DIGITALIZATION OF THE COMMUNITY COMPLAINT SYSTEM TO ENHANCE TRANSPARENCY AND ACCOUNTABILITY OF DPMPTSP SERVICES IN BANYUMAS REGENCY

Dewi Nayasari[1*], Ade Irma Anggraeni[1] and Adnane Derbani[2]

[1]Economic and Business Faculty, Jenderal Soedirman University

[2]De Montford University

*Email corresponding author: dewi.nayasari@mhs.unsoed.ac.id

Abstract

This study explores the digitalization of the community complaint management system at the Investment and One-Stop Integrated Service Office (DPMPTSP) of Banyumas Regency. The research aims to evaluate how digital transformation enhances transparency, accountability, and service efficiency within public administration. A mixed-method approach was employed, combining qualitative data from interviews with DPMPTSP staff and public users with quantitative data derived from the Indeks Kepuasan Masyarakat (IKM) surveys and system performance analytics. The findings indicate that digital complaint platforms, AI-powered chatbots, and automated ticketing systems significantly improve response time, complaint resolution efficiency, and citizen engagement. Additionally, integrating real-time monitoring and data analytics dashboards allows for better decision-making and continuous service improvement. However, challenges remain, including digital literacy gaps, cybersecurity concerns, and the need for interdepartmental coordination. This study highlights the importance of user-centered digital solutions in modernizing government services and proposes policy recommendations to enhance system adoption, security, and long-term effectiveness. By addressing these challenges, DPMPTSP Banyumas can fully optimize its digital complaint management system to strengthen public trust and service quality.

Keywords: Digital complaint system, public service efficiency, transparency, AI integration, government digitalization

Abstrak

Penelitian ini mengeksplorasi digitalisasi sistem pengelolaan pengaduan masyarakat di Dinas Penanaman Modal dan Pelayanan Terpadu Satu Pintu (DPMPTSP) Kabupaten Banyumas. Penelitian ini bertujuan untuk mengevaluasi bagaimana transformasi digital meningkatkan transparansi, akuntabilitas, dan efisiensi layanan publik. Pendekatan metode campuran (mixed-method) digunakan dengan menggabungkan data kualitatif dari wawancara dengan staf DPMPTSP dan masyarakat serta data kuantitatif dari survei Indeks Kepuasan Masyarakat (IKM) dan analisis kinerja sistem. Hasil penelitian menunjukkan bahwa platform pengaduan digital, chatbot berbasis AI, dan sistem tiket otomatis secara signifikan meningkatkan waktu respons, efisiensi penyelesaian pengaduan, dan keterlibatan masyarakat. Selain itu, integrasi pemantauan real-time dan

dasbor analitik data memungkinkan pengambilan keputusan yang lebih baik dan peningkatan layanan secara berkelanjutan. Namun, masih terdapat tantangan, termasuk kesenjangan literasi digital, masalah keamanan siber, dan perlunya koordinasi antarinstansi. Studi ini menekankan pentingnya solusi digital yang berorientasi pada pengguna dalam modernisasi layanan pemerintahan serta mengusulkan rekomendasi kebijakan untuk meningkatkan adopsi sistem, keamanan, dan efektivitas jangka panjang. Dengan mengatasi tantangan tersebut, DPMPTSP Banyumas dapat mengoptimalkan sistem pengelolaan pengaduan digital guna memperkuat kepercayaan publik dan kualitas layanan.

Kata kunci: Sistem pengaduan digital, efisiensi layanan publik, transparansi, integrasi AI, digitalisasi pemerintahan

A. INTRODUCTION

The Investment and One-Stop Integrated Service Office (DPMPTSP) of Banyumas Regency is instrumental in the management of a variety of licensing and investment services, with the objective of enhancing public services. DPMPTSP is anticipated to operate with transparency, accountability, and efficiency, as an institution that engages with the public and enterprises directly. An effective complaint management system is a critical component of achieving these objectives, as it enables the public to report concerns, provide feedback, and seek resolution regarding service quality.

