

## **DIGITAL-BASED HR DEVELOPMENT STRATEGY IN IMPROVING EMPLOYEE PERFORMANCE AT THE TELECOMMUNICATIONS EQUIPMENT TESTING CENTER**

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### **Abstract**

The main problem in this research is that the Digital-Based human resource development strategy in improving employee performance at the Telecommunication Equipment Testing Center, Ministry of Communication and Informatics of the Republic of Indonesia has not been running effectively and efficiently. This problem is studied and analyzed based on Sikula's theory (2011). The research method used by researchers is a case study using a qualitative approach. The results of the study found an effective strategy for developing digital-based human resources in improving employee performance at the Telecommunications Equipment Testing Center, Ministry of Communication and Informatics of the Republic of Indonesia, namely by paying attention to factors of work productivity, efficiency, damage, accidents, service, morale, career, conceptual, leadership, remuneration and consumer factors are supported by research findings, namely creativity factors and innovative factors so that employee performance at the Central Telecommunications Equipment Testing Center, Ministry of Communication and Informatics of the Republic of Indonesia can run effectively and efficiently.

**Keywords:** Strategy, Digital-Based HR Development, Employee Performance.

### **A. INTRODUCTION**

At present, the development of the quality of human resources in all fields has become a discourse that has surfaced in both the public and private sectors. This was triggered by various advances in technology, knowledge and culture (Masdar et al, 2009) . In the government administration sector, efforts to develop the quality of human resources for apparatus are absolutely carried out in order to answer criticism and public scrutiny regarding accountability for the performance of public agencies and the realization of good governance, so that the business world and society can be well served and will ultimately improve people's welfare (Rustandi, 2019) .

Human resources are organizational assets that require maintenance and growth. Today, the position and function of human resources have grown more strategic (Bariqi, 2018). Human resource development is a priority for government bureaucratic transformation in the context of government organizations (Fatya, 2017). This is in accordance with Law No. 5 of 2014 regarding the State Civil Apparatus (ASN), which stipulates that one of the guiding factors in the appointment and advancement of state civil officials is their commitment to professionalism in their respective roles. Professionalism is the completion of the qualifications and

capabilities of the human resources apparatus. The objective of creating this apparatus's human resources is to boost employee productivity at all organizational levels (Apriani, 2015).

Priority must be given to the establishment of a new bureaucratic paradigm while implementing bureaucratic reform, particularly in terms of the planning and development of apparatus resources (civil servants) (Pardede & Mustam, 2017). In the Civil Service development program, the current government bureaucracy is expected to establish and build a learning organization system (Rakhmawanto, 2008). Essentially, a learning organization is a culture that encourages and accelerates individuals, groups, or organizations to continue learning and consistently employ critical thinking skills when determining what should be done and why (Hendrawan, 2019).

The human resource development strategy according to Handoko (1996) is aimed at developing continuous learning abilities, because the dynamics of environmental change are increasingly demanding intellectual abilities (*brain intensive*) to produce knowledge. And as evidence of the low quality of human resources in Indonesia, it can be seen from the Human Development Index (IPM) score. According to data from the Central Statistics Agency (BPS), Indonesia's HDI for 2020 is in the position of 70.94. There was an increase of 0.02 points compared to the previous year which was at 70.92. HDI numbers that are in the 70-80 range indicate that the score is high. Meanwhile, according to data released by the United Nation Development Program (UNDP) in 2020, Indonesia is ranked 107th out of 189 countries analyzed (Hawari, 2019). Compared to neighboring countries in Southeast Asia, Indonesia is ranked fifth. Indonesia's HDI lost to Singapore, Brunei Darussalam, Malaysia and Thailand.

Learning organizations can be seen as an effort to empower individuals and groups to be able to create knowledge, products, and services through innovative networks both within the organization and outside the organization (Jubaedah, 2010). The application of this learning organization is more intended for employees to be able to develop their capacity on an ongoing basis in realizing organizational optimization. This explanation is supported by the results of Kamijo's research (2017) that "Planning human resource needs and placement is directed at the need for HR competence to carry out functions according to the organization's strategic plan".

