

Law Enforcement Profession In Dealing With The Industrial Revolution 4.0

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ABSTRACT

The Industrial Revolution 4.0, also known as the cyber physical system, is a revolution that emphasizes automation and collaboration between smart technologies. The Industrial Revolution 4.0 which started for the first time in the 21st century has the main mechanism that allows communication between sources of information and industry. With the emergence of the Industrial revolution 4.0, several sectors underwent changes. The approach method used is juridical normative retaliation, or an approach using a positivist legislature, which emphasizes that law is identical to the standards made and disseminated by the agency or individual concerned. In the legal profession, one must be able to improve soft skills in the world of work, as well as increase creativity and innovative thinking. There is a special ability that is difficult to replace, especially in the legal profession. This includes abilities such as critical thinking, wide-ranging imagination, problem solving, making decisions, communicating with others, working in teams, empathy, and tolerance. This creates fundamental and unwavering legal standards for anyone navigating the 40 Industrial Revolution period. In the world of digital technology, law enforcers must be able to effectively brand themselves and their institutions within the digital technology space.

Keywords : Enforcement, Profession, Industrial, Revolution.

ABSTRAK

Revolusi Industri 4.0 disebut dengan cyber physical system ialah revolusi yang menitikberatkan pada otomatisasi serta kolaborasi antara teknologi saber. Revolusi industri 4.0 ini muncul pertama kali pada abad ke-21 memiliki ciri utama yang dapat melakukan penggabungan antara informasi serta teknologi komunikasi ke dalam bidang industri. Dengan adanya kemunculan revolusi industri 4.0 ini, membuat perubahan banyak dalam berbagai sektor. Metode pendekatan yang dipakai adalah pendekatan yuridis normatif yaitu pendekatan yang menggunakan legis positivis, yang menyatakan bahwa hukum identik dengan norma-norma tertulis yang dibuat dan diundangkan oleh lembaga atau pejabat yang berwenang. Pendekatan ini digunakan dengan tujuan untuk menganalisis perkembangan revolusi industri 4.0. Perkembangan dan kemajuan teknologi di era modern ini Revolusi Industri 4.0 pada profesi hukum harus bisa meningkatkan soft skill dalam karakter kerja, meningkatkan kreativitas dan pemikiran yang inovatif. Ada skill tertentu yang sulit tergantikan khususnya dalam profesi hukum, yaitu kemampuan seperti berpikir kritis, daya Imajinasi yang luas tak terbatas, menyelesaikan masalah, membuat keputusan, berkomunikasi, team-work, empati dan bertoleransi. Ini yang membuat kunci utama dan tak tergantikan bagi penegak hukum dalam menghadapi era Revolusi Industri 40. Para Penegak Hukum harus mampu membranding dirinya dan kantor hukumnya dalam dunia teknologi digital.

Kata Kunci : Penegakan, Profesi, Industri, Revolusi.

A. Introduction

In living human life, it always moves dynamically along with the development of society. The more advanced the times, the more societal developments that have made many millennial generations grow. Along with the development of this society, the millennial generation is able to develop technology as it is currently developing, namely entering the era of digitalization or the

industrial revolution 4.0. With this development, the concept of a rule of law faces enormous challenges, because it has to coordinate developments that are able to make it easier for society but also has to continue to provide security and maintain values in the life of the nation and state based on Pancasila.

The Industrial Revolution 4.0, also known as the cyber physical system, is a revolution that emphasizes automation and collaboration between smart technologies. The Industrial Revolution 4.0 which started for the first time in the 21st century has the main mechanism that allows communication between sources of information and industry.

With the emergence of industrial rotation 4.0 made many changes in various sectors. In the past, at first it required a lot of workers to carry out its operations, but along with the development of the industrial revolution, it can now be replaced by the use of sophisticated and easily accessible technological machines.

