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The Legal Validity of Information Technology Utilization by Judges in Supervising the Execution of Criminal Sentences

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Abstract

The oversight and monitoring of the implementation of criminal sentences represent a vital yet inadequately developed aspect of Indonesia's criminal justice system, especially in achieving sentencing goals such as rehabilitation, deterrence, and social reintegration. This article is urgent because criminal penalties are getting more complicated, judges have too much work to do, and information and communication technology (ICT) is moving too quickly for the Criminal Procedure Code (KUHAP) to keep up. The study aims to examine the legal obstacles encountered by courts in the oversight of criminal offenders via ICT and to develop a suitable legislative framework that confers binding legal authority to such technology. Utilizing a normative juridical methodology encompassing statutory, conceptual, philosophical, and comparative frameworks, this study examines Indonesian criminal procedural law in conjunction with comparative practices from several jurisdictions. The findings indicate substantial normative deficiencies in KUHAP regarding the utilization of ICT for judicial oversight and monitoring, leading to the constrained efficacy of post-sentencing supervision. The study suggests the explicit integration of ICT-based supervision standards into KUHAP to enhance judicial oversight of sentence implementation. The study enhances the evolution of criminal law by promoting discourse on criminal law policy, especially in reconciling procedural law reform with technological advancements and the changing aims of punishment.

I. Introduction

The Indonesian correctional system is a designed and continuous attempt to assist criminals who have been through the legal system and been found guilty of a crime. In this system, prisoners do not just get punishments; they also get the chance to change their behaviour for the better through rehabilitation programs. The goal of Indonesia's correctional system is to give people who have been convicted a second chance to improve themselves once they have served their time. The hope is that they will be able to rejoin society as better people and not make the same mistakes again (Permono, 2021).

The main purpose of rehabilitation in the correctional system is to assist a convict get their life, relationships, and job back on track. In other words, rehabilitation includes not only changes in the offender's illegal behaviour but also adjustments in the social and economic aspects of their life that help them reintegrate into society in a good way. Rehabilitation is to enable criminals who have completed their sentences to positively contribute to society and to prevent recidivism. This method is likely to help the inmate's social growth and general healing from their existence (Permono, 2021).

Correctional institutions, serving as facilities for convict rehabilitation, are a fundamental component of the Criminal Justice System (CJS) in Indonesia. In this system, each institution has a distinct function and role, although they are intertwined and interconnected in tackling criminal legal challenges. This is delineated in Law Number 8 of 1981 regarding the Criminal Procedure Code (hereinafter abbreviated to KUHAP), which categorises the components of the Criminal Justice System into four entities: the police, the prosecutor's office, the judiciary, and correctional facilities. Correctional institutions are essential in implementing judicial decisions, embodying the determinations made by the judge and functioning as a pivotal venue for fulfilling the aims of punishment outlined in the court ruling. This circumstance is the case since, according to Article 183 of the KUHAP, a judge cannot give a sentence unless it is based on at least two valid pieces of evidence. The judge must also be sure that a crime has happened and that the defendant is guilty of it. This logic is intentional because the article implies that when a judge sentences someone, they must have a clear objective for the punishment. That purpose must be possible to reach by carrying out the punishment.

To guarantee that the goals of punishment are carried out, the KUHAP in Chapter XX, as well as Law Number 14 of 1970 on Judicial Power, strengthened by Article 33, paragraph (2), which was amended by Law Number 48 of 2009, regulates the prosecutor's oversight and monitoring of the application of court decisions, conducted by the Chief Judge of the District Court. This is further reinforced in the KUHAP with provisions regarding the oversight and monitoring of the application of judicial rulings (ALHUMAMI, 2018) as stipulated in Articles 277 to 282, which state the following: (Pemerintah Republik Indonesia, 1981)

Article 277 (1) "In every court, there must be a judge assigned with a special task to assist the chief judge in supervising and observing court decisions that impose sentences of deprivation of liberty."

Article 277 (2) "The judge referred to in paragraph (1), known as the supervising and observing judge, is appointed by the chief judge for a maximum term of two years."

Article 278 "The prosecutor sends a copy of the minutes of the execution of the court decision, signed by the prosecutor, the head of the correctional institution, and the convicted individual, to the court that rendered the decision at the first instance, and it is recorded in the supervision and observation registry."

Article 279 "The supervision and observation registry referred to in Article 278 must be completed, closed, and signed by the registrar on each working day, and for acknowledgment, it must also be signed by the judge referred to in Article 277."

Article 280 (1) "The supervising and observing judge conducts supervision to ensure that the court's decision is executed as intended."

Article 280 (2) "The supervising and observing judge conducts observation for research purposes to gather information that benefits sentencing, which is derived from the behavior of the inmates or the rehabilitation efforts within the correctional institution, as well as the reciprocal influence on the inmate during their sentence."

Article 280 (3) "The observation referred to in paragraph (2) is continued even after the convict has completed their sentence."

Article 281 (4) "Supervision and observation as referred to in Article 277 also apply to conditional sentences."

Article 281 "At the request of the supervising and observing judge, the head of the correctional institution shall provide periodic or on-demand information about the behavior of specific inmates under the judge's observation."

Article 282 "If deemed necessary for the effective use of observation, the supervising and observing judge may discuss with the head of the correctional institution the methods of rehabilitating certain inmates."

These articles make it clear that every court must appoint a judge with a special and important job: to help the Chief Judge of the District Court keep a close eye on all court decisions that impose sentences of deprivation of liberty, such as imprisonment or detention. This job does not just involve making sure that the decision is carried out; it also involves checking that the rights of the inmates are being respected and that the decision made is in line with the rules and principles of justice. The judge in charge of this special task is responsible for making sure that every part of the decision to take away someone's freedom is carried out correctly and in accordance with the law. If something needs to be fixed or thought about again in the execution of the decision, the judge must suggest it to the Chief Judge of the District Court. This article shows how important accountability and openness are to the law enforcement process, especially when a judge makes a judgment that limits a person's freedom (Murni & Sulchan, 2021).

