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Knowledge Management Cloud Base CV Idru Varen

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Abstract
This study explores the implementation of a cloud-based Knowledge Management (KM) system at CV Idru Varen, aiming to improve the efficiency of knowledge transfer and organizational performance. The research focuses on overcoming the barriers of fragmented information systems, slow decision-making processes, and operational delays. The developed KM system integrates various cloud-based tools for storing, sharing, and managing knowledge across departments, improving collaboration, data integration, and resource management. The study finds that the system significantly reduces operational costs, increases time efficiency, and fosters a culture of continuous learning and innovation. Furthermore, the research identifies areas for future enhancements, including the incorporation of artificial intelligence and enhanced mobile functionality. This paper provides insights into the practical implementation of cloud-based KM in small to medium-sized enterprises (SMEs), offering valuable lessons for organizations looking to optimize their knowledge management processes.

1 Introduction

Information Systems (IS) are structured frameworks designed to collect, store, process, manage, analyze, and present data to support decision-making within organizations (Agus Rohmat Hidayat, Nur Alifah, 2023). Using computer technology and specialized software, information systems integrate various components, including hardware, software, procedures, databases, and people, to create an efficient and effective information environment (Hidayat & Alifah, 2022). As organizations continue to face rapid changes in technology, IS becomes a critical tool to help achieve organizational goals by providing relevant and timely information for strategic decisions (Laudon & Laudon, 2020). This integration ensures that various functions, including decision support and operational control, are streamlined and can be used for competitive advantage (Hendricks, 2019).

One of the key developments in IS is the rise of cloud computing. Cloud computing allows businesses to access and store data more flexibly while providing scalability and cost efficiency (Hidayat, Budiwidodo, Suherli, & Chandrasari, 2025). By integrating cloud-based systems, organizations can manage large volumes of data and enhance data analytics capabilities (Armbrust et al., 2010). These developments have opened up opportunities for increased efficiency, enabling businesses to handle more complex data sets in adaptive and dynamic ways. This evolution reflects the shift towards more agile and responsive IS solutions in the modern business landscape (Hidayat, Budiwidodo, Suherli, & Laksana, 2025). Knowledge Management (KM) is a

strategic approach to managing organizational knowledge by collecting, storing, managing, and distributing it to enhance organizational performance (Hardiyanto & Hidayat, 2025)

. The primary purpose of KM is to ensure that knowledge, both tacit and explicit, is accessible and can be used to improve efficiency, innovation, and decision-making. A robust KM system integrates technology to assist in collecting and sharing knowledge, thus fostering collaboration and continuous learning (Nonaka & Takeuchi, 1995). In the age of rapid technological advancements, cloud-based KM systems have become increasingly important as they facilitate the seamless sharing and access of knowledge across geographies and departments (Xue, 2018).

The use of Information Technology (IT) in KM further empowers organizations to capture valuable insights, prevent the loss of knowledge when employees leave, and promote a culture of innovation (Davenport & Prusak, 1998). Cloud-based systems specifically help overcome challenges like geographical barriers, fragmented data, and limited access to knowledge across an organization (Rohmat Hidayat et al., 2025). By providing a centralized platform, cloud systems make it easier to manage and share data across all levels of the organization (Singh & Sharma, 2020). This innovation in KM not only supports operational goals but also plays a key role in enhancing long-term strategic capabilities by enabling collaboration across different functions (Sharma, 2017).

In the context of implementing a cloud-based knowledge management system at CV Idru Varen, several challenges need to be addressed to ensure the system operates effectively. One of the main issues faced by the company is the lack of integration of information systems that support the flow of knowledge across departments. The current information systems are fragmented, which causes difficulty in sharing real-time information between employees in different locations. This hinders fast and effective decision-making, which is crucial in today's competitive business environment (Singh & Sharma, 2020).

Another challenge identified is the resistance to change among some employees, especially those who are accustomed to manual systems or those that have been in place for many years. Implementing a cloud-based system requires training and a shift in organizational culture, which is not always easily accepted by all parties. Additionally, there are concerns regarding data security, as storing critical information in the cloud requires a higher level of protection and the potential risks of data breaches, which could be financially and reputationally damaging to the company (Zhang & Lee, 2019).

