

Training on the Utilization of Cloud Storage and Data Encryption in the Archiving of Authentic Deeds by Notaries on Sebesi Island, South Lampung

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Abstract: *This community service activity focuses on improving the digital literacy of notaries and prospective notaries in Pulau Sebesi, South Lampung, regarding the secure archiving of authentic deeds through cloud storage and data encryption. The purpose of this program is to enhance understanding of legal and technological aspects of digital archiving in accordance with the Notary Law and the Electronic Information and Transactions Law. The method used was a participatory-collaborative approach involving legal socialization, technical training, and direct mentoring. Participants were introduced to encryption practices and the use of cloud platforms for secure document management. The results showed an increase in participants' knowledge and skills in applying digital security principles to notarial archives, as well as the formation of a digital notary group committed to continuing technological adaptation for legal documentation in remote island areas.*

Introduction

The development of digital technology has brought significant changes in almost all aspects of life, including in the field of notarial law. The ongoing digital transformation requires notaries to adapt to work systems that are electronic and based on information technology. In this context, notaries are not only public officials who draw up authentic deeds but also legal data managers who must ensure the security and integrity of electronic documents. Therefore, the ability to utilize digital technologies such as cloud storage and data encryption has become an essential skill for notaries in the modern era (Kinasih, 2024).

An authentic deed is a legal document that carries perfect evidentiary value in Indonesia's legal system. Consequently, such deeds must be managed with great care, both in physical and digital forms. Digital archiving of deeds is not only aimed at improving spatial and temporal efficiency but also serves as a strategic measure to preserve legal data from the risk of loss or damage (Sopyan et al., 2025). A cloud-based archiving system allows notaries to store and access documents easily, anytime and anywhere, while maintaining security and confidentiality in accordance with legal provisions (RENO, 2022).

The implementation of digital archiving systems has yet to be fully optimized across Indonesia, especially in island regions such as Sebesi Island, South Lampung. Based on preliminary observations, most notaries and notary candidates in this area still face limitations in understanding the concepts and practices of digital data security. This is due to the lack of technical training and uneven internet infrastructure that hinders the effective use of cloud technology. As a result, legal document archiving is still carried out conventionally, which is prone to the risks of data loss and breaches.

The geographical isolation of Sebesi Island is one of the main obstacles to the adoption of information technology. Unstable internet access and limited technological devices make it difficult for notaries to independently implement digital storage systems. Yet, adequate digital infrastructure is a prerequisite for supporting the modernization of legal administration in island regions. Academic and practical interventions from higher education institutions are therefore needed to strengthen human resource capacity in law and technology (Putra, 2024).

The low level of digital literacy among notaries and notary candidates also poses a major challenge. Many legal practitioners still perceive digital archiving as highly vulnerable to data breaches, without realizing that encryption technology is actually designed to protect information from unauthorized access. This lack of understanding has led to resistance toward adopting new technologies, even though, in the era of public administration digitalization, the ability to secure data through encryption is a form of professional responsibility for notaries in maintaining client and document confidentiality (Sitaresmi & Ristawati, 2025).

Through this community service program, a team of lecturers from the Faculty of Law and the Faculty of Informatics at Universitas Sang Bumi Ruwa Jurai collaborated to provide a tangible solution to these challenges. This program was designed to integrate legal and technological aspects into a comprehensive training package. The training not only provided understanding of the legal foundations of digital archiving as regulated by the Notary Position Law and the Electronic Information and Transactions Law (ITE Law) but also equipped participants with technical skills in the use of cloud storage and data encryption (Yurika, 2025).

The collaborative approach between the fields of law and informatics became the

key to the program's success. Law lecturers explained the normative and ethical aspects of digital legal document storage, while informatics lecturers provided technical training on cloud mechanisms, network security, and data encryption methods to ensure confidentiality. As a result, the participants not only understood the legal framework but were also able to apply the technology in their daily notarial practices (FIDIYANI, 2025).

The use of cloud storage in the notarial context is not merely about ease of access but also administrative efficiency. With a cloud-based storage system, notaries can perform quick data searches, update documents without duplication, and conduct automatic backups to prevent data loss due to physical device damage (Putra, 2024). This technology, when combined with strong data encryption, produces an efficient and secure digital archiving system that meets the professional standards of modern notaries in the digital era (Kurniawan & Latumahina, n.d.).

This community service initiative is expected to create a digital notarial ecosystem on Sebesi Island. By enhancing human resource capacity, notaries and notary candidates will be better prepared to face the paradigm shift toward legal digitalization. The wider community will also benefit indirectly through faster, more transparent, and more efficient legal services. This transformation aligns with the government's policy to realize electronic-based governance (e-government) that upholds principles of accountability and information security.

The training on the use of cloud storage and data encryption serves not only as a means of technical knowledge transfer but also as an effort toward technology-based legal empowerment. The cross-disciplinary collaboration between law and informatics represents an innovative model of community engagement that can be replicated in other regions with similar geographical and social conditions. This program constitutes a concrete step in bridging the gap between the advancement of digital technology and its application in notarial practice in Indonesia, particularly in island areas such as Sebesi Island, South Lampung.

