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The Implementation of The Policy on The Use of Web-Based Applications on Trademark Registration Applications in Indonesia

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Abstract

This study aims to analyze and evaluate the implementation of the web-based application policy for trademark registration in Indonesia, focusing on the simplification of service procedures, ease of use, and technological aspects, as well as the quantitative implications for the volume of trademark applications, renewals, and Non-Tax State Revenue. A qualitative approach was employed, utilizing in-depth interviews with three policymakers from the Directorate General of Intellectual Property (DJKI) and ten users of the application. The interview data were subsequently processed using NVIVO 15 software. The analysis concludes that the implementation of the trademark application has successfully simplified service procedures and proven user-friendly; technologically, it meets standards for reliability and service capacity while driving an increase in trademark applications, renewals, and Non-Tax State Revenue derived from trademark services. Nevertheless, empirical findings also indicate room for further improvement in the policy's implementation.

Keywords: Trademark Policy, Micro and Small Enterprises, Administrative Burden, Intellectual Property Rights, Policy Implementation

INTRODUCTION

The development of information technology in the current modern era has had a significant influence on various aspects of people's lives. This progress not only facilitates access to information but also brings benefits in increasing efficiency in various sectors. On the other hand, the rapid growth of information technology also creates a world that is increasingly connected without geographical boundaries, thereby encouraging rapid and dynamic social changes (Ramli, 2006). Information Technology (IT) refers to a set of technologies designed to assist humans in performing various activities related to data processing. These activities include the process of collecting, organizing, storing,

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processing, and presenting data into information that is useful, accurate, and valuable for decision-making and other activities (Sugiarto, 2023).

Nugroho (2003) states that e-government is the use of information technology aimed at strengthening the relationship between the government and the community, including individuals, business actors, and other stakeholders. In this context, the online trademark registration application is a concrete example of the application of the e-government concept in the field of legal and intellectual property services. According to Sosiawan (2015), the unequal level of digital literacy among the lower-middle class is a significant obstacle in the utilization of electronic-based government services (e-government). According to Soetomo (2004), the successful implementation of a public policy depends not only on the substance of the policy itself but also on the implementing actors, the availability of resources, and the community's response to the policy.

This research has high relevance considering that trademark registration plays a strategic role in providing legal protection for business actors, while also being an important foundation in driving the progress of the creative economy sector in Indonesia. Based on data from the ASEAN IP Register, to date, Indonesia has recorded the highest number of trademark registration applications in ASEAN, which is around 1,887,229 applications.



Figure 1. Trademark Application Volume of Indonesia

According to Thomas R. Dye (2013), public policy is whatever governments choose to do or not to do. William N. Dunn (2003) defines public policy as a series of decisions and actions that have specific goals and are carried out by government actors

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to solve public problems effectively. According to Mazmanian and Sabatier (1983), the success of policy implementation is influenced by three main factors: clarity and consistency of policy objectives, socio-political and administrative conditions, and the performance of policy-implementing actors. Meanwhile, according to Van Meter and Van Horn (1975), policy implementation is strongly influenced by six variables, namely: clear policy standards and objectives, resources, characteristics of implementing agencies, inter-organizational communication, the disposition or attitude of the implementers, and the social, economic, and political environment.

According to Dwiyanto (2006), public service is an activity carried out by government institutions to meet the community's needs for public goods and services. To understand the extent to which service quality is felt by users, the SERVQUAL approach by Zeithaml, Parasuraman, and Berry (1990) is highly relevant to use. SERVQUAL is a widely used model for measuring service quality based on five main dimensions, namely: Tangibles, Reliability, Responsiveness, Assurance, and Empathy.

The Technology Acceptance Model (TAM) developed by Fred Davis (1989) explains that the two main factors influencing a person in accepting and using technology are Perceived Usefulness and Perceived Ease of Use. Rogers (2003) in his theory on the diffusion of innovations explains that technology adoption is also influenced by several characteristics of the innovation itself, namely: Relative advantage, Compatibility, Complexity, Trialability, and Observability. Furthermore, according to Heeks (2006), digitalization in government, often referred to as the e-government concept, is the use of information and communication technology by public institutions to improve the efficiency of internal processes, expand access to services, and create a more open and interactive relationship between the government and citizens.