In order to support the direction of development of the state apparatus, it is better to follow changes in bureaucratic institutions that must improve and change to keep up with developments. Government bureaucratic institutions should be designed accordingly real main tasks and functions by carrying out organizational restructuring (Siti Maryam, 2017). Restructuring is basically a fundamental improvement or overhaul of the entire organizational chain with the aim of increasing competitiveness. The design of bureaucratic institutions should be structured in a streamlined (*downsizing*), short (*flattening*), and rich in functions (*function*) which leads to the formation of organizations with short levels of control (*delaying*), so that operations will be more effective, efficient, and flexible (Basri, 2009). This organizational change will automatically bring consequences for employees to adapt and compete in improving their abilities (Wartini, 2015).

How well the people of Indonesia optimize and reap the benefits of the digital transformation period depends on the extent to which their digital society is capable and empowered. The Ministry of Communication and Informatics (MOCI) is committed to enhancing the quality of Indonesia's Human Resources (HR)/Digital Talents (Widorekno et al, 2021). The Ministry of Communication and Informatics plans to continue its

comprehensive development of the quality of human resources/digital talents in 2021. This will be done on three different levels: the first, through the Digital Literacy National Movement, which has reached 12.3 million people; the second, through the Digital Talent Scholarship (DTS), which has trained 131 thousand people; and the third, through the Digital Leadership Academy (DLA), which will train a select group of advanced-level digital leaders. In preparation for the possible progress, challenges, and benefits generated from the accelerated national digital transformation plan, the Ministry of Communication and Information will continue developing the three HR/Digital Talent development programs in 2022.

The development of human resources is not only external or for the general public, or reliable digital talent in entering the digital transformation era to welcome the technology 4.0 era (Rohida, 2018) . The thing that needs to be prepared is also the human resources within the Ministry of Communication and Informatics. Apparatuses that will later guide policies and become digital talent *benchmarks also need to upgrade and upskill* their skills and competencies. It is the duty of the Ministry of Communication and Informatics to prepare the state civil apparatus to have the capacity and capability to carry out various policies and programs related to the intended digital transformation. Meanwhile, the HR Research and Development Agency has a role in preparing reliable digital talent in entering the digital transformation era to welcome the 4.0 technology era .

Based on the results of field observations, that digital-based human resource development strategy in improving employee performance at the Telecommunication Equipment Testing Center, Ministry of Communication and Informatics of the Republic of Indonesia. Still not running as expected by the organization. This can be seen from various indicators , including: a) related to the level of work productivity which is not working as it should, ; b) the level of employee work efficiency that has not been maximized, for example related to work efficiency ; and c) In connection with damage to the tools or machines used to test telecommunications equipment at the Telecommunications Equipment Testing Center, it still occurs frequently.

Based on the description of the problem above, the author wants to examine this problem further by focusing research on Digital-Based human resource development strategies in Improving Employee Performance at the Center for Testing Telecommunications Equipment, Ministry of Communication and Informatics of the Republic of Indonesia . It is hoped that this research can find new theories or can find novelty related to human resource development strategies and can provide conceptual input and can contribute to the Telecommunication Equipment Testing Center, Ministry of Communication and Informatics of the Republic of Indonesia with regard to human resource development strategies digital-based in improving employee performance.

## **B. LITERATURE REVIEW**

### **1. The concept of Public Administration**

Waldo in Silalahi (2007:9) suggests: "Administration is a cooperative human effort that has a high level of rationality." In this regard, the meaning that can be drawn from the various meanings above is that Administration, Public Administration and the making (administrator) or implementation (implementation) of policies are an inseparable unit. All policies that arise are none other than because of one thing or in overcoming problems, difficulties so that they can be solved as much as possible.

The work process that must be carried out by each organization becomes various forms of activity, as according to Tjokroamidjojo (1994: 16) namely "In terms of development, administration can be divided into two major parts, namely: (1) Public Administration and (2) Commercial administration (Business Administration)". In particular, state administration is divided into three major elements as stated by Tjokroamidjojo (1994:19), namely: Elements of state administration are (a) Financial Administration, (b) Personnel Administration, (c) Material Administration and the three administrative elements have different tasks. namely the duty to obtain, use and control.