Method

The activity began with a needs survey and preliminary assessment of participants to determine their level of understanding regarding digital archiving and data security. The community service team conducted interviews and distributed questionnaires to identify the main problems faced by participants in managing legal documents. The survey results were used as the basis for developing training materials tailored to the participants' conditions and capabilities, particularly considering the limited digital infrastructure available on Sebesi Island (AHIMSYA, 2025).

The next stage involved training sessions and legal socialization, which were divided into two main parts. The first session focused on the legal and ethical aspects of

digital notarial practice, delivered by lecturers from the Faculty of Law. The material covered topics such as the legal basis for electronic signatures, the validity of digital documents, personal data protection, and the legal responsibilities of notaries in storing electronic archives. The second session, led by lecturers from the Faculty of Informatics, provided technical training on the use of cloud storage applications such as Google Drive, OneDrive, and Nextcloud, as well as practical exercises on data encryption using simple software tools (Ridwan, 2025).

After the training, participants engaged in direct simulation and mentoring to implement what they had learned. During this stage, participants were tasked with creating password-protected digital archive folders, encrypting deed documents, and simulating data backup procedures to the cloud. The mentoring process was conducted intensively to ensure that participants fully understood how to maintain data security and were able to apply it independently in their professional activities.

Result

The implementation of the training on the utilization of cloud storage and data encryption in the archiving of authentic deeds by notaries on Sebesi Island, South Lampung, was carried out successfully and received positive responses from the participants. The activity was attended by 25 participants, consisting of notaries, notary candidates, village officials, and community members interested in digital-based legal administration. Participant enthusiasm was evident from the beginning, as most of them admitted that this was their first time receiving training on digital archiving and data security.

The program began with an opening session emphasizing the importance of the legal profession's adaptation to advancements in information technology. Resource persons from the Faculty of Law provided in-depth explanations regarding the notary's responsibility to maintain the confidentiality of deed documents, as well as the legal framework governing the use of electronic documents and digital signatures. Participants showed great interest in discussions concerning the legal validity of digital deeds based on the Notary Position Law and the Electronic Information and Transactions Law (ITE Law).



Figure 1. Documentation of the training activity on the utilization of cloud storage and data encryption by notaries on Sebesi Island.

In the next session, lecturers from the Faculty of Informatics presented the basic concepts of cloud storage and data encryption, accompanied by a live demonstration on how to create accounts, organize storage folders, and activate security features on platforms such as Google Drive and Nextcloud. Participants were guided to practice storing deed files in password-protected digital folders. Several participants admitted that they had just learned that cloud systems could provide better data protection than local storage, provided that adequate security layers were applied.

The training also included explanations of various types of encryption that can be used to protect authentic deed archives. Participants were taught how to use software such as VeraCrypt and 7-Zip to encrypt files, create access keys, and understand the importance of secure password management. Through this practical session, participants gained hands-on experience in securing digital documents to prevent unauthorized access.

After the presentation and demonstration stage, participants were divided into small groups to conduct an integrated digital archiving simulation. Each group was asked to create a cloud folder structure according to notarial needs, such as archives for sale and purchase deeds, company establishment deeds, and grant deeds. Subsequently, each file was encrypted and tested with a restricted access system. The simulation results showed that most participants were able to follow the procedures well and demonstrated an understanding of basic digital security concepts.

The evaluation results indicated a significant improvement in participants' understanding. Based on pre-test and post-test data, there was an average increase of

82% in legal and technical knowledge related to digital archiving. Before the training, only 28% of participants understood the functions of data encryption and cloud-based storage, whereas after the training, the number rose to 90%. This data shows that the training had a tangible impact on improving digital literacy among notaries and notary candidates on Sebesi Island.

During the activity, participants were also actively engaged in discussions about the challenges of implementing cloud systems in notarial practice in island regions. Some of the obstacles mentioned included limited internet access, the cost of digital platform subscriptions, and concerns about potential data breaches. The service team explained that there are many open-source solutions that can be used for free while maintaining a high level of security, meaning that cost should not be a major barrier to digital transformation.

This program not only enhanced participants' technical skills but also fostered legal awareness regarding the importance of maintaining the confidentiality and integrity of documents. As public officials, notaries bear both moral and legal responsibility to ensure that all digital archives are protected from manipulation or data loss. The training served as an initial step for participants to apply information security principles consistently in their professional practice.

Another impact of this program was the establishment of a professional collaboration network between notaries on Sebesi Island and the mentoring lecturers from Universitas Sang Bumi Ruwa Jurai. Through continued communication, participants plan to form a notarial digitalization study group to facilitate information exchange and experience sharing among practitioners. The lecturers' team also committed to providing ongoing online mentoring to ensure continuous development of digital archiving system implementation.

This community service program proved that applying information technology in the legal field is not difficult when carried out with the right and sustainable approach. The training, which integrated both legal and informatics aspects, successfully increased participants' confidence in managing deed archives digitally. The implementation of cloud storage and data encryption systems serves as a strategic step to support notarial professionalism while strengthening safer, more efficient, and sustainable legal document management on Sebesi Island, South Lampung.

