



Identifying Human Capital Readiness and Digital Culture toward Employee Performance in Facing Industry 4.0: Case of Pt Perusahaan Listrik Negara Province X

Chairul Anshar¹, Madju Yuni Ros Bangun²

^{1,2} School of Business and Management, Bandung Institute of Technology, Indonesia

ABSTRACT: The emergence of Industry 4.0 has brought changes and challenges to PT Perusahaan Listrik Negara (PLN). In order to adapt and thrive in this new era, it is crucial for companies to identify and enhance their human capital readiness and digital culture toward employee performance. The performance of employees generally has the potential to enhance the productivity of a company in achieving its goals. However, in the process of transforming and improving employee performance in the era of Industry 4.0, PT Perusahaan Listrik Negara (PLN) faces important challenges, namely the lack of mature employee readiness and weak digital capabilities. This study aims to identify the impact of human capital readiness and digital culture on employee performance in the context of facing Industry 4.0. Industry 4.0 represents a significant transformation in the way businesses operate, driven by advancements in digital technology and automation. The study focuses on understanding how the readiness of employees in terms of skills, knowledge, and attitudes, as well as the organizational culture surrounding digital adoption, influence employee performance in the era of Industry 4.0. The research found will be used to determine which dimensions need to be prioritized in order to enhance the "Amount of Work," "Punctuality," and "Quality of Work," aiming to address the company's shortcomings in both work processes and systems. Based on the analysis, it is found that Soft Skills, Attitude, Digital First Mindset, Flexibility and Agile, and Data Driven Decision Making are the dimensions with the highest priority. These indicators are crucial factors that require improvement. Based on the research found, the proposed programs as company strategies to improve employee performance include enhancing employee capabilities through seminars and workshops related to digital technology. Additionally, improving the company's technology is essential to enable employees to operate and apply their work digitally.

KEYWORDS: Digital Culture, Employee Performance, Human Capital Readiness, Industry 4.0.

INTRODUCTION

PT Perusahaan Listrik Negara (PLN) is one of state-owned companies in Indonesia electricity which continues to be committed and innovates carrying out the big mission of illuminating and moving the country. PLN keeps striving to build the foundation and running the digitalization. The modern digital revolution has a significant effect on human resources for an organization's success (Hendriyadi, 2019). By utilizing existing technology, employees are required to be accustomed to using digital-based work tools to make it easier for employees to fulfil 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 fulfil 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. In dealing with this all-digital industry 4.0, of course it requires maximum readiness from PLN employees to be able to use digital media which is very necessary in carrying out their work. According to a form letter from PLN 5550/STH.03.02/A010500/2020 about PLN's cultural revolution in preparing human resources for the industrial revolution 4.0, this is obviously also sustainable in terms of human capital readiness in facing industry 4.0 revolution. With the encouragement of changes in work culture that has evolved into a digital culture, a rigorous business culture, meantime, can impair workers' performance. The company needs to adapt its corporate culture to the employees. Corporate culture is one of several elements that affects employee performance. Employee performance, contentment, and motivation can all be increased when employees are compatible with the prevalent culture. The implementation of corporate culture will increase the



firm's success in motivating workers in addition the employee could feel the engagement to the company and feel the prosperous, and employees will do and work harder for the company; if the company performs well, then its performance will also improve, which leads to the achievement of company goals. Employee performance is judged not only on their ability to perform their jobs flawlessly, but also on their capacity for self-mastery by the amount of work, quality of work and also time management to complete it as scheduled. According to a form letter 2020, PLN 5550/STH.03.02/A010500/2020, and PLN's vision is "To be the Leading Electricity Company in Southeast Asia and #1 Customer Choice for Energy Solutions", it is felt necessary to pay attention to measure the Human Capital Readiness and Digital Culture in Facing The Industry 4.0 Revolution.

LITERATURE REVIEW

1. INDUSTRY 4.0

A well-known economist from Germany named Prof. Klaus Schwab serves as the Executive World Economic Forum (WEF). In his book titled "The Fourth Industrial Revolution" Schwab, who was the first to develop the term Industry 4.0 stated that the concept had completely changed human life and the way that people worked fundamentally (Schwab, 2016). Economic, industrial, and governmental sectors have all been impacted by recent technology developments that combine the physical, digital, and biological worlds. With the rise of digital technology, which has a significant influence on human existence all over the world, the industrial revolution is currently at its height. Automation systems are encouraged in all activity processes by the most recent industrial revolution, or fourth generation. Based on (Rüßmann et., at 2015) Industry 4.0 is constructed on nine technological innovation pillars that can help the organization in acceleration of industrial production on many fields, they are: Big Data Analytics, Cybersecurity, Autonomous Robots, Simulation, Integrasi System, Internet of Things (IoT), Cloud Computing, dan additive manufacturing.

2. 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. By upgrading in knowledge, skill set and also value into themselves so that it will achieve a competitive advantage human capital. This statement is also in line with research (Kusmin, 2017) that states to address the human capital issue, all parties involved must participate in employee re-training and up-skilling to improve their readiness to confront rising unemployment and a talent scarcity. In preparing efficient human resources by analysing the knowledge needs of employees such as hard skills or soft skills to suit the company's conditions and goals. In this study, the author 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, contains action-oriented intellectual capital that is performance-oriented (Sveiby, 1997) involves the classification of knowledge in the form of tacit or explicit knowledge, and particular or general knowledge.
2. Skills, as a physical and mental activity aspect of competency (Spencer, 1993). Hard skills and soft skills are the two types of skills. Technical skills are characteristics of hard skills (Rainsbury, 2002), These abilities include cognitive processes like thinking, reasoning, and memorizing and are impacted by an individual's IQ (Rainburry & Hodges, 2002; Hendarman & Cantner, 2017). Soft skills are internal and interpersonal abilities that are required for individual growth, social involvement, and career success (Kechagias, 2011). These skills include the ability to manage interpersonal interactions (Rainburry & Hodges, 2002; Hendarman & Cantner, 2017),
3. Attitude, conduct that is based on conscious and unconscious mental concepts that have been created through experience (Venes, 2001) and as tendency for apprehending certain object or behavior which is disliked and liked (Albarrachin, 2005).

