Transformasi Organisasi Polri di Era Industri 4.0

Ghalih Widyo Nugroho  
University of Indonesia  
Lieh43@gmail.com

Chairul Muriman Setyabudi  
University of Indonesia

Muhammad Erza Aminanto  
University of Indonesia

Abstract  
Industry 4.0 is a term that is based on the idea of the fourth industrial revolution related to the rapid development of technology. This industrial revolution not only has positive impacts but also negative impacts. One of the negative impacts is the development of various forms of crime. The such condition provides new challenges for the police to make organizational changes and improve the quality and capability of their human resources to be able to face all the dynamics that develop in the future. The study aims to analyze the readiness of the human resources of the Indonesian National Police (INP) to face the 4.0 era and its transformation efforts in the 4.0 era. The research employs the qualitative approach and descriptive-analytic method. Data is gathered through library research. The study results show that INP human resources are still not ready to face the 4.0 era, so the INP Chief brings a transformation program into four forms. One of them is to conduct organizational transformation through institutional structuring efforts, increase the quantity and quality of INP's human resources, and implement technological developments in carrying out their duties and functions accompanied by efforts to provide and fulfill facilities and infrastructure needed by INP.

Keywords: industry 4.0, Polri, transformation

INTRODUCTION

Lately, we often hear the term "industrial revolution 4.0." However, there are still many people who do not understand what it means and the changes and impacts that will occur in our lives due to the industrial revolution 4.0. The Chancellor of Germany, (Abdullah, 2019) said that the industrial revolution 4.0 is a comprehensive transformation of the overall aspects of production in the industry through the merger of digital technology and the internet with conventional industry. Then (Heri, 2019) argues that the notion of the industrial revolution emphasizes the element of the speed of information availability, namely the industrial environment where all entities are always connected and able to share information (Akbar, 2020).

Information technology has become a base for human life. Everything can be borderless with the unlimited use of computing power and data due to the impact or influence of the massive development of the Internet and digital technology as a driving factor for the movement and connectivity of humans and machines. This era will also disrupt various human activities, including HR (Human Resources) problems which are one of the important elements in the organization because HR has an important role in determining the direction and progress of an organization (Tini Utami, 2021).

This transformation of information technology will have an impact on organizational change, especially in the organization itself, HR management processes, and also the level of crime that is increasingly modern and sophisticated. Such a change then requires human resources in each organization to improve their abilities and competencies in supporting performance so that later it will greatly affect the implementation of their duties. The development of technology presents increasingly sophisticated technology that makes every individual required to be able to explore all the potential of their human resources. This is necessary to be able to support organizational performance so that later it will greatly affect
the implementation of tasks. Even the system of facilities and infrastructure in the organization also continues to develop and continue to be refined over time so that the organization can develop by existing human resources. In other words, the readiness of these human resources has become one of the important factors in welcoming the industrial era 4.0.

One of the parties that must adapt to the presence of the industrial revolution 4.0 is the police, including the Indonesian National Police or Polri. Polri is an organization or institution formed by the government that is appointed as the maintainer of public security and order, and law enforcement and also becomes a protector, admirer, and servant of the community as mentioned in Law No. 2 of 2002 concerning the National Police of the Republic of Indonesia. The National Police need to adapt and be able to respond quickly to the impact of the development of industrial revolution 4.0 because the National Police must be able to guarantee the stability of security in the era of the industrial revolution to realize the sustainability of national development in Indonesia. This is mainly related to the ability to respond to social phenomena that encourage various forms of crime so that then the challenge of the National Police today is to be able to create human resources that go towards digitalization and can utilize information technology to produce a comprehensive strategy in responding to challenges in the era of the industrial revolution 4.0 (Apriliana, 2019).

