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4.0 INDUSTRIAL REVOLUTION IN THE CONCEPT OF PANCASILA INDUSTRIAL RELATIONS AND THE DEVELOPMENT OF SKILLS AND COMPENSATION TO WORKERS

Ahmad Hunaeni Zulkarnaen *¹

*¹ Postgraduate Law Program, Universitas Suryakencana, Indonesia



Abstract

4.0 industrial revolution gave birth to robotic technology, digital that has a massive impact on human life in the world, which encourages automation in all business or company activity processes and changes the order of almost every industry in every country. The extent of this change marks the transformation of the entire production and management system of companies in the world. In addition to the potential to improve the quality of life of the world community, it is feared that the industrial revolution 4.0 will take over human work resulting in mass layoffs. The purpose of this article is to analyze the Pancasila industrial relations, skills development and compensation to workers in the era of the industrial revolution 4.0. The method of approach used in this research is normative juridical, which is studying and studying the principles of law, especially positive legal principles derived from library research materials available from the laws and regulations as well as the provisions using the material primary and secondary law. The conclusion of this article is that companies must utilize the functions of Human Resource Management (HRM) and one of them is the function of skills development and compensation. The skill development function is the process of increasing the technical, theoretical, conceptual, and moral skills of workers through education and training, in accordance with the employment needs of the Industrial Revolution 4.0 period. Whereas the compensation function is that the company fairly and appropriately provides direct remuneration in the form of venture capital (money or goods) to workers who are forced to be laid off due to the negative impact of the company applying robotic, digital and automation technology. Fair is interpreted in accordance with the contribution of workers to the company and is feasible to be interpreted at least to meet the primary needs (clothing, housing, food) of workers and their families.

Keywords: Industrial Revolution 4.0; Pancasila Industrial Relations; Skill Development; Compensation.

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1. Introduction

The definition of "revolution" means changes that are very fast, the meaning of "industry" is the effort to carry out the production process. The definition of "industrial revolution" is a change that takes place quickly in the implementation where the work of the production process was originally done by humans replaced by machines, while the goods produced have added value (commercial value added) [1].

The term "Industrial Revolution" was introduced by Friedrich Engels and Louis-Auguste Blanqui in the middle of the 19th century. This industrial revolution is ongoing from time to time. This last decade can already be called entering the fourth phase (4.0) the phase change phase gives an articulate difference on the useful side. The first phase (1.0) takes place in the discovery of a machine which stresses the production mechanism. In the second phase (2.0) it has moved on to a mass production stage integrated with quality control and standardization. The third phase (3.0) enters the stage of uniformity en masse based on computer integration. The fourth phase (4.0), hereinafter referred to as RI4, has presented the digitalization and automation of the integration of the internet with manufacturing [1].

The phrase "Fourth Industrial Revolution" was first coined by Schwab in 2016 and introduced the same year at WEC. RI4 has a unique opportunity to improve human communication and conflict resolution. RI4 is our current environment and growing. Technology and trends in the RI4 era will change the way we live and work [2].

RI4 is a condition in the 21st century, when there are massive changes in various fields through a combination of technologies that reduce the barriers between the physical, digital and biological worlds. RI4 is characterized by technological advances in various fields, especially artificial intelligence, robots, blockchain, nanotechnology, quantum computers, biotechnology, the Internet of Things, 3D printing, and unmanned vehicles [1]. hereinafter referred to as robotic, digital and automation technology (RI4).

Robotics, digital and automation (RI4) technology has changed the order of almost every industry in every country. The extent of this change marks the transformation of the entire production system, management (company: writer) and government. Klaus Schwab sees as part of the industrial revolution "new technological breakthroughs" in fields such as artificial intelligence or Artificial Intelligence (AI), the Internet of Things (IoT). AI, robotics, IoT, full autonomous vehicles, 3D printing, quantum computing and nanotechnology. robotic and digital technology (RI4) is expected to see a large implementation of some emerging technologies with high potential for change effects [2].

Like the previous revolution, robotics, digital and automation technology (RI4) has the potential to improve the quality of life of people throughout the world, but advances in the field of automation and artificial intelligence have raised concerns that machines will one day take over human work, including advances in artificial intelligence and automation can replace the human workforce as a whole which is replaced by robotic, digital and automation technology (RI4), this means there will be a wave of unemployment and mass layoffs. To minimize the negative potential, companies that use robotics, digital and automation technology (RI4) in the production process

must possess and implement the soul of Industrial Relations Pancasila (IRP), the soul of the intended HIP, is acknowledging, believing in trying and working is a service human to God and fellow human beings, sees workers not merely as a factor of production but as a personal human being with all their dignity, and in a harmonious, balanced and equitable manner leading to the creation of social justice for all parties involved in Industrial Relations (IR) in companies that the production process uses robotics, digital and automation (RI4) technology.

Efforts to minimize as much negative potential as explained above, the legal function governing Industrial Relations (IR) in companies must be imbued by IRP and dynamic or in line with developments in science and technology, robotics, digital and automation (RI4), so that the law governing IR can function or as a standard of conduct tool, as a tool of social engineering, as a tool of social control, as a facility on human interaction in an IR in a company that implements technology, robotics, digital and automation (RI4) in the production process.