METHOD

This research uses a qualitative approach with an in-depth interview method with key informants within the Directorate General of Intellectual Property (DJKI). This approach was chosen because the problem being studied relates to the policy implementation process and the perceptions of decision-makers regarding the effectiveness of implementing a website-based application in the trademark registration application system in Indonesia. The data in this research were collected through in-depth interviews or the completion of written questionnaires sent to informants who have direct relevance to the policy on the use of website-based applications at DJKI.

Overall, this research involved 13 (thirteen) informants classified into two main groups to ensure comprehensive data source triangulation. The classification consists of 3 (three) informants from internal parties of the Directorate General of Intellectual Property (DJKI) as policy formulators and executors, and 10 (ten) informants from

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external parties as the target group or direct users of the application services. Informants were determined purposively, namely chosen based on certain criteria according to the research needs.

In-depth interviews were used to explore in more detail the perceptions, views, and experiences of the informants regarding the implementation of the policy on the use of website-based applications in the trademark registration application process in Indonesia. These interviews were semi-structured, where the researcher prepared main guiding questions but still provided room for informants to express their views freely. The interview results were recorded and transcribed verbatim, meaning all words were recorded as they are, including word repetitions, pauses, or spoken expressions, without paraphrasing or simplifying sentences.

In this research, data analysis was carried out with the help of NVivo Version 15 software, which functions to organize, group, and systematically interpret the data from in-depth interviews. Qualitative data analysis includes three main stages, namely data reduction, data display, and conclusion drawing/verification. To ensure the validity of the findings, the researcher conducted a source triangulation process by comparing information from various informants and conducting member checking to validate the interpretation results with the participants.

RESULTS AND DISCUSSIONS

Data Analysis Overview

Data in this research was collected through interviews involving 13 informants. All interview data were processed using NVivo 15 software through an open coding process, which produced 81 codes comprising parent codes and sub-codes with a total of 200 references from all data sources. The coding process focused on three main issues aligned with the research objectives: simplification of service procedures, ease of use of the application by users, and system reliability along with technological capacity.



Figure 2. Inter-Theme Word Cloud

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The visual Word Cloud dominated by the words "merek" (trademark), "aplikasi" (application), "proses" (process), and "sistem" (system) aligns with the focus of policy implementation. The high frequency of appearance for "pendaftaran" (registration), "pengajuan" (application), "mekanisme" (mechanism), and "pengguna" (user) represents the informants' findings regarding the effectiveness of simplifying service procedures while highlighting the extent of the trademark application's user-friendly level. The presence of supporting words such as "teknis" (technical), "infrastruktur" (infrastructure), and "daring" (online) directly underlines the importance of technological aspects, specifically regarding system reliability and service capacity.

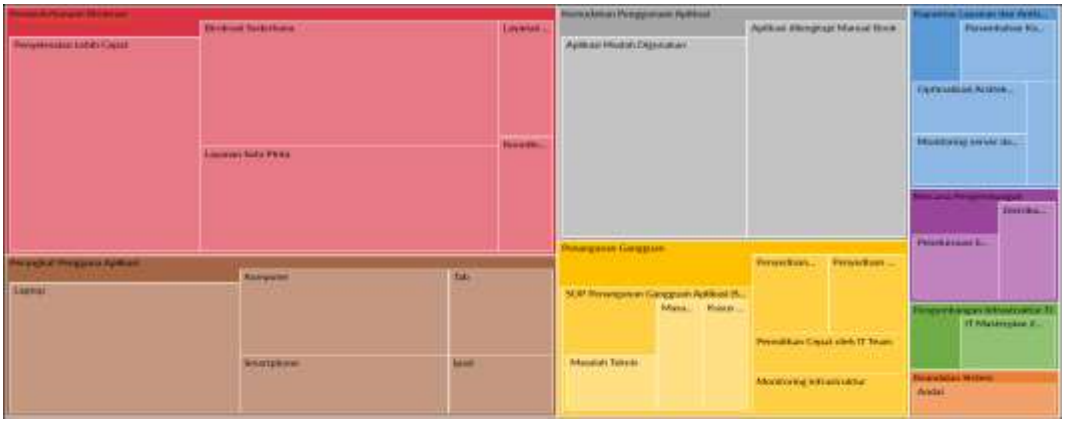


Figure 3. Inter-Theme Hierarchy

The hierarchy above provides several important analytical notes. Bureaucracy Simplification occupies the top rank for the most discussed theme. This confirms that the acceleration and simplification of service procedures are the most tangible impacts felt by the informants post-application implementation. Application User Devices and Application Ease of Use show that accessibility and user experience aspects received massive attention from the informants.