Several published literary sources have also revealed similar concerns. One of them is the writing Retno Mawarin Sukmariningsih (Mawarin, 2013) entitled *Future Prospects of the National Police in Facing Future Challenges*. Sukmariningsih revealed about future of the National Police, which must face various increasingly complex challenges. The sharpness of the National Police in seeing the development of police challenges in the field of law enforcement and in capturing various aspirations of the community related to police duties is a must. Such sensitivity is more projected on increased alertness and immediate responsiveness through various effective and proactive anticipatory efforts. In addition, another challenge faced by the police is related to how expectations the Indonesian people will improve the performance and professionalism of the Polri institution from time to time. This is a challenge for the National Police to prove its role as an instrument in maintaining public security and order. (Wahyurudhanto, 2018).

To answer these increasingly complex challenges, the National Police is required to carry out transformation, namely an organizational change that can accommodate various challenges that arise today. As research (Tini Utami, 2021), The policy of transforming the police to carry out public security functions can be said to be a very adaptive policy in responding to changing times. The transformation policies that can be carried out consist of organizational transformation, operations transformation, public service transformation, and supervision transformation. These four forms of police organizational transformation are basically needed by the National Police, especially in the current digital transition period. This transformation effort can be carried out considering that the National Police has internal and external strength. Transformative efforts and strengthening police infrastructure are expected to support the duties and functions of the National Police in securing the community (Jati, 2019).

To realize this transformation organization is certainly not as easy as turning the palm of the hand. This means that it takes hard work and support from all parties, both internal and external parties including a lot of budgetary support. Therefore, on this occasion, the author is interested in conducting research and writing about the efforts of the National Police in implementing their organizational transformation in the era of the industrial revolution 4.0 which is full of complex challenges. Based on the explanation of the background above, the purpose of this study is to analyze (i) which is a challenge for law enforcement and policing in the 4.0 era; (ii) how the preparation of The National Police's human resources in transforming in era 4.0; and (iii) what only efforts must be made by the National Police to realize the transformation of the National Police in the 4.0 era.

**Literature Review**

**Industrial Revolution 4.0**

The term industrial revolution is defined as changes that occur in humans in carrying out their production processes. This industrial revolution first appeared in the 1750s,
Commonly referred to as the industrial revolution 1.0. At that time there were massive changes in agriculture, manufacturing, mining, transportation, and technology and there was a profound impact on the social, economic, and cultural conditions of the world. This first-generation industrial revolution gave birth to history when human and animal power was replaced by the presence of machines, and one of them was the existence of steam engines invented in the 18th century (Akbar, 2020; Annisa, 2001).

The industrial revolution 2.0 is characterized by the use of electricity to facilitate and accelerate the production, distribution, and trade processes. The discovery prompted the emergence of telephones, cars, and airplanes that changed the face of the world significantly. Meanwhile, the industrial revolution 3.0 introduced information technology (IT) and computerized systems that can support production automation that changes the communication patterns of contemporary society. Business practices inevitably change with technology that makes factories and industrial machines prefer machines over humans (Annisa, 2001).

The industrial revolution 4.0 that emerged in the 2000s until now is the era of the application of modern technology, including fiber technology and integrated network systems, which work in every economic activity, from production to consumption. Industry 4.0 is the integration of Cyber-Physical Systems (CPS) and the internet of Things and Services (IoT and IoS) into industrial processes that include manufacturing and logistics and other processes. CPS is a technology to combine the real world with the virtual world. This merger can be realized through the integration between physical and computational processes (embedded computers and networking technologies). Industry 4.0 is a term to refer to a set of technology and value chain organizations in the form of smart factories, CPS, IoT, and IoS. The smart factory is a modular factory with CPS technology that monitors the physical process of production which then displays it virtually and decentralizes decision-making (Jaladriyanta, 2020). Through IoT, CPS can communicate with each other and work together in real time with humans. IoS is all service applications that can be utilized by every owner of interests both internally and between organizations (Sang & Li, 2019).

There are four main principles in industrial design 4.0. First is interconnection which is the ability of machines, sensor devices, and people to connect and communicate with each other through the internet of things (IoT), this principle requires an engagement between security and standards. The second principle is information transparency, which is the ability of information systems to build virtual copies of the physical world by enriching digital models through sensor data including data and information provision (Yuswanto et al., n.d.). The third principle is technical assistance which includes the ability of the assistance system to support humans by conducting conscious incorporation and evaluation of information aimed at making the right decisions and solving urgent problems in a short time. The fourth principle is decentralized decisions, which is the ability of virtual physical systems to make their own decisions and execute tasks as effectively as possible (Abdullah, 2019).