The legal function as an IR regulating tool as described above can only be carried out, if employment development in a company that uses robotics, digital and automation technology (RI4) in its production process is still based on Pancasila and the 1945 Constitution, namely the IR regulating law can function as a tool, for optimally and humanely empower the workforce, be able to realize opportunities and provide workforce that is in accordance with the development needs of robotics, digital and automation (RI4) technology and at the same time provide protection to workers affected by layoffs due to the negative impact of the company using robotic technology, digital and automation (RI4) in the production process. The form of protection referred to, is to realize and improve the welfare of workers and their families affected by layoffs, this is in line with the development of Indonesian people as a whole which aims to create Indonesian people and society that are prosperous, just, prosperous, and equitable, both materially and spiritually, organized on the principle of cohesiveness through functional coordination across central and regional sectors.

Qualified human resources (workers) are needed to realize the goals of employment development as described above, qualified workers, are workers having competence or performance in an effort to realize the goals of companies that have used robotics, digital and automation (RI4) technology in their production processes, characteristics of quality workers, among others have knowledge (knowledge), skills according to the demands of robotics, digital and automation technology (RI4), workers who have a productive attitude, innovative or creative, dynamic, forward thinking, willing to work together, trustworthy and loyal.

The way companies have workers who meet the competency requirements with the characteristics or characteristics described above, is by utilizing HRM functions, including HRM functions in the field of development and compensation. The function of development, is to carry out the process of improving technical, theoretical, conceptual, and moral skills of workers through education and training, of course education and training provided, should be in accordance with current and future employment needs. In addition to utilizing the company's development function, it must utilize other areas of the HRM function, namely the compensation function, which is meant by the compensation function, is that the company fairly and appropriately provides direct remuneration in the form of money or goods to workers affected by layoffs in return for services rendered by the company as due to negative potential because the company uses robotics, digital and automation

(RI4) technology in its production process. Fair is interpreted in accordance with the contribution of workers affected by layoffs, properly interpreted to meet the primary needs (clothing, shelter, food) workers affected by layoffs and their families.

2. Method

The method of approach used in this research is normative juridical, which is studying and studying the principles of law, especially positive legal principles derived from library research materials that exist from the laws and regulations as well as the provisions, especially those relating with the Industrial Revolution 4.0, Pancasila Industrial Relations and Worker Skill Development and combined with the HRM function approach, especially the HRM function in the field of development and compensation to workers affected by layoffs as a result of negative impacts because the company uses robotic, digital and automation technology.

The research conducted is a descriptive analysis research, which provides a comprehensive and systematic overview of the Industrial Revolution 4.0, Pancasila Industrial Relations and Worker Skill Development. To obtain data that supports this research, the source of data is obtained through: Library Research, namely by collecting and studying secondary data relating to the Industrial Revolution 4.0, Pancasila Industrial Relations and Worker Skill Development.

3. Results and Discussions

4.0 Industrial Revolution

The Industrial Revolution 4.0, also known as the Fourth Industrial Revolution, is the fourth revolutionary era since the first industrial revolution in the 18th century. The RI4 era is characterized by a blend of technologies that blur the boundaries between physical, digital and biological fields, or collectively referred to as cyber-physical systems (CPS) [2]. RI4 is marked by the emergence of technological breakthroughs in a number of fields in question including the fields of robotics, AI, nano technology, IoT, Industrial Internet of Things (IIoT), fifth generation wireless technology (5G), 3D manufacturing or printing additives and fully autonomous vehicles [2] Hereinafter referred to as robotics, digital and automation technology (RI4).

In the industrial revolution the process that can be translated actually occurs social and cultural changes that take place quickly and involves the basic needs (needs) with the desires (wants) of the community. A journey of change in the revolution can be planned. The basis for this change is the fulfillment of desires to fulfill human needs quickly and with quality. Innovation is the key to the existence of change itself. Innovation is the most important factor that determines the competitiveness of a country or company. The results of future innovation achievements are determined to what extent can formulate a body of knowledge related to innovation management, technology transfer and business incubation, science and Technopark [1].

RI4 gave birth to digital technology that has a massive impact on human life throughout the world, which encourages automation in all activity processes. Internet technology is increasingly massive not only connecting millions of people around the world but also has become the basis for online trade and transportation transactions. The emergence of online transportation such as Gojek, Uber and Grab shows the integration of human activities with information technology and the economy

is increasing. The development of autonomous vehicle technology (cars without drivers), drones, social media applications, biotechnology and nanotechnology increasingly confirms that the world and human life have fundamentally changed [2].

Mastering RI4 became the theme of the 2016 World Economy Forum Annual Meeting in Davos-Kloster, Switzerland on October 10, 2016, the World Economy Forum (WEC) announced the opening of a new center for RI4 in San Francisco. According to WEC this center will function as a platform for interaction, insight, and impact on scientific and technological changes that change the way we live, work and relate to each other [2].