3. DIGITAL CULTURE

Digital culture may be defined as anything that influences how we connect, behave, think, and communicate in the society that employs it. the internet's technology. Religious and political institutions, conventions, language, dress/appearance, works of art, and so on all contribute to culture. (Jerome Buvat, 2017) stated that in digital culture has 7 dimensions. In this study, the researcher would use these dimensions, they are:

1. *Innovation*, the prevalence of behaviors that support risk taking, disruptive thinking, and the exploration new ideas



2. *Data-driven Decision-Making*, the application of data and analytics to better business decisions
3. *Collaboration*, the formation of cross-functional, inter-departmental teams in order to maximize the enterprise's capabilities
4. *Open Culture*, is a sign of where the firm is open with third-party vendors, start-ups, or customers, which are effectively open companies with the outer or external world.
5. *Digital First Mindset*, a mindset where digital solutions are the default way forward
6. *Agility and Flexibility*, Organizations operate under the assumption that digital solutions are the only option to address an issue or improve organizational performance in the future. Organizations are accustomed to engaging with digital objects such as cell phones, applications or software, system information, the internet, or websites, which facilitate work.
7. *Customer Centricity*, the utilization of digital technologies to increase customer base, alter customer experience, and co-create new goods.

4. EMPLOYEE PERFORMANCE

Employee performance is the foundation of a company's productivity, and it is influenced by employee attributes, motivation, expectations, and management assessments of employee outcomes fulfilment (Kasmir, 2016). Another definition stated that the end outcome of achieving employee work performance to complete existing duties is performance (Mangkunegara, 2017). The success of a company all depends on the human resources in it, the higher the level of performance of a company, the company will also be successful in carrying out the company's vision and mission, therefore all companies hope that employee performance will continue to increase every year. Employee performance is the outcome of work done by employees in accordance with their roles or obligations over a specific time period, which is tied to size specific values or standards of the organization where the employees works (Umam, 2018). In this study, the author would use these dimensions developed by (Bangun 2012, in Danuarta & Nurul, 2021) they are:

1. *Number Of Jobs*, the amount of work represents the quantity of work that was created individually or as a group standards become the standard of work in which Employees are needed to fulfil the criteria for knowledge, skills, and talents. So, based on that need, establish the number of people required to perform the task or how many units of work may be performed by any employee.
2. *Quality Of Work*, necessitates that every worker inside the organization satisfy the standards specific to producing excellent work needed of the position. It indicates that employee performance is good if you can acquire a job that meets the quality standards of the work.
3. *Timeliness*, Employees must be able to complete their tasks on schedule

5. CONCEPTUAL FRAMEWORK

An appropriate conceptual framework was created to provide clear guidelines for this research. In short, conceptual framework is described to understand how significant the correlation among human capital readiness dimensions (knowledge, hard skill, soft skill, attitude) was developed by (Hendarman 2020a, 2020b) and Digital Culture dimensions (innovation, data driven decision making, collaboration, open culture, digital first mindset, flexibility and agile, customer centricity) was developed by (Buvat 2017., et al) toward employee performance (amount of work, punctuality, quality of work) was developed by (Build 2012 in Danuarta & Nurul, 2021). The calculation is done by using a simple linear regression analysis method with SPSS 23. The conceptual framework of final project is stated below:

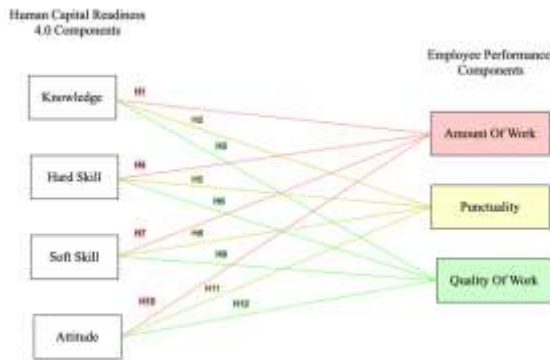


Figure 1. Conceptual Framework Human Capital Readiness
Source: Author, (2023)

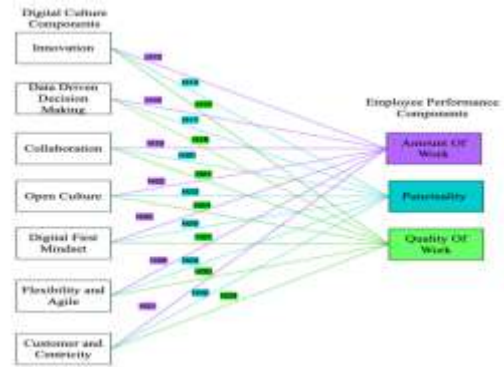


Figure 2. Conceptual Framework Digital Culture
Source: Author, (2023)

As we can see that the above is the hypothesis of Human Capital Readiness 4.0 and employee performance components become the predictor. The details of each hypothesis are described below:

- H01: Knowledge has no significant effect on “Amount Of Work” of performance
- H1: Knowledge has a significant effect on “Amount Of Work” of performance
- H02: Knowledge has no significant effect on “Punctuality” of performance
- H2: Knowledge has a significant effect on “Punctuality” of performance
- H03: Knowledge has no significant effect on “Quality Of Work” of performance
- H3: Knowledge has a significant effect on “Quality Of Work” of performance
- H04: Hard Skill has no significant effect on “Amount Of Work” of performance
- H4: Hard Skill has a significant effect on “Amount Of Work” of performance
- H05: Hard Skill has no significant effect on “Punctuality” of performance
- H5: Hard Skill has a significant effect on “Punctuality” of performance
- H06: Hard Skill has no significant effect on “Quality Of Work” of performance
- H6: Hard Skill has a significant effect on “Quality Of Work” of performance
- H07: Soft Skill has no significant effect on “Amount Of Work” of performance
- H7: Soft Skill has a significant effect on “Amount Of Work” of performance
- H08: Soft Skill has no significant effect on “Punctuality” of performance
- H8: Soft Skill has a significant effect on “Punctuality” of performance
- H09: Soft Skill has no significant effect on “Quality Of Work” of performance
- H9: Soft Skill has a significant effect on “Quality Of Work” of performance
- H010: Attitude has no significant effect on “Amount Of Work” of performance
- H10: Attitude has a significant effect on “Amount Of Work” of performance
- H011: Attitude has no significant effect on “Punctuality” of performance
- H11: Attitude has a significant effect on “Punctuality” of performance
- H012: Attitude has no significant effect on “Quality Of Work” of performance
- H12: Attitude has a significant effect on “Quality Of Work” of performance

As we can see that the above is the hypothesis of Digital Culture and Employee Performance components become the predictor. The details of each hypothesis are described below:

- H013: Innovation has no significant effect on “Amount Of Work” Performance
- H13: Innovation has a significant effect on “Amount of Work” Performance
- H014: Innovation has no significant effect on “Punctuality” Performance
- H14: Innovation has a significant effect on “Punctuality” Performance
- H015: Innovation has no significant effect on “Quality Of Work” Performance



- H15: Innovation has a significant effect on “Quality Of Work” Performance
H16: Data Driven Decision Making has no significant effect on “Amount Of Work” Performance
H16: Data Driven Decision Making has a significant effect on “Amount Of Work” Performance
H17: Data Driven Decision Making has no significant effect on “Punctuality” Performance
H17: Data Driven Decision Making has a significant effect on “Punctuality” Performance
H18: Data Driven Decision Making has no significant effect on “Quality Of Work” Performance
H18: Data Driven Decision Making has A significant effect on “Quality Of Work” Performance
H19: Collaboration has no significant effect on “Amount Of Work” Performance
H19: : Collaboration has a significant effect on “Amount Of Work” Performance
H20: Collaboration has no significant effect on “Punctuality” Performance
H20: Collaboration has a significant effect on “Punctuality” Performance
H21: Collaboration has no significant effect on “Quality Of Work” Performance
H21: Collaboration has a significant effect on “Quality Of Work” Performance
H22: Open Culture has no significant effect on “Amount Of Work” Performance
H22: Open Culture has a significant effect on “Amount Of Work” Performance
H23: Open Culture has no significant effect on “Punctuality” Performance
H23: Open Culture has a significant effect on “Punctuality” Performance
H24: Open Culture has no significant effect on “Quality Of Work” Performance
H24: Open Culture has a significant effect on “Quality Of Work” Performance
H25: Digital First Mindset has no significant effect on “Amount Of Work” Performance
H25: Digital First Mindset has a significant effect on “Amount Of Work” Performance
H26: Digital First Mindset has no significant effect on “Punctuality” Performance
H26: Digital First Mindset has a significant effect on “Punctuality” Performance
H27: Digital First Mindset has no significant effect on “Quality Of Work” Performance
H27 Digital First Mindset has a significant effect on “Quality Of Work” Performance
H28: Flexibility and Agile has no significant effect on “Amount Of Work” Performance
H28: Flexibility and Agile has a significant effect on “Amount Of Work” Performance
H29: Flexibility and Agile has no significant effect on “Punctuality” Performance
H29: Flexibility and Agile has a significant effect on “Punctuality” Performance
H30: Flexibility and Agile has no significant effect on “Quality Of Work” Performance
H30: Flexibility and Agile has a significant effect on “Quality Of Work” Performance
H31: Customer and Centricity has no significant effect on “Amount Of Work” Performance
H31: Customer and Centricity has a significant effect on “Amount Of Work” Performance
H32: Customer and Centricity has no a significant effect on “Punctuality” Performance
H32: Customer and Centricity has a significant effect on “Punctuality” Performance
H33: Customer and Centricity has no a significant effect on “Quality Of Work” Performance
H33: Customer and Centricity has a significant effect on “Quality Of Work” Performance

6. METHODOLOGY

On this research used 2 types of data, such as primary data and secondary data. Primary data is data that has been developed by the author by conducting surveys, interviews, and delivering questionnaires to respondents with the objective of understanding and solving issues directly in the field (Benedictine University Library., 2023), and the secondary data is also used on this research in order to support fundamental research. Primary data on this research was gathered through journal, literature, article, dan internet. To understand the effectiveness of PT PLN Province X in achieving its goals, the author used quantitative methods. This step will also become an offer to the company in readiness for transformation.



7. VALIDITY TEST

The validity test that are conducted for each variable including *Human Capital Readiness (X1)* with 37 statements, *Digital Culture (X2)* with 38 statements, and *Employee Performance (Y)* with 8 statements. Based on the result, all the questionnaire items on the Research Instrument have an R count > R table (0.192). Therefore, it was concluded that all questionnaire items on each variable were valid. Which means that If r count > r table then the statement is declared valid.

