Design and Application of E-Policing: Police Practice Management Through the use of Information Technology in Indonesia

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As one of the state agencies with a high workload, the police are required to be competent and professional in carrying out their duties in order to maintain public security. Regarding the implementation of police duties, many aspects of information technology has been adopted through e-policing to maintain order and facilitate the identification of violations and criminality. This study seeks to analyse the management and technical aspects of e-policing development in Indonesia. This study was conducted using a qualitative method, with a literature review and observation approach to e-policing systems in Indonesia. The study results show that e-policing, specifically in Indonesia, is useful in the context of organisational management for the effectiveness of community services and tasks. In the technical context, some of the main elements that need to be considered in e-policing are back-office, network, and applications that are adequate and easy to use. The adoption of e-policing is also useful for social and managerial harmonisation in police institutions, where policing can electronically bridge the management and implementation of tasks, as well as the relations with the community.

Key words: *Management, information technology, application, e-policing.*

Introduction

As one of the state agencies with a high workload, in order to maintain public security throughout the day, the police are required to always be competent and professional in carrying out their duties. At present, the implementation of police duties involves many aspects of information technology to maintain order and facilitate identification of violations and criminality. The practice known as E-Policing is electronic policing which can be understood as policing online, so that the relationship between the police and the community can be active

24 hours a day and 7 days a week without the limits of space and time. This enables them to always be able to share information and communicate. This practice has developed widely in police institutions in various countries, including Australia (Chan et al., 2001), the Netherlands (Korteland & Bekkers, 2008), the United Kingdom (Liu & Hu, 2005), and the United States (de Guzman & Jones, 2012). Almost all of the earliest innovations of e-policing were implemented in developed countries. Along with the widespread adoption of information technology today, e-policing is also being applied by police institutions in developing countries (Harianto, 2017; Matlala, 2018; Thoyyib, 2019; Alese et al., 2011; Kun, 2011).

E-policing is a program related to bureaucratic reform and is part of a creative break through to produce innovations and creations in various police service systems including administrative services, security services, safety services, and legal services. Hence, e-policing is to perfect and improve the quality of performance, so that the police can really become a professional, intelligent, moral, and modern figure as life guardian, civilisation builder and humanitarian fighter as well. E-policing in the context of public relations, especially in Indonesia, is not intended to erase manual methods that are still effective and efficient in establishing closeness and friendship between the police and the communities they serve. E-policing can be understood as the implementation of electronic-based police tasks. This means building systems that are integrated, systematic, and mutually supportive, as well harmonious in realising and maintaining security and a sense of security in society between fuctions/sections (Jones et al., 2014; Mollah et al., 2012). E-policing can be said to meet excellent service standards that lead to speed, accuracy, transparency, accountability, and are informative and easily accessible (Chanin & Courts, 2017; Indarti, 2020). Excellent service can be realised through the support of human resources, transformative leaders, IT-based systems, as well as programs that excel in providing services, protection, and upholding the law (Dunleavy et al., 2006). E-Policing can be categorised in the context of leadership, administration, operations, and capacity building for institutions. E-policing can also be technically applied to community and traffic policing patterns by using various platforms that are self-developed or by utilising social media (Dekker et al., 2020; Seve et al., 2005). In this context, this study seeks to analyse the management and technical aspects of e-policing development in Indonesia.

E-Policing: Information Technology Innovation for Police Services

Electronic policing/e-policing is a model of policing in the digital era that seeks to transcend the boundaries of space and time so that various police services can be carried out quickly, precisely, accurately, transparently, and are informative and easily accessible (Djamin & Chryshnanda, 2011). Electronic policing can be an anti-corruption idea program, as part of bureaucratic reform and a creative break through. E-policing produces various programs and innovations as well as creations in policing that can be developed, including administrative services, security services, safety services, legal services, humanitarian services, and

information services that are entirely in accordance with the foundation as guidelines (Sever et al., 2005).

E-policing involves online policing that can support and build a fair bureaucracy and works as an anti-corruption initiative (Kelly, 2013). Excellent police services refer to the service quality elements in public administration, which are fast, precise, accurate, transparent, accountable, informative and easily accessible (Djamin & Chryshnanda, 2011). The digital age encourages lifestyles to adjust to digital culture. In the era of advancement in the field of science and technology, the rapid impact of globalisation is occurring. In addition to the positive aspects, globalisation also has an impact on various social problems relating to public services, security disturbances, or crime, which occur in society. These problems are increasingly complex and increasingly sophisticated, because it is more systematic, professionally organised, and utilises modern technology and equipment, as well as skilled people/professionals. In addition, the demands and challenges will be even greater and the crimes will be increasingly difficult to prevent, track, and prove. In addition, the demands and expectations of the community for excellence regarding the performance of the police in organising policing will increase. Excellent police services can be produced in a fair bureaucracy (Kelly, 2013).