Discussion

The results of the training on the utilization of cloud storage and data encryption in the archiving of authentic deeds by notaries on Sebesi Island demonstrate that digital transformation in the notarial field is not merely a technical necessity but also an integral part of legal and professional ethical responsibility. Notaries are required to adapt to changing work patterns that demand efficiency, transparency, and information security.

This training proved that understanding the legal basis of deed digitalization must be accompanied by technical competence in managing data securely and professionally.

The involvement of lecturers from both the fields of law and informatics in this community service activity served as a strategic step in building cross-disciplinary synergy. In practice, many participants realized that legal and technological aspects cannot be separated when addressing the issue of electronic document security. Understanding the legal validity of digital deeds based on the Notary Position Law and the Electronic Information and Transactions Law (ITE Law) became the foundation for participants to embrace the paradigm shift in legal administrative processes. This interdisciplinary approach enriched the participants' perspectives, as they not only learned about legal norms but also understood how digital systems work to support legal compliance.

The training also revealed that the main challenge in implementing digital archiving systems in island regions lies not only in infrastructure limitations but also in human factors. Low digital literacy, lack of continuous training, and resistance to change remain real barriers to the modernization of the notarial profession. After participating in the training, participants realized that the use of cloud storage does not contradict the principle of deed confidentiality, as long as it is supported by proper encryption-based security systems. This shift in perception is a crucial outcome in transforming traditional mindsets toward a more modern and efficient notarial practice.

The simulation of cloud storage utilization provided valuable hands-on experience for participants. They directly observed that digital storage systems offer convenience in searching, updating, and backing up data without relying on physical archives. Cloud technology was also seen as a practical solution to the limited storage space in notary offices, particularly in areas with restricted transportation access such as Sebesi Island. This finding shows that the application of information technology in notarial practices can be gradually adapted to local conditions.

Discussions during the activity highlighted the importance of personal data protection and the notary's legal responsibility in maintaining the confidentiality of electronic documents. Participants came to understand that breaches of data security not only affect professional reputation but may also lead to legal consequences. The law lecturers emphasized that the use of technology must align with the principles of prudence and compliance with applicable regulations. This perspective strengthened the participants' awareness that digitalization must never compromise professional ethics.

From a technological standpoint, data encryption emerged as a key component in maintaining the integrity of legal documents. Participants who had previously been unfamiliar with encryption concepts were now able to use them independently. This hands-on experience demonstrated that basic technical skills can be significantly improved through well-structured and practical training. The participants' success in

encrypting and decrypting deed files proved that digital security technologies can be applied in simple ways without the need for expensive equipment. This outcome indicates that technological innovation can be implemented in island regions as long as it is supported by appropriate training.

This community service program also opened opportunities for developing a community-based digital notarial system. Participants planned to establish a working group called “Digital Notaries of Sebesi Island,” serving as a platform for information exchange, collaborative learning, and peer mentoring in the adoption of digital technologies. This initiative reflected the participants’ independence and commitment to continuing digital transformation sustainably. The establishment of this group is expected to serve as a model for implementing digital notarial practices in other regions with similar geographical characteristics.

The analysis of the activity results also showed a positive impact on increasing public legal awareness. Through interaction during the program, village officials and local residents gained an understanding of the importance of securely storing legal documents in digital form. Although the training focused on notaries, its benefits extended to the broader community, which began to appreciate the value of data security in daily life. This aligns with the broader goal of community service, which is not only to enhance professional capacity but also to promote social empowerment through legal digital literacy.

From an academic perspective, this program strengthened the role of higher education institutions in bridging the gap between theory and practice. The collaboration between law and informatics lecturers demonstrated that the application of knowledge must be able to respond to real societal needs. This type of community engagement model can serve as a reference for other universities to develop similar programs that integrate regulatory and technological aspects. The training conducted on Sebesi Island proved that universities can act as catalysts for change toward modern and inclusive legal governance.

The training on the utilization of cloud storage and data encryption on Sebesi Island provided concrete evidence that digital transformation in the legal field can be implemented gradually, based on local needs, and oriented toward improving human resource competence. The participants now have a deeper understanding of the relationship between law, professional ethics, and information technology. The application of the training outcomes is expected to strengthen notarial practices that are professional, secure, and competitive in the digital era. This program marks an important step toward establishing an adaptive and sustainable digital notarial ecosystem in South Lampung.

Conclusion

The training on the utilization of cloud storage and data encryption in the archiving of authentic deeds by notaries on Sebesi Island had a positive impact on enhancing participants' legal and technological competencies. This program successfully raised awareness of the importance of data security and deepened understanding of the legal foundations of digital archiving in accordance with statutory regulations. The collaboration between law and informatics lecturers proved effective in fostering an interdisciplinary understanding that is both practical and relevant to the needs of the notarial profession in the digital era. The outcomes of this activity are expected to serve as an initial step toward the implementation of a modern notarial system that is efficient, secure, and aligned with the principles of good administrative law in island regions such as Sebesi Island.

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