If the Third Industrial Revolution (digital revolution) involved the development of computers and IT (information technology) since the mid-20th century (twenty), then RI4 grew from there. Nevertheless, RI4 is still considered a new era and not a continuation of the digital revolution. This is because the explosion of development and technology has really changed a lot of things. According to Klaus Schwab, the new age will be different in terms of the speed of technological breakthroughs, the broad scope and extraordinary impact of the new system [2].

IoT leads RI4. IoT has the potential to change our understanding of how things can be connected, and also provide enormous value to the world. Many world studies estimate that by 2030 IoT could contribute \$ 14.2 trillion to the global economy. IoT provides enormous potential, for that the business sector (companies) need to seriously deal with risks that will emerge in the era of connectivity [2]. The trigger for RI4 is the global spread of the internet and new technologies such as wireless sensors, AI, RI4 will radically change the way humans live and work [2]. Sensor devices can be placed almost anywhere, companies can gather detailed insights on how machines and processes work. For example, companies install IoT sensors in warehouses to monitor the way staff choose and place items on the shelves. Analysis of the data from the sensor shows that so far the forklift driver takes 30% of the trip longer than necessary. This data is followed up, new routes are made, and productivity increases with minimal investment [2].

IoT can help improve the maintenance process, predictive maintenance works by identifying maintenance problems in real time. This allows the tool owner to carry out cost-effective maintenance before the technology is severely damaged. The IoT Proposition is able to find out the potential damage to a device long before it is used, and take action based on that information. For example, a company in Los Angeles, USA can understand if an equipment in a Singapore branch is experiencing speed or temperature abnormalities. That way, they can then decide whether it needs to be fixed or not [2].

Increased Understanding of Risks

Better operational understanding helps companies identify risks and take steps to mitigate them. Many industries say that IoT helps, or has opportunities for, overall corporate risk. In 2014 for example the death rate of workers in the construction industry was around 20%. If the company can provide wearable technology to construction workers, the company can provide workers with the data needed to understand how work accidents occur, and take steps towards better safety procedures and according to Article 35 paragraph (1) Law Number 13 of 2003 concerning Manpower (UUK), work safety is the responsibility of the company or the company is obliged to provide protection that includes safety, health (physical, mental) and welfare of workers.

The more sensor devices that collect data, the risk can also be better understood and valued from an insurance perspective. For example, the use of telematics. Wireless monitors in a car or truck can gather precise details about how individuals use the data to claim appropriate insurance [2]. Like the previous revolution, RI4 has the potential to improve the quality of life of people throughout the world. But advances in the field of automation and artificial intelligence have raised concerns that machines will one day take over human work, including advances in artificial intelligence and automation that can replace the whole human workforce which is replaced by technology and robotics.

RI4 changes the industrial order by marking the transformation in the field of management, management, is a tool to achieve the desired goals (companies), good management will facilitate the realization of the objectives of the company (industry), employees (workers), and society (government). With management, the effectiveness and effectiveness of the elements of management can be improved. The management elements referred to consist of: man, money, methods, machines, materials, and market, abbreviated as 6 M [3]. In scientific journals related to RI4 technology the author will only discuss about the elements of Man management or Human Resources Management, hereinafter referred to as HRM and Machines related to Information Management (IM) associated with HIP, why MI ?, given RI4 put more emphasis on progress in the telecommunications aspects of IoT and IIoT, hereinafter referred to as robotics and digital technology (RI4) [2].

IM is a management activity based on its function which is basically trying to ensure that the business (company) that is run is still able to continue to survive in the long run. To ensure that IM has the duty to provide all information (IoT, IIoT) related to company activities both internal and external information, which can encourage business (company business) to be able to adapt to changes in the community (national and global society) [4].

The definition of IM as explained above, is in line with the opinion of Klaus Schwab in his book, Fourth Industrial Revolution, explaining how RI4 is different from the three previous revolutions, especially technological progress as its main characteristic. The basis on which RI4 is based is more on advancements in telecommunications (IoT, IIoT) and connectivity than technology. Technology has great potential to continue to connect billions of more people to cyberspace networks, thereby drastically increasing business and organizational efficiency (companies) and helping to regenerate the natural environment through better asset management (resources) [2].

Minimize the negative potential of robotics, digital and automation (RI4) technology, where one day machines will take over human work so that there is a great potential for mass layoffs or unemployment, so as to minimize mass layoffs or unemployment mass, the Pancasila Industrial Relations (PIR) must be in companies that implement robotics and digital technology (RI4) in the production process.

Relationship between Pancasila Industrial and Industrial Revolution 4.0

Understanding of PIR, according to Sedjun.H. Manulang, is a system of relationships formed between actors in the production process of goods and services (workers, employers, government) based on values which are manifestations of the whole precepts of the Pancasila and the 1945 Constitution (UUD'45) which grow and develop above the national personality and national

culture of Indonesia [5]. According to FX Djumialdji and Wiwoho Soedjono, HIP is an industrial relationship (IR) imbued by the five Pancasila precepts that reads: 1) A labor relationship that recognizes and believes in work as human service to God and fellow human beings; 2) Workers are not merely as a factor of production but as a private person with all their dignity and dignity; 3) Labor relations that lead to the Unity of Indonesia, do not distinguish between groups, beliefs, politics, understanding, flow, religion, ethnicity, gender; 4) Labor relations based on the principle of deliberation and consensus, eliminating differences, looking for commonalities towards agreement between workers and employers; 5) A labor relationship that leads to the creation of social justice for all Indonesian people, for that the results of economic development must be enjoyed together in a harmonious, balanced and equitable manner [5].