8. RELIABILITY TEST

Reliability testing of the instrument was carried out by testing the scores between items using the Alpha Cronbach technique by comparing the alpha coefficient with 0.600. The set of questions to measure a variable is reliable and successful in measuring the variable we are measuring if the reliability coefficient is greater than or equal to 0.600. Based on the result, it can be seen that the reliability coefficient for all variables is greater than the critical value (0.600), so that all research variables are reliable, thus the instrument can be continued for further analysis.

9. NORMALITY TEST

The normality test in this study was conducted using the One-Sample Kolmogorov-Smirnov test with a sample size of 104 respondents. The normality test results for Human Capital Readiness and Digital Culture toward employee performance. From One-Sample Kolmogorov-Smirnov Test result to each of human capital readiness and digital culture has $sig \geq \alpha$ (.200^d). Therefore, it was concluded that the data is distributed normal.

9. RESULT AND ANALYSIS

To facilitate the author in describing and analyzing the influence matrix, the following table presents a summary of all dimensions of human capital readiness and digital culture towards performance outcome. Furthermore, the deeper analysis shows that there are significant difference in the strengths of each human capital readiness dimension and digital culture dimension which can affect the employee performance of PT. PLN Province x. The summary of the comparison among the performance of "Amount of Work", "Punctuality" and "Quality of Work" are shown in Tables below:

Table 1. Average Variable Score and Influence towards Performance

Variable	Indicator	Label	Avg.	Influence			Sig.
				Amount Of Work	Punctuality	Quality Of Work	
Knowledge	Industry 4.0 Knowledge	X1	4,16	0,506	0,536	0,476	0,000
		X2	4,13				
	Component 4.0 Knowledge	X3	4,35				
		X4	4,29				
		X5	4,33				
		X6	4,32				
		X7	4,19				
		X8	4,13				
		X9	4,10				
		X10	4,15				
		X11	4,14				
		X12	4,15				
		X13	4,10				
		X14	4,13				
Hard Skill	Component of Hard Skill	X15	4,07				
		X16	4,08				
		X17	4,20				
		X18	4,20				
		X19	4,13				
		X20	4,20				
		X21	4,15				
		X22	4,14				
Soft Skill	Personal	X23	4,33	0,793	0,791	0,733	0,000
		X24	4,24				
		X25	4,25				
		X26	4,34				
	Innovation	X27	4,35				
		X28	4,23				
		X29	4,26				
		X30	4,32				
		X31	4,36				
		X32	4,36				
Attitude	Conative	X33	4,37	0,727	0,667	0,614	0,000
		X34	4,39				
		X35	4,32				
		X36	4,39				
		X37	4,30				

From all the data resulted from the questionnaire and analyzed by using SPSS 23 above, it can be summarized that, all the human capital readiness dimensions have positive relationship toward "Amount of Work", "Punctuality", and "Quality of Work" with



significant value less than the probability value (sig. value < 0.05), reject all the null hypothesis (human capital readiness has a significant impact towards employee performance).

Table 2. Average Variable Score and Influence towards Performance

Variable	Label	Avg.	Influence			Sig.
			Amount Of Work	Punctuality	Quality Of Work	
Innovation	X38	4.41	0.709	0.677	0.672	0.000
	X39	4.25				
	X40	4.25				
	X41	4.36				
	X42	4.28				
Data Driven Decision Making	X43	4.38	0.789	0.772	0.709	0.000
	X44	4.36				
	X45	4.32				
	X46	4.35				
	X47	4.30				
Collaboration	X48	4.29	0.679	0.696	0.637	0.000
	X49	4.33				
	X50	4.27				
Open Culture	X51	4.35	0.624	0.634	0.622	0.000
	X52	4.37				
	X53	4.31				
	X54	4.27				
	X55	4.20				
Digital First Mindset	X56	4.35	0.795	0.823	0.752	0.000
	X57	4.37				
	X58	4.30				
	X59	4.37				
	X60	4.31				
	X61	4.38				
	X62	4.31				
Flexibility and Agile	X63	4.28	0.755	0.755	0.681	0.000
	X64	4.26				
	X65	4.26				
	X66	4.28				
	X67	4.34				
	X68	4.38				
	X69	4.34				
Customer and Centricity	X70	4.30	0.695	0.708	0.653	0.000
	X71	4.36				
	X72	4.24				
	X73	4.31				
	X74	4.29				
	X75	4.30				

From all the data resulted from the questionnaire and analyzed by using SPSS 23 above, it can be summarized that, all the digital culture have positive relationship toward “Amount of Work”, “Punctuality”, and “Quality of Work” with significant value less than the probability value (sig. value < 0.05), reject all the null hypothesis (human capital readiness has a significant impact towards employee performance).

In this study, the author refers to table I and table II to compile and map the influence score matrix and variable score. The author also maps the questionnaire questions into 9 quadrants based on the mapping of each score and influence. The aim is to provide improvements to the priority areas identified by the company. For example, the indicator of the Personal Soft Skill variable is mapped into Quadrant 1, which means that this quadrant has a high influence on employee performance outcome but has a low variable score. This becomes the first priority for the company to make improvements. This approach also facilitates the author in analyzing and mapping variables. The same process is applied to the subsequent quadrants.

Furthermore, to calculate the average values of the variables, the author calculates the scores for each questionnaire and each dimension of all the questionnaires. The influence score is obtained using statistical analysis with SPSS 23. Each quadrant is symbolized by the sequence number of the questionnaire. For example, X23 represents the indicator of personal from the Soft Skill variable that will be mapped in a specific quadrant.