Moreover, CV Idru Varen faces challenges related to the initial implementation costs and maintenance of the cloud system. The initial investment to transition to a cloud-based system, along with long-term operational and maintenance costs, becomes a barrier for many companies, particularly those with limited budgets like CV Idru Varen. Therefore, careful planning is needed to ensure that the long-term benefits outweigh the costs involved (Armbrust et al., 2010).

This research offers a novel contribution by exploring the implementation of cloud-based knowledge management systems in small to medium-sized enterprises (SMEs) like CV Idru Varen, which are often overlooked in literature focused on larger corporations. Unlike existing studies that primarily address larger organizations with extensive resources, this research focuses on the specific challenges and opportunities faced by smaller businesses in adopting cloud-based systems. This unique perspective sheds light on the practical implications of KM for SMEs, providing valuable insights into the scalability, affordability, and adaptability of cloud-based systems for organizational growth and knowledge sharing.

The primary purpose of this research is to explore and propose a practical framework for implementing a cloud-based knowledge management system at CV Idru Varen. This study aims to identify the key challenges and opportunities associated with the transition to a cloud-based system, offering strategies for overcoming resistance to change and ensuring smooth implementation. Additionally, the research seeks to examine how the system can improve organizational decision-making, facilitate knowledge sharing, and enhance overall business performance in a resource-constrained environment.

This research provides several benefits both for academic and practical applications. From an academic standpoint, it contributes to the literature on cloud computing and knowledge management systems by focusing on the implementation challenges in SMEs. It also offers a deeper understanding of how KM systems can be tailored to fit the needs of smaller organizations. Practically, the study will assist SMEs, especially those in similar sectors, in implementing cloud-based systems more effectively by providing actionable insights and best practices. Furthermore, the research can guide managers and decision-makers in assessing the feasibility, costs, and benefits of transitioning to cloud-based knowledge management solutions.

2 Method

The application of Knowledge Management (KM) in this research involves four main components: Human, Organization, Process, and Technology. Each component plays a critical role in ensuring the successful implementation of a cloud-based KM system at CV Idru Varen. These components are outlined as follows:

Human Component

The human element is fundamental to the success of Knowledge Management. KM cannot be effectively implemented without people who are skilled and committed to its use. Employees must be equipped with the right competencies to handle knowledge processes, from creation to sharing. This requires that employees understand the importance of knowledge management in improving their performance and the company's overall efficiency. In this context, a focus on employee training and development is essential, as it ensures that people are capable of participating in and driving KM initiatives. Furthermore, the company must promote a knowledge-sharing culture where collaboration is encouraged, and employees are motivated to contribute and exchange their expertise freely.

Organization Component

The organizational culture, policies, and strategies are crucial for the effective implementation of KM. For KM to succeed, the organization must have clear policies and procedures in place that align with its strategic goals. Organizational support in terms of leadership commitment and the allocation of resources is also vital. This involves establishing organizational structures and creating incentives for knowledge sharing. Furthermore, the organization needs to ensure that the rules governing KM are well-communicated to all employees. These rules should outline how knowledge is to be created, stored, shared, and utilized, fostering a transparent and consistent approach to managing knowledge across all levels of the organization.

Process Component

The KM process is essential for guiding how knowledge flows within the organization. A clear and structured process simplifies, develops, and enhances knowledge transfer. In this research, the KM process is structured into three training phases, each targeting different aspects of the knowledge-sharing and implementation process:

Orientation Training

Orientation training introduces employees to the business environment and the company’s operations. It serves as an introductory stage that helps employees familiarize themselves with various aspects of the business and how their roles fit into the broader organizational objectives. This training ensures that employees can effectively interact with external stakeholders, acting as representatives of the company and providing valuable feedback and suggestions.

Basic Training

Basic training focuses on providing employees with the foundational knowledge and skills needed for their specific roles. This training ensures that employees understand the fundamental concepts and workflows associated with their duties. By equipping employees with the basic knowledge needed to perform their tasks efficiently, this phase enables smooth integration with colleagues from different departments, fostering a collaborative environment where employees understand each other's roles.

Professional Training

Professional training targets employees who have advanced roles or specialized job descriptions. This training focuses on the development of specific skills required for employees to perform their duties at a high level. Professional training covers in-depth knowledge of job roles, responsibilities, and expectations, ensuring that employees are fully equipped to manage their professional duties while contributing to the overall organizational success. This training is critical for aligning employees' performance with the strategic goals of the company.