To guarantee the proper execution of court decisions, it is essential to oversee and monitor their implementation, ensuring adherence to the core principles of rehabilitation and the objectives intended by the court's ruling, while also maintaining

legal certainty, utility, and justice. This facilitates the reintegration of inmates who have completed their sentences into society, allowing them to exercise agency among the populace. This is essential because a judge's judgment is invariably grounded in the aims of punishment, which include deterring the offender and rehabilitating the perpetrator to avert future criminal behaviour and to render them advantageous to society.

In numerous nations, the function of judges in overseeing and monitoring the execution of criminal sanctions is similarly governed, with objectives akin to those delineated in Indonesian criminal law. This ensures that judges can supervise and monitor the execution of criminal punishments, both during and after their implementation, with the assumption that such acts will facilitate the attainment of punitive objectives.

Judges in Indonesia's Criminal Justice System possess specific fundamental legal duties and authorities. One such authority is to furnish information, deliberation, and legal counsel to local government authorities upon request. This corresponds with Article 52 of Law Number 2 of 1986 regarding General Courts, which stipulates that courts possess the authority to furnish information, considerations, and legal counsel to government entities under their jurisdiction upon request. The supervisory and observing judge institution in Indonesia is largely similar to that in France, known as the *Juge d'application des Peines* (JAP). In France, the JAP serves as one among several judges entrusted with supervisory functions, including: (a) the Juge d'instruction (at the preliminary stage of investigation); (b) the Juge des enfants (for juvenile matters); and (c) the Juge des tutelles (for guardianship issues). Conversely, in nations like Nigeria and Hungary, the responsibility for supervision and observation is vested in the Public Prosecutor, so establishing the prosecutor as both the implementer of judicial rulings and the supervisory authority. In Poland, the prosecutor and the judge share joint responsibility for overseeing the legality of detention and the implementation of court rulings. In some nations, including Malaysia, Egypt, and Australia, the system is analogous to that of Indonesia, wherein judges are tasked with overseeing and monitoring the execution of criminal sanctions (Sohilait et al., 2023)

The aims of supervisory and observing judges, as noted in the previously mentioned countries, including those where the public prosecutor functions as both the enforcer of court rulings and as a supervisor and observer, are not significantly distinct from the stipulations of Indonesian criminal law. In Indonesia, judges are empowered to oversee and monitor the enforcement of criminal penalties both during and subsequent to their execution. This court oversight and monitoring aims to function as a means of fulfilling the goals of the sentence.

The principal responsibilities of judges encompass receiving, scrutinising, adjudicating, and settling issues presented to them. Judges possess the authority to preside over court proceedings and render decisions, which is integral to their primary adjudicative function of receiving, examining, deciding, and resolving cases, all while adhering to the principles of independence, integrity, and impartiality. In addition, judges are entrusted with the duty to supervise and observe the

implementation of court judgments, as stipulated in Articles 277 to 283 of KUHAP, and further regulated under Article 5 paragraph (1) of the Law on Judicial Power. This supervisory function may be carried out once the court decision has obtained permanent legal force (*inkracht van gewijsde*). They also have the authority to lead trials and make decisions based on the principles of freedom, fairness, and impartiality. Therefore, their role extends beyond the courtroom, encompassing the provision of legal advice to government agencies to support the effective and efficient administration of justice. (Pemerintah Indonesia, 1986).

In practice, judges mostly focus on the criminal justice process, which includes the criminal ruling, witness and expert testimony, and the defendant's examination. In the meantime, the prosecutor is in charge of carrying out the execution, and the correctional facilities are in charge of carrying out the court's judgment. Several studies have shown that the problems are mostly because people do not think of supervision and observation as important parts of their jobs, unlike people who work in the criminal trial process. Judges have a lot of work to do when they are resolving legal matters, which makes the obligations of the judicial process quite hard on both the body and the mind. According to data provided by the Registry of the Supreme Court in 2022, the caseload that must be handled by judges is as follows (*see* table 1 and table 2):

99.08% of the load was successfully completed	**civil chamber court**	**criminal chamber court**	**religious courts**	**Military courts**	**Administrative courts**	**total**
number of caseloads	8506	10980	1333	380	7085	28284
number of supreme court justices	16	15	6	4	6	47
ratio of supreme court justices to number of cases	1:532	1:732	1:222	1:95	1:1181	1:602
file allocation ratio to each supreme court judge	1595	2196	667	285	3543	1805
minimum number of document pages read	159.500	219.600	66.700	28.500	354.300	180.500

(Table 1: The Load was Successfully Completed. Source: Registry of the Supreme Court of the Republic of Indonesia)

Type of cases	remaining cases in 2021	cases entered in 2022	amount of load	2022 case decision	remaining cases in 2022	productivity ratio
Civil cases	16	6.551	6.576	6.541	26	99,60%
Particular civil cases	11	1.928	1.939	1.939	0	100%
Criminal cases	10	1.655	1.665	1.663	2	99,88%
Particular criminal case	124	9.191	9.315	9.290	25	99,73%
religious civil cases (jinayah)	7	1.326	1.333	1.333	0	100%
military criminal cases	0	380	380	380	0	100%
state administrative matters	7	7.028	7.085	6.878	207	97,08%
Total	175	28.109	28.284	28.024	260	99,08%

(Table 2: Type of cases and productivity ratio. Source: Registry of the Supreme Court of the Republic of Indonesia)

There are also other problems, like external ones, like not enough money, the fact that KUHAP has not put in place rules for supervising and observing judges, and bureaucratic problems within law enforcement agencies, since the tasks given are also related to the duties of other law enforcement agencies (Iswariyani et al., 2021)

Supervision and observation are essential managerial responsibilities that are intricately connected to the effective and efficient attainment of organisational objectives. This duty not only emphasises the oversight of plan execution but also includes the assessment of continuous performance. Outcomes are evaluated by supervision and observation, with measurements and evaluations conducted to identify deviations, prompting corrective measures or changes to ensure compliance with stated objectives and standards (Amiruddin, 2017)