The opinion above is interpreted that the state administration is so broad in scope in carrying out activities within government organizations. Public administration, better known in Indonesia as state administration, is one aspect of government activities. Public administration is a part of administrative science that is closely related to the formulation of various state policies. Public administration is very influential not only at the level of policy formulation, but also at the level of policy implementation, because indeed public administration functions to achieve program objectives that have been determined by policy makers. political.

## **2. The Concept of Behavior**

The conceptualization of behavior has actually started since the 20th century, especially in the 1940s, to be precise after the 2nd World War in 1945, the concept received enormous attention from experts. One proof of the strength of this attention is the emergence of Simon's work entitled "Administrative behavior" which explores the importance of the human aspect in an organization. This work is considered a landmark of the development of organizational behavior science. In connection with this Fishborn in Zamroni (1992: 154) suggests an understanding of behavior as follows: Behavior is a function of attitude, behavior is closely related to intention, while intention will be determined by attitudes and subjective norms. A person's intention to do something is determined by two things, the first is something that comes from within him, namely attitude; the second is something that comes from outside, namely the perception of other people's opinions of him in relation to the behavior being discussed.

The above opinion according to the researchers' thinking is that behavior is an activity of a person that can be observed, besides that behavior is closely related to attitudes rather than the human individual himself. Another conception put forward by Hersey and Blanchard in Dharma (2003:34) that: "Behavior is basically goal-oriented meaning that people's behavior is generally motivated by the desire to achieve certain goals." Regarding the motivation that influences this behavior, Ndraha (2009:66) argues that "behavior is influenced by conditions that come from the environment and interests that are based (from within) by those concerned".

Behavior tends to always relate to the surrounding environment as a result of the organization's activities. Therefore, Atchinson in Siagian (2016: 435) argues that: "Behavior can also be viewed as an organism's activities that can be observed by other organisms or by research instruments." In line with the organizational view Thoha (2004: 185) emphasized that "Organization is a collection of people who have certain attitudes and behaviors in an effort to work together to achieve a certain goal".

## **3. The Concept of Human Resource Development**

The development of human resources in all fields is one of the efforts that must be made for the creation of quality human resources who have the ability to utilize, develop and master science and technology. Improving the quality of human resources to be able to meet the challenges of increasing rapid development needs to be carried out continuously so that human resources remain a productive resource.

Humans are social beings and tend to form groups either in the office or in the community, so it is necessary to improve the quality related to their profession so that they can work effectively, efficiently, productively and with quality. Furthermore Sedarmayanti (2017: 123) states that: Human resource development must lead to development needs. Thus there is a strong link between the development of employment opportunities and the provision of manpower. Quality human resources will not only be able to fill open job vacancies, but will also be able to create and expand employment opportunities.

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Human resource development must lead to development needs. Thus there is a strong link between the development of employment opportunities and the provision of manpower. Quality human resources will not only be able to fill open job vacancies, but will also be able to create and expand employment opportunities. The description is clear that in order to improve a person's abilities education and training must be included in order to obtain optimal work results, so as to increase employee work effectiveness. Each employee has diverse abilities and is different from one another caused by various factors, both educational background, experience, and years of service, so that the organization must be able to appreciate the differences in the abilities of its employees as an investment in human resources.

#### **4. HR Development Strategy Concept**

According to Nawawi (2012: 303) that the HR development strategy takes place in two directions, first, it must come from workers or employees who actively plan and actively carry out activities towards progress and development to realize a successful career, second, from organizations or institutions to help provide opportunities for potential employees in developing their careers. Thus the development of human resources is a manifestation of the relationship between work and the organization. Organizational participation in HR development is a form of organizational responsibility to its employees in achieving career success. This makes the strength capable of creating a competitive organization in facing environmental conditions in the future.

In the government bureaucracy in Indonesia, the strategy for developing human resources for its apparatus or civil servants is also implemented consistently, meaning that government organizations must know and be responsive. The development of civil servants, apart from being an organizational goal to improve their performance, is also a necessity for employees to progress in improving their quality and career. Therefore, the problem of human resource development for civil servants must really be considered and a real model must be created as a strategy for developing these civil servants.