**Transformation**

Transformation comes from the English word "transform" which means to control a form from one form to another. According to Josef Prijotomo, the word transformation in Indonesian can be equated with the word redirection, which means the change from the original object to the resulting object. The changes that occur can be categorized into two types. First, changes that no longer show similarities or similarities to the object of origin. Second, the change in which the resulting object still shows clues to the object of origin (Ghufron, 2018).

Then (Ihwan & Arifin, 2019) said that a transformation is an act of change made to existing elements or rules (codes). This is done by means of deviation, regrouping, assembly/re-collection, which refers to authenticity and is expected to produce a new meaning. These methods are able to maintain their authenticity in generating new meanings and forms. Meanwhile, according to , transformation is a process of change gradually so that it reaches the ultimate stage. Here the change is carried out by responding to the
influence of external and internal elements that will direct the change of the previously known form through the process of doubling repeatedly or multiplying (Ghufron, 2018).

**Policing in Era 4.0 and Smart Societies**

With the emergence of the industrial revolution 4.0 era as it is today, of course, various aspects of human life are required to make adjustments. Therefore, there is now what is referred to as policing era 4.0 or the era of AI (Artificial intelligence) and Smart Societies (Smart Society). This leads to the concept of the presence of a smart community in policing (in carrying out police duties) in the 4.0 era as it is today. This is as stated (LeGates & Stout, 2020), where the emergence of Artificial Intelligence (AI), along with the deployment of Internet of Things (IoT) devices, creates an increasingly interconnected intelligent society (Lai et al., 2020). Connectivity coverage, a huge increase in the volume of smart devices and evolving interfaces between humans and technology, along with the expansion of Big Data and the volumetric metadata generated and structured, are driving cultural change towards Industry 4.0. As a result, many modern technologies are beginning to be present in human life and provide many benefits in these areas, including improving their policing models has become a priority for governments (Indarti, 2019).

In this regard, as patterns of crime, policy and technology change in line with an intelligent society, law enforcement agencies around the world are required to formulate a future-ready legislative framework. They are required to rethink crime prevention efforts, investigative decision-making and predictive policing, prevent or mitigate potential cyberattack devastation, and ensure the security of operational capabilities, ie. This then leads to the prospect of policing with the concept of Command, Control, Communications and Intelligence (C3I) (El Asmar et al., 2012). Therefore, it is not surprising that today's modern police force is required to be able to apply this kind of policing concept, especially as part of today's intelligent society (Afriani et al., 2022).

**Police Resilience**

In addition to the ability to adapt to changing situations and conditions, as part of a smart society, police organizations are also expected to have strong resilience to deal with these changes. Without strong resilience, the police will not be able to survive in this era of uncertainty. In this regard, resilience, endurance, as well as psychological capital are considered important capacities for police officers to cope with and adapt to challenging and potentially traumatic stressful situations (Apriliana, 2019). By having good resilience, it can be expected that the police organization will be ready to face various challenges, including in its discussion of resilience to the presence of the industrial revolution 4.0 era that cannot be stopped.

Resilience, endurance, and psychological capital are considered important capacities for police officers to cope with and adapt to challenging and potentially traumatic stressful situations. Resilience is generally seen as the capacity to "bounce back" after adversity, but also to develop their capacity to face future events. On the other hand, endurance is part of an individual's interaction with others in overcoming problems. This is a psychological skill for police officers who give positive results after experiencing stress and trauma. While psychological capital is a trait consisting of four aspects: self-efficacy, optimism, hope, and finally resilience that is, when hit by problems and difficulties, maintain and bounce back and even go beyond achieving success. Here, psychological capital predicts job satisfaction, organizational commitment, and psychological well-being (Murdiastuti et al., 2021).