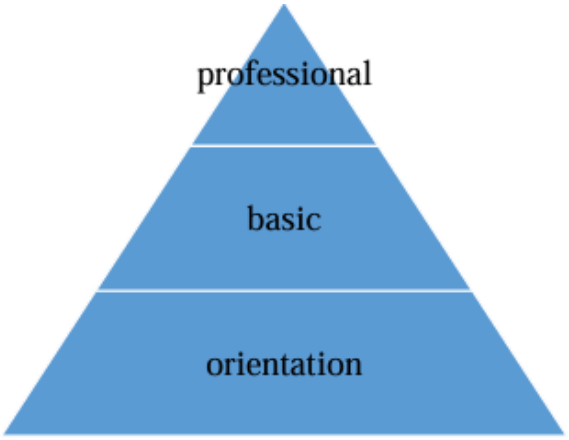


Figure 1. Structure Pyramid

Technology Component

Technology is a key enabler of collaboration, communication, and knowledge storage within a KM system. The use of cloud computing infrastructure as a service, in the form of web-based technologies, is a suitable solution for facilitating knowledge management processes. By leveraging the cloud, the company can enhance the creation, storage, transfer, and application of knowledge. Cloud technology allows for greater flexibility and accessibility, enabling employees to collaborate in real time, share knowledge, and access critical information from any location. This web-based infrastructure provides a centralized platform for storing and managing data, ensuring that knowledge is organized, easily accessible, and distributed effectively across the organization.

The adoption of a cloud-based KM system allows for seamless integration of technology with the business processes of the company. Employees can use cloud-based tools to contribute knowledge, access training materials, and collaborate on projects. This also reduces the dependency on physical resources and enables more efficient knowledge management operations, ensuring that valuable organizational knowledge is preserved and readily available.

3 Result and Discussion

The development and implementation of a cloud-based knowledge management (KM) system in this study aims to streamline the process of knowledge transfer within an organization, particularly in CV Idru Varen. By using cloud technology, the system offers a more efficient, flexible, and secure method for sharing and managing knowledge across various departments and employees. The following sections discuss the results of the implementation, the benefits of cloud-based KM, and the key findings from the study.

1. **System Overview and Structure**

   The cloud-based KM system developed in this study was designed with the core objective of facilitating the knowledge transfer process. Traditionally, many organizations face challenges in effectively sharing and disseminating knowledge across different departments due to barriers such as siloed systems, geographic distance, and slow information flow. This often leads to inefficiencies in decision-making and operational delays. The new system addressed these challenges by integrating various tools and platforms in a cloud-based environment that could be accessed remotely and in real-time, reducing information bottlenecks.

   The system incorporates several key features:

   a. Centralized knowledge repository: A unified platform where all knowledge resources—such as documents, procedures, training materials, and best practices—are stored. Employees can easily search and access relevant materials from anywhere.

   b. Collaborative tools: Features such as forums, discussion boards, and real-time messaging facilitate communication between employees, enabling them to share insights, ask questions, and collaborate on solving issues.

c. Knowledge sharing workflows: The system includes structured workflows that guide employees through the process of submitting, reviewing, and disseminating knowledge, ensuring that no important information is overlooked.
d. Data security: Robust cloud security features, including encryption and access control, ensure that sensitive information is protected.

2. Efficiency and Flexibility in Knowledge Transfer

One of the primary outcomes of implementing the cloud-based KM system was a significant improvement in the knowledge transfer process. With this system, knowledge could be transferred more efficiently between employees and departments, overcoming the barriers that often impede information sharing in traditional, non-cloud environments. As a result, employees spent less time searching for information, and the quality of decision-making improved, as the necessary knowledge was available at the moment of need.