Logically, the importance of the PNS HR development strategy is a condition sine quanon, which must exist in every government organization, both at the central government and regional governments. As it is known that coaching or developing employees involves two main things that cover them, namely: development to improve the quality of employees, and development to improve employee careers. These two types of development will be the focus of this research, because both are driving factors for employees to improve their quality of work and career. Quality development as well as career development of civil servants in government agencies is needed as a basic guideline for civil servant management planning.

## 5. Concept of Strategy and Role of Digital-Based Human Resources

The quality of human resources determines the progress of a business in the company. However, the development of human resources in the digital era also needs to be continuously improved so that companies are more innovative and develop more rapidly. So that with quality human resources, it will bring the company in a better direction. One way to maintain the quality of HR performance is to conduct training and human resource development for every employee in today's digital era.

HR development strategy is not only through education and skills development, but there are many ways to develop it. You can do digital learning through webinars, simulations, training videos, and so on. With digital HR development steps, companies can indirectly save on training costs and travel costs.

### C. METHODS

The research method used by researchers is a case study using a qualitative approach. According to Arikunto (2003) that "the case study method as a type of descriptive approach is research carried out intensively, in detail and in depth on an organism (individual), institution or certain symptoms with a narrow area or subject." Meanwhile according to Moleong (2014) that "research with a qualitative approach is intended as a research procedure that produces descriptive data in the form of written or spoken words from people and observable behavior". Using the above-described methods and strategies, it is possible to collect meaningful, in-depth data. Meaning is the true, definite data that lies beneath the observable data as a value. This study's collected data pertains to digital-based human resource development strategies for enhancing employee performance at the Telecommunication Equipment Testing Center, Ministry of Communication and Informatics of the Republic of Indonesia; therefore, the desired data consists of descriptive information. A SWOT analysis is utilized to identify an effective approach for Digital-Based HR Development in Improving Employee Performance at the Telecommunication Equipment Testing Center.

### D. RESULTS AND DISCUSSION

#### 1. SWOT analysis.

Internal factors have a greater impact on the development of Digital-Based Human Resources in Improving Employee Performance at the Telecommunication Equipment Testing Center, Ministry of Communication and Informatics of the Republic of Indonesia than external factors, so the SWOT analysis indicates that internal factors should be used to solve problems. Several immediate, high-priority issues can be identified based on the analysis and strategy to be implemented, namely by employing the WT strategy for the short term with the understanding that this strategy can realize the development of Digital-Based Human Resources in Improving Employee Performance at the Telecommunication Equipment Testing Center, Ministry of Communication and Informatics of the Optimum Republic of Indonesia.

The owned strengths, weaknesses, opportunities, and threats indicate that internal factors are more influential in the development of Digital-Based Human Resources in Improving Employee Performance at the Telecommunication Equipment Testing Center, Ministry of Communication and Information of the Republic of Indonesia than external factors, and thus the SWOT strategy is used for problem solving.