**METHOD**

This study the author used qualitative methods. Qualitative research methods are methods by conducting intensive research activities, so that researchers will participate in a relatively long period in the field, record carefully about phenomena in the field, conduct reflective analysis of various documents produced, and make detailed research reports. The nature of this study is descriptive analysis because this study is intended to provide as
accurate data as possible about the problems discussed and analyze the data obtained to answer the problems. The data in this study was collected using literature studies, namely data collection techniques carried out by conducting study studies on books, literature, notes and reports that have to do with the problem solved (Purwoko & Yola, 2022).

Data analysis carried out in this thesis research using qualitative data. Qualitative data analysis means deciphering data in a quality manner in the form of sentences that are orderly, direct, logical, non-overlapping and effective so as to facilitate the interpretation of data and understanding the results of the analysis. Where the implementation of data analysis is divided into three stages. First, data reduction, which at this stage, the data that has been collected is simplified and classified, then eliminates unnecessary or unrelated data related to the research topic. Second, the presentation of data, which in this stage, the data that has been simplified and grouped is then presented in the form of a description to produce meaningful information while facilitating understanding and drawing conclusions related to the topic under study. Third, drawing conclusions, where the data that has been described are then drawn conclusions as an answer to the problems posed in this study.

RESULTS AND DISCUSSION

Challenges of Law Enforcement and Policing Era 4.0

As previously mentioned, the entry of human life in the era of the industrial revolution 4.0 has provided many changes in human life, including the police. This is closely related to the duties of the police, especially the National Police in Indonesia, as an organization or institution formed by the government that is appointed as the custodian of kamtibmas, law enforcement and also as a protector of community servants. As mentioned in Law No. 2 of 2002 concerning the National Police of the Republic of Indonesia. The most important challenge of the National Police in its duties as a law enforcement and policing implementer in the 4.0 era is basically related to its ability to adapt to the changes of this era. One of them is the one that is related to the ability of its human resources.

In this case, it is important for the National Police to adapt and be able to respond quickly to the impact of the development of the Industrial Revolution 4.0. Because the National Police is tasked with ensuring the stability of Kamtibmas in the era of the industrial revolution in order to realize the sustainability of national development in Indonesia. This is mainly related to the ability to respond to social phenomena that drive different forms of crime. So then the challenge of the National Police today is to be able to create human resources (HR) that go towards digitalization and can utilize information technology so as to produce a comprehensive strategy in responding to the challenges of the industrial revolution era 4.0 (Akbar, 2020).

To answer these challenges, the Chief of Police realized it in a work program with the tagline "Transformation Towards a Precise National Police" prioritizing transformation into 4 (four) forms, one of which is organizational transformation. Organizational transformation is carried out so that in the future the National Police will be able to face the challenges of increasingly complex tasks, so that the National Police will be able to provide services to the community quickly, transparently and accountably. The organizational transformation that will be carried out by the Chief of Police is the first institutional arrangement, one of which is the Polsek as a basis for resolution by prioritizing the activities of kamtibmas, so that there are certain police stations that are no longer charged with investigative duties. Second, Making Police Human Resources Superior In The Police 4.0 Era which includes increasing the quantity and quality of Police Human Resources, improving performance-based career management systems, expanding educational cooperation at home and abroad, humanist management of superior human resources. The three Changes in Modern Police Technology (Police 4.0) which include the unification of an integrated Police information system, fulfillment of Polri facilities and
Readiness of Police Human Resources in Transforming in the 4.0 Era

The industrial revolution 4.0 caused by the development of modern technology, especially the rapid development of computer technology, allows the development of computer networks to provide a wider platform. Technology trends from time to time are always updated. This then leads to the emergence of a new situation, where companies that want to survive must be able to adjust to the current situation, especially in relation to the use and utilization of the technology itself, including the National Police. As an institution tasked with maintaining order and national security, the National Police is also required to be able to adapt to the development of the industrial revolution 4.0. Because the development of technology in this era, not only has a positive impact, but also has a negative impact on the lives of the Indonesian people.