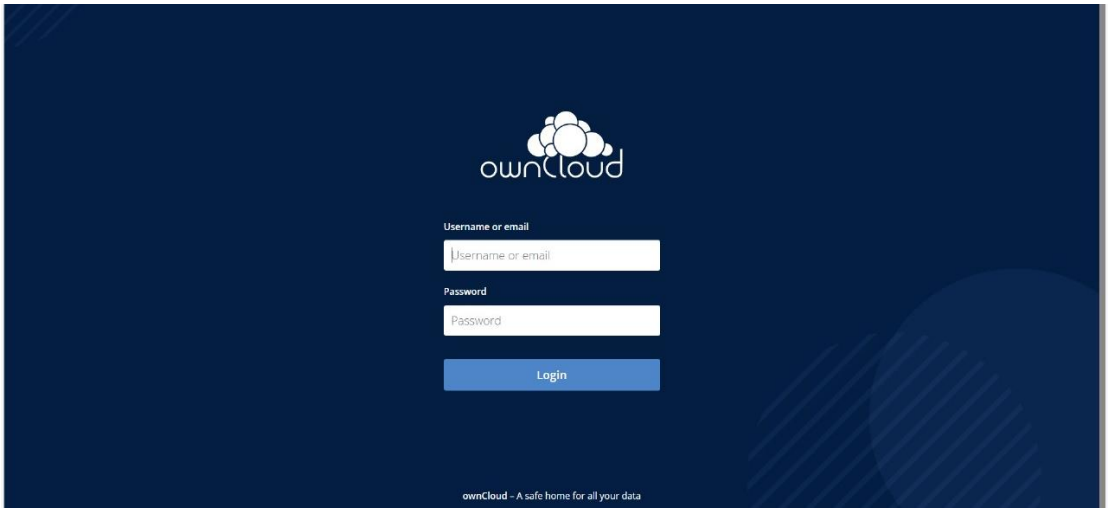
Before the system was implemented, knowledge transfer in CV Idru Varen was often slow and fragmented. Employees were relying on email chains, physical documents, and in-person meetings to share knowledge, which was time-consuming and inefficient. The new system streamlined these processes by providing an easily accessible, digital repository of all relevant knowledge that could be accessed instantly from any device with an internet connection.

The flexibility of access provided by the cloud system also allowed employees to interact with knowledge resources from various locations. For example, field workers and remote teams could access and contribute to the knowledge base without needing to be physically present in the office, enabling them to participate in the knowledge management process more actively. This flexibility was crucial for CV Idru Varen, as it had employees working in different geographic areas.

3. Enhanced Data Integration

Another key benefit of the cloud-based KM system was its improved data integration capabilities. In the pre-cloud environment, CV Idru Varen's knowledge was often fragmented across different departments and systems. Data was stored in silos, making it difficult for employees to access information from other parts of the company. This lack of integration hindered collaboration and slowed down decision-making.

By integrating data into a single cloud-based system, the organization was able to eliminate silos and create a more cohesive knowledge ecosystem. The system facilitated the flow of information not only within departments but also across the entire organization. This integration made it easier for employees to access the information they needed, ensuring that critical knowledge was not missed.



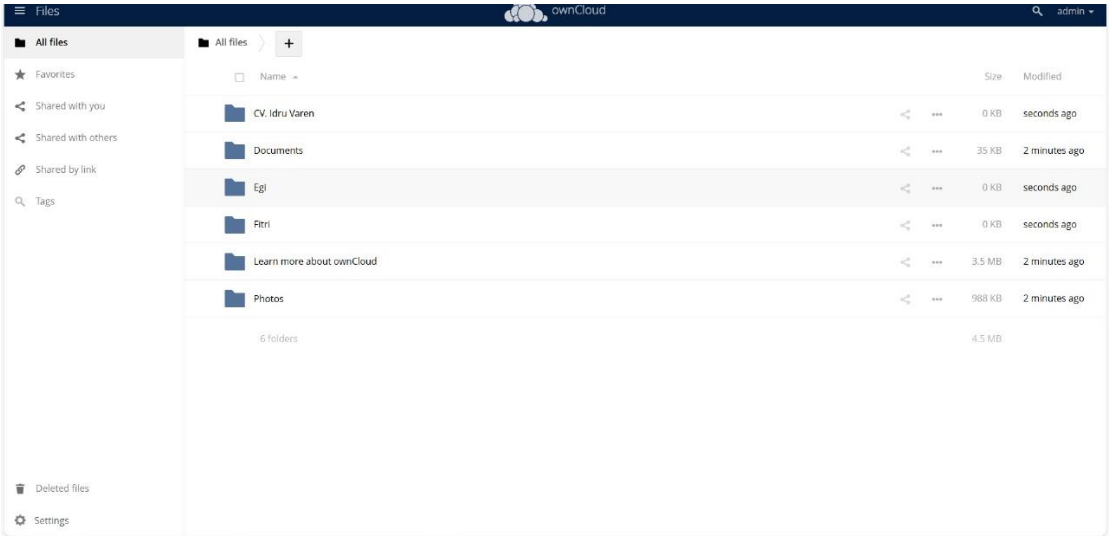


Figure 2. Login
Source: Screenshot from the KM System Interface

With improved data integration, employees were able to access a more comprehensive set of knowledge resources, which enhanced the overall effectiveness of the knowledge management process. For example, employees in the finance department could now easily access marketing insights and customer feedback stored by the sales team, providing them with a more complete picture when making financial projections or budgeting decisions.