As explained above, robotics, digital technology (RI4), besides having positive potential, can improve the quality of life of people around the world, including in Indonesia, but also has negative potential, among others, concerns that machines will one day take over human work, for example the advancement of artificial intelligence and automation can replace the whole human workforce which is replaced by technology and robotics, this means there will be a wave of unemployment and layoffs (mass layoffs) in bulk. To minimize the negative potential, companies that use technology and robotics in their production processes must possess and implement the PIR spirit, for example the PIR soul, is that the entrepreneur recognizes, believes that trying and working is human service to God and fellow humans and views workers as not merely as a factor of production but as a personal human being with all its dignity and pushing towards the creation of social justice for all parties involved in the production process or IRs (entrepreneurs, workers and their families) in a harmonious, balanced and equitable manner, meaning productivity or corporate profits because using technology and robotics in the production process can be enjoyed by all parties involved in IR. For this reason the IR regulatory legal function must not be static but must be dynamic, meaning that changes must be made to the IR regulatory law in line with the development of science and technology, robotics and digital (RI4), this is in line with Abdul Manan's opinion, "to carry out its legal function may be static, law must be dynamic, changes must be made in line with the times and dynamics of community life "and the development of science and technology, robotics and digital (RI4) [6].

In fact the laws governing IR are made and enacted for the benefit of all parties involved in IR, while the interests of all parties involved in IR, including companies that use robotics and digital technology (RI4) in their production processes, are not the same or different from each other, one of the causes of this difference, is due to the development of science and technology, robotics, digital (RI4). Therefore, if a law regulating IR is made at a time when the IR regulating law is felt according to a need (Industrial Revolution. 03 / RI3), then the need for RI3 cease to exist and / or turn into technology, robotics, digital (RI4), then a very wise matter of law governing HI is amended and adapted to the conditions of the age of robotic and digital technology (RI4). This is in line with Ahmad Nusthafa al-Maraghi's opinion, that the actual laws are made and promulgated for the benefit of humans, while human interests are not the same, different from one another due to differences in conditions, situations, times and places. Therefore, if a law is made at a time when the law is felt as a need, then the need is no longer present, then a very wise matter is changed and adapted to the conditions of the times, therefore all parties involved in IR (entrepreneurs, workers, government), must carry out the IR regulatory functions (written and unwritten), the intended IR arrangements, are:

- 1) As a standard of conduct, which is the standard of behavior that must be obeyed by everyone in acting in relation to one another, that is, all parties involved in IR using technology, robotics, digital (RI4) in the production process must have the backrest or the size of the behavior according to the 5 (five) Pancasila souls contained in PIR as described above [6];
- 2) As a tool of social engineering, that is, as a means or tool to change society towards a better personal or community life or the use of technology, robotics, digital (RI4) in a company is a means or tool to change all parties involved in IR towards better or the use of technology, robotics, digital (RI4) in a company can realize the ultimate goal of IR, namely the use of technology, robotics, digital (RI4) is a means or tool to bring prosperity to all parties (entrepreneurs, workers and their families);
- 3) As a tool of social control, that is, as a tool to control human behavior and actions, so that they do not commit acts that violate the legal, religious, moral or moral norms of the five (5) Pancasila souls in PIR as a tool to control the behavior and actions of all parties involved in IR (especially entrepreneurs) in using technology, robotics and digital (RI4) in the production process, so as not to act in violation of IR regulations inspired by Pancasila, religion and decency in Indonesia [6];
- 4) As a facility on human interaction, that is, the law functions not only to create order, but also to create changes in society by expediting the process of social interaction and is expected to be a driver to bring about changes in people's lives. Or the 5 (five) souls of Pancasila in PIR not only to create IR order in companies that use technology, robotics and digital (RI4) in the production process, but also create changes for all parties involved in IR by smoothing the process of social interaction among they are and are expected to be a driver to bring about changes in the lives of all parties in IR, namely using technology, robotics and digital (RI4) in the production process with the aim of welfare for all parties (employers, workers).

The functions of IR regulating law as explained above, have substance meaning, IR regulating law is positioned as a means of implementing the soul of the Pancasila, with the soul of the Pancasila company with all its power and efforts must prevent or minimize the negative potential of technology, robotics and digital (RI4), related with this Sunaryati Hartono once put forward the "law as a tool" so that practically political law (the soul of Pancasila) is a tool or means and steps that can be used by the government (all parties in IR) to create a national legal system (IR regulatory law) in order to achieve the ideals of the nation and the goals of the country and the ultimate goal of IR namely the welfare of all parties involved in IR [7].

