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Internship Program on Land Information Systems for Improving Public Service Efficiency at Pandeglang Land Office

Rafif Prayata Nurbintan¹

¹ State Administration Program, Pamulang University

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CORRESPONDING AUTHOR

*E-mail: rafifprayata3@gmail.com

ABSTRACT

This internship program aims to analyze the utilization of Land Information Systems in improving public service efficiency at the National Land Agency (BPN) of Pandeglang Regency. The implementation of digital transformation in land administration services is increasingly important to support faster, more accurate, and transparent public services. This program uses a qualitative descriptive approach through observation, interviews, and documentation during the internship period. The activities carried out include direct involvement in administrative services, data entry into the land information system, document verification, and filing processes. The results show that the utilization of land information systems such as Geo-KKP supports service efficiency by improving data accuracy, accelerating administrative processes, and enhancing document management. However, several challenges were identified, including limited human resource capacity, partial use of manual procedures, and suboptimal system utilization. These conditions affect the overall efficiency of land services. Therefore, it can be concluded that land information systems play an important role in improving public service efficiency, but further optimization is needed through human resource development and better system integration to achieve more effective and responsive land services.

1. INTRODUCTION

Public service is one of the primary responsibilities of government institutions in fulfilling the needs of society. The quality of public services has become an important indicator in evaluating the performance of public organizations. In the digital era, government agencies are increasingly required to provide services that are faster, more transparent, and accountable to the public. According to (Yudiyanto & Pandjaitan, 2025), digital transformation has become a necessity for public institutions in improving service delivery and enhancing public trust. One area of public service that plays a strategic role is land administration, as it is closely related to legal certainty of land rights, land registration, and land information management. Therefore, the utilization of information technology in land services is essential for improving service quality and administrative efficiency.

The Ministry of Agrarian Affairs and Spatial Planning/National Land Agency (ATR/BPN) is responsible for administering land affairs in Indonesia, including land registration, certificate issuance, maintenance of land records, and resolution of land-

related disputes. To improve the effectiveness of these services, ATR/BPN has continuously implemented digital transformation initiatives. According to (Fefiyanto et al., 2024), one of the major innovations introduced by the institution is the Land Information System (Sistem Informasi Pertanahan/SIP), which functions as a digital platform for managing land data and providing land-related information. This system supports decision-making processes from administrative, legal, and economic perspectives while also contributing to development planning through integrated land data management.

One of the land information systems implemented by ATR/BPN is Geo-KKP (Geospatial Computerization of Land Offices). Geo-KKP is an advanced development of the Land Office Computerization System (KKP) that integrates textual and spatial land data within a single platform. This integration enables more accurate land administration and reduces mapping errors commonly found in manual administrative processes. Previous studies have indicated that digitalization through Geo-KKP contributes to better land administration management and enhances the efficiency of land data processing (Zein et al., 2023).

In addition to Geo-KKP, ATR/BPN has developed the Sentuh Tanahku application as part of its e-government initiative in land services. According to (Mawaddah, 2026), the application improves efficiency, transparency, and accessibility of land services by enabling citizens to obtain information more quickly and conveniently. However, the effectiveness of this application is still influenced by several factors, including limited digital literacy among users and the readiness of supporting technological infrastructure. Consequently, the success of digital transformation depends not only on the availability of information systems but also on the preparedness of institutions and users in utilizing digital technologies effectively.

Although various digital innovations have been implemented in land administration services, challenges remain regarding their effectiveness in improving public service delivery at the local level. Differences in technological readiness, human resource capacity, and public understanding of digital services may affect the optimal utilization of land information systems. Therefore, it is important to examine how these systems are implemented in practice and identify the obstacles encountered during their operation.

This article aims to describe and analyze the utilization of Land Information Systems in improving public service efficiency at the National Land Agency of Pandeglang Regency. Furthermore, it seeks to identify the challenges faced in the implementation process and to evaluate the contribution of digital land services to enhancing service quality, transparency, and administrative effectiveness.