Engineering Elements in E-Policing

In the digital era, the national police must change the mindset and culture set of its policing through e-policing, which can be used as a model for anti-corruption initiatives and bureaucratic reform. In this context, the national police developed the initiative as part of a creative breakthrough by building important elements of e-policing, which consisted of back office, application development and networking models. Broadly speaking, from the perspective of public administration, in the digital era, the state apparatus has time to build a back office system, and develop applications and networks by utilising information technology and big data to provide excellent services that focus on speed, accuracy, transparency, accountability, and are informative and easily accessible (Höchtl et al., 2016; Meijer, 2011). Beyond management, e-policing development also involves technical aspects, which, in ths context, is information management (Yin, 2006). In various adoption models, there are 3 main elements in Indonesian e-policing that need to be considered in adopting e-policing, namely back-office, application and network.

a. Back office
In the back office, there is a system of (1) map/mapping situation, (2) job description and job analysis, (3) operating system: routine, special and contingency, (4) HR administration system, planning, budget, (5) Reporting, (6) Command and control.

The back office model is a centre for coordination, communication and information. The command and control centre (*Kodal*) contain an application system works to: a. supervise and monitor, b. structure command, c. perform operational analysis so that it will be fast and easy in providing responses. The coordination function contains a network application system both internally and externally as soft power.

The communication function contains a communication application system directly through the media from both internal to external, and from external to internal. Information contains the application system, which comprises: a. filling and recording (recording and data collection system), b. searching, c. filtering (categorisation/grouping), d. rating, e. timing and emergency, f. early warning, g. contingencies (natural factors, infrastructure damage factors and human factors that have wide impact), and h. division of tasks by region.

b. Application

Application is a model of service programs that can be installed in various systems for data collection, searching, providing information, responding, and so on.

c. Network

Networks are electronically or manually connected nodes, which continue to be built as a basic foundation for the strength of these service systems. All of them are built so that the Internet of Things (IoT) and Artificial Intelligence (AI) is able to realise the big data and one gate service system with excellent service standards. When building various standard AI application systems, it is able to recognise or input analysing data so that it can show its sophisticated products in the form of graphical info, statistical info and other virtual info in real time.

Managerial Benefits of E-Policing

In Indonesia, public services are served by various institutions. The core of public service is to provide transparent and fast public services, which is now usually updated by online systems. To change the service paradigm to something that is practical and online, the police need a fair bureaucratic model that can support the administration of policing and is able to produce products and benefits by building e-policing. Managerially, e-policing is useful at various levels and for various needs.

First, as a state institution, e-policing when adopted by the police institution brings benefits to the nation and state, the welfare of society in general, and the progress of police institutions, specifically.

Furthermore, these benefits can then be adjusted to the police bureaucracy system where the adoption of e-policing can be integrated with the police model on a regional basis, which takes

into consideration local interests and specific impact of ideology, politics, economy, social, culture, security and safety. This makes e-policing flexible in its uses, objectives, and needs of each organisation at a particular police level.

In addition, the adoption of managerial e-policing is in accordance with the main vision of the police. In terms of the main functions and duties of the police as an institution, a function, and as individuals, the direction for the National Police, at least for 2020, is to be a professional, creative and innovative institution. The emphasis on morality is based on awareness, responsibility and discipline.

This makes the adoption of e-policing useful to adapt to models of coaching in the Indonesian police environment for leadership, administration, operational and capacity building. In the field of public service management which is a mirror of the civilisation of a nation, e-policing can be an indicator of the progress of police institutions. Public service is a reflection of the professionalism of the state apparatus. The excellent service in public sector management, such as in the police institution, will affect the performance of organisation and community satisfaction. Public services in e-policing can be categorised in several sections:

(a) Administrative services are services provided to the public to be able to utilise the administration both for licensing, study, supervision, accountability, and even to obtain facilities from both the government and the business sector

(b) Legal services are part of life in the nation and state. This legal service will provide guarantees for various things that can be full of uncertainties, as well as civilised solutions capable of preventing irregularities. It also educates the lives under the nation's law and its enforcement is carried out to protect the public, victims, as well as justice seekers.

(c) Security and safety services: these two interrelated things will be related to operational systems in the life of the nation and state. Security and safety are guarantees given to predict, anticipate and provide solutions in normal and contingent conditions. Public services through information technology in the digital age are a source of strength for institutions to offer quality services to the public. Here, the institution offers speed, accuracy, and ease of access, which have become the standard of excellence in public service.

(d) Humanitarian services are social services that ensure the orderliness and harmony in social life. Humanitarian services are a prime standard for how everything can be done quickly, precisely, accurately, transparently, accountably, informally, and easily.

Harmonisation of the Social and Technological Environment in E-Policing

In the digital age, various social life activities are connected electronically. The production of goods is mostly done by machines or robotic systems. Businesses and trading systems in

markets are managed online. There is the electronic banking and financial management system. The public transport operation system is run through uber, grab and online systems. The health system also detects and treats up to surgery and transplantation using a laser system and three-dimensional cameras for monitoring and the healing processes. Increasingly sophisticated information and communication systems make a world without space and time. Legally, control and enforcement systems can be enforced through sensor systems or through surveillance cameras.