Upon scrutinising the roles and obligations of judges in the criminal justice system, it is clear that these responsibilities are both commendable and exceedingly rigorous. This arises from the extensive array of responsibilities judges undertake in managing criminal cases, which includes receiving case files, conducting examinations, issuing rulings, and finalising resolutions, further complicated by managerial obligations, such as those of supervisory and observing judges. Consequently, the execution of these administrative activities frequently becomes inadequate. A significant challenge is that, in practice, the implementation of the

supervisory and observational functions at the Kendal District Court is limited to merely fulfilling administrative obligations (such as the preparation of formal reports), and has yet to reach the core substance of the intended role namely, to ensure that criminal judgments are executed properly and in accordance with the law. Additionally, there are substantial constraints related to limited facilities and infrastructure, as well as the small number of judges assigned to carry out supervisory and observational duties. These limitations hinder the realization of effective law enforcement and the broader goal of achieving legal certainty. (Murni & Sulchan, 2021) The practical realities described above reveal a rather contradictory situation between the legal objectives intended to be achieved through the implementation of criminal sanctions and the actual role performed by the supervisory judge.

The principal objective of monitoring and observation is to avert any deviation or malfeasance that may jeopardise the system, organisation, or society. Supervision and observation serve as means to ensure that all actions adhere to established rules and policies. This encompasses the oversight and monitoring of budget allocation and utilisation to guarantee that available funds are employed efficiently and for their designated purpose, thus preventing waste or resource misappropriation. Furthermore, the oversight and monitoring of processes are intended to guarantee that every phase of activity execution complies with the regulations, without any alterations or deviations from the procedures. Supervision and oversight of authority are essential to guarantee that the power conferred upon persons or institutions is not misused and remains within the bounds of legitimate authority. Consequently, good supervision and observation seek to establish a system that is transparent, accountable, and responsible, while reducing the likelihood of misuse, misbehaviour, or errors in all facets of operations and management (Abd. Choliq, 2020)

The execution of judicial supervision and observation functions, as previously outlined, could effectively be facilitated through the utilisation and integration of Information Technology or digital technology. Electronic information refers to a compilation of data formatted electronically, encompassing text, audio, graphics, maps, drawings, photographs, electronic data exchange, emails, telegrams, telexes, faxes, and analogous communication modes. Information and communication technology (ICT) pertains to electronic information. This data may encompass letters, signs, numbers, access codes, symbols, or perforations that have been processed to convey information or meaning interpretable by individuals with the requisite skills or expertise (Pemerintah Indonesia, 2008)

This electronic information can be utilized in various communication and data processing contexts accessible to pertinent parties, enabling them to retrieve data and documents acquired from oversight and observation via information and communication technology (ICT), which is always advancing. In light of the swift progression of Information and communication technology (ICT) in contemporary culture, including technologies such as GPS, electric sensors, and Artificial

Intelligence (AI)-based monitoring systems, these advancements have attained heightened sophistication. One advantage of information technology in social life, including the legal and judicial domains, is its ability to serve as a tool for supervising and observing criminal offenders while they serve their sentences or after completing their sentences.

In several countries, the form of supervision and observation conducted by judges on criminal offenders also utilizes information and communication technology (ICT), especially for those who commit acts of sexual aggression against minors. Some legal provisions regulate how technology is developed to monitor the movements and behaviour of offenders committing indecent acts against children, specifying the duration of the monitoring period and when the monitoring takes place. The data recorded within the information and communication technology (ICT) system are expected to provide accurate information to judges in their role as supervisors and observers of court decisions.

The study aims to examine the legal problems related to the utilisation of electronic devices and information technology for monitoring and supervising individuals serving criminal sentences in Indonesian correctional facilities (hereinafter written to LAPAS) or post-sentence completion. This analysis aims to formulate a suitable legal concept within the KUHAP or the Judicial Power Law, specifically about legal norms regarding information and communication technology (ICT), which would possess legal authority in overseeing the implementation of criminal sanctions.

This study utilises the philosophical juridical method, anchoring the research in philosophical principles to aid criminal law policy in addressing moral and ethical dimensions within the formulated rules or regulations. This is further reinforced by a juridical foundation that provides the legal framework and regulations that must be considered when formulating and developing legal policies.

Based on the comparative practices of the countries mentioned above, notably legal science, which looks at laws, norms, and principles that are pertinent to the topic. Among these is the statutory approach, which entails examining all applicable laws and rules pertaining to the legal matters under consideration, as well as the conceptual approach, which is based on perspectives and doctrines developed within legal theory (Ibrahim, 2007).

The objective of the aforementioned study is to investigate the legal challenges associated with the utilisation of Information Technology and Digital Technology in the oversight and monitoring of offenders undergoing criminal sanctions within Correctional Institutions or after their completion of such sanctions. This analysis suggests that a comprehensive legal framework may be established within the Draft Criminal Procedure Code or the Reform of the Law on Judicial Authority, incorporating legal norms pertaining to Information Technology and Digital Technology that possess legal authority for overseeing and monitoring the enforcement of criminal sanctions and subsequent compliance.

This method is based on a multidisciplinary approach, particularly a legal approach, which involves the study of legal norms, principles, and aspects relevant to

this research. It employs the statute approach, namely by examining all legislation and regulations related to the legal issues under study, as well as the conceptual approach, which is derived from legal doctrines and scholarly opinions that have developed within the field of law. The approaches used in this study include an examination of the Criminal Procedure Code, the Law on Judicial Authority, and the Law on Information Technology, which are necessary to assess and evaluate the norms governing judicial supervision and observation contained within these laws. This also involves analysing the synchronization and harmonization of legal norms, both vertically and horizontally, between the KUHAP, the Law on Judicial Authority, the Law on Information Technology, and other implementing regulations. In addition, a comparative approach is used, which involves comparing relevant laws in other countries—whether from different or similar legal systems. This comparison is focused on the norms set forth in the KUHAP, the Law on Judicial Authority, and the Law on Information Technology. The purpose of this comparative analysis is to identify similarities and differences in judicial supervision and observation norms across jurisdictions, with the aim of providing recommendations and contributing to the development of Indonesia's criminal law policy, particularly concerning norms related to judicial supervision and observation.