2. MATERIALS AND METHODS

2.1 Program Approach

This internship program employs a participatory approach and technology transfer. The participatory approach is implemented through students' direct involvement in land administration activities at the Pandeglang Regency Office of the National Land Agency (BPN), such as observations, discussions with staff, and participation in administrative service processes. In addition, the technology transfer approach is used to understand and observe the utilization of land information systems such as Geo-KKP and other digital services in supporting the improvement of public service efficiency. This approach aims to provide firsthand insight into how information systems are applied in day-to-day service activities.

2.2 Location, Time, and Partner

The internship took place at the Pandeglang Regency Office of the National Land Agency (BPN), located at Jl. Raya Labuan Km. 3, Sukaratu, Majasari Subdistrict, Pandeglang Regency, Banten Province.

The internship takes place from January 19 to March 3, 2026, in accordance with the academic schedule of the Public Administration Study Program at Universitas Pamulang, Serang Campus.

The partner in this activity is the Pandeglang Regency Land Office, specifically its land services division, such as the Land Rights Determination and Registration Section. The number of participants involved in this administrative activity is determined based on the office's internal needs. This agency was selected based on the relevance of its field of work to the discipline of Public Administration, as well as its focus on the use of land information systems in public service delivery.

2.3 Program Stages

a. Problem Identification

This phase was conducted through direct observation at the Pandeglang Regency Land Office and discussions with staff members. The objective was to understand the land service workflow, the use of information systems, and the challenges encountered in the service delivery process.

b. Program Planning

At this stage, coordination with relevant agencies took place, and preparations for the internship were made. The author also studied theories related to public service and land information systems as a foundation for the internship.

c. Program Implementation

The internship involved direct participation in service activities, such as assisting with document verification, entering data into the land information system, and filing documents. In addition, the author also observed the use of the Geo-KKP system in the service process.

d. Monitoring and Evaluation

The evaluation was conducted through discussions with staff and field supervisors to assess the author's understanding of the service process and the effectiveness of the land information system in supporting service delivery.

e. Follow-Up

The follow-up involved systematically compiling an internship report based on data collected during the activities at the Pandeglang Regency Land Office. This report covers the results of observations, interviews, and documentation related to land service processes and the use of the information systems employed. In addition, the author also provides an overview of the implementation of the land information system in the field, including its effectiveness, challenges, and the system's role in supporting the efficiency of public services.

Furthermore, the author offers constructive suggestions and recommendations regarding efforts to optimize the use of the land information system, such as improving the quality of human resources, strengthening data integration, and maximizing the use of technology in service delivery processes. It is hoped that these recommendations will serve as a basis for evaluation by the agency in improving the quality of land services to make them more effective, efficient, and responsive to the needs of the community.

2.4 Techniques of Program Implementation

The techniques used during the internship included direct observation, interviews, discussions, documentation, and fieldwork. Observations were conducted to directly monitor the land service workflow at the Pandeglang Regency Land Office, enabling the author to understand the stages of the service process from start to finish and to see firsthand how the land information system is applied in operational activities. Interviews were conducted with agency staff to obtain more in-depth information regarding work systems, the use of the land information system, and the challenges faced in service delivery, ensuring that the data collected is based not only on observations but also on practical field experience. Documentation was used to support data on activities during the internship, including photographs, notes, and relevant records pertaining to the land service process, serving as supporting evidence for the preparation of the report. Meanwhile, fieldwork involved directly assisting with administrative service processes, such as data entry, file review, and document archiving, allowing the author to understand the practical application of the service system in the field while enhancing work skills in the field of land administration.

2.5 Data Collection and Evaluation Instruments

The instruments used in data collection and the evaluation of internship activities are intended to obtain accurate information about the activity process, assess the results of implementation, and support the analysis in the preparation of internship reports. Data collection was conducted to describe the actual conditions in the field, particularly regarding land services and the use of the

land information system at the National Land Agency in Pandeglang Regency.

The instruments used include observation sheets, interview guidelines, activity attendance lists, activity documentation, field notes, and assessments of work outputs such as data entry and document archiving. These instruments are used to ensure that the data obtained is more comprehensive, systematic, and aligned with the analytical needs of the internship report.