4. **Cost Reduction and Time Savings**

One of the most tangible benefits of implementing a cloud-based KM system was the reduction in operational costs and time savings associated with knowledge transfer. In the past, employees spent considerable time looking for information in physical files or waiting for colleagues to respond to emails. This delay not only wasted valuable time but also caused bottlenecks in the workflow.

The new cloud-based system allowed employees to access information instantly, eliminating the need for time-consuming searches and reducing the time spent on repetitive tasks. As a result, employees were able to focus more on their core responsibilities, increasing productivity.

Additionally, the system's cloud infrastructure enabled CV Idru Varen to reduce the costs associated with maintaining physical servers and IT infrastructure. With the cloud, the company no longer needed to invest in expensive hardware or worry about server maintenance, as these tasks were managed by the cloud service provider.

5. **Improved Resource Management and Organizational Optimization**

By improving the knowledge-sharing process, the cloud-based KM system also contributed to better resource management within the organization. The system allowed CV Idru Varen to optimize the allocation of its human and financial resources. For example, the system facilitated better project management by ensuring that all team members had access to the most up-to-date information, helping them to allocate their efforts more effectively and avoid duplicating work.

The system also provided managers with valuable insights into employee performance, allowing them to identify areas where additional training or resources might be needed. This data-driven approach to resource management helped CV Idru Varen allocate its resources more effectively, ultimately improving its overall efficiency.

6. **Knowledge Creation and Innovation**

In addition to facilitating the sharing of existing knowledge, the cloud-based KM system also supported knowledge creation and innovation. By providing a platform for employees to collaborate and share ideas, the system fostered a culture of continuous learning and innovation. Employees were encouraged to contribute their ideas to the knowledge base, creating a dynamic, evolving pool of knowledge that could be leveraged for innovation.

The system also made it easier for employees to access knowledge from external sources, such as industry reports, academic papers, and research databases. This exposure to new ideas and external

knowledge sources helped stimulate creative thinking and problem-solving, driving innovation within the organization.

7. **Future Enhancements and Recommendations**

While the cloud-based KM system has proven effective in improving knowledge management processes at CV Idru Varen, there are opportunities for further enhancements. For example, integrating artificial intelligence (AI) and machine learning (ML) technologies into the system could improve the knowledge recommendation process, helping employees find the most relevant information based on their roles, tasks, and previous activities.

Additionally, enhancing the mobile functionality of the system could provide even greater flexibility, allowing employees to access and contribute to the knowledge base while on the go, further improving the system's usability and accessibility.

The cloud-based Knowledge Management system implemented at CV Idru Varen has successfully improved the efficiency of knowledge transfer, enhanced data integration, and reduced operational costs. By centralizing knowledge in a single cloud platform, CV Idru Varen has streamlined its workflows, improved communication, and optimized resource management. The system has also fostered a culture of collaboration, enabling employees to share knowledge more easily and innovate more effectively. As the company continues to leverage this system, further enhancements, such as the integration of AI and improved mobile access, could enhance its capabilities and drive even greater efficiency and innovation.

4 Conclusion

The implementation of the cloud-based Knowledge Management (KM) system at CV Idru Varen has demonstrated significant improvements in knowledge transfer efficiency, data integration, and resource management. The system has successfully addressed the challenges of fragmented information systems, providing a centralized platform for knowledge sharing across departments. As a result, employees can access relevant knowledge more quickly, enhancing decision-making and collaboration. Additionally, the reduction in operational costs and time savings associated with knowledge transfer has led to better organizational optimization and increased productivity. However, while the system has provided immediate benefits, further enhancements, such as the integration of artificial intelligence (AI) and machine learning (ML) technologies, could further improve the knowledge recommendation process. Furthermore, expanding the mobile functionality of the system could increase accessibility, offering greater flexibility for employees working remotely. It is recommended that CV Idru Varen continue to refine the system, incorporating user feedback and exploring additional features to maximize the system's potential.

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