According to the rules stated in the Regulation of the Minister of Law of the Republic of Indonesia Number 5 of 2026 Concerning Trademark Registration, a trademark application in Indonesia can now be completed in a maximum of 3 (three) months if the application is administratively complete and receives no objections from others (two months of trademark publication and one month for administrative and substantive examination).

Simplification of Service Procedures

The implementation of electronic trademark application services has simplified the bureaucratic process. Applicants no longer need to come directly to the DJKI office or the

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Regional Office in every provincial capital, but rather simply submit an application, upload requirement documents, and make PNBP payments through the merek.dgip.go.id application. Digitalization also facilitates the examination process by officers because all documents are stored electronically, so that the service process can be carried out more quickly and efficiently.

According to the rules stated in the Regulation of the Minister of Law of the Republic of Indonesia Number 5 of 2026 Concerning Trademark Registration, a trademark application in Indonesia can now be completed in a maximum of 3 (three) months if the application is administratively complete and receives no objections from others (two months of trademark publication and one month for administrative and substantive examination).

During the physical document-based submission period, the completion of the application until the issuance of a final decision generally required one to two years. After the implementation of the application-based system, this duration gradually shortened to seven to eight months, and under current conditions can be completed in a maximum of 6 (six) months. Integration with the Intellectual Property Consultant Database (PDKKI) allows applicant data to be filled in automatically if the application is submitted by a registered intellectual property consultant. From the payment aspect, the Trademark Application is connected to the Intellectual Property Payment System (Simpaki) which automatically generates a PNBP billing code after the application requirements are met. After that, the applicant can directly pay the Non-Tax State Revenue (PNBP) billing code issued from the Trademark Application, and this can also be paid through many channels such as M-Banking, Marketplace Applications like Tokopedia, Shopee, and others.

Regarding the contribution to bureaucratic simplification, respondents from the community using the website-based trademark application consistently highlighted time efficiency as the main advantage compared to conventional submission mechanisms. Hardi Nurcahyo, a civil servant, stated, "Now I can register a trademark anytime anywhere, it only takes about 20 minutes to fill out. Very practical, no need to go to the DJKI office". The aspect of time and place flexibility was also emphasized by respondent Yovianko, who stated, "First, it shortens the time because trademark applications are made online. No need to print paper and go to DJKI and queue to submit the application form. Second, flexibility. Applicants can submit trademark applications and monitor the progress of applications anytime and anywhere".

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Figure 4. Word Cloud of Service Procedure Simplification

The visual word cloud clearly shows the dominance of the words "merek" (trademark), "proses" (process), and "aplikasi" (application) which become the center point of the informants' experiences and views. The appearance of supporting terms such as "pengajuan" (application), "mekanisme" (mechanism), "pembayaran" (payment), up to the "single window" concept provides a picture that the institution is focusing on revamping traditional bureaucracy workflows into a more integrated system.



Figure 5. Hierarchy Chart of Bureaucracy Simplification

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Referring to the hierarchy chart above, all elements are incorporated into one large blue umbrella representing "Bureaucracy Simplification". Inside that main block, the largest visual proportion is occupied by the element "Faster Completion". This fact becomes the main indicator that the highest selling point of the Trademark application's presence for the public is time efficiency. The subsequent largest blocks are sequentially filled by "Simple Bureaucracy" and "One-Stop Service".