Data for this internship was collected through observation, interviews, and documentation. Observations were conducted to directly observe land service processes in the registration and rights determination sections. Interviews were conducted with staff to obtain information regarding the use of the land information system in service delivery. Documentation served as supporting evidence for activities such as data entry, filing, and other service-related activities at the Pandeglang Regency Land Office.

2.6 Data Analysis

The data were analyzed using a qualitative descriptive approach, which involved narratively describing the results of observations, interviews, and documentation to clearly illustrate the implementation of the field internship activities. This analysis aims to provide an overview of how land services operate at the Pandeglang Regency Land Office and how the land information system is used to improve the speed and efficiency of service delivery.

Data from observations were used to directly describe the land administration service process, particularly regarding registration and the determination of land rights. Data from interviews and collected documents were analyzed to assess how effectively the land information system is utilized in service delivery and to identify obstacles encountered during the internship.

Subsequently, the analysis was conducted by grouping the data based on several themes: the land service process, the use of the land information system, obstacles in service delivery, and efforts to improve service efficiency. The results of this analysis were used to evaluate how effectively the land information system was utilized in helping to improve the quality of public services at the Pandeglang Regency Land Office.

2.7 Indicators of Program Success

The success of the internship program at the Pandeglang Regency National Land Agency is assessed based on several aspects, namely an increase in students' understanding of land administration processes, particularly in the areas of registration and title determination. Additionally, success can be measured by the extent to which students are able to understand and use the land information system employed in these services.

Other indicators include improvements in administrative skills—such as data entry, file review, and document management—as well as students' active participation in various service activities at the agency. Success is also reflected in students' ability to understand how the agency operates, as well as their capacity to identify issues that arise during service delivery and the use of the information system.

In addition, positive evaluations from field supervisors and feedback from the agency are also important indicators in assessing the overall success of the internship program.

3. RESULT AND DISCUSSION

To support the analysis of the results of the internship program at the National Land Agency in Pandeglang Regency, it is necessary to identify performance indicators throughout the duration of the program. These indicators are used to assess changes in students' understanding, skills, and competencies before and after the internship, particularly in the land administration process and the use of land information systems.

Table 1. Participants' Knowledge Before and After the Program

Indicator	Before Program	After Program	Change
Understanding of the land service process	Do not yet fully understand the process.	Understand the registration process and the determination of rights	Improving
Land Information System Skills	Not yet able to operate the system	Able to enter data and understand how to use the system	Improving
Administrative skills	Limited to theory	Able to enter, verify, and file data	Improving
Understanding service efficiency	Do not yet have a practical understanding	Understand the importance of efficiency in service	Improving

Based on the table above, it can be seen that there was an improvement in all indicators following the internship program. The most significant improvement was observed in students' understanding of land administration processes and their skills in using land information systems; whereas previously students lacked firsthand understanding of the agency's workflow, after the internship they gained a better understanding and were able to participate in administrative tasks.

In addition, administrative skills such as data entry, document verification, and filing also improved because students were directly involved in service activities. These results indicate that the internship program made a tangible contribution to enhancing students' competencies, particularly in understanding public service practices in the land sector and the importance of utilizing information systems to support service efficiency.

4. CONCLUSION

Based on the results of the internship program at the National Land Agency in Pandeglang Regency, it can be concluded that this internship contributed to enhancing students' understanding, skills, and experience regarding land services, particularly in the areas of registration and rights determination. By being directly involved in service delivery processes, students gained a clearer understanding of how the agency operates and how the land information system is applied to support public services.

The results of the program indicate that the use of the land information system helps improve service efficiency, particularly in data processing, document verification, and document storage. However, there are several obstacles, such as processes that are still carried out manually and limitations in maximizing the system and human resources.

Overall, this internship program not only provides real-world work experience but also helps students better understand the application of public administration in the field of land affairs. Therefore, improvements are needed in the land information system, workforce skills, and a reduction in manual procedures so that services can run more effectively and efficiently in the future.

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