.25%
<b>6</b>	Agility & Flexibility	17.70	88.50%
<b>7</b>	Customer Centricity	17.50	87.50%
	<b>Total Score</b>	<b>17.11</b>	<b>85.55%</b>



The data analysis reveals that, at Unit X, where the organization has been very successful in implementing digital culture in the company based on the survey completed, each dimension score in the digital culture survey has been implemented and is well reflected in the everyday work behavior.

**10. EMPLOYEE PERFORMANCE ANALYSIS**

**C. Employee Performance Index**

Sr. No.	Dimension	Average Score	Score (%)
1	Amount Of Work	17.63	88.15%
2	Punctuality	17.11	85.55%
3	Quality Of Work	17.72	88.62%
	<b>Total Score</b>	<b>17.48</b>	<b>87.44%</b>

The table above shows that the average score for each dimension on the Employee Performance scale category score is quite high. No aspect has a score less than 80%. The employee performance survey has a score range of 85.55 to 88.62 percent. The dimension of Quantity of Work receives the highest score, followed by the dimension of Amount of Work. The Punctuality dimension has the lowest score. The average employee performance score is likewise good, according to this table. The outcomes demonstrate that the business was successful in raising unit X employees' performance in terms of achieving business objectives.

**11. REGRESSION MODEL**

The two constructs seem important and have a fully positive relationship to individual invention, as shown by the equation above. Employee performance at work is predicted to grow by 0.281 for a given contribution of human capital preparedness, and by 0.142 for digital culture, according to the slope of industrial human resource competency 4.0 ( $\beta = 0.281$ ). The interval to be employed in testing the designed hypotheses is in agreement with the p-value (.sig) of 0.05. To determine if the construct is significant or not, the analysis for this case will use a p-value approach, therefore the main emphasis will be seen based on the t (t) value and p (.sig) value. The numbers that appear in the cells in Figure 4.1 are meant to represent each component of Industrial Human Capital Readiness 4.0 to the Y variable, which is employee performance. T-table with an alpha level of 5% will be 1,984 for this sample size (DF = 99). Examining the impact of Industrial Human Capital Readiness 4.0 on employee performance under Hypothesis H1. The construct T value is 2,086 with a p-value of 0.040, as shown in the above table.

1. This hypothesis (H1: There is a substantial link between the preparedness of industrial human capital 4.0 with employee performance) yields accepted or Hypothesis is accepted as it has been demonstrated that tcount (2,086) > ttable (1,967) with p-value (0.040) (0.05).
2. Testing the Digital Culture of Employee Performance H2 Hypothesis. The construct T value is 2,457 with a p-value of 0.016, as shown in the above table. This hypothesis (H2: There is a substantial association between digital culture and employee performance) leads to accepted or accepted hypotheses, as demonstrated by the fact that tcount (2,457) > ttable (1,967) with a p-value (0.016) (0.05).

The equation regression model will be presented as follows in accordance with the figure below:

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.211	.921		.229	.819
	X1	.281	.135	.202	2.086	.040
	X2	.534	.217	.238	2.457	.016

a. Dependent Variable: Y



## 12. CONCLUSION

As the top telecommunications provider in Indonesia, Telkom constantly looks for methods to make people's lives better online. One strategy is to change into a digital telecommunications provider in 2022, which entails that numerous Telkom divisions are also changing. Researchers attempt to evaluate their digital unit with the Human Capital Readiness Survey, digital culture, and employee performance in order to achieve this transformation aim. to address some of the Unit X issues that arise. Since the Hard Skill dimension, which is included in the NOT READY category with a value gap of 0.85 and HDI of 1.00, is able to show employee readiness for their capacity to adapt to changes made in their organizational environment, it is crucial to increase this dimension. In the previous chapter, we came to the conclusion that the Readiness of Human Capital on the Hard Skill dimension is the root cause of the X unit. The capacity to constantly initiate changes and to adjust as necessary so as to optimize benefits, minimize risks, and maintain performance. Based on the findings of the survey, Unit X's digital culture scored 85.55% and Employee Performance scored 87.44%, both of which are excellent results. Although staff performance and digital culture received high category scores in the results, there are still certain areas that require work. Additionally, the survey's findings indicate a strong connection between employee performance and compensation.

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