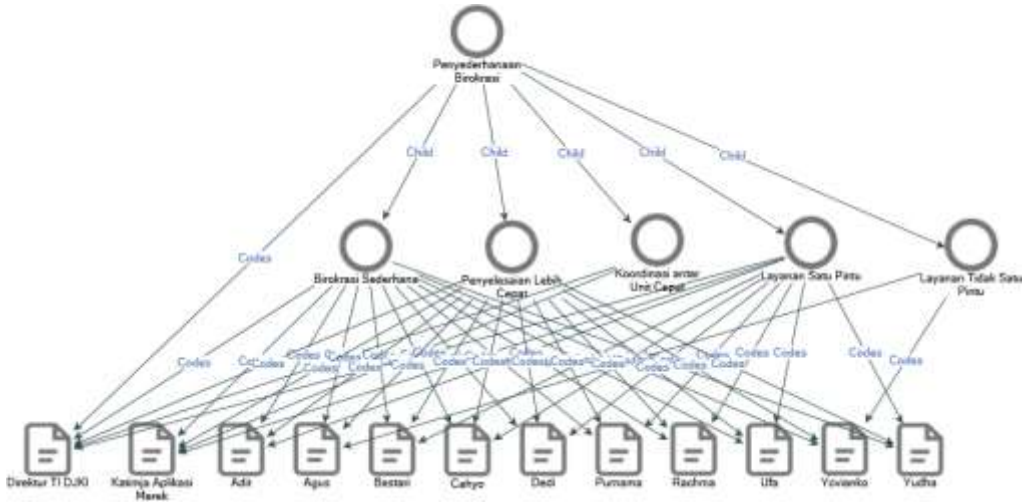


Figure 6. Project Map of Bureaucracy Simplification

The bureaucracy simplification project map displays a very comprehensive interaction pattern, involving consensus from all research participants. The "Faster Completion" and "Simple Bureaucracy" nodes receive massive line pulls from the users. Digitalization has eliminated the necessity for applicants to be physically present at the DJKI counter, cut down the process of filling out paper forms prone to loss, and automated the initial verification stages.

Before 2019, application growth was relatively moderate with an average annual increase in the range of 5.5%, constrained by the accessibility of services which were still manual. After the launch of the application in 2019, the volume of applications jumped significantly by 18.07% compared to the previous year, and continued to grow to reach 155,418 applications in 2025 — an increase of 151.9% compared to the position in 2014.

Table 1. The Growth of the Number of Trademark Registration Applications for the Year 2014–2025

Year	Number of Applications	Increase (%)	Increase in Number
2014	61,641	–	–
2015	61,894	0.41%	253

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2016	66,151	6.88%	4,257
2017	68,632	3.75%	2,481
2018	76,230	11.07%	7,598
2019	90,006	18.07%	13,776
2020	95,746	6.38%	5,740
2021	106,170	10.89%	10,424
2022	122,268	15.16%	16,098
2023	135,592	10.90%	13,324
2024	147,061	8.46%	11,469
2025	155,418	5.68%	8,357

A different pattern is actually seen in the trend of trademark renewals, which according to informants does not move linearly with the growth of new applications. The volume of renewals had surged sharply to reach its peak of 33,458 applications in 2022, but in the last three years it has actually tended to flatten out and slightly decrease.

Table 2. The Growth of the Number of Trademark Renewals for the Year 2015–2025

Year	Number of Trademark Renewals	Increase (%)	Increase in Number
2015	21,159	–	–
2016	22,334	5.55%	1,175
2017	17,808	-20.27%	-4,526
2018	22,028	23.70%	4,220
2019	20,664	-6.19%	-1,364
2020	22,889	10.77%	2,225
2021	27,028	18.08%	4,139
2022	33,458	23.79%	6,430
2023	32,656	-2.40%	-802
2024	32,180	-1.46%	-476
2025	32,568	1.21%	388

Based on the existing PNBP data, there is an indication that the implementation of the online trademark filing system in 2019 is related to an increase in PNBP revenue, but this relationship is more appropriately called a correlation rather than a definite direct cause-and-effect relationship. Before the use of website-based applications (2015–2018), PNBP increased from IDR 140.88 billion to IDR 198.30 billion with an average

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growth of around 12.60% per year. After the online application started to be implemented in 2019, PNBP increased from IDR 211.78 billion to IDR 399.98 billion in 2025.