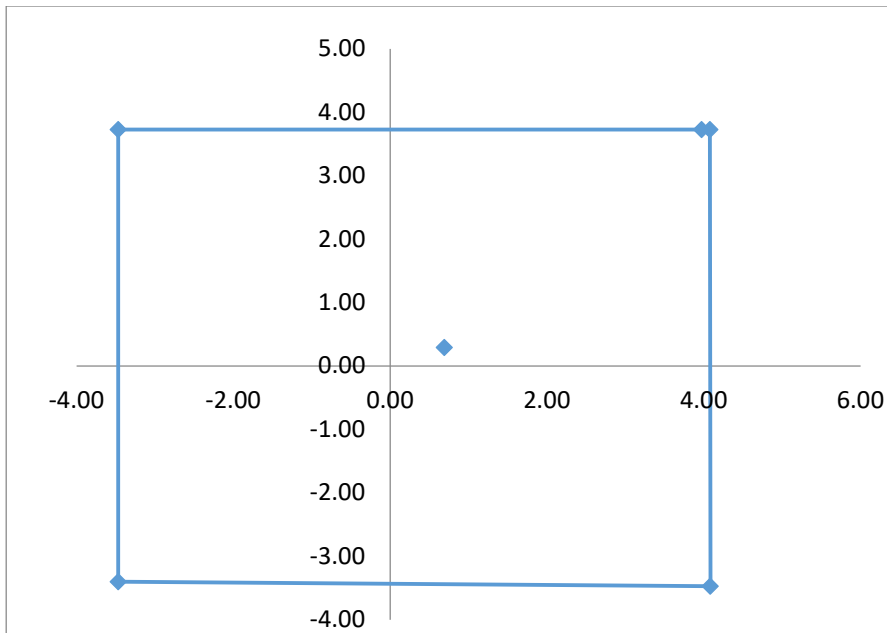
Table 1 Weighting Results

Criteria	Ratings	Weight	Score
<b>Strengthness</b> _			
a. Having skills can produce decisions for the most benefit to the institution	4	0.11	0.46
b. Utilitarianism will produce strength with maximum benefit, so that the development of human resources is in a more strategic direction	4	0.11	0.46
c. Have adequate qualified standard telecommunications human resources for institutions	4	0.11	0.46
d. Has international standard quality standards	3	0.09	0.26
e. Digital industry revolution collaboration with various related institutions	4	0.11	0.46
f. Has an international standard organizational work procedure	5	0.14	0.71
g. Stakeholder courage is absolutely necessary to unite human resources and existing potential for the acceleration of HR development so that it has a positive impact on domestic and foreign users of BBPPT testing and calibration services	3	0.09	0.26
h. Consistency in the existence of education and training to support careers	4	0.11	0.46
<b>Amount</b>			<b>3.971</b>
<b>Weakness</b>			
a. Produce conflicting decisions and do not satisfy all parties, when employees do not achieve organizational targets	4.00	0.18	0.73
b. Not all digital telecommunications human resources have international certification so that some employees are not yet effective in implementing organizational services	3.00	0.14	0.41
c. Limited number of complete test equipment	3.00	0.14	0.41
d. Need regulations or a legal umbrella to keep pace with the development of the digital industrial revolution	4.00	0.18	0.73
e. The Minister of Communication and Information Telecommunications regulations need to be reviewed and adjusted to the changing times, namely the digital revolution	3.00	0.14	0.41
f. Resistance in testing telecommunications devices in the presence of moral violations which are sometimes not directly proportional to the increase in the use of ICT	3.00	0.14	0.41
g. Lack of adjustment to the development of developing technology	2.00	0.09	0.18

Criteria	Ratings	Weight	Score
<b>Amount</b>			<b>3.273</b>
<b>Opportunity</b>			
a. Produce mature decisions because the results of employee performance have the opportunity to increase organizational targets as the work agenda of the Telecommunication Equipment Testing Center	4.00	0.16	0.64
b. The capability of telecommunication laboratory facilities and infrastructure is of international standard	3.00	0.12	0.36
c. Capability of international standard laboratory facilities	4.00	0.16	0.64
d. Indonesian workers are equipped with machine operational skills and relevant knowledge	3.00	0.12	0.36
e. Readiness of telecommunication services related to air traffic service communication equipment	4.00	0.16	0.64
f. ICT advances that are happening in today's cyber world	3.00	0.12	0.36
g. Competency of HR excellence in telecommunications and digital	4.00	0.16	0.64
<b>Amount</b>			<b>3.640</b>
<b>Challenge</b>			
a. Both have arguments for every employee that can cause a dilemma, but because of the concept of utilitarianism which sees a decision for greater benefit, the final result is considered the best	4.00	0.17	0.70
b. There are foreign human resources ready to enter the country with superior capabilities, because their technological capabilities are better than domestic ones	3.00	0.13	0.39
c. There is still a conflict of interest that disrupts the performance of employees at the Telecommunication Equipment Testing Center	3.00	0.13	0.39
d. A new balance in a healthy work environment, and new human and technological interactions	3.00	0.13	0.39
e. Services that are less than optimal are due to Human Resources who have not mastered telecommunications knowledge globally	3.00	0.13	0.39
f. Misuse of technology and information is also getting higher and more complex	4.00	0.17	0.70
g. HR unpreparedness in facing the entry of more modern digital telecommunications	3.00	0.13	0.39
<b>Amount</b>			<b>3.570</b>



Strategy points (3.971; -3.273) and (3.640;-3.570 ) namely at points (0.690; 0.290) in quadrant 4, the location of the strategy points can be seen in the graph below:



**Figure 1 Draw a strategy point**

The analysis and strategy that will be used can be determined with several priority issues that can be addressed immediately, namely by using the WO strategy for the short term with the consideration that this strategy is influential in the development of Digital-Based Human Resources in Improving Employee Performance at the Telecommunications Equipment Testing Center, Ministry of Communications and Informatics of the Republic of Indonesia, for the medium term, use the WO strategy. From the results of the SWOT Analysis, a strategy for developing Digital-Based Human Resources in Improving Employee Performance at the Telecommunications Equipment Testing Center, Ministry of Communication and Information of the Republic of Indonesia can be carried out by creating a strategy that minimizes weaknesses to take advantage of existing opportunities

## 2. Digital-based HR Development Strategy at the Telecommunication Equipment Testing Center

Based on the results of the SWOT analysis mentioned above, there is an effective strategy in developing Digital-Based Human Resources in improving employee performance at the Telecommunication Equipment Testing Center , namely on the aspects of Work Productivity, Efficiency, Damage, Accidents, Service, Morale, Career, Conceptual , Leadership, Rewards, and Consumers with all the parameters. To find out digital -based human resource development strategies in improving employee performance, researchers can describe each factor as follows:

### a) Work Productivity Factors

The results of the research from the case studies mentioned above, we can SWOT analysis to determine strengths, weaknesses, opportunities, and threats from the aspect of work productivity with the parameters of employee technical skills, employee human skills and employee managerial skills in developing Human Resources as follows: 1) Strengths. Having skills can produce decisions for the most benefit to the institution. Another advantage is that utilitarianism will produce strength with maximum utility, so that the development of Human Resources is in a more strategic direction. 2) Weaknesses (Weaknesses). Produce conflicting decisions and do not satisfy all parties, when employees do not achieve organizational targets. 3) Opportunities produce mature decisions because employee performance results have the opportunity to increase organizational targets as part of the work agenda of the Telecommunication Equipment Testing Center. 4) Threats (Threats). Both have arguments for every employee that a dilemma can occur, but because of the concept of utilitarianism which views a decision for greater benefit, the final result is considered the best.

#### **b) Efficiency Factor**

The results of research on the efficiency aspect with the parameters of labor efficiency, time efficiency, and raw material efficiency in the development of Human Resources at the Telecommunication Equipment Testing Center, are as follows: 1) Strengths. Have adequate qualification standard telecommunications Human Resources for institutions. 2) Weaknesses (Weaknesses). Not all digital telecommunications Human Resources have international certification so that some employees are not yet effective in implementing organizational services. 3) Opportunities (Opportunities) the ability of telecommunication laboratory facilities and infrastructure owned is of international standard. 4) Threats (Threats). Researchers can analyze that work efficiency is related to a system that can help employees to produce as much output as possible with as little input as possible. Work efficiency is closely related to employee performance. Higher levels of efficiency mean more work can be done in less time with fewer human resources. That is, work efficiency is a way to *"work smarter, not harder"*.

#### **c) Damage Factor**

The results of research on the damage aspect with the parameters of reducing damage to goods, reducing production damage and reducing machines in the context of developing Human Resources at the Telecommunication Equipment Testing Center, are as follows: 1) Strengths. Has ISO international quality standards, 2) Weaknesses. Limited number of complete test equipment, 3) Opportunities (Opportunities) the ability of international standard laboratory facilities. 4) Threats (Threats). There are still conflicts of interest that disrupt the performance of employees at the Telecommunication Equipment Testing Center. In reducing downtime in organizations or institutions, namely by conducting training for digital manufacturing or telecommunication employees so as to minimize errors that can result from incorrect operation of software or machines carried out by employees.

#### **d) Accident Factor**

The results of research on the accident aspect with the parameters of reducing accident rates, reducing medical expenses, and creating a healthy and safe work environment in the perspective of developing Human Resources at the Telecommunication Equipment Testing Center, are as follows; 1) Strengths. Collaboration of the digital industrial revolution with various related institutions, 2) Weaknesses need regulations or a legal umbrella to keep pace with the development of the digital industrial revolution., 3) Opportunities (Opportunities) Indonesian workers are equipped with machine operational skills and relevant knowledge. 4)

Threats (threats) of a new balance in a healthy work environment, and the existence of new human and technological interactions. To prevent work accidents management must create policies that cover two aspects, namely policies to reduce unsafe actions or socio-processual aspects and policies, reduce unsafe conditions or structural technological aspects.