Where this 4.0 era has given rise to new types and forms of crime that are different from previous conventional crimes. Nowadays crimes have been committed by taking advantage of and using the opportunities provided by modern instruments with sophisticated equipment. Unlike traditional types of crime, these crimes have a new dimension with forms such as carding, data falsification, the spread of viruses to deliberately damage or hijack data, cyber-bullying, online prostitution and cyber terrorism (Jati, 2019). What's worse is how the crime is a form of transnational crime that has no regard for national boundaries. The emergence of these new types and forms of crime requires the National Police to respond with adequate law enforcement capabilities. Thus, the readiness of police human resources to face the industrial revolution 4.0 is very important so that they can always maintain the security and order of the country and society.

(Castells, 1996) stated that there are six challenges that police organizations must be able to solve in the face of industry 4.0. The first is the ability to provide services through the complete digital world. The second is about integrating safeguards with the private sector and civil society. Third, provide a faster response to changes in every line of life. Fourth, the ability to utilize cyber-physical systems. Fifth is the use of information and knowledge that is not yet known about what can be successful in reducing crime and managing police services. Finally, in terms of implementing Transparency to the maximum (Indarti, 2019).

To be able to face these challenges, the National Police needs to improve the competence and professionalism of its members. The professionalism of police officers in enforcement is related to the implementation of their duties in the fight against crime and disorderly events that occur in various regions. According to (Marshall & Garrick, 2011), Professionalism is related to "understanding or believing that the attitudes and actions of the apparatus in carrying out government activities and services are always based on science and the values of the apparatus profession that prioritizes the public interest." Professionalism, one of which is characterized by the intellectual or theoretical as well as technical competence of a person in carrying out his professional duties (Wahyurudhanto, 2018). According to (Keo et al., 2021), competence is related to "the abilities and characteristics of an employee in the form of knowledge, skills, and behavioral attitudes needed in carrying out the duties of his position, so that the employee can carry out his duties professionally, effectively and efficiently.

On the other hand, The National Police's human resources are still considered unprepared to face the challenges that arise due to the industrial revolution 4.0. This can be seen from the lack of members with inadequate levels of education and skills. This certainly makes the current handling and solving of crimes still not optimal. Then there are police
officers, especially young police officers or Y-generation police officers, who abuse the internet and social media at their disposal. Some conditions suggest that they tend to use the internet for negativity and deviate from police norms. This happens because they consider that what they do keeps up with the times and tends to forget the norms of policing, the culture of hierarchy in rank, regulations, principles of esprit de corps, and primary responsibilities as protectors, admirers, and servants of the community. (Ihwan & Arifin, 2019).

This condition arises on the basis of the assumption by Gen Y that the situation they face tends to be dull, rigid, full of rules, causing a reaction of resistance in some Gen Y individuals in the police force. This means that young police officers or those with generation Y, who should be the superior generation of police hope, actually show the opposite attitude. In this regard, professionalism and competence are the most important things to be developed in the management of human resources to face various developments in crime that are increasingly modern and sophisticated. In addition, the National Police also needs a special organizational work strategy and system to change their mindset to become a superior generation in the police force. (Abdullah, 2019).

**Efforts that must be made by the National Police to Realize the Transformation of the National Police in the 4.0 Era**

Previously, it was said that the organizational transformation carried out in realizing a precise Polri in the 4.0 era includes: 1) Institutional Arrangement, one of which is the Polsek as a basis for resolution by prioritizing kamtibmas activities, so that there are certain police stations that are no longer charged with investigative duties; 2) Making Police Human Resources Superior In The Police Era 4.0 which includes increasing the quantity and quality of Police Human Resources, improving performance-based career management systems, expanding educational cooperation at home and abroad, humanist management of superior human resources; 3) Changes in Modern Police Technology (Police 4.0) which include the unification of an integrated Police information system, the fulfillment of Polri facilities and infrastructure and making the Police Research Center a center for police technology research.