According to Angela Merkel (2013), Industry 4.0 is a change towards a comprehensive one that combines all aspects of manufacturing from traditional industries with digital technology and the internet. Schlechtendahl and his colleagues also emphasized (2015) that the Industrial Revolution 4.0 will most likely increase the speed of information sharing because every component of the industrial environment is guaranteed to be connected and able to exchange information with one another. However, in the period before the First Industrial Revolution, humans only made various types of goods, offerings and jewelry with the help of human, animal, air, vitality. Utilizing this power to ensure that all goods and services have a certain level of quality, both in terms of the quantity that can be produced, the speed of the production process, as well as the efficacy and effectiveness of the goods.

Lack of human resources to obtain additional energy while maintaining processes such as coalescing or similar, human energy or can be combined with steam power and hydro power. However, steam and wind power also has limitations, which are a matter of location or timing of the energy sources. Only areas with turbid air or windy areas that can produce this power source.

When the First Industrial Revolution started, it ushered in a new era that improved and expanded many aspects of human life. Due to changes on a large and

global scale, which make the production process difficult and time-consuming, all production controls that prioritize efficiency and speed of production are vulnerable to damage. faster, cheaper, and easier to process

The First Industrial Revolution, or better known as Industrial Rotation 1.0, began in 1776 when James Watt first invented a mechanical engine in the form of a steam engine. Although the engine mentioned above was not invented for the first time, James Watt's engine had a higher efficiency when compared to the engine made earlier in 1776. Wood and coal were the materials used in testing this James Watt steam engine. The engine is capable of providing power for 24-hour non-stop ship-to-ship operations to demonstrate the efficacy of this invention

When this steam engine was first introduced, the ruling countries in Europe began to expand their territory or mastery in the kingdoms or sultanates of the African and Asian continents. Apart from this impact, there are other impacts associated with the use of steam engines, such as environmental pollution used to produce various industrial goods. Then, at the start of the second industrial revolution, in 1870, the production of goods was streamlined with the help of assembly lines and sluggish energy use.

Then, after the Industrial Revolution 2.0, came the Industrial Revolution 3.0, which is believed to have taken place in 1989. At this time, the invention of the computer was just beginning, and it began to produce a very different pattern of industrial and manufacturing growth.

Furthermore, the Industrial Revolution 4.0 began, where every manufacturing process has been systematically integrated using various wireless and big data technologies. This enables data processing to be more efficient by integrating all operational processes into one system and enabling the integration of all manufacturing processes.

The 4th Industrial Revolution has provided many changes that occur in the use of digital for the economy and social system which resulted in the development of ways of working and mindset during its development. quoted from A T. Kearney, the origins of the industrial revolution are as follows: 1) The first mechanization jam in 1784 was a turning point for the industry because it led to the development

of mechanization facilities that used liquid and steam energy. Working Tools that Rely on Human and Animal Power are eventually replaced

Advocate is a legal profession that has an obligation to provide legal assistance to the community, as well as legal services and services, which are in court or outside the court.

Advocates based on Law Number 18 of 2003 concerning Advocates in Article 1 number (1) reads "Advocates are people whose profession is providing legal services both inside and outside the court who meet the requirements under the provisions of this Law." Along with the development of technology and the progress of the 4.0 industrial revolution era, law enforcers must be able to provide efficient space to follow these changes. Especially for the advocate profession, they must be able to take advantage of the industrial revolution 4.0 era very well, such as using internet opportunities to create a landing page that is devoted to conducting questions and answers with the public about the problems, they face without having to meet in person so that it can make it easier for clients to interact.

Based on the background above, it is necessary to review further about the Industrial Revolution 4.0 1. To what extent is the Impact of the Industrial Revolution 4.0 on the Legal Profession 2. What are the Expectations of Legal Service Users Against the Industrial Revolution 4.0

B. Research Methodology

1. Approach Method

The approach strategy used is normative juridical, or positivist legislature, which emphasizes that law is synonymous with standards made and disseminated by the organization or individual concerned.