This study additionally employs an information technology approach that examines the domain of information technology, encompassing hardware, software, and communication technologies used for the processing, storage, transmission, and dissemination of information through various data processing functions such as capturing, transmitting, storing, retrieving, manipulating, and presenting data (Tampang, 2012), which is essential because the analysis extends beyond normative legal aspects to include the technological dimensions relevant to the supervision and monitoring of criminal sanctions through digital and information technology; based on this background, the research focuses on two core issues, namely the legal challenges encountered in supervising criminal offenders during the execution of prison sentences using Information and communication technology (ICT) and the appropriate legal formulation required to confer legal force upon ICT in supervising and observing the implementation of criminal sanctions in order to realize the objectives of punishment.

II. Legal Challenges Faced in Supervising Criminal Offenders During the Execution of Prison Sentences Using Information and Communication Technology

Oversight and surveillance of offenders during the fulfilment of their criminal terms and subsequent to their completion are essential. This is due to the existence of multiple critical phases in the criminal process, one of which involves assessing whether the punitive and rehabilitative measures align with the objectives set forth by the judge. It is essential to evaluate whether the duration of the prison sentence mandated by the judge has been completed, whether the rehabilitation process within the correctional facility aligns with relevant legal standards, whether it conforms to

fundamental rehabilitation principles, and whether it adheres to recognized rehabilitation methodologies. This is crucial to guarantee the attainment of the objective of rehabilitating the offender. The primary objective is for the offender, after serving their sentence and being released from the correctional facility, to reintegrate into society and gain acceptance from the community. Additionally, a significant responsibility for the judge lies in overseeing and monitoring the offender after their release from the correctional facility, through conditional release or conditional sentencing. This task becomes more challenging as the offender begins to adapt to the outside environment, including their family, the surrounding community, and the social circles that may have previously had a negative influence on them. As such, the offender's condition becomes highly vulnerable to relapse.

The supervisory and monitoring responsibilities undertaken by courts grow progressively more difficult compared to when the offender remains in the jail facility. This obligation complements the judge's principal responsibilities in executing the judicial process. Judges encounter numerous problems in executing their supervisory and monitoring responsibilities, particularly the substantial job and authority in overseeing offenders, as delineated in Articles 277 to 283 of the KUHAP, namely (Pemerintah Republik Indonesia, 1981) :

1. The court assigns the supervising judge specific duties to oversee the decision to impose the sentence of deprivation of liberty.
2. The supervising and monitoring judge must ensure that the court’s decision is implemented as expected.
3. The supervising judge is also tasked with observing the behavior of the convicted person during the execution of the criminal sentence, including monitoring the rehabilitation process conducted by the correctional facility, with this task serving as material for future sentencing decisions.
4. Supervision and monitoring duties should be performed not only at the correctional facility but also after the condemned individual has served out their entire term. This includes individuals who are serving conditional sentences.

Chapter XX of the articles mentioned above makes the judges' jobs of overseeing and monitoring even harder. They have to make sure that the goals of criminal punishment are met by enforcing sanctions, even after the offender has served their time. In fact, Information and Communication Technology (ICT) can help with the high load that supervising and monitoring judges have to bear. Because of what is happening now, Information and communication technology (ICT) are now necessary, and they have made big changes in people's lives, which is why they are often called "disruptive technologies." The justice system is also affected by the phenomenon of technological disruption, which is characterised by profound change brought about by the digitisation of many areas of society. The incorporation of information technology into the judicial system has demonstrated an improvement in the efficiency and efficacy of a judge's duties (Jusafri, Nur Hidayani Ali muddin, 2024)

When anything that was once solid or well-structured run through major and fundamental changes, it is said to be "disrupted." It signifies "something that is uprooted" in a literal sense. When applied to current events, "disruption" can mean a

situation that causes big changes. These changes can affect not just a small part of life, but also the whole way society works, affecting different areas, systems, and long-held beliefs while also challenging old ways of thinking and doing things. This disruptive event can happen in many ways, such as in technology, the economy, or society. In all of these cases, people need to adapt and respond to the changes that are happening quickly (Sobandi, 2023). Furthermore, according to Kasali, disruption refers to an innovation or threat that replaces an entire old system with a new method or system. Disruption replaces outdated physical-based technologies with digital technologies that create something entirely new, more efficient, and more beneficial. (Ohoitimur, 2018)

Indonesia is presently undergoing upheavals, particularly within the legal domain, encompassing both legal issues and judicial processes. A notable disruption in legal affairs is the rise of many legal challenges arising from Information and Communication Technology, including those related to social media, CCTV, and other technologies, particularly concerning their utilisation in criminal activities. Meanwhile, disruptions in the judicial field have also been developing, in particular, with the use of Information and communication technology (ICT) as evidence, which can be used in the criminal justice process. According to Article 5, paragraph (1) of the Electronic Information and Transactions Law, this can include electronic documents and information as well as electronic prints. Information technology is a means of gathering, storing, processing, analysing, and/or sharing information, as stated in Article 1, number 3 of Law Number 1 of 2024 respecting the Second Amendment to Law Number 11 of 2008 on Electronic Information and Transactions (hereinafter abbreviated to ITE Law). Data management in a variety of formats is used in this process to make information easier to access and share. According to Supreme Court Regulation Number. 7 of 2022, which forms the basis for putting the e-Court application into practice in the legal system, Information and Communication Technology are being increasingly used for case administration and court proceedings electronically (e-Court), in addition to being used for evidence (Sobandi, 2023)

Information technology in the legal context refers to the use of computer-based communication and information systems for legal objectives. This includes the use of hardware and software to process, store, and transmit data electronically, supporting various legal processes such as investigation and digital evidence in today's digital era. (Pribadi, 2018)

The state can use many parts of Information and Communication Technology to enforce criminal law. In addition to being used as evidence and for case management and court proceedings, such as e-Filing for the public to register cases online, e-Payment for the estimation and payment of advance fees online, e-Summons for online summons, and e-Litigation for online hearings, Information and Communication Technology can also be used to supervise and monitor offenders serving criminal sentences or after completing their sentences outside of correctional facilities. Information and Communication Technology can be used to keep track of, process,

and analyse the usage of criminal sanctions in correctional facilities, as well as how criminals behave while they are in prison, after they get out of prison, or while they are on conditional release or in conditional sentences.