Based on the transformation program carried out by the Chief of Police, improving institutional arrangements is one of the efforts that must be carried out by the National Police. Institutional is basically a form of social group run by society. Institutional comes from the word institution, which means rules in an organization or community group to help its members to be able to interact with each other to achieve the desired goals. (Jamaludin, 2015) also explains that institutions are a set of ideal norms and conditions that are reproduced less perfectly through habits in each subsequent generation of individuals. The term institution can also be interpreted as an order or set of rules in a group of societies, including norms, devices, equipment and behaviors that are created and will become common values in a certain period to serve the achievement of the collective goals of the community itself. These rules were created to facilitate or facilitate coordination, so that each member of society can work together with each other to achieve the desired common goal (Apriliana, 2019). Thus institutions act as stimulus and clues to individual behavior (Budiharsana & Heywood, 2017). It is not surprising that in the context of the National Police, the institution is arranged in stages from the central level to the regional level.

The central-level Polri organization is called the Headquarters of the National Police of the Republic of Indonesia (Mabes Polri); while the regional level Polri organization is called the Regional Indonesian National Police (Polda) at the provincial level, the National Police of the Republic of Indonesia Resort (Polres) at the district / city level, and the National Police of the Republic of Indonesia Sector (Polsek) in the subdistrict area. According to the transformation program of the Chief of Police, polsek will be used as a basis for resolution by prioritizing community activities so that the National Police can get closer to the community. Thus, handling problems in the Polsek will prioritize mediational handling methods, rather than law enforcement ones. In this method, customary customs that already live in society can be one of the solutions to conflicts, so as to better accommodate the so-called "sense of justice" in society. Thus,
there are certain police departments that are no longer charged with investigative duties. The determination of polsek as the basis for the resolution is because polsek is the closest unit to the community, so by prioritizing kamtibmas activities and more humanist handling can allow the Polri to establish good cooperative relations with the community, because at this level of the Police, the police can come into direct contact with the community (Hidayat, 2019).

Moreover, the community policing program carried out by the previous Polri also requires police officers to adjust their respective characteristics to the area where the police are located based on the socio-cultural conditions of the community without neglecting applicable laws. Then, in the community policing program, the exchange or sharing of information from the community is urgently needed by the National Police to find out the current condition of the community and the events that occur in the community so that they can form an appropriate crime prevention strategy and in accordance with the conditions and events that have occurred. In addition, the sharing of information is also important to find and establish the identity of criminal suspects in a community environment, because it is the community that knows the environment and the people around it best. Thus, efforts to make polsek as a basis for resolution are very important and needed to adjust to the development of community life and get closer to the community by prioritizing partnerships with the community in order to solve social problems, which in the end will actively encourage citizen participation at all stages of the process of solving environmental problems. (Sativa, 2021).

Then in an effort to transform in the field of human resources, the National Police can carry out career development that avoids the arbitrariness of HR managers and the uncertainty and apathy of employees towards their careers. Because good human resource management through career development will allow recognition and development of the professional capacity of each police officer individually. This can then have an impact on the increasing number of police personnel with good and professional competence. This is important, especially considering that the current security situation demands high performance for the police and the individuals working on it (Oktaviani & Hertati, 2019).

Research conducted by (Katherin & Bernarto, 2021) shows that the career development strategies of Polri personnel that have been implemented within the organization include through various training, coaching and development, as well as awards for outstanding personnel. The results of the development of Polri personnel that have been implemented include the following: 1) Through training programs, seminars and workshops to improve the work ability of Polri personnel by mastering various skills and techniques for implementing certain work; 2) Improvement of theoretical, conceptual, and moral abilities that can be known from the results of competency tests; 3) Increased motivation and performance of Polri members as a result of the Police Chief's coaching and career development program; 4) Placement of positions in accordance with the competence of the personnel of the Chief of Police.

In relation to these career development strategies, to be able to answer the needs and challenges of today's global world, (Sevilla & P, 2017) proposes that there are at least two aspects of the police education system that can be used as study material and explored to change into a new training paradigm so that it can lead to competent and professional police. The first relates to the aspect of learning methods, that the teacher must remain a person worthy of being a role model. Exemplary is intended as an ideal figure in the spirit of gaining knowledge and skills, the quality of knowledge, the quality of normative ethical behavior and as an appropriate figure to be used as an example of superior quality human resources. Secondly, the management aspect of the educational institution. This concerns the management of the educational institution itself, as experienced so far where previously the school only moved and operated independently.