Table 3. Human Capital Readiness Ranking Comparison on Employee Performance

Ranking	“Amount Of Work”	“Punctuality”	“Quality of Work”
1 (Most Influencing)	Soft Skill	Soft Skill	Soft Skill
2	Attitude	Attitude	Attitude
3	Hard Skill	Knowledge	Hard Skill
Least Influencing	Knowledge	Hard Skill	Hard Skill



Based on the table above, it can be explained that the table is a ranking table designed to facilitate the author in identifying which variables should be prioritized for maintenance or improvement in PT PLN Province X. The goal is to enhance the company's performance. Analyzing with this ranking matrix becomes a crucial step in prioritizing variables using questionnaire results and summaries.

Table 4. Table 3 Digital Culture Ranking Comparison on Employee Performance

Ranking	“Amount Of Work”	“Punctuality”	“Quality of Work”
1 (Most Influencing)	Digital First Mindset	Digital First Mindset	Digital First Mindset
2	Data Driven Decision Making	Data Driven Decision Making	Data Driven Decision Making
3	Flexibility and Agile	Flexibility and Agile	Flexibility and Agile
4	Innovation	Customer and Centricity	Innovation
5	Customer and Centricity	Collaboration	Customer and Centricity
6	Collaboration	Innovation	Collaboration
Least Influencing	Open Culture	Open Culture	Open Culture

Based on the table above, it can be explained that the table represents a ranking table designed to facilitate the author in identifying which variables should be prioritized for maintenance or improvement in PT PLN Province X with the aim of enhancement. Analyzing with this ranking matrix becomes a crucial step in prioritizing variables using questionnaire results and summaries.

10. BUSINESS SOLUTION

a. Human Capital Readiness towards (amount of work, punctuality, and quality of work)

1. Amount of Work

From the result analysis, it can be seen that the priority for improvement is the Innovation indicator from the Soft Skill variable, which refers to X28 with an average score of (4.23). Furthermore, it can be observed that the beta value indicates a high influence on the "Amount Of Work" performance. The label of X28 refers to indicator Innovation of Soft Skill variable, which means the company needs to provide such organizing a seminar to increase employee skills in innovation regarding the topic for all employees. With this, it is expected that the company can also empower employees to grow and listen to the suggestions and new ideas provided by them. This creates opportunities for skill and attitude development, with the hope of improving employee performance in delivering and completing work according to targets. Next, after improving the Innovation indicator, the next step is to address the other 6 priority indicators in Quadrant II that have high influence but moderate scores. The second priority is found in the personal indicator of the Soft Skill variable, which refers to X24 with an average score of (4.24). This indicates that the company needs to create a "seminar" program with the aim of enabling employees to adapt to new technologies, similar to the first priority indicator of "innovation." Creating awareness among employees about new technologies by inviting external speakers can influence them. According to Hendarman (2021), employees with high soft skills and high emotional intelligence are more likely to change their mindset, stimulate innovation, and excel in the industry. These skills are crucial for companies in the era of Industry 4.0, as they contribute to becoming top performers in completing "Amount of Work." Subsequently, there are 7 (seven) items in quadrant II which are in High Influence but Medium Score quadrant that are needed to make an improvement to the “Amount Of Work” Performance (Achievement of targets and the number of jobs produced), the company's ability to improve and manage these indicator will improve and increase employee performance, because they have high influence enough but medium score. Next, after improving the Innovation indicator, the next step is to address the other three priority indicators in Quadrant II that have high influence but moderate scores. The second priority is the Personal indicator of the Soft Skill variable, referred to as X24 with an average score of (4.24). This indicates that the company needs to create a "seminar" program with the aim of enabling employees to adapt to new technologies and raising awareness among employees about new technologies, such as bringing in external speakers who may influence the employees. Hendarman (2021) stated that employees with high soft skills and emotional intelligence are more likely



to change mindsets or thinking patterns, as well as drive innovation and individual performance in the industry. These skills are precisely what companies need in the era of Industry 4.0, so that the more skills the company provides, the more likely employees will become top performers in completing tasks with "Punctuality." Subsequently, there are 4 (four) items in quadrant II which are in High Influence but Medium Score quadrant that are needed to make an improvement to the "Punctuality" Performance (Employee efficiency in completing tasks on time), the company's ability to improve and manage these indicators will improve and increase employee performance, because they have high influence enough but medium score.

2. Punctuality

From the table above can be seen that, it is same with "Amount Of Work" Performance, the first priority which needs to make an improvement is that from indicator innovation of soft skill dimension, which refers to X28 statement with an average score (4,23) because it's shown with the lowest score comparing the others, which means the company needs to provide such as organizing a seminar to increase employee skills in innovation regarding the topic for all employees. With this case, it's expected that the company can also empower employees to grow and listen to their suggestions and new ideas, thereby providing opportunities for skill and attitude development. This, in turn, is expected to enhance employee performance in completing tasks within the designated time. Employees who have high levels of innovation and creativity automatically contribute to improved employee performance within the company. Therefore, it is time for the company to provide space for employees to implement their ideas by listening to their suggestions and input. According to Eka Desiana (2018), good innovation involves passion and a thinking style that can bring something new to the company, resulting in timely completion of tasks ("Punctuality" Performance).