The way this technology works is by managing, storing, transmitting, and processing information. Information technology encompasses everything from personal computers to globally connected computer networks. One of the most crucial components of this technology is management information, a key concept that involves the collection, processing, and utilization of information to facilitate effective decision-making. Management information includes aspects such as performance monitoring, decision-making, strategic planning, and reporting. With the support of information and digital technologies, data can be managed and analysed more effectively, with the aim of achieving better outcomes.

One challenge faced when supervising and monitoring through Information and Communication Technology is that the law on electronic transactions, specifically Law Number 1 of 2024 on the Second Amendment to Law Number 11 of 2008 on Electronic Information and Transactions, only regulates administrative law; criminal substantive law and criminal procedural law are limited to the investigation process. However, formulations related to prosecution and the further stages of criminal enforcement, particularly concerning the implementation of criminal sanctions, are not regulated by the Electronic Information and Transactions Law. Even the KUHAP itself does not address this, although Information and Communication Technology have significant functions and benefits for criminal law enforcement.

A further problem encountered pertains to the preparedness of the technological infrastructure within LAPAS. This encompasses the preparedness of both hardware and software that facilitate the operation of Information and Communication Technology, as both elements are crucial for its functionality, given the substantial expenses and the skills necessary for operators. Furthermore, issues stem from the accessibility of sufficient supporting technological infrastructure. Furthermore, the substantial quantity of LAPAS, many of which are facing overpopulation, along with the nation's extensive and varied geographical conditions, exacerbates the challenges associated with the implementation of this technology (Yulianti, 2020).

Furthermore, another significant challenge that must be considered is the legal culture, both among law enforcement officials and the public, in using and operating increasingly sophisticated and rapidly developing technological devices. In this context, many individuals still lack full technological literacy or even face difficulties in operating these devices, a condition known as "technological illiteracy," which can hinder the effectiveness of technology use in various aspects, including law enforcement. Additionally, the culture of adhering to and understanding existing regulations regarding the use of technology must also be continuously improved, particularly in relation to personal data protection, privacy, and the wise and lawful use of technological devices and systems. This is crucial because, although technology has a significant positive impact on criminal law enforcement, such as accelerating investigations, improving the accuracy of evidence, and facilitating monitoring and supervision, it can also have negative consequences, such as abuse for harmful

purposes, violations of privacy, and the dissemination of false or misleading information. Therefore, there must be more integrated and comprehensive efforts to build technological awareness and competence, both among law enforcement officials and the public so that technology can be utilized to its full potential while maintaining the applicable legal principles.

III. Legal Provision Empowering ICT to Oversee the Enforcement of Criminal Penalties Efficiently

Information technology is now an essential component of our daily lives because it is so important in many areas, such as law enforcement. The fast and continual growth of technology, especially with the rise of AI, makes it more and more clear how important it is for activities that need structured work patterns and the processing of vast and complicated volumes of information. Modern information technology can handle huge amounts of data, which makes it easier and faster to find the information people need. This technology makes it possible for law enforcement to look into crimes and gather evidence from a wide range of online data sources, which hold billions of pieces of information. Law enforcement can readily access and look at the information they need to solve crimes, find criminals, and make sure that the legal system works more quickly and correctly with this technology. As this technology keeps becoming better, it becomes more important for law enforcement to use it in the digital age (Ikawati et al., 2024)

The objective of employing Information and Communication Technology (ICT) is to furnish precise information concerning the execution of rehabilitation within correctional institutions or externally, the conduct of offenders, and the decision-making process related to the provision of conditional release or discharge, including the application of conditional sentences. This technology is anticipated to facilitate the responsibilities of overseeing and monitoring judges, alongside their function in the criminal law enforcement process.

In several countries, Information and Communication Technology have already been utilized to assist law enforcement officials in executing criminal law enforcement processes. One such country is China, which has been a pioneer in leveraging information technology, particularly in developing AI technology related to facial recognition for crime identification.(Ikawati et al., 2024)

The United States has developed information technology, specifically AI technology, as a system for document analysis and to offer recommendations to judges in decision-making. In Europe, nations like the United Kingdom and Estonia utilise information technology in criminal law, specifically for document analysis and offering recommendations to judges in their decision-making processes (Ikawati et al., 2024)

a. United State

Electronic monitoring was first introduced in the United States in the 1980s and has since expanded its use to more than 40 countries. (Mike Nellis, 2013) This technology is widely applied at various stages of the CJS, including

during probation and conditional release, as an alternative or complement to imprisonment. (Daems & Vander Beken, 2018) Its ongoing implementation reflects the potential of electronic monitoring in enhancing efficiency and reducing the burden of overcrowding in prisons across many countries. (loan Durnescu, James M. Byrne, Benjamin J. Mackey, 2019)

b. Germany

Electronic monitoring is conducted with an efficient approach, particularly in managing high-risk offenders after their release. The use of GPS technology, which functions to track an individual's location in real-time, is limited to around 70 cases per day, while radio frequency technology is used minimally. This limitation reflects an effort to ensure that available resources are used selectively and proportionally, with the aim of minimizing the potential for abuse while enhancing the effectiveness of monitoring individuals deemed to pose a high risk to society. (Dünkel et al., 2017)

c. United Kingdom

There is a significant aspiration to develop large-scale GPS-based electronic monitoring programs, particularly in England and Wales. This initiative has the potential to revolutionize existing punitive practices by offering a more effective and humane alternative to traditional incarceration systems. Through GPS technology, a more targeted approach can be created for monitoring offenders while also reducing prison overcrowding and allowing offenders to remain engaged in their social and economic lives. The development of such programs reflects an effort to modernize the CJS by considering the needs of rehabilitation and reintegration of individuals into society. (Nellis, 2014)