**e) Service Factor**

The results of research on the service aspect with the parameters of increasing excellent service, increasing job satisfaction, and transparency (open and accessible to all parties) in the field of Human Resource development at the Telecommunication Equipment Testing Center, are as follows; 1) Strengths. Having international standard organizational work procedures, 2) Weaknesses (Weaknesses) The Minister of Communication and Informatics regulations need to be reviewed and adjusted to the changing times, namely the digital revolution. 3) Opportunities for telecommunications service readiness related to Air Traffic Service Communication Equipment 4) Service Threats that are less than optimal due to Human Resources who have not mastered telecommunications knowledge globally. With the current development of the excellent service program for the community/customers, it is better to further refine the implementation of prime service activities so that the service needs of the community can be satisfied in the future.

**f) Moral Factor**

The results of research on the moral aspect with parameters make employee morale better and enthusiastic in completing work in the field of human resource development at the Telecommunication Equipment Testing Center, as follows; 1) Stakeholder Strengths are absolutely necessary to unite human resources and existing potential for the acceleration of Human Resource development so that it has a positive impact on users of domestic and foreign BBPPT testing and calibration services. 2) Weaknesses of resistance in testing telecommunications equipment with moral violations which are sometimes not directly proportional to the increase in ICT utilization, 3) Opportunities for ICT advancements that are happening in the cyber world today, 4) Threats for technology abuse and information is also increasingly high and complex . In the moral aspect, employees hold the key in every job, especially when the work involves the safety of the community, even the slightest cannot be tolerated, because the impact of intentional mistakes due to promises to justify wrongdoing or rewards means that their role is no longer as a responsible servant. good and trustworthy in accordance with applicable laws and regulations.

**g) Career Factor**

The results of research on the career aspect with the parameters of career advancement, skills improvement and performance improvement in the field of Human Resources development at the Telecommunication Equipment Testing Center are as follows; 1) Strengths (Strengths) consistency of education and training to support careers, 2) Weaknesses (Weaknesses) lack of adjustment to developing technological developments, 3) Opportunities (Opportunities) competency excellence in Human Resources in the field of telecommunications and digital, 4) Threats ( Threat) Unprepared Human Resources in facing the entry of more modern digital telecommunications. Career development is very important for an organization, because career is a necessity that must be continuously developed in an employee so as to be able to motivate employees to improve their performance.

**h) Conceptual Factors**

The results of the research on the conceptual aspect with the parameters of increasing manager skills, increasing manager technical skills, increasing manager human skills in the field of Human Resource development at the Telecommunication Equipment Testing Center, are as follows; 1) Strengths (Strengths) technological knowledge skills possessed by Human Resources can be maximized with innovative ideas, 2) Weaknesses (Weaknesses) developing existing telecommunication conceptuels have not been maximized, 3) Opportunities (Opportunities) superiority of Human Resources in the field of telecommunications and digital must continue to be developed with the support of the central and regional governments, 4) Threats (Threats) every concept that has been designed with conceptual skills is the result of ideas that arise from within employees who are not well aspirated. Improving the quality of human resources as a series of efforts to realize the whole human being as a human being puts emphasis on human dignity, rights and obligations which are reflected in the values contained in humans both in terms of ethics, aesthetics and logic which includes values spiritual personality and struggle.

**i) Leadership Factor**

The results of research on the leadership aspect with the parameters of public relations relations in working are more flexible, and motivation in working is more focused in the field of Human Resource development at the Telecommunication Equipment Testing Center, as follows; 1) Strengths (Strengths) have a work environment by building a strong teamwork. 2) Weaknesses require wider and sustainable networking development, 3) Opportunities (Opportunities) motivation to work and build a better work environment, 4) Threats (Threats) organizational targets have not been achieved. Basically, leaders will influence their employees or subordinates. So that they could make personal sacrifices. These sacrifices are used for the sake of achieving good performance according to organizational goals. Therefore, leaders are expected to have a special obligation to consider ethics when making decisions.