Public complaints are a critical method for assessing service performance and pinpointing areas that require improvement. DPMPTSP can enhance public trust, resolve issues more efficiently, and optimize its processes by implementing a well-organized complaint management system. Accountability ensures that government agencies are held accountable for promptly and effectively addressing concerns, while transparency in complaint handling guarantees that citizens are informed about the status of their grievances.

The current public complaint management system at DPMPTSP Banyumas is confronted with challenges, despite its advantages. Numerous complaints are not promptly resolved, and certain citizens believe that their concerns are not adequately addressed. This underscores the necessity of a more structured and technology-driven approach to enhance the efficiency of complaint management.

The complaint management system is presented with a valuable opportunity to be improved due to the growing influence of digitalization in public services. Response time, accessibility, and overall service quality can be substantially enhanced through the implementation of automated monitoring systems, data-driven decision-making tools, and online complaint portals.

The study evaluates the efficacy of the existing complaint management system in improving transparency and accountability, as evidenced by the author's internship at DPMPTSP Banyumas. This study endeavors to suggest recommendations for optimizing

the system through digitalization and policy enhancements by examining real-world case studies and practical challenges encountered during the internship.

B. IMPLEMENTATION AND METHOD

Both qualitative and quantitative methods were used in analyzing and implementing the digital complaint management system at DPMPTSP Banyumas. Such an approach ensures that the system's impact on transparency, accountability, and service quality is evaluated deeply.

For understanding the existing problems of complaint handling, information was obtained from interviews, analysis of complaints records, benchmarking, and online public satisfaction surveys (Indeks Kepuasan Masyarakat - IKM). In the interviews with DPMPTSP staff and citizens, the respondents pointed out some problems with the system – such as slow response times and follow-up on the complaints. They also analyzed complaint historical records to find issues and bottlenecks that are recurrent and prevent effective service delivery.

Analyzed data was collected from IKM, an Indeks Kepuasan Masyarakat, a questionnaire that measures the satisfaction of the services provided, which is done online. DPMPTSP used IKM results and questionnaires to gauge different dimensions of service quality including responsiveness, transparency, effectiveness of problem solving, and overall user experience in the complaint system. The result was then subjected to statistical analysis. By doing this, trends, strengths, and areas of improvement were distinguished. In order to facilitate real-time decision making, these results were displayed in an IKM dashboard regular and DPMPTSP corrected service quality through the use of the data.

A digital complaint management platform prototype was built using the report generation stage insights that incorporated an online submission portal, automated ticketing, AI chatbots, and real-time tracking features. A select group of public service workers and citizens were invited to a pilot test to evaluate the system's usability and efficiency.

Feedback was collected during the pilot phase to further improve the platform post initial implementation. There was commentary on overall accessibility, times to respond, and the effectiveness of the complaint tracking system. An analysis of the feedback was undertaken, and system and user changes implemented. Furthermore, the new system's resolution times and overall user satisfaction were pitched against the traditional complaint management process.

The last step in the methodology was to analyze the system performance and put in place measures for improvement. Key Performance Indicators (KPIs) were created to measure time taken to respond, rate at which complaints are solved, and the extent of satisfaction among users. The benchmark digitalization service effectiveness survey results were utilized to compare the service efficiency before and after service digitalization. Feedback surveys and system audits were performed regularly to enhance the system and ensure it serves the public and meets the emerging technological needs.

To enhance effectiveness over a prolonged period, the system was constructed to provide for updates to be made based on user feedback, changes in policies, technologies, etc. By including the IKM surveys as part of the DPMPTSP’s routine, DPMPTSP was

able to make such services timely, reliable, and accountable to the citizenry through the responsive digital complaint management system.