In fact, Indonesia already has legal provisions for utilizing information technology in the criminal law enforcement process. One example is in Law Number 17 of 2016 concerning the Handling of Sexual Crimes, where the procedures for its implementation are regulated in Government Regulation Number 70 of 2020 concerning the Procedures for Implementing Chemical Castration, Installation of Electronic Detection Devices, Rehabilitation, and the Disclosure of the Identity of Perpetrators of Sexual Violence Against Children (Peraturan Pemerintah RI, 2020) The use of Information and Communication Technology is applied only to offenders involved in immoral crimes through the installation of electronic monitoring devices, and it is only used for adult offenders. The installation is performed based on a court decision that has acquired permanent legal force. Based on the provisions above, Indonesia actually already has regulations comparable to other countries, indicating that the use of Information and Communication Technology to monitor and observe convicted individuals is already in place. For example, Articles 31 (1) and (2) of the Law on Information and Electronic Transactions regulate the interception and unauthorized surveillance of electronic information, which may relate to electronic monitoring aspects. Additionally, Article 40 (2) emphasizes the government's obligation to protect public interests from the misuse of electronic information that could disrupt public order. (Pemerintah Indonesia, 2008)

These laws state that the use of Information and Communication Technology for surveillance must adhere to applicable legal principles and human rights, even though they do not specifically govern the monitoring of convicted individuals. This is particularly relevant to the fundamental principles of Criminal Procedure Law. Therefore, the implementation of monitoring technology for offenders needs to be based on clear regulations and must consider privacy aspects as well as individual rights. However, in practice, this has not yet been fully implemented. According to research conducted in several courts, some judges have made decisions, but the implementation has not yet taken place.

Although it does not directly regulate the monitoring of convicted persons, these provisions indicate that the use of Information Technology and Digital Technology for surveillance purposes must comply with applicable legal principles and human rights standards. While the rights of convicted persons may be limited, their fundamental human rights must not be violated, as stipulated in Article 9 of Law Number 22 of 2022 concerning Corrections in conjunction with the Minister of Law and Human Rights Regulation Number 8 of 2024 concerning the Implementation of Security and Order in Correctional Work Units.

Some of the fundamental rights of convicted persons that must not be infringed include:

a) the right to practice religious worship according to one's religion or belief;
b) the right to receive physical and spiritual care;
c) the right to education, instruction, recreational activities, and opportunities for self-development;
d) the right to receive adequate healthcare and nutrition based on dietary needs;
e) the right to humane treatment and protection from acts of torture, exploitation, neglect, violence, and any actions that may endanger physical or mental health;
f) the right to occupational safety, fair wages, or work-related incentives;
g) the right to access social services.

Therefore, any supervision and monitoring utilizing such technology must not contradict the rights of convicted persons as outlined above, especially in relation to the fundamental principles of criminal procedural law. Consequently, the implementation of monitoring technologies for criminal offenders must be based on clear legal provisions and must take into account privacy concerns and individual rights. However, in practice, such implementation has not yet been realized. Research conducted in several courts shows that, although some judges have issued relevant rulings, there has been no actual implementation.

Law Number 17 of 2016 on the Handling of Sexual Crimes already has a well-established framework for the use of Information and Communication Technology, as does Government Regulation Number 70 of 2020 on the Procedures for the Implementation of Chemical Castration, Electronic Detection Device Installation, Rehabilitation, and Public Disclosure of the Identity of Perpetrators of Sexual Violence

Against Children. However, it only applies to a single kind of crime. Given the current developments in crime in Indonesia, especially those involving high risks, both in terms of the acts themselves and their consequences, a system based on Information and Communication Technology is urgently needed for surveillance and monitoring. This would enable judges to obtain more accurate and effective information.

Based on the research findings, the norm for surveillance and monitoring must be formulated through Information and Communication Technology in the law, specifically within the Indonesian KUHAP. This should be regulated in Chapter XX, concerning the Supervision and Monitoring of Court Decisions, by adding a new article in Chapter XX of the KUHAP. This would ensure that the work patterns and methods of surveillance and monitoring using Information and Communication Technology are clearly established and have a legal foundation, especially with the recent reform of criminal penalties in Law Number 1 of 2023 on the Indonesian Penal Code, where the reforms include new types of penalties, including actions and criminal sanctions as regulated in Articles 64, 65, and 66. These sanctions comprise primary, additional, and special penalties. Some reforms in the primary criminal sanctions include:(Republik Indonesia, 2023)

a. The abolition of the penalty of imprisonment,
b. The introduction of surveillance sanctions, and
c. The introduction of community service sanctions.

In addition to the previously existing sanctions, the reform of additional criminal sanctions also introduces new types of additional penalties, namely: (Republik Indonesia, 2023)

a. Payment of compensation,
b. Revocation of specific licenses,
c. Fulfilment of local customary obligations, and
d. Regulation regarding the imposition of additional penalties as a supplement to the main penalty when it is deemed that the latter is insufficient for achieving the objectives of sentencing.

The purpose of sentencing generally comprises three theories as follows: the retributive theory (absolute), the utilitarian theory (relative), and the combined theory. These three theories have been widely discussed by scholars, taking into account the aspects to be achieved in imposing penalties, as well as being influenced by the social and cultural values embraced by the scholars.

The theories in the context of sentencing encompass several approaches, including the absolutist theory, often known as the theory of retribution, the relativist theory, also referred to as the utilitarian or theory of utility, and the combined theory, which integrates elements of both the absolutist (retribution) and relativist (utility) theories. The absolutist theory is one approach in the purpose of sentencing that is still widely applied in the practice of imposing sanctions on offenders, emphasizing the aspect of retribution. This approach assumes that a crime should be punished with a criminal sanction as a form of retribution, without considering whether the sanction is sufficient to have a deterrent effect on the offender (M. Sholehuddin, 2007)

In general, there is a view that the purposes of punishment comprise only three

main theories as follows: the absolutist theory, the relativist theory, and the combined theory. However, along with its development, various other theories of the purpose of punishment have emerged beyond these three. The following will provide a detailed explanation of the three theories of punishment that have been widely recognized by academics and legal practitioners.

a. Absolutist Theory

The absolutist theory, also known as the retributive theory (*vergeldings theorieën*), first emerged in the 17th century and was supported by several prominent figures, such as Immanuel Kant, Hegel, Herbart, Leo Polak, and Julius Stahl. This theory views punishment solely as a means of exacting retribution for the actions committed by the offender. As Hugo Grotius stated, malum passionis (quod inglitur) propter malum actionis, that is, the suffering caused is a result of the evil deed committed. A similar view was expressed by Johannes Andenaes, who argues that punishment is a way to uphold justice and that justice is achieved when the offender is punished in proportion to their actions.(Bambang Poernomo, 1985)

Immanuel Kant, however, viewed punishment as a moral imperative, obligating the perpetrator of a crime to be punished. Hegel also agrees that punishment is the logical consequence of the criminal act committed. Kant further argues that a crime creates injustice, which can only be rectified through equivalent retribution, while Herbart contends that crime creates dissatisfaction within society, which can only be restored through punishment as a means of reparation to society.