Table 3. The Growth of Non-Tax State Revenue (PNBP) for Trademark Services for the Year 2015–2025

Year	Total PNBP (IDR)	Increase (%)	Increase in Amount (IDR)
2015	140,877,800,000	–	–
2016	154,745,550,540	9.84%	13,867,750,540
2017	194,128,600,000	25.45%	39,383,049,460
2018	198,301,000,004	2.15%	4,172,400,004
2019	211,775,050,000	6.79%	13,474,049,996
2020	246,587,599,971	16.44%	34,812,549,971
2021	273,008,955,658	10.71%	26,421,355,687
2022	297,517,450,000	8.98%	24,508,494,342
2023	324,374,636,161	9.03%	26,857,186,161
2024	372,973,554,658	14.98%	48,598,918,497
2025	399,981,871,439	7.24%	27,008,316,781

Ease of Use (User Friendly) of the Trademark Application

From the side of user accessibility, the Director of IT of DJKI mentioned that the trademark registration application can be accessed through various types of devices, although the most optimal user experience is still obtained through a computer or laptop. "Yes, it can be accessed through various types of devices, namely computers, laptops, tabs, ipads as well as smart phone devices, but the best experience and it is easier if using a pc and laptop by using the google chrome and mozilla firefox internet browsers".

By design, the interface of the merek.dgip.go.id application is designed with reference to the principle of ease of use, where the application flow is arranged sequentially and structurally starting from account creation, form filling, uploading requirement documents, to PNBP payment, so that users can follow the process stages independently without requiring technical assistance. The availability of supporting documents for users is also confirmed by informants, who stated that technical guidelines for using the application can be accessed through the official DJKI channel. "Yes it is equipped, it is available on the merek.dgip.go.id website and also on the main DJKI website at dgip.go.id".

On the aspect of navigation ease, the majority of Trademark Application Users consider the trademark application easy to use, even by applicants who are accessing

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the system for the first time. Respondent Yudha, a private employee who has used the application for more than six years, described his experience: "Yes, it is very easy to find the required menu, easy to directly understand to submit a trademark application, no need to look for guides from youtube". A similar assessment was also conveyed by respondents from intellectual property consultants, who incidentally have a higher frequency of using the application compared to individual applicants. "I think it's easy for the size of an IP Consultant," stated Yovianko.

All respondents, without exception, stated that the application has been equipped with adequate technical instructions and user manuals. The presence of this manual book acts as a passive virtual assistant that guides the applicant step by step, thereby minimizing data input errors (such as classification of goods/services classes) and reducing the rejection ratio of applications due to administrative issues.



Figure 7. Word Cloud of Ease of Use

The visual word cloud shows the dominance of the words "merek" (trademark), "aplikasi" (application), "pengguna" (user), and "pendaftaran" (registration), representing the primary focus of the public's experience when interacting with DJKI's digital platform. The significant appearance of supporting words such as "panduan" (guide), "petunjuk" (instruction), "membantu" (helping), "memahami" (understanding), and "mudah" (easy) provides a strong indication that the informants' attention heavily emphasizes the completeness of navigation and technical instruction support.

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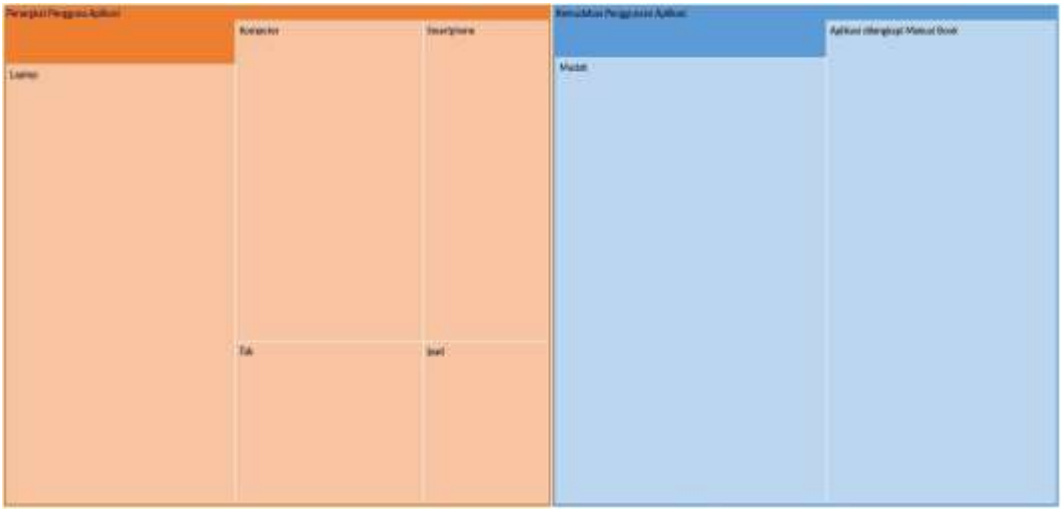


Figure 8. Hierarchy Chart of Ease of Use Aspect

Referring to the hierarchy chart visualization, the orange block representing "Application User Devices" occupies a slightly larger spatial proportion compared to the blue block representing "Application Ease of Use". On the device block, Laptop and Computer gadgets dominate the conversation, followed by Smartphone, Tab, and iPad. On the ease of use dimension, the majority of informants stated that the system is "Easy" to operate, supported by the availability of technical guides in the form of "Application equipped with Manual Book".