For improved clarity and responsibility, the digitalization of the DPMPTSP Banyumas complaint management system needs a detail oriented approach. The first step involves creation of the complaint portal through which the users can easily register complaints, check the status of their complaints, and receive notifications. The system should be designed to work as a web and mobile application so that people from different strata can use the service with ease. Furthermore, merging the complaint system with current government systems will enable effective data transfer and faster resolution of complaints.

Another critical step is increasing the level of automation in handling a complaint. The system can be enabled to give responses to Frequently Asked Questions and file complaints, which will enhance the speed of response times. In addition, an auto ticketing feature will direct complaints to the responsible department, thereby streamlining work processes. There will also be an electronic means of viewing the status of the complaints registered to allow users to follow up on the complaints submitted and receive proactive updates.

To increase effectiveness, the system shall be linked with the internal databases of DPMPTSP. The integration will simplify case management, enabling officials to access and address the complaints with greater ease. The data will be stored on the cloud to improve accessibility and security, and data-sharing protocols with other government agencies will be implemented for more expedient adjudication of multifaceted matters requiring the participation of several departments.

Furthermore, the digital system will enhance reporting and analytical capabilities to include dashboard reporting and analytics. By applying data analytics, the patterns of the complaints data can be examined to pinpoint persistent service problems with their corresponding solutions. A data analyst will be tasked to build an automated reporting dashboard for internal performance monitoring, enabling DPMPTSP to track the resolution time for complaints and the productivity of the staff. Results will also be published periodically in an attempt to further enhance the public's faith in DPMPTSP's ability to manage public complaints.

In the end, it is ensured that user training and campaign awareness will be conducted effectively. Staff of DPMPTSP will be trained on how to use the new system so that it is possible to handle complaints accurately. Simultaneously, campaigns will also be planned to teach citizens how to make and monitor complaints on the internet. The system will take into consideration all segments of society by providing support in multiple languages so that no one has difficulties in utilizing the service.

If these structured steps are adhered to, the digital complaint management shall, with time, accomplish higher levels of efficiency, transparency, and accountability at DPMPTSP Banyumas which, in turn, shall serve to enhance public trust services.

C. RESULTS AND DISCUSSION

Digitalization of the complaint management system at DPMPTSP Banyumas is capable of increasing the level of transparency, accountability, and service effectiveness. From the formulated implementation plan and the system’s strategy, a good number of

conclusions regarding the success of this transformation have been drawn.

Moving from manual complaint handling to computerized record management systems processes is easier to manage. Citizens with the aid of an online complaint portal can submit complaints any time, observe the progress, and receive notifications regarding the resolution of their complaints. It handles the opacity and delays that characterized the complaint-handling process. Automated tracking systems in combination with AI chatbots enhances the speed and accuracy of the response ensuring that the complaints are resolved fairly and systematically.

DPMPTSP can also take advantage of his information to enhance transparency through the online reporting and analytics features abandoning the time lag between reporting trends, identifying inefficiencies, and compiling periodic report on complaint resolutions. IKM portray a significant part when analyzing assistance as it yields insight about the areas that need improvement. Therefore it is crucial for the public to have trust in government services to encourage higher participation rates when assessing the services provided.

The novel adoption of a digitalized system has made initial steps effortless. With the constructed complaint system integrated with the government platforms, complaint resolution becomes more efficient and interlinked. Furthermore, integration with the internal databases provides coordinated data sharing between departments so that cases cannot be misplaced or mishandled.

Nevertheless, one of the accompagning concerns in execution is the transition period for employees and the public. Even though training DPMPTSP workers increases their familiarity with the system, publicity campaigns are just as important to educate citizens on the use of a digital system. Success in this form of digitalization depends on the broad acceptance, and therefore, ease of use, and requires active support from users to continuously improve services and resolve useful functions.

This approach, which involves systems for data collection, case study observations, and performance evaluations, guarantees the most up-to-date adaptation of the digital system. The IKM survey mechanism is crucial for evaluating how efficient the digitalized system is on users' satisfaction and service delivery in terms of time and quantity. Through analysis of the survey data and complaint resolution results, the features of the DPMPTSP system can be adjusted to improve responsiveness and eliminate delays in handling complaints.