According to Julius Stahl, God created the state as His representative in administering and enforcing legal order in the world. From this perspective, criminals must be punished in order to restore legal order. The theory put forward by Julius Stahl and Immanuel Kant is known as the subjective retributive theory, while the one proposed by Herbart is referred to as the objective retributive theory (Rivanie et al., 2022)

b. Relative Theory

The relative theory argues that punishment aims to protect the interests of society. This theory was pioneered by Karl O. Christiansen. From the perspective of the relative theory, punishment is not only carried out as a form of retribution against the perpetrator of a crime but also has specific objectives that provide benefits. Therefore, this theory is also often referred to as the utilitarian theory. The main objectives of punishment, according to this theory, are as follows:(E. Utrecht, 1958)

1. Maintaining public order;
2. Restoring the harm suffered by society as a result of the crime;
3. Rehabilitating the offender;
4. Eradicating the offender;
5. Preventing crime.

The theory of purpose has two functions of deterrence, namely general

deterrence theory and special deterrence theory. The general deterrence theory was proposed by the German philosopher von Feuerbach, who also introduced the theory of legality outlined in Article 1 of the KUHAP. This theory posits that the imposition of criminal sanctions on an individual who has committed a crime aims to instill fear in society, thus preventing others from committing the same criminal act. Von Feuerbach argued that the criminal sanctions imposed for prohibited actions should be clearly defined in law to deter other individuals from engaging in criminal behaviour (Eddy O.S. Hiariej, 2016)

c. Combined Theory

This theory was first proposed by Roeslan Saleh, as cited by M. Sholehuddin in his book Sistem Sanksi dalam Hukum Pidana: Ide Dasar Double Track System. Roeslan Saleh argued that sentencing should consider and accommodate the interests of various parties, namely society, the offender, and the victim. Sentencing should not solely focus on the interests of society or the offender but should also take into account the feelings and rights of the victim and their family (Sholehuddin, 2003)

If sentencing prioritizes only the interests of society, it will create a penal system that treats the offender merely as an object. Conversely, if sentencing solely prioritizes the interests of the offender, it will result in a highly individualistic penal system that focuses only on the rights of the offender without considering their obligations. Meanwhile, if sentencing is solely focused on the interests of the victim, it will form a penal system that addresses a very limited set of interests, without being able to accommodate the interests of both the offender and society as a whole (Sholehuddin, 2003)

Based on the reform of criminal sanctions, it is also highly relevant to reform the forms of supervision and monitoring conducted by judges over the implementation of criminal sanctions in order to achieve the goals of punishment, by utilizing Information and Communication Technology (ICT).

Legal reform in the form of supervision and monitoring becomes crucial as an effort to complement the functions and duties of judges. This legal reform must be executed using a legal policy approach, which is part of the policy measures, including legal and law enforcement policy, criminal law policy, criminal politics, and social politics.(Arief, 2018) When examining the process of criminal law policy, it is conducted through the following stages (Muladi, 1995):

1. Formulation Stage, which is the stage of law enforcement in abstracto by lawmakers and is considered the legislative policy stage;
2. Application Stage, which is the stage of applying criminal law by law enforcement officials and is referred to as the judicial policy stage;
3. Execution Stage, which is the stage of the concrete implementation of criminal law by law enforcement apparatus and is often referred to as the executive or administrative policy stage.

Criminal law in Indonesia, as a tool to address crime, does not seem to pose a problem. This is reflected in the existing legislative practices, which show that the application of criminal law is part of the legal policy or legal politics adopted by

Indonesia. The use of criminal law is considered normal and acceptable, as if its existence is no longer questioned. The issue lies in determining the appropriate direction or approach for applying criminal law. In terms of terminology, policy originates from the English word "policy" or the Dutch "politiek," which can be interpreted as general principles aimed at guiding the government (including law enforcement officials) in managing, regulating, or resolving public issues, societal problems, or the formulation of laws, as well as allocating laws or regulations to achieve common goals focused on efforts to realize the welfare and prosperity of society. (M. Abas, Mia Amalia, Ridwan Malik, Abdul Aziz, 2023)

As an introduction to discussing criminal law policy (penal policy), Barda Nawawi Arief's statement regarding criminal law politics or policy should be considered. According to him, the study of criminal law politics is crucial to complement the knowledge of positive criminal law. Positive criminal law focuses more on the application of existing laws, while criminal law policy is more related to the process of creating, formulating, or reforming positive law.(Lubis & Hidayat, 2021)

Based on the above opinion, it can be concluded that in understanding criminal law, it is not enough to rely solely on the science of positive criminal law but is also necessary to involve political law science, criminal policy, and penal policy. This aims to evaluate whether criminal legislation has been optimally formulated, meeting legal, sociological (sociopolitical and socio-structural), and philosophical requirements, as well as having anticipatory characteristics and being predictable. Thus, the resulting criminal legislation can provide maximum benefits and is expected to achieve its objectives. Furthermore, the knowledge of criminal law policy is essential as a reference for assessing the effectiveness of positive criminal law in the context of criminal law reform or renewal. (Awaluddin Habibi Siregar, Deby Rinaldi, 2024)