Social Attitudes and Mental Attitudes, Pancasila Industrial and the Industrial Revolution 4.0 Relations

According to Djumialdji and Wiwoho Soedjono, to achieve the principle, the purpose of the PIR as described above, it requires a social attitude that reflects national unity and unity, mutual cooperation, tolerance, tolerance, openness, help to help and be able to control themselves. In addition to social attitudes, PIR mental attitude is needed, that is, all parties in the production process are friends in arms who understand each other's position and role and equally understand their rights and obligations in the entire production process [4].

Referring to the opinion of Djumialdji and Wiwoho Soedjono above, to achieve the PIR goal in its correlation with the era of robotics and digital technology (RI4), social attitudes that reflect

national unity and unity, mutual cooperation, tolerance, openness, help and able to control themselves. In addition to social attitudes, PIR mental attitude is needed, namely all parties in IR in companies that use robotics and digital technology (RI4) are as comrades who understand each other's position and role and equally understand rights and obligations in the entire production process with robotics technology and digital (RI4).

Social attitudes and mental attitudes of workers or trade unions in companies that have used RI4 digital technology in their production processes: a) Feeling in possession of (companies that implement robotic and digital technology (RI4) in the production process; b) Participating in maintaining and maintaining (companies that apply robotics and digital technology (RI4) in the production process, b) Continually introspective to improve competence and performance so that they can participate in companies that use robotics and digital technology (RI4) in the production process [8].

Social attitudes and mental attitude of entrepreneurs (who use RI4 digital technology in the production process): a) Awareness that workers are human beings who have dignity, dignity and self-esteem; b) Awareness that increasing the degree, dignity, self-esteem and welfare of workers is an obligation and duty of humanity for companies that apply robotics and digital technology (RI4) in the production process; c) Implementing human resource management (HR) based on its function to obtain the best HR (workers) for dynamic, creative, innovative and forward-thinking company businesses in applying RI4 digital technology in the production process; d) Maintain the best human resources or workers so that workers can continue to work together with companies that implement robotics and digital technology (RI4) in their production processes with constant or increasing quality of work; e) Transforming the field of HR management / workers in an effort to smooth the company that applies robotics and digital technology (RI4) in the production process. Social attitude and mental attitude of the government. The social and mental attitude of the government, is as a guide, guide, protector and conciliator of all parties involved in the production process (conduct work training in an effort to welcome robotic and digital technology (RI4) [4].

Human Resource Management and Industrial Revolution 4.0

HRM is the application of management based on its function to obtain the best HR (workers) for the business (in the era of robotics and digital technology (RI4)) that are run and how the best HR (workers) can be maintained and continue to work together with us (technology user companies) digital RI4 in the production process) with the quality of work that is always constant or increasing [3]. According to Simamora, HRM is the utilization, development, assessment, provision of services, and management of individual members of an organization or group of workers (workers, trade unions). Meanwhile, according to Dessler, HRM a policy and practice needed by someone who runs the aspect of "people" or HR (workers) from the position of a management, including recruitment, screening, training, appraisal, and assessment. Meanwhile according to Schuler, et al, HRM, is an acknowledgment of the importance of the organization's workforce as HR (workers) which is very important in contributing to organizational goals and using several functions and activities to ensure that HR (workers) are used effectively and fair for the interests of individuals, organizations, and society [8]. The best contribution of HR (workers) to organizational goals is in line with the objectives of the PIR, which is to realize a just and prosperous society based on Pancasila, independence, eternal peace, social justice through creating business peace, increasing production, increasing workers 'welfare and workers' degrees according to human dignity. For this

reason, HRM must carry out planning, organizing, directing and supervising procurement, development, compensation, integration, maintenance, and termination of employment with a view to achieving corporate organizational goals (in accordance with PIR objectives) in an integrated manner [9].

According to Cushway, the goals of HRM are: 1) Providing management considerations in making HR policies to ensure that the organization has motivated and high-performing HR (workers) who are always ready to cope with changes and fulfill work obligations legally; 2) Implementing and maintaining all HR (employee) policies and procedures that enable the organization to achieve its objectives; 3) Assist in developing the overall direction of the organization and strategy, specifically relating to the implications of HR (workers); 4) Provide support and conditions that will help line managers achieve their goals; 5) Dealing with various crises and difficult situations in relations between workers to ensure that they do not hinder the organization from achieving its objectives; 6) Provide communication media between workers and organizational management; 7) Acting as maintainers of organizational standards and values in HR management (workers).

Referring to the HRM goals of Cushway, the relation of companies facing RI4 era is: a) Providing management considerations in making HR policies (workers) to ensure companies have motivated and high-performing workers, ready to overcome changes or developments in knowledge and technology, especially in the face of robotic and digital technology (RI4); b) Able to implement and maintain all HR or employee policies and procedures that enable the company to achieve its objectives in the era of robotics and digital technology (RI4); c) Assist in the development of the overall direction of the company and its strategies, specifically relating to the implications of HR or workers in dealing with the RI4 era; d) Provide support and conditions that will help line managers achieve their goals in dealing with the RI4 era; e) Dealing with various crises and difficult situations in relations between HR or workers to ensure that they do not hamper the company in achieving its objectives in the era of RI4; f) Providing communication media between HR or workers and company management in achieving company goals in the era of robotics and digital technology (RI4). Acting as the preserver of company standards and values in HR management or workers in an effort to achieve company goals in the era of robotics and digital technology (RI4) [10].