3. Quality of Work

From the table above can be seen that, it is same with "Amount of Work" and "Punctuality" Performance. The first priority which needs to make an improvement is Innovation indicator from Soft Skill dimension, the label refers to X28 statement, with average score (4,23) which has the lowest score comparing the others. Meanwhile, for the beta score is (0,733) which categorized into High Influence and Medium Score. Once more, the label of X28 refers to Soft Skill, which means the company needs to provide such organizing a seminar to increase employees' skills in innovation regarding the topic are as follows for all employees. With this, it is expected that the company can also provide more freedom for employees to grow and listen to the suggestions and new ideas provided by employees. This will create opportunities to develop skills and attitudes, with the hope of improving employee performance in producing and completing high-quality work. Employees with high innovation and creativity levels will automatically contribute to improving employee performance in the company. Therefore, it is time for the company to provide space for employees to implement ideas that exist in their minds by listening to suggestions and input from employees. According to Eka Desiana (2018), good innovation involves passion and a thinking style that can bring new things to the company, resulting in high-quality work performance ("Quality of Work" Performance). Next, after improving the Innovation indicator, the next step is to address the other three priority indicators in Quadrant II that have high influence but moderate scores. The second priority is the Personal indicator of the Soft Skill variable, referred to as X24 with an average score of (4.24). This means that the company needs to create a seminar program with the goal of enabling employees to adapt to new technologies and raising awareness of new technologies by inviting external speakers who can influence the employees. According to Hendarman (2021), employees with high soft skills and emotional intelligence are more likely to change mindsets or thought patterns, drive innovation, and excel as individuals in the industry. These skills are essential for companies in the era of Industry 4.0, so the more skills the company provides, the better the employees will become in producing high-quality work. Subsequently, there are 4 (four) items in quadrant II which are in High Influence but Medium Score quadrant that are needed to make an improvement to the "Quality of Work" Performance (Employee discipline and dedication of the quality of work produced on the tasks) the company's ability to improve and manage these indicators will improve and increase employee performance, because they have high influence enough but medium score.



b. Digital Culture towards (amount of work, punctuality, and quality of work)

1. Amount of Work

Top priority is the Digital First Mindset, referring to X55 with an average score of (4.20), and it aligns with its beta value indicating high influence towards. "Amount of Work" performance. Label X55 refers to indicator Digital First Mindset variable, In this case, the company needs to provide the latest digital technology so that employees can develop their thinking to interact and utilize the technology, and learn how the technology can assist them in solving their tasks to achieve excellent performance. Fransisca (2021) stated that advanced technology also maximizes employee performance by providing assistance in their work, thereby minimizing "Human Error". The company should also introduce the latest digital technology to its employees by providing training or workshops to enable employees to adapt to the previously manual processes that have been transitioned into digital ones. To continuously monitor the development of employees, the company should also conduct regular performance evaluations to assess their progress in line with the advancements of Industry 4.0. Then, after improving the Digital First Mindset, the next step is to focus on the 5 other priority variables in Quadrant I that have high influence. The second priority variable is Flexibility and Agile, referring to X64 with an average score of (4.26), which means the company needs to provide greater appreciation to employees to demonstrate high motivation with the aim of further improving current job performance. Forms of appreciation that can be provided by the company include rewards or promotions. Additionally, the company should be able to adapt to changes in work culture such as the transformation of remote work or work from home for employees, while ensuring that company targets are met. Based on the research conducted by Candra (2022), the impact of rewards on employee performance is increased productivity. In the study by Aji (2022), work from home or work from anywhere has a positive influence on employee performance, leading to better performance compared to their current state. There are 6 items in Quadrant I that have High Influence and need to be improved for "Amount of Work" Performance (achievement of targets and the number of jobs produced). In addition to focusing on upgrading the latest technology and providing motivation to employees, the company also needs to evaluate and optimize performance to achieve company goals. The company's ability to improve and manage these indicators will improve and increase employee performance because it has High Influence.

2. Punctuality

From the data in the table above, it's similar to the condition of "Amount of Work" the main priority is Digital First Mindset pada X55 with average value 4,20 and the beta value in the quadrant indicates a High Influence on Punctuality. Based on the crucial statement in X55, in this case, the company needs to continually update the digital technology it uses because the important role of technology is to save time and effort. In addition to technology improvement, it is important for the company to provide training so that employees can adapt to digital culture changes and to conduct evaluations as support for employee learning strategies. Consequently, the integration of technology and effective time management can be seen as mutually beneficial, leading to increased productivity and improved overall efficiency (Hamayun, 2022). Next, after improving the Digital First Mindset, the next step is to enhance the other priority indicator in quadrant I with high influence, which is Data Driven Decision Making referring to X42 with an average score of (4.24). This means that the company needs to establish a reliable and accurate specialized database to enable employees to maintain business continuity by identifying business progress or failures, making data-driven decisions, and protecting the collected data. According to Wiryanto (2020), data can also be applied by companies to improve employee performance, such as utilizing people analytics. In this context, people analytics can be used to enhance business performance by analyzing data from individuals or employees of the company. Afterwards, there are only 2 (two) items in quadrant I which are in High Influence that are needed to make an improvement to the "Punctuality" Performance (Employee efficiency in completing tasks on time), the company's ability to improve and manage these indicators will improve and increase employee performance, because they have high influence and bring the success of the company and willing to work together in order to create rapid growth in terms of the company's goals in the future.



3. Quality of Work

From the table above, it is similar to the "Amount of Work" and "Punctuality" variables, the first priority to be taken is Digital First Mindset refers to X55 with average value 4,20 and the beta value in the quadrant indicates a high influence on the Quality of Work. The statement in X55 is very crucial because once again it refers to Digital First Mindset for employee, at this point the company should provide new digital technology and the employee need to adapt and manage this development company culture. Training and evaluation can be company routine agenda to ensure that employees are able to work at their maximum potential and achieve good quality of work, it is important to implement a Digital First Mindset. Afterwards, the improvement needed in order to increase Digital First Mindset that resides in low Score and High Influence quadrant to the High Score and High Influence quadrant to ensure the "Quality of Work" of employees which is would create employees that will work with the best performance to the success of the company and willing to work together in order to create rapid growth in terms of the company's goals in the future.