Cyber officers are required to work smart and be able to provide excellent solutions. Connected application systems can be applied and empowered to provide excellent police services. Digital map systems, data systems from humans, motor vehicles, roads, natural situations and social conditions are interconnected with an integrated monitoring, information and capital system. Existing systems in applications will be able to operate properly and correctly when supported by a comprehensive, holistic and systemic data collection system.

Integrated data will be able to circumvent the boundaries of time and space. The right solutions can be seen from the various relationships between the virtual and the actual. Data input systems in the public sector will be very important to support the flow of big data (Morabito, 2015). Data input systems can be proactively obtained from users, or through data sharing between back offices, and also from communication information systems that are inputted through CCTV, and other networks.

The use of big data will develop intelligent application functions in analysing and finding solutions. Big data systems require huge energy to accommodate and apply through program analysis systems. The products produced are able to provide instructions for predictions, anticipations and solutions. One of the competencies for cyber cops is inputting, categorising, utilising, and analysing data. This will be the strength to be able to provide excellent services in real time and on time.

The digital age will be marked by the back office as the brain of data collectors, so that it can predict, anticipate, and provide solutions. The back office will be the centre of K3i: communication, coordination, command, control and information. In addition to the back office, there are various applications that form service and data inputs of features or images that are fast, concise, compact and easily accessible. Between the back office with the application and also with customers and users or from the wider community, network systems are connected through the internet or other systems.

In developing policing for the digital age, thoughts and acts complement each other and become a system in order to shift manual, partial and temporary patterns into online systems that are integrated and sustainable. In building a system, things that need to be considered are processes

and standards that include inputs, processes and outputs, which require the existence of operational guidelines. Building a police system is an effort to change the habitus and mind set of police officers in using their policing.

In the social context, the adoption of police technology and practices can also be understood as e-policing, which is a policing model that brings community policing to the online system. Thus, e-policing is a model of policing in the digital era that seeks to break through the barriers of space and time so that police services can be carried out quickly, precisely, accurately, transparently, accountably and easily. E-policing can be a strategy of anti-corruption initiatives, bureaucratic reform and creative break throughs. It is said to be an anti-corruption initiative because online systems can minimise person-to-person meetings. E-policing is also said to be a bureaucratic reform, because it can break through complex bureaucratic barriers that are able to penetrate time and space, for example, regarding information and communication services via the internet. In relation to work procedures in the bureaucracy, it can be held directly with Performance Management Standards created through the intranet/internet as well so as to become paperless and environmentally friendly. E-policing is said to be part of a creative break through, because many programs and various innovations and creations in policing can be developed through various applications through electronic, print or social media at once (Williams et al., 2018).

E-policing is also useful for significantly reducing irrational bureaucratic systems that are loaded with personal approaches that are difficult to measure by professional standards both within the bureaucracy and in society. Building a rational bureaucracy requires a strong political will. This, in the context of leadership, needs to be supported by leaders and partners as part of the soft power and the state apparatus to improve the bureaucracy and public services.

With advances in technology, partnerships with stakeholders in building services will be easier and a lot of improvements can be made in counteracting crimes and providing public legitimacy (Rosenbaum et al., 2011). The online electronic system through the back office, application and network will facilitate the management of services by the public to get the service systems needed (Lewis & Lewis, 2012). Movements towards one stop service are stiffened at the back office through electronic applications connected to each other. The workers/HR will certainly become a link, bridging for professional, smart, moral and modern solutions. The dignity and status of the state apparatus will increase when the bureaucracy is able to build service systems that are fast, accurate, transparent, informative and easily accessible as a one gate online service system.

Conclusion

E-policing involves technological innovation and the adoption of information technology in the police as part of adjusting organisational strategies in the digital world. In the context of the Indonesian police, e-policing is part of a bureaucratic reform to become a professional, intelligent, moral and modern agency. This is a long process that starts with extraordinary visionary thoughts which are different from old bureaucratic administrative thoughts. The study results show that e-policing, specifically in Indonesia, is useful in the context of organisational management for the effectiveness of community services and tasks. In the technical context, some of the main elements that need to be considered in e-policing are back-office, network and applications that are adequate and easy to use. The adoption of e-policing is also useful for social and managerial harmonisation in police institutions, where policing can electronically bridge the management and implementation of tasks, and relations with the community.

In this context, the adoption of information technology is done by building a policing model in the digital age based on online systems or e-policing. In a rational bureaucracy based on competence, visionary, transformational and problem-oriented leadership is needed. This study recommends improving HR professionals managerially in the implementation of e-policing. HR in this context needs to have a good attitude, be hard workers, and possess a student mind set as the ideal police officer is a civil society builder and humanitarian fighter as well. This has been institutionally demonstrated in the focus of the police bureaucracy by improving the management of prime institutions. This is in to become a National First-Class Institution that has superior programs that are inspiring, innovative, creative and dynamic, as well as ready to face demands, needs, challenges and threats in the present and the future. E-policing, which is the support of infrastructure and technology in carrying out tasks, is necessary for modern police institutions to provide services that are fast, accurate, transparent, accountable, informative and easily accessible. Furthermore, aspects that need attention are budgeting and planning, as well as monitoring and evaluation, to improve the quality of the implementation of police duties. This in turn can support the realisation and maintenance of domestic security stability.

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