According to Schuler et al HRM has 3 (three) objectives: a) Improve productivity levels; b) Improve the quality of life of workers; c) Ensuring the organization meets the legal aspects. Quality human resources, are HR (workers) who meet the competency requirements in an effort to realize company goals. According to Ruky, human resources who meet the competency requirements have the following characteristics or characteristics: a) Have full knowledge of the duties, responsibilities, and authority; b) Having the necessary knowledge, related to the full implementation of the task; c) Able to carry out the tasks that must be done because it has the necessary expertise; d) Being productive, innovative / creative, willing to work with others, can be trusted (loyal) [10].

The way companies have workers who meet the competency requirements with the characteristics or characteristics as described, namely HRM must utilize HR functions, among others as follows: a) Development is a process of increasing technical, theoretical, conceptual, and moral skills of workers through education and training, education and training provided, should be in accordance

with current and future employment needs (RI4); b) Compensation is the provision of direct compensation in the form of money or goods to employees (workers) in return for services provided to the organization (company). The principle of compensation is fair and appropriate. Fair is interpreted in accordance with work performance, feasible to be interpreted as meeting primary needs (clothing, housing, food); c) Election is an improvement in physical, mental and loyalty conditions, so that they (workers) will continue to work together until retirement. Good maintenance is carried out with welfare programs based on the needs of most employees (workers), which are guided by internal and external consistency [11].

As explained above, the way companies have employees who meet the competency requirements with the characteristics or characteristics as described, such as having the necessary knowledge and expertise, being productive, innovative or creative, willing to work with others, can be trusted, loyal, is one of them through the development of the process of improving technical, theoretical, conceptual, and moral skills of workers through education and training.

Development Program and Industrial Revolution 4.0.

Employee development (new/old) needs to be planned and ongoing. For development to be carried out properly, it must first be determined employee development programs (workers) that are prepared carefully and are based on scientific methods and are guided by the skills needed by the company today (RI3) and for the future (robotics and digital technology (RI4)), the purpose of development is to improve the technical, theoretical, conceptual and moral capabilities of employees (workers) so that their work performance is good and achieve optimal results, employee development (workers) is felt to be increasingly important because of the demands of work or position as a result of technological progress (technology robotics and digital (RI4)) and increasingly intense competition among similar companies (in the era of robotics and digital technology (RI4)). Every company personnel are required to be able to work effectively, efficiently, with good quality and quantity of work so that the company's competitiveness is getting better. Development is carried out non-career and career goals for employees or workers (new/old) through training and education. Development is an effort to improve the theoretical, conceptual, and moral technical abilities of employees (workers) according to the needs of occupation through education and training. The purpose of education is to improve the theoretical, conceptual, and moral skills of the employees (workers), while the training aims to improve the technical skills of carrying out employee work. Job training is all activities with the aim of giving, obtaining, improving, developing work competence, productivity, discipline, attitude, and work ethic at a certain skill and expertise level in accordance with the level and qualifications of the position or occupation (Vide Article 1 paragraph (9) of the Law labor) [12].

The purpose of developing workers (education and training) needs to be done by the company because it will provide benefits for the company, employees (workers) and the consumer community. The principle of development is to improve the quality and ability to work of employees, especially in the face of the era of robotics, digital technology (RI4). Program, is a kind of concrete plan because it includes targets, policies, procedures, budget and time for implementation, participants, curriculum. The development program must be based on improving the effectiveness and efficiency of the work of each employee (worker) in his position. An organization (company) development program should be informed openly to all employees (workers) so that they prepare themselves.

Worker development aims to improve skills, knowledge, attitudes through training, and development so that they can carry out their duties properly. Development of employees (workers) due to the development of science and technology (RI4). Short-term education process training, when operational employees systematically learn operational technical skills. Development is a long-term educational process, in which managerial employees (workers) learn concepts and theories automatically including learning technological, robotic, and digital concepts and theories (RI4). The purpose of developing workers is in line with the objectives of labor law, among others according to Manulang, which is to achieve / implement social justice in the field of employment. The purpose of developing workers is in line with the objectives of employment development. Meanwhile, according to Article 4 of the Law on Manpower, labor development aims, is to empower and utilize manpower optimally and humanely, to realize employment opportunities and supply of labor according to national and regional development needs (robotic and digital technology needs (RI4)), provide protection to workers in realizing their welfare, and improving the welfare of the workforce and their families [13].

Meanwhile, according to Abdul Khakim [11], what is meant by empowerment and empowerment of workers, is to provide the widest employment opportunities for Indonesian workers, so that they can participate optimally in national development (in the era of robotics and digital technology (RI4)), with continue to uphold human values or make Indonesian workers as the subject of development, not as objects of development.

One type of development is formal development, where employees (workers) are assigned by the company to attend education and training, both those carried out by the company and those carried out by educational and training institutions, because of current or future work demands (robotics technology) and digital (RI4)), so that workers increasingly understand technical skills, human skills, conceptual skills and managerial skills related to robotics and digital technology (RI4).