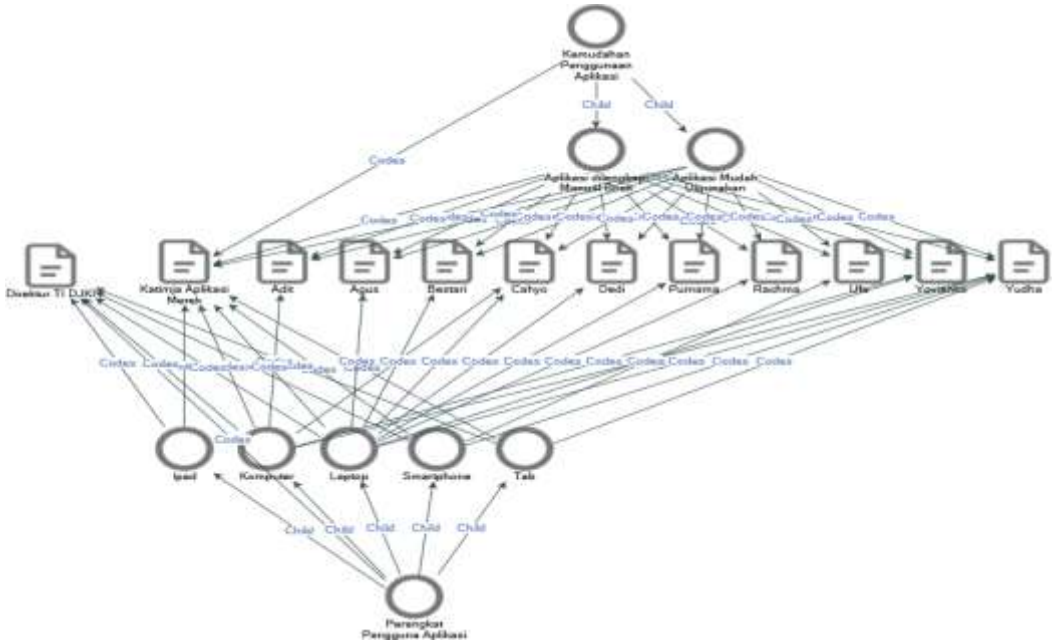


Figure 9. Project Map of Application Ease of Use

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The node "Application is Easy to Use" receives line pulls from almost all external informants. The consensus from the users reflects that the user interface (UI) and user experience (UX) designed by DJKI have met digital ergonomic standards. The navigation flow in registering a trademark is considered logical, uncomplicated, and easy to understand even by laypeople. DJKI has mitigated potential user confusion by providing a comprehensive electronic manual book.

Technological Aspects: System Reliability and Service Capacity

System reliability also receives special attention in this interview. Based on a report from the DJKI Information Technology Evaluation Working Team, up to Quarter 2 of 2026, which is in April 2026, the SLA realization of the DJKI IT Directorate reached 99.15%, exceeding the minimum target of ≥ 99.00% set in the 2026 DJKI Performance Agreement. It can be said that this Trademark application can be called a reliable system. There has never been a system downtime that took a long time.

To anticipate technical disruptions, DJKI implements a preventive approach in the form of real-time infrastructure monitoring and the provision of backup power through Uninterruptible Power Supply (UPS), before the backup generator takes over the electricity supply. The handling of disruptions to online trademark services at DJKI is carried out based on the Application Complaint Handling SOP (SOP-DJKI-06.03) which was stipulated and ratified by the Director of Intellectual Property Information Technology on November 27, 2023. The SOP regulates the flow of complaint handling systematically involving three layers of implementers, namely service users, service desk, and complaint managers.