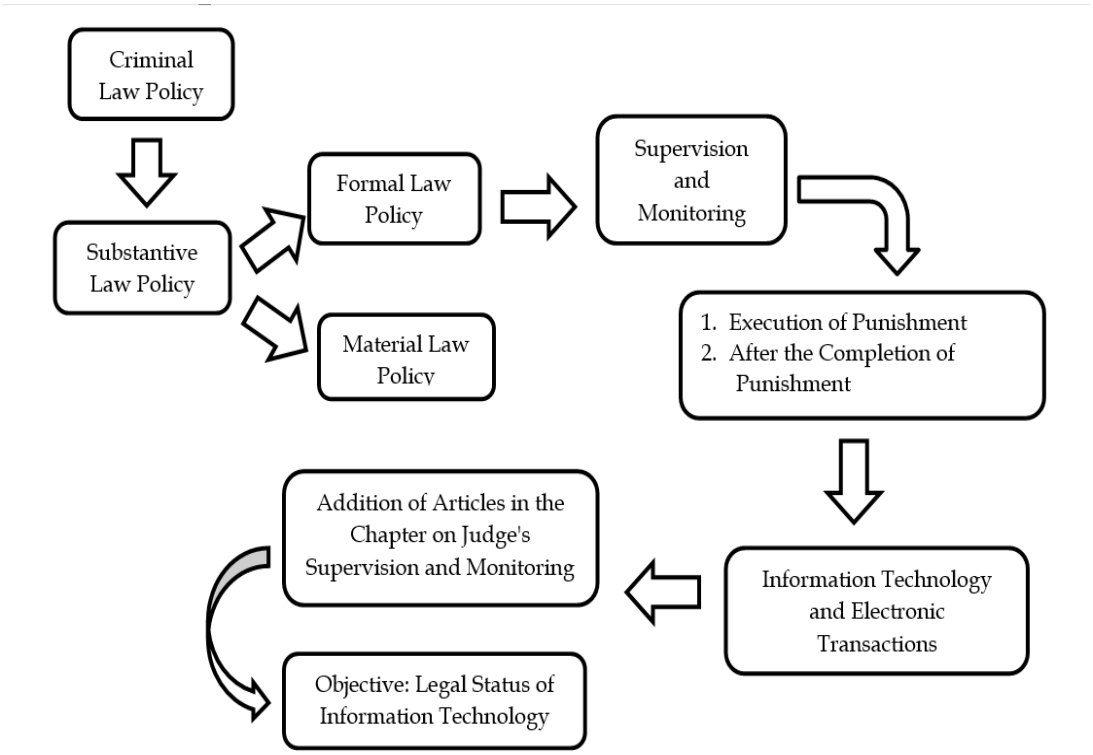
According to Wisnubroto, criminal law policy or penal policy encompasses actions related to the following matters (Firman Yudhanegara, Qadriani Arifuddin, Mohammad Hidayat Muhtar, Mas Ahmad Amalia, Loso Judijanto, 2024) :

1. The government's efforts to address crime through criminal law,
2. The method of formulating criminal law to align with societal conditions,
3. The government's policy in regulating society through criminal law, and
4. The use of criminal law to regulate society in order to achieve broader goals.

Barda Nawawi Arief posits that the issue of criminal law policy, or penal policy, is fundamentally more intricate than mere technical legislative tasks that may be resolved through systematic and legal-normative dogmatics. A juridical-factual approach, integrating sociological, historical, and comparative methodologies, is essential for criminal law policy alongside the juridical-

normative approach. It necessitates a holistic approach incorporating many social sciences, alongside a cohesive strategy pertaining to social policy and country development overall. Consequently, criminology should prioritise criminal law policy. Furthermore, a main focus of criminological research is "punishment" as a societal reaction to criminal behaviour.

Criminal law policy has become a direction for the development of Indonesian law. One of the criminal law policies in the field of substantive law is crucial for legal reform, and policies in the field of substantive law comprise policies in both material law and formal law. This research focuses on formal law, as it relates to the authority of judges in their role of overseeing and monitoring the implementation of court decisions on criminal offenders, both during their incarceration in correctional institutions and after their release. The authority exercised by judges is quite demanding because their duties and powers not only involve supervision and monitoring but also adjudication. Therefore, the researcher has developed an innovation regarding the implementation of supervision and monitoring by utilizing Information and Communication Technology in the form of AI, the use of barcodes, electronic detection devices, and creating their legal status within the KUHAP to strengthen these technologies within the legal framework.



IV. Conclusion

At present, insufficient legislation governs the oversight and monitoring of criminal offenders' use of Information and Communication Technology; consequently, courts have legal impediments. A solitary statute determines the governance of Information and Communication Technology concerning child sexual violence. The KUHAP, as the principal framework and reference for other legislation, still lacks provisions concerning the application of technology in criminal law enforcement. A further challenge is the inadequate legislative framework, particularly regarding court resources, which are predominantly focused on adjudicating criminal cases rather than executing their supervisory and monitoring roles. Moreover, given the substantial inequalities in the conditions of Indonesian correctional institutions relative to those in other nations, sufficient infrastructure is important for Information and Communication Technology. Due to the advantages and good attributes these technologies offer, Information and Communication Technology are crucial for enhancing the oversight and surveillance that courts exercise over criminal offenders. Consequently, the incorporation of this provision within the KUHAP under the article concerning judicial oversight and monitoring is essential for its practical application. Limited legislation regulates the utilisation of Information and Communication Technology by criminal offenders; thus, judges face legal challenges in monitoring and overseeing these individuals. Presently, there exists a singular statute that pertains to the application of Information and Communication Technology in cases of child sexual violence. The KUHAP does not yet regulate the application of technology in criminal law enforcement, the fundamental statute that serves as a framework for other legal provisions. The deficiencies of the legal system are most evident in the allocation of judicial resources, which predominantly focus on managing criminal cases rather than fulfilling supervisory and monitoring roles. Moreover, adequate infrastructure is essential for Information and Communication Technology, especially considering the conditions of LAPAS, which significantly diverge from those of other countries. The optimisation of judicial supervision and monitoring of criminal offenders renders Information and Communication Technology highly significant due to its advantages and beneficial attributes. To operationalise this, it should be articulated inside the KUHAP in the section about judicial oversight and monitoring, to institute it as a new standard within that provision.

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