In addition, this view depicts law as a normative system that is inherently unjust, unreliable and disconnected from people's daily lives. For the purpose of analyzing the emergence of the Industrial Revolution 4.0 and the emergence of the Law Enforcement Revolution, the Standard Juridical Approach Method is used.

2. Research Specifications

Research specifications will be applied in an effort to collect information needed to make legal writings. What Peter Mahmud Marzuki usually calls the

right data is a research specification. Data is a study that describes the condition of the goods to be examined through the lens of a legal discipline. In this case, this study aims to provide a complete picture of the evolution of law enforcement developments in the face of revolution 4.0.

3. Types of Data

The data needed to be applied in this research is secondary data. Secondary data in the field of law from a binding point of view can be grouped into:

- A. Primary Legal Materials are authoritative sources of law that have one or more exceptions, are absolute, and are binding. The basic rules of law are basic rules, statutory rules, official record rules, State Gazette explaining rules, treatise rules, judge decision rules, and jurisprudence rules.
- B. Secondary legal material The term "secondary law" also refers to materials that describe basic law, such as books and articles written by jurists or by other legal professionals who have followed different career paths. Data information alone is not able to accurately describe reality; consequently, it is necessary to use secondary legal data to fully describe the existing reality. Therefore the law of secondary materials is used.

4. Data Collection Method

Secondary data is obtained by carrying out an inventory of laws and regulations, official documents, and literature which are then written according to their relevance to the core of the problem to be reviewed as a complete study.

a. Data Presentation Method

The findings of this observation are presented as a narrative text which is presented systematically. Systematic in this context means that all primary data collected will be combined with secondary data collected and connected to each other with the topic of study so as to form a cohesive whole.

b. Data Analysis

By presenting and using data based on existing legal theories (theoretical interpretation), quantitative analysis can then be carried out. Based on the results of the analysis, the assessment presented is made using the conclusions from the observations made .

C. Finding & Discussion

1. The Impact of the 4.0 Industrial Revolution on the Legal Profession

The current era of globalization has been ushered in by more complex technological developments. There is no other way for Indonesia to develop economically other than by studying various strategies that have worked well in other countries. To complement and unify technical advances, it requires their coordination with proper rules.

That in this modern era there is extraordinary speed and technological progress, not only changing technology in the usual way, but we can regard it as a stream of industrial reform progress. Technological developments that are happening at this time have changed people's way of life, starting from the way of thinking, communicating, working, visiting people's lives, passing legal validity.

Any activity related to technology today has had a significant negative impact on the public policy and regulatory framework, particularly in Indonesia, where technology is seen as the main driver of national development. Therefore, it is strongly recommended that the alignment of regulations and policies from government agencies be carried out, including the alignment of laws and regulations.

Especially Advocates and other law firms will really need a lot of legal information engineers as time goes by. Given that IT professionals also have to comply with the law, it's clear they need to be able to prevent potential problems such as dust from using electronic devices or the internet in the digital world. this issue is very important because law enforcement agencies must also be able to provide and assist the public easily and efficiently, the government and legislative institutions as regulators see from different perspectives the development of comprehensive basic data in a wide range.

Starting with thorough background research on several regulations that have been classified according to their ties to each other, professional analysis of various regulatory issues, and finally the current range of products covered by current legislation are all included. To prepare for the upcoming 4.0 Industrial Revolution, Human Resources has developed a professional law that can concentrate on developing soft skills in the workplace, increasing more introspective thinking, and increasing high resilience. In addition, there are certain skills that are very difficult to develop, especially in the legal field. These skills include the ability to think critically, solve problems, communicate effectively, make decisions, work well in teams, be patient and tolerant, and have self-esteem. This is a crucial point that cannot be ignored by legal professionals who are preparing for the Industrial Revolution 4.0 era.