Although it is common for government digital service providers in the early phases of their digital transformation, it cannot be denied that the system experienced a decrease in performance under traffic surge conditions that exceeded previously calculated capacities, which then became important evaluation material for the technical team to adjust the architecture and increase infrastructure capacity more anticipatorily. In the event that recurring problems are found, the DJKI Information Technology unit carries out comprehensive improvements to the application code and architecture to permanently eliminate the root cause of the problem, rather than just handling symptoms at the surface level.

Regarding future development directions, informants conveyed two main innovations being planned by DJKI: "The application of artificial intelligence-based trademark image search technology, which allows trademark examiners to check visual similarities automatically and more precisely than manual methods... The next innovation is the development of an automated application distribution system to substantive examiners, designed to replace the manual assignment mechanism with algorithms

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based on workload and competence". As a form of long-term planning, DJKI also has the 2025–2029 Information Technology Masterplan document which contains a roadmap for infrastructure capacity development year by year.



Figure 10. Word Cloud of Technological Aspects

The visual word cloud shows centrality in the words "sistem" (system), "teknologi" (technology), "informasi" (information), and "infrastruktur" (infrastructure), which explicitly depict the urgency of strengthening the digital foundation in intellectual property protection governance. The appearance of critical lexicons such as "kapasitas" (capacity), "gangguan" (disruption), "server" (server), "manajemen" (management), and "risiko" (risk) indicates that the informants' evaluation highlights real challenges regarding system reliability in accommodating surges in service traffic loads.

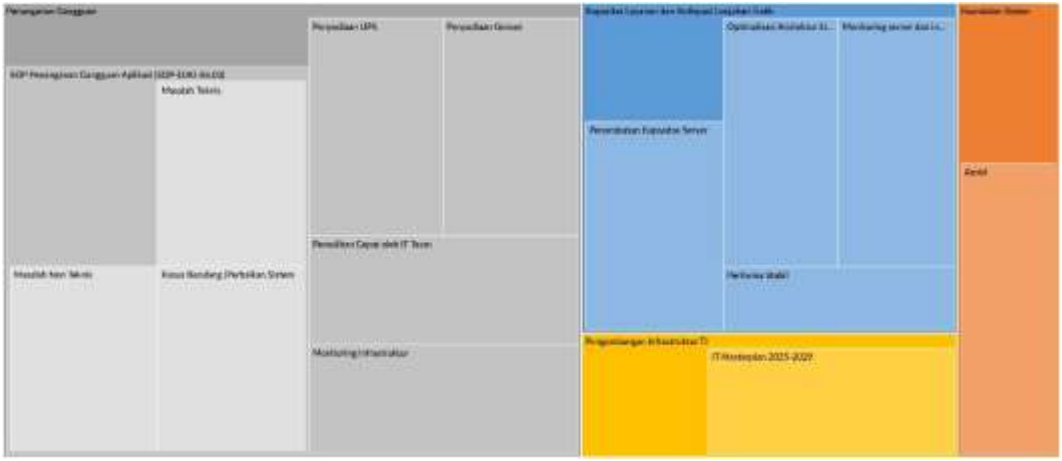


Figure 11. Hierarchy Chart of Technological Aspects

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The hierarchy chart mapping divides the information technology cluster into 4 determinant blocks. The gray block mastering the largest visual proportion is "Handling Disruptions". In the second position, the blue block represents "Service Capacity and Anticipation of Traffic Surges", followed by the macro conclusion in the orange block ("System Reliability") and the future roadmap in the yellow block ("IT Infrastructure Development").