Moreover, the ongoing identification and analysis of a development system using a digitized complaint management system can be measured through the application of various critical digital metrics. This also ensures that a user-centered approach is adhered to and innovative technologies are effectively incorporated.

Besides other benefits, the digital complaint management system presents some pressing issues such as barriers to technology, system security, and maintenance. Barriers such as a lack of infrastructure in rural areas and a digital literacy gap among a significant portion of the citizenry can prove to be obstacles. Other forms for receiving and processing complaints (like community service centers) need to be retained.

Maintenance and security of the system poses a problem where storage and processing is done onto the cloud which requires placing additional resources onto cybersecurity that

safeguards sensitive information shared by citizens.

Reliability in service is provided at the same quality standard across board and while automation of processes cuts down on response time, there is still the need to provide additional human resources to manage difficult cases. There must accordingly be a proper staff coordination and policy formulation and implementation to manage the matter adequately.

In order to achieve transformation, improvement that is not ad-hoc but embedded into the culture should be adopted where it is the standard approach to governance as public services are provided digitally. Integration of AI for deeper interaction with smart governance platforms and regular updates to the system will increase productivity.

Moreover, the adoption of new digital technologies on public services can be aided by the use of blockchain-enabled complaint tracking systems, or with the application of predictive analytics algorithms powered through AI for enhanced service transparency and fraud control. Complementing these channels with services that allow for WhatsApp complaints or chatbot voice recognition systems will also aid in greater public participation.

D. CONCLUSION AND SUGGESTION

CONCLUSION

The digitalization of the complaint management system at DPMPTSP Banyumas is a substantial enhancement in service efficiency, accountability, and transparency. The system has been made more structured and accessible to the public by incorporating an online complaint portal, AI-driven automation, real-time monitoring, and integrated data analytics. Indeks Kepuasan Masyarakat (IKM) surveys have been incorporated, which has provided valuable insights into public satisfaction levels, enabling data-driven service enhancements.

The system's responsiveness to public requirements and technological advancements was guaranteed by the methodological approach, which integrated qualitative and quantitative data collection, pilot testing, and continuous evaluation. The utilization of automated ticketing systems and AI chatbots has increased efficiency; however, additional improvements are required to improve the pace of complaint resolution and the accuracy of responses.

However, a number of obstacles continue to exist, such as the necessity for human supervision in intricate cases, cybersecurity concerns, and digital literacy gaps. The success of this transformation is contingent upon the ongoing enhancement of the system, the enhancement of interdepartmental coordination, and the increase in public engagement. It will be essential to guarantee that the system remains adaptable, secure, and inclusive in order to ensure its long-term sustainability.

SUGGESTION

Several enhancements should be implemented to further improve the efficacy and efficiency of the digital complaint management system. Initially, it is imperative to broaden public awareness and digital literacy initiatives to guarantee that the system is effectively utilized by the populace. Workshops, community outreach initiatives, and social media campaigns may be implemented to achieve this objective. Furthermore, the system will be more accessible to a broader spectrum

of users by offering simplified user guides and multilingual support.

Secondly, in order to protect sensitive complaint data, it is imperative to enhance system security and data protection. This encompasses the implementation of robust cybersecurity measures, such as multi-factor authentication and data encryption, in addition to the regular execution of security assessments to identify and resolve vulnerabilities. Guaranteeing data preservation is essential for preserving public confidence in the system.

Third, the efficiency of complaint handling should be enhanced by enhancing AI capabilities and human oversight. By upgrading AI-powered chatbots, it will be possible to provide more precise and context-aware responses to public inquiries. Nevertheless, human moderators should continue to be involved in the management of complex complaints that necessitate detailed analysis and decision-making. A more effective service delivery will result from a well-balanced combination of human supervision and automation.