11. SUMMARY OF HUMAN CAPITAL READINESS AND DIGITAL CULTURE TOWARD PERFORMANCE

After analyzing the influence matrix and variable scores above, it can be concluded that the top priority faced by PT PLN Province X in terms of "amount of work," "punctuality," and "quality of work" performance is related to the Soft Skill dimension of HCR, specifically organizing a seminar for innovation development. If the company is able to improve this factor, it will not only enhance employee performance in facing the industrial transformation of Industry 4.0 but also help employees in fulfilling their job responsibilities. Once the priority items have been identified, those with good scores and high influence should be maintained and managed to further enhance employee performance, making them better prepared for the challenges of Industry 4.0 transformation. Meanwhile, regarding the dimension of Digital Culture, it can be concluded that the top priority faced by PT PLN Province X in terms of "Amount Of Work," "Punctuality," And "Quality Of Work" performance is related to the Digital First Mindset. The company needs to make improvements by conducting seminars or workshops to cultivate the mindset of employees to effectively utilize the provided technology. Therefore, digital technology has dramatically impacted the culture in and around the workplace, facilitating work effectiveness and expanding the desired work targets (Buchanan et al., 2016). This researcher's statement needs to be aligned with the preparation of employee readiness, such as soft skills and attitude.

This can be done by organizing seminars on relevant topics for all employees, increasing employee awareness of the importance of digital technology, and implementing monitoring activities through the HR Department. These initiatives will help employees in adapting to the changes brought by the industry 4.0 revolution. The Human Capital Development Department team is responsible for overseeing all development activities as it falls within their duties and responsibilities.

12. IMPLEMENTATION PLAN

Based on the objectives outlined in Chapter 1 of this research, the implementation plan focuses on enhancing and encouraging the "Amount of Work," "Punctuality," and "Quality of Work." employee performance of PT PLN Province X in facing industry 4.0. Furthermore, Soft Skill falls into the most critical role of HCR and Digital Culture falls into Digital First Mindset which becomes the most important role to be enhanced in supporting to increase the performance in facing industry 4.0, so that the company's goal will be reached. The plans are found below:

The Indicator(s)	Program	Activity	Expected Output
Soft Skill	Organizing a seminar about self-development	Raising awareness about self-development by organizing seminar regarding to the topic for all employees	Employees can be more flexible in generating new ideas to be implemented in their respective work or in broader areas.
Attitude	Organizing a seminar about technology acceptance	Raising awareness in attitude development and knowledge employees about technology acceptance	Employees cannot just accept new technologies implemented by the company, but also operate and apply those technologies in carrying out their respective job desks.



Digital Mindset	First	Increase employee awareness of the importance of digital technology	The company can conduct seminars or workshops to build the mindset of employees to be able to run the technology that has been provided by the company.	Employees are able to maximize their performance by utilizing available digital technology and finished more task than before.
		Build a Continuous-Learning and Practice Culture	The company collects data on how employees are using the platform, measures the correlation between continuous learning, practicing and performance, and examines how digital technology tools help employees work, in expected or unexpected ways.	Companies can monitor and assess employee performance abilities in using digital technology, in this case employees are expected to be able to improve their digital mindset.
Flexibility and Agile		Build flexible policies	Create a work system that is flexible and keeps abreast of existing technological developments by using a hybrid work or remote job mechanism.	By implementing new work procedures to encourage employee collaboration and productivity so that employees are able to improve their performance for the better
		Build a culture of agility	Make a culture of trust and creating psychological safety between employees	To make sure the workplace is somewhere employee feels safe so that the employee feel comfortable when attempting something a little out of the ordinary.
Data Driven Decision Making		Train employees to be able to make decisions based on data	Employee self-development courses to understand data and be able to make decisions based on existing data	Help businesses to make the best decisions in a short time and also minimize risk, increase efficiency and productivity, and improve business decisions based on facts.
		Improve digital technology and improve data quality	The company continues to update changes in digital technology and regularly monitors the data stored to ensure accuracy, completeness, relevancy, and timeliness	Updating the operating system, software and hardware can help speed up analysis time and improve the accuracy of analysis results, as well as improve data quality which can also help increase the effectiveness of business data analysis because otherwise poor quality data can lead to bad analysis results. wrong and wrong business decisions.

With the proposed programs above, the author hopes that the implementation plan can be successfully realized by the company, which is predominantly composed of Generation X (1965-1980) and Generation Y (1981-1996) employees. The author also hopes for an increase in awareness of the importance of the current industrial revolution era and its significant impact on the company, such as the development of employees' soft skills in self-development and the digital culture within the company.

13. CONCLUSION

Based on the statistical analysis results described in the previous chapter, it can be concluded that there is a significant influence of human capital readiness and digital culture on employee performance, particularly in preparing employees to face the industry 4.0 and the implemented digital culture, which will affect organizational performance in business growth. Additionally, there is a significant difference in the performance of "Amount of Work", "Punctuality", and "Quality of Work" influenced by Soft Skills



within the HCR dimension, specifically the indicators of innovation and personal skills. This condition the company can organize a seminar to increase the awareness for employees to enhance the innovation and personal. Meanwhile, the most influencing for the digital culture is Digital First Mindset. This condition the company can Increase employee awareness of the importance of digital technology by conducting seminars or workshops to build the mindset of employees to be able to run the technology that has been provided by the company. This applies to all levels of employees at PT PLN Province X.