In addition to improving education, training and coaching, building the ability to collaborate or cooperate is a very important aspect for the police to combat welfare today. In this regard, the WEF also said that to face the challenges of the industrial revolution 4.0, organizations need to realize that "human capital investment" is an organizational asset and not an organizational burden. Where the most important strategy for developing human resources in the future is the development of intellectual and social skills. This is embraced.
because it allows HR to work together with diverse skills and expertise so that they are able to quickly interpret the information presented through a "human-machine interface".

Moreover, the forms and types of crimes that have developed along with globalization and the development of information and communication technology, tend to be carried out with a wider coverage area than conventional crimes before, which requires law enforcement officials to be able to cooperate with other actors, both the public, the government, and the private sector. For example, with the development of technology and easy access to cyberspace, it makes confusing news more and more reported, hoaxes, non-insulting words, insults and so on are easily spread, and makes the atmosphere less conducive because of the tension that is caused. Therefore, it requires the cooperation of the National Police with other institutions and parties to be able to fight cybercrime.

In this regard, the National Police has sought to utilize various technologies into the implementation of police duties and functions, including to connect and cooperate with other institutions. Here the police use three approaches in utilizing advances in information technology to make it easier for officers to carry out police duties. First is a region- or area-based approach. The second is an interest- or function-based approach or of activity. While the latter is impact based issues. Incoming information is structured and systematically constructed, and interconnected (Cahyaningsih et al., 2021).

In fighting crime in the digital age, especially related to cybercrime, the National Police cooperates with various government agencies and other parties, such as and the Minister of Communication and Information, website owners, and so on. Technology also makes it easier for the National Police to carry out internal coordination between security forces, increase human resource capacity and also communicate data-based with work units outside the National Police in the country (Kemenkominfo, Kemenkumham, BSSN, BIN, SIMAN TEAM, etc.) and coordinate with NGOs and anti-Hoax Communities (Bantax, Turn Back Hoax, Mafindo, and others). This is because strengthening technology in line with the demands of the times on the National Police will result in strengthening homeland security, which means opening up information exchanges with security agencies from other countries in the framework of creating a safe and comfortable world to live in. This is done to keep negative things spread to the community and want the public to be accurately informed. Because the events that occur in society are mostly dominated by perceptions arising from news on social media (Čirović & Pamučar, 2013).

Not only that, to combat social crimes and support the implementation of other police duties and functions, the National Police also seeks to build relationships with foreign law enforcement institutions and international institutions, this also needs to be considered because the current pattern of crime is no longer limited to one country but involves several countries. For example, transnational crime countermeasures that require intensive interstate police collaboration, or countermeasures through digital media that require specific skills in technology. So that police officers are required to have language skills and introduction to police technology so that later they can follow the dynamics of society (Hidayat, 2019).

Thus, cooperation with foreign law enforcement agencies and international agencies, especially in the field of training education, can help the National Police exchange experiences and share best practices of concrete actions from the out-of-state police forces with which it cooperates. Because usually with cooperation with foreign law enforcement institutions and international institutions in the field of education will allow training by inviting experts and instructors from international organizations and the State Police outside, which is very useful in increasing the knowledge, ability, and competence of the National Police in facing the increasingly complex task and work load in this 4.0 era. (Heri, 2019).

Finally, efforts that must be made to realize the transformation of the National Police in Era 4.0 are transformations in the use and use of technology. Because the development of crime that exists today tends to use and have a digital footprint, every function of the police must utilize digital technology as a means of excellent service to the community. In the transformation program carried out by the Chief of Police, one of the
efforts that must be made is to form an integrated Police information system. Because the service information system by the police is the most important component to achieve convenience for the public to find out important information related to the police and for people who want to manage at the police station. Where management requires the availability of integrated data as a source of information that can be accessed in real time (Heri, 2019).