The role of education, is as a foundation for forming, preparing, fostering and developing the capabilities of HR (workers) that will determine the success of future development in the era of robotics and digital technology (RI4). Training is defined by Ivancevich as an effort to improve the performance of employees (workers) in their current jobs or in other jobs that are held immediately. Sikula, training is a short-term education that uses systematic and organized procedures, in which non-managerial workers learn technical knowledge and skills for specific purposes. For example, workers have competence and performance related to robotics and digital technology (RI4). According to Richarson, the strategic plan involving training includes various components, namely: determining the current level of employee (worker) skills, selecting the most flexible places and scheduling programs, choosing the most appropriate training method, gathering and developing training materials and evaluating training. The training objectives are among others increasing work productivity, work quality of workers [14].

Although companies that apply robotic, digital and automation technology (RI4) have carried out development of their employees or companies in every way and power to prevent mass layoffs, but it is possible negative impacts resulting from implementing robot technology and digital (RI4) in the form of mass layoffs cannot be avoided, for that the company is required to provide compensation to workers affected by the layoffs.

Compensation and Negative Potential of the Industrial Revolution 4.0

As explained above, development is a long-term education, which means companies need a long time in applying technology, robotics and digital (RI4) in the production process, which can be used by companies to provide compensation to workers who are forced to be laid off by the company due to the negative impact of the company using robotic and digital technology (RI4). Understanding compensation, is providing direct compensation in the form of money or goods to employees (workers) in return for services provided to the organization (company). The principle of compensation is fair and appropriate. Fair is interpreted in accordance with work performance, properly interpreted to meet primary needs.

The compensation can be used by workers who are laid off, among others, for entrepreneurial capital, entrepreneurial capital in the form of Severance Pay (UP), Tenure Award (UPMK) and Right of Reimbursement Money (UPH), the amount of which exceeds labor laws (labor law) Per-Acts) that apply, for example according to Per-Acts, UP should be at 2 (two) times the provisions of Per-Laws companies provide 3 (three) Per-Acts, as well as UPMK and UPH . The granting of such compensation is in accordance with the legal objectives based on the theory of active social justice: Includes all efforts to create social conditions that open the widest possible way and encourage humans to continuously humanize themselves, the purpose of legal goals is to create humane social conditions that enable social processes that enable social processes takes place fairly, so that every human being has the broadest opportunity to develop his full potential (talent and ability) for humanity [15].

Based on the legal objectives based on the theory of active patronage justice, the granting of the compensation, includes all efforts of employers who apply robotics, digital technology (RI4) to create conditions that open the widest possible path and encourage for or to workers affected by layoffs due to the potential negative impact of RI4 to continuously humanize themselves or create humane lay-off conditions that enable the implementation and granting of compensation rates to workers affected by layoffs to take place fairly, so that every employee who is exposed to layoffs has broad opportunities to develop his potential (talents and abilities) for humanity intact. In addition, the provision of compensation is expected to provide as much happiness as possible for workers affected by mass layoffs as a negative impact of RI4, this is in accordance with the Utilitarianism's legal philosophy of Jeremy Bentham, a flow that puts benefits as the main objective of the law. The benefits are defined as happiness, which is as much happiness as possible for as many people as possible, namely workers who are laid off [16].

For the regulation of the amount of compensation as described above to be effective, the amount of compensation arrangements must be known by all parties involved in IR, because all parties involved are concerned about setting the amount of compensation as mentioned above, otherwise it is better before setting the amount The compensation is applied, firstly socialized, so that all parties concerned with the regulation of the amount of compensation can receive it. This is in accordance with the opinion of Abdul Manan: The new law must be known by the community because the community's interest is to be regulated by the new law. It is better before the law is enacted, first socialized so that people are ready to accept " .

For the sake of legal certainty, the regulation of the amount of compensation as explained above, should be made in writing by the authorized agency that made it ((legislative, executive)), this is

in line with Abdul Manan's opinion, "the new law should be made in writing by the relevant agency has the authority to make it "meaning that the amount of compensation for workers affected by mass layoffs due to the negative RI4 must be stated in the Manpower Act, so that the classification of the compensation amount based on the nature and strength of the sanction is included in the compulsory legal rules (dwingendrecht, compulsory law) , i.e. Legal norms (regulation of the amount of compensation) that contains legal provisions (the obligations of all parties in IR) which under any circumstances in fact cannot be ruled out through individual agreements (or collective agreements) made by the parties (all parties involved in IR). In other words, such legal rules (regulation of the amount of compensation) under any circumstances must be obeyed and the binding capacity is absolute.

Considering that the amount of compensation is based on the nature and strength of the sanctions included in the force of law (dwingendrecht, compulsory law), then when viewed from the perspective of the nature of labor law included in the working conditions category with the category of Labor Legislation, namely : Rights and obligations of employers and workers contained in the Law. Therefore, the regulation is imperative that must be implemented. Because it is mandatory, it is binding on all companies, so that it is also macro-minimal. Macro in the sense of binding all companies without exception, both the place, size, type of business, the nature of the legal entity, and so forth. Minimal in meaning in practice regarding matters that are regulated can be done better or greater depending on the ability and willingness of the company individually [17].