Next, for some of the second indicators that need improvement, it is related to attitude, which requires a level-up. The company can implement programs such as influential seminars to enhance employees' attitude towards technology acceptance. Therefore, the company's ability to make decisions based on mapping and prioritizing issues will be a key strength in its transformation. Meanwhile for the second priority of Digital Culture are Flexibility and Agile and Data Driven Decision Making. Flexibility and Agile, the program is that build flexible policies, and Create a work system that is flexible and keeps abreast of existing technological developments by using a hybrid work or remote job mechanism. also for data driven decision making, Train employees to be able to make decisions based on data Employee self-development courses to understand data and be able to make decisions based on existing data.

Furthermore, based on influence and variable score matrix, It can be concluded that the current condition being faced by PT PLN Province X is spread across almost all quadrants that require the action of levelling up and maintaining existing programs. Therefore, the author suggests prioritizing improvements in critical areas and addressing urgent issues. In short, improving employee performance will enhance the overall performance of the company.

14. RECOMMENDATION

1. The author hopes that this research would raise the awareness of how important in preparing employees in facing industry 4.0 and how it is impacted to digital culture in the company.
2. Assist the human resources department in providing programs to enhance the skills and the digital culture in the company.
3. To the future research who wants to conduct the same topic, the author suggests that the object of research can explore a wider range, not only an one specific company to obtain a situation that is different from the current research.

REFERENCES

1. Hendriyadi, W. M. (2019). INDUSTRIAL REVOLUTION 4.0: CHALLENGES AND OPPORTUNITIES OF HUMAN RESOURCES MANAGEMENT TO IMPROVE PRODUCTIVITY GRAND HOTEL JAMBI. *Vol 7. No. 3, September 2019 (344-351)*, 344-351.
2. Rubman. (2015). Industry 4.0: The Future of Productivity and Growth in Manufacturing Industries.
3. Susan E. Jackson, R. S. (2014). An Aspirational Framework for Strategic Human Resource Management. *Vol. 8, No. 1, 1-56*, 1-56.
4. Sure, L. B. (2015). Consequences of Industry 4.0 on Human Labour and Work Organisation. *Journal of Business and Media Psychology (2015) 6, Issue 1,*, 33-40.
5. Joseph , E. A. (2018). Chapter 3 Human Capital in the Smart Manufacturing and Industry 4.0 Revolution. <http://dx.doi.org/10.5772/intechopen.73575>.
6. Achmad Fajar Hendarman, U. C. (2017). Soft skills, hard skills, and individual innovativeness. *DOI 10.1007/s40821-017-0076-6*, 139-169.
7. Patandean, E. H. (2021). PENGARUH ERA REVOLUSI INDUSTRI 4.0 TERHADAP KOMPETENSI DAN KINERJA SUMBER DAYA MANUSIA. 1-52.
8. Nurazwa Ahmad, A. S. (2018). Industry 4.0 Implications on Human Capital: A Review. *ISSN: 2395-0463 Vol-4, Special Issue-13*, 221-235.
9. Schwab, K. (2016). *The Fourth Industrial Revolution*. Switzerland: ISBN-13: 978-1-944835-01-9.
10. Agolla, J. E. (2018). *Human Capital in The Smart Manufacturing and Industry 4.0 Revolution*. Gaborone, Botswana: Intech.
11. Kusmin, L. a. (2017). Towards a Data Driven Competency Management Platform for Industry 4.0. 2025.



12. Sveiby, S. &. (1997). *The New Organizational Wealth: Managing and Measuring Knowledge-Based Assets*. San Francisco: Berret- Koehler.
13. Spencer, S. &. (1993). *Competency at work*. New York: John Wiley & Sons. New York: Wiley, New York, ©1993 .
14. Rainsburry, H. a. (2002). Ranking Workplace Competencies: Student and Graduate Perceptions. *Asia-Pacific Journal of Cooperative Education*, 8-18.
15. Kechagias, K. (2011). *Teaching and assessing soft skills*. Thessaloniki (Neapolis): 1st Second Chance School of Thessaloniki, as part of the *Measuring and Assessing Soft Skills (MASS) Project*.
16. Venes. (2001). *Taber's cyclopedic medical dictionary (19th ed.)*. Philadelphia: F. A. Davis.
17. Albarrachin. (2005). *Attitudes: Introduction and Scope*, *The Handbook of Attitudes*, Routledge.
18. Ivancevich, K. M. (2006). *Organizational Behavior and Management*. Dharma Y.
19. Achmad, S. &. (2019). *Budaya Organisasi : Pengertian, Makna, dan Aplikasinya dalam Kehidupan Organisasi*. Yogyakarta: Yogyakarta : UPP STIM YKPN., 2019.
20. Microsoft. (2018). *Digital Culture: Your Competitive Advantage*. Irlandia: Microsoft.
21. Jerome Buvat, K. K. (2017). *The Digital Culture Challenge: Closing the Employee-Leadership Gap*. Paris: Capgemini. Paris.
22. Kasmir. (2016). *Manajemen Sumber Daya Manusia (Teori dan Praktik)*. PT. Rajagrafindo Persada. Jakarta.

Cite this Article: Chairul Anshar, Madju Yuni Ros Bangun (2023). Identifying Human Capital Readiness and Digital Culture toward Employee Performance in Facing Industry 4.0: Case of Pt Perusahaan Listrik Negara Province X. International Journal of Current Science Research and Review, 6(7), 4429-4442