**j) Reward Factor**

The results of research on the aspect of remuneration with the parameters of increasing compensation, cooperation ties, and increasing employee work stability, in the field of Human Resource development at the Telecommunication Equipment Testing Center, are as follows; 1) Strengths There is compensation provided in addition to basic salary, 2) Weaknesses (Weaknesses) Delay in paying wages after work is completed and received by workers, 3) Opportunities (Opportunities) there is high morale and creates satisfaction with the work achieved, 4) Threats (threats) work cannot be completed on time so that it has an impact on community services. The role of remuneration and incentives carried out at the Telecommunication Equipment Testing Center has been going well and is appropriate so as to support an increase in employee motivation. This can be reviewed, among others, in terms of achieving the hierarchy of needs which are a source of motivation, namely the fulfillment of physical needs, the feeling of security and safety at work, the fulfillment of social needs, the fulfillment of the need for appreciation/recognition and the need for self-realization.

**k) Consumer Factors**

The results of research on consumer aspects with parameters providing better benefits, obtaining quality or quality goods in the field of Human Resource development at the Telecommunication Equipment Testing Center, are as follows; 1) Strengths Success in providing satisfactory services to the community/consumers, 2) Weaknesses (Weaknesses) there is still a lack of consistency in every service provided by employees in their fields, 3) Opportunities (Opportunities) Providing excellent service quality

with the ability and owned technology, 4) Threats (Threats) required timely and quality services. The digital-based Human Resource Development Strategy in improving employee performance at the Telecommunication Equipment Testing Center, is a form of aspiration from the wishes of the world community that with the renewal of telecommunications and the digital revolution that will change the world more easily and form human civilization in the future.

Manufacturing, banking, the service industry, and other fields are just some of the many that are seeing new methods of getting their work done emerge as a result of technological advancements. Thus, it is imperative that Human Resources be fostered that foster innovation and creativity in response to this situation (HR). Without originality and innovation, government institutions like the Telecommunication Equipment Testing Center, Ministry of Communication and Informatics of the Republic of Indonesia will remain stagnant in their mission and performance, drawing public scrutiny, criticism, and disinterest. Therefore, every government institution that aspires to develop should first work to foster an environment conducive to creativity and innovation within its own walls. Only then will the institution be able to produce ready and solid organizational products, increasing the likelihood that it will be able to successfully navigate the challenges it encounters from the outside.

What we mean when we talk about creativity is the ability to think of and implement novel solutions to problems, or the generation of goods that do not yet exist but could benefit society. A creative person is someone who is full of ideas and determination, who enjoys taking on new tasks, who is open to attempting new things, and who has a serious, professional disposition. In contrast, the term "innovation" refers to a process of rejuvenation that adds value to a product by introducing novel, differentiated ideas. Persons who are innovative tend to be those who are eager to learn and work, who are focused on the future, who are brimming with ideas, who are logical and unbiased in their thinking, who value and maximize the use of time, and who enjoy experimenting and researching.

Although these two words have different meanings, they are closely related. By being creative and innovative, you will be "different" from the others, you will be unique and you will have the potential to be at the forefront of increasingly fierce competition. Everyone basically has a creative and innovative attitude, but not everyone is able to develop it. To be able to develop a creative and innovative attitude, seriousness and perseverance are needed. Creative and innovative is one of the keys to success in winning the competition. The development of creative and innovative attitudes will also be better if developed together, because the two have a strong synergy .

## E. CONCLUSION

The implementation of digital-based human resource development in improving employee performance at the Telecommunication Equipment Testing Center, Ministry of Communication and Informatics of the Republic of Indonesia has not been fully effective. The effective strategy for developing digital-based human resources in improving employee performance at the Telecommunications Equipment Testing Center, Ministry of Communication and Informatics of the Republic of Indonesia, namely by paying attention to factors of work productivity, efficiency, damage, accidents, service, morale, career, conceptual, leadership, remuneration and consumer factors are supported by research findings, namely **creativity factors**

**and innovative factors** so that employee performance at the Telecommunication Equipment Testing Center, Ministry of Communication and Informatics of the Republic of Indonesia can run effectively and efficiently.

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