Therefore, the National Police can build a back office as a center for data, communication, coordination, control, supervision and information; application as a form of model service programs that can be installed in various models and systems both for data collection, search, providing information, response speed and so on; and the network as an electronic network and manually must continue to be built as the basic foundation for the strength of these service systems. So that later with the construction of an integrated information system, the National Police can easily present and process the information and data it has easily, completely, accurately, and in real time (Meghana et al., 2017).

Furthermore, with the existence of industry 4.0, technology today gives rise to what is called big data, including in the police system. Big Data is a large set of data both structured, semi-, and unstructured so that it cannot be processed using ordinary relational database tools (Pramana et al., 2020). Big data in the police system arises from the police information system itself which creates an increasingly large amount of data during the transaction process. This data shows the characteristics of Big Data due to the volume and speed of accumulation. Decision makers are faced with such a phenomenon as a data explosion and suffering from an excess of information.

Because ideally all organizational data should be available for data mining to improve event logging, report to regulators, and enforce internal controls. To illustrate, new analytical technologies facilitated by emerging data processing methods, can be used. Moreover, data itself is one of the most important and strategic assets in policing. Thus, the Big Data mining process in the operational implementation of the duties and functions of the National Police can ensure efficiency, reduce waste, provide guarantees for separation of duties, and find asset misappropriation. This means that the construction of the back office as a data center must be supported by big data to be able to work integrated synergies, which will later make it easier for the police to create an analysis system for both anticipation predictions and solutions conceptually and even theoretically to its operation (Police Education and Training Institute, 2021). This link between big data can not only improve the accuracy of predictive policing, but also can create data integration into a single data system, namely 'Satu Data Indonesia'.

Here, what is no less important to do in supporting the realization of the Polri organization in the 4.0 era is the provision and fulfillment of Polri facilities and infrastructure, both for the construction of an integrated information system and to support the implementation of other Police duties and functions. Because without adequate facilities and infrastructure, the implementation of the duties and functions of the National Police will not be achieved in accordance with the expected goals. Therefore, it is important for the National Police to fulfill all the facilities and infrastructure needed in carrying out their duties and functions.

From the various explanations made above, it can be said that in the face of various challenges in the current 4.0 era, the National Police has made various efforts to transform its organization for the better. This basically indicates that the National Police is able to survive in this uncertain situation. Its validity can be shown by how even though the times are constantly changing, the National Police is constantly making various efforts to deal with changing situations and conditions. The presence of technological developments in the 4.0 era is considered a challenging stressful situation due to its uncertainty. Then with the various efforts made, as mentioned earlier, this indicates that the National Police is able to bounce back from existing problems and build themselves to build a better future (Meliala, 2017).

In addition, the pattern of self-development in the field of organizations, especially those related to the development of modern technology today, basically the National Police has made many efforts as described earlier. Polri has utilized various technologies in the implementation of police duties and functions, including to connect and cooperate with other
institutions. Polri has also strengthened technology in its organization to strengthen homeland security. For example, with the construction of a back office as a Polri data center, the development of Big Data, to the provision and fulfillment of Polri facilities and infrastructure. Even the National Police has also acknowledged how "human capital investment" is an important key in facing the challenges of the 4.0 era. Such efforts indicate that currently the police have realized its position as a smart society that must be able to utilize all existing technology for the benefit of state security. Its ability to use these various technologies also indicates that, currently, the National Police has tried its best to transform itself into an organization that is ready to face the various challenges of the 4.0 era.

CONCLUSION

Based on the above discussion, it can be concluded that:
1. In this era of the industrial revolution 4.0, information technology has become a base in human life. The development of technology presents increasingly sophisticated technology so that every individual is required to be able to explore all the potential of their human resources to be able to support their performance.
2. Police human resources are still not ready to face technological developments in the era of revolution 4.0.

Based on the above conclusions, the author recommends the National Police to:
1. Police personnel must be aware of and know the development of technology in the era of the industrial revolution 4.0, so that they can adapt to these developments.
2. Polri must answer the challenges posed by technological developments in the era of the industrial revolution 4.0, by preparing its personnel with various education and training

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