Other options for the compensation amount as explained above, can be set forth in Company Regulations (PP) and Collective Labor Agreements (PKB), where PP and PKB based on the nature of labor law are included in the working conditions category with the Working Conditions category of employment), namely: Rights and obligations for workers and employers regarding various aspects of employment relationships that have not been regulated or not regulated by the Act (work norms). This arrangement is micro-conditional. Micro in the sense is regulated only for certain companies individually. Conditional in the sense that the arrangement is adjusted to the conditions and capabilities of the company concerned, the form of work conditions, is PP and PKB [18].

PP and PKB are written agreements made legally by workers or unions or a combination of trade unions with employers or a combination of employers, then the legal consequences are based on Article 1338 paragraph (1) of the Civil Code (Civil Code) then the PP and PKB apply as a law for those who made it. PP and PKB are collective agreements, meaning an agreement that is binding on employers or a combination of employers and all workers who work in companies or employers' joints. And, what is meant by PP and PKB acts as a law for those who make it, meaning that based on the nature and strength of the sanctions PP and PKB are included in the rule of law that force (dwingendrecht, compulsory law) which under any circumstances must be obeyed and the binding capacity is absolute , until changes are made based on the agreement of the parties that made them. And, what is meant by PP and PKB is made legally, is that the making of PP and PKB is made based on applicable Laws, as regulated in Article 1320 paragraph (4) of the Civil Code, among other things stating "each agreement must not conflict with the law law" means that the making of PP and PKB must refer to the Decree of the Minister of Manpower Number 48/MEN/IV/2004 concerning Procedures for Making and Ratifying PPs and the Making and Registration of PKB.

The negative impact of layoffs, companies will experience a shortage of workers who have competence according to the demands of robotics, digital and automation technology (RI4), to overcome this the company can implement an apprenticeship program to recruit prospective workers who have the competencies as mentioned above. According to Article 1 paragraph (11) UUK, apprenticeship is: Part of a job training system that is organized in an integrated manner between training in training institutions and working directly under the guidance and supervision of instructors or workers who are more experienced, in the process of producing goods or services in the company, in order to master certain skills or expertise (according to the demands of robotics, digital and automation technology in the RI4 era).

4. Conclusions

RI4 is a condition in the 21st century, when there are massive changes in various fields through a combination of technologies that reduce the barriers between the physical, digital and biological worlds. RI4 is characterized by technological advances in various fields, especially artificial intelligence, robots, blockchain, nanotechnology, quantum computers, biotechnology, the Internet of Thing, 3D printing, and unmanned vehicles. Like the previous revolution, robotics, digital and automation technology (RI4) has the potential to improve the quality of life of people throughout the world, but advancements in the field of automation and artificial intelligence have raised concerns that machines will one day take over human work or replace human labor in a manner completely replaced by robotics, digital and automation (RI4) technology, there will be a wave of unemployment due to mass layoffs. To minimize the negative potential, companies that use robotics, digital and automation technology (RI4) in their production processes must possess and carry out the spirit of PIR, that is, the entrepreneur recognizes, believes that trying and working is a human service to God and fellow humans and views workers are not merely a factor of production but as a personal human being with all their dignity and in a harmonious, balanced and equitable manner leading to the creation of social justice for all parties involved in IR in companies whose production processes use robotic, digital and automation technology (RI4).

Pancasila and the 1945 Constitution must be the basis of employment development in a company that in its production process uses robotics, digital and automation (RI4) and is implemented in the context of developing Indonesian people as a whole in order to realize a prosperous, fair, prosperous, evenly material Indonesian people spiritual or based on the principle of national development, namely the principle of democracy, the principle of fairness, equitability and the principle of cohesiveness through functional coordination across central and regional sectors through the optimal empowerment of human workers, realizing opportunities and providing workers in accordance with the development needs of robotics science and technology, digital and automation (RI4) while still providing protection to workers in order to realize company productivity which is correlated with the welfare of workers and their families.

Based on the principle of HIP, companies that use robotics, digital and automation (RI4) technology in the production process must be based on an atmosphere of harmony, harmony and balance among all parties involved in IR, all parties in IR must have a sense of mutual ownership, participate in maintaining, participating in maintaining, constantly introspective and shared responsibility, for the realization of the ultimate goal of the IR regulatory law, namely the welfare of all parties, for that workers and employers must be friends in arms and must work together,

helping each other to realize the welfare of all parties in the era of robotics, digital technology and automation (RI4), increased production that correlates with the welfare of workers and their families must be a common goal. Likewise, workers and employers, are comrades in profit, which means the benefits received by the company as a positive impact of the company using robotics, digital and automation technology (RI4) can be enjoyed by workers and their families, according to appropriate and harmonious parts. In addition to comrades in profit, workers and entrepreneurs, are comrades in responsibility to: Almighty God, nation and state, society, workers and their families and comrades in responsibility to the company.

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*Corresponding author.

E-mail address: ahmadhunaeniz@ unsur.ac.id