The Negative Impact of the Industrial Revolution 4.0

- 1) Because the production process for digital crime uses technology, it is increasingly important to have a good and strict security system.
- 2) There is a larger salary scale for employees and the supporting equipment they will use because money has to be set aside to buy equipment that can operate properly and to get staff training in the skills to use it.
- 3) There is population expansion, which increases the number of people living in the general population of cities.
- 4) Bad environmental impact, due to the excessive use of machine operations can produce large amounts of waste, air pollution, and other negative things that can damage the environment.

Types of Industrial Revolution 4.0:

The following are nine technologies that will become the main pillars for the incumbent industry to prepare for digitalization in the Industrial Revolution 4.0.

1. Internet of Things or IoT

Internet of Things, also known as IoT, is a technology that first appeared in the development that took place during the Industrial revolution 4.0. IoT which is a concept in which certain objects have the ability to transfer existing data over a network without requiring human interaction.

IoT is a system that utilizes multiple computing platforms, mechanical systems and digital media to create a single point of connectivity. In the Internet of Things system itself has four components consisting of sensor nodes, data connectors, data collection, and face-to-face users.

The following are examples of other applications that utilize IoT, such as Gowes which uses IoT for bike sharing, eFishery which uses IoT to feed fish automatically, Qlue which uses IoT for smart cities, and Hara which uses IoT for food and agriculture.

2. Big Data

Big Data is the second type of technology that drives the Industrial 4.0 revolution. Big Data is a methodology that is often used to visualize large amounts of data, both structured and unstructured.

There are some businesses that are already using big data to help other companies understand where their business is going.

Here are some service providers who are involved in the use of Big Data technology in Indonesia, as follows.

- 1) Sonar Platforms
- 2) Paques Platforms
- 3) Data Warehouse
- 4) Dattabot

3. Augmented Reality

The main technology driving the Industrial revolution 4.0 is Augmented Reality, or more commonly known as AR. AR is a technology that connects a two-dimensional virtual world with a

four-dimensional virtual world that exists in a certain environment, and then executes the virtual world that exists in that environment in real time. Some applications that use AR technology, or augmented reality, include chatbots and software facial recognition, which is more commonly known as facial recognition.

4. Cyber Security

The fourth technology in development that occurred in the industrial revolution 4.0 is Cyber Security which is a form of effort to protect all information held from cyber attacks. Cyber attack itself is all kinds of actions that are intentionally carried out to undermine the confidentiality, integrity, and availability of information.

5. Artificial Intelligence or AI

The fifth technology under development that came with the Industrial Revolution 4.0 is called artificial intelligence or AI. AI is a type of computer or machine technology with almost the same intelligence as humans.

The main feature of this artificial intelligence is its ability to continuously check the data it receives. The more data that is entered and examined, the more accurate the predictions will be.

6. Additive Manufacturing

Additive manufacturing is the sixth development technology that emerged in the Industrial Revolution 4.0. This is another development in manufacturing and is best known for its use of 3D printers. Along with the development of our current technological era and the development of the digital age, every image or digital design that is created can be adjusted in size and shape and used as a physical product.

7. Simulation

The seventh technology that has been developed in the Industrial Revolution 4.0 is simulation. Simulation is usually used in many

situations. Technology simulation used for performance optimization, safety engineering, training, and testing.

8. System Integration

The eighth technology in development accompanying the Industrial Revolution 4.0 is system integration or commonly system integration. It is a set of connections among a number of physical and functional systems. This system is also able to combine an existing subsystem component into a system, thus enabling each function of the existing system to function properly as an integral part of the existing system.

9. Cloud computing

The technology that led to the developments that occurred in the Semantic Period 4.0 was a computer that could become a technology that is currently used as a means of data transfer and applications. With this type of computing, the computer user is granted permission to quickly connect to a virtual server which can be used to configure the server over the network. There are three different cloud computing service delivery models that can be derived from one another.