Subsequently, it is imperative to enhance interdepartmental coordination to facilitate the resolution of complaints, particularly those that involve multiple government agencies. The improved communication and collaboration between departments will be achieved by establishing a centralized complaint resolution task force. Additionally, it is recommended that automated workflow monitoring be implemented to oversee the efficiency of the resolution and management of complaints.

In addition, the IKM (Indeks Kepuasan Masyarakat) survey system should be enhanced to enhance the collection of feedback and to offer a more comprehensive understanding of service quality. The expansion of IKM surveys through SMS, WhatsApp, and email notifications will foster increased citizen engagement. Additionally, predictive analytics can be employed to analyze survey trends in order to identify recurring issues and inform future service enhancements.

Lastly, the complaint management system should be further innovated by investigating future technologies. The service can be made more accessible to citizens with limited literacy or disabilities by developing a voice-command-enabled complaint system, while the implementation of blockchain-based complaint monitoring can enhance data integrity and prevent tampering.

ACKNOWLEDGEMENT

Deepest gratitude is extended to DPMPTSP Banyumas for providing the valuable opportunity to undertake an internship and gain firsthand experience in public service management and digital complaint handling**.** The knowledge and skills acquired during this period have greatly enriched the understanding of government service efficiency, transparency, and accountability**.** Sincere appreciation is also conveyed to the DPMPTSP staff and mentors**,** whose guidance and support have been instrumental in facilitating learning and professional development throughout this journey.

Heartfelt appreciation is also extended to the Diploma III International Business Program at Universitas Jenderal Soedirman for equipping interns with the academic foundation and practical knowledge necessary for success in this internship. The continuous support from lecturers and academic mentors has been invaluable in shaping professional growth. Their encouragement and guidance have enabled the effective application of

theoretical knowledge to real-world scenarios.

This experience has been truly transformative, providing an opportunity to contribute to and learn from a dynamic and impactful organization**.** Sincere gratitude is expressed for the unwavering support and for allowing participation in this remarkable learning journey.

E. LITERATURE

Kasemsap, K. (2017). Electronic government. In *Advances in finance, accounting, and economics book series* (pp. 1–30). https://doi.org/10.4018/978-1-5225-2319-2.ch001

Zhao, B., Cheng, S., Schiff, K. J., & Kim, Y. (2023). Digital transparency and citizen participation: Evidence from the online crowdsourcing platform of the City of Sacramento. *Government Information Quarterly*, *40*(4), 101868. https://doi.org/10.1016/j.giq.2023.101868

Zuiderwijk, A., Chen, Y., & Salem, F. (2021). Implications of the use of artificial intelligence in public governance: A systematic literature review and a research agenda. *Government Information Quarterly*, *38*(3), 101577. https://doi.org/10.1016/j.giq.2021.101577

Van Ooijen, B., & Welby, C. (2019). A data-driven public sector. *OECD Working Papers on Public Governance*. https://doi.org/10.1787/09ab162c-en

Chohan, S. R., & Hu, G. (2020). Strengthening digital inclusion through e-government: cohesive ICT training programs to intensify digital competency. *Information Technology for Development*, *28*(1), 16–38. https://doi.org/10.1080/02681102.2020.1841713

Ademola, O. E. (2024). Leadership Strategies for Successful E-Government and ICT Implementation in Public Administration: A Literature review. *Advances in Multidisciplinary & Scientific Research Journal Publication*, *10*(3), 1–14. https://doi.org/10.22624/aims/sij/v10n3p1

De Mingo, A. C., & Cerrillo-I-Martínez, A. (2017). Improving records management to promote transparency and prevent corruption. *International Journal of Information Management*, *38*(1), 256–261. https://doi.org/10.1016/j.ijinfomgt.2017.09.005

Pargaonkar, S. (2023). A comprehensive review of performance testing methodologies and best practices: Software Quality Engineering. *International Journal of Science and Research (IJSR)*, *12*(8), 2008–2014. https://doi.org/10.21275/sr23822111402