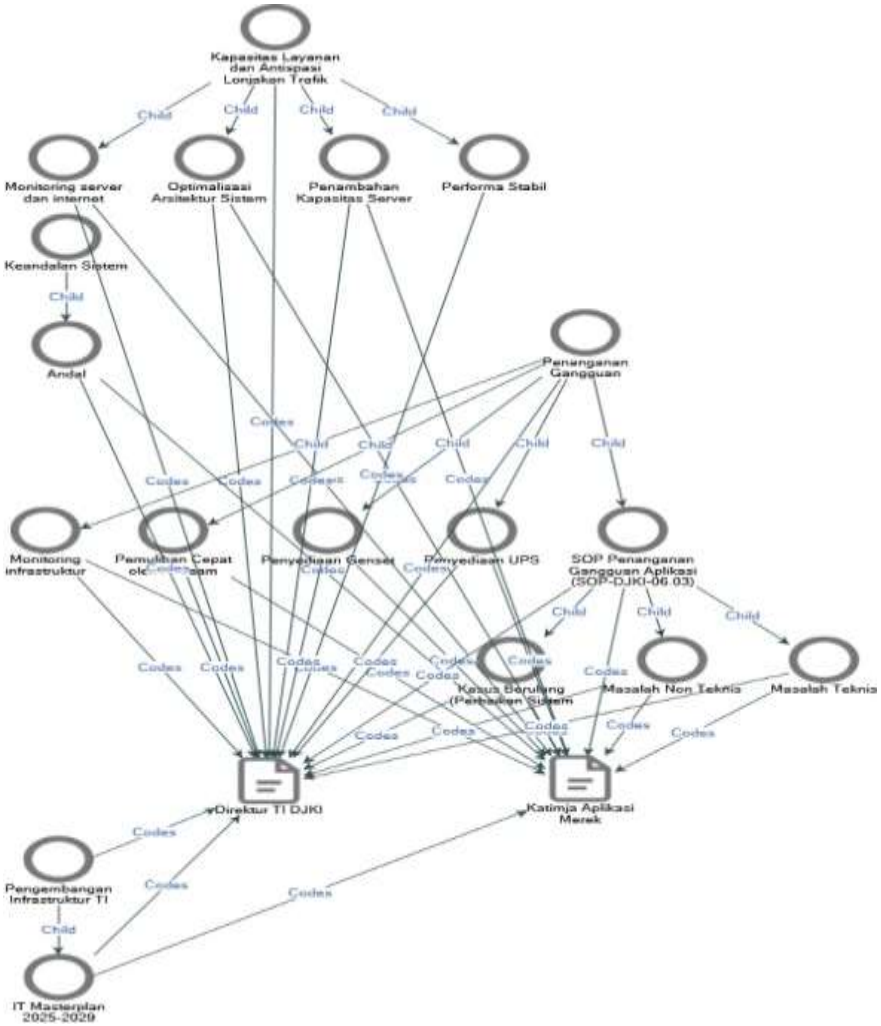


Figure 12. Project Map of Technological Aspects: Reliability and Capacity

Based on the project map, the technological robustness of the Trademark application is supported by several operational pillars. First, regarding the anticipation of traffic surges, the IT Director and Working Team Leader ensure "Stable Performance" through "Addition of Server Capacity" and "Optimization of System Architecture". Second, in the realm of technical crisis handling, DJKI already has an internal regulatory instrument in the form of "SOP for Application Disruption Handling (SOP-DJKI-06.03)".

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Third, the mapping shows the "UPS Provision" and "Genset Provision" nodes, representing physical power redundancy forms. Fourth, DJKI's technology investment is plotted for the long term through the "IT Masterplan 2025-2029" document.

CONCLUSION

This research seeks to deeply explore the implementation of the policy on the use of website-based applications in trademark registration applications in Indonesia. Referring to the formulation of the problem and the research objectives that have been set, based on the results of the qualitative analysis of all interview and observation data, the author produces the following conclusions: This website-based trademark application policy has tangibly succeeded in encouraging the simplification of service procedures. Completion becomes faster for the trademark registration process. The automation of administrative stages and the strengthening of inter-unit coordination drastically cut the bureaucratic chain to be simpler. The community using this Trademark application acknowledges that the Trademark Application already uses a one-stop service mechanism.

Reviewed from the aspect of ease of use (user-friendly), the Trademark application has proven to be highly adaptive and easy to operate by the community. This system is designed with an intuitive interface and cross-device access flexibility (multi-platform), allowing users to access services through various devices (laptops, computers, smartphones, and tablets). The success of this aspect is also driven by DJKI's preventive intervention through the provision of electronic guides (manual books) that effectively guide applicants and mitigate potential technical confusion during the form-filling process.

In the review of technological aspects, the Trademark application shows a robust level of system reliability and service capacity in accommodating the escalation of user traffic. This operational stability is achieved through capable server architecture management, the enforcement of Standard Operating Procedures (SOP) for rapid disruption mitigation, and the provision of hardware power redundancy. The entire infrastructure is designed sustainably through the IT Masterplan guidelines to ensure that public services continue to run without significant technical obstacles.

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