- 1) SaaS stands for Cloud Software as a Service, which is a platform used for applications that have been provided by cloud infrastructure.
- 2) PaaS which means Cloud Platform as a Service is a feature that utilizes a given platform, making developers who use it only need to focus on developing an application.
- 3) IaaS which means Infrastructure as a Service is a service that is prepared to take advantage of the infrastructure that has been provided, that person can process, store, network, and use resources that are more needed.

2. Expectations of Legal Service Users Against the Industrial Revolution 4.0

The first hope is that people in charge of enforcing the law should provide guidance on monotonous legal issues; however, other issues must

also be integrated into or considered based on the needs of the people using the system. In order to make the use of legal services easier for users,

Second hope, legal experts must provide legal advice in accordance with technological advances. Today, those who use law are more interested in quick and easy communication with legal experts. For example, if a client requests certain information about an ongoing legal issue, they can do so immediately via the medium of the telephone or WhatsApp. "Clients like to have conversations with law enforcement officials who are responsive and interactive,"

The third expectation is compliance with regulations, both local and global, related to the need for clear laws. Because of this, it's safe to assume that every adherent of the law has all the necessary regulations on their smartphone or laptop. Because clients are more interested in a quick response from lawyers when they deal with them or try to conclude a legal agreement, Fourth, application of legal fees. as a result, today's clients prefer to pay for more comprehensive legal services and are less interested in those whose fee ranges have not been set or are less likely to be accepted.

In the case of an alternative fee structure, the scheme in question does not use the scheme to calculate the hourly fee amount and instead stipulates that the scheme must be negotiated or fixed in accordance with the terms of the agreement (billable hours)

Sixth, marketing and business development specialists raise funds for programs to develop businesses and organizations by enabling various forms of contact with clients or potential clients and involving staff members in various training and funding programs.

The goal of technology investment and technology-related investment is to make the work environment more effective and efficient and improve data quality. As part of the "industrial revolution 4.0", a lawyer must have the following skills: "data protection, knowledge of corporate law, tax law, IPR, liability," and "social skills, cognitive skills, creative."

In the world of digital technology, a legal practitioner must be able to effectively brand himself and his institution. For example, Google,

Facebook, Instagram, and other social media are used as examples to show how lawyers should position themselves according to the expectations of the general public.

Marketing Services in the Industrial Revolution 4.0:

There are many ways to market your advocate business, including by:

- 1) Through the website. On the website there is a lot of information about the advocate's office that can be provided to the public.
- 2) Company Profiles. A business profile is one way to introduce an advocate's business.
- 3) Send letters to prospective clients for services sold by the advocate's office.
- 4) Mass media. Advertisements in the mass media cannot be carried out, according to the "internal rules" of the advocate organization. When there is a case, the advocate's office immediately uses the mass media as an advertising medium indirectly by mentioning the case material it is handling.

D. Conclusion

1. All activities related to technology have greatly influenced public policies and regulations. Therefore, law enforcement agencies will increasingly need legal information engineers. Law enforcers must be able and able to provide legal services that are useful and can help the community easily, both the government and other legislative institutions which are referred to as regulators to be able to see from various different perspectives the development of technology in the world of law enforcement. Starting from the completeness of the database on various regulations which are categorized based on their interrelationship with one another, having professional analysis to deal with various regulatory issues, as well as various current legal objects. Negative Impact of Industrial Revolution 4.0 More vulnerable to cyber attacks.
2. Law enforcers must be able to brand themselves and their institutions in developments in the world of digitalization technology. Like, Google, Facebook, Instagram, and other social media as a means for advocates to

introduce themselves with their abilities to the public. technology investment, investment in technology is made to make workflow more effective and efficient, and to be able to manage data even better to face the industrial revolution 4.0.

E. Suggestions

1. Law enforcers must be able to deal with the industrial revolution 4.0 and must be more careful because increasingly advanced technology is becoming more vulnerable, because if law enforcers cannot keep up with IT developments, these secret accesses can be hijacked by cybercrime.
2. Law enforcers must be more active on social media in order to promote their activities on social media. In order to make it easier for the public to find the information needed.

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